



C-Soft 7.700

C-Soft

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1 Notices

1.1 Proprietary notice

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1.2 Copyright notice

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*All other trademarks are property of their respective owners.

**MOTOROLA, MOTOTRBO, and the Stylized M logo are registered in the U.S. Patent and Trademark Office.

1.3 Warranty notice (limited)

For warranty and service information, see <http://www.telex.com/warranty>.

1.4 Factory service center

Factory Service Center
Bosch Security Systems, LLC
Radio Dispatch Products
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Lincoln, Nebraska, 68507

1.5 Contact information

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Phone: (800) 553-5992

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Knowledge database: <http://knowledge.boschsecurity.com/>

Web: www.telex.com

1.6 Claims

No liability will be accepted for damages directly or indirectly arising from the use of our materials or from any other causes. Our liability shall be expressly limited to replacement or repair of defective materials.

Mototrbo claim

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1.7**Warning****Notice!**

This is a class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

**Warning!**

Do not open the unit. No user serviceable parts are contained within. Bosch cannot be responsible for damage. If the unit is opened, the warranty can be voided.

1.8**OpenSSL project**

- This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<https://www.openssl.org/>).
- This product includes cryptographic software written by Eric Young (eay@cryptsoft.com).
- This product includes cryptographic software written by Tim Hudson (tjh@cryptsoft.com).

2 Overview

The Telex C-Soft Console Software is a Microsoft Windows application (refer to *Copyright notice, page 11*) that enables a PC with a network connection to monitor and control 2-way radios connected to the network. Utilized in conjunction with an infrastructure of Telex VoIP (Voice Over Internet Protocol) products, the C-Soft application offers a powerful and convenient method for controlling a radio network using standard computer equipment. The software console can support up to 200 lines and is fully compatible with popular touch screen monitors. In addition, standard desk microphones, headsets, and foot-switches are supported through the use of the ADHB-4 headset adapter panel.

**Notice!**

Application Notes containing instructions for specific product installation are available for download at www.telex.com.

Computer system requirements

Operating system	Microsoft Windows 8.1 and Windows 10 (supports both 32-bit and 64-bit)
Sound system	Full-duplex Microsoft Windows compatible sound system
Network connection	10Mbps or 100Mbps, full-duplex TCP/IP connection. Static IP address preferred to DHCP
Processor speed	Intel Core i3 2.80GHz processor
Random access memory	Minimum of 8GB recommended

3 License and optional features

Part number	Description	Model number
F.01U.307.023	C-Soft 2-line SOFTWARE v7	C-Soft7 2L
F.01U.307.024	C-Soft 6-line SOFTWARE v7	C-Soft7 6L
F.01U.307.025	C-Soft 12-line SOFTWARE v7	C-Soft7 12L
F.01U.307.026	C-Soft 24-line SOFTWARE v7	C-Soft7 24L
F.01U.307.027	C-Soft 50-line SOFTWARE v7	C-Soft7 50L
F.01U.307.028	C-Soft 100-line SOFTWARE v7	C-Soft7 100L
F.01U.307.029	C-Soft 150-line SOFTWARE v7	C-Soft7 150L
F.01U.307.030	C-Soft 200-line SOFTWARE v7	C-Soft7 200L
F.01U.307.031	Upgrade Previous C-Soft to C-Soft v7	C-Soft7 Upgrade
***Each C-Soft license includes 2 lines of SIP and 1 line of Per Line Playback		
F.01U.307.047	SIP Enhanced 6-line	SIP 6L
F.01U.307.048	SIP Enhanced 12-line	SIP 12L
F.01U.307.032	Line Call Playback 2-line	Playback 2L
F.01U.307.033	Line Call Playback 6-line	Playback 6L
F.01U.307.034	Line Call Playback 12-line	Playback 12L
F.01U.307.035	Line Call Playback 24-line	Playback 24L
F.01U.307.036	Line Call Playback 50-line	Playback 50L
F.01U.307.037	Line Call Playback 100-line	Playback 100L
F.01U.307.038	NEXEDGE Direct IP 2-line	NEXEDGE IP 2L
F.01U.307.039	NEXEDGE Direct IP 6-line	NEXEDGE IP 6L
F.01U.307.040	NEXEDGE Direct IP 12-line	NEXEDGE IP 12L
F.01U.307.041	NEXEDGE Direct IP 24-line	NEXEDGE IP 24L
F.01U.307.042	DFSI Direct IP 2-line	P25 DFSI 2L
F.01U.307.043	DFSI Direct IP 6-line	P25 DFSI 6L
F.01U.307.044	DFSI Direct IP 12-line	P25 DFSI 12L
F.01U.307.045	DFSI Direct IP 24-line	P25 DFSI 24L

F.01U.343.866	AES Encryption Option, per seat	Encryption Seat
F.01U.343.860	Direct IP Interface, DMR AIS, 2-line	DMR AIS IP 2L
F.01U.343.861	Direct IP Interface, DMR AIS, 6-line	DMR AIS IP 6L
F.01U.343.862	Direct IP Interface, DMR AIS, 12-line	DMR AIS IP 12L
F.01U.343.863	Direct IP Interface, DMR AIS, 24-line	DMR AIS IP 24L
F.01U.343.864	Application Programming Interface SDK	API SDK
F.01U.343.865	Application Programming Interface, per seat	API Seat
F.01U.343.856	P25 CSSI Direct IP 2-line License	P25 CSSI 2L
F.01U.343.857	P25 CSSI Direct IP 6-line License	P25 CSSI 6L
F.01U.343.858	P25 CSSI Direct IP 12-line License	P25 CSSI 12L
F.01U.343.859	P25 CSSI Direct IP 24-line License	P25 CSSI 24L

4 C-Soft Application Software

C-Soft Designer program

The **C-Soft Designer** program provides the ability to create custom dispatch screen designs. Console operators with differing requirements can be given different screen designs. Once the screen layout is created, the C-Soft Designer program generates a file read by the C-Soft Runtime program.



Notice!

A software-based license key is not required to operate C-Soft Designer.

C-Soft Runtime program

The **C-Soft Runtime** program does the actual network communications with the other radio elements available on the network. This single screen design file makes it easy for the designer to send updates to users wherever they may be located.

5 Installation and setup

This chapter includes information on the installation of and the initial system setup requirements for the C-Soft program.

Sections include:

- Install the C-Soft Runtime Software
- Install the C-Soft Designer Software
- Install the ADHB-4 Driver
- Install the Telex License Server
- Configure the initial Volume Control settings

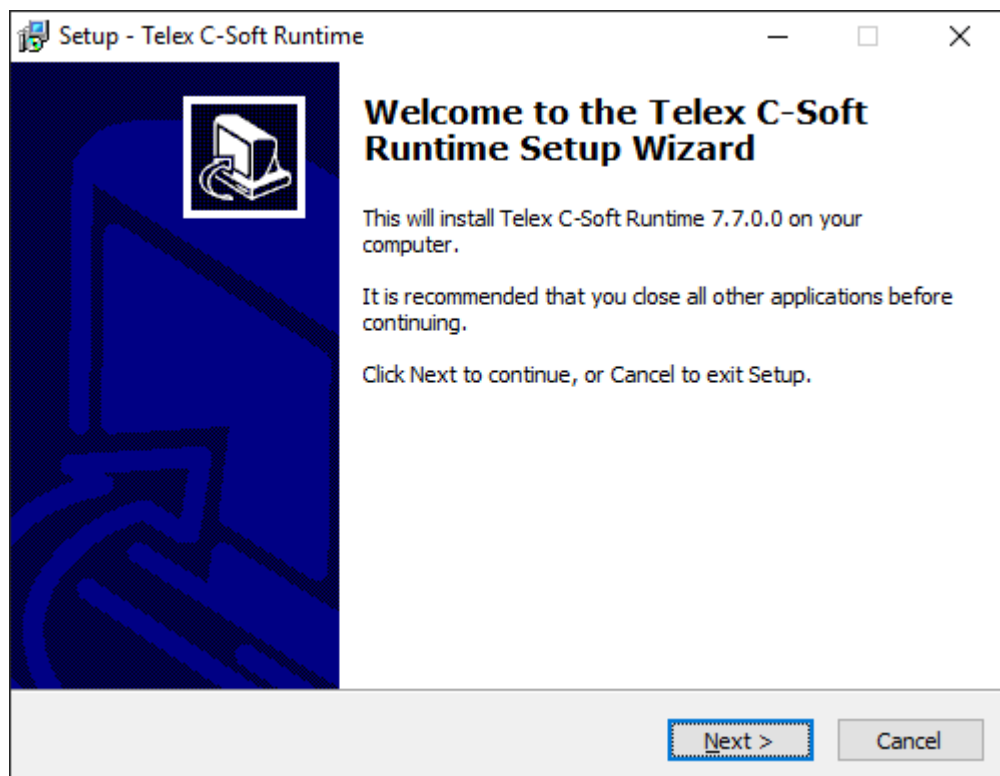
5.1 Install the C-Soft Runtime software

Important: The C-Soft Installation package is downloadable from www.telex.com. Contact the technical support team to get access.

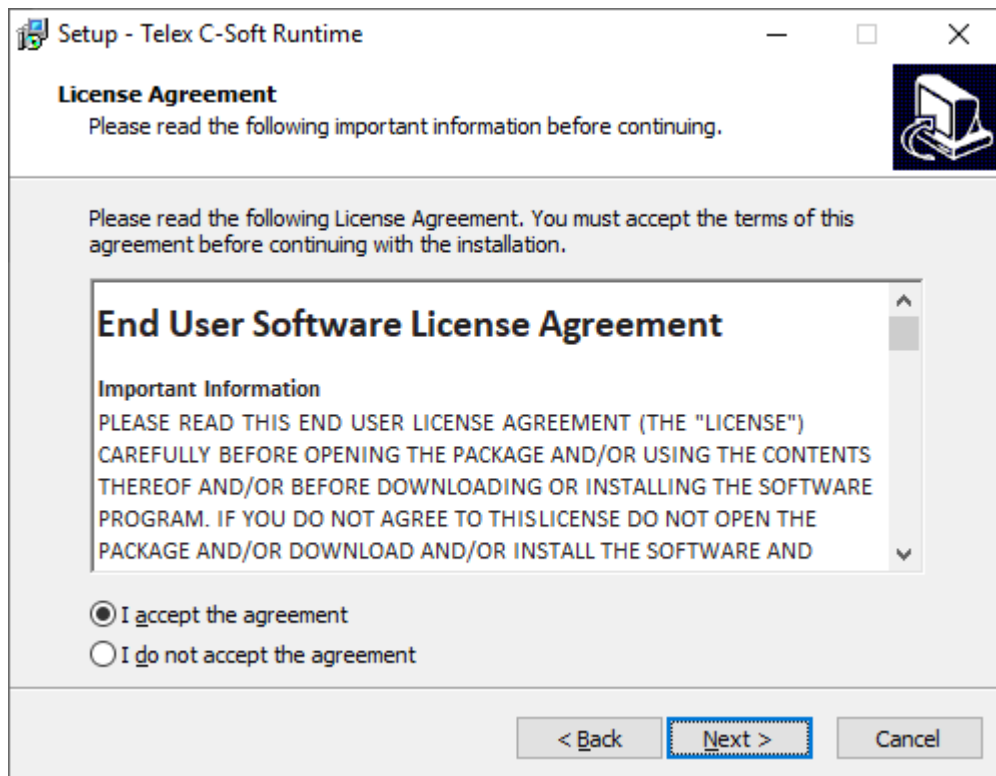
To **install the C-Soft software**, do the following:

1. Download the **C-Soft installation package** and copy it to your computer.
2. Navigate to and double-click the **C-Soft Setup_vXXXX.exe** file.

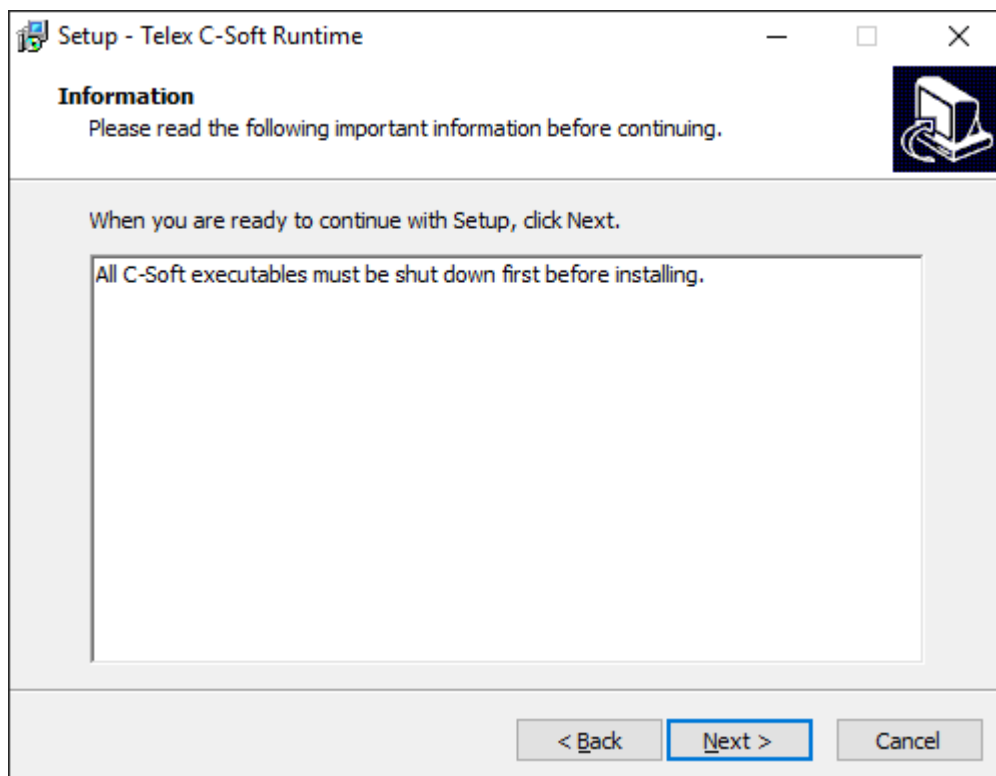
The C-Soft Runtime Setup wizard appears.



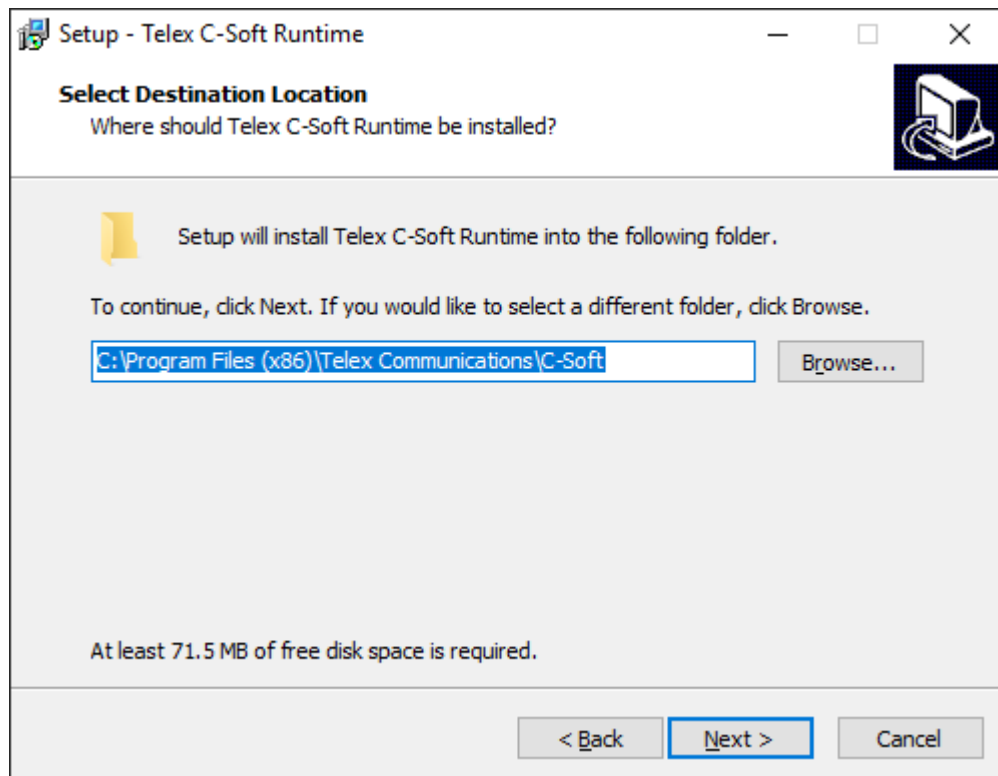
3. Click **Next**.
The License Agreement window appears.



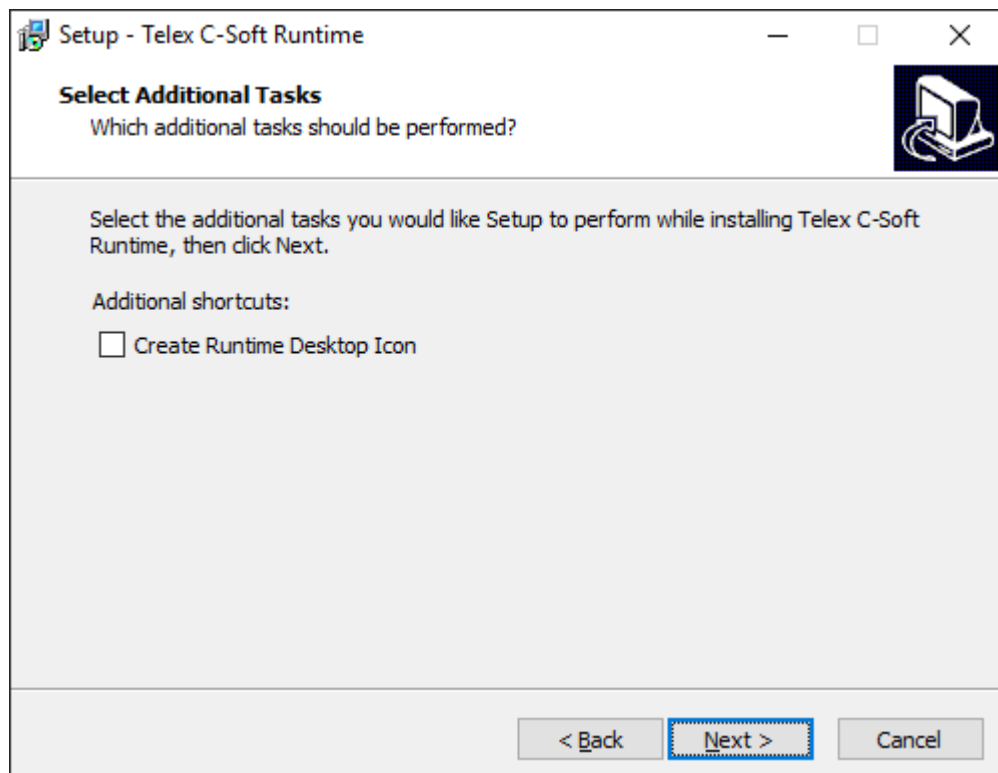
4. To agree with the agreement, select the **"I accept the agreement"** radio button.
5. Click the **Next** button.
The Information window appears.



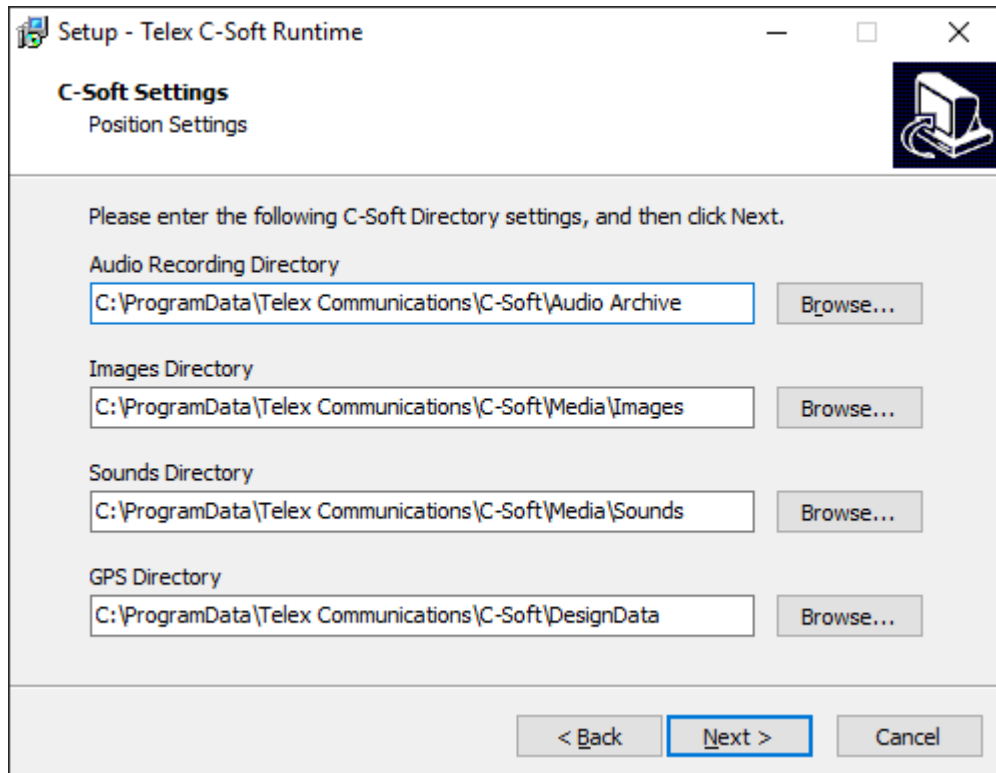
6. Follow the instructions in the window and click **Next**.
The Select Destination Location window appears.



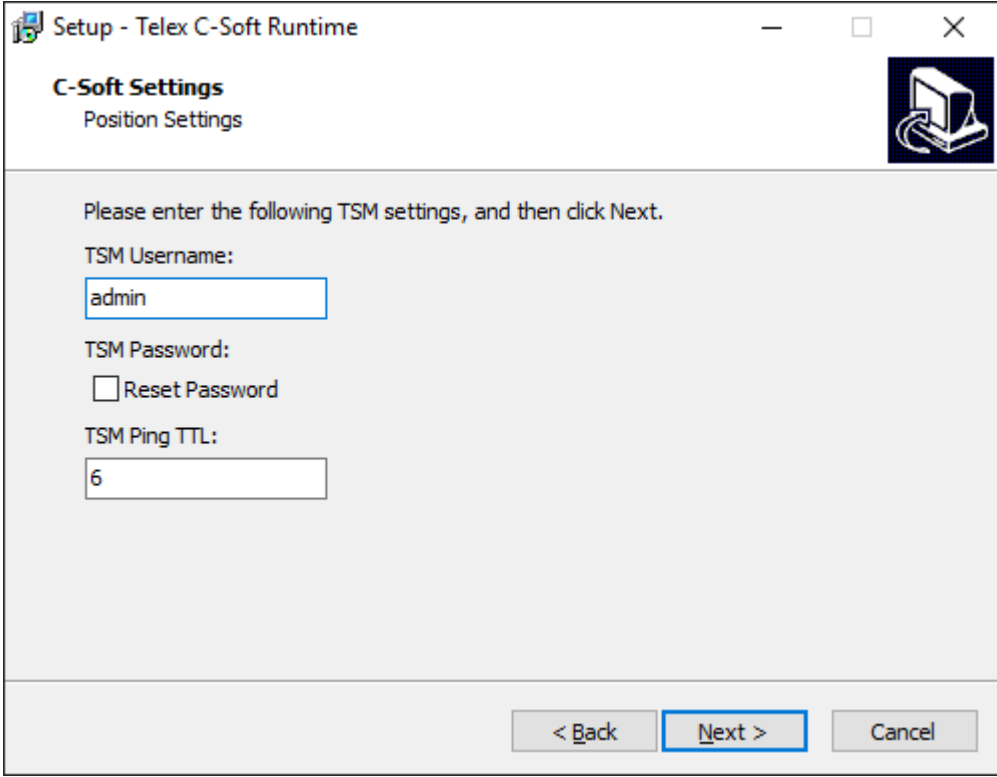
7. Click **Next** to accept the default folder location for C-Soft (recommended).
The Select Additional Tasks window appears.
OR
Click **Browse** to select a different folder location for C-Soft.
The Browse window appears.



8. From the Additional shortcuts list, select **check boxes** for the shortcuts you want to create.
9. Click **Next**.
The C-Soft Settings window appears.



10. Click **Next** to accept the default C-Soft Directory settings (recommended).
The C-Soft Settings TSM Setup window appears.
OR
Click the **Browse button** to navigate to the folder as desired for each Directory setting.



Setup - Telex C-Soft Runtime

C-Soft Settings
Position Settings

Please enter the following TSM settings, and then click Next.

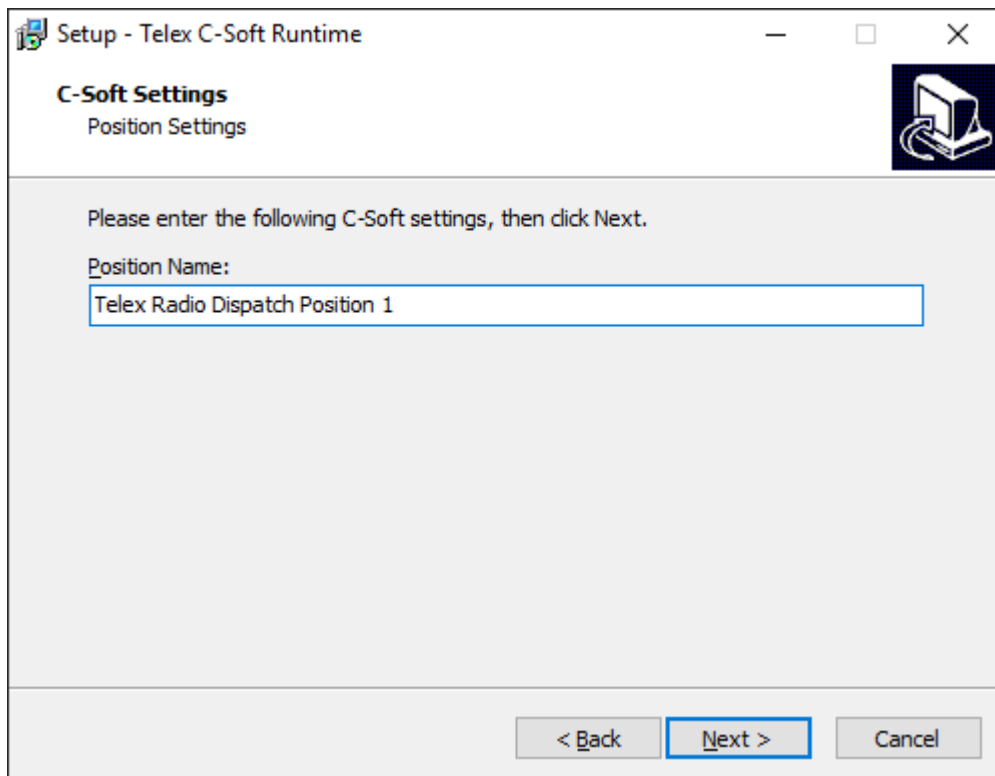
TSM Username:

TSM Password:
☐ Reset Password

TSM Ping TTL:

< Back Next > Cancel

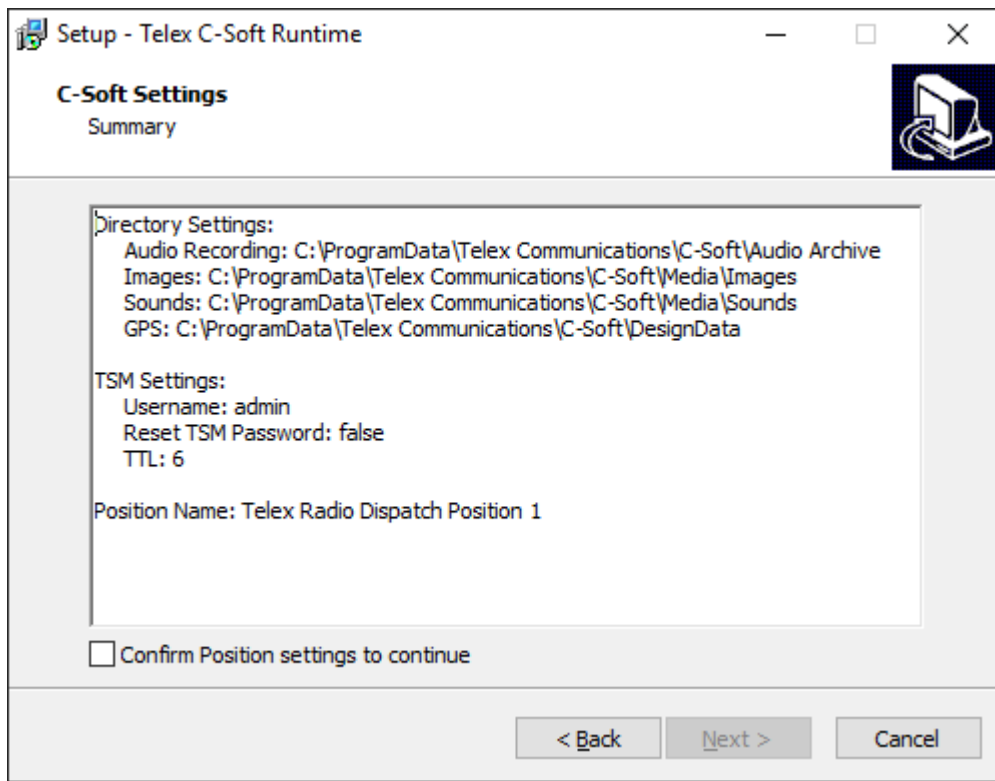
11. Enter the **TSM Username** desired.
12. Select the **Reset Password** check box to reset the password that logs into the device with TSM.
13. Enter the **TSM Ping TTL** to set the TTL (Time to Live) value, which is TSM device detection feature.
14. Click **Next**.
The C-Soft Settings Position Name window appears.



15. Enter the **Position Name**.

16. Click **Next**.

The C-Soft Settings Summary window appears.

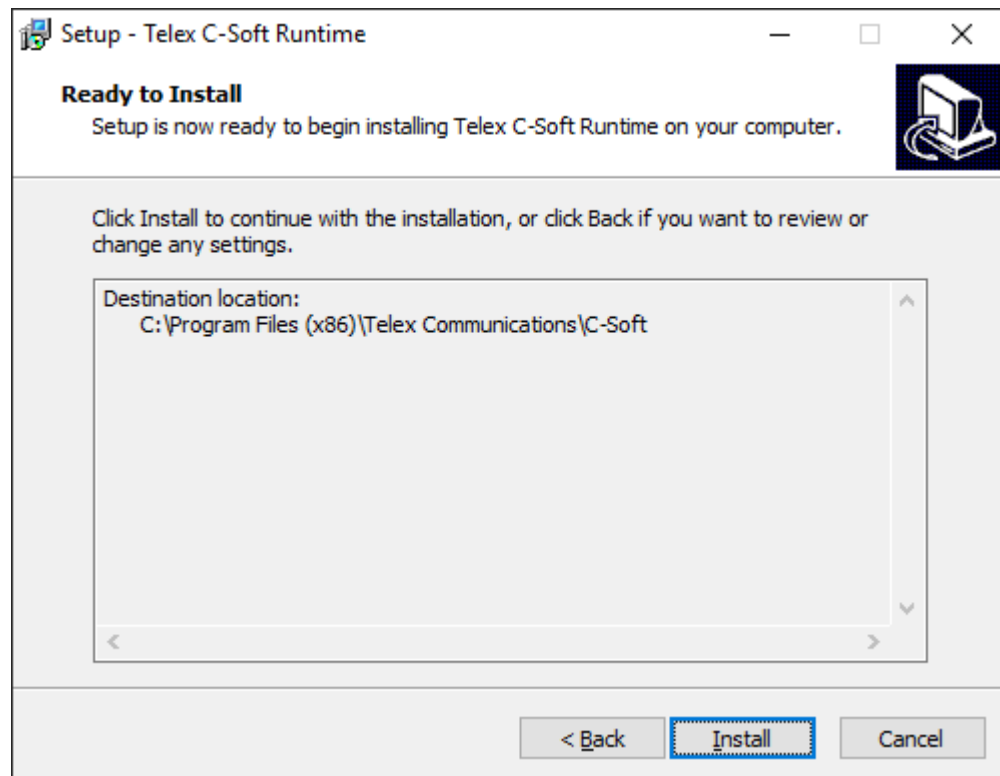


17. Select the **Confirm Position settings to continue** check box.

18. Click **Next**.

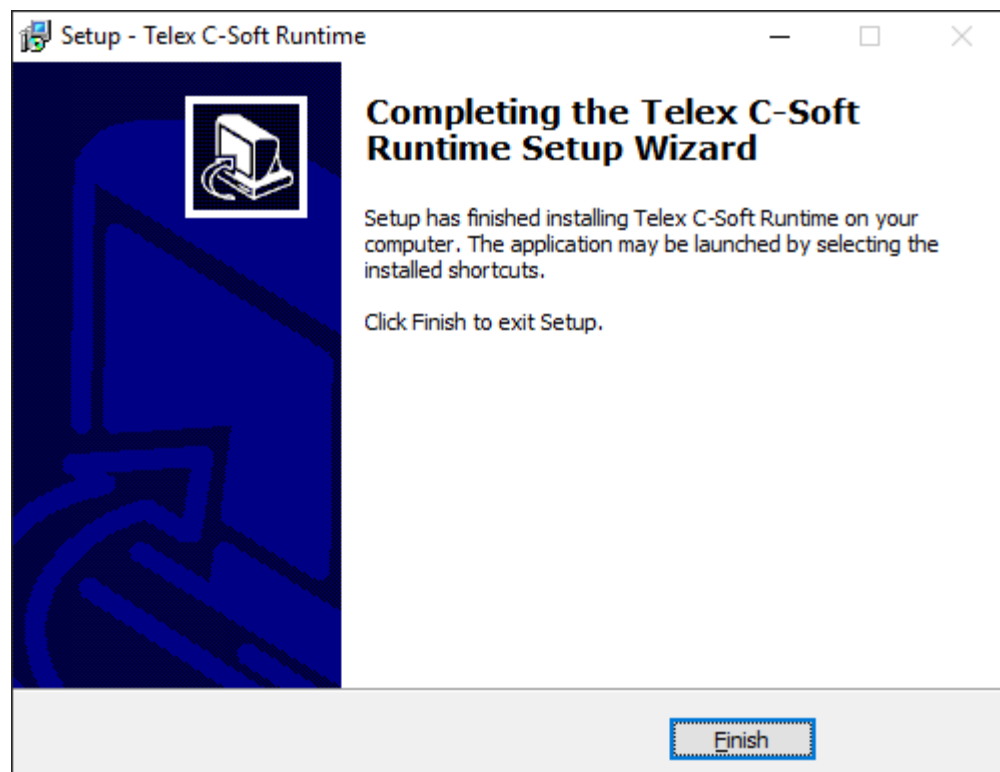
The Ready to Install window appears.

NOTE: The destination location and start menu folder paths appear in this window.



19. Click **Install**.

C-Soft installs. The C-Soft Runtime Setup Wizard finish window appears.



20. Click **Finish**, when complete.

5.2 Install the C-Soft Designer software

Important: The C-Soft Installation package is downloadable from www.telex.com. Contact the technical support team to get access.

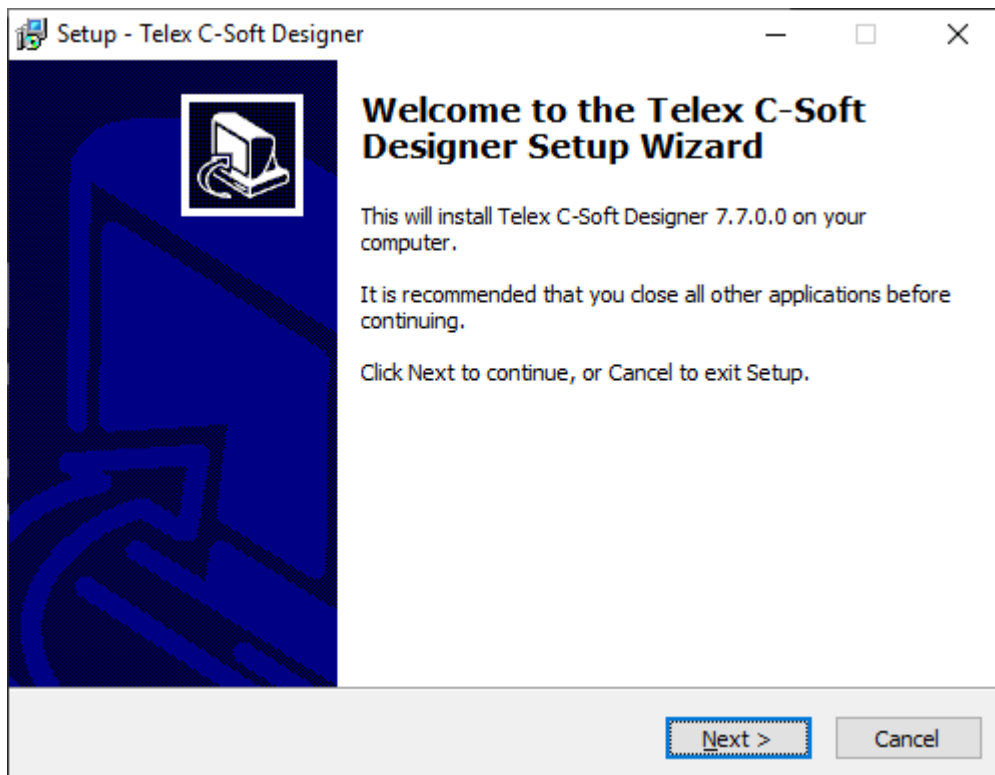
To **install the C-Soft Designer software**, do the following:



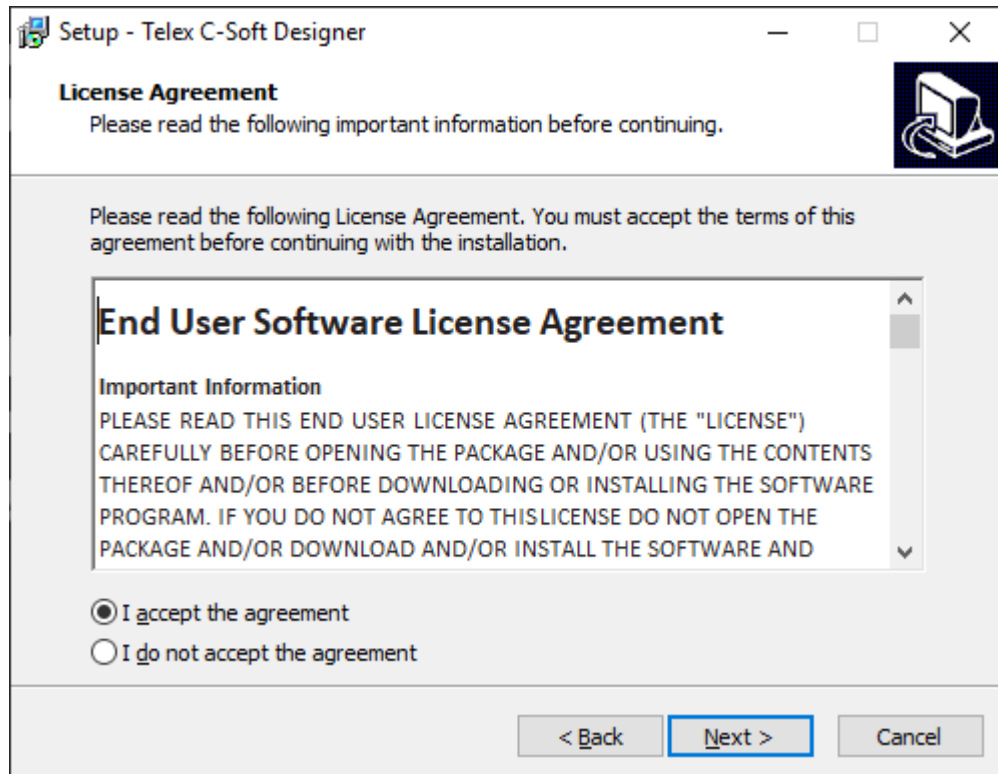
Notice!

The C-Soft Designer installer launches during the C-Soft Runtime installer. It has already downloaded to your machine.

1. Navigate to and double-click the **C-SoftDesigner_Setup_vXXXX.exe** file.
The C-Soft Designer Setup wizard appears.



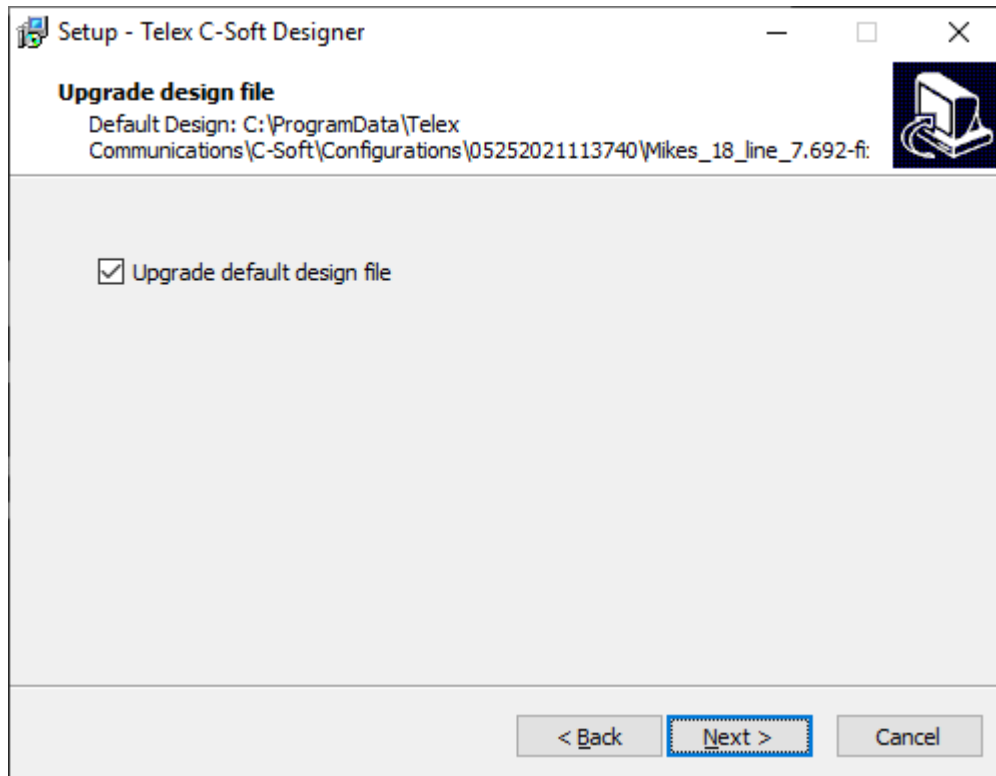
2. Click **Next**.
The License Agreement window appears.



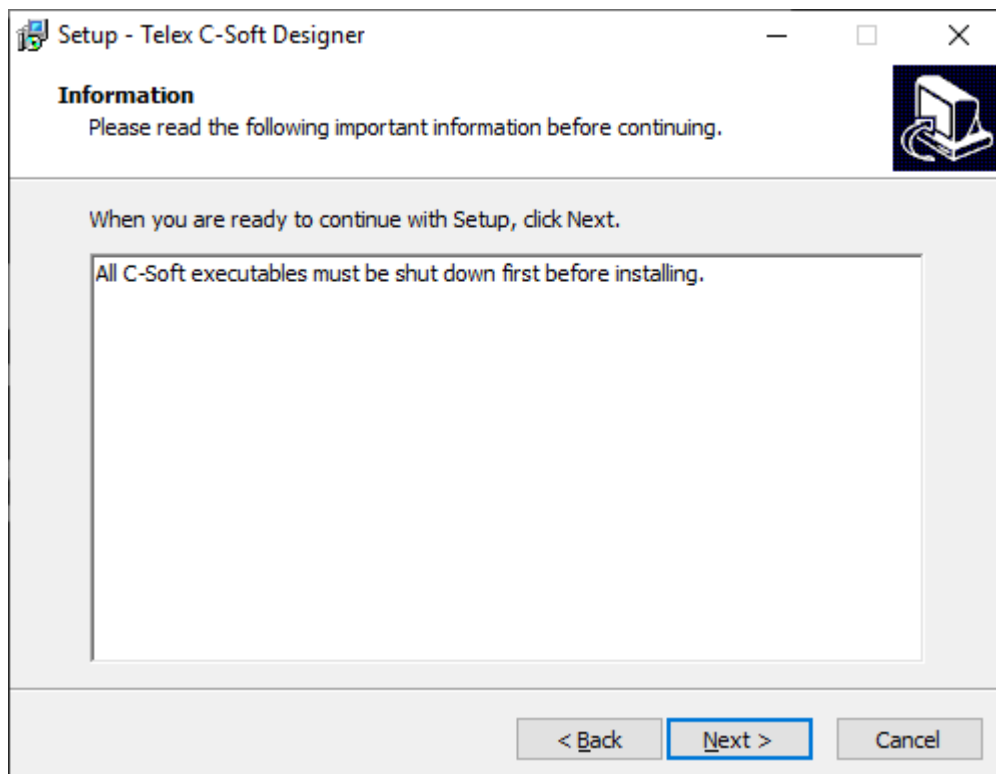
3. To agree with the agreement, select the **"I accept the agreement" radio button**.
4. Click the **Next button**.
The Upgrade Design window appears.
5. (Optional) Select the Upgrade default design check box to have C-Soft Designer automatically upgrade the current design to a version compatible with the C-Soft Designer version being installed.

**Notice!**

If selected, a backup of the default design is saved prior to upgrade. It exists in the same folder, but a version suffix is added to the file's name. For example, if the designs name is MyDesign.veg, MyDesign.veg is the first backed up to MyDesign_X.XXX.veg. and then MyDesign.veg is upgraded to the new C-Soft version.



1. Click Next.
The Information window appears.



2. Follow the instructions in the window and click **Next**.
The Select Destination Location window appears.

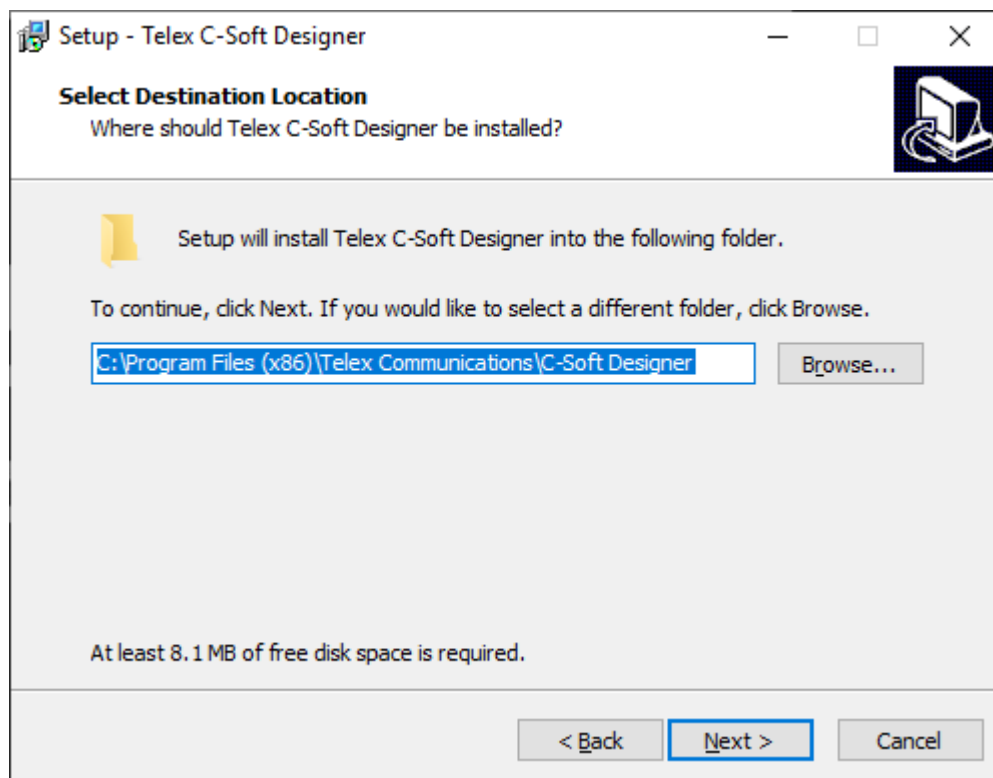
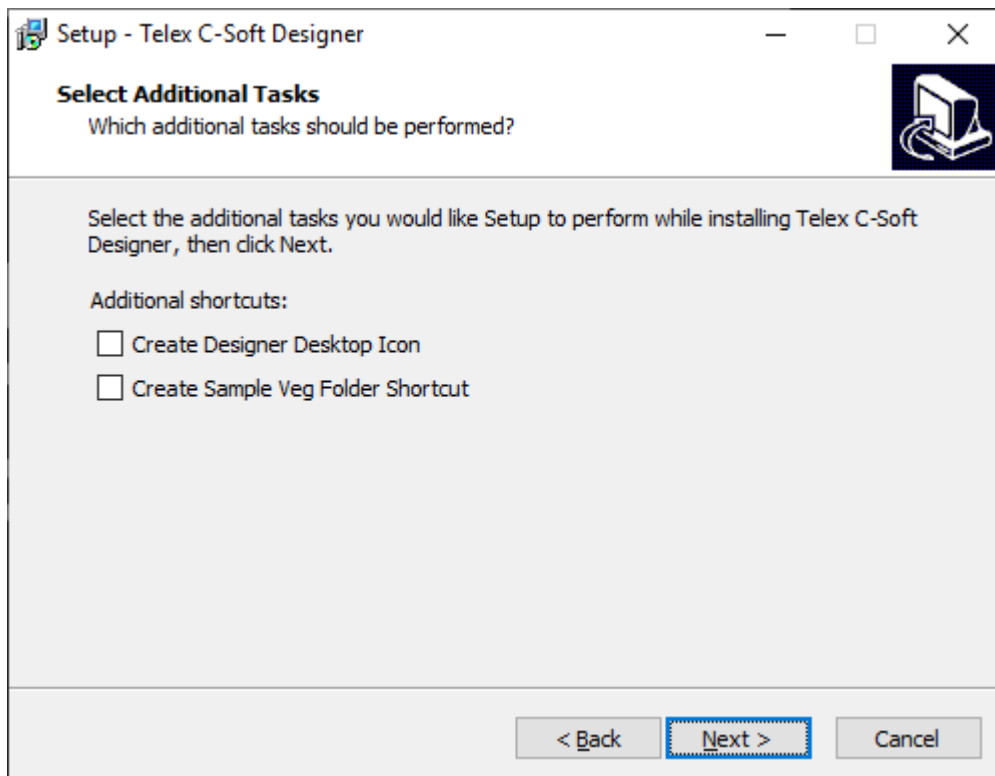
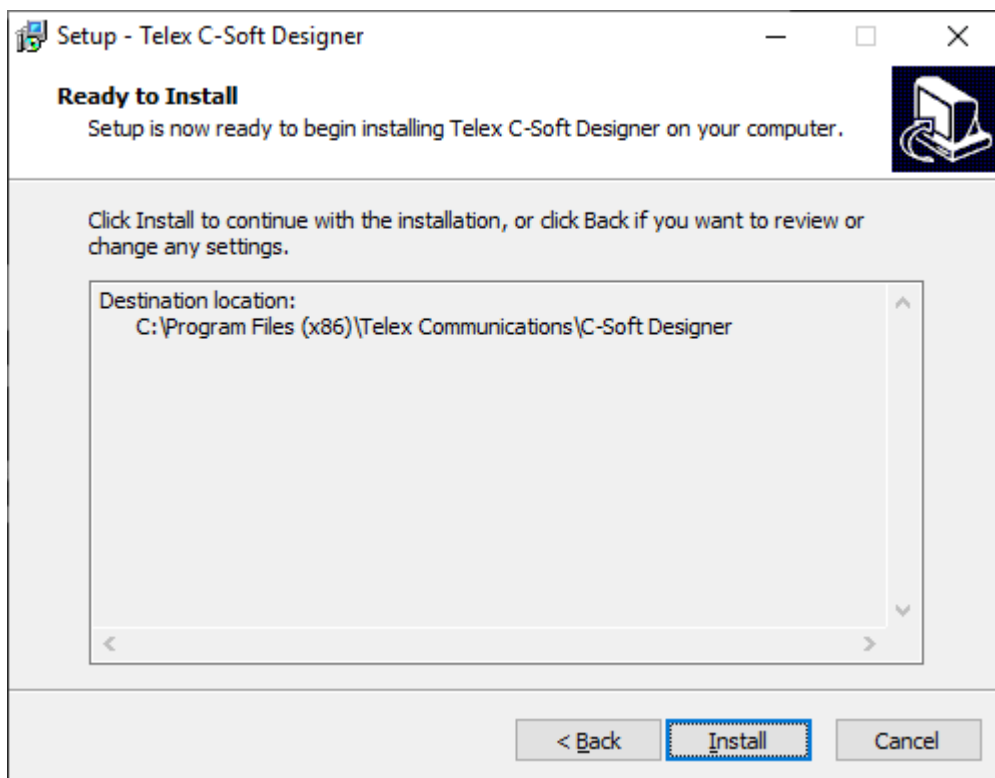


Figure 5.1:

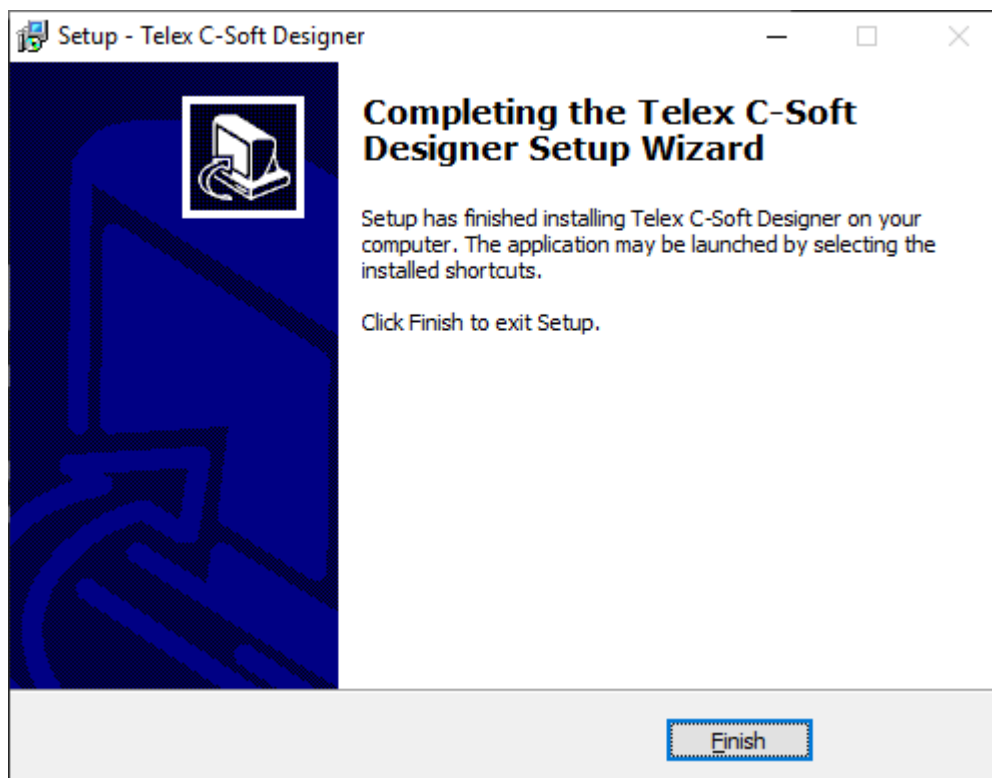
1. Click **Next** to accept the default folder (recommended).
The Select Additional Tasks window appears.
OR
Click **Browse** to select a different folder location for the program's files.
The Browse window appears



2. From the Additional icons list, select **check boxes for shortcuts** you want to create.
3. Click **Next**.
The Ready to Install window appears.
NOTE: The destination location and start menu folder paths appear in this window.



4. Click **Install**.
C-Soft Designer installs.



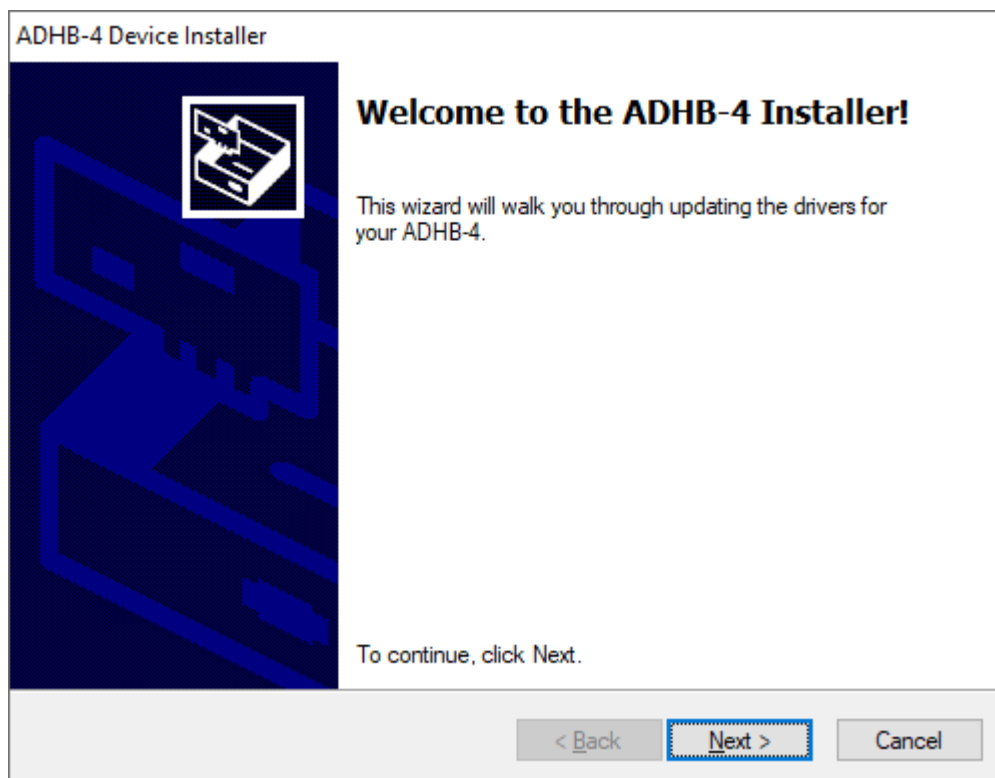
5. Click **Finish**, when complete.

5.3 ADHB-4 driver installation

The **ADHB-4 Device Installer** wizard appears automatically at the end of the C-Soft installation process.

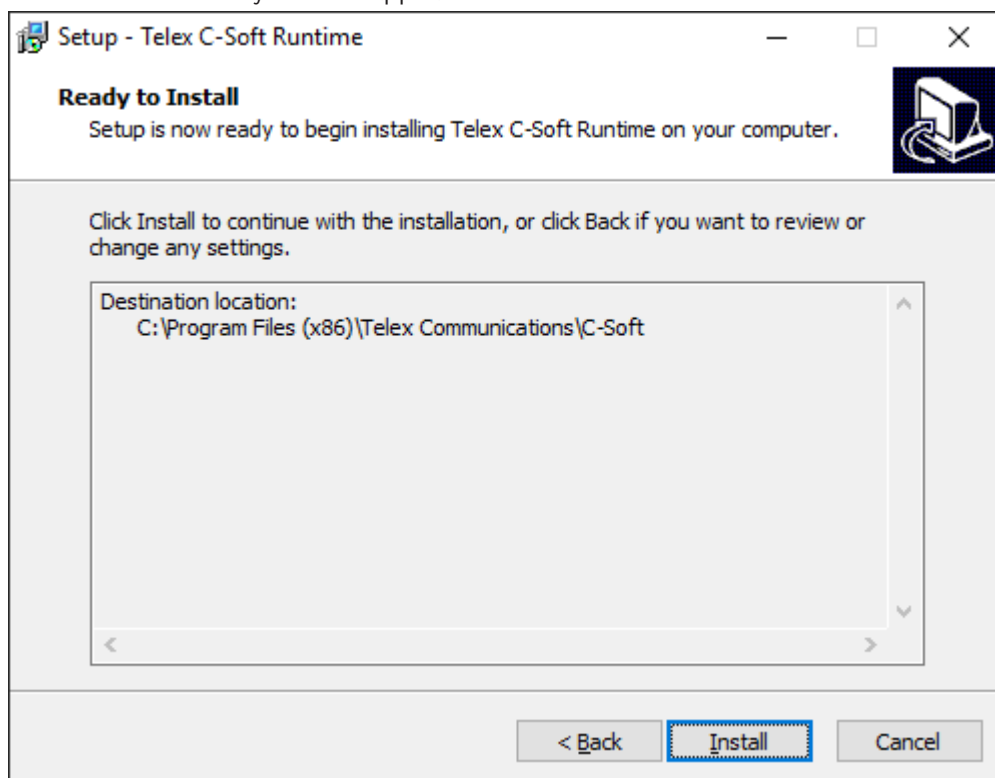
To **install the ADHB-4 driver**, do the following:

1. From the Welcome to the ADHB-4 Installer wizard, click the **Next button**.
The Windows Security message appears.



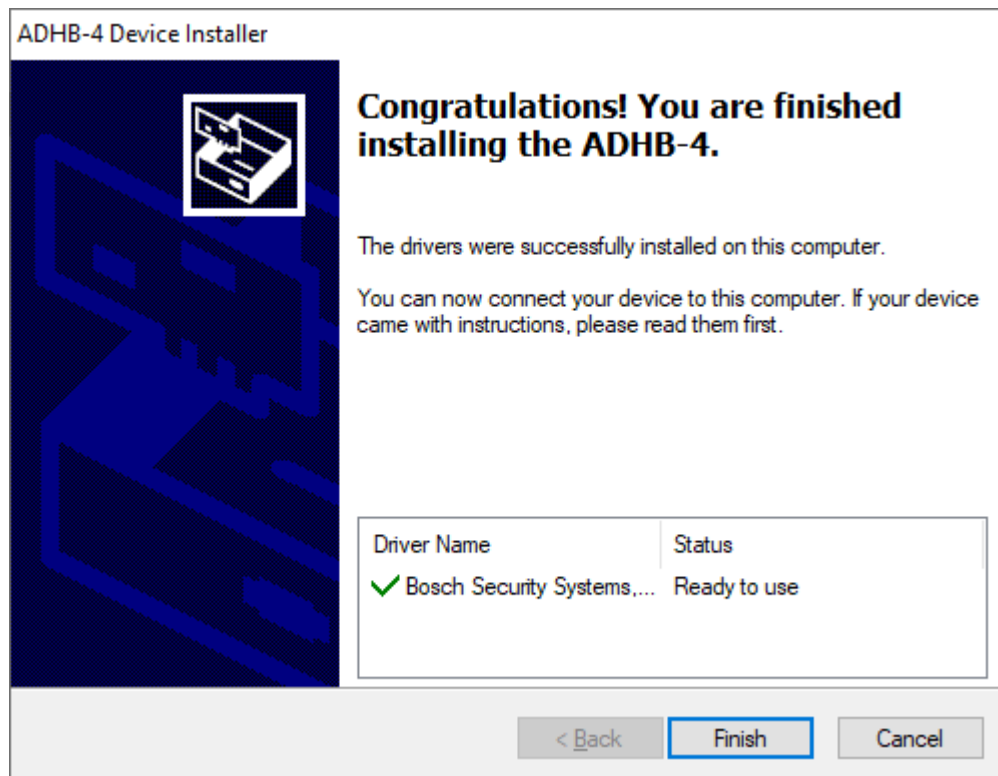
2. Click **Next**.

The Windows Security window appears.



3. Click **Install**.

The Congratulations! You are finished Installing the ADHB-4 window appears.



4. Click **Finish**.
The ADHB-4 driver installation is complete.

Note:

- When the installation is finished, the C-Soft executable files are located at: C:\Program Files\Telex Communications\C-Soft.
- The cposi.txt, keyset.dat, and DefaultVeg.txt files are located at: C:\Programdata\Telex Communications\design_folder.

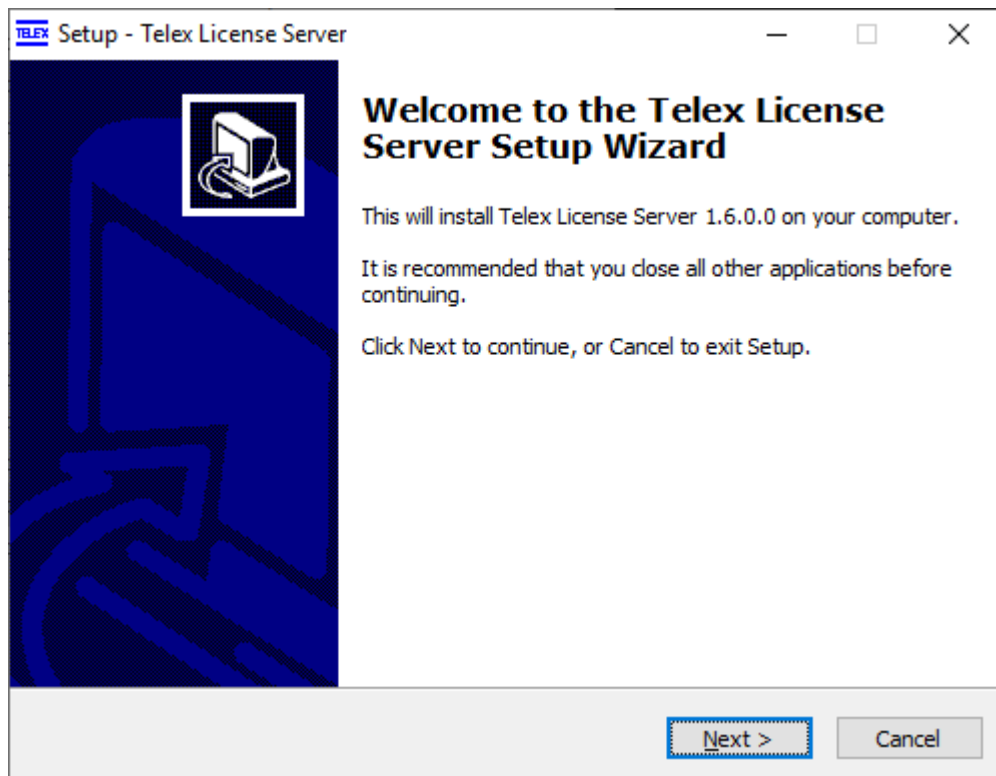
5.4 Telex License Server setup

The **Telex License Server Installer** wizard appears automatically at the end of the ADHB-4 installation process.

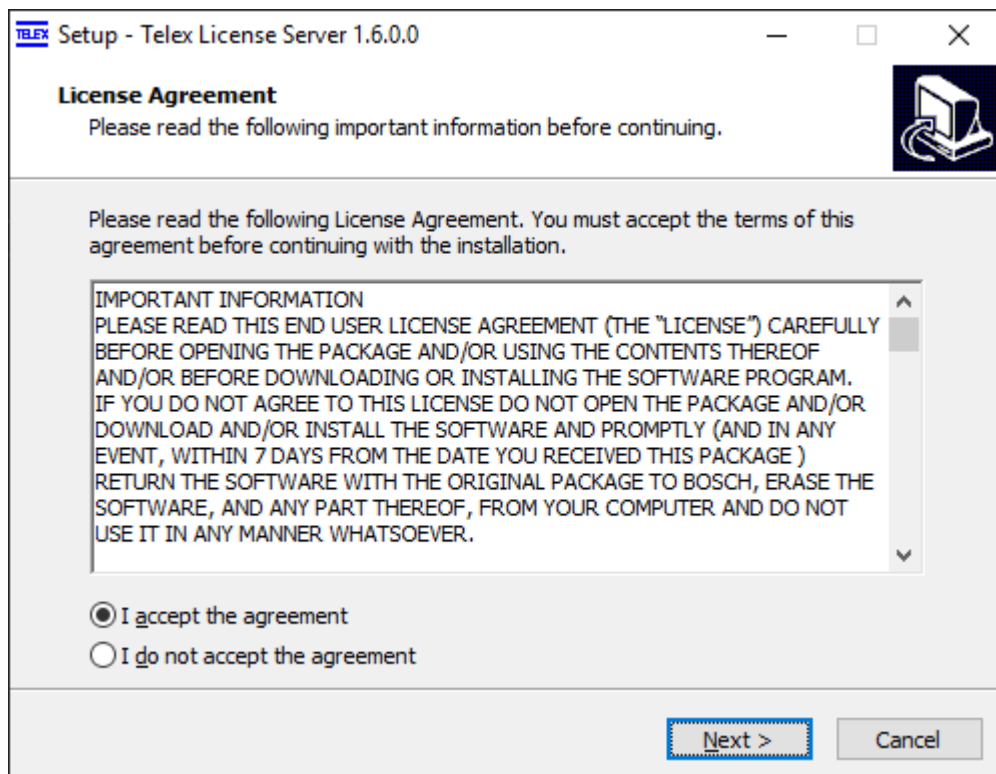
For more information about the Telex License process, refer to “*Appendix I - Telex License Activation tool, page 585*”.

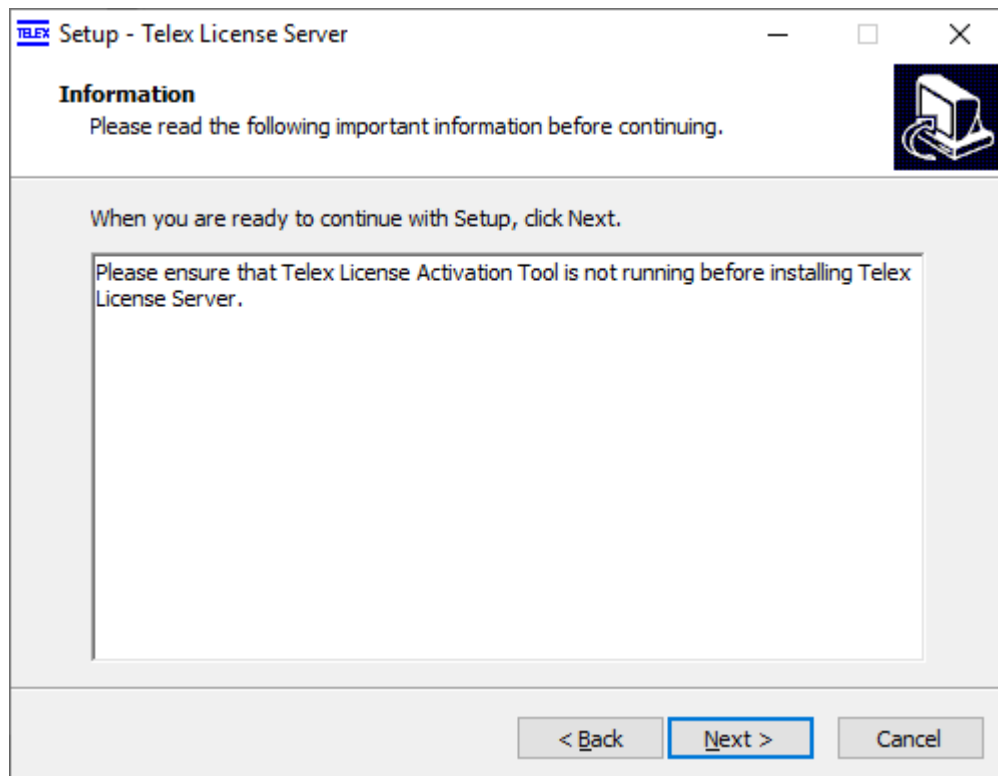
To **install the Telex License Server**, do the following:

1. From the Welcome to the Telex License Server Setup Wizard, click the **Next button**.
The License Agreement window appears.

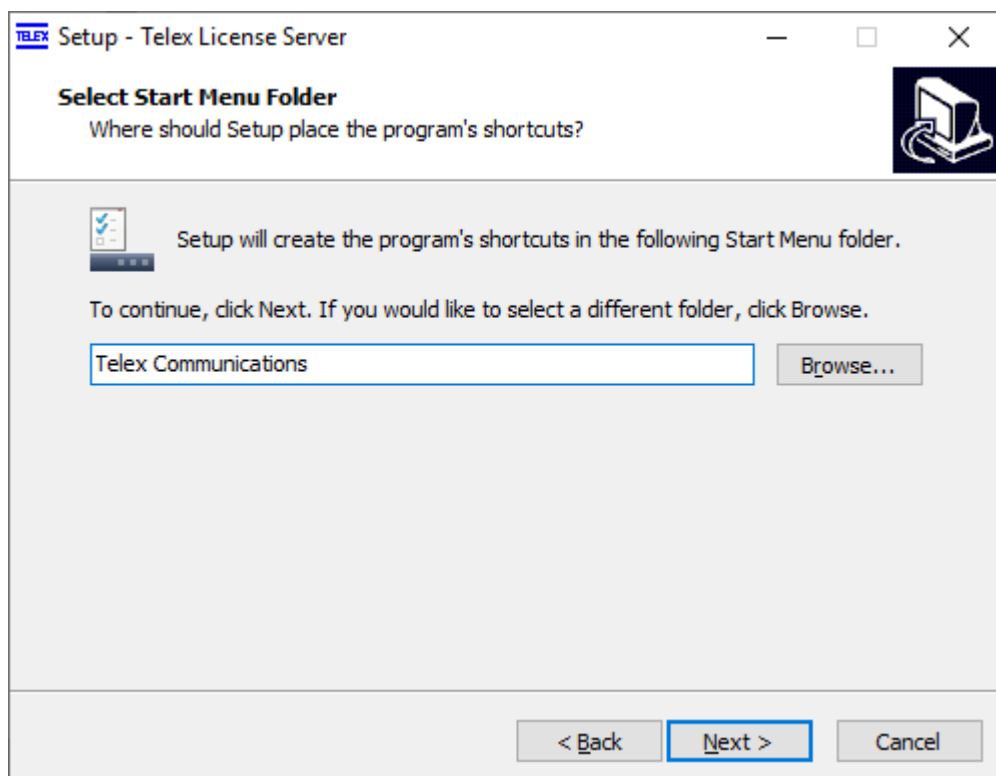
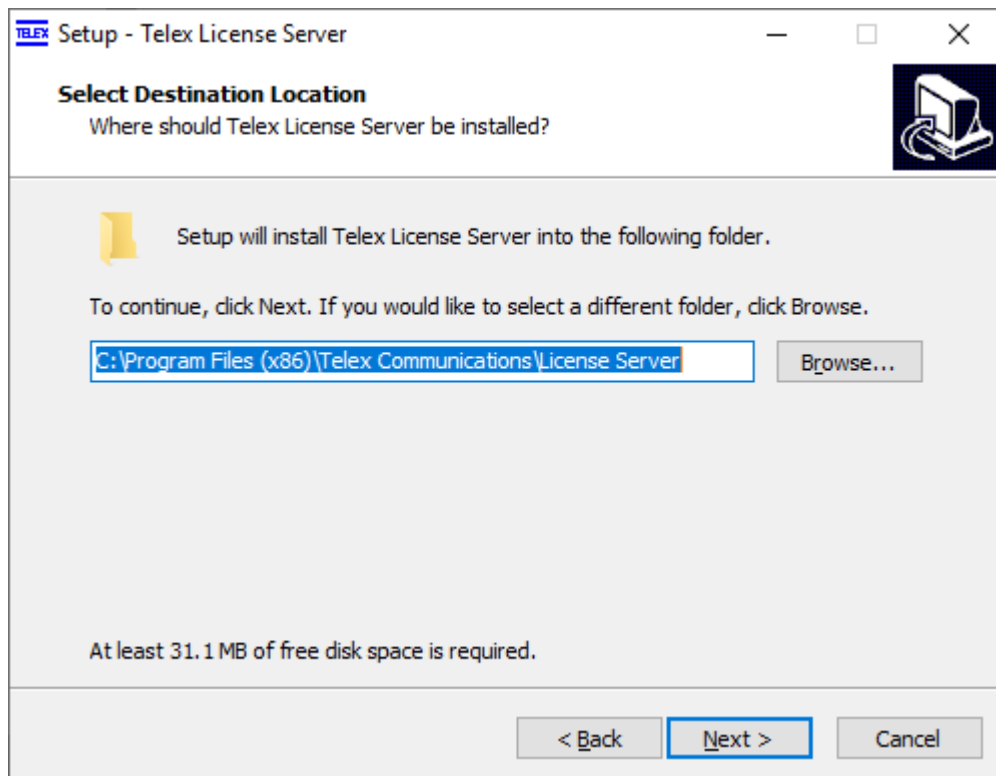


2. To accept the agreement, select the **"I accept the agreement" radio button**. The Select Destination window appears.





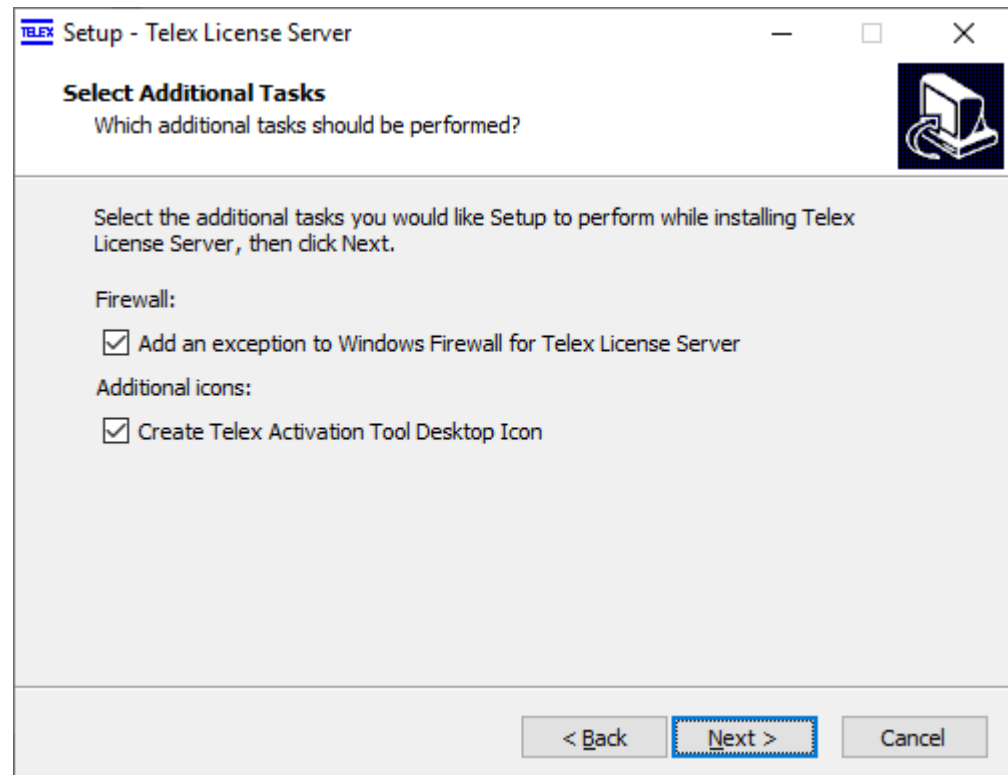
3. Follow the instructions in the window and click **Next**.
The Select Destination Location window appears.
4. Click the **Next button** to accept the default folder location for C-Soft (recommended).
The Select Start Menu Folder window appears.
OR
Click the **Browse button** to select a different folder location for C-Soft.
The Browse window appears.



1. Click the **Next button** to accept the default folder (recommended).
The Select Additional Tasks window appears.
OR
Click the **Browse button** to select a different folder location for the program's shortcut

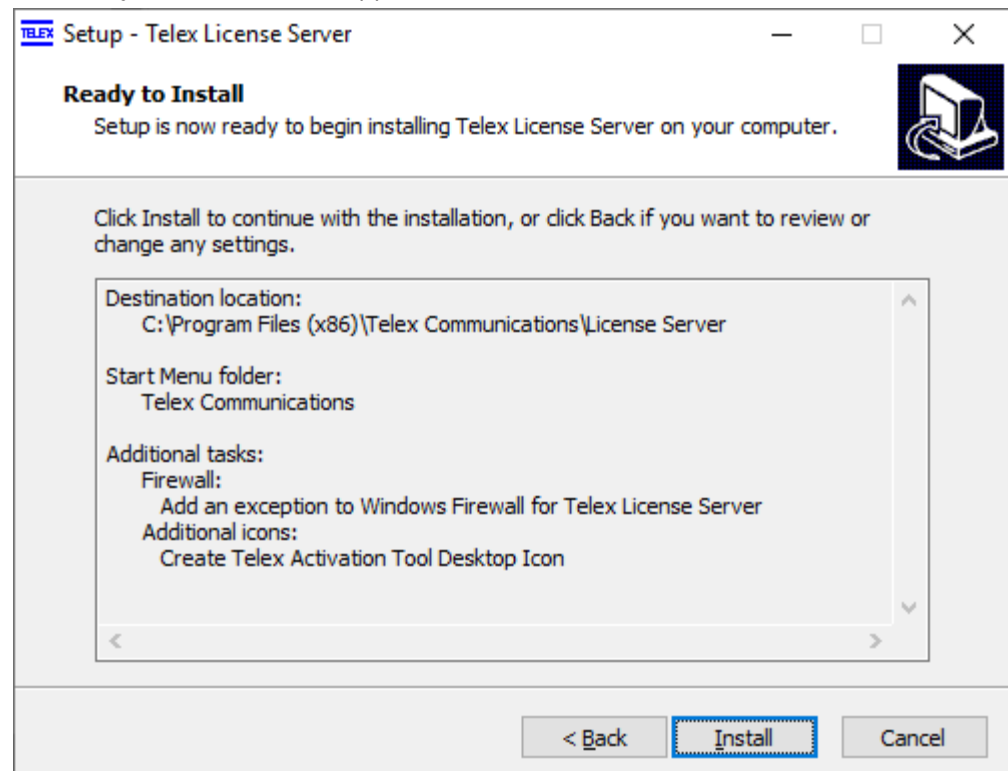
files.

The Browse window appears.



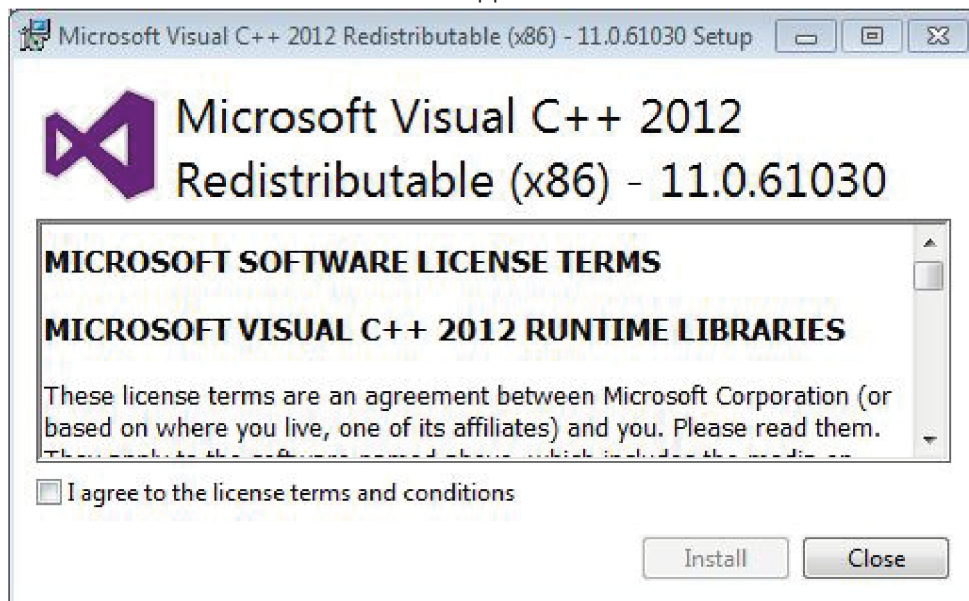
2. From the Additional icons list, select **check boxes** for the shortcuts you want to create.
3. Click the **Next button**.

The Ready to Install window appears.



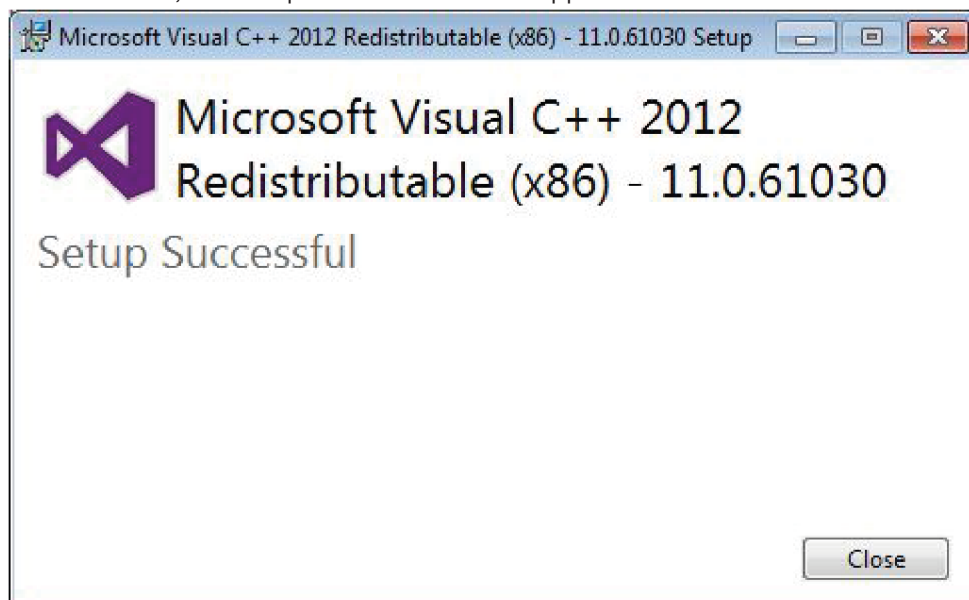
4. Click the **Install** button.

The Microsoft Visual C++ 2012 window appears.



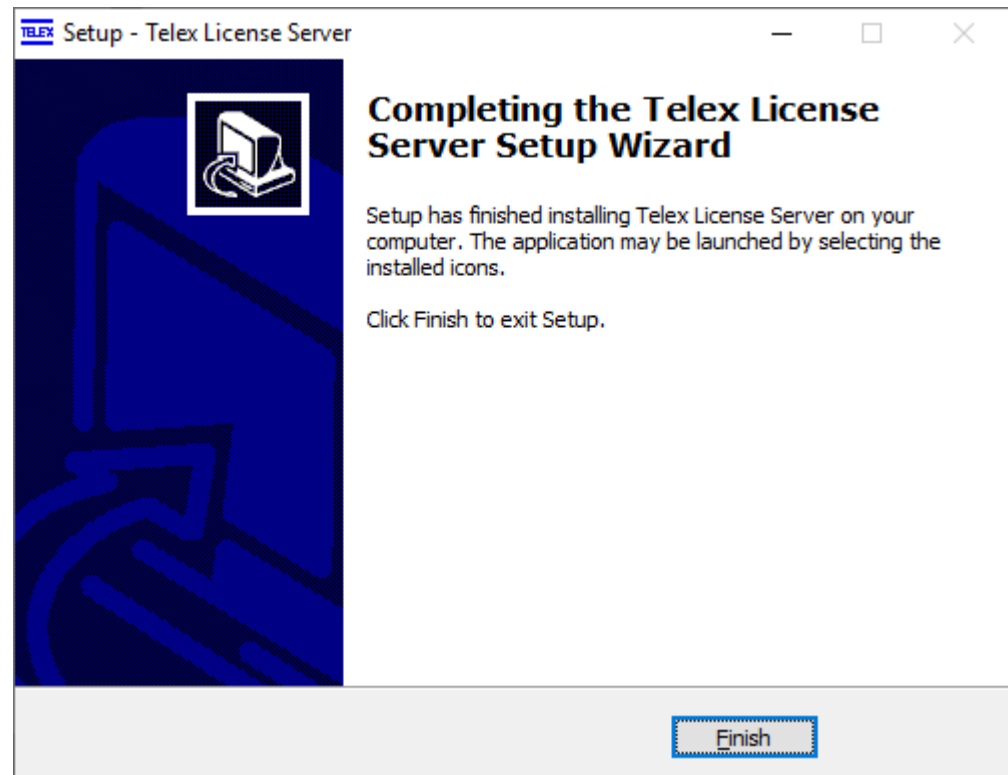
5. Select the **I agree to the license terms and conditions** check box.
6. Click the **Install** button.

Once installed, the Setup Successful window appears.



7. Click the **Close** button.

The Completing the Telex License Server Setup Wizard appears.



8. Click the **Finish** button.

5.5 Initial volume control settings

There are two sets of volume control settings on the computer crucial to the operation of the C-Soft programs. The first set controls playback volumes, and the second set controls recording volumes. Before using the C-Soft applications, these settings need to be checked and adjusted, if necessary.

These steps are only necessary when not using the ADHB-4.

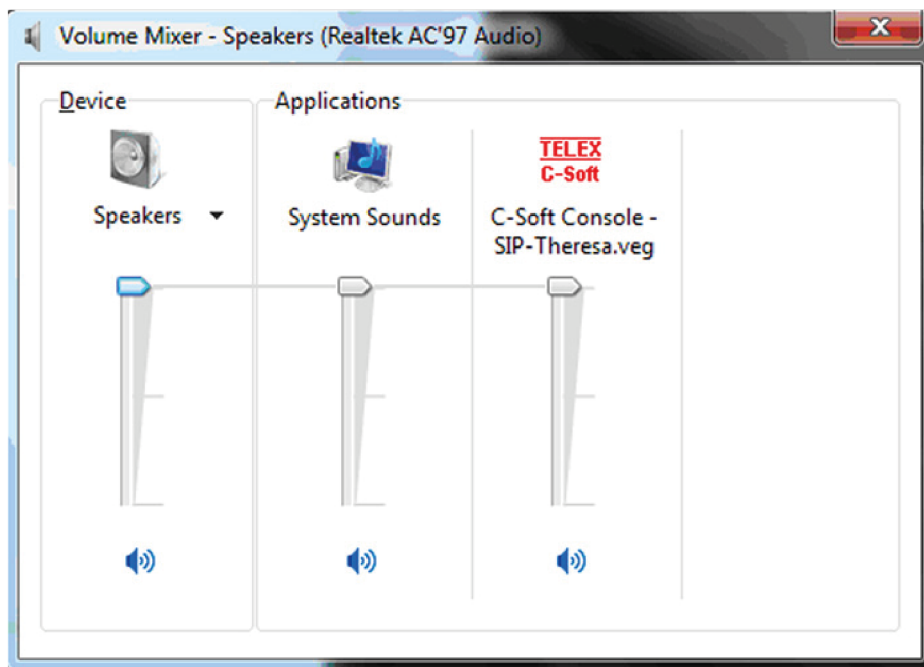
5.5.1 Playback volumes

To **set the playback volume**, do the following:

1. Click the **speaker** icon  in the system tray.
The Mixer window appears.

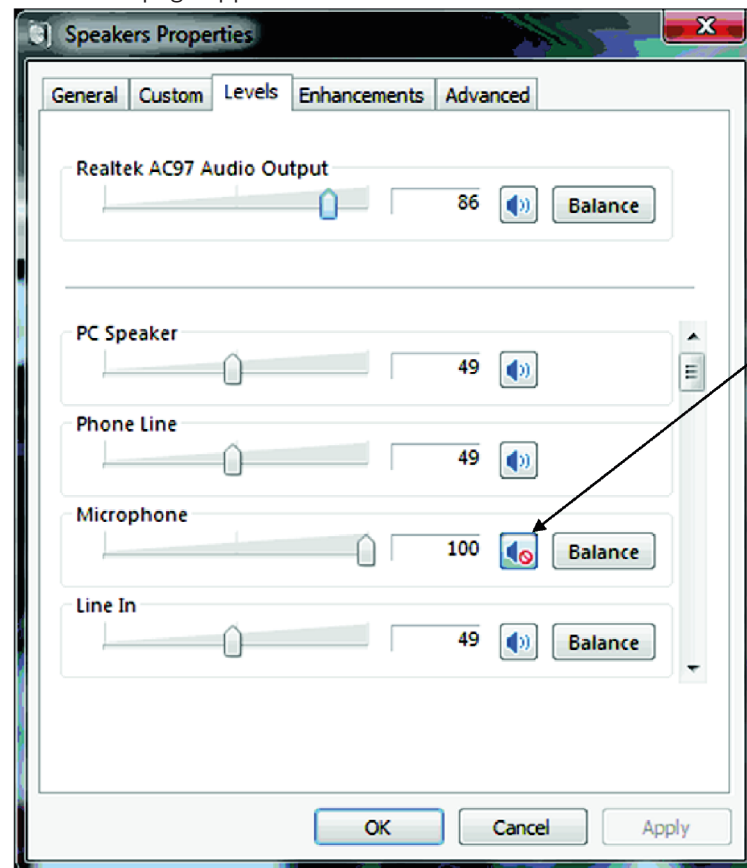
2. Click **Mixer**.

The Volume Mixer window appears.



3. Set the **Device Volume to the maximum level**.
The C-Soft Console volume slider moves to maximum.
4. Click the **Device Speaker's** icon.
The Speaker Properties window appears.

5. Click **Levels**.
The Levels page appears.



UNIVERSAL
NO
SYMBOL

6. If a universal no symbol does not appear on the Microphone's speaker icon, click the **microphone** icon.
The universal no symbol appears on the icon.
OR
If the universal no symbol appears on the **microphone icon**, go to the next step.
7. Click **OK**.
The window closes.

5.5.2

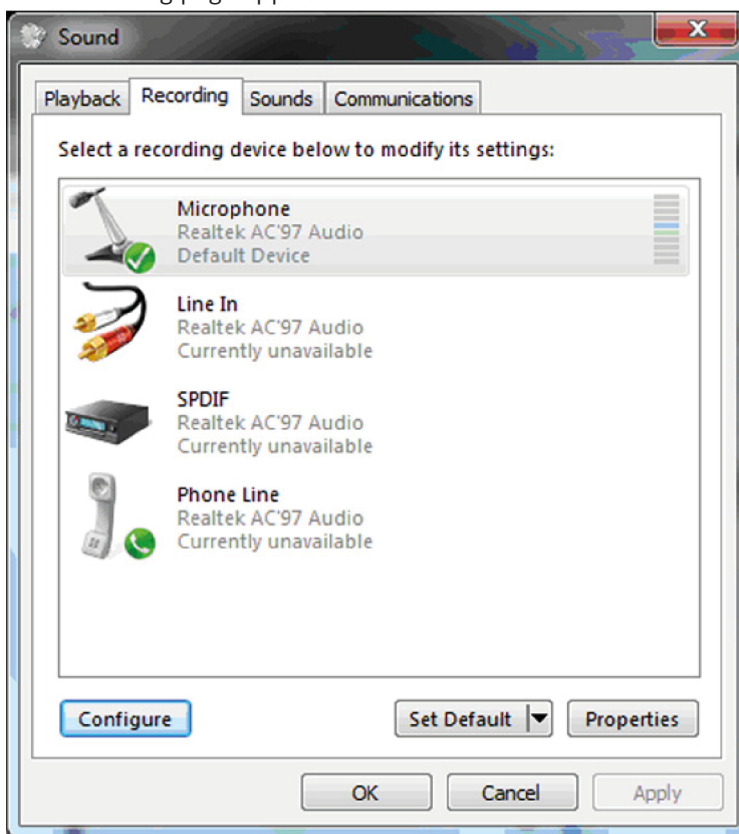
Recording volumes

To **set the recording volumes**, do the following:

1. Right-click the **speaker** icon  in the system tray.

- From the shortcut menu, select **Recording Devices**.

The Recording page appears.

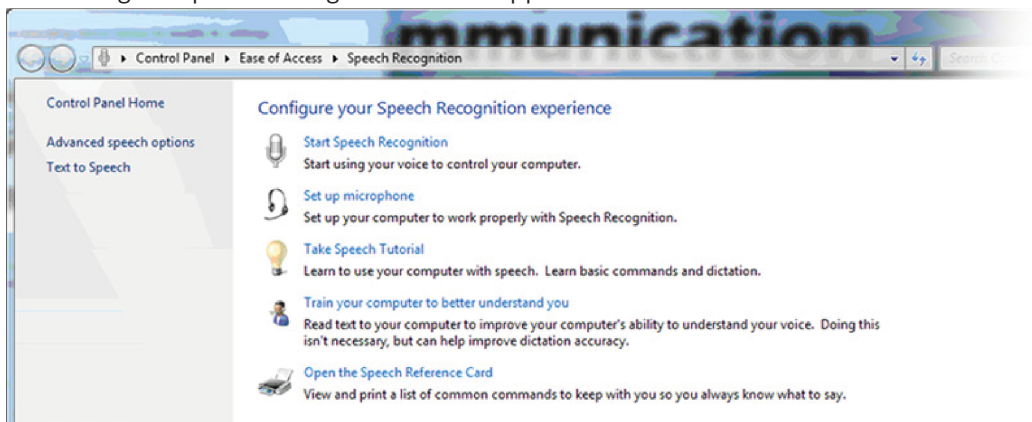


- Click **Microphone**.

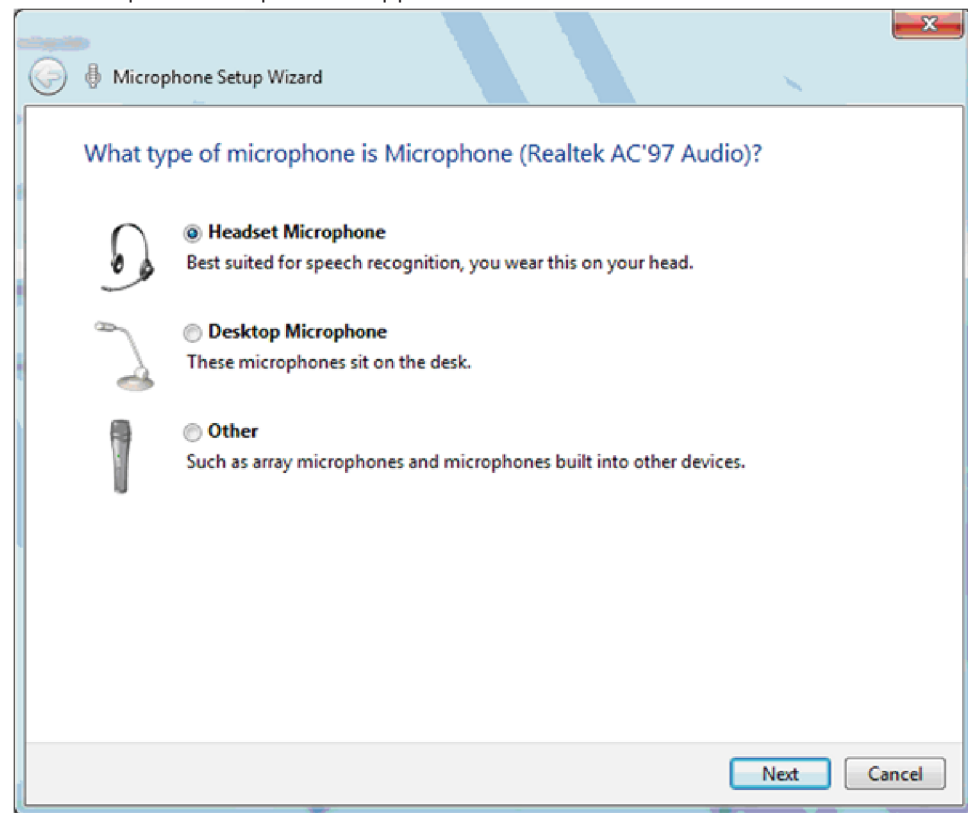
The Configure Button is Enabled.

- Click the **Configure Button**.

The Configure Speech Recognition screen appears.



5. Click **Set up microphone**.
The Microphone Setup Wizard appears.



6. Select the type of **microphone** you want to configure.
7. Click **Next**.
The Set up your microphone window appears.
8. Follow the **instructions** in the window.
9. Click **Next**.
The Adjust Volume window appears.
10. Follow the **instructions** in the window.
11. Click **OK**.
The Sound window closes.
12. Close the **Volume Mixer** window.

5.6 Position settings

These position settings are stored in the devices ProgramData and are used on any design file ran on the device. These settings are configurable when running the C-Soft Installer (7.700 or greater). They can also be configured using TSM for both C-Soft Desktop installations and IP-30XX devices.

Audio Recording Directory: Location of recorded audio

Images Directory: Global location for images

Sounds Directory: Global location for sounds

GPS Directory: Global location for GPS kml files

TSM Username: Username for accessing device from TSM

TSM Password: Password for accessing device from TSM

TSM Ping TTL: TTL for TSM network connection

Position Name: Name of the dispatch position

6 Communications system design

Designing a C-Soft console requires an understanding of the radio network and how the various radios and other communication equipment are connected.

Before you begin to design the C-Soft console, create a road map of the radio, console, and any other communication equipment locations.

This road map must include the following:

- Multicast Addresses for each channel of TX (Transmit) and RX (Receive) communication.
- Port numbers for each channel of TX and RX communication.
- Base IP Addresses assigned to each console or radio on the network and the number of frequencies each radio operates on.
- The number of channels each radio may operate on.

6.1 Communication control

6.1.1 Tone remote control

Telex Radio Dispatch sells a full line of tone control consoles and radio adaptors. This technology requires an analog connection between console and radio. Each console needing to control an individual radio is wired in parallel to allow multiple operator positions to monitor and control the same radio. For a large system with multiple console positions and multiple radio channels, an entire rack might be devoted to bridging audio to all interested parties. In addition, due to loading of multiple consoles on a particular circuit, additional bridging hardware might be required, increasing wiring and tuning of the system for acceptable performance. The Ethernet-based IP network solves many of these issues and provides for a number of other services not previously possible.

6.1.2 VoIP radio control

VoIP is referred to generically throughout this document to mean RoIP (Radio Over Internet Protocol). RoIP terminology is a subset of VoIP and referred to as VoIP generically throughout this document. VoIP is a method of breaking analog audio up into packets to be transferred over a computer data network. Because Ethernet delivers information packets, audio is generally broken into 10-40ms chunks of audio, compressed, and placed on the Ethernet. The nodes of the network are then free to utilize or ignore any combination of packets. If a particular audio stream is of interest, the stream of audio packets are captured, decompressed, converted back to analog, and played on available speakers.

Given the popularity of the Ethernet-based networks, many companies and agencies already have an existing network or LAN (Local Area Network). Beyond that, a large number of companies exist to provide WAN (Wide Area Network) connections between sites with significant distances between them. The WAN connections can be used to connect offices across the street from one another, around the world, or anywhere in between. Possibly the best thing about these connections is they may already exist. In many cases, WAN links are less expensive than a comparable leased analog line and they can carry more conversations simultaneously.

The most compelling reason to consider basing the next radio control system upgrade on VoIP technology is the simplification in wiring requirements. Instead of needing to bring a pair or more of wires, per channel, to each console, only a single connection to the Ethernet is required. Since Ethernet can easily handle dozens of simultaneous connections, it becomes the only pipeline required for all communications.

6.2 PC & Network Security Considerations

No system can be 100% protected against security threats. However, there are measures both manufacturers and users can do to help reduce the likelihood of a malicious attack resulting in either the loss of data or system takeover. We evaluate and improve our products continuously to protect against such attacks. This is only one safeguard used to reduce the likelihood of such an event. There are many more considerations needed to implement measures to strengthen your network security.

We strongly recommend the following considerations:

- Deploy Dispatch products and software on isolated networks that do not connect to other networks, when possible.
- Apply the latest Windows updates and install up-to-date IT security software.
- User rights should be properly administered using group policies to prevent unauthorized use of USB connected devices.
- If the Dispatch network must connect to other networks, install and properly maintain firewalls and intrusion detection systems.
- If Dispatch devices or computers use the Internet to connect, a VPN or tunnel connection should be utilized. Examples of such products are those made by DCB (Data Communications for Business), Cisco, and others.



Notice!

Bosch recommends utilizing the services of IT professionals knowledgeable about network design and security when designing, installing, and configuring dispatch networks and deploying PCs. By default, the Telex Dispatch products using the Windows operating system has Windows Update enabled along with Windows Defender (firewall and anti-virus). Disabling these features is not recommended unless it is part of an internal IT security program that uses customized security policies along with appropriate anti-virus and firewall software.

6.3 Network requirements

6.3.1 IP operation overview

The network options today have essentially converged on Ethernet. A local electronics store may sell many of the components for both a wired or wireless network solution. For more advanced network applications, an in-house or external network hardware source may be required. These sources of information can also help with the design of the network, as well as provide sources for advanced networking equipment, such as routers and hubs from Cisco and other network vendors. This section is an overview of the protocols operating on the top of the Ethernet network.

6.3.2 Ethernet as physical layer

Ethernet is a network and has a low level method for transferring data from one location to another. Source and destinations are based on the MAC (Media Access Control) which is embedded in the Ethernet interface. The MAC Address is unique for all devices in the world and cannot be changed. The IEEE (Institute of Electrical and Electronics Engineers) controls the allocation of the MAC Addresses. The definition for Ethernet includes requirements for inter-operation at speeds of 10 and 100 Mbps. Higher speeds are available, but generally have not filtered down into end-user equipment.

6.3.3 Bandwidth

Each VoIP channel requires 50kBit of bandwidth while active. Full-duplex conversation requires 100kBit of bandwidth.

Some radio systems transmit go-ahead beeps when it is clear to talk. In order for the console operator to hear the beeps, the system must support full-duplex communication. Full-duplex bandwidth may only be required for the first few seconds of a conversation, due to the brief nature of the go-ahead beeps at the beginning of the transmission.

When using Telex's IP-223 with a PIB (Phone Interface Box) or TDI (Telephone Dispatch Interface) adapter, C-6200, or a NI-223 for a telephone connection, a full 100kBit is required since it is a full-time, full-duplex conversation.

Additional vocoders available: Telex 32K (50 kbits/sec simplex), G.726 16K (34 kbits/sec simplex), G.726 32K (50 kbits/sec simplex), G.711 (82 kbits/sec simplex).

6.3.4 Multicast

In general, Telex Dispatch Systems require Multicast to function. The network must be able to create a static Multicast Address, accessible at all times.

Once an IGMP (Internet Group Management Protocol) join message is sent out, networks typically enable Multicast and then prune branches after a period of time. Due to intermittent usage patterns of 2-way radios, such a system can appear to work flawlessly for a period of time and then no longer work.

When using Cisco technology, IP PIM dense mode is recommended. Generally speaking, sparse-dense-mode can also be implemented effectively. We recommend explicitly joining the Multicast group with an IP IGMP static-join X.X.X.X command. For more information on Cisco and IGMP, visit www.cisco.com.

If running Sparse mode, by design Telex equipment only sends a IGMP join message when powered up or queried by routers. The routers need to be configured with a PIM Interval Timer to keep the Multicast group active. (See example below.)

6.3.5 IP PIM query-interval

To configure the frequency of PIM (Protocol Independent Multicast) router query messages, use the ip pim query-interval command in interface configuration mode.

To return the default interval, use the no form of this command:

```
ip pim query-interval seconds
```

```
no ip pim query-interval [seconds]
```

6.3.6 Internet group management protocol

IGMP can be used to control where Multicast is allowed to propagate. This should be limited to subnets utilizing the C-Soft program as the dispatch console and only when used on an intermittent basis (when the C-Soft program is used for a period of time and then shut down). When a console on the subnet is expected to be continually operational, Multicast must be active for the subnet at all times.

6.3.7 Network performance

Networks should perform well under any loading conditions. The default audio delay is 120ms, plus any delay added by the network. While delay alone does not cause issues, variable delay (also known as jitter) does. Jitter, in a network, cannot exceed the maximum packet buffer of any individual product buffer. Refer to the individual product manuals for these specifications. For example, the IP-223 or IP-224 can handle approximately 600ms of network jitter.



Notice!

Losing more than 5% of the total packets transmitted compromises audio quality and system performance. Optimally, packet loss should be less than 1%.

6.3.8 TCP/IP and UDP/IP

TCP/IP (Transmission Control Protocol/Internet Protocol) is the best-known protocol for use in computer communications. It is the basis for communications on the Internet and World Wide Web. It is a guaranteed method of transferring data between two computers. Being guaranteed means for every packet of information transferred from one computer to another an acknowledgement packet is returned. Additional handshaking is utilized from the outset of the data communications to ensure both ends of the connection. Because of this guaranteed communications and its implementation utilizing handshaking (no other method is available), TCP/IP adds a great deal of overhead to data communications is not desirable for audio traffic over a network. This is where UDP/IP finds its acceptance.

UDP/IP (Universal Datagram Protocol/Internet Protocol) has existed as long as TCP/IP as an unreliable method of data communications. The term unreliable should not be thought of as a problem for audio communications over a network connection. UDP allows for a computer to send a packet of data to another computer without the handshaking sequence required within TCP/IP. Because of this, the computer sending the packet has no confirmation the packet arrived at its destination. While the loss of packets can be a problem, it generally is accounted for when the UDP application is developed. In the case of VoIP, the loss of a packet, which only contains 10-40ms of audio, is not a problem, as the human ear generally ignores the small chunk of lost audio. The largest single factor in the loss of UDP/IP packets is network design and loading. UDP applications use algorithms which makes the loss of information the largest single factor in UDP/IP network design and loading. As long as a network is well designed with

capacity for all of its chartered requirements, packet loss can be a non-issue. Because of its lower overhead and its ability to Multicast, UDP/IP is the protocol of choice for VoIP development.

6.3.9 Multicast UDP/IP

Multicast is an extension to UDP/IP. It enables one computer to broadcast data packets to multiple recipients. This is an ideal model for radio communications when multiple people need to monitor the audio. A single VoIP connected radio is set up to broadcast Multicast VoIP packets when receiving audio. Since the Multicast packets can be received by any interested party, all consoles monitoring the audio can receive and decode the packets for playback. In addition to simplifying monitoring of audio traffic by multiple listeners, Multicast also greatly reduces the bandwidth requirement on the network. Instead of having to regenerate the received audio into a UDP/IP data stream to each individual monitor, which uses the bandwidth times the number of monitoring consoles, a single data stream is generated and monitored by all.

Implementation of a Multicast protocol requires a few things for seamless use on a network. First, clients must all support the protocol. This is accepted as given since all Telex Radio Dispatch products utilize Multicast for audio communications. Second, consider if the network infrastructure supports Multicast.

Multicast packets are defined to be all packets with a destination address between 224.0.0.0 and 239.255.255.255. Some of these addresses are commonly used for broadcast audio and are not necessarily available. When a computer opens a UDP/IP port within this address range, it also joins the group. By joining the group, a packet is sent out to all addresses saying it is interested in seeing the traffic on this Multicast address. Routers that receive this broadcast message to join a particular Multicast Address then pass packets through because the router is now aware a listener is interested in this traffic. The routers utilized in the network must support this. The protocol used to alert routers to parties who are interested in certain Multicast Address traffic is IGMP (Internet Group Management Protocol). Telex radio Dispatch products support IGMPv1, as defined in RFC 1112.

In addition to the joining of Multicast broadcast groups, clients on the network can also specify a packet TTL (Time To Live). The TTL is the number of routers the packet goes through before being stopped. As an example, the TTL for a particular broadcasting node on the network is set to 3. This means when a packet is transmitted, it arrives at the first router in the network. This router examines the TTL value in the packet and determines if it should pass it through since it is not zero. When it passes the packet, the router decrements the TTL value by 1 to a value of 2. The next router encountered by packets does the same, reducing the value of TTL to 1. The next router does the same and the TTL is reduced to 0. The next router the packet reaches examines the TTL value, sees it is zero, and the packet is not to be retransmitted. Setting a large TTL value may allow for packets to get from one host to another on a large network, but also adds additional bandwidth requirements due to the larger number of packets being transferred.

6.3.10

Telex Radio Dispatch port-centric method

As mentioned earlier, Telex utilizes Multicast for all audio communications. Typically only one Multicast is used for all traffic. In addition to a valid Multicast Address, a port number is required. The port is an additional two bytes of information ranging between 1054 and 65535 that further specifies how the data traffic should be handled. For example, assume the base Multicast Address chosen is 225.8.11.81. Port 1054 is used to distinguish channel 1's RX traffic. Port 1072 is used to specify channel 1's TX traffic. Channel 2 might use 1055 for RX and 1073 for TX traffic. By making each channel's TX and RX ports different and unique, full-duplex audio can be supported and many channels of traffic can be supported using only one Multicast Address (full-duplex data transmission means data can be transmitted in both directions on a signal carrier at the same time). It is through this method a single console can pick and choose the particular radio resources available on the network without concern for what the console right next to it is utilizing.

7 C-Soft Designer program

The **C-Soft Designer** program is a console designer application used by system specialists to design and configure custom dispatch windows. Various combinations of buttons, sliders, text, and popup windows can be included in a window design. These elements are then configured to operate on specific lines.

The designer can place elements in any desired location, and can include or omit functions based on the requirements of the system and the console operator.

When you are finished designing your VoIP system, the C-Soft console can be created. Before you begin, determine the TX and RX port of each radio, the multicast group(s) used, the number of radios to control, and the frequencies used by each radio.

7.1 Starting the C-Soft Designer program

To **start the C-Soft Designer program**, do the following:

- Double-click the **C-Soft Designer desktop shortcut** created during program installation. The C-Soft Designer program appears.

8 C-Soft Designer window

When the **C-Soft Designer program** is started, the console window, shown in the Figure below, appears. This window is the workspace. It contains the commands and tools needed to design and configure a customized software console.

The C-Soft Designer workspace includes the following components:

- Title Bar
- Menu Bar
- Toolbar
- Console window
- Status Bar

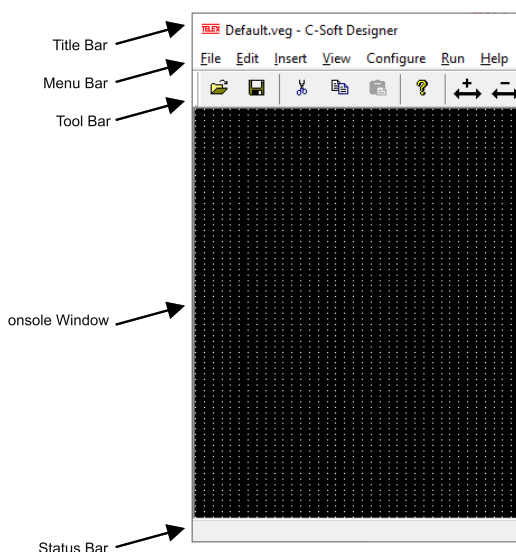


Figure 8.1: C-Soft Designer workspace

Title Bar

The **Title Bar** is located across the top of each window. When a file is opened, the path sequence and file name appear on the title bar.

Menu Bar

The **Menu Bar** is located directly below the title bar and displays menus that contain commands for accessing the C-Soft Designer functions. For example, the Insert menu contains commands to add UI Element Buttons, Volume Sliders, Text, Popup Windows, and more.

Toolbar

The **Toolbar** is located directly below the menu bar and provides quick, easy access to commonly used tasks. Refer to the Table below for a brief description of each button on the toolbar and the action taken when the button is selected.

To **move the toolbar**, do the following:

- Click, hold, and drag the **move handle** on the toolbar or the title bar (blue bar on a floating toolbar) to a new location.

The toolbar can be docked on any side of the window or as a floating toolbar, inside or outside the workspace.

Icon	Tool name	Description
------	-----------	-------------

	Open	Open an existing console design. You can also use File Open.
	Save	Save the current console design. You can also use File Save.
	Cut	Delete the selected item(s). You can also use Edit Cut or the Delete key on the keyboard. This does not place the cut item on the clipboard. After information is cut, you can not retrieve it.
	Copy	Copy the selected item(s). You can also use Edit Copy or CTRL+C. This places the copied item on the clipboard.
	Paste	Insert the item(s) on the clipboard into the console design. You can also use Edit Paste CTRL+V
	About	Display the software version, company contact information, and various statistics about the console design. You can also use Help About C-Soft Designer.
	Increase Width	Increase the width of the selected element. Proportionally increase the size of the selected text.
	Decrease Width	Decrease the width of the selected element. Proportionally decrease the size of the selected text.
	Increase Height	Increase the height of the selected element. Proportionally increase the size of the selected text.
	Decrease Height	Decrease the height of the selected element. Proportionally decrease the size of the selected text.
	Rotate Window	Rotate the selected popup window 90° counter-clockwise around the selected popup button. Rotate the selected text 90° counter-clockwise.
	Move Right	Move the selected item(s) to the right.
	Move Left	Move the selected item(s) to the left.
	Move Up	Move the selected item(s) up.
	Move Down	Move the selected item(s) down.
	Start C-Soft Runtime	Run C-Soft Runtime with the current .veg file loaded in C-Soft Designer.

Tab. 8.1: C-Soft Designer toolbar

Console window

The **Console window** displays the open console design. The console window contains a grid for easy alignment of elements on the window. The grid is a window alignment tool and is not displayed on the console position window.

Status Bar

The **Status Bar** is located at the bottom of the workspace window.

To **display or hide the status bar**, do the following:

- From the View menu, select **Status Bar**.

The status bar view toggles on and off. If there is a check mark next to Status bar in the view menu, the Status bar is visible.

9 User interface element configuration

The **C-Soft Designer program** is heavily dependent on the mouse for interacting with the elements that comprise the console window design. The mouse is used for selecting and moving objects, to access a form or window, and to perform actions on the displayed element or text.

Several standard Windows shortcuts are supported and are listed next to the command on the menu. This section describes C-Soft Designer features available to assist in component manipulation on the console window.

To **select a single item**, do the following:

- Click the **desired item**.

A red target is displayed on the selected element or in the case of text, there is a bounding outline around the selected text.

To **select a group of items**, do the following:

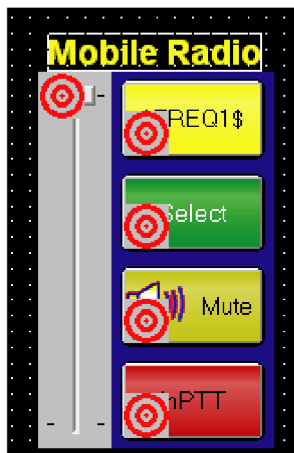
1. Position the **mouse pointer** at the top and to the side of the objects to be selected.
2. Press and hold the **left mouse button** while dragging the mouse over the objects to be selected.

This draws a box around the items selected.

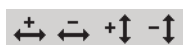
3. When all items are included within the box, release the **mouse button**.

A red target appears on the selected element(s), and, in the case of text, there is a box around the selected text.

You can select all items by pressing Ctrl+A.



A group of items cannot be moved using the mouse. When selected, use either the positioning tools



on the toolbar or the arrow keys on your keyboard to move the items.

To **move an individual item**, do the following:

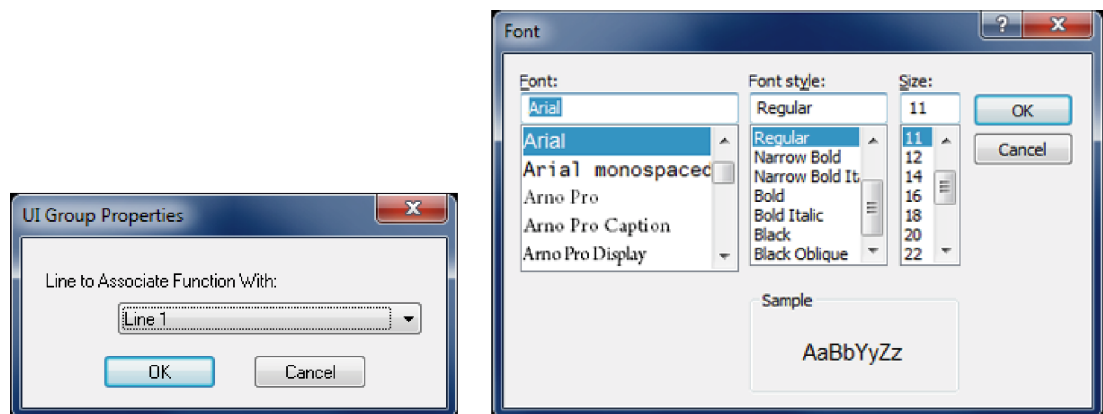
1. Select the **item to be moved**.
2. Drag the **item** to its new location on the window.

To copy and move an individual item at the same time, do the following:

1. Select the **item** while holding down the **Ctrl** key.
2. Drag the **item** to its new location on the window.

This moves the copied item into the new location with all the parameters of the copied item intact. When a popup button is copied using the Ctrl key, the popup window is also copied.

The Ctrl key copies items to allow for large sections of the console window to be designed, copied, and then modified slightly to quickly design the console window.



To **change the line number associated with a group of items**, do the following:

1. Select a **group of items**.
2. Right-click an **element** within the selected group.
A shortcut menu appears.
3. From the shortcut menu, select **Group Line Number**.
The UI Group Properties window appears.
4. From the Line to Associate Function With drop down menu, select the **line** to associate with the selected group.
5. Click **OK**.

The line number for the group is changed.

To **change the border color of a group of items**, do the following:

1. Select a **group of items**.
2. Right-click an **element** within the selected group.
A shortcut menu appears.
3. From the shortcut menu, select **Group Border Color**.
The UI Group Border Color window appears.
4. From the Border Color drop down menu, select the **color** to associate to the group.
5. Click **OK**.

The border color for the group of items is changed.

To **change the font used on the elements in the group**, do the following:

1. Select a **group of items**.
2. Right-click an **element** within the selected group.
A shortcut menu appears.
3. From the shortcut menu, select **Group Font Change**.
The Font window appears.

4. Select the **Font**, **Font style**, and **Size** you want to display on the elements.
A sample of the selected style displays in the Sample field at the bottom of the Font window.
5. Click **OK**.

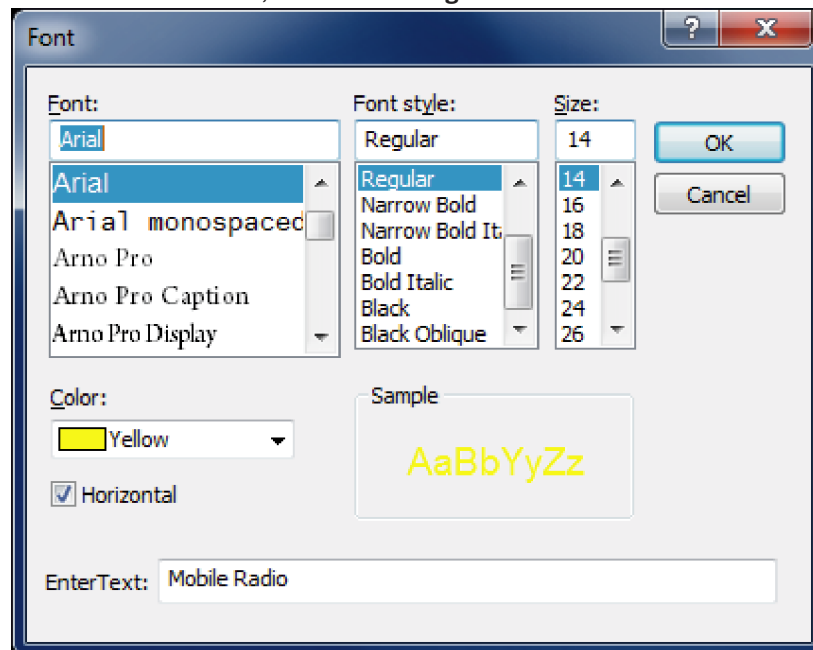
The position of the popup window in relation to the popup button can be changed. The border color of a group can also be changed.

To **change the position of a popup window**, do the following:

1. Right-click a **UI element popup button**.
A shortcut menu appears.
2. From the shortcut menu, select **Open popup**.
A popup window appears.
3. From the toolbar, select the **rotate** icon. 
Each click on the tool rotates the window 90° counter-clockwise around the selected popup button.
OR
Use the arrow keys or directional buttons to **move** the popup window.

To **change a text string**, do the following:

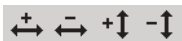
1. Select the **text** you want to change.
A bounding outline appears around the text.
2. Right-click on the **text**.
The Font window appears.
3. In the Enter Text field, make the **changes to the text**.



4. Click **OK** to accept the changes.
The text is changed.
OR
Click **Cancel**.

To **change the size of a button, volume control or text string**, do the following:

1. Select an **item or group of items**.
2. From the menu bar, select the **increase** or **decrease width** and **height** icons.



OR

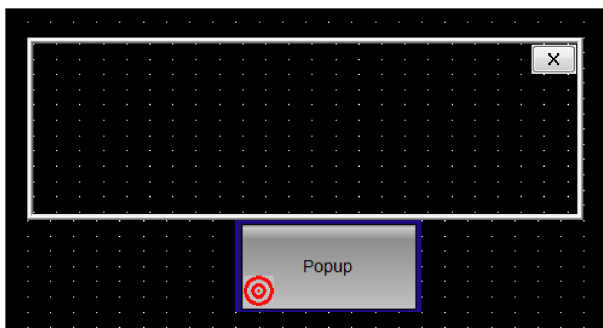
Press the **Ctrl key** while pressing the **arrow keys on your keyboard**.

To **change the size of a popup window**, do the following:

1. Right-click a **UI element popup button**.
A shortcut menu appears.
2. From the shortcut menu, select **Open popup**.
A popup window appears.
3. Select the **popup button**.
4. Use the **increase** or **decrease width** and **height** icons  to size the popup window.

OR

Press the **Ctrl key** while pressing the **arrow keys on your keyboard** to size the popup window.



For more information, refer to the table on "Toolbar".

10

File menu

The **File** menu contains commands for working with files.

Open

Only files in the C-Soft Designer file format (*.veg) or Telex Design Archive (.tda) can be opened by the C-Soft Designer program.

NAVIGATION: Select File | Open from the menu bar.

Save

C-Soft Designer saves the active design to the C-Soft Designer file format (*.veg), or the Telex Design Archive (*.tda) file format. If the active design has not yet been saved to a file, the Save menu opens the Save As dialog to select a destination file name and type.

NAVIGATION: Select File | Save from the menu bar.

Save As

The **Save As...** menu option opens the Save As dialog to select a destination file name, file type, and sets the active design to the specified file.

To **save a file by a different name**, do the following:

1. From the File menu, select **Save As...** .
The Save dialog opens.
2. Navigate to the **desired folder**.
3. In the File Name field, enter the **new file name**.

Import SIP Contacts

To include SIP Phone contacts in your TDA file use the **Import SIP Contacts** menu to open a file chooser to select a SIP Contacts (*.csv or .veg) file. After selecting the file, the file is copied and named to the expected Design Data location corresponding to the current design. As a result, when saving the current Design as a Telex Design Archive, the SIP contacts file is included in the Design Archive and can be deployed to an IP-30XX device.

File Information

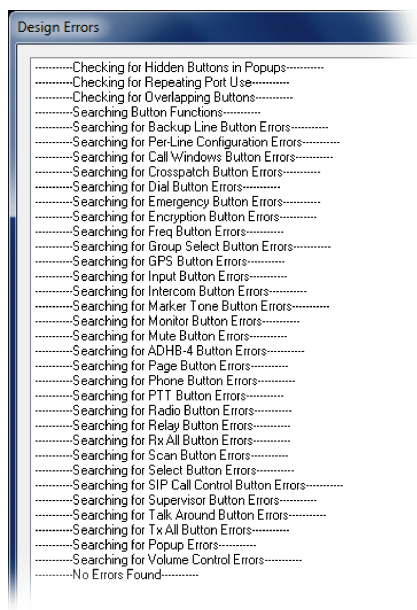
The **File Information** menu opens the File Information window. For more information, see *File Information window*, page 58.

10.1

Design Errors window

The **Design Errors** window appears when a file is saved and C-Soft Designer detects potential errors in the design.

When the file is saved, the C-Soft Designer program performs a validation on the console design. The results of the validation are displayed in the Design Errors window.



When not all the results can be displayed within the window, scroll bars are provided to navigate through all of the test results.

Close button

The **Close** button is used to close the Design Errors window.

10.2

File Information window

The **File Information** menu is used to open the File Information window. This window displays:

- The file path for the currently open file.
- The version of C-Soft Designer used to last save the .veg file, total number of buttons, popups, and sliders used in the current design.
- The Licensing Requirements group box lists the number of lines configured for each feature and lists the minimum C-Soft License Feature that meets the specification.

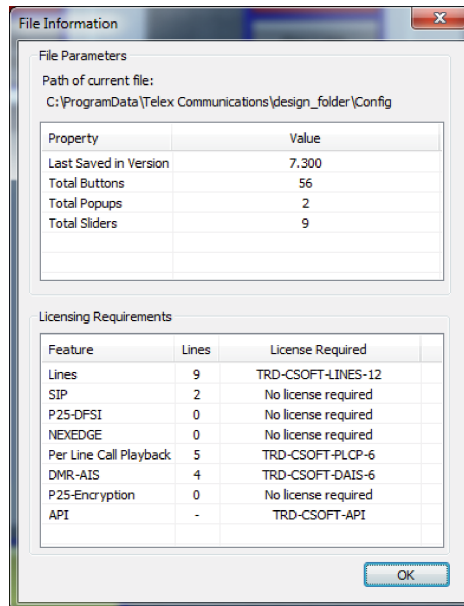


Figure 10.1: File Information window

Refer to

- *File Information window, page 58*

10.3

Telex Design Archive (TDA) files

C-Soft Designer allows the export of a container file called the **TDA** (Telex Design Archive), which contains all the resource files referenced in a given design. The media contents of a design file are not stored in the design and use static addressing to display them in C-Soft Runtime. The TDA container allows creating a design on a separate device that then deploying it to an IP-30XX, which unpacks and copies the resources to the designated storage locations.

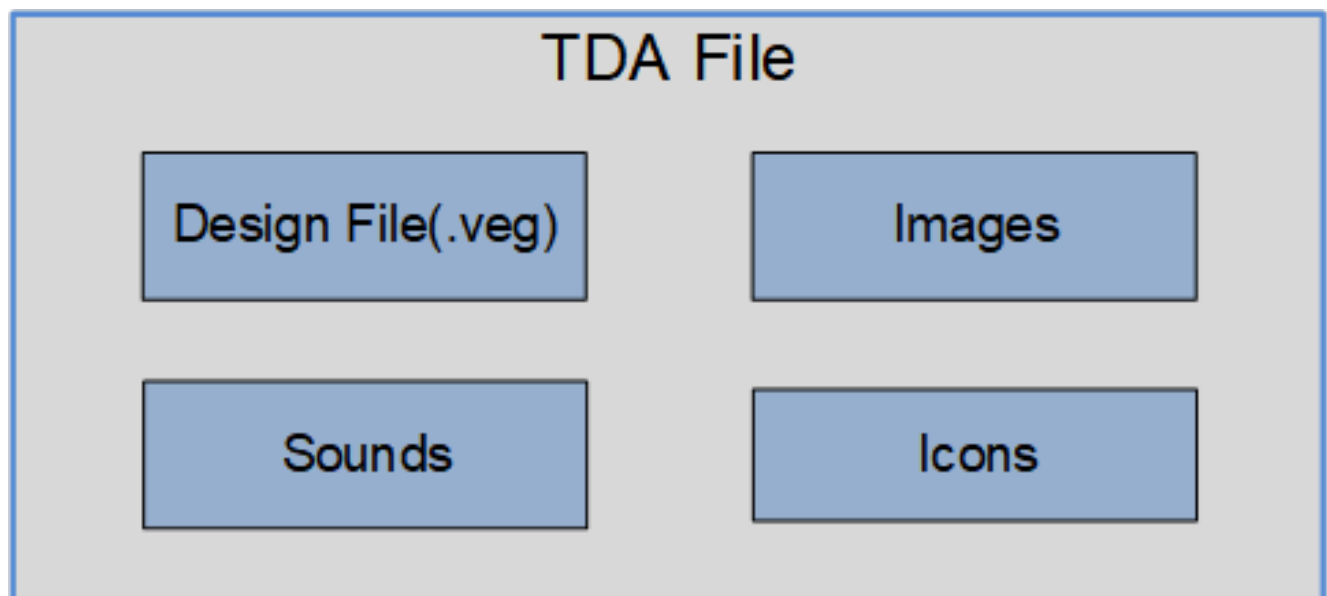


Figure 10.2: TDA Contents

11 Edit menu

The **Edit** menu, shown in the Figure below, contains commands for the setup and revision of per line and global parameters for your VoIP network. This menu also contains commands to create and modify individual elements of the console position design.

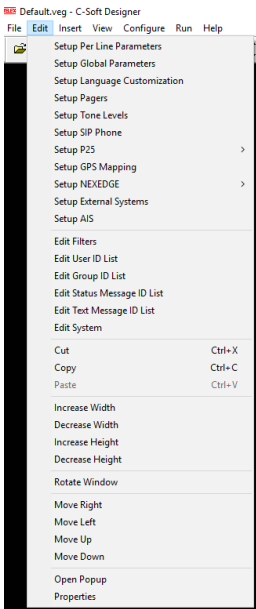


Figure 11.1: Edit Menu

12

Per Line Parameters window

The **Per Line Parameters** window, shown in the Figure below, is used to configure line types, addresses, port information, and line frequencies for the VoIP network. This window allows configuration of up to 200 separate entries.

The frequency, vocoder, backup IP, and signaling parameters for all lines included in the console design must be set up on this window. If the line is not set up on this window, the line is not available as an option when setting up the user interface elements.

Additions and changes can be made to the Per Line Parameters window at any time. However, make sure all UI Elements, assigned to the line, are updated.

NAVIGATION: Select Edit | Setup Per Line Parameters from the menu bar.

The screenshot shows the 'Per Line Parameters' window with a table of 7 lines. Each line has a 'Line Number', 'Line Type', 'Line Name', 'Rx Multicast Address', 'Rx Port', 'Tx Multicast Address', 'Tx Port', 'Base Radio IP', 'TTL', and 'Packet Delay'. There are also checkboxes for 'Echo Packets Enable' and buttons for 'Options', 'Freqs', 'Signal Setup', and 'SIP'.

Line Number	Line Type	Line Name	Rx Multicast Address	Rx Port	Tx Multicast Address	Tx Port	Base Radio IP	TTL	Packet Delay	Echo Packets Enable	Options	Freqs	Signal Setup	SIP
1	Telex	Fire Department	225. 8 . 11 . 81	1054	225. 8 . 11 . 81	1254	0 . 0 . 0 . 0	2	10	☐	Options	Freqs	Signal Setup	SIP
2	Telex	Sidney Police	225. 8 . 11 . 81	1055	225. 8 . 11 . 81	1255	0 . 0 . 0 . 0	2	10	☐	Options	Freqs	Signal Setup	SIP
3	Telex	Newport Police	225. 8 . 11 . 81	1056	225. 8 . 11 . 81	1256	0 . 0 . 0 . 0	2	10	☐	Options	Freqs	Signal Setup	SIP
4	Telex	iDen Line	225. 8 . 11 . 81	1057	225. 8 . 11 . 81	1257	0 . 0 . 0 . 0	2	10	☐	Options	Freqs	Signal Setup	SIP
5	Telex	16kb Vocoder	225. 8 . 11 . 81	1058	225. 8 . 11 . 81	1258	0 . 0 . 0 . 0	2	10	☐	Options	Freqs	Signal Setup	SIP
6	Telex	Supervisor Line	225. 8 . 11 . 81	1059	225. 8 . 11 . 81	1259	0 . 0 . 0 . 0	2	10	☐	Options	Freqs	Signal Setup	SIP
7	Disabled	Line 7	225. 8 . 11 . 81	1060	225. 8 . 11 . 81	1260	0 . 0 . 0 . 0	6	10	☐	Options	Freqs	Signal Setup	SIP

Figure 12.1: Per Line Parameters window

Line Number Field

The **Line Number** field displays the number of the line. This number is used for identification purposes in the design of the console position.

Line Type Drop Down Menu

The **Line Type** drop down menu identifies the type of line being configured. When a selection is made in the line type field, the fields necessary to enter the setup information for that line type are enabled.

Available selections for this field are:

- Disabled - Line is not enabled. When the line is configured, it can be disabled without losing configuration settings. Note that Line 1 cannot be disabled.
- Telex - Compatible with Telex VoIP radio dispatch products, such as the C-6200, IP-223 or IP-224. Select Telex for FleetSync, Sprint Direct Connect, MDC-1200, or MOTOTRBO (refer to “*Copyright notice, page 11*”) Professional Digital Two-Way Radio System.
- Phone - Allows the console to access a telephone line from across the network. Phone configurations require the use of Telex’s PIB or TDI adapter. For more information, see the IP-223 Phone Interface Box Technical Manual (F.01U.188.265) or the Telephone Dispatch Interface Technical Manual (F.01U.196.107) available for download at www.telexradiodispatch.com.

- SIP Phone - Each C-Soft 7.000 License comes with two SIP lines. Additional lines can be purchased as an additional feature, and are available in 6, and 12 line increments. For more information refer to SIP (Session Initiation Protocol) configuration, and to “*SIP Phone line configuration, page 111*”.
- P25-DFSI - For more information, refer to “Setting up a P25-DFSI Line”.
- NEXEDGE - For more information, refer to “NEXEDGE Trunking System Setup”.
- AIS - For more information, refer to “DMR-AIS”.
- P25-CSSI - For more information, refer to “CSSI Interface”.

Line Name Field

The **Line Name** field is used to enter a descriptive name for the line. This name is used for identification purposes in the console position design.

This field can contain up to 30 characters.

RX Multicast Address Fields

The **RX Multicast Address** fields identify the broadcast address for all audio traffic. This dotted quad number must be between 224.0.0.2 and 239.255.255.255. Devices can have the same or different Multicast Address for RX channels. Telex VoIP enabled equipment can use one Multicast Address for all lines with the port number defining the RX channels.

Note:

- Unicast addressing (point-to-point communications) is also supported. Enter a static IP address of the receiving gateway device.
- The RX Multicast Address must match the RX Multicast Address setup on the IP-223, IP-224, or a C-6200 if it is the gateway.

RX Port Fields

The **RX Port** fields identify the RX port numbers. These numbers must be unique per channel and must be between 1054 and 65535.

The RX port number must match the port number set up on the IP-223, IP-224, or a C-6200 if it is the gateway.

TX Multicast Address Fields

The **TX Multicast Address** fields identify the broadcast address for all audio traffic. This dotted quad number must be between 224.0.0.2 and 239.255.255.255. Devices can have the same or different Multicast Address for TX channels. Telex VoIP enabled equipment can use one Multicast Address for all lines with the port number defining the TX channels.

Note:

- Unicast addressing (point-to-point communications) is also supported. Enter a static IP address of the receiving gateway device.
- The TX Multicast Address must match the TX Multicast Address setup on the IP-223, IP-224, or a C-6200 if it is the gateway.

TX Port Fields

The **TX Port** fields identify the TX port numbers. These numbers must be unique per channel and must be between 1054 and 65535.

The TX port number must match the port number set up on the IP-223, IP-224, or a C-6200 if it is the gateway.

EXAMPLE: In the Figure below, the RX Port is 1054 and the TX Port is 1254 for Line 1. All consoles monitoring receive audio for channel 1 must share the same Multicast Address, as well as the same RX port number. Any console transmitting on the network must set its port number to 1254 to cause the radio to key up.

Line Options Setup: Line 1

Line Setup Options

Vocoder Type: **TELEX 32K**

☒ TX Monitor Enable ☐ Scannable

☐ Packet Delay for Satellite Mode

Backup IP Setup

	Multicast Address	Port
RX:	0 . 0 . 0 . 0	1054
TX:	0 . 0 . 0 . 0	1254
Base Radio IP:	0 . 0 . 0 . 0	

OK Cancel

Base Radio IP Field

The **Base Radio IP** field identifies the IP Address of the IP-223 or IP-224 used by the C-Soft program to create a TCP connection to the specified address. This address is required for the C-Soft program to create an internal ping command. It is also required for full-duplex mode (i.e., telephone mode) and to generate encoded message strings (i.e., 5/6 Tone). We recommend you include a base radio IP Address for all lines within your system design.

The base radio IP Address can be configured to periodically ping the IP gateway to determine if a network connection still exists for a particular radio. If there is no response received from the ping, the backup IP radio address is used.

A backup button is available for the console design. This button is used to force a switch, or to monitor whether the primary or backup channel is used. Additional information on this feature is provided in “*Backup Line*, page 232”.

TTL Field

The **TTL** field identifies the number of routers the Multicast audio packets go through before being stopped. The network design dictates this value. If audio is not reaching a particular node on the network, increasing this value may correct the problem.

The range for this field is 1 to 99.

Packet Delay Field

The **Packet Delay** field identifies the length of delay before playback, in 20ms packets. Some buffering of these packets must occur before playback to help absorb network delays, jitters, and lost packets. The typical entry for this field is 6, which translates to a delay of 120ms before playback (each packet is 20ms of audio). Larger values may be required for complicated networks, smaller values for simpler networks.

The range for this field is 4 to 64.

Echo Packets Enable Check Box

The **Echo Packets Enable** check box indicates the system operates on networks that do not support multicast. The C-Soft program must be running at all times to translate and transfer packets from one IP subnet to another.

A typical application has a number of radios spread throughout a network without multicast. In this case, the radio adapters (IP-223s, IP-224s or C-6200s) are programmed to send packets to the IP Address of the PC running the C-Soft program with Echo Packets enabled.

An example of an Echo Packet system, where three different radios are connected through a WAN, is shown in *Appendix D - Echo Packets Diagram, page 478*. In each of the subnets, a single copy of the C-Soft program is used to communicate to the radio in its subnet. A second console is used to echo the audio traffic to other copies of the C-Soft program. The C-Soft program also echoes all traffic to a Multicast Address within its subnet so additional consoles can be added to the system by specifying the Multicast Address.

Options Button

The **Options** button opens the Line Options Setup window, shown in the Figure below, for the selected line.

Freqs Button

The **Freqs** button opens the Frequency Parameters window for the selected line. For more information, refer to “*Frequency Parameters window, page 67*”.

Signal Setup Button

The **Signal Setup** button opens the Signaling Parameters window. For more information, refer to “*Signaling Parameters window, page 72*”.

SIP Button

The **SIP** button opens the Configuration SIP Settings window. For more information, refer to “*Configure SIP Settings window, page 108*”.

12.1

Line Options Setup window

The **Line Options Setup** window is used to configure the monitoring capabilities, digital format in the line setup options and the backup IP to use if network resources of the primary radio interface identified for the line fail.

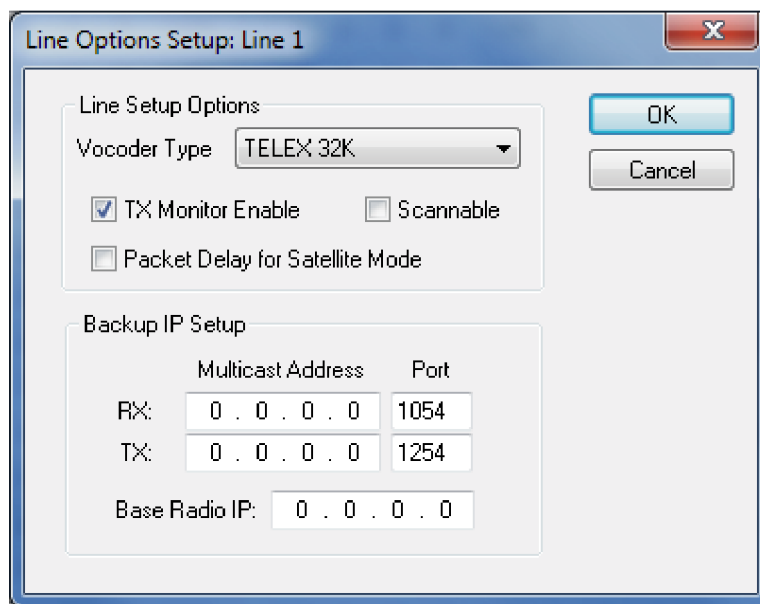


Figure 12.2: Line Options Setup window



Notice!

Vocoder configurations must be the same across devices.

To **open the Line Options Setup window**, do the following:

1. Select **Edit | Per Line Parameter**.
The Per Line Setup window appears.
2. Click **Options**.
The Line Options window appears.

Line Setup Options group box

Vocoder Type drop down menu

The **Vocoder Type** drop down menu indicates the bit rate at which audio is converted into digital format. This feature is used to configure communication between C-Soft and an IP-223 or IP-224.

Available selections for this field are:

TELEX 32K, G.726 16K, G726 32K (IP224 Only), and G.711 64K (IP224 Only).

The G.726 32K (IP224 Only) and G.711 64K (IP224 Only) vocoders are only supported on C-Soft version 6.000 or higher, Network Recorder version 4.500 or higher, and the IP-224.

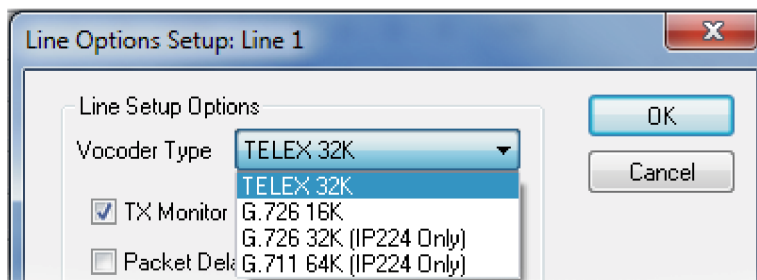


Figure 12.3: Vocoder Type drop down menu - Line Options Setup



Notice!

The **TELEX 32K** is the same as the previous **ADPCM 32K**, and the **G.726 16K** is the same as the previous **ADPCM 16K**.

TX Monitor Enable check box

The **TX Monitor Enable** check box indicates the console operator can monitor TX traffic from other console operators.

Scannable check box

The **Scannable** check box indicates the console operator is allowed to control the scan list of a particular radio. The frequency button is used in C-Soft Runtime to add or delete radio channels from the scan list.



Notice!

This feature is not supported on all radios, only Kenwood TK-x80, TK-x150/180, TX-5x10, and NEXEDGE support.

Packet Delay for Satellite Mode check box

The **Packet Delay for Satellite Mode** check box enables Satellite Mode which means if there is an issue with play out audio within the correct timing (burst of packets instead of consistent 20ms packets) no packets are dropped, but there is an audio delay based on how inconsistently the packets are received.

If not selected, Normal mode is enabled meaning if there is an issue with playing audio within the correct timing, packets are dropped so the audio delay is no longer than the Packet Delay plus 80ms.

Backup IP Setup group box

RX Multicast Address and Port fields

The **RX Multicast Address and Port** fields identify the receive Multicast Address and port to use if the primary receive path fails.

TX Multicast Address and Port fields

The **TX Multicast Address and Port** fields identify the transmit Multicast Address and port to use if the primary transmit path fails.

Base Radio IP field

The **Base Radio IP** field identifies the backup IP Address of the base radio, should the primary address fail.

Buttons

The **OK** button saves the entries and closes the window.

The **Cancel** button discards any changes made and closes the window.

12.2

Frequency Parameters window

The **Frequency Parameters** window, shown in the Figure below, is used to enter the parameters for the individual function tones available for the selected line.

Additions and changes can be made to the Frequency Parameters window at any time. However, if any user interface elements have been placed on the console window, the changes made to a line must also be changed on the individual elements, if needed.

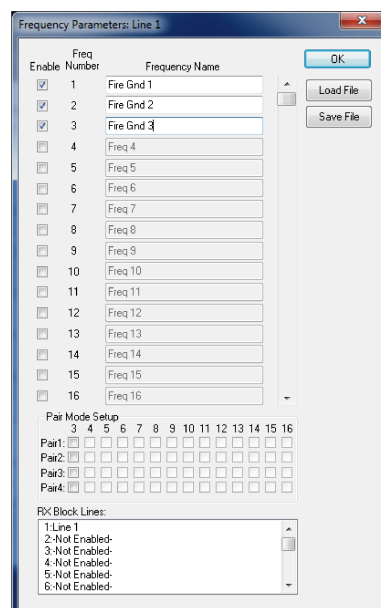


Figure 12.4: Frequency Parameters window

Enable Check Box

The **Enable** check box indicates the corresponding frequency numbers are available to the console operator for selection on the line.

Frequency Name Field

The **Frequency Name** field is used to enter a descriptive name for the frequency. This name is used to identify the frequency for the elements used in the design of the console position and is made available for selection in a list of variables.

When a frequency name is changed, a Frequency Change button's text does not automatically update. This is done separately.

This field can contain up to 20 characters.

OK Button

The **OK** button saves the entries and closes the window.

Load File Button

The **Load File** button is used to load a .csv file into the current frequency window.



Notice!

When the .csv file is loaded, all items in the current list are overwritten.

To **load a saved frequency .csv file**, do the following:

1. Click **Load File**.
The Open window appears.
2. In the Open window, select the **file** you want to load.
3. Click **Open**.

The file is loaded, the Frequency Name field is populated and the Enable check box is selected.

Save File Button

The **Save File** button is used to save the current frequency names to a .csv file.

To **save the currently enabled frequency names to a .csv file**, do the following:

1. Click **Save File**.
The Save As window appears.
2. In the Filename field, enter a **name**.
3. Click **Save**.

The .csv file is saved in the current folder.

Pair Mode Setup Check Boxes

The **Pair Mode Setup** check boxes allow function tones to have control functions not used for actual control of the radio. There are four wildcard groups available per line. Function tones 1 and 2 are not allowed in a wildcard group and a function tone may not be selected in more than one group. One function tone from each group can be active at a time, plus either F1 or F2.

RX Block Lines Display Box

The **RX Block Lines** display box contains a list of all the lines in the system. Each line selected in the list has its received audio blocked from the speaker when the line you are currently configuring is selected. This allows the console operator to transmit on a radio that has overlapping coverage with other radios without getting feedback from the radios receiving the transmitted signal. This function also operates when a parallel console is transmitting on the line.

To **mute a line during transmission**, do the following:

1. Select the **line(s)** in the display box.
The line is highlighted.
2. Click the **line(s)** a second time to clear the selection.

The line is no longer highlighted.



Notice!

Individual lines must have Mute Per-Line buttons associated with them for this feature to work.

12.3

Frequency Parameters windows - MOTOTRBO

Channel Setup Page

When the Freq button for a Telex line configured for a system type of MOTOTRBO line is clicked, the Frequency Parameters window opens to the Channel Setup page. The **Channel Setup** page, shown in the Figure below, is used to enter the MOTOTRBO line's channel, zone, channel name, pair mode setup and RX block.



Notice!

The General Signal Setup window must be configured for MOTOTRBO system type before MOTOTRBO parameters are available on this page. Refer to "Signaling Parameters Window".

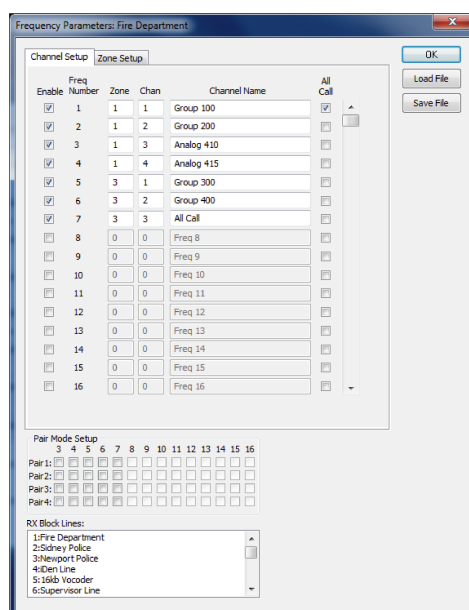


Figure 12.5: Frequency Parameters - Channel Setup Page

Enable check box

The **Enable** check box indicates the corresponding frequency numbers are available to the console operator for selection on the line.

Zone field

The **Zone** field is used to enter a MOTOTRBO zone number. The same zone number must also be configured in the radio.

Chan field

The **Chan** (Channel) field is used to enter a MOTOTRBO channel number. The same channel number must also be configured in the radio.

Channel Name field

The **Channel Name** field is used to enter a user-recognizable name for the frequency. This name identifies the frequency for elements used in the console design and is available for selection in C-Soft Runtime.

This field can contain up to 20 characters.



Notice!

If the Channel Name field is changed, the Channel Name button's text does not automatically update. This is done separately.

All Call Check box

The **All Call** check box indicates the All Call function is enabled in C-Soft for the associated channel. The MOTOTRBO radio must be configured for All Call.

Zone Setup Page

When the **Zone Setup** tab is clicked from the Frequency Parameters window, the Zone Setup page appears. The Zone Setup page, shown in the Figure below, is used to set up zone names. The Zone Setup window supports up to 250 different zone names.

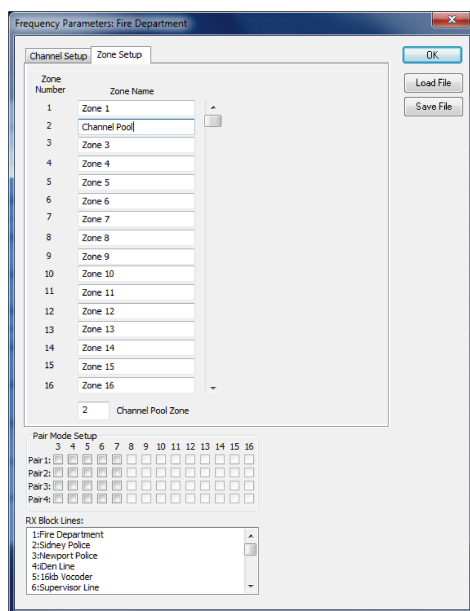


Figure 12.6: Frequency Parameters window - Zone Setup Page

Zone Name field

The **Zone Name** field is used to enter a user-recognizable name for the zone. The name should match the zone name configured in the radio.

This field can contain up to 20 characters.

**Notice!**

A Zone is a place channels are stored in a radio.

Channel Pool Zone field

The **Channel Pool Zone** field indicates the zone number used for a channel pool.

REFERENCE: If there is a fixed zone for channel pool programmed in the MOTOTRBO radio, the zone must be entered in this field. For more information, refer to Motorola's technical documentation.

OK button

The **OK** button saves the entries and closes the window.

Load File button

The **Load File** button is used to load a .csv file into the current frequency window.

**Notice!**

When the .csv file is loaded, all items in the current list are overwritten.

To **download a saved frequency .csv file**, do the following:

1. Click **Load File**.
The Open window appears.
2. In the Open window, select the desired **file**.
3. Click **Open**.

The file is loaded, the Frequency Name field is populated and the Enable check box is selected.

Save File button

The **Save File** button is used to save the current frequency names to a .csv file.

To **save the currently enabled frequency names to a .csv file**, do the following:

1. Click **Save File**.
The Save As window appears.
2. In the Filename field, enter a **name**.
3. Click **Save**.

The .csv file is saved in the current folder.

Pair Mode Setup check boxes

The **Pair Mode Setup** check boxes allow function tones to have control functions not used for actual control of the radio. There are four wildcard groups available per line. Function tones 1 and 2 are not allowed in a wildcard group and a function tone may not be selected in more than one group. One function tone from each group can be active at a time, plus either F1 or F2.

RX Block Lines display box

The **RX Block Lines** display box contains a list of all the lines in the system. Each line selected in the list has its received audio blocked from the speaker when the line you are currently configuring is selected. This allows the console operator to transmit on a radio that has overlapping coverage with other radios without getting feedback from the radios receiving the transmitted signal. This function also operates when a parallel console is transmitting on the line.

To **mute a line during transmission**, do the following:

1. Select the **line(s)** in the display box.
The line is highlighted.
2. Click the **line(s)** a second time to clear the selection.
The line is no longer highlighted.

**Notice!**

Individual lines must have Mute Per-Line buttons associated with them for this feature to work.

12.4**Signaling Parameters window**

When Telex is selected in the Line Type drop down menu, and the Signal Setup button on the Per Line Parameters window is clicked, the General Signal Setup page, shown in the Figure below, appears.

Signaling Parameters: Line 1

General Signal Setup

System Settings

System Type: Generic

System Name: None Edit System

Signaling AutoFill Setup

☐ Enable Signaling AutoFill

Starting Line Number: 1

Ending Line Number: 1

Call Logging

☒ Display All Calls

System Settings Group Box

System Type drop down menu

The **System Type** drop down menu is used to configure the signaling type for the individual line.

Available selections for Telex Line Type are:

- Generic - For more information, refer to “*Generic system type, page 75*”.
- 5/6 Tone/DTMF ANI - For more information, refer to “*5-6 Tone/DTMF ANI system type, page 75*”.
- FleetSync - For more information, refer to “*FleetSync system type, page 83*”.
- iDEN - For more information, refer to “*iDEN System Type*”.
- Telex-Serial - For more information, refer to “*Telex-Serial system type, page 86*”.
- MDC-1200 - For more information, refer to “*MDC-1200 system type, page 88*”.
- MOTOTRBO - For more information, refer to “*MOTOTRBO system type, page 92*”.
- Sprint Direct Connect - For more information, refer to “*Sprint Direct Connect system type, page 96*”.
- Telex-Enhanced-ANI - For more information, refer to “*Telex-Enhanced-ANI system type, page 98*”.

Available selections for Phone Line Type are:

- Generic - For more information, refer to “*Generic system type, page 75*”.
- Phone - For more information, refer to “*Phone system type, page 100*”.

Available selections for P25-DFSI Line Type are:

- P25-DFSI - For more information, refer to Appendix E, “Setting up a P25-DFSI Line”.

Available selections for NEXEDGE Line Type are:

- NEXEDGE - For more information, refer to Appendix F, “NEXEDGE Trunking System Setup”.

Available selections for P25-CSSI Line Type are:

- P25-CSSI For more information, refer to Appendix G, “CSSI Interface”.

**Notice!**

The Signaling Setup button is disabled for lines types of Disabled and SIP.

System Name drop down menu

The **System Name** drop down menu is used to select a system for the selected line. If the System Type field is set to FleetSync, MDC-1200, MOTOTRBO or Telex-Serial, this field becomes active.

**Notice!**

Systems are configured by the user. Refer to “Edit System List Window”.

Edit System button

The **Edit System** button is used to open the Edit System window. From this window, you can modify the systems included in the Per Line Parameter configuration. For more information, refer to “Edit System List Window”.

Signaling Autofill Setup group box**Enable Signaling Autofill check box**

The **Enable Signaling Autofill** check box indicates the signaling parameters configured on the current line are copied and then pasted into the corresponding line numbers.

Starting Line Number field

The **Starting Line Number** field is used to indicate the first line to which signaling parameters are copied.

**Notice!**

The Enable Signaling Autofill check box must be selected to enable autofill.

Ending Line Number field

The **Ending Line Number** field is used to indicate the last line to which signaling parameters are copied.

**Notice!**

The Enable Signaling Autofill check box must be selected to enable autofill.

Call Logging group box**Display All Calls check box**

The **Display All Calls** check box allows you to choose to display all calls in the Per-Line Call History window, regardless of the call's destination ID. If cleared, only calls sent to the console or a group containing the console's ID are displayed in the Per-Line Call History Window.

**Notice!**

The Display All Calls check box is only enabled when the following System Types are selected: Generic, 5/6 Tone/DTMF ANI, FleetSync, and MDC-1200. For other system types, the Display All Calls check box is not applicable.

OK button

The **OK** button saves the entries and closes the window.

Cancel button

The **Cancel** button discards any settings made and closes the window.

12.5

Signal system types

12.5.1

Generic system type

The **Generic** system type option is used to configure the line for a system type other than those listed.

To **configure the line for a Generic system**, do the following:

1. Select **Edit | Per Line Parameters** from the menu bar.
The Per Line Parameters window appears.
2. From the Line Type drop down menu, select **Telex**.
3. Click **Signal Setup**.
The Signaling Parameters window appears.
4. From the System Type drop down menu, select **Generic**.
5. Select **Display All Calls**, to display all calls in the Per-Line Call History window.

12.5.2

5-6 Tone/DTMF ANI system type

The **5/6 Tone/DTMF ANI** (Automatic Number Identification) system type option is used to set the line type signal to 5/6 tone or DTMF signaling.

**Notice!**

The IP-224 does not support 5/6 Tone or DTMF encoding or decoding functions.

To **configure the line for a 5/6 DTMF ANI type**, do the following:

1. Select **Edit | Per Line Parameters** from the menu bar.
The Per Line Parameters window appears.
2. From the Line Type drop down menu, select **Telex**.
3. Click **Signal Setup**.
The Signaling Parameters window appears.
4. From the System Type drop down menu, select **5-6 Tone/DTMF ANI**.
The 5/6 Tone DTMF ANI Setup tab and Call Setup tab appear.

5/6 Tone DTMF ANI Setup page

When 5/6 Tone DTMF ANI is selected from the System Type drop down menu, the **5/6 Tone/DTMF ANI Setup** page appears, as shown in the Figure below.

The screenshot shows the 'Signaling Parameters: Sidney Police' window with the '5-6 Tone/DTMF ANI Setup' tab selected. The window is divided into several sections:

- Per Line Console ID:** Unit ID: 123
- Signaling Setup:**
 - Signaling Type: CCIR1 (dropdown)
 - Digit Duration: 25 ms
 - Interdigit Duration: 0 ms
 - Pause Duration: 25 ms
 - Preamble Duration: 25 ms
 - Level: -3 dB
 - Twist Level: 0 dB
 - Group Digit: A
 - Repeat Digit: E
- Auto Ack Setup:**
 - Auto Ack Type: Disabled (dropdown)
 - Auto Ack Delay: 1000 ms
- Single Tone Auto Ack Setup:**
 - Frequency: 1000 Hz
 - Duration: 25 ms
 - Level: -3 dB
- Signaling Delays:**
 - Initial Delay: 750 ms
 - End Delay: 0 ms

A 'Defaults' button is located in the top right corner of the window.

Figure 12.7: 5/6 Tone/DTMF ANI Setup Page - Signaling Parameters

Per Line Console ID group box

Unit ID field

The **Unit ID** field is used to assign a numeric identifier to the console's line. The unit ID appears when a radio is called from the specified console line.

This field can contain up to 8 digits.

Signaling Setup group box

Signaling Type drop down menu

The **Signaling Type** drop down menu identifies the signaling type used when generating a call.

Available selections for this field are:

- CCIR1
- CCIR2
- DTMF
- DZVEI
- EEA
- EIA
- EURO
- KENWOOD 5-TONE
- MODAT
- NATEL
- PCCIR
- PDZVEI
- PZVEI
- ZVEI1
- ZVEI2

Digit Duration field

The **Digit Duration** field represents the length of time, in ms, the digit tone plays when it is active.

The range for this field is 25 to 9999ms.

Interdigit Duration field

The **Interdigit Duration** field represents the length of time, in ms, between the digit tones within a group.

The range for this field is 25 to 9999ms.

Pause Duration field

The **Pause Duration** field represents the length of time, in ms, allowed between transmitted groups.

The range for this field is 25 to 9999ms.

**Notice!**

The pause duration must be at least the sum of the Digit and Interdigit Duration fields.

Preamble Duration field

The **Preamble Duration** field represents the length of time, in ms, the first tone digit plays. With some radio systems, the first tone needs to be longer than subsequent tones. For example, the first tone may be used to activate a dormant (battery saving) state.

The range for this field is 25 to 9999ms.

**Notice!**

The preamble duration must be at least the amount of the Digit Duration field.

Level field

The **Level** field represents the relative level, in dB, the encoded message sends.

The range for this field is -20dB to +12dB.

Twist Level field

The **Twist Level** field represents the relative level difference, in dB, of high and low tones generated when using DTMF tone types. This field is only active when DTMF is the selected tone type.

The range for this field is -10dB to +10dB.

Group Digit field

The **Group Digit** field represents the group identification defined by the radio system. Typically this digit is not used anywhere else in the system.

This range for this field is 0-9 or A-D, # and *.

Repeat Digit field

The **Repeat Digit** field identifies a repeat digit. Repeat digits are used to signal a digit has been repeated. Repeat digits are used to maintain tone transitions at appropriate intervals, which simplifies the decode function.

EXAMPLE: The repeat digit is E and the subscriber ID is 23335. The encoder string would actually send a tone string of 23E35.

Defaults button

The **Defaults** button resets all the signal parameters back to the default values.

Auto Ack Setup group box**Auto Ack Type drop down menu**

The **Auto Ack Type** drop down menu allows you to choose the signaling type desired to acknowledge receipt of a call.

Available selections for this field are:

- Disabled - Indicates no acknowledgement is sent after receiving a call.
- Single-Tone - Indicates a single tone is sent after receiving a call.
- Signaling - Indicates the Auto Ack field is available for formatting.

For more information, refer to “Auto Ack Field” in “Auto Ack Field”.

Auto Ack Delay field

The **Auto Ack Delay** field allows you to configure the lead-in delay, in ms, for receiving messages configured to transmit acknowledgements back to the calling radio.

The range for this field is 0 to 9999ms.

Single Tone Auto Ack Setup group box

Frequency field

The **Frequency** field represents the frequency, in Hz, generated during a single tone acknowledgement.

The range for this field is 0 to 4000Hz.

Duration field

The **Duration** field represents the duration, in ms, of the single tone acknowledgement.

The range for this field is 25 to 9999ms.

Level field

The **Level** field represents the relative level, in dB, the encoded message sends.

The range for this field is -20dB to +12dB.

Signaling Delays group box

Initial Delay field

The **Initial Delay** field represents the lead-in delay, in ms, for console-generated messages transmitted to the field radios.

The range for this field is 0 to 9999ms.

End Delay field

The **End Delay** field identifies the delay, in ms, at the end of transmitted messages to the field. It delimits the tone string.

The range for this field is 0 to 9999ms.



Notice!

A value is required for this field. Do not leave blank.

Call Setup page

When 5/6 Tone/DTMF Tone ANI is selected from the System Type drop down menu the **Call Setup** page appears, shown in the Figure below.

Figure 12.8: Call Setup Page - Signaling Parameters

Call Setup group box

Auto Ack field

The **Auto Ack** field represents an automatically generated acknowledgement message that is sent to the field after receiving a select call. First, configure the “Auto Ack Type drop down menu”, then configure this field using the proper format.

This field can contain up to 32 characters.

Field values can be: Low or High.

- DTMF Format - Allows for 0-9, *, #, A-D, G, I, K, P, R, and S.
- 5-Tone Format - Allows for 0-9, A-F, G, I, K, P, R, and S.

For more information, refer to the table “Call setup group format descriptions” below.

Emerg Resolved field

The **Emerg Resolved** (Emergency Resolved) field represents the message sent each time an emergency is acknowledged (for example, when the Emergency Ack button is pressed in the Active Emergency window).

This field can contain up to 32 characters.



Notice!

A message is sent only if the emergency is active.

Field values can be: Low or High.

- DTMF Format - Allows for 0-9, *, #, A-D, G, I, K, P, R, and S.
- 5-Tone Format - Allows for 0-9, A-F, G, I, K, P, R, and S.

For more information, refer to the table “Call setup group format descriptions” below.

PTT BOT field

The **PTT BOT** (Push-To-Talk Beginning Of Transmit) field represents the message sent each time the PTT button is pressed on the console at the beginning of transmit.

This field can contain up to 32 characters.

Field values can be: Low or High.

- DTMF Format - Allows for 0-9, *, #, A-D, G, I, K, P, R, and S.
- 5-Tone Format - Allows for 0-9, A-F, G, I, K, P, R, and S.

For more information, refer to the table “Call setup group format descriptions” below.

PTT EOT field

The **PTT EOT** (Push-To-Talk End Of Transmit) field represents the message sent each time the PTT button is pressed on the console at the end of transmit.

This field can contain up to 32 characters.

Field values can be: Low or High.

- DTMF Format - Allows for 0-9, *, #, A-D, G, I, K, P, R, and S.
- 5-Tone Format - Allows for 0-9, A-F, G, I, K, P, R, and S.

For more information, refer to the table “Call setup group format descriptions” below.

Call (1-10) Format field

The **Call (1-10) Format** fields represent the message sent when selected by the console operator on the Per Line Call History, Call List Window, or the Manual Call List window. Refer to the Figure below.

This field can contain up to 32 characters.

Field values can be: Low or High.

- DTMF Format - Allows for 0-9, *, #, A-D, G, I, K, P, R, and S.
- 5-Tone Format - Allows for 0-9, A-F, G, I, K, P, R, and S.

For more information, refer to the table “Call setup group format descriptions” below.

Call (1-10) Label field

The **Call (1-10) Label** fields represent the label applied to the button on the Per Line Call History, the Manual Call Window, and the Call List Window popup button, shown in the Figure below.

This field can contain up to 31 alphanumeric characters.

Defaults button

The **Defaults** button resets the fields to their default values.

Value	Description
I	Stands for Console ID. Use the “Unit ID Field” on page 75 or “User ID Field” on page 83 to configure the Console ID. This value must match the number of digits in the Console ID. For example, the Console ID is 123, the value entered in the format field would be III.
G	Stands for Group. This is used to make a Group Call. The Group ID is configured on the “Edit System List Window - System Menu” on page 180 to configure Group IDs. This value must match the number of digits in the Group ID. For example, the Group ID is 5000A, the value entered in the format field would be GGGGG. NOTE: Not applicable for iDEN setup.
S	Stands for Status. Use the “Status Message ID List Window” on page 172 to configure Status IDs.
P	Stands for Pause. When you want to format a pause into the string being sent out, use a P. Pause Duration is set up in Signaling Setup.
R	Stands for Radio ID. You must enter the exact number of digits in the radio ID. For example, if you pick User ID 12356, you must enter RRRRR.
K	Takes all the digits in the User ID of the type of call being made. In this format, you can enter a K, which enters all numbers associated with the User ID column.
NOTE: You can use any combination of these values with the numerical digits to create formats.	

Tab. 12.2: Call setup group format descriptions

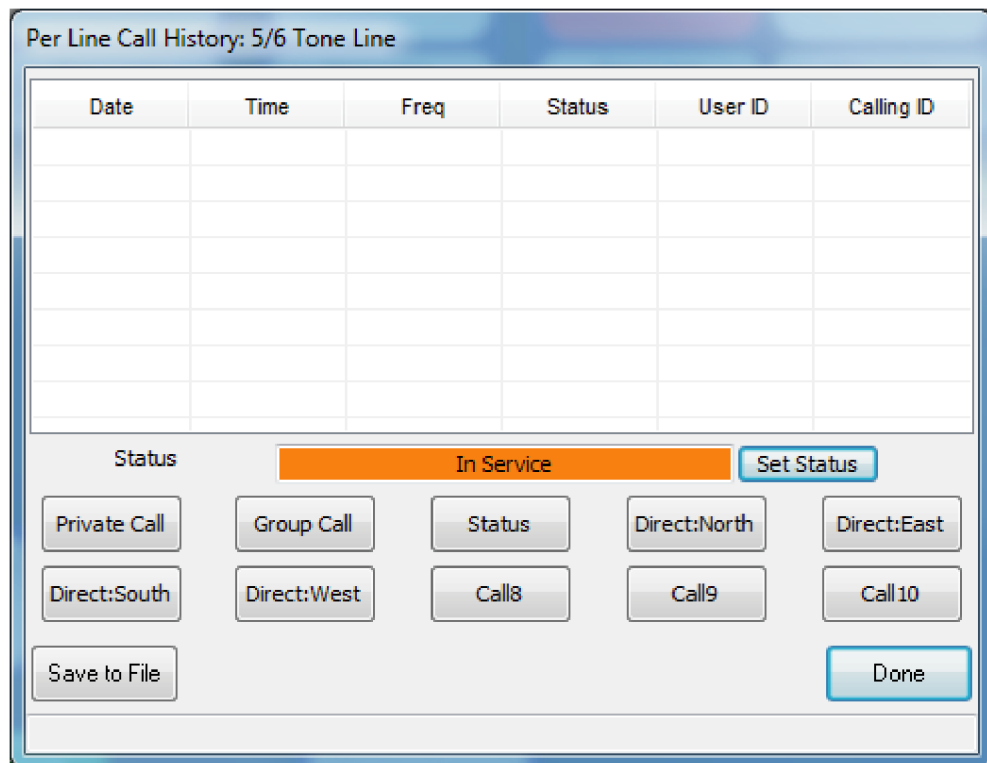


Figure 12.9: Per Line Call History Window for 5/6 Tone or iDEN Line

12.5.3

FleetSync system type

The **FleetSync** system type option is used to configure the line used to encode/decode FleetSync IDs and status codes.

Signaling Parameters: Line 1

General Signal Setup

System Settings

System Type: Generic ▼

System Name:

Signaling AutoFill Setup

☐ Enable Signaling

Starting Line Number:

Ending Line Number:

Call Logging

☒ Display All Calls

Figure 12.10: FleetSync System Type

To **set the system type to FleetSync**, do the following:

1. Select **Edit | Per Line Parameters** from the menu bar.
The Per Line Parameters window appears.
2. From the Line Type drop down menu, select **Telex**.
3. Click **Signal Setup**.
The Signaling Parameters window appears.
4. From the System Type drop down menu, select **FleetSync**.
The FleetSync Setup tab appears.
5. From the System Name drop down menu, select a **system** for the line.

FleetSync Setup page

When FleetSync is selected from the System Type drop down menu, the **FleetSync Setup** page appears, shown in the Figure below.

The screenshot shows a software window titled "Signaling Parameters: Fire Department". It has two tabs: "General Signal Setup" and "FleetSync Setup", with the latter being active. The "FleetSync Setup" tab contains three main sections: "Per Line Console ID", "Call Permission Setup", and "User Display Options". The "Per Line Console ID" section has two input fields: "Fleet ID" with the value "100" and "User ID" with the value "1000". The "Call Permission Setup" section has two checked checkboxes: "Allow Broadcast Calls on this Line" and "Allow InterFleet Calls on this Line". The "User Display Options" section has one unchecked checkbox: "Only Display Filters".

Figure 12.11: FleetSync Setup Page—Signaling Parameters

Per Line Console ID group box

The **Per Line Console ID** group box is used to define the Fleet ID and User ID. The Fleet ID is added to the front of the User ID to create the Per Line Console ID. This ID appears on radio when receiving data/audio from that console line.

EXAMPLE: To create console ID 1234567, enter 123 as the Fleet ID and 4567 as the User ID. Whenever the operator presses the PTT button or send a FleetSync data message, the receiving radios display the console ID configured for the line.

Fleet ID field

The **Fleet ID** field is used to enter the 3-digit Fleet ID number of a group of FleetSync radios and is assigned per line.

The range for this field is 100 to 349.

Unit ID field

The **User ID** field is used to identify the console's 4-digit User ID to FleetSync radios programmed for Over-The-Air-Protocol.

The range for this field is 1000 to 4999.

Note:

- The IP-223 or IP-224 must be configured for FleetSync Encode.
- The Console ID does not appear if the mobile radio connected to the IP-224 is configured for FleetSync Signaling.

Call Permission Setup group box

Allow Broadcast Calls on this Line check box

The **Allow Broadcast Calls on this Line** check box is used to grant the line permission to place FleetSync broadcast calls.

Allow InterFleet Calls on this Line check box

The **Allow InterFleet Calls on this Line** check box is used to grant the line permission to place calls to fleets or units outside the console's fleet.

User Display Options group box

Only Display Filters check box

The **Only Display Filters** check box indicates, in addition to the system name, that only filters containing fleets and units display in the C-Soft Runtime FleetSync Dispatching window's system list, refer to the Figure below. All components in the system are visible including groups and individuals, otherwise only filters and their components are visible.



Notice!

The Only Display Filters check box controls the system list appearance only. Component permissions are controlled per line, refer to “*FleetSync system type, page 83*”.

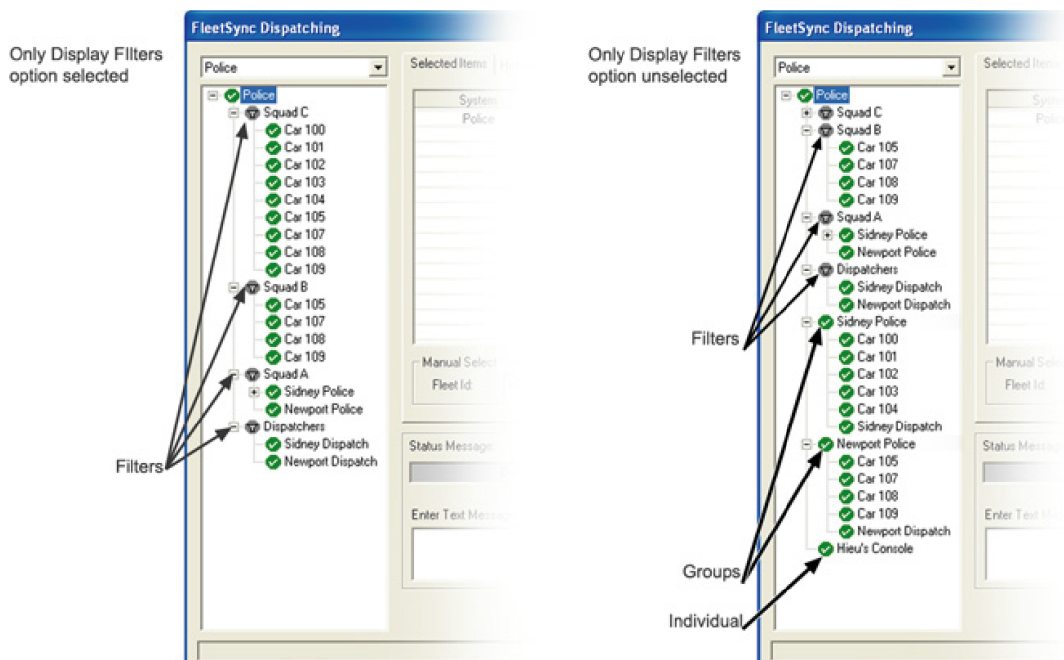


Figure 12.12: FleetSync System List Filters Display in C-Soft Runtime

12.5.4

Telex-Serial system type

The **Telex-Serial** system type option is used to configure the line for serial radio control. The System Type is used for a variety of radio brands. Consult the IP-224 user manual for a full list of radios utilizing the Telex-Serial Type option.

Signaling Parameters: Line 1

General Signal Setup

System Settings

System Type: Generic ▼

System Name: Generic 5/6 Tone/DTMF ANI FleetSync iDEN Telex-Serial MDC-1200 MOTOTRBO Sprint Direct Connect Telex-Enhanced-ANI

☐ Enable Signaling

Starting Line Number: 1

Ending Line Number: 1

Edit System

Call Logging

☒ Display All Calls

Figure 12.13: Telex-Serial System Type

To **set the system type to Telex-Serial**, do the following:

1. Select **Edit | Per Line Parameters** from the menu bar.
The Per Line Parameters window appears.
2. From the Line Type drop down menu, select **Telex**.
3. Click **Signal Setup**.
The Signaling Parameters window appears.
4. From the System Type drop down menu, select **Telex-Serial**.
The Telex-Serial Setup tab appears.
5. From the System Name drop down menu, select a **system** for the line.
6. Click the **Telex-Serial Setup Tab**.
The Telex-Serial Setup page appears.
7. In the Console ID field, enter the **console ID**.

Telex-Serial Setup page

The **Telex-Serial Setup** page, shown in the Figure below, is used to define the Per Line Console ID.

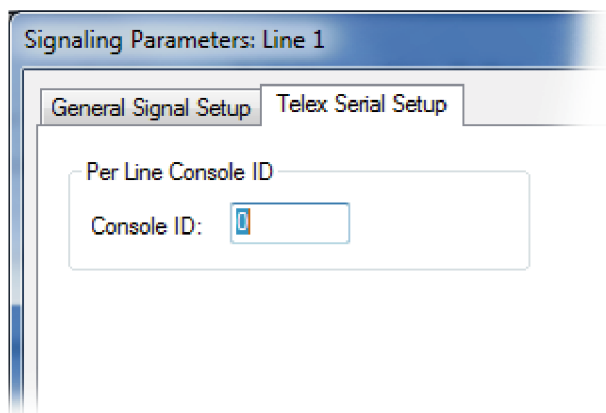


Figure 12.14: Telex-Serial Setup Page

Per Line Console ID group box

The **Per Line Console ID** group box is used to define the Console ID. This ID appears on the radio when receiving data/audio from that console line.

Console ID field

The **Console ID** field is used to enter the console ID for the Telex-Serial Line.

12.5.5

MDC-1200 system type

The **MDC-1200** system type option is used to configure the line for MDC-1200 use.

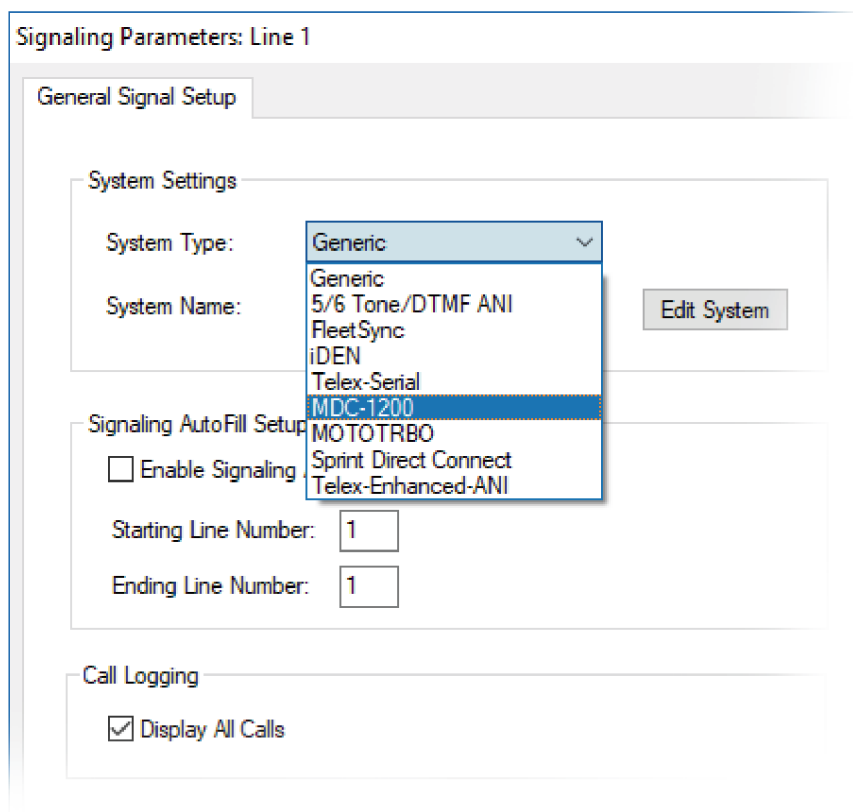


Figure 12.15: MDC-1200 System Type

To **configure the line for a MDC-1200 type**, do the following

1. Select **Edit | Per Line Parameters** from the menu bar.
The Per Line Parameters window appears.
2. From the Line Type drop down menu, select **Telex**.
3. Click **Signal Setup**.
The Signaling Parameters window appears.
4. Select **MDC-1200** from the System Type drop down menu.
The MDC-1200 Setup tab appears.
5. From the System Name drop down menu, select a **system** for the line.

MDC-1200 Setup page

When MDC-1200 is selected from the System Type drop down menu, the **MDC-1200 Setup** page appears, shown in the Figure below.

The screenshot shows a window titled "Signaling Parameters: Line 1" with two tabs: "General Signal Setup" and "MDC-1200 Setup". The "MDC-1200 Setup" tab is active. It contains several sections: "Per Line Console ID" with "Group ID: (In Hex)" set to "001" and "Unit ID: (In Hex)" set to "0001"; "PTT ID Options" with a dropdown menu set to "Pre Only"; "Call Permission Setup" with a checked checkbox for "Allow Broadcast Calls on this Line"; and "User Display Options" with an unchecked checkbox for "Only Display Filters".

Figure 12.16: MDC-1200 Page - Signaling Parameters

Per Line Console ID group box

Group ID: (In Hex) field

The **Group ID: (In Hex)** field is used to identify the group ID for the console.

This field requires a 3-digit hexadecimal number (0-EEE).



Notice!

Do not use the letter F in this field. It is reserved as a wild card digit used to create MDC-1200 custom call groups.

Unit ID (In Hex) field

The **Unit ID (In Hex)** field is used to identify the MDC-1200 unit for the line.

This field requires a 4-digit hexadecimal number (1-DEEE).

Call type	ID range
Unit call	0001-DEEE
Group call	E000-EEEE
System call	FFFF

Tab. 12.3: MDC-1200 unit ID ranges

Note:

- Apply the ID numbers as given in the Table above.
- The letter F is reserved as a wild card digit used to create MDC-1200 custom call groups.
- A call sent to an ID containing the letter F is received by all units that match all the non-F characters.

EXAMPLE: A call sent to D1FF is received by all units with an ID between D100 and D1EE.

PTT ID Options**PTT ID Options drop down menu**

The **PTT ID Options** drop down menu is used to indicate when an ID is sent while transmitting.

Available selections for this field are:

- None - No PTT ID is sent when transmitting from the console.
- Pre Only - The console's PTT ID is sent before the voice stream begins.
- Post Only - The console's PTT ID is sent after the voice stream ends.
- Pre and Post - The console's PTT ID is sent both before and after the voice stream begins and ends.

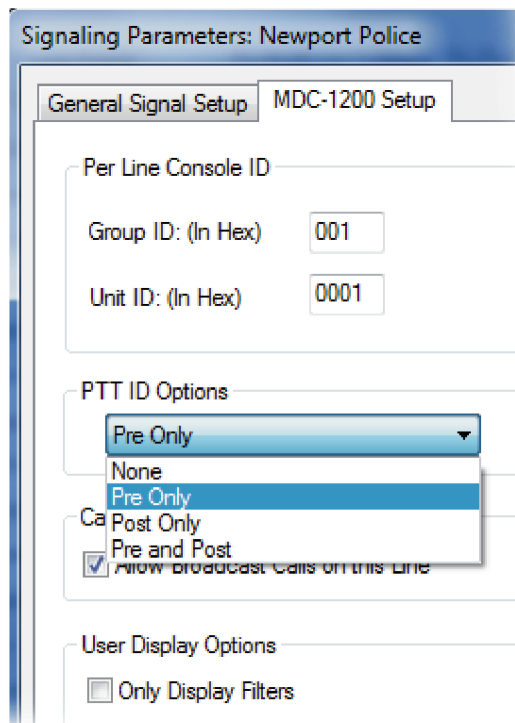


Figure 12.17: PTT ID Options Drop Down Menu

Call Permission Setup group box

Allow Broadcast Calls on the Line check box

The **Allow Broadcast Calls on the Line** check box indicates the console operator is allowed to place call alerts, and place select calls to the entire system.

The system user ID is FFFF.

User Display Options group box

Only Display Filters check box

The **Only Display Filters** check box indicates, in addition to the system name, only groups and units contained in the filter display in the system list in C-Soft Runtime's MDC-1200 Dispatch window, shown in Figure 329. When selected, only filters and their components are visible. Otherwise, all components in the system appear in the system list.



Notice!

The Only Display Filters check box controls the system list appearance. Component permissions are controlled per line. For more information, refer to "Call Permission Setup Group Box".

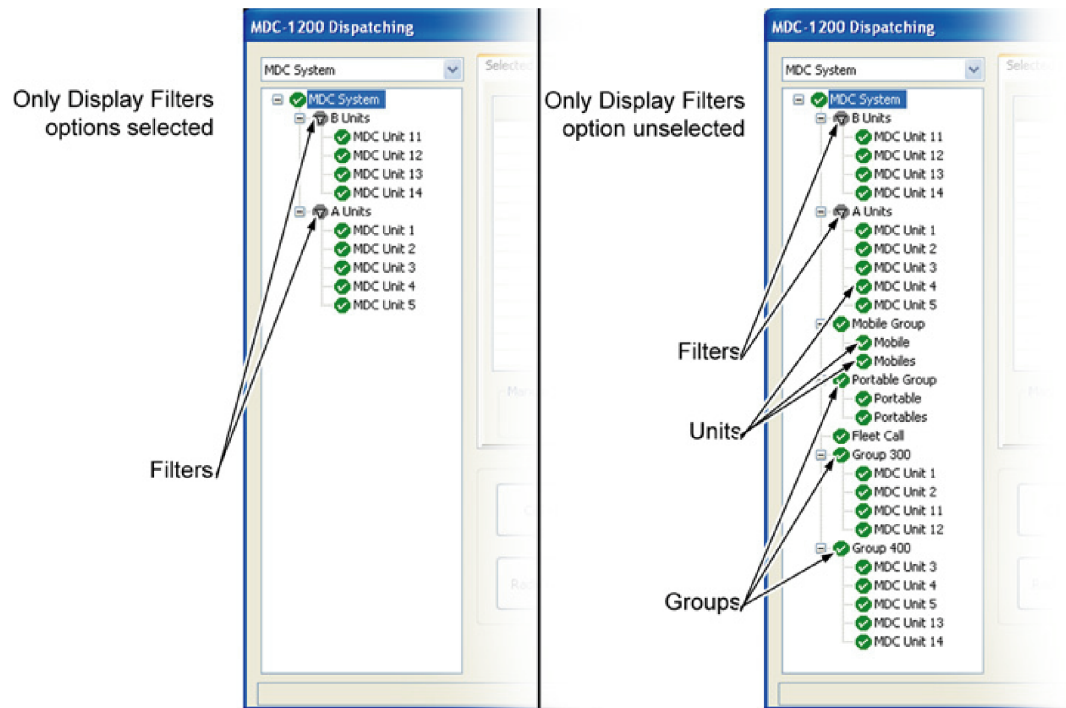


Figure 12.18: MDC-1200 System List Filters Display in C-Soft Runtime

12.5.6

MOTOTRBO system type

The **MOTOTRBO** system type option is used to configure the line for MOTOTRBO use.



Notice!

There is a 10 console limit to each SOIP line.

Signaling Parameters: Line 1

General Signal Setup

System Settings

System Type: Generic

System Name:

Signaling AutoFill Setup

☐ Enable Signaling

Starting Line Number:

Ending Line Number:

Call Logging

☒ Display All Calls

Figure 12.19: MOTOTRBO System Type

To **configure the line for MOTOTRBO type**, do the following:

1. Select **Edit | Per Line Parameters** from the menu bar.
The Per Line Parameters window appears.
2. From the Line Type drop down menu, select **Telex**.
3. Click **Signal Setup**.
The Signaling Parameters window appears.
4. From the System Type drop down menu, select **MOTOTRBO**.
The MOTOTRBO Setup tab appears.
5. From the System Name drop down menu, select a **system** for the line.

MOTOTRBO Setup page

When MOTOTRBO is selected from the System Type drop down menu, the **MOTOTRBO Setup** page appears, shown in the Figure below.

Signaling Parameters: Line 1

General Signal Setup | **MOTOTRBO Setup**

Interface Type

☒ **MTRBi**

☐ MOTOTRBO Interface

SOIP Setup

RX Multicast Address	RX Port
225 . 8 . 11 . 81	2000
TX Multicast Address	TX Port
225 . 8 . 11 . 81	2200

Control Line Setup

Multicast Address	Control Port
225 . 8 . 11 . 81	2254

☒ Default

Network Setup

CAI Network:	12
CAI Group Network:	225

Reset to Default

Figure 12.20: MOTOTRBO Setup Page

Interface Type group box

MTRBi radio button

The **MTRBi** radio button is used to select signaling using the MTRBi interface option to IP-224 or IP-223.

MOTOTRBO radio button

The **MOTOTRBO** radio button is used to select signaling using the MOTOTRBO interface option to IP-224.

SOIP Setup group box

The **SOIP Setup** group box is used to set up communication between the IP-223 or IP-224 and C-Soft to send and receive serial data. The fields in this section must match the same fields for the specified line on the IP-223 or IP-224.

For more information, refer to the MTRBi Installation Manual (F.01U.247.183). For MOTOTRBO support, refer to the MOTOTRBO Application Guide (F.01U.298.170).

RX Multicast Address field

The **RX Multicast Address** field indicates the Multicast Address used to receive serial data over the network. This is the same Serial Over IP RX Multicast Address set up in the IP-223's or IP-224's Multicast Address Setup window for the associated MOTOTRBO line.

RX Port field

The **RX Port** field indicates the RX port number used to receive serial data. This is the same Serial Over IP RX port number set up on the IP-223 or IP-224 for the associated MOTOTRBO line.

TX Multicast Address field

The **TX Multicast Address** field indicates the Multicast Address used to send serial data. This is the same Serial Over IP TX Multicast Address set up in the IP-223's or IP-224's Multicast Address Setup window for the associated MOTOTRBO line.

TX Port field

The **TX Port** field indicates the TX port number used to send serial data. This is the same Serial Over IP TX port number set up on the IP- 223 or IP-224 for the associated MOTOTRBO line.

Control Line Setup group box

The **Control Line Setup** group box section is used to set up multiple C-Soft consoles to communicate with the same MOTOTRBO radio.

Multicast Address field

The **Multicast Address** field indicates the Multicast Address used by the console to communicate with MOTOTRBO radio. The Multicast Address is configured for the line in the Per Line Parameters window.

This field is not editable.

Control Port field

The **Control Port** field indicates the port used to communicate with the MOTOTRBO radio.

The default value for this field is 1000 more than the TX Port value configured for the line on the Per Line Parameters window.

To **change the TX Port value**, do the following:

1. Clear the **Default** check box.
The Control Port field becomes editable.
2. In the Control Port field, enter a **port number**.

Default check box

The **Default** check box is used to accept the control port's default value. The default value is calculated by adding 1000 to the TX Port number for the line. When the check box is selected, this value is automatically entered in the field. Clear the check box to enter a different value.

Network Setup group box

The **Network Setup** group box section is used to set up the MOTOTRBO radio to send text messages and allow GPS (Global Positioning System) to work in C-Soft.



Notice!

The CAI (Common Air Interface) Network and CAI Group Network fields in C-Soft Designer must match the CAI network and CAI Network Group configured in the MOTOTRBO CPS software.

For more information, refer to the Motorola's technical documentation.

CAI Network field

The **CAI Network** field is used to enter the value for the CAI network configured on the radio.

The range for this field is 1 to 126.

CAI Group Network field

The **CAI Group Network** field is used to enter the value for the CAI Group Network configured on the radio.

The range for this field is 225 to 239.

12.5.7

Sprint Direct Connect system type

Sprint Direct Connect Setup page

When Sprint Direct Connect is selected from the System Type drop down menu, the **Sprint Direct Connect Setup** page appears.

To **configure the line for Sprint Direct Connect type**, do the following:

1. Select **Edit | Per Line Parameters** from the menu bar.
The Per Line Parameters window appears.
2. From the Line Type drop down menu, select **Telex**.
3. Click **Signal Setup**.
The Signaling Parameters window appears.
4. From the System Type drop down menu, select **Sprint Direct Connect**.
The Sprint Direct Connect Setup tab appears.

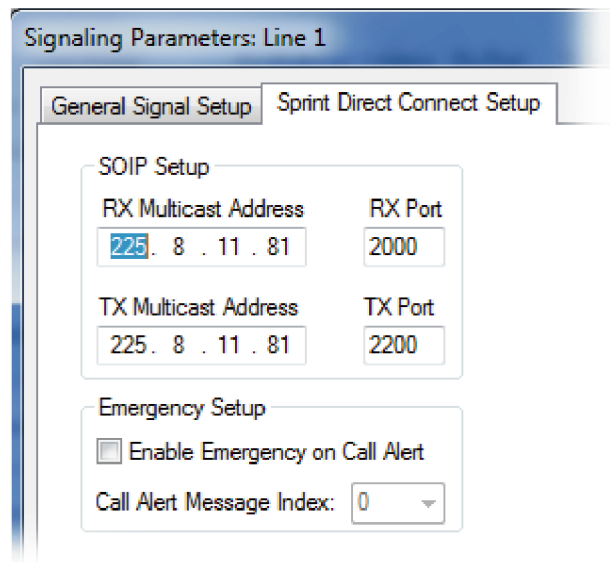


Figure 12.21: Signaling Parameters - Sprint Direct Connect Setup

SOIP Setup group box

RX Multicast Address field

The **RX Multicast Address** field indicates the Multicast Address used to receive serial data over the network. This is the same Serial Over IP RX Multicast Address set up in the IP-223's or IP-224's Multicast Address Setup window for the associated Sprint Direct Connect line.

RX Port field

The **RX Port** field indicates the RX port number used to receive serial data. This is the same Serial Over IP RX port number set up on the IP-223 or IP-224 for the associated Sprint Direct Connect line.

TX Multicast Address field

The **TX Multicast Address** field indicates the Multicast Address used to send serial data. This is the same Serial Over IP TX Multicast Address set up in the IP-223's or IP-224's Multicast Address Setup window for the associated Sprint Direct Connect line.

TX Port field

The **TX Port** field indicates the TX port number used to send serial data. This is the same Serial Over IP TX port number set up on the IP-223 or IP-224 for the associated Sprint Direct Connect line.

Emergency Setup group box

Enable Emergency on Call Alert check box

The **Enable Emergency on Call Alert** check box enables C-Soft to treat incoming SDC call alerts containing the message index specified in the Call Alert Message Index field as an Emergency. C-Soft plays emergency alert tones, performs the Emergency button flash actions on the receiving line's Select button, and creates an entry in the Active Emergency window.

Call Alert Message Index drop down menu

The **Call Alert Message Index** drop down menu is used to select the Call Alert message triggered by an Emergency in C-Soft. The Sprint Direct Connect handsets contain 21 preset Call Alert messages.

Index	Message	Index	Message
0	<no message>	11	I'll be there shortly
1	Can't talk right now	12	I love you
2	Will call you back	13	Meeting still on?
3	I'm in a meeting	14	Are you free?
4	Call me	15	Please stop by
5	Direct Connect me	16	Can I call you?
6	Yes	17	In the office?
7	No	18	On my way
8	Where are you?	19	Need help
9	Let's get lunch	20	Where you at?
10	The meeting has been cancelled		

12.5.8

Telex-Enhanced-ANI system type

The **Telex-Enhanced-ANI** system type option is used to configure the line for serial radio control. Consult the IP-224 user manual for full list of radios utilizing the Telex-Enhanced-ANI Type option.

Signaling Parameters: Sonim

The screenshot shows the 'Signaling Parameters: Sonim' window with the 'Telex Enhanced ANI Setup' tab selected. The 'System Settings' section contains a 'System Type' dropdown menu that is open, showing a list of system types. 'Telex-Enhanced-ANI' is the selected option. Below this, the 'System Name' field is empty. To the right of the 'System Name' field is an 'Edit System' button. The 'Signaling AutoFill Setup' section includes an 'Enable Signaling' checkbox which is unchecked, and two numeric input fields for 'Starting Line Number' and 'Ending Line Number', both containing the value '1'. The 'Call Logging' section at the bottom has a 'Display All Calls' checkbox which is checked.

Figure 12.22: Telex-Enhanced-ANI System Type

To **set the system type to Telex-Enhanced-ANI**, do the following:

1. Select **Edit | Per Line Parameters** from the menu bar.
The Per Line Parameters window appears.
2. From the Line Type drop down menu, select **Telex**.
3. Click **Signal Setup**.
The Signaling Parameters window appears.
4. From the System Type drop down menu, select **Telex-Enhanced-ANI**.
The Telex-Enhanced-ANI Setup tab appears.
5. From the System Name drop down menu, select a **system** for the line.
6. Click the **Telex-Enhanced-ANI Setup Tab**.
The Telex-Enhanced-ANI Setup page appears.
7. Select the **Enable Callback check box**, if applicable.

Telex-Enhanced-ANI Setup page

The **Telex-Enhanced-ANI Setup** page is shown in the Figure below.

Signaling Parameters: Sonim

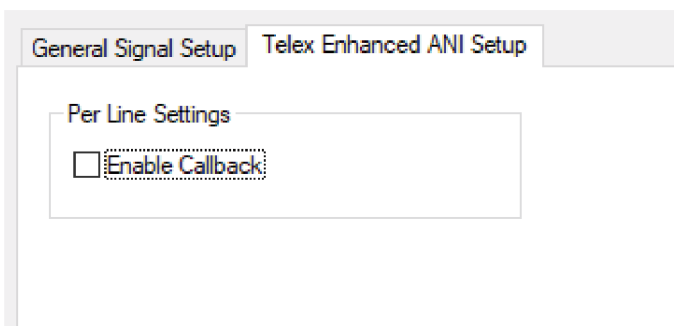


Figure 12.23: Telex-Enhanced-ANI Setup Page

Per Line Settings group box

The **Callback** feature allows Line PTT and Main PTT buttons to send group/private call commands depending on the last call made. This is needed on protocols that need to differentiate between the two call types.

Enable Callback check box

The **Enable Callback** check box is used to enable or disable the Callback feature.

12.5.9

Phone system type

The **Phone** system type option is used to configure the line for standard phone use, as shown in the Figure below.

Available selections for this field are:

- Generic - If Generic is selected no additional signaling is being used. For more information, refer to “*Generic system type, page 75*”.
- Phone - Phone enables the ability to send additional DTMF signaling to IP-223. For more information, refer to “Phone Setup Page” below.

The screenshot shows a software window titled "Signaling Parameters: Fire Department". It has a tab labeled "General Signal Setup". Inside the window, there are three sections:

- System Settings:** Contains a "System Type:" label with a dropdown menu currently showing "Generic". Below it, a "System Name:" label with a dropdown menu showing "Generic" and "Phone" as options. To the right of these dropdowns is an "Edit System" button.
- Signaling AutoFill Setup:** Contains a checkbox labeled "Enable Signaling AutoFill" which is unchecked. Below it are two input fields: "Starting Line Number:" with the value "1" and "Ending Line Number:" with the value "1".
- Call Logging:** Contains a checkbox labeled "Display All Calls" which is checked.

Figure 12.24: Phone System Type

To **configure the line for a Phone type**, do the following:

1. Select **Edit | Per Line Parameters** from the menu bar.
The Per Line Parameters window appears.
2. From the Line Type drop down menu, select **Phone**.
3. Click **Signal Setup**.
The Signaling Parameters window appears.
4. From the System Type drop down menu, select **Phone**.
The Phone Setup tab and the Call Setup tab appear.

Phone Setup page

When Phone is selected from the System Type drop down menu, the **Phone Setup** page appears, shown in the Figure below.

Signaling Parameters: Fire Department

General Signal Setup Phone Setup Call Setup

Signaling Setup

Signaling Type: DTMF

Digit Duration: 150 ms

Interdigit Duration: 100 ms

Pause Duration: 250 ms

Preamble Duration: 150 ms

Level: -3 dB

Twist Level: 0 dB

Signaling Delays

Initial Delay: 750 ms

End Delay: 0 ms

Figure 12.25: Phone Setup Page - Signaling Parameters

Signaling Setup group box

Signaling Type drop down menu

The **Signaling Type** drop down menu, shown in the Figure above, identifies the signaling type used when generating a phone call. DTMF is the default field value and can not be changed.

Digit Duration field

The **Digit Duration** field represents the length of time, in ms, the digit tone plays when it is active.

Interdigit Duration field

The **Interdigit Duration** field represents the length of time, in ms, between the digit tones within a group.

Pause Duration field

The **Pause Duration** field represents the length of time, in ms, allowed between transmitted groups.

**Notice!**

The pause duration must be at least the sum of the Digit and Interdigit Duration fields.

Preamble Duration field

The **Preamble Duration** field represents the length of time, in ms, the first tone digit plays. With some radio systems, the first tone needs to be longer than subsequent tones. For example, the first tone may be used to activate a dormant (battery saving) state.

**Notice!**

The preamble duration must be at least the amount of the Digit Duration field.

Level field

The **Level** field represents the relative level, in dB, the encoded message sends.

The range for this field is -20dB to +12dB.

Twist Level field

The **Twist Level** field represents the relative level difference, in dB, of high and low tones generated when using DTMF tone types. This field is only active when DTMF is the selected tone type.

The range for this field is -10dB to +10dB.

Signaling Delays group box**Initial Delay field**

The **Initial Delay** field represents the lead-in delay, in ms, for console-generated messages transmitted to the field radios.

The range for this field is 0 to 9999ms.

End Delay field

The **End Delay** field identifies the delay, in ms, at the end of transmitted messages to the field. It delimits the tone string.

The range for this field is 0 to 9999ms.

When Phone is selected from the System Type drop down menu, the Call Setup page appears, shown in the Figure below.

Figure 12.26: Call Setup Page - Signaling Parameters Phone

Call Setup group box

Auto Ack field

The **Auto Ack** field for phone setup is disabled.

Emerg Resolved field

The **Emerg Resolved** field for Phone Setup is disabled.

PTT BOT field

The **PTT BOT** field for Phone Setup is disabled.

PTT EOT field

The **PTT EOT** field for Phone Setup is disabled.

Call (1-10) Format field

The **Call (1-10) Format** fields represent the message sent when selected by the console operator on the Per Line Call History, Call List Window, or the Manual Call List window. Refer to the Figure below.

This field can contain up to 32 characters.

Field values can be: Low or High.

- DTMF Format - Allows for 0-9, *, #, A-D, G, I, K, P, R, and S.

For more information, refer to the table “Call setup group format descriptions” below.

Call (1-10) Label field

The **Call (1-10) Label** fields represent the label applied to the button on the Per Line Call History, the Manual Call Window, and the Call List Window popup button, shown in the Figure below.

This field can contain up to 31 alphanumeric characters.

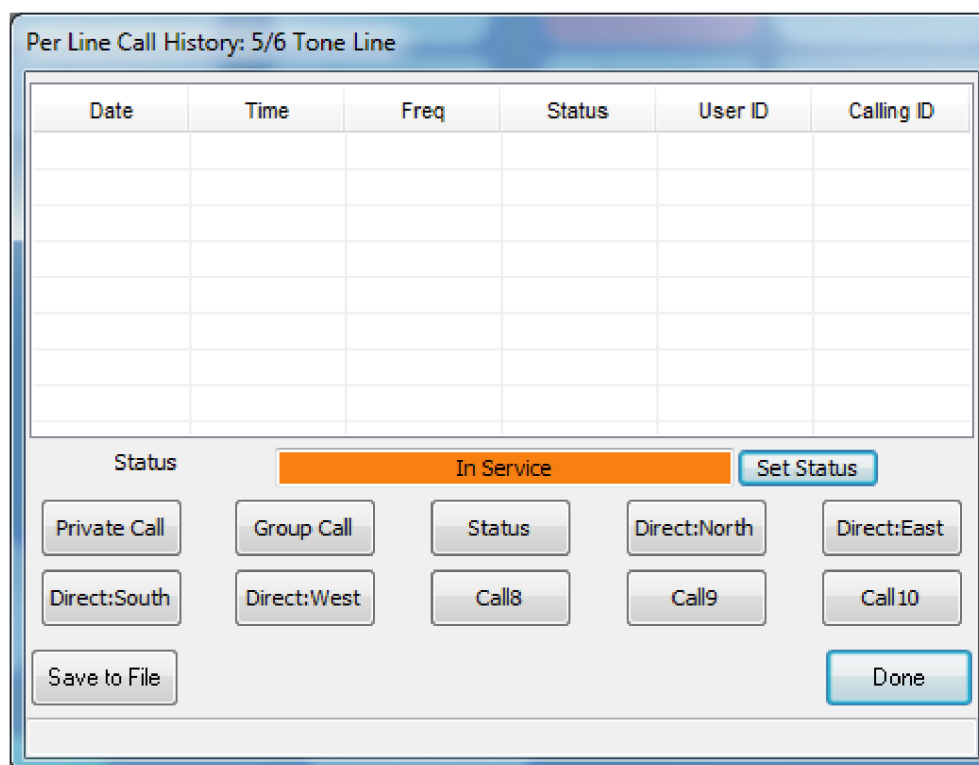


Figure 12.27: Per Line Call History Window

Refer to

- Generic system type, page 75

12.6

AutoFill Line Parameters window

The **AutoFill Line Parameters** window, shown in the Figure below, is used to eliminate repetitious data entry by automatically populating the corresponding fields on the Per Line Parameters window with the entries shown in the AutoFill Line Properties window. The RX and TX entry automatically increment by one for each filled line.

AutoFill button

The **AutoFill** button, shown in the Figure below, opens the AutoFill Line Parameters window.



Figure 12.28: Per Line Parameters AutoFill Button

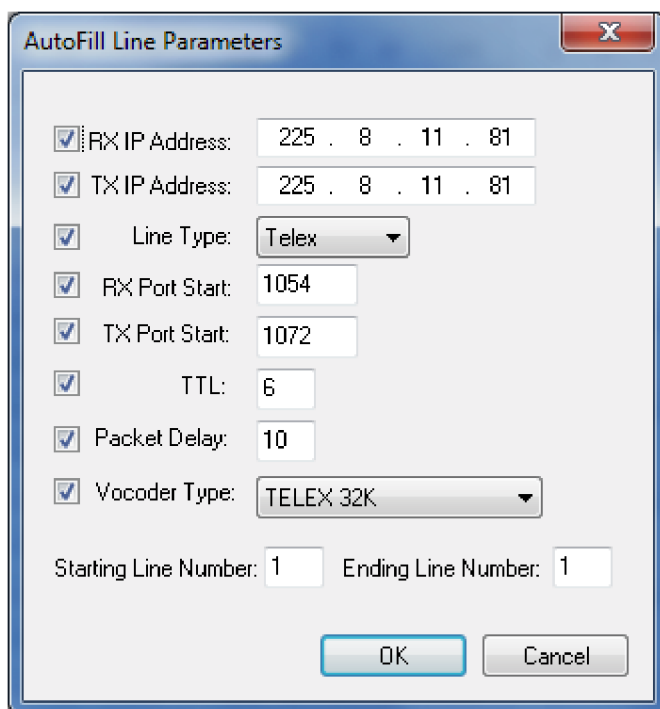


Figure 12.29: AutoFill Line Parameters Window

RX IP Address check box

The **RX IP Address** check box indicates the IP Address is selected for the Autofill feature.

RX IP Address field

The **RX IP Address** field indicates the IP Address used to receive data over the network.

TX IP Address check box

The **TX IP Address** check box indicates the IP Address is selected for the Autofill feature.

TX IP Address field

The **TX IP Address** field indicates the IP Address used to send data over the network.

Line Type check box

The **Line Type** check box indicates the Line Type is selected for the Autofill feature.

Line Type drop down menu

The **Line Type** drop down menu is used to select the type of line for the Autofill feature.

Available selections for this field are Disabled, Telex, Phone, SIP Phone, P25-DFSI, NEXEDGE, and AIS.

RX Port Start check box

The **RX Port Start** check box indicates the RX Port Number is selected for the Autofill feature.

TX Port Start check box

The **TX Port Start** check box indicates the TX Port Number is selected for the Autofill feature.

TTL check box

The **TTL** check box indicates the TTL number is selected for the Autofill feature.

TTL field

The **TTL** field is used to enter the number of routers the Multicast audio packets go through before being discarded. Network design dictates this value.

The range for this field is 1 to 100.

Packet Delay check box

The **Packet Delay** check box indicates the Packet Delay number is selected for the Autofill feature

Packet Delay field

The **Packet Delay** field is used to enter a packet delay number.

The range for this field is 4 to 27.

Vocoder Type check box

The **Vocoder Type** check box indicates the Vocoder Type is selected for the Autofill feature.

Vocoder Type drop down menu

The **Vocoder Type** drop down menu is used to select the vocoder to use for the Autofill feature.

Available selections for this field are: TELEX 32K, G.726 16K, G.726 32K (IP224 Only), and G.711 64K (IP224 Only).

Starting Line Number field

The **Starting Line Number** field is used to enter a starting line number.

The range for this field is 1 to 200.

Ending Line Number field

In the **Ending Line Number** field is used to enter an ending line number.

The range for this field is 1 to 200.

To **fill line parameters with the autofill feature**, do the following:

1. From the menu bar, select **File | Setup Per Line Parameters**.

2. Click **Autofill**.
The AutoFill Line Parameters window appears.
3. In the RX IP Address field, enter an **RX IP Address**.
4. In the TX IP Address, enter a **TX IP Address**.
5. In the Line Type drop down menu, select a **Line Type**.
6. In the RX Port Start field, enter an **RX Port start number**.
7. In the TX Port Start field, enter a **TX Port start number**.
8. In the TTL field, enter a **TTL**.
9. In the Packet Delay field, enter a **Packet Delay** number.
10. In the Starting Line Number field, enter a **starting line** number.
11. In the Ending Line Number field, enter an **ending line** number.
12. Click **OK**.

The IP Addresses, port numbers and TTL automatically fill in the appropriate fields starting and ending with line numbers entered in the AutoFill Line Parameters window.

OK button

The **OK** button applies the selected settings and closes the window.

Cancel button

The **Cancel** button closes the window.

12.7

Configure SIP Settings window

The **Configure SIP Settings** window, shown in the Figure below, is used to register the SIP Address.

Global SIP settings are available in the SIP Global Configuration window. To open this window, select Edit | Global SIP Phone. For more information, refer to “*Global SIP Configuration window, page 163*”.

Configure SIP Settings for Line #18 - GrandStream 2004

SIP Account Credentials

Extension: 2004

Domain/Server IP: 172.19.51.51

Authorization Name: 2004

Password: *****

Registrar Settings

Registrar Compatibility: Fully Compliant

Ring Settings

Ring Sound: Default

Proxy Server

☐ Use Outbound SIP Proxy Server

Server Address:

Backup Address:

User Name:

Password:

Voicemail Settings

☒ Enable Voicemail Notification

OK Cancel

Figure 12.30: Configure SIP Settings Window

SIP Account Credentials group box

Extension field

The **Extension** field is used to enter the SIP extension number (for example, 211).

Domain/Server IP field

The **Domain/Server IP** field is used to enter the Domain or Server IP address (for example, 172.19.50.20).

Authorization Name field

The **Authorization Name** field is used to specify the user name used to register the SIP account on the SIP Server.

Password field

The **Password** field is used to specify the password used to register to the SIP server. This is typically known as secret on the SIP server.

Registrar group box

Registrar Compatibility drop down menu

The **Registrar Compatibility** field is used to specify the compatibility level of the specified registrar server with RFC 3581 (SIP Symmetric Response Routing).

The default selection is Fully Compliant.

Available selections for this field are:

- Fully Compliant - Registrar is fully compliant with RFC 3581 and will register any number and all types of listeners in the SIP packet header's Contact field.
- Cannot Use Multiple Contacts - Registrar is able to register only one contact in the SIP packet header's Contact field.
- Cannot Use Private Contacts - Registrar is unable to register any contacts in the SIP packet header's Contact field.
- Has Application Layer Gateway - Network address translations will be handled externally by a router with an Application Layer Gateway. Network address translations should not be performed by C-Soft.

For more information refer to "*SIP Phone line configuration, page 111*".

To **configure the line for a SIP phone**, do the following:

1. From the menu bar, select **Edit | Setup Per Line Parameters**.
The Per Line Parameters window appears.
2. From the Line Type drop down menu, select **SIP phone**.
The SIP button is active.
3. In the Line Name field, enter a **name** for the line.
4. Select the **Echo Packets** check box (optional).
NOTE: this can be used to stream audio to a recorder.
 - In the RX Multicast Address field, enter the desired **echo destination**.
 - In the RX port field, enter the desired **Port number**.
5. In the TTL field, enter a **value between 1 and 99**.
6. Click **SIP**.

The Configure SIP Setting For Line X - (where X is the line number) window appears.

Ring Settings group box

Ring Sound drop down menu

The **Ring Sound** drop down menu is used to select different ring tones for individual SIP Extensions. One of four ring tones can be assigned to a SIP Extension.

Available selections for this field are: Ring 1, Ring 2, Ring 3, and Ring 4.



Notice!

If the Default option is selected, C-Soft uses the Ring Sound set in Global Settings (Edit | Setup Global Parameters | Peripherals tab | Ring Sound).

Proxy Server group box**Use Outbound SIP Proxy check box**

The **Use Outbound SIP Proxy** check box indicates traffic is initially sent through the proxy server entered in the Use Outbound SIP Proxy field. If the Use Outbound SIP Proxy check box is selected, the specified proxy settings override the Global SIP Proxy settings found in the Global SIP Configuration window for the specific line.

**Notice!**

The Server Address field must also be configured.

Server Address field

The **Server Address** field is used to enter the proxy server's address.

**Notice!**

The Use Outbound SIP Proxy check box must also be selected.

Backup Address field

The **Backup Address** field is used to specify a backup proxy server address. If the parameter is set and C-Soft fails to register using the primary Proxy Server address, C-Soft switches to the backup proxy address and attempts to re-register.

User Name field

The **User Name** field is used to enter the proxy server User Name.

Password field

The **Password** field is used to enter the proxy server password.

Voicemail Settings group box**Enable Voicemail Notification check box**

The **Enable Voicemail Notification** check box enables C-Soft to subscribe to voicemail notification messages from the SIP server.

12.8

SIP Phone line configuration

C-Soft supports **SIP Phone** lines. SIP (Session Initiation Protocol) provides an alternative method of telephone line installation into your dispatch system. With SIP you can easily adapt and configure many telephone lines into a C-Soft console position without having to connect external hardware.

Each C-Soft 7.000 License comes with two SIP lines. Additional lines can be purchased as an additional feature and are available in 6, and 12 line increments.

12.8.1

SIP features

The SIP option is used to access the following features:

- Crosspatch
- Outbound DTMF
- Per line call history
- Call directory editing on-the-fly
- Auto-answer incoming calls
- Stun and proxy server
- Auto adjustments
- Silence detection
- Network recording or monitoring
- Call hold
- Do not disturb
- 3-way-calls
- Microphone mute
- Line conference
- Consultant transfer
- Blind transfer
- Missed call history
- Call waiting
- Conditional forwarding

To **configure your system for SIP calls**, do the following:

1. Obtain a **SIP account** through your IT system administrator or internet service provider.
2. Configure a **SIP phone line** in C-Soft Designer, refer to *SIP Phone line configuration, page 111*.
3. If using a network recorder or monitor, **configure echo packets** in C-Soft Designer, refer to *Configure SIP for recording or monitoring, page 112*.
4. Set up **global SIP configurations** in C-Soft Designer, refer to “*Global SIP Configuration window, page 163*”.
5. Create a **SIP Call Control** button in C-Soft Designer, refer to *SIP Call Control, page 368*.
6. Test the **registration parameters** in C-Soft Runtime, refer to “Test the SIP Registration”.

12.8.2

Configure SIP for recording or monitoring

The SIP Phone line can be recorded or monitored. This is configured in the Per Line Parameters window.

For more information, refer to “*Per Line Parameters window, page 61*”.

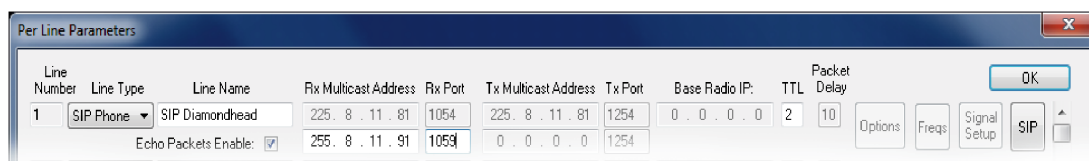


Figure 12.31: SIP Line Type - Per Line Parameters

To **configure the SIP line for network recording or monitoring**, do the following:

1. From the Per Line Parameters window, select the **Echo Packets Enable** check box.
2. In the RX Multicast Address field, enter an **IP Address**.

3. In the RX Port field, enter an **RX port number**.
4. Click **OK**.

The Per Line Parameters window closes.

13 Global Parameter Setup window

The **Global Parameter** window, shown in the Figure below, is used to navigate to the Appearance, Audio, Control Settings, Local Consoles, Peripherals, and Recording pages to configure global settings.

NAVIGATION: Select Edit | Setup Global Parameters from the menu bar.

13.1 Appearance page

The **Appearance** page, shown in the Figure below, is used to configure various C-Soft appearance settings. This includes Unit/ID Display behavior, background display options, and button style.

Global Parameter Setup

Appearance Audio Control Settings IRR Recording Local Consoles Peripherals Recording

ANI Setup

☒ Enable Sticky ANI

☐ Enable Residual ANI

☐ Clear ANI on PTT

Alias Setup

☐ Always Display Unit #

Group ANI Setup

☐ Hide Group ANI

Logo

Image Filename: Browse...

Position: Upper Left

Button Style

Style: Glossy Rectangle

Button Border

Thickness: 3

Button Flash Colors

Call Alert: Group Call:

Emergency: Select Call:

Background Color

Window Options

☐ Keep information windows as top layer

Popup Options

Close Using: Done Button

OK Cancel

Figure 13.1: Appearance Page - Global Parameters Setup

ANI Setup group box**Enable Sticky ANI check box**

The **Enable Sticky ANI** check box indicates the ANI displayed on the select button remains visible until the next call is received.

Enable Residual ANI check box

The **Enable Residual ANI** check box indicates the previous caller's ANI continues to display after receiving a call from a user without ANI capabilities; otherwise, the caller's ANI disappears when the call is ended.

Clear ANI on PTT check box

The **Clear ANI on PTT** check box indicates the ANI, normally displayed on the select button, is cleared when a PTT operation is selected.

Alias Setup group box**Always Display Unit # check box**

The **Always Display Unit #** check box indicates the Unit ID # (ANI) is displayed on the receiving line's Select button in addition to the unit's Alias. Selecting this check box causes both the user's alias and number to appear on the button.

Group ANI Setup group box**Hide Group ANI check box**

The **Hide Group ANI** check box indicates the Group ANI information is not displayed on the receiving line's Select button when receiving a Group call on a line configured for either Sprint Direct Connect, P25-DFSI, NEXEDGE, or iDEN operation.

Logo group box**Image Filename field**

The **Image Filename** field identifies the file path of a image to be displayed in the background of the Console window.

C-Soft supports 1-bit, 4-bit, 8-bit and 24-bit bitmaps, .png, .jpg, and .gif file formats.

This field can contain up to 255 characters.

Browse button

The **Browse** button opens the Open window, which is used to navigate to the logo image file.

To **change the image file**, do the following:

1. Click **Browse**.
The Open window appears.
2. Select the **file** you want to use for the image.
3. Click **Open**.

The path to the image file appears in the field.

Position drop down menu

The **Position** drop down menu is used to select the location of the image logo on the console window.

Available selections for this field are: Upper-Left, Upper-Right, Lower-Left, Lower-Right, Center and Stretch.

Button Style group box

The **Button Style** group box is used to select a button style.

Style drop down menu

The **Style** drop down menu is used to select the button style.

Available options are: Classic, Glossy Circle, Glossy Rectangle, Modern, and Vista.

Classic Option

The **Classic option**, if selected, indicates the buttons are displayed in a classic style.

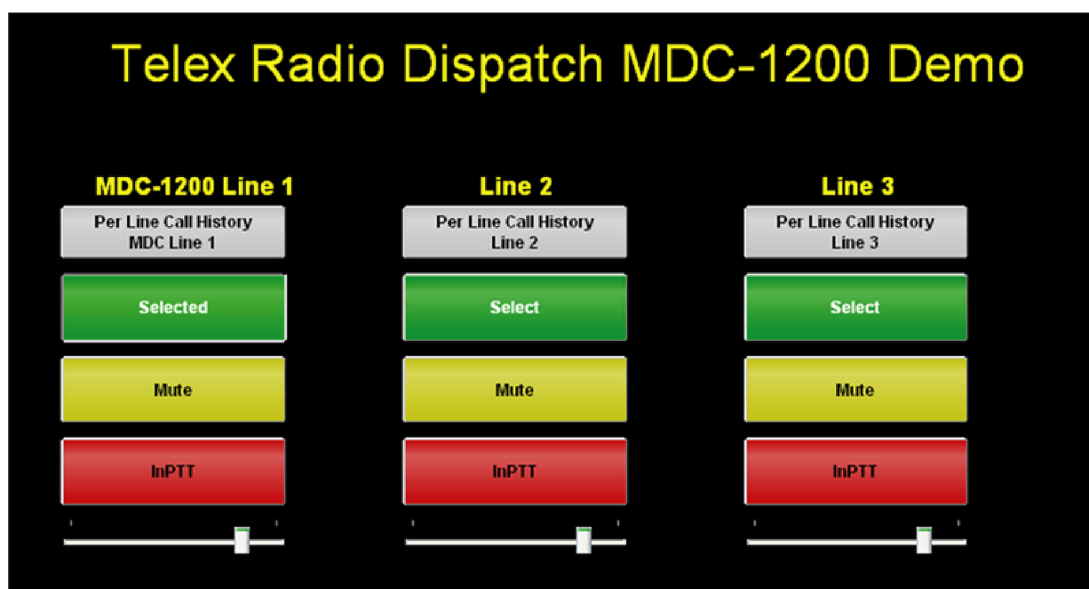


Figure 13.2: Classic Option Style

Glossy Circle Option

The **Glossy Circle Option**, if selected, indicates the buttons are displayed in a glossy circle style.

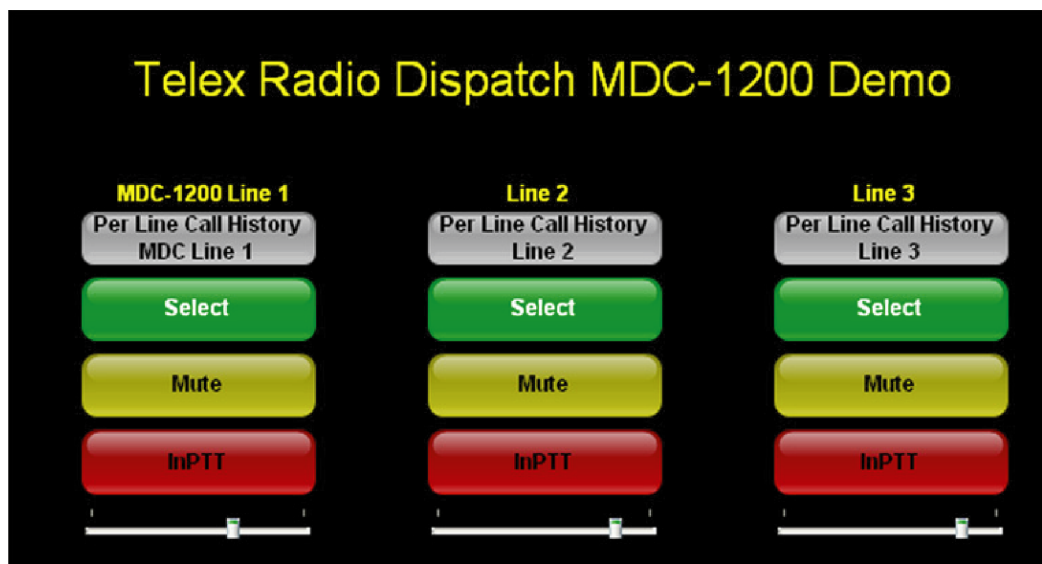


Figure 13.3: Glossy Circle Option Style

Glossy Rectangle Option

The **Glossy Rectangle option**, if selected, indicates the buttons are displayed in a glossy rectangle style.

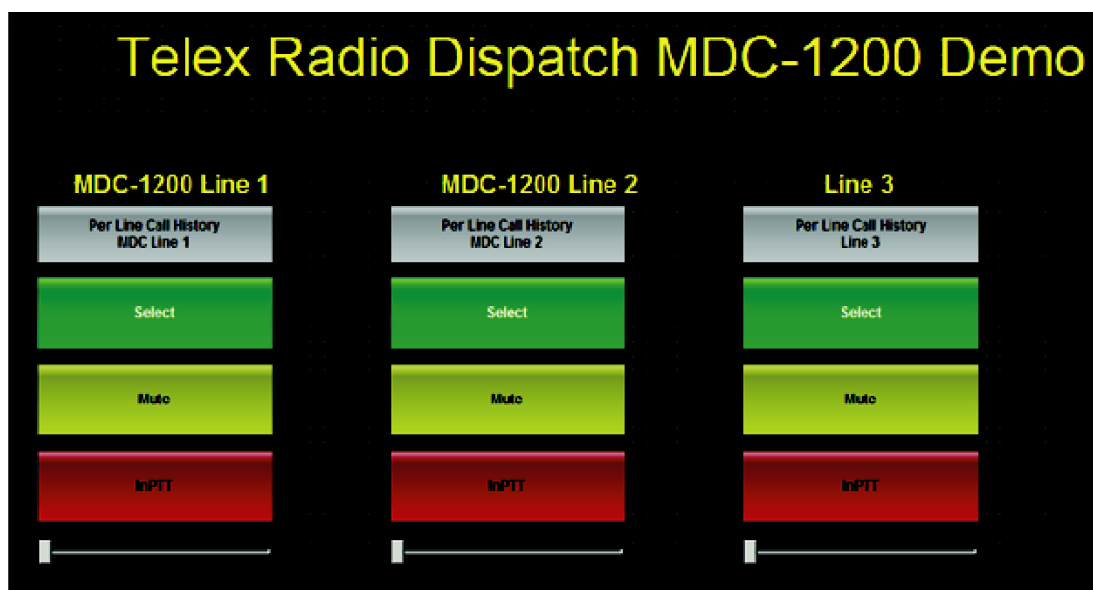


Figure 13.4: Glossy Rectangle Option Style

Modern Style Option

The **Modern Style option**, if selected, indicates the buttons are displayed in a glossy rectangle style.

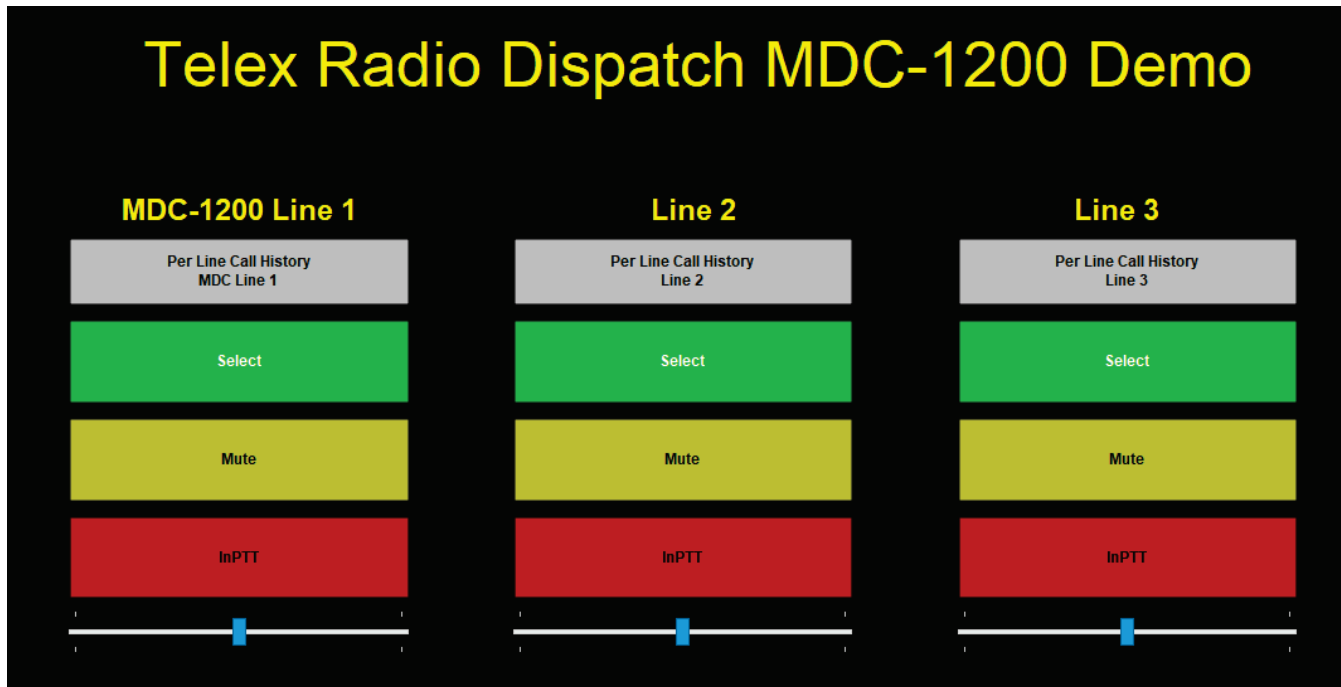


Figure 13.5: Modern Style Option

Vista Style Option

The **Vista Style option**, if selected, indicates the buttons are displayed in a vista style.

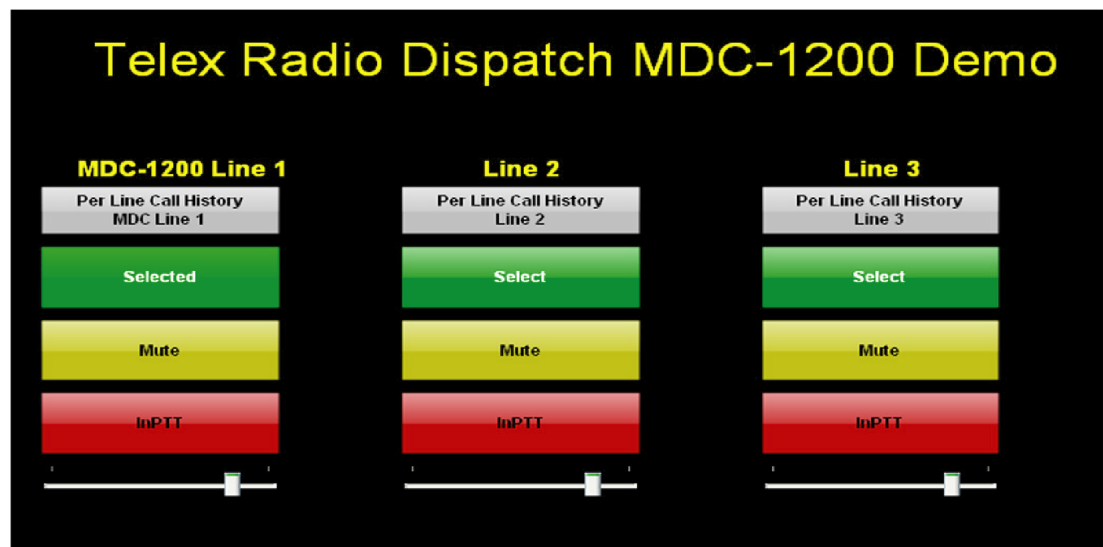


Figure 13.6: Vista Button Style

Button Border group box

The **Button Border** group box is used to select the thickness of the border of various UI Controls. This setting applies to all buttons, popup buttons, and frequency controls.

Thickness spin box

The **Thickness** spin box is used to set the thickness of the border around the UI button. The higher the value, the thicker the border.

The range for this field is 0 to 10.

The default is 5.

Button Flash Color group box

The **Button Flash Color** group box is used to set the blink color for Select buttons when receiving one of the following call types.

Call Alert drop down palette

The **Call Alert** drop down palette is used to set the button color when a Call Alert is being received. The button blinks when an alert is received.

Group Call drop down palette

The **Group Call** drop down palette is used to set the button color when a Group Call is being received. The button blinks when a Group Call is received.

Emergency drop down palette

The **Emergency** drop down palette is used to set the button color when an Emergency call is being received. The button blinks when an Emergency call is received.

Select Call drop down palette

The **Select Call** drop down palette is used to set the button color when a Select call is being received. The button blinks when a Select call is received.

Background Color group box**Background Color drop down palette**

The **Background Color** drop down palette displays the background color for the console and popup windows. Use the drop down button to open a palette to select the desired color.

The default color is black.

Window Options group box**Keep Information Windows As Top Layer check box**

The **Keep Information Windows As Top Layer** check box indicates all C-Soft information windows are always displayed above C-Soft popup windows or any other application running on the PC.

The C-Soft information windows include:

- Active Emergency Window
- Call List Window
- Call Queue Window
- Emergency History Window
- Event Logger Window
- FleetSync Window
- Global Call History
- HB4 Global Parameters Setup Window
- HB4 Volume Window
- HB4 Speaker Select Window
- HB4 IRR Speaker Select Window
- License Dialog
- Manual Call List Window
- Manual Page Entry

- MDC-1200 Window
- MOTOTRBO Window
- P25-DFSI Window
- Per Line Call History Window
- SIP Call Window
- Status List Window
- Supervisor
- Web Page Popup

Popup Options group box**Close Using drop down menu**

The **Close Using** drop down menu is used to select the closure method used by all popup windows.

Available options are:

- Use the “X” in the top right
- Use the “Done” in the bottom right corner
- Use the button toggle to close. The button toggle closes the window even when using “X” or “Done”

13.2

Audio page

The **Audio** page, shown in the Figure below, is used to configure audio routing and blocking.

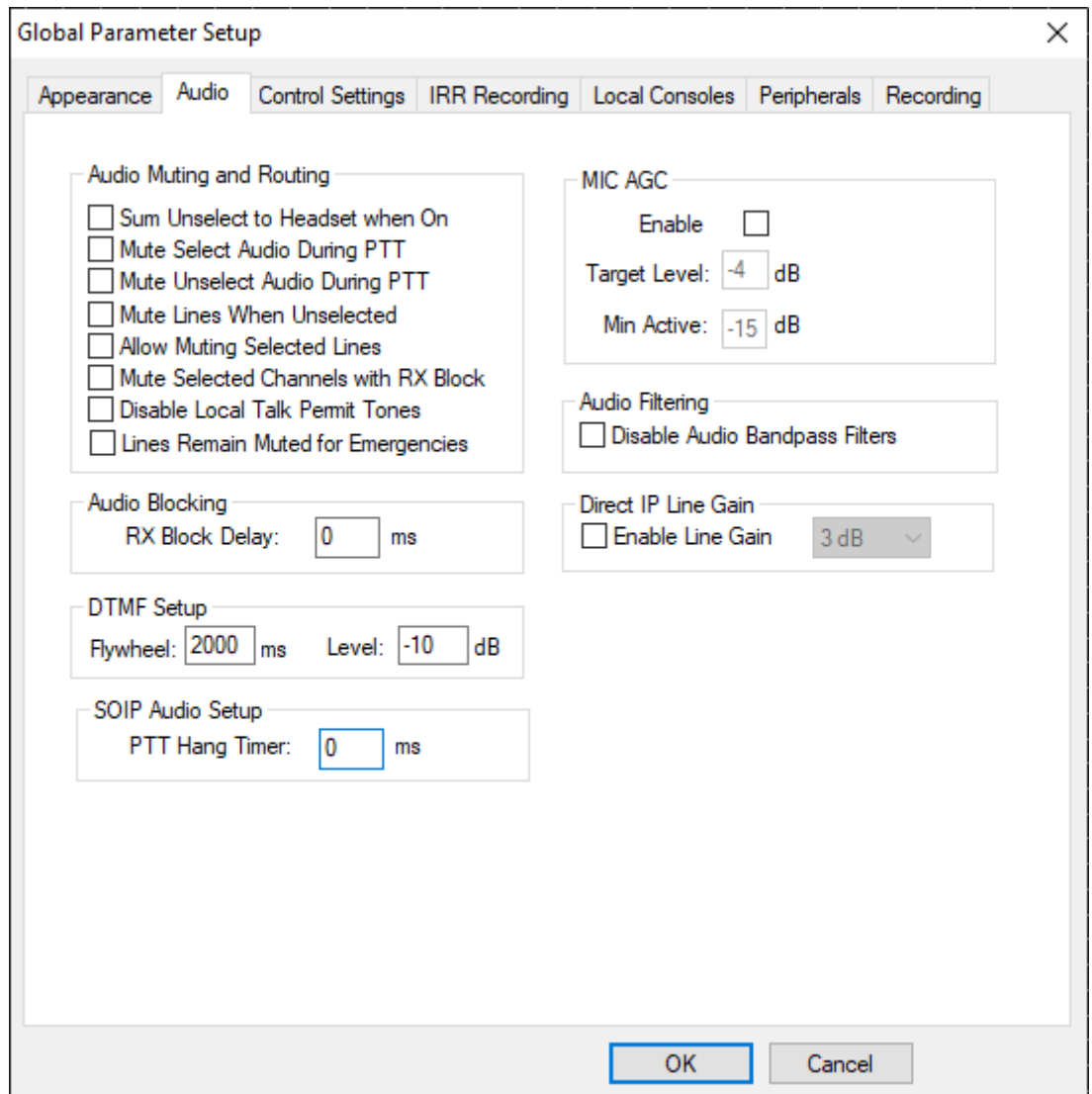


Figure 13.7: Audio Page - Global Parameters Setup

Audio Muting and Routing group box

Sum Unselect to Headset when On check box

The **Sum Unselect to Headset when On** check box indicates when an ADHB-4 is active, select and unselect audio is combined and routed to the headset.

Mute Select Audio During PTT check box

The **Mute Select Audio During PTT** check box indicates select audio is muted when PTT is used.

Mute Unselect Audio During PTT check box

The **Mute Unselect Audio During PTT** check box indicates unselect audio is muted when PTT is used.

Mute Lines When Unselected check box

The **Mute Lines When Unselected** check box indicates unselected lines are automatically muted (only selected line is heard).

Allow Muting Selected Lines check box

The **Allow Muting Selected Lines** check box indicates the console operator is able to mute selected lines on the console.

Mute Selected Channels with RX Block check box

The **Mute Selected Channels with RX Block** check box indicates the console operator is able to mute channels on which RX Block is enabled.

Disable Local Talk Permit Tones check box

The **Disable Local Talk Permit Tones** check box indicates the console does not generate talk permit tones. Instead, the talk permit tones are generated by a communication device attached to the system.

Lines Remain Muted for Emergencies check box

The **Lines Remain Muted for Emergencies** check box indicates the console will not transmit emergency call audio when the console is muted. When the check box is not selected, a muted console will transmit emergency call audio.

Audio Blocking group box**RX Block Delay field**

The **RX Block Delay** field identifies the amount of time, in ms, the release of the RX blocked line is delayed. The RX blocked lines are selected on the Per Line Frequency Setup window, refer to “RX Block Lines Display Box”. This delay allows any IP- and/or system-delayed audio to end before releasing the muted lines.

The range for this field is 300 to 5000ms.

The default is 0.

To **disable this feature**, do the following:

- In the RX Block Delay field, enter **0 ms**.

DTMF Setup group box**Flywheel field**

The **Flywheel** field identifies the amount of time, in ms, allowed to pass between clicks of different DTMF keypad keys before the radio is keyed down by the console.

The range for this field is 300 to 5000ms.

The default is 2000.

Level field

The Level field identifies, in dB, the relative audio level to be transmitted. The actual level transmitted by the radio varies depending on the system. This field allows the console designer to adjust the relative level up or down after the remainder of the system is aligned and operational.

The range for this field is -30 to 10dB.

SOIP Audio Setup group box**PTT Hang Timer field**

The **PTT Hang Timer** field is used to enter the amount of time to delay the PTT off command for SOIP protocols. This delay allows the IP-223/4 to complete processing any transmit audio before C-Soft sends a command to the serial device to stop transmitting. To calculate the Hang Timer Delay, use the following equation:

$$\text{Hang Timer Delay} = \text{IP-224 Packet Delay} * 20\text{ms} + \text{IP-224 TX Delay (EQ 1)}$$

Currently, only Sprint Direct Connect lines are affected by this feature.

MIC AGC group box

The **MIC AGC** (Automatic Gain Control) group box indicates the C-Soft program supports a software based microphone AGC.

Enable check box

The **Enable** check box is used to help equalize speech level variations caused by the use of different microphones, different speaking distances to the microphone, and different volumes of speech.

Target Level field

The **Target Level** field identifies the audio level, in dB, the MIC AGC packets are adjusted to.

- If the measured audio level is above the target level, the audio is reduced in gain.
- If the incoming level is below the target, up to 6dB of gain is applied to bring the level up.

The range for this field is -30dB to 6dB.

Min Active field

The **Min Active** field identifies the audio level, in dB, at which the AGC software stops trying to adjust the audio level. If audio below this level is detected, the AGC software does not attempt to adjust the audio. This prevents open mics from amplifying background noise onto the transmit channel.

The range for this field is -60 to 0 dB.

Audio Filtering**Disable Audio Bandpass Filter check box**

The **Disable Audio Bandpass Filter** check box indicates the audio bandpass filter is disabled. When selected, audio transmitted from C-Soft is not passed through the vocoder specific bandpass filter before being encoded. Disabling the bandpass filter results in the transmit audio sounding warmer (more bass) than filtered audio.

Direct IP Line Gain group box**Enable Line Gain check box**

The **Enable Line Gain** is used to help balance receive audio levels between IP-224s and the Direct IP system. When enabled, the selected amount of gain is applied to all receive audio of every Direct IP Lines (AIS, NEXEDGE, P25-DFSI, and P25-CSSI).

Available gain levels are 3 dB, 6 dB, 9 dB, and 12 dB.

13.3 Control Settings page

The **Control Settings** page, shown in the Figure below, is used to enable various console controls, a supervisor password and points to FleetSync, MDC1200 and MOTOTRBO system files.

The screenshot shows the 'Global Parameter Setup' window with the 'Control Settings' tab selected. The window contains several sections for configuring console controls:

- User Control Options:** Includes four unchecked checkboxes: 'Allow Freq Update Anytime', 'Ignore Freq Updates', 'Disable Spacebar PTT', and 'Kill Lines on Crosspatch'.
- Control Timeouts:** Includes two input fields: 'Supervisor: 0 sec' and 'Crosspatch: 0 sec'.
- Save Runtime Setting:** Includes a checked checkbox 'Save Runtime State on Close'.
- System List:** Includes a 'Filename:' input field and a 'Browse ...' button.
- Logging Setup:** Includes an unchecked checkbox 'Enable Logging' and a 'Log Level:' dropdown menu set to 'Error'.
- Supervisor Password:** Includes a text input field containing '1234'.
- Window Controls:** Includes five checked checkboxes: 'Allow Minimize', 'Allow Maximize', 'Allow Resize', 'Allow Move', and 'Allow Close'.
- Keyboard Dual-Tone Format:** Includes two radio buttons: 'DTMF' (selected) and 'Knox'.

At the bottom of the window are 'OK' and 'Cancel' buttons.

Figure 13.8: Control Settings Page - Global Parameters Setup

User Control options

Allow Freq Update Anytime check box

The **Allow Freq Update Anytime** check box indicates frequency updates are accepted at any point in the RX stream. Otherwise, frequency updates are accepted at the beginning of a call, before audio playback begins.

Ignore Freq Updates check box

The **Ignore Freq Updates** check box is used to ignore frequency change updates from remote sources, such as parallel consoles or IP-224s. A line's transmit frequency can only be changed on the local console using either Frequency Change button or the Frequency Control.

Disable Spacebar PTT check box

The **Disable Spacebar PTT** check box indicates the spacebar is not used for PTT.

Kill Lines on Crosspatch check box

The **Kill Lines on Crosspatch** check box indicates the console operator cannot transmit on a line included in crosspatch by a parallel console operator. Otherwise, the console operator is allowed to transmit on the lines even if another console operator has included the lines in a crosspatch.

Control Timeouts group box**Supervisor field**

The **Supervisor** field controls the parallel console crosspatch timeout. The timeout is controlled by the Supervisor console initiating the action.

The range for this field is 0 to 3600 seconds.

EXAMPLE: Console 1 has supervisor timeout set to 10 seconds.

Console 2 has supervisor timeout set to 2 seconds.

- Case 1: If console 1 initiated the action, then both consoles timeout after 2 seconds.
- Case 2: If console 2 initiated the action, then console 2 times out in 2 seconds and console 1 times out in 10 seconds.

To **disable supervisor timeout**, do the following:

- In the Supervisor field, enter **0**.

Crosspatch field

The **Crosspatch** field indicates the amount of time, in seconds, a crosspatch is allowed to remain inactive before it is dropped.

The range for this field is 0 to 3600 seconds.

To **disable crosspatch inactivity**, do the following:

- In the Crosspatch field, enter **0**.

Save Runtime Setting group box**Save Runtime Status on Close check box**

The **Save Runtime Status on Close** check box indicates the console size, position, settings, and selections are saved to the cposi.txt when the program is closed. Otherwise, the size position, and selections are not saved when C-Soft Runtime is closed.

For more information, refer to “Window Sizing” on “*C-Soft Console*, page 466”.

**Notice!**

C-Soft opens only the current version of the cposi.txt file.

System List group box

Filename field

The **Filename** field identifies the system file used by C-Soft Runtime when it opens the.veg file. If left blank, the Edit System window opens to a blank system. The filename identifies the path to the saved FleetSync, MDC-1200, MOTOTRBO, Telex-Serial and P25-DFSI systems.

For more information, refer to “*Edit System List window, page 192*”.

Browse button

The **Browse** button is used to select the system list file to use. When clicked, a file chooser menu opens and allows the user to browse to the desired System List file.

Logging Setup group box

Enable Logging check box

The **Enable Logging** check box indicates logging is active and the console creates an event log file when C-Soft Runtime is started.

By default the Enable Logging check box is not selected.

If the Enable Logging check box is selected, then a log file is created.

The location of the log file is C:\ProgramData\Telex Communications\C-Soft\Logs.



Notice!

The log file is named SystemLog_[Date][Time]_[.veg file name].txt. For example, a system log started on June 3rd at 1:05 PM from the Denton Fire.veg file is named, SystemLog_06-03 13:05:13_Denton Fire.txt. A new file is created anytime C-Soft Runtime is started or when the current log file reaches a file size of 3 Mb.

Event log files are kept for at least seven days. C-Soft deletes any files older than seven days at boot-up, or when creating a new event log file because the existing file has reached its maximum size.

Log Level drop down menu

The **Log Level** drop down menu is used to select type of messages to be saved in the event log file and the event log window, if available.

Available options are:

- Error - Used for events that could cause or indicate a service failure.
- Warning - Used for minor user-level exceptions not expected during normal operation.
- Information - Used for normal user-level events (for example, incoming calls, starting a call, etc.)
- Debug - Used for debugging purposes.

**Notice!**

Error, Warning, and Debug are used by Sprint Direct Connect only. All other types use Information only.

Supervisor Password**Supervisor Password field**

The **Supervisor Password** field is used to assign a password for the supervisor function and any other password protected functions.

This field can contain up to 16 alphanumeric characters.

Window Controls group box**Window Controls check boxes**

The **Window Controls** check boxes indicate the standard window controls are included on the dispatch console window.

Available selections for this field are:

- Allow Minimize - allows the console operator to minimize the dispatch window to a button on the toolbar.
- Allow Maximize - allows the console operator to maximize the dispatch window.
- Allow Resize - allows the console operator to resize the dispatch window.
- Allow Move - allows the console operator to move a dispatch window that has been resized.
- Allow Close - allows the console operator to close a dispatch window. If this selection is not enabled, the only way to shut down the dispatch console position is to use the Windows Task Manager (press Ctrl+Alt+Delete to open Windows Task Manager).

Keyboard Dual-Tone Format group box**DTMF radio button**

The **DTMF** radio button indicates DTMF tones are used when keyboard number keys are pressed.

Knox radio button

The **Knox** radio button indicates Knox tones are used when keyboard number keys are pressed. Knox tones are specific tones used to unlock Knox boxes. These boxes are used primarily by fire departments.

13.4

IRR Recording page

The **IRR Recording** page, shown in the Figure below, is used to assign the lines to be recorded by Per Line Recording and Per Line Recording options.

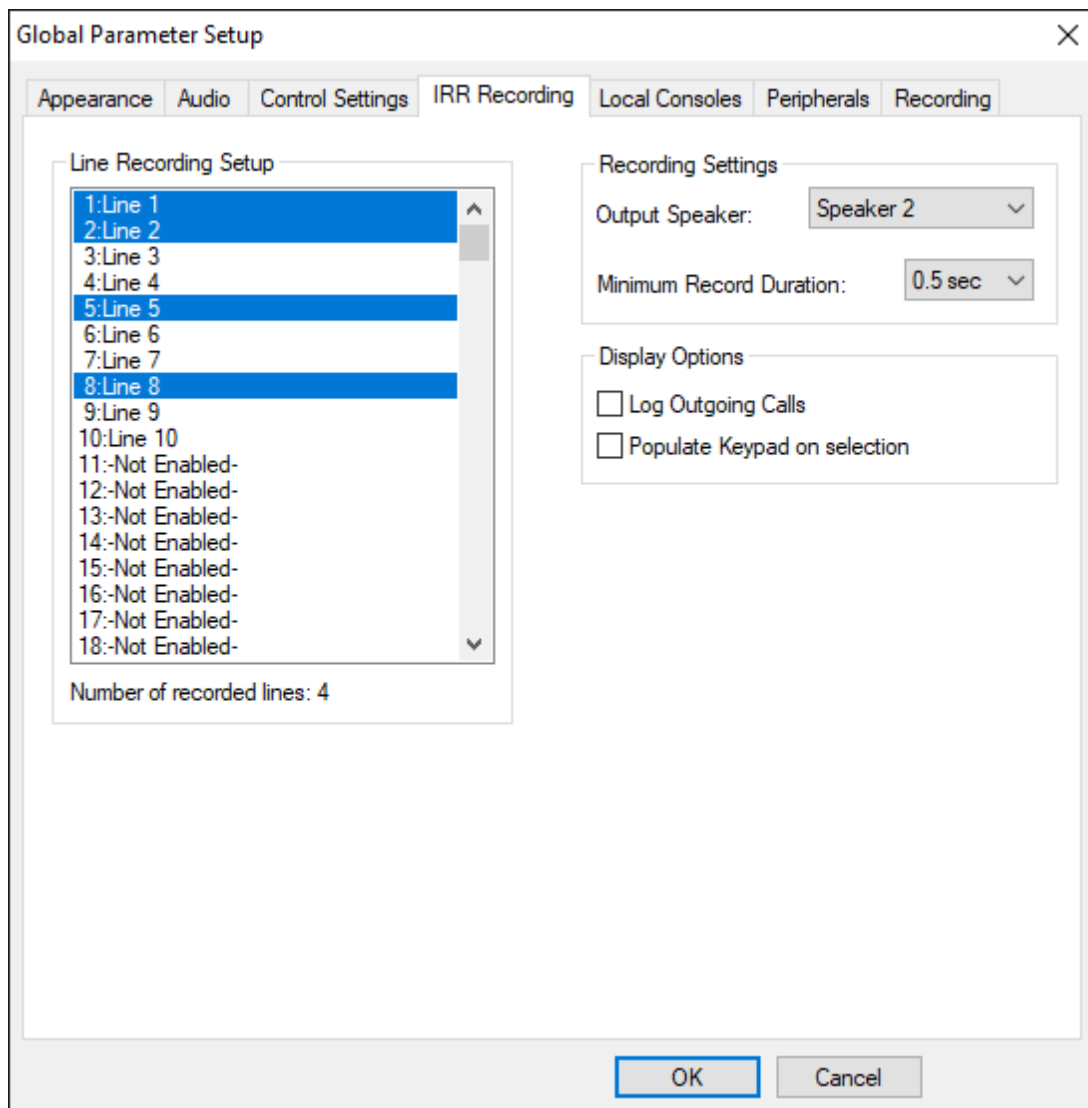


Figure 13.9: IRR Recording Page - Global Parameters Setup

Line Recording Setup group box

When checked the last 60 minutes of received audio will be recorded and available for playback from the both the Per Line History or Global Call History Window. Up to 100 lines can be selected for IRR recording.

The recorded audio storage directory is specified in C:\ProgramData\Telex Communications C-Soft\Settings\ClientSettings.xml and by default is C:\ProgramData\Telex Communications C-Soft\Audio Archive. Change the recorded audio storage directory by using Telex System Manager.

Recording Settings group box

Output Speaker drop down menu

The **Output Speaker** drop down menu is used to designate the speaker used to playback per line call recording audio.

Minimum Record Duration drop down menu

The **Minimum Record Duration** drop down menu is used to set the minimum length of time a call must last for the audio to be recorded.

Calls lasting less than the minimum duration are not recorded and will not be available for playback.

Default is 0.5 sec.

Options are:

- 0.5 sec
- 1.0 sec
- 1.5 sec
- 2.0 sec

Log Outgoing Calls check box

The **Log Outgoing Calls** check box sets C-Soft's logging behavior in both the Per Line History and Global Call History windows.

By default, C-Soft only logs incoming calls. If the Log Outgoing Calls check box is selected, outgoing calls are also logged in these windows. Note, the line must be configured in the Line Recording Setup Box to record outgoing traffic.

Additionally, if Per Line Recording is enabled for a given line and the Log Outgoing Calls check box is checked, outgoing transmissions made on that line are recorded and available for playback.

Populate Keypad on Selection check box

The **Populate Keypad on Selection** check box indicates the user can select an entry in the per line call history window and have the keypad automatically populate with the ID of the call. By default, this option is disabled.

13.5

Local Consoles page

The **Local Consoles** page, shown in the Figure below, is used to configure the IP Addresses of local consoles.

Global Parameter Setup

AppearanceAudioControl SettingsIRR RecordingLocal ConsolesPeripheralsRecording

Local Console IP Addresses

0 . 0 . 0 . 0

0 . 0 . 0 . 0

0 . 0 . 0 . 0

0 . 0 . 0 . 0

0 . 0 . 0 . 0

0 . 0 . 0 . 0

0 . 0 . 0 . 0

0 . 0 . 0 . 0

0 . 0 . 0 . 0

0 . 0 . 0 . 0

Direct IP Console Subscriber IDs

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

☐ Crossmute direct IP console subscriber IDs (Only for NEXEDGE, AIS and CSSII)

OK

Cancel

Figure 13.10: Local Consoles Page - Global Parameters Setup

Local Console IP Addresses group box

Local Console IP Address fields

The **Local Console IP Address** fields identify up to 10 base IP Addresses of the Hardware IP Console (IP-2002, IP-1616, IP-3000 series and C-6200) and C-Soft consoles that reside in the same room.

The C-Soft program examines the source of the audio, and, if the source is from a console in this list, the audio is muted. An exception to the muting rule is, if an ADHB-4 is connected and the headset is turned on. In this case, the received audio is routed to the headset earpiece and is played, ignoring the crossmute condition.



Notice!

Individual lines must have Mute Per-Line buttons associated with them for this feature to work.

Direct IP Console Subscriber IDs field

The **Direct Console Subscriber IDs** field is only used for the NEXEDGE IP, AIS, and P25 CSSI interfaces. If an ID is entered into this field, the console treats all audio received from the entered ID as a parallel console transmission.

Crossmute File

The **Crossmute File** is used to allow each position to have its own crossmute settings without requiring a different design file by populating the Local Console IP Address fields with a .txt file.

To **create a crossmute file**, do the following:

1. In a .txt file, enter **up to 200 IP Addresses** (one per line).
2. Select **File | Save** from the menu bar.
The Save window opens.
3. In the File Name field, enter **csoft_crossmutes.txt**.
4. From the Look in drop down menu, select **C:\ProgramData\Telex Communications\C-Soft\DesignData**.
5. Click **Save**.

The IP Addresses are loaded from this file and replace the entries in the Global Properties Setup window.



Notice!

The Crossmute File feature does not apply to either the AIS, CSSI, or NEXEDGE IP interfaces.

Crossmute Direct IP Console Subscriber IDs check box (for NEXEDGE, AIS, and CSSI Lines Only)

The **Crossmute Direct IP Console Subscriber IDs** check box is used to allow crossmute for the NEXEDGE IP, AIS, CSSI interfaces in a parallel console. This means when C-Soft detects a parallel console transmit with a console ID on the list, it mutes the transmit audio.

To **enable Crossmute Direct IP Console Subscribers**, do the following:

1. In the Direct IP Console Subscribers ID field, enter the **IDs for all NEXEDGE, AIS, and CSSI consoles present in the system**.
2. Select the **Crossmute direct IP console subscribers IDs check box**.

13.6

Peripherals page

The **Peripherals** page, shown in the Figure below, is used to configure network settings, phone, and peripheral devices.

Figure 13.11: Peripherals Page - Global Parameters Setup

Network Settings group box

IP Interface spin box

The **IP Interface** spin box is used to select the network interface. The C-Soft program can be configured to use any of the first four interfaces.

If **no traffic is detected on the selected interface**, do the following:

1. From the IP Interface spin box, select a **different interface** (0-3).
2. Save the **C-Soft Designer.exe** file.
3. Restart the **C-Soft Runtime console**.



Notice!

If at least one Ethernet connection is present, the value always defaults to zero, often resulting in no traffic detected. If your computer has an Ethernet connection not being used to run C-Soft Runtime, we recommend turning off that connection or setting the value in the field to 1, 2, or 3.

**Caution!**

If you choose to run an Ethernet connection and C-Soft at the same time, you might lose your C-Soft Ethernet connection.

EXAMPLE: The wireless connection is located at interface 0 and the C-Soft Ethernet connection is located at interface 1. If the computer becomes disconnected from the wireless connection, Windows automatically moves the C-Soft Ethernet connection from interface 1 to interface 0. In this case, C-Soft is disconnected from the Ethernet.

Radio Ping Interval field

The **Radio Ping Interval** field identifies the time, in seconds, between ping attempts on the base radio IP Address. The typical amount of time is 300 seconds or five minutes. A value of zero disables the function.

The range for this field is 0 to 9999 seconds.

TCP/IP Time Out field

The **TCP/IP Time Out** field indicates the amount of time, in ms, before the TCP/IP connection times out.

The range for this field is 1000 to 20000ms.

Enable RX Multicast Loopback check box

The **Enable RX Multicast Loopback** check box is used to enable the current console configuration to receive Multicast audio sent from the same PC currently running C-Soft.

Phone group box**Ring Multicast field**

The **Ring Multicast** field identifies the IP Address to which the ring signal is broadcast. The entry in this field should correspond to the values set in a C-6200 console with an actual phone card interface, or to an IP-223 with Telex's PIB or attached TDI Adapter.

Ring Port field

The **Ring Port** field is used to identify the port number to which the ring signal is broadcast. The entry in this field should correspond to the values set in a C-6200 console with an actual phone card interface, or to an IP-223 with Telex's PIB or attached TDI Adapter.

Ring Sound drop down menu

The **Ring Sound** drop down menu is used to select the ring sound heard when a call is received.

Available selections for this field are: Ring 1, Ring 2, Ring 3, and Ring 4.

Ring Speaker drop down menu

The **Ring Speaker** drop down menu is used to select which speaker plays incoming phone ring tones.

Available selections for this field are Speaker 1, Speaker 2, Speaker 3, Speaker 4, Speaker 5, or Speaker 6.

Auto Hold Phone Line on PTT check box

The **Auto Hold Line on PTT** check box is used to indicate any phone currently offhook is put on hold when any PTT button is pressed.

**Notice!**

Feature supported in both Line Types: Phone and SIP Phone.

NEO-10 group box

The **NEO-10** device sends out a UDP packet anytime one of its inputs or outputs changes state. The C-Soft program monitors this traffic and allows all users of the equipment to see input and output status changes.

Multicast field

The **Multicast** field identifies the Multicast Address of the NEO-10 device.

The entry in this field should correspond to the entry on the NEO-10 Multicast Setup window.

Update Port field

The **Update Port** field identifies the port number of the NEO-10 device.

The entry in this field should correspond to the entry on the NEO-10 Multicast Setup window.

License Server group box**IP Address/Name fields**

The **IP Address/Name** fields are used to specify the IP address or name of one or two Telex Licensing Servers. Address specifications are expected in the following formats:

- <port>@<host IP>
- <port>@<servername>
- <host IP>

The default port is 27000.

**Notice!**

In C-Soft Runtime, the token “@localhost” will automatically be added to the license server specification to instruct the license libraries to additionally connect to a locally-running license server. As a result, for configurations using a local license server, no additional parameters need to be set in C-Soft Designer.

ADHB-4 Speaker Volume group box**Speaker 1-6 Min Volume field**

The **Speaker 1-6 Min Volume** field indicates the minimum selectable volume level for speakers connected to jacks 2-6. During C-Soft operation, the volume for the specified speaker cannot be set lower than the percentage configured for the speaker in this field.

This field ranges from 0% to 100%.

Speaker 1's volume is controlled with the Volume Master Select button. Refer to "UI Element Function Drop Down Menu".

13.7 Recording page

The **Recording** page, shown in the Figure below, is used to configure a recording with Telex's Network Recorder.

For more information, refer to the Telex Network Recorder Technical Manual and Archive Database Reviewer (F.01U.188.143).

	Enable	Vocoder Type	Multicast	Port	TTL
Select:	☐	TELEX 32K	225. 8 . 11 . 81	2055	1
Unselect:	☐	TELEX 32K	225. 8 . 11 . 81	2056	1
Speaker 3 :	☐	TELEX 32K	225. 8 . 11 . 81	2057	1
Speaker 4:	☐	TELEX 32K	225. 8 . 11 . 81	2058	1
Speaker 5:	☐	TELEX 32K	225. 8 . 11 . 81	2059	1
Speaker 6:	☐	TELEX 32K	225. 8 . 11 . 81	2060	1
Mic:	☐	TELEX 32K	225. 8 . 11 . 81	2054	1
NENA:	☐	TELEX 32K	225. 8 . 11 . 81	2061	1
Aux Track Left:	☐	TELEX 32K	225. 8 . 11 . 81	2062	1
Aux Track Right:	☐	TELEX 32K	225. 8 . 11 . 81	2063	1

Figure 13.12: Recording Page - Global Parameters Setup

**Notice!**

The microphone only records during activity, such as a telephone call or PTT.

Enable check box

The **Enable** check box is used to enable the Select speaker, Unselect speaker, speakers 3-6, microphone, NENA, Aux Track Left, and Aux Track Right for recording from the indicated IP Address and port.

**Notice!**

Speakers 3-6 and NENA are used when an ADHB-4 is connected to the PC. Aux Track Left is the left channel audio received by the Aux In port on the ADBH-4 Gen 2. Aux Track Right is the right channel audio received by the Aux In port on the ADBH-4 Gen 2.

Vocoder Type drop down menu

The **Vocoder Type** drop down menu indicates the bit rate at which audio is converted into digital format. This feature is used to configure communication between C-Soft and an IP-223 or IP-224.

Available selections for this field are: TELEX 32K, G.726 16K, G.726 32K (IP224 Only), and G.711 64K (IP224 Only).

Multicast field

The **Multicast** field indicates the console's Multicast Address for the selected speaker, microphone, or NENA.

**Notice!**

If multiple consoles are in use, this option requires a separate configuration for each console.

Port field

The **Port** field indicates the port used for the selected speaker, microphone or NENA audio.

The port number must be unique from all other ports configured on the console.

TTL field

The **TTL** field indicates the lifespan of data in a computer or network.

14 Language Customization

The **Language Customization** window, shown in the Figure below, is used to configure call window names, buttons, button labels, button color codes, column labels, fonts, and the number of lines to display in the window.



Notice!

The Language Customization window was formerly known as “Global Call Parameters.”

NAVIGATION: Select Edit | Language Customization from the menu bar.

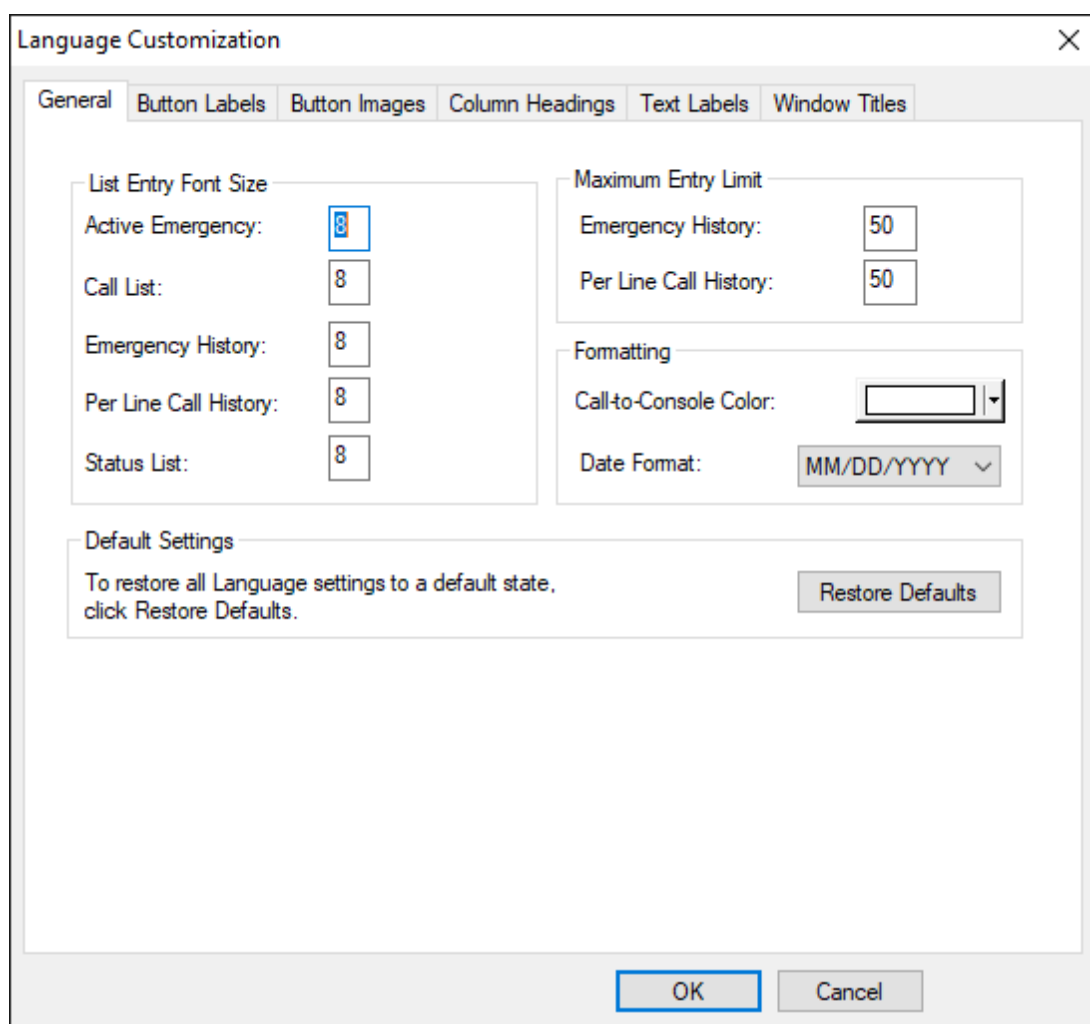


Figure 14.1: Language Customization Window - General Page

14.1 General page

The **General** page is used to set the list entry font size, maximum entry limit, formatting, and to restore default settings.

List Entry Font Size group box**Active Emergency Font Size field**

The **Active Emergency Font Size** field is used to specify text size for the Active Emergency Call History window.

The range for this field is 1 to 72.

Call List Font Size field

The **Call List Font Size** field is used to specify the text size for the Call List window.

The range for this field is 1 to 72.

Emergency Call History Font Size field

The **Emergency Call History Font Size** field is used to specify the text size for the Emergency Call History window.

The range for this field is 1 to 72.

Per Line Call History Font Size field

The **Per Line Call History Font Size** field is used to specify the text size for the Per Line Call History window.

The range for this field is 1 to 72.

Status List Font Size field

The **Status List Font Size** field is used to specify the text size for the Status List window.

The range for this field is 1 to 72.

Maximum Entry Limit group box**Emergency Call History Window Lines field**

The **Emergency Call History Window Lines** field is used to set the number of lines displayed in the Emergency Call History window. When the Call History window is full, the oldest call is removed.

The range for this field is 1 to 500 lines.

Per Line Call History Window Lines field

The **Per Line Call History Window Lines** field is used to set the number of lines displayed in the Per Line Call History window. When the Call History window is full, the oldest call is removed.

The range for this field is 1 to 500 lines.

Formatting group box**Call-to-Console Color drop down menu**

The **Call-to-Console Color** drop down menu is used to set the Call-To-Console background color. The background color can be changed by selecting options from the drop down menu.

**Notice!**

The Call-to-Console color is used as the background color for calls directed to C-Soft consoles in the FleetSync, MDC-1200, Call List and Per Line Call History windows.

Date Format drop down menu

The **Date Format** drop down menu is used to select the date format displayed in the call logs.

Available selections for this menu are:

- MM/DD/YYYY
- DD/MM/YYYY

Default Setting group box**Restore Default button**

The **Restore Default** button is used to reset all parameter settings to their default values.

The Restore Default button will reset all parameters in the Language Customization setup.

14.2

Button Labels window

The **Button Labels** group box contains fields to enter custom labels appearing on buttons in the Call List, Per Line, Manual Call List, Set Status and Active Emergency windows.

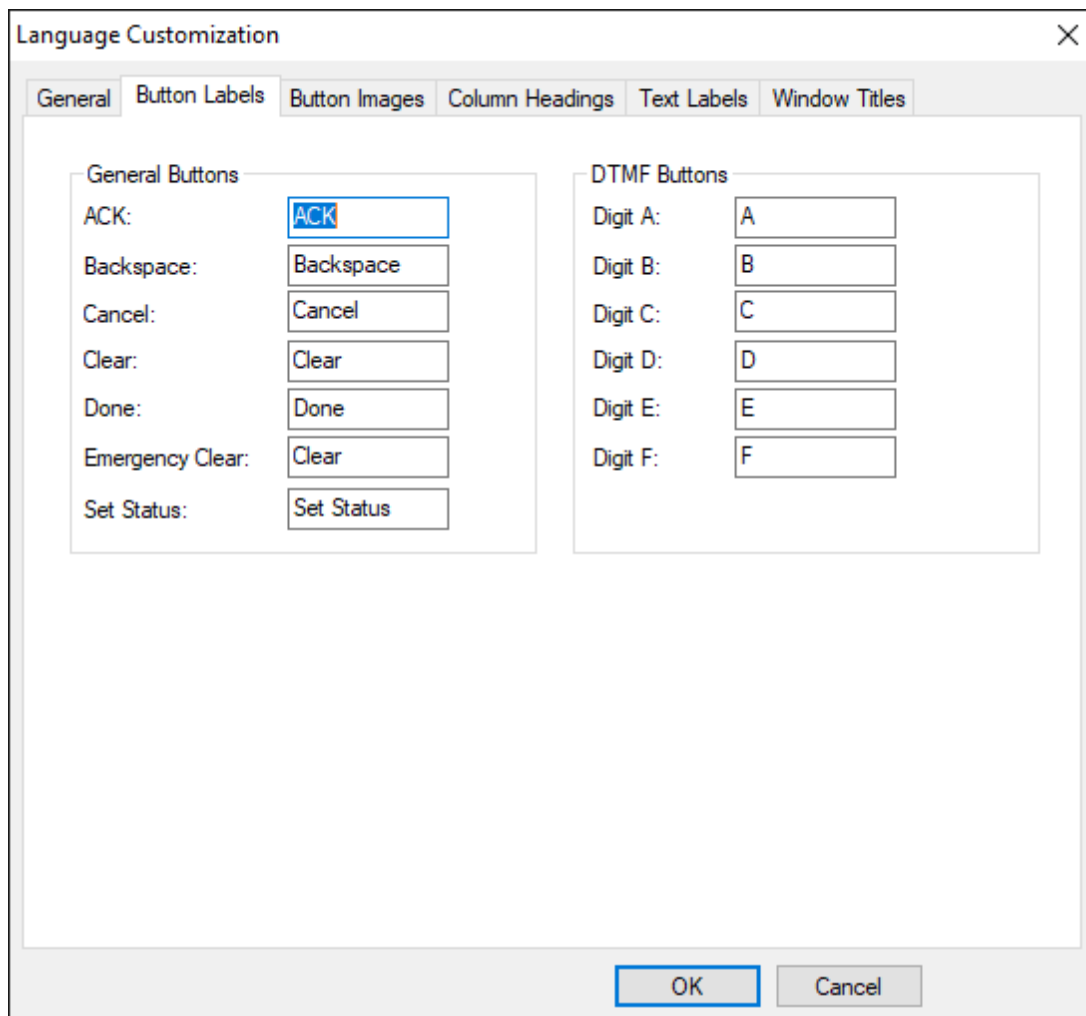


Figure 14.2: Language Customization Window - Button Labels Page

General Button group box

ACK field

The **ACK** field creates a button label that displays in the Active Emergency window. When the button is clicked in C-Soft Runtime, the emergency is acknowledged by sending a message to the radio that initially declared the emergency.

This field can contain up to 10 characters.

Backspace field

The **Backspace** field creates a button label that displays in the Manual Call window. When the button is clicked in C-Soft Runtime, the last character entered in the User ID field is cleared.

This field can contain up to 10 characters.

Cancel field

The **Cancel** field creates a button label that displays in the Set Status window. When the button is clicked in C-Soft Runtime, changes are discarded and the window closes.

This field can contain up to 10 characters.

Clear field

The **Clear** field creates a button label that displays in the Manual Call List window. When the button is clicked in C-Soft Runtime, the User ID field is cleared.

This field can contain up to 10 characters.

Done field

The **Done** field creates a button label that displays in all call windows. When the button is clicked in C-Soft Runtime, the window closes.

This field can contain up to 10 characters.

Emergency Clear field

The **Emergency Clear** field creates a button label that displays in the Active Emergency window. When the button is clicked in C-Soft Runtime, the Emergency is cleared from the list.

This field can contain up to 10 characters.

Set Status field

The **Set Status** field creates a button label that displays in the Per Line Call History, Manual Call List and Call List windows. When the button is clicked in C-Soft Runtime, the Status List window appears and a status ID can be selected and sent.

This field can contain up to 10 characters.

DTMF Buttons group box**Digit A-F fields**

The **Digit A-F** fields create a button label that displays in the Manual Call window. When the button is clicked in C-Soft Runtime, the digit it is assigned to is entered in the User ID field.

This field can contain up to 10 alphanumeric characters.

14.3

Button Images window

The Button Images group box contains fields to enter the file path of an image file (.bmp, .jpg, .gif, and .png) to display custom images on the specified buttons. Each button image contains the following two buttons:

Browse button

The **Browse** button opens the Open window, which is used to navigate to the image file.

Clear button

The **Clear** button resets the current file path to the default file path.

**Notice!**

To create a transparent background when using a 24-bit bitmap image, use RGB color 192, 192, 192.

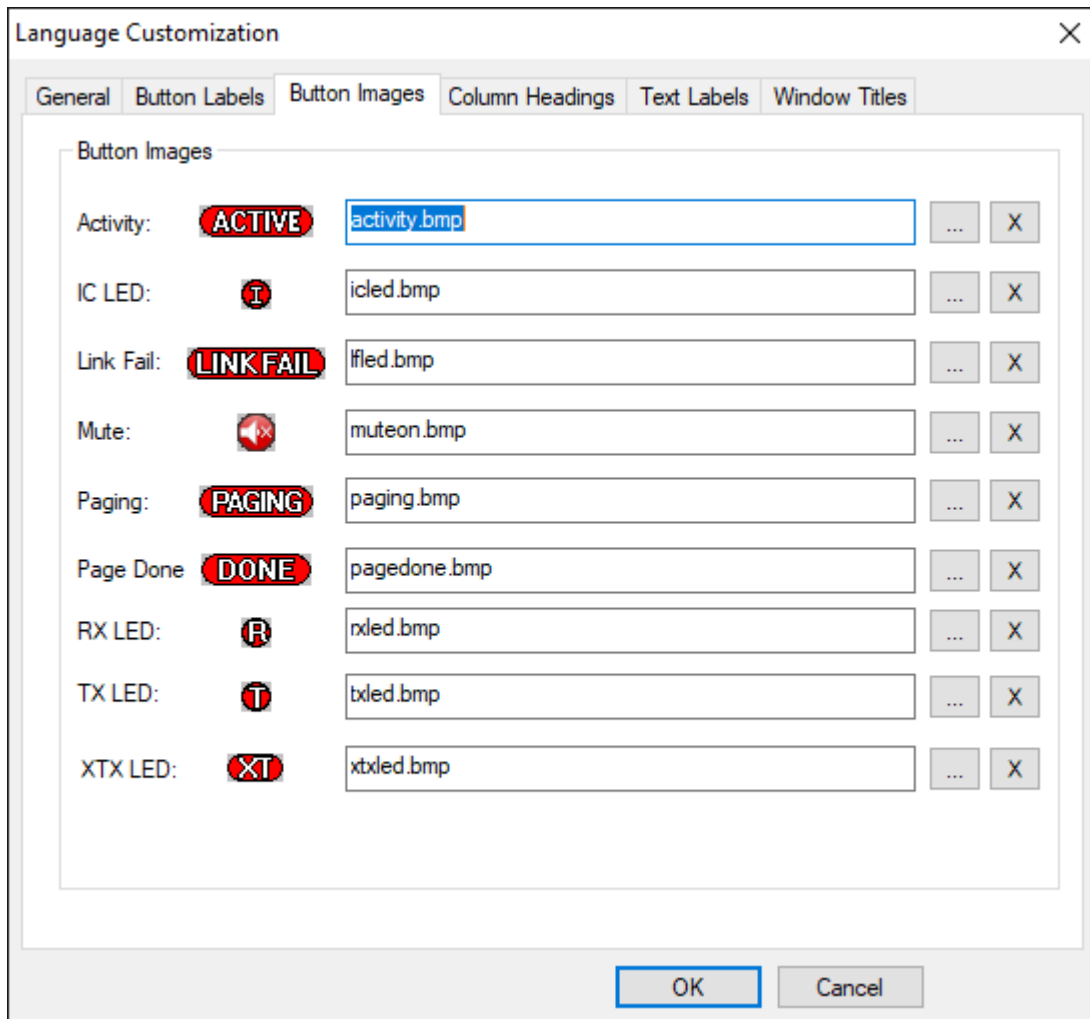


Figure 14.3: Button Images window

Activity

The **Activity** icon is displayed on a Popup button when audio traffic is detected on a line contained in the popup window and the popup window is closed (see *UI Element Setup window - Add Popup Button*, page 439). The default image is activity.bmp.

IC LED

The **IC LED** icon is displayed on a Select button when intercom traffic is detected on the Select button's line (see *Select*, page 364). The default image is icled.bmp.

Link Fail

The **Link Fail** icon is displayed on Select buttons when C-Soft fails to detect a device at the Select button's base radio IP (see *Select*, page 364). The default image is lfled.bmp.

Mute LED

The **Mute LED** icon is displayed on Select buttons when the Select button's line is muted (see *Select*, page 364). The default image is muton.bmp.

Paging

The **Paging** icon is displayed on Page and Manual Pages buttons while the page is being sent. The default image is paging.bmp.

Page Done

The **Page Done** icon is displayed on Page and Manual Pages buttons when the page has been completed and the “Manually confirm pages are done sending” option has been enabled in Paging Setup see *Paging Settings window, page 149* The default image is pagedone.bmp.

RX LED

The **RX LED** icon is displayed on Select buttons when receive traffic is detected on the Select button's line (see *Select, page 364*). The default image is rxled.bmp.

TX LED

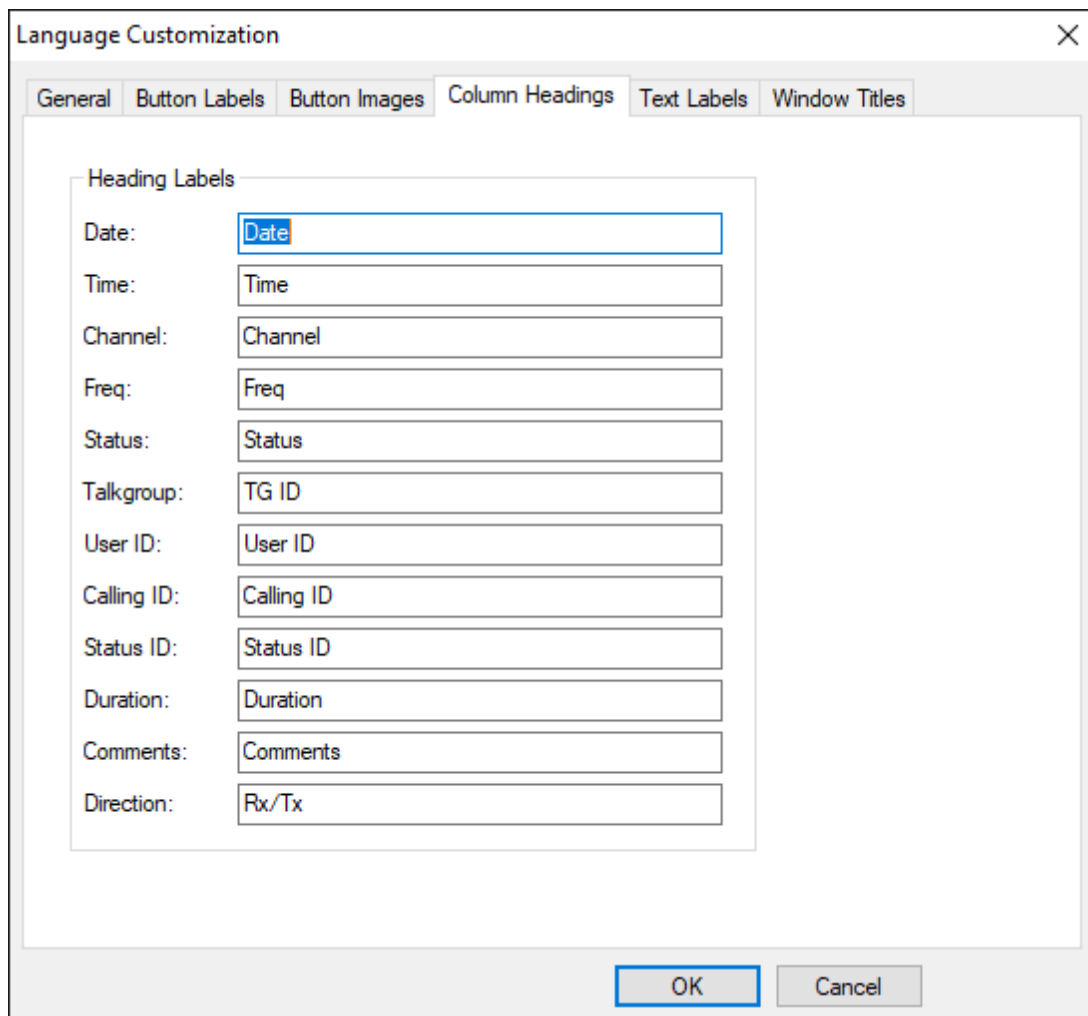
The **TX LED** is displayed on Select buttons when parallel console transmit traffic is detected on the Select button's line (see *Select, page 364*). The default image is txled.bmp.

XTX LED

The **XTX LED** icon is displayed on Select buttons when parallel console transmit traffic, which has been crossmuted, is detected on the Select button's line (see *Local Consoles page, page 129* and *Select, page 364*). The default image is xtxled.bmp.

14.4 Column Headings page

The **Heading Labels** group box contains fields to enter custom labels appearing on column headings in the Call List, Per Line, Manual Call List, Set Status and Active Emergency windows.



Language Customization

General Button Labels Button Images **Column Headings** Text Labels Window Titles

Heading Labels

Date:	Date
Time:	Time
Channel:	Channel
Freq:	Freq
Status:	Status
Talkgroup:	TG ID
User ID:	User ID
Calling ID:	Calling ID
Status ID:	Status ID
Duration:	Duration
Comments:	Comments
Direction:	Rx/Tx

OK Cancel

Figure 14.4: Language Customization Window - Column Heading Page

Heading Labels group box

Date field

The **Date** field is used to create the column label applied to the date column in call windows.

This field can contain up to 31 characters.

Time field

The **Time** field is used to create the column label applied to the time column in call windows.

This field can contain up to 31 characters.

Channel field

The **Channel** field is used to create the column label applied to the channel column in call windows.

This field can contain up to 31 characters.

Freq field

The **Freq** field is used to create the column label applied to the frequency column in call windows.

This field can contain up to 31 characters.

Status field

The **Status** field is used to create the column label applied to the status column in call windows.

This field can contain up to 31 characters.

Talkgroup field

The **Talkgroup** field is used to create the column label applied to the talkgroup column in call windows.

This field can contain up to 31 characters.

User ID field

The **User ID** field is used to create the column label applied to the user ID column in call windows.

This field can contain up to 31 characters.

Calling ID field

The **Calling ID** field is used to create the column label applied to the calling ID column in call windows.

This field can contain up to 31 characters.

Status ID field

The **Status ID** field is used to create the column label applied to the status ID column in call windows.

This field can contain up to 31 characters.

Duration field

The **Duration** field is used to create the column label applied to the duration column in call windows.

This field can contain up to 31 characters.

Comments field

The **Comments** field is used to create the column label applied to the comments column in call windows.

This field can contain up to 31 characters.

14.5 Text Labels window

The **Text Labels** group box contains fields to enter custom labels appearing in text fields in the Call List, Per Line, Manual Call List, Set Status and Active Emergency windows.

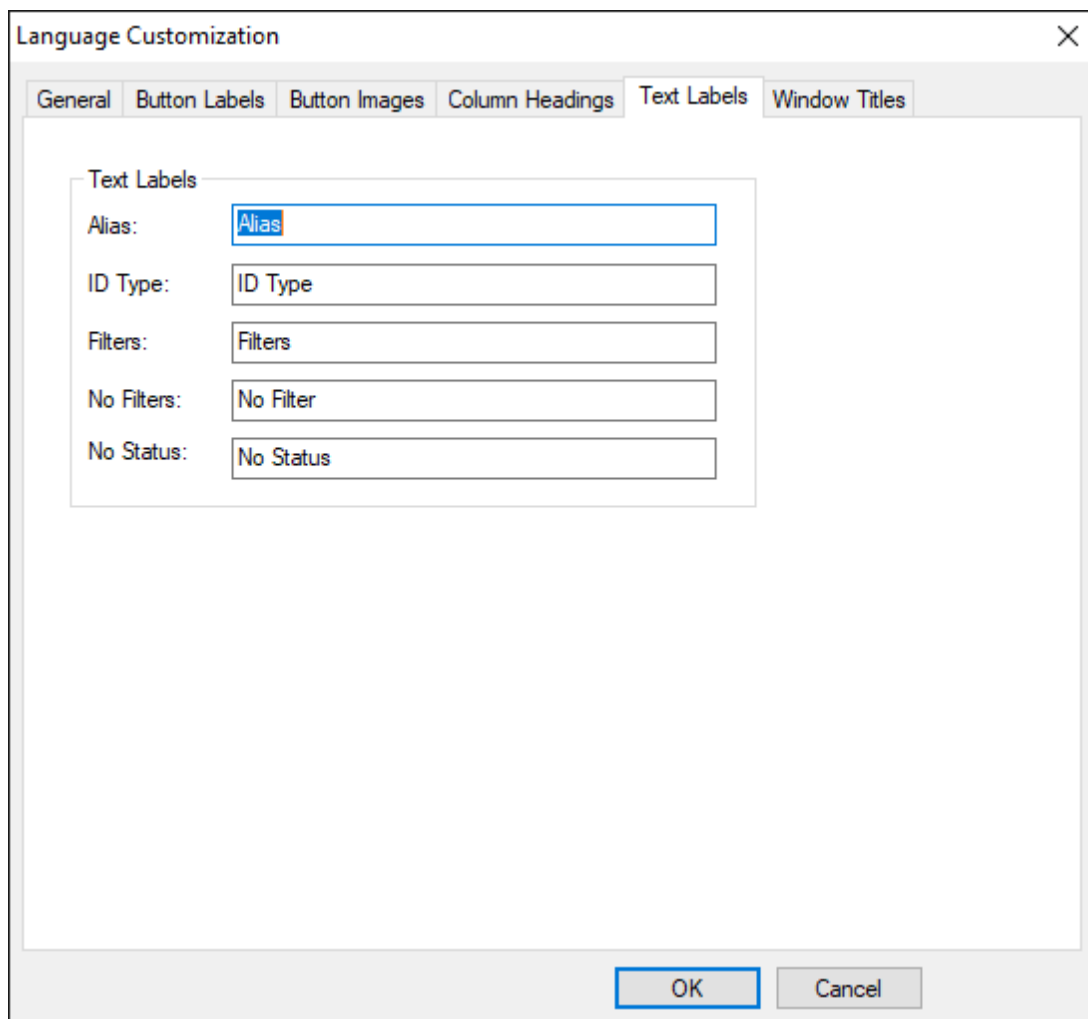
The image shows a screenshot of the 'Language Customization' window. The window has a title bar with a close button (X) in the top right corner. Below the title bar is a tabbed interface with six tabs: 'General', 'Button Labels', 'Button Images', 'Column Headings', 'Text Labels', and 'Window Titles'. The 'Text Labels' tab is currently selected and highlighted. Inside this tab, there is a group box titled 'Text Labels'. Within this group box, there are five text input fields, each with a label to its left: 'Alias:' (with the text 'Alias' inside), 'ID Type:' (with the text 'ID Type' inside), 'Filters:' (with the text 'Filters' inside), 'No Filters:' (with the text 'No Filter' inside), and 'No Status:' (with the text 'No Status' inside). At the bottom right of the window, there are two buttons: 'OK' and 'Cancel'.

Figure 14.5: Language Customization Window - Text Labels Page

Text Labels group box

Alias field

The **Alias** field is used to create the column label applied to the alias column in call windows.

This field can contain up to 31 characters.

ID Type field

The **ID Type** field is used to create the column label applied to the ID type column in call windows.

This field can contain up to 31 characters.

Filters field

The **Filters** field is used to create the filters label applied to the Call List window.

This field can contain up to 31 characters.

No Filters field

The **No Filters** field is used to create the label applied when no filters are selected in the filters display in the Call List window.

This field can contain up to 31 characters.

No Status field

The **No Status** field is used to create the label applied when no statuses are selected in the status display in call windows.

This field can contain up to 31 characters.

14.6

Window Titles window

The **Window Titles** group box contains fields to enter custom titles appearing on windows in the Call List, Per Line, Manual Call List, Set Status and Active Emergency windows.

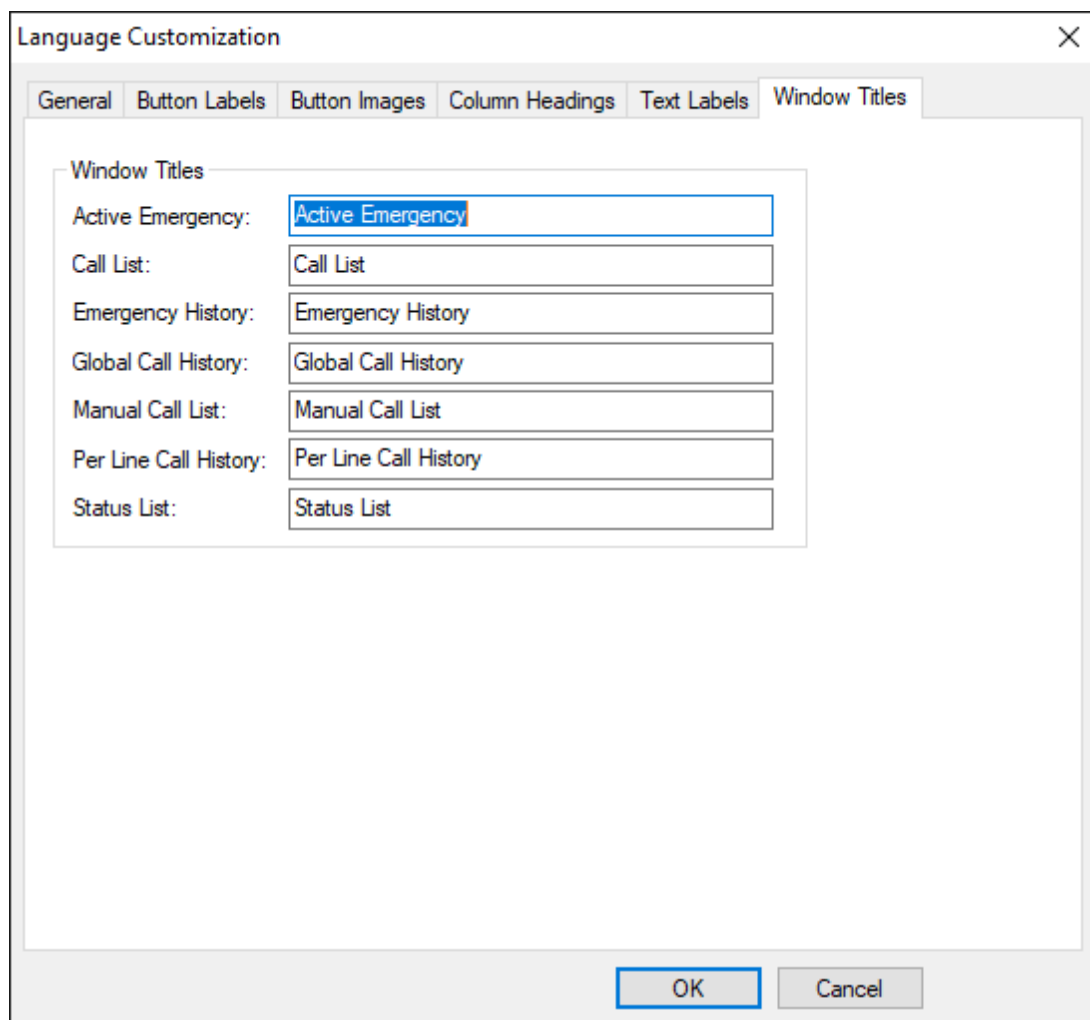


Figure 14.6: Language Customization Window - Window Titles Page

Window Titles group box**Active Emergency field**

The **Active Emergency** field allows you to name the window that appears when the Active Emergency button is clicked in the C-Soft Runtime program.

This field can contain up to 10 characters.

Call List field

The **Call List** field allows you to name the window that appears when the Call List button is clicked in the C-Soft Runtime program.

This field can contain up to 10 characters.

Emergency History field

The **Emergency History** field allows you to name the window that appears when the Emergency History button is clicked in the C-Soft Runtime program.

This field can contain up to 10 characters.

Global Call History field

The **Global Call History** field allows you to name the window that appears when the Global Call History button is clicked in the C-Soft Runtime program.

This field can contain up to 10 characters.

Per Line Call History field

The **Per Line Call History** field allows you to name the window that appears when the Per Line Call History button is clicked in the C-Soft Runtime program.

This field can contain up to 10 characters.

Manual Call List field

The **Manual Call List** field allows you to name the window that appears when the Manual Call List button is clicked in the C-Soft Runtime program.

This field can contain up to 10 characters.

Status List field

The **Status List** field allows you to name the window that appears when the Status List button is clicked in the C-Soft Runtime program.

This field can contain up to 10 characters.

15 Paging Settings window

The **Paging Settings** window, shown in the Figure below, is used to configure pager settings for both individual and group pages. Up to 10 predefined pages can be configured.

NAVIGATION: Select Edit | Setup Pagers from the menu bar.

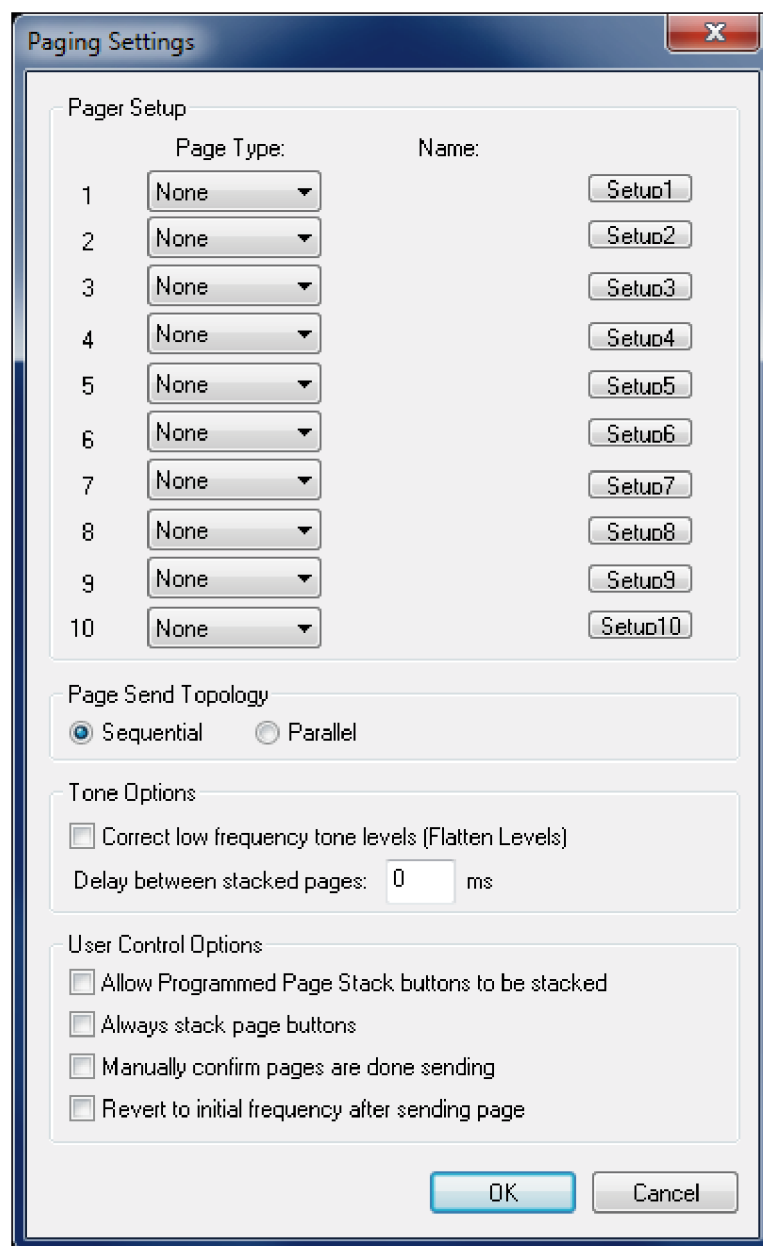


Figure 15.1: Pagers Window

Page Setup

Page Type drop down menu

The **Page Type** drop down menu, to the right of the pager number, is used to select a predefined pager from a list.

Available selections for this field are:

- 2 Tone 100 (Quickcall II 100)

- 2 Tone 1000 (Quickcall II 1000)
- DTMF
- Knox

In addition to the pager selections provided on this window, a UI element is provided.

Setup button

The **Setup** button is used to open the appropriate window for the type of pager selected in the drop down menu.

For more information, refer to:

- “2 Tone 100 Page Setup window, page 151”.
- “2 Tone 1000 Setup window, page 153”.
- “DTMF Paging Setup window, page 157”.
- “Knox Paging Setup window, page 158”.

Page Send Topology

Sequential radio button

The **Sequential** radio button indicates the paging codes are sent on a line by line basis. The pages for one line are completely sent before the pages on the next line are started.

Parallel radio button

The **Parallel** radio button indicates the paging codes are sent on different lines at the same time.

Tone Options

Correct Low Frequency Tone Levels (Flatten Levels)

The **Correct Low Freq Tone Levels (Flatten Levels)** check box indicates tones across 300kHz to 3kHz spectrum are flattened for better level adjustment. Depending on the load being driven, it is possible additional roll-off of the lower frequency tone (sub 1kHz) levels can occur.

Delay Between Stacked Pages field

The **Delay Between Stacked Pages** field is used to set the amount of time, in ms, C-Soft waits between stacked pages. This feature enables page decoders to distinguish between different pages.

The range for this field is 0 to 9999ms.



Notice!

This field is global and affects all stacked pages regardless of page type or format. This field is added to the Inter-Page Delay configured for the individual Page Formats.

User Control Options Group Box

Allow Programmed Page Stack Buttons to be Stacked check box

The **Allowed Programmed Page Stack Buttons to be Stacked** check box indicates programmed page stack buttons can be stacked.

Always Stack Page Buttons check box

The **Always Stack Page Buttons** check box indicates that Page buttons are always stacked.

Manual Confirm Pages Are Done Sending check box

The **Manual Confirm Pages Are Done Sending** check box indicates the Page, Manual Page, and Programmed Page Stack buttons display the Done icon once all pages generated by a page button have been sent by the console. The Done icon remains visible on the page buttons until the Page Cancel button is clicked.

Revert to Initial Frequency After Sending Page check box

The **Revert to Initial Frequency After Sending Page** check box indicates the console returns to the original frequency configured before sending the page.

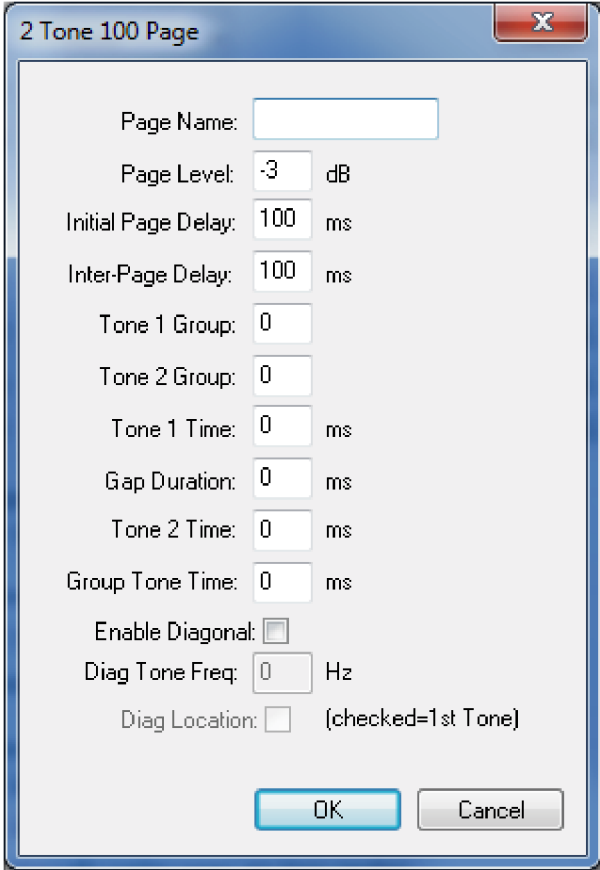
OK button

The **OK** button saves the entries and closes the window.

15.1

2 Tone 100 Page Setup window

The **2 Tone 100 Page Setup window**, shown the Figure below, is used to configure a 2-digit code paging sequence for this format. To open this window, select 2 Tone 100 from the Page Type drop down menu.



2 Tone 100 Page

Page Name:

Page Level: dB

Initial Page Delay: ms

Inter-Page Delay: ms

Tone 1 Group:

Tone 2 Group:

Tone 1 Time: ms

Gap Duration: ms

Tone 2 Time: ms

Group Tone Time: ms

Enable Diagonal: ☐

Diag Tone Freq: Hz

Diag Location: ☐ (checked=1st Tone)

OK Cancel

Figure 15.2: 2 Tone 100 Page Setup Window

Page Name field

The **Page Name** field is used to enter a descriptive name to associate with the paging sequence for this encoder. The name, when assigned, is displayed in the Pager Setup window next to the Pager Number field, and is included for selection in a list of variables for the user interface element page function.

Page Level field

The **Page Level** field identifies the output, in dB, of the relative paging tone.

The range for this field is -60 to 10dB.

Initial Page Delay field

The **Initial Page Delay** field identifies the amount of time, in ms, allowed from PTT until the first tone is played.

The range for this field is 0 to 9999ms.

Inter-Page Delay field

The **Inter-Page Delay** field is used to set the amount of time, in ms, C-Soft waits between stacked pages using the paging format.

The range for this field is 0 to 9999ms.

**Notice!**

This field only affects stacked pages using this page format. The field is added to Delay Between Stacked Pages field on the Paging Setting window.

Tone 1 Group and Tone 2 Group fields

The **Tone 1 Group and Tone 2 Group** fields identify which two frequencies are played in succession.

The range for this field is 1 to 15.

To **determine the entry for each field**, do the following:

- Using the table on “*Telex Tone Group Numbers, page 473*”, find the desired Telex Tone Group number for the first and second tones.

Tone 1 Time field

The **Tone 1 Time** field identifies the duration, in ms, of tone 1. The tone and gap durations for standard paging plans are shown in “*Tone and Gap Durations for Standard Paging Plans, page 474*”.

The range for this field is 0 to 10000ms.

Gap Duration field

The **Gap Duration** field identifies the duration, in ms, of the gap duration. The tone and gap durations for standard paging plans are shown in “*Tone and Gap Durations for Standard Paging Plans, page 474*”.

The range for this field is 0 to 15000ms.

Tone 2 Time field

The **Tone 2 Time** field identifies the duration, in ms, of tone 2. The tone and gap durations for standard paging plans are shown in “*Tone and Gap Durations for Standard Paging Plans, page 474*”.

The range for this field is 0 to 10000ms.

Group Tone Time field

The **Group Tone Time** field identifies the duration, in ms, of the group tone. The tone and gap durations for standard paging plans are shown in “*Tone and Gap Durations for Standard Paging Plans, page 474*”.

The range for this field is 0 to 10000ms.

Enable Diagonal check box

The **Enable Diagonal** check box indicates the tone specified in the Diag Tone Freq field is used in place of either the first or second tone depending on the selection in the Diag Location check box. Otherwise, the group tone is played for the diagonal tone duration period.

Diag Tone Freq field

The **Diag Tone Freq** field identifies the frequency, in Hz, of the diagonal tone when the Enable Diagonal check box is selected.

The range for this field is 0 to 3000Hz.

Diag Location check box

The **Diag Location** check box indicates the diagonal tone is used in place of the first tone; otherwise, the group tone is used.

OK button

The **OK** button saves the entries and closes the window.

Cancel button

The **Cancel** button discards any changes made and closes the window.

15.2

2 Tone 1000 Setup window

The **2 Tone 1000 Setup** window, shown in the Figure below, is used to configure a 3-digit paging code. To open this window, select 2 Tone 1000 from the Page Type drop down menu.

2 Tone 1000 Page

Page Name:

Page Level: dB

Initial Page Delay: ms

Inter-Page Delay: ms

Tone Plan Number:

Tone 1 Time: ms

Gap Duration: ms

Tone 2 Time: ms

Group Tone Time: ms

Enable Diagonal: ☐

Diag Tone Freq: Hz

Diag Location: ☐ (checked=1st Tone)

OK Cancel

Figure 15.3: 2 Tone 1000 Setup Window

Page Name field

The **Page Name** field is used to enter a descriptive name to associate with the setup for this encoder. The name, once assigned, is displayed on the Pager Setup window next to the Pager Number field, and is included for selection in a list of variables for the user interface element page function.

Page Level field

The **Page Level** field identifies the output of the relative paging tone.

The range for this field is -60 to 10dB.

Initial Page Delay field

The **Initial Page Delay** field identifies the amount of time allowed from PTT until the first tone is played.

The range for this field is 0 to 9999ms.

Inter-Page Delay field

The **Inter-Page Delay** field is used to set the amount of time, in ms, C-Soft waits between stacked pages using the paging format.



Notice!

This field only affects stacked pages using this page format. The field is added to Delay Between Stacked Pages field on the Paging Setting window.

The range for this field is 0 to 9999ms.

Tone Plan Number field

The **Tone Plan Number** field is used to configure the first and second page tones. Refer to “*Telex Tone Group Numbers, page 473*”.

The range for this field is 1 to 25.

EXAMPLE: If the pager to be reached is N349, the Telex Code Plan Number would be set to 12 which corresponds to group Mot N. The Pager Capcode 3 corresponds to the line (3+3), in Group N (Tone Plan Number 12), from which the 2 Tone Group Frequencies are selected.

From using Telex Code Plan #12, Tone Group #3, and Tone Group #3 for N349, the first tone (Telex Tone Group Number 3 and Tone Group 4) sent would be 313.0, followed by the second tone (Telex Tone Group Number 3 and Tone Group 9) 1063.2.

Table “Example tone plan number locator” shows the break down of each digit in the pager number N349 and a description of the encoder parameters identified by the digit.

Digit	Identifies	Description	
N	Pager	Locate the Mot N group pagers in “2 Tone 1000 Plan Numbers” on page 427. Enter the Telex Codeplan # from the top row in the Tone Plan Number (12) (this digit can also identify the entries for the Tone 1 Time, Gap Duration, Tone 2 Time and Group Tone Time fields, refer to “Tone and Gap Durations for Standard Paging Plans” on page 426).	Where the Telex code plan # (12) and the Pager Capcode (3xx) intersect in the table to identify the Telex Group No. (3+3). This identifies the frequencies for tone 1 and Tone 2.
3	Pager Capcode	Locate the Pager Capcode (3xx) in “2 Tone 1000 Plan Numbers” on page 427.	In the table’s left column.

4	Tone 1 Frequency	Using the first number identified above (3), locate the Telex Group No. 3 and Tone Group 4 (second digit in pager number), from “Telex Tone Group Numbers” on page 425.	Where these two items intersect in the table identifies the frequency of tone 1 (313.0).
9	Tone 2 Frequency	Using the second number in the Telex Group number (3), locate the Telex Group No. 3 and Tone Group 9 (third digit in pager number) from “Telex Tone Group Numbers” on page 425.	Where these two items intersect in the table identifies the frequency of tone 2 (1063.2).

Tab. 15.4: Example tone plan number locator

Tone 1 Time field

The **Tone 1 Time** field identifies the amount of time of the duration for tone 1. The tone and gap durations for standard paging plans are shown in “*Tone and Gap Durations for Standard Paging Plans, page 474*”.

The range for this field is 1 to 10000ms.

Gap Duration field

The **Gap Duration** field identifies the amount of time of the gap duration. The tone and gap durations for standard paging plans are shown in “*Tone and Gap Durations for Standard Paging Plans, page 474*”.

The range for this field is 1 to 15000ms.

Tone 2 Time field

The **Tone 2 Time** field identifies the amount of time of the duration for tone 2. The tone and gap durations for standard paging plans are shown in “*Tone and Gap Durations for Standard Paging Plans, page 474*”.

The range for this field is 1 to 10000ms.

Group Tone Time field

The **Group Tone Time** field identifies the amount of time of the tone duration for the group tone. The tone and gap durations for standard paging plans are shown in “*Tone and Gap Durations for Standard Paging Plans, page 474*”.

The range for this field is 1 to 10000ms.

Enable Diagonal check box

The **Enable Diagonal** check box indicates the frequency entered in the Diag Tone Freq field is used in place of either the first or second tone depending on the selection made in the Diag Location check box. Otherwise, the second tone is played for the diagonal tone duration period.

Diag Tone Freq field

The **Diag Tone Freq** field identifies the frequency of the diagonal tone when the Enable Diagonal check box is selected.

The range for this field is 0 to 3000Hz.

Diag Location check box

The **Diag Location** check box indicates the diagonal tone is used in place of the first or second tone. If selected, the diagonal tone overrides either the first or second group tone. Otherwise, group tone is used.

OK button

The **OK** button saves the entries and closes the window.

Cancel button

The **Cancel** button discards any changes made and closes the window.

15.3

DTMF Paging Setup window

The **DTMF Paging Setup** window, shown in the Figure below, is used to configure standard paging tones level, delay, time length and string length.

To open this window, select DTMF from the Page Type drop down menu.

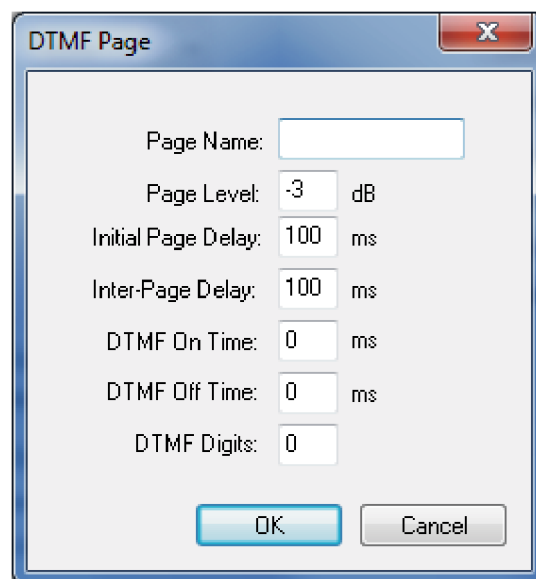


Figure 15.4: DTMF Paging Setup Window

Page Name field

The **Page Name** field is used to enter a descriptive name to associate with the setup for this encoder. The name, once assigned, is displayed on the Pager Setup window next to the Pager Number field, and is included for selection in a list of variables for the user interface element page function.

Page Level field

The **Page Level** field identifies the output of the relative paging tone.

The range for this field is -60 to 10dB.

Initial Page Delay field

The **Initial Page Delay** field identifies the amount of time allowed from PTT until the first tone is played.

The range for this field is 0 to 9999ms.

Inter-Page Delay field

The **Inter-Page Delay** field is used to set the amount of time, in ms, C-Soft waits between stacked pages using the paging format.

The range for this field is 0 to 9999ms.

**Notice!**

This field only affects stacked pages using this page format. The field is added to Delay Between Stacked Pages field on the Paging Setting window.

DTMF On Time field

The **DTMF On Time** field identifies the amount of time the DTMF digit is played.

The range for this field is 20 to 2000ms.

DTMF Off Time field

The **DTMF Off Time** field identifies the amount of time in between the time each DTMF digit is played.

The range for this field is 20 to 2000ms.

DTMF Digits field

The **DTMF Digits** field identifies the number of digits in a standard page. The number of digits specified are expected by all pages using this option.

The range for this field is 1 to 16.

OK button

The **OK** button saves the entries and closes the window.

Cancel button

The **Cancel** button discards any changes made and closes the window.

15.4

Knox Paging Setup window

The **Knox Paging Setup** window, shown in the Figure below, is used to configure the pager name, output level, digit duration, pause times, and digits required in the page.

To open this window, select Knox from the Page Type drop down menu.

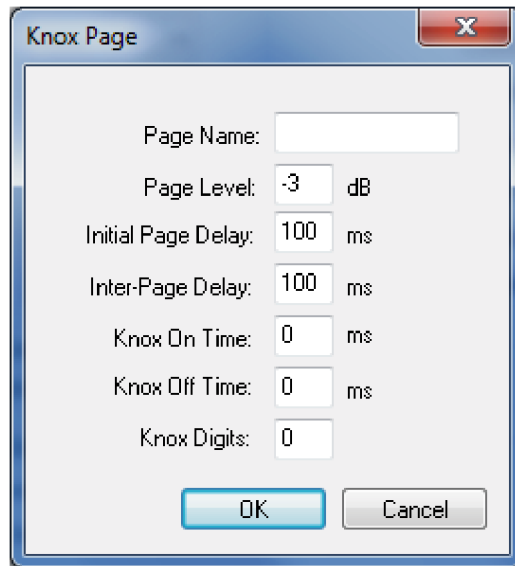


Figure 15.5: Knox Paging Setup Window

Page Name field

The **Page Name** field is used to enter a descriptive name to associate with the paging sequence for this encoder. The name, when assigned, is displayed in the Pager Setup window next to the Pager Number field, and is included for selection in a list of variables for the user interface element page function.

Page Level field

The **Page Level** field identifies the output of the relative paging tone.

The range for this field is -60 to 10dB.

Initial Page Delay field

The **Initial Page Delay** field identifies the amount of time allowed from PTT until the first tone is played.

The range for this field is 0 to 9999ms.

Inter-Page Delay field

The **Inter-Page Delay** field is used to set the amount of time, in ms, C-Soft waits between stacked pages using the paging format.



Notice!

This field only affects stacked pages using this page format. The field is added to Delay Between Stacked Pages field on the Paging Setting window.

The range for this field is 0 to 9999ms.

Knox On Time field

The **Knox On Time** field identifies the amount of time the kox digit is played.

The range for this field is 20 to 2000ms.

Knox Off Time field

The **Knox Off Time** field identifies the amount of time in between the time each Knox Digit is played.

The range for this field is 20 to 2000ms.

Knox Digits field

The **Knox Digits** field identifies the number of digits in a standard page. The number of digits specified are expected by all pages using this option.

The range for this field is 1 to 16.

OK button

The **OK** button saves the entries and closes the window.

Cancel button

The **Cancel** button discards any changes made and closes the window.

16 Tone Levels window

The **Tone Levels** window, shown in the Figure below, is used to configure the tone level, in dB, of individual tones heard by the operator.

NAVIGATION: Select Edit | Setup Tone Level from the menu bar.

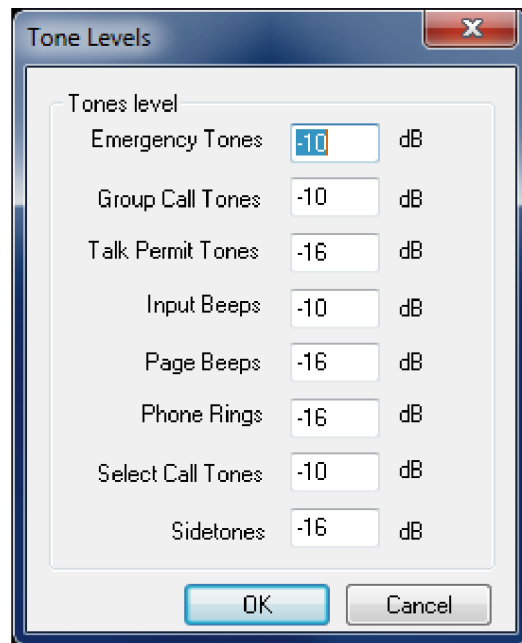


Figure 16.1: Tone Levels Window

Emergency Tone field

The **Emergency Tones** field indicates the tone level at which the emergency tone is heard.

The range for this field is -60 to 0 dB.

Group Call Tones field

The **Group Call Tones** field indicates the tone level at which the group call tones are heard.

The range for this field is -60 to 0 dB.

Talk Permit Tones field

The **Talk Permit Tones** field indicates the beep level at which the iDEN beeps are heard.

The range for this field is -60 to 0 dB.

Input Beeps field

The **Input Beeps** field indicates the beep level at which the input beeps are heard.

The range for this field is -60 to 0 dB.

Page Beeps field

The **Page Beeps** field indicates the beep level at which the page beeps are heard.

The range for this field is -60 to 0 dB.

Phone Rings field

The **Phone Rings** field indicates the ring level at which the phone rings are heard.

The range for this field is -60 to 0 dB.

Select Call Tones field

The **Select Call Tones** field indicates the tone level at which select call tones are heard.

The range for this field is -60 to 0 dB.

Sidetones field

The **Sidetones** field indicates the level at which sidetones are heard.

The range for this field is -60 to 0 dB.

OK button

The **OK** button saves the entries and closes the window.

Cancel button

The **Cancel** button discards any changes made and closes the window.

17 Global SIP Configuration window

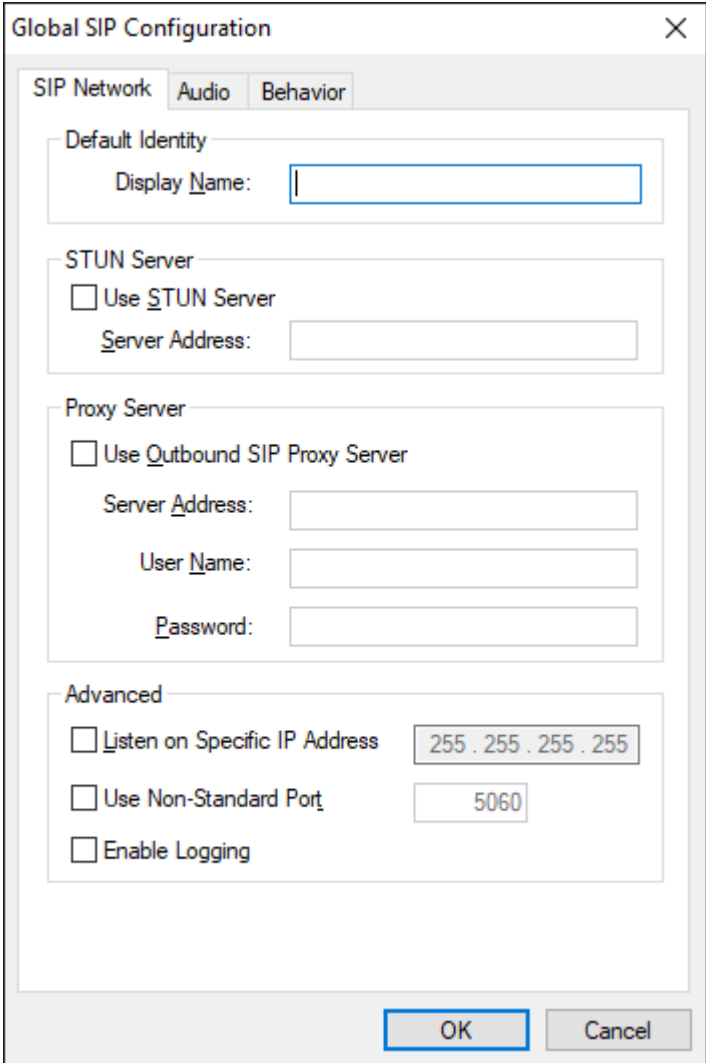
The **Global SIP Configuration** window, shown in the Figure below, provides access to SIP Network settings and SIP Audio settings.

SIP extension settings are configured on a Per Line basis. For more information, see *Configure SIP Settings window, page 108*.

NAVIGATION: Select Edit | Setup SIP Phone from the menu bar.

17.1 SIP Network page

The **SIP Network** page, shown in the Figure below, is used to enter Default Identity, STUN Settings, Proxy Server Settings, and various other advanced settings.



The screenshot shows the 'Global SIP Configuration' window with the 'SIP Network' tab selected. The window has a title bar with a close button (X). Below the title bar are three tabs: 'SIP Network', 'Audio', and 'Behavior'. The 'SIP Network' tab contains several sections:

- Default Identity:** A text box labeled 'Display Name:' with a cursor inside.
- STUN Server:** A checkbox labeled 'Use STUN Server' (unchecked) and a text box labeled 'Server Address:'.
- Proxy Server:** A checkbox labeled 'Use Outbound SIP Proxy Server' (unchecked), and three text boxes labeled 'Server Address:', 'User Name:', and 'Password:'.
- Advanced:** Three checkboxes: 'Listen on Specific IP Address' (unchecked) with a text box containing '255 . 255 . 255 . 255'; 'Use Non-Standard Port' (unchecked) with a text box containing '5060'; and 'Enable Logging' (unchecked).

At the bottom right of the window are 'OK' and 'Cancel' buttons.

Figure 17.1: Network Page - Global SIP Configuration

Default Identity group box**Display Name field**

The **Display Name** field is used to enter an alias name for the console for easy identification. The display name appears on the SIP phone if the SIP phone or SIP/PSTN gateway is capable and configured to display the alias.

STUN Server group box**Use STUN Server check box**

The **Use STUN Server** check box indicates the STUN (Session Traversal Utilities for NAT [Network Address Translation]) server entered in the field is used to negotiate packet routing through NAT firewalls or NAT routers.

Server Address field

The **Server Address** field is used to enter a server address for packet routing.

**Notice!**

The Use Stun Server check box must also be selected.

Typically, if C-Soft is running on a computer running on a private IP network, then it is necessary to enable the use of STUN server option. The STUN protocol allows C-Soft to use a STUN server on the internet to determine how the NAT gateway translates the UDP addressing between the private network and the public internet.

Proxy Server group box**Use Outbound SIP Proxy check box**

The **Use Outbound SIP Proxy** check box indicates traffic is initially sent through the proxy server entered in the Server Address field.

**Notice!**

The Server Address field must also be configured.

Server Address field

The **Server Address** field is used to enter the proxy server's address.

**Notice!**

The Use Outbound SIP Proxy check box must also be selected.

User Name field

The **User Name** field is used to enter the proxy server User Name.

Password field

The **Password** field is used to enter the proxy server password.

Advanced group box**Listen on Specific IP Address check box**

The **Listen on Specific IP Address** check box indicates the IP Address you enter in the Listen on Specific IP Address field is active.

**Notice!**

The Listen on Specific IP Address field must also be configured.

Listen on Specific IP Address field

The **Listen on Specific IP Address** field is used to enter the specific IP Address to use for sending and receiving phone calls. This feature is useful when the computer has multiple NICs (Network Interface Cards).

**Notice!**

The Listen on Specific IP Address check box must also be selected.

Use Non-Standard Port check box

The **Use Non-Standard Port** check box indicates the port number entered in the field is used for SIP communication. Otherwise, the default port number 5060 is used.

**Notice!**

The Use Non-Standard Port field must also be configured.

Use Non-Standard Port field

The **Use Non-Standard Port** field is used to enter a port number for SIP communications.~

**Notice!**

The Use Non-Standard Port check box must also be selected.

Enable Logging check box

The **Enable Logging** check box enables logging for the SIP library in C-Soft. This check box is used for Debugging Purposes Only.

17.2 Audio page

The **Audio** page, shown in the Figure below, contains LAM, silence detection, and jitter buffering configuration.

Global SIP Configuration

SIP Network Audio Behavior

LAM Setup

LAM Level (dB) -30

LAM Time (s) 3

Silence Detection

☐ None

☐ Fixed Threshold Threshold 0

☒ Adaptive Threshold Period (ms) 600

Voice Deadband (ms) 10

Silence Deadband (ms) 400

Jitter Buffering

Min Duration (ms) 50

Max Duration (ms) 250

Restore Defaults

OK Cancel

Figure 17.2: Audio Page - Global SIP Configuration

LAM Setup group box

The **LAM Setup** group box is used to control LAM (Line Activity Monitor) during SIP phone to radio crosspatch activity.

LAM Level (dB) spin box

The **LAM Level (dB)** spin box is used to set the audio threshold at which the crosspatched line or echo packets begin to send audio packets over the network.

The range for this field is -60 to 0 dB.

LAM Time (s) spin box

The **LAM Time** spin box is used to set the amount of time for radio crosspatch activity. The LAM time determines how long the SIP line is active after the audio level is below the LAM level threshold.

The range for this field is 0 to 60 sec.

Silence Detection group box

None radio button

The **None** radio button indicates there is no silence detection for any SIP phone line in the system. Audio continues to transmit, even if silent.

Fixed Threshold radio button and Threshold spin box

The **Fixed Threshold** radio button is used to activate the minimum audio detection mode. When the audio level reaches the specified threshold configured in the spin box, it is no longer considered silent. Audio levels below the specified raw digital value in the spin box are ignored and considered silent.

This setting is used with the Voice Deadband and Silence Deadband spin boxes.

The range for this field is 0 to 8000.

Adaptive Threshold radio button and Period spin box

The **Adaptive Threshold** radio button is used to activate the dynamic audio detection mode and is the recommended configuration for silence detection. The minimum audio is automatically adjusted after the software determines the average audio received over the amount of time specified in the Period spin box.

This setting is used with the Voice Deadband and Silence Deadband spin boxes.

The range for this field is 10 to 10000ms.

Voice Deadband (ms) spin box

The **Voice Deadband (ms)** spin box is used to configure the minimum duration of audio above the threshold needed to start sending audio.

The range for this field is 10 to 10000ms.



Notice!

If audio is choppy after setting the value, try setting to a shorter amount of time.

Silence Deadband (ms) spin box

The **Silence Deadband (ms)** spin box is used to configure the minimum duration of audio below the threshold before the audio is considered silent. The time should be long enough so that gaps between spoken words are not detected as silence, otherwise the audio may sound choppy.

The range for this field is 10 to 10000ms.

Jitter Buffering group box

The **Jitter Buffering** group box contains settings for buffering incoming audio packet delivery to reduce jitter. When the minimum and maximum are set, the duration of jitter buffer is dynamically adjusted between the two values. A longer duration can improve the audio quality if network latency is variable, but when the duration is set for too long, audio delay can interfere with conversation. Experimentation is the best way to optimize your settings.

Min Duration (ms) spin box

The **Min Duration (ms)** spin box is used to configure minimum buffer duration for incoming audio.

The range for this field is 10 to 10000ms.

Max Duration (ms) spin box

The **Max Duration (ms)** spin box is used to configure maximum buffer duration for incoming audio.

The range for this field is 10 to 10000ms.

Restore Default button

The **Restore Defaults** button is used to restore factory defaults. The default values appear in the Figure above.

OK button

The **OK** button saves the entries and closes the window.

Cancel button

The **Cancel** button discards any changes made and closes the window.

Operation Test

Test the SIP registration to confirm successful connectivity and authentication to the SIP server. SIP Server status is recorded in the Global Call History page in C-Soft Runtime and a success or failure registration message appears in the status bar.

**Notice!**

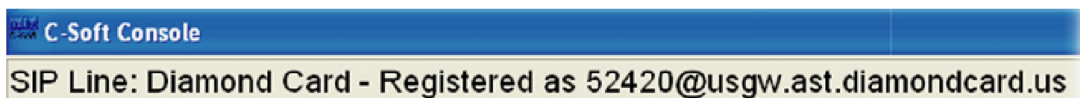
A SIP Call Control UI element is required for each SIP line. Before testing the SIP connection, you must create a SIP Call Control UI element button. Refer to “SIP Call Control” on page 342.

To **test the SIP connection in C-Soft Runtime**, do the following:

- Open the **C-Soft** console.

A message appears in the console status bar:

- If the connection is successful, a success message appears.
- If the connection fails a failure message appears.



C-Soft Console
SIP Line: Diamond Card - Registered as 52420@usgw.ast.diamondcard.us



C-Soft Console
SIP Line: SIPDiamondcard - Unable to Register as 52420@usgw.ast.diamondcard.us

17.3

Behavior page

The **Behavior** page, shown in the figure below, contains settings for defining how C-Soft SIP operates. These settings are needed for interoperability with different SIP servers, which may have differing procedures for common SIP operations.

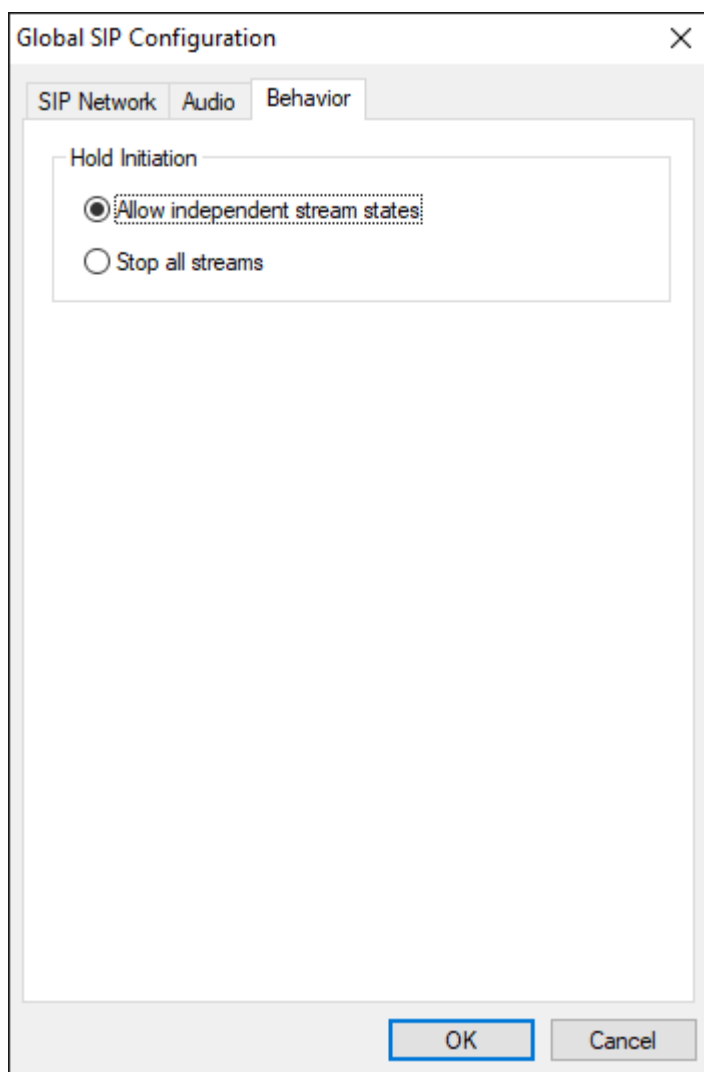


Figure 17.3: Global SIP Configuration - Behavior page

Hold Initiation Group Box

The Hold Initiation group box is used to set how C-Soft initiates putting a call on hold. The default value is Allow independent stream states, and is only recommended to set Stop all streams in the case that C-Soft audio is leaking while on hold.

Allow independent stream states Radio Button

The **Allow independent stream states radio button** indicates that C-Soft, upon putting a call on hold, sends an invite message with the parameter a=sendonly, which the SIP server and remote endpoint negotiate media streams, ultimately putting the call on hold.

Stop all streams Radio Button

The **Stop all streams** radio button indicates that C-Soft, upon putting a call on hold, sends an invite message with the parameter a=inactive, immediately ending the streams without negotiation.

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Setup P25

NAVIGATION: Select **Edit | Setup P25** from the menu bar.

For more information about setting up P25:

- **P25 DFSI Global Setup** is discussed in *P25 DFSI Global Setup window, page 480*
- **Global P25 CSSI Parameters** is discussed *Global P25 CSSI Parameters, page 540*
- **Encryption Setup** is discussed in *Encryption Setup window, page 516*

Refer to

- *P25-DFSI window, page 322*
- *Appendix E - P25-DFSI (Digital Fixed Station Interface), page 479*

19 GPS Mapping Setup window

The **GPS Mapping Setup** window is used to enable GPS data to be received and stored by C-Soft, and to configure GPS settings, such as file name.

The .kml file is located in a directory specified in C:\ProgramData\Telex Communications C-Soft\Settings\ClientSettings.xml and by default is C:\ProgramData\Telex Communications C-Soft\DesignData. Change the GPS Mapping storage directory by using Telex System Manager.

NAVIGATION: Select **Edit | Setup GPS Mapping** from the menu bar.

Figure 19.1: GPS Mapping Setup Window



Notice!

GPS mapping is currently only available for the Kenwood NEXEDGE, MOTORBO, and Tait DMR Trunking systems.

KML File Setup group box

Store received GPS data in KML File check box

The **Store received GPS data in KML File** check box is used to create and store GPS file.



Notice!

Google Earth functionality will only work if the Store received GPS data in KML File check box is selected.

File Name field

The **File Name** field is used to define the file name.

Network Setup group box

Enable GPS Output (NEXEDGE Only) check box

The **Enable GPS Output** check box is used to enable GPS output. If selected, the GPS IP Address and GPS ports become active and can be modified. If the radios have GPS enabled, the console outputs the GPS information on the console's user selectable address and port. The format is in Degrees, Decimal Minutes.

The remote radio must be configured in the radio programming software to send the GPS coordinates to the console ID.

**Notice!**

The Network GPS feature is only available for the NEXEDGE IP interface.

GPS IP Address field

The **GPS IP Address** field indicates the console's GPS IP Address for transmitting GPS data.

GPS Port field

The **GPS Port** field indicates the port used for GPS data.

The port number must be unique from all other ports configured on the console.

20

NEXEDGE

NAVIGATION: Select **Edit | Setup NEXEDGE** from the menu bar.

- NEXEDGE is discussed in *Appendix H - Kenwood NEXEDGE Direct IP interface, page 544*
- Global NEXEDGE Conventional Parameters window is discussed in *Global NEXEDGE Conventional Parameters window, page 561*
- Global NEXEDGE Trunking Parameters is discussed in *NEXEDGE Trunking System setup, page 551*
- NEXEDGE Encryption is discussed in *NEXEDGE Encryption window, page 581*

21 Setup External Systems

Use **Setup External Systems** to configure and manage connections to external systems that C-Soft uses for various specialized operations.

21.1 API Setup

For more information on the API Setup window, see

- *Appendix K - C-Soft API Installation notes, page 604*
- *Setup External Systems window, page 605*

22

AIS

For more information, see *AIS Global Setup window, page 596*.

23 Filter List Setup window

The **Filter List Setup** window, shown in the Figure below, is used to create a list of filters for the console operator to use during FleetSync, MDC-1200, MOTOTRBO, P25-DFSI, and Telex-Serial system creation to sort and organize units and groups or fleets of user IDs in the system. The filters are also used by the console operator to filter units and groups while in the Call List window, the FleetSync Dispatching window, the MOTOTRBO Dispatching window, the P25-DFSI Dispatching window and Keypad Control.

This list can contain up to 60 filters.

NAVIGATION: Select Edit | Edit Filters from the menu bar.

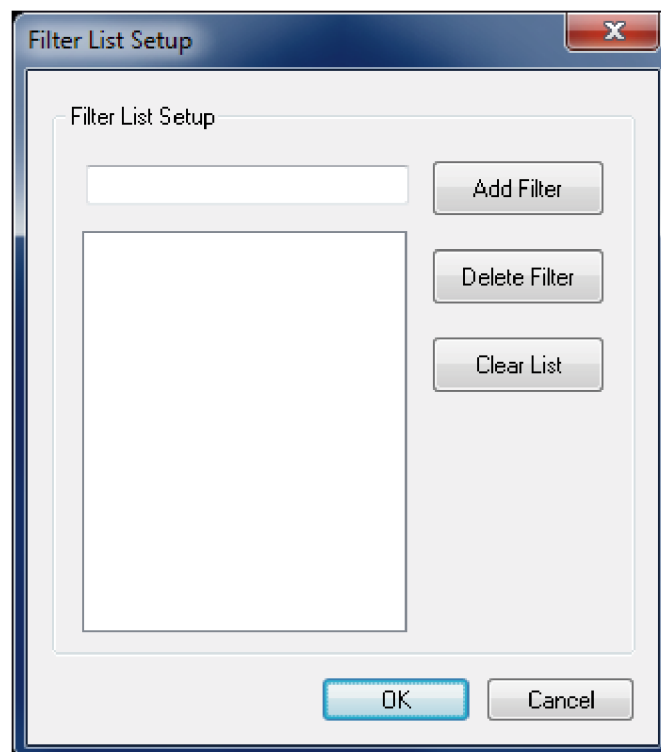


Figure 23.1: Filter List Setup Window

Filter List Setup group box

Filter Entry field

The **Filter Entry** field is used to enter a label for a new filter.

This field can contain up to 16 alphanumeric characters.

List field

The **List** field displays the list of all filters created in the system.

This list can contain up to 60 filters.

Add Filter button

The **Add Filter** button is used to add the filter entry in the Filter Entry field to the list of filters.

To **add a filter**, do the following:

1. In the Filter Entry field, enter a **name** for the filter.

2. Click **Add Filter**.

The new filter appears in the Filter Entry field.

Delete Filter button

The **Delete Filter** button is used to delete an unwanted entry from the list of filters.

To **delete a filter**, do the following:

1. In the Filter List field, **select** the filter name.
2. Click **Delete Filter**.

The filter is deleted from the list.

Clear List button

The **Clear List** button is used to clear the entire list of filters from the Filter List.

To **clear all entries**, do the following:

- Click **Clear List**.

The list is cleared from the window.



Notice!

If you accidentally click the clear list button and did not want to delete the entire list then click Cancel and reopen the window.

OK button

The **OK** button saves any changes made and closes the window.

Cancel button

The **Cancel** button discards any changes made and closes the window.

24 User ID List window

The **User ID List** window, shown in the following Figures, is used to create a list of individual users in the system for recall later. It is used in conjunction with the ANI features of certain radios. When the window is closed and reopened, the user IDs are sorted by Name in ascending order. Refer to the Figure below.

NAVIGATION: Select Edit | Edit User ID List from the menu bar.

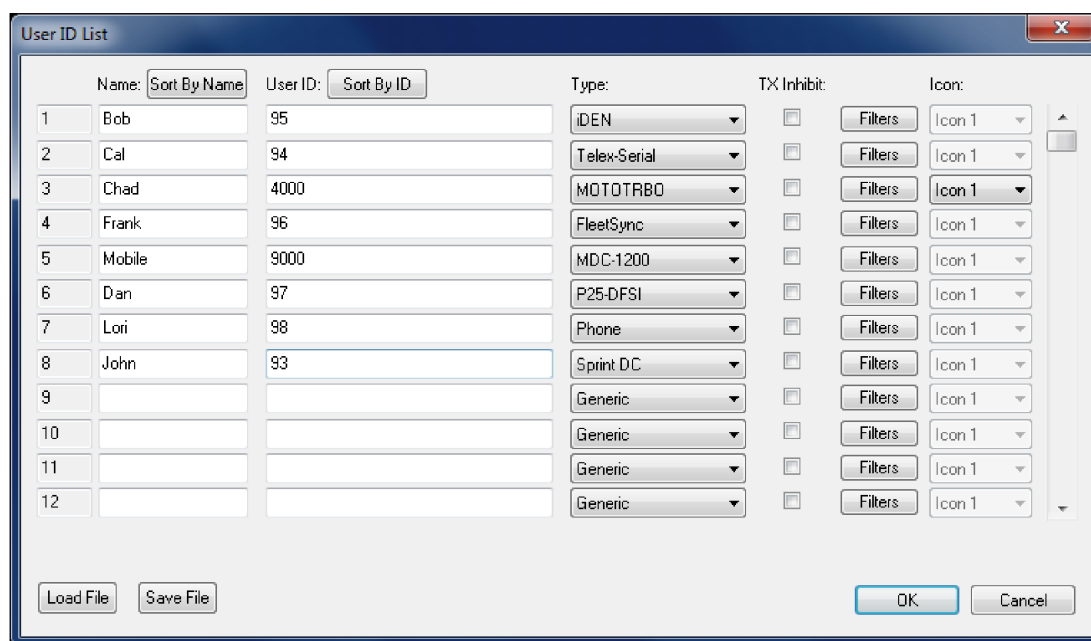


Figure 24.1: User ID List Window



Notice!

When the User ID List is closed and opened again, the blank rows are deleted and the list is sorted in ascending order by Name.

Name field

The **Name** field is used to enter a descriptive name to associate with the User ID.

When the ANI is received, this name appears on the select button for the line and in the User ID column of the Per Line Call History window, Call List window, and the Manual Call List window. If no name is associated with a User ID, the User ID appears on the line's button and in the history and call list windows.

This field can contain up to 16 characters.

For more information about ANI display configuration, refer to "ANI Setup Group Box".

Sort By Name button

The **Sort By Name** button is used to sort the User ID List by Name in ascending order.

User ID field

The **User ID** field is used to configure the user ID number transmitted by the radio.

User ID Types:

- Generic: Up to 31 hexadecimal digits, *, and #
- FleetSync: Up to 31 decimal digits.
- iDen: Up to 31 decimal digits, *, and #
- Telex-Serial: Up to 31 decimal digits
- MDC-1200: Up to 31 hexadecimal digits
- MOTOTRBO: Up to 31 decimal digits
- NEXEDGE: Up to 5 decimal digits
- NEXEDGE All Call: The ID is 65535
- P25-DFSI: Up to 31 decimal digits
- P25-CSSI: Up to 31 decimal digits
- Phone: Up to 31 decimal digits, *, and #
- Sprint DC: Up to 31 decimal digits
- AIS: Up to 8 decimal digits
- Telex-Enhanced-ANI: Up to 32 alphanumeric characters

Some of these system types do expect certain User ID formats or ranges, which are as follows:

- Generic: This applies to many different systems, so there is no additional specification
- FleetSync: 7 decimal digits: in range of 1001000-3494999
- iDen: "<number>*<number>*<number>"
- Telex-Serial: applies to many different systems, so no additional specification
- MDC-1200: 4 hexadecimal digits 0 - FFFF
- MOTOTRBO: decimal number 0-16776125
- NEXEDGE: decimal number 0-65519
- P25-DFSI: decimal number 0-65535
- P25-CSSI: decimal number 0-65535
- Phone: decimal number of up to 15 digits
- Sprint DC: decimal number of 10 digits for an individual phone number and 15 digits for a TeamDC group ID
- AIS: Decimal number 1 - 16777215
- Telex-Enhanced-ANI: A-Z, a-z, and 0-9

This field can contain up to 32 characters.

**Notice!**

Up to 6000 user IDs can be created.

Sort By ID button

The **Sort By ID** button is used to sort the User ID List by User ID in ascending order.

Type drop down menu

The **Type** drop down menu is used to select the system type the user ID is associated with.

Available selections for this field are: Generic, FleetSync, iDEN, Telex-Serial, MDC-1200, MOTOTRBO, P25-DFSI, Phone, Sprint DC, NEXEDGE-TRUNK, NEXEDGE-CONV, CSSI and AIS.

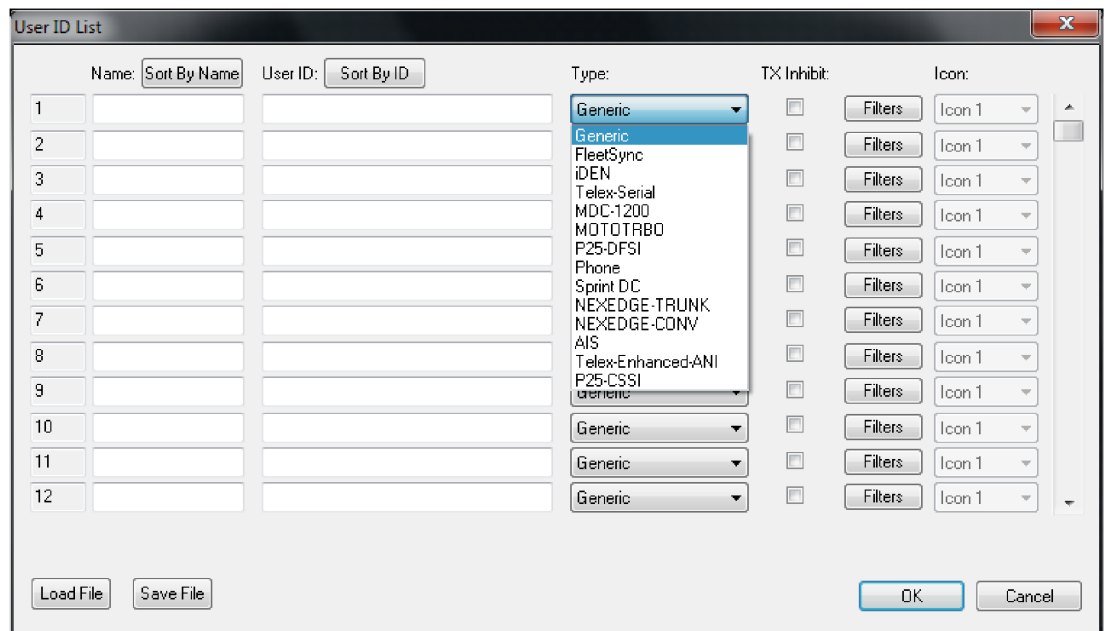


Figure 24.2: User ID List - Type Drop Down Menu

TX Inhibit check box

The **TX Inhibit** check box indicates the caller's alias displays when received, but does not display as an available destination in the Call List, FleetSync Dispatch window, MDC-1200 Dispatch window, MOTOTRBO Dispatch window, P25-DFSI Dispatch window, or Keypad.

Filters button

The **Filters** button is used to assign one or more filters to the ID. When the filter button is clicked, the Select Filters window appears and displays all filters you created earlier. Refer to "Filter List Setup window, page 177".

To **assign filters to the user ID**, do the following:

1. Click the **Filter Button**.
The Select Filter window appears.
2. Select the **filters** you want to add the User ID to.
All the filters you want to include the User ID in are selected.
3. Click **OK**.

The User IDs are added to the selected filters.

To **deselect a filter**, do the following:

- Click the **filter**.

Select Filters window

The **Select Filters** window is used to select filters to associate the user with. You can assign multiple filters to a single User ID.

Load File button

The **Load File** button is used to load a .csv file containing User ID information into the User ID List window.



Notice!

When the .csv file is loaded, all items in the current list are overwritten.

To **load a saved User ID .csv file**, do the following:

1. Click **Load File**.
The Open window appears.
2. In the Open window, select the **file** you want to load.
3. Click **Open**.

The file is loaded, the Username, ID, and Type field are populated. If configured in the file, TX inhibit and filters are also populated.

Save File button

The **Save File** button is used to save the current User IDs to a .csv file.

To **save the User ID List to a .csv file**, do the following:

1. Click **Save File**.
The Save As window appears.
2. In the Filename field, enter a **name**.
3. Click **Save**.

The .csv file is saved in the current folder.

OK button

The **OK** button saves any changes made and closes the window.

Cancel button

The **Cancel** button discards any changes made and closes the window.

25 Group ID List window

The **Group ID List** window, shown in the Figure below, is used to configure both the decode and encode group IDs for group ANIs. By default, the Group ID List is sorted by Group Name in ascending order (refer to the Figure below).

Up to 5000 Group IDs can be created.

NAVIGATION: Select Edit | Edit Group ID List from the menu bar.



Notice!

When the Group ID List is closed and opened again, the blank rows are deleted and the list is sorted by Group Name in ascending order.

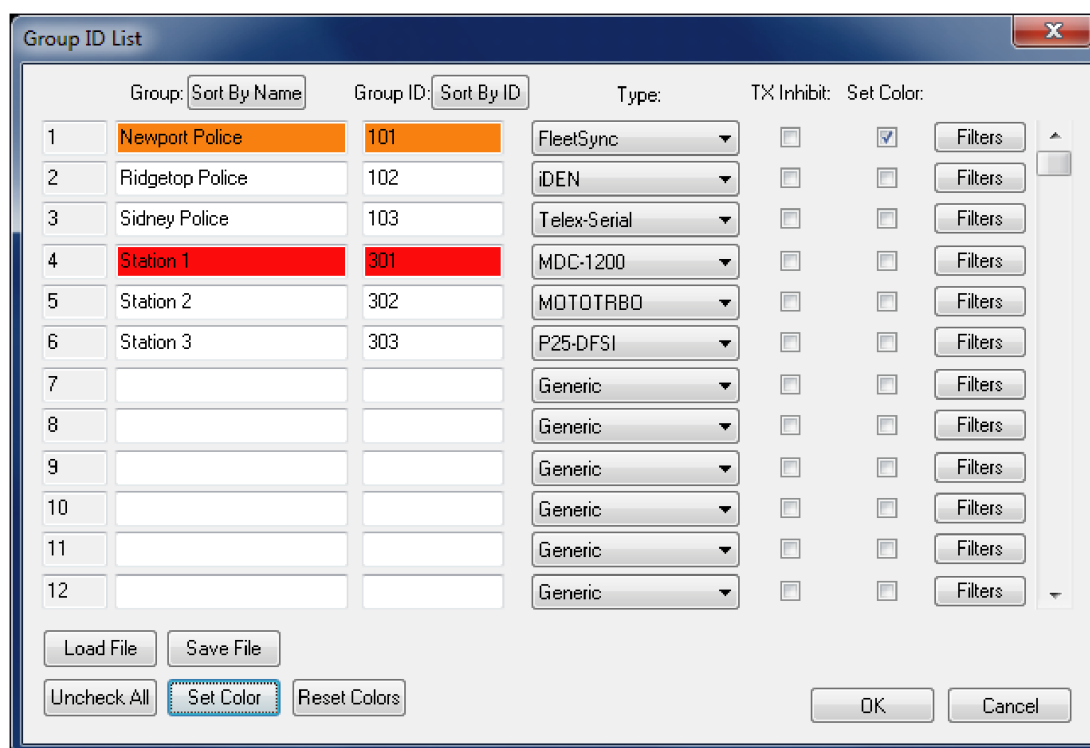


Figure 25.1: Group ID List Window

Group field

The **Group** field is used to enter a descriptive name to associate with the Group ID. This name is displayed on the Select button of the line when the ANI is received and in the Per Line Call History Window, Call List Window, Manual Call List Window, System-specific Dispatch Windows, and the Keypad Module. If no name is associated with a Group ID, the Group ID appears.

This field can contain up to 16 characters.

Sort By Name button

The **Sort By Name** button is used to sort the Group ID List by Group Name in ascending order.

Group ID Field

The **Group ID** field is used to enter the particular resource group's identification number which is used for aliasing incoming and addressing outgoing group-related operations.

This field can contain up to 8 characters.

ID number format:

- Generic - Up to 8 hexadecimal digits, *, and #.
- FleetSync - Up to 8 decimal digits.
- iDEN - Up to 8 decimal digits, *, and #.
- Telex-Serial - Up to 8 decimal digits.
- MDC-1200 - Up to 8 hexadecimal digits.
- MOTOTRBO - Up to 8 decimal digits.
- NEXEDGE - Up to 5 decimal digits.
- P25-DFSI - Up to 8 decimal digits.
- P25-CSSI - Up to 8 decimal digits.
- AIS - Up to 8 decimal digits., 1-16777215
- Telex-Enhanced-ANI: Up to 32 alphanumeric characters

Sort By ID button

The **Sort By ID** button is used to sort the Group ID List by Group ID in ascending order.

Type drop down menu

The **Type** drop down menu is used to select the system type for the assigned group.

Available selections for this field are Generic, FleetSync, iDEN, Telex-Serial, MDC-1200, MOTOTRBO, P25-DFSI, NEXEDGE-TRUNK, NEXEDGE-CONV, P25-CSSI and AIS

To **assign the system type to the group**, do the following:

- From the Type drop down menu, select the **type of system** associated to the group.

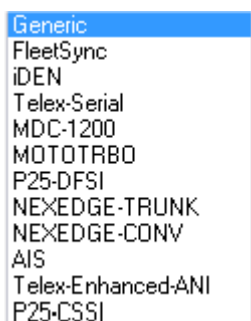


Figure 25.2: Group ID List Window - Type Drop Down Menu

TX Inhibit check box

The **TX Inhibit** check box indicates the caller's alias displays when received, but does not display as an available destination in the FleetSync Dispatch Window, MDC-1200 Dispatch Window, or Keypad module.

Set Color check box

The **Set Color** check box is used to set a color for the group ID. When the set color check box is selected, the Set Color button can be used to assign a color to the selected items. For more information, refer to "Set Color Button".

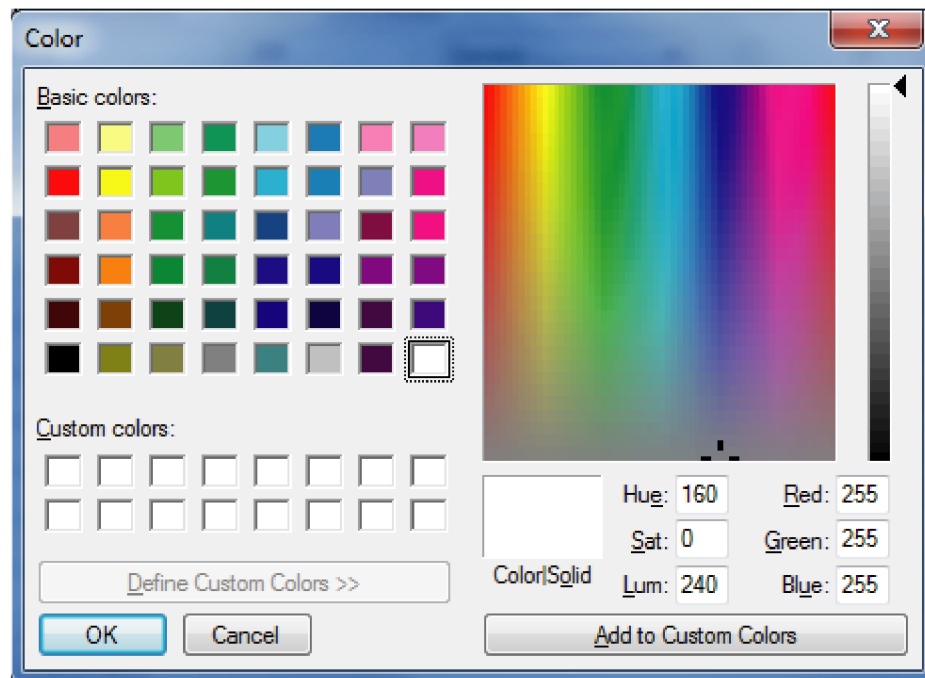


Figure 25.3: Color Window

Filters button

The **Filters** button is used to assign a filter(s) to the group. When a filter is assigned, the group is included any time the selected filter(s) is chosen.

Load File button

The **Load File** button is used to load a .csv file into the current Group ID List window.



Notice!

When the .csv file is loaded, all items in the current list are overwritten.

To **load a saved group ID .csv file**, do the following:

1. Click **Load File**.
The Open window appears.
2. In the Open window, select the **file** you want to load.
3. Click **Open**.

The file loads, the Group name and Group ID fields populate. If included in the saved file, the group color, filters and TX Inhibit also populate.

Save File button

The **Save File** button is used to save the current Group ID List to a .csv file.

To **save the Group ID List to a .csv file**, do the following:

1. Click **Save File**.
The Save As window appears.
 2. In the Filename field, enter a **name**.
 3. Click **Save**.
- The .csv file is saved in the current folder.

Uncheck All button

The **Uncheck All** button clears all Set Color check boxes.

Set Color button

The **Set Color** button opens the color palette. With this palette you can assign a color to display as the background for the group and group ID in C-Soft Runtime's system-specific dispatch windows, and the Per Line Call History window. The colors allow for customization and quick visual recognition of configured groups.

To **set a color for the group ID**, do the following:

1. Select the **Set Color** check box for each group you want to assign a color.
Each group ID you want to color is selected.
2. Click **Set Color**.
The Color window appears.
3. Select a **color**.
The color appears in preview box.
4. Click **OK**, to apply the color in the preview box.

The color is applied to the selected group(s).

Click Cancel to close the window and discard changes.

Reset Colors button

The **Reset Colors** button sets all Group ID background colors to white.

OK button

The **OK** button saves any changes made and closes the window.

Cancel button

The **Cancel** button discards any changes made and closes the window.

26 Status Message ID List window

The **Status Message ID List** window, shown in the Figure below, is used to configure status messages and status IDs that are either sent or received by the console.

This list can contain up to 5000 status messages.

Note:

- When the window is closed and reopened, the list is sorted in descending Status ID order.
- Any row left unfilled is deleted and the list is sorted by descending group ID number when the Status Message ID List is closed and opened again.

NAVIGATION: Select Edit | Edit Status Message ID List from the menu bar.

	Status Message:	Status ID:	Password Protected:	Set Color:
1	Emergency	99	☒	☐
2	Mandown	98	☒	☐
3	Ack Stun Off	94	☒	☐
4	Ack Stun On	93	☒	☐
5	Revive	92	☒	☐
6	Stun	91	☒	☐
7			☐	☐
8			☐	☐
9			☐	☐
10			☐	☐
11			☐	☐
12			☐	☐

Buttons: Load File, Save File, Uncheck All, Set Color, Reset Colors, OK, Cancel

Figure 26.1: Status Message ID List Window

Status Message field

The **Status Message** field creates an alias or descriptive message to associate with the Status ID. This message appears in the Per Line Call History window, Global Call History window, System-specific Dispatch windows, Status window, Send Status button, and on the Select button upon receiving a Status Message.

This field can contain up to 32 characters.

Status ID field

The **Status ID** field identifies the message transmitted by the radio. For example, using the Figure above, if status 98 is sent to the console, the console displays “Mandown”.

This field can contain up to 8 characters.

Password Protected check box

The **Password Protected** check box is used to indicate the supervisor password is required before the status ID can be sent. Refer to “Supervisor Password Field”.

Set Color check box

The **Set Color** check box is used to select specific Status Message entries to which the Set Color button applies.

Load File button

The **Load File** button is used to load a .csv file into the current Status ID window.

**Notice!**

When the .csv file is loaded, all items in the current list are overwritten.

To **load a saved status message .csv file**, do the following:

1. On the Status Message ID List window, click **Load File**.
The Open window appears.
2. In the Open window, select the **file** you want to download.
3. Click **Open**.

The file is loaded, the Status Message and ID fields are populated. If configured in the saved file, status color and password protection is also populated.

Save File button

The **Save File** button is used to save the current Status Message ID List to a .csv file.

To **save the Status Message ID List to a .csv file**, do the following:

1. On the Status Message ID List window, click **Save File**.
The Save As window appears.
2. In the Filename field, enter a **name**.
3. Click **Save**.

The .csv file is saved in the current folder.

Uncheck All button

The **Uncheck All** button clears all Set Color check boxes.

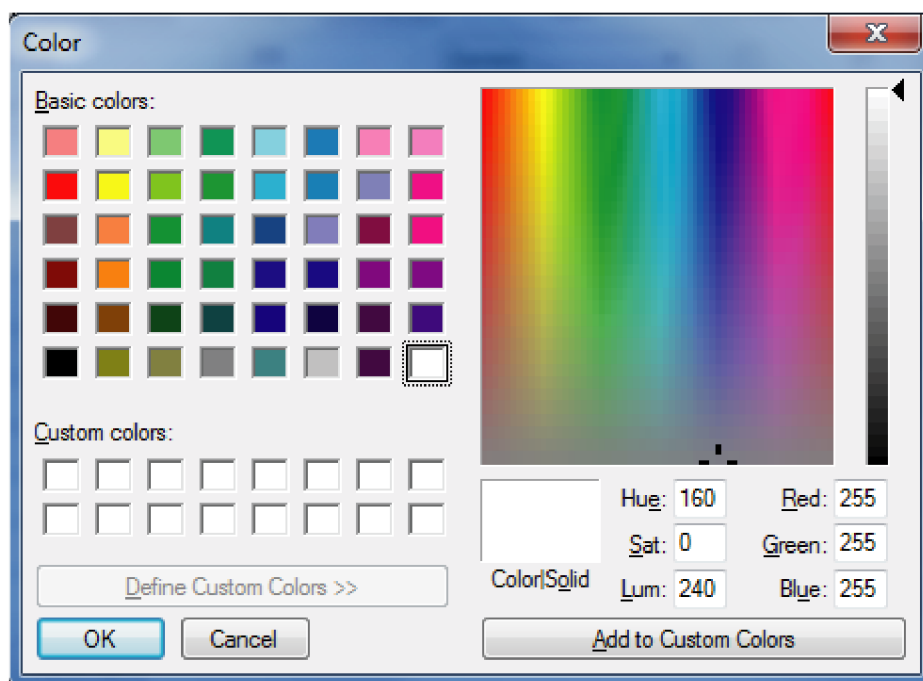
Set Color button

The **Set Color** button is used to set a color for any entries for which the Set Color check box is selected.

To **set the Status ID color**, do the following:

1. Select the **Set Color** check box for all messages you want to assign a color.
2. On the Status Message ID List window, click **Set Color**.
The Color window appears.
3. From the Basic colors group box or the palette, select a **color**.
4. Click **OK**.

The selected Status IDs are colored.

**Reset Colors button**

The **Reset Colors** button sets all Status ID background colors to white.

OK button

The **OK** button saves any changes made and closes the window.

Cancel button

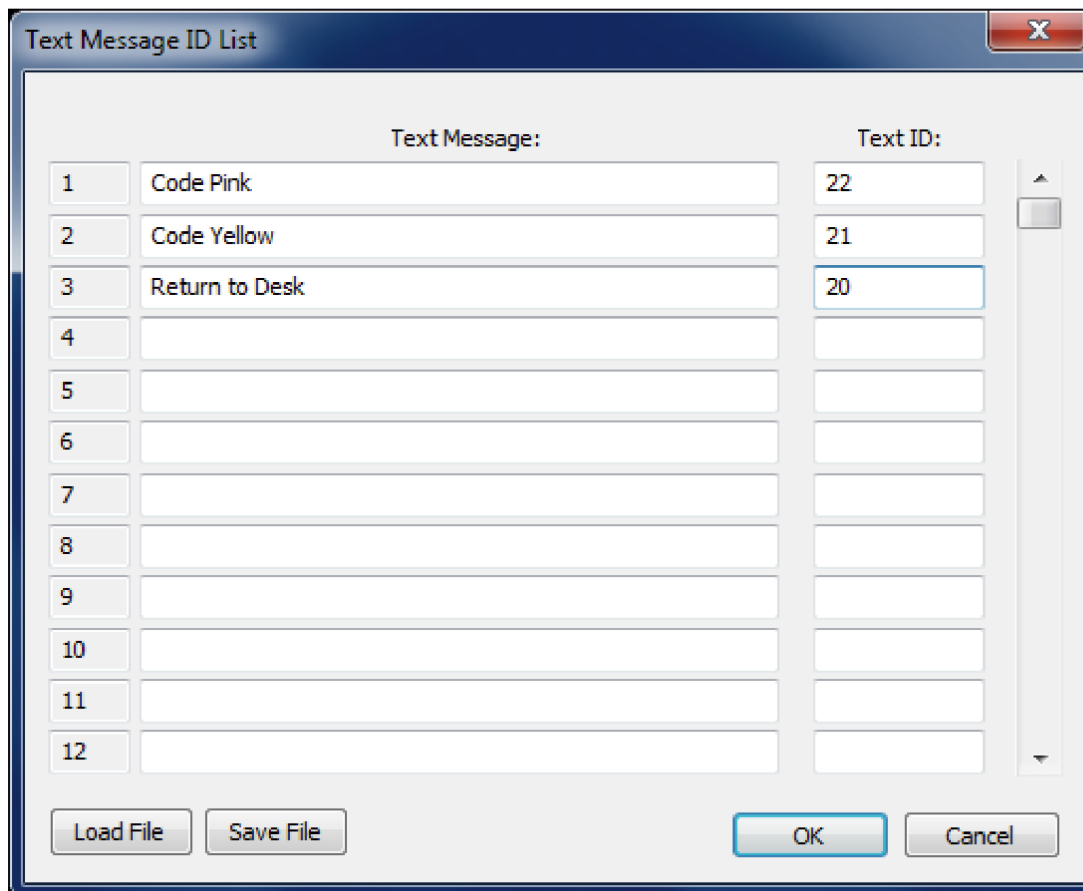
The **Cancel** button discards any changes made and closes the window.

27 Text Message ID List window

The **Text Message ID List** window, shown in the Figure below, is used to configure static text messages (aliases) and an associated ID. The Text Message ID List is used to associate sent or received TextID codes to a readable Text Message.

This list can contain up to 500 text messages.

NAVIGATION: Select Edit | Edit Text Message ID List from the menu bar.



	Text Message:	Text ID:
1	Code Pink	22
2	Code Yellow	21
3	Return to Desk	20
4		
5		
6		
7		
8		
9		
10		
11		
12		

Figure 27.1: Text Message ID Window

Text Message field

The **Text Message** field is used to create a descriptive message for the Text ID. This message can be selected by the console operator from the Per Line Call History window, MDC-1200 Dispatching window, MOTOTRBO Dispatching window and P25-DFS1 Dispatching window while in C-Soft Runtime.

This field can contain up to 48 characters.

Text ID field

The **Text ID** field indicates the ID number entered on the radio to send the text message. This ID number also appears in the Quick Text drop down menu on the MOTOTRBO Dispatching window in C-Soft Runtime for selecting a text message to send to the radio.

This field can contain 1 to 3 digits.

Load File button

The **Load File** button is used to load a .csv file in to the current Text Message ID List window.

**Notice!**

When the .csv file is loaded, all items in the current list are overwritten.

To **load a saved text message .csv file**, do the following:

1. In the Text Message ID List window, click **Load File**.
The Open window appears.
2. In the Open window, select the **file** you want to load.
3. Click **Open**.

The file is loaded, the Text Message and ID fields are populated.

Save File button

The **Save File** button is used to save the Text Message ID List to a .csv file.

To **save the Text Message ID List to a .csv file**, do the following:

1. Click **Save File**.
The Save As window appears.
2. In the Filename field, enter a **name**.
3. Click **Save**.

The .csv file is saved in the current folder.

OK button

The **OK** button saves any changes made and closes the window.

Cancel button

The **Cancel** button discards any changes made and closes the window.

28 Edit System List window

The **Edit System List** window, shown in the Figure below, is used to create and manage units, groups, and fleets included in your FleetSync, MDC-1200, MOTOTRBO, P25-DFSI, NEXEDGE IP, or Telex-Serial system. This list can contain up to 200 systems.

Reference

For more information about creating a UI Element button for a FleetSync, NEXEDGE IP, MDC-1200, MOTOTRBO, Telex Serial, or P25 DFSI system:

- Refer to “*FleetSync, page 255*”.
- Refer to “*MDC-1200, page 291*”.
- Refer to “*MOTOTRBO Radio Setup page, page 303*”.
- Refer to “*P25-DFSI window, page 322*”.
- Refer to “*CSSI System setup, page 538*”.
- Refer to “Telex-Serial Setup page” on “*Telex-Serial system type, page 86*”.
- Refer to “*Appendix H - Kenwood NEXEDGE Direct IP interface, page 544*”.

For more information about using the dispatching window that appears when the console operator selects a FleetSync, MDC-1200, MOTOTRBO, or P25 DFSI dispatching window button in C-Soft Runtime:

- Refer to “*FleetSync Dispatching window, page 256*”.
- Refer to “*MDC-1200 Dispatching window, page 294*”.
- Refer to “*MOTOTRBO Dispatching window, page 312*”.
- Refer to “*P25-DFSI window, page 322*”.
- Refer to “*CSSI System setup, page 538*”.

NAVIGATION: Select Edit | Edit System from the menu bar.

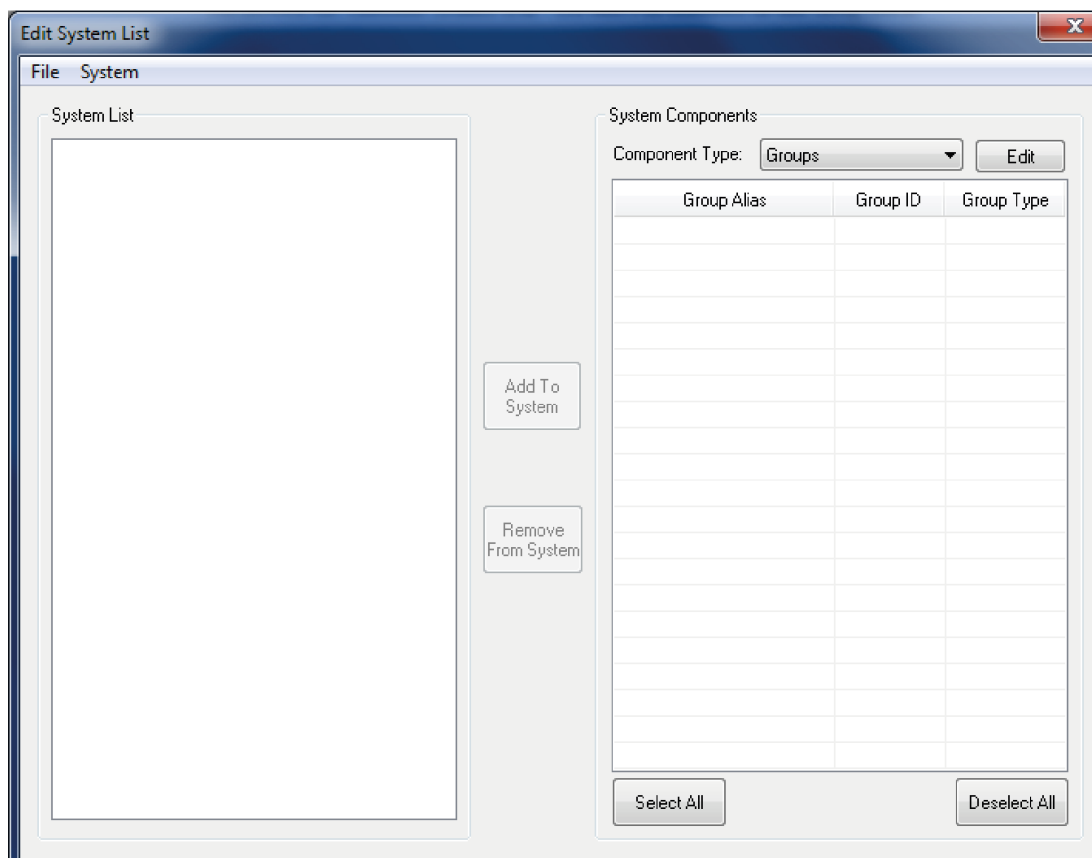


Figure 28.1: Edit System List Window - Blank

To **create a new system**, do the following:

1. From the File menu, select **New**.
2. From the Edit System List window, select **System | New System**.
The New System window appears.
3. In the New System Name field enter a **name**.

A new system with empty filters and empty statuses appears in the System List field.

System names cannot contain the characters shown in the following table:

"	'	;	&	<	>	(	)	,	
---	---	---	---	---	---	---	---	---	--

Tab. 28.5: Characters not permitted in system names

28.1 File menu - Edit System List

The **File** menu, in the **Edit System List** window, shown in the Figure below, is used to create new, open existing, save the current system list, or close the current window.

Available selections for this field are New, Open, Save, and Close.

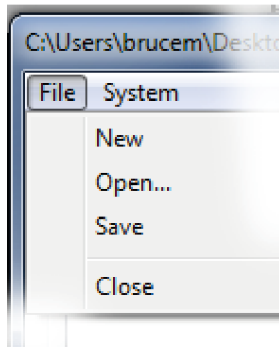


Figure 28.2: File Menu - Edit System List Window

New menu

The **New** menu clears the current System List field display so you can create a new system list in the window.

To **create a new system list from the Edit System List window**, do the following:

1. From the File menu, select **New**.
A prompt to save the current system appears, if one already exists.
2. From the System menu, select **New System**.
The New System window appears.
3. In the name field, enter a **name** for your new system.
4. From the System Type drop down menu, select a **system type**.

Note:

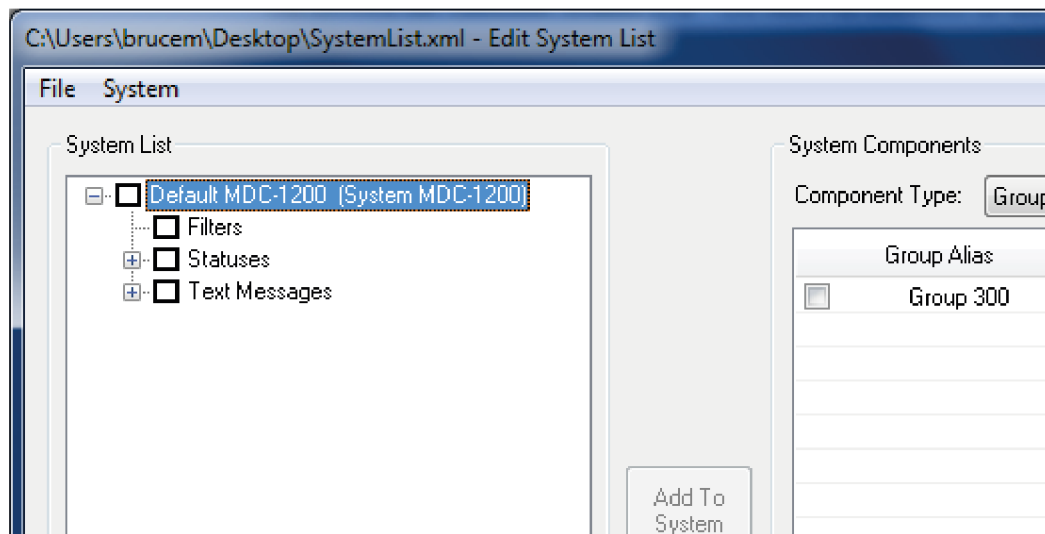
- If a system(s) is currently displayed in the System List field, then you are prompted to save changes to the current system before the window refreshes.
- If no system is currently displayed, selecting File | New has no affect. Click System | New System, to begin to create a new system

Open menu

The **Open** menu opens a window to select a file from.

To **open an existing system list**, do the following:

1. From the File menu, select **Open**.
NOTE: If a system is currently displayed in the System List field, then you are prompted to save changes to the current system before the window refreshes.
2. From the Open window, select the **system file** you want to add to the System List field.
The system file is highlighted.
3. Click **Open**.
The system is loaded in the System List field and system components are available for selection.
OR
Click **Cancel** to exit without selecting a system list file.



Save menu

The **Save** menu saves the currently displayed system to a file.

To **save a system list file**, do the following:

1. From the File menu, click **Save**.
The Save As window appears.
2. In the name field, enter a **name** for the system list.
OR
Verify the **filename** is the name you want to use.
3. Click **Save**.



Notice!

If this is the first time you are saving the system list, click the Save button, the Save As window appears. Choose a filename and path to save the file or click the cancel button.

Save as Default XML File check box

The **Save as Default xml File** check box indicates the selected system list file is designated as the default system list for the console position.

To **save the current system list as the default .xml file**, do the following:

1. From the File menu, click **Save**.
The Save As window appears.
2. In the name field, enter a **name** for the system list.
OR
Verify the **filename** is the name you want to use.
3. Select the **Save as Default xml File** check box.
4. Click **Save**.

The system list is saved as default and appears the next time the Edit System window opens. Also, this system list is used by Runtime the next time the .veg file is run.

This feature works in conjunction with the Filename field on “Filename Field”.

Close menu

The **Close** menu closes the Edit System List window.

To **close the Edit System window**, do the following:

1. From the File Menu, select **Close**.
A C-Soft Designer window appears.
2. Click **Save** to save changes.
OR
Click **No** to discard changes and close the window.
OR
Click **Cancel** to discard changes.

28.2

Edit System List window - System Menu

The **System Menu**, shown in the Figure below, is used to select a new system, copy from an existing system, or automatically build a system with filters, groups, statuses, and units you defined earlier.

Available selections for this field are: New System, Copy System, and Auto Build System.

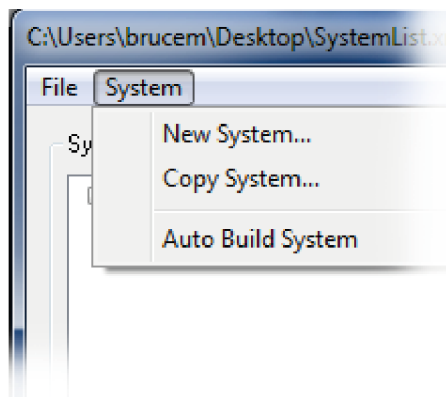


Figure 28.3: System Drop Down Menu - System List

28.2.1

New System window

The **New System** window, shown in the Figure below, is used to configure the system type and name the new system.

New System Setup group box

The **New System Setup** group box is used to enter a System Name and select a System Type.

System Name field

The **System Name** field is used to enter a name for your new system.

This field can contain up to 23 characters.

System Type drop down menu

The **System Type** drop down menu is used to select the type of system you want to configure.

Available selections for this field are: FleetSync, Telex-Serial, MDC-1200, MOTOTRBO, NEXEDGE-CONV, NEXEDGE-TRUNK, and P25-DFSI.

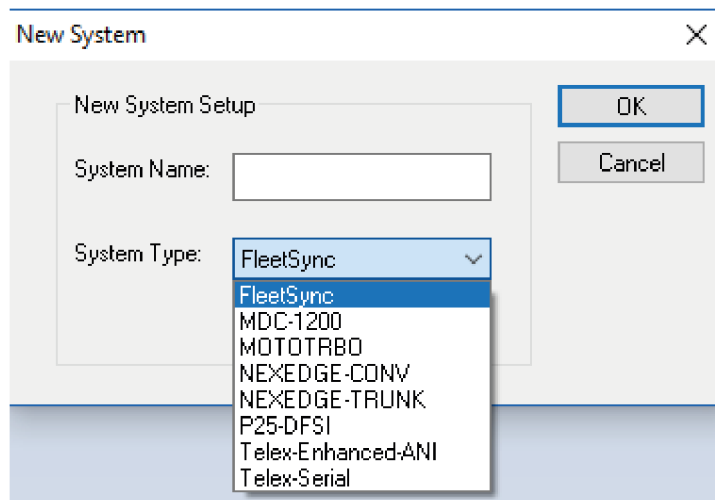


Figure 28.4: System Type Drop Down Menu - New System

To **create a new system**, do the following:

1. From the Edit menu, select **Edit System List**.
The Edit System List Window appears.
2. From the System menu, select **New System**.
The New System window appears.
3. In the System Name field, enter a **name** for the new system.
4. From the System Type drop down menu, select the **system type** (for example, FleetSync).
5. Click **OK**.

The system is added to the System List field.



Notice!

If the system already appears in the System List field, the copied system is added to the current system list and placed at the bottom of the list. If you are creating a new system, it is placed in the System List field with empty filters and status containers.

OK button

The **OK** button creates the new system and closes the window.

Cancel button

The **Cancel** button closes the window without creating a new systems.



Notice!

The new system is not saved until the system file is saved.

28.2.2

Copy System window

The **Copy System** window, shown in the Figure below, is used to specify one system (source system) to copy to another system (destination system).

NAVIGATION: Select File | Copy System from the System List menu bar.

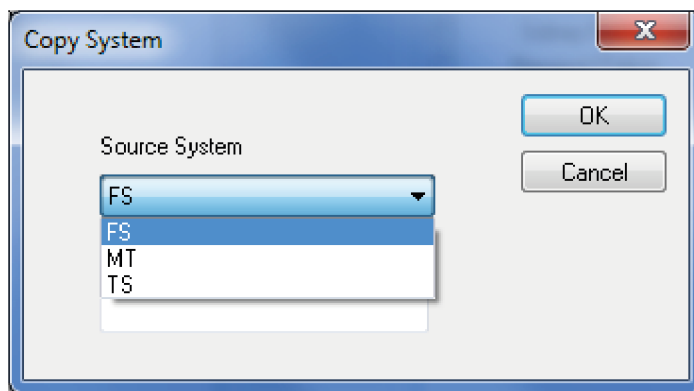


Figure 28.5: Copy System Window

Source System drop down menu

The **Source System** drop down menu is used to select an existing system to copy. The list is populated with systems defined and saved earlier. For more information, refer to “*Edit System List window, page 192*”.

Destination System field

The **Destination System** field is used to enter a name for the new system being created.

OK button

The **OK** button copies the selected source system to the newly created destination system and closes the window.

Cancel button

The **Cancel** button closes the window without copying any systems.

To **copy a system**, do the following:

1. From the Source System drop down menu, select a **system** to copy.
2. In the Destination System field, enter a **name** for the new system.
3. Click **OK**.

The system is added to the System List field.

If systems already appear in the System List field, the copied system is added to the current system list and placed at the bottom of the list.

If you are creating a new system, it is placed in the System List field with empty filters and status containers.

28.2.3

System configuration

C-Soft supports Telex-Serial, FleetSync, MDC-1200, MOTOTRBO, and P25-DFSI signaling protocols. In C-Soft Designer, systems are created to help manage permissions, organize units and groups, and set up status message. In C-Soft Runtime the system is accessible through the FleetSync, MDC-1200, MOTOTRBO or P25-DFSI Dispatching windows.

For more information, refer to “*FleetSync Dispatching window, page 256*”.

For more information, refer to “*MDC-1200 Dispatching window, page 294*”.

For more information, refer to “*MOTOTRBO Dispatching window, page 312*”.

For more information, refer to “*P25-DFSI window, page 322*”.

To **configure a system**, follow these steps:

1. Plan your **system**.
2. Create the **system filters**, refer to “*Filter List Setup window, page 177*”.
3. Set up a **user ID List**, refer to “*User ID List window, page 179*”.
4. Set up a **group ID list**, refer to “*Group ID List window, page 183*”.
5. Set up a **status ID list**, refer to “*Status Message ID List window, page 187*”.
6. Create the **system**, refer to “*Edit System List window, page 192*”, use filters and lists created in steps 2-5.
7. Set up **Per Line Parameters**, refer to “*Per Line Parameters window, page 61*”.
8. Add the required **UI elements for the selected signaling protocol**, refer to “*UI Element Setup window - Add button, page 404*”.
9. Manage **default system file**, refer to “Filename Field on “Filename Field”.

If you create more than one system file you can manage which system appears, by default, in the Edit System List window.

28.2.4 Auto Build System command

The **Auto Build System** from the File menu is used to automatically create a new system based on the current console configuration.

To **build a system with the Auto Build command**, do the following:

1. From the System menu, click **New System**.
A New System window appears.
2. In the New System Name field, enter a **name** for the new system.
3. From the System Type drop down menu, select the **system type**.
4. Click **OK**.
The new system is added to the system list field with empty filters and status containers.
5. In the system list field, select the **check box for the new system**.
6. From the System window, select **Auto Build System**.
The new system is populated with all Filters, User IDs, Status IDs, Group IDs, and Units IDs saved while completing steps 2-5 in “*System configuration, page 198*”. Only users and groups of the same system type are added to the new system.

Delete unwanted filters, IDs, and statuses, as needed.

System List group box

The **System List** group box is used to display the current system and its components.

To change the system list view, do one of the following:

- Click the **expand button** to view components. 
- Click the **collapse button** to hide components. 

28.2.4.1 System List group box

System List check boxes

The **System List** check boxes indicate the component is selected for removal. For more information, refer to “Remove From List Button” on “*System Components group box, page 200*”.

System Components check boxes

The **System Components** check boxes indicate the component is selected to add to the system list. For more information, refer to “Add to List Button” on “*System Components group box, page 200*”.

System Components group box

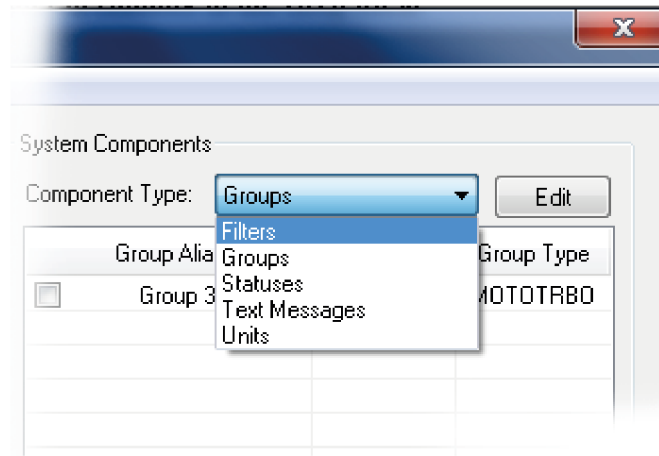


Figure 28.6: Component Type Drop Down Menu - System List

28.2.4.2

System Components group box

Component Type drop down menu

The Component Type drop down menu, shown in the Figure above, is used to select a category to pull data from.

Available selections for this field are Filters, Groups, Statuses, Text Messages and Units.

Filters component

The **Filters** component is used to select a filter. You must create filters, refer to “*Filter List Setup window, page 177*”, before a list is available for selection.

When the filter component is selected, the filter aliases you created appear in the list.

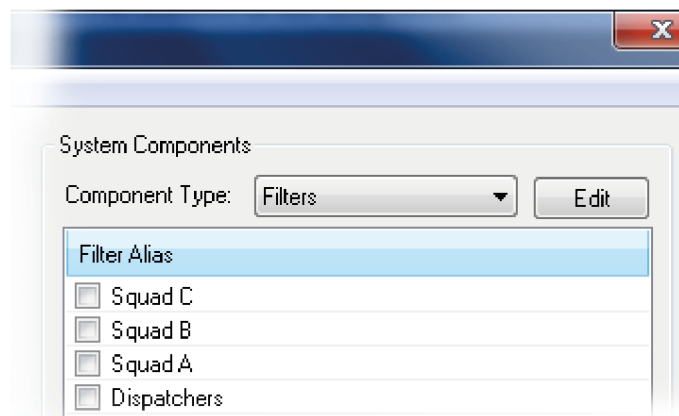


Figure 28.7: Filter Alias List Example

Groups components

The **Groups** component is used to select groups to include in your system. You must create groups, refer to “*Group ID List window, page 183*”, before a list of groups is available for selection.

When the Groups component is selected, the group aliases you created appear in the list. See the Figure below.

- Group Alias Column

The Group Alias column displays the alias for available groups.

- Group ID Column

The Group ID column displays the ID number used to connect to the group.

- Group Type Column

The Group Type column displays the signaling type configured for the group.

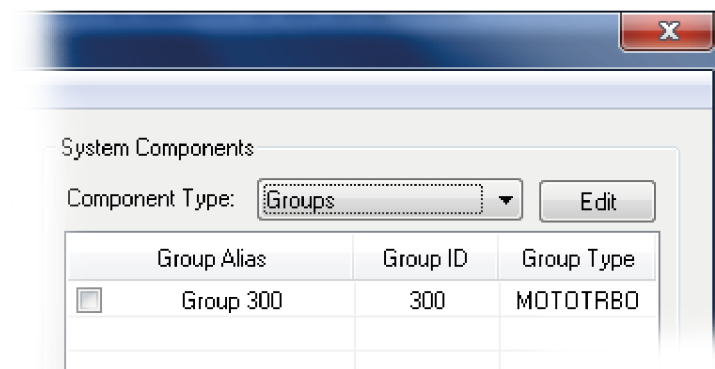


Figure 28.8: Groups Alias List

Statuses components

The **Statuses** components is used to select statuses to include in your system. You must create statuses, refer to “*Status Message ID List window, page 187*”, before a list is available for selection.

When the Status component is selected, the status aliases you create appear in the list. See the Figure below.

- Status Alias Column

The Status Alias column displays the alias configured for the status message.

- Status ID Column

The Status ID column displays the ID used to send the status message.

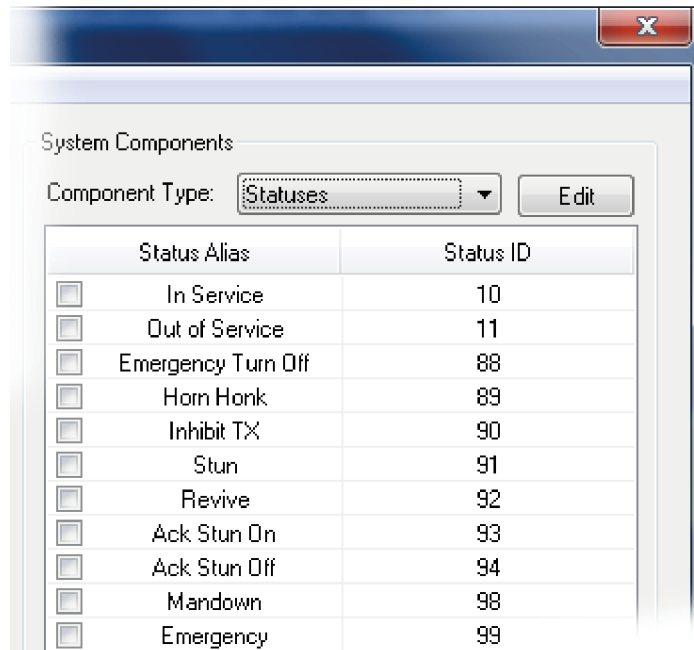


Figure 28.9: Status Alias List Example

Text Messages

The **Text Messages** component is used to select text messages to include in your system. You must create text messages, refer to “*Text Message ID List window, page 190*”, before a list is available for selection.

When the Text message component is selected, the text messages you create appear in the list. Refer to the the Figure below.

- Text Message Column

The Text Message column displays the text message.

- Text Message ID Column

The Text Message ID column displays the ID used to send the message.

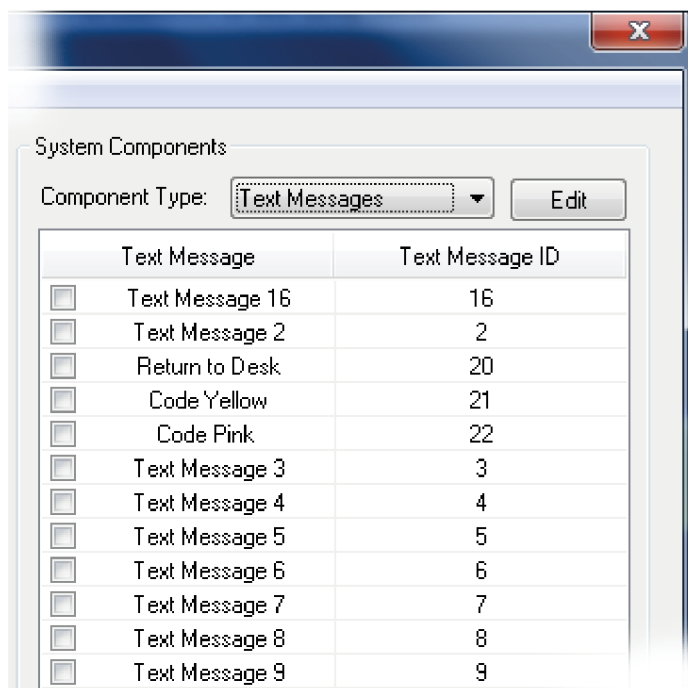


Figure 28.10: Text Messages List Example

Units components

The **Units** component is used to select units (individual users) to add to either a system or an MDC-1200 group. The unit becomes a child when added to an MDC-1200 group. This helps organize users in the system list. You must create units, refer to “*User ID List window, page 179*”, before a list of units is available for selection.

To **add units to a group**, do the following:

1. From the Component Type drop down menu, select **Units**.
The list of units you created appears.
2. Select **units** to add to the system list.
3. Select the **group's** check box to which you want to add the unit.
4. Click **Add to List**.

The selected units are added to the group.

Unit Alias column

The **Unit Alias** column displays the alias for each configured unit.

Unit ID column

The **Unit ID** column displays the individual ID to which the message is sent.

Unit Type column

The **Unit Type** column displays the unit's signaling system type.

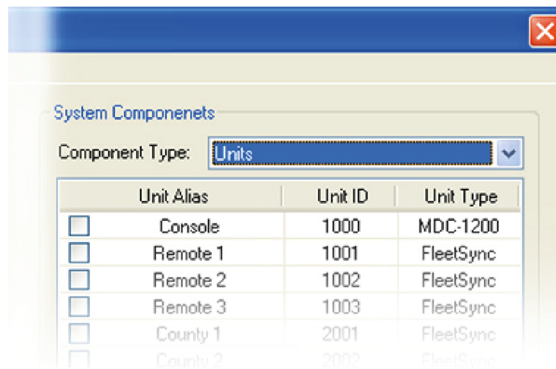


Figure 28.11: Units List Example

Add to List button

The **Add to List** button is used to add components selected in the System Component field, to the currently selected system.

To **add a component to the current system**, do the following:

1. From the System List, select the **system** you want to add the component to.
2. In the System Component field, select the **items** you want to add to the system.
The selected items are highlighted in the System Component field.
3. Click **Add to List**.

The highlighted components are added to the selected system in the System List field.

Remove From List button

The **Remove From List** button is used to remove components from the System List.

To **remove a component from a system list**, do the following:

1. From the System List, select the **system component** you want to remove from the system.
2. Click **Remove From List**.

The highlighted components are removed from the selected system in the System List field.

Select All button

The **Select All** button is used to select each component currently listed in the System Components list. When clicked, all component's check boxes are selected.

Deselect All button

The **Deselect All** button is used to deselect all components currently listed in the System Components list. When clicked, all component's check boxes are cleared.

Window Design Edit commands

The **Window Design Edit** commands include several standard Windows commands. The shortcut key for the command is listed next to the command on the menu. Most of the Edit menu commands can be accessed by the toolbar buttons described in the table C-Soft Designer Toolbar on "C-Soft designer window". A shortcut menu with a list of commands relevant to the selected item can also be displayed by right-clicking a user interface element.

Additional details for these commands are provided in “*User interface element configuration, page 53*”.

To **select all elements on the window**, do the following:

- Click **Ctrl+A**.

All elements are selected.

To **deselect all**, do the following:

- Click the **console window background**.

All elements are deselected.

Command	Description
Cut	Select Cut from the Edit menu to delete the selected item. NOTE that the Cut command does not place the selected item(s) into the clipboard. Also, the Delete key on the keyboard can be used to delete design elements from the window.
Copy	Selecting Copy from the Edit menu copies the selected item(s) to the clipboard.
Paste	Select Paste from the Edit menu to insert the item(s) in the clipboard onto the console window. The clipboard is specific to the C-Soft Designer program and cannot be used to exchange data with other applications. Any item(s) in the clipboard can be pasted multiple times. Each succeeding paste appears as a cascading item off the original item pasted to allow for easy selection and placement of the object(s).
Increase Width	Select Increase Width from the Edit menu to increase the width of the selected element. When text is selected, the size of the selected text is proportionally increased.
Decrease Width	Select Decrease Width from the Edit menu to decrease the width of the selected element. When text is selected, the size of the selected text is proportionally decreased.
Increase Height	Select Increase Height from the Edit menu to increase the height of the selected element. When text is selected, the size of the selected text is proportionally increased.
Decrease Height	Select Decrease Height from the Edit menu to decrease the height of the selected element. When text is selected, the size of the selected text is proportionally decreased.
Rotate Window	Select Rotate Window from the Edit menu to rotate the popup window counter-clockwise around the selected popup button.
Move Right	Select Move Right from the Edit menu to move the selected item(s) to the right.
Move Left	Select Move Left from the Edit menu to move the selected item(s) to the left.
Move Up	Select Move Up from the Edit menu to move the selected item(s) up.

Move Down	Select Move Down from the Edit menu to move the selected item(s) down.
Open popup	Select Open popup from the Edit menu to open the popup window for the selected popup button.
Properties	Select Properties from the Edit menu to open the UI Element Setup window for the selected item, or in the case of text, a window to enter a new text string.

Refer to

- *Filter List Setup window, page 177*
- *Group ID List window, page 183*
- *Status Message ID List window, page 187*
- *Text Message ID List window, page 190*
- *User ID List window, page 179*
- *User interface element configuration, page 53*

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Insert menu

The **Insert** menu contains commands to add controls and descriptive text to the console window.



Notice!

This menu also appears by right-clicking in the C-Soft Designer Workspace.

Available selections for this field are:

- Add Button
- Add Clock
- Add Frame
- Add Frequency Control
- Add Keypad
- Add Popup Button
- Add Text
- Add Text Message Control
- Add Volume Control
- Add VU Meter

When a command is selected, a button or control appears in the upper-left corner of the console window.



Notice!

All available UI Elements can also be placed inside popup windows.

Learn how to position items on the console window, refer to “*User interface element configuration, page 53*”.

EXAMPLE: The Figure below, shows the console workspace after Add Button is selected from the Insert menu and the newly created button is right-clicked.

To **insert a UI Element button**, do the following:

- From the Insert menu, click **Add UI Button**.

The UI button appears in the upper left corner of the console window.

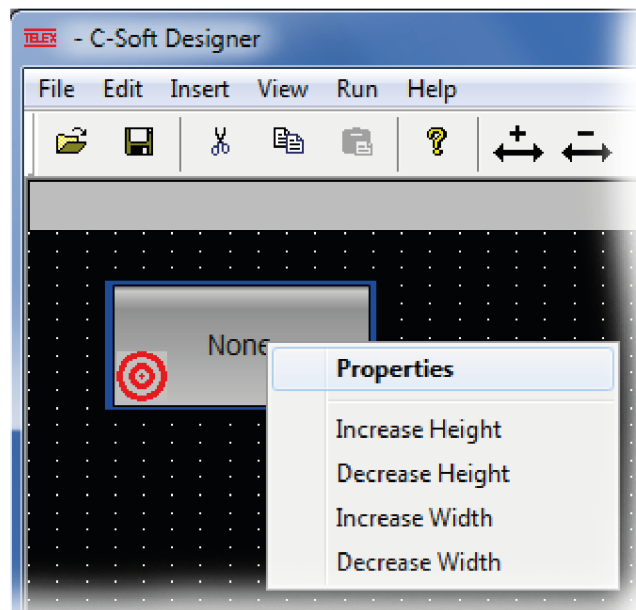


Figure 29.1: Button Properties Flyout Menu

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30.1

UI Element Setup window

Type page

The **Type** page, shown in the Figure below, is used to select the button's filter, function and line.

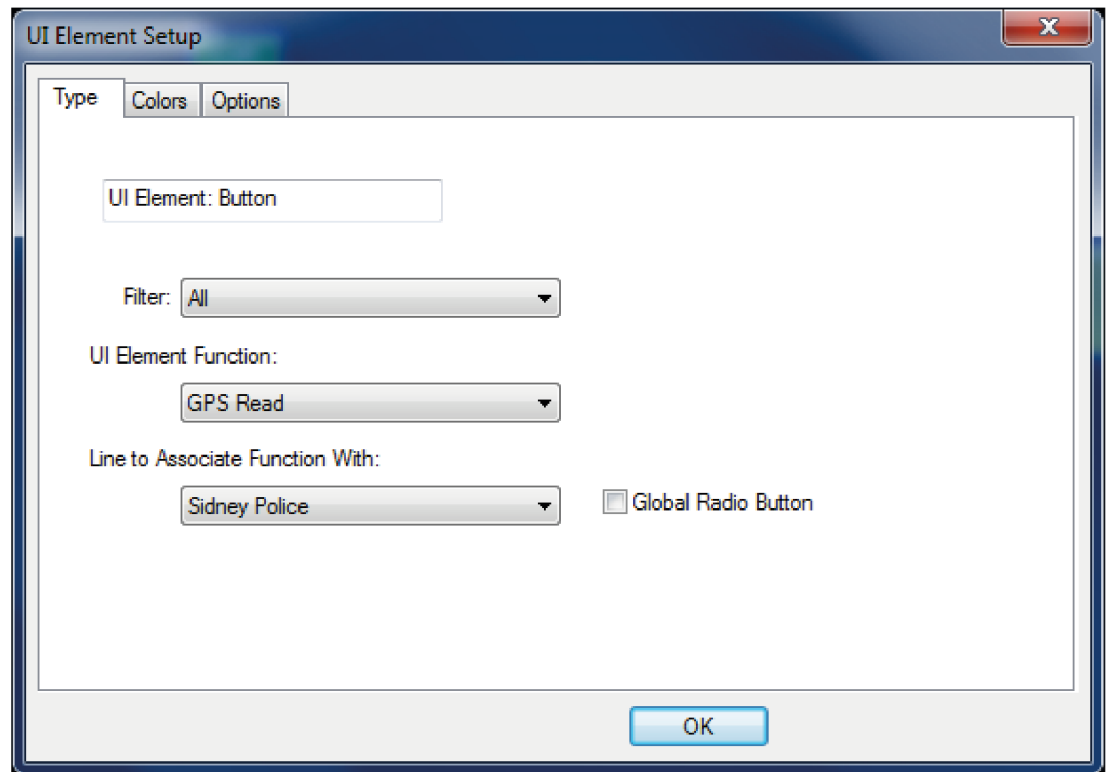


Figure 30.1: UI Element Setup for Radio Command Button - Type Page

Filter drop down menu

The **Filter** drop down menu is used to refine the list of all available UI Element functions to a smaller subset of options available in the UI Element Function drop down menu.

UI Element Function drop down menu

The **UI Element Function** drop down menu is used to select a function type. If a Radio Command Button function type is selected, the Global Radio Button check box appears.

Line to Associate Function With drop down menu

The **Line to Associate Function With** drop down menu is used to select a desired line.

Global Radio Button check box

The **Global Radio Button** check box, if enabled, indicates that a Radio Command Button function type is selected in the UI Element function drop down menu.

- Select the Global Radio Button check box to send the configured radio command on any selected line.
- If the Global Radio Button check box is not selected, the configured radio command is sent on the specified line only.

30.2 Colors page

The **Colors** page, shown in the Figure below, is used to setup the colors and text of the Radio Command Button.

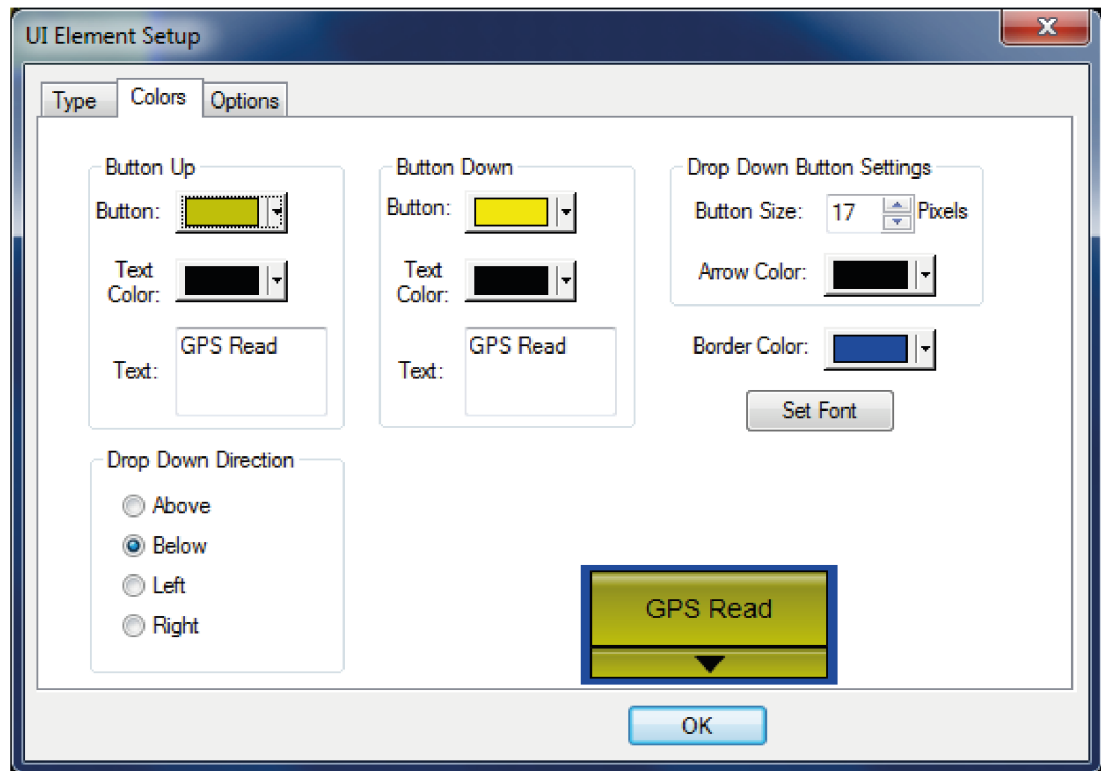


Figure 30.2: UI Element Setup for Radio Command Button - Colors Page

For information on the Button Up and Button Down color and text options, refer to the “*Global Parameter Setup window, page 114*”.

Drop Down Direction group box

The **Drop Down Direction** group box specifies the direction the drop down list containing the list of the available users or groups is displayed relative to the button.

Above radio button

The **Above** radio button indicates the drop down list displays above the button.

Below radio button

The **Below** radio button indicates the drop down list displays below the button.

Left radio button

The **Left** radio button indicates the drop down list displays to the left of the button.

Right radio button

The **Right** radio button indicates the drop down list displays to the right of the button.

OK button

The **OK** button saves the entries and closes the window.

30.3 Options page

The **Options** page, shown in the Figure below, is used to select the settings for list and scroll settings.

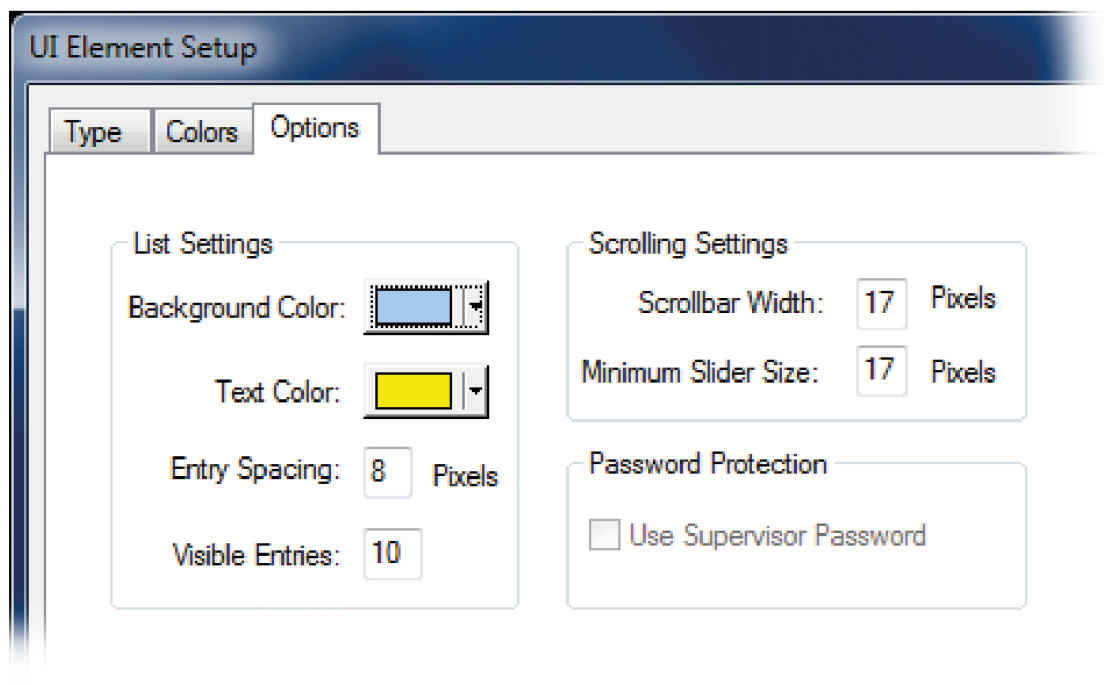


Figure 30.3: Options Page - UI Element Setup

List Settings group box

Background Color drop down menu

The **Background Color** drop down menu displays the background color of the drop down list. The background color can be changed by selecting the drop down menu to open a color palette.

Text Color drop down menu

The **Text Color** drop down menu displays the color of the text in the drop down list. The text color can be changed by selecting the drop down menu to open a color palette.

Entry Spacing field

The **Entry Spacing** field determines the amount of space in pixels between individual entries in the drop down list. The value entered for Entry Spacing and the font type determine the height of the individual entries in the drop down list. The entry spacing value can be increased to allow individual entries to be selected from a touch screen.

The range for this field is 0 to 99.

The default value for this field is 8.

Visible Entries field

The **Visible Entries** field determines the number of users visible in the drop down list without scrolling.

The default value for this field is 10.

Scrolling Settings group box

Scrollbar Width field

The **Scrollbar Width** field determines the width in pixels of the scrollbar in the drop down list.

The default value for this field is 17.

Minimum Slider Size field

The **Minimum Slider Size** field determines the minimum height of the scrollbar's thumbtack slider in the drop down list. The thumbtack slider is sized proportionally based on the total number of entries in the list and the number of entries which are displayed. The minimum slider size ensures the scrollbar is always as least as large as the entered value.

The default value for this field is 17.

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UI Element Functions configuration

The **UI Element Functions** drop down menu, on the Type page, contains UI Element functions for selection. Configuration for each function is described in the following section and listed alphabetically, as it appears in the drop down menu.

UI ELEMENT	FUNCTION	CROSS REFERENCE
Add button		
Active Emergency Window	Opens the Active Emergency window to display emergency calls.	Refer to “ <i>Active Emergency Window, page 219</i> ”.
ADHB-4 Auxiliary Audio Control	Allows the console operator to toggle the playing of audio received from the ADHB-4 Gen 2’s Aux In port	Refer to “ <i>ADHB-4 Auxiliary Audio Control button, page 220</i> ”.
ADHB-4 Mic Control	Allows the user to switch between two mic control inputs when the ADHB-4 is connected to C-Soft.	Refer to “ <i>ADHB-4 Mic Control, page 222</i> ”.
ADHB-4 NENA-Hold	Places a hold on the NENA line.	Refer to “ <i>ADHB-4 NENA-Hold, page 223</i> ”.
ADHB-4 NENA-Hook Control	Indicates if the NENA line is off or on-hook.	Refer to “ <i>ADHB-4 NENA-Hook Control function, page 224</i> ”.
ADHB-4 NENA-Indication	Indicates the current on or offhook state of a NENA line.	Refer to “ <i>ADHB-4 NENA-Indication, page 224</i> ”.
ADHB-4 NENA-Mute	Mutes the NENA line.	Refer to “ <i>ADHB-4 NENA-Mute, page 225</i> ”.
ADHB-4 Select speaker Control	Allows the user to turn the selected speaker on and off when the ADHB-4 when the headset is connected.	Refer to “ <i>ADHB-4 Select Speaker Control, page 225</i> ”.
Alert	Configures tones and duration for alerts.	Refer to “ <i>Alert, page 225</i> ”.
Annunciation	Allows the user to send a pre-recorded .wav file.	Refer to “ <i>Annunciation, page 228</i> ”.
Auto-Dial	Assign a string to send when the button is clicked.	Refer to “ <i>Auto-Dial, page 231</i> ”.
Backup Line	Switches to backup IP Address.	Refer to “ <i>Backup Line, page 232</i> ”.
Call List Window	Opens the Call List window to display a list of user IDs.	Refer to “ <i>Call List Window, page 233</i> ”.

Call Priority	Sets an outgoing call's priority for AIS/DMR calls.	Refer to " <i>Call Priority button, page 238</i> ".
Call Queue Window	Allows users to view calls added to call queue.	Refer to " <i>Call Queue window, page 239</i> ".
Crosspatch	Crosspatches two or more lines.	Refer to " <i>Crosspatch, page 246</i> ".
Crosspatch Block	Blocks a crosspatch line from transmitting.	Refer to " <i>Crosspatch Block, page 247</i> ".
Crosspatch Clear	Clears a specific group from a crosspatch.	Refer to " <i>Crosspatch Clear, page 248</i> ".
Crosspatch Programmed	Crosspatches a pre-defined group.	Refer to " <i>Crosspatch Programmed, page 248</i> ".
Crosspatch PTT	Transmits from the console to crosspatched lines.	Refer to " <i>Crosspatch PTT, page 250</i> ".
Dial	Dials the number specified in the Keypad Module.	Refer to " <i>Dial, page 251</i> ".
DTMF Digit	Creates a DTMF digit button.	Refer to " <i>DTMF Digit, page 251</i> ".
Emergency ACK	Acknowledges an active emergency.	Refer to " <i>Emergency ACK, page 252</i> ".
Emergency Clear	Stops emergency tones from playing on the console.	Refer to " <i>Emergency Clear, page 253</i> ".
Emergency History Window	Opens the Emergency History window to view received calls.	Refer to " <i>Emergency History Window, page 253</i> ".
Encryption	Toggles encryption on/off.	Refer to " <i>Encryption, page 254</i> ".
Encryption Key Select	Select transmit P25-DFSI encryption option and display incoming call's encryption information.	Refer to "P25 Encryption" on page 469.
Event Logger	Displays system log events.	Refer to " <i>Event Logger, page 254</i> ".
FleetSync	Opens a FleetSync Dispatching window.	Refer to " <i>FleetSync, page 255</i> ".
Frequency Change	Changes to a pre-defined frequency.	Refer to " <i>Frequency Change, page 265</i> ".
GPS Read	Reads the GPS coordinates of a radio.	Refer to " <i>GPS Read button, page 266</i> ".

GPS Trigger Off	Turns off the trigger reading of the GPS coordinates of a radio.	Refer to “ <i>GPS Trigger Off button, page 267</i> ”.
GPS Trigger On	Reads the GPS coordinates of a radio at a set periodic time.	Refer to “ <i>GPS Trigger On button, page 267</i> ”.
Group Programmed	Broadcasts to a pre-defined group.	Refer to “ <i>Group Programmed, page 269</i> ”.
Group Select	Creates a pre-defined group.	Refer to “ <i>Group Select, page 273</i> ”.
Group Select Limited	Limits the number of lines which can be selected simultaneously.	Refer to “ <i>Group Select Limited, page 273</i> ”.
Input Indication	Monitors NEO-10, or ADHB-4 activity.	Refer to “ <i>Input Indication, page 274</i> ”.
Instant Recall	Plays back audio.	Refer to “ <i>Instant Recall, page 278</i> ”.
Intercom	Allows console to console communication.	Refer to “ <i>Intercom, page 281</i> ”.
Intercom-Per Line	Allows pre-defined console to console communication.	Refer to “ <i>Intercom-Per Line, page 281</i> ”.
Knox Digit	Creates a Knox digit button.	Refer to “ <i>Knox Digit, page 282</i> ”.
Instant Recall - Last Call Button	Allows console operator to play back audio from last received call.	Refer to “ <i>Instant Recall - Last Call button, page 280</i> ”.
Launch Application	Opens specified application.	Refer to “ <i>Launch Application, page 282</i> ”.
Manual Call List Window	Opens the Manual Call List window.	Refer to “ <i>Manual Call List, page 285</i> ”.
Marker Tone	Keys and sends a tone burst to a pre-defined radio channel.	Refer to “ <i>Marker Tone, page 287</i> ”.
MDC-1200 Window	Opens the MDC-1200 Dispatching window.	Refer to “ <i>MDC-1200, page 291</i> ”.
Monitor	Sends packets to open squelch or ignore CTCSS tones.	Refer to “ <i>Monitor, page 303</i> ”.
MOTOTRBO Window	Opens the MOTOTRBO Dispatching window.	Refer to “ <i>MOTOTRBO Window</i> ”.
Mute Group	Mutes audio on a pre-defined group.	Refer to “ <i>Mute Group, page 319</i> ”.

Mute Main	Mutes all currently selected lines.	Refer to “ <i>Mute Main, page 320</i> ”.
Mute-Per line	Toggles mute on a pre-defined line.	Refer to “ <i>Mute-Per Line, page 321</i> ”.
P25-DFSI Window	Opens the P25-DFSI Dispatching Window.	Refer to “ <i>P25-DFSI window, page 322</i> ”.
Page	Pages a specific line and frequency.	Refer to “ <i>Page, page 324</i> ”.
Page Cancel	Cancels an active page.	Refer to “ <i>Page Cancel, page 328</i> ”.
Page Manual Entry	Sends a page to a pager number entered by the console operator.	Refer to “ <i>Page Manual Entry, page 328</i> ”.
Page Send	Sends a group of pages, when stacked.	Refer to “ <i>Page Send, page 331</i> ”.
Page Stack	Stacks pages.	Refer to “ <i>Page Stack, page 332</i> ”.
Page Stack Programmed	Stacks a pre-defined group of pages.	Refer to “ <i>Page Stack Programmed, page 333</i> ”.
Per Line Call History	Opens the Per line Call History window.	Refer to “ <i>Per Line Call History, page 335</i> ”.
Phone Flashhook	Flashhooks a phone line.	Refer to “ <i>Phone-Flashhook, page 343</i> ”.
PTT Group Call	Transmits audio to a group of radios.	Refer to “ <i>PTT-Group Call, page 345</i> ”.
PTT -Main	Transmits audio to all selected lines.	Refer to “ <i>PTT-Main, page 346</i> ”.
PTT Per Line	Keys a pre-defined line.	Refer to “ <i>PTT-Per Line, page 346</i> ”.
PTT Private Call	Transmits audio to a single radio.	Refer to “ <i>PTT-Private Call, page 347</i> ”.
PTT - Talk Back	Transmits to the last line that received audio.	Refer to “ <i>PTT-Talk Back, page 348</i> ”.
Radio Call Alert	Sends a Call alert to a Radio.	Refer to “ <i>Radio Call Alert, page 348</i> ”.
Radio Call Type	Selects between Broadcast and Conference Call Types. (NEXEDGE IP Only).	Refer to “ <i>Radio Call Type, page 349</i> ”.
Radio Check	Checks if a Radio is on/off.	Refer to “ <i>Radio Check, page 349</i> ”.

Radio Disable	Disables a Radio.	Refer to “ <i>Radio Disable, page 349</i> ”.
Radio Enable	Enables a Radio.	Refer to “ <i>Radio Enable, page 350</i> ”.
Radio Regroup	Temporarily reassigns Talkgroup.	Refer to “ <i>Radio Regroup, page 350</i> ”.
Radio Remote Monitor	Activates PTT on remote radio to monitor.	Refer to “ <i>Radio Remote Monitor, page 351</i> ”.
Radio Ungroup	Resets Radio Talkgroup.	Refer to “ <i>Radio Ungroup, page 351</i> ”.
Radio Select Call	Sends a Select Call to a radio.	Refer to “ <i>Radio Select Call, page 353</i> ”.
Radio Status	Sends a Status Message to a radio.	Refer to “ <i>Radio Status, page 352</i> ”.
Radio Status Request	Requests the Status of a Radio.	Refer to “ <i>Radio Status Request, page 352</i> ”.
Radio On/Offhook	Toggles radio on/off periodically to keep the radio active.	Refer to “ <i>Radio-On/Offhook, page 353</i> ”.
Relay Control Button	Controls an ADHB-4 or NEO-10 relay.	Refer to “ <i>Relay Control Button, page 354</i> ”.
RX All	Disengages mute on selected lines.	Refer to “ <i>RX All, page 363</i> ”.
Scan	Scans the selected line.	Refer to “ <i>Scan, page 364</i> ”.
Scrambler/Encrypt Key Select	Selects active NEXEDGE encryption key	Refer to “Kenwood NEXEDGE Direct IP Interface” on page 503.
Select	Selects a line.	Refer to “ <i>Select, page 364</i> ”.
SIP Call Control	Opens the SIP Calls window.	Refer to “ <i>SIP Call Control, page 368</i> ”.
Stack Status Programmed	Opens the Status Programmed window.	Refer to “ <i>Status Stack Programmed, page 396</i> ”.
Stack Status Window	Opens the Stack Status window.	Refer to “ <i>Status Stack window, page 398</i> ”.
Supervisor	Seizes control of a line or group of lines.	Refer to “ <i>Supervisor, page 401</i> ”.
Talk Around	Toggles the serial controlled radio that supports talk around feature on/off.	Refer to “ <i>Talk Around button, page 402</i> ”.

Text Button	Displays text on the console.	Refer to “ <i>Text button, page 402</i> ”.
TX All	Selects all lines for TX.	Refer to “ <i>TX All, page 403</i> ”.
Add Clock		
Clock	Displays the current time on the console.	Refer to “ <i>UI Element Setup window - Add Clock, page 412</i> ”.
Add Frame		
Frame	Displays a configurable frame on the console.	Refer to “ <i>UI Element Setup window - Add Frame, page 416</i> ”.
Add Frequency Control		
Frequency Control	Displays a customized frequency control on the console.	Refer to “ <i>UI Element Setup window - Add Frequency Control, page 418</i> ”.
Add Keypad		
Keypad	Provides access to an on-screen keypad, allowing easy access to contacts, DTMF keypad, and operation history.	Refer to “ <i>UI Element Setup window - Add Keypad, page 425</i> ”.
Add Popup Button		
Add Popup Button	Displays a Popup button.	Refer to “ <i>UI Element Setup window - Add Popup Button, page 439</i> ”.
Popup Global Call History	Opens the Global Call History display.	Refer to “ <i>Popup Global Call History, page 444</i> ”.
Popup Webpage	Opens a window that displays a pre-defined webpage.	Refer to “ <i>Popup Webpage, page 442</i> ”.
Popup Window Control	Configures popup window controls	Refer to “ <i>Popup Window Setup page, page 440</i> ”.
Add Text		
Font Window	Displays customizable text lines to console design.	Refer to “The Done button is used to close the window”.
Add Text Message Control		
Text Message	Provides an interface for sending and receiving text messages.	Refer to “ <i>UI Element Setup window - Add Text Message Control, page 450</i> ”.
Add Volume Control		

Volume-ADHB-4 NENA	Controls the NENA volume on an ADHB-4.	Refer to “Volume-NENA” on <i>Type page, page 453</i> .
Volume-Auxiliary Track Left	Controls the left channel volume of the auxiliary audio when operating with an ADHB-4 Gen 2.	Refer to “Volume-Auxiliary Track Left” on <i>Type page, page 453</i> .
Volume-Auxiliary Track Right	Controls the right channel volume of the auxiliary audio when operating with an ADHB-4 Gen 2.	Refer to “Volume-Auxiliary Track Right” on <i>Type page, page 453</i> .
Volume-Master Select	Controls the volume on all select lines.	Refer to “Volume-Master Select” on <i>Type page, page 453</i> .
Volume-Master Unselect	Controls the volume on all unselected lines.	Refer to “Volume-Master Unselect” on <i>Type page, page 453</i> .
Volume-Per Line	Controls volume per line.	Refer to “Volume-Per Line” on <i>Type page, page 453</i> .
Add VU Meter		
VU Meter	Control Displays the volume level of a particular line.	Refer to “ <i>UI Element Setup window - Add VU Meter, page 457</i> ”.

Tab. 31.6: UI elements

Refer to

- *UI Element Setup window - Add Text, page 449*

31.1

Active Emergency Window

The **Active Emergency Window**, shown in the Figure below, function displays a list of current active emergencies.

When clicked in the C-Soft Runtime program, the Active Emergency window automatically appears, and the Select button on the line receiving the emergency blinks. The Active Emergency window is also accessible by clicking the Active Emergency button. For more information, refer to “Emergency Button” on page 282 and to “Emergency Type” on page 284.

When an emergency call is received, the Active Emergency window automatically appears, and the Select button on the line receiving the emergency blinks. The Active Emergency window is also accessible by clicking the Active Emergency button. One of two actions can be taken on an emergency call listed in the window:

- Clear the emergency - By clearing the emergency, the emergency entry turns orange and the tones stop. Pressing the Clear button clears all Active Emergencies in the list.

- Acknowledge the emergency - By acknowledging the emergency, the selected emergency entry is removed from the Active Emergency window. The user can acknowledge only one emergency at a time. This can be accomplished without first clearing the emergency. For supported radio protocol the emergency acknowledge message is sent to the individual radio that declared the emergency.

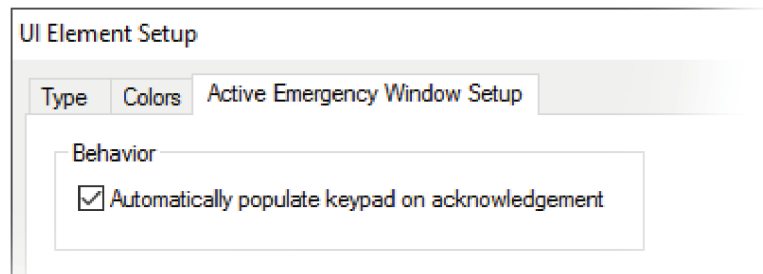


Figure 31.1: Active Emergency Window Setup

Behavior group box

Automatically Populate Keypad On Acknowledgement check box

The **Automatically Populate Keypad On Acknowledgement** check box indicates when the Active Emergency Window's ACK button is pressed, the keypad's destination is set to a selected Emergency entry. Since the keypad's contents are context specific to the currently selected line, the keypad only updates if the currently selected line's Signaling/System type match those of the selected Emergency entry.

To **add an Active Emergency button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Active Emergency Window**.
The Active Emergency Window Setup tab appears.
5. Click the **Active Emergency Window Setup tab**.
The Active Emergency Window Setup page appears.
6. Select the **Automatically populate keypad on acknowledgement check box**, if desired.
7. Click **OK**.

The button color changes and Active Emergency appears on the button.

31.2

ADHB-4 Auxiliary Audio Control button



Notice!

Unless specified, the ADHB-4 and the ADHB-4 Gen 2 function the same.

The **ADHB-4 Auxiliary Audio Control** button allows the console operator to toggle the playing of audio received from the ADHB-4 Gen 2's Aux In port. When the button is in the up state, the auxiliary audio is muted. When the button is in the down state, the selected auxiliary audio channel is played in the designated speaker. The button can be configured by the user to either the left or right track audio.

The ADHB-4 Auxiliary Audio Control buttons are muted when a Main Mute button is pressed and un-muted when an RX All button is pressed. The ADHB-4 Auxiliary Audio Control buttons can be added to a crosspatch, with the limitation of one ADHB-4 Auxiliary Audio Control button per crosspatch.

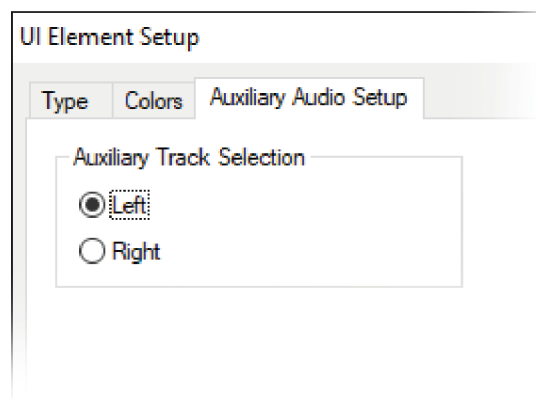
ADHB-4 Auxiliary Audio Setup page

The **ADHB-4 Auxiliary Audio Setup** page is used to setup which auxiliary track to use.

To **open the ADHB-4 Auxiliary Audio Setup page**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **ADHB-4 Auxiliary Audio Control**.
The Auxiliary Audio Setup tab appears.
5. Click the **ADHB-4 Auxiliary Audio Setup tab**.

The ADHB-4 Auxiliary Audio Setup page appears.



Auxiliary Track selection

Left radio button

The **Left** radio button indicates the ADHB-4 Auxiliary Audio Control button is controlling the Auxiliary Audio Left track.

Right radio button

The **Right** radio button indicates the ADHB-4 Auxiliary Audio Control button is controlling the Auxiliary Audio Right track.

31.3 ADHB-4 Mic Control

The **ADHB-4 Mic Control** allows the user to switch between two microphone control inputs when the ADHB-4 is connected to C-Soft.



Notice!

The microphone source selected for the up state of the button is active when the button is in the up position; conversely, the microphone source selected for the down state is active when the button is depressed.

ADHB-4 Mic Control Button Setup page

When the ADHB-4 Mic Control is selected from the UI Element Function drop down menu, the **ADHB-4 Mic Control Button Setup** page appears.

The ADHB-4 Control button can operate in one of two behaviors: Toggle or Selectable.

When configured as a toggle button, C-soft uses the ADHB-4 Control button's up or down state to determine the active ADHB-4 input source. Upon pressing the button, C-Soft toggles between sources configured for the Up and Down states. Each state may select one of the following:

- Controller - the headset/mic input on the main ADHB-4 unit.
- RHB1 - remote headset box 1.
- RHB2 - remote headset box 2.
- Desk Mic.

When configured as a selectable button, the ADHB-4 Mic Control Button is displayed as a Split Button. Pressing the button displays a drop down list of options, allowing the user to select which mic source to use.

The list is configurable by selecting the check box next to each option in the list of Available Options.

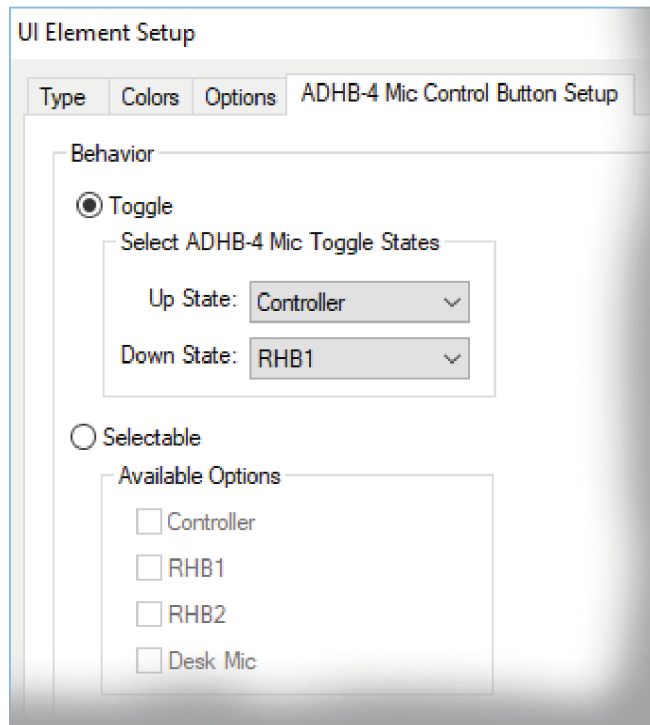


Figure 31.2: ADHB-4 Mic Control Button Setup

To **add an ADHB-4 Mic Control button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element Function drop down menu, select **ADHB-4 Mic Control**.
The ADHB-4 Mic Control Button Setup tab appears.
5. Click on the **ADHB-4 Mic Control Button Setup tab**.
6. From the ADHB-Mic Toggle States drop down menu, select **one** of the following for either or the up and/or down state:
 - Controller - the headset/mic input on the main ADHB-4 Unit.
 - RHB1 - remote headset box 1
 - RHB2 - remote headset box 2
 - Desk Mic
7. Click **OK**.

The button color changes and ADHB-4 Mic Control appears on the button.

31.4

ADHB-4 NENA-Hold

The **ADHB-4 NENA-Hold** function allows the console operator to place a NENA (National Emergency Number Association) audio line connected to an ADHB-4, on hold. If the NENA is on hold, the TX audio is not sent to the NENA and RX audio is routed to a specified speaker. Otherwise the TX and RX are sent from the NENA line.

To **add a ADHB-4 NENA-Hold button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
 2. Right-click the **None** button.
A shortcut menu appears.
 3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
 4. From the UI Element drop down menu, select **ADHB-4 NENA-Hold**.
 5. Click **OK**.
- The button changes color and NENA Hold appears on the button.

31.5

ADHB-4 NENA-Hook Control function

The **ADHB-4 NENA-Hook Control** function allows the console operator to change the NENA phone line logic that is connected to an ADHB-4, on or off hook.

To **add ADHB-4 NENA-Hook Control button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
 2. Right-click the **None** button.
A shortcut menu appears.
 3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
 4. From the UI Element drop down menu, select **ADHB-4 NENA-Hook Control**.
 5. Click **OK**.
- The button changes color and NENA On Hook Control appears on the button

31.6

ADHB-4 NENA-Indication

The **ADHB-4 NENA-Indication** function indicates the current on- or offhook state of a NENA phone line connected to an ADHB-4. A speaker icon appears on the button to indicate audio routing for the NENA line.



Notice!

If the NENA Mute button is clicked (for example, line is muted) the mute icon appears on the NENA Indication button.

To **add NENA-Indication button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
 2. Right-click the **None** button.
A shortcut menu appears.
 3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
 4. From the UI Element drop down menu, select **ADHB-4 NENA-Indication**.
 5. Click **OK**.
- The button changes color and NENA Indication appears on the button.

31.7 ADHB-4 NENA-Mute

The **ADHB-4 NENA-Mute** function allows the console operator to mute the RX audio of a NENA phone line.

To **add a NENA-Mute button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **ADHB-4 NENA-Mute**.
5. Click **OK**.

The button changes color and NENA Mute appears on the button.

31.8 ADHB-4 Select Speaker Control

The **ADHB-4 Select Speaker Control** allows the user to turn the selected speaker on and off when the headset is connected.

To **add an ADHB-4 Select Speaker Control button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **ADHB-4 Select Speaker Control**.
5. Click **OK**.

The button color changes and Speaker Off appears on the button.

31.9 Alert

The **Alert** function allows the console operator to send a tone to all selected lines.

In C-Soft Runtime, if PTT is not active when an Alert button is pressed, the PTT button is automatically activated to key the remote radios before the tones are generated.

Alert Setup page

When the Alert function is selected from the UI Element Function drop down menu, the **Alert Setup** page appears. Refer to the Figure below.

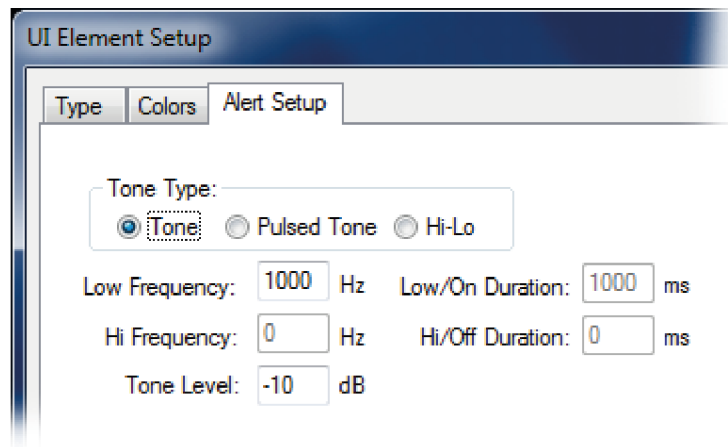


Figure 31.3: Alert Setup Page - UI Element Setup

Tone Type group box

The **Tone Type** group box identifies the type of tone to play. When a selection is made, the fields necessary to enter the setup information for the tone type are enabled on the page.

Tone radio button

The **Tone** radio button indicates a single steady tone is used as an alert tone.

To **add a tone alert button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Alert**.
The Alert Setup tab appears.
5. Click the **Alert Setup** tab.
The Alert Setup page appears.
6. In the Tone Type group box, select the **Tone** radio button.
7. In the Low Frequency field, enter the **frequency** (in Hz).
8. In the Tone Level field, enter the **tone level** (in dB).
9. Click **OK**.

The button changes color and Alert appears on the button.

Pulsed Tone radio button

The **Pulsed Tone** radio button indicates a pulsed tone is used as an alert tone.

To **add a Pulsed Tone alert button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.

4. From the UI Element drop down menu, select **Alert**.
The Alert Setup tab appears.
 5. Click the **Alert Setup** tab.
The Alert Setup page appears.
 6. From the Tone Type group box, select the **Pulsed Tone** radio button.
 7. In the Low Frequency field, enter the **frequency** (in Hz).
 8. In the Low/On Duration field enter the **duration** (in ms).
 9. In the Hi/Off Duration field, enter the **duration** in ms.
 10. From the Tone Level field, enter the **tone level** (in dB).
 11. Click **OK**.
- The button changes color and Alert appears on the button.

Hi-Lo radio button

The **Hi-Lo** radio button indicates a Hi-Lo warble is used as an alert tone.

To **add a Hi-Lo alert button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Alert**.
The Alert Setup tab appears.
5. Click the **Alert Setup** tab.
The Alert Setup page appears.
6. From the Tone Type group box, select the **Hi-Lo** radio button.
7. In the Low Frequency field, enter the **frequency** (in Hz).
8. In the Low/On Duration field, enter a **duration** (in ms).
9. In the Hi Frequency field, enter a **frequency** (in Hz).
10. In the Hi/Off Duration field, enter the **duration** (in ms).
11. From the Tone Level field, enter the **tone level** (in dB).
12. Click **OK**.

The button changes color and Alert appears on the button.

Low Frequency field

The **Low Frequency** field identifies the frequency of the low tones sent when the button is pressed.

The range for this field is 0 to 3000Hz.

Low/On Duration field

The **Low/On Duration** field identifies the duration at which the frequency is played.

The range for this field is 0 to 2000ms.

Hi Frequency field

The **Hi Frequency** field identifies the frequency of the high tones sent when the button is pressed.

The range for this field is 0 to 3000Hz.

Hi/Off Duration field

The **Hi/Off Duration** field identifies the duration at which the frequency is stopped.

The range for this field is 0 to 2000ms.

Tone Level field

The **Tone Level** field identifies the relative change allowable in the level of the tone generated.

The range for this field is -30 to 0dB.

31.10**Annunciation**

The **Annunciation** function allows the console operator to send a pre-recorded .wav file to radio users. When clicked the .wav file waits for all console TX and RX traffic to clear before sending the recording. If multiple annunciation buttons are clicked, the .wav files are sent in the order they were clicked.

Annunciation Setup page

When the Annunciation function is selected from the UI Element drop down menu the **Annunciation Setup** page appears.

Figure 31.4: Annunciation Setup Page - UI Element Setup

Annunciation Setup group box

File Path field

The **File Path** field is used to specify the path for the .wav file recording. When preparing the .wav file, ensure the file is saved with a 16-bit, 8.000kHz sample rate.



Notice!

We recommend using Audacity, an open source software application (<http://audacity.sourceforge.net/>), to make changes to your .wav files.

Browse button

The **Browse** button is used to browse for and select the .wav file to be used.

Level field

The **Level** field indicates the relative level change, in dB, for the .wav file.

The range for this field is -30dB to 10dB.

Send on Selected Lines check box

The **Send on Selected** check box indicates the console operator can select which line(s) the .wav file can be sent on.

If unselected, the .wav file is sent only on the line associated to the UI Element button currently being configured. Otherwise, the .wav file is sent to all selected lines.

Frequency drop down menu

The **Frequency** drop down menu is used to select the frequency for the Annunciation. This field contains all the frequencies defined for “*Frequency Parameters window, page 67*”.

Stay Selected After Annunciation check box

The **Stay Selected After Annunciation** check box indicates the line used for the annunciation is selected after the annunciation ends and unselect all other lines.

**Notice!**

This setting does not change the Select state of the line when the line is in a crosspatch.

Relay Setup group box**Active Relay With Annunciation check box**

The **Active Relay With Annunciation** check box indicates a configured relay activates when an annunciation is sent.

Relay Destination group box

The **Relay Destination** radio buttons identify the relay to be controlled. When a selection is made, the fields necessary to enter the setup information for the relay are enabled.

ADHB-4 Settings group box

The **ADHB-4 Settings** radio buttons identify which ADHB-4 relay is activated when the Annunciation is sent.

None radio button

The **None** radio button indicates none of the ADHB-4 relays is activated.

Relay 1 radio button

The **Relay1** radio button indicates the first relay in the ADHB-4 is being controlled.

Relay 2 radio button

The **Relay 2** radio button indicates the second relay in the ADHB-4 is being controlled.

NEO Settings group box

The **NEO Settings** field identifies the IP Address and the relay, if any, for the NEO-10.

IP field

The **IP** field identifies the IP Address of the NEO-10.

Relay drop down menu

The **Relay** drop down menu is used to select the desired relay.

Available selections for this field are None, Port 1, Port 2, Port 3, Port 4, Port 5, Port 6, Port 7, Port 8, Port 9 and Port 10.

Active Duration field

The **Active Duration** field is used to enter the length of time, in ms, the relay remains active from the start of the Annunciation.

The range for this field is 300-3000ms.

31.11 Auto-Dial

The **Auto-Dial** function allows the console operator to quickly dial a pre-defined number.

Auto-Dial String Entry page

When the **Auto-Dial String Entry** function is selected from the UI Element drop down menu the Auto-Dial String Entry page appears. Refer to the Figure below.

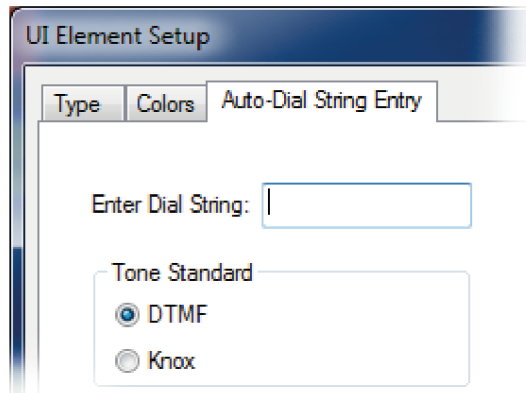


Figure 31.5: Auto-Dial String Entry Page - UI Element Setup

To **add an Auto-Dial button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Auto-Dial**.
The Auto-Dial String Entry tab appears.
5. Click the **Auto-Dial String Entry** tab.
The Auto-Dial String Entry page appears.
6. In the Enter Dial String field, enter the **Auto-Dial number** for the button.
NOTE: Commas entered in this field add a 2 second delay.
7. Click **OK**.

The color of the button changes and Dial appears on the button.

Enter Dial String field

The **Enter Dial String** field indicates the number to dial when the button is clicked in C-Soft Runtime.

This field can contain up to 16 characters.

Tone Standard group box

DTMF radio button

The **DTMF** radio button indicates DTMF tones are transmitted to place the call.

Knox radio button

The **Knox** radio button indicates Knox tones are transmitted to place the call.

31.12

Backup Line

The **Backup Line** function forces the line to route packets to and from either the primary or secondary radio interface. If the ping routine fails to receive a reply from the Base Radio IP, it automatically switches to the Backup IP settings specified in the Per Line Parameters window.

In C-Soft Runtime, the button changes to show the current condition. If there is a failure on both the primary and secondary radio interfaces, LINK FAIL is displayed on the Select button.

**Notice!**

When the Backup Line function is selected, a line must be selected from the Line to Associate Function With drop down menu.

Backup Control Line Setup page

When the Backup Line function is selected from the UI Element drop down menu, the **Backup Control Line Setup** page appears. Refer to the Figure below.

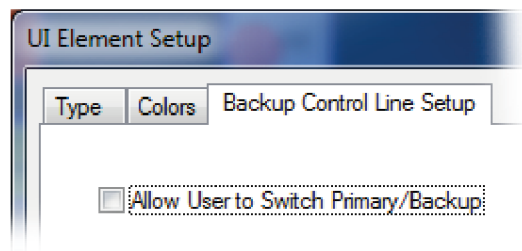


Figure 31.6: Backup Control Line Setup Page - UI Element Setup

Allow User to Switch Primary/Backup check box

The **Allow User to Switch Primary/Backup** check box indicates the console operator is allowed to manually switch between the primary and secondary radios. Otherwise, the button functions as an indicator only, and the console operator cannot control the radio in use.

**Notice!**

The C-Soft program needs to be restarted to reset from the backup radio to the primary radio.

To **add a Backup Line button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.

4. From the UI Element drop down menu, select **Backup Line**.
The Backup Control Line Setup tab appears.
5. From the Line to Associate Function With drop down menu, select the **line** to setup the backup control.
6. Click the **Backup Control Line Setup** tab.
The Backup Control Line Setup page appears.
7. Select the **Allow User To Switch Primary/Backup check box**, if desired.
8. Click **OK**.
The button changes color and Primary appears on the button.

31.13

Call List Window

The **Call List Window** function creates a button used to view a list of User IDs.

In C-Soft Runtime, if the console operator clicks the Call List button, the Call List window for the selected line, shown in the Figure below, appears. From this window, the user can make outgoing calls and send status messages based upon programming setup. The Call List displays generic, iDEN, and phone type users and groups.

To **add a call list button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Call List**.
5. Click **OK**.

The color of the button changes and Call List appears on the button.

31.13.1

Call List window

The **Call List** window, shown in the Figure below, is used to view and select from a list of IDs. Default messages are configured by the console administrator and assigned to the buttons on the bottom of the window.

Alias	User ID
Frank	96
Ned	95
Cal	94
Bob	93
Sid	92
Matt	91
Nick	90

Figure 31.7: Call List Window - C-Soft Runtime

ID Type drop down menu

The **ID Type** drop down menu is used to select a sort type for the list.

Available selections for this field are:

- Alias - Select Alias from the menu to sort the User IDs by alias in ascending alphabetical order.
- ID - Select ID from the menu to sort the User IDs by ID number in ascending numerical order. The selected ID type determines the User ID drop down menu entries.

User ID drop down menu

The **User ID** drop down menu is used to select a user ID for placing a call. Either the alias or the ID number appears in the menu depending on the ID Type drop down menu selection. Alternatively, the status can be selected from the list at the bottom of the window.

Filters drop down menu

The **Filters** drop down menu is used to select a filter from the list. When selected, the list populates with users assigned to the filter by the console administrator.

Available selections for this field are:

- No Filter - Displays a complete list of user IDs.
- User-defined System Filter - Displays only user IDs belonging to the filter.

Status field

The **Status** field indicates the currently selected status. If no status is selected, No Status appears in the field.

Set Status button

The **Set Status** button is used to select a status to send. When clicked, the Status List window appears. Refer to the Figure below.

To **view the Call List**, do the following:

1. Click **Call List**.
2. From the Filter drop down menu, select a **filter** to sort the list.
OR
Select **No Filter**.

To **select a user ID to place a call to**, do the following:

1. Select the **line** you want to place the call from.
2. Click **Call List**.
The Call List window appears.
3. From the Filter drop down menu, select a **filter** to sort the list.
OR
Select **No Filter**.
4. From the User ID drop down menu, select an **alias** or **user ID**.
The selected user ID in the call list is highlighted.
5. Click **Done**.
If a password is required to send the status ID, the Password Entry window appears.
6. Using the monitor keypad or your keyboard, enter the **password**.
For each character you enter, asterisks fill the empty field at the top of the window.
OR
If the password is unknown, click **Cancel**.
The Password Window closes.
7. Click **Done**.

The Password Entry and Status List windows close and the selected status's alias appears in the Status Message field or, if the password is incorrectly entered, an error message appears.

To **send a status ID from the Call List window in C-Soft Runtime**, do the following:

1. While in C-Soft Runtime, select the **line** you want to place the call from.
2. Select a **Call List** button.
The Call List window appears.
3. From the ID Type drop down menu, select an **alias** or an **ID number**.
The selected User ID in the User List is highlighted.
4. Select **Set Status**.
The Status List window appears.
5. From the ID type drop down menu, sort the **list** by alias or status ID number.
The list is sorted depending on the selected type.
6. From the Status drop down menu, select a **status ID** to send.
The selected status ID is highlighted.
OR
From the status ID list, select a **status ID** to send.
The selected status ID is highlighted.

7. Click **Done**.
If a password is required to send the status ID, the Password Entry window appears.
8. Using the monitor keypad or your keyboard, enter the **password**.
For each character you enter, asterisks fill the empty field at the top of the window.
9. Click **Enter**.
The Password Entry window closes and the selected status's alias appears in the Status Message field. If the password is incorrectly entered, an error message appears.
OR
Click **Cancel**.
10. Click a **Call** button to place the call.
The message is sent and a confirmation or error message appears in the dispatching status bar.
11. Click **Done** to close the window.

Call (1-10) buttons

The **Call (1-10)** buttons are used to place user-defined calls configured in the *5-6 Tone/DTMF ANI system type*, page 75. The labels configured on the 5/6 Tone/DTMF ANI Setup page appear on these buttons in the Call List window.



Notice!

The Call1-Call10 buttons may have different labels assigned by the console administrator.

To **place a call from the Call List window**, do the following:

1. Select an **ID** from the list.
Available call buttons on the bottom of the window become active.
2. Select a **call** button.
The call is placed.

Done button

The **Done** button is used to close the Call List window.

31.13.2

Status List window

The **Status List** window, shown in the Figure below, is used to select from a list of preprogrammed status IDs. When a status ID is selected and the window is closed, the selected status appears in the Status field located on the Status List window.

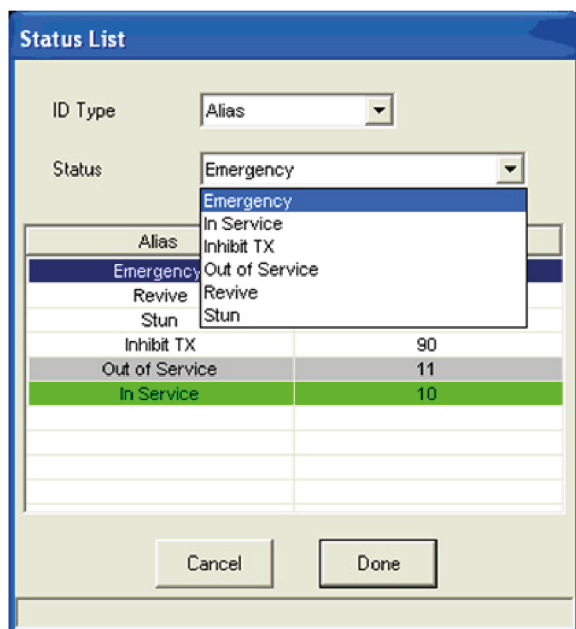


Figure 31.8: Status List Window

ID Type drop down menu

The **ID Type** drop down menu is used to select a sort type for the list.

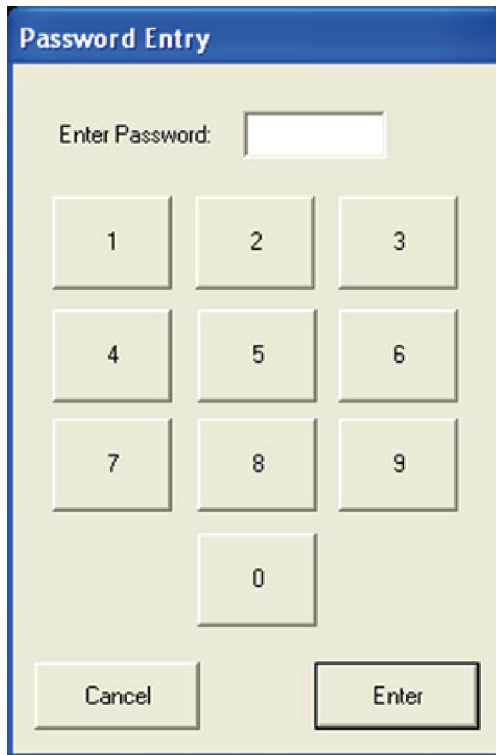
Available selections for this field are:

- Alias - Selecting Alias from the menu, sorts the status IDs by alias in alphabetical order.
- Status ID - Selecting ID from the menu, sorts the status IDs by ID number in ascending numerical order.

Status drop down menu

The **Status** drop down menu is used to select the status to send. Either the alias or the ID number appear in the list and is determined by the selection in the ID Type drop down menu. Alternatively, the status can be selected from the list at the bottom of the window.

Refer to Call 1-10 Buttons on the “*Call List window, page 233*” or to “Per Line Call History Setup Page” on “*Per Line Call History, page 335*” to continue with sending a message to the selected ID.

A screenshot of a 'Password Entry' dialog box. It has a blue title bar with the text 'Password Entry'. Below the title bar is a label 'Enter Password:' followed by a white text input field. Underneath the input field is a numeric keypad with buttons for digits 1 through 9, 0, and a 'Cancel' button. At the bottom right of the dialog is an 'Enter' button.**Cancel button**

The **Cancel** button discards any changes made and closes the window.

Enter button

The **Enter** button is used to close the Status List window.

Refer to

- *Call List window, page 233*

31.14

Call Priority button

The **Call Priority** button is used to set the transmit call priority for calls on AIS lines sent from the consoles.

There are five levels of priority:

- Off (0)
- Low (1)
- Normal (2)
- High (3)
- Emergency - generates an emergency response on the radios

By default, all calls are set to a priority of Off (0).

31.15 Call Queue window

The **Call Queue** window contains a list of calls that require a response from the dispatcher. The status of individual calls is updated across all consoles as dispatchers answer and complete calls.

Signalling/ Call Type	Call Alert	Group Call	Private Call	Select Call	Group Status
5/6 Tone, DTMF	N/A	Yes	N/A	Yes	N/A
Fleet Sync	N/A	Yes	Yes	Yes	N/A
Telex-Serial ^a	Yes ^a	Yes ^a	Yes ^a	Yes ^a	N/A
MDC-1200	Yes	Yes	Yes	N/A	N/A
MOTOTRBO	Yes	Yes	Yes	N/A	N/A
NEXEDGE Direct IP	Yes	Yes	Yes	Yes	Yes
AIS	Yes	Yes	Yes	N/A	N/A
Telex- Enhanced ANI	Yes	Yes	Yes	Yes	N/A

a. support varies based on attached mobile

The **Call Queue Window Setup** page is used to configure the Call Queue Window.

The screenshot shows the 'UI Element Setup' dialog box with the 'Call Queue Window Setup' tab selected. The dialog has a title bar with a close button (X) and a tabbed interface with four tabs: 'Type', 'Colors', 'Call Queue Window Setup' (active), and 'Call Queue Columns'. The 'Call Queue Window Setup' tab contains four sections:

- Event Selection:** Contains four checkboxes: 'Call Alert' (checked), 'Group Call' (unchecked), 'Private and Selective Call' (checked), and 'Group Statuses' (checked).
- Event Priority:** Contains a 'Sort entries by:' label and three radio button options: 'Time event received' (selected), 'Event Status ID - Ascending', and 'Event Status ID - Descending'.
- Behavior:** Contains three checkboxes: 'Automatically populate keypad on answer' (unchecked), 'Play audible alert for waiting entries' (unchecked), and 'Remove completed entries from window' (unchecked).
- Window Appearance:** Contains a 'Maximum Number of Visible Entries:' label with a text input field containing '20', a 'Set Font' button, and a 'Sample Text' label.

An 'OK' button is located at the bottom right of the dialog box.

31.15.1 Call Queue Setup page

31.15.1.1 Event Selection group box

The **Event Selection** group box allows users to select call types to be added to the call queue window. When the C-Soft console receives one of the selected radio call events, an entry is created in the call queue window.

Call Alert check box

The **Call Alert** check box indicates call alerts can be added to the call queue window.

Group Call check box

The **Group Call** check box indicates group calls can be added to the call queue window.

Private and Selective Call check box

The **Private Call** check box indicates private and selective calls can be added to the call queue window.

Group Statuses check box

The **Group Statuses** check box indicates group statuses can be added to the call queue window.

31.15.1.2 Behavior group box

Automatically Populate Keypad on Answer check box

The **Automatically Populate Keypad on Answer** check box indicates the user ID information for a call entry is automatically added to the User Entry field in the Keypad control when the call is answered. A call is answered when the Answer button is clicked.

Play Audible Alert for Waiting Entries

The **Play Audible Alert for Waiting Entries** check box indicates an audible alert is played on Speaker 1 when receiving a new call queue event. The audible alert serves as a notification, and is played each time a call event is added to the Call Queue Window.

Remove Completed Entries from Window

The **Remove Completed Entries from Window** check box indicates call entries with a call state of Completed are removed from the Call Queue window. A Call entry is removed from the window once the Clear button is clicked.

31.15.1.3 Event Priority group box

The **Event Priority** group box is used to configure how call queue events are ordered in the Call Queue Window.

Time Event Received radio button

The **Time Event Received** radio button indicates the incoming call events are sorted by the time the event was received, with the most recently received events being displayed at the top of the window.

Event Status ID - Ascending

The **Event Status ID - Ascending** radio button indicates incoming call events are sorted by the value of the event's Status ID. An event with a lower numbered status ID will be displayed above an event with a higher status ID (i.e. Status #1 will be shown above Status #2).

Event Status ID - Descending

The **Event Status ID - Descending** radio button indicates incoming call events are sorted by the value of the event's Status ID. An event with a higher numbered status ID will be displayed above an event with a higher status ID (i.e. Status #2 will be shown above Status #1).

31.15.1.4

Window Appearance group box

Maximum Number of Visible Entries field

The **Maximum Number of Visible Entries** field is used to enter and identify the number of call entries saved in the call queue window. Once the maximum number has been reached the last call entry is removed from the end of the list.

The range for this field is 1 to 50.

Set Font button

The **Set Font** button, when selected, opens the Font window. The Font window is used to select a font type and font size to use for the call queue window. When the format is changed, a preview of the text appears in the Sample field.

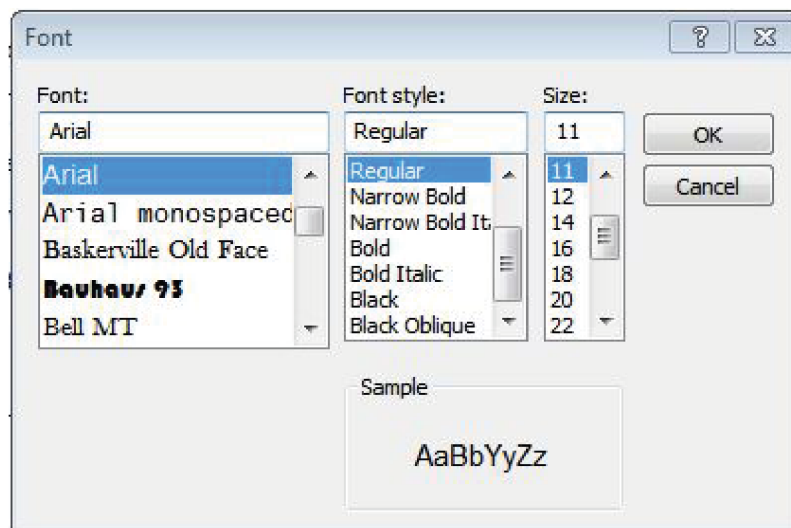
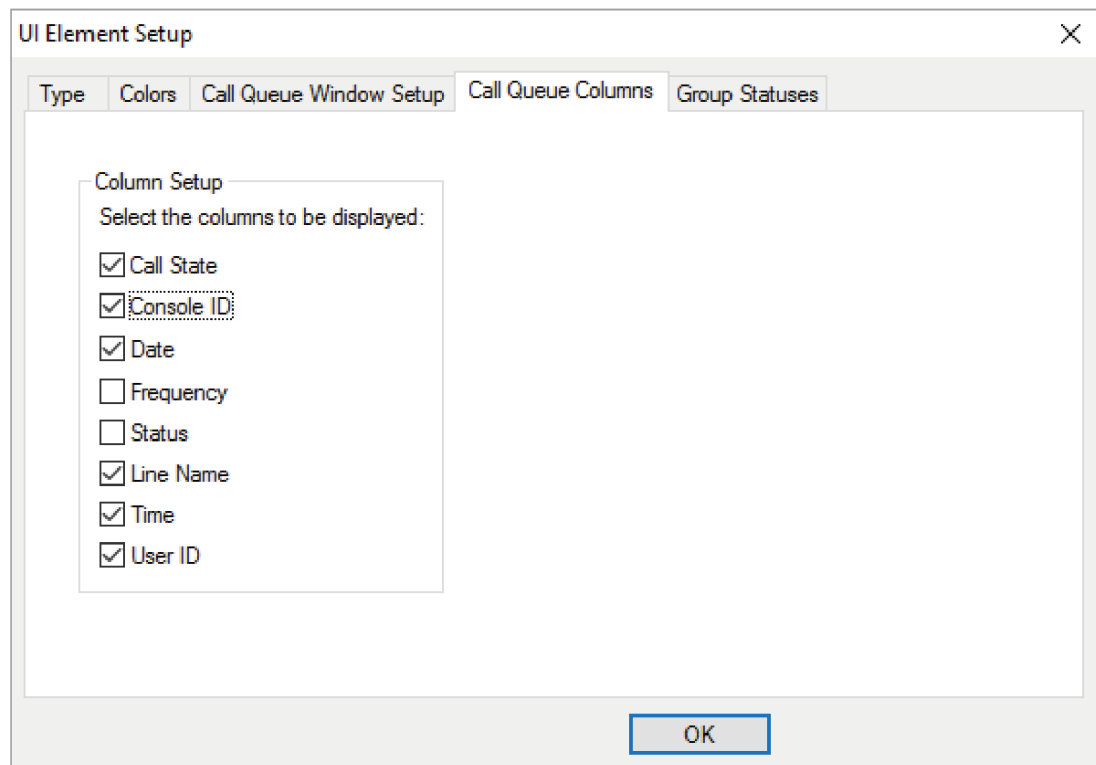


Figure 31.9: Font Window

31.15.2

Call Queue Columns page

The Call Queue Window Setup page is used to configure which columns are visible in the Call Queue Window.



Column Setup group box

The **Column Setup** group box allows users to determine which columns are visible in the Call Queue window. The respective column will be displayed in the Call Queue window if checked and hidden if unchecked.

Call State check box

The **Call State** check box is used to add a call state column to the Call Queue window.

The possible call states are:

- Waiting
- Processing
- Complete

Console ID check box

The **Console ID** check box is used to add a console ID column to the Call Queue window.

Date check box

The **Date** check box is used to add a date column to the Call Queue window.

Frequency check box

The **Frequency** check box is used to add a frequency column to the Call Queue window.

Line Name check box

The **Line Name** check box is used to add a line name column to the Call Queue window.

Status check box

The **Status** check box is used to add a status column to the Call Queue window.

Time check box

The **Time** check box is used to add a time column to the Call Queue window.

User ID check box

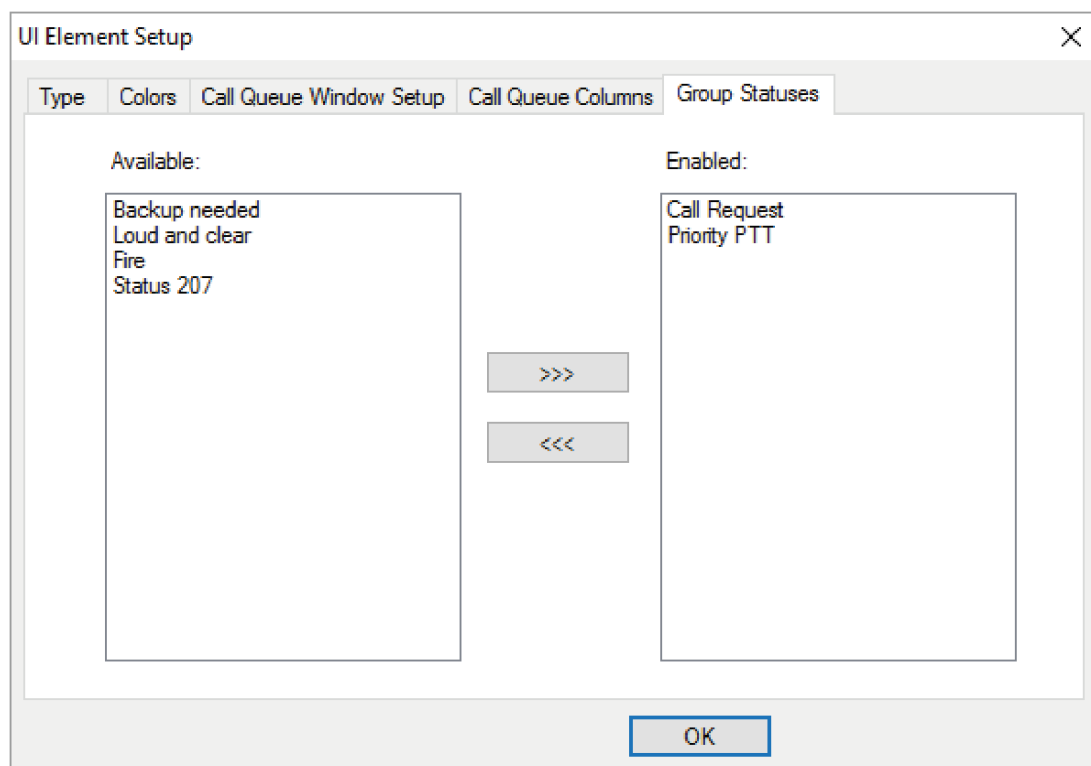
The **User ID** check box is used to add a user ID column to the Call Queue window.

31.15.3**Group Statuses page**

The **Group Statuses** page is used to configure which statuses trigger an entry in the Call Queue Window. The Group Statuses page is visible when the Group Statuses check box is checked in the Event Selection group box in the Call Queue Window Setup page.

**Notice!**

A maximum of 20 statuses can be configured for the Call Queue Window.

**Available field**

The **Available** field displays all statuses in the system. This list is used to select a status to add to the Enabled field.

1. Select the **call entry** in the list.

[illegible]

2. Click the **Answer** button.

Note:

- Incoming calls are added to the Call Queue window. Call entries have a status of Waiting until answered by a dispatcher.
- Selecting the call entry causes the background color of the call entry to change to the selected color configured in Microsoft Windows.
- After the call has been answered, the call status updates to Processing. After a call has been answered, any dispatcher on a parallel console position can clear the call entry. Dispatchers on parallel console positions can determine the dispatcher who answers and clears a particular call by viewing the Console ID field for the call entry.

To **clear a call**, do the following:

1. Select the **call entry** in the list.

Call Queue

Date	Time	Channel	Console ID	User ID	Call State
08/22/2016	09:27:30	DISPATCH	Dispatch 3	44	Processing

Answer

Clear

Done

2. Click the **Clear** button.

NOTE: Selecting the call entry causes the background color of the call entry to change to the selected color configured in Microsoft Windows.

Call Queue

Date	Time	Channel	Console ID	User ID	Call State
08/22/2016	09:27:30	DISPATCH	Dispatch 3	44	Complete

Answer

Clear

Done

The call event is complete. If the Remove Completed Entries from Window check box is unchecked, the call entry remains on the screen until the maximum number of viewable entries (configured in C-Soft Designer) is reached.

31.16

Crosspatch

The **Crosspatch** function allows the console operator to connect two or more radios/phone lines, enabling different lines to talk to other lines configured as full-duplex become simplex in operation when placed into a crosspatch.

**Notice!**

Only the console creating the crosspatch is able to clear the crosspatch. All other consoles display X-PATCH on lines in a patch group.

Patch Group page

When the Crosspatch function is selected from the UI Element drop down menu, the **Patch Group** page appears. Refer to the Figure below.

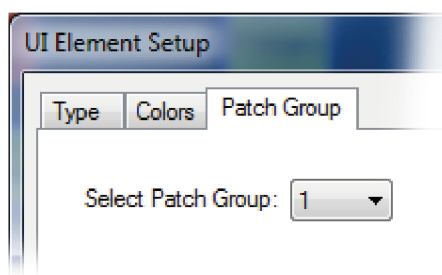


Figure 31.11: Patch Group Page - UI Element Setup

To **add a Crosspatch button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Crosspatch**.
The Patch Group tab appears.
5. Click the **Patch Group** tab.
The Patch Group page appears.
6. From the Select Patch Group drop down menu, select the **number** of the crosspatch group (1-30).
7. Click **OK**.

The color of the button changes and Patch appears on the button.

31.17

Crosspatch Block

The **Crosspatch Block** function allows a particular crosspatch line to be blocked from transmitting.

EXAMPLE: If the line is stuck in receive mode due to noise, that line can be blocked, releasing its control of the crosspatch. After the line completes a transmit cycle, then it is eligible to transmit/receive as part of the patch.

Patch Group page

When the Crosspatch function is selected from the UI Element drop down menu, the **Patch Group** page appears. Refer to the Figure below.

To **add a Patch Block button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Crosspatch Block**.
The Patch Group tab appears.
5. Click the **Patch Group** tab.
The Patch Group page appears.
6. From the Select Patch Group drop down menu, select the **crosspatch group number**.
7. Click **OK**.

The color of the button changes and a Patch Block button appears in the console window.

31.18 Crosspatch Clear

The **Crosspatch Clear** function allows the console operator to drop the patch for the crosspatch group.

Patch Group page

When the Crosspatch function is selected from the UI Element drop down menu, the **Patch Group** page appears. Refer to the Figure below.

To **add a Patch Clear button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Crosspatch Clear**.
The Patch Group tab appears.
5. Click the **Patch Group** tab.
The Patch Group page appears.
6. From the Select Patch Group drop down menu, select the **number** of the crosspatch group.
7. Click **OK**.

The color of the button changes and Patch Clear appears on the button.

31.19 Crosspatch Programmed

The **Crosspatch Programmed** function allows the console operator to create a crosspatch on a pre-defined group of lines.

**Notice!**

Telex recommends you assign a unique color to this button because it is applied to all lines in the crosspatch.

Line Group page

When the Crosspatch Programmed function is selected from the UI Element drop down menu, the **Line Group** page appears. Refer to the Figure below.

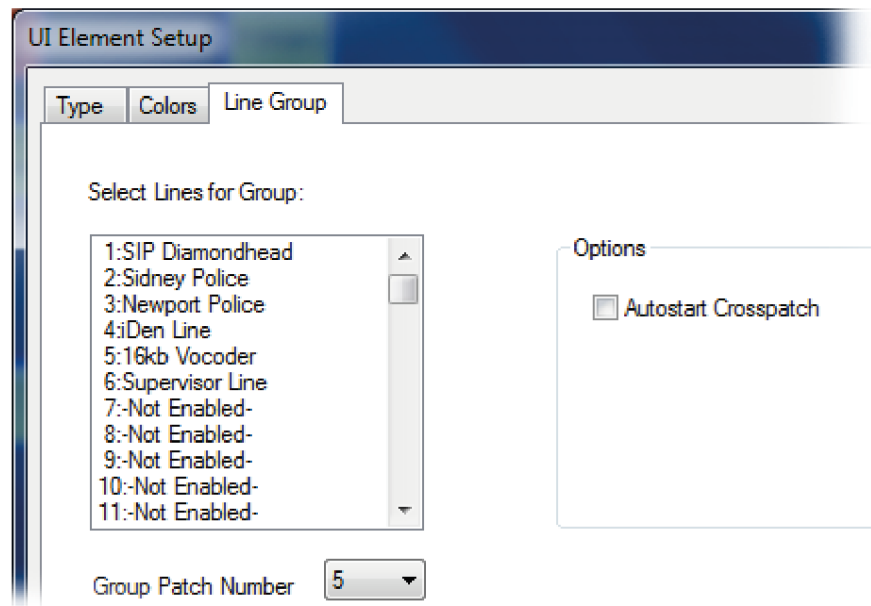


Figure 31.12: Line Group Page - UI Element Setup

Select Lines for Group field

The **Select Lines for Group** field contains a list of all the lines configured on “*Per Line Parameters window, page 61*”. Selecting a line from this list assigns the line to the group.

Group Patch Number drop down menu

The **Group Patch Number** drop down menu is used to assign a unique crosspatch group number to the selected line.

Autostart Crosspatch check box

The **Autostart Crosspatch** check box indicates the crosspatch is automatically created when the C-Soft program is started.

To **add a Crosspatch Programmed button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.

4. From the UI Element drop down menu, select **Crosspatch Programmed**.
The Line Group tab appears.
5. Click the **Line Group** tab.
The Line Group page appears.
6. On the Line Group page, select the **line(s)** from the Select Lines for Group field.
7. From the Group Patch Number drop down menu, select the **group patch number**.
8. From the Options field, select the **Autostart Crosspatch check box** to automatically start the crosspatch, if desired.
9. Click **OK**.
The color of the button changes and Preset Patch appears on the button.

**Notice!**

Autostart Crosspatch does not work for Phone or SIP lines.

Refer to

- *Per Line Parameters window, page 61*

31.20**Crosspatch PTT**

The **Crosspatch PTT** function allows the console operator to transmit audio to all lines included in the crosspatch.

Patch Group page

When the Crosspatch PTT function is selected from the UI Element drop down menu, the **Patch Group** page appears. Refer to the Figure on “*Crosspatch, page 246*”.

To **add a Crosspatch PTT button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Crosspatch PTT**.
The Patch Group tab appears.
5. Click the **Patch Group** tab.
The Patch Group page appears.
6. From the Select Patch Group drop down menu, select the **number** of the crosspatch group.
7. Click **OK**.

The color of the button changes and Crosspatch PTT appears on the button.

Refer to

- *Crosspatch, page 246*

31.21 Dial

The **Dial** function dials the user selected in the keypad. For more information on the Keypad Module, refer to “Dial” on page 234.

To **add a Dial button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, **select Dial**.
5. Click **OK**.

The color of the button changes and Dial appears on the button.

31.22 DTMF Digit

The **DTMF Digit** function adds one digit of a DTMF keypad. Multiple buttons can be added to the console to form a DTMF keypad. All 16 digits are supported.

DTMF Digit page

When the DTMF Digit function is selected from the UI Element drop down menu, the **DTMF Digit** page appears. Refer to the Figure below.

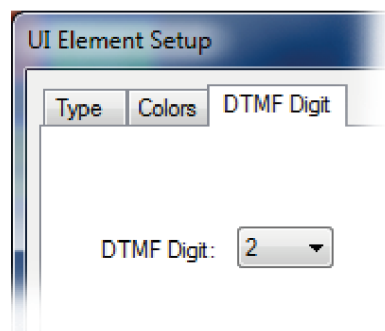


Figure 31.13: DTMF Digit Page - UI Element Setup

DTMF Digit drop down menu

The **DTMF Digit** drop down menu provides a list of numbers and letters for the DTMF keypad.

This range for this field is 0-9 or A-D, # and *.

Note:

- Each digit must be assigned to its own button.
- When creating a telephone keypad, the corresponding letters for the keypad are automatically inserted.

In C-Soft Runtime, if a DTMF digit button is clicked, the digit is sent to all selected lines during a PTT operation, or it generates its own PTT if clicked outside of a PTT operation.

To **assign a digit to a button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **DTMF Digit**.
The DTMF Digit tab appears.
5. Click the **DTMF Digit** tab.
The DTMF Digit page appears.
6. From the DTMF Digit drop down menu, select the **digit** you want to appear on the button.
7. Click **OK**.

The color of the button changes and the selected number (or letter) appears on the button.



31.23

Emergency ACK

The **Emergency ACK** function creates a button to indicate the emergency is acknowledged and stops the Select buttons blinking.



Notice!

When the Emergency ACK function is selected, a line must be selected from the Line to Associate Function With drop down menu.

In C-Soft Runtime, if an emergency signal is received, the C-Soft program sends an emergency Hi-Lo tone to the selected speaker to notify the console operator. In addition, the Select button for the line that received the emergency call blinks.

To **add an Emergency ACK button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select the **Emergency ACK button**.
5. From the Line to Associate Function With drop down menu, select the **desired line** to associate with this function.
6. Click **OK**.

The color of the button changes and Emergency ACK appears on the button.

31.24 Emergency Clear

The **Emergency Clear** function stops the Hi-Lo tone from playing on the selected speaker.

To **add an Emergency Clear button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Emergency Clear**.
5. Click **OK**.

The color of the button changes and Emergency Clear appears on the button.

31.25 Emergency History Window

The **Emergency History Window** function creates a button to access the emergency call history list.

In C-Soft Runtime, if the Emergency History window button is clicked, the Emergency History window appears. From this window, you can view all emergencies, cleared emergencies, and acknowledged emergencies.

To **add an Emergency History Window button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Emergency History Window**.
5. Click **OK**.

The color of the button changes and Emergency History appears on the button.

31.26 Encryption

The **Encryption** function allows the console operator to selectively turn on and off encryption message sent to an IP-223 or IP-224.



Notice!

When the Encryption function is selected, a line must be selected from the Line to Associate Function With drop down menu.

Encryption Setup page

When the Encryption function is selected, the **Encryption Setup** page appears, shown in the Figure below.

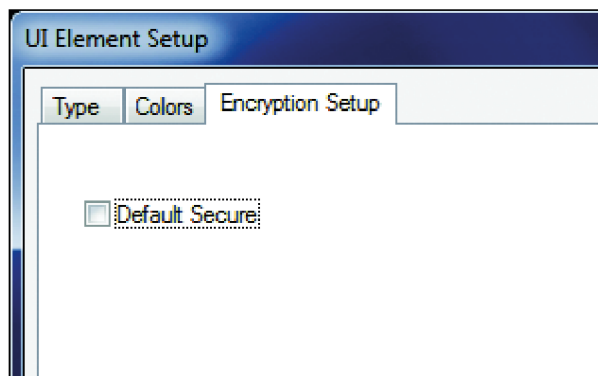


Figure 31.14: Encryption Setup Page - UI Element Setup

Default Secure check box

The **Default Secure** check box indicates encryption is enabled when C-Soft boots up.

To **configure encryption on a line**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Encryption**.
 1. From the Line to Associate Function With drop down menu, select the **desired line** to associate with this function.
 2. Click **OK**.

The color of the button changes and Clear appears on the button.

31.27 Event Logger

The **Event Logger** function opens a window that displays all the messages written to the Event Log file viewable by the dispatcher.

Note:

- The Event Logger window only displays log messages if logging is enabled.
- To set the log level and which level of logging messages to record, see “Logging Setup Group Box”.

To **add an Event Logger button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Event Logger**.
5. Click **OK**.

A button with Event Logger on it appears.

31.28

FleetSync

The **FleetSync** function creates a button to open the FleetSync Dispatching window, shown in the Figure in “*FleetSync Dispatching window, page 256*”.

In C-Soft Runtime, when the window is open the user can view the system list, call history and status history, send status IDs, voice messages and data messages, select groups and individuals to place calls.

FleetSync Setup page

When the FleetSync function is selected from the UI element drop down menu, the **FleetSync Setup** page appears, shown in the Figure below.

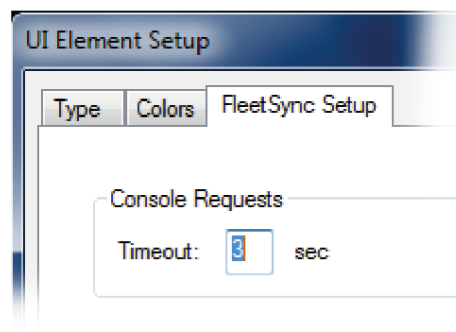


Figure 31.15: FleetSync Setup Page - UI Element Setup

Console Requests group box

Timeout field

The **Timeout** field is used to configure the amount of time, in seconds, the console waits after sending a status request command before indicating a response was never received.

The range for this field is 1 to 10 seconds.

To **add a FleetSync button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.

2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **FleetSync**.
5. Click **OK**.

A button with FleetSync on it appears.

Refer to

- *FleetSync Dispatching window, page 256*

31.28.1

FleetSync Dispatching window

The **FleetSync Dispatching** window is used by the console operator in C-Soft Runtime to place calls, view call history, and send status and text messages. Console action feedback is provided in the Dispatching Status bar.

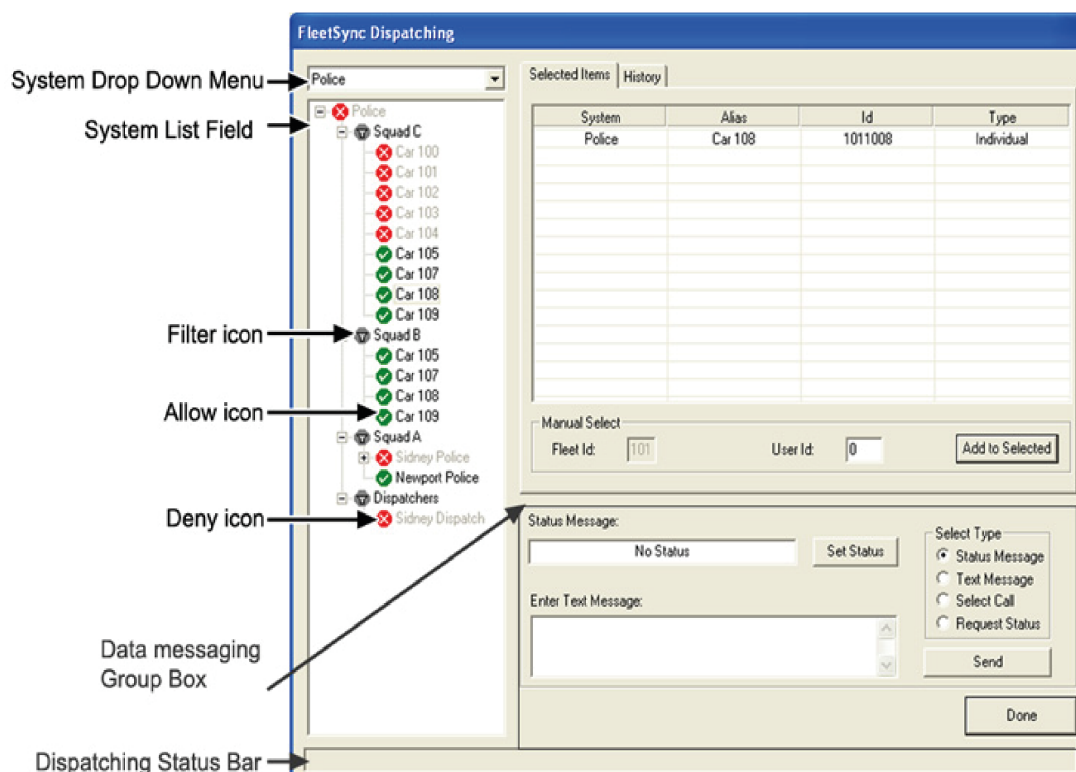


Figure 31.16: FleetSync Dispatching Window

System Type drop down menu

The **System Type** drop down menu is used to change from the currently selected system to another system in the console position.

The default systems included in the drop down menu depend on the currently selected line's configuration.

Up to 200 systems can be created.

System List field

The **System List** field populates with components that belong to the system currently selected from the System drop down menu. Filters components are listed next in the hierarchy. When a filter component is expanded, individual unit and fleet components are visible.

Systems can be configured, by the console admin, to display filters only. In that case, only components affiliated with a filter, shown in the Figure below, appear in the filter list. Otherwise, all components, including components with deny icons (permission to place calls is denied), shown in the Figure above, appear in the list.

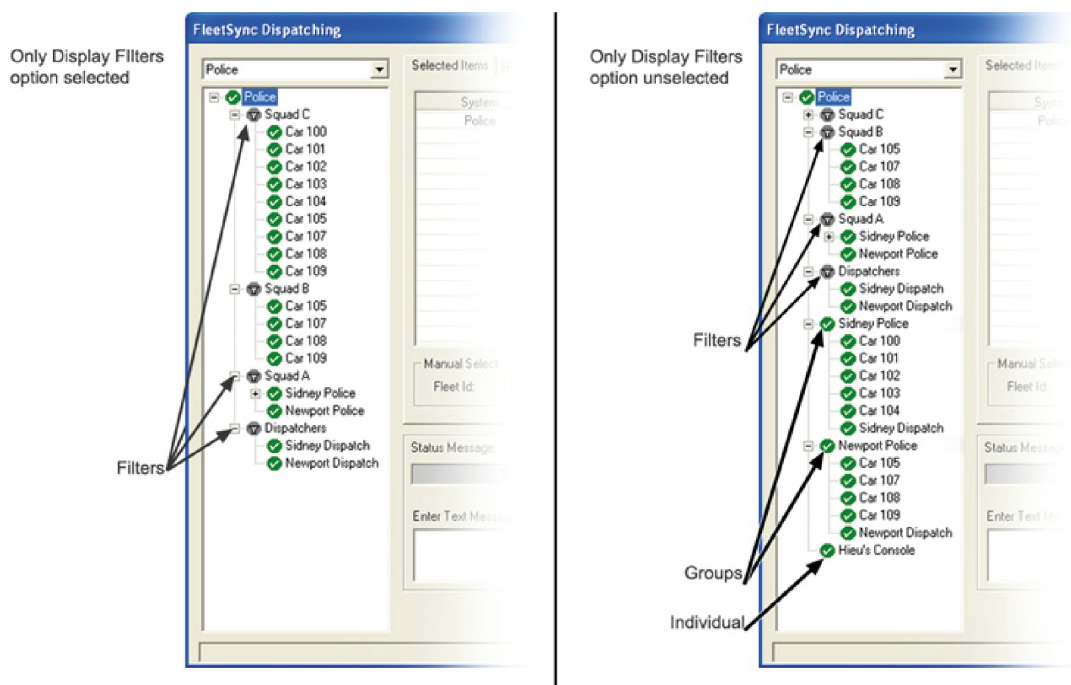


Figure 31.17: System Displays Only Filters Example

Icon	Type	Description
	Filter	The Filter icon indicates the component is a filter. Filters are used to group, sort, and label the components contained in the filter, refer to the Figure above. To view or hide filters, do one of the following: - Click the expand button to view components. - Click the collapse button to hide components.
	Allow	The Allow icon indicates the component is available for selection. The console operator can place calls and send status and text messages to these components, refer to the Figure above.
	Deny	The Deny icon indicates the component does not allow broadcast calls, when a system is tagged, or, does not allow interfleet calls when Fleets or Units are tagged, refer to the Figure above.

System List flyout menu

The **System List** flyout menu, shown in the Figure below, is a quick method of accessing the Select Type commands also available in the Data Messaging Group Box.

Available selections for this field are Status, Text Messages, Select Calls and Request Status.

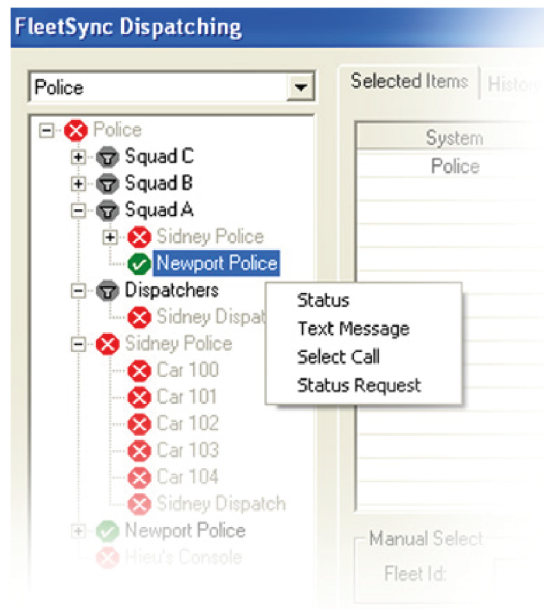


Figure 31.18: System List Flyout Menu

To **access the System List flyout menu**, do the following:

1. In the System List, right-click the **unit** or **group** to send the call or message to.
The System List flyout menu appears.
OR
In the System List, right-click the **system** to send the call or message to.
The System List flyout menu appears.
2. Click **Status**.
OR
Click **Text Message**.
OR
Click **Select Call**.
OR
Click **Status Request**.

Reference

- For more information, refer to “Status Message Radio Button” on “Select Type Group Box”.
- For more information, refer to “Text Message Radio Button” on “Select Type Group Box”.
- For more information, refer to “Select Call Radio Button” on “Select Type Group Box”.
- For more information, refer to “Request Status Radio Button” on “Select Type Group Box”.

Selected Items page

The **Selected Items** page is used to view the currently selected component's ID information. The selected item list is used to determine where the call or status message is sent.

Selection of only one component per system is allowed. Grayed out items with deny icon tags are not available for selection.

For more information, refer to "Manual Select Group Box".

To **add a component's ID to the Selected Items page**, do the following:

1. In the System list field, select the **component**.
The component is highlighted.
2. Click **Add to Selected**.

The item appears in the list.

To **remove an ID from the Selected Items page**, do the following:

1. Right-click the **unwanted component**.
2. Click **Remove Item**.

The item disappears from the list.

Manual Select group box

The **Manual Select** group box is used to manually enter Fleet and User ID numbers for placing calls, sending status messages and text messages.

Fleet ID field

The **Fleet ID** field is used to enter the Fleet ID portion of the ID number for placing and sending interfleet calls and messages. The Fleet ID field is populated, by default, with the Fleet ID when the system is selected and broadcast calls are allowed on the line.

- If interfleet calls are not allowed on the selected line, the Fleet ID field is not editable for any component. It is possible, however, to place an individual intrafleet call manually. The selected line's Fleet ID-grayed out-is added on to the unit ID number you enter manually.
- If a Fleet ID and User ID are both 0, then the console displays the following message:
Cannot add a system! Allow Broadcast Call option is disabled, appears.

User ID field

The **User ID** field is used to manually enter the unit ID portion of the ID number. It is used to place a call or send a message when the ID is not available for selection from the system list.

The User ID field is also used to place broadcast calls using zeros, indicating it is a broadcast call, and is sent to all members of the fleet.

History page

The **History** page is used to view past FleetSync calls and messages received by the console. Additionally, calls or messages can be sent by selecting the ID in the history log. When selected, the ID is added to the Selected Items page.

This list is configured by the console administrator. It can contain up to 500 IDs. For more information, refer to "Per Line Call History Window Lines Field" on "Per Line Call History Window Lines Field".

Note:

- Calls are not saved to the history list if C-Soft Runtime is closed.
- The FleetSync Call History list includes calls received from parallel console positions.

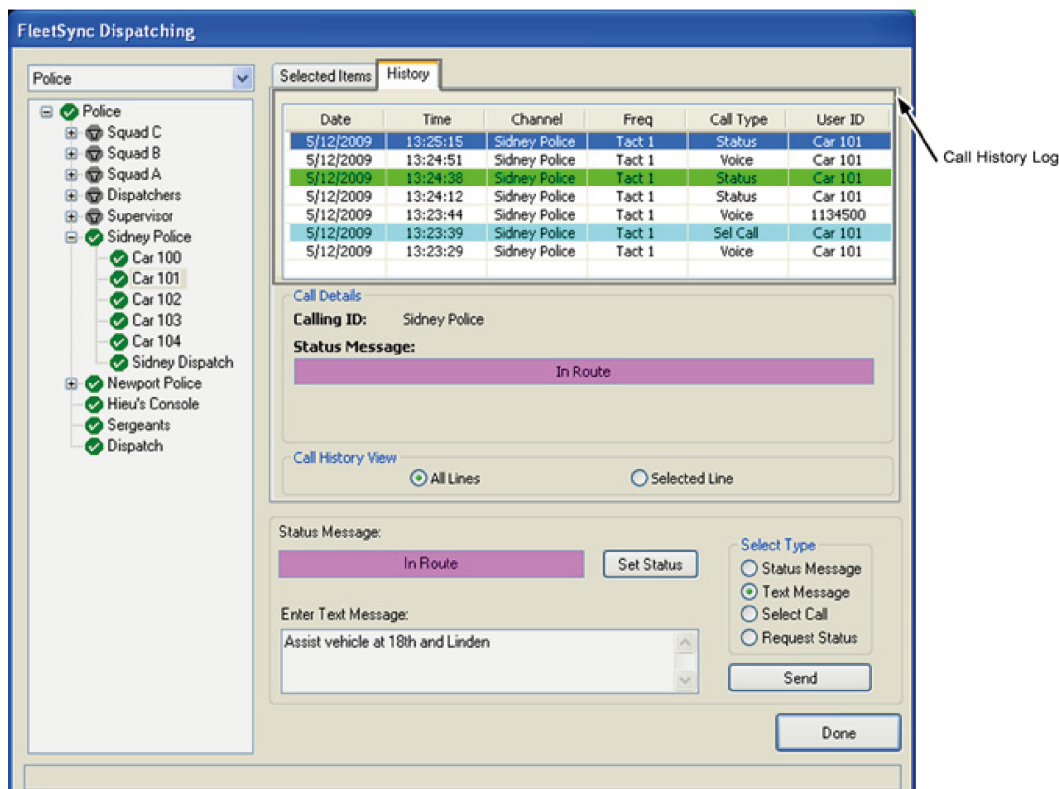


Figure 31.19: History Page - FleetSync Dispatching Window

Call History View group box

The **Call History View** group box is used to control the log display.

All Lines radio button

The **All Lines** radio button is used to display all calls and messages received by the console.

Selected Line radio button

The **Selected Line** radio button is used to display all calls and messages received on the selected line.

Call Details group box

The **Call Details** group box is used to display additional call information for the currently selected ID type.

Add to Selected button

The **Add to Selected** button is used to add the manually entered Fleet and Unit ID to the selected items page. When the ID number displays in the Selected Items page, the call can be placed or message sent.

To **manually place an individual call inside the current system**, do the following:

1. In C-Soft Runtime, select a **line**.

2. Click the **FleetSync** button.
The FleetSync Dispatching window appears. The Fleet ID field is, by default, populated with the current system's fleet ID.
3. In the User ID field, enter the **individual's unit ID number**.
4. Click **Add to Selected**.

The system name you are currently working with appears in the Selected Items page.



Notice!

The name on the FleetSync button is configured by your console administrator. FleetSync is used generically to refer to any button configured for FleetSync functions.

To **manually place an interfleet call**, do the following:

1. Select a **line** with interfleet calls allowed.
2. Click **FleetSync**.
The FleetSync Dispatching window appears.
3. In the Fleet ID field, enter the **individual's fleet ID number**.
4. In the User ID field, enter the **individual's unit ID number**.

1. Click **Add to Selected**.

The system name you are currently working with appears in the Selected Items page.

To **manually place a broadcast call**, do the following:

1. Select a **line** with broadcast calls allowed.
2. Click **FleetSync**.
The FleetSync Dispatching window appears. The Fleet ID field contains the system Fleet ID number, and is not editable.
3. In the System List field, select the **system name**.
The system name is highlighted.
4. In the Unit ID field, enter **0000**.
5. Click **Add to Selected**.

The system name you are currently working with appears in the Selected Items page.

Note:

- Lines can be configured to allow or deny both broadcast calls or interfleet calls.
- Permission to place calls can be determined by the window's appearance. Refer to the two Figures below.

Icon	Type	Description
	Deny	Broadcast calls are not allowed as indicated by the deny icon. When the system name is selected, the Selected Items page is empty and the Fleet ID field is grayed out, refer to the Figure below.
	Allow	Broadcast calls are allowed as indicated by the allow icon. When the system name is selected the ID number appears in the Selected Items page and the Fleet ID field is active, refer to the Figure below.

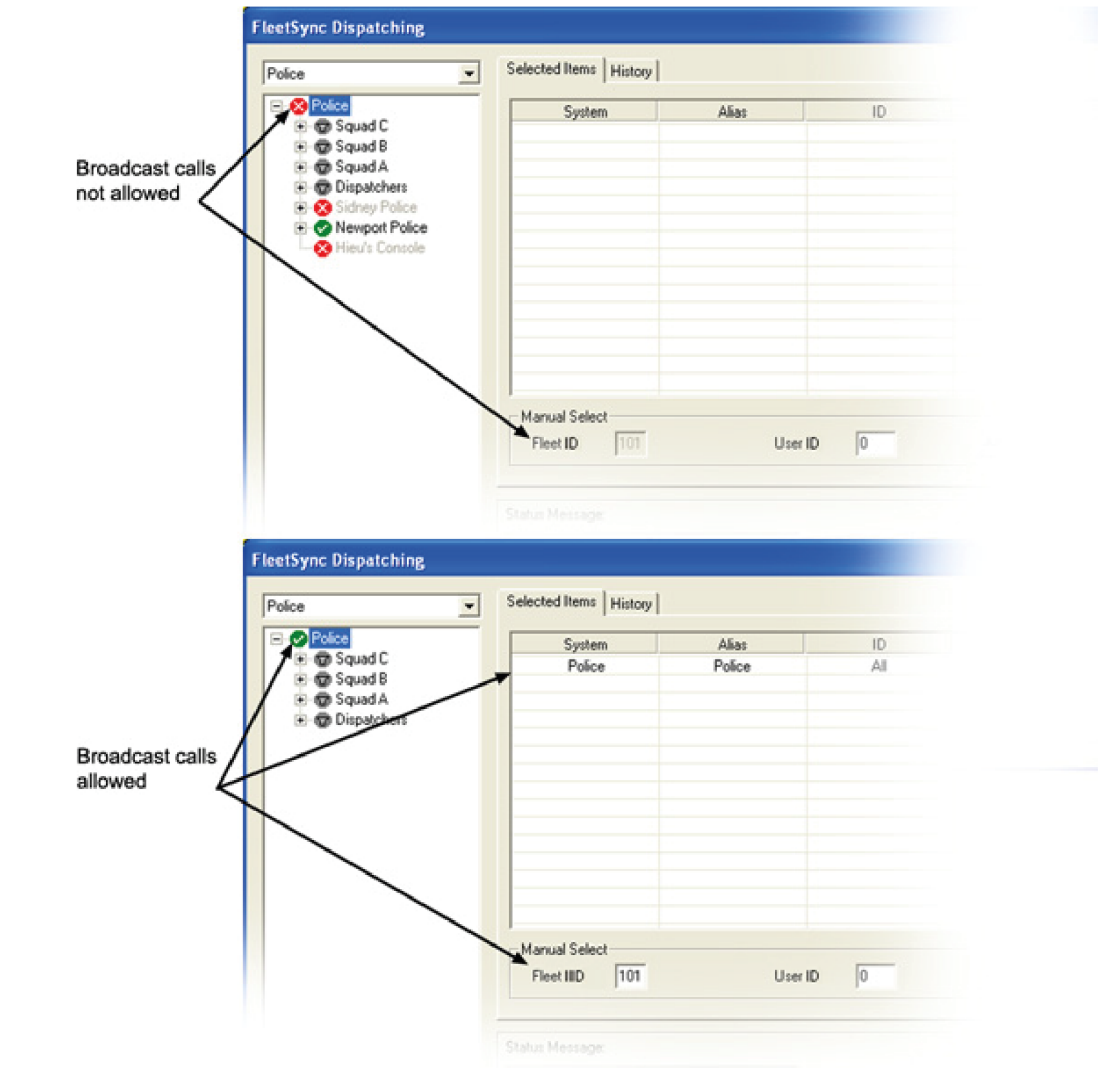


Figure 31.20: Broadcast Call Permissions

Icon	Type	Description
	Deny	Interfleet calls are not allowed as indicated by the deny icon. When the Fleet name is selected, the Selected Items page is empty and the Fleet ID field is grayed out, refer to the Figure below.
	Allow	Interfleet calls are allowed as indicated by the allow icon. When the Fleet name is selected, the ID appears in the Selected Items page and the Fleet ID field is active, see to the Figure below.

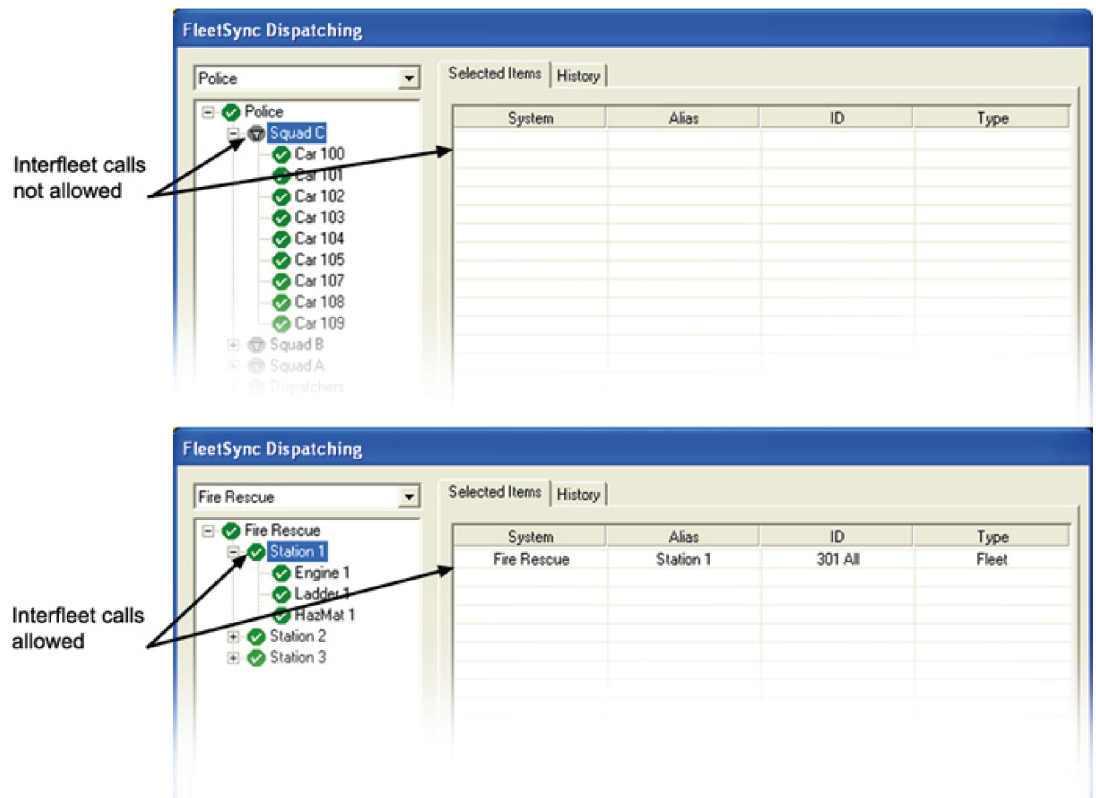


Figure 31.21: Interfleet Call Permission

Status Message field

The **Status Message** field indicates the currently selected status message. If no status is selected, No Status appears in the field. The Set Status button is used to change the status ID.

Set Status button

The **Set Status** button is used to select a status to send. When the Set Status button is clicked, the Status List window appears. Refer to the Figure on “*Status List window, page 236*”.

To **set the status ID**, do the following:

1. Select **Set Status**.
The Status List window appears.
2. Select a **Status ID** from the list.
The ID is highlighted.
OR
From the Status drop down menu, select a **Status ID**.
The ID is highlighted.
3. Click **Done**.

The selected Status ID appears in the Status Message field.

Select Type group box

The **Select Type** group box is used to select the type of message or call sent when the Send button is clicked.

Status Message radio button

The **Status Message** radio button indicates the currently selected status message is sent to the ID number listed in the Selected Item page.

To **send the current status message**, do the following:

1. Select the **Status Message** radio button.
2. Click **Send**.

The message is sent and a confirmation appears in the status bar.

**Notice!**

Status ID codes must be between 10 and 99. See manufacturer's technical data for specific Status ID codes.

Text Message radio button

The **Text Message** radio button indicates the current entry in the Enter Text Message text box is sent to the ID number listed in the Selected Item page.

To **send the current text message**, do the following:

1. Select the **Text Message** radio button.
2. Click **Send**.

The message is sent and a confirmation appears in the status bar.

Text messages can contain up to 48 characters.

Select Call radio button

The **Select Call** radio button indicates a select call is placed to the current ID in the Selected Items page.

To **place a select call to the ID**, do the following:

1. Select the **Select Call** radio button.
2. Click **Send**.

The message is sent and a confirmation appears in the status bar.

Request Status radio button

The **Request Status** radio button is used to send a request for status from the ID currently listed in the Selected Items page.

To **request a status from the ID**, do the following:

1. Select the **Request Status** radio button.
2. Click **Send**.

The message is sent and a confirmation appears in the status bar.

Send button

The **Send** button is used to send the currently selected call, status, or message to the ID listed on the Selected Items page. When selected, a confirmation or error message appears in the status bar at the bottom of the window.

Done button

The **Done** button is used to close the FleetSync Dispatching window.

FleetSync Dispatching window status bar

The FleetSync Dispatching window status bar, shown in Figure on “*FleetSync Dispatching window, page 256*”, indicates console activity. Confirmation and error messages appear when calls, statuses, or messages are sent.

31.29 Frequency Change

The **Frequency Change** function sends a burst of packets onto the Ethernet network requesting the remote radio change to the new frequency of the selected line. Additionally, all other consoles on the network change to display the new frequency of the radio on that particular line.

**Notice!**

When the Frequency Change function is selected, a line must be selected from the Line to Associate Function with drop down menu.

Freq Set page

When the Frequency Change function is selected from the UI Element drop down menu, the **Freq Set** page appears. Refer to the Figure below.

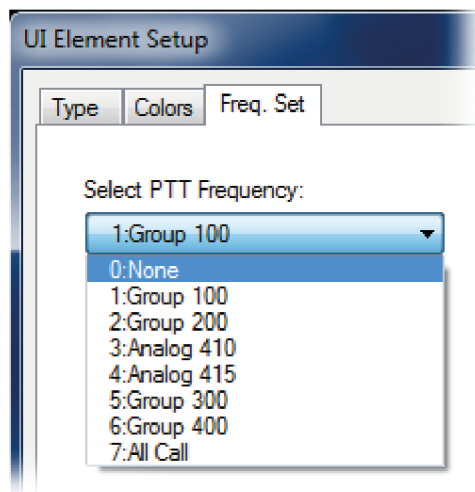


Figure 31.22: Freq. Set Page - UI Element Setup

Given that frequencies change, it is common to place frequency selection buttons in a popup window. The console operator opens the popup window to change frequencies and closes the window when they are done.

However, with the popup window closed, it becomes impossible to see exactly what frequency is currently selected for the line. By placing the variable \$FREQX\$, where X represents the line number, into the Button Up Text and Button Down Text field on the Colors page, the frequency for that line is automatically updated on the button when it changes.

When Scannable is selected for the line, refer to “Scannable Check Box” on “Line setup options group box”, right-click the button to display a shortcut menu that provides the console operator the ability to add or remove this channel from the scan list.

When a frequency is in the scan list, a scan icon appears on the frequency change button. Parallel consoles are also alerted to update their display if a frequency is added or removed from the scan list.

Select PTT Frequency drop down menu

The **Select PTT Frequency** drop down menu is used to select the frequency for the line. This field contains all the frequencies configured on “Freqs Button”.

To **add or change a Frequency button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **UI button**.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Frequency Change**.
The Freq Set tab appears.
5. From the Line to Associate Function With drop down menu, select the **desired line** to associate with this function.
6. Click the **Freq Set** tab.
The Freq Set page appears.
7. From the Select PTT Frequency drop down menu, select the **desired frequency** for the line selected.
8. Click **OK**.

The color of the button changes and FreqX (X representing the line of the frequency) appears on the button. Also, the frequency is changed for the line.

Additions and changes can be made to the Per Line Frequency Setup window at any time. However, if any user interface elements have been placed on the console window, the changes made to a line must also be changed on the individual elements, if needed.

31.30 GPS Read button

The **GPS Read** button is used to query the current GPS coordinates of the selected radio. This functionality is currently supported on lines using NEXEDGE or MOTOTRBO signaling only.

To **query a radio of its GPS coordinates**, do the following:

1. From the GPS Read drop down list, select the **unit** you want to send this command.
OR
If using the a Keypad, select the **unit** you want to send the GPS Read Request.

2. Click **GPS Read**.
The command is sent.

To **add a GPS Read button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **GPS Read**.
5. Click **OK**.

The color of the button changes and GPS Read appears on the button.

GPS Trigger Setup page

The **GPS Trigger Setup** page is used to select the settings for the GPS Trigger.

31.31

GPS Trigger Off button

The **GPS Trigger Off** button is used to stop periodic GPS coordinate updates from the selected radio. The functionality is currently supported on lines using NEXEDGE or MOTOTRBO signaling only.

To **stop receiving periodic GPS coordinates from a radio**, do the following:

1. From the GPS Trigger Time drop down menu, select the **unit** you want to send the GPS Trigger Off command.
OR
If using a Keypad, select the **unit** you wish to send the GPS Trigger Off command.
2. Click **GPS Trigger Off**.
The command is sent.

To **add a GPS Trigger Off button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **GPS Trigger Off**.
5. Click **OK**.

The color of the button changes and GPS Trigger Off appears on the button.

31.32

GPS Trigger On button

The **GPS Trigger On** button is used to start periodic GPS coordinate updates from the selected radio. The functionality is currently supported on lines using NEXEDGE or MOTOTRBO signaling only.

To **start receiving periodic GPS coordinates from a radio**, do the following:

1. From the GPS Trigger Time drop down menu, select the **unit** you want to send the GPS Trigger On command.
OR
If using a Keypad, select the **unit** you wish to send the GPS Trigger On command.
2. Click **GPS Trigger On**.
The command is sent.

GPS Trigger Setup page

When the GPS Trigger On Button function is selected from the UI Element drop down menu, the **GPS Trigger Setup** page appears. See the Figure below.

GPS Trigger Time drop down menu

The **GPS Trigger Time** drop down menu is used to select the time duration between GPS coordinate updates.

The time duration between GPS coordinate updates is determined by the GPS Trigger Time drop down menu.

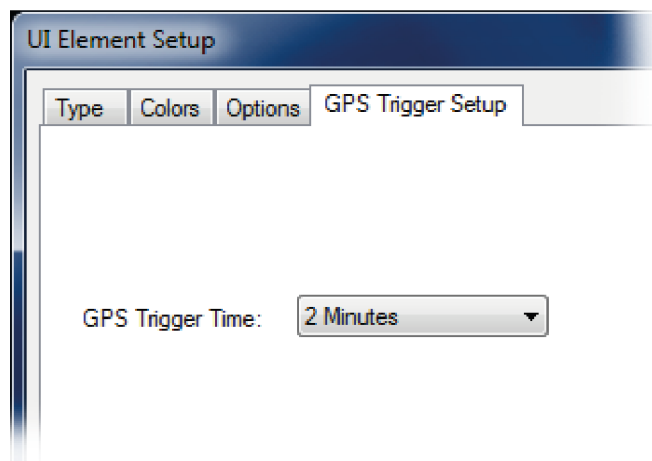


Figure 31.23: GPS Trigger Setup Page - UI Element Setup

Available options are:

- 30 Seconds
- 1 Minute
- 2 Minutes
- 4 Minutes
- 8 Minutes

To **add a GPS Trigger On button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **GPS Trigger On**.
5. Click **OK**.

The color of the button changes and GPS Trigger On appears on the button.

31.33 Group Programmed

The **Group Programmed** function allows the console operator to broadcast to a pre-defined group.

Line Group page

When the Group Programmed function is selected from the UI Element drop down menu, the **Line Group** page appears. Refer to the Figure below.

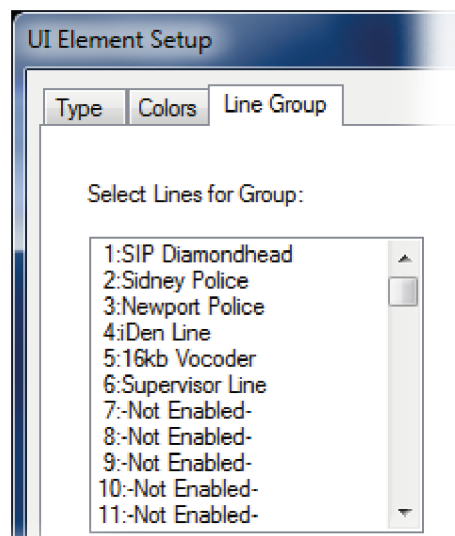


Figure 31.24: Line Group Page - UI Element Setup

Select Lines for Group field

The **Select Lines for Group** field contains a list of all the lines configured on “*Per Line Parameters window, page 61*”. Selecting a line from this list assigns it to the group. Pressing the Group Programmed button in the C-Soft Runtime program places the defined lines into a select condition.

To **add a group programmed button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Group Programmed**.
The Line Group tab appears.
5. Click the **Line Group** tab.
The Line Group page appears.
6. From the Select Lines for Group field, select the **line(s)** for the group.
7. Click **OK**.

The color of the button changes and Preset Group appears on the button.

To **remove a line from the Group Programmed**, deselect the line.

Group Programmed Enhanced button

The **Group Programmed Enhanced** button allows the console operator to broadcast to a pre-defined group of lines and frequencies. The group's lines and transmit frequencies are configured in the Group Programmed Enhanced setup dialog.

Up to 25 selected lines can be stored in a pre-defined group.



Notice!

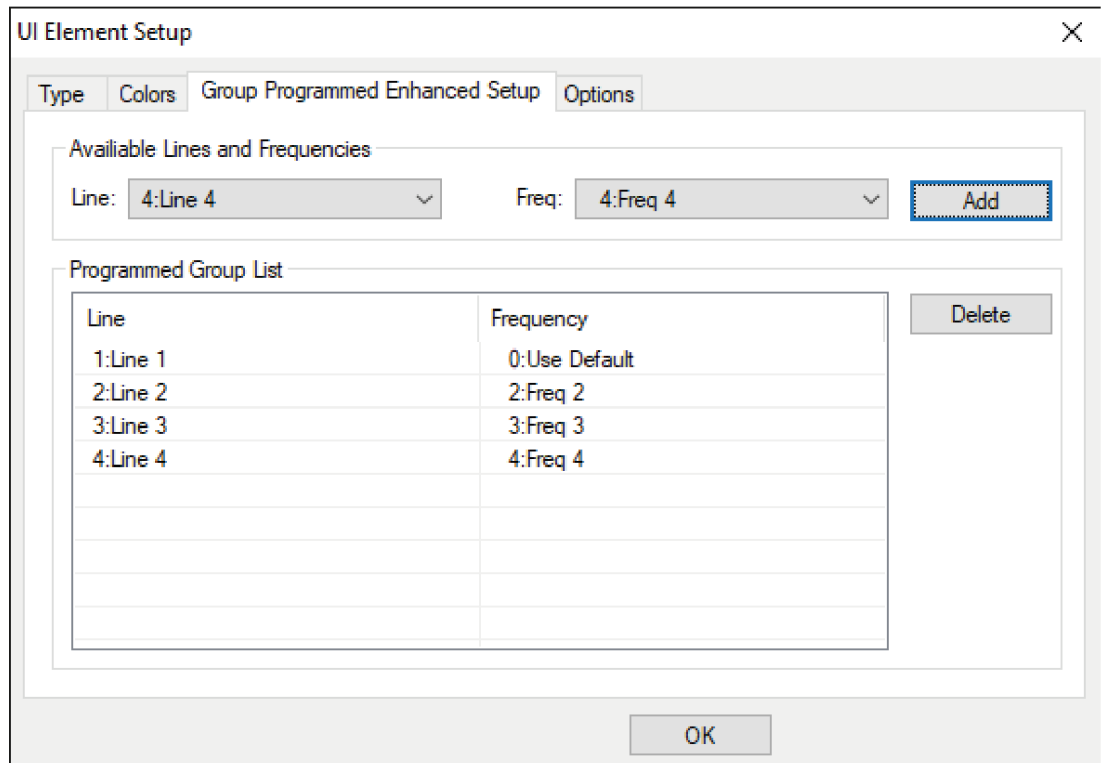
The Allow Programmed Group to be changed in Runtime feature is not accessible with a mouse used on the IP-30XX devices.

Group Programmed Enhanced Setup page

When Group Programmed Enhanced button is selected from the UI Element drop down menu, the **Group Programmed Enhanced Setup** page appears. This button has the ability to configure line and frequencies selected when the button is pressed.

To **open the Group Programmed Enhanced Setup page**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Group Programmed Enhanced**.
The Group Programmed Enhanced Setup tab appears.
5. Click the **Group Programmed Enhanced Setup page**.



Available Lines and Frequencies group box

The **Available Lines and Frequencies** group box displays the list of lines and the line's corresponding frequencies available in the design configuration file.

Line drop down menu

The **Line** drop down menu identifies the desired line to be selected.

Freq drop down menu

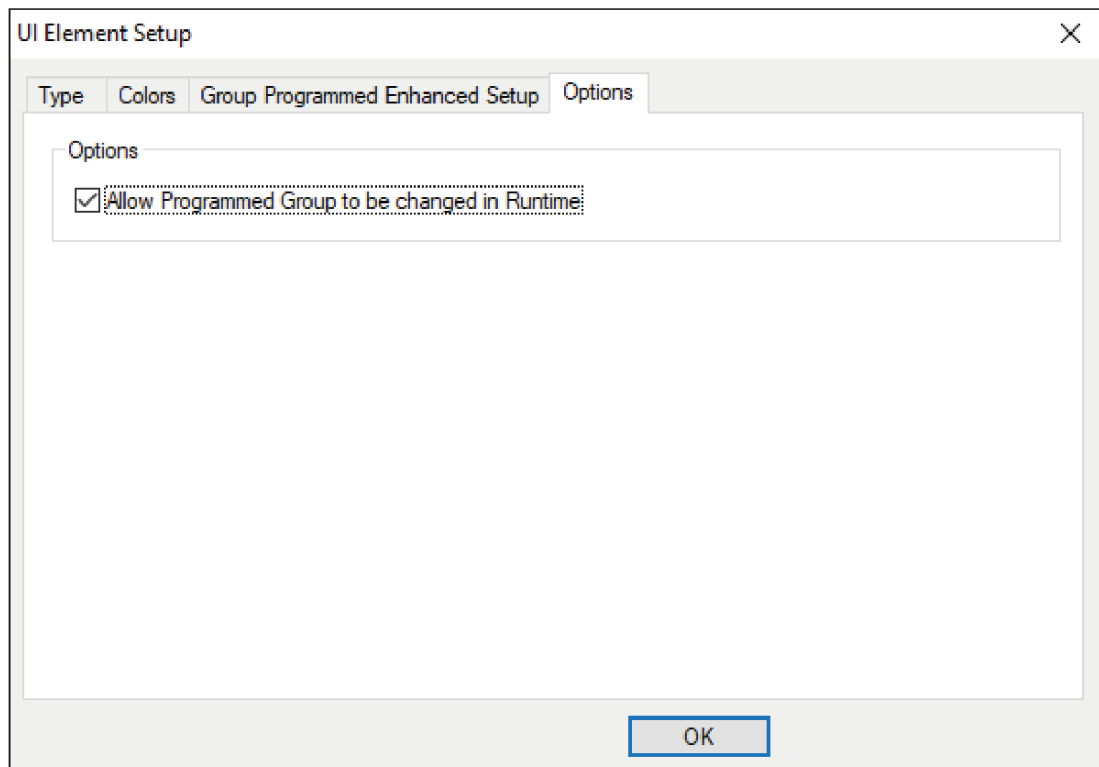
The **Freq** drop down menu identifies the desired frequency to use per selected line.

Programmed Group List

The **Programmed Group List** displays the list of line/frequency combinations which are selected when the Group Programmed Enhanced button is pressed. To remove a line/frequency combination from the list, select the desired row in the list and then click the Delete button.

Group Programmed Enhanced Options page

The **Group Programmed Enhanced Options** page is used to identify whether or not Programmed Groups can be changed in Runtime by the dispatcher.



Allow Programmed Group to be changed in Runtime check box

The **Allow Programmed Group to be changed in Runtime** check box indicates the setup allows the defined group to be modified by the dispatcher in C-Soft Runtime.

To **edit the Group Programmed Enhanced button in Runtime**, do the following:

1. Right-click the **Group Programmed Enhanced button**.
2. Select the **Edit option**.
The border of the Group Programmed Enhanced button blinks to signify the console is in Edit mode.
3. Select or unselect **lines**.
4. Set the desired **transmit frequency** for the selected lines.
5. Right-click the **Group Programmed Enhanced button**.
6. Select the **Save Option**.

The new group configuration is now saved to the button.

To **exit Edit mode without saving**, do the following:

1. Right-click the **Group Programmed Enhanced button**.
2. Select the **Cancel option or any button other than a select or frequency control**.

To **clear a button's defined group**, do the following:

1. Right-click the **Group Programmed Enhanced button**.
2. Select the **Clear option**.

Refer to

- *Per Line Parameters window, page 61*

31.34 Group Select

The **Group Select** function creates a button used to create a group of users to call.



Notice!

Group Select Limited and Group Select buttons cannot co-exist on the same console.

To **add a Group Select button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Group Select**.
5. Click **OK**.

The color of the button changes and Group Select appears on the button.

When the button is selected in C-Soft Runtime, a group can be defined manually.

To **manually select a group of IDs to call, while in C-Soft Runtime**, do the following:

1. In C-Soft Runtime, click the **Group Select** button.
2. Click the **desired lines**.
The lines are added to the group.
3. Click the **Group Select** button a second time.
The group clears.

31.35 Group Select Limited

The **Group Select Limited** function is similar to the Group Select function, except the number of lines the console operator can select is limited.



Notice!

Group Select Limited and Group Select buttons cannot co-exist on the same console.

Group Select Limited page

When the Group Select Limited function is selected from the UI element drop down menu, the **Group Select Limited** page appears. Refer to the Figure below.

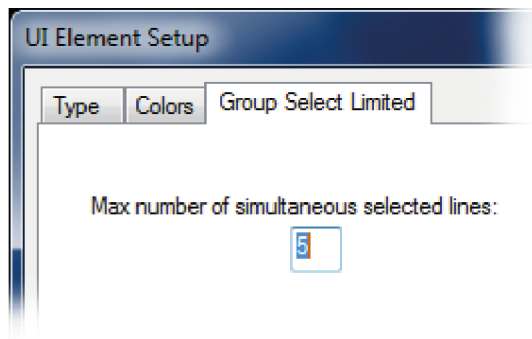


Figure 31.25: Group Select Limited Page - UI Element Setup

Max Number of Simultaneous Selected Lines field

The **Max Number of Simultaneous Selected Lines** field identifies the number of lines a console operator can select for a group.

The range for this field is 0 to 200 lines.

To **add a group select limited button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Group Select Limited**.
The Group Select Limited tab appears.
5. Click the **Group Select Limited** tab.
The Group Select Limited page appears.
6. From the Select Lines for Group field, enter the **maximum number of line(s)** for the group.
7. Click **OK**.

The color of the button changes and Group Limited appears on the button.

31.36 Input Indication

The **Input Indication** function allows the console operator to monitor an ADHB-4 or NEO-10 input, as well as configure the parameters particular to an input source.

Input Indication Setup page

When the Input Indication function is selected from the UI element drop down menu, the **Input Indication Setup** page appears. Refer to the Figure below.

Figure 31.26: Input Indication Setup Page - UI Element Setup

Input Source group box

The **Input Source** group box identifies the input source to be monitored. When either ADHB-4 or NEO is selected, the fields necessary to enter the setup information for input sources are enabled.

ADHB-4 radio button

The **ADHB-4** radio button indicates an ADHB-4 device is used as the input source.

NEO radio button

The **NEO** radio button indicates a NEO-10 is used as the input source.

Polarity group box

Active High check box

The **Active High** check box indicates the input is set to active high. If selected, the status button changes when the input goes to a positive (high) state.

Annunciation of Input Change group box

Beep for check box

The **Beep for** check box indicates a beep sound is played when there is a change in input. When the Beep for check box is selected, the Beep for seconds field becomes active. Otherwise, there is no beep sound when the input changes.

Beep for seconds field

The **Beep for seconds** field is used to set the amount of time, in seconds, the indicator beeps after the input is changed. The Beep for radio button must be selected.

The range for this field is 0 to 20 seconds.

Blink for check box

The **Blink for** check box indicates the border of the Input Indication button blinks when an input change is detected.

Blink for seconds field

The **Blink for seconds** field is used to enter the number of seconds the border of the Input Indication button blinks after a change in input is detected.

The range for this field is 0 to 30 seconds.

Play check box

The **Play** check box indicates the .wav file configured for the selected annunciation button plays when the input changes.

**Notice!**

When a system is configured with parallel consoles, only one console should be configured to play a .wav file on input change. This prevents multiple consoles attempting to transmit the .wav file simultaneously.

Play drop down menu

The **Play** drop down menu is used to select an annunciation button from a list that exist in the design file. The .wav file format is: X:text (where X represents the line number associated with the Annunciation button and text is the button name of the Annunciation button). When the input changes, the .wav file is played on the line the annunciation button is configured on.

The Play check box must be selected to activate the play function.

Input Destination ADHB-4 group box

The **Input Destination** radio buttons identify the ADHB-4 input destination.

None radio button

The **None** radio button indicates there is no input indication assigned to the button or there is no ADHB-4 connected.

Input 1 radio button

The **Input 1** radio button is used to configure the Input Indication button to signal the console operator if the first relay is currently in control of an ADHB-4.

Input 2 radio button

The **Input 2** radio button is used to configure the Input Indication button to signal the console operator if the second relay is in control of an ADHB-4.

NEO Settings group box**IP field**

The **IP** field identifies the IP Address of the NEO-10.

Input drop down menu

The **Input** drop down menu identifies the input port for relays.

Available selections for this field are None and Ports 1 through 10.

Relay Setup group box**Active Relay With Input check box**

The **Active Relay With Input** check box indicates a configured relay activates when the input state changes to active.

Relay Destination group box

The **Relay Destination** radio buttons identify the relay to be controlled. When a selection is made, the fields necessary to enter the setup information for the relay are enabled.

ADHB-4 Settings group box

The **ADHB-4 Settings** radio buttons identify which ADHB-4 relay is activated when an input is active.

None radio button

The **None** radio button indicates none of the ADHB-4 relays is activated.

Relay 1 radio button

The **Relay1** radio button indicates the first relay in the ADHB-4 is being controlled.

Relay 2 radio button

The **Relay 2** radio button indicates the second relay in the ADHB-4 is being controlled.

NEO Settings group box

The **NEO Settings** field identifies the IP Address and the relay, if any, for the NEO-10.

IP field

The **IP** field identifies the IP Address of the NEO-10.

Relay drop down menu

The **Relay** drop down menu is used to select the desired relay.

Available selections for this field are None, Port 1, Port 2, Port 3, Port 4, Port 5, Port 6, Port 7, Port 8, Port 9 and Port 10.

Active Duration field

The **Active Duration** field is used to enter the length of time, in ms, the relay remains active after the input state changes to active.

The range for this field is 300-3000ms.

To **configure and add an ADHB-4 Input Indications button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.

3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Input Indication**.
The Input Indication Setup tab appears.
5. Click the **Input Indication Setup** tab.
The Input Indication Setup page appears.
6. From the Input Source and Polarity group box, select **ADHB-4**.
The Input Destinations group box is active.
7. From the Input Destination area, select **None**, **Input1**, or **Input2**.
8. Select the **Active High** check box for active high inputs.
9. From the Annunciation of Input Change group box, select **No Audio**.
OR
Select **Beep**.
10. In the seconds field, enter **number of seconds** the beep is heard, if applicable.
11. From the Input drop down menu, select the **desired input**.

To **configure and add a NEO Input Indication button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Input Indication**.
The Input Indication Setup tab appears.
5. Click the **Input Indication Setup** tab.
The Input Indication Setup page appears.
6. Select **NEO**.
The NEO Settings group box is active.
7. In the IP field, enter the **IP Address** of the NEO-10.
8. Select the **Active High** check box for active high inputs.
9. From the Annunciation of Input Change group box, select **No Audio**.
OR
Select **Beep**.
10. In the seconds field, enter **number of seconds** the beep is heard.
11. From the Input drop down menu, select the **desired input**.

31.37 Instant Recall

The **Instant Recall** function allows the console operator to play back a predetermined amount of receive audio only.

The recall starts with the oldest call first.

Multiple Instant Recall buttons can be placed on the console window with each button set to playback a certain amount of audio.

The button must be held down for the complete duration of the recording time to hear all audio in buffer.

The C-Soft program function constantly maintains a record of the last 600 seconds (or 10 minutes) of both parallel transmit and receive audio. The recorder only records the audio when the call is active, allowing for a long conversation to be replayed without the loss of audio.

31.37.1

Duration page

When the Instant Recall function is selected on the UI Element Setup window, the **Duration** page appears. Refer to the Figure below.

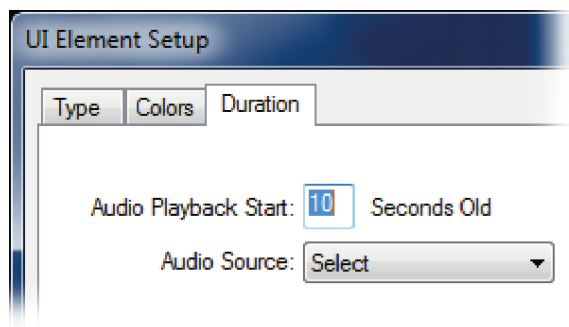


Figure 31.27: Duration Page - UI Element Setup

Audio Playback Start field

The **Audio Playback Start** field identifies the amount of time to record from the end of the call backwards.

The field value can range from 0 to 600 seconds.

Audio Source drop down menu

The **Audio Source** drop down menu determines the source from which the audio is recorded. Available selections for this field are:

- Select
- Unselect
- Speaker 3 [ADHB-4]
- Speaker 4 [ADHB-4]
- Speaker 5 [ADHB-4]
- Speaker 6 [ADHB-4]

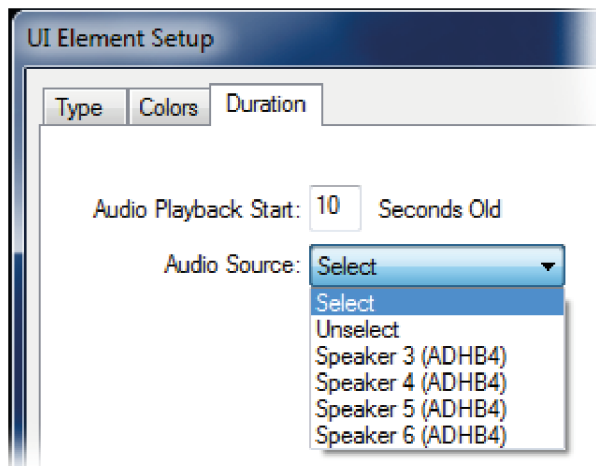


Figure 31.28: Audio Source Drop Down Menu

To **configure and add an Instant Recall button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Instant Recall**.
The Duration tab appears.
5. Click the **Duration** tab.
The Duration page appears.
6. In the Audio Playback Start field, enter the **number of seconds** you want to play back audio.
7. From the Audio Source drop down menu, select the audio source to play back.
8. Click **OK**.

The duration and audio source are configured. The color of the button changes and IRR Select 10 appears on the button.

31.38 Instant Recall - Last Call button

The **Instant Recall - Last Call** button allows users to play back audio from the last received call on the configured line.

Clicking the Last Call button prompts the audio from the last call to start playing. To stop the audio from playing, click the Last Call button again. The Last Call button is only available for lines that have Per Line Call Playback enabled.

To **add a Last Call button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.

4. From the UI Element drop down menu, select **Instant Recall - Last Call**.
The Line to Associate Function With drop down menu becomes active.
5. From the Line to Associate Function With drop down menu, select the **line** to associate the Last Call function.
6. Click **OK**.

The color of the button changes and Last Call appears on the button.

31.39 Intercom

The **Intercom** function allows communication between consoles without keying remote radios. The Intercom button works just like the PTT- Main button, except additional information is included in the transmission that prevents the generation of PTT and radio keying.

To **add an Intercom button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Intercom**.
5. Click **OK**.

The color of the button changes and Intercom appears on the button.

31.40 Intercom-Per Line

The **Intercom-Per Line** function allows console operators to communicate with each other without keying up a radio connected to the line. This button is similar to the Intercom button, except it works only on the line selected in the Line to Associate Function With field, and it does not transmit on the selected line.

The Intercom Per Line function is usually activated on a non-priority channel so existing audio traffic is not interrupted.

To **add an Intercom-Per Line button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Intercom-Per Line**.
The Line to Associate Function With drop down menu becomes active.
5. From the Line to Associate Function With drop down menu, select the **line** to associate the Intercom-Per Line function.
6. Click **OK**.

The color of the button changes and Intercom appears on the button.

31.41 Knox Digit

The **Knox Digit** function is used to assign a Knox tone to the button. These digits must be assigned to UI elements individually.

Available selections for this field are: 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, *, and #.

To **create a Knox digit button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Knox Digit**.
The Knox Digit tab appears.
5. Click the **Knox Digit** tab.
6. From the Know Digit drop down menu, select a **digit**.
7. Click **OK**.

The Knox Digit button is created.

31.42 Launch Application

The **Launch Application** function creates a button called Launch Application.

In C-Soft Runtime, if the Launch Application button is clicked, the specified application, such as a messaging software is started. The maximum number of Launch Application buttons in a design is 64.

31.42.1 Launch Application Setup page

When the Launch Application function is selected from the UI Element Setup window, the **Launch Application Setup** page and Application Triggers page appear. Refer to the Figure below.

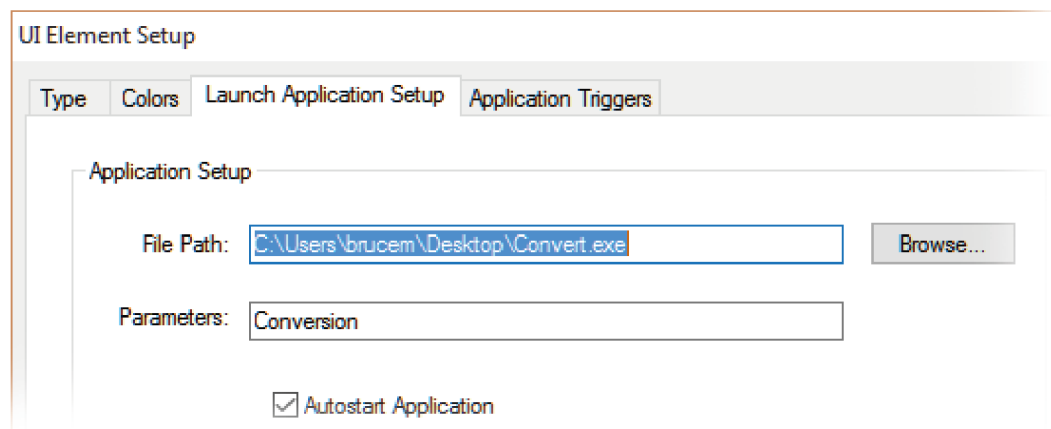


Figure 31.29: Launch Application Setup Page - UI Element Setup

File Path field

The **File Path** field displays the path to the application you want to launch. For example, F:\RadioDispatch\CSoftDesigner.exe. You can either find the file with the browse button or enter the path in the field.

Parameters field

The **Parameters** field is used to specify command line arguments to the application being started. The parameters that can be entered are dependent on the application.

EXAMPLES:

- If the application is Internet Explorer and www.Telex.com is entered in the Parameters field, the Telex webpage opens in Internet Explorer.
- If the application file path is Notepad, and C:\Logs\notebook.txt is entered in the Parameters field, the notebook.txt file opens.

This field can contain up to 1024 characters.

Browse button

The **Browse** button opens a Windows folder from which you can navigate to the application you want to start with the Launch Application button.

Autostart Application check box

The **Autostart Application** check box indicates the application automatically starts running the configured application when C-Soft is launched.

To **create a launch application button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Launch Application**.
The Launch Application Setup tab appears.
5. Click the **Launch Application Setup** tab.
The Launch Application Setup page appears.
6. Click the **browse** button.
A Windows folder appears.
7. Navigate to the **application** you want to start when the Launch Application button is clicked.
8. Click **OK**.

The UI Properties window closes.

31.42.2**Application Triggers page**

When the Launch Application function is selected from the UI Element Setup window, the Launch Application Setup page and **Application Triggers** page appear. Refer to the Figure below.

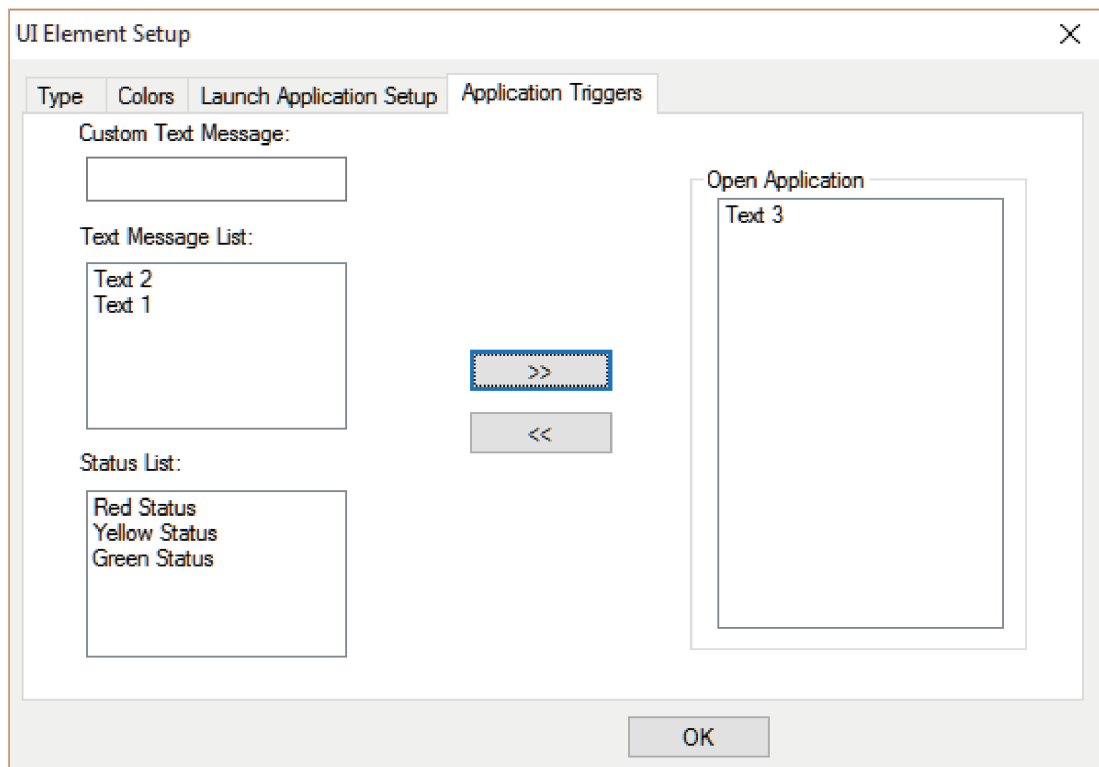


Figure 31.30: Application Triggers Page

Custom Text Message field

The **Custom Text Message** field is used to enter a custom text message that can be added to the Open Application group box.

Text Message List field

The **Text Message List** field is used to select text message that were pre-created in Text Message ID list.

Status List field

The **Status List** field is used to select statuses that were pre-created in Status Message ID. list

Add button

The **Add** button is used to add the selected text messages or status messages to the application launch list.

Remove button

The **Remove** button is used to remove the selected text messages or status messages from the application launch list.

Open Application field

The **Open Application** field displays the text messages and status messages that have been moved to the open application list. When text messages or status messages are received that are in the application list, the application specified on the Launch Application Setup page starts.

OK button

The **OK** button saves any changes made and closes the window.

To **create text message/status message application launch button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element Function drop down menu, select **Launch Application**.
The Launch Application Setup and Application Triggers tabs appear.
5. Click the **Application Triggers tab**.
The Application Triggers page appears.
6. In the Custom Text Message field, enter a **custom text message that is not in the Text Message List**.
OR
From the Text Message List group box, select the **text message** desired to launch the designated application.
The list of text messages are pulled from the Text Message ID List.
OR
From the Status List group box, select the **status** desired to launch the designated application.
The list of status messages are pulled from the Status Message ID List.
7. Click the **Add button** to add the text messages or status messages to the Open Applications group box.
OR
Click the **Remove button** to remove the text messages or status messages from the Open Applications group box.
IMPORTANT: Whenever the designated text/status is received in C-Soft Runtime, the designated application launches.
8. Click **OK**.
The color of the button changes and Text Message Control or Status Message Control appears on the button.

31.43

Manual Call List

The **Manual Call List** function creates a button called Manual Call List. The Manual Call List window is used to place calls by manually entering the user ID number.

In C-Soft Runtime, if the Manual Call List button is clicked, the manual call list for the selected line appears. From this window, the user can manually send calls or status messages on the selected line based on programming set up in “*Signaling Parameters window, page 72*”.

To **add a Manual Call List button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.

3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Manual Call List**.
5. Click **OK**.

The color of the button changes and Manual Call List appears on the button.

Refer to

- *Signaling Parameters window, page 72*

31.43.1

Manual Call List window

The **Manual Call List** window is used to manually send messages, alerts and statuses. The User ID is entered by the console operator.

The screenshot shows the 'Manual Call List' window. At the top, the title bar reads 'Manual Call List: No Line Selected'. Below the title bar, there is a 'User ID' label followed by a text input field. To the right of the input field are two buttons: 'Clear' and 'Backspace'. Below the input field is a numeric keypad with buttons for digits 1 through 9, an asterisk (*), 0, and a hash (#). Below the numeric keypad are buttons for letters A, B, C, D, E, and F. Below the letter buttons is a 'Status' label followed by a dropdown menu currently showing 'No Status' and a 'Set Status' button. Below the status section are two rows of buttons labeled 'Call1' through 'Call10'. At the bottom right is a 'Done' button. The entire window has a light gray background with a blue header bar.

Figure 31.31: Manual Call List Window - C-Soft Runtime Application

User ID field

The **User ID** field is used to enter an ID number to call or send status to.

Graphic DTMF keypad

The **Graphic DTMF** keypad is used to enter DTMF digits to place calls and send status messages.

Clear button

The **Clear** button is used to clear all digits from the User ID field.

Backspace button

The **Backspace** button is used to backup one space to clear the last digit entered.

Set Status button

The **Set Status** button is used to select from a list of preprogrammed status IDs. When a status ID is selected and the window is closed, the selected status appears in the Status field in the Status List window.

For more information, refer to “*Status List window, page 236*”.

A-F Buttons

The **A-F** buttons are valid digits for 5/6 Tone. Each digit corresponds to a different tone frequency.

Call (1-10) Buttons

The **Call (1-10)** buttons are used to place user-defined calls configured in the “5/6 Tone DTMF ANI Setup Page” on “*5-6 Tone/DTMF ANI system type, page 75*”. The labels configured on the 5/6 Tone/DTMF ANI Setup page appear on these buttons in the call list window.

To **place a manual call**, do the following:

1. Select a **line** to call from.
2. Select a **Manual Call List** button.
The Manual Call List window appears, refer to the Figure above.
3. Using the monitor keypad or your keyboard, enter a **user ID number**.
The number appears in the User ID field.
4. Press a **configured call button** to place the call.

The call is placed.

Done button

The **Done** button is used to close the Manual Call List window.

Refer to

- *Status List window, page 236*
- *5-6 Tone/DTMF ANI system type, page 75*

31.44

Marker Tone

The **Marker Tone** function controls a periodic automatic keyup of a radio channel, along with an associated tone burst transmission for a particular line.

**Notice!**

If the Marker Tone function is selected, a line must be selected from the Line to Associate Function With drop down menu on the Type page.

Marker Tone Setup page

When the Marker Tone function is selected from the UI Element drop down menu, **the Marker Tone Setup** page appears. Refer to the Figure below.

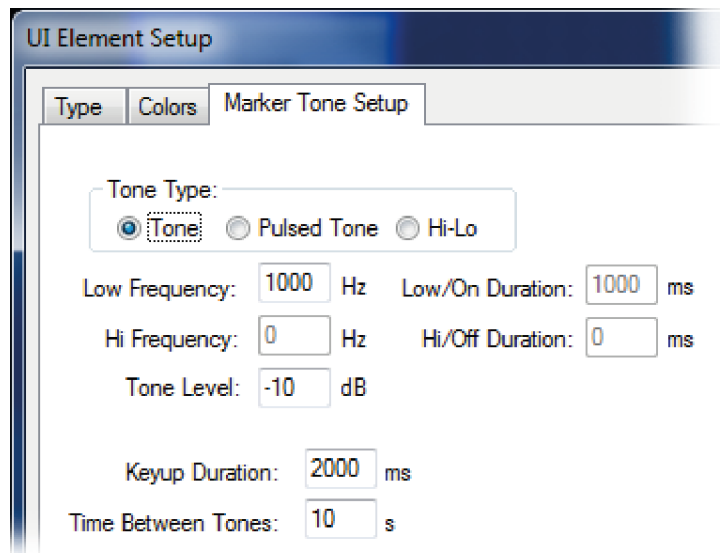


Figure 31.32: Marker Tone Setup Page - UI Element Setup

Tone Type group box

The **Tone Type** group box identifies the type of tone to play. When a selection is made, the fields necessary to enter the setup information for that tone type are enabled on the page.

Tone radio button

The **Tone** radio button indicates a single steady tone is used as an alert tone.

To **add a marker tone button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Marker Tone**.
The Marker Tone Setup tab appears.
5. Click the **Marker Tone** tab.
The Marker Tone Setup page appears.
6. In the Tone Type group box, select the **Tone** radio button.
7. In the Low Frequency field, enter the **frequency** (in Hz).
8. In the Tone Level field, enter the **tone level** (in dB).
9. In the Key-up Duration field, enter the **duration** (in ms).

10. In the Time Between Tones field, enter a **time** (in seconds).
 11. Click **OK**.
- The Marker Tone button is created.

Pulsed Tone radio button

The **Pulsed Tone** radio button indicates a pulsed tone is used as an alert tone.

To **add a pulsed marker tone button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Marker Tone**.
The Marker Tone Setup tab appears.
5. Click the **Alert Setup** tab.
The Alert Setup page appears.
6. From the Tone Type group box, select the **Pulsed Tone** radio button.
7. In the Low Frequency field, enter the **frequency** (in Hz).
8. In the Low/On Duration field enter the **duration** (in ms).
9. In the Hi/Off Duration field, enter the **duration** (in ms).
10. In the Tone Level field, enter the **tone level** (in dB).
11. In the Key-up Duration field, enter the **duration** (in ms).
12. In the Time Between Tones field, enter a **time** (in seconds).
13. Click **OK**.

The Marker Tone button is created.

Hi-Lo radio button

The **Hi-Lo** radio button indicates a Hi-Lo warble is used as an alert tone.

To **add a hi-lo marker tone button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Marker Tone**.
The Marker Tone Setup tab appears.
5. Click the **Marker Tone** tab.
The Marker Tone Setup page appears.
6. From the Tone Type group box, select the **Hi-Lo** radio button.
7. In the Low Frequency field, enter the **frequency** (in Hz).
8. In the Low/On Duration field, enter a **duration** (in ms).
9. In the Hi Frequency field, enter a **frequency** (in Hz).
10. In the Hi/Off Duration field, enter the **duration** (in ms).
11. In the Tone Level field, enter the **tone level** (in dB).
12. In the Key-up Duration field, enter the **duration** (in ms).

13. In the Time Between Tones field, enter a **time** (in seconds).

14. Click **OK**.

The Marker Tone button is created.

Low Frequency field

The **Low Frequency** field identifies the frequency, in Hz, of the low tone sent when the button is pressed.

The range for this field is 0 to 3000Hz.

Low/On Duration field

The **Low/On Duration** field identifies the duration, in ms, the low frequency is played.

The range for this field is 0 to 5000ms.



Notice!

If Tone is selected, this field is ignored because the tone is continuous. If Pulsed Tone is selected, this field indicates the length of each tone off period. If Hi-Lo is selected, this field indicates how long the high tone is played.

Hi Frequency field

The **Hi Frequency** field identifies the frequency of the Hi tone sent when the button is pressed.

The range for this field is 0 to 3000Hz.

Hi/Off Duration field

The **Hi/Off Duration** field identifies the duration the Hi frequency is turned off.

The range for this field is 0 to 5000ms.

Tone Level field

The **Tone Level** field identifies the relative change for allowable tone level.

The range for this field is -40 to 10dB.



Notice!

If Tone is selected, this field is ignored because the tone is continuous. If Pulsed Tone is selected, this field indicates the length of each tone off period. If Hi-Lo is selected, this field indicates how long the high tone is played.

Key-up Duration field

The **Key-up Duration** field identifies the duration of the tone.

The range for this field is 0 to 10,000ms.

Time Between Tones field

The **Time Between Tones** field identifies the duration between key-ups.

The range for this field is 0 to 32 seconds.

31.45

MDC-1200

The **MDC-1200** function, creates a button to open the MDC-1200 Dispatching window.

In C-Soft Runtime, when the window is open the user can view the system list, call and status history, status IDs, voice and data messages and select groups and individuals to place calls.

MDC-1200 Setup page

When the MDC-1200 window function is selected from the UI Element drop down menu, the **MDC-1200 Setup** page appears.

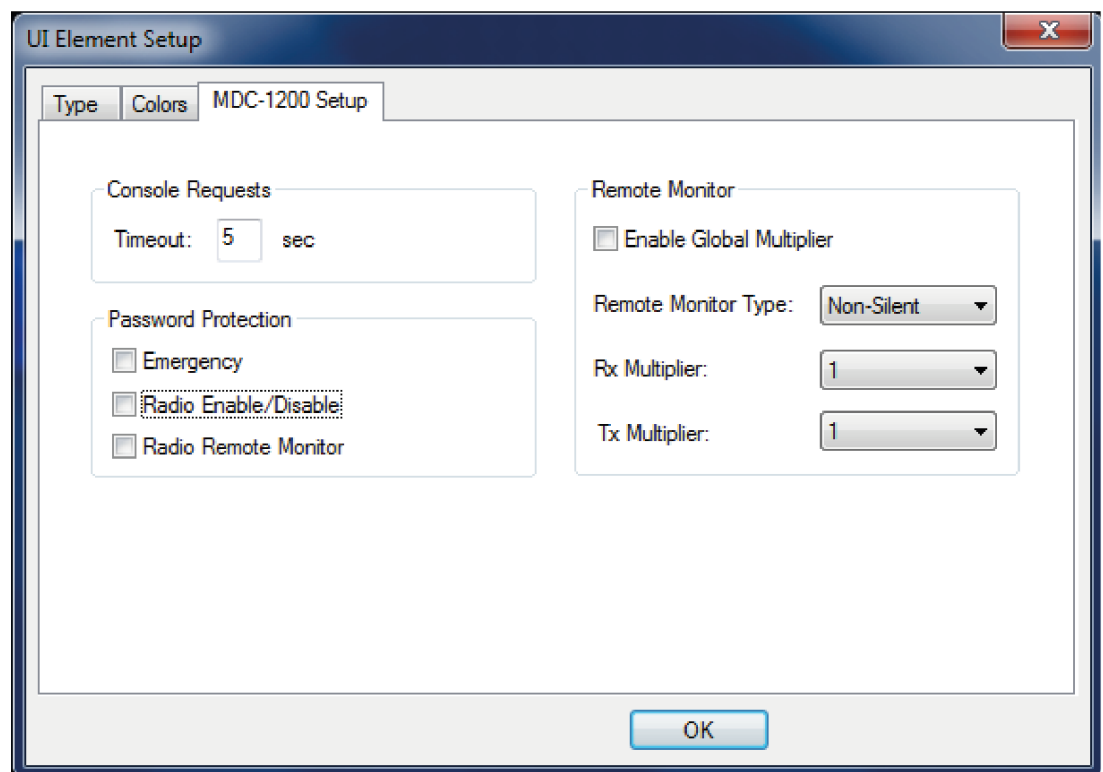


Figure 31.33: MDC-1200 Setup Page - UI Element Setup

Console Requests group box

Timeout sec field

The **Timeout sec** field is used to configure the amount of time, in seconds, the console waits when sending status requests, radio checks, radio enable, and radio disable messages. If the radio is unable to respond, No Response, appears in the status bar of the dispatching window depending on the current state of the radio.

The range for this field is 1 to 10 seconds.

Password Protection group box**Emergency check box**

The **Emergency** check box indicates the console operator is prompted for the supervisor password before they are allowed to send an emergency message.

Radio Enable/Disable check box

The **Radio Enable/Disable** check box indicates the console operator is prompted for the supervisor password before they are allowed to enable or disable the radio.

Radio Remote Monitor check box

The **Radio Remote Monitor** check box indicates the console operator is prompted for the supervisor password before they are allowed to remotely monitor the radio.

Remote Monitor group box**Enable Global Multiplier check box**

The **Enable Global Multiplier** check box indicates the values entered in the RX Multiplier and TX Multiplier fields are multiplied by two.

Remote Monitor Type drop down menu

The **Remote Monitor Type** drop down menu is used to select a mode for radio transmission indications.

Available selections for this field are:

- Non-Silent - Radio indicates transmission is occurring by flashing TX LED on the radio display when using radio remote monitor.
- Silent - No transmit indication appears during transmission.

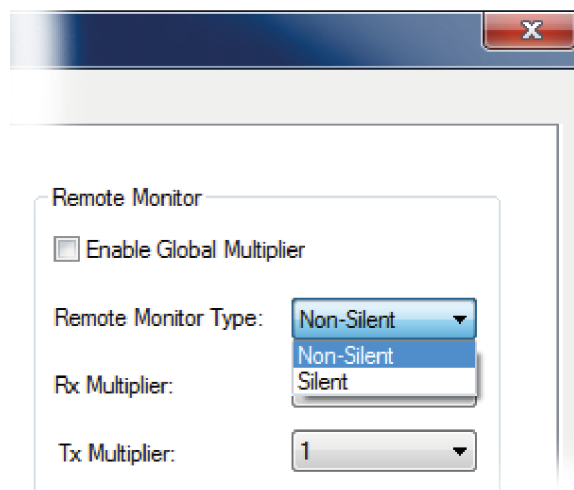


Figure 31.34: Remote Monitor Type Drop Down Menu

RX Multiplier drop down menu

The **RX Multiplier** drop down menu indicates the amount of time the radio receiving the remote monitor command is unable to receive calls after transmitting. The value is multiplied by the remote monitor time programmed in the radio to determine the total time.

Available selections for this field are: 0 to 3.

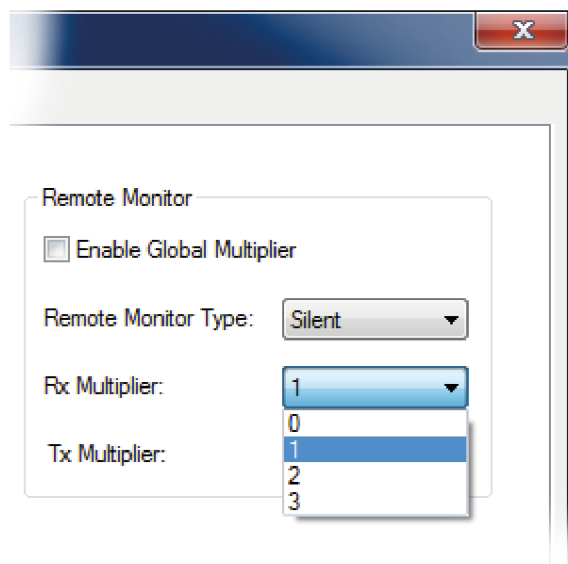


Figure 31.35: Rx Multiplier Drop Down Menu

TX Multiplier drop down menu

The **TX Multiplier** drop down menu is used to indicate how long the radio receiving the remote monitor command is allowed to transmit. The value is multiplied by the remote monitor time programmed in the radio to determine total transmit time.

Available selections for this field are: 0 to 3.

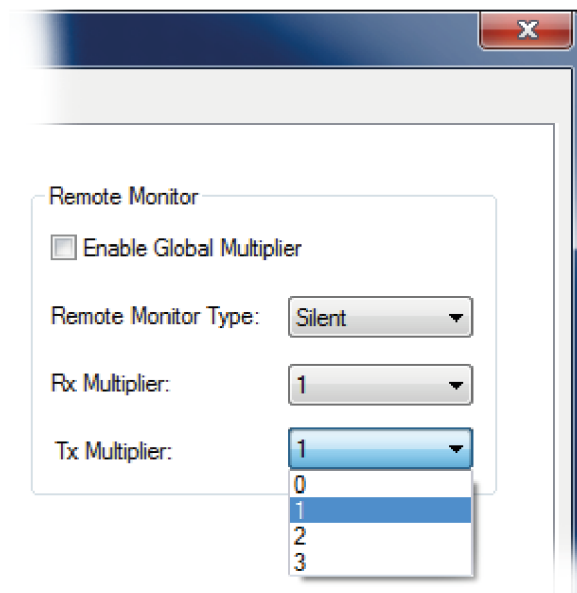


Figure 31.36: Tx Multiplier Drop Down Menu

To **add an MDC-1200 Window button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.

3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **MDC-1200 Window**.
The MDC-1200 Setup tab appears.
5. Click the **MDC-1200 Setup** tab.
The MDC-1200 Setup page appears
6. From the Console Request group box, enter a **time** for the timeout.
7. From the Password Protection group box, select the **password protection** radio button.
NOTE: For more information, refer to “Password Protection Group Box”.
8. From the Remote Monitor group box, configure a **multiplier**.
NOTE: For more information, refer to “Remote Monitor Group Box”.
9. Click **OK**.
A button with MDC-1200 on it appears.

31.45.1

MDC-1200 Dispatching window

The **MDC-1200 Dispatching** window, shown in the Figure below, is used by the console operator in C-Soft Runtime to send and receive MDC-1200 messages. The status bar provides feedback about MDC-1200.

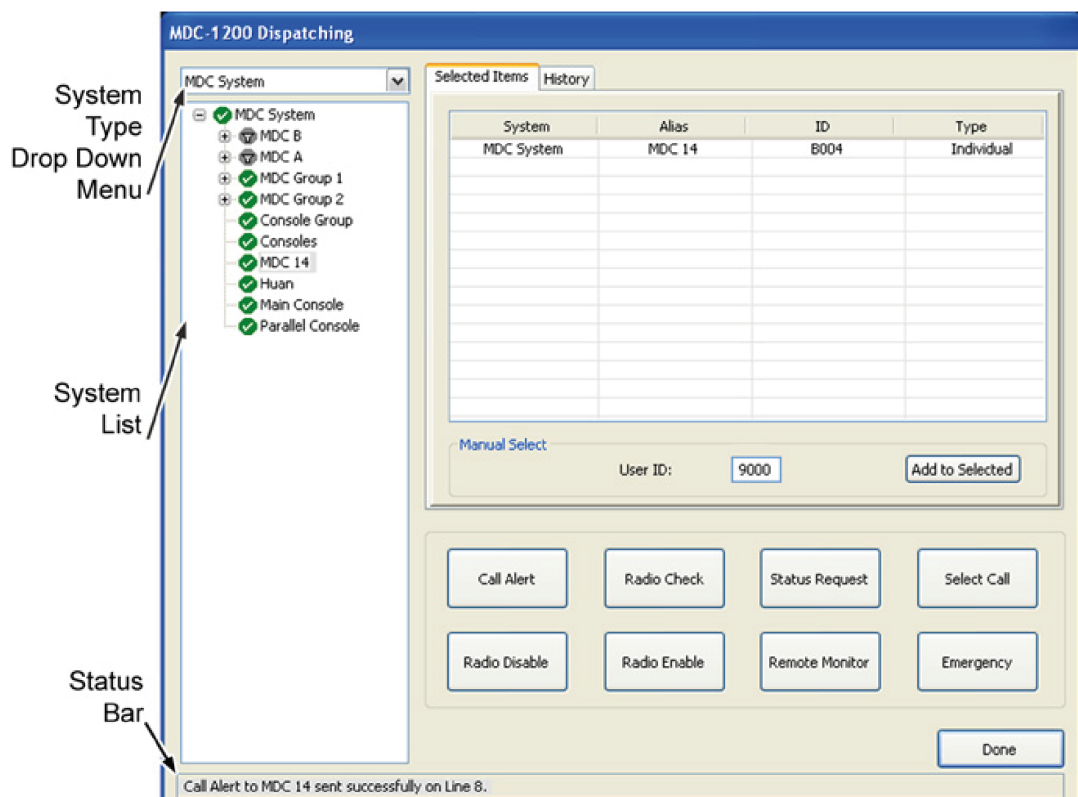


Figure 31.37: Selected Items Page - MDC-1200 Dispatching Window

System Type drop down menu

The **System Type** drop down menu is used to change from the currently selected system to another system in the console position. When a system is selected, the system list populates with filters and components contained in the system.

Up to 200 systems can be created.

The default systems included in the drop down menu depend on the currently selected line's configuration.

System List

The **System List** populates with system components that belong to the system currently selected in the System drop down menu. The system name is the first item to appear in the list. Filter components are listed next in the hierarchy. When a filter component is expanded individual units and groups are visible.

Systems can be configured, by the console admin, to display filters only. In that case, only components affiliated with a filter appear in the System List. Otherwise, all components, including components with deny icons (permission to place calls denied), appear in the list. Refer to the Figure below.

Icon	Type	Description
	Filter	The Filter icon indicates the component is used to group, sort, and label the components contained in the filter. To view or hide filters, do one of the following: – Click  to expand the filter list. – Click  to collapse the filter list.
	Deny	The Deny icon indicates the tagged item does not allow the console operator to place a call or send messages to this component.
	Allow	The Allow icon indicates the component is available for selection. The console operator can place calls to these components.

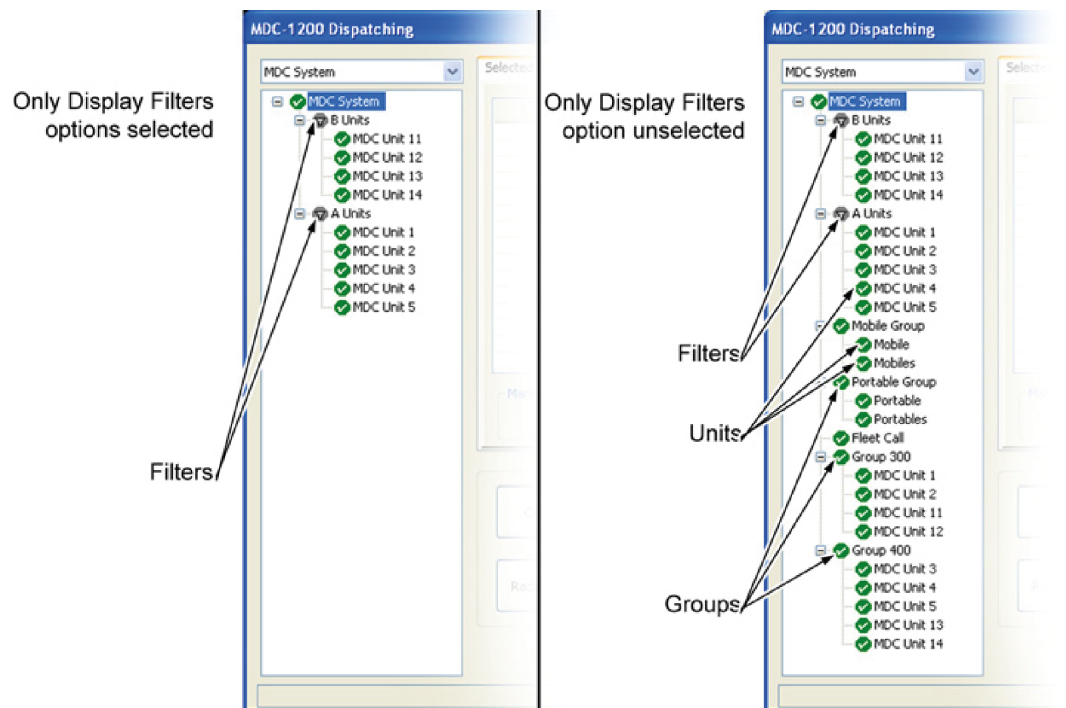


Figure 31.38: MDC-1200 System Displays Only Filters Example

System List flyout menu

The **System List** flyout menu is used as a quick method of accessing the Select Type commands that are also available with the MDC Message buttons.

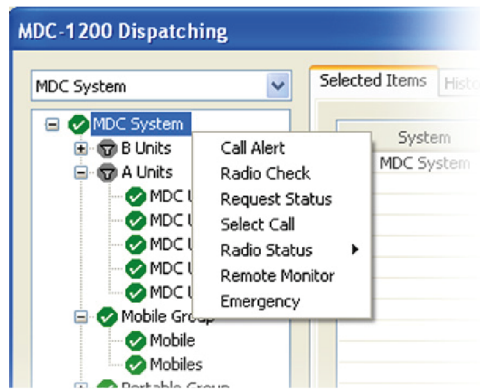
Available selections for this field are:

- Call Alert
- Radio Check
- Request Status
- Select Call
- Radio Status
- Remote Monitor
- Emergency

To **access the System List flyout menu**, do the following:

- In the system list, right-click the **system**, **individual**, or **group** to send the call or message to.

The System List flyout menu appears.



Selected Items page

The **Selected Items** page is used to view the currently selected component's ID information. The selected item list is used to determine where a call or status message is sent to. The operator can select one component per system in the list. Up to 200 messages can be sent simultaneously as long as they are each sent to a different system. When a system component in the system list is selected it is added to the selected items page.

Grayed out icons with deny tags are not available for selection.

To **add a component's ID to the Selected Items page**, do the following:

- In the System List field, select the **component**.

The component is highlighted, and appears in the Selected Items list.

Refer to "Manual Select Group Box" to learn how to manually enter an ID.

To **remove an ID from the Selected Items page**, do the following:

1. Right-click the **unwanted component**.
A flyout menu appears.
2. Click **Remove Item**.

The item disappears from the list.

Manual Select group box

The **Manual Select** group box is used to communicate with system users not in the system list.

User ID field

The **User ID** field is used to enter an MDC ID (in hexadecimal format) for selection to add to the list.

Add to Selected button

The **Add to Selected** button is used to add the MDC ID entered in the User ID field to the selected items list.

To **manually place an individual radio ID in the selected items list**, do the following:

- In the User ID field, enter an **ID** from 001-DFFF.

The ID appears in the Selected Items list.

To **manually place a group ID in the selected items list**, do the following:

- In the User ID field, enter an **ID** from 000-FFF.

The ID appears in the Selected Items list.

To **manually place a system ID in the selected items list**, do the following:

- In the User ID field, enter **FFFF**.

The ID appears in the Selected Items list.



Notice!

The character F behaves like a wildcard.

The **MDC Message** buttons, located at the bottom of the MDC-1200 Dispatching window, are used to send calls, alerts, statuses, and messages. When a button is clicked, the status bar confirms activity.

MDC offers ANI capabilities on PTT. When transmitting on a line, C-Soft sends the console's ID to the radio. A PTT call displays in the history pages as a Voice message type. The ID alias or ID appear on the line's Select button.

Call Alert button

The **Call Alert** button is used to send an alert message.

To **send a call alert**, do the following:

1. From the system list, select the **unit ID** to send the alert message to.
OR
From the system list, select the **group** to send the alert message to
The highlighted item is added to the selected items list.
2. Click **Call Alert**.

An alert is sent to the selected user(s) MDC-1200 radio.

Radio Check button

The **Radio Check** button indicates a message is sent to check for radio activity.

To **send a radio check message to an MDC-1200 radio**, do the following:

1. In the system list, select a **unit ID** to send the radio check message to.
The highlighted item is added to the selected items list.
2. Click **Radio Check**.

If the selected radio is able to respond, Acknowledge appears on the line's select button, History window, and in the item list on the History page.

If the radio is unable to respond within the configured time allowed, No Response appears on the select button, the Per Line Call History window, and the list on the History page.

Status Request button

The **Status Request** button is used to request status from a unit in the system.

To **request a status from a unit**, do the following:

1. In the system list, select a **unit ID** to send the alert message to.
The highlight item is added to the selected items list.

2. Click **Status Request**.

If the selected radio is able to respond, the (status message) appears on the line's select button, the Per Line Call History window, and in the item list on the History page.

If the radio is unable to respond within the configured time allowed, No Response appears on the select button, the Per Line Call History window, and the list on the History page.

Select Call button

The **Select Call** button is used to place a select call.

To **place an MDC-1200 select call**, do the following:

1. In the system list, select a **unit ID** to place the select call to.
The highlighted item is added to the selected items list.
OR
In the system list, select a **group** to place the select call to.
The highlighted item is added to the selected items list.

2. Click **Select Call**.

The select call message is sent and the receiving radio performs select call actions.

Radio Disable button

The **Radio Disable** button is used to disable a radio in the field from use by unauthorized persons.

To **disable a radio**, do the following:

1. In the system list, select a **unit** you want to disable from use.
The highlighted item is added to the selected items list.
2. Click **Radio Disable**.

The disable radio message is sent and the radio no longer functions.

If the selected radio is able to respond, Acknowledge appears on the line's select button, History window, and in the item list on the History page.

If the radio is unable to respond within the configured time allowed, No Response appears on the select button, the Per Line Call History window, and the list on the History page.

Radio Enable button

The **Radio Enable** button is used to enable a radio that has been disabled.

To **enable a radio**, do the following:

1. In the system list, select a **unit** you want to enable for use.
The highlighted item is added to the selected items list.
2. Click **Radio Enable**.

The microphone on the selected unit is open for monitoring.

If the selected radio is able to respond, Acknowledge appears on the line's select button, History window, and in the item list on the History page.

If the radio is unable to respond within the configured time allowed, No Response appears on the select button, the Per Line Call History window, and the list on the History page.

Remote Monitor button

The **Remote Monitor** button is used to remotely keyup a microphone for monitoring purposes.

To **monitor a unit**, do the following:

1. In the system list, select a **unit ID** you want to monitor remotely.
The highlighted item is added to the selected items list.
2. Click **Remote Monitor**.

The microphone on the selected unit is open for monitoring.

Emergency button

The **Emergency** button is used to send an emergency alert.

To **send an emergency call**, do the following:

1. In the system list, select the **unit ID** to which the emergency alert is sent.
The highlighted item is added to the selected items list.

OR

In the system list, select the **group** to which the emergency alert is sent.
The highlighted item is added to the selected items list.

2. Click **Emergency**.

The emergency alert is sent and the receiving unit performs emergency actions.

31.45.2

History page

The **History** page is used to view a log of received messages. Calls received from parallel consoles are included in the log. The history page is also used to place calls. Status, group and call color coding is supported. Click and drag column headings to rearrange column order. Messages can be sent to an ID in the history list. Items in the history list can not be removed. When C-Soft Runtime is closed all call history is cleared.

For more information, refer to “Per Line Call History Window Lines Window Field” on “Per Line Call History Window Lines Field”.

Note:

- Received messages also appear on the line’s select button while receiving a call and in the Per Line Call History window, refer to “Per Line Call History Window” on page 314.
- MDC-1200 call history can also be found on the Per Line Call History window.

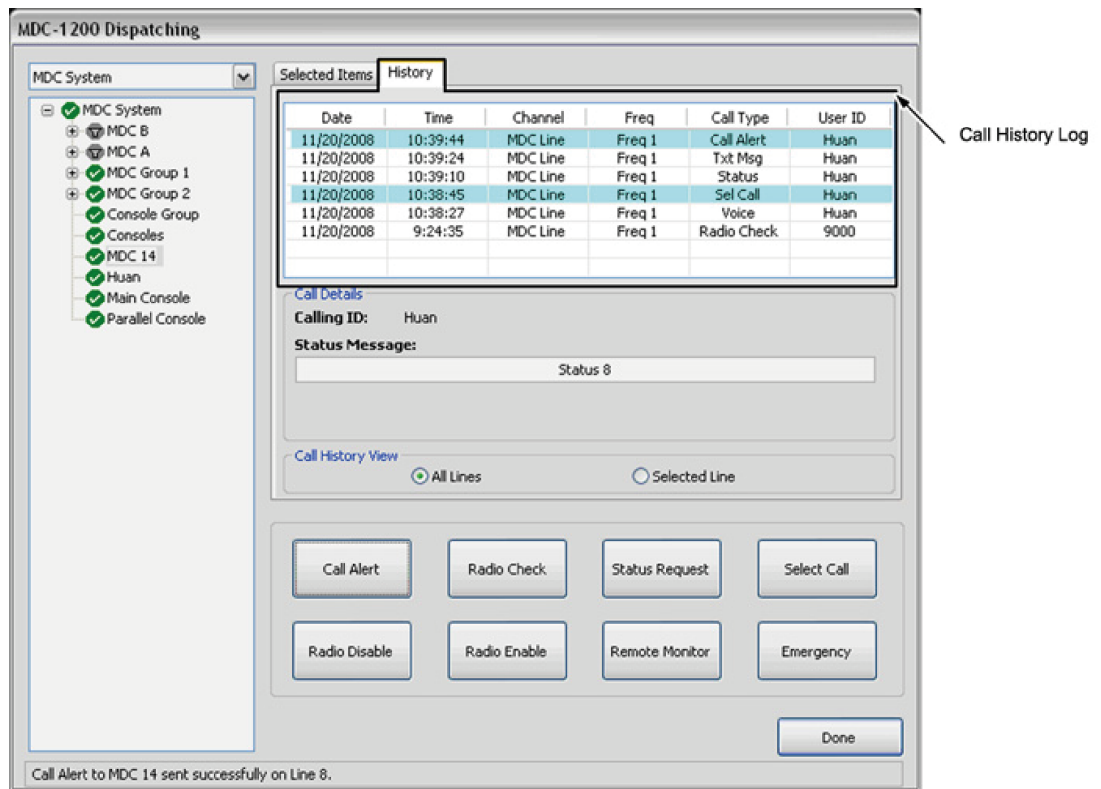


Figure 31.39: History Page - MDC Dispatching Window

To **place a select call from the History page**, do the following:

1. From the history log, select a **unit ID** entry in the history log.
2. Click **Select Call**.

The call is sent.

For more calling options, refer to “Selected Items Page” on *MDC-1200 Dispatching window*, page 294.

Date column

The **Date** column displays the date the message was received.

Time column

The **Time** column displays the time the message was received.

Channel column

The **Channel** column displays the frequency the message was sent on.

Call Type column

The **Call Type** column displays the type of message received.

There are seven call type possibilities:

- Call Alert Type

Call Alert indicates an alert message was received from an MDC-1200 radio. When a call alert message is received, all alerts and the caller's alias or ID appears on the receiving line's button. If annunciations are configured, they are played when an alert is received. Refer to "Annunciation of Call Alert Group Box" on page 341.

- Emergency Type

Emergency indicates an emergency message was received from an MDC-1200 radio.

- Group Call Type

Group Call indicates a group call was received from an MDC-1200 radio. When a group call is received, the group call initiator's ANI or ID appear on the receiving line's select button. If annunciations are configured, they are heard when a group call is received. Refer to "Annunciation of Select Call Group Box" on page 339.

- Select Call Type

Select Call indicates a select call was received from an MDC-1200 radio. When an individual call is received, the caller's ANI or ID appears on the receiving line's select button. If annunciations are configured, they are heard when a select call is received. Refer to "Annunciation of Select Call Group Box" on page 339.

- Status Type

Status indicates a status message was received from an MDC-1200 radio. When a status message is selected, the alias or ID appears in the Calling ID field and a status message appears in the Status message field.

- Txt msg Type

Txt msg (Text Message) indicates a text message was received from an MDC-1200 radio. When a text message is selected, the alias or ID appear in the Calling ID field and the text message appears in the Test Message field.

- Voice Type

Voice indicates a voice message was received from an MDC-1200 radio. If available, the ANI displays on the receiving line's select button, otherwise the ID appears.

Call Details group box

The **Call Details** group box gives information about a selected item in the history list.

Calling ID

The **Calling ID** is the alias or ID number of the MDC-1200 radio that sent the selected message.

Status Message field

The **Status Message** field is used to display the status message received by the selected message.

If a text message appears in the field, the label changes to Text Message.

Text Message field

The **Text Message** field is used to display the text message received by the selected message.

If a status message appears in the field, the label changes to Status Message.

Call History View group box

All Lines radio button

The **All Lines** radio button indicates the history list displays all messages received on all lines.

Selected Line radio button

The **Selected Line** radio button indicates the history list displays messages received on selected lines in the system.

Refer to

- *MDC-1200 Dispatching window, page 294*

31.46

Monitor

The **Monitor** function allows the console operator to send a packet burst, similar to a frequency change, to a remote radio, instructing the radio to open squelch or ignore CTCSS tones.

To **add a monitor button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Monitor**.
5. Click **OK**.

The button changes color and MON appears on the button.

31.47

MOTOTRBO Radio Setup page

When the MOTOTRBO function is selected from the UI Element drop down menu, the **MOTOTRBO Radio Setup** window appears.



Notice!

Each line controlling either a MTRBi or MOTOTRBO requires its own window.

The MOTOTRBO Radio Setup page, shown in the Figure below, is used for setting Dispatch Window features and entering time intervals to check for the Master Console.

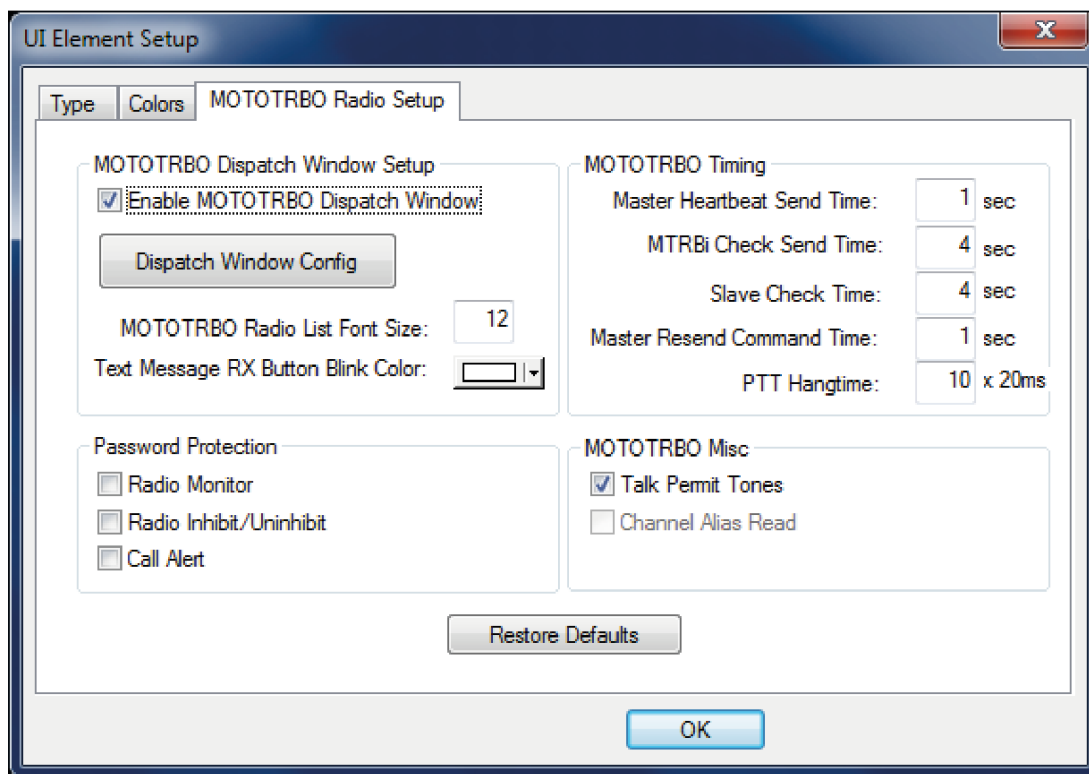


Figure 31.40: MOTOTRBO Radio Setup Page Example

MOTOTRBO Dispatch Window Setup group box

Enable MOTOTRBO Dispatch Window check box

The **Enable MOTOTRBO Dispatch Window** check box, if selected, allows the user to open the Dispatch Window in Runtime. If not selected, the user is not able to open the Dispatch Window in Runtime.

Dispatch Window Config button

The **Dispatch Window Config** button is used to open the Dispatch Window settings. The button text and color of the Dispatch Window can be updated in this view.

For more information on Dispatch Window Config button, refer to the Figure below.

MOTOTRBO Radio List Font Size field

The **MOTOTRBO Radio List Font Size** field is used to enter the font size of the ID List.

Text Message RX Button Blink Color drop down palette

The **Text Message TX Button Blink Color** drop down palette is used to select the color that the MOTOTRBO Dispatch Window button blinks when a text message is received. The button will not blink if the MOTOTRBO Dispatch Window's Text Message tab is already open.

MOTOTRBO Timing group box

Master Heartbeat Send Time field

The **Master Heartbeat Send Time** field is used to enter an interval for the master console to send its heartbeat out to all other consoles on the control line (i.e., 1).

The range for this field is 1 to 999 seconds.

The default is 1.

MTRBi Check Send Time field

The **MTRBi Check Send Time** field is used to enter an interval for C-Soft to verify the MTRBi on a certain line is alive (i.e., 4).

Note:

- Allow one second for the check function to complete.
- This function is only available when MTRBi is selected on the MOTOTRBO Setup tab.

EXAMPLE: If this field is set to four seconds, the console sends an MTRBi check command then waits for four minus one second, or three seconds for a response.

The range for this field is 2 to 999 seconds.

The default is 4.

Slave Check Time field

The **Slave Check Time** field is used to enter an interval for the console to wait to receive a heartbeat from the master before it changes into the master. (i.e., 4)

EXAMPLE: At startup, the console waits four seconds for a heartbeat, if nothing is received, the console changes to the master console. If a heartbeat is detected, the console remains a slave and resets to four seconds.

The range for this field is 3 to 999 seconds.

The default is 4.

Master Resend Command Time field

The **Master Resend Command Time** field is used to enter an interval for C-Soft to resend a MOTOTRBO command (i.e., 1).

EXAMPLE: If C-Soft sends a MOTOTRBO command and does not get a response in one second, it sends the command again, waits one second, if nothing sends again, waits one second. If no response is received after three tries the command is cleared and goes to the next command to send to the buffer. The maximum tries is three.

The range for this field is 1 to 999 seconds.

The default is 1.

PTT Hangtime field

The **PTT Hangtime** field is used to enter the amount of time C-Soft waits before sending the end of call command to the MTRBi. This delay allows the IP-224 to finish processing the outgoing audio before the mobile stops transmitting.

The value entered in this field is multiplied by 20ms to calculate the total delay. This value should match the Packet Delay Before Playback field in the Ethernet Setup section of the IP-223 technical manual and the IP-224 technical manual.

The range for this field is 0 to 99 x 20ms.

EXAMPLE: A value of 10 delays sending the end of call command by 200ms.

This feature is only enabled when MTRBi is selected from the MOTOTRBO Setup tab in Signaling Setup.

Password Protection group box

The **Password Protection** group box enables the user to set up functions that require a user password before allowing the user access.

If not selected, no password is required.

Radio Monitor check box

The **Radio Monitor** check box indicates the user must enter a password to use these functions.

Radio Inhibit/Uninhibit check box

The **Radio Inhibit/Uninhibit** check box indicates the user must enter a password to use the function.

Call Alert check box

The **Call Alert** check box indicates the user must enter a password to use the function.

MOTOTRBO Misc group box

Talk Permit Tones check box

The **Talk Permit Tones** check box, if selected, enables the user to hear go ahead Tones when PTT is pressed in Runtime.

Channel Alias Read check box

The **Channel Alias Read** check box indicates the channel's aliases are read automatically from the mobile radio.

This feature is only enabled when MOTOTRBO is selected from the MOTOTRBO Setup tab in the Signaling Setup Window.

31.47.1

Dispatch Window

The **Dispatch Window**, shown in the Figure below, is used to select the color, font and font size of the Dispatch Window settings.

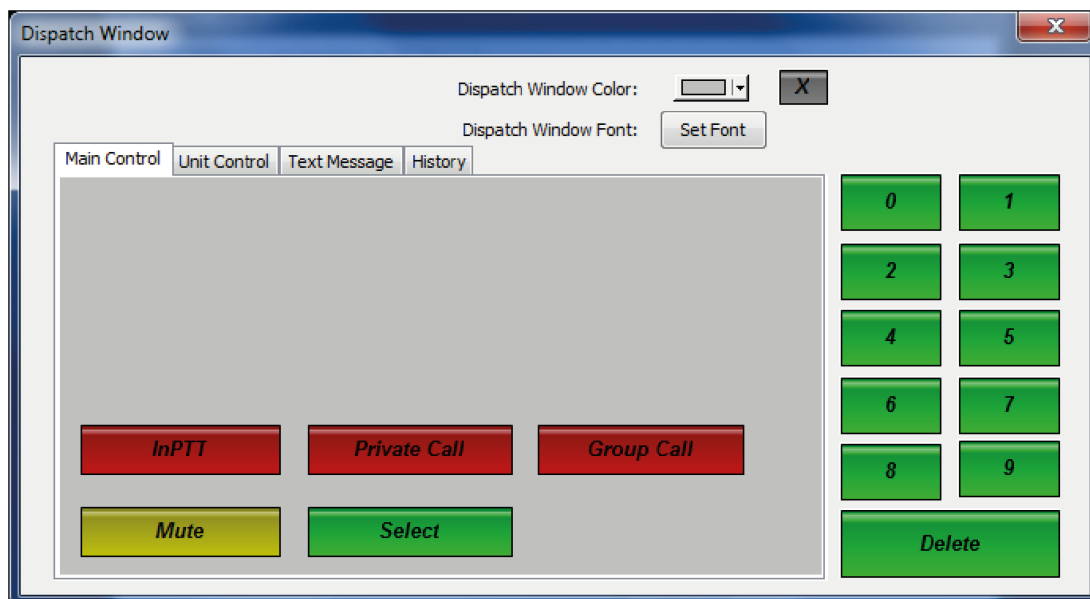


Figure 31.41: Dispatch Window Example

Dispatch Window Color drop down menu

The **Dispatch Window Color** drop down menu is used to select the color of the Dispatch Window.

To **select the color of the Dispatch Window**, do the following:

- From the Dispatch Window Color drop down menu, select the **desired color** for the dispatch window.

Set Font button

The **Set Font** button opens the Font window.

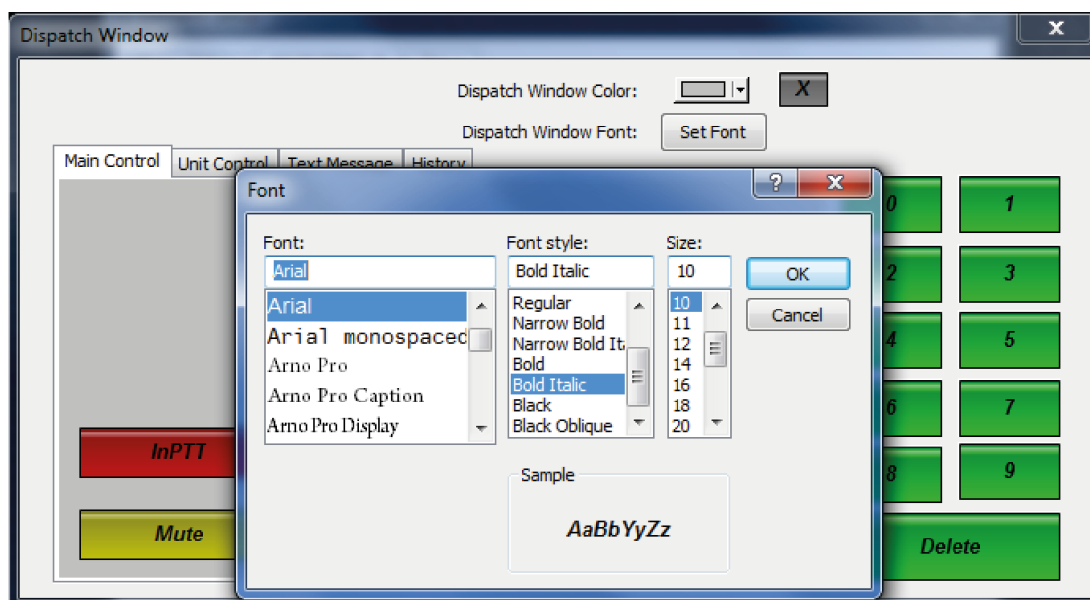


Figure 31.42: Dispatch Window Font Drop Down Menu

To **set the font of the Dispatch Window**, do the following:

- From the Font window, select the **desired font** for your text.

Main Control Page

The **Main Control** page, shown in the Figure “Dispatch Window Example” on *Dispatch Window, page 306*, is used to change the color, font type, and font size for the following buttons:

- InPTT
- Private Call
- Group Call
- Mute
- Select
- Numerical Pad
- Delete

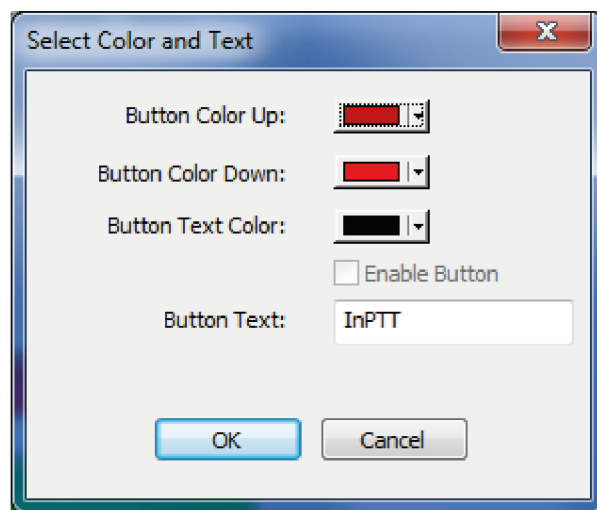


Figure 31.43: Select Color and Text

Button Color Up drop down menu

The **Button Color Up** drop down menu is used to select the color of the button as it is released.

Button Color Down drop down menu

The **Button Color Down** drop down menu is used to select the color of the button as it is pressed.

Button Text Color drop down menu

The **Button Text Color** drop down menu is used to select a color for the button text.

Enable Button check box

The **Enable Button** check box is used to enable the button in C-Soft Runtime. If disabled, the button's operation is not available.

Button Text field

The **Button Text** field is used to add text to the button.

OK button

The **OK** button is used to accept the changes to the button.

Cancel button

The **Cancel** button is used to discard any changes to the button.

To **select color and text of the desired button**, do the following:

1. From the Main Control menu, press the **desired button**.
Select Color and Text appears.
2. From the Button Color Up drop down menu, select the **desired color**.
3. From the Button Color Down drop down menu, select the **desired color**.
4. From the Button Text Color drop down menu, select the **desired color**.
5. Select the **Enable Button** check box to enable the button's functionality in C-Soft Runtime.
6. In the Button Text field, enter the **desired text** for the button.
7. Click **OK**.

The entries are saved.

Unit Control Page

The **Unit Control** page, shown in Figure below is used to change the color, font type, and font size for the following buttons:

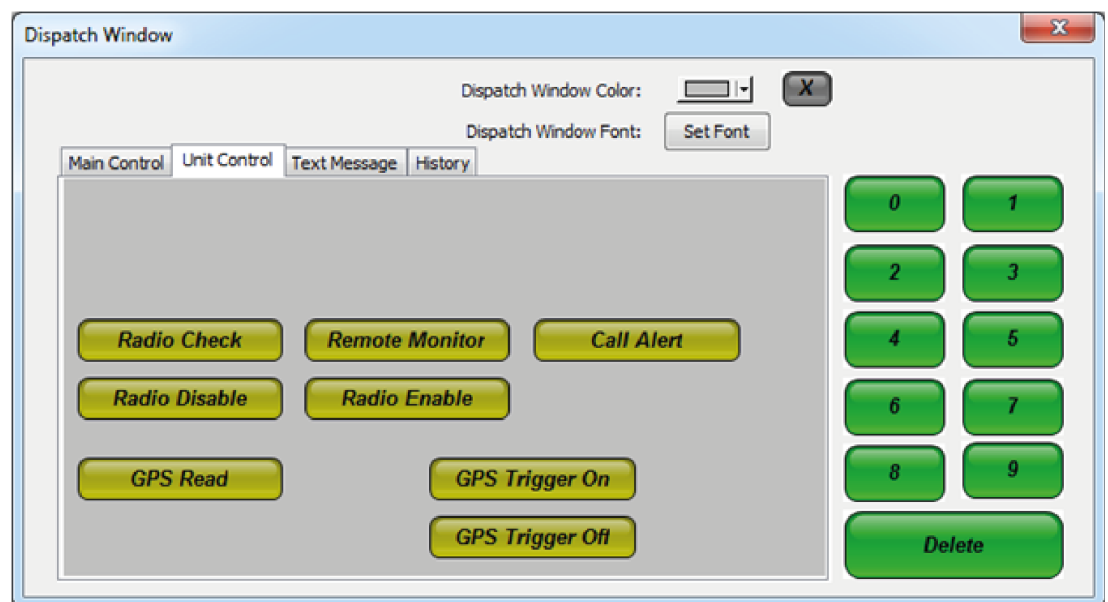


Figure 31.44: Unit Control Page Example

Radio Check button

The **Radio Check** button is used to select the color of the button and text of the Radio Check button.

Remote Monitor button

The **Remote Monitor** button is used to select the color of the button and text of the Remote Monitor button.

Call Alert button

The **Call Alert** button is used to select the color of the button and text of the Call Alert button.

Radio Disable button

The **Radio Disable** button is used to select the color of the button and text of the Radio Disable button.

Radio Enable button

The **Radio Enable** button is used to select the color of the button and text of the Radio Enable button.

GPS Trigger On button

The **GPS Trigger On** button is used to select the color of the button and text of the GPS Trigger On button.

GPS Read button

The **GPS Read** button is used to select the color of the button and text of the GPS Read button.

GPS Trigger Off button

The **GPS Trigger Off** button is used to select the color of the button and text of the GPS Trigger Off button.

Keypad

The **Keypad** buttons are used to select the color of the buttons and text of the Keypad buttons.

To **select color and text of the desired button**, do the following:

1. From the Unit Control window, select the **desired button**.
Select Color and Text appears.
2. From the Button Color Up drop down menu, select the **desired color**.
3. From the Button Color Down drop down menu, select the **desired color**.
4. From the Button Text Color drop down menu, select the **desired color**.
5. Select the **Enable Button** check box to enable the selected color and text of the button.
6. In the Button Text field, enter the **desired text** for the button.
7. Click **OK**.

The entries are saved.

Text Message page

The **Text Message** page, shown in the Figure below, is used to select the color of the button and text of the text message.

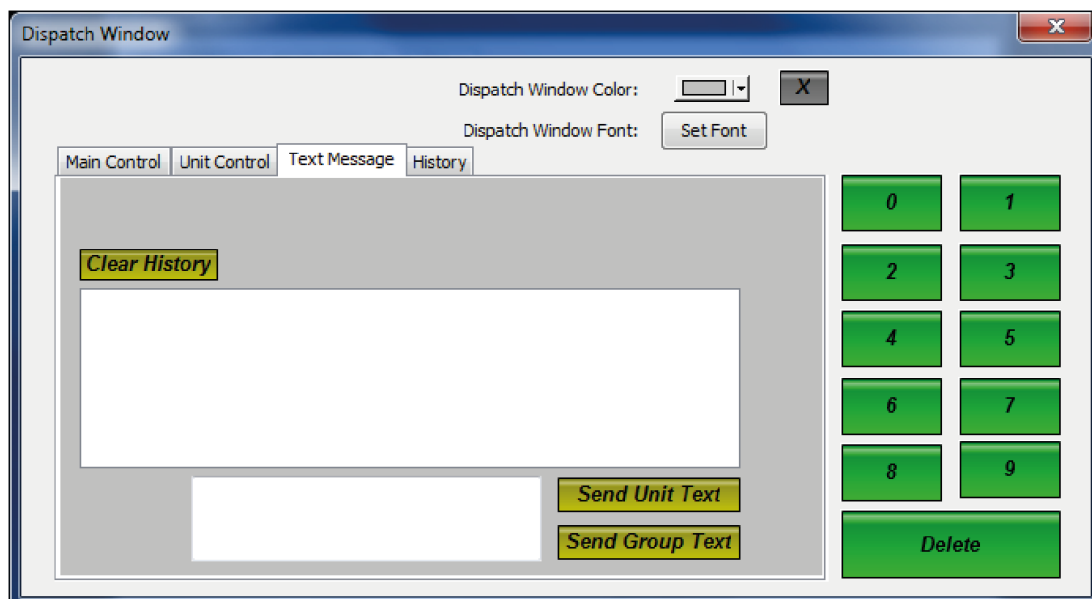


Figure 31.45: Text Message Page Example

Clear History button

The **Clear History** button is used to select the color of the button and text of the Clear History button.

Send Unit Text button

The **Send Unit Text** button is used to select the color of the button and text of the Send Unit Text button.

Send Group Text button

The **Send Group Text** button is used to select color of the button and text of the Send Group Text button.

To **select color and text of the desired button**, do the following:

1. From the Text Message menu, press the **desired button**.
Select Color and Text appears.
2. From the Button Color Up drop down menu, select the **desired color**.
3. From the Button Color Down drop down menu, select the **desired color**.
4. From the Button Text Color drop down menu, select the **desired color**.
5. Select the **Enable Button** check box to enable the selected color and text of the button.
6. In the Button Text field, enter the **desired text** for the button.
7. Click **OK**.

The entries are saved.

History page

The **History Message** page, shown in the Figure below, is used to change the color, font type, and font size for the following buttons:

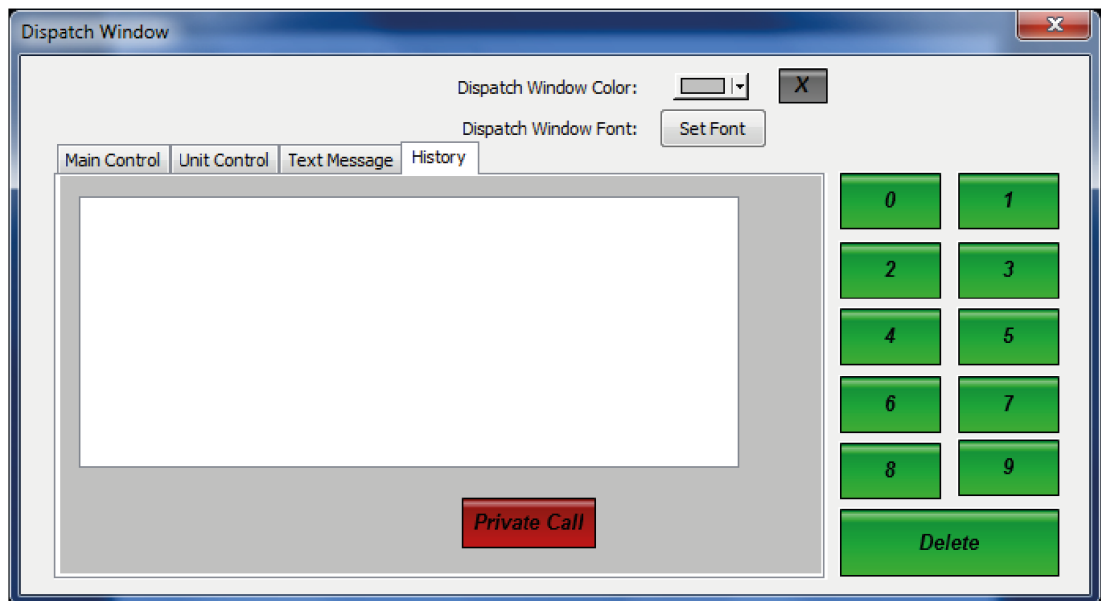


Figure 31.46: History Message Page Example

Private Call button

The **Private Call** button is used to select the color of the button and text of the Private Call button.

To **select color and text of the desired button**, do the following:

1. From the History menu press the **desired button**.
Select Color and Text appears.
2. From the Button Color Up drop down menu, select the **desired color**.
3. From the Button Color Down drop down menu, select the **desired color**.
4. From the Button Text Color drop down menu, select the **desired color**.
5. In the Private text field, enter the desired text to be displayed when a call from an individual is selected.
6. In the Group Text field, enter the **desired text** to be displayed when a call from a group is selected.
7. Click **OK**.

The entries are saved.



Notice!

The Private Call Button uses the Enable Button setting from the DFSI Window's Main Control tab's Private Call and Group Call buttons.

31.47.2

MOTOTRBO Dispatching window

The **MOTOTRBO Dispatching** window, shown in the Figure below, is used by the console operator in C-Soft Runtime to manage a MOTOTRBO line's call history, channel changes, send text messages and alerts, read GPS coordinates and read remote radio positions. Volume adjustments, radio checks, and radio enable/disable are also conducted from this window.

During operation, all parallel consoles on the same network synchronize to each other. Consoles on the same network display the same channel and zone, received ID, alias, history and notifications.

Each line controlling a MTRBi (MOTOTRBO) or MOTOTRBO Interface requires its own window.

To **add a MOTOTRBO button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **MOTOTRBO**.
The MOTOTRBO Radio Setup page appears.
5. In the Master Heartbeat Sent time field, enter a **time interval** to send a heartbeat.
6. In the MTRBi Check Send Time field, enter a **time interval** to check MTRBi status.
7. In the Slave Check Time field, enter the **amount of time** C-Soft waits before changing to the master console.
8. In the Master Resend Command Time field, enter the **amount of time** C-Soft waits before resending a command.
9. From the MOTOTRBO drop down menu, select a **background color** for the window.
10. Click **OK**.

The MOTOTRBO button is added to the console.

Main Control page

The **MOTOTRBO** window displays the most frequently used MOTOTRBO fields.

The drop down menu selections are set up in C-Soft Designer and the MOTOTRBO radio programming software.

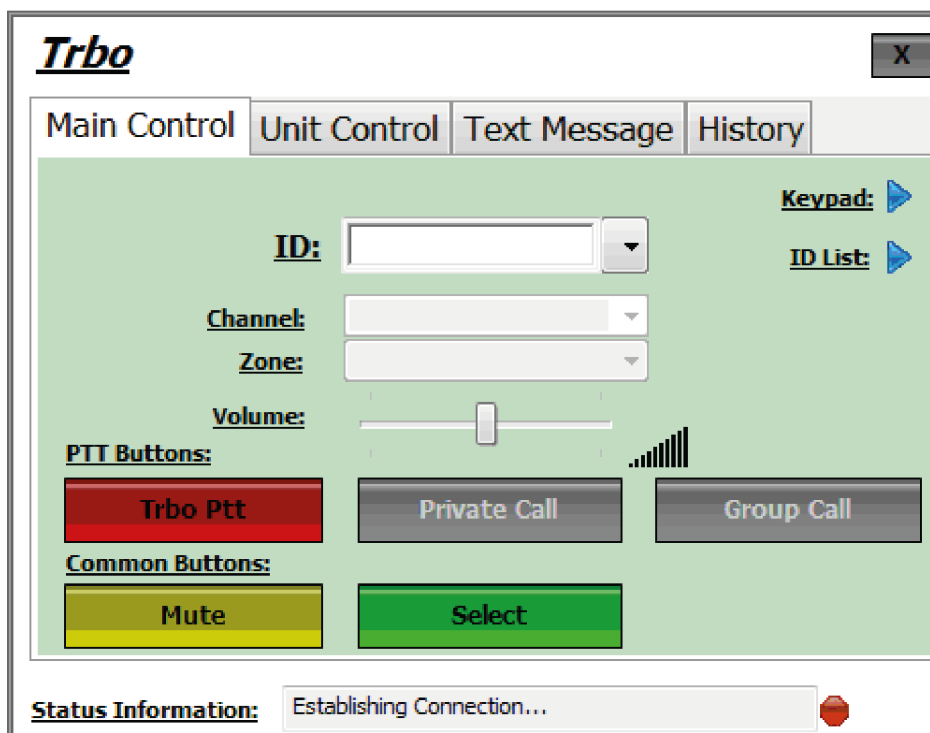


Figure 31.47: MOTOTRBO Dispatching Window

Channel drop down menu

The **Channel** drop down menu is used to change the channel of the selected line. If a parallel console or the radio changes the channel, this field updates with the current channel information.

Available selections for this field are configured in the radio.

Zone drop down menu

The **Zone** drop down menu is used to change the zone of the selected line. If a parallel console or the radio changes the zone, this field updates with the current zone information.

Available selections for this field are configured in the radio.

Volume Slider

The **Volume Slider** is used to increase or decrease the volume to the speaker or handset currently connected. The volume indicator gives a graphical representation of the total volume.



Notice!

MOTOTRBO is compatible with the ADHB-4 which can also be used to adjust volume.

Trbo Ptt button

The **Trbo Ptt** button is used the same as a normal key up of a mobile radio.

Private Call button

The **Private Call** button is used to select what is entered in the ID field for a private call.

Group Call button

The **Group Call** button is used to select what is entered in the ID field for a group call.

Mute button

The **Mute** button is used to mute or amplify the selected line's volume. If the console speaker is muted, the universal no symbol appears on the speaker icon.

Select button

The **Select** button is used to select or deselect the MOTOTRBO Line.

Status Information field

The **Status Information** field displays all incoming and outgoing MOTOTRBO radio status information.

MOTOTRBO Connection Indicator

The **MOTOTRBO Connection Indicator** indicates the status of the connection to the MOTOTRBO currently displayed in the MOTOTRBO window. If green, the unit is online and functional. If red, the unit is offline or disconnected.

Unit Control page

When the Unit Control tab is clicked from the MOTOTRBO window, the Control Buttons page appears. The **Unit Control** page is used to access MOTOTRBO functions. When a radio is selected in the ID field, a button can be clicked to perform an action.

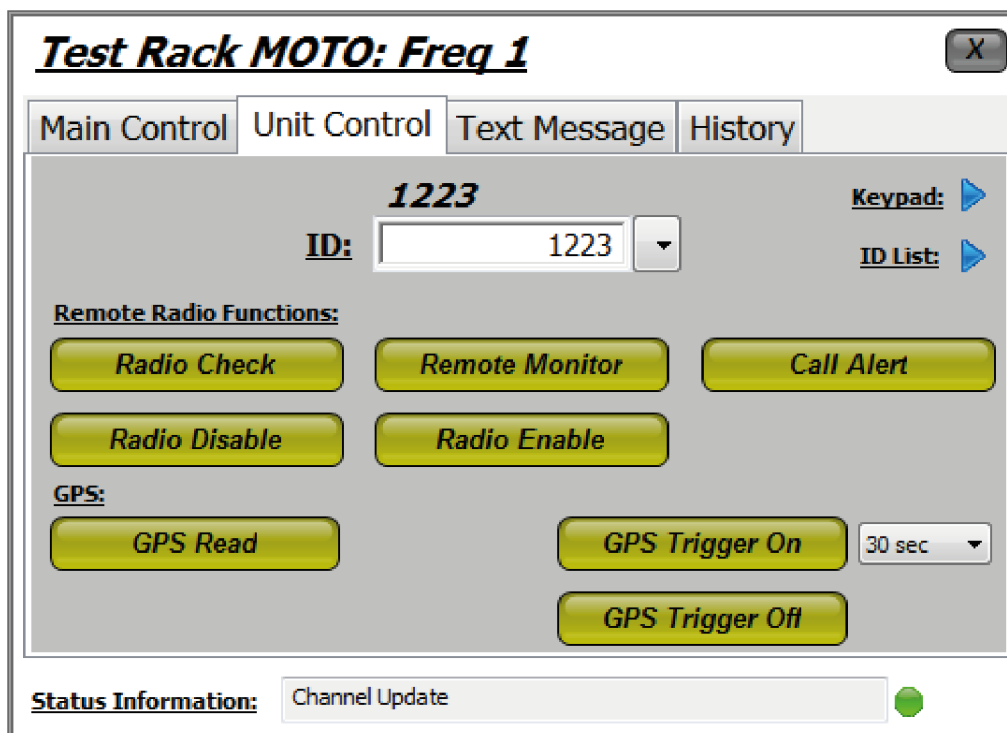


Figure 31.48: MOTOTRBO Window - Unit Control

Radio Check button

The **Radio Check** button is used to verify if the target radio is currently online and functional.

Radio Disable button

The **Radio Disable** button is used to disable a target radio from use. This feature can be used in the case of a lost or stolen radio.

Radio Enable button

The **Radio Enable** button is used to enable the target radio for use. This feature is used to enable a radio if it has been disabled with the Radio Disable button.

Remote Monitor button

The **Remote Monitor** button is used to monitor the target remote radio.

Call Alert button

The **Call Alert** button is used to send an alert to the target remote radio.

GPS Read button

The **GPS Read** button is used to request a read of the selected radio's current location and navigate to the radio's location on Google Earth.

GPS Trigger On button

The **GPS Trigger On** button is used to enable the GPS to send status at a regular interval to the console. The interval is determined by the value entered in the GPS Trigger On field.

GPS Trigger Off button

The **GPS Trigger Off** button is used to disable the radio from periodic GPS coordinate updates status to the console.

GPS Trigger On field

The **GPS Trigger On** field is used to configure the interval with which the selected radio sends a GPS location to the console.

Available options for this field are: 30 sec, 1 min, 4 min, 8 min, 10 min, 20 min, and 30 min.

Text Message page

When the **Text Message** tab is clicked the Text Message page appears. Refer to the Figure on 441.

The Text Message page is used to send text messages to the selected individual or a group of radios and to view text messages sent and received during the current C-Soft Runtime session.

Radio Name column

The **Radio Name** column displays the name assigned to the radio the text message was sent or received.

Time column

The **Time** column displays the time the text message was sent or received.

Text Message column

The **Text Message** column displays the text message sent to or received from the radio.

Quick Text drop down menu

The **Quick Text** drop down menu is used to select a text ID number assigned to a preprogrammed text message. When a text ID is selected, its message appears in the Text field.

Text field

The **Text** field displays a preview of the text message to be sent when Send Text is clicked. A text message can be entered using the Quick Text drop down menu or it can be entered manually.

This field can contain up to 100 characters.

Send Unit Text button

The **Send Unit Text** button is used to send the message in the Text field to the selected radio. When clicked, the message is sent to the radio.

To **send a text message**, do the following:

1. In the Text field, enter a **text message** to send.
OR
From the Quick Text drop down menu, select a **Text ID**.

2. From the ID drop down menu, select an **individual** to send the text message to.
OR
From the ID drop down menu, select a **group** to send the text message to.
3. Click **Send Unit Text**.
The text message is sent to the selected user.
OR
Click **Send Group Text**.
The text message is sent to the selected group.

Clear History button

The **Clear History** button is used to clear all text messages in the list.

To **clear text message history**, do the following:

- Click **Clear History**.

The text message history list is deleted.

History page

The **History** page appears when MOTOTRBO window is maximized. The History page is global for all MOTOTRBO lines. All MOTOTRBO active and previous calls appear in the list. Each call's radio name, radio ID, date, time, call type, and the call's current state appear.



Notice!

When C-Soft Runtime is closed, this list is cleared.

Date column

The **Date** column displays the date the call was received.

Time column

The **Time** column displays the time the call was received.

Freq column

The **Freq** column displays the frequency the call came from.

Status column

The **Status** column displays the current status of the call.

Available options for this field are Mobile PTT, In Progress, Call RX., GPS Position, On, Off, Passed and Failed.

User ID column

The **User ID** column displays the caller's user ID.

Call Type column

The **Call Type** column displays the type of call.

Available options for this field are Private, Group, Alert, Enable, Disable, Check, Scan, Monitor and GPS Read.

Private Call button

The **Private Call** button is used to initiate a private call to the User ID displayed in the selected entry's User ID column.

31.48

Mute Group

The **Mute Group** function allows the console operator to mute the audio on a pre-defined group of lines.

Line Group page

When the **Mute Group** function is selected from the UI Element drop down menu, the Line Group page appears. Refer to the Figure below.



Notice!

The Line Group page is used to select the lines that belong to a specific Mute Group.

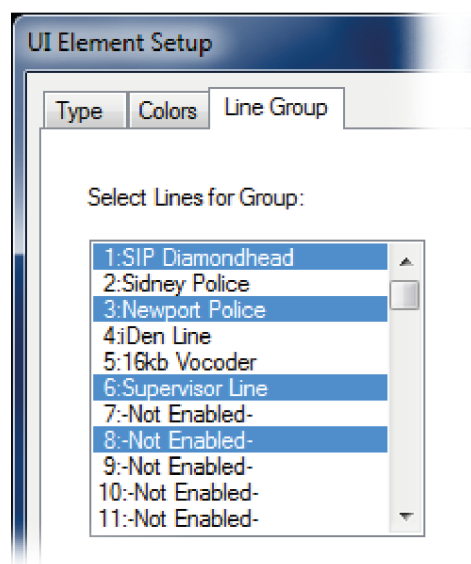


Figure 31.49: Line Group Page - UI Element Setup

Select Lines for Group field

The **Select Lines for Group** field contains a list of all the lines configured on the “*Per Line Parameters window, page 61*”. Selecting a line from this list, assigns the line to the group.

Click the Group Programmed button in the C-Soft Runtime program to place the lines defined on the Line Group page into a select condition.

To **add a Mute Group button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Mute Group**.
The Line Group tab appears.
5. Click the **Line Group** tab.
The Line Group page appears.
6. From the Select Line for Group field, select the **line(s)** you want to add to the group.
7. Click **OK**.

The selected lines are assigned to the group. The button color changes and Mute Group appears on the button.



Notice!

Deselect the highlighted line, to remove a line from the Mute Group List.

Refer to

- *Per Line Parameters window, page 61*

31.49

Mute Main

The **Mute Main** function allows the console operator to mute all lines not currently selected.



Notice!

Selected lines can also be muted when the Allow Muting Selected Lines option is selected on the Global Parameters page. Refer to “*Global Parameter Setup window, page 114*”.

To **add a Mute Main button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Mute Main**.
5. Click **OK**.

The button changes color and Mute appears on the button.

Refer to

- *Global Parameter Setup window, page 114*

31.50 Mute-Per Line

The **Mute-Per Line** function allows the console operator to mute a particular line. It is a toggle button that is active when clicked and inactive when released.

Mute Icon

A **Mute Icon**, shown in the Figure below, appears on a line's Select button, a group select button, a phone onhook/offhook button, a SIP button or a NENA indication anytime the line is muted, RX blocked, or group muted.

This icon can be customized by selecting an image for the Mute icon in the *Button Images* window, page 141.

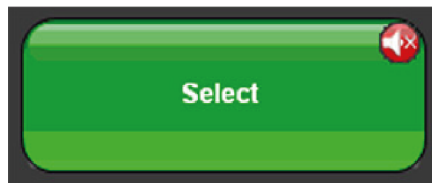


Figure 31.50: Mute Icon - Select Button

31.50.1 Per Line Mute Button Setup page

When the Mute - Per Line function is selected from the UI Element drop down menu, as shown in the Figure below, the **Per Line Mute Button Setup** page appears.

The Per Line Mute Button setup tab is used to set the Mute Time and Minimum Mute Level.

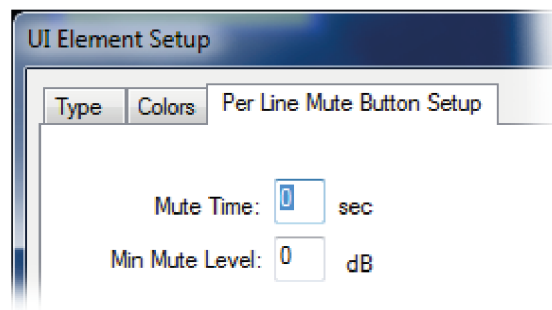


Figure 31.51: Per Line Mute Button Setup Page - UI Element Setup

Mute Time field

The **Mute Time** field identifies the duration audio is muted before the audio is automatically restored. A value of zero disables this feature.

The range for this field is 0 to 180 seconds.

Min Mute Level field

The **Min Mute Level** field identifies the level the unselected audio level is reduced at the speaker. Enter a value from -20 to -1dB to reduce the level on the muted line accordingly without completely muting the line. This ensures the console operator is unable to completely turn off audio being monitored. A value of zero completely mutes the line.

The range for this field is -20 to -1dB.



Notice!

Selected lines can also be muted when the Allow Muting Selected Lines option is selected on the Global Parameters page. Refer to “*Global Parameter Setup window, page 114*”.

To **add a Mute-Per Line button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Mute - Per Line**.
The Line to Associate Function With drop down menu becomes active. The Per Line Mute Button Setup tab appears.
5. From the Line to Associate Function With drop down menu, select the **line** you want to associate with the Mute - Per Line function.
6. Click the **Per Line Mute Button Setup** tab.
The Per Line Mute Button Setup page appears.
7. In the Mute Time field, enter the **amount of time** the line is muted before audio is automatically restored.
8. In the Min Mute Level field, enter the **audio level** for the unselected line.
9. Click **OK**.

The button changes color and Mute appears on the button.

31.51

P25-DFSI window

The **P25-DFSI** window allows the console operator to open the P25-DFSI Dispatching window.

P25-DFSI Misc page

When the P25-DFSI function is selected from the UI Element drop down menu, the **P25-DFSI Misc** page appears. Refer to the Figure below.

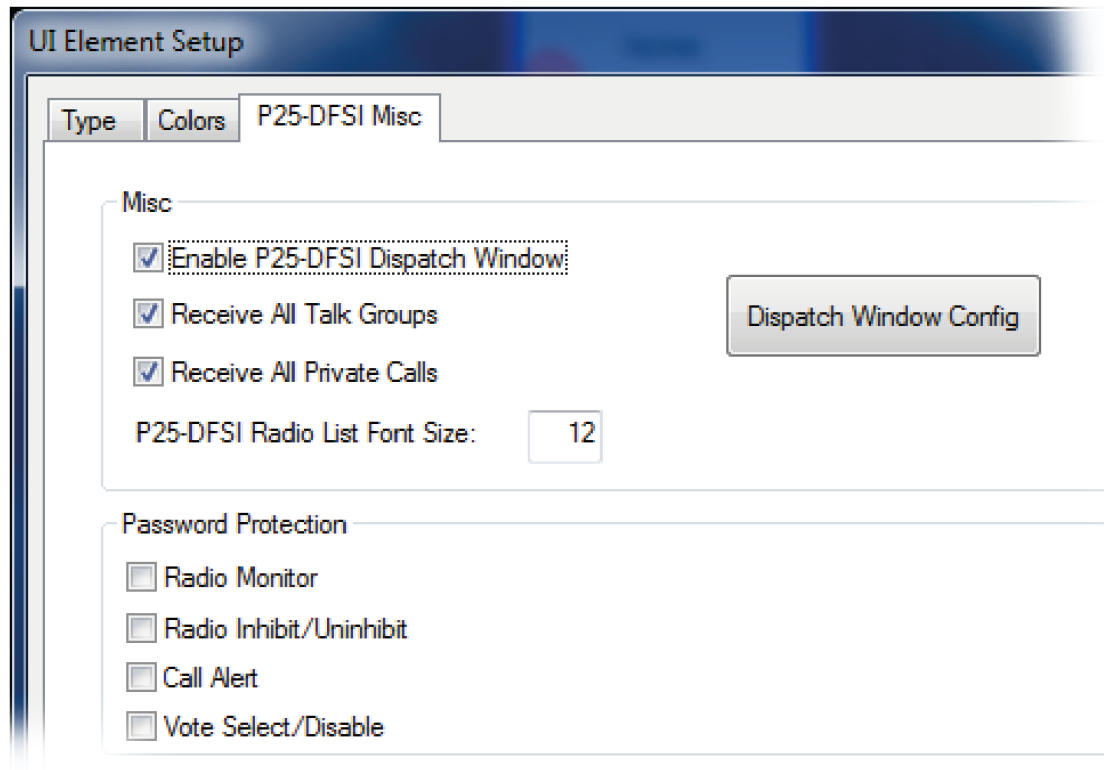


Figure 31.52: P25-DFSI Misc - UI Element Setup

Misc group box

Enable P25-DFSI Dispatch Window check box

The **Enable P25-DFSI Dispatch Window** check box gives the user to open the Dispatch Window in Runtime. If not selected, the user is not able to open the Dispatch Window in Runtime.

Receive All Talk Groups check box

The **Receive All Talk Groups** check box indicates all incoming Talk Groups can be heard. If not selected, only incoming calls with Talk Groups matching the current Talk Group will be heard, all others are muted.

Receive All Private Calls check box

The **Receive All Private Calls** check box indicates all incoming Private Calls can be heard. If not selected, only incoming Private Calls sent directly to the console will be heard, all others are muted.

P25-DFSI Radio List Font Size field

The **P25-DFSI Radio List Font Size** field is used to select a font size for the P25-DFSI Radio List.

The range for this field is 0 to 99.

The default is 12.

Dispatch Window Config button

The **Dispatch Window Config** button is used to open the Dispatch Window settings. The button text and color of the Dispatch Window can be updated in this view. For more information, refer to “*Appendix E - P25-DFSI (Digital Fixed Station Interface)*, page 479”.

Password Protection group box

The **Password Protection** group box enables the user to set up functions that require a user password before allowing the user access.

If not selected, no password is required.

Radio Monitor check box

The **Radio Monitor** check box, if enabled, indicates the Radio Monitor function is password protected.

For more information, refer to “*Global Parameter Setup window, page 114*”.

Radio Inhibit/Uninhibit check box

The **Radio Inhibit/Uninhibit** check box, if enabled, indicates the Radio Inhibit/Uninhibit function is password protected.

For more information, refer to “*Global Parameter Setup window, page 114*”.

Call Alert check box

The **Call Alert** check box, if enabled, indicates the Call Alert function is password protected.

For more information, refer to “*Global Parameter Setup window, page 114*”.

Vote Select/Disable check box

The **Vote Select/Disable** check box, if enabled, indicates the Vote Select/Disable function is password protected.

For more information, refer to “*Global Parameter Setup window, page 114*”.

OK button

The **OK** button saves the entries and closes the window.

31.52

Page

The **Page** function allows the console operator to send a single page to a specific line on a specific frequency.

Page Setup page

When the Page function is selected from the UI Element drop down menu, the **Page Setup** page appears. Refer to the Figure below.

Figure 31.53: Page Setup Page - UI Element Setup

Page Setup group box

Format drop down menu

The **Format** drop down menu is used to select the desired pager. This field contains all the pagers defined for the line in the “*Paging Settings window, page 149*”.

Frequency drop down menu

The **Frequency** drop down menu is used to select the frequency for the page. This field contains all of the frequencies defined for “Freqs Button”.

Talk Time field

The **Talk Time** field is used to enter the amount of time, in ms, allowed for the console operator to add a voice message to a page after the page has been sent.

The range for this field is 0 to 32000ms.

Page String field

The **Page String** field is used to enter the page string specific to the pager selected in the format field.

This field can contain up to 35 characters.

Use Manual Cap Code Entry check box

The **Use Manual Cap Code Entry** check box indicates a page string is manually entered by the user in Runtime, instead of using the predefined page string entered in the Page String field.

**Notice!**

Selecting this option disables the Page String field.

In C-Soft Runtime, when the page button is clicked, the Manual Paging Entry window appears. The user enters the number to page and clicks Send Page.

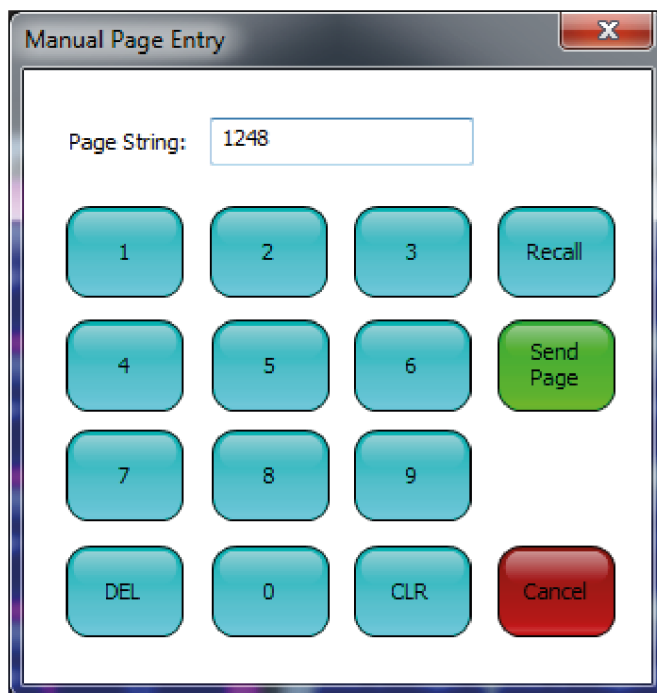


Figure 31.54: Manual Page Entry Window

Send on Selected (not steered) check box

The **Send on Selected (not steered)** check box indicates the page is sent to the selected line or the unselected line. Otherwise, the page is sent to the line configured for the page button.

Relay Setup group box**Active Relay With Page check box**

The **Active Relay With Page** check box indicates a configured relay activates when a page is sent.

Relay Destination group box

The **Relay Destination** radio buttons identify the relay to be controlled. When a selection is made, the fields necessary to enter the setup information for the relay are enabled.

ADHB-4 Settings group box

The **ADHB-4 Settings** radio buttons identify which ADHB-4 relay is activated when the page is sent.

None radio button

The **None** radio button indicates none of the ADHB-4 relays is activated.

Relay 1 radio button

The **Relay1** radio button indicates the first relay in the ADHB-4 is being controlled.

Relay 2 radio button

The **Relay 2** radio button indicates the second relay in the ADHB-4 is being controlled.

NEO Settings group box

The **NEO Settings** field identifies the IP Address and the relay, if any, for the NEO-10.

IP field**Relay drop down menu**

The **Relay** drop down menu is used to select the desired relay.

Available selections for this field are None, Port 1, Port 2, Port 3, Port 4, Port 5, Port 6, Port 7, Port 8, Port 9 and Port 10.

Active Duration field

The **Active Duration** field is used to enter the length of time, in ms, the relay remains active from the start of the Annunciation.

The range for this field is 300-3000ms.

To **add a Page button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Page**.
The Line to Associate Function With drop down menu becomes active. The Page Setup tab appears.
5. From the Line to Associate Function With drop down menu, select the **line** you want to associate with the Page function.
6. Click the **Page Setup** tab.
The Page Setup page appears.
7. From the Format drop down menu, select the **type of pager** being used.
8. From the Frequency drop down menu, select the **frequency** for the pager.
9. In the Talk Time field, enter the **amount of time** allowed for the console operator to add a voice message to the page.
10. In the Page String field, enter the **page string** or **code** specific to the pager.
11. Select the **Send on Selected (not steered)** check box, if desired.
12. Click **OK**.

The button changes color and Page appears on the button.

31.53 Page Cancel

The **Page Cancel** function is used to cancel the transmission of one or more pages while the pages are being sent.

If the Manually Confirm When Pages Are Done Sending check box is selected (*"Paging Settings window, page 149"*), the Page Cancel button clears the Paging Done icons from all paging buttons.

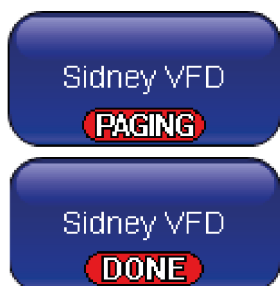


Figure 31.55: Paging Button

Note:

- These icons can be customized by using the *Button Images window, page 141*.
- If you do not want to use one of the icons, you must make a 1 pixel bmp file and call it out properly (see above). If you delete the .bmp file, the C-Soft Runtime uses the default icons.

Refer to

- *Paging Settings window, page 149*

31.54 Page Manual Entry

The **Page Manual Entry** function allows the incorporation of up to five single tones in sequence for a specific line.

31.54.1 Manual Page Setup

When the Page Manual Entry function is selected from the UI Element drop down menu, the **Manual Page Setup** page appears. Refer to the Figure below.

Figure 31.56: Manual Page Setup Page - UI Element Setup

Initial Lead-In Delay field

The **Initial Lead-in Delay** field identifies the amount of time to use for the lead-in delay.

The range for this field is 0 to 20000ms.

Frequency drop down menu

The **Frequency** drop down menu identifies the frequency to send the page on. This field contains all of the frequencies defined for the line in “Freqs Button”.

Tone Level field

The **Tone Level** field identifies the audio level of the tone.

The range for this field is -60 to 10dB.

Tone (1-5) fields

The **Tone (1-5)** fields identify the frequency for the tone.

The range for this field is 0 to 3000Hz.

Tone (1-5) Level fields

The **Tone (1-5)** Level fields identify the length for the tone.

The range for this field is 0 to 65000ms.

Talk Time field

The **Talk Time** field identifies the maximum amount of time, allowed for talk time.

The range for this field is 0 to 65000ms.

Send on Selected (not steered) check box

The **Send on Selected (not steered)** check box indicates the page is sent to the selected line. Otherwise, the page is sent to the line configured for the page button.

Relay Setup group box**Active Relay With Annunciation check box**

The **Active Relay With Annunciation** check box indicates a configured relay activates when an Page is sent.

Relay Destination group box

The **Relay Destination** radio buttons identify the relay to be controlled. When a selection is made, the fields necessary to enter the setup information for the relay are enabled.

ADHB-4 Settings group box

The **ADHB-4 Settings** radio buttons identify which ADHB-4 relay to activate when the page is sent.

None radio button

The **None** radio button indicates none of the ADHB-4 relays is activated when sending a page.

Relay 1 radio button

The **Relay1** radio button indicates the first relay in the ADHB-4 is being controlled.

Relay 2 radio button

The **Relay 2** radio button indicates the second relay in the ADHB-4 is being controlled.

NEO Settings group box

The **NEO Settings** field identifies the IP Address and the relay, if any, for the NEO-10.

IP field

The **IP** field identifies the IP Address of the NEO-10.

Relay drop down menu

The **Relay** drop down menu is used to select the desired relay.

Available selections for this field are None, Port 1, Port 2, Port 3, Port 4, Port 5, Port 6, Port 7, Port 8, Port 9 and Port 10.

Active Duration field

The **Active Duration** field is used to enter the length of time, in ms, the relay remains active from the start of the Annunciation.

The range for this field is 300-3000ms.

Page Generation options

Page Tone Iteration Count field

The **Page Tone Iteration Count** field is used to determine the number of times the button's tone sequence is sent during the page and allows for tone sequences to be repeated a specified number of times.

The range for this field is 1 - 100.

The default value for this field is 1.

To **add a Manual Page button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Page-Manual Entry**.
The Line to Associate Function With drop down menu becomes active. The Manual Page Setup tab appears.
5. From the Line to Associate Function With drop down menu, select the **line** you want to associate with the Manual Page function.
6. Click the **Manual Page Setup** tab.
The Manual Page Setup page appears.
7. In the Initial Lead in Delay field, enter the **lead-in delay** for the pager.
8. From the Frequency drop down menu, select the **type of frequency** for the pager.
9. In the Tone 1 through Tone 5 fields, enter the **level** and **amount of time** for each tone.
10. In the Talk Time field, enter the **amount of time** allowed for the console operator to add a voice message to the page.
11. Select the **Send on Selected (not steered)** check box, if desired.
12. Click **OK**.

The button changes color and Page appears on the button.

31.55

Page Send

The **Page Send** function allows a console operator to send a group of pages selected using the Page Stack button. This option also works when the Always Stack Page Buttons check box is selected, refer to "Always Stack Page Buttons Check Box" on "Always Stack Page Buttons Check Box".

In C-Soft Runtime, the console operator is notified when the last stacked page is sent. A voice message can be sent to page recipients.

To **add a Page Send button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.

4. From the UI Element drop down menu, select **Page Send**.
5. Click **OK**.

The button changes color and Page Send appears on the button.

31.56

Page Stack

The **Page Stack** function allows the console operator to select the number of pages to be sent in succession.

In C-Soft Runtime, after pressing the Page Stack button, the console operator can select multiple Page buttons. Normally, a page is sent the moment the Page button is pressed, but when the Page button is pressed after the Page Stack button, all selected pages are stacked first and sent when the Page Send button is clicked.



Notice!

When the Page Send button is clicked, pages assigned to the same line number are sent in the order they were selected, but pages assigned to different line numbers are sent in order of ascending line number.

For example, when the Page Send button is pressed, pages that were selected in this order: XYZ (line 5), XYY (line 5), XXY (line 4), ZZY (line 3) are sent in this order: ZZY (line 3), XXY (line 4), XYZ (line 5), XYY (line 5).

31.56.1

Page Stack Setup

When the Page Stack function is selected from the UI Element drop down menu, a **Page Stack Setup** page appears. Refer to the Figure below.

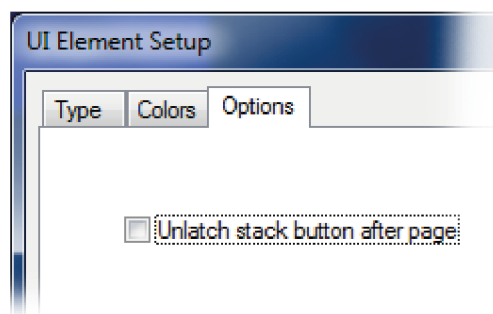


Figure 31.57: Options Page - UI Element Setup

Unlatch stack button after page check box

The **Unlatch stack button after page** check box indicates the Page Stack button automatically unlatches (toggle off) after pages are sent.

To **add a Page Stack button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.

3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Page Stack**.
The Option tab appears.
5. Click the **Options** tab.
The Options page appears.
6. Select the **Unlatch stack button after page** check box to automatically unlatch after the pages are sent, if desired.
7. Click **OK**.
The button changes color and Stack Pages appears on the button.

31.57 Page Stack Programmed

The **Page Stack Programmed** function creates a button used to select a pre-defined group of pages. While in C-Soft Runtime, clicking the Page Stacked Programmed button causes the pre-defined pages to be stacked.



Notice!

When the Page Send button is clicked, pages assigned to the same line number are sent in the order they were selected, but pages assigned to different line numbers are sent in order of ascending line number.

For example, when the Page Send button is pressed, pages that were selected in this order: XYZ (line 5), XYY (line 5), XXY (line 4), ZZY (line 3) are sent in this order: ZZY (line 3), XXY (line 4), XYZ (line 5), XYY (line 5).

To **send stacked pages**, do the following:

1. From C-Soft Runtime, click the **Page Stacked Programmed** button.
The pages are stacked in the order defined in the Selected Pages list.
2. Click the **Page Send** button.
The Pages are sent.

31.57.1 Programmed Stack Setup page

When Pages Stack Programmed is selected from the drop down menu, the **Programmed Stack Setup** page appears. Refer to the Figure below.

A maximum of 50 pages can be configured for a single Page Stack Programmed button.

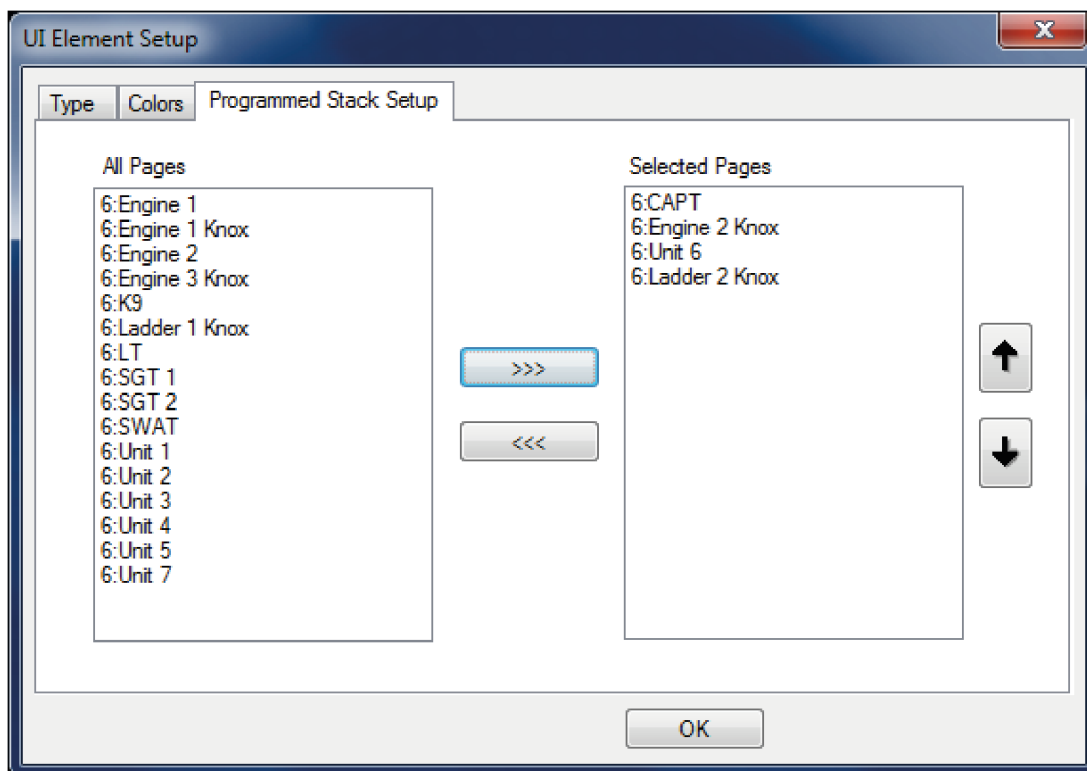


Figure 31.58: Programmed Stack Setup - UI Element Setup

All Pages field

The **All Pages** field displays all pages in the system. This list is used to select a page to add to the Selected pages field.

Selected Pages field

The **Selected Pages** field displays pages selected for the stack. When the console operator clicks the Page Stack Programmed button, a page is sent to members in this field.

Move Right button

The **Arrow Right** button  is used to move pages from the All Pages field to the Selected Pages field.

Move Left button

The **Arrow Left** button  is used to move pages from the Selected Pages field to the All Pages field.

Move Up Button

The **Move Up** button  is used to move the selected page up in the Selected Pages list.

Move Down Button

The **Move Down** button  is used to move the selected page down in the Selected Pages list.

To **add a Page Stack Programmed button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, **select Page Stack Programmed**.
The Programmed Stack Setup tab appears.
5. Click the **Programmed Stack Setup tab**.
The Programmed Stack Setup page appears.
6. Select **pages** from the All Pages panel.
7. Click **>>>** to move them to the Selected Pages pane.
8. Click **OK**.

The button changes color and Page Send appears on the button.

31.58

Per Line Call History

The **Per Line Call History** function creates a button used to open a list of past calls received on the associated line.

In C-Soft Runtime, the Per Line Call History window is used to view incoming calls, make outgoing calls, and playback call audio based upon programming setup.

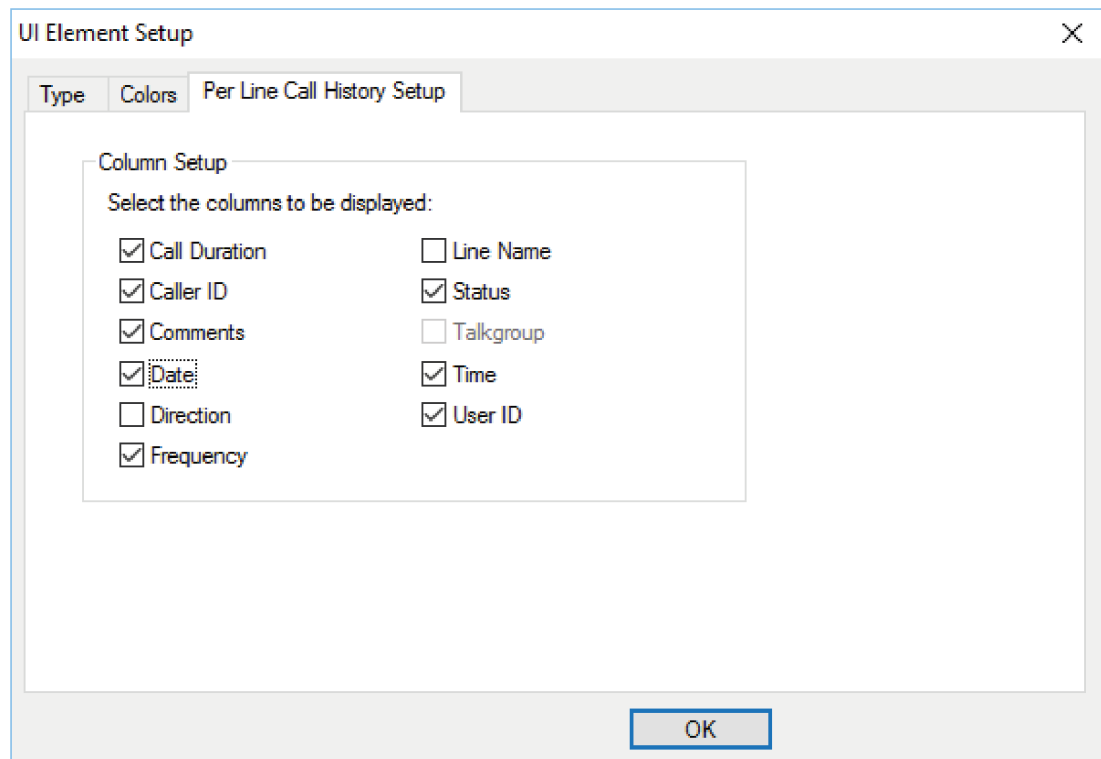
To **add a Per Line Call History button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Per Line Call History**.
5. From the Line to Associate Function With drop down menu, select the **line** to display call history.
6. Click **OK**.

The color of the button changes and Per Line Call History appears on the button.

Per Line Call History Setup page

The **Per Line Call History Setup** window allows users to determine which columns are visible in the Per Line Call History window. The respective columns display in the Per Line Call History window if selected and hidden if not checked.

**Column Setup group box****Call Duration check box**

The **Call Duration** check box is used to add a Call Duration column to the Per Line Call History window.

Caller ID check box

The **Caller ID** check box is used to add a Caller ID column to the Per Line Call History window.

Comments check box

The **Comments** check box is used to add a Comments column to the Per Line Call History window.

Date check box

The **Date** check box is used to add a Date column to the Per Line Call History window.

Direction check box

The **Direction** check box is used to add a Direction column to the Per Line Call History window.

Frequency check box

The **Frequency** check box is used to add a Frequency column to the Per Line Call History window.

Line Name check box

The **Line Name** check box is used to add a Line Name column to the Per Line Call History window.

Status check box

The **Status** check box is used to add a Status column to the Per Line Call History window.

Talkgroup check box

The **Talkgroup** check box is used to add a Talkgroup column to the Per Line Call History window.

**Notice!**

This field is only available when the associated line is configured for a P25-DFSI line.

Time check box

The **Time** check box is used to add a Time column to the Per Line Call History window.

User ID check box

The **User ID** check box is used to add a User ID column to the Per Line Call History window.

31.58.1**Per Line Call History window**

The **Per Line Call History** window is used to view the associated line's call history. Each entry in the call history contains details regarding an individual call. Icons in the left column display the current status of the call entry. The console operator can also send messages, statuses, and alerts to the ID listed in the window by clicking a Call button at the bottom of the window.

Per Line Call History : MTRBi (rack)

	Date	Time	Freq	Calling ID	User ID	Status	Duration	Comments
	10/28/2014	10:01:35	Group 101	Group 101	Aaron Eanes	Group RX	00:09	Save for supervisor
	10/28/2014	09:53:55	Group 100	Aaron Eanes		Sent Check	00:00	Verify Aaron's radio is receiving
	10/28/2014	10:03:05	Group 103		1332	Radio Check Ack	00:00	
	10/28/2014	10:03:00	Group 103	1332		Sent Check	00:00	
	10/28/2014	10:02:47	Group 103	Group 103	1332	Group RX	00:08	Unit arrived on scene
	10/28/2014	10:02:07	Group 101		Aaron Eanes	Remote Monitor Ack	00:11	
	10/28/2014	10:02:06	Group 101	Aaron Eanes		Sent Remote Monitor	00:00	
	10/28/2014	10:01:04	Group 103		Aaron Eanes	Private RX	00:07	
	10/28/2014	10:00:33	Group 103		1332	Private RX	00:10	
	10/28/2014	09:59:39	Group 103	Group 103	1332	Group RX	00:08	Need to get unit to 14th and Toledo.
	10/28/2014	09:54:04	Group 100		Aaron Eanes	Enable Radio Ack	00:00	
	10/28/2014	09:54:03	Group 100	Aaron Eanes		Sent Enable	00:00	
	10/28/2014	09:54:02	Group 100		Aaron Eanes	Disable Radio Ack	00:00	
	10/28/2014	09:54:01	Group 100	Aaron Eanes		Sent Disable	00:00	
	10/28/2014	09:53:56	Group 100		Aaron Eanes	Radio Check Ack	00:00	
	10/28/2014	09:53:26	Group 100		Aaron Eanes	Call Alert	00:00	
	10/28/2014	09:52:56	Group 101	Group 101	Aaron Eanes	Group RX	00:05	
	10/28/2014	09:52:35	Group 100	Group 100	Aaron Eanes	Group RX	00:09	

Save to File Done

Figure 31.59: Per Line Call History Window - C-Soft Runtime

Icon Status column

The **Icon Status** column displays an icon representative of the call entry state.



The call entry is pinned. A pinned call entry is always located at the top of the call list control and cannot be deleted until the call is unpinned.



The call entry contains audio that can be played.



The call entry contains audio that can be played and the call entry is pinned.



The call entry contains audio, but the line was muted when the call was received. The un-muted audio can still be played.



The call entry contains audio, but the line was muted when the call was received and the call entry was pinned. The un-muted audio can still be played.



The audio for a call entry is currently being played.



The audio for a pinned call entry is currently being played.

Date column

The **Date** column displays the date of the call or operation.

Time column

The **Time** column displays the time of the call or operation.

Freq column

The **Freq** column displays the frequency of the call or operation.

Status column

The **Status** column displays additional call or operation information. For example, if a status message is received, the Status column contains a Status Alias. If the entry represents an outgoing Select Call, the Status column contains “Sent Select Call”.

User ID column

The **User ID** column displays the source User Alias/ID or Group Alias/ID of the call or operation.

Calling ID Column

The **Calling ID** column displays the destination User Alias/ID or Group Alias/ID of the call or operation.

Direction column

The **Direction** column displays the call or operation’s direction. Incoming calls or operations display Rx and outgoing calls or operations display Tx.

Duration column

The **Duration** column displays the duration of the recorded call audio.

Comments column

The **Comments** column displays comments from the user.

31.58.2

Per Line Call History window - 5/6 Tone line

The Status List window displays the status of a call. If the configured line is set to 5/6 Tone DTMF ANI signaling, and one or more call formats have been configured in the Call Setup tab, the Per Line Call History window displays the user defined call buttons as shown in the Figure below.

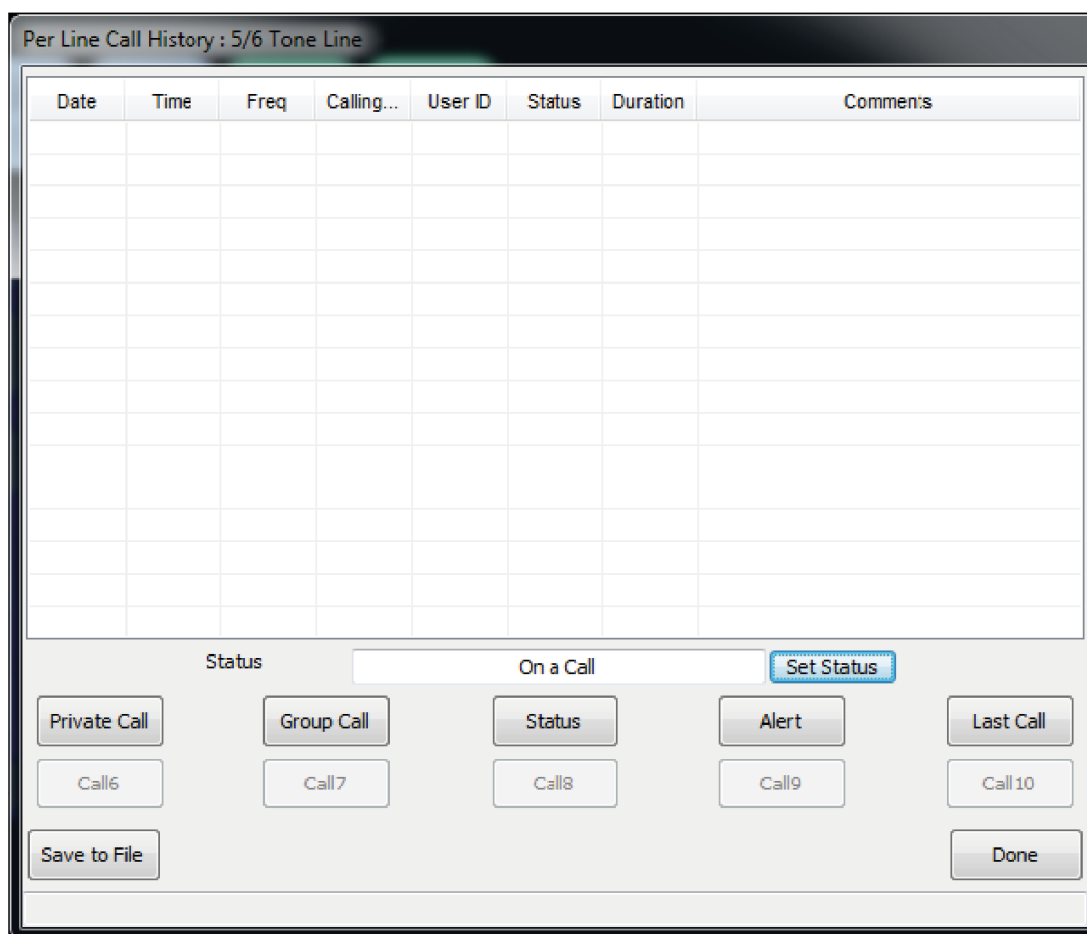


Figure 31.60: Per Line Call History Window: 5/6 Tone Line

Set Status button

The **Set Status** button is used to open the Status List window and select a status to send. Refer to the Figure on "*Status List window, page 236*".

To **send a status ID from the Per Line Call History window in C-Soft Runtime**, do the following:

1. While in C-Soft Runtime, select the **line** you want to place the call from.

2. Select a **Per Line Call History** button.
The Per Line Call History window appears.
3. From the ID Type drop down menu, select an **alias** or an **ID number**.
The selected User ID in the User List is highlighted.
4. Select **Set Status**.
The Status List window appears.
5. From the ID type drop down menu, select an **alias** or **ID number** to sort the list.
The list is sorted depending on the selected type.
6. From the Status drop down menu, select a **status ID** to send.
The selected status ID is highlighted.
OR
From the status ID list, select a **status ID** to send.
The selected status ID is highlighted.
7. Click **Done**.
If a password is required to send the status ID, the Password Entry window appears.
8. Using the keypad, enter the **password**.
For each character you enter, asterisks fill the empty field at the top of the window.
9. Click **Enter**.
The Password Entry window closes and the selected status's alias appears in the Status Message field or, if the password is incorrectly entered, an error message appears.
10. Click a **Call** button to place the call.
The message is sent and a confirmation or error message appears in the Dispatching status bar.
11. Click **Done**.
The window closes.

To **open the Status List window**, do the following:

1. Open a **Per Line Call History window** associated with a 5/6 Tone line.
 2. Click the **Set Status** button.
- The Status List window appears.

Alias	Status ID
Emergency	99
Revive	92
Kill	91
Stun	90
Resolved	88
Call Back	80
Send Status	70
Gone Home	6

**Notice!**

The Status field is used only for 5/6 Tone/DTMF ANI Signaling.

Call (1-10) Buttons

The **Call (1-10)** buttons are used to place user-defined calls configured in the “5-6 Tone/DTMF ANI system type, page 75”. For the call buttons panel to be enabled, the line must be configured for 5/6 Tone DTMF Signaling, and at least one Call Format must be set up. The labels used only for 5/6 Tone/DTMF ANI Setup page appear on these buttons in the Call List window.

To **place a call from the Per Line Call History window**, do the following:

1. Select an **ID** in the list.
Available call buttons on the bottom of the window become active.
2. Select a **call** button.
The call is placed.

Refer to

- *Status List window, page 236*
- *5-6 Tone/DTMF ANI system type, page 75*

31.58.3**IRR Playback Control window****Notice!**

For the IRR Playback control to appear, the line must be configured for IRR Recording. If IRR Recording is enabled on the line, the Per Line Call History Window will display the Audio Playback Control.

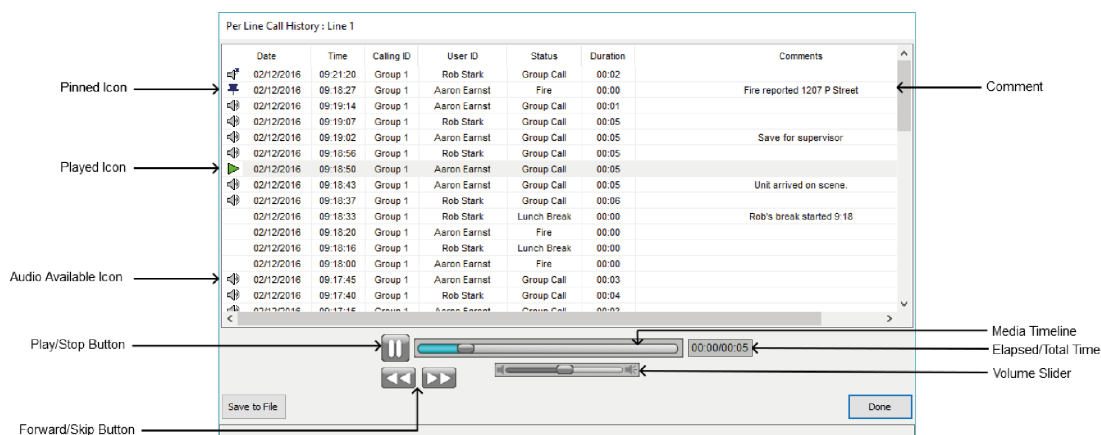


Figure 31.61: Per Line Call History Window

Save to File button

The **Save to File** button is used to save the currently selected items to a .csv file.

To **save a .csv file of the items in the list**, do the following:

1. From the Per Line Call History list, select the **items** you want to save.
2. Click **Save to File**.
The Save window appears.
3. In the File name field, enter a **name** for your .csv file.
4. Click **Save**.

Done button

The **Done** button is used to close the Per Line Call History window.

Note:

When an ADHB-4 is installed in the system:

- Master Select audio will also affect the IRR playback audio level if Output Speaker 1 is selected in the Recording Settings.
- Master Unselect audio will also affect the IRR playback audio level if Output Speaker 2 to 6 is selected in the Recording Settings.

31.58.4

Comments window

The **Comments** window, shown in the Figure below appears when the user right clicks on a call entry in either the Per Line window or the Global Call History window and selects the Edit Comment menu item. The Comments window is used to either create a new comment or modify an existing comment for a menu item.

Up to 100 characters can be entered in a single comment.

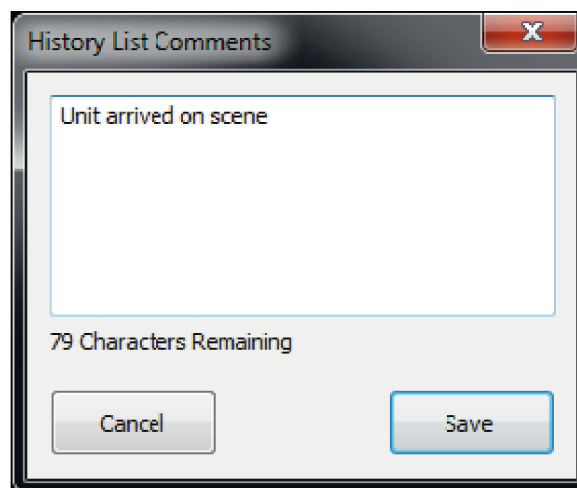


Figure 31.62: Comments window



Notice!

Phone functions listed below are specific to PSTN lines attached to a C-6200 or IP-223 with TDI or PIB adapters. These should not be confused with SIP Phone operation.

31.59 Phone-Flashhook

The **Phone-Flashhook** function allows the console operator to perform a flashhook operation on the phone line. This button is generally included as part of a DTMF keypad.

To **add a Flash button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Phone - Flashhook**.
5. Click **OK**.

The button changes color and Flash appears on the button.

31.60 Phone-Hold

The **Phone-Hold** function allows the console operator to place a particular line on hold. While a line is in hold status, no TX audio is sent to the line and RX audio is sent to the unselect speaker.

To **add a Hold button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Phone - Hold**.
The Line to Associate Function With drop down menu becomes active.
5. From the Line to Associate Function With drop down menu, select the **line** to associate the Hold function.
6. Click **OK**.

The button changes color and Hold appears on the button.

31.61 Phone-On/Offhook

The **Phone-On/Offhook** function is available to add a line set up as a phone line.

A phone, like a radio circuit, can be used as a network device. A C-6200 console with a phone card offers phone lines for use by anyone on the network. A phone line can be used for direct phone communications by a console operator, or to add a crosspatch to telephone capability for radio users.

When the console operator presses the Phone-On/Offhook button, the line goes offhook and a dial tone is audible. All radio traffic is moved to the unselect speaker. Full-duplex audio is present from the microphone while the line is offhook and not on hold. Placing the line on hold mutes the transmit audio and places the receive audio on the unselect speaker.

When a hard-wired phone card receives an incoming call, a ring signal is sent out. The C-Soft program generates a ringing sound and places a RING icon on the on/offhook button. When the line is taken offhook, the first console to answer the call takes control of the line and all others are denied.

**Notice!**

A Mute-Per Line button can be associated with a Phone line to mute the phone line's mic. The mute icon appears when the Phone line is muted, RX blocked, or when a Mute Main button is selected. Refer to "*Mute-Per Line, page 321*".

To **add a Phone On/Offhook button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Phone - On/Offhook**.
The Line to Associate Function With drop down menu becomes active and the Remote Phone Select tab appears.
5. From the Line to Associate Function With drop down menu, select the **line** to associate the On/Offhook function.
6. Click the **Remote Phone Select** tab.
The Remote Phone Select page appears.
7. From the Remote Phone Number drop down menu, select the **physical line** of the device the PSTN line is attached to.
 - When specifying a specific line using an **IP-223**, valid options are **1 or 2**.
 - When specifying a specific line for a **C-6200** choices can be **1-18**.
 - To use **any line** on the device, select **Pool**.
8. Click **OK**.

The button changes color and Phone Onhook appears on the button.

Refer to

- *Mute-Per Line, page 321*

31.61.1**Remote Phone Line Select page**

When the Phone On/Offhook function is selected from the UI Element drop down menu, the **Remote Phone Line Select** page appears. Refer to the Figure below.

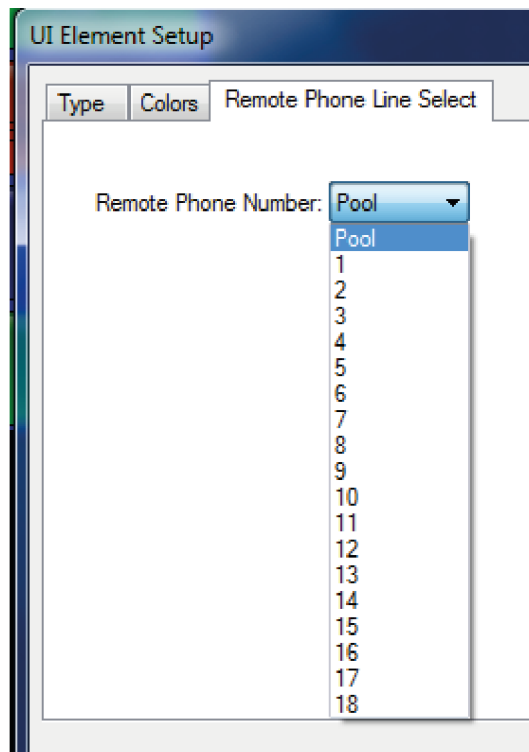


Figure 31.63: Remote Phone Line Select Page - UI Element Setup

Remote Phone Number drop down menu

The **Remote Phone Number** drop down menu identifies the line to force the use of a particular phone line on the console.

To **use any line**, do the following:

- From the Remote Phone Number drop down menu, select **Pool**.

C-Soft creates a ring only if the selected line is ringing.

31.62 PTT-Group Call

The **PTT-Group Call** button is used to call a specific group/talk group.

Refer to the Table “Radio Operations Supported by System Type,” on page 394 for radio operations supported by Group PTT.

To **send a group call**, do the following:

1. If the Keypad is present, select the **group** from the Contacts tab or manually enter a group ID.
OR
From the Group-PTT drop down menu, select the **group** you want to call.
2. Press and hold the **Group PTT** button and begin speaking.
3. Release the **Group PTT** button to stop transmitting.

The PTT-Group Call function allows the console operator to transmit audio to a group of radios.

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.

2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **PTT-Group Call**.
5. Click **OK**.

The button changes color and PTT appears on the button.

31.63 PTT-Main

The **PTT-Main** function allows the console operator to transmit audio to all selected channels. This button is generally included on all console designs. In C-Soft Runtime, if the console operator presses the PTT-Main button, audio is sent to all selected channels.

To **add a PTT-Main button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **PTT-Main**.
5. Click **OK**.

The button changes color and PTT appears on the button.

31.64 PTT-Per Line

The **PTT-Per Line** function, or instant PTT function, allows the console operator to immediately key up a specific line on the current frequency.

When the PTT-Per Line function is selected, a line must be selected from the Line to Associate Function With drop down menu on the Type page.

31.64.1 Per Line PTT Setup page

When the PTT-Per Line function is selected from the UI Element drop down menu, the **Per Line PTT Setup** page appears. Refer to the Figure below.

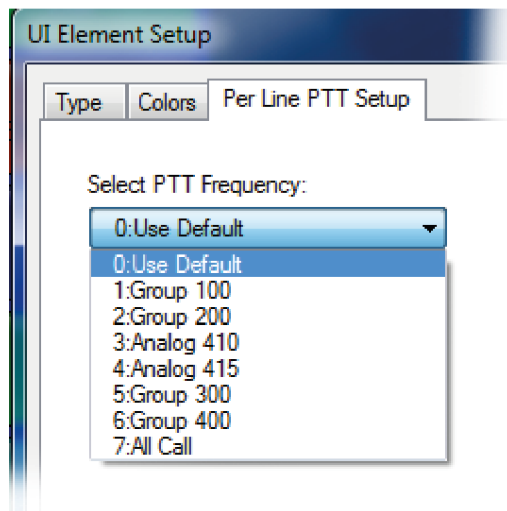


Figure 31.64: Per Line PTT Setup Page - UI Element Setup

Select PTT Frequency drop down menu

The **Select PTT Frequency** drop down menu identifies the desired frequency to use per selected line.

To **add a PTT-Per Line button**, do the following:

1. From the UI Element drop down menu, select **PTT-Per Line**.
The Line to Associate Function With drop down menu becomes active.
2. From the Line to Associate Function With drop down menu, select the **line** to associate with PTT Per Line.
3. Click the **Per Line PTT Setup** tab.
The Per Line PTT Setup page appears.
4. From the Select PTT Frequency drop down menu, select the **frequency**.
5. Click **OK**.

The color of the button changes and Freq X (where X is the frequency) appears on the button.

31.65 PTT-Private Call

The **PTT-Private Call** button is used to call an individual radio user.

Refer to the table “Radio Operations Supported by System Type,” on “*Keypad, page 433*” to see radio operations supported by PTT-Private Call.

To **add a PTT-Private Call button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **PTT-Private Call**.
5. Click **OK**.

The button changes color and PTT-Private Call appears on the button.

To **send a private call**, do the following:

1. If the Keypad is present, select the **User** from the Contacts tab or manually enter a **User ID**.
OR
From the PTT-Private Call drop down menu, select the **user** you want to call.
2. Press hold the **PTT-Private Call** button and begin speaking.
3. Release the **PTT-Private Call** button to stop transmitting.

31.66 PTT-Talk Back

The **PTT-Talk Back** function allows the console operator to transmit back to the last line from which audio was received.

To **add a PTT-Talk Back button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
 2. Right-click the **None** button.
A shortcut menu appears.
 3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
 4. From the UI Element drop down menu, select **PTT-Talk Back**.
 5. Click **OK**.
- The button changes color and PTT-Talk Back appears on the button.

31.67 Radio Call Alert

The **Radio Call Alert** button is used to send an alert message to a target radio.

Refer to the table “Radio Operations Supported by System Type,” on *Keypad, page 433* to see radio operations supported by Radio Call Alert.

To **add a Radio Call Alert button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Radio Call Alert**.
5. Click **OK**.

The button changes color and Call Alert appears on the button.

To **send a radio call alert message**, do the following:

1. If the Keypad is present, select the **User** from the Contacts tab or manually enter a **User ID**.
OR
Select the **User ID** to send the call alert.
2. Click **Radio Call Alert**.
The command is sent.

31.68 Radio Call Type

The **Radio Call Type** button is used to switch between Conference Call and Broadcast Call. This feature is only available for the NEXEDGE IP interface.

To **add a Radio Call Type button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. Click **OK**.

The button changes color and Call Type appears on the button.

31.69 Radio Check

The **Radio Check** function is used to send a message to check for radio activity.

Refer to the table “Radio Operations Supported by System Type,” on “*Keypad, page 433*” to see radio operations supported by Radio Check.

To **add a Radio Check button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Radio Check**.
5. Click **OK**.

The button changes color and Radio Check appears on the button.

To **send a radio check message**, do the following:

1. If the Keypad is present, select the **User** from the Contacts tab or manually enter a **User ID**.
OR
Select the **User ID** to send the radio check message to.
2. Click the **command button** on the Radio Check button.

31.70 Radio Disable

The **Radio Disable** button is used to disable a radio in the field from use by unauthorized persons.

Refer to the table “Radio Operations Supported by System Type,” on “*Keypad, page 433*” for radio operations supported by Radio Disable.

To **add a Radio Disable button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Radio Disable**.
5. Click **OK**.

The button changes color and Radio Disable appears on the button.

To **disable a radio**, do the following:

1. If the Keypad is present, select the **User** from the Contacts tab or manually enter a **User ID**.
OR
Select the **Unit ID** to disable.
2. Click **Radio Disable**.
The command is sent.

31.71 Radio Enable

The **Radio Enable** button is used to enable a radio that has been disabled.

Refer to the table “Radio Operations Supported by System Type,” on “*Keypad, page 433*” for radio operations supported by Radio Enable.

To **add a Radio Enable button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Radio Enable**.
5. Click **OK**.

The button changes color and Radio Enable appears on the button.

To **enable a radio**, do the following:

1. If the Keypad is present, select the **User** from the Contacts tab or manually enter a **User ID**.
OR
Select the **Unit ID** to enable.
2. Click **Radio Enable**.
The command is sent.

31.72 Radio Regroup

The **Radio Regroup** button allows the dispatcher to temporarily reassign a radio to a different talkgroup.

To **add a Radio Regroup button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
 2. Right-click the **None** button.
A shortcut menu appears.
 3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
 4. From the UI Element drop down menu, select **Radio Regroup**.
 5. Click **OK**.
- The button changes color and Radio Regroup appears on the button.

31.73

Radio Ungroup

The **Radio Ungroup** button allows the dispatcher to reset a radio to their original talkgroup after using the Radio Regroup button.

To **add a Radio Ungroup button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
 2. Right-click the **None** button.
A shortcut menu appears.
 3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
 4. From the UI Element drop down menu, select **Radio Ungroup**.
 5. Click **OK**.
- The button changes color and Radio Ungroup appears on the button.



Notice!

The Radio Regroup and Radio Ungroup buttons are only available for the NEXEDGE IP interface.

31.74

Radio Remote Monitor

The **Radio Remote Monitor** button allows the dispatcher to open the mic of a targeted radio and hear any audio in the vicinity of that radio.

Refer to the table “Radio Operations Supported by System Type,” on “*Keypad, page 433*” for radio operations supported by Radio Remote Monitor.

To **add a Remote Monitor button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.

4. From the UI Element drop down menu, select **Remote Monitor**.
5. Click **OK**.

The button changes color and Remote Monitor appears on the button.

To **monitor a unit**, do the following:

1. If a Keypad is present, select a **User** from the Contacts tab.
OR
From the Remote Monitor drop down menu, select the **unit** to monitor.
2. Click **Remote Monitor**.
The command is sent.

31.75 Radio Status

The **Radio Status** function is used to send a status message to a unit.

Refer to the table “Radio Operations Supported by System Type,” on “*Keypad, page 433*” for radio operations supported by radio status. The list of statuses which can be sent from the button configured in the Radio Status Setup window.

To **send a radio status**, do the following:

1. From the Contacts tab of the Keypad, select a **user**.
OR
Manually enter a **User ID**.
2. From the Radio Status drop down menu, select the **status** to be sent.
3. Click the **Radio Status button**.

The status message is sent to the user selected in the Keypad or manually entered.

31.76 Radio Status Request

The **Radio Status Request** button is used to send message to request status from a unit in the system.

Refer to the table “Radio Operations Supported by System Type,” on “*Keypad, page 433*” for radio operations supported by Radio Status Request.

To **add a Radio Status Request button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Radio Status Request**.
5. Click **OK**.

The button changes color and Status Request appears on the button.

To **request a status from a unit**, do the following:

1. If the Keypad is present, select the **User** from the Contacts tab or manually enter a **User ID**.
OR
From the Radio Status Request drop down menu, select the **User** to send the radio status message to.
2. Click **Radio Status Request**.
The command is sent.

31.77 Radio Select Call

The **Radio Select Call** function is used to send a Select Call to a unit in the system.

Refer to the table “Radio Operations Supported by System Type,” on “*Keypad, page 433*” for radio operations supported by Radio Select Call.

To **add a Radio Select Call button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Radio Select Call**.
5. Click **OK**.

The button changes color and Radio Select Call appears on the button.

To **send a select call**, do the following:

1. If the Keypad is present, select the **User** from the Contacts tab or manually enter a **User ID**.
OR
Select the **Unit ID** to enable.
2. Click **Radio Select Call**.
The command is sent.

31.78 Radio-On/Offhook

The **Radio-On/Offhook** function allows the console operator to control a radio using a standard PSTN (Public Switched Telephone Network) phone line. Radio - On/Offhook is similar to “*Phone-On/Offhook, page 343*”, except radio-on/offhook has a Keep-Alive tone generated to keep the phone line from dropping. A keep-alive tone goes between the radio and console so the system knows to stay active until after the connection is broken.



Notice!

Requires an IP-223 with TDI's at both ends.

To **add a Radio On/OffHook button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Radio - On/Offhook**.
The Line to Associate Function With drop down menu becomes active and the Remote Phone Select tab appears.
5. From the Line to Associate Function With drop down menu, select the **line** to associate the On/Offhook function.
6. Click the **Remote Phone Line Select** tab.
The Remote Phone Line Select page appears.
7. From the Remote Phone Number drop down menu, select the **line** to force the use of a particular phone line on the console.
8. Click **OK**.
The button changes color and Radio OnHook appears on the button

Refer to

- *Phone-On/Offhook, page 343*

31.79

Relay Control Button

The **Relay Control Button** function allows the console operator to control the relays on an attached ADHB-4 or a network-connected NEO-10.

31.79.1

Relay Control Setup page

When Relay Control Button is selected from the UI Element drop down menu, the **Relay Control Setup** page appears.

The image shows the 'UI Element Setup' window with the 'Relay Control Setup' tab selected. The window has a title bar with a close button (X) and a tab bar with four tabs: 'Type', 'Colors', 'Relay Control Setup' (active), 'Text Message Control', and 'Status Control'.

Relay Destination: Radio buttons for 'ADHB-4' (selected) and 'NEO'.

ADHB-4 Settings: Radio buttons for 'None' (selected), 'Relay1', and 'Relay2'.

NEO Settings: IP address field (0 . 0 . 0 . 0) and a 'Relay' dropdown menu (None).

Relay Behavior: Radio buttons for 'Latch Relay On/Off' (selected), 'Momentary Relay', and 'Timed Relay' (3000 ms).

Emergency Relay Trigger:

- ☐ Activate Relay on Emergency Call
- Deactivate Relay on:
 - ☒ Relay Control Button Only
 - ☐ Emergency Clear and Acknowledge
 - ☐ Emergency Acknowledge

Phone Relay Trigger:

- ☐ Activate Relay in Call
- ☐ Activate Relay on Phone Ring
- Phone Relay Behavior:
 - ☒ Cadence
 - ☐ Steady

PTT Relay Trigger:

- ☐ Activate Relay on PTT

An 'OK' button is located at the bottom right of the window.

Figure 31.65: Relay Control Setup Page - C-Soft

To **open the Relay Control Setup page**, do the following:

1. Select **Insert | Add IU Button**.
A None button is added to the console.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element Function drop down menu, select **Relay Control**.
The Relay Control Setup tab appears.

Relay Destination group box

The **Relay Destination** radio buttons identify the relay to be controlled. When a selection is made, the fields necessary to enter the setup information for the relay are enabled.

ADHB-4 radio button

The **ADHB-4** radio button indicates an ADHB-4 is controlled by the Relay Control button.

NEO radio button

The **NEO** radio button indicates a NEO-10 is controlled by the Relay Control button.

ADHB-4 Settings group box

The **ADHB-4 Settings** radio buttons identify which ADHB-4 relay is activated when the button is pressed, or when the configured input conditions are met.

None radio button

The **None** radio button indicates none of the ADHB-4 relays is activated when the button is pressed.

Relay 1 radio button

The **Relay1** radio button indicates the first relay in the ADHB-4 is being controlled.

Relay 2 radio button

The **Relay 2** radio button indicates the second relay in the ADHB-4 is being controlled.

NEO Settings group box

The **NEO Settings** field identifies the IP Address and the relay, if any, for the NEO-10.

IP field

The **IP** field identifies the IP Address of the NEO-10.

Relay drop down menu

The **Relay** drop down menu is used to select the desired relay.

Available selections for this field are None, Port 1, Port 2, Port 3, Port 4, Port 5, Port 6, Port 7, Port 8, Port 9 and Port 10.

To **configure and add an ADHB-4 Relay Control button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Relay Control Button**.
The Relay Control Setup tab appears.
5. Click the **Relay Control Setup** tab.
The Relay Control Setup page appears.
6. From the Relay Destination group box, select the **ADHB-4** radio button.
The ADHB-4 Settings group box becomes active.
7. From the ADHB-4 Settings group box, select the **None** radio button.
OR
From the ADHB-4 Settings group box, select the **Relay1** radio button.
OR
From the ADHB-4 Settings group box, select the **Relay2** radio button.
8. Click **OK**.

The button changes color and Relay Off appears on the button.

To **configure and add a NEO Relay Control button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Relay Control Button**.
The Relay Control Setup tab appears.

5. Click the **Relay Control Setup** tab.
The Relay Control Setup page appears.
6. From the Relay Destination group box, select **NEO**.
The NEO Settings group box becomes active.
7. From the Relay Behavior group box, select the **desired mode** radio button for the relay control.
8. In the IP field, enter the **IP Address** of the NEO-10.
9. From the Relay drop down menu, select the **desired relay**.
10. Click **OK**.
The button changes color and Relay Off appears on the button.

Relay Behavior group box

The **Relay Behavior** radio buttons identify the mode for the relay control.

Latch Relay On/Off radio button

The **Latch Relay** radio button indicates the relay's latch is controlled by the operator. When the Relay Control button is clicked the device is active. When the Relay Control button is pressed again the device is inactive.

Momentary Relay radio button

The **Momentary Relay** radio button indicates the relay is active when the button is pressed. When the button is released, the relay is inactive.

Timed Relay radio button

The **Timed Relay** radio button indicates that when an Relay Control button is clicked, it remains active for the amount of time configured in the Timed field. When the radio button is selected, you must configure a time in the Timed field.

Timed Relay field

The **Time Relay** field is used to set the time, in ms, when the Timed Relay radio button is selected.

The range for this field is 0 to 30000ms.

Emergency Relay Trigger group box

The **Emergency Relay Trigger** group box is used to configure how the relay behaves when an emergency call is received.

Activate Relay on Emergency Call check box

The **Activate Relay on Emergency Call** check box indicates an emergency call activates the configured relay. If the check box is selected, a radio emergency deactivation radio button can be selected.

Relay Control Button Only radio button

The **Relay Control Button Only** radio button is used to configure the relay to deactivate when the relay control button is released.

Emergency Clear and Acknowledge radio button

The **Emergency Clear and Acknowledge** radio button indicates the relay is deactivated when the emergency is acknowledged, cleared, or when the relay control button is released.

Emergency Acknowledge radio button

The **Emergency Acknowledge** radio button indicates the relay is deactivated when the emergency is acknowledged or when the relay control button is released.

Phone Relay Trigger group box

The **Phone Relay Trigger** group box is used to configure how the relay behaves when a phone call is received.

Activate Relay in Call check box

The **Activate Relay in Call** check box indicates the relay is activated while C-Soft is in a phone call. This setting includes both a phone line going offhook as well as C-Soft participating in a SIP call.

Activate Relay on Phone Ring check box

The **Activate Relay on Phone Ring** check box indicates a phone ring activates the configured relay. When the check box is selected, the phone ring behavior can be configured. This setting includes both a ringing phone line as well as an incoming SIP call.

Cadence radio button

The **Cadence** radio button indicates the relay is activated when an individual phone ring starts and deactivated when the phone ring ends.

EXAMPLE: A phone ringing three times, produces an on/off/on/off /on/off pattern.

Steady radio button

The **Steady** radio button indicates the relay is activated when the first phone ring is received and deactivates when the call is answered or the caller terminates the call.

EXAMPLE: A phone ringing three times, produces a on/off pattern.

PTT Relay Trigger group box**Activate Relay on PTT check box**

The **Activate Relay on PTT** check box indicates the configured relay is active when any console-generated transmit event, with the exception of intercom and intercom per line, occurs.

31.79.1.1 Relay Destination group box**31.79.1.2 ADHB-4 Settings group box****31.79.1.3 NEO Settings group box**

31.79.1.4 Relay Behavior group box**31.79.1.5 Emergency Relay Trigger group box****31.79.1.6 Phone Relay Trigger group box****31.79.1.7 PTT Relay Trigger group box****31.79.2 Text Message Control page**

To open the **Text Message Control** page, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element Function drop down menu, select **Relay Control Button**.
The Relay Control Setup, Text Message Control, and Status Control tabs appear.
5. Click the **Text Message Control** tab.

The Text Message Control page appears.

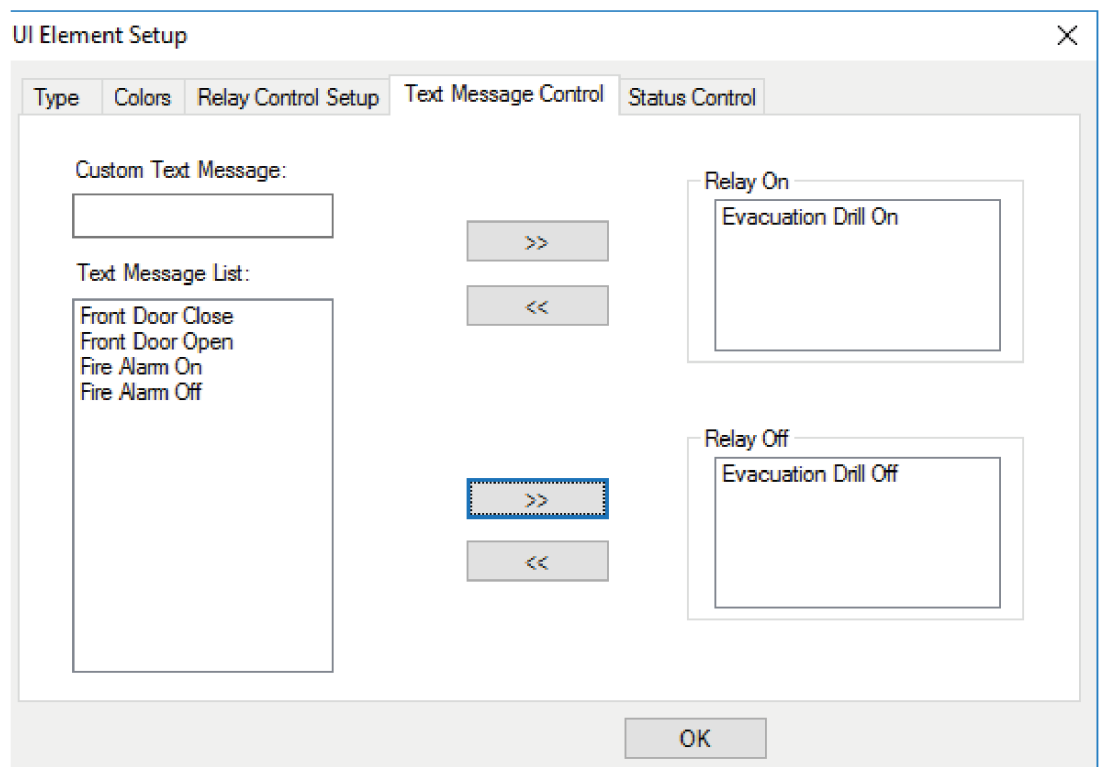


Figure 31.66: Text Message Control Page

Custom Text Message field

The **Custom Text Message** field is used to enter a text message that is not in the Text Message ID List.

Text Message List field

The **Text Message List** field is used select a status that was pre-created in the Text Message ID List.

Add button

The **Add** button is used to add the custom or selected text message to the Relay On field.

Remove button

The **Remove** button is used to add the custom or selected text message to the Relay On field.

Relay On field

The **Relay On** field is used to list the different text messages that are sent when the relay is turned on.

Add button

The **Add** button is used to add the custom or selected text message to the Relay Off field.

Remove button

The **Remove** button is used to add the custom or selected text message to the Relay Off field.

Relay Off field

The **Relay Off** field is used to list the different text messages that are sent when the relay is turned off.

OK button

The **OK** button saves the modifications and closes the window.

To **create a text message relay control button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
 2. Right-click the **None** button.
A shortcut menu appears.
 3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
 4. From the UI Element Function drop down menu, select **Relay Control Button**.
The Relay Control Setup, Text Message Control, and Status Control tabs appear.
 5. Click the **Text Message Control** tab.
The Text Message Control page appears.
 6. In the Custom Text Message field, enter a **custom text message** that is not listed in the Text Message ID List.
- OR

From the Text Message List Group Box, select the **status desired** to trigger relays on and off.

The list of text messages is pulled from the Text Message ID List.

7. Click the **Add button** to add the status to either the Relay On group box or the Relay Off group box.

The Text Message moves from the Custom Text Message field or the Text Message List.

IMPORTANT: A status cannot be used for both a trigger on and a trigger off. If the relay control type is timed, the Relay Off group box is disabled since the relay automatically latches off when the designated time has elapsed.

8. Click **OK**.

The modifications are made and the window closes.

To **remove status from the relay on or relay off lists**, do the following:

1. From the UI Element Function drop down menu, select **Relay Control Button**.
The Relay Control Setup, Text Message Control, and Status Control tabs appear.
2. Click the **Text Message Control** tab.
The Text Message Control page appears.
3. From the Relay On list, select the **text message** to remove from the list.
OR
From the Relay Off list, select the **text message** to remove from the list.
4. Click the **Remove button** to remove the status from either the Relay On group box or the Relay Off group box.
The Text Message is removed from the Relay On or the Relay Off list.
5. Click **OK**.

The modifications are made and the window closes.

31.79.3

Status Control page

To **open the Status Control page**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element Function drop down menu, select **Relay Control Button**.
The Relay Control Setup, Text Message Control, and Status Control tabs appear.
5. Click the **Status Control tab**.

The Status Control page appears.

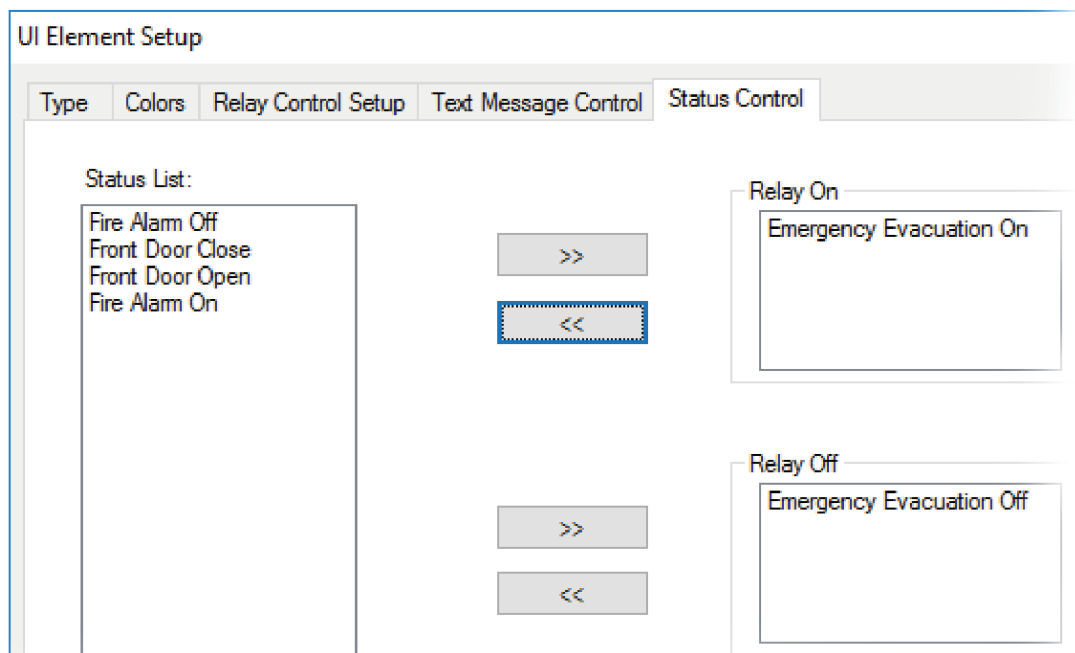


Figure 31.67: Status Control Page

Status List field

The **Status List** field is used to select the status to add to the Relay On field or Relay Off field.

Add button

The **Add** button is used to add the custom or selected status to the Relay On field.

Remove button

The **Remove** button is used to add the custom or selected status to the Relay On field.

Relay On field

The **Relay On** field is used to list the different statuses that are sent when the relay is turned on.

Add button

The **Add** button is used to add the custom or selected status to the Relay Off field.

Remove button

The **Remove** button is used to add the custom or selected status to the Relay Off field.

Relay Off field

The **Relay Off** field is used to list the different statuses that are sent when the relay is turned off.

OK button

The **OK** button saves the modifications and closes the window.

To **create a status control button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element Function drop down menu, select **Relay Control Button**.
The Relay Control Setup, Text Message Control, and Status Control tabs appear.
5. Click the **Status Control** tab.
The Status Control page appears.
6. From the Status List group box, select the **status desired** to trigger relays on and off.
The list of statuses is pulled from the Status Message ID List.
7. Click the **Add button** to add the status to either the Relay On group box or the Relay Off group box.
The Status moves from the Status List to the Relay On or Relay Off group box.
IMPORTANT: A status cannot be used for both a trigger on and a trigger off. If the relay control type is timed, the Relay Off group box is disabled since the relay automatically latches off when the designated time has elapsed.
8. Click **OK**.
The modifications are made and the window closes.

To **remove status from the relay on or relay off lists**, do the following:

1. From the UI Element Function drop down menu, select **Relay Control Button**.
The Relay Control Setup, Text Message Control, and Status Control tabs appear.
2. Click the **Status Control** tab.
The Status Control page appears.
3. From the Relay On list, select the **status** to remove from the list.
OR
From the Relay Off list, select the **status** to remove from the list.
4. Click the **Remove button** to remove the status from either the Relay On group box or the Relay Off group box.
The status is removed from the Relay On or the Relay Off list.
5. Click **OK**.
The modifications are made and the window closes.

31.80

RX All

The RX All function allows the console operator to remove mute on selected lines if Allow Muting Selected Lines is selected.

In C-Soft Runtime, if the console operator presses the RX All button it does not change the select status of any line.

To **add an RX All button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.

3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **RX All**.
5. Click **OK**.
The button color changes and RX All appears on the button.

31.81 Scan

The **Scan** function allows the console operator to scan a selected line.

To **add a Scan button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Scan**.
The Line to Associate Function With drop down menu becomes active.
5. From the Line to Associate Function With drop down menu, select the **line** to associate with Scan.
6. Click **OK**.
The button color changes and Scan Off appears on the button.

To **activate or deactivate a radio's scan mode in Runtime**, do the following:

1. Press the **Scan button**.
The radio's scan mode is activated.
2. Press the **Scan button** again.
The radio's scan mode is deactivated.

31.82 Select

The **Select** function allows the console operator to toggle transmission channels when a master or accessory PTT button is selected. DTMF and Alert tones are also transmitted to all selected lines. Select buttons also indicate the type of activity on a line, such as: audio receive, audio transmit, mute, crossmute, intercom, link fail, and supervisor status.

The Supervisor icon cannot be customized.

- A Mute-Per Line button can be associated with the line assigned to the Select button to mute the RX (incoming) audio. The mute icon appears when the Select line is muted, RX blocked, or when a Mute-Main button is selected. Refer to “*Mute-Per Line*, page 321”.

For more information, refer to *Button Images window*, page 141.

Select Button Setup page

When Select is chosen from the UI Element drop down menu, the **Select Button Setup** page appears.

To **open the Select Button Setup page**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Select**.
The Select Button Setup tab appears.
5. Click the **Select Button Setup** tab.
The Select Button Setup page appears.

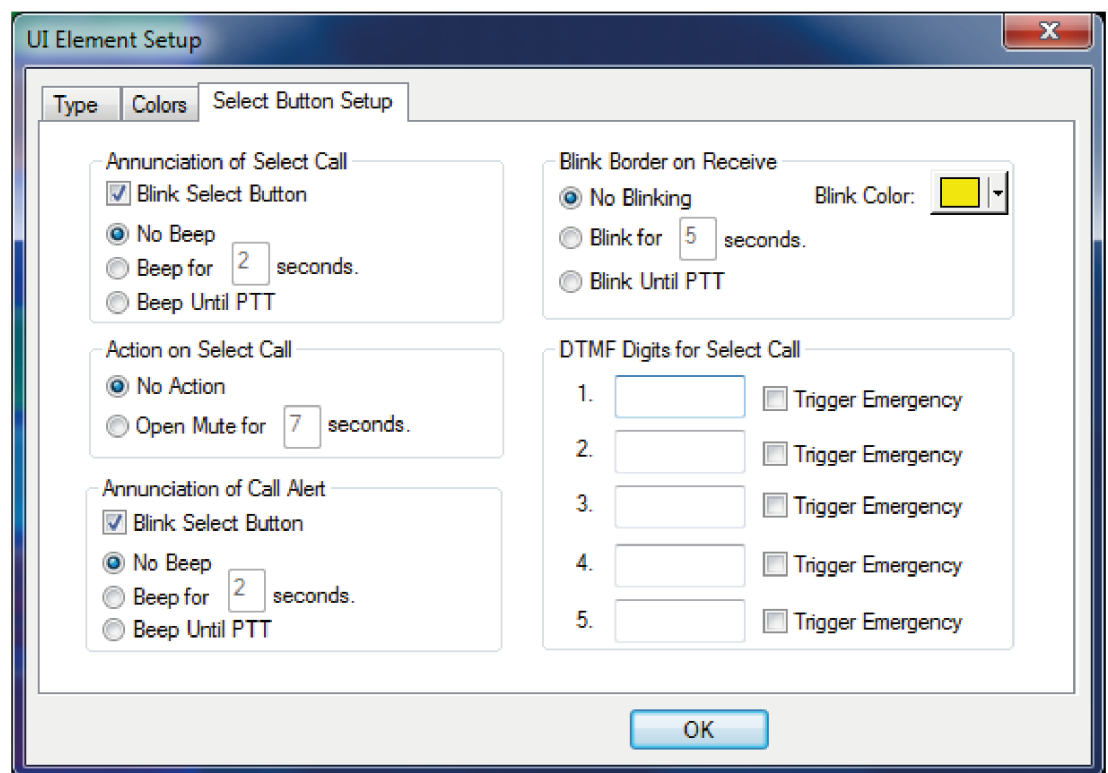


Figure 31.68: Select Button Setup - UI Element Setup

Annunciation of Select Call group box

Blink Select Button check box

The **Blink Select Button** check box is used to indicate the button blinks light blue when the console receives a select call.

No Beep radio button

The **No Beep** radio button indicates no tones are heard when a select call is received.

Beep for radio button

The **Beep for** radio button is used to indicate a select call alert tone is heard when a select call is received.

Beep for seconds field

The **Beep for seconds** field indicates the amount of time the select call alert tone plays.

The Beep for radio button must be selected for this field to be active.

The range for this field is 1-10 seconds.

Beep Until PTT radio button

The **Beep Until PTT** radio button indicates the select call alert tone is heard until a PTT operation is performed on the line that received the select call.

To **configure a blinking button indication**, do the following:

- From the Select Button Setup page, select the **Blink Select Button** check box.

To **configure the desired notification**, select one of the following:

- No Beep radio button - no beep sound is played when a select call is received.
- Beep For radio button - a beep sounds for the specified the number of second.
- Beep Until PTT radio button - a beep sounds until a PTT when a select call is received.

Action On Select Call group box

No Action radio button

The **No Action** radio button indicates an active mute button is not opened during a select call.

Open Mute for radio button

The **Open Mute** for radio button indicates a muted line is opened upon receiving a select call.

The Open Mute for seconds field must also be configured.

Open Mute for seconds field

The **Open Mute for seconds** field indicates the amount of time a muted line is unmuted upon receiving a select call.

The range for this field is 1 to 20 seconds.

To **configure the desired action**, select one of the following:

- No Action radio button - no action occurs.
- Open Mute for radio button - specifies the duration, in seconds, muted line remains open (unmuted).

To **add a Select button**, do the following

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Select**.
The Line to Associate Function With drop down menu becomes active and the Select Button Setup tab appears.
5. From the Line to Associate Function With drop down menu, select the **line** to associate with Select.

6. Click the **Select Button Setup** tab.
The Select Button Setup page appears.
7. In the DTMF Digits for Select Call field, enter the **digits required** to activate the select call feature.
8. From the Annunciation of Select Call group box, select the **type of notification** to be used.
9. From the Action on Select Call group box, select the **mute action** during a select call.
10. Click **OK**.

The button changes color and Select appears on the button.

Annunciation of Call Alert group box

Blink Select Button check box

The **Blink Select Button** check box indicates the button blinks orange when the console receives a call alert.

No Beep radio button

The **No Beep** radio button indicates no tones are heard when a call alert is received.

Beep for check box

The **Beep for** check box indicates a call alert tone is heard when a call alert is received.

The Beep for seconds field indicates the amount of time the alert tone plays.

Blink Border on Receive group box

No Blinking radio button

The **No Blinking** radio button indicates the Select button does not blink when receiving a call.

Blink for radio button

The **Blink for** radio button indicates upon receiving a call the Select button's border blinks for the amount of time set in the seconds field. When the line is transmitting the blinking stops.

When selected, the Blink for Radio button field is active.

Blink for field

The **Blink for** field indicates the amount of time, in seconds, the Select button blinks upon receiving a call.

Blink Until PTT radio button

The **Blink Until PTT** radio button indicates upon receiving a call, the Select button's border blinks until a PTT is generated on the line.

Blink Color drop down palette

The **Blink Color** drop down palette indicates the color of the button border when it blinks.

DTMF Digits for Select Call fields

The **DTMF Digits for Select Call** fields identifies the digits required to activate the select call feature. C-Soft can respond up to five different DTMF strings.

This field can contain up to 10 characters.

Beep for seconds field

The **Beep for** seconds field indicates the amount of time the call alert tone plays.

The Beep for radio button must be selected for this field to be active.

The range for this field is 1 to 10 seconds.

Beep Until PTT radio button

The **Beep Until PTT** radio button indicates the alert tone is heard until a PTT operation is performed on the line that received the call alert.

To **configure a blinking button indication**, do the following:

- From the Select Button Setup page, select the **Blink Select Button** check box.

To **configure the desired notification**, select one of the following:

- No Beep radio button - no beep sound is played when a select call is received.
- Beep For radio button - a beep sounds for the specified number of second (0-10 seconds) when a Select Call is received.
- Beep Until PTT radio button - a beep sounds until a PTT when a select call is received.

DTMF Digits for Select Call group box

The **DTMF Digits for Select Call** group box contains five fields to specify DTMF digit strings to trigger a select call in C-Soft. When the console receives any of the DTMF strings configured in the select call setup, the button notifies the operator by either blinking or beeping depending on the console configuration.

Trigger Emergency check box

The Trigger Emergency check box indicates an emergency is triggered when the string entered in the field is received.

Refer to

- *Mute-Per Line, page 321*

31.83**SIP Call Control**

The **SIP Call Control** function creates a button to open the SIP Calls window shown in *SIP Calls window, page 375*.

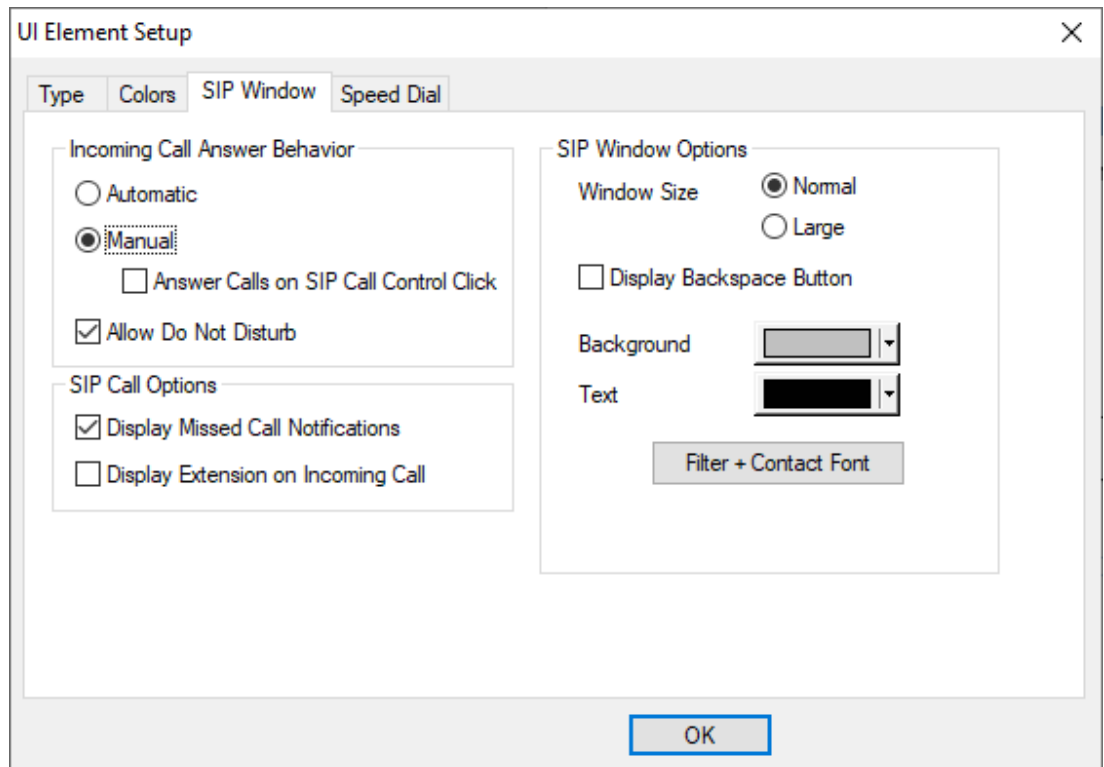


Figure 31.69: SIP Window - SIP Call Control

Refer to

- *SIP Calls window, page 375*

31.83.1

SIP Window page

Incoming Call Answer Behavior group box

The **Incoming Call Answer Behavior** group box is used to determine how C-Soft responds to incoming calls.

Automatic button

The **Automatic** button indicates incoming calls are answered automatically by C-Soft.

Manual button

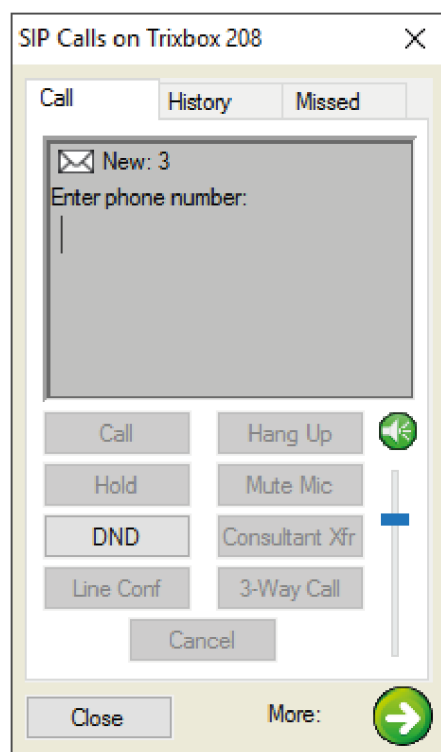
The **Manual** button indicates incoming calls are answered by clicking the Answer button in the SIP Call Control window.

Answer Call on SIP Call Control Click check box

The **Answer Call on SIP Call Control Click** check box indicates incoming calls are answered using the SIP Call Control button. This option also allows calls to be answered in a single button press.

Allow Do Not Disturb check box

The **Allow Do Not Disturb** check box indicates the Do Not Disturb feature is available. If unchecked, the Do Not Disturb button is disabled.

SIP Call Options group box**Figure 31.70:** Normal Window Size

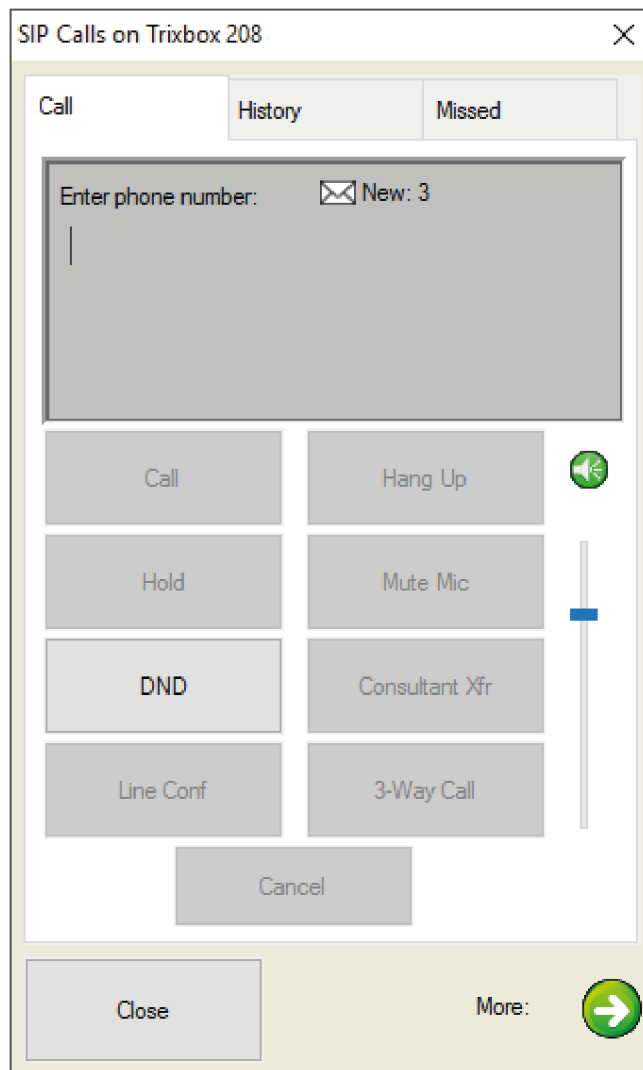


Figure 31.71: Large Window Size

Display Missed Call Notifications check box

The **Display Missed Call Notifications** check box indicates if any missed call notifications should be displayed to the user. When selected, missed calls generate notifications on the SIP Call Control button and in the SIP Call Control window.

In configurations where the extension is configured for one or more Ring Groups, it may be useful to not display missed call notifications.

Display Extension on Incoming Call check box

The **Display Extension on Incoming Call** check box indicates the incoming extension number is displayed in addition to any alias information in the SIP Call Display window.

When not selected, the incoming SIP extension number is only displayed if there is no caller ID information included in the incoming call.

SIP Window options

Window Size radio buttons

The **Window Size** radio buttons are used to specify the size of the SIP window.

Available options are Normal and Large.

**Notice!**

The Large window size is recommended for touch-screen operation.

Display Backspace Button check box

The **Display Backspace Button** check box is used to display an on-screen backspace button in the top right corner of the SIP Call Control window. The on-screen backspace button is useful for touchscreen operations when using C-Soft without a keyboard.

Background drop down palette

The **Background** drop down palette is used to change the background color of the SIP Call Display window.

A light color is recommended.

Text drop down palette

The **Text** drop down palette is used to change the color of the SIP Call Display window.

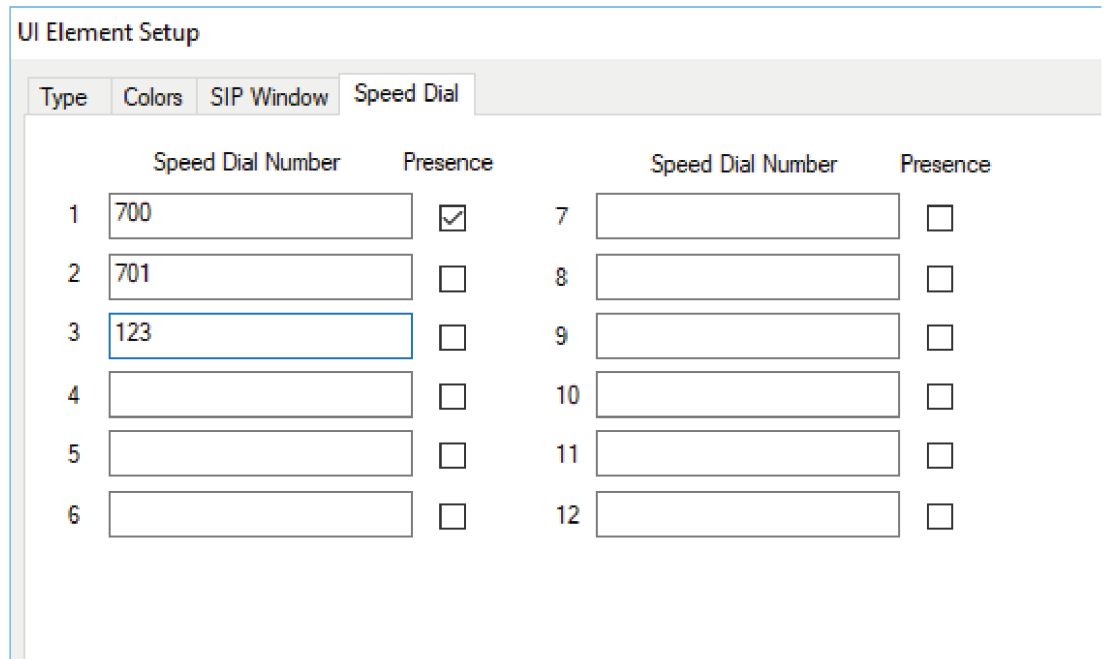
A dark color is recommended.

Filter + Contact Text button

The **Filter + Contact Text** button is used to select a font for the SIP Call Control's Contact and Filter list.

31.83.2**SIP Speed Dial page**

The **SIP Speed Dial** page allows entry of 12 numbers. These provide an easy and convenient way to access commonly-called extensions. Additionally, each entry contains a Presence check box. If an entry's Presence check box is selected, C-Soft attempts to subscribe to presence notifications for the extension.



The image shows a 'UI Element Setup' window with a 'Speed Dial' tab selected. It contains two columns of speed dial entries, each with a number (1-12), a text input field for the number, and a checkbox for 'Presence'.

	Speed Dial Number	Presence		Speed Dial Number	Presence
1	700	☒	7		☐
2	701	☐	8		☐
3	123	☐	9		☐
4		☐	10		☐
5		☐	11		☐
6		☐	12		☐

Figure 31.72: Speed Dial Page

Refer to “Speed Dial Pane” for additional information on the Presence feature.

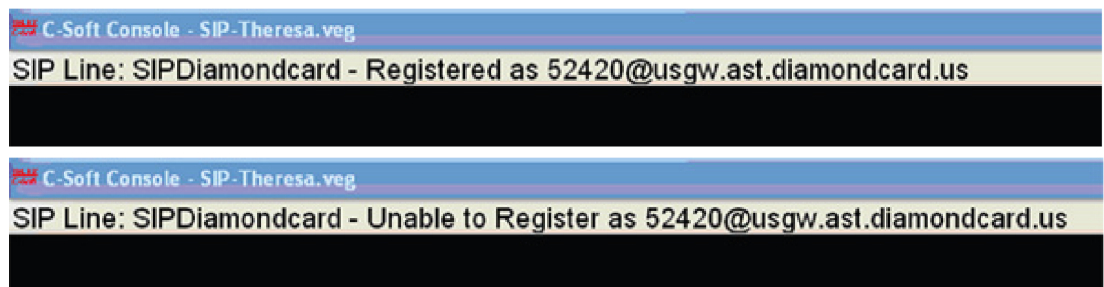
In C-Soft Runtime, when the window is open, the user can receive, place, and transfer phone calls, control the call volume, view history or view a list of missed calls. Monitor the Status Bar at the top of the console window for success or failure messages.

To **initiate a connection to the SIP server**, do the following:

- Open **C-Soft Runtime**.

C-Soft attempts to connect to the server.

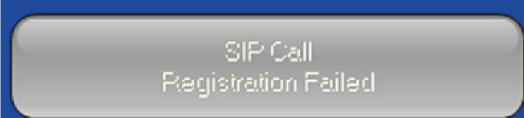
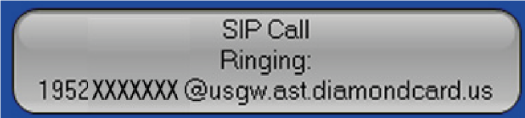
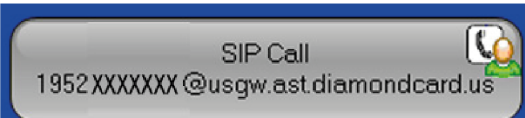
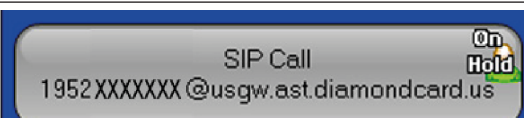
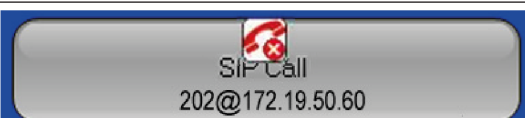
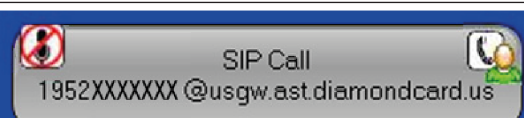
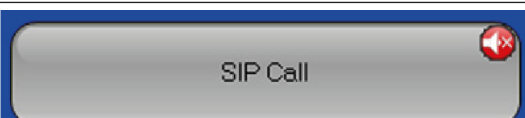
- If the SIP server connection is successful, the message appears on the console status bar.
- If the SIP server connection fails, the message appears on the console status bar.
- If the SIP server connection becomes disconnected during use, the failure message appears in the status bar.



During SIP calls, some status messages and icons appear directly on the SIP Call control button during SIP call activity. These same indications as well as status messages, appear in the SIP Calls window. Refer to the Figure below.

Note:

- A Mute Per Line button can be associated with a SIP Call Control button to mute the SIP line's RX (incoming) audio. The mute icon, refer to the Figure below, appears when the SIP line is muted per line, RX blocked, or when a Mute-Main button is selected.
- If the line is muted, and a call is initiated from the SIP Calls window, the line is automatically unmuted.

	
Registration failed	Ringling
	
Incoming call	Connected
	
On hold	Do not disturb
	
Mic mute	Mute (per line)

Tab. 31.7: SIP Call Buttons with Status Indications

SIP Incoming Call popup menu

The **SIP Incoming Call** popup menu, shown in the Figure below, can be used to quickly access the incoming SIP call. During an incoming call, the status indicator changes to RING. Right-click the incoming SIP call button to access the popup menu.

Available selections for this menu are:

- Open SIP Window - Opens the SIP Calls window. For more information, refer to “*SIP Calls window, page 375*”.
- Answer - Answers the incoming call. For more information, refer to “*Call/Answer Button on Call page, page 375*”.
- Ignore - Ignores the incoming call. For more information, refer to “*Hang Up/Hang Up >/ Ignore Button on Call page, page 375*”.

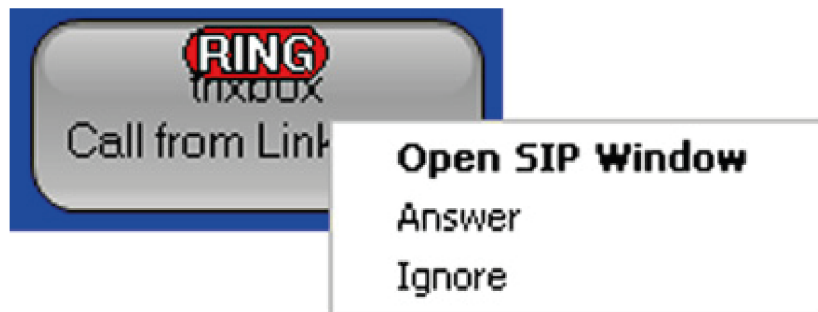


Figure 31.73: SIP Incoming Call popup Menu

Refer to

- *SIP Calls window, page 375*
- *Call page, page 375*

31.83.3

SIP Calls window

The **SIP Calls** window is used to manage SIP Calls, view call history and view missed calls.

31.83.4

Call page

When a SIP Call Control button is clicked in C-Soft Runtime, the SIP Calls window opens to the **Call** page. Refer to the Figure below.

The Call page is used to place incoming and outgoing SIP phone calls, place holds, initiate 3-way calling, mute the microphone, transfer calls, and activate do not disturb.

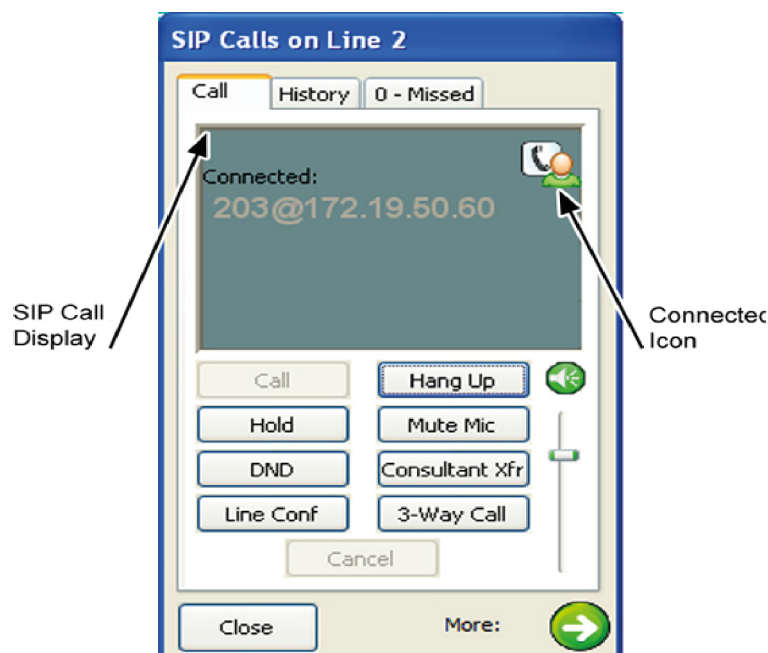


Figure 31.74: SIP Calls Window - Call Page

SIP Call display

The **SIP Call** display is used to enter a phone number to call. It also provides status messages and icons to indicate the state of the associated SIP line.

To **enter a phone number to call**, do the following:

1. Ensure the **SIP Calls** window is open.
2. Using the Keypad pane or the keyboard keypad, enter the **phone number** to call.
The digits appear in the SIP display.
3. Click **Call**.
OR
While the SIP display has focus, press **Enter**.

When the call is connected, the Connected icon appears in the display.

Call/Answer button

The **Call/Answer** button is used to place or answer a call.

This button is disabled until a number is entered or an incoming call is received.

- If a contact is selected from the Contacts pane, or a phone number is entered in the SIP Call display, the Call button is enabled.
- If a call is being received on a line while the SIP Calls window is open, a ring icon appears on the SIP Call display, the Call/Answer button changes to Answer, and the Call/Answer and Ignore buttons are enabled.

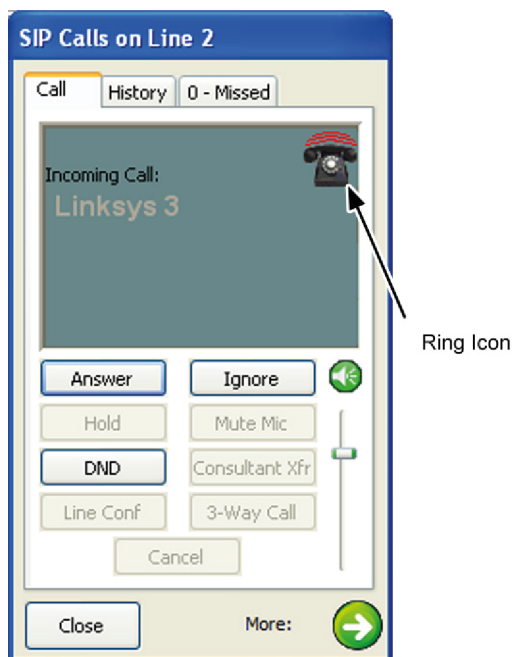


Figure 31.75: SIP Calls - Incoming Call

To **answer a call**, do the following:

- Click **Answer**.

The incoming call is connected.

If the line is already engaged in a call, the existing call is placed on hold and the Cancel button label changes to Switch.

To **return to a caller on hold while on another call**, do the following:

- Click **Switch**.

The current caller is placed on hold and the other call is taken off hold.

To **answer and merge a waiting call with the current call**, do the following.

1. While already engaged in a call, click **Answer**.

The current call is placed on hold and the incoming call is answered.

2. Click **3-way Call**.

The on-hold call is taken off hold, and joined with the other call. The two callers and console operator are connected in one conversation. The 3-Way Call button label changes to Leave Call.

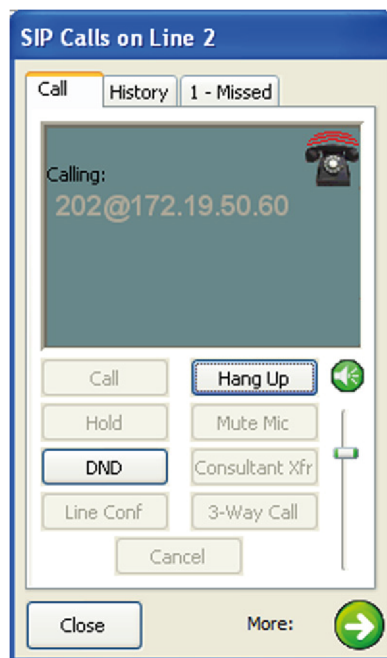


Figure 31.76: SIP Calls - Outgoing Call

To **place an outgoing call**, do the following:

1. Using the Keypad pane or keyboard, enter the **phone number**.
The number appears in the SIP Calls display.
2. Click **Call**.
OR
Press **Enter**.

The call is placed to the phone number entered in step 1.

To disconnect from the call, click Hang Up.

Hang Up/Hang Up >/Ignore Button

The **Hang Up/Hang Up >/Ignore** button is used to disconnect the current SIP call or ignore an incoming call.

- During a call, the Hang Up button is enabled.
- If multiple parties are connected via consultant transfer, 3-way calling, or call waiting the Hang Up > button appears. Click the Hang Up > button to open a popup menu containing all currently connected calls.
- While an incoming call is ringing, the Hang Up button's text changes to Ignore.

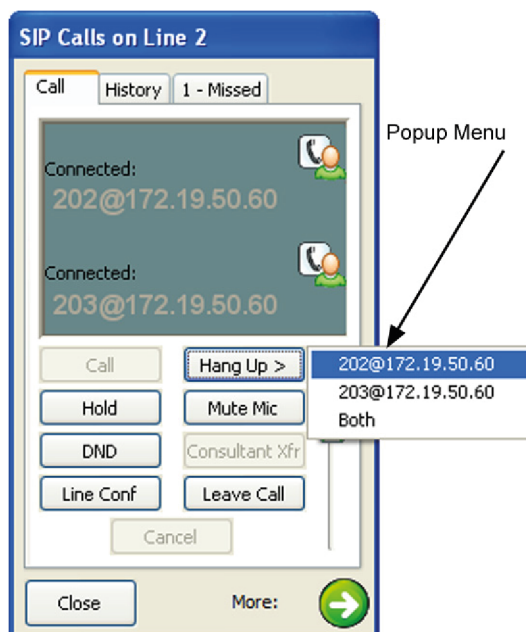


Figure 31.77: Hang Up > Button with popup Menu

To **disengage a 2-way call**, do the following:

- Click the **Hang Up** button.

The call is disconnected and the connected icon disappears.

To **disengage a call with multiple participants**, do the following:

1. Click **Hang Up >**.
A popup menu appears. Refer to the Figure above.
2. Select an individual **call** to disconnect from.
OR
Select **Both** to disconnect both calls.

To **ignore an incoming call**, do the following:

- Click **Ignore**.

The call is ignored and the caller information is added to the list on the Missed page.

Hold button

The **Hold** button places the current call on hold. During hold, C-Soft does not send or receive audio.

- If multiple parties are connected at one time, the hold button places all calls on hold or takes all calls off hold.
- If the console operator is talking to the consulting party during a consultant transfer or speaking to one party during a call waiting event, clicking the Hold button places the active participant on hold.

Note:

- Hold options can be configured on the SIP server.
- The SIP hold button stops both incoming and outgoing audio, whereas the console hold button only stops the outgoing audio.

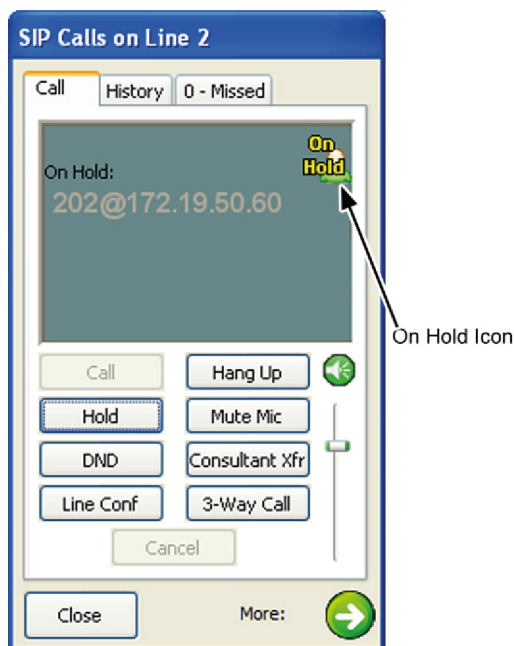


Figure 31.78: Call Page - On Hold

To **place a call on hold**, do the following:

- While in a SIP call, click **Hold**.

The call is placed on hold and the On Hold icon appears in the SIP Call display.

To **take a call off hold**, do the following:

- Click the **Hold** button.

The call is taken off hold.

Mute Mic/Unmute Mic button

The **Mute Mic** button is used to stop microphone audio from reaching any connected party.

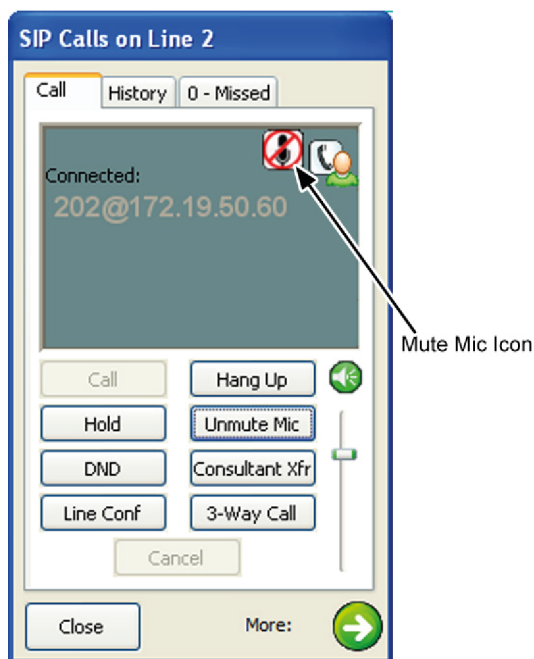


Figure 31.79: Call Page - Mute Mic

To **mute the microphone**, do the following:

- While engaged in a SIP call, click **Mute Mic**.

The button changes to Unmute Mic, the Mute Mic icon appears in the SIP Call display, and microphone audio is not sent.

To **unmute the microphone**, do the following:

- Click **Unmute Mic**.

The button label changes to Mute Mic, the icon disappears from the display, and the microphone is open.

DND/Disable DND button

The **DND (Do Not Disturb) / Disable DND** button is used to activate do not disturb mode.

While active, callers automatically receive a message stating the number is unavailable. While DND is active, DND icons appear on the Call page and the associated SIP button.



Figure 31.80: Call Page - DND

To **activate DND**, do the following:

- Click **DND**.

The button label changes to Disable DND and the DND icon appears in the SIP Call display.

Calls received while in do not disturb mode are logged on the Missed page.

To **disable DND**, do the following:

- Click **Disable DND**.

The specific do not disturb message is configured on the SIP server.

Consultant Xfr/Blind Xfr button

The **Consultant Xfr/Blind Xfr** button is used to blind transfer a call or transfer with consultation.

- A blind transfer is a call transferred to a second party without announcing the call to the receiver.
- A consultant transfer allows the console operator to announce the transferred call to the receiver.
- The button label is changed by right-clicking the button and selecting the function from the popup menu.

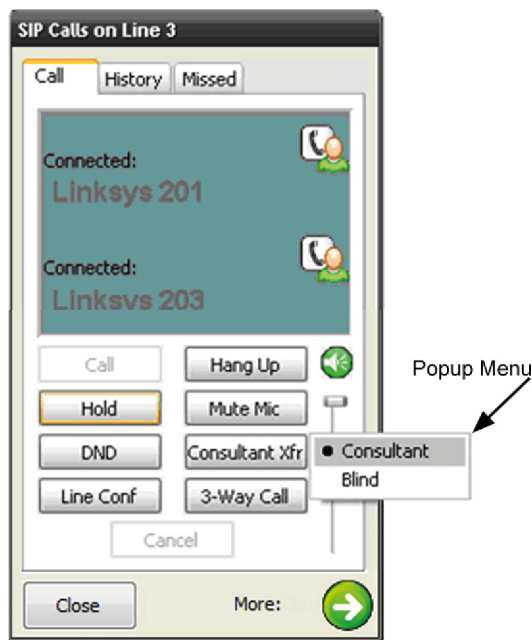


Figure 31.81: Consultant Xfr popup Menu

To **abort the transfer function at any time**, click **Cancel**. The incoming call remains connected.

To **make a consultant transfer**, do the following:

1. From the Call page for the line, if the button label is Consultant Xfr, go to **step 3**.
OR
Right-click **Blind Xfr**.
A popup menu appears.
2. Select **Consultant Xfr**.
The button label and function changes to Consultant Xfr.
3. Click **Consultant Xfr**.
Enter transfer destination appears and the SIP Call display is ready to accept a transfer destination.
4. Using the Keypad pane, keyboard, or the Contacts list, enter the new **destination number** in the SIP Calls window.
5. Click **Consultant Xfr**.
The current call is placed on hold and a call is placed to the destination number. When the call is answered, the Hang Up button changes to Hang Up >.
6. Announce the caller to the **second party**.
7. Click **Consultant Xfr**.
The first and second call are now connected, and disconnected from C-Soft.
8. Click **Hang Up** to disconnect from the call.
Both callers are disconnected from the console.

To **make a blind transfer**, do the following:

1. From the Call page for the line, if the button label is Blind Xfr, go to **step 3**.
OR
Right-click **Consultant Xfr**.
A popup menu appears.

2. Select **Blind Xfr.**
The button changes to Blind Xfr.
3. Click **Blind Xfr.**
Enter Transfer destination appears in the display and the SIP Call display is ready to accept a number.
4. Using the Keypad pane, keyboard, or Contacts list enter the **destination number.**
The phone number appears at the bottom of the display.
5. Click **Blind Xfr.**
The original call is transferred to the destination number and immediately disconnected from the console.

Line Conf button

The **Line Conf** button is used to join two SIP phone calls already in progress into a line conference. A line already involved in a 3-way call can be included in the line conference. During a line conference, the SIP Calls window border changes to black. An example is shown in the Figure below.

Due to processing demands, a maximum of six remote parties (plus the console) can be mixed together at one time.

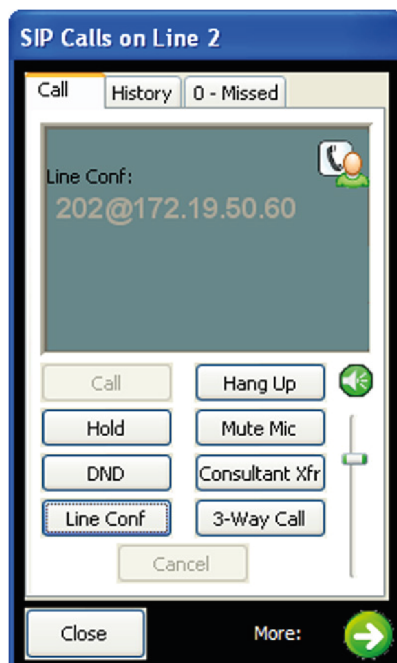


Figure 31.82: SIP Calls Page - Line Conference

To **place two lines into a line conference**, do the following:

1. Engage **two SIP** calls on two separate lines.
2. From the first line's call window, click **Line Conf.**
The window's border turns black.
3. From the second line's call window, click **Line Conf.**

The second line's SIP Call window turns black. Both lines are now in communication with each other.

3-Way Call button

The **3-Way Call** button is used to establish a call in which three participants are engaged.

To **abort the 3-way call function at any time**, click **Cancel**.

The original call remains connected to the console.

To **establish a 3-way call**, do the following:

1. While already engaged in a call, click **3-Way Call**.
Enter New Destination appears in the display.
2. Using the Keypad pane, keyboard, or Contacts list enter the **new destination number**.
The number appears at the bottom of the display.
3. Click **3-Way Call**.
The current call is placed on hold and a call is placed to the new destination number. The Hang Up button changes to Hang Up >.
4. Click **3-Way Call**.

The first call is taken off hold and joined in the current call. Both parties and the console operator are connected. The 3-Way Call button's label changes to Leave Call.

Cancel/Switch button

The **Cancel/Switch** button is used to cancel an operation or switch to another call.

- If the button is active and Cancel appears on it, it can be used to cancel a blind transfer, consultant transfer, 3-way call or restore a call to its previous state.
- If the button is active and Switch appears on it, it can be used to switch from the current call to a call-waiting call.

To **cancel a transfer or 3-way call operation before it is completed**, do the following:

- Click **Cancel**.

The operation is canceled, the current caller remains on the line, and the Cancel button is disabled.

To **switch to a waiting call while already in a call**, do the following:

- Click **Switch**.

The current call is placed on hold, the waiting call becomes active.

Click Switch to switch back to the other call.

Mute icon

The **Mute** icon is used to instantly mute audio on the SIP line.

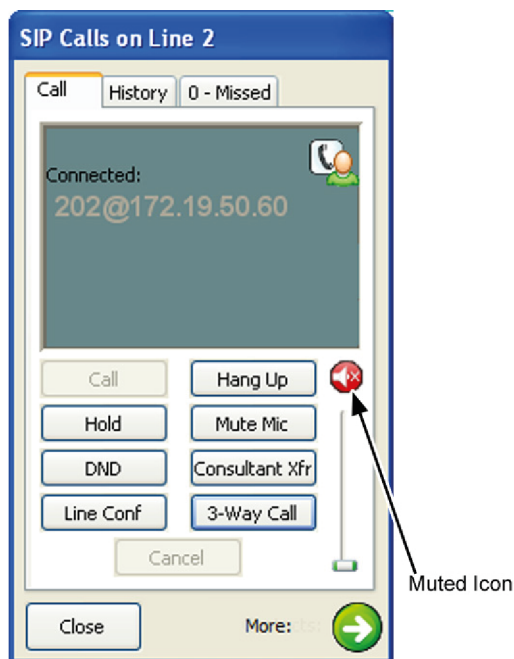


Figure 31.83: Call Page - Mute Icon

To **mute audio on the SIP line**, do the following:

- Click **Mute**.

The Volume slider moves to the bottom of the volume bar. The speaker icon changes to a red mute icon and audio is turned off.

Clicking Mute restores the Volume slider to its previous value.

Volume Slider

The **Volume** slider is used to adjust the speaker volume for the associated line.

To **decrease the volume**, do the following:

- Slide the volume **slider** down.

To **increase the volume**, do the following:

- Slide the volume **slider** up.

Expand Button

The **Expand** button is used to expand the SIP Calls window, refer to the Figure in 480. When the Expand button is clicked, a Misc tab, Forward tab, and additional features appear on the Call, History, and Missed pages.

- Expand button.



Collapse button

The **Collapse** button is used to collapse the SIP Calls window, refer to the Figure above.

- Collapse button.



Contacts pane

The **Contact** pane is used to view, edit, or delete the list of contacts within the SIP system. This list is managed using a popup menu. The contact list can be divided into subdirectories making it easier to group and maintain contacts. Additionally, the Contact Search bar can be used to filter the contact list to contain only contacts that match the entered text.

The Contact List supports 5000 SIP contacts.

The Contacts pane appears on the Call page when the expand button is clicked.

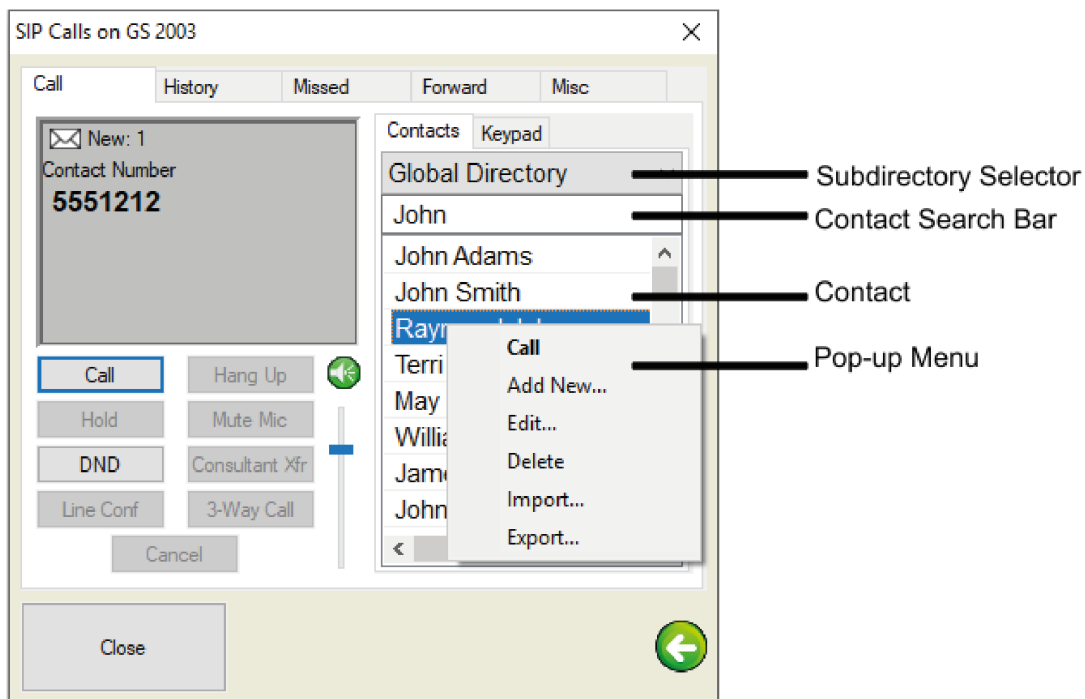


Figure 31.84: Call Page - Contacts Pane



Notice!

The Pop-up Menu is not accessible with a mouse on the IP-30xx devices.



Notice!

Subdirectory Group names can be modified from their default names (Subdirectory 1, Subdirectory 2, etc.) by editing the Contact Directory CSV file. The CSV file is located at C:\ProgramData\Telex Communications\design_folder\ and is named sip_directory_<veg>.cvs (where <veg> is the name of the C-Soft Design file. You can edit this file directly using a text editor or import the file into any common spreadsheet application, such as Excel). The Directory file is only created after adding the first contact to an operational position.

To **place a call to a contact in the list**, do the following:

1. From the Contacts pane, select a **contact**.
The contact's number appears in the SIP call display.

2. Click **Call**.

A call is placed to the selected contact.

OR

Double-click the **contact**.

The default action (the bold item in the popup menu i.e Call) is performed and the call is placed.

OR

Right-click the contact and select **Call**.

A call is placed to the selected contact.

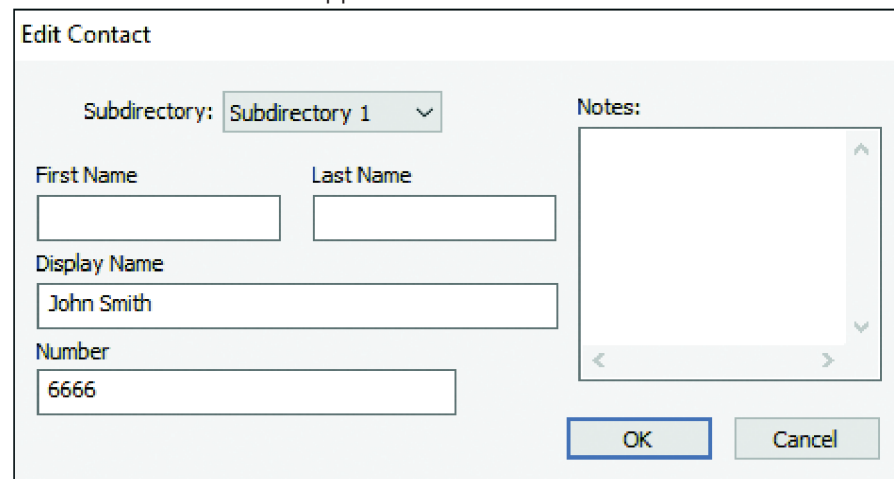
To **add a new contact to the list**, do the following:

1. Right-click the **contact** list.

A popup menu appears.

2. Click **Add New**.

The Edit Contact window appears.



3. From the Subdirectory drop down menu, select a **subdirectory to associate to a Contact**, if desired.
4. In the First Name field, enter the **first name** of the contact.
5. In the Last Name field, enter the **last name** of the contact.
6. In the Display Name field, enter a **user-recognizable name** for the contact.
7. In the Number field, enter the **phone number** for the contact.
8. In the Notes field, enter **appropriate comments** for the contact.
9. Click **OK**.

The contact is added to the contacts list.

To **edit a contact in the list**, do the following:

1. Right-click the **contact** list.

A popup menu appears.

2. Click **Edit**.

The Edit Contact window appears.

3. Make **changes** to the appropriate fields.

4. Click **OK**.

The changes to the contact information are saved.

To **delete an entry from the contacts list**, do the following:

1. Right-click a **contact** to delete.
The contact list popup menu appears.
2. Click **Delete**.
The contact is removed from the list.

To **import a contact list from a .csv file**, do the following:

1. Right-click the **contact** list.
A popup menu appears.
2. Click **Import**.
The Import window appears.
3. Select a **.csv file** to import.
4. Click **OK**.

All contacts contained in the .csv file are added to the list.

To **export a contact to a .csv file**, do the following:

1. Right-click the **contact** list.
A popup menu appears.
2. Click **Export**.
The Export window appears.
3. From the Name drop down menu, select a **name**.
OR
In the Name field, enter a **name** for the .csv file.
4. Click **OK**.

All contacts are exported to the selected .csv file.

Keypad pane

The **Keypad** pane is used to enter DTMF digits and access voice mail messages.

The Keypad appears when the Keypad tab is clicked while in the maximized Call page. The Call page is maximized using the Expand button.

Note:

- These digits can also be entered using the keyboard.
- While in a call, the keypad generates DTMF tones. When not in a call, the keypad inserts the digits in the SIP call display.

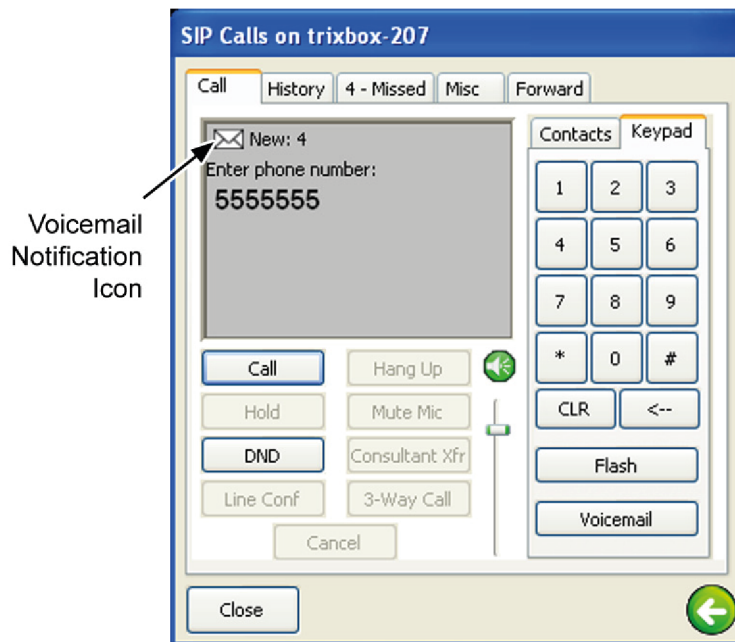


Figure 31.85: Call Page - Keypad Pane

To **access the keypad pane**, do the following:

1. From the Calls page, click the **expand** button.
The contacts page appears.
2. Click the **Keypad** tab.
The Keypad pane appears.

CLR button

The **CLR (Clear)** button is used to clear the information from the SIP Call display.

The SIP Call display entry field must be enabled.

<-- button

The **<--** button is used to delete the last entered character from the SIP Call display.

The SIP Call display entry field must be enabled.

Flash button

The **Flash** button is used to send a hook flash signal.

This feature is only available during a SIP call.

Voice mail button

The **Voice mail** button is used to access a specific voice mail number. The SIP server must support this feature.

To **configure a specific voice mail number for the button**, do the following:

1. Right-click **Voice mail** and select **Configure** from the popup menu.
The Edit Contact window appears.
2. In the Number field, enter the **phone number** for the button.

3. Click **OK**.

The voice mail number is stored.

To **call the stored voice mail number**, do the following:

- Click the **Voice mail** button.

A call is placed to the specified phone number.

Voice mail notification icon

When the **Voice mail notification** icon, shown in the Figure above, appears in the SIP Calls display, voice mails are waiting. The number indicated to the right of the New text, (e.g. 4), is the quantity of voice mail messages in queue.

Speed Dial pane

If at least one speed dial extension is configured, the SIP window in C-Soft Runtime displays an additional **Speed Dial** pane.

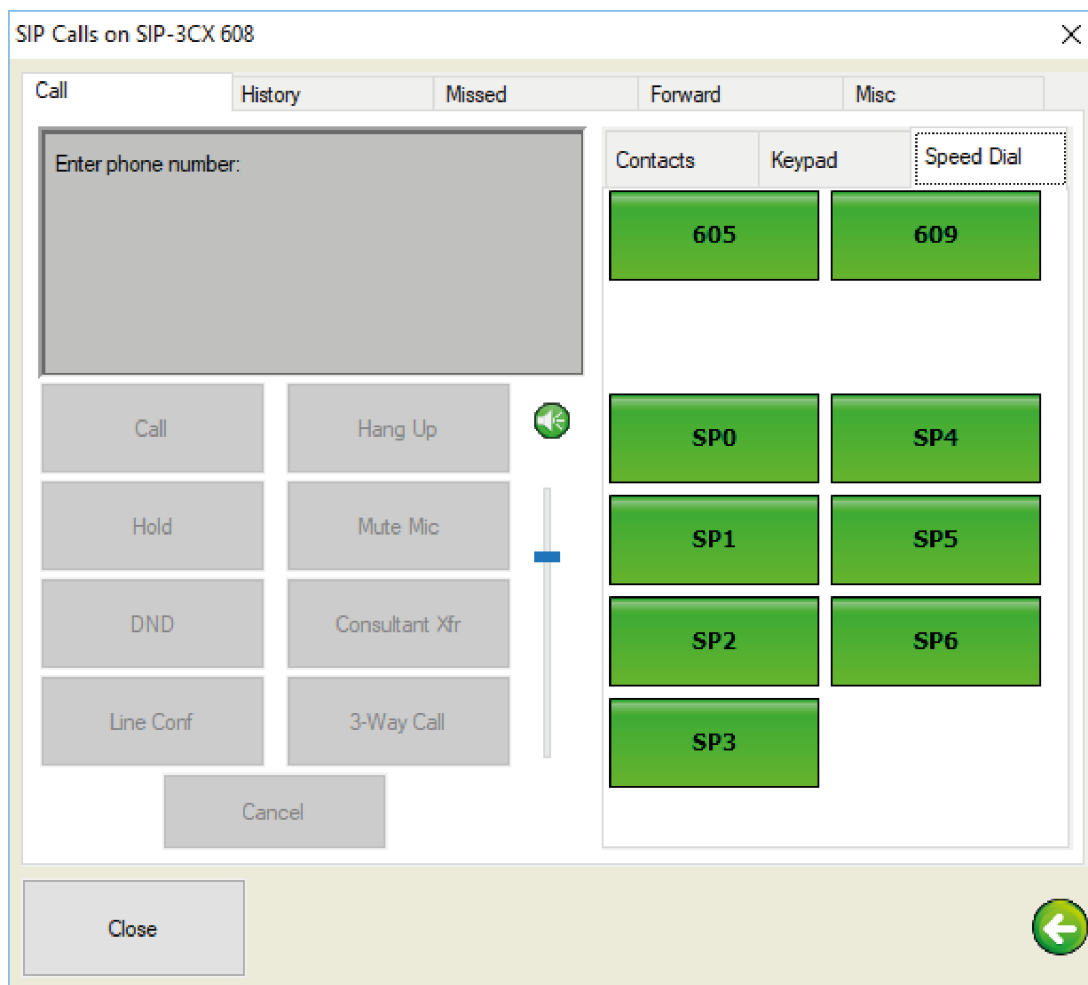


Figure 31.86: Call Page - Speed Dial Pane

In C-Soft Runtime, the current call state of the speed dial number is color coded (for example, green means the number is available to call):

- If not currently in a call, pressing the button calls the specified number.
- If already in a call with the specified number, pressing the button hangs up the call.

- If already in a call, but not with the specified number, pressing the button forwards the current call to the specified extension.

If the Presence setting is enabled, C-Soft attempts to monitor the Presence State of each of the configured button extensions. Each Speed Dial button color changes based on the corresponding extension's presence. Additionally, any Autodial buttons in the main console window configured to the same extension also change color with the extension's presence information.

The Presence states and colors are:

Presence state	Color
Available (not in a call)	Green
Unavailable (in a call)	Red
Incoming Ring	Yellow
Outgoing Ring	Blue
No Presence Information	Grey

31.83.5

History page

When the History tab is clicked from the SIP Calls window, the History page appears. Refer to the Figure below. The **History** page is used to view past SIP Calls received on the selected line.

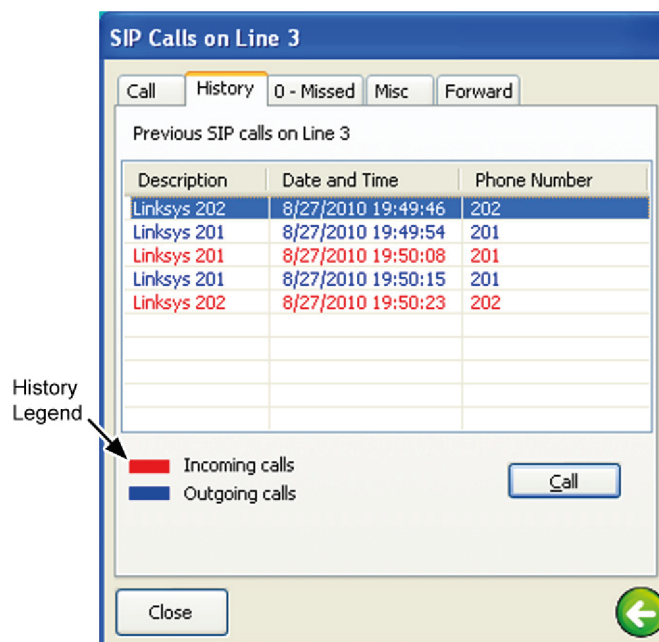


Figure 31.87: History Page - Maximized

Description column

The **Description** column displays the call's number and url or the alias.

Date and Time column

The **Date and Time** column displays the date and time the call occurred

Phone Number column

The **Phone Number** column displays the phone number that called.

History legend

The **History** legend displays the color format used for incoming and outgoing calls.

Call button

The **Call** button is used to place a call to the selected phone number. If no call is selected from the list, the Call button is disabled.

The Call button appears on the History page when the Expand button is clicked.

To **call a contact in the History list**, do the following:

1. Select the **phone number** to call.
 2. Click the **Call** button.
- OR
- Select **Call** from the entry's popup menu.
- OR
- Double-click the **entry**.

The call is placed and the SIP Calls window switches to the Call page.

31.83.6

Missed page

When the Missed tab is clicked from the SIP Calls window, the Missed page appears. Refer to the Figure below. The **Missed** page is used to view calls received, but not answered on the selected SIP line.

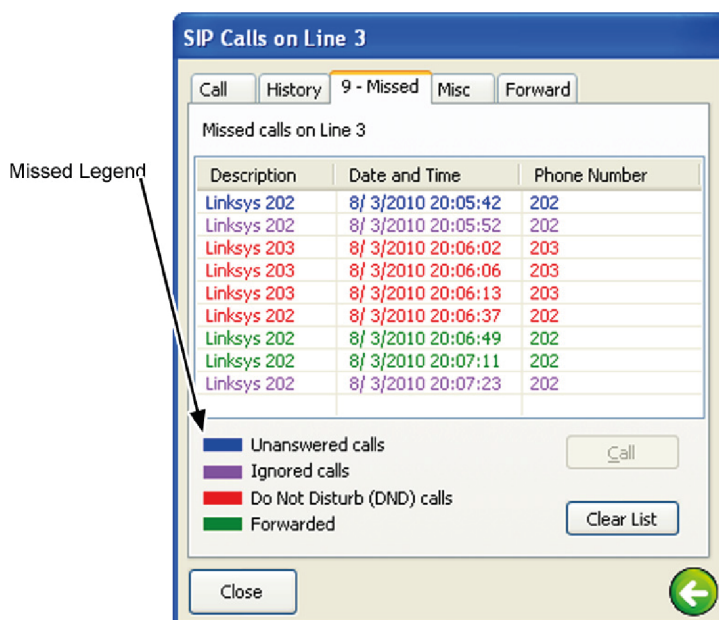


Figure 31.88: Missed Page

Description column

The **Description** column displays the call's number and url or the alias.

Date and Time column

The **Date and Time** column displays the date and time the call occurred

Phone Number column

The **Phone Number** column displays the phone number that called.

This column is visible when the Expand button is clicked to maximize the window.

Missed Calls legend

The **Missed Calls** legend display the color format used for unanswered, ignored, do not disturb, and forwarded calls.

Call button

The **Call** button is used to place a call to the selected phone number. If no call is selected from the list, the Call button is disabled.

The Call button appears when the Missed page is maximized. Click the Expand button to maximize the window.

Call button

The **Call** button is used to place a call to a phone number selected from the list. This button is visible when the Expand button is clicked to maximize the window.

To **place a call from the missed call list**, do the following:

1. Select a **call** from the list.
2. Click **Return Call**.
OR
Double-click an **entry**.
OR
Right-click an entry and select **Call** from the popup menu.

The call is placed to the selected phone number.

Clear List button

The **Clear List** button is used to clear all calls from the list. This button is visible when the window is maximized.

To **clear all calls from the list**, do the following:

- Click **Clear List**.

The list is cleared.

31.83.7**Misc page**

The **Misc** page is used to view the following system information:

- Domain - Displays the registered domain of the SIP line.
- Protocol - Displays the SIP protocol for the line.

- SIP Registration - Displays the registration information for the SIP line.

The Misc page, refer to the Figure below, becomes available in the SIP Calls window when the expand button is clicked.

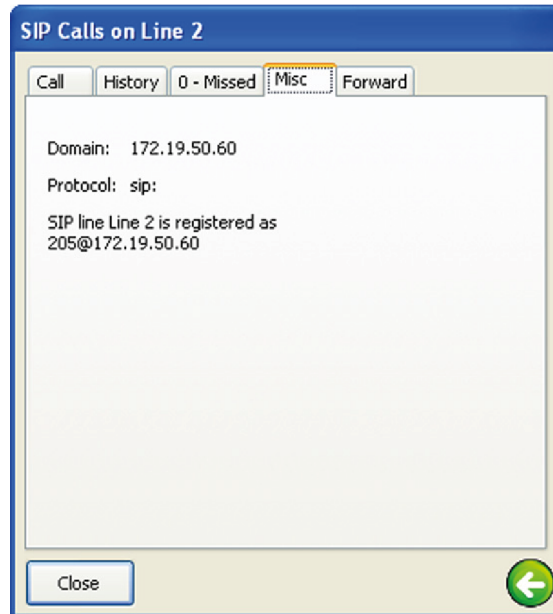


Figure 31.89: Misc Page

31.83.8

Forward page

The **Forward** page is used to configure forwarding options.

The Forward page, shown in the Figure below, becomes available in the SIP Calls window when the expand button is clicked.

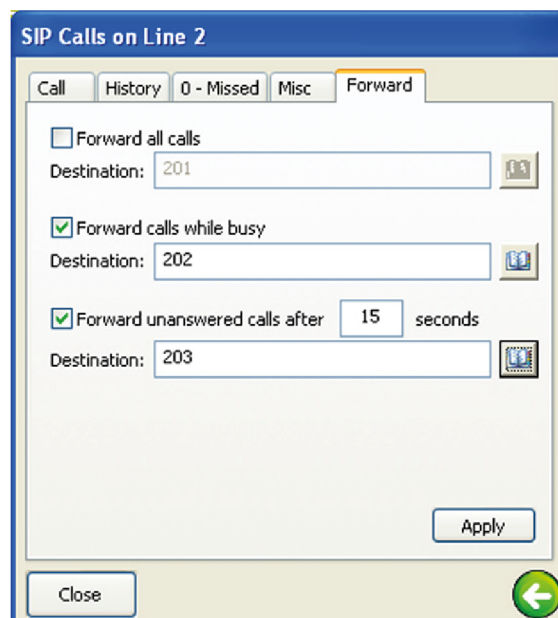


Figure 31.90: Forward Page

Forward All Calls check box

The **Forward All Calls** check box indicates all calls received on the line are forwarded to the phone number entered in the Destination field for this check box.

**Notice!**

This selection cannot be combined with any other forwarding option.

Destination field

The **Destination** field is used to enter the phone number to forward all incoming calls to.

Address Book

The **Address Book** button is used to locate a phone number to enter in the Destination field.

**Forward calls while busy check box**

The **Forward call while busy** check box indicates calls received while the line is busy are forwarded to the phone number in the Destination field for this check box

**Notice!**

This check box can be used in combination with the Forward unanswered calls option. Some SIP servers (i.e. 3CX) have their own settings for forwarding a call when an extension is busy. When using these servers the call forwarding logic in the server takes precedence over the call forwarding settings in C-Soft.

Destination field

The **Destination** field is used to enter the phone number to forward incoming calls to when the line is busy.

Address Book

The **Address Book** button is used to locate a phone number to enter in the Destination field.

Forward unanswered calls after check box

The **Forward unanswered calls after** check box indicates calls left unanswered are forwarded to the phone number entered in the Destination after the amount of time configured in the Forward unanswered all after seconds field.

**Notice!**

This check box can be used in combination with the Forward calls while busy option.

Forward unanswered calls after seconds field

The **Forward unanswered calls after seconds** field is used to enter the amount of time, in seconds, the call is left unanswered before it is forwarded to the phone number in the Destination field.

Destination field

The **Destination** field is used to enter the phone number to forward unanswered calls after [X] seconds.

Address Book

The **Address Book** button is used to locate a phone number to enter in the Destination field.

Apply button

The **Apply** button is used to save changes made to the Forward page.

To **set up call forwarding**, do the following:

1. From the Forward page, select the **Forward all calls** check box.
OR
Select the **Forward calls while busy** check box.
OR
Select the **Forward unanswered calls** check box.
2. In the Forward unanswered calls after seconds field, enter the **amount of time** in seconds.
3. In the Destination field for the selected check box, enter the **phone number** the call is to be forwarded to.
OR
Click the **Address Book** button.
The address book appears.
4. Select a **phone number** to forward calls to.
The phone number appears in the Destination field.
5. Click **Select**.
The window closes and the phone number appears in the selected field.
OR
Click **Cancel**
The changes are not accepted and the window closes.
6. Click **Apply** to accept changes.
The changes are applied.

Close button

The **Close** button is used to close the SIP Calls window.

31.84 Status Stack Programmed

The **Status Stack Programmed** window, shown in the Figure below, is used to pre-configure a stack status which defines the user or group a particular status is sent. Programmed stack statuses are used to execute an existing stack status in C-Soft Runtime.

Stack Setup page

When Status Stack Programmed is chosen from the UI Element drop down menu, the **Stack Setup** page appears.



Notice!

This feature is only supported in FleetSync and NEXEDGE Direct IP.

To **open the Stack Setup page**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Status Stack Programmed**.
The Stack Setup tab appears.
5. Click the **Stack Setup tab**.
The Stack Setup window appears.

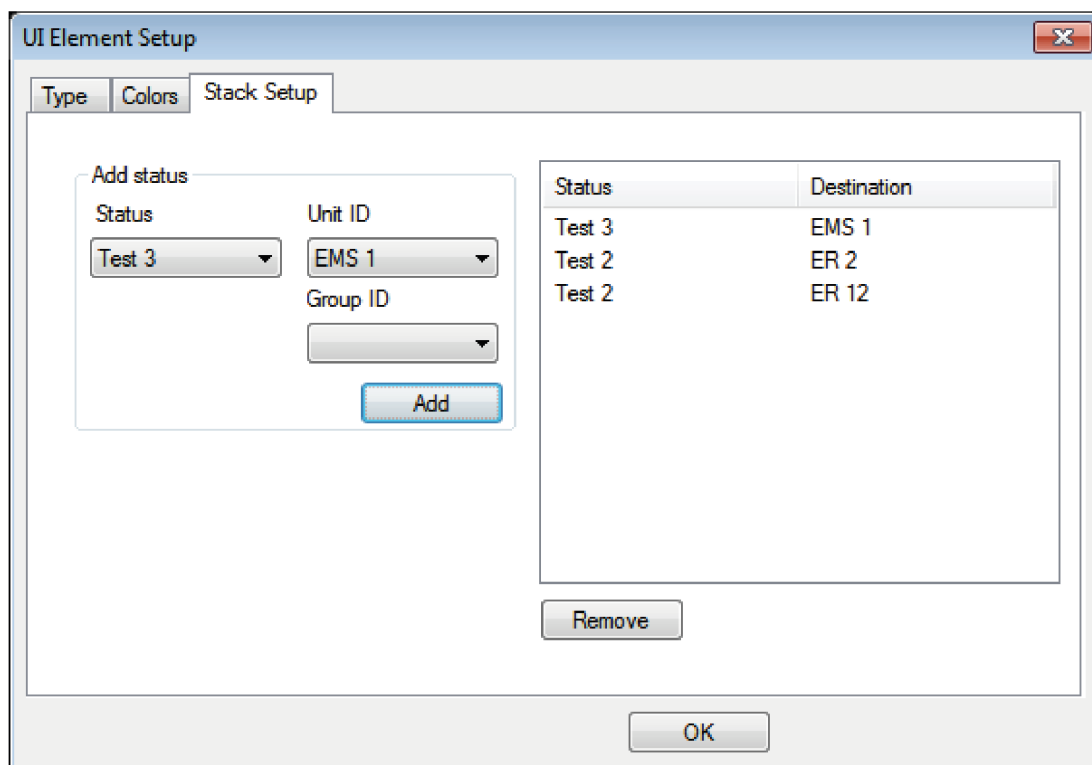


Figure 31.91: Status Stack Programmed - Stack Setup Page

Add Status group box

Status drop down menu

The **Status** drop down menu is used to select an existing status you want to configure for the stack setup.

To create statuses, refer to “*Status Message ID List window, page 187*”.

Unit ID drop down menu

The **Unit ID** drop down menu is used to select an existing Unit ID to send the status.

Group ID drop down menu

The **Group ID** drop down menu is used to select an existing Group ID to send the status.

Add button

The **Add** button is used to add the selected status and either the selected Unit ID or Group ID to the Status/Destination display pane.

Status/Destination display pane

The **Status/Destination** display pane displays the preprogrammed status messages and the destination each is sent to when the configured button is clicked.

Remove button

The **Remove** button is used to remove the selected preprogrammed status from the Status/Destination display pane.

To **remove a status from the Status/Destination display pane**, do the following:

1. From the Status/Destination display pane, select the **Status** you want to remove.
2. Click the **Remove button**.

The Status is removed from the Status/Destination display pane.

31.85

Status Stack window

The Status Stack window, shown in the Figure below, is used to configure the window appearance and functionality of the status stack, including the number of visible entries and the actions to take when a failed attempt occurs. The Status stack window allow users to select multiple statuses and send them.

Stack Setup page

When Status Stack Window is chosen from the UI Element drop down menu, the **Stack Setup** page appears.

To **open the Stack Setup page**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Status Stack Window**.
The Stack Setup tab appears.
5. Click the **Stack Setup tab**.
The Stack Setup window appears.

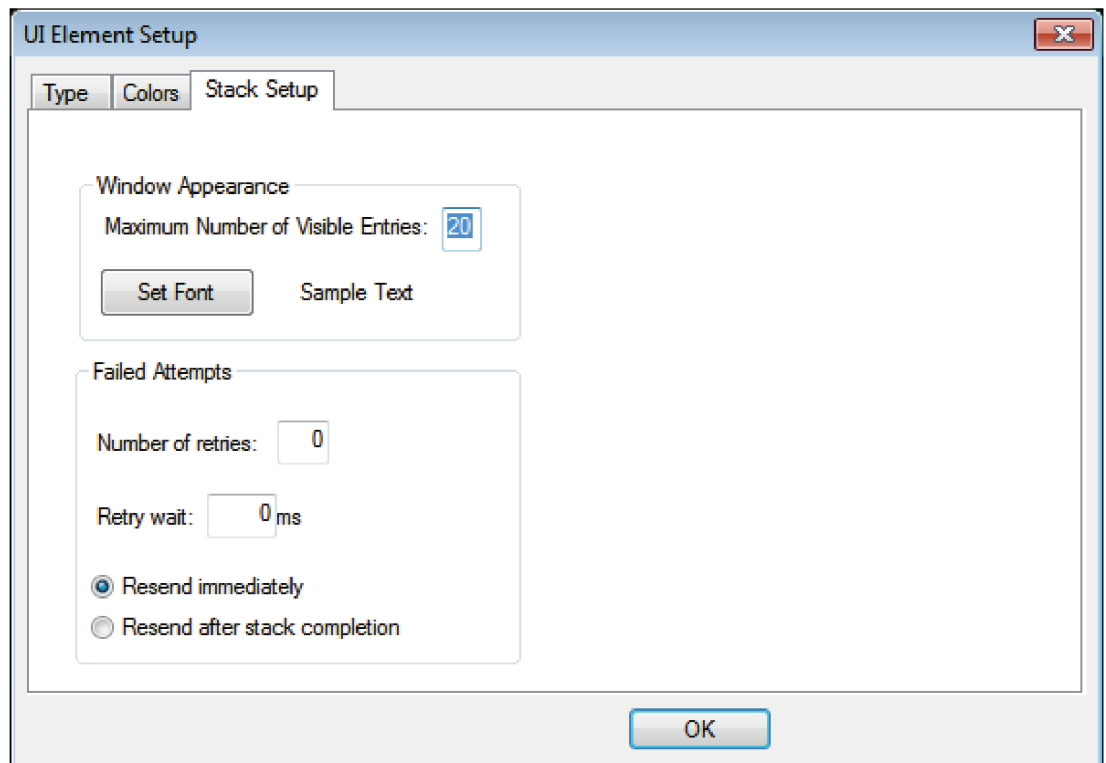


Figure 31.92: Stack Status Window - Stack Setup Page

31.85.1

Window Appearance group box

Maximum Number of Visible Entries field

The **Maximum Number of Visible Entries** field is used to set the maximum number of visible entries inside a Stack window at one time.

The range for this field is 0-9.

Set Font button

The **Set Font** button is used to open the Font window. From this window you can set the font you want to display in the Stack Status window.

31.85.2

Failed Attempts group box

Number of Retries field

The **Number of Retries** field is used to set the number of times the system retries the status.

The range for this field is 0-9999.

Retry Wait field

The **Retry Wait** field is used to set the amount of time to wait between status tries.

The range for this field is 0-9.

Resend Immediately radio button

The **Resend Immediately** radio button is used to set the system to resend the failed status immediately, regardless of the status of the status stack.

Resend After Stack Completion radio button

The **Resend After Stack Completion** radio button is used to set the system to resend the failed status after the status stack has completely finished.

31.85.3**Status Stack window**

The **Status Stack** window is used to display the status of stacks being sent such as the date, time, channel, etc. This window is also used to administer status stacks - sent and failed sends.

**Notice!**

This feature is only supported in FleetSync and NEXEDGE Direct IP.

Status Stack Window

Date	Time	Channel	Status A...	Unit ID	Status
01/07/20...	08:38:15	Conv T...	Fire	1	Failed
01/07/20...	08:38:15	Conv T...	Fire	2	Failed

Status: Fire

Groups: Group 002C

Users: Radio 43C
Radio 41C

Add

Send

Resend

Clear

Done

Add status and repeat if needed else send.

Figure 31.93: Stacked Status Window

Status Stack display pane

The **Status Stack** display pane displays columns of different information:

- Date Column - The date the status stack was sent.
- Time Column - The time the status stack was sent.
- Channel Column - The channel the status is sent from.
- Status Alias Column - The name of the status sent.
- Unit ID Column - The User ID of the recipient of the status.

- Group ID Column - The Group ID of the group receiving the status.
- Status Column - The Status of the stack sent. Available Statuses are:

Status drop down menu

The **Status** drop down menu is used to select the status alias. Doing this, refines the list of statuses shown in the display pane, making it easier to find the particular status you are searching. The selections listed in this menu are directly related to the statuses you created in the Status Message ID List window. For more information, refer to “*Status Message ID List window, page 187*”.

Groups display pane

The **Groups** display pane displays the groups, if any, associated with the selected status.

Users display pane

The **Users** display pane displays the users, if any, associated with the selected status.

Resend button

The **Resend** button resends a failed status. You can select more than one status to resend by pressing the Ctrl key and selecting with the mouse which statuses you want to resend.

Clear button

The **Clear** button clears the Stacked Status window of all statuses.

Done button

The **Done** button closes the Stacked Status window.

Add button

The **Add** button adds more statuses to send

Send button

The **Send** button sends the selected statuses to the appropriate users or groups.

Refer to

- *Status Message ID List window, page 187*

31.86

Supervisor

The **Supervisor** function allows a single dispatch location to seize control of a line or group of lines.

In C-Soft Runtime, after clicking the Supervisor button, the console operator enters the 4-digit PIN number. When the PIN is entered, a supervisor packet burst is sent to all selected lines. When a console receives a packet burst, those lines are removed from local control. The console operator of those lines is no longer able to hear receive traffic or create transmit traffic.

Supervisor password and timeout are configured on the “*Control Settings page, page 124*”.

To **add a Supervisor button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Supervisor**.
5. Click **OK**.

The button changes color and Supervisor appears on the button.

Refer to

- *Control Settings page, page 124*

31.87

Talk Around button

The **Talk Around** button is used, on a per line basis, to toggle the radio talk around feature. Talk around bypasses a radio repeater system, permitting direct radio-to-radio communication.

In C-Soft Runtime, after clicking the talk around button, the button changes colors and talk around is enabled (the button position is down). After clicking the button again, talk around is disabled (the button position is up).

To **add a Talk Around button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Talk Around**.
5. Click **OK**.

The button changes color and Talk Around appears on the button.

31.88

Text button

The **Text** button displays text or can serve as a colored space filler.



Notice!

There is no action associated with this UI Button.

To **add a text button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.

3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Text Button**.
5. Click the **Colors** tab.
The Colors page appears.

From the Colors page you can enter the text and change the color you want on the button. Also, you can leave the text field blank and change the color of the button to serve as a colored space filler. For more information, refer to “*Colors page, page 407*”.

Refer to

- *Colors page, page 407*

31.89

TX All

The **TX All** function allows the console operator to place all lines into a selected mode. A subsequent PTT is then transmitted on all lines.

To **add a TX All button**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **TX All**.
5. Click **OK**.
The button color changes and TX All appears on the button.

32

UI Element Setup window - Add button

The **UI Element Setup** window is used to configure the button to perform the assigned command when clicked in C-Soft Runtime.

To **open the UI Element Setup window for a UI Button**, do the following:

1. Right-click the **UI Element button**.
The properties menu appears.
2. Click **Properties**.
The UI Element window appears.

– Double-click the **UI Element button**.
The UI Element window appears.



Notice!

The first field on the UI Element Setup window identifies the type of button you are configuring and cannot be changed. In this case, it is UI Element: Button. The type is determined by the button you right-click.

32.1

Type page

The **Type** page, shown in the Figure below, is used to configure the type of function for the UI Element button. Some UI Elements require further configuration and when selected from the function drop down menu, additional configuration pages appear.

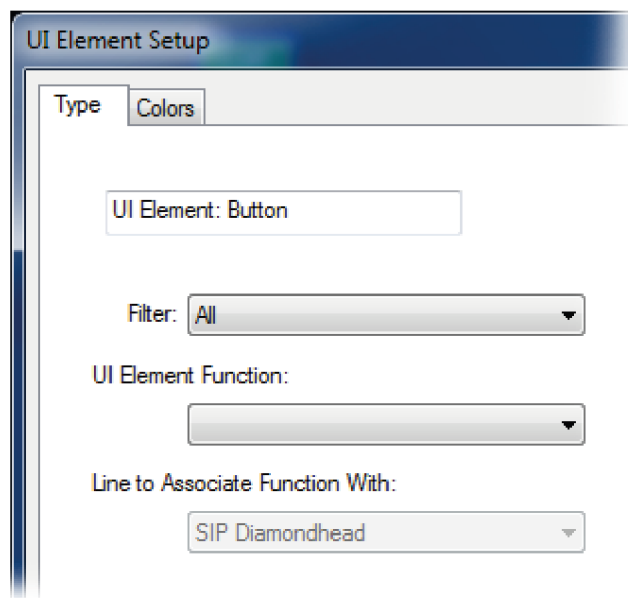


Figure 32.1: Type Page - UI Element Setup

Filter drop down menu

The **Filter** drop down menu is used to select a filter that shows only elements associated with the type of filter chosen.

Available selections for this field are:

- All - All UI Elements are available

- FleetSync - UI Elements which can be used with FleetSync are available
- MDC-1200 - UI Elements which can be used with MDC-1200 are available
- MOTOTRBO - UI Elements which can be used with MOTOTRBO are available
- P25-DFSI - UI Elements which can be used with P25-DFSI are available
- Phone - UI Elements which can be used with Phone are available
- SIP - UI Elements which can be used with SIP are available
- ADHB-4 Only - Only UI Elements associated with the ADHB-4 are available
- Crosspatch Only - Only UI Elements associated with Crosspatch are available
- FleetSync Only - Only UI Elements associated with FleetSync are available
- MDC-1200 Only - Only UI Elements associated with MDC-1200 are available
- P25-DFSI Only - Only UI Elements associated with P25-DFSI are available
- Paging Only - Only UI Elements associated with Paging are available
- Phone Only - Only UI Elements associated with Phone are available
- PTT Only - Only UI Elements associated with PTT are available
- SIP Only - Only UI Elements associated with SIP are available

UI Element Function drop down menu

The **UI Element Function** drop down menu is used to select an operation for the button. For more information on individual function configurations, refer to “*UI Element Functions configuration, page 213*”.

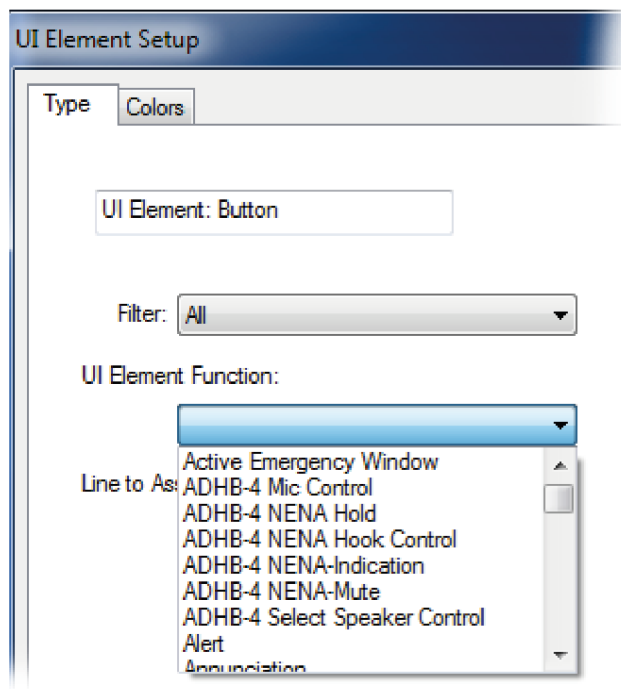


Figure 32.2: UI Element Function Drop Down Menu

Line to Associate Function With drop down menu

The **Line to Associate Function With** drop down menu is used to select a line to associate the function with. Not all functions are associated per line. This field is grayed out if the UI element function is a global function.

OK button

The **OK** button saves the entries and closes the window.

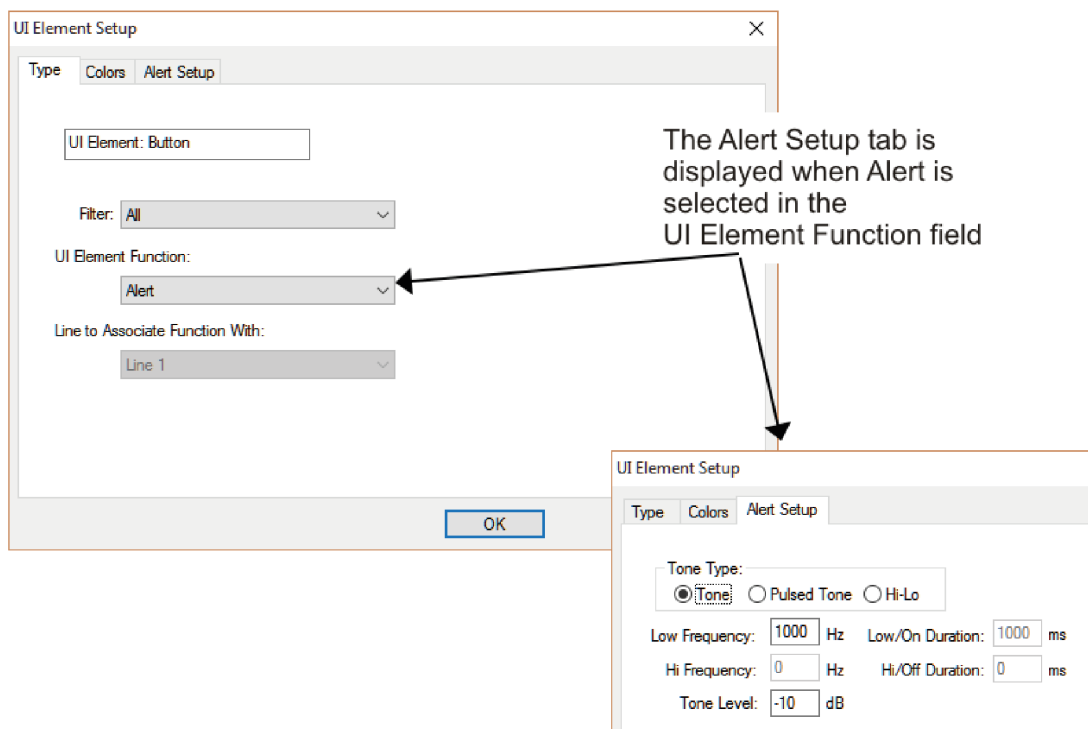


Figure 32.3: Alert Setup Page - UI Element Setup



Notice!

If the console contains a UI Element button with no assigned function, ERROR! Button with no assigned UI element function appears in the Design Errors window when the C-Soft Designer is saved. Refer to the Figure below.

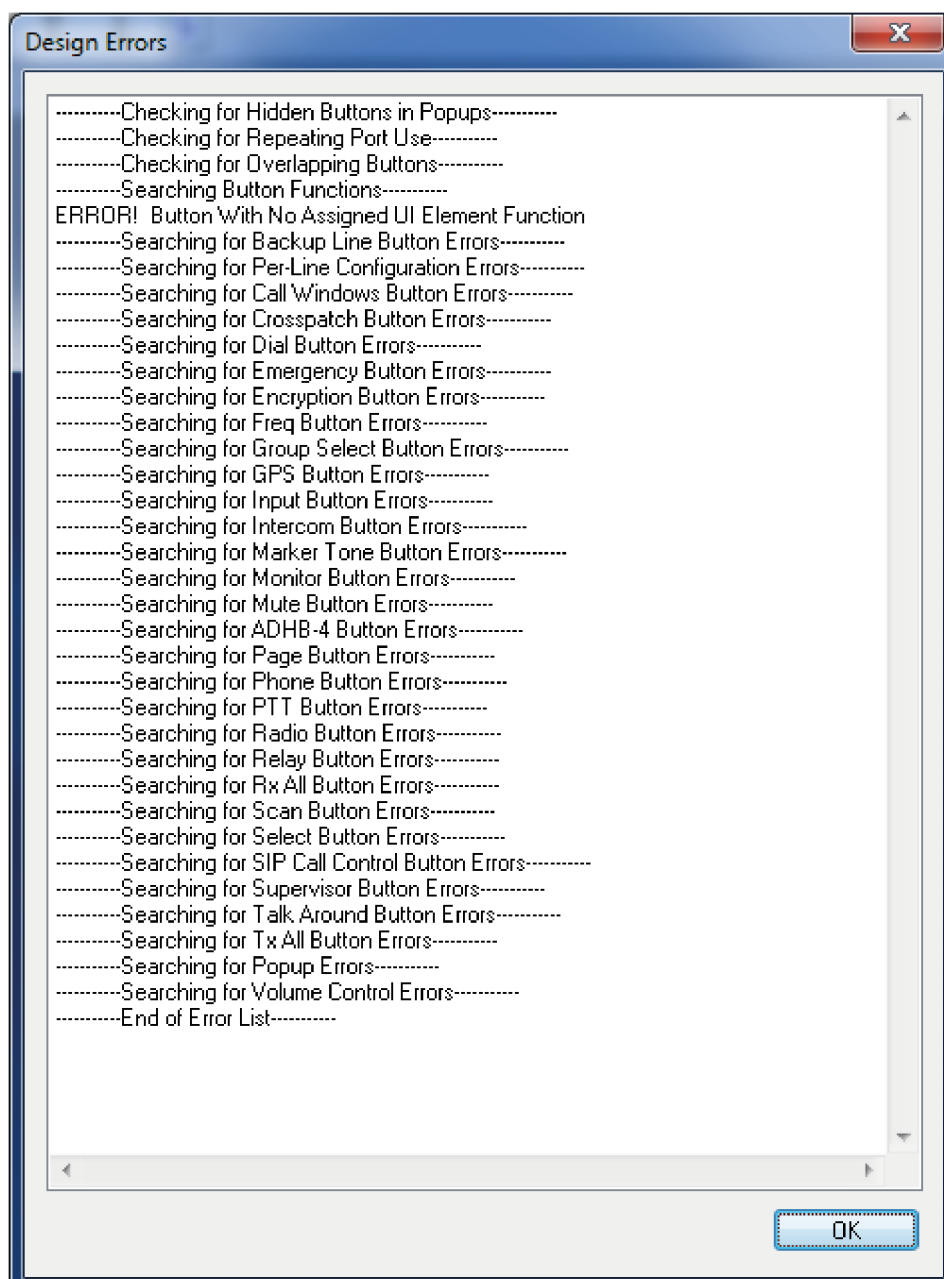


Figure 32.4: Design Errors Window

32.2

Colors page

When Add UI Button or Add popup Button is selected from the Insert Menu the **Colors** page appears. This page also provides a visual display of the button in the up position with the selected attributes, and can be pressed to display the button in its down state. Refer to the Figure below.

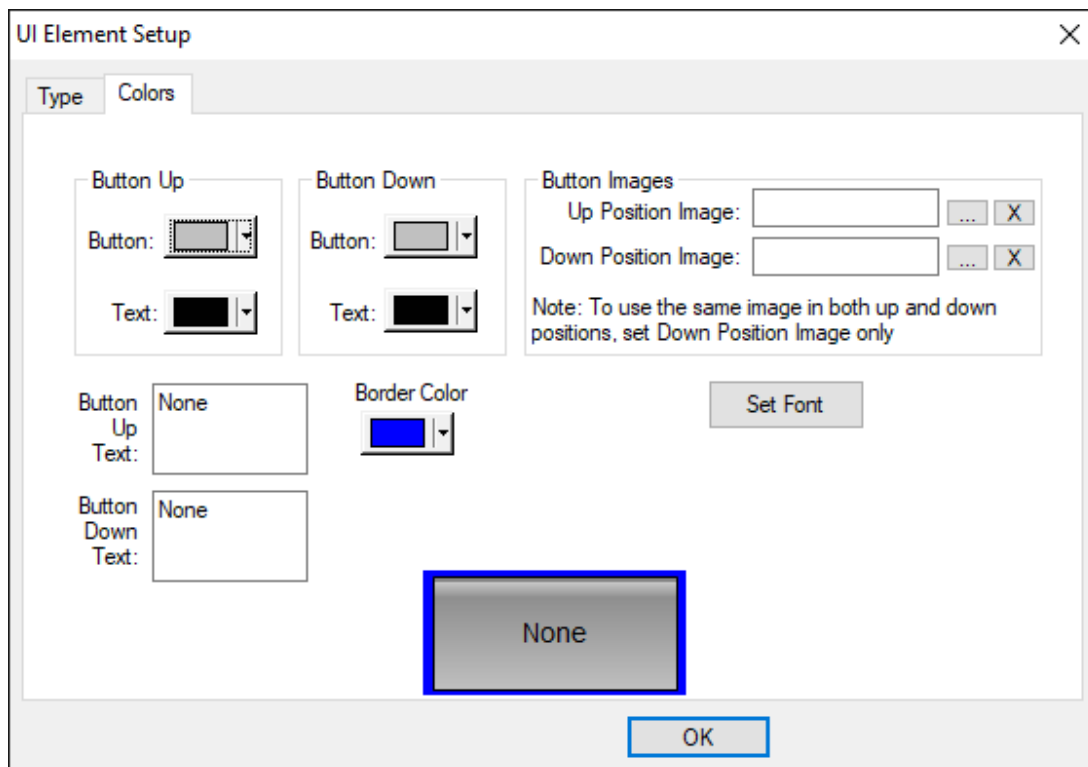


Figure 32.5: Colors Page - UI Element Setup

Button Up and Button Down group box

Button drop down menu

The **Button** drop down menu displays the color of the button when it is available for selection (Button Up) or when it is selected (Button Down). Default button colors are defined for each UI element function. The button colors can be changed by selecting the drop down menu to open a color palette.

Text drop down menu

The **Text** drop down menu displays the color of the text on the button when it is available for selection (Button Up) or when it is selected (Button Down). Default text colors are defined for each UI element function. The text colors can be changed by selecting the drop down menu to open a color palette.

Button Images group box

The **Button Images** group box is used to add a graphic to a button. The Button Images group box supports image types of .bmp, .png, .jpg, and .gif.

Note:

- For a transparent button when using a 24-bit color bitmap, use RGB color 192, 192, 192.
- Suggested maximum image size is 1680 x 1050 pixels.
- Suggested maximum resolution is 72dpi.
- Only 24-bit and 32-bit .png files are supported.

Up Position and Down Position Image fields

The **Up Position and Down Position image** fields identify the image to use on the button. Use the browse button  located next to the field to select the image.

To **use the same image on the Up and Down button position**, do the following:

- Using the browse button located next to the Down Position Image field, select the **image**.

To **use a different image for the Up and Down button position**, do the following:

- Using the browse button located next to the **image** field, select the image for each field.

To **clear an entry from the Up and Down button position Image fields**, do the following:

- Click the **X** button located next to the image field.

Button Up Text field

The **Button Up Text** field identifies the text displayed on the button when the button is available for selection.

This field can contain up to 49 characters.

Button Down Text field

The **Button Down Text** field identifies the text displayed on the button when the button is selected.

This field can contain up to 49 characters.

Border Color drop down menu

The **Border Color** drop down menu displays the color of the border around the button. The border color can be changed by opening the palette with the drop down menu to select the desired color. The button border is half of the grid size on the console window. This allows UI Elements with the same color border to be grouped together, or to help create a visual separation between groups of buttons.

Set Font button

The **Set Font** button displays a Font window used to select the text attributes for the button text.

OK button

The **OK** button saves the entries and closes the window.

32.3

Radio Command buttons

The **Radio Command** buttons, shown in the Figure below, allow the user to send a radio command to specific user or group. If a keypad is present in the design file, Radio Command buttons contain a single button and use the keypad's destination as the command's target. However, if no keypad is present the button comprised of two individual buttons; the command button and a drop down button.

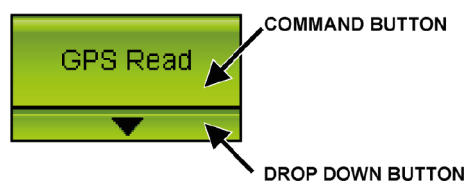


Figure 32.6: Radio Command Button

Radio Command drop down button

The **Radio Command** drop down button is used to display all the users or groups associated with the radio command.

If no keypad is present, the following button function types display users in the drop down list:

- GPS Read
- GPS Trigger On
- GPS Trigger Off
- Private Call
- Radio Call Alert
- Radio Call Type
- Radio Check
- Radio Disable
- Radio Enable
- Radio Select Call
- Radio Status Request
- Radio Regroup
- Radio Ungroup
- Remote Monitor

The following statuses display statuses in the drop down list:

- Radio Status

The following button function types display groups in the drop down list:

- Group Call

The following button function types display call priorities in the drop down list:

- Call Priority

To **select a user from the drop down list**, do the following:

1. Click the **Radio Command** button.
The drop down list opens displaying users/groups configured in the line's signaling system.



2. From the Radio Command drop down list, select an **entry**.
The Command Button displays the selected user name. When the command button is pressed, the button's configured command is sent to the selected.



33 UI Element Setup window - Add Clock

The **Add Clock** option inserts a clock on the console. C-Soft can support multiple clocks on a design file for radio resources covering different time zones. The time and button format are controlled with the Clock Control page.

While in C-Soft Runtime, the clock displays as configured. An example is shown in the Figure below.

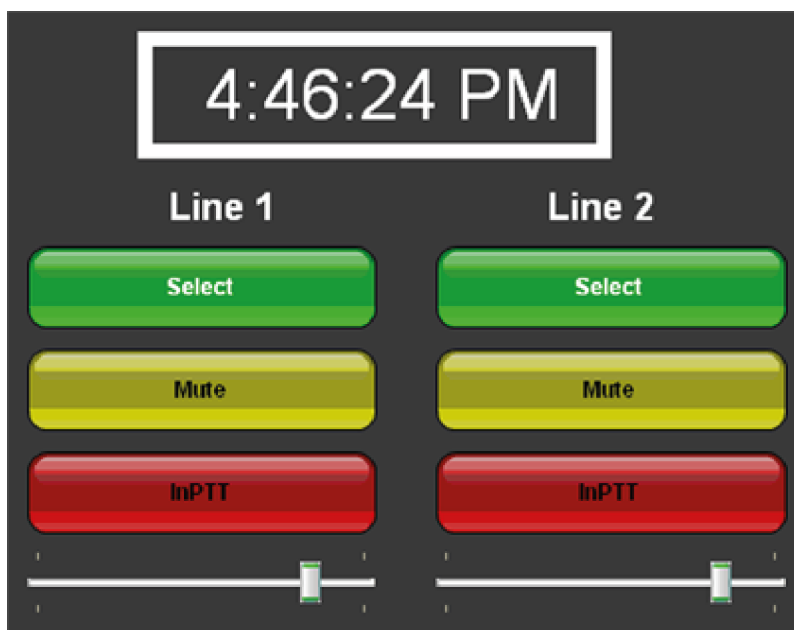


Figure 33.1: Console Clock Example

To **insert a clock button**, do the following:

- From the menu bar, select **Insert | Add Clock**.

A clock button appears on the console.

33.1 Clock Control page

The **Clock Control** page, shown in the Figure below, appears when the clock is right-clicked.

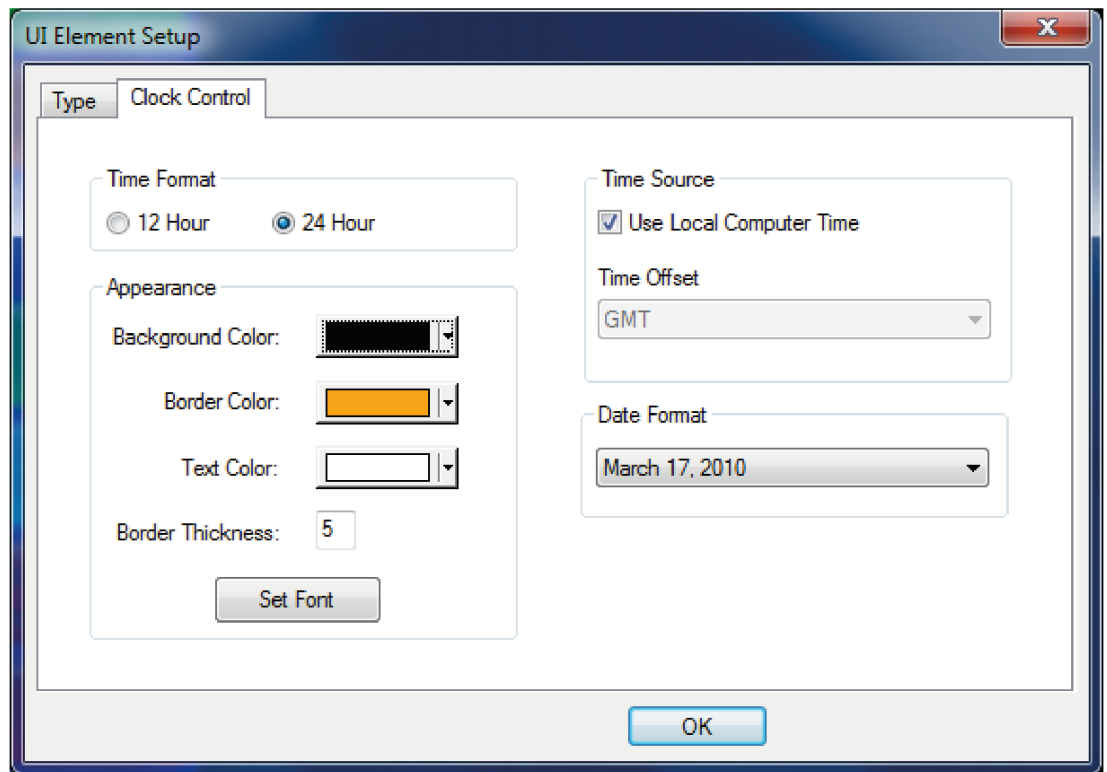


Figure 33.2: Clock Control Page

Time Format group box

12 Hour radio button

The **12 Hour** radio button indicates the time displays in civilian time format.

24 Hour Radio Button

The 24 hour radio button indicates the time displays in military time format.

Appearance group box

Background Color drop down palette

The **Background Color** drop down palette is used to set the clock background color.

Border Color drop down palette

The **Border Color** drop down palette is used to set the clock border color.

Text Color drop down palette

The **Text Color** drop down palette is used to set the clock text color.

Border Thickness field

The **Border Thickness** field is used to set the clock border thickness.

The range for this field is 0 to 20.

Set Font button

The **Set Font** button is used to open the font window.

Font window

The **Font** window, shown in the Figure below, indicates the font used to display the time on the clock display. The font window includes standard options for Font, Font Style, and Size. When you change the format, a preview of the text appears in the Sample field.

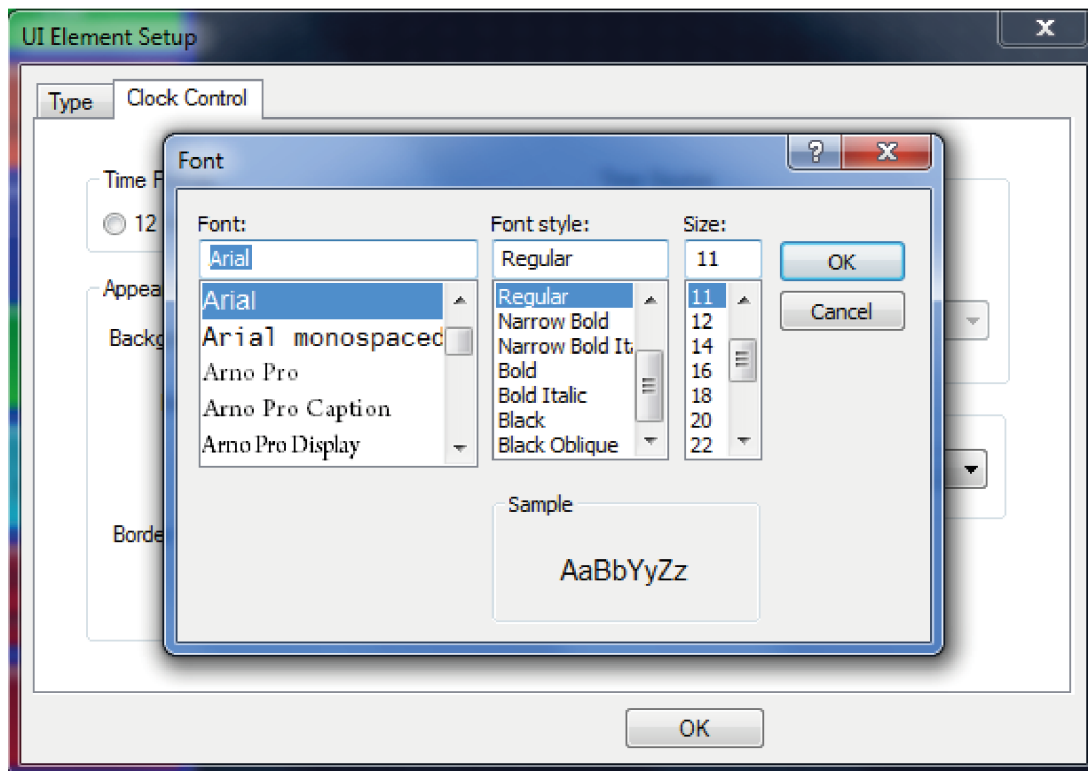


Figure 33.3: Font Window - Clock Control

Time Source group box

Use Local Computer Time check box

The **Use Local Computer Time** check box indicates the time that displays on the clock is derived from the PC running C-Soft. Otherwise, an offset time must be selected from the Time Offset drop down menu.

Time Offset drop down menu

The **Time Offset** drop down menu is used to select an offset time for the clock. The Use Local Computer Time check box must be cleared for this field to be active.

Available selections for this field are:

GMT-12:00	GMT-11:00	GMT-10:00	GMT-09:00	GMT-08:00	GMT-07:00
GMT-06:00	GMT-05:00	GMT-04:00	GMT-03:30	GMT-03:00	GMT-02:00
GMT-01:00	GMT	GMT+01:00	GMT+02:00	GMT+03:00	GMT+03:30
GMT+04:00	GMT+04:30	GMT+05:00	GMT+05:30	GMT+05:45	GMT+06:00
GMT+06:30	GMT+07:00	GMT+08:00	GMT+09:00	GMT+09:30	GMT+10:00
GMT+11:00	GMT+12:00	GMT+13:00			

Date Format drop down menu

The **Date Format** drop down menu is used to select the display format for the clock. The clock control displays in the selected format.

Available selections for this field are:

Selection	Console clock display format
None	Date is not displayed. The clock only displays the time.
Wednesday, March 17, 2010	Day of the Week, Month Day, Year (4-digit)
Wednesday March 17	Day of the Week Month Day
Wed March 17	Day of the Week Abbreviated Month Day
Wednesday Mar 17	Day of the Week Month Abbreviated Day
March 17, 2010	Month Day, Year (4-digit)
Mar 17, 2010	Month Abbreviated Day, Year (4-digit)
17-Mar-2010	Day-Month Abbreviated-Year (4-digit)
17-Mar-10	Day-Month Abbreviated-Year (2-digit)
March 17	Month Day
03/17/10	dd/mm/yy
03/17/2010	mm/dd/yyyy
17/03/2010	dd/mm/yyyy
17.03.2010	dd.mm.yyyy
2010-03-17	yyyy-mm-dd
17 March 2010	Day Month Year (4-digit)
17 Mar 2010	Day, Month Abbreviated, Year (4-digit)
2010 March 17	Year (4-digit) Month Day
2010 Mar 17	Year (4-digit), Month Abbreviated Day

34 UI Element Setup window - Add Frame

The **Add Frame** option inserts a Frame on the console. The button format and color are controlled with the Frame Setup page.

To **insert a Frame**, do the following:

- From the menu bar, select **Insert | Add Frame**.

A Frame appears on the console.

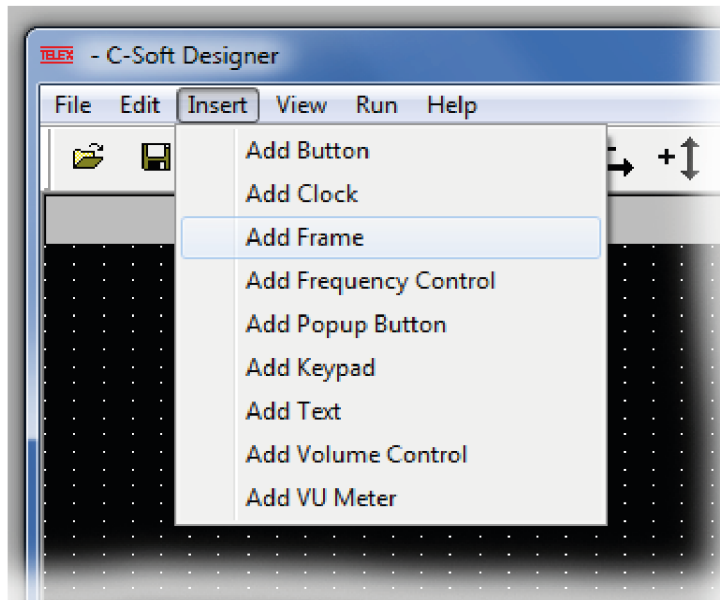


Figure 34.1: Insert/Add Frame from Insert Drop Down Menu

Frame Setup page

The **Frame Setup** page, shown in the Figure below, appears when the Frame button is right-clicked on the edge of the frame.

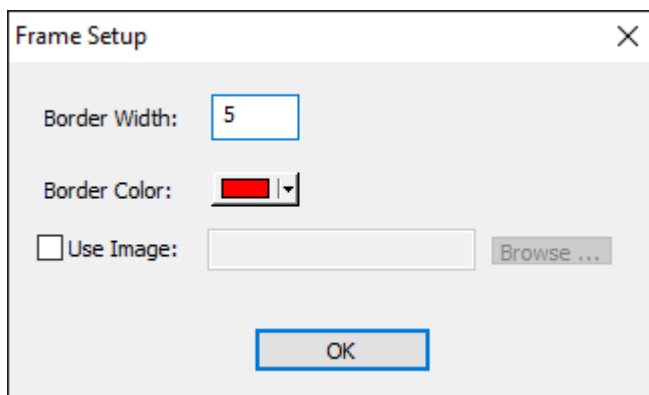


Figure 34.2: Frame Setup Page

Border Width field

The **Border Width** field is used to enter the border width of the frame.

The range for this field is 0 to 999.

Border Color field

The **Border Color** field is used to select the border color of the frame.

Use Image check box

The **Use Image** check box indicates the frame displays the selected image file.

To **select an image file**, do the following:

- Click the **Browse button**.

The Frame supports image types of .bmp, .png, .jpg, and .gif.

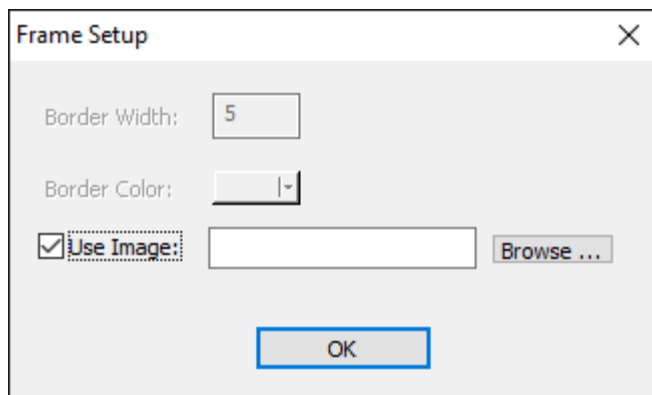


Figure 34.3: Use Image Check Box

35

UI Element Setup window - Add Frequency Control

The Frequency Control

The **Frequency Control** is used to change the frequency on a line. When a frequency is changed, a burst of packets is sent onto the Ethernet network requesting the remote radio to change to the new frequency of the selected line. Additionally, all other consoles on the network must change to display the new frequency of the radio on that particular line.

A Frequency Control is composed of two buttons, (frequency up and frequency down) and the current frequency display area.

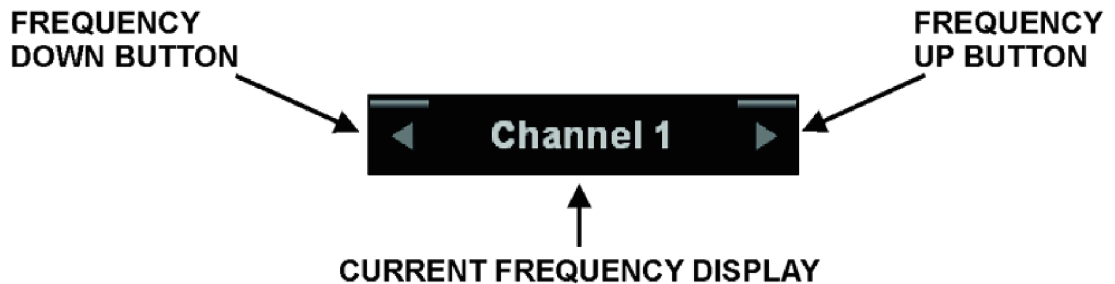


Figure 35.1: Frequency Control

The Frequency Control automatically contains all frequencies configured for the line, except for frequencies configured for Pair Mode and are non-transmittable.

For more information, refer to “Freqs Button”.

Frequency Down button

The **Frequency Down** button is used to select the previous configured frequency.

Frequency Up button

The **Frequency Up** button is used to advance to the next configured frequency.

Current Frequency display

The **Current Frequency** display displays the active frequency on the line associated to the frequency control. The selected frequency can be changed by either; clicking the Frequency Down or Frequency Up buttons, or by clicking on the Current Frequency Display area and selecting a frequency from a drop down list.

To **scroll through the available frequencies**, do the following:

- Press and hold the **Frequency Down** or **Up** buttons.

The Frequency Control begins cycling through the available frequencies on the configured line.

To **select a frequency while scrolling**, do the following:

- Release the **Frequency Up** or **Down** button when the desired frequency is visible.

To **select a frequency from the drop down list**, do the following:

1. Click the **Current Frequency Display** area.
A drop down menu containing all available frequencies are displayed. Frequencies are displayed in ascending numeric order starting at Frequency 1.

2. From the drop down menu, select the desired **frequency**.



Figure 35.2: Frequency Control Drop Down

When Scannable is selected for the line, right-click the frequency control to display a shortcut menu that provides the console operator the ability to add or remove the currently selected frequency from the scan list.

When a frequency is in the scan list, the  icon appears next to the frequency in the Frequency Display area and in the Frequency drop down list. Parallel consoles are also alerted to update their display if a frequency is added or removed from the scan list.

For more information refer to “Scannable Check Box” on “Scannable Check Box”.

Add Frequency Control

The **Add Frequency Control** function inserts a Frequency Control on the console. The button format and color are controlled with the Frequency Control page.

To **insert a frequency control button**, do the following:

- From the menu bar, select **Insert | Add Frequency Control**.

A Frequency Control appears on the console.

35.1

Colors page

The **Colors** page, shown in the Figure below, is used to select the settings for the Orientation, Arrow Button Settings, and Text settings.

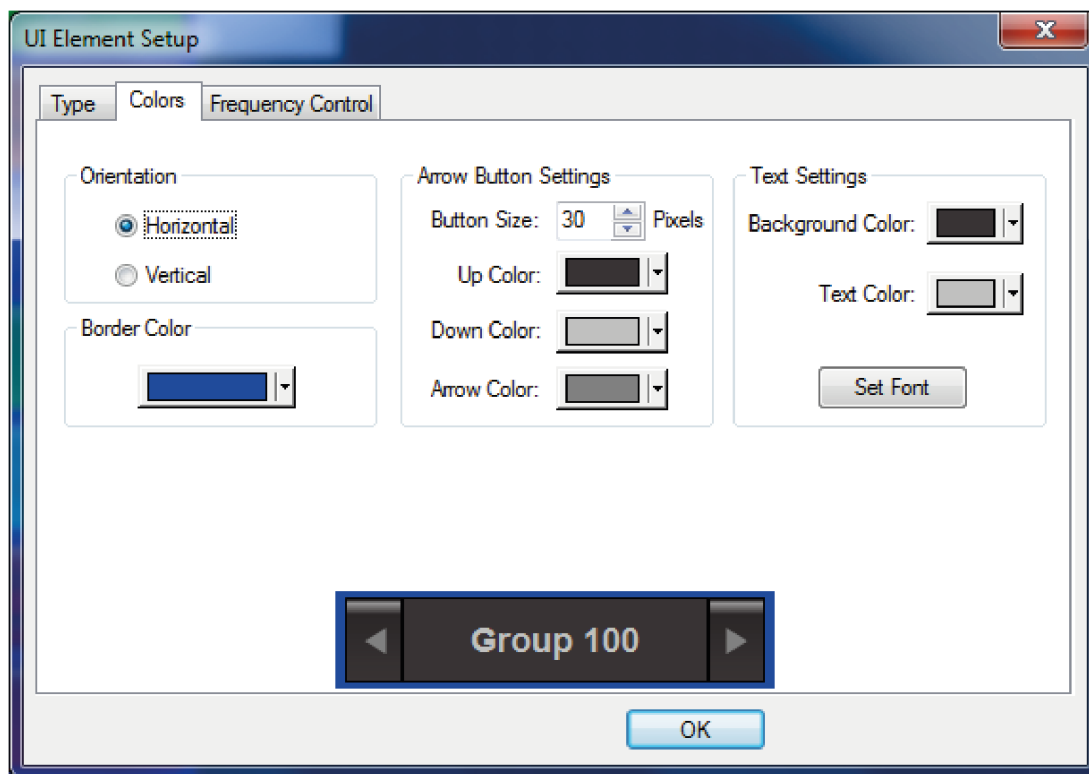


Figure 35.3: Colors Page - UI Element Setup

Orientation group box

The **Orientation** group box specifies whether the Frequency Up and Down buttons are placed to the left and right of the control or the top and bottom of the control.

Horizontal radio button

The **Horizontal** radio button indicates the Frequency Up and Down buttons are drawn to the right and left of the frequency display area.



Figure 35.4: Frequency Control in the Horizontal Orientation

Vertical radio button

The **Vertical** radio button indicates the Frequency Up and Down buttons are drawn to the top and bottom of the frequency display area.



Figure 35.5: Frequency Control in the Vertical Orientation

Border Color group box**Border Color drop down menu**

The **Border Color** drop down menu displays the color of the border around the frequency control. The border color can be changed by opening the palette with the drop down menu to select the desired color. The frequency control border is half of the grid size on the console window. The frequency control border being half the size of the grid size allows UI Elements with the same color border to be grouped together, or to help create a visual separation between groups of UI Elements.

Arrow Button Settings group box

The **Arrow Button Settings** group box contains settings which control the appearance of the Frequency Up and Down buttons.

Button Size field

The **Button Size** field sets the height (if the orientation is set to vertical) or width (if the orientation is set to horizontal) of the Frequency Up and Down buttons. The button size field allows for a larger drop down button to accommodate users of touch screen monitors.

The range for this field is 0 to 200.

The default value for this field is 17.

Up Color drop down menu

The **Up Color** drop down menu displays the color of the button when it is available for selection (Button Up). The button colors can be changed by selecting the drop down menu to open a color palette.

Down Color drop down menu

The **Down Color** drop down menu displays the color of the button when it is selected (Button Down). The button colors can be changed by selecting the drop down menu to open a color palette.

Arrow Color drop down menu

The **Arrow Color** drop down menu displays the color of the arrow in the drop down button. The arrow color can be changed by opening the palette with the drop down menu to select the desired color.

Text Settings group box

The **Text Settings** group box properties control the appearance of the Frequency Display area and the Frequency drop down list.

Background Color drop down menu

The **Background Color** drop down menu displays the background color of the Frequency Display area and Frequency drop down list. The background color can be changed by selecting the drop down menu to open a color palette.

Text Color drop down menu

The **Text Color** drop down menu displays the color of the text in the Frequency Display area and Frequency drop down list. The text colors can be changed by selecting the drop down menu to open a color palette.

Set Font button

The **Set Font** button displays a Font window used to select the text attributes for the Frequency Display area and Frequency drop down list.

OK button

The **OK** button saves the entries and closes the window.

35.2**Frequency Control page**

The **Frequency Control** page, shown in the Figure below, is used to select the Frequency List Settings and the Scrolling Settings.

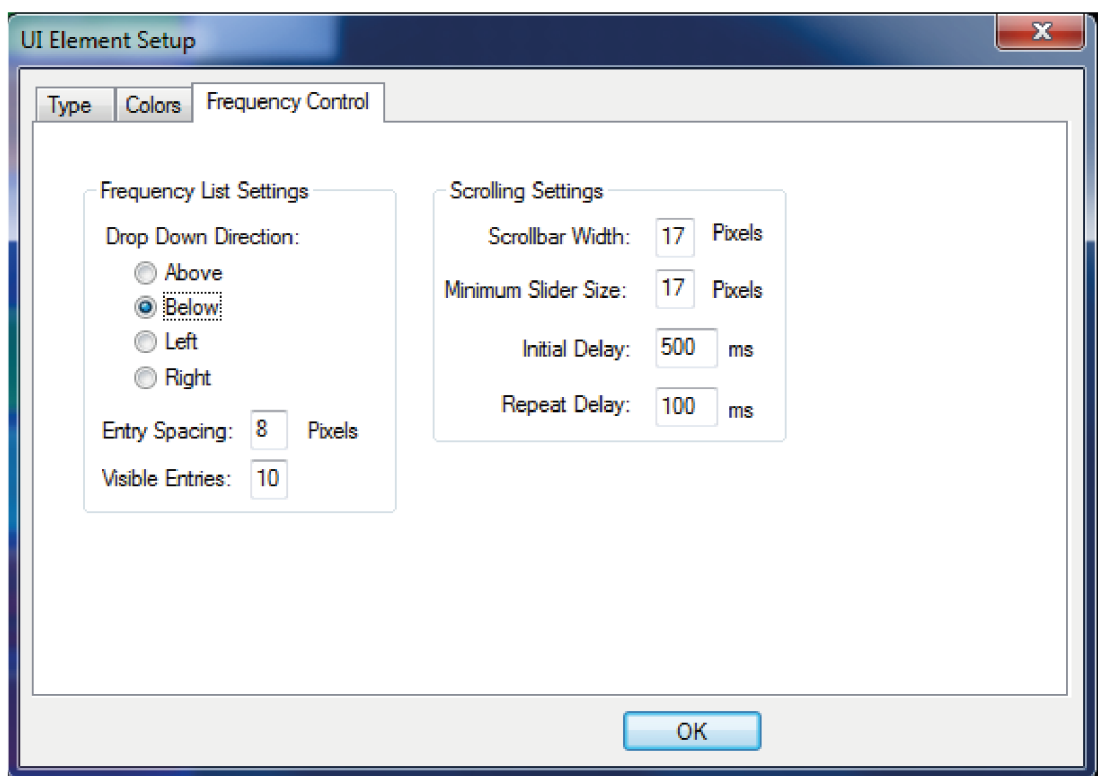


Figure 35.6: Frequency Control Page - UI Element Setup

Frequency List Settings group box

The **Frequency List** group box properties control the appearance and the display location of the Frequency drop down list. The Frequency List appears when the user clicks the Frequency Display area and disappears when either a frequency has been selected or the user has clicked on another control.

Drop Down Direction radio buttons

The **Drop Down Direction** group box is used to select the direction the drop down list containing the list of available frequencies is displayed relative to the frequency control.

Above radio button

The **Above** radio button indicates the drop down list is displayed above the frequency control.

Below radio button

The **Below** radio button indicates the drop down list is displayed below the frequency control.

Left radio button

The **Left** radio button indicates the drop down list is displayed to the left of the frequency control.

Right radio button

The **Right** radio button indicates the drop down list is displayed to the right of the frequency control.

Entry Spacing field

The **Entry Spacing** field is used to enter the amount of space in pixels between individual entries in the drop down list. The value entered for Entry Spacing and the font type determine the height of the individual entries in the drop down list. When using a touch screen monitor the entry spacing value can be increased to allow individual entries to be selected from a touch screen.

The range for this field is 0 to 99.

The default value for this field is 8.

Visible Entries field

The **Visible Entries** field is used to enter the number of frequencies visible in the drop down list without scrolling.

The default value for this field is 10.

Scrolling Settings group box**Scrollbar Width field**

The **Scrollbar Width** field is used to set the width in pixels of the scrollbar in the drop down list.

The default value for this field is 17.

Minimum Slider Size field

The **Minimum Slider Size** field is used to set the minimum height of the scrollbar's thumbtack slider in the drop down list. The thumbtack slider is sized proportionally to the total number of entries in the list and the number of entries which are displayed. The minimum slider size ensures the scrollbar will always be as large as the entered value.

The default value for this field is 17.

Initial Delay field

The **Initial Delay** field is used to set the number of milliseconds a Frequency Up or Down button must be held down before the frequency control begins scrolling through the available frequencies. The larger the value, the longer the Frequency Up or Down buttons must be held before scrolling begins.

The range for this field is 10 to 9999.

The default value for this field is 500.

Repeat Delay field

The **Repeat Delay** field is used to set the number of milliseconds between frequency changes once the Frequency Control begins scrolling. The larger the value, the slower the Frequency Control will cycle through the available Frequency List.

The range for this field is 10 to 9999.

The default value for this field is 100.

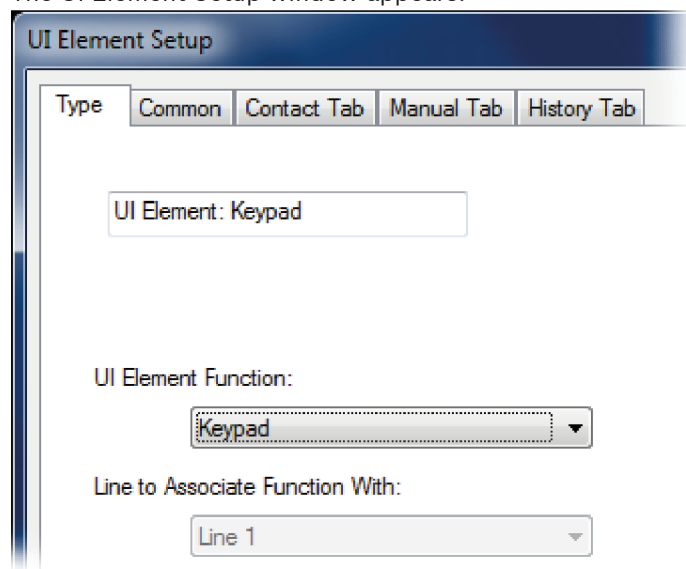
36

UI Element Setup window - Add Keypad

Use the Keypad UI Element Properties to configure the colors associated with each Mode; Common, Contact, Manual, and History. The Keypad GUI Element Settings window contains five pages: Type, Common, Contact Tab, Manual Tab, and History Tab.

To **customize the Keypad Graphical User Interface**, do the following:

1. From the Insert menu, select **Add Keypad**.
The keypad module is created on the Designer desktop.
2. Right-click on the **keypad**.
A popup menu appears.
3. From the popup menu, select **Properties**.
The UI Element Setup window appears.



4. Click each tab to **configure colors** for the associated buttons and fields.

36.1

Common page

The **Common** page is used to set the appearance settings for common keypad window elements shared between multiple pages.

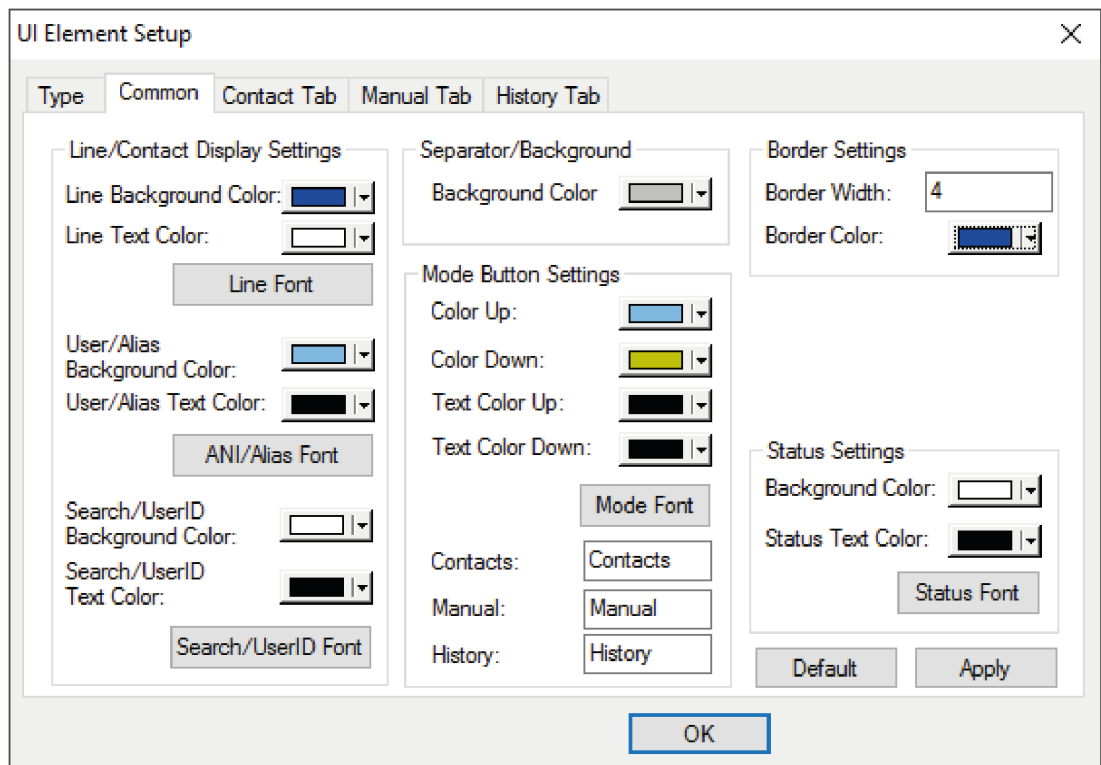


Figure 36.1: Keypad GUI Element - Common Page

Line Contact display settings

Line Background Color drop down palette

The **Line Background Color** drop down palette is used to set the background color of the selected contact area.

Line Text Color drop down palette

The **Line Text Color** drop down palette is used to set the text color of the selected contact area.

Line Font button

The **Line Font** button opens the Font window. From this window, you can set the font of the selected contact area.

User/Alias Background Color drop down palette

The **User/Alias Background Color** drop down palette is used to set the background color of the User/Alias display area.

User/Alias Text Color drop down palette

The **User/Alias Text Color** drop down palette is used to set the text color of the User/Alias display area.

ANI/Alias Font button

The **ANI/Alias Font** button opens the font window. From this window, you can set the font of the User/Alias display area.

Search/UserID Background Color drop down palette

The **Search/UserID Background Color** drop down palette is used to set the background color of the Search/UserID area.

Search/UserID Text Color drop down palette

The **Search/UserID Color** drop down palette is used to set the text color of the Search/UserID entry area.

Search/UserID Font button

The **Search/User ID Font** button opens the Font window. From this window, you can set the font of the Search/UserID Entry area.

Separator/Background group box**Separator/Background Color drop down palette**

The **Separator/Background Color** drop down palette is used to set the color of other non-defined background areas.

Mode Button Settings group box**Color Up Color drop down palette**

The **Color Up Color** drop down palette is used to set the color of the mode buttons in the unpressed state.

Color Down Color drop down palette

The **Color Down Color** drop down palette is used to set the color of the mode buttons in the depressed state.

Text Color Up Color drop down palette

The **Text Color Up Color** drop down palette is used to set the text color of the mode buttons in the unpressed state.

Text Color Down Color drop down palette

The **Text Color Down Color** drop down palette is used to set the text color of the mode buttons in the depressed state.

Mode Font button

The **Mode Font** button opens the Font window. From this window, you can set the of the Mode buttons.

Contact Button Label field

The **Contact Button Label** field is used to enter the text shown on the Contacts button.

Manual Button Label field

The **Manual Button Label** field is used to enter the text shown on the Manual button.

History Button Label field

The **History Button Label** field is used to enter the text shown on the History button.

Border Settings group box**Border Width field**

The **Border Width** field is used to set the border width for the entire keypad control.

Border Color drop down palette

The **Border Color** drop down palette is used to set the border color for the entire keypad control.

Status Settings group box**Background Color drop down palette**

The **Background Color** drop down palette is used to set the background color of the status display area.

Status Text Color drop down palette

The **Status Text Color** drop down palette is used to set the text color of the status display area.

Status Font button

The **Status Font** button opens the Font window. From this window, you can set the font of the status display area.

Default button

The **Default** button is used to return all the Common Tab settings back to the factory default settings.

Apply button

The **Apply** button is used to apply the modifications made to the Common Tab settings.

36.2

Contact Tab page

The **Contact Tab** page is used to set the appearance settings for the Contact window.

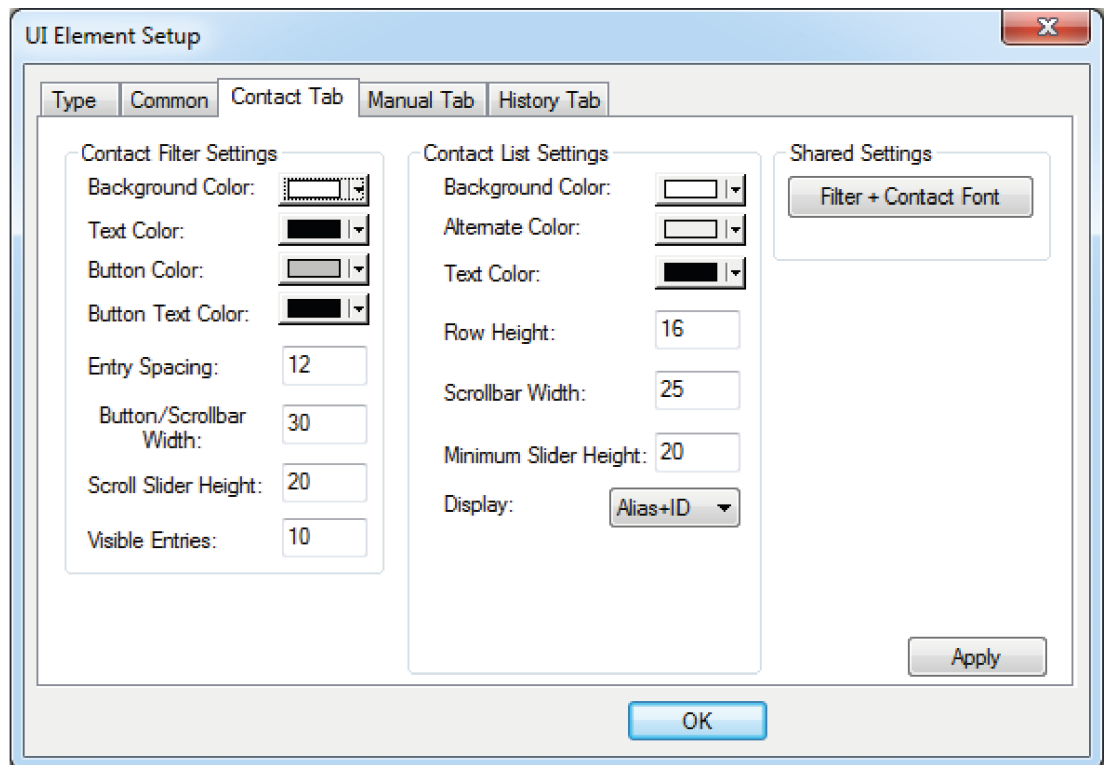


Figure 36.2: Keypad GUI Element - Contact Tab Page

Contact Filter Settings group box

Background Color drop down palette

The **Background Color** drop down palette is used to set the background color of the filter area.

Text Color drop down palette

The **Text Color** drop down palette is used to set the text color of the filter area.

Button Color drop down palette

The **Button Color** drop down palette is used to set the color of the button in the filter area.

Button Text Color drop down palette

The **Button Text** color drop down palette is used to set the color of the arrow on the button in the filter area.

Entry Spacing field

The **Entry Spacing** field is used to enter the spacing between entries in the filter entry list.

Button/Scrollbar Width field

The **Button/Scrollbar Width** field is used to enter the width of the filter selection button and filter entry list scrollbar.

Scroll Slider Height field

The **Scroll Slider Height** field is used to enter the height of the filter entry list scrollbar's slider.

Visible Entries field

The **Visible Entries** field is used to enter the number of entries displayed at once in the filter entry list.

Contact List Settings group box**Background Color drop down palette**

The **Background Color** drop down palette is used to set the background color of every odd row of the Contact List area.

Alternate Color drop down palette

The **Alternate Color** drop down palette is used to set the background color of every even row of the Contact List area.

Text Color drop down palette

The **Text Color** drop down palette is used to set the text color of the Contact List area.

Row Height field

The **Row Height** field is used to enter the height of each row in the Contact List.

Scrollbar Width field

The **Scrollbar Width** field is used to enter the width of the Contact List scrollbar.

Minimum Slider Height field

The **Minimum Slider Height** field is used to set the minimum slider height of the Contact List area.

Display drop down menu

The **Display** drop down menu is used to set how the Contacts information is displayed in the Contact List.

Available options are:

- Alias + ID
- Alias

Shared Settings group box**Filter + Contact Font button**

The **Filter + Contact Font** button opens the Font window. From this window you can set the font of both the filter entry list and the contact list.

Apply button

The **Apply** button is used to apply the modifications made to the Contact Tab settings.

36.3

Manual Tab page

The **Manual Tab** page is used to set the appearance settings for the Manual window.

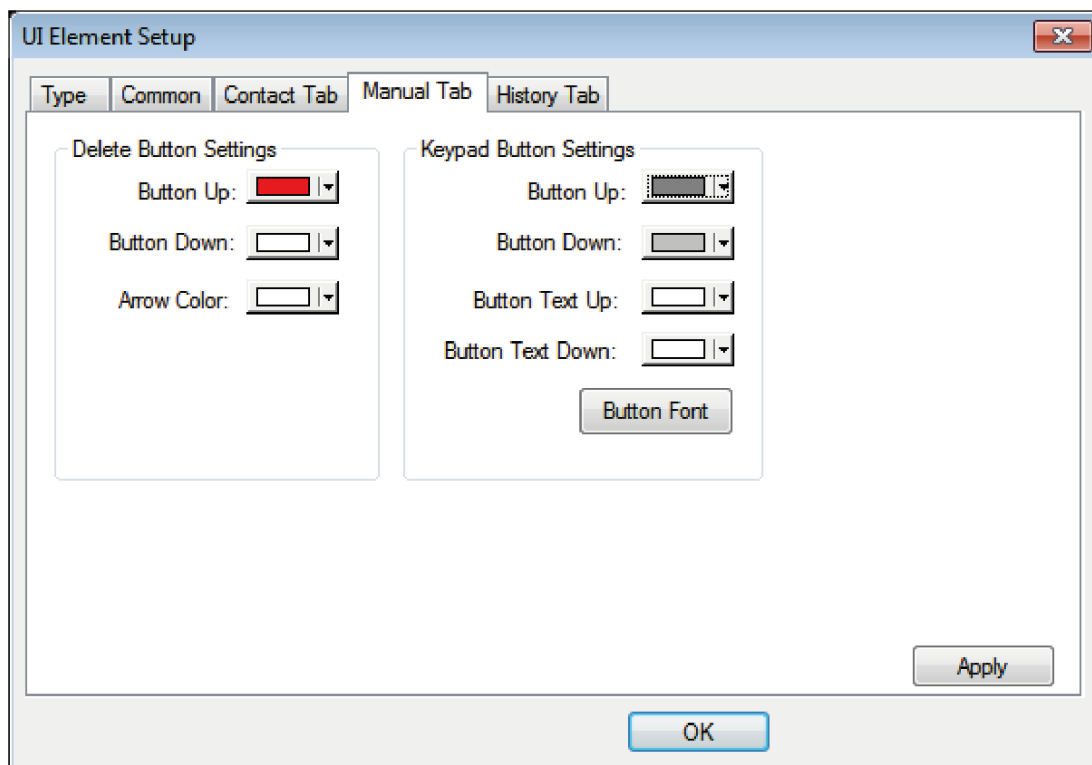


Figure 36.3: Keypad GUI Element - Manual Tab Page

Delete Button Settings group box

Button Up drop down palette

The **Button Up** drop down palette is used to set the color of the Delete button in the unpressed state.

Button Down drop down palette

The **Button Down** drop down palette is used to set the color of the Delete button in the depressed state.

Arrow Color drop down palette

The **Arrow Color** drop down palette is used to set the color of the arrow on the Delete button.

Keypad Button Settings group box

Button Up drop down palette

The **Bottom Up** drop down palette is used to set the color of the manual entry button in the unpressed state.

Button Down drop down palette

The **Button Down** drop down palette is used to set the color of the manual entry button in the depressed state.

Button Text Up drop down palette

The **Button Text Up** drop down palette is used to set the text color of the manual entry button in the unpressed state.

Button Text Down drop down palette

The **Button Text Down** drop down palette is used to set the text color of the manual entry button in the depressed state.

Button Font button

The **Button Font** button opens the Font window. From this window, you can set the font for the manual entry buttons.

Apply button

The **Apply** button is used to apply the modifications made to the Manual Tab settings.

36.4

History Tab page

The **History Tab** page is used to set the appearance settings for the History window.

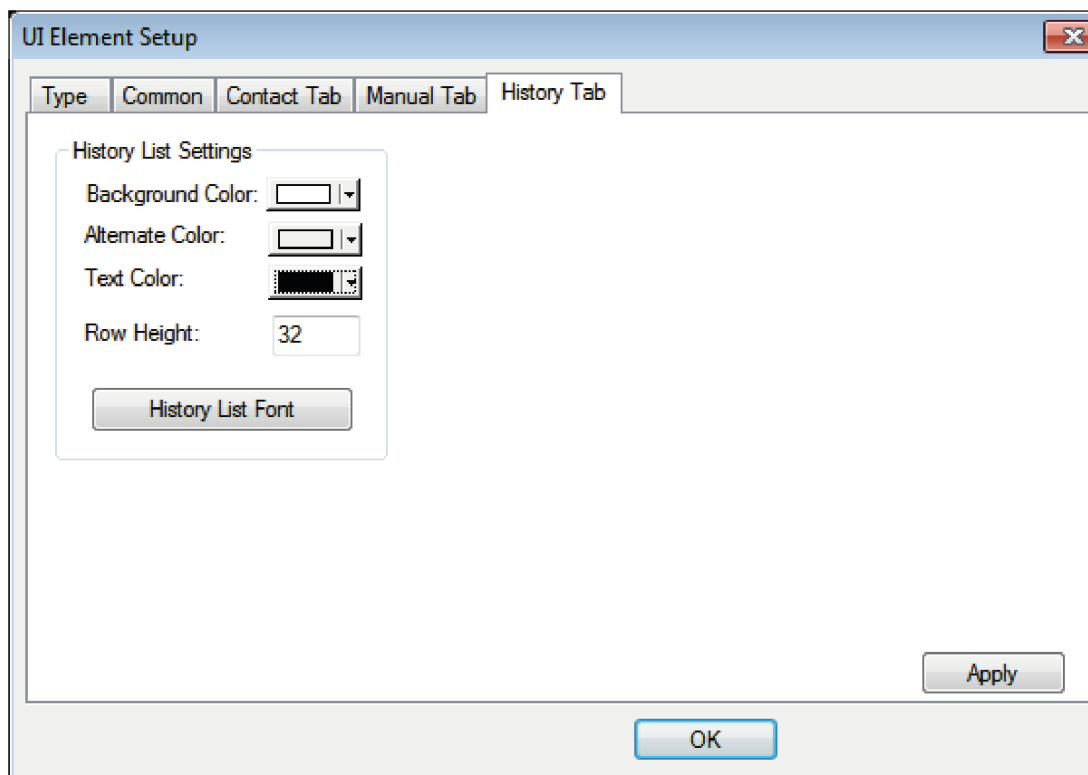


Figure 36.4: Keypad GUI Element - History Tab Page

History List Settings group box**Background Color drop down palette**

The **Background Color** drop down palette is used to set the background color of every odd row of the History List area.

Alternate Color drop down palette

The **Alternate Color** drop down palette is used to set the background color of every even row of the History List area.

Text Color drop down palette

The **Text Color** drop down palette is used to set the text color of the History List area.

Row Height field

The **Row Height** field is used to enter the height of each row in the History List.

History List Font button

The **History List Font** button opens the Font window. From this window you can set the font for the History List window.

36.5

Keypad

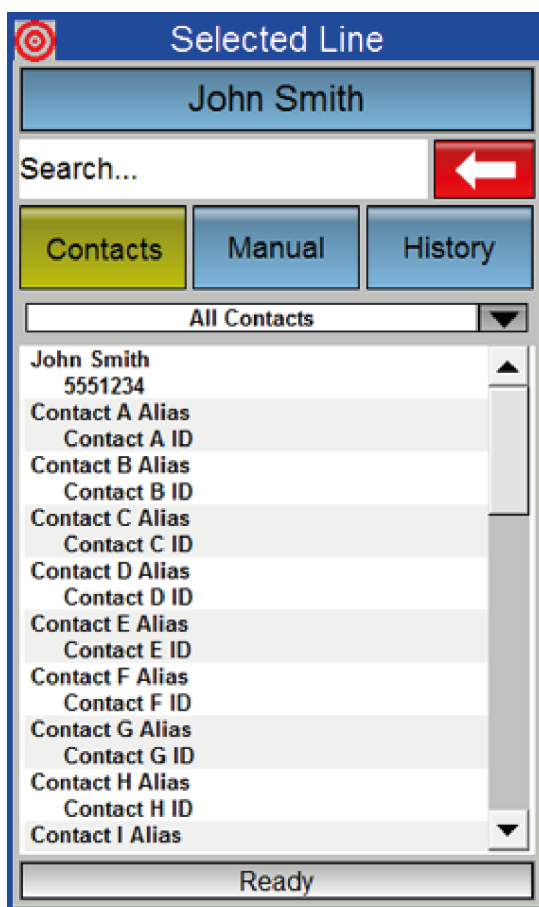
The Add Keypad option is used to add the keypad module, shown in the Figure below, to your C-Soft Console. The keypad module is used to specify a destination address for radio operations. Use the following Table to see the different radio operations for the different system types.

	FleetSyn c	Telex- Serial	MDC- 1200	MOTOTRBO	P25- DFSI	Sprint Direct Connect	AIS	NEXEDGE Control Station	NEXEDG E IP Interface	Telex- Enhanced- ANI
Radio Check			x	x	x		x			
Radio Enable/ Disable	x	x	x	x	x	x	x	x	x	x
Call Alert			x	x	x	x	x	x	x	
Select Call	x	x	x					x	x	x
Remote Monitor		x	x	x	x		x	x	x	x
Status Request	x	x	x		x		x	x	x	x
Status Message	x	x				x	x	x	x	x
GPS Operation s				x			x	x	x	
Private PTT	x	x		x	x	x	x	x	x	x
Group PTT	x	x		x	x	x		x	x	x
Radio Regroup								x	x	

Radio								x	x	
Ungroup										

Table 36.8: Radio Operations Supported by System Type

NAVIGATION: Select Insert | Add Keypad from the menu bar.

**Figure 36.5:** Keypad Module - C-Soft

The keypad module has three modes of operation:

- Contacts Mode - Used to search for contact/user IDs.
- Manual Mode - Displays a numeric keypad on the screen while allowing for keyboard input.
- History Mode - Displays a list of recently used contact/user IDs and can be used to specify destination for new operations.

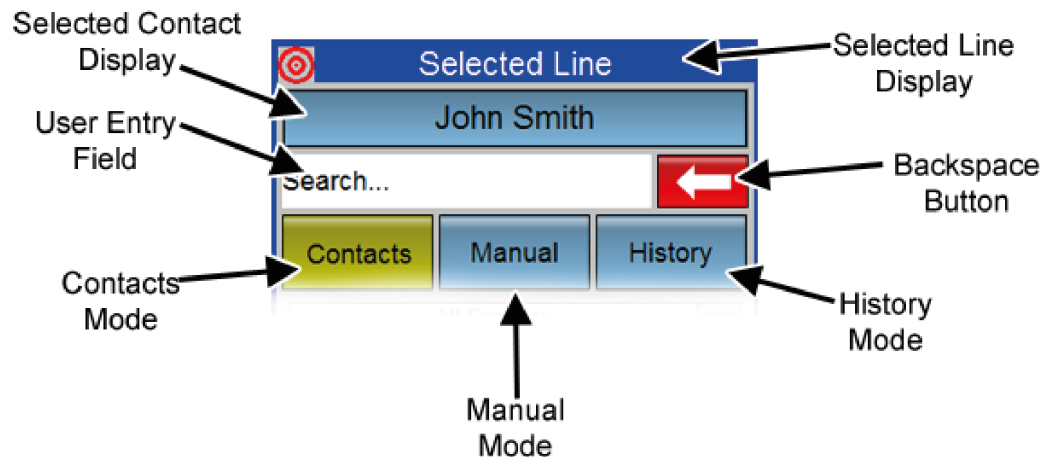


Figure 36.6: Keypad Module - Common Controls

Selected Line Display

The Selected Line display shows the currently selected line. For example, Line 1.

Selected Contact display

The **Selected Contact** display shows the currently selected contact. The selected contact is the destination of any radio command messages sent from the corresponding radio command buttons.

User Entry field

The **User Entry** field is used to enter information necessary for keypad operation. Depending on the current mode selected, this field behaves differently.

- In Contact mode, the user entry field is used to search contacts. When text is entered, the contact list updates to only show contacts whose User IDs or Aliases match (or partially match) the entered text. This search is not case sensitive. If no users match the entered text, the entered text becomes the selected contact (for example, manually entering an ID).
- In Manual mode, the user entry field is used to display the entered digits.
- In History mode, the user entry field is used to display the entered digits.

Contacts Mode button

The **Contacts Mode**, shown in the Figure below, is used to search for contacts. The use of filters further narrows the search parameters when looking for contacts.

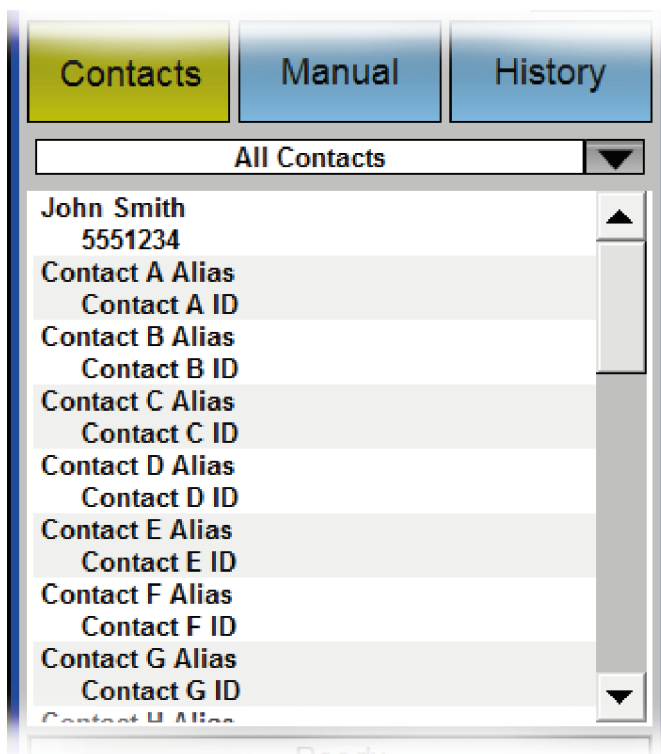


Figure 36.7: Keypad Module - Contacts Pane

Filter drop down menu

The **Filter** drop down menu is used to select a filter to use when looking for contacts. When a filter is selected from the list, only contacts contained within the specified filter are shown.

Filters are created using the Filter List Setup window, refer to “*Filter List Setup window, page 177*”. Once filters are created, user IDs are associated with filters in the User ID List Setup window, refer to “*User ID List window, page 179*”. Group IDs are associated with filters in the Group ID List Setup window, refer to “*Group ID List window, page 183*”.

Contact List pane

The **Contact List** pane displays all contacts associated with the selected line. When a contact entry is selected, the selected Contact Display is updated with the selected contact information. Any radio operations use the selected contact’s as the destination.

If the contact uses a System List, only contacts within the system list are shown.

Signaling/System Types Requiring a System List	Signaling/System Types Not Requiring a System List
– FleetSync – Telex-Serial – MDC-1200 – MOTOTRBO – P25-DFSI – NEXEDGE	– Generic – 5/6 Tone – iDen – Sprint Direct Connect – AIS

Manual Mode

The **Manual Mode**, shown in the Figure below, is used to manually enter the desired ID. The numeric keypad can be used with a mouse, but is used largely for touch-screen users or users without a keyboard.

If the manually entered ID matches a known User ID or Group ID, the selected contact display area displays the matching contact information.



Notice!

The ABC button displays the DTMF buttons A - F.

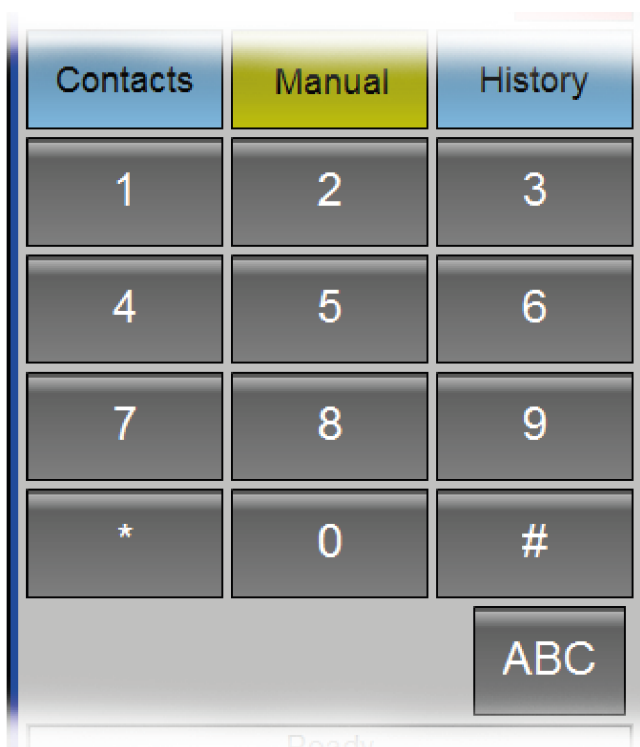


Figure 36.8: Keypad Module - Manual Panel

History Mode

The **History Mode**, shown in the Figure below, is used to view any operations initiated that use the keypad's destination as a target. When a history event is selected, the contact associated with the selected history event appears in the Selected Contact area. Each entry includes:

- Operation Destination (the Contact ID or Alias, if known)
- Operation Type
- Line name on which the operation was sent
- Timestamp of when the operation occurred.

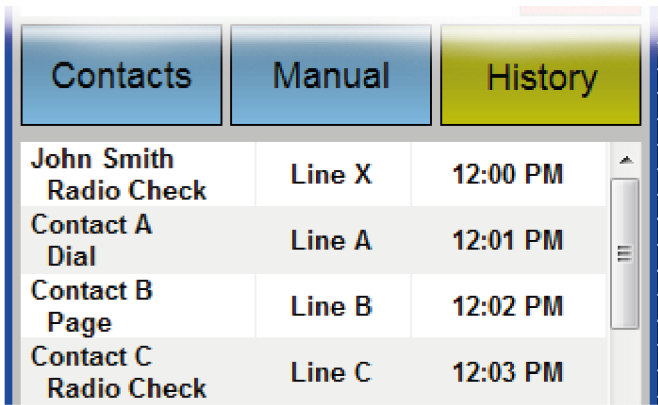


Figure 36.9: Keypad Module - History Pane

Status Bar

The **Status Bar** displays relevant operation information. This includes notifications of specifying an invalid User ID, operation sent notifications, and operation results notification.

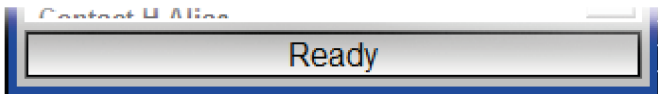


Figure 36.10: Keypad Module - Status Bar

37

UI Element Setup window - Add Popup Button

Select **Add UI Popup Button** from the Insert menu to place a popup button in the upper left hand corner of the console window. Popup buttons can also be added to a popup window. The popup button displays an activity icon when a line inside the popup window has incoming audio traffic. The activity icon can be customized by creating a graphic file named activity.bmp. This file must be located in the same directory as the csoftruntime.exe file.

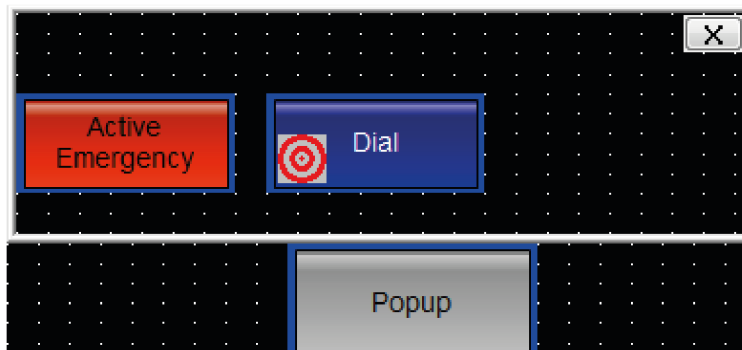
To **add a popup button to the C-Soft Console window**, do the following:

- From the Insert menu, select **Add popup Button**.

A popup button appears on the C-Soft console window.

To **open a popup window in C-Soft Designer**, do the following:

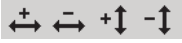
1. Right-click a **UI element popup button**.
A shortcut menu appears.
2. From the shortcut menu, select **Open popup**.
A popup window appears.



To **close a popup window**, do the following

- Click the **X** in the upper-right corner of the popup window.
The popup window closes.

To **resize the popup window in C-Soft Designer**, do the following:

1. Right-click the **popup button**.
2. From the Shortcut menu, select **Open popup**.
3. Click **resize buttons**  to increase/reduce width/height.
OR
Press the **Ctrl** key while pressing the arrow keys on your keyboard.

Note:

- If, as a result of resizing, the window extends past the window view, move the popup button to a new position.
- The popup window cannot be resized in C-Soft Runtime.

To **insert items into the popup window**, do the following:

1. Right-click the **Popup button**.
A flyout menu appears.

2. From the flyout menu, select **Open Popup**.
The Popup window opens.
3. Right-click anywhere **inside** the Popup window.
A flyout menu appears.
4. From the flyout, select the **desired element**.
5. **Repeat** as necessary.

**Notice!**

The popup button must be selected in order to insert items into a popup window.

To **edit items in the popup window**, do the following:

1. Open a **popup window** as described above.
2. Select the **item(s)** in the popup window.
Red targets appear on the items.
3. Perform the desired **action** on the selected item(s).

**Notice!**

The parameters for the item(s) can be changed, and the item(s) can be cut, copied, or moved in the same way as an item(s) is when it is placed directly on the console window.

37.1

Popup Window Setup page

The Popup Window Control function creates a popup window to which additional controls and button can be added. The popup window is one of the most versatile user interface options. Popup windows can be used to group together similar line functions, pages, alerts, or any combination of button and slider controls. Popup buttons can even be included within a popup window allowing for nested controls. When popup Window Control is selected from the UI Element Function drop down menu, the **Popup Window Setup** page appears.

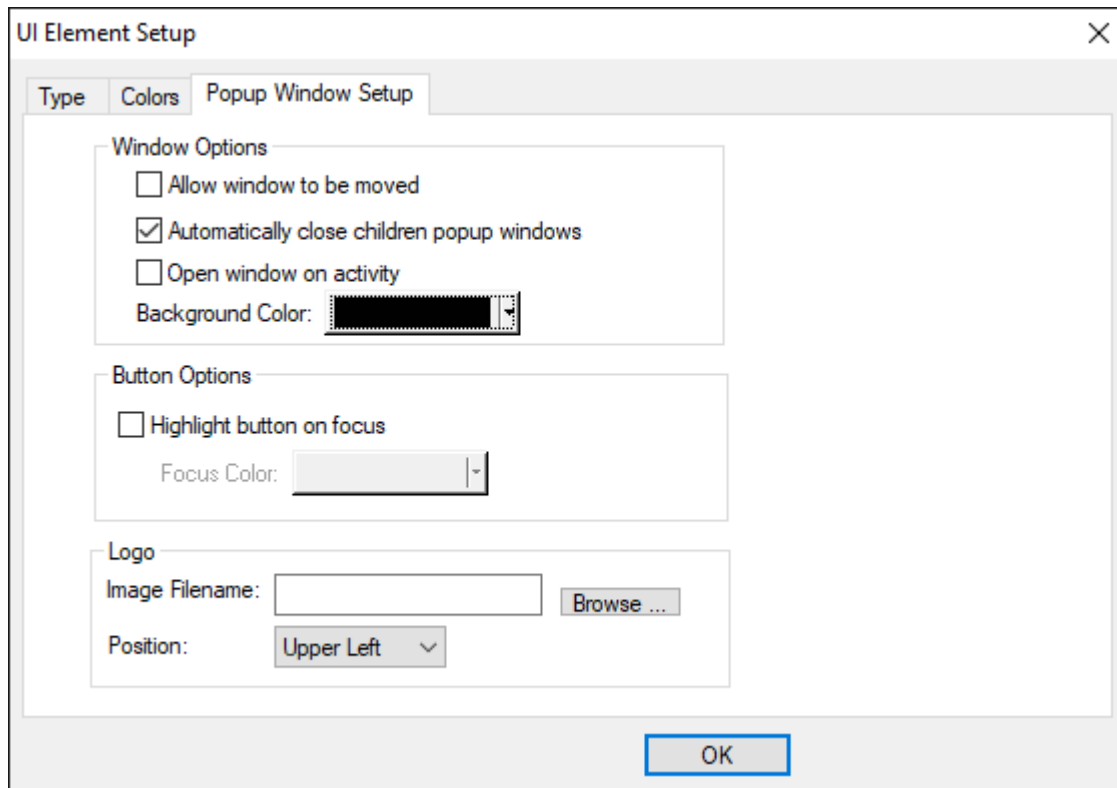


Figure 37.1: Popup Window Setup Page

37.1.1 Window Options group box

Allow window to be moved check box

The **Allow window to be moved** check box indicates the popup window can be moved in C-Soft Runtime.

Automatically close children popup windows check box

The **Automatically close children popup windows** check box indicates when a popup window is closed, any associated children popup windows automatically close. When cleared, the children popup windows remain open after the parent window has closed.

Open Window on Activity check box

The **Open Window on Activity** check box indicates the popup window automatically opens when activity is occurring within the popup window.

Background Color drop down palette

The Window **Background Color** drop down palette is used to set a background color for the popup window.

37.1.2 Button Options group box

Highlight button on focus check box

The **Highlight button on focus** check box is used to indicate to the user when the button's child window is in focus.

Focus Color drop down palette

The **Focus Color** drop down palette is used to select the color the button changes to when the button window it opens is under focus.

37.1.3**Logo group box****Image Filename field**

The **Image Filename** field identifies the file path of a image to be displayed in the background of the Console window.

This field can contain up to 255 characters.

C-Soft supports 1-bit, 4-bit, 8-bit and 24-bit bitmaps, .png, .jpg, and .gif file formats.

Browse button

The **Browse** button opens the Open window, which is used to navigate to the logo image file.

To **change the image file**, do the following:

1. Click **Browse**.
The Open window appears.
2. Select the **file** you want to use for the image.
3. Click **Open**.

The path to the image file appears in the field.

Position drop down menu

The **Position** drop down menu is used to select the location of the image logo on the console window.

Available selections for this field are: Upper-Left, Upper-Right, Lower-Left, Lower-Right, Center and Stretch.

37.2**Popup Webpage**

The **Popup Webpage** function provides the ability to embed a webpage in the popup window. When the popup Webpage button is pressed, the specified webpage is displayed in the popup window.

A maximum of three webpages are allowed on any console design.

37.2.1**Popup Webpage Setup page**

When the popup Webpage function is selected, the **Popup Webpage Setup** page appears. Refer to the Figure below.

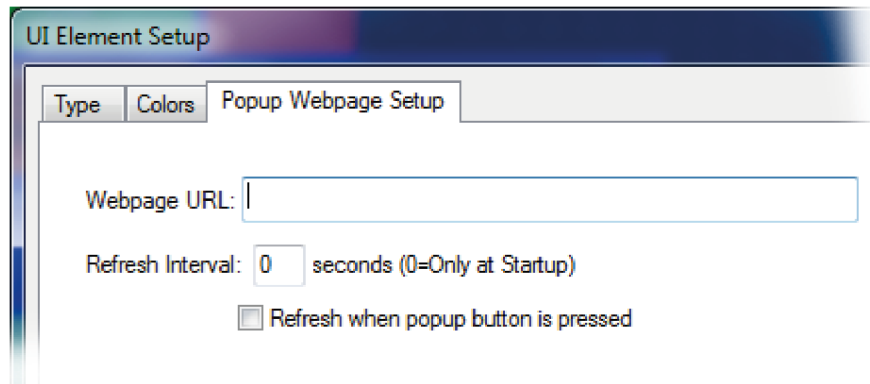


Figure 37.2: Popup Webpage Setup Page - UI Element Setup

Webpage URL field

The **Webpage URL** field identifies the URL of the webpage to display in the popup window.

This field can contain up to 98 characters.

Refresh Interval field

The **Refresh Interval** field identifies the amount of time that passes before the webpage displayed in the popup window is automatically refreshed. For example, if a radar weather map is displayed on the console operator's window, an entry of 300 in this field automatically refreshes the radar image every five minutes. A value of zero indicates the webpage refreshes on C-Soft application startup.

The range for this field is 0 to 999.

Refresh when a popup button is pressed check box

The **Refresh when popup button is pressed** check box indicates the webpage display is refreshed when the popup Webpage button is pressed.

37.3

Type page

The **Type** page is used to configure the type of function for the UI Element Popup (Control) button. Some UI Elements require further configuration and when selected from the function drop down menu additional configuration pages appear. Refer to the Figure below.

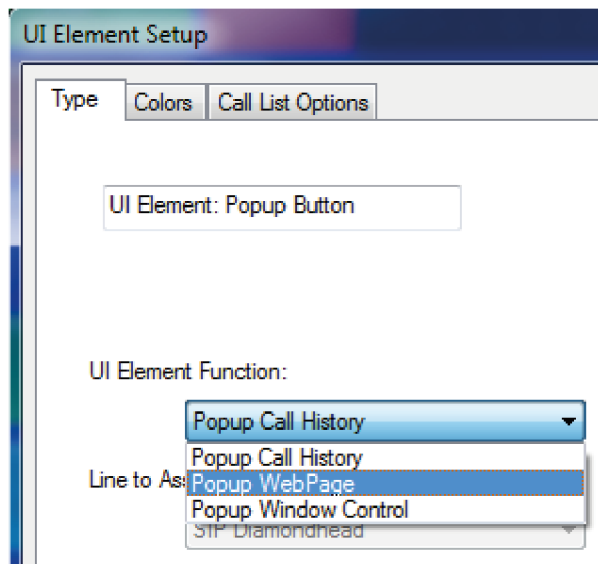


Figure 37.3: Type Page - UI Element Setup Popup Control

UI Element Function drop down menu

The **UI Element Function** drop down menu is used to select an operation for the popup button. Each function configuration is described in the following section.

Available selections for this field are:

- Popup Call History
- Popup Webpage
- Popup Window Control

Refer to

- *Instant Recall, page 278*

37.4 Popup Global Call History

The **Popup Global Call History** function creates a button used to open the Global Call History window.

In C-Soft Runtime, the Global Call History is used to view per line calls received and stored in the history log. The Global Call History window also logs the state changes of input indication and relays from an ADHB-4 or NEO-10. In addition to displaying the global call history, the log can be used to play back received audio. Transmitted audio is only recorded on Phone or SIP Phone lines.

Global Call History stores up to 10 minutes of audio across all lines not enabled for Per Line Recording. For lines enabled for Per Line Recording, Global Call History window displays an additional 60 minutes of audio for each enabled line. Silence between calls is not stored.

Note:

- C-Soft supports one Global Call History window per console. If a Global Call History window button already exists, the Popup Call History function is not available for selection.

- Recording calls is also accomplished by adding an Instant Recall Recording button to the console, refer to “*Instant Recall, page 278*” for details.
- While the call history audio is playing, the recorder continues to record incoming calls.

37.4.1

Call List Options page

When the popup Call History function is selected, the **Call List Options** page appears. Refer to the Figure below.

The screenshot shows the 'UI Element Setup' window with the 'Call List Options' tab selected. The window is divided into three main sections:

- Logging Options:** Contains two checked checkboxes: 'Include Muted Calls in List' and 'Include NEO Changes in List'.
- List Appearance:** Contains two input fields: 'Call Window Lines' with a value of 200 and 'Call Window Font Size' with a value of 8.
- Column Setup:** Contains a section 'Select the columns to be displayed:' with a list of checkboxes: 'Call Duration', 'Caller ID', 'Comments', 'Date', 'Direction', 'Frequency', 'Line Name', 'Status', 'Talkgroup', 'Time', and 'User ID'. The checkboxes for 'Call Duration', 'Caller ID', 'Comments', 'Date', 'Frequency', 'Line Name', 'Status', 'Time', and 'User ID' are checked. The checkboxes for 'Direction' and 'Talkgroup' are unchecked.

An 'OK' button is located at the bottom right of the window.

Figure 37.4: Call List Options Page - UI Element Setup

Logging Options group box

Include Muted Calls in List check box

The **Include Muted Calls in List** check box indicates muted calls are included in the call history log.

Include NEO Changes in List check box

The **Include NEO Changes in List** check box indicates the NEO-10 event changes are included in the call history log.

List appearance

Call Window Lines field

The **Call Window Lines** field identifies the number of lines of text saved in the call history log.

The range for this field is 1 to 500 lines.

Call Window Font Size field

The **Call Window Font Size** field identifies the font size of the text in the call history log.

The range for this field is 0 to 72.

The default is 8 point.

Column Setup group box

The **Column Setup** group box allows the user to determine which columns are visible in the Global Call History window. The respective columns display in the Global Call History window if selected and hidden if not selected.

Call Duration check box

The **Call Duration** check box is used to add a Call Duration column to the Global Call History window.

Caller ID check box

The **Caller ID** check box is used to add a Caller ID column to the Global Call History window.

Comments check box

The **Comments** check box is used to add a Comments column to the Global Call History window.

Date check box

The **Date** check box is used to add a Date column to the Global Call History window.

Direction check box

The **Direction** check box is used to add a Direction column to the Global Call History window.

Frequency check box

The **Frequency** check box is used to add a Frequency column to the Global Call History window.

Line Name check box

The **Line Name** check box is used to add a Line Name column to the Global Call History window.

Status check box

The **Status** check box is used to add a Status column to the Global Call History window.

Talkgroup check box

The **Talkgroup** check box is used to add a Talkgroup column to the Global Call History window.

**Notice!**

Only lines configured for P25-DFSI use the Talkgroup column.

Time check box

The **Time** check box is used to add a Time column to the Global Call History window.

User ID check box

The **User ID** check box is used to add a User ID column to the Global Call History window.

37.5

Global Call History window

The **Global Call History** window provides a log of past calls received by the console. The operator uses the log to view previously received calls. In addition, the calls can be selected for playback.

This log can contain up to 500 calls.

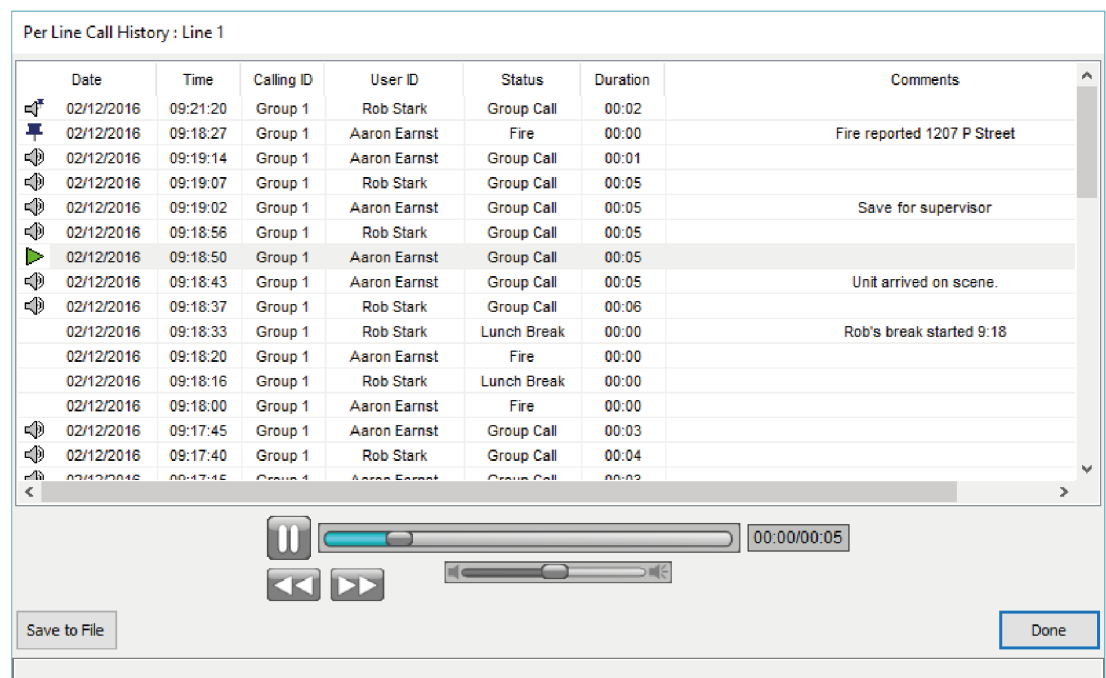


Figure 37.5: Global Call History Window

Save to File button

The **Save to File** button is used to save the currently selected items to a .csv file.

**Notice!**

IP-30XX devices do not have the Save to File button.

To **save a .csv file of the items in the list**, do the following:

1. From the Per Line Call History list, select the **items** you want to save.
2. Click **Save to File**.
The Save window appears.
3. In the File name field, enter a **name** for your .csv file.
4. Click **Save**.

Done button

The **Done** button is used to close the window.

38 UI Element Setup window - Add Text

The **Add Text** option opens the Font window, shown in the Figure below.

NAVIGATION: Select Insert | Add Text from the menu bar.

Font window

The **Font** window is used to add descriptive text to the console window or to a popup window. The Font window includes standard options for Font, Font Style, Size, and Color formatting. When you change the format, a preview of the text appears in the sample field.

For more information, refer to “*User interface element configuration, page 53*”.

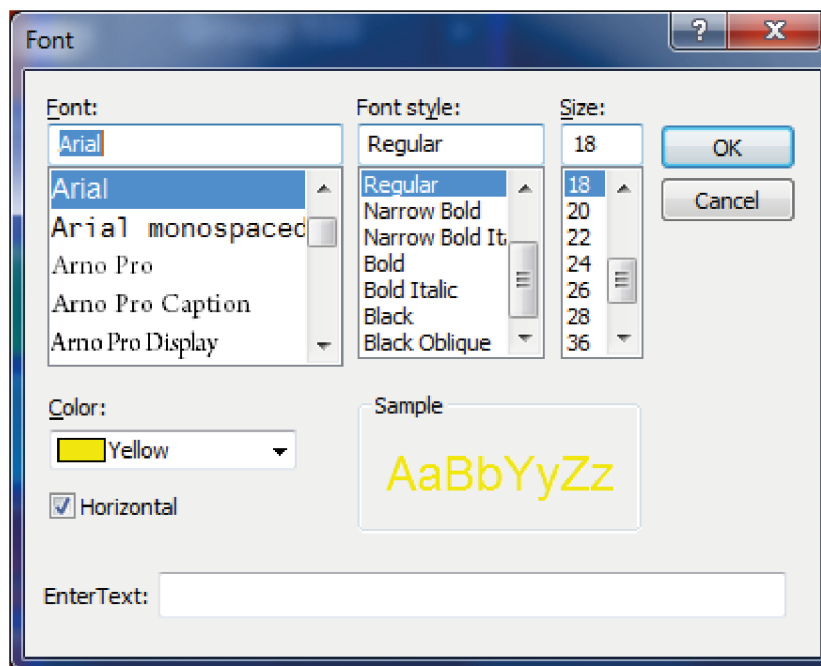


Figure 38.1: Font Window

Horizontal check box

The **Horizontal** check box indicates the text is displayed on the console window in a horizontal orientation. If not selected, the text is displayed vertically.

Enter Text field

The **Enter Text** field identifies the text to place on the console window.

This field can contain up to 50 characters.

OK button

The **OK** button saves the entries and closes the window.

Cancel button

The **Cancel** button discards any changes made and closes the window.

39 UI Element Setup window - Add Text Message Control

The **Add Text Message Control** window is used to send and receive text messages.

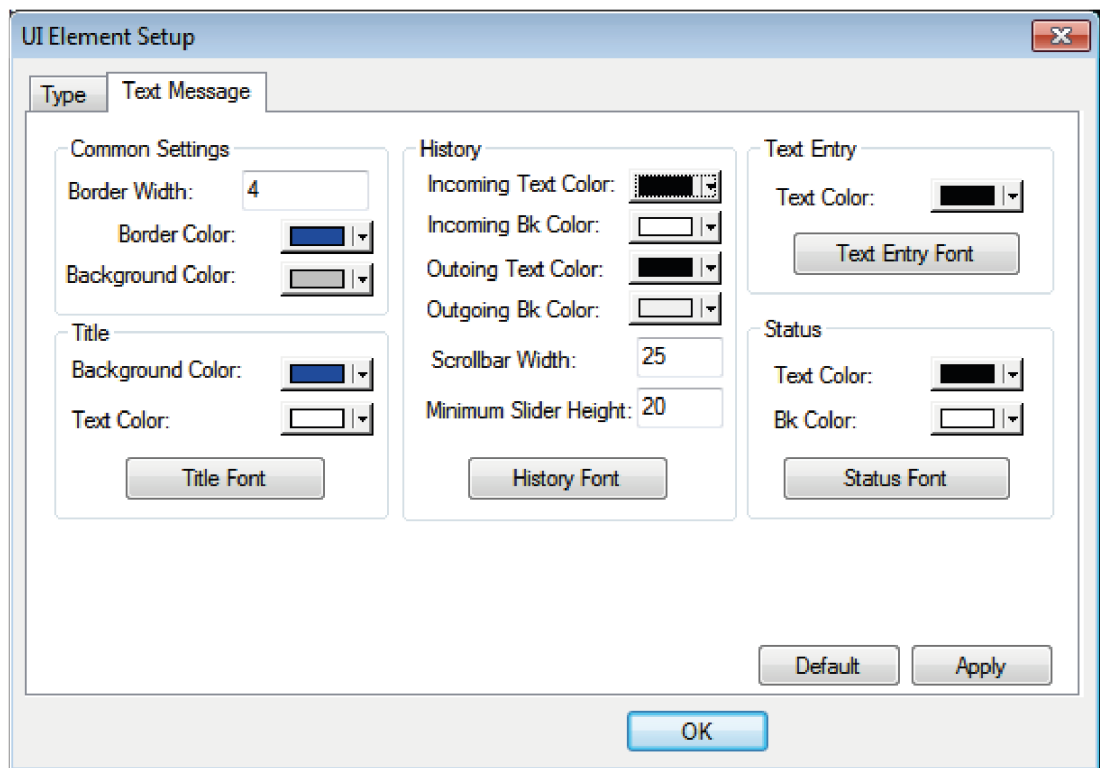


Figure 39.1: UI Element Setup window - Text Message

Text Message page

When the Text Message Control function is selected from the UI Element drop down menu, **Text Message** page appears. Refer to the Figure above.

Common Settings group box

Border Width field

The **Border Width** field is used to set the outside border width of the control.

The range for this field is 0 to 20.

Border Color drop down menu

The **Border Color** drop down menu is used to set the outside border color.

Background Color drop down menu

The **Background Color** drop down menu is used to set the color of non-control areas.

Title group box

Background Color drop down menu

The **Background Color** drop down menu is used to set the background color of the title area.

Text Color drop down menu

The **Text Color** drop down menu is used to set the text color of the title area text.

Title Font button

The **Title Font** button is used to sets the font of the title area text.

History group box**Incoming Text Color drop down menu**

The **Incoming Text Color** drop down menu is used to set the text color of incoming text messages.

Incoming Bk Color drop down menu

The **Incoming Bk Color** drop down menu is used to sets the background color of incoming text messages.

Outgoing Text Color drop down menu

The **Outgoing Text Color** drop down menu is used to set the text color of outgoing text messages.

Outgoing Bk Color drop down menu

The **Outgoing Bk Color** drop down menu is used to set the background color of outgoing text messages.

Scrollbar Width field

The **Scrollbar Width** field is used to set the scrollbar width.

The range of this field is 10 to 100.

Minimum Slider Height field

The **Minimum Slider Height** field is used to set the slider height.

The range of this field is 10 to 100.

History Font button

The **History Font** button is used to set the font for all incoming and outgoing text messages.

Text Entry group box**Text Color drop down menu**

The **Text Color** drop down menu is used to set the text color for the text entry area.

Text Entry Font button

The **Text Entry Font** button is used to set the text font for the text entry area.

Status group box**Text Color drop down menu**

The **Text Color** drop down menu is used to set the color for the status area text.

Bk Color drop down menu

The **Bk Color** drop down menu is used to set the background color of the status area.

Status Font button

The **Status Font** button is used to set the font of the status area text.

Default button

The **Default** button is used to reset all parameter settings to their default values.

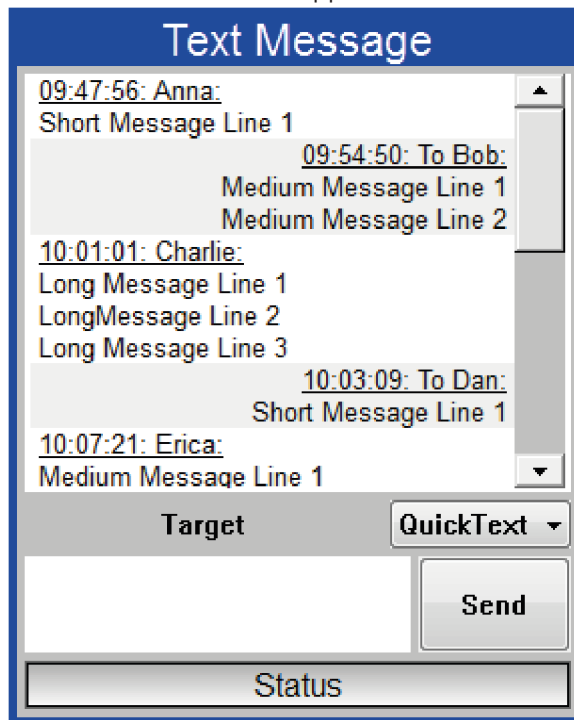
Apply button

The **Apply** button is used to save changes made to the Text Message page.

To **use the Text Message Control**, do the following:

1. Select the **line** on which to send the text message.
2. Using the keypad, select the **destination** for the text message.

The selected destination appears in the Destination Display of the Text Message Control.



3. Enter **text** into the entry field.
OR
Click the **QuickText** button to select a pre-defined text message.
4. When finished, press the **Send** button.

The text message is sent, and displays as an outgoing message in the Text Message History List. In addition, the Status Notification Area displays a notification that the text was sent.

40

UI Element Setup window - Add Volume Control

The **Add Volume Control** option is used to place a volume control slider, shown in the Figure below, in the upper left-hand corner of the console window. This section provides information on the functionality of the different volume controls selected from the UI Element Function drop down menu.



Figure 40.1: Volume Control Slider

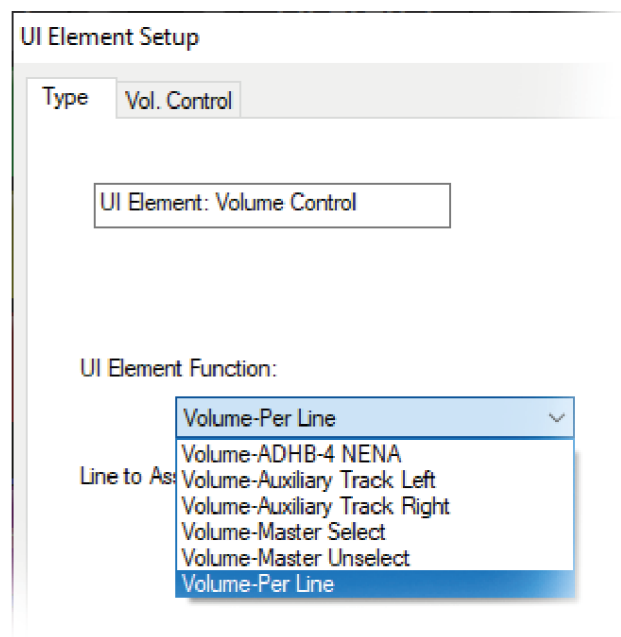


Figure 40.2: Type Page - UI Element Setup Volume Control

To **access the UI Element Setup window for Volume Control**, do the following:

1. From the Insert menu, select **Add Volume Control**.
A Volume Control slider appears on the C-Soft console window.
2. Right-click the **Volume Control** slider.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.

40.1

Type page

When Add Volume Control is selected from the menu bar, the UI Element window opens to the **Type** page. Refer to the Figure above.

UI Element Function drop down menu

The **UI Element Function** drop down menu is used to select the desired functionality for the volume control.

Available selections for this field are:

- Volume-Master Select - Allows a single volume control that manipulates the volume of all selected audio.
- Volume-Master Unselect - Allows the console operator to change the unselect volume for all lines.
- Volume-ADHB-4 NENA - Allows the console operator to change the volume of NENA audio when operating with ADHB-4.
- Volume-Auxiliary Track Left - Allows the console operator to change the left channel volume of the Auxiliary audio when operating with an ADHGB-4 Gen 2.
- Volume-Auxiliary Track Right - Allows the console operator to change the right channel volume of the Auxiliary audio when operating with an ADHGB-4 Gen 2.
- Volume-Per Line - Allows the console operator to control the relative level of the selected line with respect to other lines.

Line to Associate Function With drop down menu

The **Line to Associate Function With** drop down menu is used to select the line to associate the button or volume control with. This field is only enabled when the selected entry in the UI Element Function field requires a line association.

OK button

The **OK** button saves the entries and closes the window.

**Notice!**

If the associated line is muted, the volume control for the line is disabled.

40.2

Vol. Control page

When the Vol Control tab is selected from the UI Element Setup window, the **Vol. Control** page appears. Refer to the Figure below.

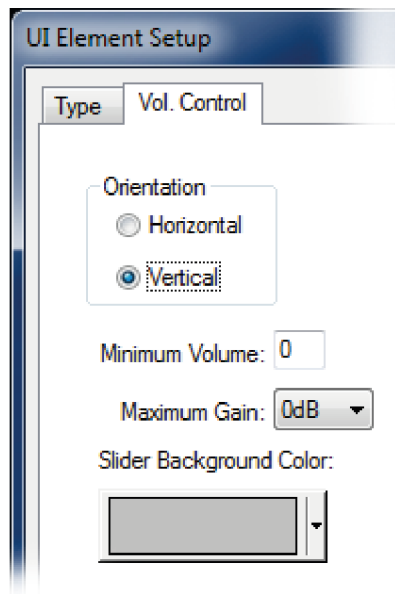


Figure 40.3: Vol. Control Page - UI Element Setup Volume Control

Orientation group box

The **Orientation** group box contains buttons to orient the volume control.

Horizontal radio button

The **Horizontal** radio button is used to position the volume control horizontally.

Vertical radio button

The **Vertical** radio button is used to position the volume control vertically.

Minimum Volume field

The **Minimum Volume** field identifies the minimum volume level for the control.

The range for this field is -20 to -1dB.

Zero (0) mutes the audio.

Maximum Gain drop down menu

The **Maximum Gain** drop down menu identifies the maximum volume level for the control.

Available selections for this field are: 0, 3, 6, 9, and 12.

The default for this field is 0. It is advisable to add some gain to every volume control.

Slider Background Color drop down menu

The **Slider Background Color** drop down menu displays the color of the volume control slider. Use the drop down color palette to select the desired color.

To **add a volume control**, do the following:

1. From the Insert menu, select **Add Volume Control**.
A Volume Control slider appears on the C-Soft console window.
2. Right-click the **Volume Control** slider.
A shortcut menu appears.

3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element Function drop down menu, select a **volume function**.
The Vol. Control tab appears.
5. Click the **Vol. Control** tab.
The Vol. Control page appears.
6. In the Orientation field, select the desired **orientation** radio button of the volume control slider.
7. In the Minimum Volume field, enter a **minimum volume**.
8. From the Maximum Gain drop down menu, select the **maximum gain**.
9. From the Slider Background Color drop down menu, select the **background color** for the slider control.
10. Click **OK**.
A volume control appears on the console.

41 UI Element Setup window - Add VU Meter

The **Add VU Meter** option inserts a VU Meter on the console. The control format and color are controlled with the VU Meter Control page.

To **insert a VU Meter control**, do the following:

- From the menu bar, select **Insert | Add VU Meter**.

A VU Meter control appears on the console.

41.1 VU Meter Control page

The **VU Meter Control** page, shown in the Figure below, is where the control format and color are configured.

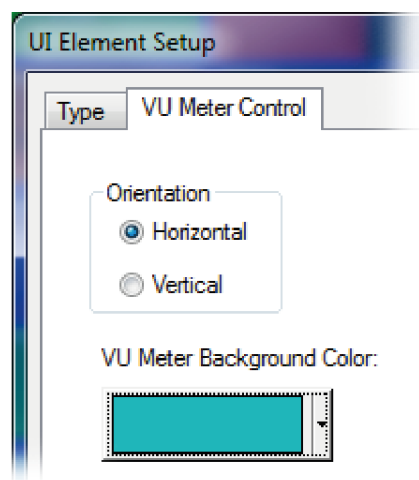


Figure 41.1: VU Meter Control Page

To **access the VU Meter Control page**, do the following:

1. Right-click the **VU Meter control**.
A shortcut menu appears.
2. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.

Orientation group box

Horizontal radio button

The **Horizontal** radio button indicates the VU Meter Control is in the horizontal position on the console.

Vertical radio button

The **Vertical** radio button indicates the VU Meter Control is in the vertical position on the console.

VU Meter Background Color drop down menu

The **VU Meter Background Color** drop down menu is used to select the VU Meter Control background color.

42

View menu

The **View** menu contains commands used to change the window view.

Toolbar toggle

The **Toolbar** toggle indicates whether the toolbar is visible or not.

- If the toolbar is toggled on (selected), the toolbar is visible on the console window.
- If the toolbar is toggled off (not selected), the toolbar is not visible on the console window.

Status Bar toggle

The **Status Bar** toggle indicates whether the Status bar is visible or not.

- If the Status Bar is toggled on (selected), the status bar is visible on the console window.
- If the Status Bar is toggled off (not selected), the status bar is not visible on the console window.

43

Configure menu

The **Configure Menu** contains configuration settings for target devices and external key mapping.

44 Device Setup

The **Device Setup** window contains settings to configure the design file for operation on a specific hardware platform along with other peripheral settings.

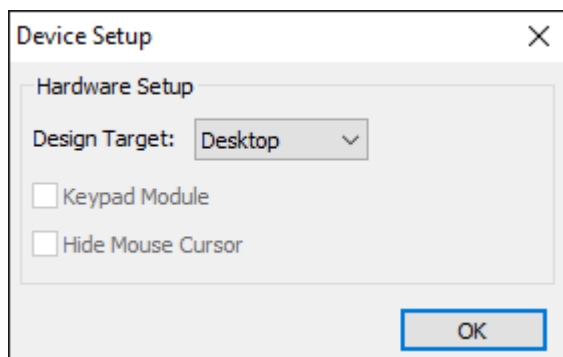


Figure 44.1: Device Setup

Design Target

Sets the target hardware platform for the design. Options are: Desktop, IP-300X, and IP-3018. Setting the Design Target to IP-300X sets the Design's window size to dimensions matching the IP-300X device, making it easier to create a Design compatible with the IP-300X's screen dimensions.

Keypad Module check box

Specifies that the Design is intended to use Side Car Button Module. If checked, additional hardware key mapping options are available in the Key Mappings Setup window (see *Global Key Mapping*, page 461). Global Key Mapping is only enabled when IP-300x or IP-3018 is the design target.

Hide Mouse Cursor check box

Specifies that C-Soft hides the mouse cursor, which is desirable when running C-Soft on a touchscreen.

3. In the Main Console tab, on the row corresponding to the desired button, click the empty **Line** column
Upon selecting the column entry, the dropdown displays a list of available lines, as well as a Global option.
4. Select the desired **line** or **Global** if the button is to operate globally.
5. In the same row, click the empty column **Button Name : Type** column.
Upon selecting the column entry, the dropdown displays a list of buttons on the main console window, filtered by the selected line.
6. When finished, press the OK button to close the window.

46 Run menu

The **Run** menu, shown in the Figure below, is used to either launch the current C-Soft Design or open a .veg file you desire.

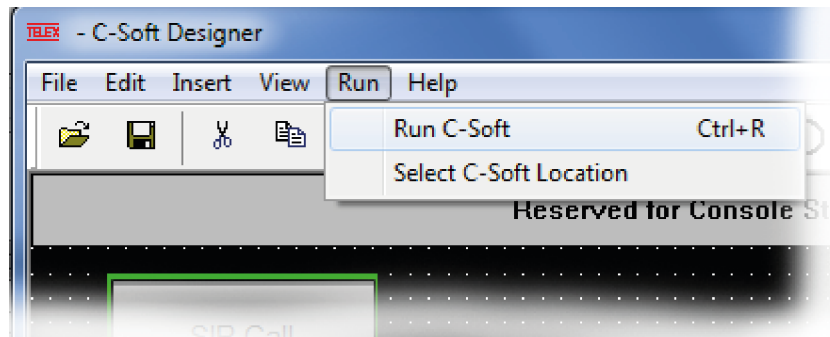


Figure 46.1: Run Menu - C-Soft

To **open the current C-Soft design in C-Soft Runtime**, do the following:

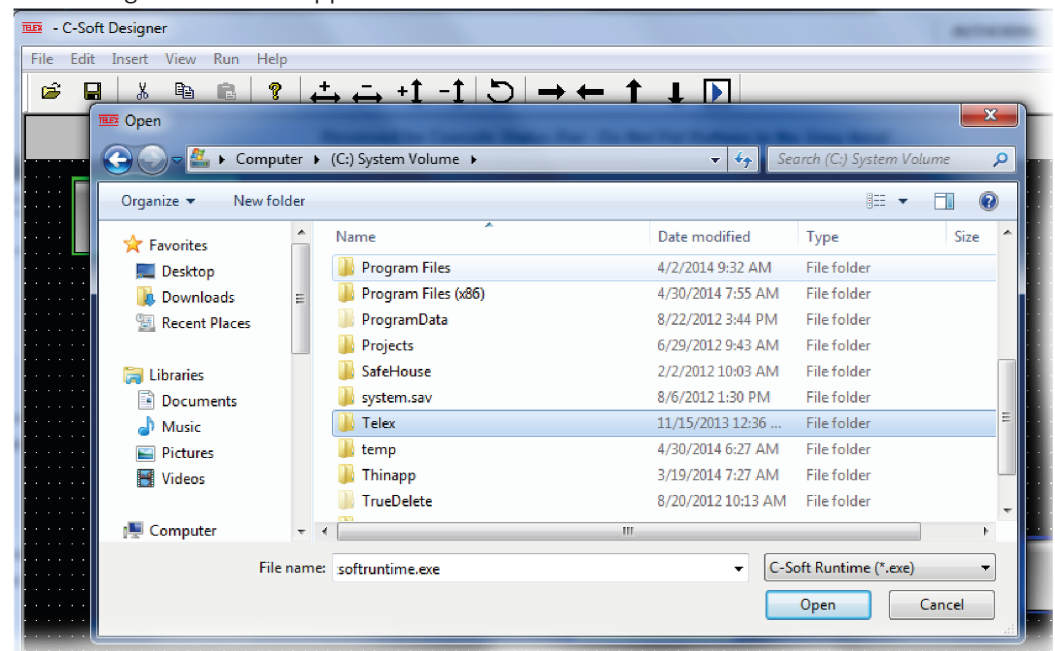
- From the Run menu, select **Run C-Soft**.

The currently open C-Soft Design file is launched in C-Soft Runtime.

To **select a C-Soft Runtime executable to run**, do the following:

1. From the Run menu, select **Select C-Soft Location**.

A file navigation window appears.



2. Navigate to and select the **C-Soft Runtime executable** you want to run.
3. Click the **Open** button.
4. From the Run menu, select **Run C-Soft**.

The current C-Soft design file is launched in the specified C-Soft Runtime executable.

47

About C-Soft Designer

The **About C-Soft Designer** window is used to view C-Soft version information, Bosch's mailing address and website URL.

NAVIGATION: Select Help | About C-Soft Designer.

48 C-Soft Runtime program

Once the design is created and saved, the C-Soft Designer program generates a file read by the **C-Soft Runtime** program. The C-Soft Runtime software does the actual IP communications with the other radio elements available on the network. The C-Soft Console appears when the C-Soft Runtime program is opened.

Upon starting C-Soft Runtime, C-Soft will automatically attempt to acquire all necessary Telex software-based licenses based on the line types and enabled features configured in the Design file. C-Soft checks for licenses on the local computer, as well as any Telex License Servers specified in the License Server settings set in the Design file. Refer to “*Peripherals page, page 131*” for instructions on how to specify a License Server.

Dealer Mode

Dealer Mode is a feature license specifically designed for Telex Radio Dispatch certified dealers to demonstrate C-Soft's capabilities for a limited amount of time. It allows C-Soft to operate as if the following licenses are available:

- 50 lines
- 12 SIP lines
- 24 P25-DFSI lines
- 24 NEXEDGE lines
- 100 lines of per-line call playback
- 24 AIS lines
- 24 P25 CSSI Lines
- P25 Encryption
- API license

Upon startup, if C-Soft Runtime detects a Dealer Mode license, it will display the Dealer Mode License window to indicate that C-Soft is operating in Dealer Mode, and that the license is not for resale. Every 15 minutes, the Dealer Mode License window reappears. After 60 minutes, the license expires, and C-Soft will cease to function and need to be restarted.

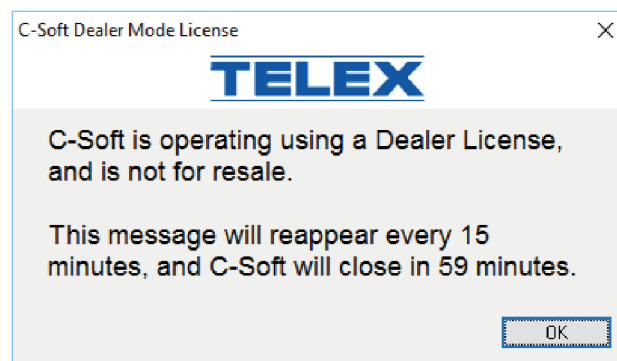


Figure 48.1: Dealer Mode License Window

Finally, the Status bar will display Dealer License: Not for Resale whenever it would otherwise be clear.



Figure 48.2: Dealer License Status Bar

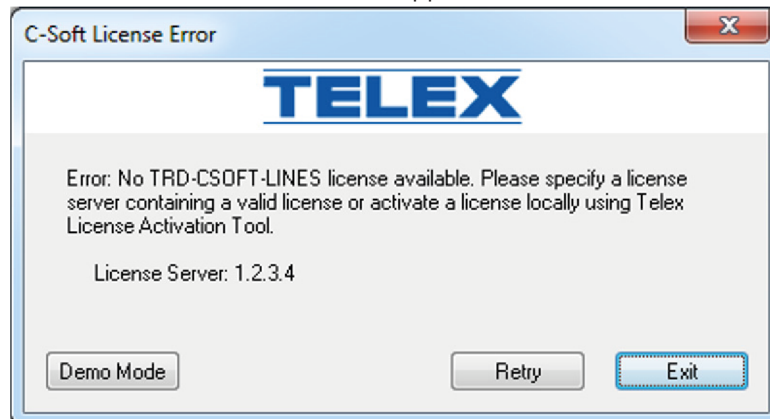
Demo Mode

If no software licenses are detected, C-Soft will display the License Error dialog, blocking access to its user interface. It is still possible to open and test the user interface by entering **Demo Mode**. While in Demo Mode, C-Soft is unable to transmit or receive audio.

To **run C-Soft Runtime in Demo mode**, do the following:

1. Double-click the **C-Soft Runtime desktop shortcut**.

The C-Soft License Error window appears.



2. Click the **Demo button** to enter Demo Mode.

Refer to

- *Peripherals page, page 131*

48.1

C-Soft Console

The **C-Soft Console** opens to the configuration stored in the default file. If no default file is specified by the user, the Set Default.Veg File window appears.

Alternatively, any .veg file can be double-clicked to open the C-Soft Console. In this case, the Set Default Veg File window does not appear.

Set Default Veg File window

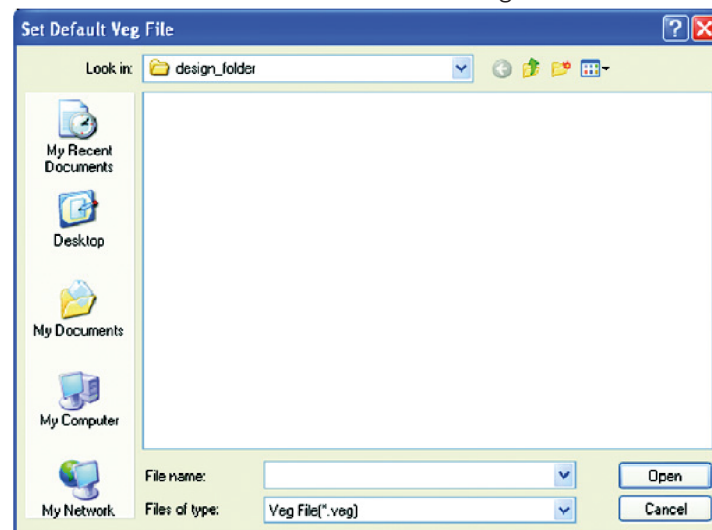
The **Set Default Veg File** window is used to locate and set the default .veg file that opens when C-Soft Runtime is opened. This window appears the first time C-Soft Runtime is opened or when the default .veg file is reset to none. For more information, refer to “Reset Default .Veg File” below.

To **set the default .veg file**, do the following:

1. Double-click the **C-Soft Runtime** shortcut installed on your desktop during C-Soft installation.
The Set Default .Veg File window appears.
2. Browse to the **.veg file** created in C-Soft Designer.
3. Select the **.veg file**.

4. Click **Open**.

The default file is set to the selected configuration and C-Soft Runtime opens.



Example Console

When the C-Soft Runtime program is started, the C-Soft Console displays the console design. A six line console design, along with several other user interface elements, is shown in the Figure below.

The Title Bar contains the C-Soft Console label and is used to access a shortcut menu. For more information, refer to "C-Soft Console Title Bar Shortcut Menu" below.

The status bar, located directly below the title bar, is divided into seven panes providing different status information. From left to right, these panes display: text messages, the IR playback position, the NENA on an ADHB-4, the connected ADHB-4, the PTT status, the VU meter, and the current time, as set on the computer clock.

The recording icon  is used to indicate if the console is configured and able to record per line audio to the hard drive. The icon appears in the menu bar if a line is enabled for IRR Line Recording and the audio recording directory is valid. For more information, refer to "*IRR Recording page, page 127*".

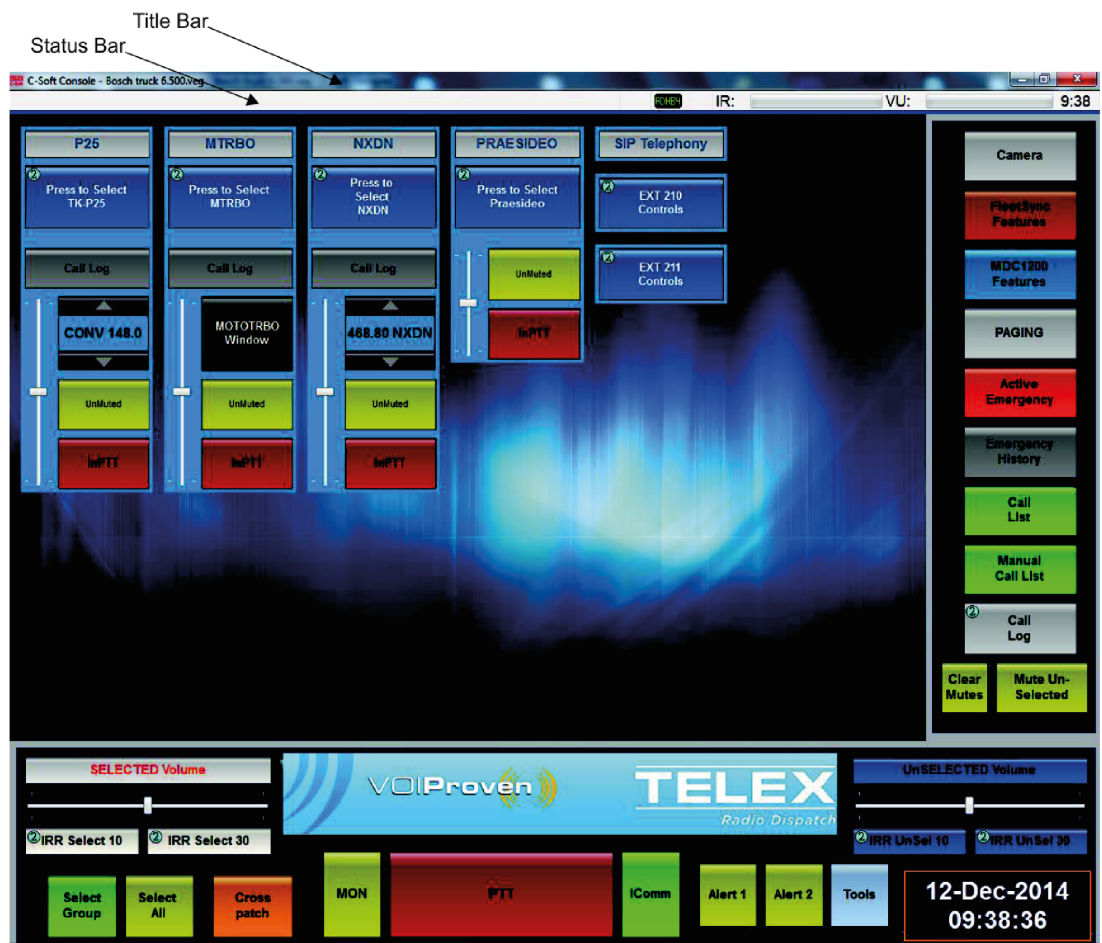


Figure 48.3: C-Soft Console Window

C-Soft Console Title Bar shortcut menu

The **C-Soft Console Title Bar** shortcut menu is used to set the window size, find the current C-Soft version, view license information, and set the default .veg file.

To **open the title bar shortcut menu**, do the following:

- Right-click the **Title Bar** to open the shortcut menu.

The menu shown in the Figure below appears.

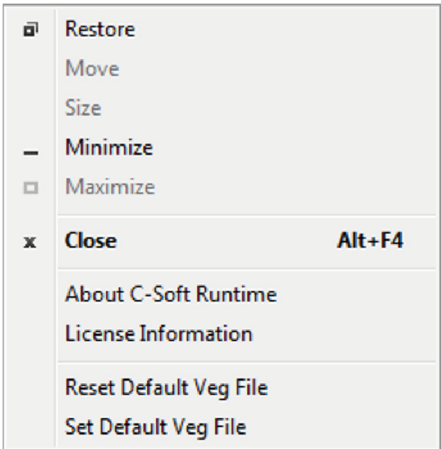


Figure 48.4: C-Soft Console Title Bar Shortcut menu - Minimize

Restore

Restore is used to restore the window to the last-set window size.

To **shrink the window to the size last set by the console operator**, do the following:

1. Right-click the **title bar**.
The Title Bar shortcut menu appears.
2. Click **Restore**.
The window is restored.

Move

Move is used to the move window. This option is not available (grayed out) if the window is maximized.



Notice!

The window can also be sized when the move cursor is active.

To **move the window**, do the following:

1. Right-click the **title bar**.
The Title Bar shortcut menu appears.
2. Click **Move**.
The Move cursor appears.
3. Click and hold the **title bar**.
4. Drag the **window** into place.

Size

Size is used to change the height and/or width of the window. This option is not available (grayed out) if the window is maximized.



Notice!

The window can also be moved when the size cursor is active.

To **size the window**, do the following:

1. Right-click the **title bar**.
The Title Bar shortcut menu appears.
2. Click **Size**.
The Size cursor appears.
3. Click and hold the cursor on the **edge of the window**.
The cursor changes.
4. Drag the **window** to the desired size.

Minimize

Minimize is used to shrink the window to a minimized icon on the task bar.

**Notice!**

If the current view is already minimized, this selection is grayed out.

Maximize

Maximize is used to change the window to full screen view.

**Notice!**

If the current view is already maximized, this selection is grayed out.

Close

Close is used to close the C-Soft Runtime program.

About C-Soft Runtime

About C-Soft Runtime is used to open the about C- Soft Runtime window.

This window contains the following information:

- Version
- Telex's address
- Sales Support Phone Number
- Website Address

License Information

The **License Information** window displays all Telex License Keys detected by C-Soft.

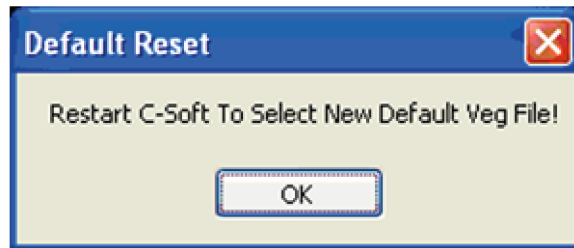
Each row in the License List represents a detected software license. The Source column displays the license's source, and Option column contains the detected license. Licenses that have been successfully checked out and are currently in use by the instance of C-Soft are displayed in blue.

Reset Default .Veg File

Reset Default .Veg File is used to change the default file to none. When reset, and C-Soft Runtime is opened, the Set Default Veg File window appears.

To **reset the default file to none**, do the following:

1. Right-click the **title bar**.
The Title Bar shortcut menu appears.
2. Select **Reset Default Veg File**.
The default file is set to none.

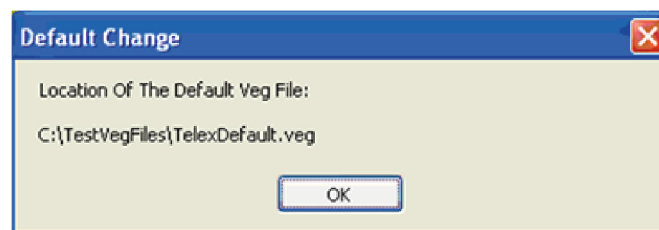


Set Default .Veg File

Set **Default .Veg File** is used to set the current configuration as the default file. When a .veg file is double-clicked C-Soft Runtime opens to the selected configuration. This configuration can be set as the default file.

To **set the current C-Soft Console configuration as the default .veg file**, do the following:

1. Right-click the **title bar**.
The Title Bar shortcut menu appears.
2. Select **Set Default Veg File**.



Window Sizing

By default, the C-Soft Runtime program window fills the entire monitor window. However, this may not be acceptable for a single monitor system, when only a small monitor is available, or if the console operator views the software on a multi-monitor computer. In these cases, the size of the console window can be changed to match the size of the console operator's monitor window.

When the C-Soft Runtime program starts it looks for the file cposi[.veg file name].txt. This file is created each time the C-Soft Runtime program is closed. The cposi[.veg file name].txt (for example, cposi_Default.txt) file records the size and position of the C-Soft Runtime program window. In addition to storing the position information, the cposi[.veg file name].txt file also stores the console state at shutdown. This includes information such as the selected channels, mute states, volumes, channel frequencies, and the entries in the call log (without the IRR audio). Since the cposi.txt file does not exist the first time the C-Soft Runtime program is started, the C-Soft Runtime window fills the entire screen.



Notice!

If one console design is closed and a different console design is started, the states do not match.

To **change the size of the program window**, do the following:

1. Ensure the following **fields are selected**, refer to “Window Controls Check Boxes” on page 121 for details.
 - Allow Minimize
 - Allow Maximize
 - Allow Resize
 - Allow CloseFor more information, refer to “Save Runtime Status on Close Check Box” on page 120.

TIP: If this is an existing design, verify these controls are enabled for the design. If they are not, select the Windows controls listed above, and then proceed to the next step.
2. Save the **designer file (.veg)**.
3. Open the **.veg** file you just saved.
4. Resize and position the **console window**, as desired.

The elements on the window do not rescale to fit the window size and some may be hidden from view when the window is resized. This step is only to create the size and position of the window. The next time the console window is opened, all of the elements on the console window are automatically scaled to fit the console window by the C-Soft Runtime program.
5. Close the **C-Soft Runtime program** when the console window is set to the desired size and position.

The cposi.[veg file name].txt file is created by the program is when it is closed
6. Open the **.veg** file.

The window opens using the last location and size with the buttons, sliders, VU Meter, and clock in the correct locations.
7. If the console display needs further adjustment, repeat the **above steps** until the console window is the desired size.

Refer to

- *IRR Recording page, page 127*

49

Appendix A - Telex Tone Group Numbers and Paging Plans

49.1

Telex Tone Group Numbers

Telex Group No.	1	2	3	4	5	6	7
Tone Group	Mot 1	Mot 2	Mot 3	Mot 4	Mot 5	Mot 6	Mot A
0	330.5	569.31	1092.4	321.7	553.9	1122.5	358.9
1	349.0	600.9	288.5	339.6	584.8	1153.4	398.1
2	368.5	634.5	296.5	358.6	617.4	1185.2	441.6
3	389.0	669.9	304.7	378.6	651.9	1217.8	489.8
4	410.8	707.3	313.0	399.8	688.3	1251.4	543.3
5	433.7	746.8	953.7	422.1	726.8	1285.8	602.6
6	457.9	788.5	979.9	445.7	767.4	1321.2	668.3
7	483.5	832.5	1006.9	470.5	810.2	1357.6	741.3
8	510.5	879.0	1034.7	496.8	855.5	1395.0	822.2
9	539.0	928.1	1063.2	524.6	903.2	1433.4	912.0
Diagonal	569.1	979.9	569.1	569.1	979.9	979.9	979.9

Tab. 49.9: Telex Tone Group Numbers (1-7)

Telex Group No.	8	9	10	11	12	13	14	15
Tone Group	Mot B	Mot Z	GE A'	GE B'	GE C'	Mot 10	Mot 11	Custom
0	371.5	346.7	682.5	652.5	667.5	1472.9	1930.2	1034.9
1	412.1	384.6	592.5	607.5	712.5	1513.5	1989.0	953.9
2	457.1	426.6	757.5	787.5	772.5	1555.2	2043.8	0
3	507.0	473.2	802.5	832.5	817.5	1598.0	2094.5	0
4	562.3	524.8	847.5	877.5	862.5	1642.0	2155.6	0
5	623.7	582.1	892.5	922.5	907.5	1687.2	2212.2	0
6	691.8	645.7	937.5	967.5	952.5	1733.7	2271.7	0
7	767.4	716.1	547.5	517.5	532.5	1781.5	2334.6	0
8	851.1	794.3	727.5	562.5	577.5	1830.5	2401.0	0
9	944.1	881.0	637.5	697.5	622.5	1881.0	2468.2	0

Diagonal	979.9	979.9	742.5	742.5	742.5	None	None	None
----------	-------	-------	-------	-------	-------	------	------	------

Tab. 49.10: Telex Tone Group Numbers (8-15)

49.2

Tone and Gap Durations for Standard Paging Plans

Tone #1 (ms)	Gap (ms)	Tone #2 (ms)	Group Call (ms)	Type
1000	-	3000	8000	GE std, Mot std Tone and Voice
400	0	800	8000	Mot Tone Only
1000	0	3000	6000	NEC-B
1000	300	3000	6000	NEC-A
1000	0	1000	4000	NEC-C
400	0	800	4000	NEC-M
500	0	500	3000	NEC-L
400	0	400	3000	NEC-D

Tab. 49.11: Tone and Gap Durations for Standard Paging Plans

50

Appendix B - 2 Tone 1000 Plan Numbers

Telex Code Plan #	1	2	3	4	5	6	7	8	9
Pager Capcodes	Mot A	Mot C	Mot D	Mot E	Mot F	Mot G	Mot H	Mot J	Mot K
0xx	2+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1xx	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1	1+1
2xx	2+2	2+2	2+2	2+2	1+3	1+3	1+3	1+4	1+4
3xx	3+3	1+2	1+2	1+2	3+3	3+3	3+3	4+1	4+1
4xx	1+2	4+4	1+5	2+1	4+4	3+1	3+1	4+4	4+4
5xx	1+3	1+4	5+5	1+6	3+1	5+5	1+6	5+5	1+6
6xx	2+1	2+1	2+1	6+6	1+4	1+5	6+6	1+5	6+6
7xx	3+1	4+1	5+1	6+1	4+1	5+1	6+1	4+5	6+1
8xx	2+3	2+4	2+5	2+6	3+4	3+5	3+6	5+4	4+6
9xx	3+2	4+2	5+2	6+2	4+3	5+3	6+3	5+1	6+4

Tab. 50.12: 2 Tone 1000 Plan Numbers (1-9)

Telex Code Plan #	10	11	12	13	14	15	16	17
Pager Capcodes	Mot L	Mot M	Mot N	Mot P	Mot Q	Mot R	Mot S	Mot T
0xx	N/A	4+2	4+2	4+2	4+2	4+2	4+2	4+2
1xx	1+1	2+3	2+3	2+3	2+4	2+4	2+5	3+4
2xx	1+5	2+2	2+2	2+2	2+2	2+2	2+2	4+3
3xx	5+1	3+3	3+3	3+3	4+2	4+2	5+2	3+3
4xx	1+6	4+4	3+2	3+2	4+4	4+4	2+6	4+4
5xx	5+5	3+2	5+5	2+6	5+5	2+6	5+5	5+5
6xx	6+6	2+4	2+5	6+6	2+5	6+6	6+6	3+5
7xx	6+1	4+2	5+2	6+2	4+5	6+2	6+2	4+5
8xx	5+6	3+4	3+5	3+6	5+4	4+6	5+6	5+4
9xx	6+5	4+3	5+3	6+3	5+2	6+4	6+5	5+3

Tab. 50.13: 2 Tone 1000 Plan Numbers (10-17)

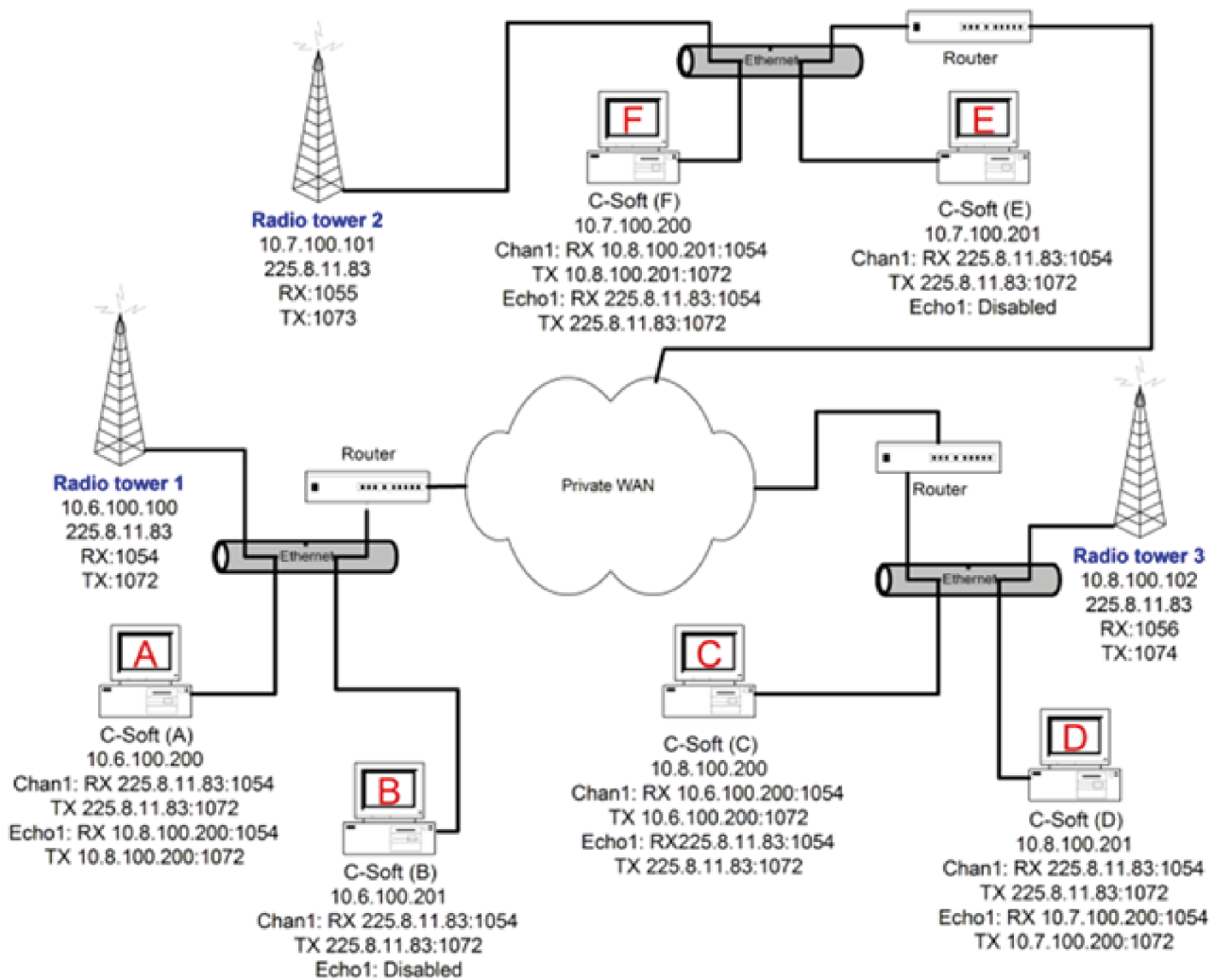
Telex Code Plan #	18	19	20	21	22	23	24	25
Pager Capcodes	Mot U	Mot V	Mot W	Mot Y	Mot MT	GE X	GE Y	GE Z
0xx	4+2	4+2	4+2	N/A	4+2	10+10	11+11	10+10
1xx	3+4	3+5	4+6	7+7	1+1	11+10	12+11	12+10
2xx	4+3	5+3	6+4	8+8	2+2	11+11	12+12	12+12
3xx	3+3	3+3	5+6	9+9	1+2	10+11	11+12	10+12
4xx	4+4	3+6	4+4	7+8	4+4	12+12	N/A	N/A
5xx	3+6	5+5	5+5	7+9	5+5	12+10	N/A	N/A
6xx	6+6	6+6	6+6	8+7	2+1	12+11	N/A	N/A
7xx	6+3	6+3	4+5	9+7	4+5	10+12	N/A	N/A
8xx	4+6	5+6	5+4	8+9	5+4	11+12	N/A	N/A
9xx	6+4	6+5	6+5	9+8	2+4	N/A	N/A	N/A

Tab. 50.14: 2 Tone 1000 Plan Numbers (18-25)

51 Appendix C - Supported Tone Frequencies

Tone Number	Code Digit	European Tone Frequencies in Hz												Motorola	
		ZVEI1	ZVEI2	KEN	PZVEI	DZVEI	PDZVEI	CCIR1	CCIR2	PCCIR	EEA	EURO SIGNAL	NATEL	EIA	MODAT
TONE 0	0	2400	2400	815	2400	2200	2200	1981	1981	1981	1981	979.8	1633	600	637.5
TONE 1	1	1060	1060	882	1060	970	970	1124	1124	1124	1124	903.1	631	741	787.5
TONE 2	2	1160	1160	954	1160	1060	1060	1197	1197	1197	1197	832.5	697	882	937.5
TONE 3	3	1270	1270	1032	1270	1160	1160	1275	1275	1275	1275	767.4	770	1023	1087.5
TONE 4	4	1400	1400	1117	1400	1270	1270	1358	1358	1358	1358	707.4	852	1164	1237.5
TONE 5	5	1530	1530	1209	1530	1400	1400	1446	1446	1446	1446	652.0	941	1305	1387.5
TONE 6	6	1670	1670	1308	1670	1530	1530	1540	1540	1540	1540	601.0	1040	1446	1537.5
TONE 7	7	1830	1830	1415	1830	1670	1670	1640	1640	1640	1640	554.0	1209	1587	1687.5
TONE 8	8	2000	2000	1531	2000	1830	1830	1747	1747	1747	1747	510.7	1336	1728	1837.5
TONE 9	9	2200	2200	1657	2200	2000	2000	1860	1860	1860	1860	470.8	1477	1869	1987.5
GROUP TONE	A	2800	885	1939	970	825/885	825	2400		1050	1055			2151	
	B	810	810	2270	810	740	886	930		930	930			2292	
RESET TONE	C	970	970	2098	2800	2600	2600	2247		2400	2247			2010	
	D	885	680	2457	885	885	856	991	2110	991	991			2292	
REPEAT TONE	E	2600	970	1792	2600	2400	2400	2110	2400	2110	2110	1062.9	1805	459	487.5
	F	680	2600		680	680		1055	2400	1995	1091		1995	1091	

52 Appendix D - Echo Packets Diagram



53

53.1

Appendix E - P25-DFSI (Digital Fixed Station Interface)

P25-DFSI C-Soft Architecture

A C-Soft console can be configured for two different types of system architectures; a Stand Alone console, or a Client/Server console.

A **Stand Alone console** is defined as a single console connection to n (where n is the number of repeaters or Fixed Stations).

A **Client/Server console** is defined as multiple consoles connected to a server console which is connected to n (where n is the number of repeaters or Fixed Stations).



Notice!

The maximum total number of consoles connected to one P25 DFSI is 25.

A Stand Alone Console is a simple configuration, requiring the least amount of setup time. Refer to the Figure below.

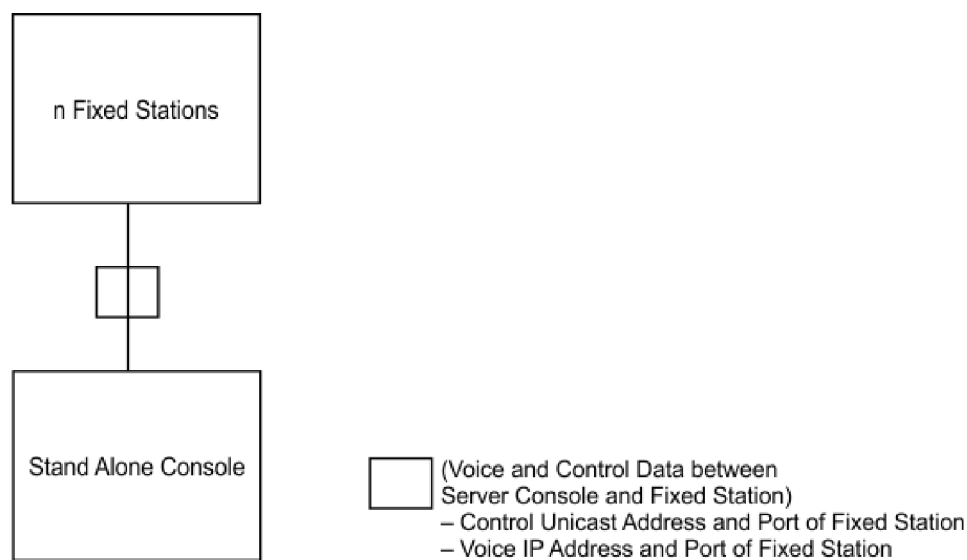


Figure 53.1: Stand Alone Console Configuration

If more than one console operator is controlling the fixed stations, a Client/Server configuration should be used. Refer to the Figure below. One console is set up as a server, two consoles are set up as clients and one console is set up as a client console providing back up to the main server console.

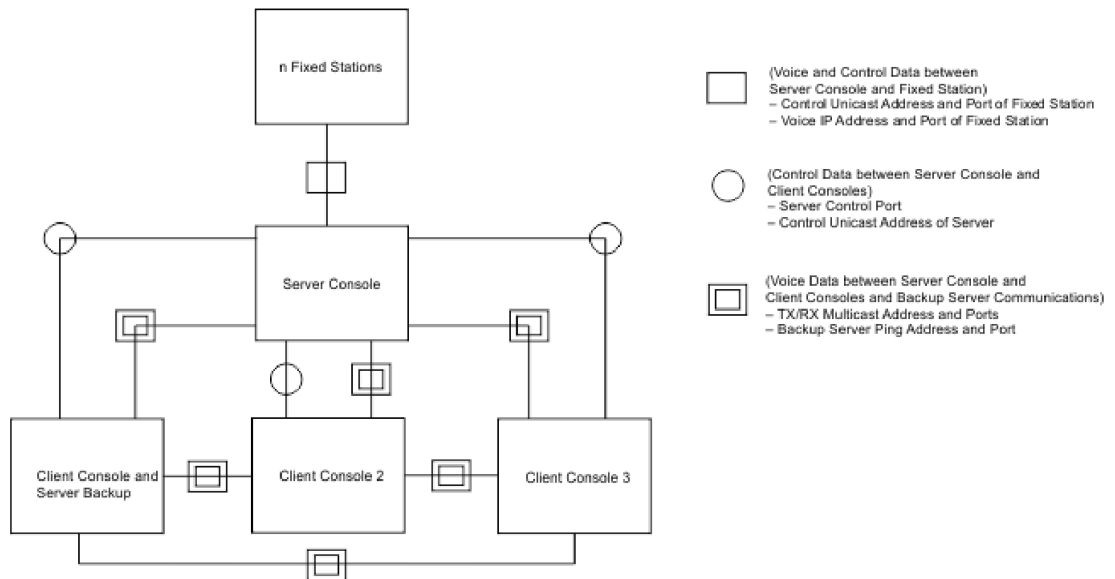


Figure 53.2: Server/Client Console Configuration



Notice!

There is no special software needed between consoles. Any C-Soft console can be configured as a Stand Alone, Server, Client or Backup console via user setting in C-Soft designer.

53.2

P25 DFSI Global Setup window

The **P25 DFSI Global Setup** window, shown in the Figure below, is used to determine what type of console is required for the system.

For example, if you require a stand alone system, then you have only one console, and an equal number of lines to base stations in your system. Only one .veg file needs to be created with the global console type set to stand alone.

If you require a client/server system, you must create one. veg file with a global console type set to server and a second .veg file with the console type set to client or client and backup server console.



Notice!

Each Client console has a unique Console ID, therefore, it is required to have a different veg file for each console position in the system.



Notice!

The parameters on this page affect all line types set to P25-DFSI.

A Console ID must first be added. Refer to the Figure below. This ID is used by the individual radios to make Private Calls with the console. This ID shows up as the radio ID when implementing a PTT from the console.

Figure 53.3: P25 DFSI Global Setup Window

To **set up P25 DFSI Global Values**, do the following:

- From the Edit menu, select **Setup P25-DFSI**.

P25 DFSI Global Setup window appears.

53.2.1

Console Type group box

The **Console Type** group box is used to make a selection between Stand Alone Console, Server Console, Client Console and Client and Backup Server Console.

Stand Alone radio button

The **Stand Alone** radio button indicates one console is used.

Server Console radio button

The **Server Console** radio button indicates multiple consoles are used.

**Notice!**

Only one server per system.

Client Console radio button

The **Client Console** radio button indicates the C-Soft Console is connected with a Server Console.

Client & Backup Server Console radio button

The **Client & Backup Server Console** radio button indicates a Server is already setup and a backup Server is needed, in case the server computer goes down.

**Notice!**

Only one Backup Server per system.

Console ID field

The **Console ID** field is used to enter the ID of the console. This ID is used by the individual radios to make Private Calls with the console, and appears as the radio ID when implementing a PTT from the console.

53.2.2**Backup Server Ping Address group box**

The **Backup Server Ping Address** group box is used for communication between all C-Soft Consoles to determine if the Server is operational or if the Server is down.

IP field

The **IP** field is a multicast address. It is used for communication between all the C-Soft Consoles to determine if the primary server is operational or is down. IP field number is the same among all of the consoles in the system.

Port Field

The **Port** field is a multicast port. It used for communication between all the C-Soft Consoles to determine if the primary server is operational or is down. The Port field number is the same among all of the consoles in the system.

53.2.3

Heartbeats group box

The **Heartbeats** group box is used to configure a Fixed Station Heartbeat Time, a Host Heartbeat Time, and the Number of Missed Heartbeats Allowed.

Fixed Station Heartbeat Time field

The **Fixed Station Heartbeat Time** field indicates the time, in seconds, the fixed station sends heartbeats to the C-Soft Console. This field is only enabled if the console type is set to Server Console or Client & Backup Server Console mode.

The range for this field is 5 to 255.

The default is 30.

Host Heartbeat Time field

The **Host Heartbeat Time** field indicates the time, in seconds, the C-Soft Console sends heartbeats to the fixed station. This field is only enabled if the console type is set to Server Console or Client & Backup Server Console mode.

The range for this field is 5 to 255.

The default is 30.

Number of Missed Heartbeats Allowed field

The **Number of Missed Heartbeats Allowed** field indicates the number of missed heartbeats from the Fixed Station before C-Soft terminates communication with the fixed station and tries to connect again.

The range for this field is 0 to 5.

The default is 2.

53.2.4

Radio/Repeater Control Signals group box

The **Radio/Repeater Control Signals** group box is used to configure the number of control retries and the wait time between retries from the server to establish contact with the radio.

Number of Control Retries field

The **Number of Control Retries** field indicates the number of times a control command is sent if no acknowledgment is received.

The range for this field is 0 to 5.

The default is 3.

Control Retry Time

The **Control Retry Time** field indicates the time, in ms, C-Soft waits before sending the same control command.

The range for this field is 500 to 1000.

The default is 600.

53.2.5

Packet Controls group box

The **Packet Controls** group box is used to set the packet delay for the C-Soft Console.

Control Packet Delay field

The **Control Packet Delay** field is used to enter a value that is multiplied by 20ms to set the delay between P25 DFSI Control Packets sent from C-Soft. This field is only enabled if the console type is set to Server Console or Client & Backup Server Console mode.

The range for this field is 0 to 99.

The default is 0.

Setting up a P25-DFSI Line

To **set up a P25-DFSI Line**, do the following:

1. From the Edit Window, select **Setup Per Line Parameters**.
The Per Line Parameters window appears.
2. From the Line Type drop down menu, select **P25-DFSI**.
3. Click the **Signal Setup button**.

The P25-DFSI Setup window appears.

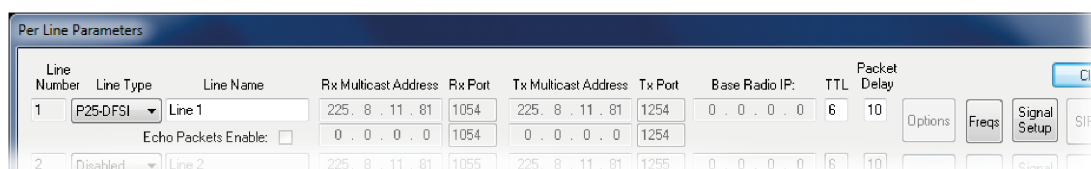


Figure 53.4: P25-DFSI Line Type



Notice!

Below are four examples of how a console can be configured, depending the Console Type selected in P25 DFSI Global Setup window (i.e. Stand Alone, Server or Client). Refer to the Figure on *P25 DFSI Global Setup window*, page 480.

Refer to

- *P25 DFSI Global Setup window*, page 480

53.3

Console Type Setup

The **Console Type Setup** is used to configure the console depending on the Console Type selected in P25 DFSI Global Setup window.

53.3.1

Stand Alone Console

Stand Alone Console type

The **Stand Alone Console** is the easiest console type to set up and should be the starting point for building a Client/Server system.

The three parameters to be set up are:

- The Per Line IP connections which consist of the control Unicast Address of FS and the Voice Address of the FS
- The channel numbers to a single base station
- P25 Manufacturer



Notice!

The Control Port of FS must match the DFSI control port of the Base Station. The Voice Port of FS can be the same as, or different than the DFSI Voice Port of the base station.

The Signaling Parameters window, shown in the Figure below, is used to set up the per line IP connections and channel numbers to a single base station.

Figure 53.5: P25-DFSI Setup-Stand Alone Console

Fixed Station (FS) Connections group box

The **Fixed Station (FS) Connections** group box contains the Control Address of Fixed Station group box and the Voice Address of Fixed Station group box.

Control Address of Fixed Station group box

Control Unicast Address of FS field

The **Control Unicast Address of FS** field is used to enter an IP Address of the P25 base station.

Control Port of FS field

The **Control Port of FS** field is used to enter the port number of the P25 base station.

The range for this field is 1054 to 65536.

**Notice!**

The Control Port of FS field must match the DFSI Control Port of the P25 base station.

Voice Address of Fixed Station group box**Voice IP Address of FS field**

The **Voice IP Address of FS** field is used to enter the voice IP address of the P25 base station.

Voice Port of FS field

The **Voice Port of FS** field is used to enter the unique port number of the P25 base station.

The range for this field is 1054 to 65536.

Backup Enabled check box

The **Backup Enabled** check box enables the backup FS setup button. It is used when the system needs to have a secondary P25 base station for backup in the event the primary base station is down.

53.4

Backup FS Setup window

The **Backup FS Setup** button opens the Backup Fixed Station Setup window.

To **open the Backup Fixed Station Setup window**, do the following:

1. Select the **Backup Enabled** check box.
2. Click **Backup FS Setup**.

The Backup Fixed Station Setup window appears.

Backup Fixed Station Setup

Control Address of Fixed Station

Control Unicast Address of FS: 172 . 19 . 50 . 70 Control Port of FS: 7000

Voice Address of Fixed Station

Voice IP Address of FS: 172 . 19 . 50 . 70 Voice Port of FS: 2000

OK

3. Configure your **backup station**.
NOTE: If connection is lost to a Fixed Station, C-Soft automatically switches to the Backup Fixed Station if Backup Enabled is selected.
4. Restart **C-Soft** to return to the original Fixed Station.

Control Address of Fixed Station group box**Control Unicast Address of FS field**

The **Control Unicast Address of FS** field is used to enter an IP Address of the P25 base station.

Control Port of FS field

The **Control Port of FS** field is used to enter the port number of the P25 base station.

The range for this field is 1054 to 65536.

**Notice!**

The Control Port of FS field must match the DFSI Control Port of the P25 base station.

Voice Address of Fixed Station group box**Voice IP Address of FS field**

The **Voice IP Address of FS** field is used to enter the IP Address of the P25 base station.

Voice Port of FS field

The **Voice Port of FS** field is used to enter the unique port number of the P25 base station.

The range for this field is 1054 to 65536.

P25 Manufacture drop down menu

The **P25 Manufacture** drop down menu is used to select the manufacturer of the repeater.

Available selections for this field are:

- Daniels
- Tait

**Notice!**

Since there may be small differences between radio designs, this field is important to insure C-Soft works correctly with the repeater.

Channel Setup button

The **Channel Setup** button is used to open the DFSI Channel Table window. For more information, refer to “*Channel Table window, page 497*”.

Edit Global DFSI Parameters button

The **Edit Global DFSI Parameters** button is used to open the P25 DFSI Global Setup window, shown in Figure on *P25 DFSI Global Setup window, page 480*.

53.5 Server Console

The Signaling Parameters window, shown in the Figure below, is used to set up the **Server Console** Configuration. The FS (Fixed Station) Connection portion of the window is the same as that for a Stand Alone Console. As in the case of the “Stand Alone Console”, one line of the Server Console connects to one base station. The difference between the Stand Alone and Server is the client(s) now connects and talks to the server on a per line basis in order to control and communicate with the base station connected to this line.

Signaling Parameters: P25 DFSI

General Signal Setup P25-DFSI Setup

Console configuration: "Server Console"

Fixed Station (FS) Connections

Control Address of Fixed Station

Control Unicast Address of FS: 172 . 19 . 50 . 70 Control Port of FS: 7000

Voice Address of Fixed Station

Voice IP Address of FS: 172 . 19 . 50 . 70 Voice Port of FS: 2000

☐ Backup Enabled Backup FS Setup

Server Connections (Clients connect to this server port & talk on these Multicast Addresses (MCA))

Server's Control Address

IP address of this computer: 172 . 19 . 100 . 148 Server Control Port: 27100

Server's Voice Address

Rx MCA: 225 . 8 . 11 . 34 Port: 8054 Tx MCA: 225 . 8 . 11 . 34 Port: 8055

P25 Manufacturer: Tait Channel Setup Edit Global DFSI Parameters

OK Cancel

Figure 53.6: P25-DFSI- Server Console

To **change settings to a Server Console**, do the following:

1. From the menu bar, select **Edit | Setup P25 | DFSI**.
The P25 DFSI Global Setup window appears.
2. In the Console Type group box, click the **Server Console radio button**.
Server Console is the console for the system.
3. From the menu bar, select **Edit | Setup Per Line Parameters**.
The Per Line Parameters window appears.
4. With P25-DFSI selected in the Line Type drop down menu, click **Signal Setup**.
The P25-DFSI Setup - Console configuration: Server Console window appears.

Fixed Station (FS) Connections group box

The **Fixed Station (FS) Connections** group box contains the Control Address of Fixed Station group box and the Voice Address of Fixed Station group box.

Control Address of Fixed Station group box**Control Unicast Address of FS field**

The **Control Unicast Address of FS** field is used to enter an IP Address of the P25 base station.

Control Port of FS field

The **Control Port of FS** field is used to enter the port number of the P25 base station.

The range for this field is 1054 to 65536.

**Notice!**

The Control Port of FS field must match the DFSI Control Port of the P25 base station.

Voice Address of Fixed Station group box**Voice IP Address of FS field**

The **Voice IP Address of FS** field is used to enter the IP Address of the P25 base station.

Voice Port of FS field

The **Voice Port of FS** field is used to enter the voice port number of the P25 base station. The Voice Port of FS field must match the voice port number configured in Daniels P25 base station and unique for Tait P25 base station.

The range for this field is 1054 to 65536.

Backup Enabled check box

The **Backup Enabled** check box enables the backup FS setup button. It is used when the system needs to have a secondary P25 base station for backup in the event the primary base station is down.

53.6

Backup FS Setup window

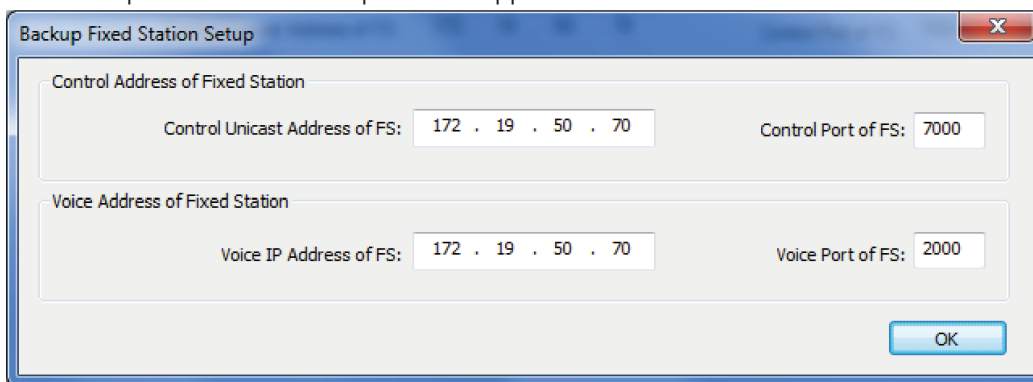
The **Backup FS Setup** button opens the Backup Fixed Station Setup window.

To **open the Backup Fixed Station Setup window**, do the following:

1. Select the **Backup Enabled** check box.

2. Click **Backup FS Setup**.

The Backup Fixed Station Setup window appears.



3. Configure your **backup station**.

NOTE: If connection is lost to a Fixed Station, C-Soft automatically switches to the Backup Fixed Station if Backup Enabled is selected.

4. Restart **C-Soft** to return to the original Fixed Station.

Control Address of Fixed Station group box

Control Unicast Address of FS field

The **Control Unicast Address of FS** field is used to enter an IP Address of the P25 base station.

Control Port of FS field

The **Control Port of FS** field is used to enter the port number of the P25 base station.

The range for this field is 1054 to 65536.



Notice!

The Control Port of FS field must match the DFSI Control Port of the P25 base station.

Voice Address of Fixed Station group box

Voice IP Address of FS field

The **Voice IP Address of FS** field is used to enter the IP Address of the P25 base station.

Voice Port of FS field

The **Voice Port of FS** field is used to enter the voice port number of the P25 base station.

The range for this field is 1054 to 65536.



Notice!

The Voice Port of FS field must match the voice port number configured in Daniels P25 base station and unique for Tait P25 base station.

Server Connections group box**IP Address of this Computer field**

The **IP Address of this Computer** field cannot be modified. When a client is configured, it must connect to the IP Address of the PC the server console resides on.

Server Control Port field

The **Server Control Port** field is used to enter the port number the client connects to the server and to control the base station/radio functionality.

The range for this field is 1054 to 65536.

Server's Voice Address group box

The **Server's Voice Address** group box is used to configure the (MCA) Multicast Address and ports the server uses to communicate with the client and client consoles.

Rx MCA field

The **Rx MCA** field is used to enter the receive Multicast Address used to receive P25 audio.

Port field

The **Port** field is used to enter the port number used to receive P25 audio.

The range for this field is 1054 to 65536.

Tx MCA field

The **Tx MCA** field is used to enter the transmit Multicast Address used to transmit P25 audio.

Port field

The **Port** field is used to enter the port number used to transmit P25 audio.

The range for this field is 1054 to 65536.

P25 Manufacture drop down menu

The **P25 Manufacture** drop down menu is used to select the manufacturer of the repeater.

Available selections for this field are:

- Codan
- Tait

**Notice!**

Since there may be small differences between radio designs, this field is important to insure C-Soft works correctly with the repeater.

Channel Setup button

The **Channel Setup** button is used to open the DFSI Channel Table window. For more information, refer to “*Channel Table window, page 497*”.

The Channel Table window displays all of the channels open for a selected line.

Edit Global DFSI Parameters button

The **Edit Global DFSI Parameters** button is used to open the P25 DFSI Global Setup window. For more information, refer to “*P25 DFSI Global Setup window, page 480*”.

The P25 DFSI Global Setup window is used to select the type of console required for the system.

53.7

Client Console

The Signaling Parameters window, shown in the Figure below, is used to set up the **Client Console** Configuration. Each client requires a different .veg file because of the console ID.



Notice!

The server console must have the number of lines equal to the number of base stations; clients cannot directly access the base station without going through the server.

Figure 53.7: P25-DFSI Client Console

To **change settings to a Server Console**, do the following:

1. From the menu bar, select **Edit | Setup P25 | DFSI**.
The P25 DFSI Global Setup window appears.
2. Select the **Client Console** radio button to make the console type a Client Console.
3. From the menu bar, select **Edit | Setup Per Line Parameters**.
The Per Line Parameters window appears.
4. From the Line Type drop down menu, select **P25-DFSI**.
5. With P25-DFSI selected in the Line Type drop down menu, click **Signal Setup**.
The P25-DFSI Setup - Console configuration Client Console window appears.

Client Connections

The **Client Connections** group box is used to configure per-line signaling setup address fields.

Control Address of Server group box

Control Unicast Address of Server field

The **Control Unicast Address of Server** field is used to enter the IP Address of the server PC.

Control Port of Server field

The **Control Port of Server** field is used to enter the port address of the server control port for this line.



Notice!

The Port Address must match the value setting of the Server Control Port on the Server Console setup.

Voice Address of Server group box

Rx MCA field

The **Rx MCA** field is used to enter the receive Multicast Address used to receive P25 audio.

Tx MCA field

The **Tx MCA** field is used to enter the transmit Multicast Address used to transmit P25 audio.

P25 Manufacture drop down menu

The **P25 Manufacture** drop down menu is used to select the manufacturer of the repeater.

Available selections for this field are:

- Daniels
- Tait



Notice!

Since there may be small differences between radio designs, this field is important to insure C-Soft works correctly with the repeater.

Channel Setup button

The **Channel Setup** button is used to open the DFSI Channel Table window. For more information, refer to “*Channel Table window, page 497*”.

The Channel Table window displays all of the channels open for a selected line.

Edit Global DFSI Parameters button

The **Edit Global DFSI Parameters** button is used to open the P25 DFSI Global Setup window. For more information, refer to “*P25 DFSI Global Setup window, page 480*”.

The P25 DFSI Global Setup window is used to select the type of console required for the system.

53.8

Client Console with Server Backup

The Signaling Parameters window, shown in the Figure below, is used to set up the Server Console Configuration. The backup client console or .veg file must have the same number of lines the server console or .veg file does.

The top half of the page, shown in the Figure below, is exactly the same as the setting for a Stand Alone Console or for a Server Console. The bottom half of the page is exactly the same as the setting for a client console.

Signaling Parameters: P25 DFSI

General Signal Setup P25-DFSI Setup

Console configuration: "Client Console with Server Backup"

Fixed Station (FS) Connections (For Backup Server)

Address of Fixed Station (For Backup Server)

Control Unicast Address of FS: 172 . 19 . 50 . 70 Control Port of FS: 7000

Voice Address of Fixed Station (For Backup Server)

Voice IP Address of FS: 172 . 19 . 50 . 70 Voice Port of FS: 2000

☐ Backup Enabled Backup FS Setup

Client Connections

Control Address of Server

Control Unicast Address of Server: 172 . 19 . 100 . 148 Control Port of Server: 27100

Voice Address of Server

Rx MCA: 225 . 8 . 11 . 34 Port: 8054 Tx MCA: 225 . 8 . 11 . 34 Port: 8055

P25 Manufacturer: Codan Channel Setup Edit Global DFSI Parameters

OK Cancel

Figure 53.8: P25-DFSI Client Console with Server Backup

To **change settings to a Server Console**, do the following:

1. From the menu bar, select **Edit | Setup P25 | DFSI**.
The P25 DFSI Global Setup window appears.

2. Click the **Client & Backup Server Console** radio button to make the console type Client and Backup Server.
Client & Backup Server Console is now the console for the system.
3. From the menu bar, select **Edit | Setup Per Line Parameters**.
The Per Line Parameters window appears.
4. From the Line Type drop down menu, select **P25-DFSI**.

Fixed Station (FS) Connections (For Backup Server) group box

The **Fixed Station (FS) Connections (For Backup Server)** group box is used to connect with the backup FSI if the Server Console fails to receive heartbeats from the Primary FSI.

Address of Fixed Station (For Backup Server) group box

Control Unicast Address of FS field

The **Control Unicast Address of FS** field is used to enter an IP Address of the P25 base station.

Control Port of FS field

The **Control Port of FS** field is used to enter the port number of the P25 base station.

The range for this field is 1054 to 65536.



Notice!

The Control Port of FS field must match the DFSI Control Port of the P25 base station.

Voice Address of Fixed Station (For Backup Server) group box

Voice IP Address of FS field

The **Voice IP Address of FS** field is used to enter the voice IP address of the P25 base station.

Voice Port of FS field

The **Voice Port of FS** field is used to enter the voice port number of the P25 base station. The Voice Port of FS field must match the voice port number configured in Daniels P25 base station and unique for Tait P25 base station.

The range for this field is 1054 to 65536.

Backup Enabled check box

The **Backup Enabled** check box enables the backup FS setup button.

53.9

Backup FS Setup window

The **Backup FS Setup** button opens the Backup Fixed Station Setup window.

To **open the Backup Fixed Station Setup window**, do the following:

1. Select the **Backup Enabled** check box.

2. Click **Backup FS Setup**.

The Backup Fixed Station Setup window appears.

3. Configure your **backup station**.
NOTE: If connection is lost to a Fixed Station, C-Soft automatically switches to the Backup Fixed Station if Backup Enabled is selected.
4. Restart **C-Soft** to return to the original Fixed Station.

53.9.1

Client Connections group box

The **Client Connections** group box is used to configure per-line signaling setup address fields.

53.9.2

Control Address of Server group box

Control Unicast Address of Server field

The **Control Unicast Address of Server** field is used to enter the IP Address of the server PC.

Control Port of Server field

The **Control Port of Server** field is used to enter the port address of the server control port for this line.



Notice!

The Port Address must match the value setting of the Server Control Port on the Server Console setup.

53.9.3

Voice Address of Server group box

Rx MCA field

The **Rx MCA** field displays the RX Multicast Address and Port that the server and clients use to receive P25 voice (a different value for each line). The MCA and ports must match the MCA and ports you entered in the server console.

Tx MCA field

The **Tx MCA** field displays the TX Multicast Address and Port that the server and clients use to transmit P25 voice (a different value for each line). The MCA and ports must match the MCA and ports you entered in the server console.

P25 Manufacture drop down menu

The **P25 Manufacture** drop down menu is used to select the manufacturer of the repeater.

Available selections for this field are:

- Daniels
- Tait



Notice!

Since there may be small differences between radio designs, this field is important to insure C-Soft works correctly with the repeater.

Channel Setup button

The **Channel Setup** button is used to open the DFSI Channel Table window. For more information, refer to “*Channel Table window, page 497*”.

The Channel Table window displays all of the channels open for a selected line.

Refer to

- *Server Console, page 488*

53.10

Channel Table window

The **Channel Table** window, shown in the Figure below, is used to view channel information.

To **open the Channel Table window**, do the following:

- In the Per Line Parameters window with P25 DFSI line type selected, click the **Freqs button**.

The Channel Table appears.

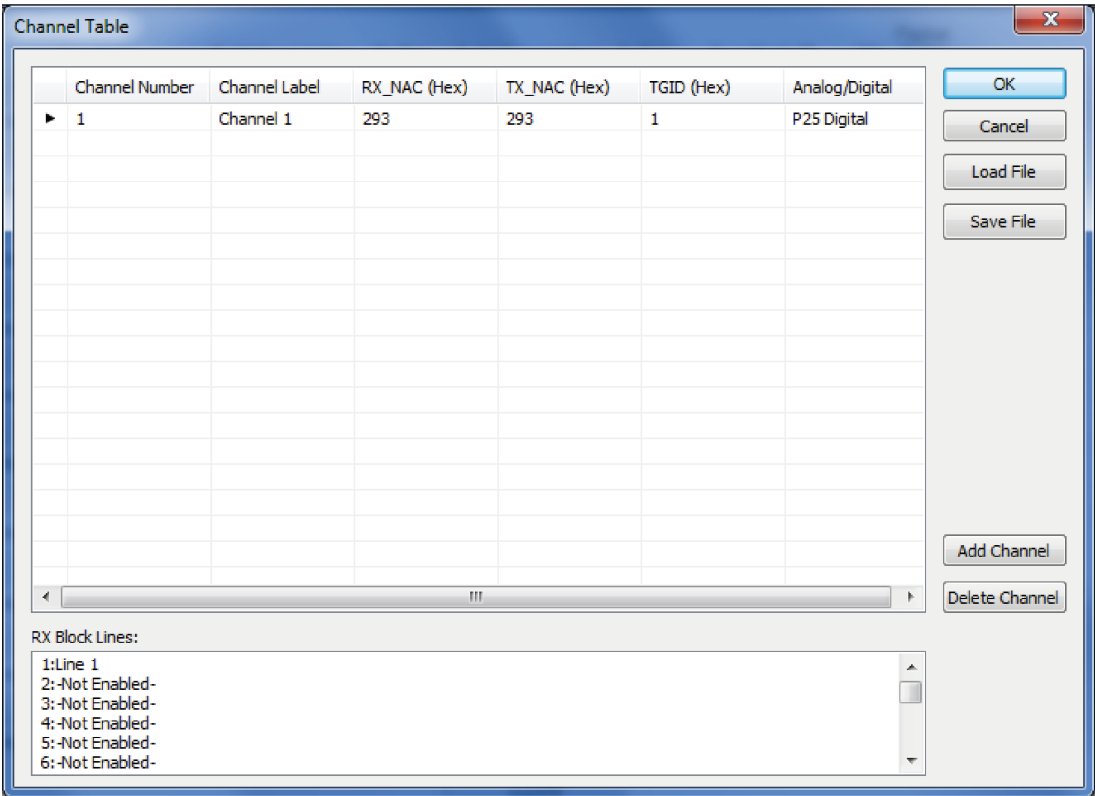


Figure 53.9: DFSI Channel Table

Channel Number column

The **Channel Number** column displays the physical channel number assigned to the radio.



Notice!

The Channel Number must match the Channel Number set up in the Fixed Station.

Channel Label column

The **Channel Label** column displays the name of the channel.

RX-NAC (Hex) column

The **RX-NAC (Hex)** column displays the receive NAC (Network Access Code). This code must match the incoming NAC from a radio so the audio can be heard on C-Soft.



Notice!

The RX-NAC must match the RX-NAC set up in the Fixed Station.

TX-NAC (Hex) column

The **TX-NAC (Hex)** column displays the TX-NAC (Transmit Network Access Code).

**Notice!**

The TX-NAC must match the TX-NAC, set up in the Fixed Station.

TGID NAC (Hex) column

The **TGID (Talk Group ID) (Hex)** column displays the Talk Group ID for the channel and is an additional filter, used in both TX and RX directions.

Analog/Digital column

The **Analog/Digital** column displays the type of voice encoding/decoding by the console for the selected channel. (A setting of P25 Digital causes the channel to transmit and receive in P25 digital audio).

Analog uses G711 encoding/decoding for both transmit and receive. Mixed mode receives in either analog or digital and transmit audio is selectable (analog or digital) via a user defined button.

Available options are:

- P25 Digital - The channel transmits and receives in P25 digital audio
- Analog - The channel transmits and receives using G711 encoding/decoding.
- Mixed Mode - Receives audio in either analog or digital. Transmit audio is selectable (analog or digital) through the use of a user-defined button.

RX Block Lines panel

The **RX Block Lines** panel is used to select lines that have their receive audio blocked when having their configurations modified. This allows the console operator to transmit on a radio that has overlapping coverage with other radios, without getting feedback from the radios receiving the transmitted signal. This function also operates when a parallel console is transmitting on the line.

To **mute a line during transmission**, do the following:

1. From the RX Block Lines panel, select the **lines** you want to block.
The line is highlighted.
2. Click the **line(s)** a second time to clear the selection.
The line is no longer highlighted.

Load File button

The **Load File** button is used to load a saved Channel Table from a saved .csv (comma separated values) file.

Save File button

The **Save File** button is used to save the Channel Table to a .csv file.

Add Channel button

The **Add Channel** button is used to manually configure another line.

Delete Channel button

The **Delete Channel** button is used to delete a channel from the channel table.

To **delete a channel**, do the following:

1. From the Channel Table, highlight the **channel row** to be deleted.
2. Click the **Delete Channel** button.

The channel is deleted.

Edit Global DFSI Parameters button

The **Edit Global DFSI Parameters** button is used to open the P25 DFSI Global Setup window. For more information, refer to “*P25 DFSI Global Setup window, page 480*”.

The P25 DFSI Global Setup window is where the type of console required for the system is selected.

Refer to

- *P25 DFSI Global Setup window, page 480*

53.11**Setting Up Additional P25-DFSI lines**

When adding multiple lines, the procedure is repeated from above.

**Notice!**

When setting up multiple lines, each line must have unique Unicast Addresses, Ports, and Multicast Addresses. The only address that is constant among the lines is the IP Address of the Server P.C.

Adding Buttons to the Design

Once you have created the lines to be used for the P25 system, buttons need to be created on the console. You can assign buttons to either individual lines or you can use the preconfigured P25-DFSI Window button.

The P25-DFSI Window button contains all P25 radio/base station functionality in a single popup window.

**Notice!**

Each DFSI line requires one P25_DFSI button; however, only one window is shown, depending on the line/button selected.

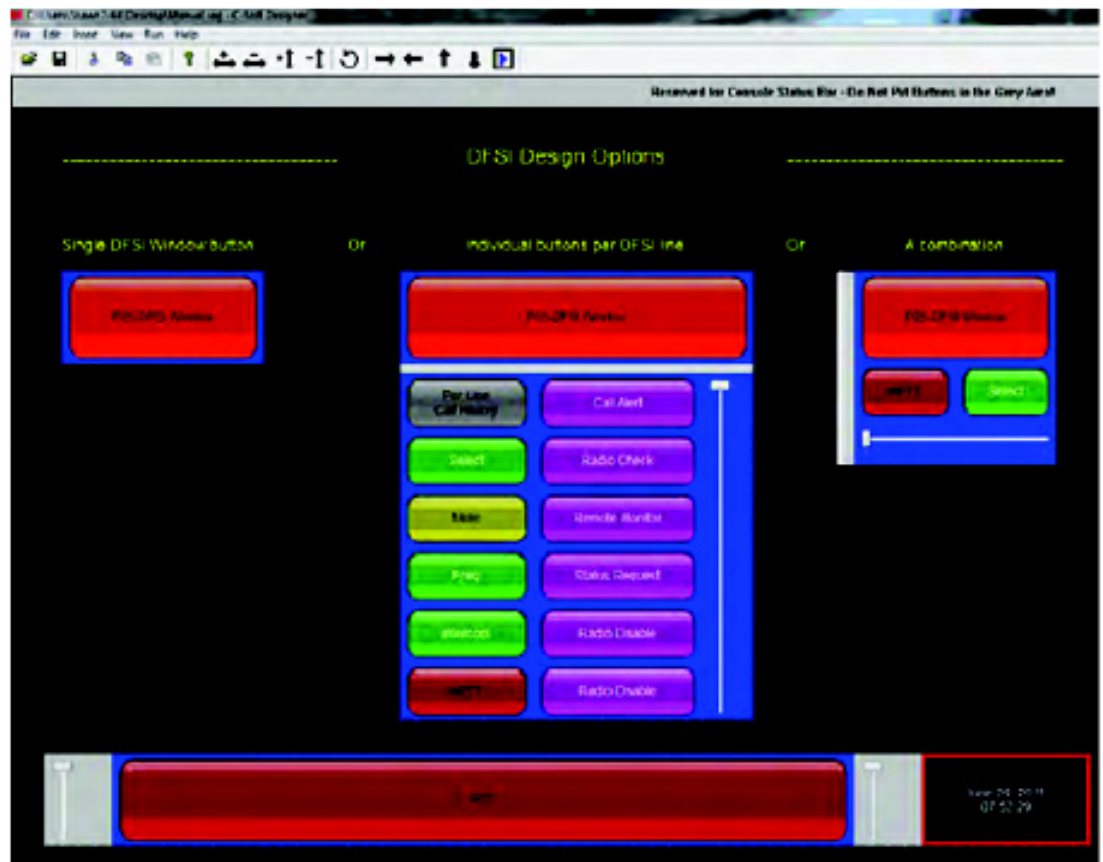


Figure 53.10: DFSI Design Options

For a P25 DFSI button without a Select Button, an “S” appears on the button for selected. A “U” appears on the button if unselected.

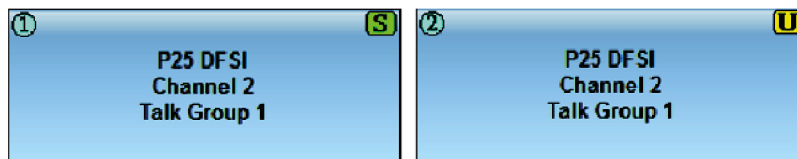


Figure 53.11: P25 DFSI - Select and Unselect

P25-DFSI Misc Page setup

The P25-DFSI Misc window is used to change the colors of the buttons.

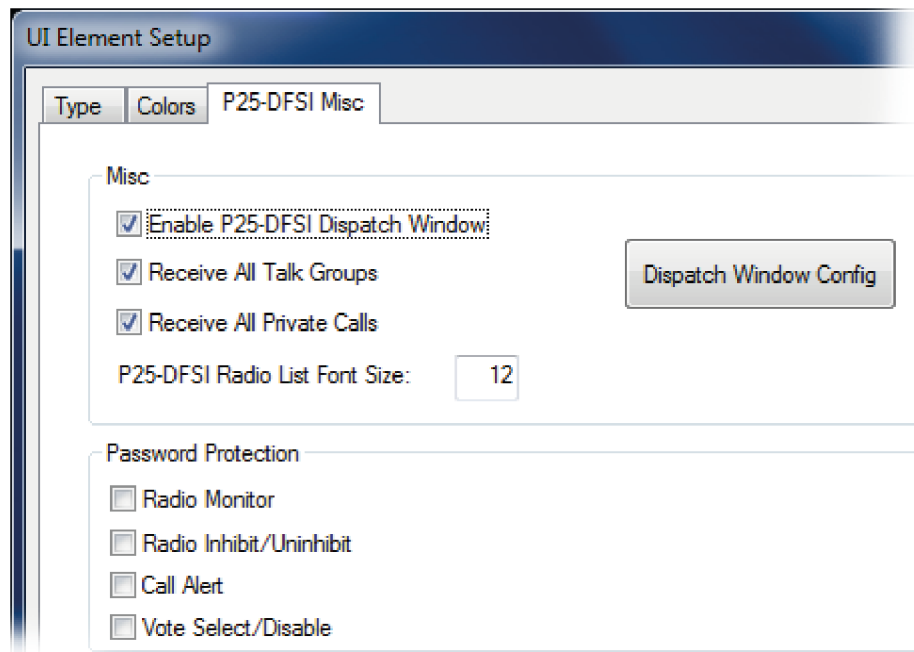


Figure 53.12: P25-DFSI Misc

To **add a P25-DFSI button to the console**, do the following:

1. From the Insert menu, select **Add UI Button**.
A None button appears on the console window.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **P25-DFSI Window**.
5. Click the **P25-DFSI Misc tab**.

The P25-DFSI Misc Page appears.

Misc group box

Enable P25-DFSI Dispatch Window check box

The **Enable P25-DFSI Dispatch Window** check box is used to enable the P25-DFSI Dispatch Window. If unselected, the user cannot open the DFSI Window in Runtime.

The default is selected.

Receive All Talk Groups check box

The **Receive All Talk Groups** check box, if enabled, allows the console operator to be able to hear all incoming Talk Groups on that line. When the check box is not enabled, the line mutes all audio not matching the current Talk Group of that line.

The default is selected.

Receive All Private Calls check box

The **Receive All Private Calls** check box, if enabled, allows the console operator be able to hear all Private Calls on that line. When the check box is not enabled, the line mutes private calls not directed to the console.

The default is selected.

P25-DFSI Radio List Font Size field

The **P25-DFSI Radio List Font Size** field indicates the size of the P25-DFSI Radio List Font Size.

The default is 12.

Password Protection group box

Radio Monitor check box

The **Radio Monitor** check box, if enabled, indicates the Radio Monitor function is password protected.

For more information, refer to “*Global Parameter Setup window, page 114*”.

Radio Inhibit/Uninhibit check box

The **Radio Inhibit/Uninhibit** check box, if enabled, indicates the Radio Inhibit/Uninhibit function is password protected.

For more information, refer to “*Global Parameter Setup window, page 114*”.

Call Alert check box

The **Call Alert** check box, if enabled, indicates the Call Alert function is password protected.

For more information, refer to “*Global Parameter Setup window, page 114*”.

Vote Select/Disable check box

The **Vote Select/Disable** check box, if enabled, indicates the Vote Select/Disable function is password protected.

For more information, refer to “*Global Parameter Setup window, page 114*”.

Dispatch Window Config button

The **Dispatch Window Config** button is used to change the color of the buttons and background of the Dispatch Window. Refer to the Figure below.

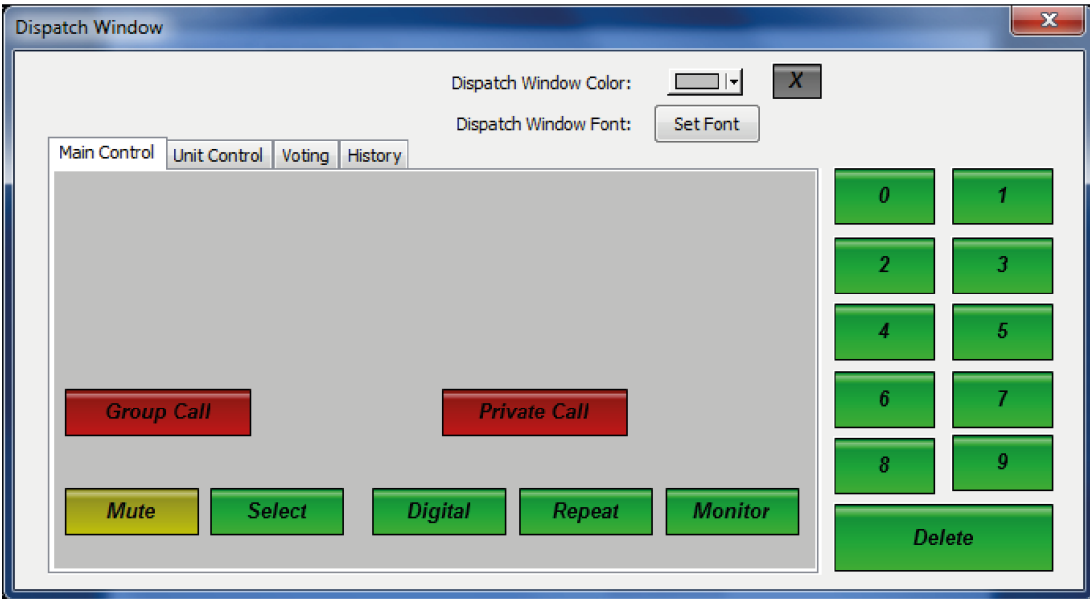


Figure 53.13: Dispatch Window

53.12 P25-DFSI window and C-Soft Runtime

The **P25-DFSI** window is the general control of a DFSI line. Clicking on the P25-DFSI button in the Figure “DFSI Design Options” in “*Setting Up Additional P25-DFSI lines, page 500*”, during runtime, opens the window shown in the Figure below.

Refer to

- *Setting Up Additional P25-DFSI lines, page 500*

53.12.1 Main Control page

The **Main Control** page is used to change the settings of the main control.

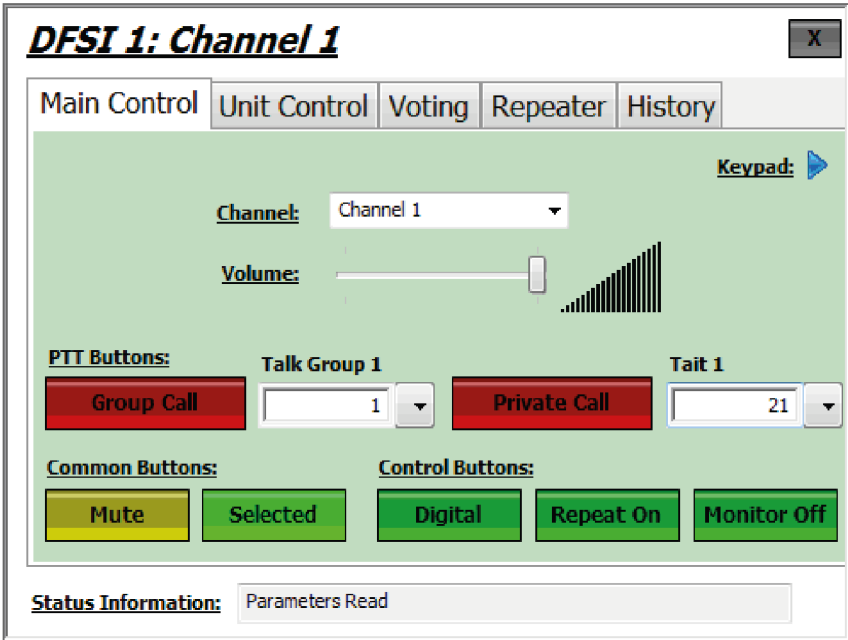


Figure 53.14: DFSI 1: Channel 1 - Main Control

Channel drop down menu

The **Channel** drop down menu is used to select the channel.

Volume Slider

The **Volume** slider is used to increase or decrease the volume of the P25 audio.

Group Call button

The **Group Call** button is used to make a group call to the group ID in the ID box.

Talk Group field and drop down menu

The **Talk Group** drop down menu is used to place group calls to the group selected from the list. The text above the drop down menu displays the selected value.

Private Call button

The **Private Call** button is used to initiate a Private Call to the radio ID in the ID box.

Private Call drop down menu

The **Private Call** drop down menu is used to place private calls to the radio selected from the list.

Mute button

The **Mute** button is a latching button (press it, it stays muted, press again, it unmutes).

Selected button

The **Selected** button changes the current line from Selected Audio to Unselected audio.

Digital button

The **Digital** button is used to toggle the channel between Analog and Digital.

**Notice!**

The channel must be configured for mixed mode. For more information, refer to “Analog/Digital Column” on *Channel Table window, page 497*.

Repeat On/Off button

The **Repeat On/Off** button is used to turn the base stations Repeater functionality On or Off.

Monitor On/Off button

The **Monitor On/Off** button is used to enable or disable monitor mode directly over the DFSI

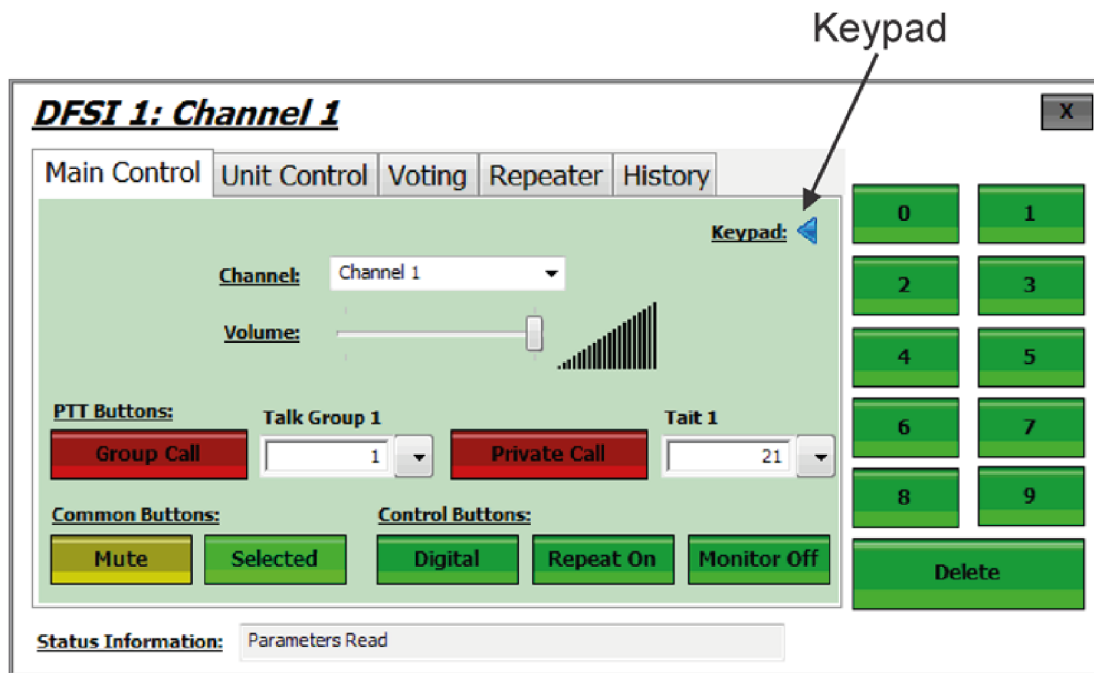


Figure 53.15: DFSI 1: Channel 1- Main Control Keypad

Keypad flyout

The **Keypad** flyout is used to manually select unit IDs for a private call.

Refer to

- *Channel Table window, page 497*

53.12.2

Unit Control page

The **Unit Control** page is used to send unit specific commands.

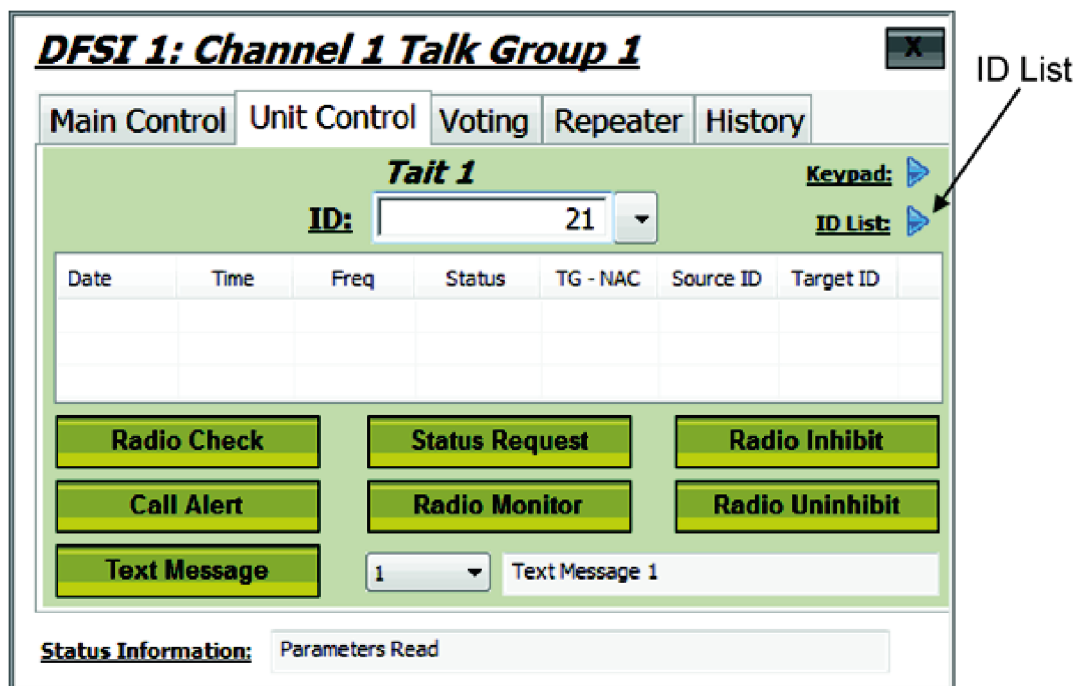


Figure 53.16: DFSI 1: Channel 1 - Unit Control

ID List flyout

The **ID List** flyout contains all the Unit IDs and Group IDs setup for P25-DFSI. The ID List flyout is used to access the preprogrammed Unit ID and Group ID list.

Date column

The **Date** column is used to show the historical date commands were sent.

Time column

The **Time** column is used to show the historical time commands were sent.

Freq column

The **Freq** column is used to show the frequency that was sent.

Status column

The **Status** column is used to show any status information about the sent command.

TG-NAC column

The **TG-NAC** column is used to show the talk group and identifier number for the radio call.

Source ID column

The **Source ID** column is used to identify the number of the calling subscriber unit.

Target ID column

The **Target ID** column is used to identify the number the source ID is calling.

Radio Check button

The **Radio Check** button is used to verify if the target radio is currently online and functional.

Status Request button

The **Status Request** button is used to read the Status of a Radio.

Radio Inhibit button

The **Radio Inhibit** button is used to disable a radio from use. This feature can be used in the case of a lost or stolen radio.

Call Alert button

The **Call Alert** button is used to send an alert to the target remote radio.

Radio Monitor button

The **Radio Monitor** button is used to monitor the selected remote radio.

Radio Uninhibit button

The **Radio Uninhibit** button is used to enable the radio for use. This feature is used to enable a radio if it has been disabled with the Radio Inhibit button.

Text Message button

The **Text Message** button is used to send the selected Text Message from the drop down menu to the selected radio.

DFSI 1: Channel 1 Talk Group 1

Unit Control | Voting | Repeater | History

Tait 1 Keypad: ID: 21 ID List:

Date	Time	Freq	Status	TG - NAC	Source ID	Target ID

Radio Check Status Request Radio Inhibit

Call Alert Radio Monitor Radio Uninhibit

Text Message 1 Text Message 1

Status Information: Parameters Read

Kenwood
Midland 1
Midland 2
Tait 1
Tait 2

Figure 53.17: DFSI 1: Channel 1 - Unit Control - ID List

53.12.3

Voting page

The **Voting** page is used to provide a visual representation of voter status.

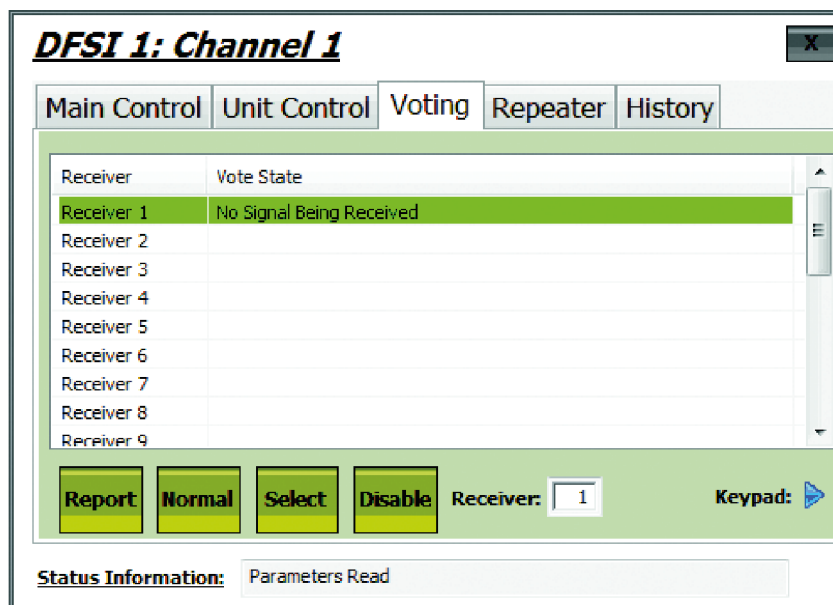


Figure 53.18: DFSI 1: Channel 1 - Voting

Receiver column

The **Receiver** column is used to display the various voting receivers that are being used.

Vote State column

The **Vote State** column display the status of the various voting receivers.

Report button

The **Report** button is used to view the current Vote State of the receiver selected in the ID box.

Normal button

The **Normal** button is used to set the receiver into normal state.

Select button

The **Select** button is used to select the receiver to use.

Disable button

The **Disable** button is used to disable the receiver input at voter.

53.12.4

Repeater page

The **Repeater** page shows the current state of all P25-DFSI lines setup in C-Soft.

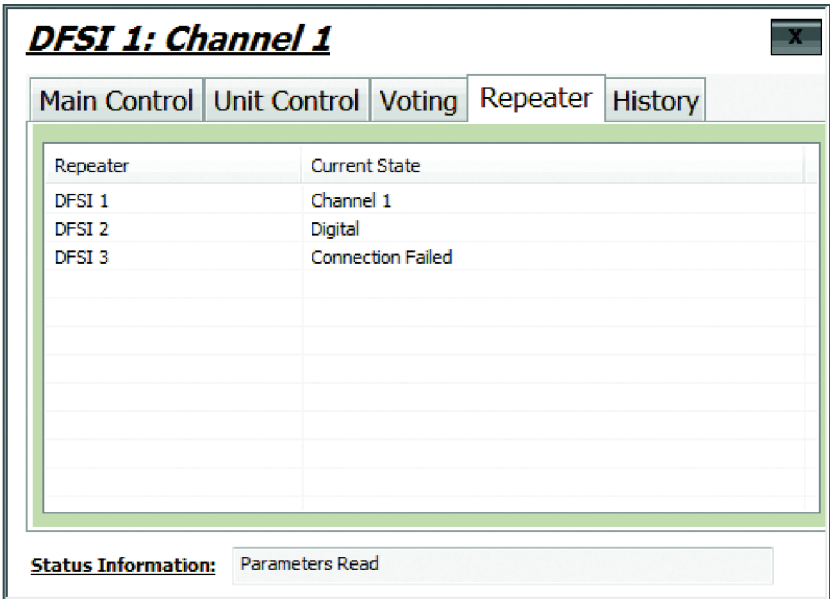


Figure 53.19: DFSI 1: Channel 1 - Repeater

When a line is selected, if the call is a Group Call, the PTT Button turns into a Group Call button. If the call selected is a Private Call, the PTT Button becomes a Private Call button.

53.12.5

History page

The **History** page is used to show the historical information for traffic on the line.

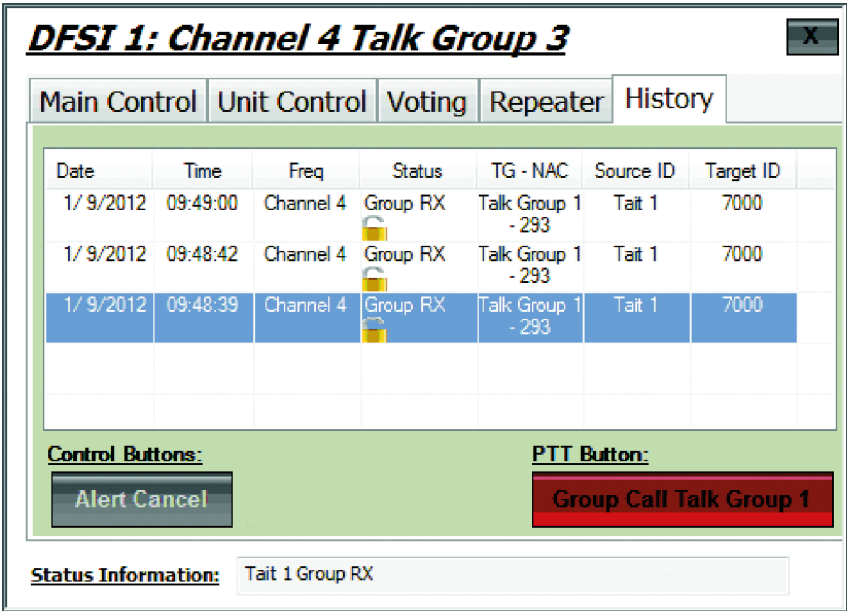


Figure 53.20: DFSI: Channel 1 - History

Alert Cancel button

The **Alert Cancel** button is used to ignore a Call Alert on the P25-DFSI line.

53.13 System features and requirement for DFSI Interface

Supported DFSI Repeaters

For the most up to date information on repeater support, go to www.telex.com.

- BK/Relm M/8150 with DFSI
- Codan
- EF Johnson Atlas
- ICOM
- RIC-M
- Tait

Supported DFSI repeater functions

For the most up to date information on **supported DFSI repeater functions**, go to www.telex.com.

- Channel Change
- Repeat mode
- Monitor
- Voting

Supported DFSI radio functions

For the most up to date information on **supported DFSI radio functions**, go to www.telexradiodispatch.com.

- Digital\Analog\Mixed Mode
- Radio Check
- Radio Inhibit
- Radio Uninhibit
- Status request
- Call Alert
- Radio Monitor
- Private Call
- Group Call

Required for C-Soft Setup

- C-Soft 6.5000 or higher
- Software-based license key for P25-DFSI lines
- Supported Repeater (refer to Supported DFSI Repeaters, above)
- IP Addresses and Ports of Repeater

53.14 Frequently Asked Questions

- P25-DFSI Line of Server Console won't connect to Fixed Station:
Check the Control Unicast Address of FS and Control Port of FS in the P25-DFSI Setup.
- P25-DFSI Line of Client Console won't connect to Fixed Station:
Check the Control Unicast Address of Server and Control Port of Server in the P25-DFSI Setup.
- The wrong channel selected is shown:
Check the P25 Manufacture in the P25-DFSI Setup.

54

Appendix F - P25 Encryption

Due to C-Soft's Designer/Runtime separation, C-Soft first requires keys are registered and organized in the design file. C-Soft uses a specialized architecture to allow for clarity and flexibility in the task of key management. C-Soft utilizes several constructs and definitions to simplify the management of encryption keys:

- Registered Key: A registered key's information consists of a key name and a CKR (Common Key Reference).
- Encryption Option: Specifies the cryptographic method used to transmit. Available encryption options are a Registered Key or Clear.
- Encryption Profile: An ordered group of encryption options which represent a list of all encryption options available on a given P25-DFSI talkgroup.

Each C-Soft design maintains a list of registered encryption keys, which are organized into encryption profiles. Each P25-DFSI line contains a list of channels that are each linked to an encryption profile, allowing the dispatcher to select and use any of the encryption options available in the encryption profile.

Once these organization steps are completed, encryption keys must be loaded into C-Soft Runtime. Once loaded, C-Soft Runtime uses the key organization as defined in the design file, but uses key data directly loaded into Runtime. This allows for C-Soft to easily manage key updates, changeovers, and other cryptographic maintenance tasks.



Notice!

The P25-DFSI Encryption functionality is a value added option to your C-Soft license; please contact your regional Bosch Sales person for details on how to purchase.

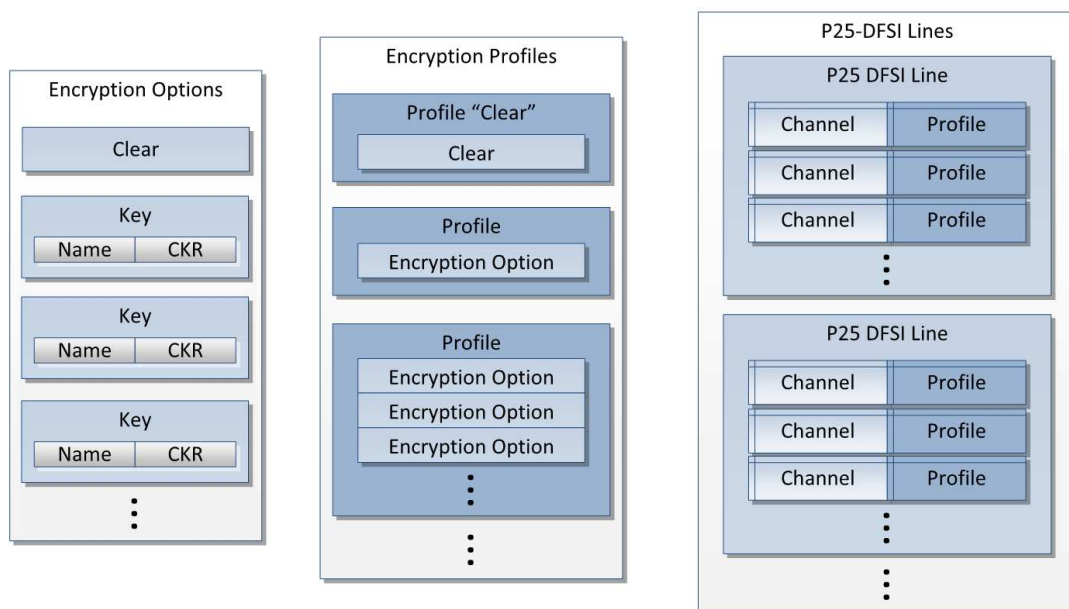


Figure 54.1: Encryption Configuration Constructs

In the example shown in the Figure below, there are three channels on both Line 1 and Line 2.

- P25 DFSI Line 1's Channel 1 is linked to the encryption profile Clear that contains only one encryption option, Clear. While using P25 DFSI Line 1's Channel 1, the dispatcher can only transmit unencrypted.
- P25 DFSI Line 1's Channel 2 is linked to Encryption Profile A that contains three encryption options. While using P25 DFSI Line 1's Channel 2, the dispatcher can choose whether to transmit unencrypted, with Key 1 or with Key 2.
- P25 DFSI Line 1's Channel 3 is linked to the encryption profile B that contains only one encryption option. While on Channel 3, the dispatcher can only transmit using Key 3.
- P25-DFSI Line 2 contains three channels that are linked to encryption profile B. While on all of these channels, the dispatcher can only transmit using Key 3.

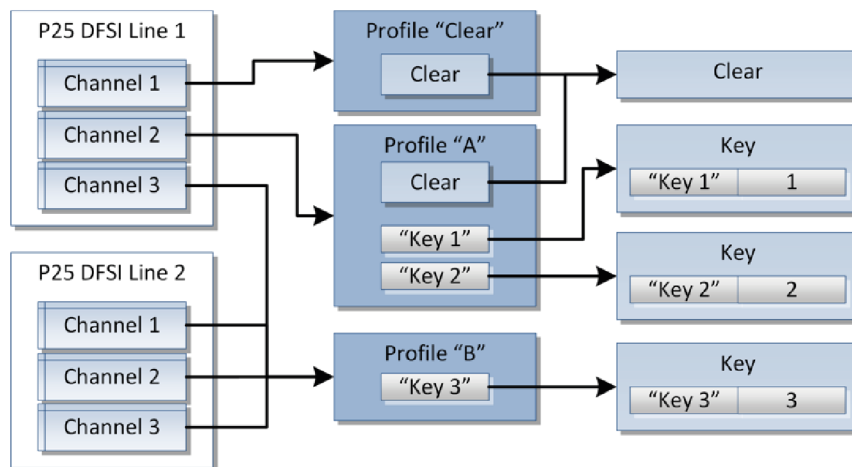
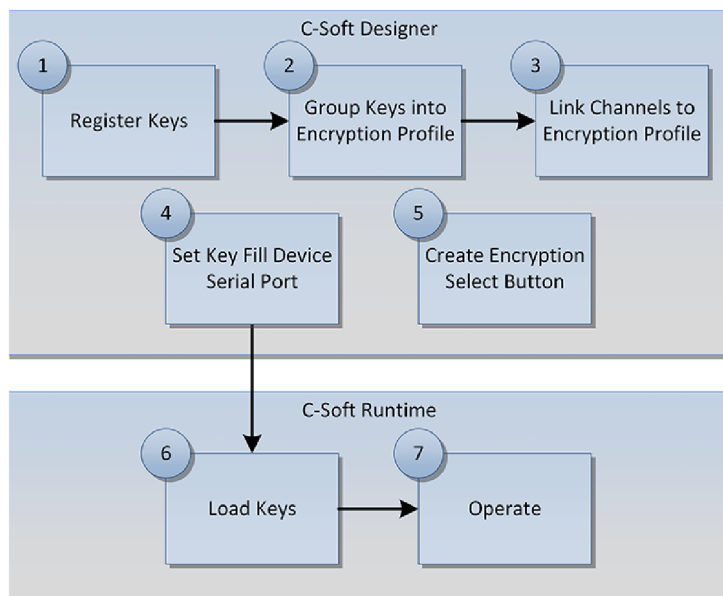


Figure 54.2: Organization Configuration Example

54.1 Encryption configuration

In order to utilize the P25-DFSI Encryption features, the following configuration steps need to be completed:



1. "Registering keys, page 519".

2. *“Group encryption options into encryption profiles, page 522”.*
3. *“Link P25-DFSI Channels to an encryption profile, page 523”.*
4. *“Activate Key Fill Device serial port, page 524”.*
5. *“Add an Encryption Option Select button, page 524”.*

The majority of encryption configuration is contained in the Encryption Setup window, shown in *“Encryption Setup window, page 516”*.

NAVIGATION: From the Edit menu, select Setup P25 | Encryption.

Refer to

- *Registering keys, page 519*
- *Group encryption options into encryption profiles, page 522*
- *Link P25-DFSI Channels to an encryption profile, page 523*
- *Activate Key Fill Device serial port, page 524*
- *Add an Encryption Option Select button, page 524*
- *Encryption Setup window, page 516*

54.2 Encryption Setup window

The screenshot shows the 'Encryption Setup' window with a close button (X) in the top right corner. It contains two main sections: 'Encryption Keys' and 'Encryption Profiles'.

Encryption Keys section:

Name	CKR
Key A	123
Key B	456
Key C	789
Click to create key	

Below the table is a 'Delete' button.

Key Fill Device section:

Serial Port:

Encryption Profiles section:

Name	Summary
Clear	Clear
Selectable	Clear+3 keys
Always Encrypted	1 key
Click to create profile	Clear

Below the table are 'Edit' and 'Delete' buttons.

At the bottom right of the window are 'OK' and 'Cancel' buttons.

Encryption Keys group box

Name column field

The **Name** column field is used to enter the name of the key being registered. A maximum of 100 keys can be registered.

Up to 24 alphanumeric characters can be entered into this field.

CKR column field

The **CKR** column field is used to enter the common key reference number. A common key reference number is used to link a key name to an encryption key in a key fill device, commonly used for key name display purposes. This additional reference value allows changing a key's name without having to know its key ID.

The range for this field is 0 through 65535.

Key Fill Device group box

The **Key Fill Device** group box is used to import encryption key data (Name and CKR) from a key fill device to C-Soft.

Serial Port drop down menu

The **Serial Port** drop down menu is used to specify the serial port that C-Soft Designer opens in order to communicate with an attached key fill device for key registration purposes.

**Notice!**

This value is also used in C-Soft Runtime to specify the serial port used to communicate with an attached key fill device for key loading.

Start button

The **Start** button is used to immediately open the serial port listed in the Serial Port drop down menu, allowing communication with the key fill device in C-Soft Designer.

The button toggles between a start and stop function.

**Notice!**

It is not recommended to use the DES demo key in any capacity where robust encryption is required. It is used mainly for demonstration and debugging.

Encryption Profiles group box

The **Encryption Profiles** group box is used to create encryption profiles with different encryption keys. For more information, refer to “*Group encryption options into encryption profiles, page 522*”. Up to 50 encryption profiles can be created. Each profile can have up to 25 encryption options associated with it.

**Notice!**

The Encryption Profile list always contains an encryption profile labeled Clear, which contains the Clear encryption option only. By default, any P25-DFSI Line’s channels are linked to the clear encryption profile.

Name column field

The **Name** column is used to enter a profile name, such as All Keys or Clear Only.

Summary column field

The **Summary** column field summarizes the key options included in the Key Profile (i.e., Clear +2keys). This column is automatically generated.

Edit button

The **Edit** button is used to open the Encryption Profile window of the currently selected encryption profile. Use this window to add and remove different encryption options to the profile as well as set the default encryption option.

Delete button

The **Delete** button is used to delete an encryption profile.

1. Select the **profile** intended for deletion.
2. Click the **Delete** button.
A warning message appears verifying the intention to delete the profile.
3. Click **OK**.

The profile is deleted from the Encryption Profiles list.

54.3

Encryption Profile Edit window

The **Encryption Profile Edit** window is used to create encryption profiles using the user created encryption options and Clear.

For more information, refer to “*Group encryption options into encryption profiles, page 522*”.

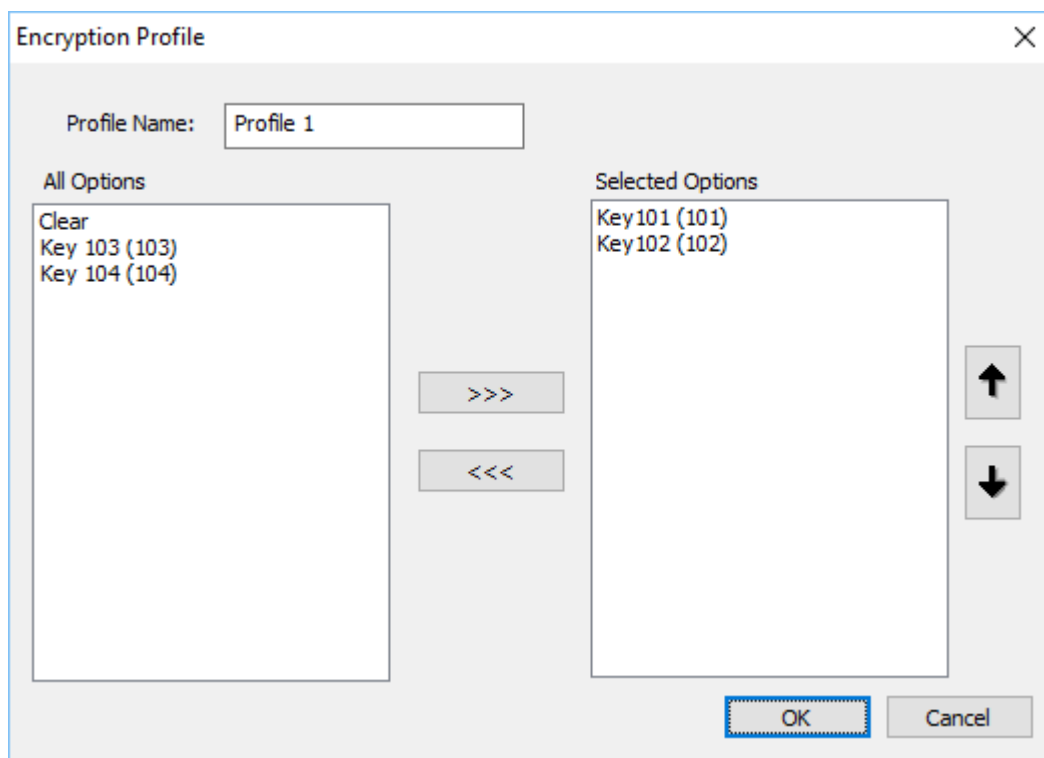


Figure 54.3: Encryption Profile Edit Window

Profile Name field

The **Profile Name** field is used to enter a name for the encryption profile.

All Options list

The **All Options** list displays a list of all available encryption options for use in the profile.

Add button

The **Add** button is used to move options from the All Options list to the Selected Options list.

Remove button

The **Remove** button is used to move options from the Selected Options list to the All Options list.

Selected Options list

The **Select Options** list displays a list of the encryption options selected for the profile being created. The Selected Options list is an ordered list.

**Notice!**

The first option listed is always the default option. For example, in Figure 228, Clear is the default encryption option. The default option is the first option listed on the Encryption Button Popup List in C-Soft Runtime.

Use the up and down buttons to move the selected encryption options up or down in the list.

OK button

The **OK** button is used to accept the modifications made and closes the Encryption Profile window.

Cancel button

The **Cancel** button is used to close the Encryption Profile window. No modifications made are saved.

Refer to

- *Group encryption options into encryption profiles, page 522*

54.4

Registering keys

Registering keys requires two pieces of information:

- The Key's Name
- The Keys CKR (Common Key Reference) value

To transmit encrypted audio using a specific encryption key, the key must be registered into the system design.

There are two methods to register keys; manually or automatically.

Register manually

To **register manually**, do the following:

1. From the Edit menu, select **P25 | Encryption**.
The Encryption Setup screen appears.
2. In the Name column, enter a **unique name** for the key.
3. In the CKR column field, enter the **CKR number** for the key.

Register automatically

When using a key fill device to import keys to C-Soft, some radios do not use key names, refer to "Key Fill Device Group Box".

To **register automatically**, do the following:

1. From the Edit menu, select **P25 | Encryption**.
The Encryption Setup screen appears.
2. From the Serial Port drop down menu, select the **COM port** to be used to communicate with a key fill device.
3. Click the **Start button**.
The specified serial port for communication with an attached key fill device opens.
NOTE: C-Soft Designer may be unable to acquire the serial port if C-Soft Runtime has reserved the port.
4. Using the Key Fill Device, **load the keys** into C-Soft.

The updated Key Names and CKRs appear in the Encryption Keys table.



Notice!

When using the automatic register feature, only Key Names and CKRs are loaded.

Name	CKR
My First Key	124
My Second Key	569
My Third Key	741
Click to create key	

Key Fill Device
Serial Port
DES Device
Key ID
Key Value

Delete

Encryption Profiles

Summary

54.5 Connecting a key fill device



Depending on the radio you are using, a few differences must be noted.

- If using a Tait Recon KVL, connect the bottom DB-9 serial port to the C-Soft Console PC using a null serial cable.
- If using either the Motorola KVL-3000+ or KVL-4000, the Tait 9000 Series to KVL adapter is also necessary. On the Motorola KVL, connect the 10-pin connector to the Tait 9000 Series to KVL Adapter. And then connect the DB-9 serial port to the C-Soft Console PC using a null serial cable.

Key Fill Device Features and Limitations

While all tested key fill devices follow the same base P25-defined Key Fill Device Interface Protocol, there may exist several operational differences and behavior.

Key Names

The Motorola KVL-3000+ and Motorola KVL-4000 do not include **Key Names** when importing encryption key data. This results in the following behavior:

- In C-Soft Designer, when using Automatic key registration, only keys' CKR values are added to the Key List. Their names must be manually set.
- In C-Soft Runtime, when receiving an audio call encrypted with a key with a non-registered but loaded key, C-Soft will display "Unregistered Key (#)", where # is the CKR of the key. This can be amended by manually registering the key in the Design, which makes the key name appear properly.
- The Tait Recon KVL key load process includes key names, and in each of these cases, the Key Name is properly displayed.

54.6 Group encryption options into encryption profiles

Encryption Profiles are ordered groups of encryption options such as registered keys and Clear.

To **group encryption options into encryption profiles**, do the following:

1. From the Edit menu, select **P25 | Encryption**.

The Encryption Setup screen appears.

Encryption Setup

Encryption Keys

Name	Value
CKR	
Key 1	123
Key 2	456
Key 3	789
Click to create key	

Key Fill Device

Serial Port: Disabled Start

Delete

Encryption Profiles

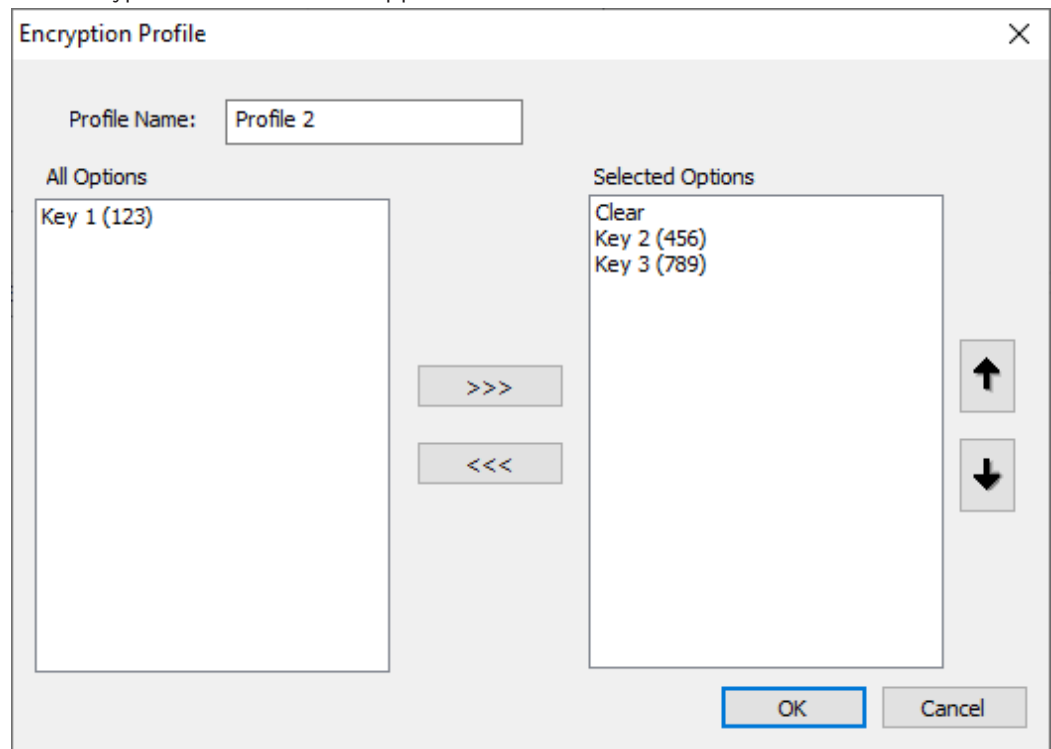
Name	Summary
Clear	Clear
My Profile	Clear
Profile 2	Clear+3 keys
Click to create profile	Clear

Edit Delete

OK Cancel

2. In the Encryption Profile group box, click in the **Click to create profile field**.
The name column field becomes active.
3. Enter a **profile name** in the active field.
The profile name appears in the field.

4. Click the **Edit button**.
The Encryption Profile window appears.



5. From the All Options list, select the **options** to add to the profile.
Multiple options can be selected at one time.
6. Click the **Add button** to move the encryption options to the Selected Options list.
7. Use the **up and down buttons** to reorder the Selected Options list, if applicable.
NOTE: Reordering the Selected Options list is useful when wanting to the default encryption option in which the topmost entry becomes the default.
8. Click **OK**.

The Edit Encryption Profile window closes.

54.7

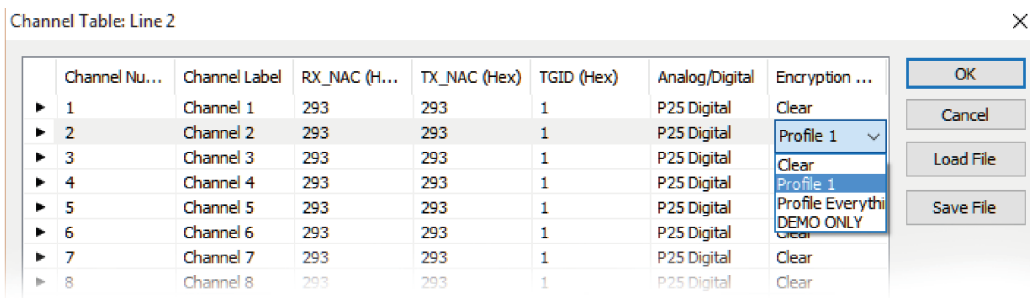
Link P25-DFSI Channels to an encryption profile

Each P25-DFSI Channel needs to be configured to select which Encryption Profile to use. When the specific P25-DFSI Channel is selected, only encryption options in the associated encryption profile are available to use for transmit.

To **link the P25-DFSI channels to the encryption profile**, do the following:

1. From the Edit Window, select **Setup Per Line Parameters**.
The Per Line Parameters window appears.
2. Press the **Freqs button** of the desired P25-DFSI line.
The Channel Table appears.

- From the Encryption Profile column drop down menu, select an **encryption profile** for each channel.



- Click **OK**.

The Channel Table modifications are saved, and the Channel Table window closes.

54.7.1

Activate Key Fill Device serial port

To permit communication between C-Soft and a key fill device, the desired serial port must be configured.

To **configure C-Soft Runtime's serial port**, do the following:

- From the Edit menu, select **P25 | Encryption**.
The Encryption Setup screen appears.
- From the Serial Port drop down menu, select the **COM port** to be used to communicate with a key fill device.
- Click the **OK button**.
The Encryption Setup window closes.
- Save the **design**.



Notice!

When C-Soft Runtime is launched with the Design, C-Soft opens the selected serial port for communication with an attached key fill device.

54.8

Add an Encryption Option Select button

Encryption Profiles containing more than one encryption option need a UI element to control the encryption option to be used while transmitting. Secondly, the Encryption Option Select button also displays encryption key information when receiving encrypted audio.

To **add an Encryption Option Select button**, do the following

- From the Insert menu, select **Add Button**.
OR
Right-click in an **empty spot in the Design workplace**.
A popup menu appears.
- Select the **Add button**.
A button appears in the design workspace.
- Right-click on the **button**.
A popup menu appears.

4. From the popup menu, select **Properties**.

The UI Properties window appears.

UI Element Setup

The screenshot shows the 'UI Element Setup' dialog box. It has three tabs: 'Type', 'Colors', and 'Options'. The 'Type' tab is active. Inside, there is a text box labeled 'UI Element: Button'. Below it is a 'Filter:' dropdown menu set to 'All'. Then, 'UI Element Function:' is a dropdown menu set to 'Encryption Key Select'. Below that, 'Line to Associate Function With:' is a dropdown menu set to 'Line 1'. To the right of this dropdown is a checked checkbox labeled 'Global Radio Button'.

5. From the UI Element Function drop down menu, select **Encryption Key Select**.
6. From the Line to Associate Function With, select the **P25-DFSI Line configured for P25 Encryption**.
OR
Select the **Global** checkbox to have the Encryption key Select button display information based on the currently selected line.
7. Click **OK**.
The window closes and the button displays Key Select.

54.9

Loading keys to C-Soft Runtime

At this point, C-Soft Runtime does not have any actual key data. This key data must be loaded from a key fill device. C-Soft Runtime communicates to a key fill device through the PC's serial port.

To **load keys into C-Soft Runtime**, do the following:

1. Launch **C-Soft Runtime**.
2. Attach a **Key Fill Device to the C-Soft Dispatch Console PC via the serial port**.
Upon successful connection, C-Soft's Status Bar displays a "Key Fill Device Attached" message.
NOTE: C-Soft Runtime may be unable to acquire the serial port if C-Soft Designer is using it to register keys.
3. Using the key fill device, **load one or more keys into C-Soft** in the same fashion as a radio.

Once finished, C-Soft's Status Bar displays a "# Key(s) Updated" message, where "#" specifies the number of keys that were loaded or updated. The keys are now successfully loaded into C-Soft.

Refer to "*Connecting a key fill device, page 521*" for more information on using a key fill device.

Refer to

- *Connecting a key fill device, page 521*

54.10**Receiving encrypted calls**

When receiving a call with encrypted audio, C-Soft attempts to find a loaded key in which the incoming Key ID matches the received Key ID. If a matching key is found, the call is decoded and played. If C-Soft does not possess a key with a matching Key ID, the incoming call's audio is muted.

While receiving a call encrypted with an AES key, the line's Select button displays FIPS to indicate the call is being decrypted using a FIPS-validated cryptographic library.

In addition, the Encryption Key Select button momentarily displays the incoming call's key name, or the Key's CKR if the name is not known. Since there are potentially two locations in which a key name is specified, C-Soft uses the following priority list for displaying Key Information:

1. Registered Key Name from Design's Encryption Key List
2. Key Name obtained from the key fill device.
3. "Unregistered Key <CKR>"

The incoming call flow is summarized as follows:

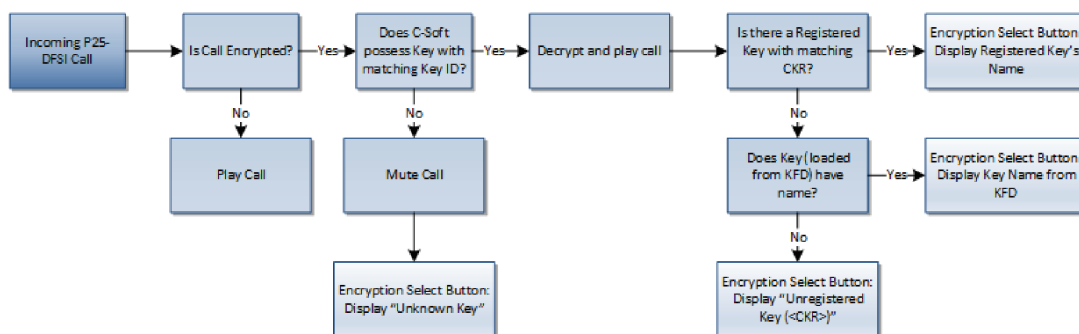


Figure 54.4: Receiving Call Flow

54.11**Transmitting encrypted calls**

The Encryption Key Select button is the essential UI element for encryption operation. The button is either configured as global meaning the content is changed based on the currently selected line, or statically configured to a specific line.

The Encryption Key Select button is also linked to the currently selected channel/talkgroups, and changes its content when the active channel/talkgroups is changed. The Encryption Key Select button's selected option is preserved between switching selected lines and switching channel/talkgroups.

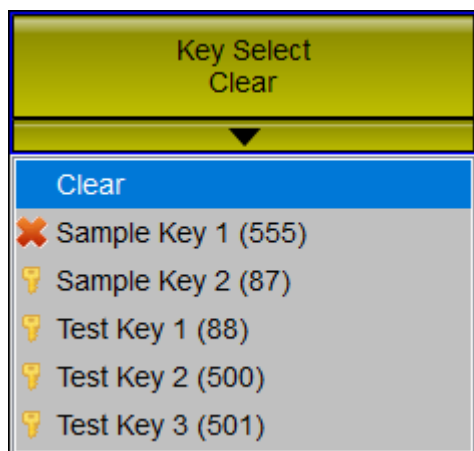


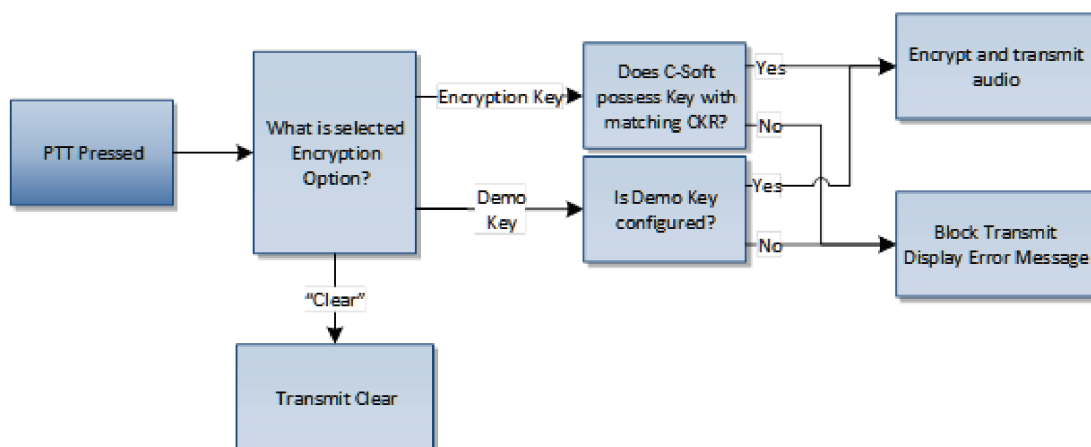
Figure 54.5: Encryption Key Select Button (with Option List)

The Encryption Key Select button's drop down menu contains a list of all encryption options contained in the encryption profile linked by the currently selected frequency of the associated line. In addition, it contains information relevant to encryption key validity.

The icon/states include:

Icon	Meaning	Description
	Blank	Used for "Clear", indicates transmissions are not encrypted.
🔑	Key	Key data is loaded and available.
❌	No Data	Key name/CKR are registered in the Design file, but C-Soft Runtime does not possess data for the key. Any attempt to transmit using a registered but not loaded key is blocked. After using a key fill device to load the key's data into C-Soft Runtime, the no data icon changes to key.

Once an encryption option is selected, pressing a PTT button (e.g. Main PTT, Per-Line PTT, Private PTT, or Group PTT) button will transmit using the selected key. While receiving a call encrypted with an AES key, the line's Select button displays FIPS to indicate the call is being decrypted using a FIPS-validated cryptographic library. The transmit call flow is as follows:

**Figure 54.6:** Transmit Call Flow

55

Appendix G - CSSI Interface

The P25 CSSI interface is designed to connect directly to P25 Trunking System via an IP Interface without using a radio gateway or additional hardware. The C-Soft CSSI interface provides flexibility in deployment and offers advanced radio control features. CSSI interface is an option feature on C-Soft and available in 2, 6, 12, and 24 talk paths.

**Notice!**

Included with this option is the ability to define a line as either P25 CSSI or P25 DFSI. The total number of lines available is constrained by the number of lines in the P25 CSSI option license. In other words, a six line P25 CSSI license could have all six lines set up for P25 CSSI, or all six lines set up for P25 DFSI, or a combination of 4 lines set up for P25 CSSI and two lines set up for P25 DFSI.

55.1

Supported features

**Notice!**

While C-Soft supports these features, each radio manufacturers supported CSSI feature set varies, consult technical support for a list of known features per manufacturer.

The CSSI Trunking Interface supports the following features:

- Console Registration
- Group Call
- Private Call
- Call Alert
- Announcement Call
- System Call
- Short Message Decode
- Status Query/Update
- Radio Unit Monitor
- Radio Check
- Radio Enable
- Radio Disable
- Emergency Alarm
- Emergency Acknowledgement
- Audio Encryption and Keys Loading
- P25 Phase 1
- P25 Phase 2
- P25 DFSI (refer to “*Appendix E - P25-DFSI (Digital Fixed Station Interface)*, page 479”)

Refer to

- *Appendix E - P25-DFSI (Digital Fixed Station Interface)*, page 479

55.2 Theory of operation

Console

In a P25 CSSI interface, the C-Soft console acts as an RFSS System. When the console starts, it needs to register its talk groups with the P25 trunking infrastructure via IP connection to gain access to the system.



Notice!

The registration process fails on certain talk groups if those talk groups are not pre-programmed in the CSSI system.

Call Line

Each CSSI line within a console design can be set up as either Talk Group or Unit Call lines.

Talk Group lines use either a Group PTT or InPTT button for call activation. Using a GroupPTT button allows the talk group ID to be varied on the line. Using an InPTT button creates a dedicated line with only one talk group ID. All talk groups needing to receive and transmit on must be registered with the CSSI system. The console registers all talk groups contained in the consoles System List when the console first starts. Talk group validation can be viewed in the console's Global Call History window (refer to "*Global Call History window, page 447*").

A **Unit Call** line is used to send private calls to an individual radio subscriber. Unit lines use either a Private PTT button or an InPTT button for call activation. Using a Private PTT button allows the unit ID to be varied on the line. Using an InPTT button creates a dedicated line to call only one unit ID. Radio buttons such as Call Alert, Remote Monitor, etc. are typical buttons assigned to this type of line. Console designers can add a Keypad module to the console design to provide easy access to the Talk Group or Private Call user list during call operations when using the Private PTT button.



Notice!

It is strongly recommended to assign Radio Control Buttons such as Radio Call Alert, Radio Check, Radio Disable, Radio Enable, and Radio Remote Monitor to a unit call line. This ensures seamless operation on the console.

Assigning the Radio Control Buttons on group lines that may be restricted can produce unpredictable results.

The console registers all talk groups contained in the consoles System List when the console first starts up. The System List can be edited using the System List Window (refer to "*Status List window, page 236*"). Talk group validation can be viewed in the console's Global Call History window (refer to "*Global Call History window, page 447*").

Refer to

- *Global Call History window, page 447*
- *Status List window, page 236*

55.2.1 Distribution of receive audio to the lines

Talk Groups

The CSSI protocol is based on SIP (Session Initiation Protocol); therefore the console implementation also uses this protocol to structure the operation of the console. The console first scans all lines for a Group PTT button that is set to the incoming talk group ID. If the receive ID matches the line's talk group ID, the line receives the audio.

If no Group PTT button is set to the incoming ID, the console then scans all lines with an Instant PTT button (a dedicated line) for a group ID assigned to the line (the talk group ID assigned in C-Soft Designer). If the receive ID matches the lines talk group ID, that line receives the audio.

If no line matches the ID, the receive audio goes to the first available (non-busy) line with a Group PTT. If all lines are busy, the call is missed.



Notice!

If a console system cannot tolerate any missed talk group calls, the console administrator must have as many Talk Group lines as voice channels available on the CSSI system and all lines must have Group PTT buttons.

If a dispatcher needs to monitor and talk to a specific talk group, an InPTT button is used to create a dedicated line.

Unit lines operate exactly the same as group lines, with one exception, if all unit call lines are busy the console sends back a busy signal to the calling unit.

Operational Notes

- The talk group or unit ID shown on the Group PTT, InPTT, and Private PTT is the line's current transmit and receive ID.
- If the keypad module is used on the C-Soft console to change talk group and unit IDs, console operators must select the desired line by clicking on the Select button first and changing the ID in the keypad. The ID changes on the selected line's PTT button and any radio buttons assigned to it. If a console operator selects another, the previous selected line retains its ID. This operation holds true for all non-dedicated lines. Dedicated lines are preset to the default designer value; the keypad has not effect on these lines.
- Up to 24 CSSI lines can be created with any combination of Talk Group or Unit lines.

Group Call line

A **Group Call** is used to talk to multiple radios within a talk group.

Group lines use Group PTT or an InPTT button for call activation. Using a Group PTT button allows the Group ID to be varied on the line. Using an InPTT button creates a dedicated line with only one Group ID. In addition, a Radio Status button can be assigned to a group line to send status messages to a group.

**Notice!**

All talk groups must be registered with the CSSI system. Upon initial start up, the console registers all CSSI groups listed in the Group ID List. Talk group validation can be viewed in the console's Global Call History window. The registration process fails on groups not pre-programmed on the CSSI system. To configure the console's system list, refer to "*File menu - Edit System List, page 193*".

Refer to

- *File menu - Edit System List, page 193*

55.2.2**Individual Call line**

An **Individual Call** line is used to send private calls to individual units. Individual Call lines use a Private PTT or an InPTT button for call activation. Using a Private PTT button allows the unit ID to be varied on the line. Using an InPTT button creates a dedicated line with only one unit ID.

Radio buttons (Call Alert, Remote Monitor, Regroup, Ungroup, etc.) are typically assigned to this type of line. Console operators can add a Keypad to the console design, providing easy access to the user list during call operation. All Unit Calls are received by the console when the Individual Call line is in Scanning Mode. In Dedicated Mode, the Individual Call line becomes a point-to-point call with one preprogrammed unit.

55.3**CSSI Call types**

Each CSSI line within a console design can be set up as either Group or Individual Call lines.

55.3.1**Group Call**

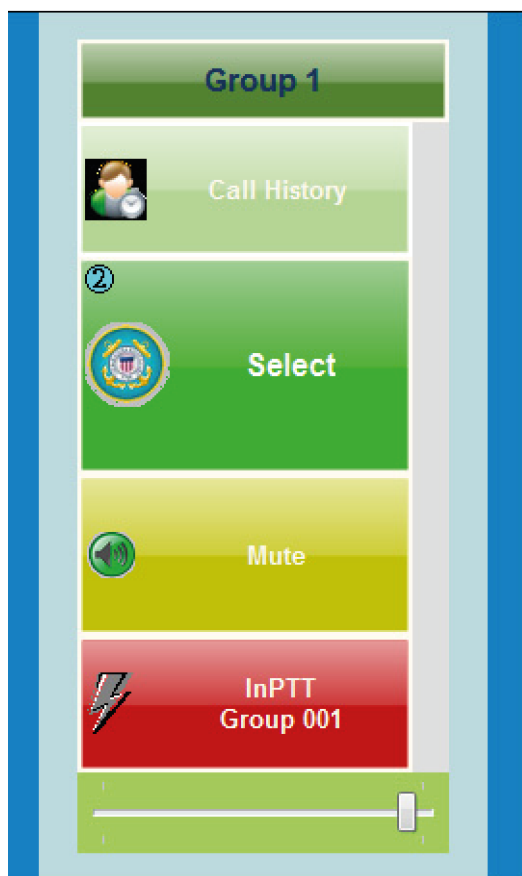
Talk Group lines use either a Group PTT or InPTT button for call activation. Using a GroupPTT button allows the talk group ID to be varied on the line. Using an InPTT button creates a dedicated line with only one talk group ID.

To **create a Group Call**, do the following:

1. From the Edit Window, select **Setup Per Line Parameters**.
The Per Line Parameters window appears.
2. Click the **Signal Setup button** of the P25 CSSI line to create a group call.
The Signaling Parameters screen appears.
3. Click the **CSSI tab**.
The CSSI page appears.
4. From the Call Type drop down menu, select **Group Call**.
5. From the Encryption Profile drop down menu, select the **encryption profile** to use, if applicable.
6. In the Call Number field, enter the **Talk Group Number of the line** if using an InPTT button on the line.

**Notice!**

If the console designer assigns an InPTT button to the line, this line would only transmit to and receive from the default ID. This is called a Static Group Line. If the console designer assigns a Group PTT button to the line, the default ID is overridden at run time by the current Group ID assigned by the selectable Group PTT button. This is called Manual Group line.



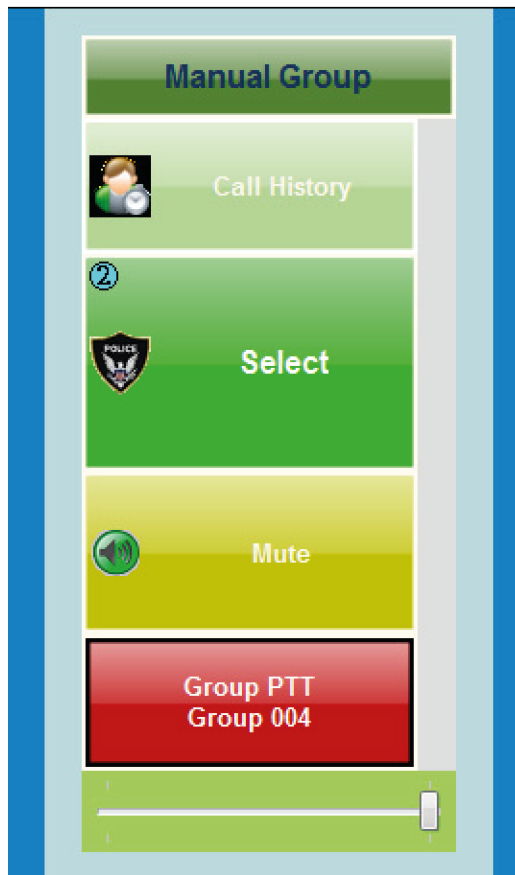


Figure 55.1: Static Group Line and Manual Line Set Up

55.3.2

Individual Call

An **Individual Call** line is used to send private calls to individual users. Individual lines use either a Private PTT button or an InPTT button for call activation. Using a Private PTT button allows the unit ID to be varied on the line. Using an InPTT button creates a dedicated line with only one unit ID. Radio buttons such as Call Alert, Remote Monitor, etc. are typical buttons assigned to this type of line. Console operators can add a Keypad to the console design to provide easy access to the user list during call operation.

To **create an Individual Call**, do the following:

1. From the Edit Window, select **Setup Per Line Parameters**.
The Per Line Parameters window appears.
2. Click the **Signal Setup button** of the P25 CSSI line to create an individual call.
The Signaling Parameters screen appears.
3. Click the **CSSI tab**.
The CSSI page appears.
4. From the Call Type drop down menu, select **Individual Call**.
5. From the Encryption Profile drop down menu, select the **encryption profile** to use, if applicable.
6. In the Call Number field, enter the **Individual Call Number of the line** if using an InPTT button on the line.

**Notice!**

If the console designer assigns an InPTT button to the line, this line would only transmit to and receive from the default unit ID.

If the console designer assigns a Private PTT button to the line, the Private PTT overrides the default number and allows different units to be selected.

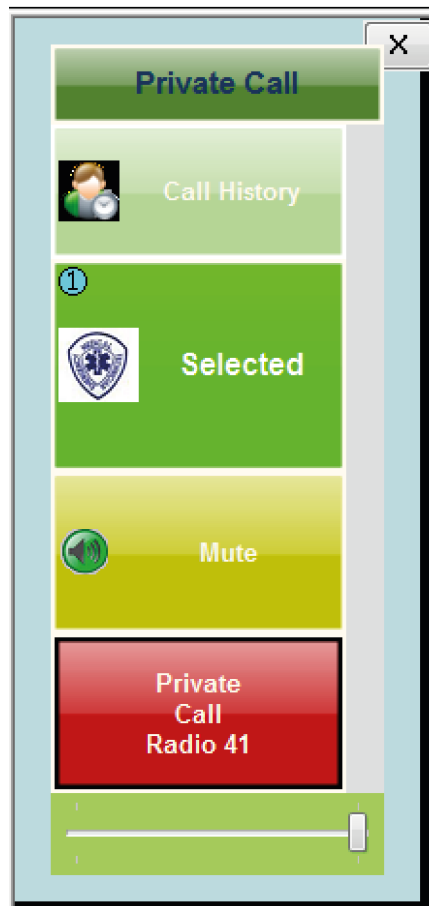


Figure 55.2: Private Call Configuration

55.4

C-Soft Setup parameters

To **program a P25 unit radio or parallel console ID for CSSI operation**, do the following:

1. From the edit menu, select **Edit User ID List**.

The User ID List window appears.

	Name: Sort By Name	User ID: Sort By ID	Type:	TX Inhibit:	Icon:
1	Console 1	65537	P25-CSSI	☐	Filters Icon 1
2	Console 2	131072	P25-CSSI	☐	Filters Icon 1
3	Console 3	196608	P25-CSSI	☐	Filters Icon 1
4	Console 4	262144	P25-CSSI	☐	Filters Icon 1
5	Console 5	327680	P25-CSSI	☐	Filters Icon 1
6	Console 6	393216	P25-CSSI	☐	Filters Icon 1
7	Console 7	458752	P25-CSSI	☐	Filters Icon 1
8	Console 8	524288	P25-CSSI	☐	Filters Icon 1
9	Hieu's Console	1005	P25-CSSI	☐	Filters Icon 1
10	Radio 1	1	P25-CSSI	☐	Filters Icon 1
11	Radio 2	2	P25-CSSI	☐	Filters Icon 1
12	Radio 3	3	P25-CSSI	☐	Filters Icon 1

Load File Save File OK Cancel

2. In the Name column, enter the **alias** for each line.
3. In the User ID column, enter the **User ID** for each line (the User ID is in decimal format).
4. From the Type drop down menu, select **P25-CSSI**.
5. Click **OK**.



Notice!

To program an All Call ID that can transmit to all CSSI subscribers on the system, enter 65535 in the User ID column, and select CSSI from the Type drop down menu. All numbers are in decimal format.

To **program a P25 Trunking talkgroup for CSSI operation**, do the following:

1. From the Edit menu, select **Edit Group ID List**.

The Group ID List window appears.

	Group: Sort By Name	Group ID: Sort By ID	Type:	TX Inhibit:	Set Color:
1	Announcement Grp	20	P25-CSSI	☐	Filters
2	Group 1	1	P25-CSSI	☐	Filters
3	Group 2	2	P25-CSSI	☐	Filters
4	Group 3	3	P25-CSSI	☐	Filters
5	Group 4	4	P25-CSSI	☐	Filters
6	Group 5	5	P25-CSSI	☐	Filters
7	Group 6	6	P25-CSSI	☐	Filters
8	Group 7	7	P25-CSSI	☐	Filters
9	Group 8	8	P25-CSSI	☐	Filters
10	Group 9	9	P25-CSSI	☐	Filters
11	System Call	65535	P25-CSSI	☐	Filters
12			Generic	☐	Filters

Load File Save File Uncheck All Set Color Reset Colors OK Cancel

2. In the Group column, enter the **Group alias** for each line.
3. In the Group ID column, enter the **Group ID** for each line (the Group ID is in decimal format).
4. From the Type drop down menu, select **CSSI** for each line.
5. Click **OK**.



Notice!

During start up, C-Soft registers all of the pre-programmed CSSI Talk Groups. C-Soft can only communicate to Talk Groups registered to the system.

55.5

Signaling Parameters

Figure 55.3: Signaling Parameters - CSSI Page

Console Call Parameters group box

The **Console Call Parameters** group box is used to configure a line's voice call. Configuration options include the type of call, the encryption profile to use, and the call number.

The **Call Type** drop down menu is used to select the type of call designated to the line.

Available options are Group Call or Individual Call.

Encryption Profile drop down menu

The **Encryption Profile** drop down menu is used to select the encryption profile to use for the line, if any. For more on Encryption profiles, refer to *"Appendix F - P25 Encryption, page 513"*.

Call Number field

The **Call Number** field is used to enter the Talk Group ID or the Individual ID, depending on what is selected in the Call Type drop down menu. This field is uniquely identified by a number.

The range for this field is 1 to 65535 in decimal.

RFSS Location Parameters group box

The **RFSS Location Parameters** group box is used to configure the P25 repeater RFSS (Radio Frequency Sub-System) that connects to the line. The following field values are obtained from the systems RFSS.

RFSS ID Dec/Hex fields

The **RFSS ID Dec/Hex** fields are used to enter the ID of the Home RFSS in the connected P25 Trunking system. The unique identifier can be entered in either decimal or hex format.

The range for this field is 1 to 65535 in decimal.

System ID Dec/Hex fields

The **System ID Dec/Hex** fields is used to enter the ID for the LMR system within a WACN (Wide Area Communication Network). The unique identifier can be entered in either decimal or hex format.

The range for this field is 1 to 4095 in decimal format.

WACN ID Dec/Hex fields

The **WACN ID Dec/Hex** fields are used to enter the WACN ID, which is a collection of one or more LMR systems. The unique identifier for each LMR system can be entered in either decimal or hex format.

The range for this field is 1 to 1048575.

RFSS IP Address field

The **RFSS IP Address** field is used to enter the IP Address of the RFSS system. Individual RF sites use this address to connect with.

RFSS Location ID field

The **RFSS Location ID** field displays the an ID that is made up of the RFSS ID, System ID, and the WACN ID. This field cannot be modified. This field is most commonly used for comparison purposes when setting up a CSSI system.

Global CSSI Setup button

The **Global CSSI Setup** button opens the Global P25 CSSI Parameters setup window. For more information, refer to “*Global P25 CSSI Parameters, page 540*”.

55.6

CSSI System setup

To **set up a CSSI Line**, do the following:

1. From the Edit menu, select **Setup Per Line Parameters**.

The Per Line Parameters window appears.

Line Number	Line Type	Line Name	Rx Multicast Address	Rx Port	Tx Multicast Address	Tx Port	Base Radio IP	TTL	Packet Delay	Options	Freqs	Signal Setup	SIP
1	P25-CSSI	Group 1	225.8.11.81	1054	225.8.11.81	1254	0.0.0.0	6	10	Options	Freqs	Signal Setup	SIP
Echo Packets Enable:			0.0.0.0	1054	0.0.0.0	1254							
2	P25-CSSI	Group 2	225.8.11.81	1055	225.8.11.81	1255	0.0.0.0	6	10	Options	Freqs	Signal Setup	SIP
Echo Packets Enable:			0.0.0.0	1055	0.0.0.0	1255							
3	P25-CSSI	Group 3	225.8.11.81	1056	225.8.11.81	1256	0.0.0.0	6	10	Options	Freqs	Signal Setup	SIP
Echo Packets Enable:			0.0.0.0	1056	0.0.0.0	1256							
4	P25-CSSI	Group 4	225.8.11.81	1057	225.8.11.81	1257	0.0.0.0	6	10	Options	Freqs	Signal Setup	SIP
Echo Packets Enable:			0.0.0.0	1057	0.0.0.0	1257							
5	P25-CSSI	Group 5	225.8.11.81	1058	225.8.11.81	1258	0.0.0.0	6	10	Options	Freqs	Signal Setup	SIP
Echo Packets Enable:			0.0.0.0	1058	0.0.0.0	1258							
6	P25-CSSI	Group 6	225.8.11.81	1059	225.8.11.81	1259	0.0.0.0	6	10	Options	Freqs	Signal Setup	SIP
Echo Packets Enable:			0.0.0.0	1059	0.0.0.0	1259							
7	P25-CSSI	Group 7	225.8.11.81	1060	225.8.11.81	1260	0.0.0.0	6	10	Options	Freqs	Signal Setup	SIP
Echo Packets Enable:			0.0.0.0	1060	0.0.0.0	1260							
8	P25-CSSI	Private	225.8.11.81	1061	225.8.11.81	1261	0.0.0.0	6	10	Options	Freqs	Signal Setup	SIP
Echo Packets Enable:			0.0.0.0	1061	0.0.0.0	1261							
9	Disabled	Line 9	225.8.11.81	1062	225.8.11.81	1262	0.0.0.0	6	10	Options	Freqs	Signal Setup	SIP
Echo Packets Enable:			0.0.0.0	1062	0.0.0.0	1262							
10	Disabled	Line 10	225.8.11.81	1063	225.8.11.81	1263	0.0.0.0	6	10	Options	Freqs	Signal Setup	SIP
Echo Packets Enable:			0.0.0.0	1063	0.0.0.0	1263							

AutoFill

2. From the Line Type drop down menu, select **CSSI**.

NOTE: The Multicast address and port number information is used for cross console communications supporting the following features: Call Queue, Emergency and Cross-patch updates. These fields should match on each console in a shared system.

3. Click the **Signal Setup** button.

The Signaling Parameters window appears.

Signaling Parameters: Group 1

General Signal Setup CSSI

System Settings

System Type: P25-CSSI

System Name: None [Edit System](#)

Signaling AutoFill Setup

☐ Enable Signaling AutoFill

Starting Line Number: 1

Ending Line Number: 1

Call Logging

☐ Display All Calls

OK Cancel

4. From the System Type drop down menu, select **P25 CSSI**.

5. Click the **CSSI tab**.
The CSSI window appears.

Signaling Parameters: Line 1

General Signal Setup CSSI

Console Call Parameters

Call Type: Group Call

Encryption Profile: Clear

Call Number: 1 Dec

RFSS Location Parameters

RFSS ID: 8 Dec 3 Hex

System ID: 2 Dec 2 Hex

WACN ID: 1 Dec 1 Hex

RFSS IP Address: 172 . 19 . 2 . 6

RFSS Location ID: 03.002.00001.p25dr

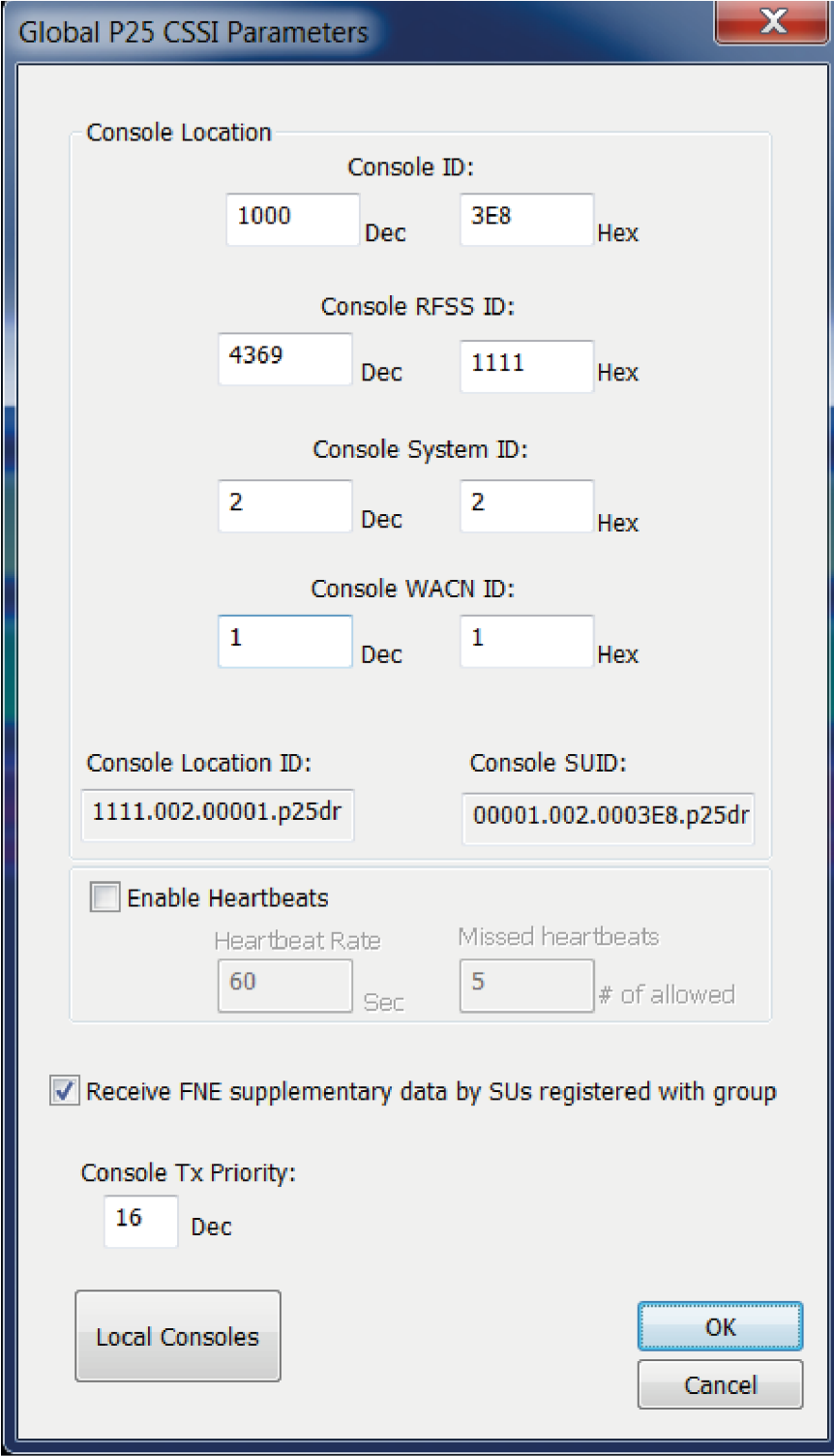
Global CSSI Setup

OK Cancel

6. From the Call Type drop down menu, select the **Call Type**.
7. In the Talk Group Number field, enter the **Talk Group Number**.

55.7 Global P25 CSSI Parameters

The **Global CSSI Parameters** apply to all CSSI console lines and only need to be set once per console. The Global CSSI Parameters window is assessable from any line, but the values are constant between lines, and can be found at Edit | Setup CSSI.



The image shows a software window titled "Global P25 CSSI Parameters" with a close button (X) in the top right corner. The window contains several input fields and checkboxes for configuring console parameters.

Console Location

Console ID:

1000 Dec 3E8 Hex

Console RFSS ID:

4369 Dec 1111 Hex

Console System ID:

2 Dec 2 Hex

Console WACN ID:

1 Dec 1 Hex

Console Location ID: 1111.002.00001.p25dr

Console SUID: 00001.002.0003E8.p25dr

☐ Enable Heartbeats

Heartbeat Rate: 60 Sec

Missed heartbeats: 5 # of allowed

☒ Receive FNE supplementary data by SUs registered with group

Console Tx Priority: 16 Dec

Local Consoles

OK

Cancel

Figure 55.4: Global CSSI Trunking Parameters Window

Console Location group box

The **Console Location** group box is used to define the console location identifiers.

Console ID Dec/Hex fields

The **Console ID Dec/Hex** fields are used to enter the ID that is assigned to the console.

The range for this field is 1 to 16777215 in decimal format.

Console RFSS ID Dec/Hex fields

The **Console RFSS ID Dec/Hex** fields are used to enter the ID of the RFSS. This ID must match the external CSSI RFSS ID which was set up on the LMR system.

The range for this field is 1 to 65535 in decimal format.

Console System ID Dec/Hex fields

The **Console System ID Dec/Hex** fields are used to enter Control System ID. This ID must match the CSSI System ID which is set up on the LMR system.

The range for this field is 1 to 4095 in decimal format.

Console WACN ID Dec/Hex fields

The **Console WACN ID Dec/Hex** fields are used to enter the WACN ID. The WACN is a collection of one or more uniquely identified LMR Systems.

The range for this field is 1 to 101048575 in decimal format.

Console Location ID field

The **Console Location ID** field displays the location ID of the console. This ID is made up of the Console RFSS ID, Console System ID and the Console WACN ID. This field is used for comparison purposes when setting up a CSSI system. This field cannot be edited.

Console SUID field

The **Console SUID** field displays the SUID (subscriber unit ID). This ID is made up of the Console WACN ID, Console System ID, and Console ID. This field is used for comparison purposes when setting up a CSSI system. This field cannot be edited.

Enable Heartbeats check box

The **Enable Heartbeats** check box determines whether or not heartbeats are sent from the console to the LMR RFSS.

Heartbeat Rate field

The **Heartbeat Rate** field is used to enter rate at which heartbeats are sent from the console to the LMR RFSS.

The range for this field is 10 to 120 seconds.

Missed Heartbeats field

The **Missed Heartbeats** field is used to enter the number of missed heartbeats allowed before an error is generated.

The range for this field is 1 to 10.

Receive FNE Supplementary data by SUs registered with group check box

The **Receive FNE Supplementary data by SUs registered with** group check box determines whether or not a group registration with both the LMR RFSS and LMR FNE (Fixed Network Equipment) is allowed. This allows supplementary operations such as Status, Call Alert, Radio Check, etc. to be handled by FNE. For example, an SU sends a Status update to the FNE. All the consoles registered to the FNE for that group receives the status update. The SU does not need to send status updates to each individual console.

Console Tx Priority field

The **Console Tx Priority** field is used to enter the transmit priority level. Consoles with a higher priority level transmits over a console that has a lower priority level.

The range for this field is 1 to 255.

**Notice!**

A console always transmits over an SU.

Local Console button

The **Local Console** button opens the “*Local Consoles page, page 129*”.

56 Appendix H - Kenwood NEXEDGE Direct IP interface

The NEXEDGE Direct IP interface is designed to connect directly to NEXEDGE Trunking and NEXEDGE Conventional Systems via an IP Interface without using a radio gateway or additional hardware. The C-Soft NEXEDGE IP interface provides flexibility in deployment and offers advanced radio control features. NEXEDGE IP interface is an option feature on C-Soft and available in 2, 6, 12, and 24 talk paths.

56.1 Supported features

The NEXEDGE Trunking and Conventional IP Interfaces support the following features:

- Direct IP Interface (no extra hardware or radio gateway needed)
- Supports both Narrow band (12.5Khz) and Very Narrow band (6.25Khz) Channel Spacing
- Group Call/Conference Call
- Unit/Private Call
- Alert Call
- Selectable Talk Group
- Emergency Call Decode with Acknowledgement Capabilities
- Radio Status Request
- Radio Status Decode
- Radio Status Encode
- Radio Remote Grouping
- Over-The-Air-Aliasing
- Supports up to 24 Talk Paths per Console
- Call Queuing Using Incoming Status
- Radio Remote Monitor with Supervisor Password
- Radio Stun
- Radio Revive
- Support the following Conventional interface types:
 - No Signaling with RAN
 - Signaling without RAN
 - Signaling and RAN
- Radio Remote Grouping (Trunking Only)
- GPS Decode with IP Interface
- Text Messaging (Trunking Only)
- Broadcast Call (Trunking Only)

56.2 Theory of operation

Console

In a NEXEDGE system, the console acts as a radio SU (Subscriber). When the console starts, it needs to register its unit ID with the NEXEDGE infrastructure via IP connection to gain access to the system. Once it is registered, it then registers all the NEXEDGE talk groups programmed in the Group ID List.

Private Call

Individual units, or SUs, are calls the console wants to talk to that are not registered by the console. All unit calls are received by the console if the console's Unit line is in SCAN mode. Scanning mode allows a line to overflow to another line, if busy. If the Unit line is in dedicated mode, the line becomes a point to point call with only one unit. Dedicated mode does not allow an overflow. If a line is busy, the call is missed.

**Notice!**

The console's registered Unit ID is set from the Global Parameter Setup window, Console Unit ID Number (refer to “*Global Parameter Setup window, page 114*”).

Group Call

All talk groups the console is required to listen and talk on must be registered with the NEXEDGE system. The console registers all talk groups contained in the console's System List when the console first starts up. Talk group validation can be viewed in the console's Global Call History window (refer to “*Global Call History window, page 447*”).

**Notice!**

The registration process fails on certain talk groups if those talk groups are not pre-programmed in the NEXEDGE system.

Call Line

Each NEXEDGE line within a console design can be set up as either Talk Group or Unit Call lines. Talk Group lines use either a Group PTT or InPTT button for call activation. Using a GroupPTT button allows the talk group ID to be varied on the line. Using an InPTT button creates a dedicated line with only one talk group ID.

A Unit Call line is used to send private calls to individual units or SUs. Unit lines use either a Private PTT button or an InPTT button for call activation. Using a Private PTT button allows the unit ID to be varied on the line. Using an InPTT button creates a dedicated line to call only one unit ID. Radio buttons such as Call Alert, Remote Monitor, etc. are typical buttons assigned to this type of line. Console designers can add a Keypad to the console design to provide easy access to the Talk Group or Private Call user list during call operations when using the Private PTT button.

**Notice!**

It is strongly recommended to assign Radio Control Buttons such as Radio Call Alert, Radio Check, Radio Disable, Radio Enable, and Radio Remote Monitor to a unit call line. This ensures seamless operation on the console.

Assigning the Radio Control Buttons on group lines that may be restricted can produce unpredictable results.

**Notice!**

In the Conventional interface, when not using talk groups, the RAN (Radio Access Node) configured is used for the Call Line.

Refer to

- *Global Parameter Setup window, page 114*
- *Global Call History window, page 447*

56.2.1**Distribution of receive audio to the lines****Talk Groups**

The NEXEDGE protocol is based on SIP (Session Initiation Protocol); therefore the console implementation also uses this protocol to structure the operation of the console. The console first scans all lines for a Group PTT button that is set to the incoming talk group ID. If the receive ID matches the line's talk group ID, the line receives the audio.

If no Group PTT button are set to the incoming ID, the console then scans all lines with an Instant PTT button (a dedicated line) for a group ID assigned to the line (the talk group ID assigned in C-Soft Designer). If the receive ID matches the lines talk group ID, that line receives the audio.

If no line matches the ID, the receive audio goes to the first available (non-busy) line with a Group PTT. If all lines are busy, the call is missed.

RANs (Conventional Only)

When using talk groups, the console scans all the lines to match the talk group, once it has found a match it then attempts to match the RAN, as well. If you are not using a talk group the console scans to find a line matching the RAN. If a match is not found the call is missed.

**Notice!**

If a console system cannot tolerate any missed talk group calls, the console administrator must have as many Talk Group lines as voice channels available on the CSSI system and all lines must have Group PTT buttons.

If a dispatcher needs to monitor and talk to a specific talk group, an InPTT button is used to create a dedicated line.

Unit lines operate exactly the same as group lines, with one exception, if all unit call lines are busy the console sends back a busy signal to the calling unit.

Operational Notes

- The talk group or unit ID shown on the Group PTT, InPTT, and Private PTT is the line's current transmit and receive ID.
- If the keypad module is used on the C-Soft console to change talk group and unit IDs, console operators must select the desired line by clicking on the Select button first and changing the ID in the keypad. The ID changes on the selected line's PTT button and any

radio buttons assigned to it. If a console operator selects another, the previous selected line retains its ID. This operation holds true for all non-dedicated lines. Dedicated lines are preset to the default designer value; the keypad has not effect on these lines.

- Up to 24 CSSI lines can be created with any combination of Talk Group or Unit lines.

56.2.2

Group Call line

A **Group Call** line can be set as a Conference Call:

- Conference Call: A Conference Call is used to talk to multiple radios within a talk group.

Group lines use Group PTT or an InPTT button for call activation. Using a Group PTT button allows the Group ID to be varied on the line. Using an InPTT button creates a dedicated line with only one Group ID. In addition, a Radio Status button can be assigned to a group line to send status messages to a group.



Notice!

All talk groups must be registered with the CSSI system. Upon initial start up, the console registers all CSSI groups listed in the Group ID List. Talk group validation can be viewed in the console's Global Call History window. The registration process fails on groups not pre-programmed on the CSSI system. To configure the console's system list, refer to "*File menu - Edit System List, page 193*".

- UNIT CALL LINE

A **Unit Call** line is used to send private calls to individual units. Unit Call lines use a Private PTT or an InPTT button for call activation. Using a Private PTT button allows the unit ID to be varied on the line. Using an InPTT button creates a dedicated line with only one unit ID.

Radio buttons (Call Alert, Remote Monitor, Regroup, Ungroup, etc.) are typically assigned to this type of line. Console operators can add a Keypad to the console design, providing easy access to the user list during call operation. All Unit Calls are received by the console when the Unit Call line is in Scanning Mode. In Dedicated Mode, the Unit Call line becomes a point-to-point call with one pre-programmed unit.

56.3

NEXEDGE Call types

Each NEXEDGE line within a console design can be set up as either Conference (Talk Group) or Unit Call lines.

56.3.1

Conference call

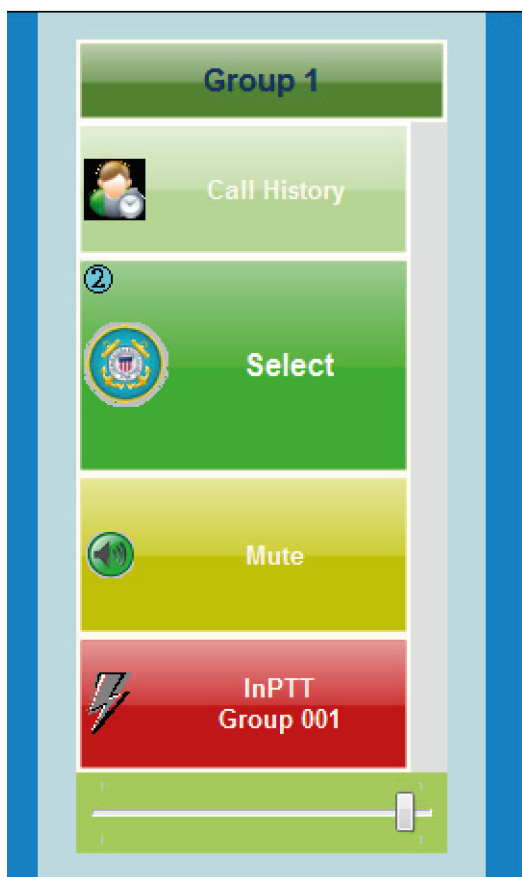
Talk Group lines use either a Group PTT or InPTT button for call activation. Using a GroupPTT button allows the talk group ID to be varied on the line. Using an InPTT button creates a dedicated line with only one talk group ID.

To **create a conference call or talk group**, do the following:

1. From the Call Type drop down menu, select **Conference Call**.
2. In the Talk Group Number field, enter the **Talk Group Number of the line**.

**Notice!**

If the console designer assigns an InPTT button to the line, this line would only transmit to and receive from the default ID. This is called a Static Group Line. If the console designer assigns a Group PTT button to the line, the default ID is overridden at run time by the current Group ID assigned by the selectable Group PTT button. This is called Manual Group line.



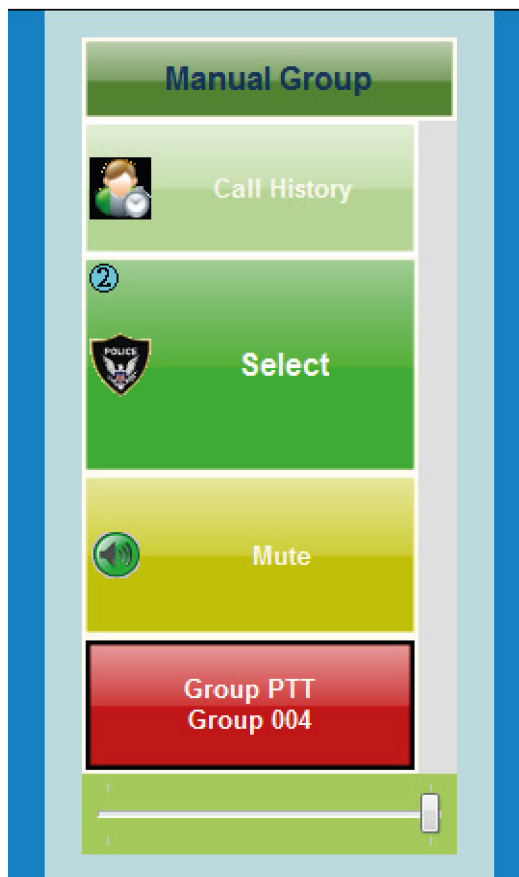


Figure 56.1: Group and Manual Line Set Up

56.3.2

Unit call

A **Unit Call** line is used to send private calls to individual users. Unit line use either a Private PTT button or an InPTT button for call activation. Using a Private PTT button allows the unit ID to be varied on the line. Using an InPTT button creates a dedicated line with only one unit ID. Radio buttons such as Call Alert, Remote Monitor, etc. are typical buttons assigned to this type of line. Console operators can add a Keypad to the console design to provide easy access to the user list during call operation.

To **create a unit call**, do the following:

1. From the Call Type drop down menu, select **Unit Call**.
2. In the Unit ID Number field, enter the **Unit Call Number of the line**.



Notice!

If the console designer assigns an InPTT button to the line, this line would only transmit to and receive from the default unit ID.

If the console designer assigns a Private PTT button to the line, the Private PTT overrides the default number and allows different units to be selected.

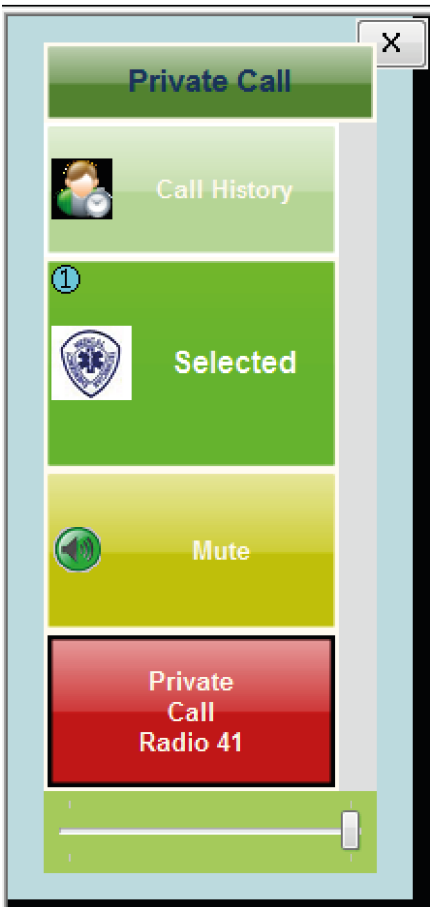


Figure 56.2: Private Call Configuration

56.4 C-Soft Setup parameters

To **program a NEXEDGE radio in C-Soft**, do the following:

- 1. From the edit menu, **select Edit User ID List**.

The User ID List window appears.

	Name: Sort By Name	User ID: Sort By ID	Type:	TX Inhibit:	Icon:
1	Radio 41	41	NEXEDGE-TRUNK	☐	Filters Icon 1
2	Radio 42	42	NEXEDGE-TRUNK	☐	Filters Icon 1
3	Radio 43	43	NEXEDGE-TRUNK	☐	Filters Icon 1
4	Radio 50	50	NEXEDGE-TRUNK	☐	Filters Icon 1
5	Radio C41	41	NEXEDGE-CONV	☐	Filters Icon 1
6	Radio C42	42	NEXEDGE-CONV	☐	Filters Icon 1
7	Radio C43	43	NEXEDGE-CONV	☐	Filters Icon 1
8	Radio C50	50	NEXEDGE-CONV	☐	Filters Icon 1
9			Generic	☐	Filters Icon 1
10			Generic	☐	Filters Icon 1
11			Generic	☐	Filters Icon 1
12			Generic	☐	Filters Icon 1

Load File Save File

OK Cancel

- 2. In the Name column, enter the **alias** for each line.

3. In the User ID column, enter the **User ID** for each line (the User ID is in decimal format).
4. From the Type drop down menu, select **NEXEDGE-CONV** or **NEXEDGE-TRUNK**.
5. Click **OK**.



Notice!

To program an All Call ID that can transmit to all NEXEDGE subscribers on the system, enter 65535 in the User ID column, and select NEXEDGE from the Type drop down menu.

To **program a Group ID for NEXEDGE in C-Soft**, do the following:

1. From the Edit menu, select **Edit Group ID List**.

The Group ID List window appears.

	Group: Sort By Name	Group ID: Sort By ID	Type:	TX Inhibit:	Set Color:	
1	Group 1	1	NEXEDGE-TRUNK	☐	☐	Filters
2	Group 2	2	NEXEDGE-TRUNK	☐	☐	Filters
3	Group 3	3	NEXEDGE-TRUNK	☐	☐	Filters
4	Group C1	1	NEXEDGE-CONV	☐	☐	Filters
5	Group C2	2	NEXEDGE-CONV	☐	☐	Filters
6	Group C3	3	NEXEDGE-CONV	☐	☐	Filters
7			Generic	☐	☐	Filters
8			Generic	☐	☐	Filters
9			Generic	☐	☐	Filters
10			Generic	☐	☐	Filters
11			Generic	☐	☐	Filters
12			Generic	☐	☐	Filters

Load File Save File
 Uncheck All Set Color Reset Colors **OK** Cancel

2. In the Group column, enter the **Group alias** for each line.
3. In the Group ID column, enter the **Group ID** for each line (the Group ID is in decimal format).
4. From the Type drop down menu, select **NEXEDGE** for each line.
5. In the Group ID column, enter the **Group ID** for each line (the Group ID is in decimal format).
6. Click **OK**.

During start up, C-Soft will register all of the pre-programmed NEXEDGE Talk Groups. C-Soft can only communicate to Talk Groups registered to the system.

56.5

NEXEDGE Trunking System setup

To **set up a NEXEDGE Line**, do the following:

1. From the Edit menu, select **Setup Per Line Parameters**.

The Per Line Parameters window appears.

Line Number	Line Type	Line Name	Rx Multicast Address	Rx Port	Tx Multicast Address	Tx Port	Base Radio IP	TTL	Packet Delay	Options	Freqs	Signal Setup	SIP
1	NEXEDGE	Group 1	225. 8 . 11 . 81	1054	225. 8 . 11 . 81	1072	0 . 0 . 0 . 0	6	10			Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1054	0 . 0 . 0 . 0	1254							
2	NEXEDGE	Group 2	225. 8 . 11 . 81	1055	225. 8 . 11 . 81	1073	0 . 0 . 0 . 0	6	10			Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1055	0 . 0 . 0 . 0	1255							
3	NEXEDGE	Manual Group	225. 8 . 11 . 81	1056	225. 8 . 11 . 81	1074	0 . 0 . 0 . 0	6	10			Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1056	0 . 0 . 0 . 0	1256							
4	NEXEDGE	Private Line	225. 8 . 11 . 81	1057	225. 8 . 11 . 81	1075	0 . 0 . 0 . 0	6	10			Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1057	0 . 0 . 0 . 0	1257							
5	Disabled	Line 5	225. 8 . 11 . 81	1058	225. 8 . 11 . 81	1258	0 . 0 . 0 . 0	6	10			Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1058	0 . 0 . 0 . 0	1258							
6	Disabled	Line 6	225. 8 . 11 . 81	1059	225. 8 . 11 . 81	1259	0 . 0 . 0 . 0	6	10			Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1059	0 . 0 . 0 . 0	1259							
7	Disabled	Line 7	225. 8 . 11 . 81	1060	225. 8 . 11 . 81	1260	0 . 0 . 0 . 0	6	10			Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1060	0 . 0 . 0 . 0	1260							
8	Disabled	Line 8	225. 8 . 11 . 81	1061	225. 8 . 11 . 81	1261	0 . 0 . 0 . 0	6	10			Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1061	0 . 0 . 0 . 0	1261							
9	Disabled	Line 9	225. 8 . 11 . 81	1062	225. 8 . 11 . 81	1262	0 . 0 . 0 . 0	6	10			Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1062	0 . 0 . 0 . 0	1262							
10	Disabled	Line 10	225. 8 . 11 . 81	1063	225. 8 . 11 . 81	1263	0 . 0 . 0 . 0	6	10			Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1063	0 . 0 . 0 . 0	1263							

AutoFill

2. From the Line Type drop down menu, select **NEXEDGE**.

NOTE: The Multicast address and port number information is used for cross console communications supporting the following features: Call Queue, Emergency and Cross-patch updates. These fields should match on each console in a shared system.

3. Click the **Signal Setup** button.

The Signaling Parameters window appears.

Signaling Parameters: Line 2

General Signal Setup | NEXEDGE Trunking Parameters

System Settings

System Type: **NEXEDGE Trunking**

System Name: **NEXEDGE Trunking**

Edit System

Signaling AutoFill Setup

☐ Enable Signaling AutoFill

Starting Line Number: **1**

Ending Line Number: **1**

Call Logging

☐ Display All Calls

4. From the System Type drop down menu, select **NEXEDGE Trunking**.

5. Click the **NEXEDGE Trunking Parameters** tab.
The NEXEDGE Trunking Parameters window appears.

6. From the Call Type drop down menu, select the **call type** (refer to “*NEXEDGE Trunking Parameters* page, page 553”).
7. In the Talk Group Number field, enter the **Talk Group Number** for the Trunking

Refer to

- *NEXEDGE Trunking Parameters* page, page 553

56.5.1 NEXEDGE Trunking Parameters page

Console Call Parameters group box

The **Console Call Parameters** group box is used to configure Call Type and Default ID.

The **Call Type** drop down menu is used to select the type of call designated to the line.

Available selections for this field are:

- **Broadcast Call:** A Broadcast Call is a group call. It temporarily disables a remote radio's ability to respond to the dispatcher in a set amount of time pre-configured in the NEXEDGE system. Broadcast calls can be used in a special event or in an emergency situation for announcement.
- **Conference Call:** A Conference Call allows a Talk Group.
- **Unit Call Lines:** A Unit Call allows the dispatcher to talk to a specific radio unit.

Talk Group Number field

The **Talk Group Number** field is used to enter the default talk group ID for the line. The Talk Group Number is a unique Talk Group ID defined by the system administrator and programmed in the NEXEDGE system.

**Notice!**

If an InPTT button is assigned to the line, the line only transmits to, and receives from, the default Talk Group ID. This is known as a Static Group line. However, if a Group PTT button is assigned to the line, the default talk group ID is overridden by the current Group ID. This is known as a Manual Group line.

Unit Call Number field

The **Unit Call Number** field is used to enter the default Unit Call number. The Unit Call Number is a unique NEXEDGE subscriber ID defined by the system administrator and programmed in the NEXEDGE system.

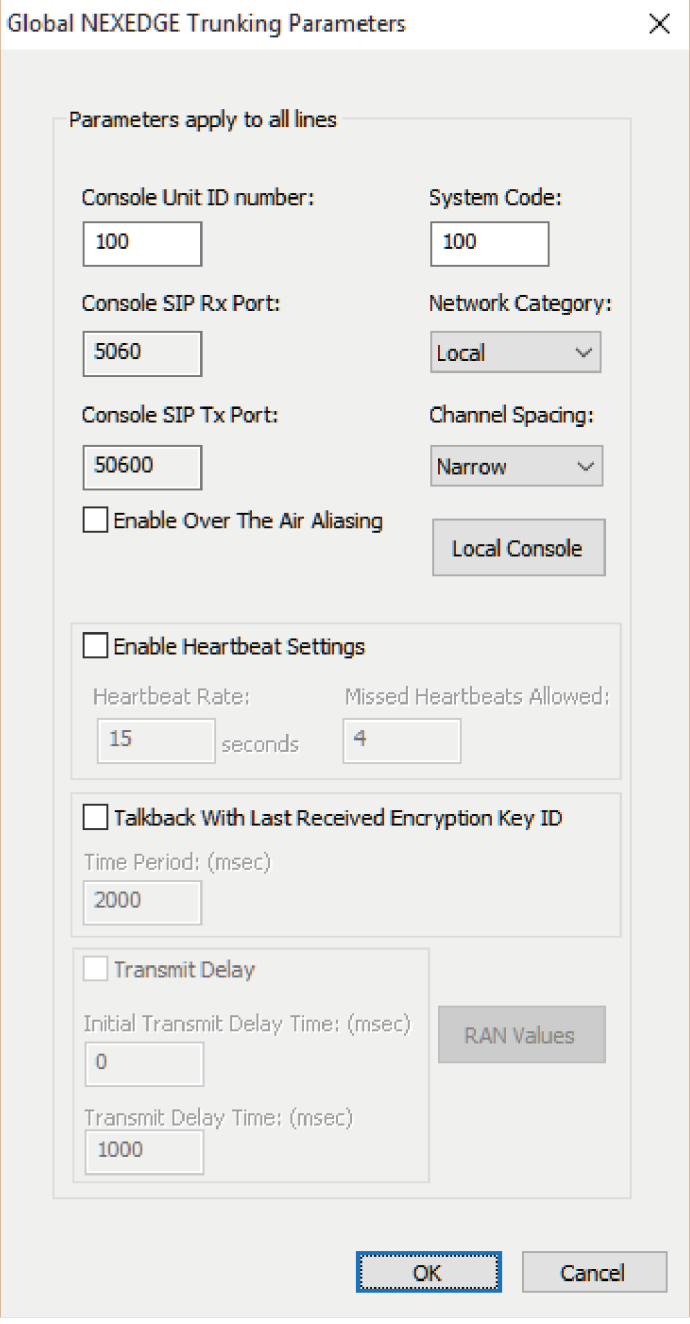
**Notice!**

An InPTT button on this line allows calls to and from the Default Unit ID. A Private PTT button overrides the default unit number and allows different units to be selected.

56.6

Console Global Setup

The Global NEXEDGE Trunking parameters apply to all NEXEDGE console lines and only need to be set once for any line. The Global NEXEDGE Trunking Parameters window is assessable from any line, but the values are constant between lines, and can be found at Edit | Setup NEXEDGE.



Global NEXEDGE Trunking Parameters

Parameters apply to all lines

Console Unit ID number: 100

System Code: 100

Console SIP Rx Port: 5060

Network Category: Local

Console SIP Tx Port: 50600

Channel Spacing: Narrow

☐ Enable Over The Air Aliasing

Local Console

☐ Enable Heartbeat Settings

Heartbeat Rate: 15 seconds

Missed Heartbeats Allowed: 4

☐ Talkback With Last Received Encryption Key ID

Time Period: (msec)

2000

☐ Transmit Delay

Initial Transmit Delay Time: (msec)

0

Transmit Delay Time: (msec)

1000

RAN Values

OK Cancel

Figure 56.3: Global NEXEDGE Trunking Parameters Window

Console Unit ID Number field

The **Console Unit ID** field is used to enter the console's unique ID registered to the NEXEDGE system. This number must be programmed in the NEXEDGE system as a console ID.



Notice!

The console's registered Unit ID is set in the global parameters window (Console Unit ID Number).

Console SIP Rx Port field

The **Console SIP Rx Port** field displays the console's receive port number for the SIP connection. This field cannot be edited.

Console SIP Tx Port field

The **Console SIP Tx Port** field displays the console's transmit port number for the SIP connection. This field cannot be edited.

System Code field

The **System Code** field is used to enter the number assigned to the NEXEDGE system. The console System Code must match the NEXEDGE site system code.

The range for this field is 1-131070.

Network Category drop down menu

The **Network Category** drop down menu is used to select the coverage size. The console Network Category must match the NEXEDGE site network category.

Available options are:

- Local
- Regional

Channel Spacing drop down menu

The **Channel Spacing** drop down menu is used to set the frequency separation between two adjacent channels. The console Channel Spacing must match the NEXEDGE site channel spacing.

Available options are:

- Narrow Band (12.5kHz)
- Very Narrow Band (6.25kHz)

Enable Over the Air Aliasing check box

The **Enable Over the Air Aliasing** check box is used to enable over the air aliasing. Over the Air Alias allows the console to display the unique name of the calling transceiver without using User ID list in C-Soft for aliasing.

**Notice!**

The Over-the-Air Alias option must be enabled and Unit ID Name must be programmed in the transceiver for the console to receive the name.

56.6.1**Local Consoles button**

The **Local Consoles** button allows users to setup a parallel console for the dispatch system.

Enable Heartbeat check box

The **Enable Heartbeat** check box indicates the system is monitoring the site verifying it is still online. When enabled, the Heartbeat Rate field and Missed Heartbeats Allowed fields become active.

Heartbeat Rate field

The **Heartbeat Rate** field is used to enter how often the heartbeat occurs, in seconds.

Missed Heartbeats Allowed field

The **Missed Heartbeats Allowed** field is used to enter the number of missed heartbeats allowed before disabling the corresponding site. Disabling the site grays out all lines associated with the site.

Transmit Delay check box

The **Transmit Delay** check box enables transmit delay when delay is necessary for Radio Command functions.

Initial Transmit Delay Time field

The **Initial Transmit Delay Time** field is used to ensure receipt of a radio command request when the called subscriber unit uses scan or battery saver. The Repeater sends an idle signaling command to the called subscriber at the designated time before sending the Radio Command (Radio Status, Radio Monitor, etc.). This insures the subscriber is available to receive the request from the repeater.

Initial Transmit Delay Time can range from 0 to 25000msec.

Transmit Delay Time field

The **Transmit Delay Time** field is used to send a delay time along with the Radio Command request. Initial Transmit Delay Time and Transmit Delay Time are summed in value to determine for the overall delay time.

Transmit Delay Time ranges from 0 to 6000msec.

RAN Encode button

The **RAN Encode** button opens the NEXEDGE Conventional RANs window. For more information, refer to “*NEXEDGE Conventional RANs window, page 563*”.

Refer to

- *NEXEDGE Conventional RANs window, page 563*

56.7

NEXEDGE Conventional IP system configuration

**Notice!**

Samples of a NEXEDGE .veg file and NEXEDGE System List.xml are available for reference design at www.telex.com/us/dispatch/line.

The screenshot shows a software window titled "Signaling Parameters: Line 2". It has two tabs: "General Signal Setup" and "NEXEDGE Conventional Parameters", with the latter being the active tab. The window is divided into three sections: "System Settings", "Signaling AutoFill Setup", and "Call Logging".

- System Settings:** Contains a "System Type:" dropdown menu with three options: "NEXEDGE Conventional" (selected), "NEXEDGE Trunking", and "NEXEDGE Conventional". Below it is a "System Name:" text field. To the right of these fields is an "Edit System" button.
- Signaling AutoFill Setup:** Contains an unchecked checkbox labeled "Enable Signaling AutoFill". Below it are two text input fields: "Starting Line Number:" with the value "1" and "Ending Line Number:" with the value "1".
- Call Logging:** Contains an unchecked checkbox labeled "Display All Calls".

Figure 56.4: Signaling Parameters Window - Conventional System Type

When NEXEDGE is selected as the Line Type and the Signal Setup button is clicked, the NEXEDGE Conventional Parameters Tab appears, refer to the Figure in “*NEXEDGE Conventional Parameters window, page 558*”.

Refer to

- *NEXEDGE Conventional Parameters window, page 558*

56.8

NEXEDGE Conventional Parameters window

The **NEXEDGE Conventional Parameters** window is used to configure the IP Address of the NEXEDGE conventional system.

Figure 56.5: NEXEDGE Conventional Parameters Window



Notice!

When using a Group PTT or Private PTT button, the talk group number and Unit Call number are pulled from the system list. In addition, Talk Group Number, Unit Talk Group Number and RAN Encode fields cannot be modified. To edit the RAN, see the Global NEXEDGE Conventional Setup window.

Parameters That Apply to This Line group box

The **Parameters That Apply to This Line** group box is used to set up the Console Call Parameters, such as Call Type, RAN number, etc., and the System Site Parameters, such as the Site Number and Site IP Address.

Console Call Parameters group box

The **Console Call Parameters** group box is used to select the call type and the default ID for the selected call type.

The **Call Type** drop down menu is used to select the type of call to assign the configured parameters. Select Conference Call to set up a group talk line or select Unit Call to set up a Private Call Line.

Available selections for this field are:

- Conference Call: A Conference Call allows a Talk Group.
- Unit Call Lines: A Unit Call allows the dispatcher to talk to a specific radio unit.

Encryption Key Field

The **Encryption Key** field is used to enter the default encryption key for the Line.

Talk Group Number field

The **Talk Group Number** field is used to enter the Group ID assigned to the group.

RAN Encode Display field

The RAN Encode field displays the RAN (Remote Access Node) for the call type. This field cannot be modified. Modifications to the RAN are done on the Global NEXEDGE Conv.

System Site Parameters group box

The **System Site Parameters** group box is used to match the IP Address of the NEXEDGE Conventional system.

Site Number field

The **Site Number** field is used to enter the site number of the NEXEDGE conventional system.

Site IP Address field

The **Site IP Address** field is use to enter the site IP Address the NEXEDGE conventional system is located.

Parameters That Apply to All Lines group box**Global NEXEDGE Convn. Setup button**

The **Global NEXEDGE Convn. Setup** button, when clicked, opens the Global NEXEDGE Conventional Setup Window.

Global Encryption Key Data button

The **Global Encryption Key Data** button opens the NEXEDGE Encryption window.

OK button

The **OK** button saves any changes made and closes the window.

Cancel button

The **Cancel** button discards any changes made and closes the window.

56.9

Global NEXEDGE Conventional Parameters window

Global NEXEDGE Conventional Parameters

Parameters apply to all lines

Console Unit ID number: 100 System Code: 1

Console SIP Rx Port: 5060 Network Category: Local

Console SIP Tx Port: 50600 Channel Spacing: Narrow

☐ Enable Over The Air Aliasing Local Console

☐ Enable Heartbeat Settings

Heartbeat Rate: 15 seconds Missed Heartbeats Allowed: 4

☐ Talkback With Last Received Encryption Key ID

Time Period: (msec) 2000

☐ Transmit Delay

Initial Transmit Delay Time: (msec) 0 RAN Values

Transmit Delay Time: (msec) 1000

OK Cancel

Figure 56.6: Global NEXEDGE Conventional Parameters Window

Parameters Apply to All Lines group box**Console Unit ID Number field**

The **Console Unit ID** field is used to enter the console's unique ID registered to the NEXEDGE system. This number must be programmed in the NEXEDGE system as a console ID.

Console SIP Rx Port field

The **Console SIP Rx Port** field displays the console's receive port number for the SIP connection. This field cannot be edited.

The number must match the NEXEDGE site's Tx SIP port number.
The default port number is 5060.

Console SIP Tx Port field

The **Console SIP Tx Port** field displays the console's transmit port number for the SIP connection. This field cannot be edited.

The number must match the NEXEDGE site's Rx SIP port number
The default port number is 5060.

Enable Over the Air Aliasing check box

The **Enable Over the Air Aliasing** check box allows the console to display the unique name of the calling transceiver without using the User ID list in C-Soft for aliasing.

**Notice!**

The Over-the-Air Alias option must be enabled and Unit ID Name must be programmed in the transceiver for the console to receive the name.

System Code field

This field is not used for the Conventional Interface.

Network Category field

This field is not used for the Conventional Interface.

Channel Spacing drop down menu

The **Channel Spacing** drop down menu is used to set the frequency separation between two adjacent channels. The console Channel Spacing must match the NEXEDGE site channel spacing.

Available options are:

- Narrow Band (12.5kHz)
- Very Narrow Band (6.25kHz)

Local Console button

The **Local Console** button opens the “*Local Consoles page, page 129*”.

Enable Heartbeat check box

The **Enable Heartbeat** check box indicates the system is monitoring the site verifying it is still online. When enabled, the Heartbeat Rate field and Missed Heartbeats Allowed fields become active.

Heartbeat Rate field

The **Heartbeat Rate** field is used to enter how often the heartbeat occurs, in seconds.

Missed Heartbeats Allowed field

The **Missed Heartbeats Allowed** field is used to enter the number of missed heartbeats allowed before disabling the corresponding site. Disabling the site grays out all lines associated with the site.

Transmit Delay check box

The **Transmit Delay** check box enables transmit delay when delay is necessary for Radio Command functions.

Initial Transmit Delay Time field

The **Initial Transmit Delay Time** field is used to ensure receipt of a radio command request when the called subscriber unit uses scan or battery saver. The Repeater sends an idle signaling command to the called subscriber at the designated time before sending the Radio Command (Radio Status, Radio Monitor, etc.). This insures the subscriber is available to receive the request from the repeater.

Initial Transmit Delay Time can range from 0 to 25000msec.

Transmit Delay Time field

The **Transmit Delay Time** field is used to send a delay time along with the Radio Command request. Initial Transmit Delay Time and Transmit Delay Time are summed in value to determine for the overall delay time.

Transmit Delay Time ranges from 0 to 6000msec.

RAN Encode button

The **RAN Encode** button opens the NEXEDGE Conventional RANs window. For more information, refer to “*NEXEDGE Conventional RANs window, page 563*”.

OK button

The **OK** button saves any changes made and closes the window.

Cancel button

The **Cancel** button discards any changes made and closes the window.

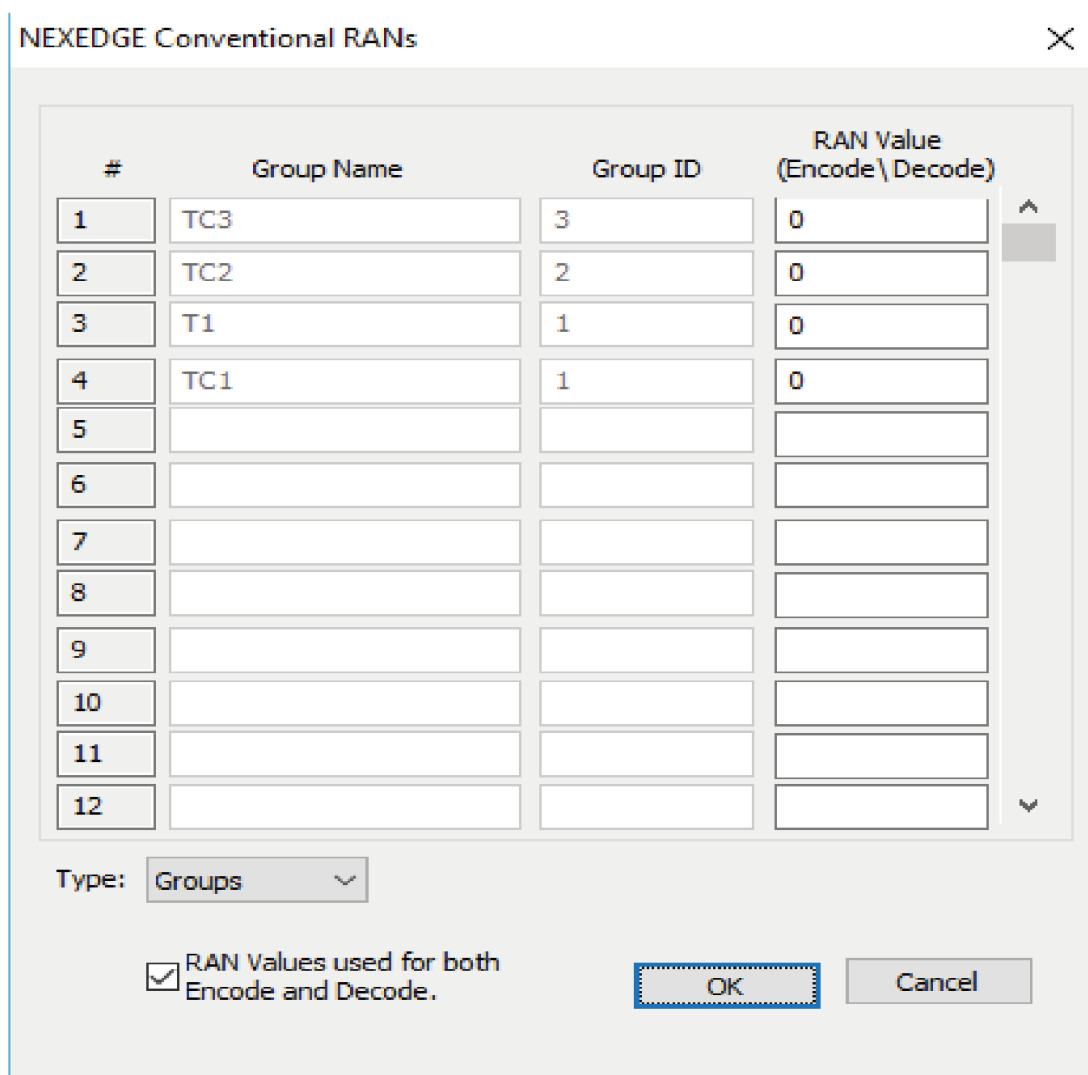
56.10

NEXEDGE Conventional RANs window

The **NEXEDGE Conventional RANs** window allows you to configure all talk groups and units to their respective RAN (Remote Access Node). The repeater must have the matching talk group/unit programmed for this to work. By populating the RANs list, the user has the ability to change the RAN number for each talk/unit. This can also be changed on the Signaling Parameters Setup and are reflected in this list.

**Notice!**

The name and ID fields cannot be modified from this window. These changes must be made in the System List window (refer to “*Edit System List window, page 192*”).



The NEXEDGE Conventional RANs window displays a table with 12 rows and 4 columns. The columns are labeled: #, Group Name, Group ID, and RAN Value (Encode\ Decode). The first four rows are pre-filled with data, while the remaining eight rows are empty. Below the table is a 'Type' dropdown menu set to 'Groups'. At the bottom, there is a checkbox labeled 'RAN Values used for both Encode and Decode.' which is checked, and two buttons: 'OK' and 'Cancel'.

#	Group Name	Group ID	RAN Value (Encode\ Decode)
1	TC3	3	0
2	TC2	2	0
3	T1	1	0
4	TC1	1	0
5			
6			
7			
8			
9			
10			
11			
12			

Type: Groups

☒ RAN Values used for both Encode and Decode.

OK Cancel

Figure 56.7: NEXEDGE Conventional RANs Window

Group/Unit Name field

The **Group/Unit Name** field displays the name of the group or unit you want to assign the RAN to.

Group/Unit ID field

The **Group/Unit ID** field displays the ID of the selected group or unit you want to assign the RAN to.

RAN Encode field

The **RAN Encode** field is used to assign a RAN code used by the associated group or unit.

Type drop down menu

The **Type** drop down menu is used to select the type of RAN you want to assign, either Groups or Units.

**Notice!**

When Group is selected from the drop down menu, Group Name and Group ID are displayed as the columns; when Unit is selected from the drop down menu, Unit Name and Unit ID are displayed.

OK button

The **OK** button saves any changes made and closes the window.

Cancel button

The **Cancel** button discards any changes made and closes the window.

Refer to

– *Edit System List window, page 192*

56.11

NEXEDGE Conventional IP set up

To **set up a NEXEDGE Line**, do the following:

1. From the Edit menu, select **Setup Per Line Parameters**.

The Per Line Parameters window appears.

Line Number	Line Type	Line Name	Rx Multicast Address	Rx Port	Tx Multicast Address	Tx Port	Base Radio IP:	TTL	Packet Delay	Options	Freqs	Signal Setup	SIP
1	NEXEDGE	Group 1	225.8.11.81	3027	225.8.11.81	1280	0.0.0.0	6	10				
		Echo Packets Enable: ☐	0.0.0.0	1054	0.0.0.0	1254							
2	NEXEDGE	Group 2	225.8.11.81	1055	225.8.11.81	1255	0.0.0.0	6	10				
		Echo Packets Enable: ☐	0.0.0.0	1055	0.0.0.0	1255							
3	NEXEDGE	Manual Group	225.8.11.81	1056	225.8.11.81	1256	0.0.0.0	6	10				
		Echo Packets Enable: ☐	0.0.0.0	1056	0.0.0.0	1256							
4	NEXEDGE	Private Line	225.8.11.81	1057	225.8.11.81	1257	0.0.0.0	6	10				
		Echo Packets Enable: ☐	0.0.0.0	1057	0.0.0.0	1257							

2. From the Line Type drop down menu, select **NEXEDGE**.

3. Click the **Signal Setup** button.

The Signaling Parameters window appears.

Signaling Parameters: Line 2

General Signal Setup NEXEDGE Conventional Parameters

System Settings

System Type: NEXEDGE Conventional NEXEDGE Trunking NEXEDGE Conventional Edit System

Signaling AutoFill Setup

☐ Enable Signaling AutoFill

Starting Line Number: 1

Ending Line Number: 1

Call Logging

☐ Display All Calls

4. From the System Type drop down menu, select **NEXEDGE Conventional**.
The NEXEDGE Conventional Parameters tab appears.

5. Click the **NEXEDGE Conventional Parameters** tab.
The NEXEDGE Conventional Parameters window appears.

Signaling Parameters: NXDN TG Fly

General Signal Setup | **NEXEDGE Conventional Parameters**

Parameters that apply to this line

Console call parameters

Call Type: **Conference Call** (dropdown menu showing Conference Call, Unit Call)

Encryption Key: None

Talk Group Number: 1

RAN Encode: 0

System site parameters

Site Number: 101

Site Ip Address: 172 . 19 . 1 . 20

Parameters that apply to all lines

Global NEXEDGE Conventional Setup

Global Encryption Key Data

OK Cancel

6. From the Call Type drop down menu, select either **Conference Call** or **Unit Call**.

56.12

C-Soft NEXEDGE Conventional IP interface

IP Console ID List

The KPG-109DN application and system key file are required before gaining access to configuration settings for the system. The values set in the Console Unit ID, RANs and Channel Spacing must match the programming parameters in Kenwood Conventional System. The Figure below displays a Kenwood KPG-109DN conventional repeater programmer.

The Console ID in C-Soft must match one of the IDs on the following list.

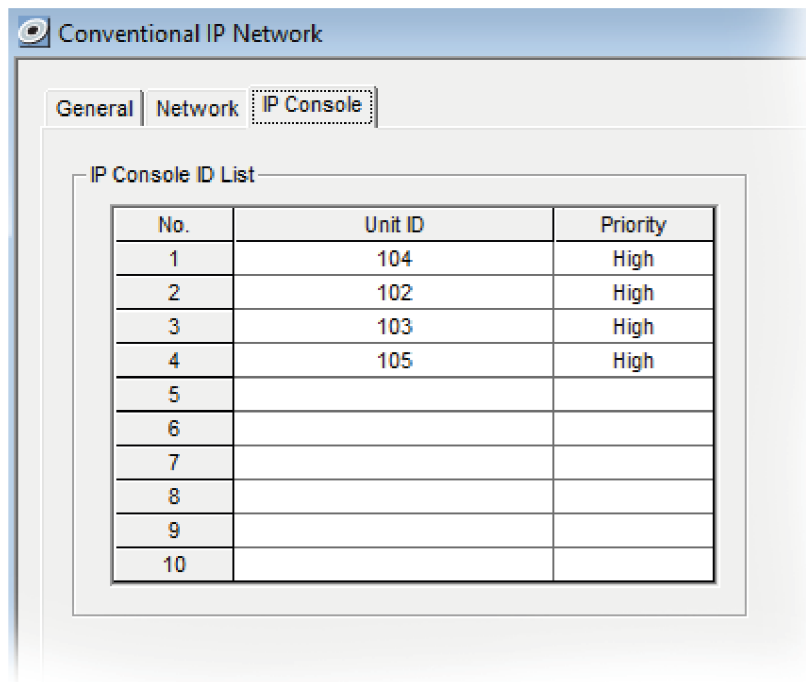


Figure 56.8: Conventional IP Network Window

Channel Edit window

The **Channel Edit** window is used to enter the channel spacing and RAN settings. Channels can have a single RAN or use multiple encode/decode tables.

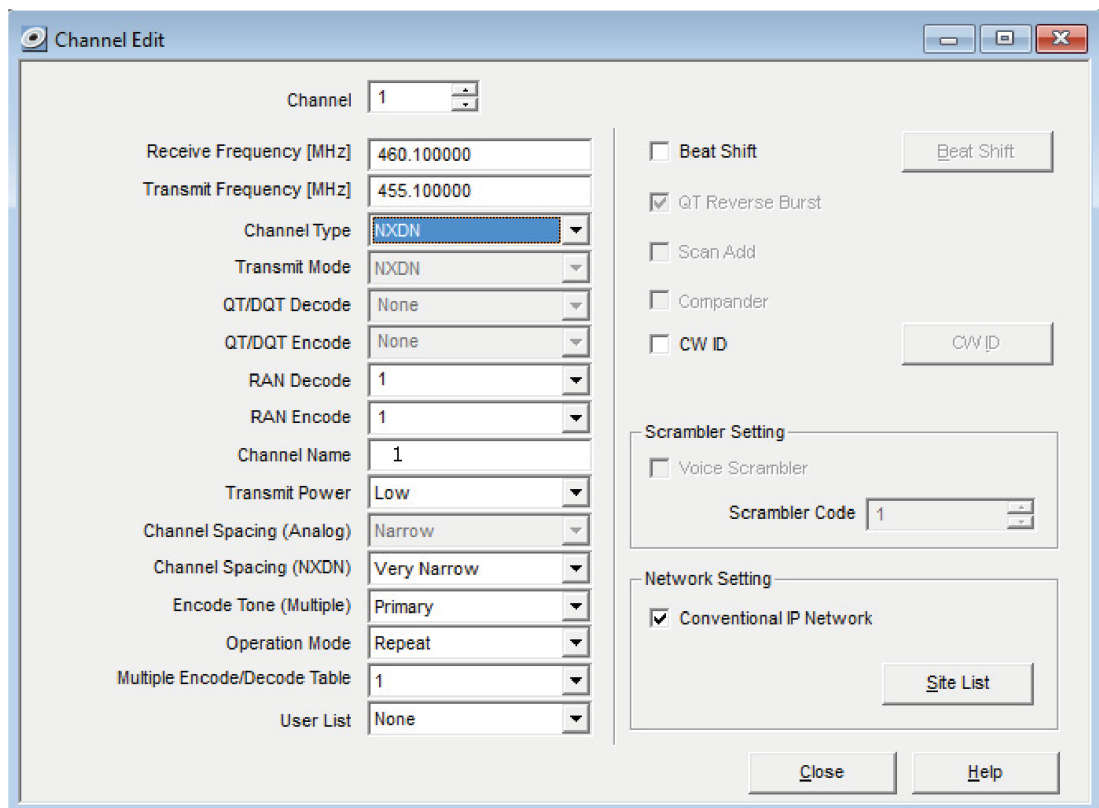


Figure 56.9: Channel Edit Window

56.13

NEXEDGE System configuration

56.13.1

NEXEDGE System configuration type 1 - No signaling with RAN

Kenwood offers a system configuration that does not use signaling. This means there is no group talk and the distinguishing element between sites is the RAN (refer to the Figure below).

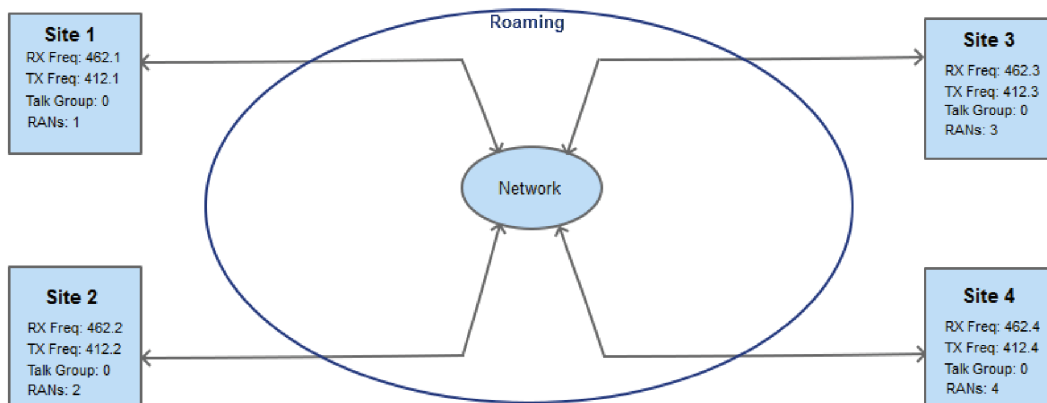


Figure 56.10: Set Up without Signaling

System configuration features (supported)

- Static Line PTT
- Conference Calls
- Radio Status Request
- Radio Status Decode
- Radio Enable
- Radio Disable
- Emergency Decode
- Emergency Acknowledgement



Notice!

In the NEXEDGE Conventional system, Emergency call can be sent out either on a Talk Group or a Unit ID. However, when the talk group isn't used in the NEXEDGE system, in order to receive an emergency call, the radio has to be configured to send out the emergency call to a Unit ID which is a Console ID.

System configuration

As seen in the Figure above, there are four sites with four different frequencies and four different RANs. C-Soft must be configured properly in order to interact correctly with the system. The number of lines must match the number of RANs. Radios should be configured as shown in the Figure below and lines should be configured as shown in the afterwards Figure.

Radio configuration

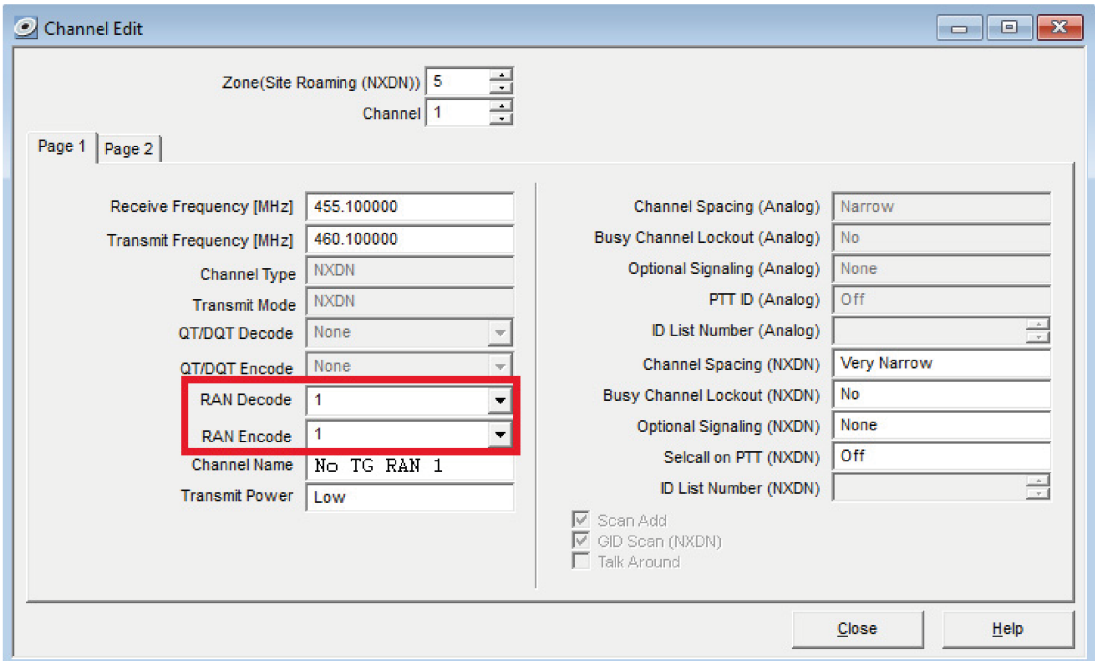


Figure 56.11: No Signaling Radio Configuration



Notice!

When setting the NXDN Signal ID to none, the Talk Group Number must be set to zero within C-Soft.

C-Soft configuration

Signaling Parameters: NXDN TG Fly

General Signal Setup NEXEDGE Conventional Parameters

Parameters that apply to this line

Console call parameters

Call Type: Conference Call

Encryption Key: None

Talk Group Number: 0

RAN Encode-Decode: 1

System site parameters

Site Number: 101

Site Ip Address: 172 . 19 . 1 . 20

Parameters that apply to all lines

Global NEXEDGE Conventional Setup

Global Encryption Key Data

OK Cancel

Figure 56.12: No Signaling C-Soft Configuration

RAN configuration



Notice!

Since there are multiple RANs for the Talk Group 0, these do not show up on the Global RANs page.

The No Signal System Type does not support Unit Calls. Send Status and Request Status are the only radio commands supported in this configuration option.

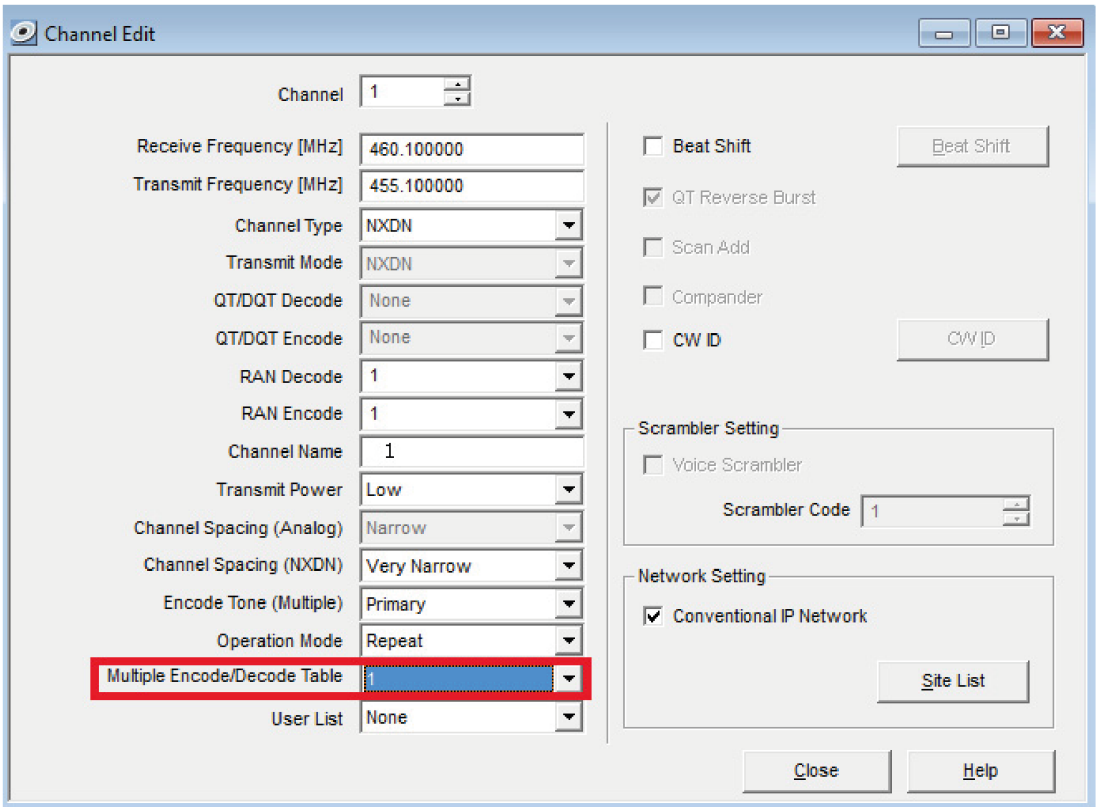


Figure 56.13: Repeater Configuration Multiple Encode/Decode Tables

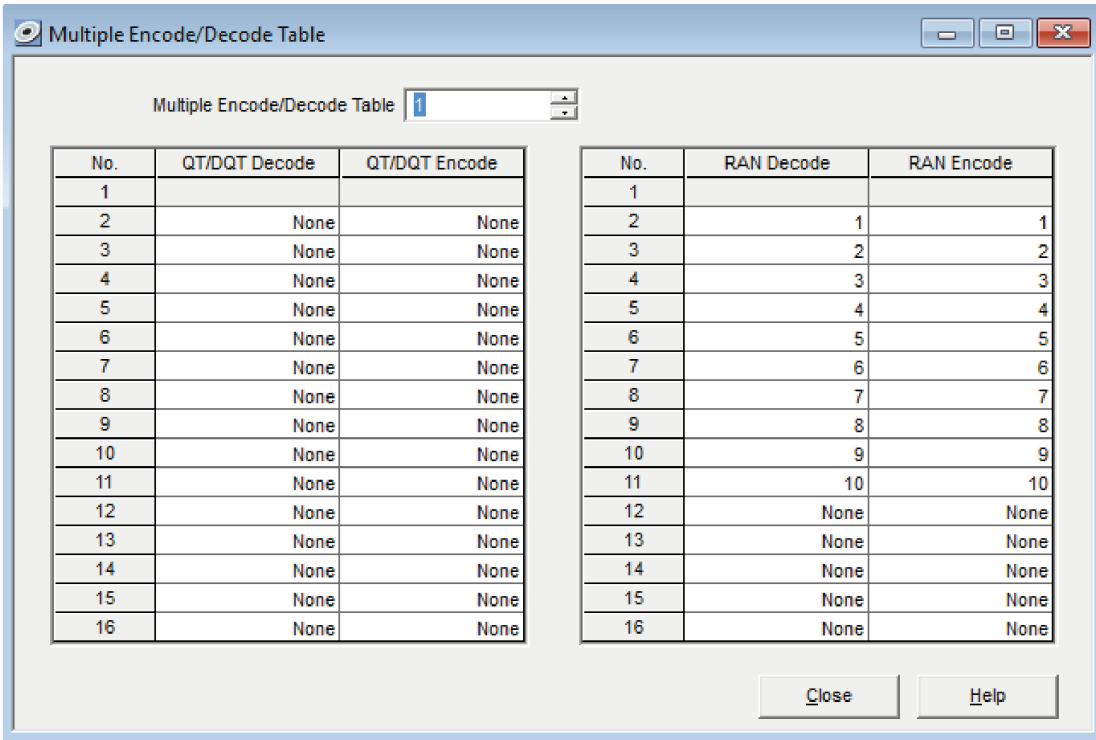


Figure 56.14: Multiple Encode/Decode Table

56.13.2

NEXEDGE System configuration type 2 - Signaling without RAN

The second system configuration uses only talk groups and no RANs. This configuration uses talk groups as the distinguishing factor between the different lines (refer to the Figure below).

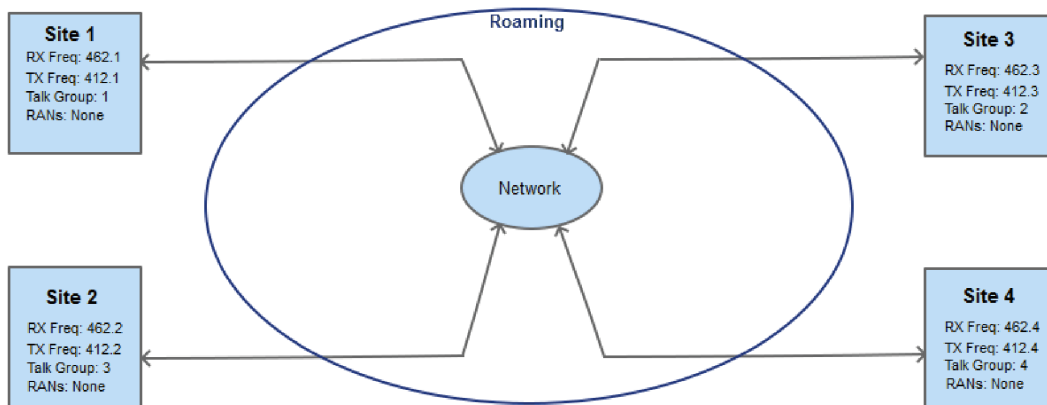


Figure 56.15: Signaling Set Up

System configuration features (supported)

- Static Line PTT, Group PTT, Private Call PTT
- Conference Calls
- Private Call
- Alert Call
- Selectable Talk Group
- Emergency Call Decode with Acknowledgement Capabilities
- Radio Status Request
- Radio Status Decode
- Radio Status Encode
- Radio Remote Monitor with Supervisor Password
- Radio Stun
- Radio Revive

Radio configuration

Radios in this system configuration are configured similar to the Figure below.

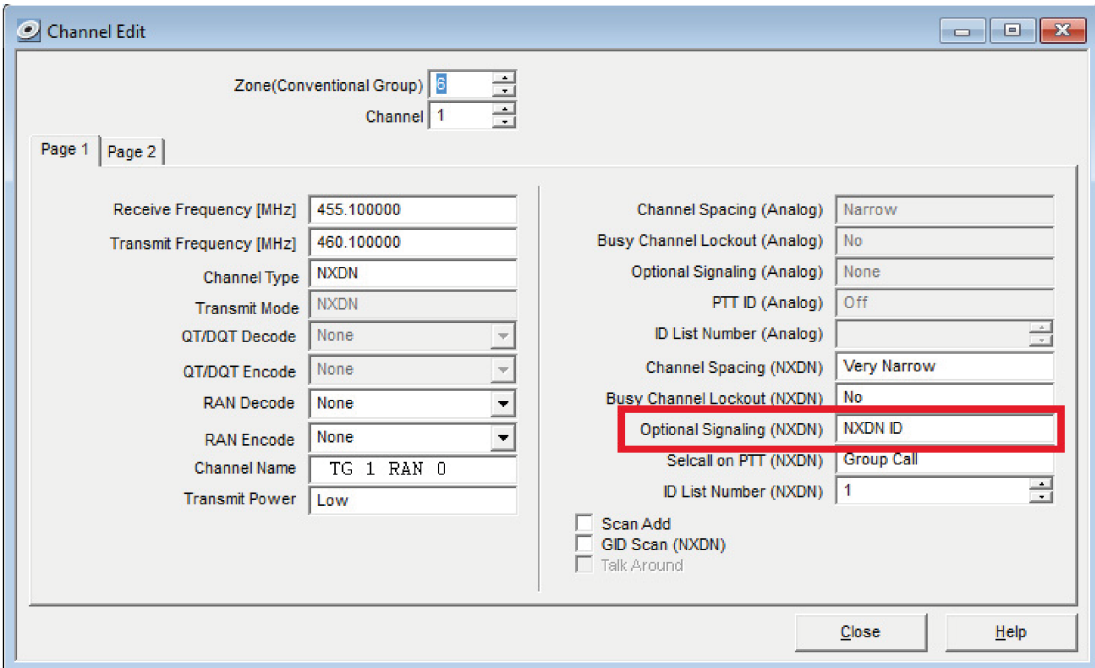


Figure 56.16: Radio Signaling Configuration

C-Soft configuration

C-Soft in this configuration is configured similar to the Figure below.

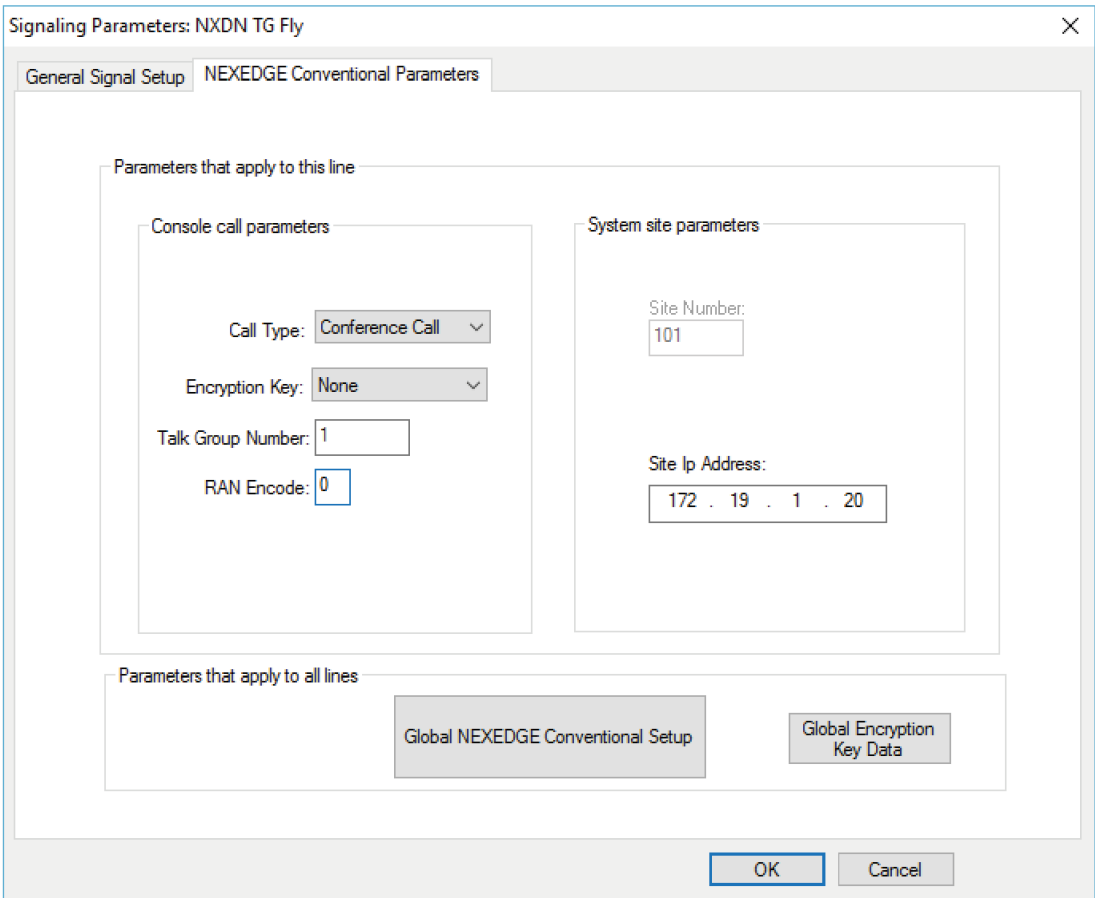


Figure 56.17: C-Soft Signaling Configuration

**Notice!**

The RAN is set to zero, which is the same as None on the repeater.

56.13.3**NEXEDGE System configuration type 3 - Signaling and RAN**

This system configuration type allows use of talk groups and RANs. This configuration allows for both the talk group and the RAN to be distinguishing factors. The lines have to match from the Radio Configuration and C-Soft to receive the call (refer to the Figure below).

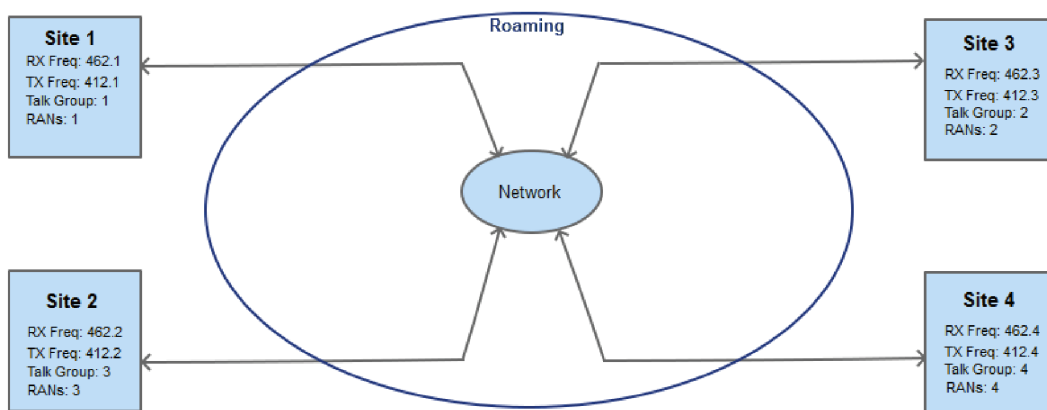


Figure 56.18: Signaling and RANs Setup

System configuration features (supported)

- Static Line PTT, Group PTT, Private Call PTT
- Conference Calls
- Private Call
- Alert Call
- Selectable Talk Group
- Selectable Users
- Emergency Call Decode with Acknowledgement Capabilities
- Radio Status Request
- Radio Status Encode
- Radio Remote Monitor with Supervisor Password
- Radio Stun
- Radio Revive
- Enhanced interference mitigation

Radio configuration

Using the Figure below, configure the Radios.

The screenshot shows the 'Channel Edit' window with the following settings:

- Zone(Conventional Group): 6
- Channel: 1
- Page 1 | Page 2
- Receive Frequency [MHz]: 455.100000
- Transmit Frequency [MHz]: 460.100000
- Channel Type: NXDN
- Transmit Mode: NXDN
- QT/DQT Decode: None
- QT/DQT Encode: None
- RAN Decode: 1
- RAN Encode: 1
- Channel Name: TG 1 RAN 0
- Transmit Power: Low
- Channel Spacing (Analog): Narrow
- Busy Channel Lockout (Analog): No
- Optional Signaling (Analog): None
- PTT ID (Analog): Off
- ID List Number (Analog):
- Channel Spacing (NXDN): Very Narrow
- Busy Channel Lockout (NXDN): No
- Optional Signaling (NXDN): NXDN ID
- Selcall on PTT (NXDN): Group Call
- ID List Number (NXDN): 1
- ☐ Scan Add
- ☐ GID Scan (NXDN)
- ☐ Talk Around

Buttons: Close, Help

Figure 56.19: Signaling with RANs Radio Configuration

In this configuration, the global RANs list populates the talk groups. Talk groups can only have one RAN associated with them. This configuration requires the repeater to be configured correctly with each repeater having the corrected decode and encode tables.

Figure 56.20: Signaling with RANs Configuration

56.14 NEXEDGE System manager parameters

For C-Soft to function properly the values set in the console must match the programming parameters in the Kenwood Trunking System.



Notice!

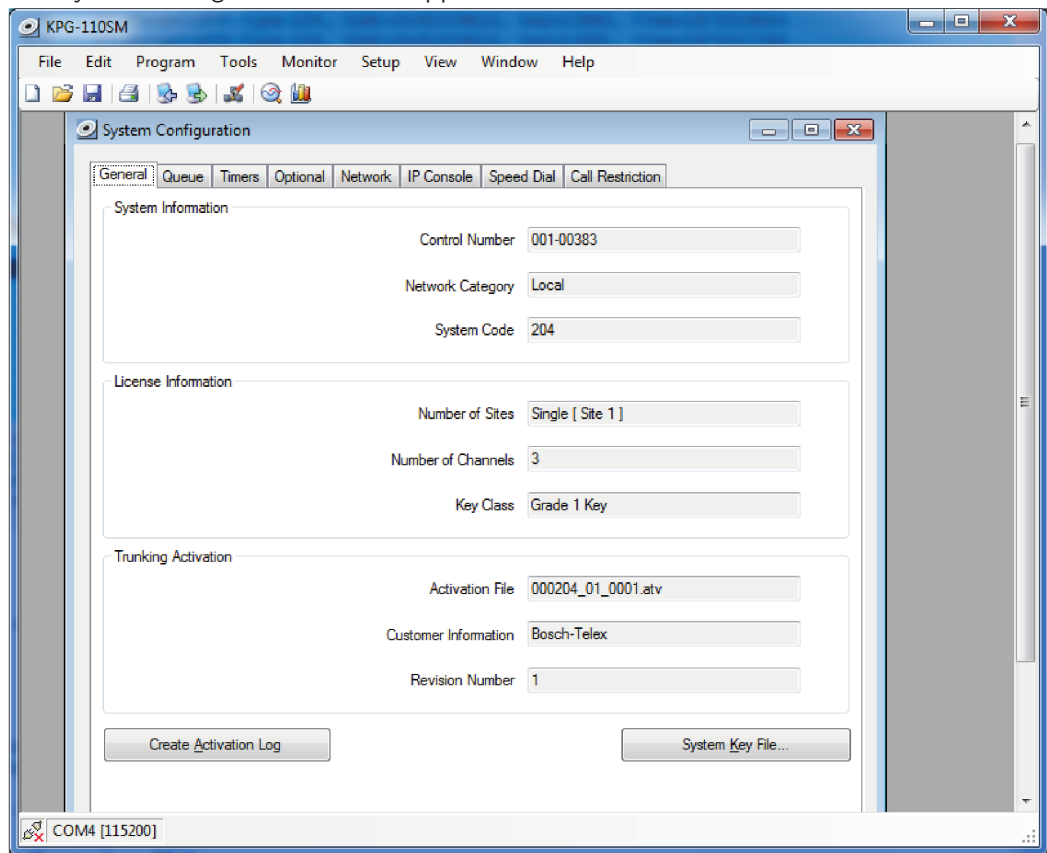
The KPG-110SM application and system key file are required to access the configuration settings for the system. The values set in the console, such as Site Number, Unit ID Number, Network Category, System Code, Network Category, and Channel Spacing, must match the programming parameters in the Kenwood trunking system.

To **configure the Kenwood KPG-110SM radio for use with C-Soft**, do the following:

1. Open the **KPG-110SM System Manager**.

2. From the Edit menu, select **System Configuration**.

The System Configuration window appears.



NOTE: For additional support, see KPG-110SM user manual.

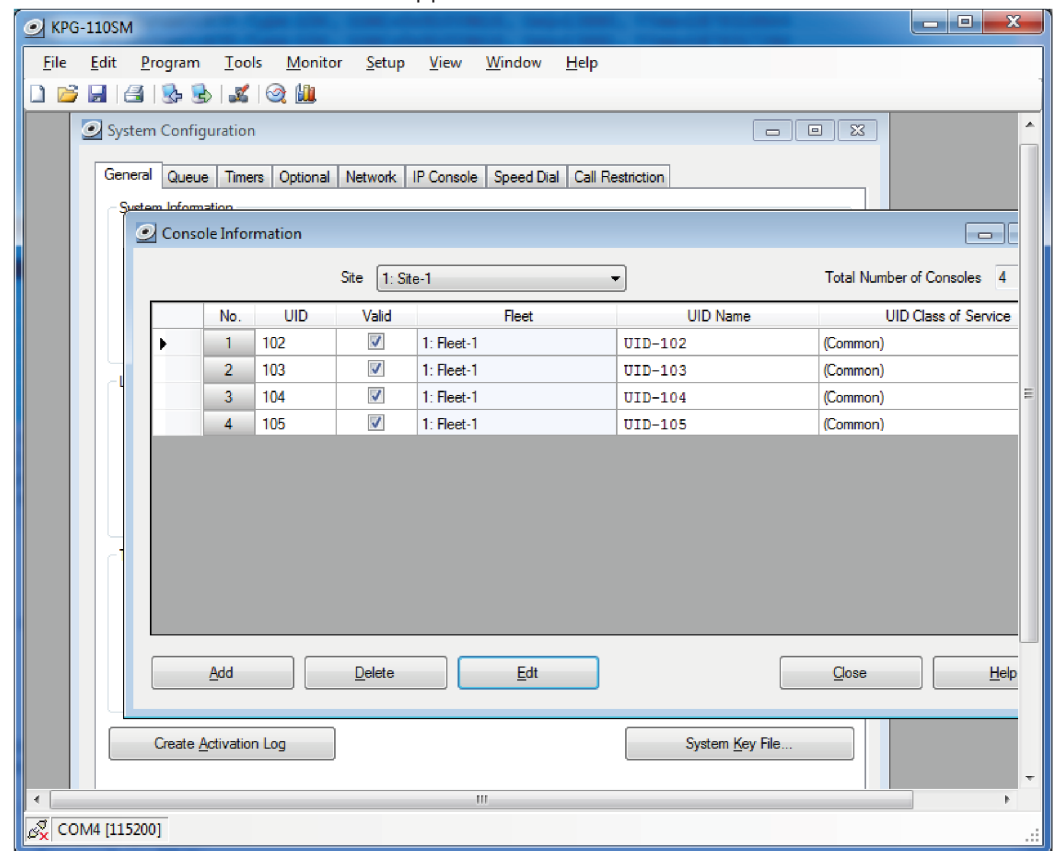
Under System Information

3. In the Control Number field, enter **Control Number**.
4. In Network Category field, enter **Network Category**.
5. In the System Code field, enter **System Code**.

IMPORTANT: The values set in the console must match the programming parameters in the Kenwood System Manager.

- From the Edit Menu, select **Console Information**.

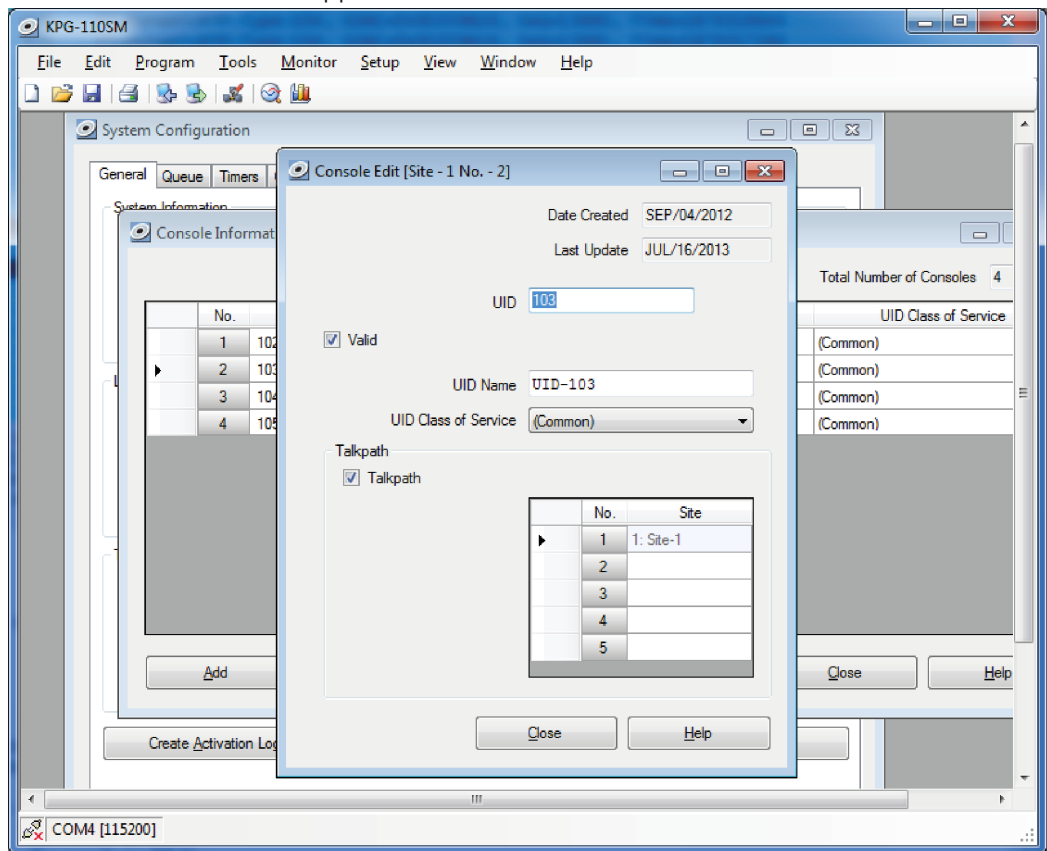
The Console Information window appears.



- From the Site drop down menu, select a **Site** to be modified.

8. Click the **Edit button**.

The Console Edit window appears.



9. In the UID field, enter **Unit ID**.
10. Select the **Valid check box**.
11. Under Talkpath, select the **Talkpath check box**.
12. Click **Close**.

56.15 Kenwood radio programming software

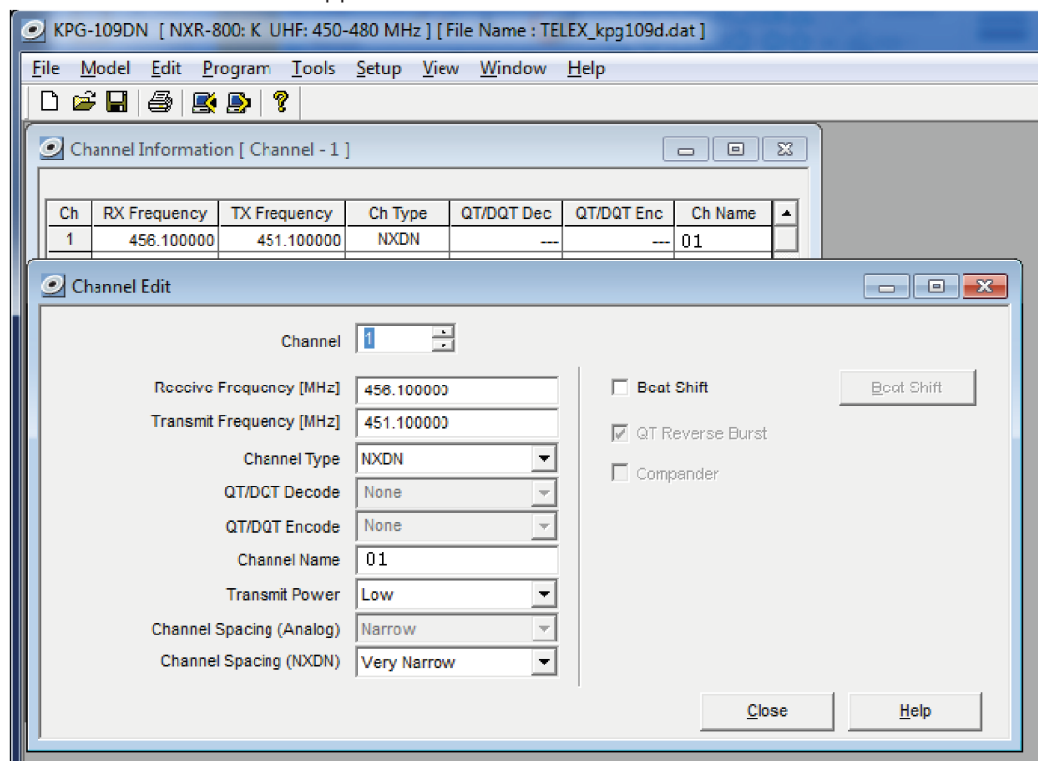
To **configure Kenwood KPG-109DN software**, do the following:

1. Open the **Kenwood KPG-109DN radio programming software**.
2. From the Edit menu, select **Channel Information**.

The Channel Information window appears.

3. Select desired channel and click **Edit**.

The Channel Edit window appears.



4. From the Channel Spacing (NXDN) drop down menu, select **Spacing**.



Notice!

Channel spacing values must match C-Soft console settings.

The NEXEDGE system allows maximum of 10 console connections per site and 100 console connections per system.

For additional support, refer to the Kenwood KPG-109DN user manual.

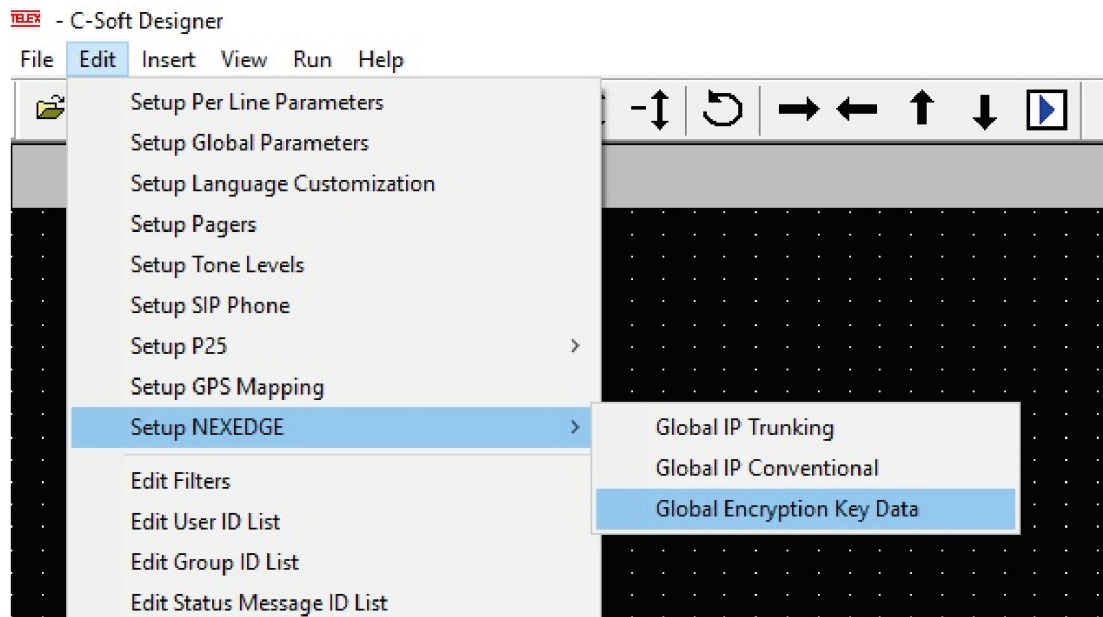
56.16

NEXEDGE Encryption window

The **NEXEDGE Encryption** window is used to store up to 16 individual encryption keys, as shown in the second Figure. Each Key Number contains Key Data, Key ID, and Key Name, all of which need to contain unique data.

To **open the NEXEDGE Encryption window from the Edit menu**, do the following:

- From the Edit Menu, select **Setup NEXEDGE | Global Encryption Key Data**.



To **open the NEXEDGE Encryption window from the Per Line Parameters window**, do the following:

1. From the menu bar, select **Edit | Setup Per Line Parameters**.
The Per Line Parameters window appears.
2. On a line with a NEXEDGE line type, click the **Signal Setup button**.
The Signalling Parameters Window appears.
3. Click the **NEXEDGE Trunking Parameters tab**.
The NEXEDGE Trunking Parameters page appears.
4. Click the **Global Encryption Key Data button** in the bottom right of the page.
The NEXEDGE Encryption window appears.

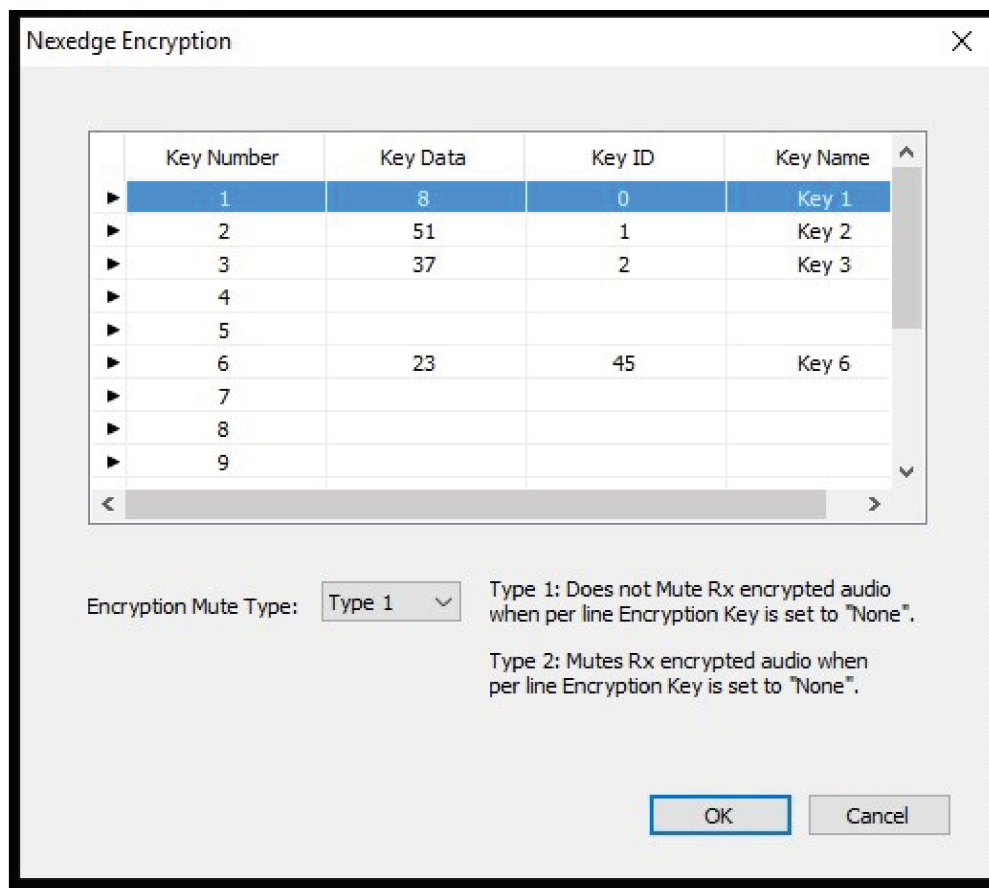


Figure 56.21: NEXEDGE Encryption Window

Key Number column

The **Key Number** column is a numerical assignment of the Key Data, Key ID, and Key Name Columns.

Key Data column

The **Key Data** column is used to enter a unique encryption number used in the encryption algorithm routine. This field must be entered first when filling out the NEXEDGE Encryption window.

The range for this field is 1 to 32767.

Key ID column

The **Key ID** column is used to enter an unique numerical alias for the Key Data. the Key ID is the actual data passed between the console and subscriber units, not the Key Data

The range for this field is 0 to 63.

Key Name column

The **Key Name** column is used to enter a local alias associated for the console operator to recognize in the C-Soft Runtime application.

This field can be any combination of letters, numbers, or special characters up to 14 characters.

Encryption Mute Type drop down menu

The **Encryption Mute Type** drop down menu is used to select the way encrypted audio is received by C-Soft when the Scrambler/Encrypt Key Select is set to None.

Available options are:

- Type 1: The console tries to match the encrypted audio received by scanning and matching the Key ID with the Key IDs created in C-Soft. If no match is found, the scrambled audio is heard.
- Type 2: The console does not scan the list and mutes all encrypted receive audio.

56.17

Scrambler/Encrypt Key Select button

The **Scrambler/Encrypt Key Select** button, shown in the Figure below, is set up to work with a specific line or as a global button to work with the selected line. This button includes a drop down menu that the user to change the current encryption key being used on the line.

The drop down menu includes the Key Names assigned in the NEXEDGE Encryption window.



Notice!

The Scrambler/Encrypt Key Select button only works for NEXEDGE type lines, otherwise, it is grayed out.

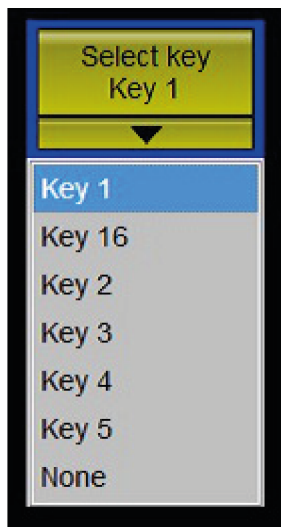


Figure 56.22: Scrambler/Encrypt Key Select Button

57

Appendix I - Telex License Activation tool

C-Soft Runtime requires one or more software-based licenses to operate. The software-based licenses reside on a Telex License Server. The Telex License Server hosts and manages Telex feature licenses. C-Soft connects to the Telex Licensing Server to validate licensing requirements. Upon successful connection, C-Soft checks out the necessary licenses. Once C-Soft closes, the licenses are released and available for use by other C-Soft instances.

Telex Licensing Server

The **Telex Licensing Server** is software package running on a PC or dedicated server. The primary function of the software is to maintain licenses and respond to licensing requests from C-Soft. When a license is added, the Telex Licensing Server detects the newly added license and makes it available for C-Soft license checkout/check-in request.

Telex License Server is comprised of two software components:

- **Telex License Manager:** The Telex License Manager is a background service running on the hosting computer. The License Manager maintains and responds to licensing requests from C-Soft. The service automatically starts on boot, and requires no user interaction. The service uses TCP port 27000 to respond to licensing requests from C-Soft.
- **Telex License Activation Tool:** The Telex Activation Tool is used to manage hosted Telex licenses. The Activation Tool has five primary features:
 - Viewing current licensing information
 - Adding a fulfillment
 - Returning a fulfillment
 - Repair fulfillments
 - Processing a fulfillment response message

57.1

Telex Licensing Server setup

The **Telex Licensing Server** can be installed in one of two locations:

- On the same PC as each C-Soft position
- On a dedicated server PC, hosting licenses for multiple C-Soft positions

Installed on the same PC as each C-Soft position

Advantages	– No single point of failure. – No configuration necessary in C-Soft. C-Soft Runtime automatically detects and check out locally hosted licenses.
Disadvantages	– License activation process must be completed for each PC running C-Soft

Installed on a dedicated server PC

Advantages	– If a single C-Soft position fails, a replacement C-Soft position can be configured without an additional license installation.
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	– License activation process only needs to be completed once.
Disadvantages	– If server PC fails, all C-Soft positions lose licensing.

57.2

Installation activation

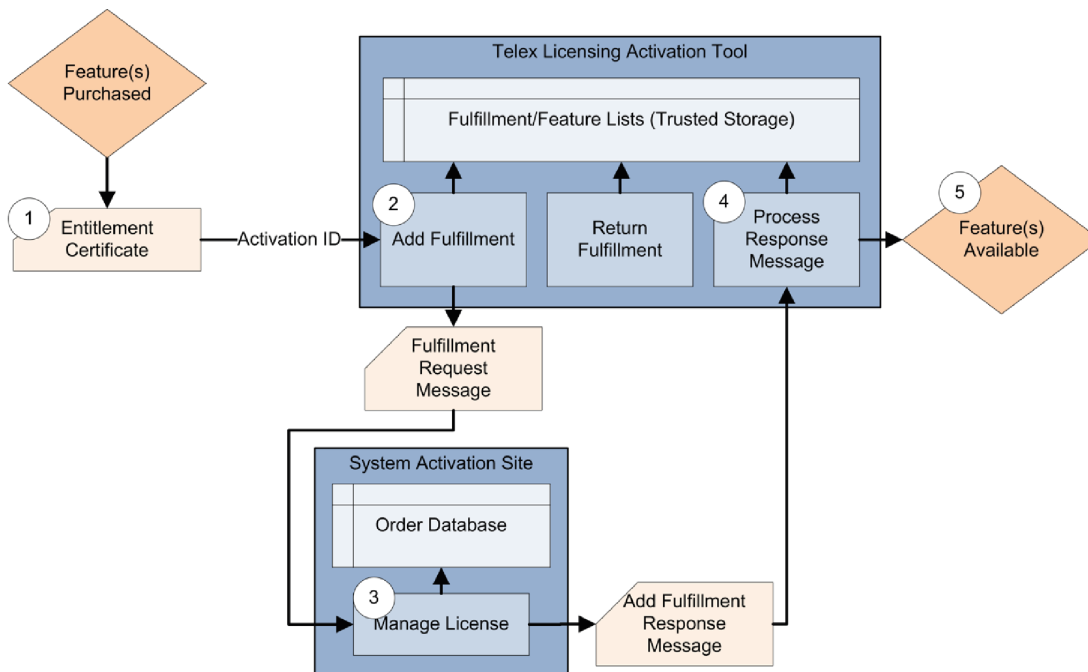


Figure 57.1: Installation Activation Flow Diagram

To **activate purchased licenses**, do the following:

1. Upon purchase of a feature, an e-mail is sent containing an **Entitlement Certificate**. The **Entitlement Certificate** contains a list of purchased features and an **Activation ID**.
2. On the target PC, install **Telex License Server**. Refer to “*Telex License Server setup, page 31*”.
3. Once installed, launch the **Telex License Activation Tool**. Refer to the figure on “*View current licensing information, page 587*”.
4. From the Telex Activation Tool, click the **Add Fulfillment** button.
5. In the Add License window, input contact information, as well as one or more **Activation IDs** received from the Entitlement Certificate. Refer to “*Appendix I - Telex License Activation tool, page 585*”.

A Fulfillment Request Message (Request.xml) is created.

If an Internet connection is available:

1. Select the **Online** tab.
The Online Page appears.
2. Enter your **System Activation Website Username and Password**.
3. Press the **Activate Licenses** button.
The features granted by the license are now available.

If an Internet connection is not available:

1. Select the **Offline tab**.
The Offline page appears.
2. Press the **Create request** button.
A prompt appears to save the Fulfillment Request Message (with default name Request.xml).
3. Visit the System Activation Website and use the **Manage License** feature.
4. Click the **Browse button**.
5. Select the newly created **Fulfillment Request Message**.
6. Click **Activate**.
A prompt appears to save the Add Fulfillment Response Message (RequestResponse.xml).
7. From the Telex License Activation Tool, select the **Process Response Message** feature.
Refer to “*Process Response Message, page 591*”.
8. Select the **Add Fulfillment Response Message** file.
The features granted by the license are now available.

Refer to

- *Telex License Server setup, page 31*
- *View current licensing information, page 587*
- *Appendix I - Telex License Activation tool, page 585*
- *Process Response Message, page 591*

57.2.1**View current licensing information**

The Telex License Activation Tool displays the computer's current license information. The left panel contains a list of Fulfillment IDs added. The right panel contains a table listing all licensed features, including quantity, order number, activation date, and expiration date of each feature.

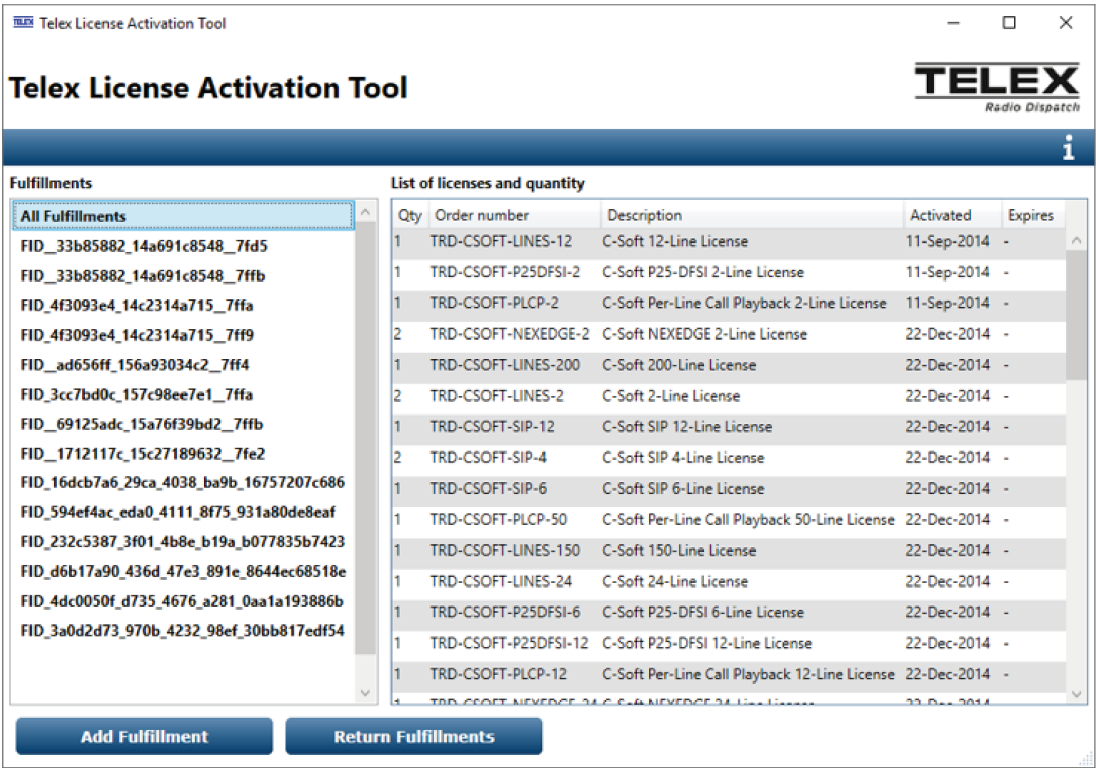


Figure 57.2: Telex Activation Tool

57.2.2 Add Fulfillment

Add Fulfillment is used by the customer or dealer to add a Fulfillment from an Activation ID, which is contained within an Entitlement Certificate.

The window displays customer information fields (Location name, Customer name, Address, City and Email) for the user to fill in when adding a Fulfillment. The window also displays a field to enter an Activation ID, and a list of entered Activation IDs, if the user wishes to enter multiple Activation IDs in the same transaction.

Customer information

Location name: GloboCorp Headquarters

Customer name: GloboCorp

Address: 111 Main St

City: GloboCity

Country: United States

Activation information

Activation ID: 12345-67890-abcde-fghij-klmno-pqrst-uvwxy

Activation ID list:

Online **Offline**

Use this method if the server has access to the internet. Enter your user name and password for the Dealer site and press activate button to activate the activation IDs.

[Use this link to configure your proxy settings.](#)

User name: globoTech

Password:

Activate licenses

Progress

Figure 57.3: Telex Activation Tool - Add License Window.



Notice!

The Location Name field must be different for each position install at any single location.

To **add a fulfillment**, do the following:

1. From the Telex License Activation window, select **Add Fulfillment**. The Add license window appears.

Under Customer information



Notice!

The Location Name field must be different for each position install at any single location.

1. In the Location name field, enter the **location of C-Soft deployment**.
2. In the Customer name field, enter the **name of the customer**.
3. In the Address field, enter the **customer's address**.
4. In the City field, enter the **customer's city**.
5. In the Country field, select the **customer's country**.

Under Activation information

If an Internet connection is available:

1. Select the **Online tab**.
The Online Page appears.
2. Enter a **User Name** and **Password** for the dealer site.
3. Click the **Activate Licenses** button.

The Telex License Activation Tool attempts to connect to the System Activation Website and execute the entire License Activation process. When finished, the license is activated and ready for use.

If an Internet connection is not available:

1. Select the **Offline tab**.
The Offline page appears.
2. Click the **Create Request** button.

An Activation Request file is generated. The Activation Request file must be processed using the Dealer Activation website. Refer to the Process Response section for instructions on how to complete the manual licensing operation.

57.2.3

Return Fulfillment

Return Fulfillment is used by the customer or dealer to remove a Fulfillment currently licensed to the PC and returns the license to the dealer's available license pool. A list of available licenses can be found at the Bosch Dealers Activation website.

To **return a fulfillment**, do the following:

1. From the Telex License Activation window, select the **fulfillment** you want to return.
The Return Fulfillment button is enabled.

If an Internet connection is available:

1. Select the **Online tab**.
The Online Page appears.
2. Enter a **User Name** and **Password** for the dealer site.
3. Click the **Return Fulfillments** button.

The Telex License Activation Tool attempts to connect to the System Activation Website and execute the License Return process.

**Notice!**

Once the Return Fulfillment process has been initiated, all licenses associated with the selected fulfillment are no longer available for license checkout.

If an Internet connection is not available:

1. Select the **Offline tab**.

The Offline page appears.

2. Click the **Create Request** button.

A Return Request file is generated. The Return Request file must be processed using the Dealer Activation website. Refer to the Process Response section for instructions on how to complete the manual licensing operation.

57.2.4**Repair**

Repair is used by the customer or dealer to re-establish the validity of fulfillments licensed to the server. The Repair License button only appears if the license has been corrupted or tampered with.

To **return a fulfillment**, do the following:

1. From the Telex License Activation window, select the **fulfillment** you want to return. The Return Fulfillment button is enabled.

If an Internet connection is available:

1. Select the **Online tab**.
The Online Page appears.
2. Enter your **Credentials**.
3. Click the **Return Fulfillments button**.

The Telex License Activation Tool attempts to connect to the System Activation Website and execute the License Repair process.

If an Internet connection is not available:

1. Select the **Offline tab**.
The Offline page appears.
2. Click the **Create Request** button.

A Repair Request file is generated. The Repair Request file must be processed using the Dealer Activation website. Refer to the Process Response section for instructions on how to complete the manual licensing operation.

57.2.5**Process Response Message**

The **Process Response Message** is used to complete an offline Add Fulfillment, Return Fulfillment, or Repair Fulfillment operation. Pressing the Process Response Message button opens the Process Response Message Window.

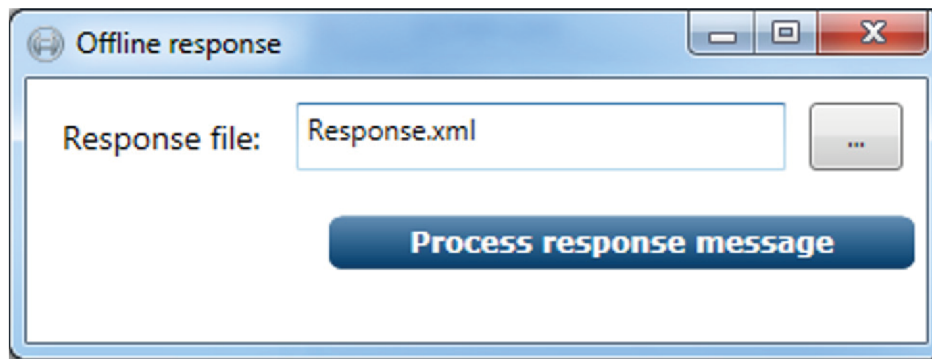


Figure 57.4: Offline Response Window

The Process Response Window contains a field used to select an Add Fulfillment Response Message (RequestResponse.xml), Return Fulfillment Response Message (ReturnResponse.xml), or Repair Response Message (RepairResponse.xml). After selecting one of these files, pressing the Process Response Message button completes the transaction.

- Add Fulfillment Response Message: If processing an Add Fulfillment Response Message, a fulfillment is added to the Fulfillment list, and the newly licensed features appear in the list of licenses. The newly added features are available for C-Soft license checkout requests.
- Return Fulfillment Response Message: If processing a Return Fulfillment Response Message, the specified fulfillment is removed from the Fulfillment list and all licenses associated with it are removed from the list. The removed features are no longer available for C-Soft license checkout requests.
- Repair Response Message: If processing a Repair Response Message, all fulfillments are validated and made available for C-Soft license checkout requests.

58 Appendix J - DMR-AIS

The AIS (Application Specification Interface) protocol was developed by DMR (Digital Mobile Radio) association to standardize the interface between a third party application such as dispatch console and DMR radio system. As a DMR member, Bosch implemented the AIS standard in C-Soft dispatch console application to fully comply with the DMR Tier II Conventional and DMR Tier III Trunking systems via wireline connection. This implementation provides the flexibility for users to install and operate DMR radio communication systems. Unlike other console manufactures, the C-Soft AIS implementation requires no dedicated server nor gateway. Each console on a DMR network will act like a digital radio subscriber. This advanced architecture provides system reliable and transparency, enhances operation, and reduces the system cost.

58.1 Supported features

The C-Soft DMR-AIS interface currently supports the following feature set:

- Displays ANI and/or Alias of incoming calls
- Send and Receive Group Calls
 - Group Call is sent by selecting corresponding Frequency button and then pressing either InPTT or Main PTT button.
 - The Group Call type (Broadcast Call or Conference Call) can be controlled by using the Radio Call Type button.



Notice!

For Hytera DMR AIS interface, system All Call can be sent by configuring a group with a group ID of 16777215 for Conventional systems.

- Send and Receive Individual Calls
 - Individual Call is sent by selecting the corresponding Frequency button and then pressing either InPTT or Main PTT button.
 - Individual calls can be made by selecting or entering a user in the Keypad and then pressing the Private PTT button.
- Receive Emergency Notifications
 - Supports receiving both Emergency Calls and Emergency Alerts.
- Send and Receive Call Alerts
 - Call Alert is sent by selecting a user from the Keypad control and then clicking the Radio Call Alert button.
 - Call Alerts can only be sent on lines configured for Individual operation.
- Send and Receive Text Messages
 - Text Message is sent by selecting a user from the Keypad control and then entering the desired text into the Text Message Control. The message is sent when the Send button in the Text Message Control is clicked.
 - Text Message can be sent to a group by selecting the line and group and then entering the desired text into the Text Message Control. The message is sent when the Send button in the Text Message Control is clicked.

- Send Radio Enable /Disable Commands
 - Radio Enable/Disable commands is sent by selecting a user from the Keypad control and then clicking either the Radio Enable or the Radio Disable button.
 - Radio Enable/Disable commands can only be sent on lines configured for individual operation.
- Send Radio Check Command
 - Radio Check command is sent by selecting a user from the Keypad control and then clicking either the Radio Check button.
 - Radio Check Command can only be sent on lines configured for Individual operation.
- Send Remote Monitor Command
 - Remote Monitor command is sent by selecting a user from the Keypad control and then clicking either the Radio Check button.
 - Remote Monitor command can only be sent on lines configured for Individual operation.
- Console Priority
 - The Call Priority button can be created to set transmit priority level for each outbound call.
- Vocoder Support
 - C-Soft supports DMR standard AMBE+2 vocoder.
- GPS Support
 - GPS currently is not a part of DMR AIS standard. However, Telex has worked with other repeater manufactures to support their specific GPS data format.
 - The following GPS features are available in C-Soft:
 - GPS Read (Standard Location Immediate Request)
 - GPS Trigger (Toggle On/Off for Location Reporting)
 - Incoming GPS Data triggered from Emergency Alarm
 - Incoming GPS Data triggered from Emergency Call
 - GPS data during voice calls

**Notice!**

Specific GPS supported functions vary depending on DMR repeater.

- Supports connection to up to 20 AIS compatible repeaters
 - Each repeater connection is configured with a name, IP Address, System Type (e.g. Conventional or Trunking), Vendor, Connection Port, Authentication Password, and Registration interval.
- Supports up to 24 AIS Interface lines
 - Each AIS Interface line connects to a specific repeater. The line configured with a Connection, Type (Group or Individual), and a list of affiliated Group or Individuals. Lines connected to a conventional repeater also use a time slot configuration.

- Each line can be configured to accept audio from one to 100 talkgroups.
- Indication of parallel console transmissions
 - Parallel Consoles are configured in C-Soft Designer by going to Edit | Setup Global Parameters | Local Consoles and entering the Subscriber IDs of the parallel consoles in the Direct IP Console Subscriber IDs field.
 - Calls initiated from parallel dispatch consoles display the 'T' icon on the receiving line's Select button.
- Crossmuting of parallel consoles
 - Calls from parallel consoles can be automatically muted by enabling the Crossmute direct IP console subscriber IDs field in Edit | Setup Global Parameters | Local Consoles
 - When this option is enabled calls initiated from parallel dispatch consoles display the 'XT' icon on the receiving line's Select button.
- Send Annunciations
 - Send audio from the .wav file on an AIS line using the Annunciation button.
- Crosspatching
 - Crosspatch audio from an AIS line to another line type supported by C-Soft.

**Notice!**

The supported features for DMR AIS interface might vary depending operation modes and DMR manufacturer's specifications. Please check the manufacturer's manual and additional application notes for more information.

System column drop down menu

The **System** column drop down menu is used to select the type of system the connection is running. There are three service tiers - Tiers I, II, and III. Tiers I and II are considered Conventional systems, where Tier II is only applicable for commercial radio markets.

Tier III is classified as a trunking system. A trunking system uses a control channel to direct radio traffic automatically whereas the radio user manually directs a conventional system.

Available options are:

- Conventional
- Trunking

Vendor column drop down menu

The **Vendor** column drop down menu is used to select the vendor of the system the connection is running. This setting allows the console to perform any logic or functionality that is unique to a specific radio system vendor.

The options available for this list are dependent on the currently selected System type.

Available option for a system type of Conventional:

- Generic

Available options for a system type of Trunking:

- Generic
- Leonardo

Connection Port field

The **Connection Port** field displays the port number used by C-Soft to connect to the AIS repeater. The connection port need to match the port number used by the DMR-AIS system. The default value for this field is 5060.

Password column field

The **Password** column field is used to enter the password configured as the Authentication Password. When the field is left empty, the system does not require a password to register.

This field can contain up to 32 alpha numeric characters.

Heartbeat (sec) column field

The **Heartbeat (sec)** column field is used to enter the length of time, in seconds, a console can be registered to the server without reregistering. This field can be used to monitor the network connection between C-Soft and the repeater.

The range for this field is 10 to 65535 seconds.

58.3

C-Soft Designer setup

To **configure C-Soft Designer**, do the following:

1. Open **C-Soft Designer v7.300 or later**.

8. From the Line Type drop down menu, select **AIS** for the desired line.

Per Line Parameters

Line Number	Line Type	Line Name	Rx Multicast Address	Rx Port	Tx Multica
1	Telex	Site 2 Slot 1	225. 8 . 11 . 81	21000	225. 8
	Disabled		0 . 0 . 0 . 0	1054	0 . 0
2	Telex	Site 2 Slot 2	225. 8 . 11 . 81	21001	225. 8
	Phone		0 . 0 . 0 . 0	1055	0 . 0
3	SIP Phone	Site 2 Private Call	225. 8 . 60 . 81	60001	225. 8
	P25-DFS		0 . 0 . 0 . 0	1056	0 . 0
	NEXEDGE				
	AIS				
	Echo Packets Enable:	☐			
4	Disabled	Site 3 Slot 1	225. 8 . 11 . 81	1057	225. 8
			0 . 0 . 0 . 0	1057	0 . 0
	Echo Packets Enable:	☐			
5	Disabled	Site 3 Slot 2	225. 8 . 11 . 34	9019	225. 8
			0 . 0 . 0 . 0	1058	0 . 0
	Echo Packets Enable:	☐			
6	Disabled	Test Rack NXDN	225. 8 . 11 . 34	9009	225. 8

15. From the Edit menu, select **Setup Global Parameters**.

The Global Parameter Setup window appears.

The screenshot shows the 'Global Parameter Setup' window with the 'Local Consoles' tab selected. The window has a title bar with a close button (X). Below the title bar are tabs for 'Appearance', 'Audio', 'Control Settings', 'IRR Recording', 'Local Consoles', 'Peripherals', and 'Recording'. The 'Local Consoles' tab is active, showing two main sections: 'Local Console IP Addresses' and 'Direct IP Console Subscriber IDs'.

Local Console IP Addresses: This section contains a 5x2 grid of IP address input fields. Each field is a text box with a blue cursor, and all fields are currently set to '0 . 0 . 0 . 0'.

Direct IP Console Subscriber IDs: This section contains a 5x6 grid of input fields. The first column contains subscriber IDs: '1011', '1012', '1013', '1014', and '0'. The remaining five columns contain numeric values, all currently set to '0'.

Below the grid is a checkbox labeled 'Crossmute direct IP console subscriber IDs (Only for NEXEDGE and AIS lines)'. The checkbox is currently unchecked.

At the bottom of the window are 'OK' and 'Cancel' buttons.

16. Click the **Local Consoles tab**.
The Local Consoles page appears.
17. In the Local Console IP Addresses group box, enter the **subscriber IDs** of the parallel consoles in the Direct IP Console Subscriber IDs field.
18. Select the **Crossmute direct IP console subscriber IDs check box** if parallel console transmit audio should not be heard on the other parallel consoles.

19. From the Edit menu, select **Edit User ID List**.

The User ID List window appears.

	Name: Sort By Name	User ID: Sort By ID	Type:
1	Portable 1001	1001	AIS
2	Portable 1002	1002	AIS
3	Portable 1003	1003	AIS
4	Portable 1004	1004	AIS
5			Generic
6			Generic
7			Generic

20. In the Name field, enter the **name of the individual radio** in the DMR system.

21. In the User ID field, enter the **user ID of the individual radio** in the DMR system.

22. From the Type drop down menu, select **AIS**.

The User ID List is used to alias IDs for incoming calls and to populate the Keypad control.

23. Repeat **step 20 through step 22**, as necessary.

24. Click **OK**.

The User ID List window closes.

25. From the Edit menu, select **Edit Group ID List**.

The Group ID List window appears.

	Group: Sort By Name	Group ID: Sort By ID	Type:
1	Group 100	100	AIS
2	Group 101	101	AIS
3	Group 102	102	AIS
4	Group 103	103	AIS
5	Group 104	104	AIS
6			Generic
7			Generic

26. In the Group field, enter the **name of the talkgroup** in the DMR system.

27. In the Group ID field, enter the **group ID of the talkgroup** in the DMR system.

28. From the Type drop down menu, select **AIS**.

The Group ID List is used to alias IDs for incoming calls and to populate the Keypad control.

29. Click **OK**.

The Group ID List window closes.

30. Save the **.veg file**.

**Notice!**

Verify the Console ID and Group IDs are entered correctly because C-Soft registers its Console ID and all Talk Groups when it starts up.

59

Appendix K - C-Soft API Installation notes

API functionality allows third party applications to connect securely to C-Soft. This API allows external applications to exchange data and provide limited control of C-Soft.



Notice!

The API functionality is a value added option to your C-Soft license, please contact your regional Bosch Sales person for details on how to purchase.

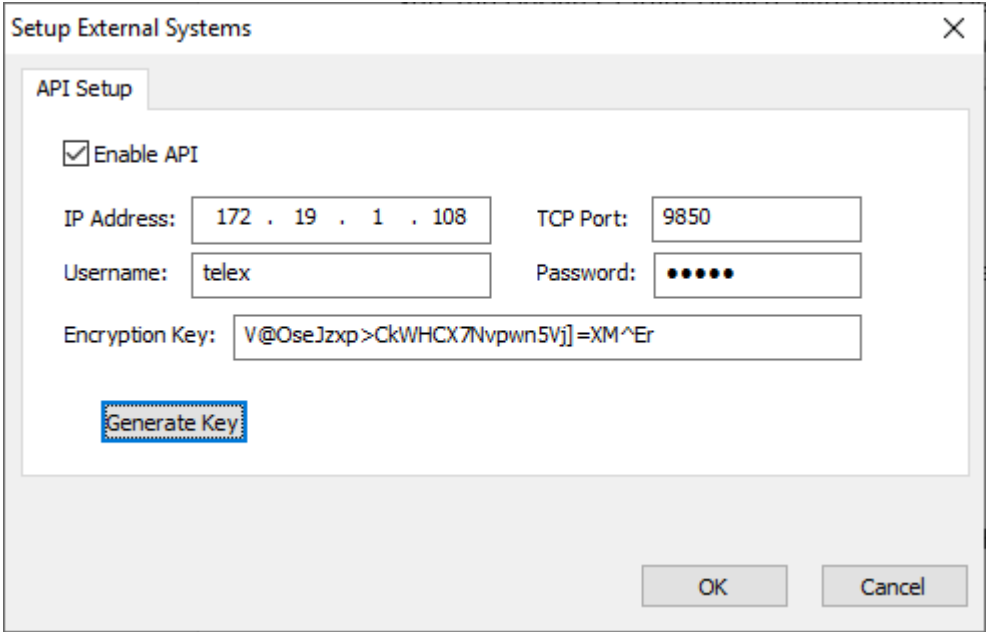
59.1

Supported features

- Secured connection with user authentication
- 256-bit AES data encryption
- Main PTT
- Line PTT
- Private Call
- Group Call
- Line Selection
- Multiple Line Selection
- Channel/Talkgroup Selection (Frequency Control Only)
- Paging Functions (Single, Stack Pages)
- Remote Monitor (Covert Call)
- Crosspatch
- GPS Integration
- Event Notifications
- Private Call Acknowledgement
- Incoming Private Call Notification
- Emergency
- Connection Monitor (Heartbeat)
- Select Call
- Radio Call Status
- Relay/Input support
- SIP support

59.2 Setup External Systems window

59.2.1 API Setup



The screenshot shows the 'Setup External Systems' dialog box with the 'API Setup' tab selected. The 'Enable API' checkbox is checked. The IP Address field contains '172 . 19 . 1 . 108', the TCP Port field contains '9850', the Username field contains 'telex', and the Password field is masked with dots. The Encryption Key field contains 'V@OseJzxp>CkWHCX7Nvpwn5Vj]=XM^Er'. A 'Generate Key' button is located below the Encryption Key field. The 'OK' and 'Cancel' buttons are at the bottom right.

Figure 59.1: API Setup Window

Enable API checkbox

The **Enable API** checkbox is used to enable the API functionality in C-Soft. If this checkbox is not selected, the functionality of the API is completely disabled.

IP Address field

The **IP Address** field is used to enter the IP Address of the 3rd party system. This is the IP Address that communicates with C-Soft. When a 3rd party system connects to C-Soft, C-Soft confirms the address before connecting to the address.



Notice!

This address must match exactly between C-Soft and the 3rd party system.

TCP Port field

The **TCP Port** field is used to enter the port number that C-Soft attempts to connect and communicate to the 3rd party system. If this does not match the 3rd party system's settings, communication cannot occur.

Username field

The **Username** field is used to enter the username used by the 3rd party system to log into C-Soft. If the 3rd party system does not have the correct username, communication fails.

Password field

The **Password** field is used to enter the password used by the 3rd party to log into C-Soft. If the 3rd party system password does not match, communication fails.

Encryption Key Field

The **Encryption Key** field is used to enter or generate a 256-bit encryption key that is used to encrypt communications between C-Soft and the 3rd party system. This key must match exactly in both C-Soft and the 3rd party system or decryption fails and encryption cannot be used.

Generate Key button

The **Generate Key** button is used to generate a random encryption key. This key must match exactly in both C-Soft and the 3rd party system or decryption fails.

OK button

The **OK** button is used to accept the modifications and close the API Setup window.

Cancel button

The **Cancel** button closes the API Setup window without saving the modifications.

59.2.1.1**API Setup window**

To **set up an API connection**, do the following

1. From the Edit menu, select **Setup External System**.
The Setup External Systems window appears.
2. Navigate to the **API Setup page**.
3. Select the **Enable API check box**.
4. In the IP Address field, enter the **IP Address of the 3rd party system** communicating with C-Soft.
5. In the TCP Port field, enter the **port number** C-Soft attempts to connect and communicate with the 3rd party system.
NOTE: If the port number entered in this field does not match the 3rd party system's settings, communication cannot occur.
6. In the User Name field, enter the **username** the 3rd party system uses to log on to C-Soft. If the 3rd party user name does not have the correct username, communication cannot occur.
7. In the Password field, enter the **password** the 3rd party system uses to log into C-Soft.
NOTE: The password can be anything, but the 3rd party system must use the same exact password for logging in. If the password does not match communication will fail.
8. In the Encryption Key field, enter the **encryption key** to be used.
OR
Click the **Generate Key button**.
An encryption code appears in the Encryption Key field.

**Notice!**

The encryption key is an AES 256-bit key. C-Soft can generate the key or a key can be manually entered. This key must match on the 3rd party system and must be a valid AES 256-bit key. If the encryption key is not valid, decryption fails and the functionality cannot be used.

Appendix L - End user license agreement



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Modification Date: Feb 15, 2017

Reason: The multi-part form data parsing code performed slowly on Bosch hardware. This code was replaced with a buffered parser for better performance.

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Glenn Randers-Pehrson
glennrp at users.sourceforge.net
December 3, 2004

Tiny XML

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