



TELEX

Radio Dispatch

Radio Dispatch Engineering Group

Application Guide Console Management System - L3Harris XL Radio Interface

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Revision C

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1. Revision History

Revision	Date	Author	Description
A	9/01/2024	Dispatch Engineering Group	Initial Version
B		L.Pham	Changed for no router
C	9/15/2025	G.Dunaski	Updated content

2. Introduction

This application guide provides an overview of the L3Harris XL radio interface with the Telex console system via the Console Management System (CMS) gateway.

3. Software Requirements

The following software is required for proper configuration and operation of the interface:

- C-Soft 8.000
- Telex Console Management System Version 2.000
 - L3Harris XL interface option, one per radio being controlled.
- One of the followings web browsers:
 - Google Chrome v49 or higher
 - Mozilla Firefox v61 or higher
 - Microsoft Edge v17 or higher
- Windows 10 or later
- L3Harris XL Radio serial number, needed for programming CMS.

4. Hardware and Options Requirements

The following hardware and radio feature are necessary for the interface:

- L3Harris XL Radio with the following specifications:
 - Firmware Version: R19C
 - “XL-Link” feature enabled, order the following from L3Harris.
 - XZ-PL9U for XL-200M, XS-PL9U for XL-185M, or XK-PL9U for XL-85M (These are the part numbers to use when ordering the feature pre-installed in a new radio)
 - YRXL-PL9U (This is the part number to use when adding the XL-Link to an existing XL mobile radio)
 - “XL MOBILE WAN” feature enabled.
 - Advanced Control Head Networking, order the following from L3Harris.
 - XZ-PL9M for XL-200M, XS-PL9M for XL-185M, XK-PL9M for XL-85M (These are the part numbers to use when ordering a new radio with the feature pre-installed)
 - YRXL-PL9M (This is the part number to use when adding the XL-Link to an existing XL mobile radio)
- Telex Console Management System

5. Supported Features

The Telex CMS gateway supports following features for the L3Harris XL interface:

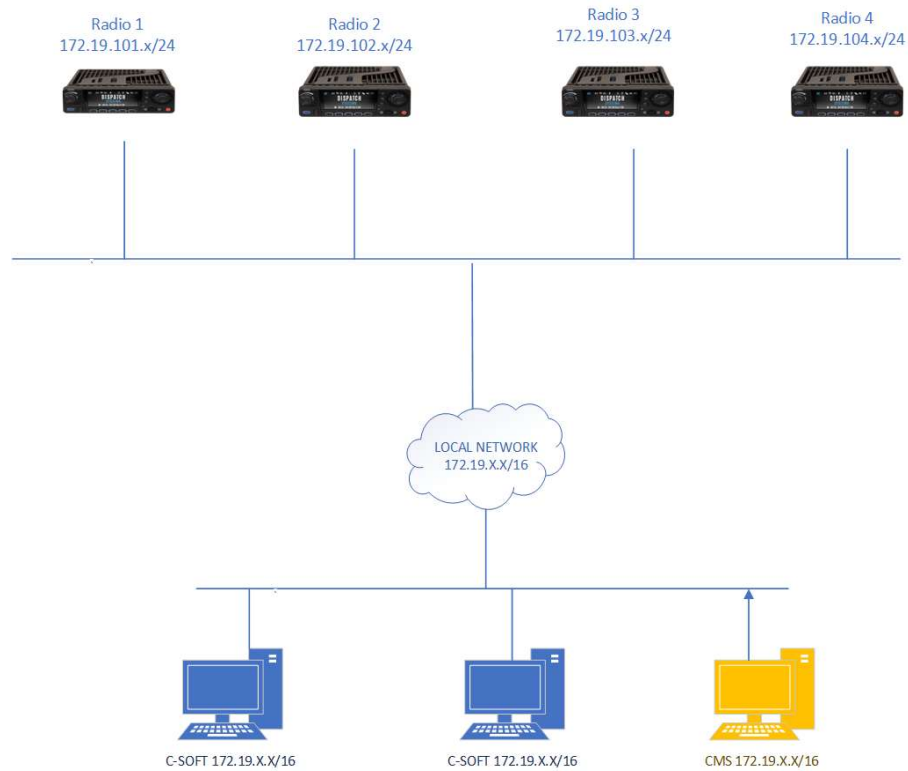
- Channel/Talkgroup Change
- ANI Decode
- Emergency Decode

6. Radio Interface Introduction

The L3Harris XL radio interface on Telex CMS is an optional feature that allows C-Soft console to communicate with and control L3Harris XL radio. A single Telex CMS can support up to 20 L3Harris XL radios. The interface uses a TCP connection for control and a SIP connection for audio communication between the radio and the CMS.

7. Network Diagram

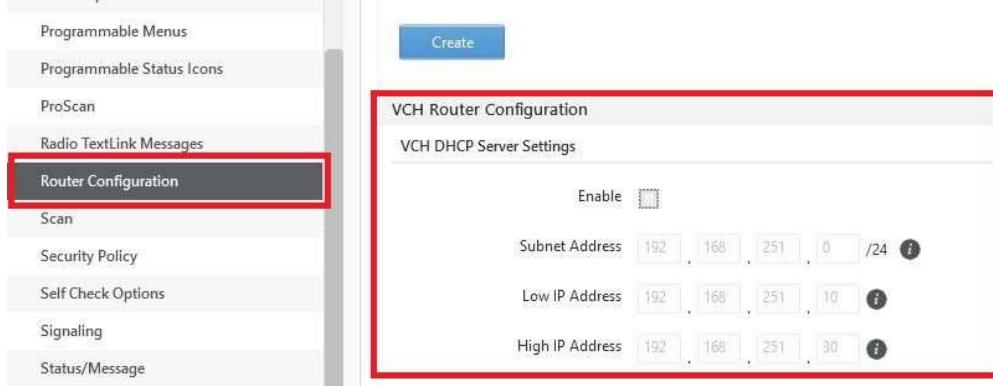
Below is the overview network diagram for the interface.



8. L3Harris XL Radio Setup

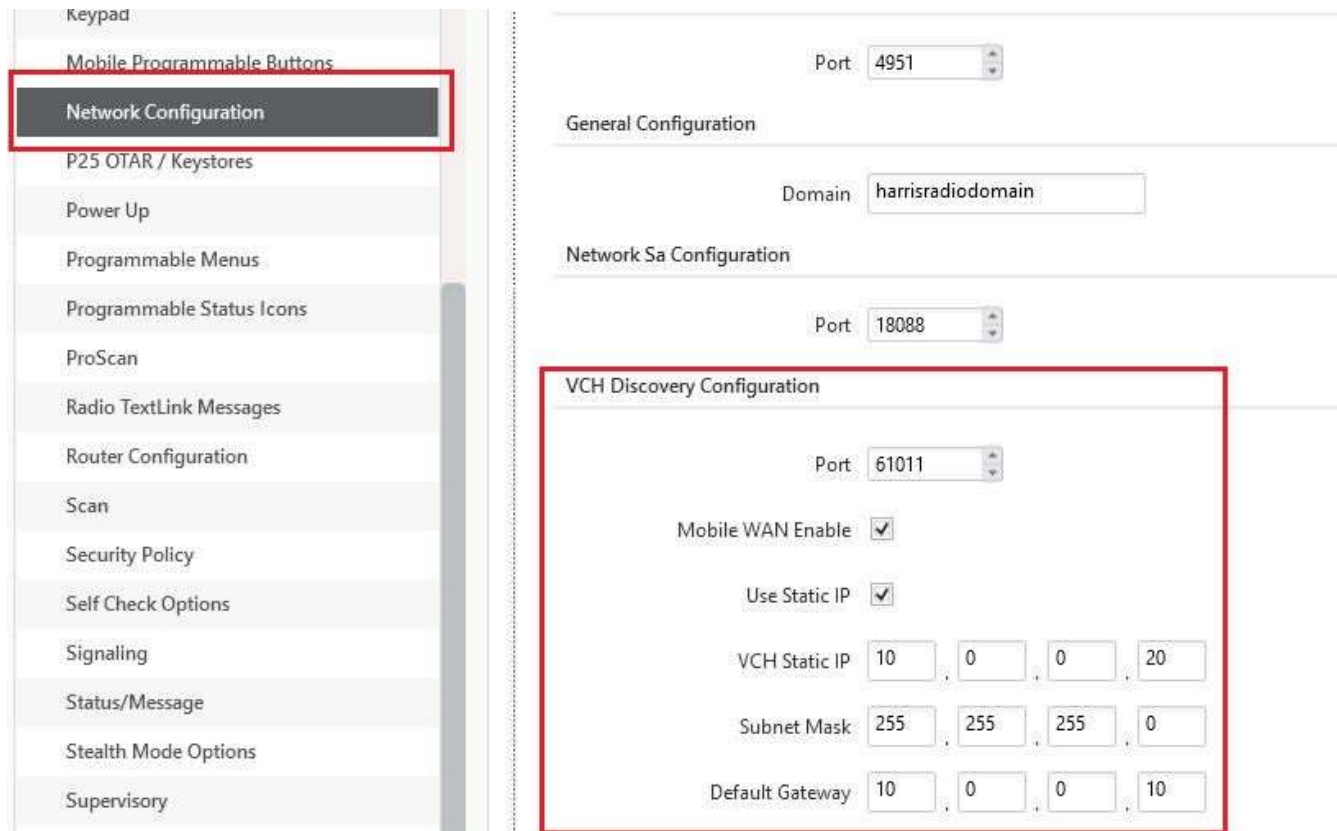
NOTE: For CMS to be able to communicate with XL Radio, The XL-Link feature needs to be enabled in the radio.

1. Router Configuration Setup:



- Step 1: Navigate to **Router Configuration**
- Step 2: Under **VCH DHCP Server Settings**
 - Make Sure the Enable checkbox is unchecked.

2. Network Configuration Setup:



- VCH Discovery Configuration
 - Step 1: Navigate to **Network Configuration**
 - Step 2: Enter desired port number into **Port** field.
 - Step 3: Select the **Mobile WAN Enable** checkbox.
 - Step 4: Select the **Use Static IP** checkbox.
 - Step 5: Set **VCH Static IP** to a desired IP address.
 - NOTE: Each radio will need a unique IP address.
 - Step 6: Set **Subnet Mask** to desired value.
 - Step 7: Set **Default Gateway** to desired value.

3. Emergency Setup:

NOTES: For the emergency to work correctly, this setting needs to be configured on the portable radio.

When using L3Harris radios on a Motorola P25 trunked system, it is best for radios to use Emergency Call & Alarm. If not, the Emergency behavior causes issues between manufacturers' radios.

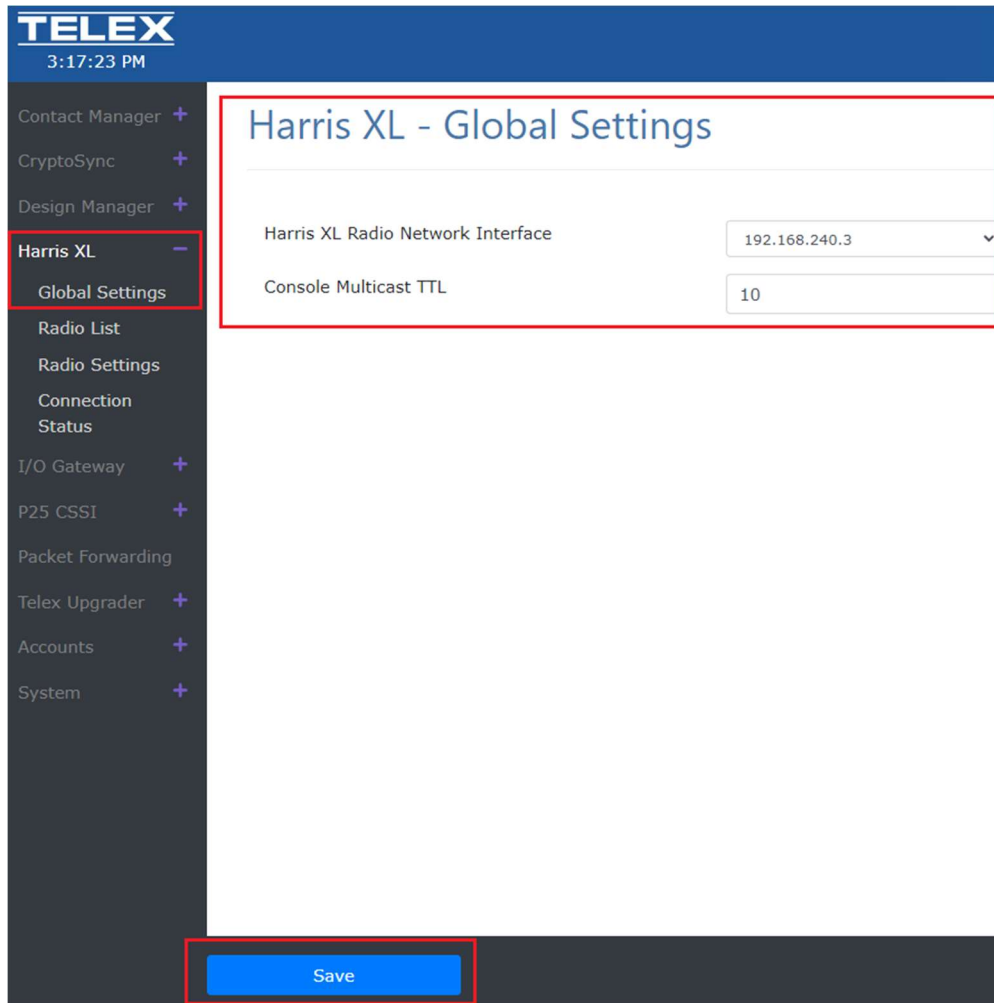
The screenshot shows the configuration interface for a TELEX TEST PORTABLE 20231101. The left sidebar contains a menu with categories: ZONES (3), SYSTEMS (3), BeON, Conventional (1), EDACS, EDACS IP, MCBTT, P25 Conventional (1) (highlighted with a red box), P25 Trunked (1), SETS (6), LISTS, and OPTIONS. The main content area is titled 'TELEX TEST PORTABLE 20231101 > Systems > P25 Conventional > DCONV'. It features an 'Apply to All Systems' button and a 'System Options' section. Under 'Set Options', the following settings are visible: P25 Conventional Frequency Set (DCONV), Individual Call Set (ICALL001), Unit ID (5), Security Key (None), Fixed Network Equipment LID (FFFFFC and 1677212), Emergency Behavior (Emergency Call, highlighted with a red box), Talk-Around Indication (Disabled), MDC ID (5), Custom Scan List, Encrypted Data Configuration, Manufacture ID (Standard), LCD Display (Channel), RTT Retries (4), and ERTT Retries (4).

- Step 1: Navigate to **System -> P25 Conventional**
- Step 2: Select **Emergency Call** for **Emergency Behavior** dropdown.

9. CMS setup

1) Global Setting

The Harris XL – Global Settings are used to configure the network connection for Harris Interfaces. If second network interface of CMS is enabled, User will need to select the one that is connect to Harris Radios.



Harris XL Radio Network Interface: This is the physical IP address that the CMS will use to communicate with Harris Radio. CMS has two network interfaces and one of them is disable by default. User will need to pick the IP address when setup CMS the first time. If User chose to enable both network interface, please select the network interface that is used for communicating with Harris XL Radios.

Console Multicast TTL: Time To Live equals the maximum number of router hops. Range 1 to 128 dec.

NOTE: This radio network interface needs to be set for all the radios to be able to connect to CMS.

Radio Lists

This page shows the list of Harris radios is currently setup in the CMS. Each line shows the information of one radio. User can add, edit or delete the radios on this page.

Harris XL - Radio List

Search:

Radio Index	Enabled	Radio Name	Radio IP	Radio Discovery Port	Radio Control Port	Rx Multicast	Rx Port	Tx Multicast	Tx Port	Serial Number
1		Radio 1	172.19.26.20	61010	61001	225.100.81.1	6644	225.100.81.1	4466	A40312000037

Show 10 entries

Previous 1 Next

Showing 1 to 1 of 1 entries

Add Radio Config

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Add Radio Config X

Enabled:

Radio Name:

Radio IP:

Radio Discovery Port: Radio Control Port:

Rx Multicast: Rx Port:

Tx Multicast: Tx Port:

Serial Number:

a) To Add Radio:

- On the bottom menu, click add radio button.
- The “Add Radio” popup will appear.

- **Enabled:** this is the checkbox to enable CMS to communicate with specific radios in the database.
- **Radio Name:** This text field is used to enter user-defined descriptive name for the radio. The maximum length of this field is 21 characters.
- **Radio IP:** This is the IP address of the radio. Please enter the IP address from the Network Configuration Setup of the radio.
- **Radio Discovery Port:** This is the VCH Discovery port from the Network Configuration Setup of the radio. Match this to **Port** field of the VCH Discovery Configuration section.
- **Radio Control Port:** This is the port number from the Control Head Configuration of the radio setup section.
- **Multicast TX:** Match this address to the Tx Multicast Address of the line assigned CSoft Designer.
- **Multicast TX Port:** Match this port number to the Tx Port Number of the line assigned in CSoft Designer.
- **Multicast RX:** Match this address to the Rx Multicast Address of the line assigned CSoft Designer.
- **Multicast RX Port:** Match this port number to the Rx Port Number of the line assigned in CSoft Designer.
- **Serial Number:** This text field is used to enter the serial number of the radio. This field is required for the point to point handshake, and must match the CMS programming and defined radio for the system to work.

b) To Edit Radio

Harris XL - Radio List

Search:

Radio Index	Enabled	Radio Name	Radio IP	Radio Discovery Port	Radio Control Port	Rx Multicast	Rx Port	Tx Multicast	Tx Port	Serial Number
1		Radio 1	172.19.26.20	61010	61001	225.100.81.1	6644	225.100.81.1	4466	A40312000037

Show 10 entries

Previous 1 Next

Showing 1 to 1 of 1 entries

Add Radio Config

© Copyright 2025 Bosch Security Systems, LLC. All Rights Reserved. Version:

- To Edit the radio, click the Edit button on the radio entry -> The Edit Radio popup appears.

Edit Radio Config [X]

Enabled:

Radio Name:

Radio IP:

Radio Discovery Port: Radio Control Port:

Rx Multicast: Rx Port:

Tx Multicast: Tx Port:

Serial Number:

- **Save:** This button is used to save any changes made to the radio configuration to the database.
- **Delete:** This button is used to delete this radio from the database.

2) Radio Settings:

This page shows the settings of the individual radio. When user clicks on the dropdown and select the radio name, the page will display the radio settings.

Harris XL - Radio Settings

Select Radio: [v]

Enabled:

Radio Name:

Radio IP:

Radio Discovery Port: Radio Control Port:

Rx Multicast: Rx Port:

Tx Multicast: Tx Port:

Serial Number:

- a) Radio Settings: The top section will display the information of the selected radio id.
- To edit radio settings in this page, select the radio from the “Select Radio” dropdown.
 - Modify the desired fields.
 - Click the “save” button on the bottom of page to save the radio settings to database.





b) Channel Setup:

- Select The radio from “Select Radio” dropdown.
- To edit channel -> click on the edit button.

[Import CSV](#)

Channel Setup

Show entries Search:

Channel Index	System Name	Channel ID	Channel Name	
1	1	1	1	
2	1	1	1	
3	1	1	1	
4	1	1	1	

- The Index of the channel list will be mapped with the index of the frequency of CSoft line.
- Change the System ID, channel ID, and Channel Name as desired.
- Click Save button to save the channel setting to database.

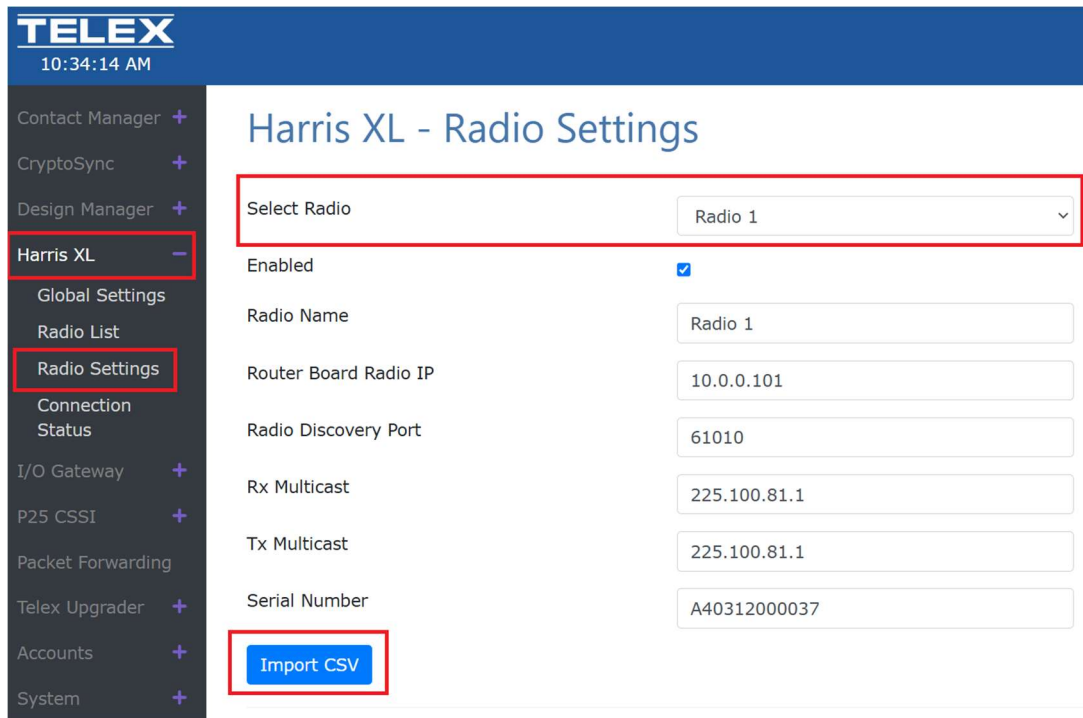
Channel Index: 1 ✕

System Name:

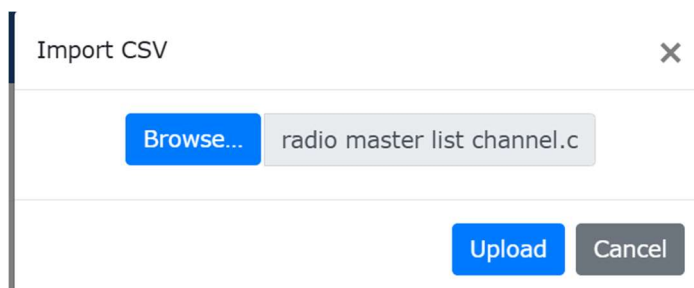
Channel ID:

Channel Name:

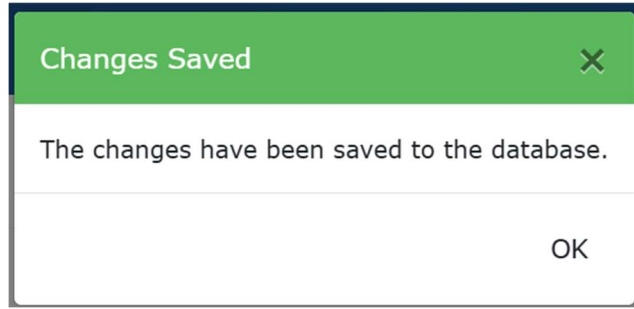
c) Import channels from CSV file:



- User can import channel list from a CSV file. To Import the CSV file:
 - Select the radio from “Select Radio” dropdown.
 - Click “Import CSV” Button -> A popup will appear.

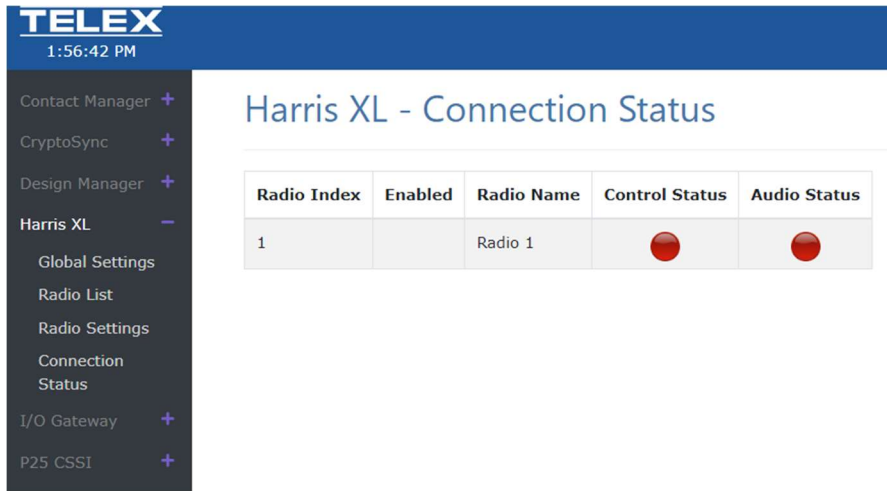


- Click Browse button and select desired CSV file.
- Click Upload to start upload the CSV file. CMS will process the CSV file and update the database.
- If CMS process CVS successfully, a popup will appear to indicate the data is saved to database.





3) Connection Status

a) This is the page showing the connection status of each radio to CMS.



The screenshot shows the TELEX application interface. The top blue header bar contains the TELEX logo and the time "1:56:42 PM". On the left is a dark sidebar menu with items: Contact Manager (+), CryptoSync (+), Design Manager (+), Harris XL (-), Global Settings, Radio List, Radio Settings, Connection Status, I/O Gateway (+), and P25 CSSI (+). The main content area is titled "Harris XL - Connection Status" and features a table with the following data:

Radio Index	Enabled	Radio Name	Control Status	Audio Status
1		Radio 1		

10. C-Soft Designer setup

The Per Line Parameters window is used to configure C-Soft to CMS communications.

1. To configure Per Line Parameters, do the following:
 - Open C-Soft Designer.
 - 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	Telex	Line 1	225.100.81.1	6644	225.100.81.1	4466	0.0.0.0	6	10	Options	Freqs	Signal Setup	SIP
2	Telex	Line 2	225.100.81.1	5566	225.100.81.1	6655	0.0.0.0	6	10	Options	Freqs	Signal Setup	SIP
3	Telex	Line 3	225.8.11.81	21056	225.8.11.81	21074	0.0.0.0	6	10	Options	Freqs	Signal Setup	SIP
4	Disabled	Line 4	225.8.11.81	1057	225.8.11.81	1257	0.0.0.0	6	10	Options	Freqs	Signal Setup	SIP
5	Disabled	Line 5	225.8.11.81	1058	225.8.11.81	1258	0.0.0.0	6	10	Options	Freqs	Signal Setup	SIP
6	Disabled	Line 6	225.8.11.81	1059	225.8.11.81	1259	0.0.0.0	6	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
8	Disabled	Line 8	225.8.11.81	1061	225.8.11.81	1261	0.0.0.0	6	10	Options	Freqs	Signal Setup	SIP
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
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

- In the Rx Multicast Address field, enter the **Transmit Multicast IP Address** of the radio line on CMS setting.
 - In the Rx Port field, enter the **Transmit Multicast Port number** of the radio line on CMS setting.
 - In the Tx Multicast Address field, enter the **Receive Multicast IP Address** of the radio line on CMS setting.
 - In the Tx Port field, enter the **Receive Multicast Port number** of the radio line on CMS setting.
2. To Configure Vocoder Type:
 3. From Per Line Parameters window, click on options button of the line.
The Line Options Setup window appears.

Line Options Setup: Line 1

Line Setup Options

Vocoder Type: G.711 64K (IP224 Only)

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

Encryption Setup

SRTP Encryption

OK

Cancel

- In the Vocoder Type dropdown, select **G7.11 674K**.
- Click **OK Button**.