



## **ADHB-4 Gen 2**

ADHB-4-GEN2-US, ADHB-4-GEN2-EU, ADHB-4-GEN2-UK,  
RHB-1-GEN2



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# 1 Notices

## 1.1 Proprietary notice

The product information and design disclosed herein were originated by and are the property of Bosch Security Systems, Inc. Bosch reserves all patent, proprietary design, manufacturing, reproduction, use and sales rights thereto, and to any article disclosed therein, except to the extent rights are expressly granted to others.

## 1.2 Copyright notice

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\*All other trademarks are property of their respective owners.

## 1.3 Warranty notice (limited)

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

## 1.4 Factory service center

Factory Service Center  
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## 1.5 Contact information

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### Technical support

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

Web: [www.telex.com](http://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.

## 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.

## 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 ([ey@cryptsoft.com](mailto:ey@cryptsoft.com)).
- This product includes cryptographic software written by Tim Hudson ([tjh@cryptsoft.com](mailto:tjh@cryptsoft.com)).

## 1.9 PC & Network Security consideration

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.
- Run C-Soft on a dedicated PC with up-to-date IT security software installed and with latest security updates applied.
- 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 PC 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.

## 2 Overview

The **ADHB-4** (Advanced Digital Headset Box) **Gen 2** is an easy to install and configure dispatch audio system that adds microphone and speaker capabilities, in various forms, to a C-Soft console. The ADHB-4 Gen 2 replaces the sound card in the PC, offering the flexibility of controlling a wider selection of audio options.

Audio input and output is routed to devices by connecting a combination of headsets, desk mics, speakers, or telephones to the unit. Additionally, a footswitch can be installed for hands-free operation.

There are two options for mounting the unit, either on the desktop or below the desktop. Standard cable connections are made directly to a PC via USB cable, to access C-Soft, and via an Ethernet connection for firmware upgrades, and unit configuration.

Audio parameters are set up within the web browser configuration software or Telex System Manager. Access to the radio dispatch system is provided by configuring the base IP address, Subnet mask and Gateway within the ADHB-4 Gen 2 software. Additionally, the input and output gain control, **PTT** (Push-To-Talk) source, and PTT priority are configured for the connected audio equipment. Status is conveniently summarized on one (1) window in the configuration software for quick evaluation of connected audio devices.

The front panel is equipped with an **LCD** (Liquid Crystal Display), allowing instant indications for ADHB-4 Gen 2 activity. The console operator can quickly determine which device audio is being routed to/from, as well as footswitch activity, volume, transmit status and receive status. A bar graph indicates the headset volume level and can be changed with the volume buttons on the front panel. A system information menu is also available. Two **LEDs** (Light Emitting Diode) on the front indicates a network link and PTT. A single red LED on the left side panel indicates phantom power is enabled when illuminated.

Softkeys on the front panel allow the console operator to adjust headset volume and allow technicians to change the IP address and Subnet mask.

## 3 Introduction

### 3.1 Computer system requirements

<b>Operating system</b>	Microsoft Windows 10
<b>Sound system</b>	Full-duplex Microsoft Windows compatible sound system
<b>Network connection</b>	10Mbps or 100Mbps, full-duplex TCP/IP connection. Static IP address preferred to DHCP
<b>Processor speed</b>	Intel Core i3 2.80GHz processor
<b>Random access memory</b>	Minimum of 8GB recommended

### 3.2 Features

- Ethernet communication
- Six receive audio output channels
- Two auxiliary audio input channels
- One dual 1/4" headset jack
- One 3-pin XLR connector to accept any low impedance microphone
- One desk mic jack
- One phone headset port
- One NENA I/O jack with offhook detection
- Supports up to three pairs of speakers
- Supports any standard amplified speaker set
- 12VDC operation
- Two RJ-45 connectors supporting up to two RHB Gen 2 devices
- Supports Select and Unselect audio with stereo headset
- LEDs for network link and PTT indication
- Host-synced clock with 12- and 24-hour modes

### 3.3 Optional hardware

Item	Model number	Part no.
ADHB-4 Gen2 audio interface device; provides headset, microphone, footswitch, phone/E-911 audio, I/O, and speaker connectivity to C-Soft software; USB connected to PC (US version)	ADHB-4-GEN2-US	F01U353940
ADHB-4 Gen2 audio interface device; provides headset, microphone, footswitch, phone/E-911 audio, I/O, and speaker connectivity to C-Soft software; USB connected to PC (UK version)	ADHB-4-GEN2-UK	F01U353941
ADHB-4 Gen2 audio interface device; provides headset, microphone, footswitch, phone/E-911 audio, I/O, and speaker connectivity to C-Soft software; USB connected to PC (EU version)	ADHB-4-GEN2-EU	F01U353942
ADHB-4 mounting brackets	ADHB-4MTBRK	F01U163360
RHB-1 Gen2 remote headset box; provides additional headset jack for ADHB-4/C-Soft console. Up to 2 RHB-1 devices can be connected to an ADHB-4 simultaneously.	RHB-1-GEN2	F01U353943
Standard dispatch speaker set	DISPATCH Speaker Set	F01U155248
Bose Companion II speaker set	PREMSPKR	F01U318452
Footswitch for ADHB-4 for hands-free PTT operation	FS-1	F01U117308
Desktop microphone, gooseneck with PTT	PREMDESKMIC	F01U318570
Desktop microphone; omnidirectional	MD-MS	F01U117309
Desktop gooseneck microphone kit (includes GNM-18 and base)	DT-GN W/GNM-18	F01U138537

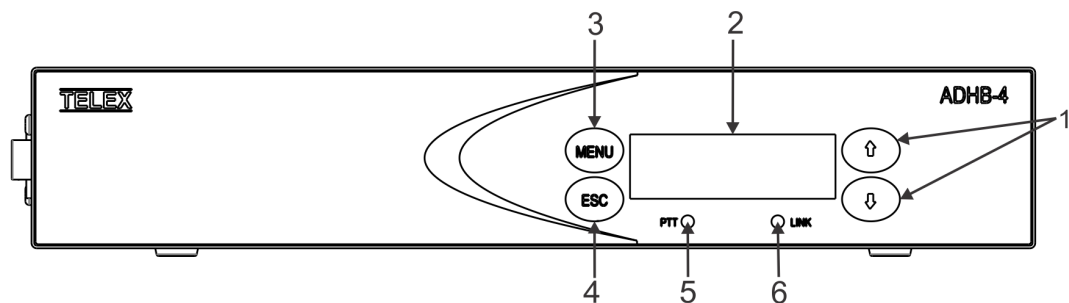
Desktop gooseneck microphone kit (base only)	DT-GN Desk Top only	F01U120586
Gooseneck microphone replacement for DT-GN or MN-GN kits; mounts directly to the top panel ¼" threaded microphone jack	GNM-18 (gooseneck only)	F01U120335
Flushmount gooseneck mic with electret mic element replacement for DT-GN or MN-GN kits; mounts directly to the top panel ¼" threaded microphone jack	MCP-90-0	F01U120438
Gooseneck mic with electret mic element, 8 inch length (20.3cm) replacement for DT-GN or MN-GN kits; mounts directly to the top panel ¼" threaded microphone jack	MCP-90-8	F01U120442
Gooseneck mic with electret mic element, 12 inch length (30.5cm) replacement for DT-GN or MN-GN kits; mounts directly to the top panel ¼" threaded microphone jack	MCP-90-12	F01U120439
Monitor mounted gooseneck microphone kit	MM-GN w/GNM-18	F01U149428
Polar choice gooseneck microphone. Note: Does not support PTT button on unit base	Polar Desktop	F01U164301
Plantronics dispatch headset kit; includes headset and PTT lower cord trigger unit	DISH-1 Headset	F01U117424
Dispatcher headset - MONO (lower cord not included, choose LC1500 or LC2500)	DH-2000	F01U117886
Dispatcher headset - dual sided MONO (lower cord not included, choose LC1500 or LC2500)	DH-2200	F01U117887
Single side headset MONO (lower cord not included, choose LC1500 or LC2500)	DH-2300	F01U351961

ANR dispatcher headset - MONO (lower cord not included, choose LC1500 or LC2500)	DH-3300	F01U351962
ANR dispatcher headset - MONO (lower cord not included, choose LC1500 or LC2500)	DH-3000	F01U120557
ANR dispatcher headset - dual sided MONO (lower cord not included, choose LC1500 or LC2500)	DH-3200	F01U120556
Lower cord unit with PTT button, belt clip; 15-foot	LC1500	F01U117884
Lower cord unit with PTT button, belt clip; 25-foot	LC2500	F01U117885

## 3.4 Controls and indicators

### 3.4.1 Front panel controls and indicators

1. Volume buttons - The Volume buttons are used to adjust the volume to the controller headset connection and selecting options while in the front panel's soft menu.
2. Display - The display gives the user graphical indications of events as they occur in either normal operation mode or in programming mode.
3. MENU button - The MENU button is used to access the main menu for the ADHB-4 Gen 2 device.
4. ESC button - The ESC button is used to exit the current menu.
5. PTT LED indicator - The PTT LED indicator notifies the user when a PTT is active.
6. LINK LED indicator - The LINK LED indicator notifies the user the ADHB-4 Gen 2 unit has a connection to the network.



**Figure 3.1:** ADHB-4 Gen 2 front panel controls and indicators

### 3.4.2 Back panel connections

1. USB port - The USB port is used to connect the ADHB-4 Gen 2 to a computer.
2. 10/100 NETWORK port - The 10/100 NETWORK port is used to connect the ADHB-4 Gen 2 to an IP network with a standard RJ-45 Ethernet interface cable. The Ethernet port connector supports a Base 10/100 Cat 5E connection.
3. FOOTSWITCH jack - The FOOTSWITCH jack is used to connect a footswitch and supports two inputs: PTT and monitor.
4. ACCESSORY PORT - The ACCESSORY PORT supports a DB-15 to provide access to recorder outputs, auxiliary inputs, and relays.
5. NENA jack - The NENA (National Emergency Number Association) jack is used to connect an RJ-12 NENA phone network.
6. PHONE HANDSET jack - The PHONE HANDSET jack is used to connect a phone headset port supplied with a mini RJ 4-pin connector.
7. RHB-1 port - The RHB ports (1 and 2) are used to connect an optional RHB (Remote headset box) using the RJ-45 cable supplied with the RHB unit. Up to two (2) RHBs can be connected.
8. RHB-2 port - The RHB ports (1 and 2) are used to connect an optional RHB (Remote headset box) using the RJ-45 cable supplied with the RHB unit. Up to two (2) RHBs can be connected.
9. AUX IN jack - The AUX IN jack allows for two auxiliary audio inputs for playing audio to dispatch positions.
10. DESK MIC jack (RJ-12) - The DESK MIC jack is used to connect an RJ-12-fitted electret or dynamic microphone.



11. SPEAKER 1-2, 3-4, 5-6 jacks - Each SPEAKER jack is used to connect a speaker pair. These three (3) receptacles are equipped with 3.5mm stereo jacks requiring self-powered, amplified PC type speakers.
12. POWER jack - The POWER jack is used to connect power to the unit via a 2.5mm center positive plug. The power requirements are 12VDC to 16VDC @ 1.25A.
13. GND connection - The GND connection is used to connect the ADHB-4 Gen 2 unit to earth ground.

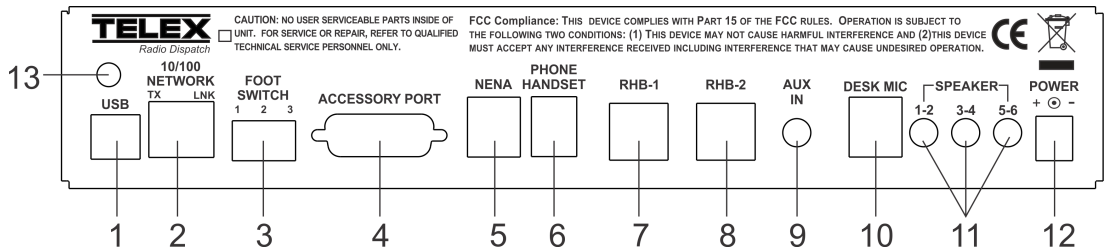


Figure 3.2: ADHB-4 Gen 2 back panel connections

### 3.4.3

#### Side panel connections

1. MIC (XLR) connector - The MIC connector is used to connect a 3-pin XLR dynamic microphone. PTT is initiated from C-Soft or a footswitch.
2. POWER LED indicator - The LED indicates phantom power is supplied to the XLR jack when lit.
3. HEADSET jack - The HEADSET jack is used to connect a 4- or 6-wire headset fitted with a dual channel 1/4" plug. This headset is known as the controller headset.
4. Polarity hash marks - Polarity hash marks are provided on the side of the unit to indicate headset connector orientation.

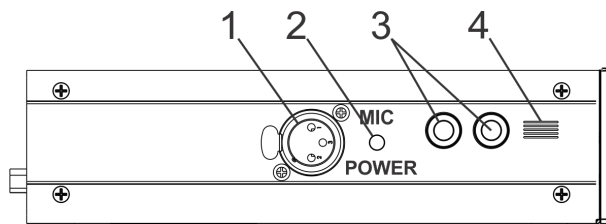


Figure 3.3: ADHB-4 Gen 2 side panel connections



#### Notice!

The polarity hash marks on the DISH series headset connectors are reversed, i.e. the connector's hash marks must be rotated 180° from the hash marks on the ADHB-4 Gen 2 before inserting it into the jack.

## 3.5 Specifications

<b>Power requirements</b>	+12 VDC to +16 VDC, semi-regulated, 1.25A nominal at 12 VDC
<b>Audio distortion</b>	2% THD maximum
<b>Frequency response</b>	±1.5 dB, 300 to 3000 Hz
<b>NENA input/output impedance</b>	600 Ohms nominal
<b>Relay contact ratings</b>	UL contact ratings 220 Vdc / 0.24 A - 60 W 125 Vdc / 0.24 A - 30 W 250 Vac / 0.25 A - 62.5 VA 125 Vac / 0.5 A - 62.5 VA 30 Vdc / 2 A - 60 W
<b>Relay contact configuration</b>	Form C
<b>Ethernet speed</b>	10/100 BaseT
<b>USB</b>	Version 2.0
<b>Storage conditions</b>	
Temperature	-30° to 65° C (-22° to 149° F)
Humidity	100% non-condensing
<b>Operating conditions</b>	
Temperature	0° to 55° C (32° to 131° F)
Humidity	100% non-condensing
Altitude	-500 to 13000 ft.
<b>Dimensions</b>	2" H x 7.71" D x 11.36" W (50.8 mm H x 195.83 mm D x 288.54 mm W)
<b>Weight</b>	3.88 lbs./1.76 kg (unit), 6.86 lbs./3.11 kg (shipping weight)

## 4 Installation



### Warning!

Do not open the unit. No user-serviceable parts are contained within. Bosch is not responsible for damage. If the unit is opened, the warranty can be voided. For troubleshooting steps contact the technical support center. Refer to “*Contact information, page 9*”.

### Reference

- The installation process requires you to reference both this manual and the C-Soft Software Console Administrator’s Guide (P/N F.01U.218.561) which is available for download at <https://products.telex.com/na/en/partners/>.
- For more information, refer to the ADHB-4 Gen 2 Quick Start Guide, available for download at <https://products.telex.com/na/en/partners/>.

### To Install your ADHB-4 Gen 2:

1. Determine where to mount your **ADHB-4 Gen 2**.
2. Determine if an **RHB** is required for your system. Refer to “*Appendix A - Remote headset box, page 98*”.
3. Connect **hardware** to the ADHB-4 Gen 2. Refer to “*Connect ADHB-4 Gen 2 hardware, page 31*”.
4. Install the current version of **C-Soft**. For more information, refer to the C-Soft Software Console Administrator’s Guide (P/N F.01U.218.561).
5. Connect the **ADHB-4 Gen 2 to power**. Refer to “*Apply power to the ADHB-4 Gen 2, page 32*”.
6. Connect the **ADHB-4 Gen 2 to the PC**. Refer to “*Connect the USB cable, page 32*”.
7. Set up the **ADHB-4 Gen 2** using the web browser configuration windows. Refer to “*Configuration, page 33*”.
8. Set up **C-Soft parameters**. Refer to the C-Soft Software Console Administrator’s Guide (P/N F.01U.218.561).



### Caution!

Do not apply power to the unit until step 5. Failure to heed this caution will result in damage to the unit. Bosch is not responsible for damage caused when power is applied before the installation process is complete and the warranty can be voided.

## 5 ADHB-4 Gen 2 mounting

The ADHB-4 Gen 2 is mounted on or under a surface such as a desk by either placing it on the work surface or using mounting brackets to fix it in place.

- Ensure there is enough clearance for back and side panel connections.
- Provide space for at least one (1) speaker pair.

A dispatch monitor, weighing up to a maximum of 35 lbs., can be placed on top of the unit.

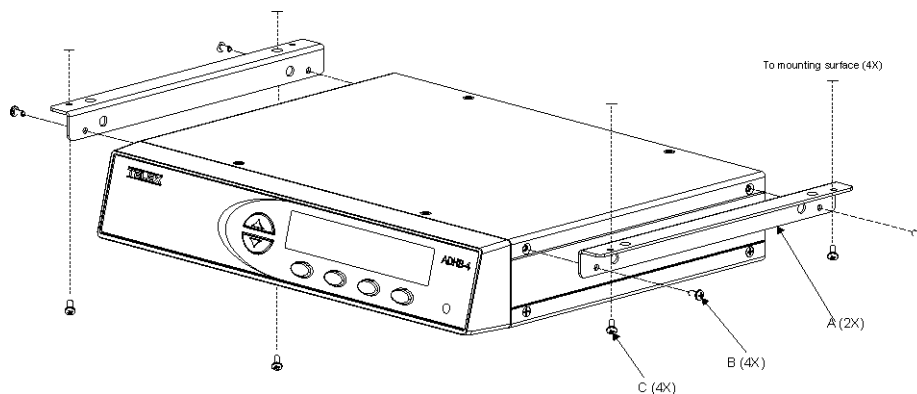
### 5.1 ADHB-4 Gen 2 mounting brackets

The ADHB-4 Gen 2 can be mounted on the underside or topside of the surface using optional ADHB-4 Gen 2 mounting brackets. For part number information, refer to “*Optional hardware*, page 13”.

### 5.2 Underside mounting

To install the ADHB-4 Gen 2 on the underside of the surface, do the following:

1. Using the supplied screws (B), attach the **brackets** (A) to the sides of the ADHB-4 Gen 2, as shown in the Figure below.
2. Place the **ADHB-4 Gen 2** in the desired mounting position.
3. Using a pencil, mark **hole positions** on the mounting surface.
4. Drill **holes** to accept a #10-13 x 3/4” round head screw (C).
5. Using the screws (C) supplied with the bracket, attach the **ADHB-4 Gen 2** to the mounting surface.

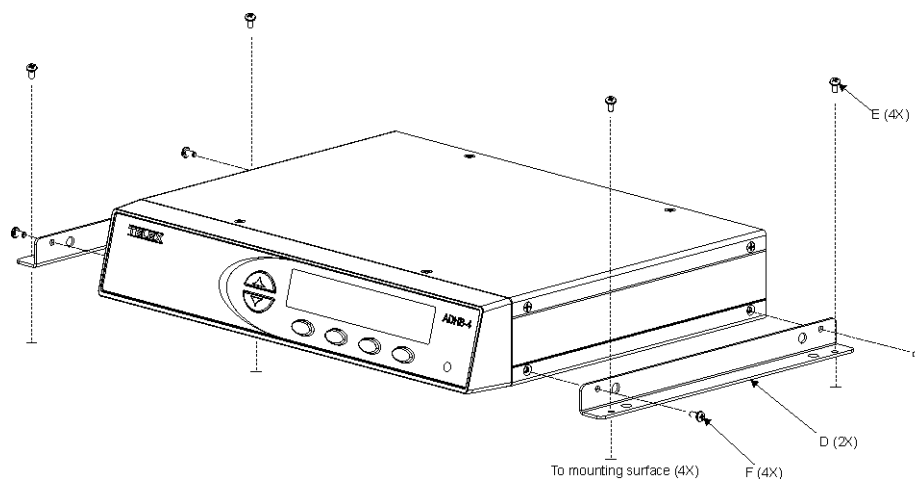


**Figure 5.1:** ADHB-4 Gen 2 underside mounting

## 5.3 Topside mounting

To install the ADHB-4 Gen 2 on the topside of the surface, do the following:

1. Using the supplied screws (B), attach the **brackets** (A) to the sides of the ADHB-4 Gen 2, as shown in the Figure below.
2. Place the **ADHB-4 Gen 2** in the desired mounting position.
3. Using a pencil, mark **hole positions** on the mounting surface.
4. Drill **holes** to accept a #10-13 x 3/4" round head screw (C).
5. Using the screws (C) supplied with the bracket, attach the **ADHB-4 Gen 2** to the mounting surface.



**Figure 5.2:** ADHB-4 Gen 2 topside mounting

## 6 ADHB-4 Gen 2 connections

### 6.1 USB port

The USB port is used to connect the ADHB-4 Gen 2 directly to a PC. The USB connection is required to send the audio and control data between C-Soft and the ADHB-4 Gen 2.

**Notice!**

If it is necessary to disconnect the USB from the computer or ADHB-4 Gen 2, the USB device should be safely removed.

To safely disconnect the USB from the computer, do the following:

1. Close the **C-Soft** console.
2. Follow Windows' recommendations to safely remove **hardware**.
3. Disconnect the **USB** from the computer and ADHB-4 Gen 2.

For more information, refer to your operating system user manual.

### 6.2 10/100 NETWORK port

The 10/100 NETWORK port is used to connect a network cable to the ADHB-4 Gen 2. Network connections are only used for configuration and firmware updates, connection is not required for operation.

### 6.3 PHONE HANDSET jack

The PHONE HANDSET jack is used to connect a telephone terminal headset port with an AUX mini RJ 4-pin headset port, to the ADHB-4 Gen 2. C-Soft will require the addition of an ADHB-4 NENA Hook Control button if using this interface. Refer to *NENA operations, page 75* for details on NENA.

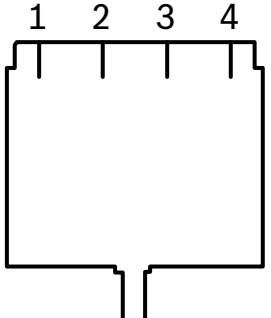
To connect to a telephone terminal AUX Headset port, do the following:

- Connect the **telephone terminal AUX Headset port** (typically on the rear side of the phone terminal) using a mini RJ 4-pin modular cord to the PHONE HANDSET port on the ADHB-4 Gen 2.

**Notice!**

The NENA hookswitch is used to activate the phone connectivity.

Pin number	Name	Description
1	NENA TX audio	Handset microphone
2	NENA RX audio	Handset receiver
3	NENA RX audio	Handset receiver
4	NENA TX audio	Handset microphone

1) Out  
2) In  
3) In  
4) Out

**Handset Connector**

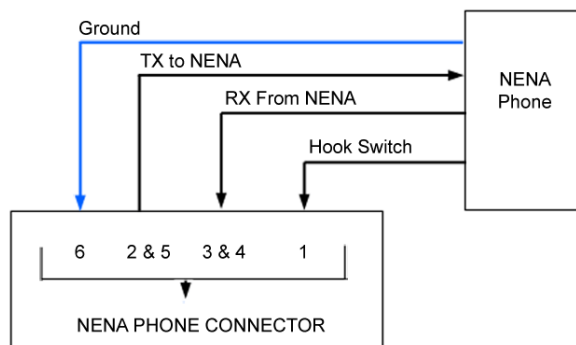
**Tab. 6.1:** Phone 4-pin RJ style handset connector pin out

## 6.4

### NENA jack

The NENA jack is used to connect a NENA phone network with an RJ-12 connector, to the ADHB-4 Gen 2 allowing full duplex conversation. NENA operation is only permitted when headset(s) are selected and detected for use at the dispatch position. The offhook condition is triggered by a contact closure that is part of the NENA jack wiring.

The NENA connector wiring diagram is shown in the Figure below. Pin outs for the RJ-12 connector are shown in the Table below.



**Figure 6.1:** NENA phone connector

**NENA phone connector**

The NENA phone connector description:

- ADHB-4 Gen 2 connects to NENA line from the RJ-12 connector.
- Balanced 600 Ohm audio in and out to eliminate ground loops.
- NENA phone RX audio routed to headset for entire offhook duration.
- Radio RX audio routes to speaker 2 when the NENA phone goes offhook.
- The hook switch input is diode protected from voltages above 5VDC.

**RJ-12 connector**

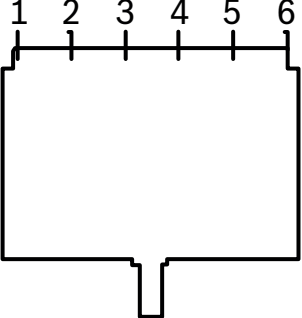
An RJ-12 connector provides input/output for a NENA port. When the NENA is taken offhook, the input transitions from high to low and NENA RX audio is routed to the active handset or headset's earpiece while NENA TX is routed from the active handset or headset's microphone. For more information, please refer to *NENA operations, page 75*.

**Notice!**

A headset or handset is required for NENA use. A desk mic cannot be used for a NENA conversation.

Pin number	Name	Description
1	Hook switch	Diode protected contact closure to ground
2	NENA TX audio	With pin 5 balanced 600 Ohm output 0dB (nominal)
3	NENA RX audio	With pin 4 balanced 600 Ohm input 0dB (nominal)
4	NENA RX audio	With pin 3 balanced 600 Ohm input 0dB (nominal)
5	NENA TX audio	With pin 2 balanced 600 Ohm output 0dB (nominal)
6	Analog ground	System analog ground



1) Hook Swiatch

2) Out

3) In

4) In

5) Out

6) Ground

**NENA Connector**

**Tab. 6.2: NENA RJ-12 connector pin outs**



## 6.5 FOOTSWITCH jack

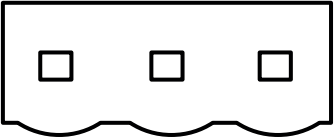
The FOOTSWITCH jack accepts a 3-pin connector that has one (1) or two (2) footswitches connected to it. The input for PTT uses pins 1 and 2. The input for monitor uses pins 2 and 3. The PTT footswitch can control the PTT functions for the controller headset, RHB 1 or 2, or the desk mic depending on the configuration.

### 3-Pin connector

Pin number	Name	Description
1	PTT	Diode protected contact closure to ground
2	GND	DC ground
3	Monitor	Diode protected contact closure to ground

1      2      3



1) PTT  
2) GND  
3) Monitor

Footswitch Connector

Tab. 6.3: Footswitch 3-pin connector pin outs

## 6.6 ACCESSORY PORT

The ACCESSORY PORT is used to connect optional equipment, to the ADHB-4 Gen 2.



### Caution!

The ground connection on the unit must be connected for proper operation. It provides a path to shunt any external noise.

### Recorder output

The ADHB-4 Gen 2 accessory port provides two (2) balanced recorder outputs with 600 Ohms impedance.

- The common recorder output sums and amplifies all common audio to a balanced output.
- The unselect recorder output sums and amplifies all unselect audio being played to speaker 2 to a balanced output.

**Notice!**

The ADHB-4 Gen 2 does not support recording audio routed to speakers 3-6.

**AUX TTL level inputs**

The AUX 1 and AUX 2 connections detect a contact closure and send the information to the C-Soft application. Each input is diode protected from voltages above +5VDC.

These inputs are:

- DC isolated
- Diode protected
- Active Hi/Low (configured in C-Soft)

**Form C relay contacts**

The ADHB-4 Gen 2 provides two (2) form C relay contacts for general use. Each relay is (separately) controlled from C-Soft. A 1.25A resettable fuse protects both sets of contacts.

**DB-15 connector**

Pin number	Name	Description
1	AUX 1 input	With pin 2 or pin 10 isolated auxiliary input diode protected. +12VDC maximum
2	Iso GND	System isolated DC ground
3	Analog GND	System analog ground
4	Relay 1 N. O.	Relay normally open contact
5	Common recorder output (+)	Web browser configured. Refer to “Common Record Vol slider, page 54”.
6	Common recorder output (-)	Web browser configured. Refer to “Common Record Vol slider, page 54”.
7	Unselect recorder output (+)	Web browser configured. Refer to “Unselect Record Vol slider, page 54”.
8	Unselect recorder output (-)	Web browser configured. Refer to “Unselect Record Vol slider, page 54”.
9	AUX 2 input	With pin 2 or pin 10 isolated auxiliary input diode protected. +12VDC maximum
10	Iso GND	System isolated DC ground
11	Relay 1 N. C.	Relay normally closed contact
12	Relay 1 common	Relay common contact
13	Relay 2 N. C.	Relay normally closed contact
14	Relay 2 N. O.	Relay normally open contact

15	Relay 2 common	Relay common contact
<div><div>DB15 Connector</div><div><div>87654321</div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div>1514131211109</div></div></div>		

Tab. 6.4: DB-15 pin outs - accessory port

6.7 RHB (1 and 2) connectors

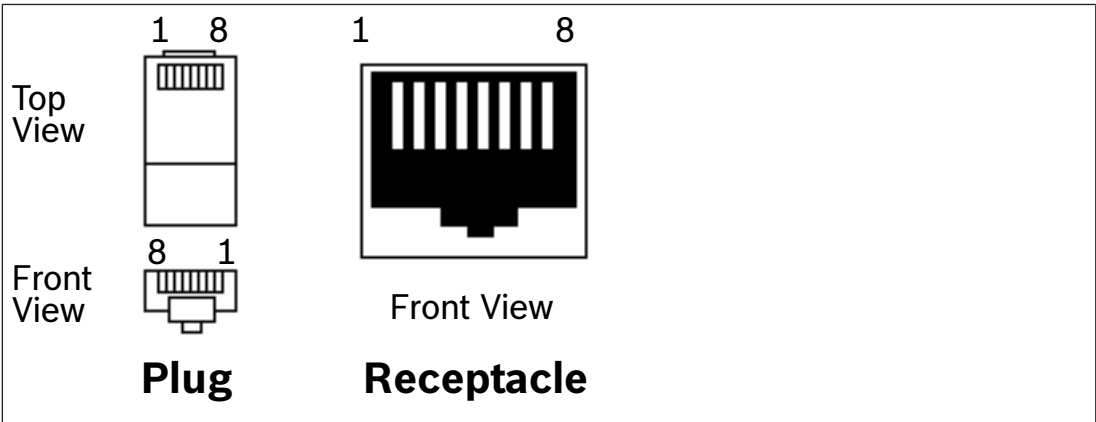
The RHB (1 and 2) connectors are RJ-45 and are used to connect up to two RHB (Remote headset box) devices. The pin outs are shown in the Table below.



**Notice!**  
Maximum cable length is 25 feet.

For more information, refer to “Appendix A - Remote headset box, page 98”.

Pin number	Name	Description
1	Unselect audio output	Unselect audio output
2	Analog GND	System analog ground
3	Analog GND	System analog ground
4	Select audio output	Select audio output
5	Microphone in	Electret microphone input
6	PTT	Diode protected contact closure to ground
7	10 VDC	100mA resettable fuse protected
8	PTT control	TTL level PTT indication 0 = No PTT/1 = PTT



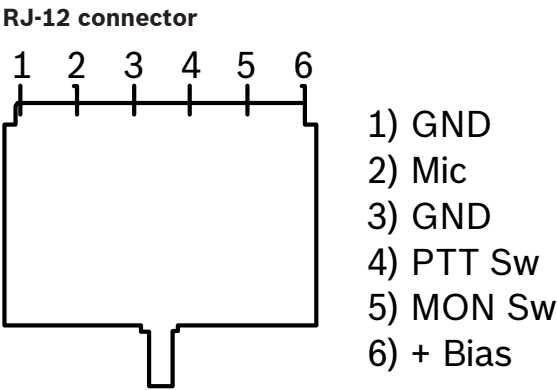
Tab. 6.5: RHB RJ-45 pin outs

6.8 DESK MIC jack

The DESK MIC jack is used to connect an electret or dynamic desk mic with an RJ-12 connector to the ADHB-4 Gen 2. The RJ-12 modular jack is designed specifically for Bosch microphone models: MD-MS/DM-2000 (electret element), model 6513C (dynamic element), PREMDESKMIC, or DT-GN; however, any microphone conforming to the input amplifier specifications may be wired for use.

If an electret microphone is used, a DC bias is placed on the microphone connection to power the microphone.

The nominal audio input levels are 500 mVpp for an electret or 10-20 mVpp for a dynamic element.



Desk Mic Connector

Figure 6.2: RJ-12 pin outs — Desk mic jack

## 6.9 AUX IN jack

The AUX IN 3.5mm audio jack supports both left and right auxiliary audio inputs for routing audio to the dispatch position. The auxiliary audio input can be set up as either Stereo in to Stereo out or Stereo in to Mono out.

Auxiliary Audio Control buttons in C-Soft can route the auxiliary audio inputs to the Headset speaker or Speakers 1-6. The auxiliary audio inputs will automatically mute when NENA, SIP, phone, or radio traffic is active on the shared auxiliary audio routed speaker.

The left and right auxiliary audio inputs can also be configured in C-Soft to broadcast out on the network to parallel dispatch positions or third party network recorders.

For more information, refer to the C-Soft Software Console Administrator's Guide (P/N F.01U.218.561).

## 6.10 SPEAKER jacks (1-2, 3-4, 5-6)

The SPEAKER jacks are used to connect self-powered 8 Ohm computer speaker pairs to the ADHB-4 Gen 2.

### Speaker default settings

Speaker 1 is dedicated to Select audio.

- If any headset is detected at this console position, Select audio is routed to the headsets and not speaker 1.



### Notice!

C-Soft provides the ability to set the audio to route to speaker 1 as well as the headset.

- If a desk mic is selected for use and no headset is present, Select audio is routed to Speaker 1.

Speaker 2 is dedicated to Unselect audio.

Speakers 3-6 (positional speakers) are used to monitor Unselect audio.

- C-Soft provides the ability to route single or multiple Unselect audio stream(s) from a C-Soft line(s) to the speakers.

For more information, refer to the C-Soft Software Console Administrator's Guide (P/N F.01U.218.561).

## 6.11 POWER jack

The POWER jack is used to connect power to the unit via a 2.5 mm center positive plug. The power requirements are 12 VDC to 16 VDC, 1.25A.

## 6.12 GND connection

The GND connection is used to connect the ADHB-4 Gen 2 to earth ground.



### Caution!

As with all communication equipment, earth ground should be used. Earth ground is a low impedance path to the earth for the purpose of discharging lightning, static, and radiated energy.

## 6.13 MIC (XLR) connector

The MIC (XLR) connector, on the side panel, is used to connect a 3-pin XLR-fitted microphone to the ADHB-4 Gen 2. The XLR microphone input stage is designed for any standard balanced low impedance dynamic microphone.

A phantom power supply of +48VDC is available for microphones that require power. The +DC is equally applied to pins 2 and 3 of the connector with reference to pin 1 (ground). Phantom power to the XLR jack is set in the web browser configuration windows. This type of connector does not provide PTT. PTT must be initiated from either C-Soft or a footswitch.

The nominal input level is 10-20 mVpp.

## 6.14 HEADSET jack

The HEADSET jack is used to connect a 4- or 6-wire headset fitted with a dual channel 1/4" plug. This headset is known as the controller headset.

## 7 Connect ADHB-4 Gen 2 hardware

To make hardware connections to the ADHB-4 Gen 2, do the following:

**Notice!**

The included adapter may be used with the RHB-1 Gen 1. For wiring information, refer to “Appendix B - Cross-connection ADHB-4/RHB 1 Gen 1 with Gen 2 versions, page 102”.

1. Connect the **10/100 network** cable to the IP network and the ADHB-4 Gen 2.
2. Connect a **speaker pair** to the SPEAKER 1-2 jack.
3. Connect an **RJ-12 desk mic** to the DESK MIC jack on the back of the unit.  
OR  
Connect an **XLR desk mic** to the XLR jack on the side panel  
OR  
Connect a headset with a dual channel 1/4” plug to the HEADSET jack on the side panel of the unit, aligning the **polarity hash marks** on the panel with the headset connector grooves.
4. Connect optional **audio devices**:
  - NENA line to the NENA jack;
  - Footswitch to the FOOTSWITCH jack;
  - Recorder/accessory to the ACCESSORY PORT;
  - Speaker pair(s) to the SPEAKER 3-4, or 5-6 jack;
  - Auxiliary audio input to the AUX IN jack;
  - Or install RHB(s) to the RHB-1 and/or RHB-2 ports.For more information, refer to “RHB 1 Gen 2 installation, page 100”.
5. Ensure **power** is supplied to the speaker pair(s).
6. Ensure the **speaker volume** and **headset volume** are turned to an audible level.

**Notice!**

The DISH-2 stereo series headset connector hash marks are reversed, i.e. the connector’s hash marks must be rotated 180° from the hash marks on the ADHB-4 Gen 2 before inserting it into the jack.

**Notice!**

Do not connect the USB cable to the PC until after C-Soft installation.

## 8 C-Soft installation

The C-Soft installation is described in the C-Soft Software Console Administrator's Guide (P/N F.01U.218.561) that can be downloaded at <https://products.telex.com/na/en/partners/>.



### Notice!

Before C-Soft installation, ensure the USB is not connected to the ADHB-4 Gen 2.

### 8.1 Apply power to the ADHB-4 Gen 2

Power can now be safely applied to the ADHB-4 Gen 2.

To apply power, do the following.

- Connect **power** to the ADHB-4 Gen 2.

The system information appears momentarily, then normal operation mode appears.

### 8.2 Connect the USB cable

The ADHB-4 Gen 2 can now be connected to the PC.

To connect the USB cable, do the following:

- Connect one end of the provided **USB cable** to a PC and the other end to the ADHB-4 Gen 2.

The clock displays indicating a connection to C-Soft through the USB port.



## 9 Configuration

### 9.1 Web browser configuration

The ADHB-4 Gen 2 uses a web browser to configure the device. The position name, MAC, hardware and firmware versions, firmware checksum, serial number and links are visible from every configuration window. The second level navigation links are used to collapse the view to display individual sections at a time.

#### 9.1.1 Submit button

The Submit button is used to temporarily save changes to the ADHB-4 Gen 2.

To permanently save changes, do the following:

1. Click the **Submit** button.  
The changes are sent to the ADHB-4 Gen 2 to temporary storage.
2. From the left navigation pane, select **Save Parameters**.  
The Save Parameters window appears.
3. Click the **Save Parameters** button.  
Changes are now permanently saved to the ADHB-4 Gen 2.


## 10 Ethernet Setup window

The Ethernet Setup window, shown in the Figure below, is used to configure the ADHB-4 Gen 2's network parameters. Refer to your network administrator to determine Ethernet address field values.

Use the navigation pane on the left to open the following sections:

- Ethernet Port Setup
- IPv6 Setup
- TSM Setup

**Name:** Telex ADHB-4 Gen2  
**MAC:** 00:0B:7C:70:39:10  
**HW:** 1.003    **FW:** 1.100  
**Checksum:** 4E67D0AA  
**SN:** 405449295400170002



**TELEX ADHB-4 GEN2**

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- ▼ Ethernet Setup
  - Ethernet Port Setup
  - IPv6 Setup
  - TSM Setup
- ▶ System Setup
- ▶ Gain Setup
- ▶ Account Management
- ▶ System Status
- ▶ Backup & Restore
- ▶ Firmware Upgrade
- ▶ Save Parameters

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### ETHERNET PORT SETUP

Use DHCP: ☐

**Unit IP Address:**

**Subnet Mask:**

**Default Gateway:**

**DNS Address 1:**

**DNS Address 2:**

**DNS Address 3:**

### IPv6 SETUP

IPv6 Enable: ☐

**Link Local Address:**

**Unit IP Address:**

**Subnet Prefix Length:**

**Gateway:**

### TELEX SYSTEM MANAGER SETUP

	Enable:	Multicast Address:	Incoming Port:	Outgoing Port:	TTL:
<b>System Manager</b>	<input checked="" type="checkbox"/>	<input type="text" value="233.15.18.22"/>	<input type="text" value="7635"/>	<input type="text" value="7636"/>	<input type="text" value="6"/>

\* NOTE: The ADHB-4 Gen2 and Telex System Manager Mcast Addresses and Ports must match!

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**Figure 10.1:** Ethernet Setup window

## 10.1 Ethernet Port Setup

### 10.1.1 Use DHCP check box

The Use DHCP check box is used to enable the ADHB-4 Gen 2 to automatically obtain the Unit IP address and other network configuration settings from the network. Once selected, all other Ethernet port setup fields on the window are disabled from use.

By default, this field is disabled.



#### Notice!

If DHCP is used, then the network must support DHCP.  
Bosch does not recommend enabling DHCP.

### 10.1.2 Unit IP Address field

The Unit IP Address field is used to assign a unique static IP address to the ADHB-4 Gen 2.

The default IP address is 192.168.1.150.

### 10.1.3 Subnet Mask field

The Subnet Mask field is used to enter the Subnet mask address. The Subnet mask address is used to distinguish local addresses from addresses that require the use of a gateway to reach. A subnet mask is required when configuring the system for a static IP address.

The default for this field is 255.255.0.0.

### 10.1.4 Default Gateway field

The Default Gateway field is used to enter the Gateway address. The Gateway address is used to connect to another network. A Gateway address is required when configuring the system for a static IP address.

The default for this field is 192.168.1.1.

### 10.1.5 DNS Address 1-3 fields

The DNS Address 1-3 fields are used to enter the DNS (Domain name system) addresses. These addresses point to the DNS server on your network. Refer to your network administrator for these values.

The default for this field is 0.0.0.0.

## 10.2 IPv6 Setup

### 10.2.1 IPv6 Enable check box

The IPv6 Enable check box, if selected, allows the ADHB-4 Gen 2 to be addressed and configured using IPv6.

## 10.2.2 Link Local Address field

The Link Local Address field is a 128-bit address field. It is not editable. It is an auto-configured address field and starts with FE in hexadecimal. The link local address is used to route the local network device only and cannot be routed to public networks. The link local address is generated from the local device's MAC address.

The Link Local Address text next to the field is a direct link. Click the text to go directly to the web page configuration of the device.

## 10.2.3 Unit IP Address field

The Unit IP Address field is used to display or set the unit's IPv6 Address. The web browser configuration uses the IPv6 Address to identify the ADHB-4 Gen 2 for such operation as set up and communication on the network. The IPv6 address size is 128 bits and is represented in hexadecimal format. The 128-bit address is divided into eight 16-bit blocks. Each 16-bit block is converted to a 4-digit hexadecimal number and is separated by colons.

The Unit IP Address text next to the field is a direct link. Click the text to go directly to the web page configuration of the device.

## 10.2.4 Subnet Prefix Length field

The Subnet Prefix Length field is used to identify how many bits of the global IPv6 address are used for the network portion. The prefix length in IPv6 corresponds to the subnet mask field used in IPv4. However, rather than being expressed in four octets like in IPv4, it is expressed as an integer between 1 through 128.

The default value for this field is 64.

## 10.2.5 Gateway field

The Gateway field is used to configure the unit's gateway IPv6 address similar to IPv4 setting. It is used to connect the device to another network.

# 10.3 Telex System Manager Setup

## 10.3.1 System Manager Enable check box

The System Manager Enable check box is used to enable communication between the ADHB-4 Gen 2 and TSM (Telex System Manager). TSM provides a centralized location to configure Telex Radio Dispatch solutions. The ADHB-4 Gen 2 firmware can be updated with TSM. TSM is a free application that can be downloaded from <https://products.telex.com/na/en/partners/>, with an approved account.

For more information, refer to the Telex System Manager Technical Manual (P/N F.01U.196.144), available for download at <https://products.telex.com/na/en/partners/>, with an approved account.

### 10.3.2 System Manager Multicast Address field

The System Manager Multicast Address field is used to display or set the multicast address used by TSM to detect connected VoIP hardware.

### 10.3.3 System Manager Incoming Port field

The System Manager Incoming Port field is used to display or set TSM's incoming port number. TSM sends data through this port to the ADHB-4 Gen 2.

### 10.3.4 System Manager Outgoing Port field

The System Manager Outgoing Port field is used to display or set TSM's outgoing port number. The ADHB-4 Gen 2 sends data through this port to TSM.

### 10.3.5 System Manager TTL field

The System Manager TTL field is used to display or set the number of routers the multicast packets are allowed to pass through before being discarded.

The range for this field is 1 to 128.

The default for this field is 6.

## 10.4 Submit button

The Submit button is used to temporarily save changes to the ADHB-4 Gen 2.

To permanently save changes, do the following:

1. Click the **Submit** button.  
The changes are sent to the ADHB-4 Gen 2 to temporary storage.
2. From the left navigation pane, select **Save Parameters**.  
The Save Parameters window appears.
3. Click the **Save Parameters** button.  
Changes are now permanently saved to the ADHB-4 Gen 2.

# 11 System Setup window

The System Setup window, shown in the Figure below, is used to configure the auxiliary inputs, headsets, microphones and microphone priorities, common recorder, and miscellaneous system parameters.

Use the navigation pane on the left to open the following sections:

- Aux Audio Input Setup
- Desk Mic Setup
- Headset Setup
- Console PTT Setup
- Footswitch PTT Setup
- NENA/Phone Mic Setup
- PTT Priority Setup
- Recorder Setup
- System Parameters Setup

**Name:** Telex ADHB-4 Gen2  
**MAC:** 00:08:7C:70:39:10  
**HW:** 1.003 **FW:** 1.100  
**Checksum:** 4E67D0AA  
**SN:** 405449295400170002

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▼ System Setup

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- [Headset Setup](#)
- [Console PTT Setup](#)
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- [NENA/Phone Mic Setup](#)
- [PTT Priority Setup](#)
- [Recorder Setup](#)
- [System Parameters Setup](#)

admin | Logout

**AUX AUDIO INPUT SETUP**  

**Aux Audio Input:** Stereo to Stereo ▼

Separate Left and Right

**Aux Audio LT to Console:** Disabled ▼

**Aux Audio RT to Console:** Disabled ▼

**DESK MIC SETUP**  
**Model:** Telex 6513C ▼  
**Connector:** RJ-12 ▼      **Type:** Dynamic ▼

**HEADSET SETUP**  

**Controller Headset:** Mono ▼ PTT ▼

**Controller Headset Audio:** SEL Audio Only ▼

**RHB 1 Headset:** Mono ▼ PTT ▼

**RHB 1 Audio:** SEL Audio Only ▼

**RHB 2 Headset:** Mono ▼ PTT ▼

**RHB 2 Audio:** SEL Audio Only ▼

**CONSOLE GENERATED PTT SETUP**  

	#1	#2	#3	#4	Disable
Headset Mic	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RHB 1 Mic	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RHB 2 Mic	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Desk Mic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

**FOOTSWITCH PTT SETUP**  

	#1	#2	#3	#4	Disable
Headset Mic	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RHB 1 Mic	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RHB 2 Mic	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Desk Mic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Figure 11.1: System Setup window (view 1)

## 11.1 Aux Audio Input Setup

The Aux Audio Input Setup section is used to configure the auxiliary audio left input and auxiliary audio right input. The auxiliary audio inputs can be used to send auxiliary audio to dispatch positions.

### 11.1.1 Aux Audio Input drop down menu

The Aux Audio Input drop down menu is used to select the format of the auxiliary audio input. Stereo to Stereo configures the ADHB-4 Gen 2 to keep the auxiliary audio left and right inputs separate while Stereo to Mono configures the ADHB-4 Gen 2 to sum the auxiliary audio left and right inputs to a single output.

Available selections for this menu are: Stereo to Stereo and Stereo to Mono.

### 11.1.2 Aux Audio to Console drop down menu

The Aux Audio to Console drop down menu is displayed when the Aux Audio Input is set to Stereo to Mono. It is used to configure which C-Soft Recording Track the auxiliary audio input is routed via the USB port.

Available selections for this menu are: Disabled, Recording Track LT and Recording Track RT.

### 11.1.3 Aux Audio LT to Console drop down menu

The Aux Audio LT to Console drop down menu is displayed when the Aux Audio Input is set to Stereo to Stereo. It is used to configure which C-Soft Recording Track the auxiliary audio left input is routed via the USB port.

Available selections for this menu are: Disabled, Recording Track LT and Recording Track RT.

### 11.1.4 Aux Audio RT to Console drop down menu

The Aux Audio RT to Console drop down menu is displayed when the Aux Audio Input is set to Stereo to Stereo. It is used to configure which C-Soft Recording Track the auxiliary audio right input is routed via the USB port.

Available selections for this menu are: Disabled, Recording Track LT and Recording Track RT.

## 11.2 Desk Mic Setup

The Desk Mic Setup section is used to configure the desk mic type and power requirements. A PTT can be generated from C-Soft or a footswitch for desk mics that require an external PTT.

### 11.2.1 Model drop down menu

The Model drop down menu is used to select the model of desk mic connected to the ADHB-4 Gen 2.

### 11.2.2 Connector drop down menu

The Connector drop down menu is used to configure the desk mic connector type. The ADHB-4 Gen 2 supports desk mics with either an RJ-12 or an XLR connector. Once the connector type is selected, the Type drop down menu options are updated to correspond with the selected connector type.

Available selections for this menu are: RJ-12 and XLR.

### 11.2.3 Type drop down menu

The Type drop down menu is used to configure the desk mic type. The ADHB-4 Gen 2 supports dynamic and electret desk mics.

Available selections for this field when RJ-12 is selected are: dynamic and electret.

Available selection for this field when XLR is selected is: dynamic.

### 11.2.4 Phantom Power drop down menu

The Phantom Power drop down menu appears when the mic connector type is set to XLR. Use this field to toggle on or off power supplied to the XLR microphone.

Available selections for this menu are: On and Off.

To turn on XLR phantom power, do the following:

1. From the Connector drop down menu, select **XLR**.  
The Phantom Power drop down menu appears. The Type defaults to dynamic.
2. From the Phantom Power drop down menu, select **ON**.  
The red LED on the side of the ADHB-4 Gen 2 indicates power is on.
3. Click **Submit**.
4. From the left navigation, click the **Save Parameters link**.
5. Click **Save Parameters**.  
The configuration is saved to the ADHB-4 Gen 2.

## 11.3 Headset Setup

The Headset Setup section is used to configure the headset type and audio channel selection. A 4-wire headset with no PTT, or a 6-wire headset with PTT, can be configured for use.

### 11.3.1 Controller Headset drop down menu

The Controller Headset drop down menus are used to configure the headset type and whether or not PTT is available on the controller headset connected to the ADHB-4 Gen 2.

Available selections for this menu are: Mono and Stereo or No PTT and PTT.



### 11.3.2 RHB 1 Headset drop down menu

The RHB 1 Headset drop down menus are used to configure the headset type and whether or not PTT is available on RHB 1's headset.

RHB 1 is connected to the RHB-1 jack on the back panel.

Available selections for this menu are: Mono and Stereo or No PTT and PTT.

### 11.3.3 RHB 2 Headset drop down menu

The RHB 2 Headset drop down menus are used to configure the headset type and whether or not PTT is available on RHB 2's headset.

RHB 2 is connected to the RHB-2 jack on the back panel.

Available selections for this menu are: Mono and Stereo or No PTT and PTT.

### 11.3.4 Controller Headset Audio drop down menu

The Controller Headset Audio drop down menu is used to configure the ADHB-4 Gen 2 to capture audio originating from C-Soft's Select audio or Select audio and Unselect audio. For mono-configured headsets, the audio is limited to Select only. For stereo-configured headsets, the headset can play Select audio only, or both Select and Unselect audio.

Available selections for this menu are: SEL Audio Only and SEL & UNSEL Audio.

### 11.3.5 RHB 1 Audio drop down menu

The RHB 1 Audio drop down menu is used to configure RHB 1 to capture audio originating from C-Soft's Select audio or Select audio and Unselect audio. For mono-configured headsets, the audio is limited to Select only. For stereo-configured headsets, the headset can play Select audio only, or both Select and Unselect audio.

Available selections for this menu are: SEL Audio Only and SEL & UNSEL Audio.

### 11.3.6 RHB 2 Audio drop down menu

The RHB 2 Audio drop down menu is used to configure RHB 2 to capture audio originating from C-Soft's Select audio or Select audio and Unselect audio. For mono-configured headsets, the audio is limited to Select only. For stereo-configured headsets, the headset can play Select audio only, or both Select and Unselect audio.

Available selections for this menu are: SEL Audio Only and SEL & UNSEL Audio.

## 11.4 Console Generated PTT Setup

The Console Generated PTT section is used to configure microphone source priorities when a PTT is generated from the console position. Up to four different microphone sources can be set up for a console generated PTT. When the console operator performs a PTT from the C-Soft console, the first available microphone source that is not disabled or disconnected is selected for transmission in the order set up in this section.

The default for these fields are:

- Headset Mic #1
- RHB 1 Mic #2
- RHB 2 Mic #3
- Desk Mic #4

### NOTE:

- The ADHB-4 Global window can be used by the console operator to select the microphone source. When the Mic Select Enable check box is selected, the priority settings on the System Setup window are overridden. Refer to “*Mic Control group box, page 96*” for more information.
- Because the desk mic cannot be detected, the ADHB-4 Gen 2 always assumes a desk mic is connected.

### EXAMPLE:

When the defaults are set, audio is captured as follows:

- If a controller headset, an RHB 1, an RHB 2, and a desk mic are connected, and a PTT is generated from C-Soft, audio is captured from the controller headset’s microphone.
- If an RHB 1, an RHB 2, and a desk mic are connected, and a PTT is generated from C-Soft, audio is captured from the RHB 1’s microphone.
- If an RHB 2 and a desk mic are connected, and a PTT is generated from C-Soft, audio is captured from the RHB 2’s microphone.

### 11.4.1 Headset Mic #1-#4 radio buttons

The Headset Mic #1-#4 radio button indicates the priority for routing microphone audio from the controller headset when a PTT is generated from C-Soft.

### 11.4.2 Headset Mic Disable radio button

The Headset Mic Disable radio button indicates the controller headset microphone is ignored when a PTT is generated from C-Soft.

### 11.4.3 RHB 1 Mic #1-#4 radio buttons

The RHB 1 Mic #1-#4 radio button indicates the priority for routing microphone audio from the RHB 1 when a PTT is generated from C-Soft.

### 11.4.4 RHB 1 Mic Disable radio button

The RHB 1 Mic Disable radio button indicates the RHB 1 microphone is ignored when a PTT is generated from C-Soft.

#### **11.4.5 RHB 2 Mic #1-#4 radio buttons**

The RHB 2 Mic #1-#4 radio button indicates the priority for routing microphone audio from the RHB 2 when a PTT is generated from C-Soft.

#### **11.4.6 RHB 2 Mic Disable radio button**

The RHB 2 Mic Disable radio button indicates the RHB 2 microphone is ignored when a PTT is generated from C-Soft.

#### **11.4.7 Desk Mic #1-#4 radio buttons**

The Desk Mic #1-#4 radio button indicates the priority for routing microphone audio from the desk mic when a PTT is generated from C-Soft.

Because the desk mic cannot be detected, the ADHB-4 Gen 2 always assumes a desk mic is connected.

#### **11.4.8 Desk Mic Disable radio button**

The Desk Mic Disable radio button indicates the desk mic is ignored when a PTT is generated from C-Soft.

## 11.5 Footswitch PTT Setup

### FOOTSWITCH PTT SETUP

	#1	#2	#3	#4	Disable
Headset Mic	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RHB 1 Mic	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RHB 2 Mic	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Desk Mic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

### NENA/PHONE MIC SOURCE SETUP

	#1	#2	#3	Disable
Headset Mic	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RHB 1 Mic	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
RHB 2 Mic	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

### PTT PRIORITY SETUP

	#1	#2	#3	#4	#5	#6	No Priority
Headset PTT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
RHB 1 PTT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
RHB 2 PTT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Desk Mic PTT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Footswitch PTT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Console Generated PTT	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### RECORDER SETUP

Common Record: ☒ SEL ☒ UNSEL ☒ NENA

### SYSTEM PARAMETERS SETUP

24 HR Clock: ☒
Change IP On Display: ☒
Clock Update:  sec

Contrast: 
Min. Headset Volume: 
Tech Display: ☐

Submit

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**Figure 11.2:** System Setup window (view 2)

The Footswitch PTT Setup section is used to configure microphone source priorities when a PTT is generated from a footswitch connected to the ADHB-4 Gen 2. Up to four different microphone sources can be set up for a footswitch generated PTT. When the console operator presses the footswitch, the first available microphone source that is not disabled or disconnected is selected for transmission in the order setup in this section.

The default for these fields are:

- Headset Mic #1
- RHB 1 Mic #2
- RHB 2 Mic #3
- Desk Mic #4

**NOTE:**

- The ADHB-4 Global window can be used by the console operator to select the microphone source. When the Mic Select Enable check box is selected, the priority settings on the System Setup window are overridden. Refer to “*Mic Control group box, page 96*” for more information.

**EXAMPLE:**

When the defaults are set, the captured audio is routed as follows:

- If a controller headset, an RHB 1, an RHB 2, and a desk mic are connected, and a PTT is generated from the footswitch, audio is captured from the controller headset's microphone.
- If an RHB 1, an RHB 2, and a desk mic are connected, and a PTT is generated from the footswitch, audio is captured from the RHB 1's microphone.
- If an RHB 2 and a desk mic are connected, and a PTT is generated from the footswitch, audio is captured from the RHB 2's microphone.

**11.5.1 Headset Mic #1-#4 radio buttons**

The Headset Mic #1-#4 radio button indicates the priority for routing microphone audio from the controller headset when a footswitch PTT is generated.

**11.5.2 Headset Mic Disable radio button**

The Headset Mic Disable radio button indicates the controller headset microphone is ignored when a footswitch PTT is generated.

**11.5.3 RHB 1 Mic #1-#4 radio buttons**

The RHB 1 Mic #1-#4 radio button indicates the priority for routing microphone audio from the RHB 1 when a footswitch PTT is generated.

**11.5.4 RHB 1 Mic Disable radio button**

The **RHB 1 Mic Disable** radio button indicates the RHB 1 microphone is ignored when a footswitch PTT is generated.

**11.5.5 RHB 2 Mic #1-#4 radio buttons**

The RHB 2 Mic #1-#4 radio button indicates the priority for routing microphone audio from the RHB 2 when a footswitch PTT is generated.

**11.5.6 RHB 2 Mic Disable radio button**

The RHB 2 Mic Disable radio button indicates the RHB 2 microphone is ignored when a footswitch PTT is generated.

**11.5.7 Desk Mic #1-#4 radio buttons**

The Desk Mic #1-#4 radio button indicates the priority for routing microphone audio from the desk mic when the footswitch PTT is generated.

### 11.5.8 Desk Mic Disable button

The Desk Mic Disable button indicates the desk mic is ignored when a footswitch PTT is generated.

## 11.6 NENA/Phone Mic Source Setup

The NENA/Phone Mic Source Setup is used to configure microphone source priorities when a NENA/phone line is active on the ADHB-4 Gen 2. Up to three different microphone sources can be set up. Once the NENA/phone is taken offhook (low), the ADHB-4 Gen 2 transmits microphone audio to the NENA/phone line. When the NENA/phone line is offhook, the priorities are used to determine the microphone audio source so PTT is not needed.

- A NENA/phone cannot operate without headsets configured for use at the console position.
- PTT can be used on any of the PTT sources during a NENA call. During this PTT event, the NENA call is placed on hold and regular radio PTT takes over. NENA audio continues to be heard on the headset while the microphone audio is routed to the radio.
- During a NENA offhook event, PTT is not necessary to talk on the active microphone.

#### NOTE:

- The ADHB-4 Global window can be used by the console operator to select the microphone source. When the Mic Select Enable check box is selected, the priority settings on the System Setup window are overridden. Refer to “*Mic Control group box, page 96*” for more information.

The default for these fields are:

- Headset Mic #1
- RHB 1 Mic #2
- RHB 2 Mic #3

#### EXAMPLE:

When the defaults are set, the audio is routed as follows:

- If a controller headset, an RHB 1, and an RHB 2 are connected, and the NENA/Phone is taken offhook, audio is captured from the controller headset’s microphone.
- If an RHB 1 and RHB 2 are connected, and the NENA/Phone is taken offhook, audio is captured from the RHB 1’s microphone.
- If an RHB 2 is connected, and the NENA/Phone is taken offhook, audio is captured from the RHB 2’s microphone.

### 11.6.1 Headset Mic #1-#3 radio buttons

The Headset Mic #1-#3 radio button indicates the priority for routing microphone audio from the controller headset when NENA is offhook and PTT is not active.

### 11.6.2 Headset Mic Disable radio button

The Headset Mic Disable radio button indicates the controller headset microphone is disabled when the NENA is offhook.

### 11.6.3 RHB 1 Mic #1-#3 radio buttons

The RHB 1 Mic #1-#3 radio button indicates the priority for routing microphone audio from the RHB 1 when NENA is offhook and PTT is not active.

### 11.6.4 RHB 1 Mic Disable radio button

The RHB 1 Mic Disable radio button indicates the RHB 1 microphone is disabled when the NENA is offhook.

### 11.6.5 RHB 2 Mic #1-#3 radio buttons

The RHB 2 Mic #1-#3 radio button indicates the priority for routing microphone audio from the RHB 2 when NENA is offhook and PTT is not active.

### 11.6.6 RHB 2 Mic Disable radio button

The RHB 2 Mic Disable radio button indicates the RHB 2 microphone is disabled when the NENA is offhook.

## 11.7 PTT Priority Setup

The PTT Priority Setup section is used to set up the priorities of different PTT sources from the ADHB-4 Gen 2. The highest priority is #1, the lowest is #6.

#### NOTE:

- The ADHB-4 Global window can be used by the console operator to select the microphone source. When the Mic Select Enable check box is selected, the priority settings on the System Setup window are overridden. Refer to “*Mic Control group box, page 96*” for more information.

#### EXAMPLE:

When the PTT priority is set up as follows:

- Console Generated PTT #1
- Headset PTT #2
- RHB 1 PTT #3
- RHB 2 PTT No Priority
- Desk Mic PTT #4
- If a PTT is generated from the controller headset, and RHB 1 is currently engaged in a PTT event, the controller headset takes control from RHB 1.
- If a PTT is generated from RHB 1 while the controller headset is currently engaged in a PTT event, RHB 1 is ignored.
- If a PTT is generated from RHB 1 while the desk mic is engaged in a PTT event, the RHB 1 takes control from the desk mic.

### 11.7.1 Headset PTT #1-#6 radio buttons

The Headset PTT #1-#6 radio buttons indicate the priority for routing controller headset microphone audio when PTT is generated from the controller.

### 11.7.2 Headset PTT No Priority radio button

The Headset PTT No Priority radio button indicates for routing controller headset microphone audio when PTT is generated from the controller has the lowest level of priority, and any other PTT with a priority can take over as the microphone audio source. If the other PTT also has a priority set to No Priority then the PTT is handled on a first come first serve basis.

The Headset PTT default is: No Priority.

### 11.7.3 RHB 1 PTT #1-#6 radio buttons

The RHB 1 PTT #1-#6 radio buttons indicate the priority for routing RHB 1 microphone audio when PTT is generated from the RHB 1.

### 11.7.4 RHB 1 PTT No Priority radio button

The RHB 1 PTT No Priority radio button indicates the priority for routing RHB 1 microphone audio when PTT is generated from the RHB 1 has the lowest level of priority, and any other PTT with a priority can take over as the microphone audio source. If the other PTT also has a priority set to No Priority then the PTT is handled on a first come first serve basis.

The RHB 1 PTT default is: No Priority.

### 11.7.5 RHB 2 PTT #1-#6 radio buttons

The RHB 2 PTT #1-#6 radio buttons indicate the priority for routing RHB 2 microphone audio when PTT is generated from the RHB 2.

### 11.7.6 RHB 2 PTT No Priority radio button

The RHB 2 PTT No Priority radio button indicates the priority for routing RHB 2 microphone audio when PTT is generated from the RHB 2 has the lowest level of priority, and any other PTT with a priority can take over as the microphone audio source. If the other PTT also has a priority set to No Priority then the PTT is handled on a first come first serve basis.

The RHB 2 PTT default is: No Priority.

### 11.7.7 Desk mic PTT #1-#6 radio buttons

The Desk Mic PTT #1-#6 radio buttons indicate the priority for routing Desk Mic audio when PTT is generated from the Desk Mic.

### 11.7.8 Desk mic PTT No Priority radio button

The Desk Mic PTT No Priority radio button indicates the priority for routing Desk Mic audio when PTT is generated from the Desk Mic has the lowest level of priority, and any other PTT with a priority can take over as the microphone audio source. If the other PTT also has a priority set to No Priority then the PTT is handled on a first come first serve basis.

The Desk Mic PTT default is: No Priority.



### 11.7.9 Footswitch PTT #1-#6 radio buttons

The Footswitch PTT #1-#6 radio buttons indicate the priority for routing the correct microphone audio as configured in “*Footswitch PTT Setup, page 44*”, when PTT is generated from the Footswitch.

### 11.7.10 Footswitch PTT No Priority radio button

The Footswitch PTT No Priority radio button indicates the priority for routing the correct microphone audio, as configured in “FOOTSWITCH PTT SETUP” on page 43, when PTT is generated from the Footswitch has the lowest level of priority, and any other PTT with a priority can take over as the microphone source. If the other PTT also has a priority set to No Priority then the PTT is handled on a first come first serve basis.

### 11.7.11 Console Generated PTT #1-#6 radio button

The Console Generated PTT #1-#6 radio buttons indicate the priority for routing the correct microphone audio, as configured in “CONSOLE GENERATED PTT SETUP” on page 42, when PTT is generated from the console.

The radio button cannot be changed.

## 11.8 Recorder setup

### 11.8.1 Common Record SEL check box

The Common Record SEL check box indicates select audio is included in the common record audio output.

This option cannot be unselected.

### 11.8.2 Common Record UNSEL check box

The Common Record UNSEL check box indicates unselect audio is included in the common record audio output.

### 11.8.3 Common Record NENA check box

The Common Record NENA check box indicates NENA audio is included in the common record audio output.

NENA audio can be placed on hold; when it is on hold, it becomes part of the unselect audio and follow rules of the Common Record UNSEL check box.

## 11.9 System parameters setup

### 11.9.1 24 HR Clock check box

The 24 Hr Clock check box indicates whether the display shows a 12-hour clock or a 24-hour clock. When selected, the 24-hour clock is seen.

### 11.9.2 Change IP On Display check box

The Change IP On Display check box indicates the IP Address can be changed using the softkeys on the front of the unit.

### 11.9.3 Clock Update field

The Clock Update field is used to set how often, in seconds, the ADHB-4 Gen 2 syncs its clock while the PC is running C-Soft.

The range for this field is 0 to 604,800 seconds.

When the field is set to 0, the clock is updated only once when C-Soft starts.

### 11.9.4 Contrast drop down menu

The Contrast drop down menu is used to select the contrast level of the display on front of the unit.

### 11.9.5 Min. Headset Volume drop down menu

The Min. Headset Volume drop down menu is used to set the minimum headset volume for the controller headset.

### 11.9.6 Tech Display check box

The Tech Display check box indicates whether the ADHB-4 Gen 2 is in Tech Display Mode or in Normal Operation Mode. When selected, Tech Display Mode is seen. For more information on Tech Mode, refer to “*Tech Display mode, page 87*”.

## 11.10 Submit button

The Submit button is used to temporarily save changes to the ADHB-4 Gen 2.

To permanently save changes, do the following:

1. Click the **Submit** button.  
The changes are sent to the ADHB-4 Gen 2 to temporary storage.
2. From the left navigation pane, select **Save Parameters**.  
The Save Parameters window appears.
3. Click the **Save Parameters** button.  
Changes are now permanently saved to the ADHB-4 Gen 2.

## 12 Gain Setup window

The Gain Setup window, shown in the Figure below, is used to configure gains for the audio inputs and outputs.

Each option on this page is adjusted with a slider. Use either the mouse or keyboard arrow keys to adjust the slider to the desired level.

Use the navigation pane on the left to open the following sections:

- Aux Audio Input Gains
- Microphone Input Gains
- Mic In Noise Threshold
- NENA Gains
- Recorder Output Gains

**TELEX ADHB-4 GEN2**

Name: Telex ADHB-4 Gen2  
MAC: 00:0B:7C:70:39:10  
HW: 1.003 FW: 1.100  
Checksum: 4E67D0AA  
SN: 405449295400170002

**TELEX**  
Radio Dispatch

admin | Logout

**TELEX ADHB-4 GEN2**

- Home
- Ethernet Setup
- System Setup
- Gain Setup**
  - Aux Audio Input Gains
  - Microphone Input Gains
  - Mic In Noise Threshold
  - NENA Gains
  - Recorder Output Gains
- Account Management
- System Status
- Backup & Restore
- Firmware Upgrade
- Save Parameters

**AUX AUDIO INPUT GAINS**

Aux Audio Left Input: 0 dB      Aux Audio Right Input: 0 dB

**MICROPHONE INPUT GAINS**

Headset Mic: 0 dB      RJ12 Desk Mic: 0 dB  
RHB 1 Mic: 0 dB      XLR Desk Mic: 0 dB  
RHB 2 Mic: 0 dB

**MICROPHONE INPUT NOISE THRESHOLD**

Headset Mic: 0      RJ12 Desk Mic: 0  
RHB 1 Mic: 0      XLR Desk Mic: 0  
RHB 2 Mic: 0

**NENA GAINS**

NENA Input: 0 dB      NENA Output: 0 dB

**RECORDER OUTPUT GAINS**

Common Record Vol: 0 dB      Unselect Record Vol: 0 dB

Submit

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Figure 12.1: Gain Setup window

## **12.1 Aux Audio Input gains**

### **12.1.1 Aux Audio Left Input slider**

The Aux Audio Left Input slider is used to configure the input level for the left auxiliary audio input.

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

### **12.1.2 Aux Audio Right Input slider**

The Aux Audio Right Input slider is used to configure the input level for the right auxiliary audio input.

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

## **12.2 Microphone Input gains**

### **12.2.1 Headset Mic slider**

The Headset Mic slider is used to configure the input level for a controller headset microphone.

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

### **12.2.2 RHB 1 Mic slider**

The RHB 1 Mic slider is used to configure the input level for a RHB 1 microphone.

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

### **12.2.3 RHB 2 Mic slider**

The RHB 2 Mic slider is used to configure the input level for a RHB 2 microphone.

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

### **12.2.4 RJ12 Desk Mic slider**

The RJ12 Desk Mic slider is used to configure the input level for an RJ-12 desk microphone.

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

### **12.2.5 XLR Desk Mic slider**

The XLR Desk Mic slider is used to configure the input level for an XLR desk microphone.

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

## 12.3 Microphone Input Noise threshold

### 12.3.1 Headset Mic slider

The Headset Mic slider is used to control the noise tolerance of the ADHB-4 Gen 2 when a controller headset is connected.

A higher value indicates a lower noise tolerance at the expense of audio quality.

The range for this field is 0 to 10.

### 12.3.2 RHB 1 Mic slider

The RHB 1 Mic slider is used to control the noise tolerance of the ADHB-4 Gen 2 when a RHB 1 headset/handset is connected.

A higher value indicates a lower noise tolerance at the expense of audio quality.

The range for this field is 0 to 10.

### 12.3.3 RHB 2 Mic slider

The RHB 2 Mic slider is used to control the noise tolerance of the ADHB-4 Gen 2 when a RHB 2 headset/handset is connected.

A higher value indicates a lower noise tolerance at the expense of audio quality.

The range for this field is 0 to 10.

### 12.3.4 RJ12 Desk Mic slider

The RJ12 Desk Mic slider is used to control the noise tolerance of the ADHB-4 Gen 2 when an RJ-12 desk microphone is connected.

A higher value indicates a lower noise tolerance at the expense of audio quality.

The range for this field is 0 to 10.

### 12.3.5 XLR Desk Mic slider

The XLR Desk Mic slider is used to control the noise tolerance of the ADHB-4 Gen 2 when an XLR desk microphone is connected.

A higher value indicates a lower noise tolerance at the expense of audio quality.

The range for this field is 0 to 10.

## 12.4 NENA gains

### 12.4.1 NENA Input slider

The NENA Input slider is used to configure the input level for a NENA line.

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

### 12.4.2 NENA Output slider

The NENA Output slider is used to configure the output level for a NENA line.

The range for this field is -30dB to 9dB.

## 12.5 Recorder Output gains

### 12.5.1 Common Record Vol slider

The Common Record Vol slider is used to configure the output level for the Common recorder. The Common recorder output is a summation of any active audio in the dispatch position. Common audio sources include: Select, Unselect (optional), PTT TX, NENA TX (optional), and NENA RX (optional).

The range for this field is -30dB to 9dB.

### 12.5.2 Unselect Record Vol slider

The Unselect Record Vol slider is used to configure the output level for the Unselect recorder. The Unselect recorder is the unselect audio being played to speaker 2 in the dispatch position.

The range for this field is -30dB to 9dB.



#### Notice!

The ADHB-4 Gen 2 does not support recording audio routed to speakers 3-6.

## 12.6 Submit button

The Submit button is used to temporarily save changes to the ADHB-4 Gen 2.

To permanently save changes, do the following:

1. Click the **Submit** button.  
The changes are sent to the ADHB-4 Gen 2 to temporary storage.
2. From the left navigation pane, select **Save Parameters**.  
The Save Parameters window appears.
3. Click the **Save Parameters** button.  
Changes are now permanently saved to the ADHB-4 Gen 2.

## 13 Account Management window

The Account Management window, refer to the Figure below, is used to manage user accounts for the ADHB-4 Gen 2 web browser configuration windows, and the ADHB-4 Gen 2 system parameters may also be reset to factory defaults from this window.

Use the navigation pane on the left to open the following sections:

- System Parameters
- User Accounts

**TELEX**  
Radio Dispatch

**TELEX ADHB-4 GEN2**

**Name:** Telex ADHB-4 Gen2  
**MAC:** 00:0B:7C:70:39:10  
**HW:** 1.003 **FW:** 1.100  
**Checksum:** 4E67D0AA  
**SN:** 405449295400170002

**admin** | Logout

**SYSTEM PARAMETERS**

Restore Factory Defaults Confirmation Code: **t4zrw3k**

Enter Restore Code:

**USER ACCOUNTS**

Username:	Delete User:	
admin	<input type="checkbox"/>	<input type="button" value="Edit"/>
<input type="button" value="Add User"/>	<input type="button" value="Delete User"/>	

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**Figure 13.1:** Account management window

## 13.1 System Parameters

If required, all of the ADHB-4 Gen 2 system parameters may be reset to factory defaults. A restore code must be entered to reset the parameters. The restore code is displayed in red in the System Parameters section, as shown in the Figure above.

To reset the system parameters, do the following:

1. In the Enter Restore Code field, enter the **Restore Factory Defaults Confirmation Code**.
2. Click **Restore**.
  - If an error occurred in the Restore Code entry, an ERROR message appears.
  - If the Restore Code was entered correctly, a SUCCESS message appears.
3. From the left navigation, select **Save Parameters**.  
The Save Parameters window appears.
4. Click **Save Parameters**.



### Caution!

All user data (for example, IP Address, password, etc.) is reset back to the factory default.

## 13.2 User Accounts

Access to the ADHB-4 Gen 2 web browser configuration is protected by usernames and passwords.

There is one default admin account:

Default username: admin

Default password: admin



### Notice!

The admin default password must be changed before logging in for the first time to prevent unauthorized access to the ADHB-4 Gen 2. The password's length is 8-20 characters and needs to include a capital letter, a number, and a special character.

### 13.2.1 Add user account

To add a user account, do the following:

#### NOTE:

- Only five user accounts can be created.
- Make note of the new password before adding or changing a password.
- The username must be unique.
- If the username already exists, the ADHB-4 Gen 2 displays an error and does not create the user account.

1. From the left navigation, select **Account Management**.  
The Account Management window appears.



2. From the User Accounts section, click the **Add User button**.  
The Add User Account window appears.
3. In the Username field, enter a **username**.  
The username's length can be up to 20 characters.
4. In the Password field, enter a **password**.  
The password's length is 8-20 characters and needs to include a capital letter, a number, and a special character.
5. In the Confirm Password field, enter the **same password** assigned in the previous step.
6. From the Set User Permissions section, select the **check boxes** to allow access to different web browser configuration windows for the user.
7. Click the **Submit button**.  
The changes are sent to the ADHB-4 Gen 2 temporary storage.
8. From the left navigation, select **Save Parameters**.  
The Save Parameters window appears.
9. Click the **Save Parameters button**.  
Changes are now permanently saved to the ADHB-4 Gen 2.

**TELEX**  
Radio Dispatch

Name: Telex ADHB-4 Gen2  
MAC: 00:0B:7C:70:39:10  
HW: 1.003 FW: 1.100  
Checksum: 4E67D0AA  
SN: 405449295400170002

admin | Logout

**TELEX ADHB-4 GEN2**

- Home
- Ethernet Setup
- System Setup
- Gain Setup
- Account Management
  - System Parameters
  - User Accounts
- System Status
- Backup & Restore
- Firmware Upgrade
- Save Parameters

**ADD USER ACCOUNT**

Username: John P  
Password: .....  
Confirm Password: .....  
Password Matched

The password length is 8-16 and needs to include a capital letter, a number and a special character

**SET USER PERMISSION**

<input checked="" type="checkbox"/> Home	<input checked="" type="checkbox"/> Gain Setup	<input checked="" type="checkbox"/> Backup & Restore
<input type="checkbox"/> Ethernet Setup	<input checked="" type="checkbox"/> Account Management	<input type="checkbox"/> Firmware Upgrade
<input checked="" type="checkbox"/> System Setup	<input checked="" type="checkbox"/> System Status	<input checked="" type="checkbox"/> Save Parameters

Submit Cancel

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**Figure 13.2:** Account Management Window - Add User Account

## 13.2.2

### Edit user account

To edit a user account, do the following:

**NOTE:**

- Only five user accounts can be created.
  - Make note of the new password before adding or changing a password.
  - The username must be unique.
  - If the username already exists, the ADHB-4 Gen 2 displays an error and does not create the user account.
1. From the left navigation, select **Account Management**.  
The Account Management window appears.
  2. From the User Accounts section, click the **Edit button next to the username to edit**.  
The Edit User Account window appears.
  3. In the Username field, enter a **new username**.  
The username's length can be up to 20 characters.
  4. In the New Password field, enter a **new password**.  
The password's length is 8-20 characters and needs to include a capital letter, a number, and a special character.  
NOTE that if the password field is left blank, the password will not change.
  5. In the Confirm Password field, enter the **same password** assigned in the previous step.
  6. From the Set User Permissions section, select the **check boxes** to allow access to different web browser configuration windows for the user.
  7. Click the **Submit button**.  
The changes are sent to the ADHB-4 Gen 2 temporary storage.
  8. From the left navigation, select **Save Parameters**.  
The Save Parameters window appears.
  9. Click the **Save Parameters** button.  
Changes are now permanently saved to the ADHB-4 Gen 2.

**Name:** Telex ADHB-4 Gen2  
**MAC:** 00:0B:7C:70:39:10  
**HW:** 1.003    **FW:** 1.100  
**Checksum:** 4E67D0AA  
**SN:** 405449295400170002

**TELEX**  
Radio Dispatch

TELEX ADHB-4 GEN2

Home

Ethernet Setup

System Setup

Gain Setup

Account Management

System Parameters

User Accounts

System Status

Backup & Restore

Firmware Upgrade

Save Parameters

admin | Logout

EDIT USER ACCOUNT

User ID

1

Username

admin

New Password

••••••

Confirm Password

••••••

The password length is 8-16  
and needs to include a capital letter, a  
number and a special character

SET USER PERMISSION

☒ Home

☒ Ethernet Setup

☒ System Setup

☒ Gain Setup

☒ Account Management

☒ System Status

☒ Backup & Restore

☒ Firmware Upgrade

☒ Save Parameters

Submit

Cancel

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Figure 13.3: Account Management Window - Edit User Account

### 13.2.3

#### Delete user account

To delete a user account, do the following:

**NOTE:**

- The first user account is the administrator and cannot be deleted.
- Deleting user accounts take effect immediately.

1. From the left navigation, select **Account Management**.  
The Account Management window appears.
2. From the User Accounts section, select the **check boxes** of the user accounts that need to be deleted.
3. Click the **Delete button**.

The selected user accounts will be deleted.

The screenshot displays the TELEX ADHB-4 GEN2 web interface. At the top, a header bar contains the device name and MAC address, the TELEX Radio Dispatch logo, and the user 'admin' with a Logout button. A left sidebar lists navigation options: Home, Ethernet Setup, System Setup, Gain Setup, Account Management (selected), System Status, Backup & Restore, Firmware Upgrade, and Save Parameters. Under 'Account Management', 'System Parameters' and 'User Accounts' are visible. The main content area is divided into 'SYSTEM PARAMETERS' and 'USER ACCOUNTS'. The 'SYSTEM PARAMETERS' section shows a 'Restore Factory Defaults Confirmation Code: t4zrw3k' and a field to 'Enter Restore Code' with a 'Restore' button. The 'USER ACCOUNTS' section lists two users: 'admin' and 'John P'. The 'admin' user has a checkbox that is unchecked, and the 'John P' user has a checked checkbox. Both users have 'Add User' and 'Delete User' buttons. To the right of each user name are 'Edit' buttons. At the bottom of the interface, a copyright notice reads: '© Copyright 2019 Bosch Security Systems, Inc. All Rights Reserved.'

**Figure 13.4:** Account Management Window - Delete User Account

## 14 System Status window

The System Status window, shown in the Figure below, summarizes the current ADHB-4 Gen 2 system setup and activity. From this window, you can view the status of the auxiliary inputs and relays, input levels, connected microphones, and speakers as well as monitor and PTT statuses.

**TELEX ADHB-4 GEN2**

Name: Telex ADHB-4 Gen2  
MAC: 00:0B:7C:70:39:10  
HW: 1.003 FW: 1.100  
Checksum: 4E67D0AA  
SN: 405449295400170002

**TELEX**  
Radio Dispatch

admin | Logout

**TELEX ADHB-4 GEN2**

- Home
- Ethernet Setup
- System Setup
- Gain Setup
- Account Management
- System Status**
  - Refresh Status
- Backup & Restore
- Firmware Upgrade
- Save Parameters

**AUX/RELAY STATUS**

AUX 1 Input: High  
AUX 2 Input: High  
Relay 1: Off  
Relay 2: Off

**GAINS STATUS**

Aux Audio Left Input Level: -37 dB  
Mic Input Level: -37 dB  
Aux Audio Right Input Level: -37 dB  
NENA Input Level: -37 dB

**MICROPHONE STATUS**

Headset Connection: Disconnected  
RHB 1 Connection: Disconnected  
RHB 2 Connection: Disconnected  
Headset PTT: Inactive  
RHB 1 PTT: Inactive  
RHB 2 PTT: Inactive

**SPEAKER STATUS**

Speaker 1: Disconnected  
Speaker 3: Disconnected  
Speaker 5: Disconnected  
Speaker 2: Disconnected  
Speaker 4: Disconnected  
Speaker 6: Disconnected

**MISC STATUS**

Desk Mic Monitor: Inactive  
Footswitch Monitor: Inactive  
NENA Hook: On-hook  
Desk Mic PTT: Inactive  
Footswitch PTT: Inactive

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Figure 14.1: System Status window

### 14.1 Refresh Status link

The Refresh Status link, located in the left navigation pane, is used to refresh the information in the System Status window.



#### Notice!

This link is a manual refresh. The statuses in this window automatically update when changes occur.

## 14.2 AUX/Relay Status

### 14.2.1 AUX 1 Input

The AUX 1 Input field indicates the current state of the AUX 1 input.

Field values can be: Low or High.

### 14.2.2 AUX 2 Input

The AUX 2 Input field indicates the current state of the AUX 2 input.

Field values can be: Low or High.

### 14.2.3 Relay 1 field

The Relay 1 field indicates the current state of relay 1.

Field values can be: On or Off.

### 14.2.4 Relay 2 field

The Relay 2 field indicates the current state of relay 2.

Field values can be: On or Off.

## 14.3 Gains Status

### 14.3.1 Aux Audio Left Input Level field

The Aux Audio Left Input Level field indicates the calculated input level in dB for the left auxiliary audio input.

### 14.3.2 Aux Audio Right Input Level field

The Aux Audio Right Input Level field indicates the calculated input level in dB for the right auxiliary audio input.

### 14.3.3 Mic Input Level field

The Mic Input Level field indicates the calculated input level in dB for the currently active microphone.

### 14.3.4 NENA Input Level field

The NENA Input Level field indicates the calculated input level in dB for the currently off hook NENA line.

## 14.4 Microphone Status

### 14.4.1 Headset Connection field

The Headset Connection field indicates the current state of the controller headset.

Field values can be: Connected or Disconnected.

### 14.4.2 RHB 1 Connection field

The RHB 1 Connection field indicates the current state of RHB 1's headset/handset.

Field values can be: Connected or Disconnected.

### 14.4.3 RHB 2 Connection field

The RHB 2 Connection field indicates the current state of RHB 2's headset/handset.

Field values can be: Connected or Disconnected.

### 14.4.4 Headset PTT field

The Headset PTT field indicates the current state of the controller headset's PTT switch.

Field values can be: Active or Inactive.

### 14.4.5 RHB 1 PTT field

The RHB 1 PTT field indicates the current state of the RHB 1 headset/handset's PTT switch.

Field values can be: Active or Inactive.

### 14.4.6 RHB 2 PTT field

The RHB 2 PTT field indicates the current state of the RHB 2 headset/handset's PTT switch.

Field values can be: Active or Inactive.

## 14.5 Speaker Status

### Speakers 1-6 field

The Speakers 1-6 field indicates if a speaker(s) is connected and whether or not it is active. When the speaker is connected and not muted, the output level in dB will be displayed.

Field values can be:

- Connected: indicates the speaker is connected but idle.
- Disconnected: indicates the speaker is not connected.
- Active: indicates the speaker is currently in use.
- Muted: indicates the speaker is muted.
- Min Muted: indicates the speaker is muted to a minimum (the minimum mute level is set in C-Soft Designer).

## 14.6 Misc Status

### 14.6.1 Desk Mic Monitor field

The Desk Mic Monitor field indicates the current state of the desk mic monitor.

Field values can be: Active or Inactive.

### 14.6.2 Footswitch Monitor field

The Footswitch Monitor field indicates the current state of the footswitch monitor.

Field values can be: Active or Inactive.

### 14.6.3 NENA Hook field

The NENA Hook field indicates the current state of the NENA hook switch.

Field values can be: Off-hook or On-hook.

### 14.6.4 Desk Mic PTT field

The Desk Mic PTT field indicates the current state of the Desk Mic PTT.

Field values can be: Active or Inactive.

### 14.6.5 Footswitch PTT field

The Footswitch PTT field indicates the current state of the Footswitch PTT.

Field values can be: Active or Inactive.



## 15 Backup & Restore window

The Backup & Restore window, shown in the Figure below, is used to backup and restore the device setting of the ADHB-4 Gen 2 device.

Use the navigation pane on the left to open the following sections:

- Internal Storage
- External Storage

**TELEX ADHB-4 GEN2**

Name: Telex ADHB-4 Gen2  
 MAC: 00:0B:7C:70:39:10  
 HW: 1.003 FW: 1.100  
 Checksum: 4E67D0AA  
 SN: 405449295400170002

**TELEX**  
 Radio Dispatch

admin | Logout

**INTERNAL STORAGE**

Create Backup (max 5)

Name:  Backup

Available Backups

Name	Time	Version
No backups found		

**EXTERNAL STORAGE**

Backup Settings to a File

Backup

Restore Settings from a File

Browse... Restore

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Figure 15.1: Backup & Restore Window

### 15.1 Internal storage

#### 15.1.1 Name field

The Name field is used to enter a user-defined descriptive name (1 to 32 characters) for the backup. After the Backup is created, this name appears in the Name Column display of the Available Backups list.

### 15.1.2

#### **Backup button**

The Backup button is used to create a backup of the current settings on the ADHB-4 Gen 2. The backup is saved to the ADHB-4 Gen 2 persistent storage.

### 15.1.3

#### **Available backups list**

The Available Backups list displays a list of existing backups that are saved to the ADHB-4 Gen 2 persistent storage.



#### **Notice!**

The maximum number of device backups is five. If five backups are already displayed in the Available Backups list, one must be deleted before another one can be created.

#### **Name column display**

The Name column is used to display the Name of any existing backup files.

This field is automatically populated and cannot be modified.

#### **Time column display**

The Time column is used to display the date and time that any existing backup files were created.

This field is automatically populated and cannot be modified.

#### **Version column display**

The Version column is used to display the firmware version present on the ADHB-4 Gen 2 when any existing backup files were created.

This field is automatically populated and cannot be modified.

#### **Restore button**

The Restore button is used to restore the settings present on the ADHB-4 Gen 2 when the backup was created. A Restore button is located to the right of each existing backup.

#### **Delete button**

The Delete button is used to delete the backup from the ADHB-4 Gen 2 persistent storage. A Delete button is located to the right of each existing backup.

### Save a new backup

To save a new backup to the ADHB-4 Gen 2 persistent storage, do the following:

1. From the left navigation, select **Backup & Restore**.  
The Backup & Restore window appears.
2. Under the Internal Storage section, enter a **name** for the backup in the Name field.
3. Click the **Backup** button.  
The backup is saved to the ADHB-4 Gen 2 device storage. The backup appears in the list of Available Backups.



### Notice!

The maximum number of device backups is five. If five backups are already displayed in the Available Backups list, one must be deleted before another one can be created.

### Restore a backup

To restore a backup from the ADHB-4 Gen 2 persistent storage, do the following:

1. From the left navigation, select **Backup & Restore**.  
The Backup & Restore window appears.
2. In the Internal Storage section from the Available Backups list, choose the desired **backup**.  
Note: Use the Name and Time fields to help identify the desired backup.
3. Click the **Restore** button.  
The settings present at the time of the backup are restored to the ADHB-4 Gen 2.

### Delete a backup

To delete a backup from the ADHB-4 Gen 2 persistent storage, do the following:

1. From the left navigation, select **Backup & Restore**.  
The Backup & Restore window appears.
2. In the Internal Storage section from the Available Backups list, choose the desired **backup**.
3. Click the **Delete** button.  
The backup is erased from the ADHB-4 Gen 2 persistent storage.

## 15.2 External storage

### 15.2.1 Backup button

The Backup button is used to record the current settings of the ADHB-4 Gen 2 into a file that can be saved to the local computer.

### 15.2.2 Restore Settings from a File field

The Restore Settings from a File field is used to display the filename of the desired backup file. The filename is populated by using the Browse button.

### 15.2.3 Browse button

The Browse button is used to find the desired backup file in the file system of the local computer. When pressed, the Browse button opens the File Upload window. This allows the user to select the .vga file containing the configuration settings to apply to the ADHB-4 Gen 2.

## 15.2.4

### Restore button

The Restore button is used to initiate the restore process after the desired backup file has been selected.

#### Save a new backup

To save a backup to the local computer, do the following:

1. From the left navigation, select **Backup & Restore**.  
The Backup & Restore window appears.
2. In the External Storage section, click the **Backup** button.  
The browser downloads a .vga. file that can be viewed and edited in Telex System Manager.

#### Restore a backup

To restore a backup from the local computer, do the following:

1. From the left navigation, select **Backup & Restore**.  
The Backup & Restore window appears.
2. In the External Storage section, click the **Browse...** button.  
The File Upload window appears.
3. Select the desired **.vga backup file**.
4. Click the **Open** button.  
The window closes and the selected backup file is displayed in the Restore Settings from a File field.
5. Click the **Restore** button.  
The settings present at the time of the backup are restored to the ADHB-4 Gen 2.

## 16 Firmware Upgrade window

Telex VoIP Hardware firmware can be updated using the following built-in steps or TSM (Telex System Manager). TSM installation files and the VoIP firmware can be downloaded at <https://products.telex.com/na/en/partners/>.

### NOTE:

- VoIP hardware includes the following Telex devices: ADHB-4 Gen2, IP-224, IP-2002, IP-1616, C-6200 and NEO-10.
- The built-in steps and TSM use .tfb (Telex Firmware Binary) files to update VoIP firmware.

The screenshot displays the Telex ADHB-4 Gen2 web interface. At the top, a blue header bar contains the Telex logo and 'Radio Dispatch'. Below the header, a white box displays device information: Name: Telex ADHB-4 Gen2, MAC: 00:0B:7C:70:39:10, HW: 1.003 FW: 1.100, Checksum: 4E67D0AA, SN: 405449295400170002. A sidebar menu on the left lists various settings, with 'Firmware Upgrade' highlighted. The main content area is titled 'FIRMWARE UPGRADE' and features a 'Firmware file:' label next to a text input field and a 'Browse...' button. Below this, the 'UPGRADE STATUS' section shows a progress bar labeled 'Idle'. The footer contains the copyright notice: '© Copyright 2019 Bosch Security Systems, Inc. All Rights Reserved.'

Figure 16.1: Firmware Upgrade Window

### 16.1 Firmware Upgrade

#### 16.1.1 Firmware File field

The Firmware File field displays the name of the selected firmware file.

## 16.1.2

### Browse button

The Browse button is used to select the desired firmware file from the local computer location where it is saved.

## 16.2

### Upgrade status

### 16.2.1

#### Status text

The Status Text displays messages describing the current status of the firmware upgrade.

Possible values are:

- Idle
- Uploading file...
- Firmware upgrade successful. Rebooting...
- ERROR: Wrong device type

### 16.2.2

#### Progress bar

The Progress bar displays a color coded progress bar marking the progress of the firmware upgrade.

Possible values are:

- Yellow — The upgrade is in progress.
- Green — The upgrade has successfully completed.
- Red — The upgrade process has failed. An error has occurred.

To upgrade the firmware on the ADHB-4 Gen 2, do the following:

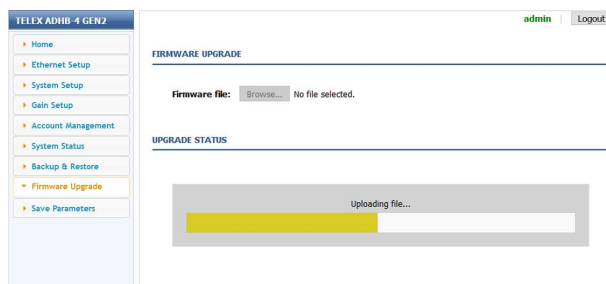
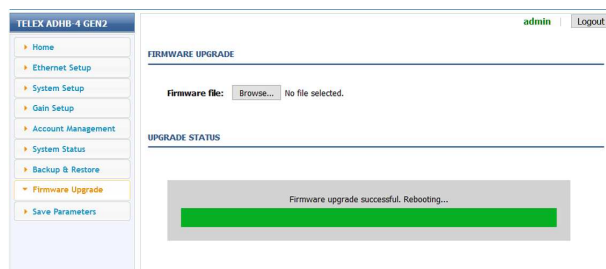
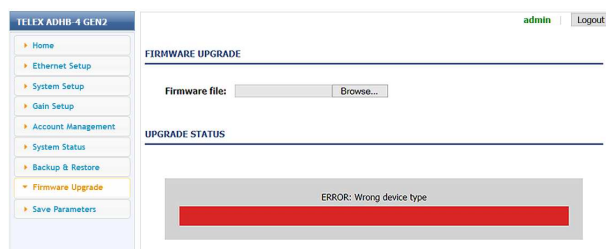
1. From the left navigation, select **Firmware Upgrade**.  
The Firmware Upgrade window appears.
2. Click the **Browse button**.  
The File Upload window appears.
3. Select the desired **.tfb file**.
4. Click the **Open** button.  
The firmware begins installing on the ADHB-4 Gen 2. The progress of the upgrade is displayed in the Upgrade Status section.

When the **upgrade completes** successfully, SUCCESS appears on the ADHB-4 Gen 2 LCD display and the ADHB-4 Gen 2 reboots.



#### Notice!

To upgrade firmware using Telex System Manager, refer to the Telex System Manager Technical Manual (P/N F.01U.196.144), available for download at <https://products.telex.com/na/en/partners/> with an approved account.

**Figure 16.2:** Upgrade Status - Uploading File**Figure 16.3:** Upgrade Status - Successful**Figure 16.4:** Upgrade Status - Error

## 17 Save Parameters window

The Save Parameters window is used to save the current configuration to the ADHB-4 Gen 2. It is also used to reset the ADHB-4 Gen 2 device.

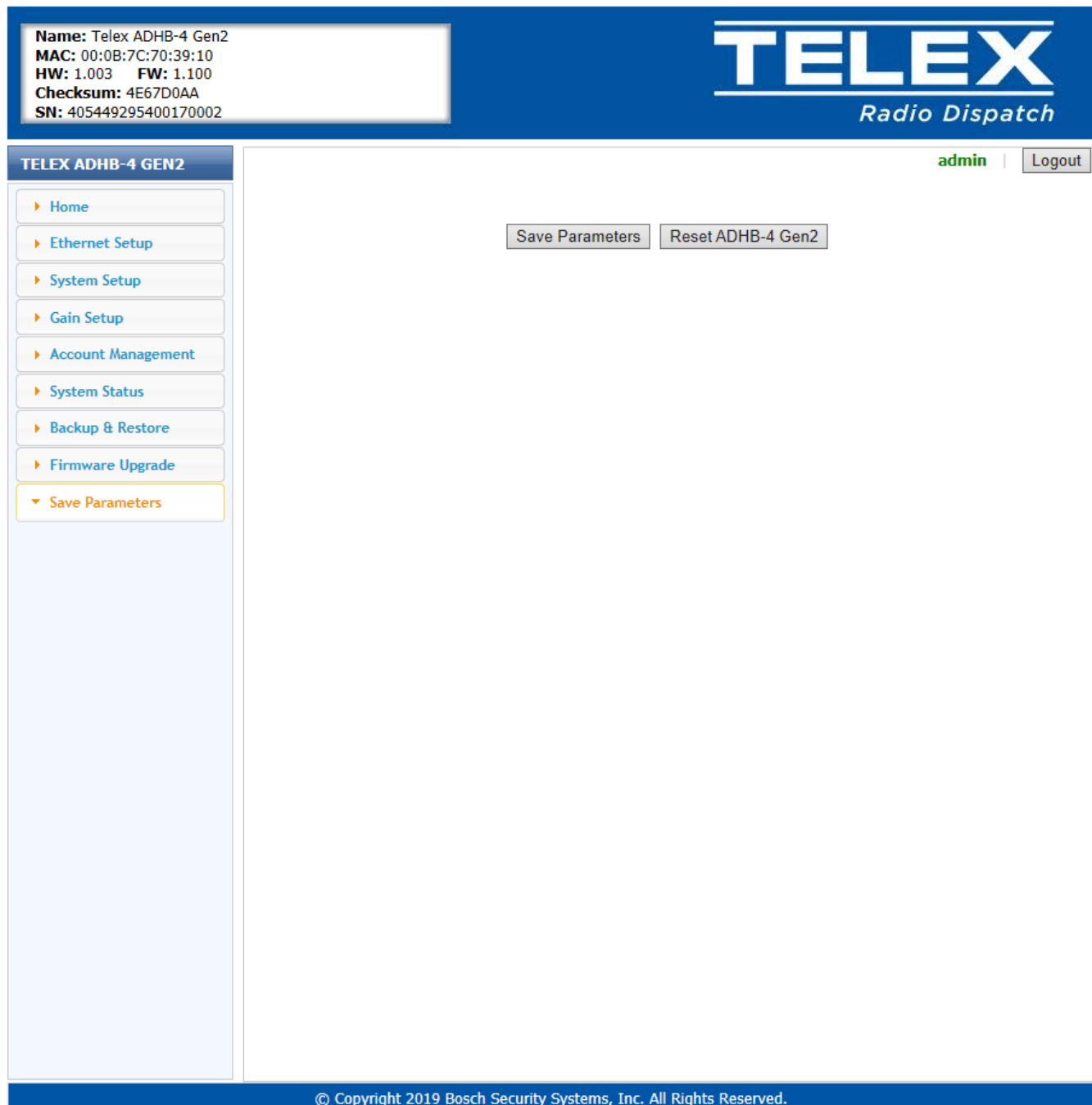


Figure 17.1: Save Parameters Window

### 17.1 Save Parameters button

The Save Parameters button is used to save any changes submitted to the ADHB-4 Gen 2 for storage into permanent memory.



To save changes to permanent memory, do the following:

1. From the left navigation pane, select **Save Parameters**.  
The Save Parameters window appears.
2. Click the **Save Parameters button**.  
Changes are now permanently saved to the ADHB-4 Gen 2.

**Notice!**

If the IP Address is changed on the Ethernet Setup window, the web browser is redirected to the new IP Address after the parameters are saved.

## 17.2

### Reset ADHB-4 Gen 2 button

The Reset ADHB-4 Gen 2 button is used to perform a full reset of the ADHB-4 Gen 2. This is the software equivalent of a power down reset.

To reset the ADHB-4 Gen 2, do the following:

1. From the left navigation pane, select **Save Parameters**.  
The Save Parameters window appears.
2. Click **Reset ADHB-4 Gen 2**.  
The ADHB-4 Gen 2 web page displays the countdown clock until the unit fully reboots.  
The web page home screen appears after the completion of reset.

## 18 Operation

### 18.1 ADHB-4 Gen 2 front panel

The ADHB-4 Gen 2 front panel uses an LCD (Liquid Crystal Display) display to provide the user with basic ADHB-4 Gen 2 information and menu options. The front panel softkeys are used to navigate through the menus and make quick changes to a few basic parameters. Front panel LEDs indicate when the ADHB-4 Gen 2 is transmitting (PTT) and if a network connection is established (LINK).

### 18.2 Front panel display

Take care not to damage the display:

- Clean with soft cloth using ethyl alcohol or isopropyl alcohol. Do not use solvents such as ketone or aromatics.
- Do not operate or store in direct exposure to sunlight.

### 18.3 Front panel softkeys

The Front Panel softkeys are used to access and navigate through the programming menus.

#### 18.3.1 Menu softkey

The MENU softkey is used to access the Main menu. The MENU softkey is also used to navigate through the lower level menus and used to select menu options. Once the softkey is pressed, the Main menu appears. For more information, refer to “*Main menu, page 76*”.

#### 18.3.2 Esc softkey

The ESC softkey is used to return to the previous menu level.

#### 18.3.3 Arrow up softkey



The Arrow Up softkey is used to navigate the ADHB-4 Gen 2 menus by moving the selection up the menu, and it is also used to increase the volume for the controller headset speaker.

#### 18.3.4 Arrow down softkey



The Arrow Down softkey is used to navigate the ADHB-4 Gen 2 menus by moving the selection down the menu, and it is also used to decrease the volume for the controller headset speaker.

#### 18.3.5 Arrow softkey



Positioning the arrow next to the desired selection allows the user to proceed to the next menu level by pressing the MENU softkey again

## 18.4 NENA operations

When an active phone call (off-hook) signal is sent from the phone system, the phone caller's audio is routed to the active headset or handset earpiece. The dispatcher's audio is also routed from the headset or handset microphone back to the phone system. This allows for full-duplex conversations to occur using a single headset, attached to the ADHB-4 Gen 2 for both radio and phone operations.

During an active phone call, selected radio traffic is routed from the headset earpiece to the select speaker, and the dispatcher's voice is routed to the radio channel when PTT is pressed. This allows the dispatcher to continue to hear the incoming phone caller's audio at all times during a phone call, but the caller will not hear the dispatcher's voice during a radio PTT.

## 19 Main menu

The MAIN MENU, shown in the Figure below, is used to select different menu levels.

Available selections for this menu are:

- Systems Utilities
- Network Settings

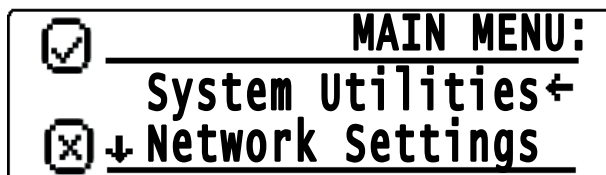


Figure 19.1: Main Menu Screen

### 19.1 Main menu structure

#### System Utilities

- View Unit Info
- 24 HR Clock
- Display Contrast
- Remote Access
- Tech Display
- Reboot Device

#### Network Settings

- DHCP
- IP Address
- Subnet Mask
- Gateway

### 19.2 System Utilities menu

The System Utilities menu is used to view unit info, change the clock format, change the contrast, enable/disable remote access, change the display mode, and reboot the ADHB-4 Gen 2.

#### 19.2.1 View Unit Info menu

The View Unit Info menu, shown in the Figures below, is used to display the unit's information, including network parameters, serial number, hardware version, and software version.

```

Telex ADHB-4 Gen 2
IP Addr: 172.19.27.174
Subnet: 255.255.0.0
MAC ID:00:0B:7C:70:00:3D
  
```

Telex ADHB-4 Gen 2  
 SN: 012345678901234567  
 Hardware Version:1.000  
 Software Version:0.700

Figure 19.2: View Unit Info Menu Screen

To display View Unit Info, do the following:

1. From the home state, press the **MENU** softkey.  
The MAIN MENU appears.
2. Using the arrow softkeys, select **System Utilities**.
3. Press the **MENU** softkey.  
The SYSTEM UTILITIES menu appears.
4. Using the arrow softkeys, select **View Unit Info**.
5. Press the **MENU** softkey.  
The View Unit Information appears.

### 19.2.2

#### 24 HR Clock check box

The 24 HR Clock check box is used to change how the clock is displayed. The actual time is read from C-Soft. When C-Soft is opened, if the ADHB-4 Gen 2 is powered on and connected via USB, the ADHB-4 Gen 2 displays the clock. Once the clock is initially set, the time continues to display whether or not C-Soft is open.

Available selections for this menu are: 24 HR (military) or 12 HR (civilian).

☒ **SYSTEM UTILITIES:**  
 ↑ **24 HR Clock** ☒ ←  
☒ ↓ **Display Contrast**

Figure 19.3: 24 Hour Clock Check Box

To change how the clock displays, do the following:

1. From the home state, press the **MENU** softkey.  
The MAIN MENU appears.
2. Using the arrow softkeys, select **System Utilities**.
3. Press the **MENU** softkey.  
The SYSTEM UTILITIES menu appears.
4. Using the arrow softkeys, select **24 HR Clock**.
5. Press the **MENU** softkey to enable/disable the 24 HR Clock check box.  
When the check box is enabled, the clock is displayed in 24 HR format.  
When the check box is disabled, the clock is displayed in 12 HR format.
6. Press the **ESC** softkey to return to the home state.  
The updated clock format is displayed after a few seconds.

### 19.2.3

#### Display Contrast menu

The Display Contrast menu, shown in the Figure below, is used to set up the contrast level of the main display in front of the unit.



**Figure 19.4:** Display Contrast Menu Screen

To adjust the Contrast Level, do the following:

1. From the home state, press the **MENU** softkey.  
The MAIN MENU appears.
2. Using the arrow softkeys, select **System Utilities**.
3. Press the **MENU** softkey.  
The SYSTEM UTILITIES menu appears.
4. Using the arrow softkeys, select **Display Contrast**.
5. Press the **MENU** softkey.  
The DISPLAY CONTRAST menu appears.
6. Using the arrow softkeys, select the desired **contrast level**.
7. Press the **MENU** softkey to save the new contrast level.
8. Press the **ESC** softkey to return to the previous menu.

### 19.2.4

#### Remote Access

The Remote Access menu, shown in the Figure below, is used to enable/disable Telex System Manager configuration (TSM Enable) or web browser configuration (Webpage Enable) of the ADHB-4 Gen 2.

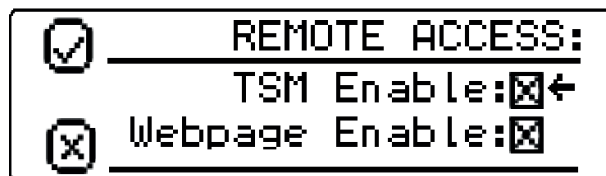


Figure 19.5: Remote Access Menu Screen

To change the remote access, do the following:

1. From the home state, press the **MENU** softkey.  
The MAIN MENU appears.
2. Using the arrow softkeys, select **System Utilities**.
3. Press the **MENU** softkey.  
The SYSTEM UTILITIES menu appears.
4. Using the arrow softkeys, select **Remote Access**.
5. Press the **MENU** softkey.  
The REMOTE ACCESS menu appears.
6. Using the arrow softkeys, select **TSM Enable**.
7. Press the **MENU** softkey to enable/disable the TSM Enable check box.
8. Using the arrow softkeys, select **Webpage Enable**.
9. Press the **MENU** softkey to enable/disable the Webpage Enable check box.
10. Press the **ESC** softkey to return to the previous menu.

### 19.2.5

#### Tech Display check box

The Tech Display check box is used to enable/disable Tech Display Mode on the ADHB-4 Gen 2. For more information on Tech Display Mode, refer to “*Tech Display mode, page 87*”.

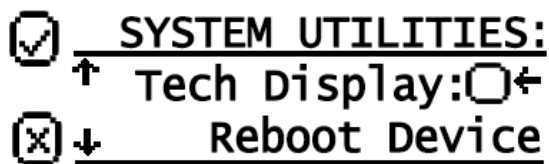


Figure 19.6: Tech Display Check Box

To change the display mode, do the following:

1. From the home state, press the **MENU** softkey.  
The MAIN MENU appears.
2. Using the arrow softkeys, select **System Utilities**.
3. Press the **MENU** softkey.  
The SYSTEM UTILITIES menu appears.
4. Using the arrow softkeys, select **Tech Display**.
5. Press the **MENU** softkey to enable/disable the Tech Display check box.  
When the check box is enabled, the tech display mode is active.  
When the check box is disabled, the normal display mode is active.
6. Press the **ESC** softkey to return to the home state.  
The updated display mode appears.

### 19.2.6

#### Reboot Device menu

The Reboot Device menu, shown in the Figure below, is used to reset the unit.

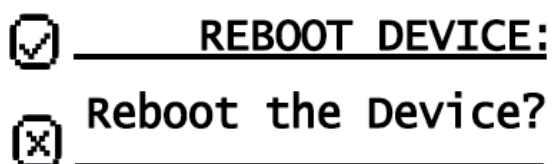


Figure 19.7: Reboot Device Menu Screen

To reset the device, do the following:

1. From the home state, press the **MENU** softkey.  
The MAIN MENU appears.
2. Using the arrow softkeys, select **System Utilities**.
3. Press the **MENU** softkey.  
The SYSTEM UTILITIES menu appears.
4. Using the arrow softkeys, select **Reboot Device**.
5. Press the **MENU** softkey.  
The REBOOT DEVICE menu appears.
6. Press the **MENU** softkey.  
The device begins rebooting.



## 19.3 Network Settings menu

The Network Settings menu is used to view and set the ADHB-4 Gen 2's network parameters.

Available selections include:

- DHCP
- IP Address
- Subnet Mask
- Gateway

### 19.3.1 DHCP check box

The DHCP (Dynamic Host Configuration Protocol) check box, shown in the Figure below, allows the ADHB-4 Gen 2 to acquire IP Addresses and other network configuration settings automatically when connected to a network.

By default, the DHCP check box is not selected.



#### Notice!

The network must allow DHCP service before the ADHB-4 Gen 2 can get the network parameters. Radio Dispatch does not recommend operating with DHCP enabled. Operating with DHCP enabled may cause the base IP Address to change unexpectedly, making changes to the software setup more difficult.

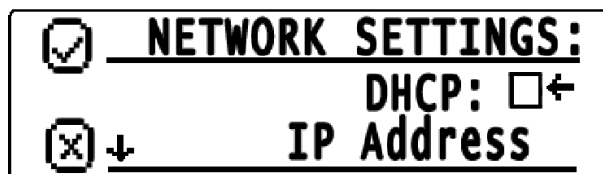


Figure 19.8: DHCP Menu Check Box

To enable DHCP for the unit, do the following:

1. From the home state, press the **MENU** softkey.  
The MAIN MENU appears.
2. Using the arrow softkeys, select **Network Settings**.
3. Press the **MENU** softkey.  
The NETWORK SETTINGS menu appears.
4. Using the arrow softkeys, select **DHCP**.
5. Press the **MENU** softkey to enable the **DHCP option check box**.

To validate the new network setting, do the following:

1. Using the arrow softkeys, select **IP Address**.
2. Press the **MENU** softkey.  
The IP Address of the unit appears.
3. Press the **ESC** softkey to return to the previous menu.

### 19.3.2

#### Set IP Address menu

The Set IP Address menu, shown in the Figure below, is used to display or set the unit's IP Address.

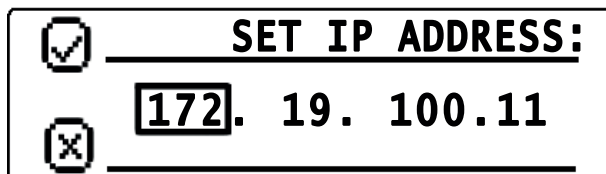


Figure 19.9: Set IP Address Menu Screen

To set the IP Address, do the following:

1. From the home state, press the **MENU** softkey.  
The MAIN MENU appears.
2. Using the arrow softkeys, select **Network Settings**.
3. Press the **MENU** softkey.  
The NETWORK SETTINGS menu appears.  
NOTE: Verify the **DHCP** check box is not selected.
4. Using the arrow softkeys, select **IP Address**.
5. Press the **MENU** softkey.  
The SET IP ADDRESS menu appears. The first IP Address quad is active.
6. Press the **MENU** softkey to change the quad field focus, as needed.
7. Press the **arrow softkeys** to change the quad number up or down by a value of one.  
OR  
Press and hold the **arrow softkeys** to rapidly change the quad number up or down.
8. Repeat **steps 6** and **7** until the IP Address is complete.
9. Press the **MENU** softkey.
10. Press the **ESC** softkey at any time to cancel and return to the previous menu.

### 19.3.3

#### Set Subnet Mask menu

The Set Subnet Mask menu, shown in the Figure below, is used to display or set the unit's Subnet Mask Address. The Subnet Mask is used to distinguish local addresses from addresses requiring the use of a gateway to reach other networks. Contact your Network Administrator to obtain the proper value for this field.

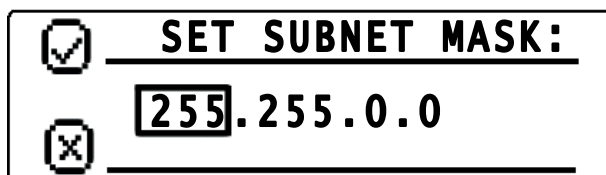


Figure 19.10: Set Subnet Mask Menu Screen

To set the Subnet Mask, do the following:

1. From the home state, press the **MENU** softkey.  
The MAIN MENU appears.
2. Using the arrow softkeys, select **Network Settings**.

3. Press the **MENU** softkey.  
The NETWORK SETTINGS menu appears.  
NOTE: Verify the **DHCP** check box is not selected.
4. Using the arrow softkeys, select **Subnet Mask**.
5. Press the **MENU** softkey.  
The SET SUBNET MASK menu appears. The first Subnet Mask quad is active.
6. Press the **MENU** softkey to change the quad field focus, as needed.
7. Press the **arrow softkeys** to change the quad number up or down by a value of one.  
OR  
Press and hold the **arrow softkeys** to rapidly change the quad number up or down.
8. Repeat **steps 6** and **7** until the Subnet mask settings are complete.
9. Press the **MENU** softkey.
10. Press the **ESC** softkey at any time to cancel and return to the previous menu.

### 19.3.4

#### Set Gateway menu

The Set Gateway menu, shown in the Figure below, is used to display or set the unit's gateway address. The gateway address is used to connect to another network.

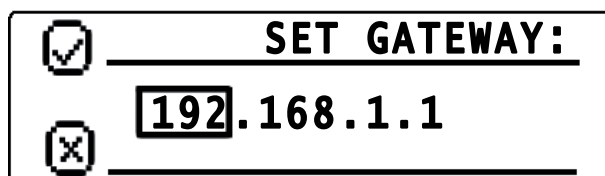


Figure 19.11: Set Gateway Menu Screen

To set the Gateway Address, do the following:

1. From the home state, press the **MENU** softkey.  
The MAIN MENU appears.
2. Using the arrow softkeys, select **Network Settings**.
3. Press the **MENU** softkey.  
The NETWORK SETTINGS menu appears.  
NOTE: Verify the **DHCP** check box is not selected.
4. Using the arrow softkeys, select **Gateway**.
5. Press the **MENU** softkey.  
The SET GATEWAY menu appears. The first gateway quad is active.
6. Press the **MENU** softkey to change the quad field focus, as needed.
7. Press the **arrow softkeys** to change the quad number up or down by a value of one.  
OR  
Press and hold the **arrow softkeys** to rapidly change the quad number up or down.
8. Repeat **steps 6** and **7** until the gateway settings are complete.
9. Press the **MENU** softkey.
10. Press the **ESC** softkey at any time to cancel and return to the previous menu.

## 20 Factory mode

Factory mode is used to reset the web browser configuration user accounts and to reset all of the unit's parameters to factory defaults.

### 20.1 Factory mode menu

The Factory Mode menu is used to select Reset Accounts or Factory Defaults.

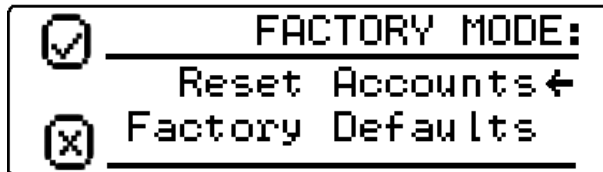


Figure 20.1: Factory Mode Menu Screen



Once the menu is accessed, a left arrow appears in the display next to the currently selected menu option.

#### 20.1.1 Reset Accounts option

The Reset Accounts option allows the operator to reset the web browser configuration user accounts on the ADHB-4 Gen 2. Once selected, the default username and the default password of the unit are reset to admin.

To reset the user accounts, do the following:

1. Turn the **unit** on.
2. From the home state, press the **MENU** softkey.  
The MAIN MENU appears.
3. Using the arrow softkeys, select **System Utilities**.
4. Press the **MENU** softkey.  
The SYSTEM UTILITIES menu appears.
5. Using the arrow softkeys, select **View Unit Info**.
6. Press the **MENU** softkey.  
The View Unit Information appears.
7. While the View Unit Info screen is displayed, use the arrow up and arrow down softkeys to perform the following sequence: **up, up, down, down**.  
The FACTORY MODE menu appears.
8. Using the arrow softkeys, select **Reset Accounts**.
9. Press the **MENU** softkey.  
Accounts Reset! appears.

## 20.1.2

### Factory Defaults option

The Factory Defaults option allows the operator to reset all the unit's parameters to default.

To reset the ADHB-4 Gen 2 back to the factory defaults, do the following:

1. Turn the **unit** on.
2. From the home state, press the **MENU** softkey.  
The MAIN MENU appears.
3. Using the arrow softkeys, select **System Utilities**.
4. Press the **MENU** softkey.  
The SYSTEM UTILITIES menu appears.
5. Using the arrow softkeys, select **View Unit Info**.
6. Press the **MENU** softkey.  
The View Unit Information appears.
7. While the View Unit Info screen is displayed, use the arrow up and arrow down softkeys to perform the following sequence: **up, up, down, down**.  
The FACTORY MODE menu appears.
8. Using the arrow softkeys, select **Factory Defaults**.
9. Press the **MENU** softkey.  
Parameters Reset...Rebooting! appears.

## 21 Normal Display mode

Normal Display mode is used by default and displays a large clock, PTT status, and a headset volume level meter.

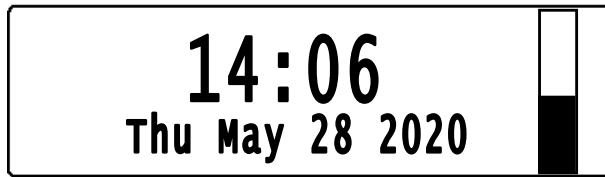


Figure 21.1: Normal Display Mode Screen

### 21.1 Clock area

The Clock area displays the synced time from C-Soft. If there hasn't been a connection between the ADHB-4 Gen 2 and C-Soft, "NO CLOCK" will be displayed.

### 21.2 PTT Status area

The PTT Status area replaces the clock area when a PTT occurs to indicate which microphone is active.

- When the controller headset microphone is active, TX HEADSET appears on the display.
- When the desk microphone is active, TX DESK MIC appears on the display.
- When the RHB 1 microphone is active, TX RHB 1 appears on the display.
- When the RHB 2 microphone is active, TX RHB 2 appears on the display.

### 21.3 Headset Volume Level meter

The Headset Volume Level meter indicates the level playing out of the controller headset's speaker. From the bottom to the top, one (1) bar is the lowest volume and 10 bars is the highest volume. Each increment represents 10% of the total volume.

The volume is controlled with the UP/DOWN Arrow softkeys on the front of the ADHB-4 Gen 2.

The default setting is 50%.

#### 21.3.1 Change the controller headset volume

To change the controller headset volume, do the following:

- From the front panel, press the **up** volume softkey.

The volume played to the controller headset's speaker increases.

OR

- From the front panel, press the **down** volume softkey.

The volume played to the controller headset's speaker decreases.

## 22 Tech Display mode

Tech Display mode is used by technicians and operators to see an overview of ADHB-4 Gen 2 operations on one screen.

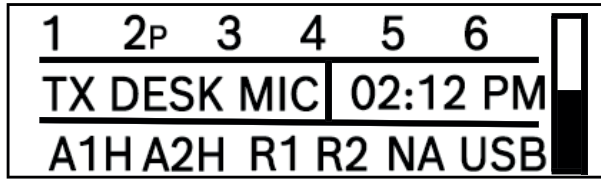


Figure 22.1: Tech Display Mode Screen

### 22.1 Speaker connection status area

The Speaker connection status area indicates the current status of the speaker. The ADHB-4 Gen 2 supports up to six speakers. The speaker number indicates that the speaker is connected, if there is no speaker number this indicates the speaker is disconnected. No text next to the speaker number indicates the speaker is connected, but idle. A “P” next to the speaker number indicates audio is playing on the speaker. An “X” next to the speaker number indicates the speaker is muted. An “M” next to the speaker number indicates the speaker is muted to a minimum.

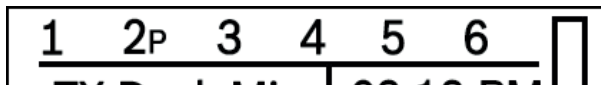


Figure 22.2: Speaker Connection Status

For more information, refer to “*Speaker Status, page 63*”.

### 22.2 PTT Status area

The PTT Status area indicates which microphone is active when a PTT occurs.

- When the controller headset microphone is active, TX HEADSET appears on the display.
- When the desk microphone is active, TX DESK MIC appears on the display.
- When the RHB 1 microphone is active, TX RHB 1 appears on the display.
- When the RHB 2 microphone is active, TX RHB 2 appears on the display.

### 22.3 Clock area

The Clock area displays the synced time from C-Soft. If there hasn’t been a connection between the ADHB-4 Gen 2 and C-Soft, the clock area is blank.

### 22.4 AUX Status area

The AUX Status area indicates the auxiliary input’s number and status.

- When the auxiliary input (A1 or A2) has an H next to it, the state of the auxiliary input is high.
- When the auxiliary device (A1 or A2) has an L next to it, the state of the auxiliary device is low.

## 22.5 Relay Status area

The Relay Status area indicates the state of the relay connected device (R1 or R2). If the relay status area is blank, the relay is off. If the relay status area has R1 or R2 displayed, then relay 1 or relay 2 is on.

## 22.6 NENA Status area

The NENA Status area indicates the NENA hook status. If the NENA status area is blank the NENA is on-hook. If the NENA status area has NA displayed then NENA is off-hook.

## 22.7 USB Indication area

The USB Indication area indicates whether the ADHB-4 Gen 2 is connected to a PC. If the USB Indication area is blank, the USB is disconnected. If the USB Indication area has USB displayed, the USB is connected.

## 22.8 Headset Volume Level meter

The Headset Volume Level meter indicates the level playing out of the controller headset's speaker. From the bottom to the top, one (1) bar is the lowest volume and 10 bars is the highest volume. Each increment represents 10% of the total volume.

The volume is controlled with the volume softkeys on the front of the ADHB-4 Gen 2.

The default setting is 50%.

### 22.8.1 Change the controller headset volume

To change the controller headset volume, do the following:

- From the front panel, press the **up** volume softkey.

The volume played to the controller headset's speaker increases.

OR

- From the front panel, press the **down** volume softkey.

The volume played to the controller headset's speaker decreases.



## 23 C-Soft controls

Speaker selection, volume controls, and some of the ADHB-4 Gen 2 parameters are accessed from the C-Soft console. ADHB-4 Gen 2 connection indicators appear on the C-Soft status bar.

### 23.1 C-Soft Status bar

The C-Soft status bar (1) displays ADHB-4 Gen 2 connection indicators. The Title bar (2) indicates the name and location of the currently open file.

Available connection indicators are: NENA and ADHB.

#### 23.1.1 NENA Status

The NENA status (3) indicates a connection to the NENA line is established.

#### 23.1.2 ADHB Status

The ADHB status (4) indicates a connection to the ADHB-4 Gen 2 is established.

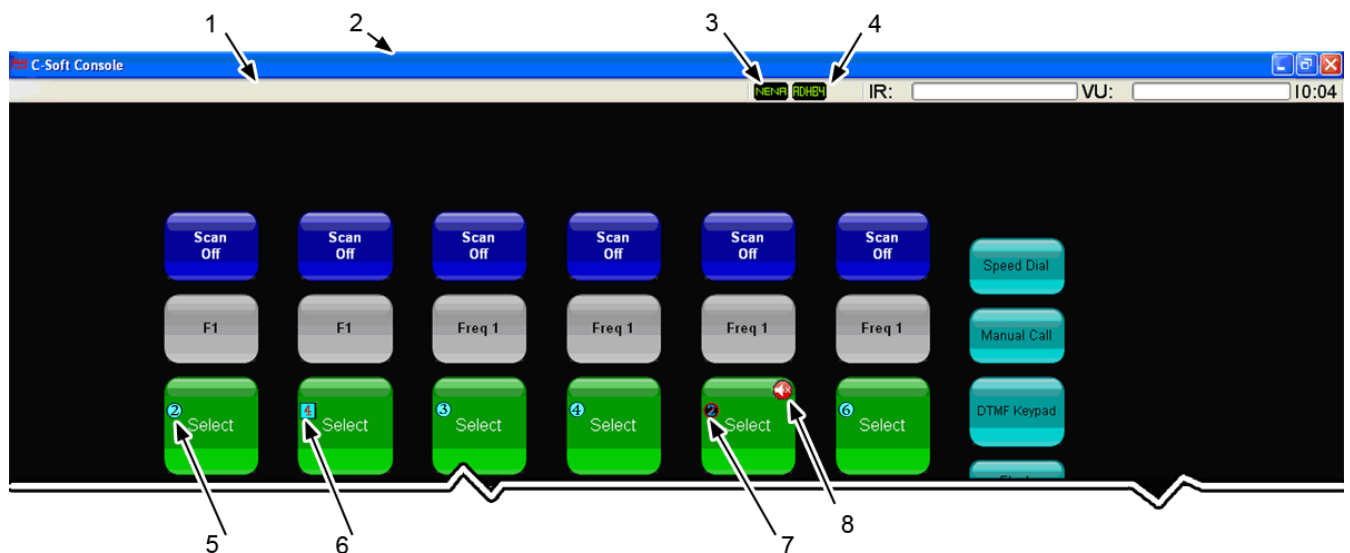


Figure 23.1: Console Speaker and Status Indications

### 23.2 Speaker Status indications

The Speaker status indications, shown in the Figure above, appear as icons on the Select, Phone, Global Call History, IRR, NENA, SIP and Auxiliary Audio Control buttons. The speaker icon indicates the speaker number and speaker status.



#### Notice!

The location of the speaker icons depend on the button's size.

### **23.2.1 Single Speaker icon**

The Single Speaker icon (5) indicates the audio is playing to the speaker number shown on the icon. This speaker icon is a cyan circle with a black speaker number

### **23.2.2 Multi Speaker icon**

The Multi Speaker icon (6) indicates audio is playing to the speaker number shown on the icon and speaker 2 (common unselect). This icon is a cyan square with a red speaker number in the center.

### **23.2.3 Disconnected Speaker icon**

The Disconnected Speaker icon (7) indicates the speaker number shown on the icon is disconnected. This icon is a single speaker icon with a universal no symbol on top of a blue speaker number.

### **23.2.4 Muted Speaker icon**

The Muted Speaker icon (8) indicates the speaker number on the icon is muted. This icon is a red circle containing a white speaker with an X.

## 24 Speaker Setup in C-Soft

The ADHB-4 Gen 2's speakers are set up, by default, to route selected audio to speaker 1 and route all unselected audio to speaker 2.

### 24.1 Unselect audio

Unselect audio can be configured from the console position to route through speakers other than the default. Select audio is always routed to speaker 1.

One (1) of two (2) methods can be used to change the unselect speaker audio:

- With the Per Line Unselect window, refer to “*Per Line Unselect window, page 91*”.
- With the ADHB-4 Global window, refer to “*ADHB-4 Global window, page 95*”.

### 24.2 Per Line Unselect window

The Per Line Unselect window is accessed by right-clicking the line's Select button on the console. Once the window appears, you can choose which speaker(s) to route the line's unselect audio.

The default for this window is Speaker 1 (Select); Speaker 2 (Unselect).

#### 24.2.1 Speaker 2-6 radio buttons

The Speaker 2-6 radio buttons are used to set which positional speaker to route the line's unselect audio.

#### 24.2.2 Positional + Speaker 2 check box

The Positional + Speaker 2 check box is used to set which positional speaker plus speaker 2 to route the line's unselect audio. This setting also applies to recording unselect audio because speakers 3-6 are not recorded.

If this check box is selected, a positional speaker (3-6) and speaker 2 are used to play unselect audio and the multi speaker icon, shown in the Figure above, appears on the line's Select button.

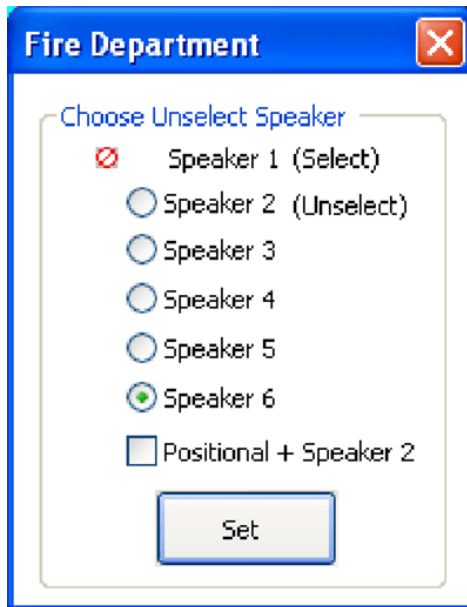
If this check box is not selected, a speaker (2-6) is used to play unselect audio and the single speaker icon, shown in the Figure above, appears on the line's Select button.

Speakers 3-6 are not routed to the unselect recorder.

### 24.2.3

#### Set button

The Set button is used to accept changes and close the window.



**Figure 24.1:** Per Line Unselect Speaker

This window is also accessible through the ADHB-4 Global window. Refer to “*ADHB-4 Global window, page 95*”.

To change the per line unselect speaker routing, do the following:

1. From the C-Soft console, right-click the line’s **Select** button.  
The Per Line Unselect window appears.
  2. Select the **radio button** where Unselect audio should be to be routed to.
  3. Click **Set**.  
The settings are saved and the window closes.
- OR
- Click the **red X** in the upper-right corner to discard changes.  
The window closes and the settings are not changed.

## 24.3 IRR Speaker window

The IRR Speaker window is used to select which speakers to play audio for instant recall. Once an Instant Recall button is right-clicked in C-Soft, the IRR Speaker window appears. Refer to the Figure below.

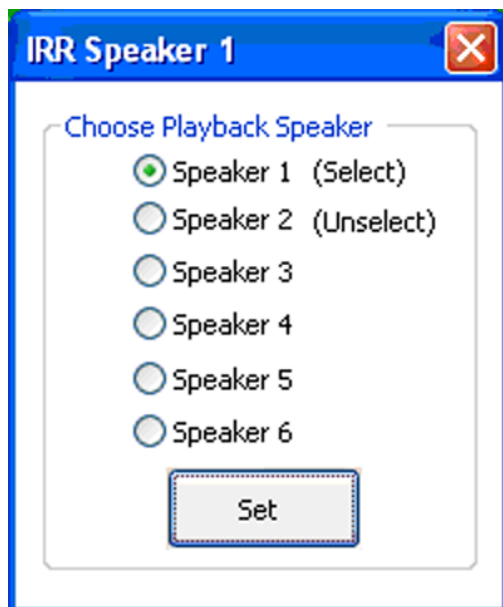


Figure 24.2: IRR Speaker Window

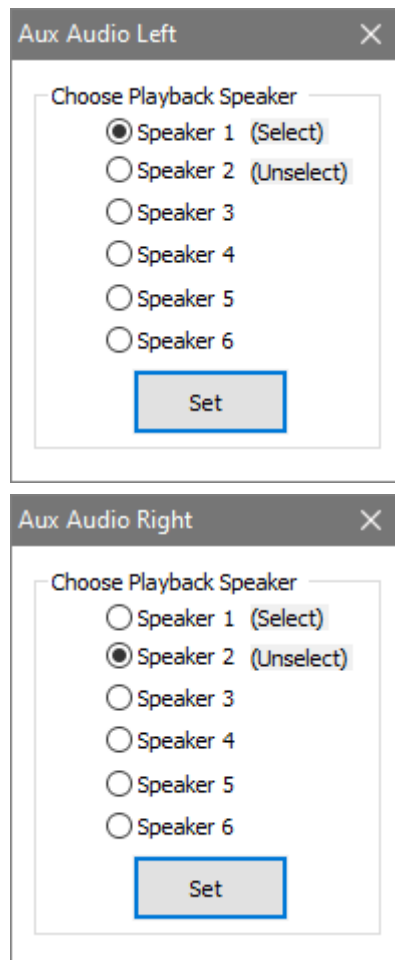
To change the IRR playback speaker, do the following:

1. From the C-Soft console, right-click the **Instant Recall** button. The IRR Speaker window appears.
2. Select the radio button where IRR audio should be routed to.
3. Click **Set**.

The Instant Recall button is configured to playback recordings from the selected speaker when clicked.

## 24.4 Aux Audio Left and Right Speaker windows

The Aux Audio Left and Right Speaker windows are used to select which speakers to play audio for auxiliary audio left and right inputs. Once an Auxiliary Audio Control button is right clicked in C-Soft, the corresponding Aux Audio Speaker window appears. Refer to the figures below.



**Figure 24.3:** Aux Audio Left and Right Speaker Windows

To change the Aux Audio Left or Right playback speaker, do the following:

1. From the C-Soft console, right-click the Auxiliary Audio Control button. The corresponding Aux Audio Speaker window appears.
2. Select the radio button where Aux Audio should be routed.
3. Click **Set**.

The settings are saved and the window closes.

OR

Click the **red X** in the upper-right corner to discard changes.

The window closes and the settings are not changed.

## 24.5 ADHB-4 Global window

The ADHB-4 Global window is used to configure some of the ADHB-4 Gen 2 parameters.

To open the ADHB-4 Global window, do the following:

- From the console, right-click on the C-Soft **Status** bar.

The ADHB-4 Global window appears.

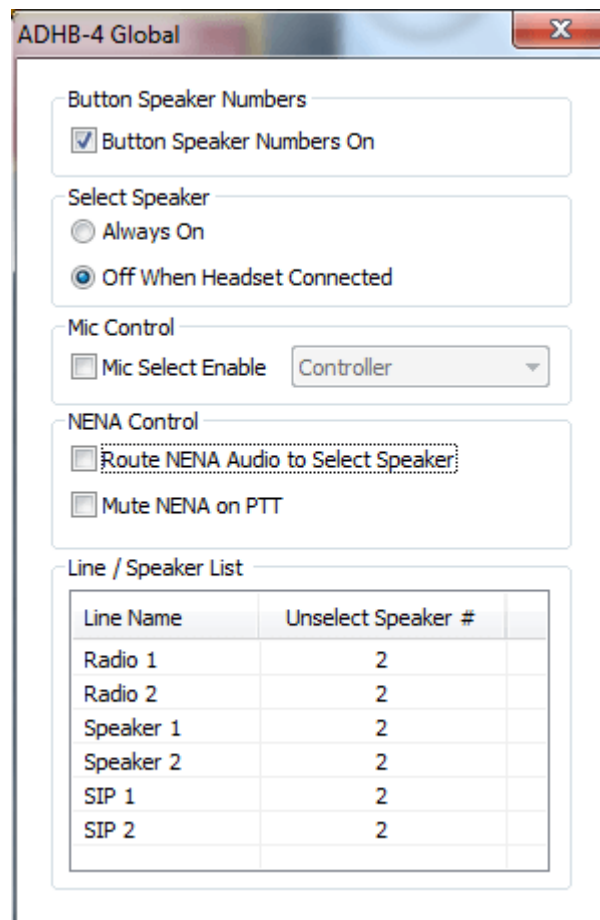


Figure 24.4: ADHB-4 Global Window

### 24.5.1 Button Speaker Numbers group box

#### Button Speaker Numbers On check box

The Button Speaker Numbers On check box, shown in the Figure above, is used to configure whether or not the speaker numbers for the ADHB-4 Gen 2 speaker audio routing appear on the console buttons.

### 24.5.2 Select Speaker group box

#### Always On radio button

The Always On radio button indicates select audio always plays from the speaker 1 whether or not the headset is connected.

**Off When Headset Connected radio button**

The Off When Headset Connected radio button indicates that when a headset is connected, speaker 1 no longer plays select audio.

**24.5.3****Mic Control group box****Mic Select Enable check box**

The Mic Select Enable check box is used by the console operator to select the microphone audio source. If selected, the device in the Mic Select Enable drop down menu is the microphone audio source. If unselected, the microphone audio source is driven by the configuration on the ADHB-4 Gen 2's System Setup Window.

For more information, refer to “*System Setup window, page 38*”.

**Mic Select Enable drop down menu**

The Mic Select Enable drop down menu is used to select the microphone audio source. Select the Mic Select Enable check box to activate this menu, then select the microphone audio source from the menu.

Available selections include:

- Controller - Enables routing microphone audio from the controller headset.
- RHB 1 - Enables routing microphone audio from the RHB 1.
- RHB 2 - Enables routing microphone audio from the RHB 2.
- Desk Mic - Enables routing microphone audio from the desk microphone.

**24.5.4****NENA Control group box****Route NENA Audio to Select Speaker check box**

The Route NENA Audio to Select Speaker check box indicates the NENA RX audio is routed to speaker 1 and the headset speakers.

**Mute NENA on PTT check box**

The Mute NENA on PTT check box indicates the NENA RX audio is muted during radio PTT operations.

**24.5.5****Line/Speaker List group box****Line Name column**

The Line Name column indicates the user-assigned name for the line.

**Unselect Speaker # column**

The Unselect Speaker # column indicates the speaker number used for unselect audio.

**Per Line Unselect**

The Per Line Unselect window, shown in the Figure above, appears when a line name or unselect speaker number is double-clicked. For more information, refer to “*Per Line Unselect window, page 91*”.



## 24.6 ADHB-4 volume control window

The ADHB-4 Volume Control window is used to adjust the volume or to mute speakers connected to the ADHB-4 Gen 2.

Speaker 3 is muted in the example shown in the Figure below, as indicated by the red circle forward slash symbol.

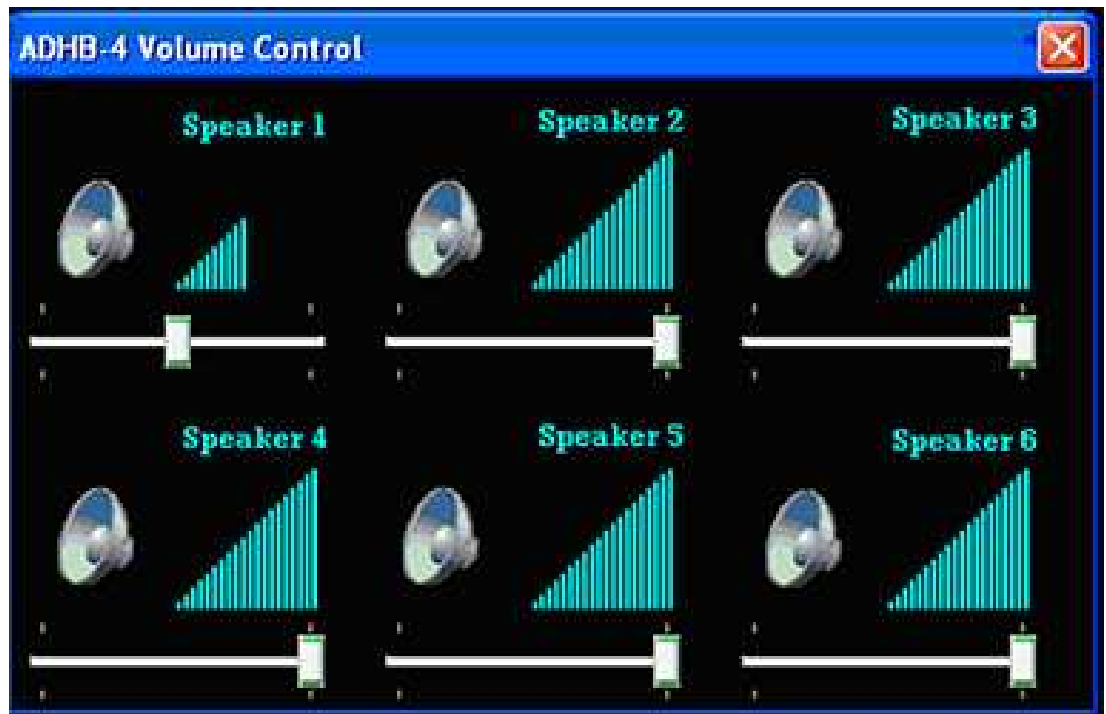


Figure 24.5: ADHB-4 Speaker Volume Control Window

To adjust a speaker's volume, do the following:

1. Left-click on the C-Soft **Status bar**.  
The ADHB-4 Volume Control window appears.
2. Move the speaker's **volume slider** to the right to increase volume or left to decrease volume.  
The volume meter changes accordingly and the change in volume takes effect immediately.
3. To close the window click the **red X** in the upper right corner of the window.  
The window closes.

To mute a speaker, do the following:

- Click the **speaker icon** for the speaker you want to mute.

A red circle forward slash symbol appears on the speaker icon and the speaker no longer plays audio.

## 25 Appendix A - Remote headset box

The RHB-1 Gen 2 (Remote Headset Box) is an optional piece of equipment used to expand headset options on the ADHB-4 Gen 2. Each RHB-1 Gen 2 supports one headset/handset. Up to two RHB-1 Gen 2s can be connected to each ADHB-4 Gen 2. The RHB-1 Gen 2 is a plug and play device; the ADHB-4 Gen 2 recognizes a connection between the two devices, allowing a central location for configuration within the ADHB-4 Gen 2.

### Compatible headsets

For a list of compatible Telex headsets, refer to “*Optional hardware, page 13*”.

### 25.1 Features

- ADHB-4 Gen 2 provides power to an RHB-1 Gen 2.
- Dual channel 1/4” headset jack.
- Volume control knob.
- Supports both Select (left ear) and Unselect (right ear).
- LED for power and PTT indications.
- External handset cradle hook-switch logic input.

### 25.2 Controls and indicators

#### 25.2.1 Front panel connections, controls and indications

1. Power Indicator LED - The Power indicator LED is green when power is supplied to the unit. It is red when a PTT is generated with the connected headset/handset. Power is supplied by from the ADHB-4 Gen 2.
2. Volume Knob - The Volume knob is used to adjust the total volume supplied to the headset/handset’s earpiece.
3. Dual Channel 1/4” Headset Jack - The Dual Channel 1/4” Headset Jack is used to connect a headset/handset to the RHB-1 Gen 2.
4. Polarity Hash Marks.- Polarity Hash Marks are provided on the front of the unit to indicate headset connector orientation.



#### Notice!

The polarity hash marks on the DISH series headset connectors are reversed, i.e. the connector’s hash marks must be rotated 180° from the hash marks on the ADHB-4 Gen 2 before inserting it into the jack.

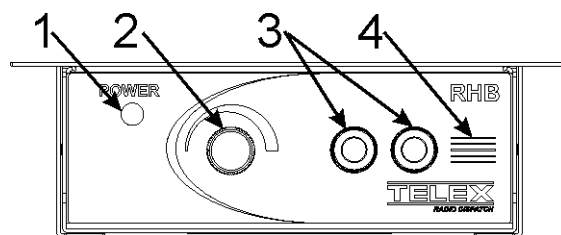


Figure 25.1: RHB-1 Gen 2 Front Panel

## 25.2.2

### Back panel connections

1. AUX (Phoenix Connector) - External handset cradle interface.
2. RJ-45 Connector. Refer to the *RHB (1 and 2) connectors, page 27* section for pin out details.

1	EGND
2	GND
3	Hook-switch input

Tab. 25.6: Pin out

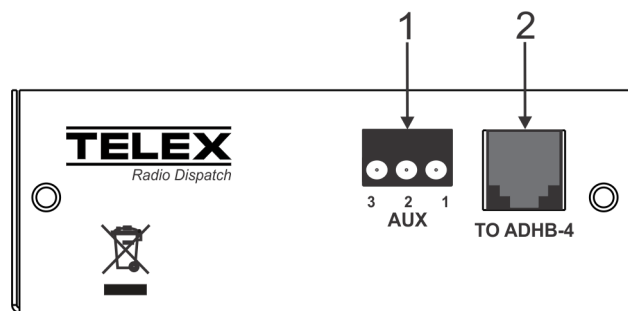


Figure 25.2: RHB-1 Gen 2 Back Panel

## 25.3

### Specifications

Audio distortion	2% THD maximum
Frequency response	±1.5dB, 300 to 3000Hz
Storage conditions	-22°F to 149°F (-30°C to 65°C), 100% non-condensing
Operating conditions	32°F to 131°F (0°C to 55°C), 100% non-condensing
Dimensions (with mounting bracket)	1.875" H x 4.75" D x 5.75" W (47.63mm H x 120.6mm D x 146.05mm W)
Weight	1.98 lbs. (0.90kg)

## 25.4

### Mounting

The RHB-1 Gen 2 can be mounted on or under a surface such as a desk. The RHB-1 Gen 2 is fitted with a mounting bracket that can be flipped 180 degrees to change the mounting orientation. The RHB-1 Gen 2 ships with the mounting bracket in position for mounting under a desk. Mounting hardware is included in the RHB-1 Gen 2 shipment.

To change the bracket's orientation, do the following:

1. Remove the **screws** (2 on each side) holding the RHB-1 Gen 2 to the bracket.
2. Slide the **RHB-1 Gen 2** out of the bracket.
3. Turn the **bracket** 180 degrees.
4. Slide the **RHB-1 Gen 2** back into the bracket.

5. Re-install the **screws** to reattach the RHB-1 Gen 2.
6. Follow the **mounting** instructions.

To mount the RHB-1 Gen 2, do the following:

1. On the mounting surface, mark and drill **holes** to accept a #10-13 x 3/4" screw or 10-12 x 1" anchor.
2. Attach the **RHB-1 Gen 2** to the surface with 4 screws.

The RHB-1 Gen 2 is easily removed from the bracket without having to uninstall the bracket.

To remove the RHB-1 Gen 2 from the bracket while mounted, do the following:

1. Disconnect the **headset**.
2. Disconnect the **RJ-45 connector** from the back of the unit.
3. Disconnect the **AUX connector** from the back of the unit.
4. Remove the **screws** (2 on each side) holding the RHB-1 Gen 2 to the bracket.
5. Slide the **RHB-1 Gen 2** forward.

## 25.5

### RHB 1 Gen 2 installation

To install the RHB-1 Gen 2, do the following:

**NOTE:**

- Install the ADHB-4 Gen 2 before proceeding.
  - The included adapter may be needed for use with the ADHB-4 Gen 1. For wiring information, refer to “*Appendix B - Cross-connection ADHB-4/RHB 1 Gen 1 with Gen 2 versions, page 102*”.
1. Ensure the **RHB-1 Gen 2** is mounted. Refer to “*Mounting, page 99*”.
  2. Plug the **RJ-45 cable** into the TO ADHB-4 (RJ-45) port on the back of the RHB-1 Gen 2.
  3. Plug the **RJ-45 cable** into a RHB-1 or RHB-2 (RJ-45) port on the back of the ADHB-4 Gen 2.
  4. Turn the **volume knob** counter-clockwise to lower the volume.
  5. Orient the **grooves** on the headset connector’s housing with the hash marks on the front of the RHB-1 Gen 2.
  6. Insert the **plug** in the jack.
  7. Adjust the **volume** before wearing the headset.



**Notice!**

The polarity hash marks on the DISH series headset connectors are reversed, i.e. the connector’s hash marks must be rotated 180° from the hash marks on the ADHB-4 Gen 2 before inserting it into the jack.

## 25.6 Configuration

The RHB-1 Gen 2 is configured with the ADHB-4 Gen 2 web browser configuration windows.

The following fields are used to configure the RHB-1 Gen 2:

- Refer to “*Headset Setup, page 40*”.
- Refer to “*Console Generated PTT Setup, page 42*”.
- Refer to “*Footswitch PTT Setup, page 44*”.
- Refer to “*NENA/Phone Mic Source Setup, page 46*”.
- Refer to “*PTT Priority Setup, page 47*”.
- Refer to “*Microphone Input gains, page 52*”.
- Refer to “*Microphone Input Noise threshold, page 53*”.
- The RHB-1 Gen 2’s microphone connection and PTT status is summarized on the System Status window in the ADHB-4 Gen 2 web browser. Refer to “*Microphone Status, page 63*”, *Microphone Input gains, page 52*” and “*Microphone Input Noise threshold, page 53*”.

26

Appendix B - Cross-connection ADHB-4/RHB 1 Gen 1 with Gen 2 versions

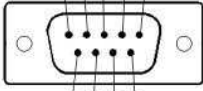
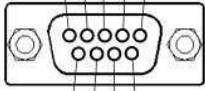
The ADHB-4 and RHB-1 Gen 1 are connected together using a DB-9 serial cable that is costly if the length required was longer than the supplied cable. The new ADHB-4 Gen 2 and RHB-1 Gen 2 are connected together using standard RJ-45 networking cables. This allows for easy changes in length and cable routing in dispatch furniture. The tested distance of an RJ-45 cable was 15 feet, with longer cables possible based on cable quality.

The ADHB-4 Gen 2 adds an auxiliary audio input port while the RHB-1 Gen 2 adds handset hook-switch logic.

- Using basic DB-9 to RJ-45 adaptors allows the combination of either generation of ADHB-4 or RHB-1 to be used or retained during an upgrade based on site requirements.
- Using the ADHB-4 Gen 1 with RHB-1 Gen 2 requires an RJ-45 to DB-9 male adaptor to be installed on the ADHB-4 Gen 1, these are supplied with the RHB-1 Gen 2.
- Using the ADHB-4 Gen 2 with RHB-1 Gen 1 requires a RJ-45 to DB-9 female adaptor to be installed on the RHB-1 Gen 1, these are supplied with the ADHB-4 Gen 2.



Wire the DB-9 connector pin 1 to matching RJ-45 pin 1, same for pins 2 through 8, leaving pin 9 not connected.

RJ-45 pin	Color	DB-9 pin	<div><div><div><div>12345</div><div></div><div>6789</div></div><div>Male DB-9</div></div><div><div><div>54321</div><div></div><div>9876</div></div><div>Female DB-9</div></div></div>
1	Blue	1	
2	Orange	2	
3	Black	3	
4	Red	4	
5	Green	5	
6	Yellow	6	
7	Brown	7	
8	White	8	
	N/C	9	

Tab. 26.7: Wiring chart

## 27

## Appendix C - End User License Agreement



**Figure 27.1:**

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End User Software License Agreement  
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Lincoln, Nebraska 68507, USA  
Tel. +1 402 467 5321  
Fax +1 402 467 3279  
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popt	The popt library exists essentially for parsing command line options	The X11 License (MIT/X Consortium)
scew	The aim of SCEW is to provide an easy interface around the XML Expat parser, as well as a simple interface for creating new XML documents	GNU Lesser General Public License
sysvinit	Init is the parent of all processes. Its primary role is to create processes from a script stored in the file /etc/inittab. This package also contains well known and used utilities like reboot, shutdown, killall, poweroff, tellinit, sulogin, wall, etc.	GNU General Public License
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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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