User Guide

HelixNet Digital Partyline for Arcadia User Guide

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1 Introduction

HelixNet® Partyline is a digital intercom system that combines the simplicity and ease of use of an analog partyline system with the quality and deployment flexibility of Ethernet networks.

User stations can be added to the system without configuration

- Simple and fast global web browser or front panel configuration
- All HelixNet enabled partyline channels are available on every cable
- Easy integration with other 2-wire or 4-wire systems
- Standard Infrastructure:
  - Ethernet networks – PoE powered user stations
  - XLR Cables – daisy changing and passively splitting
  - Digital distribution for low noise floor

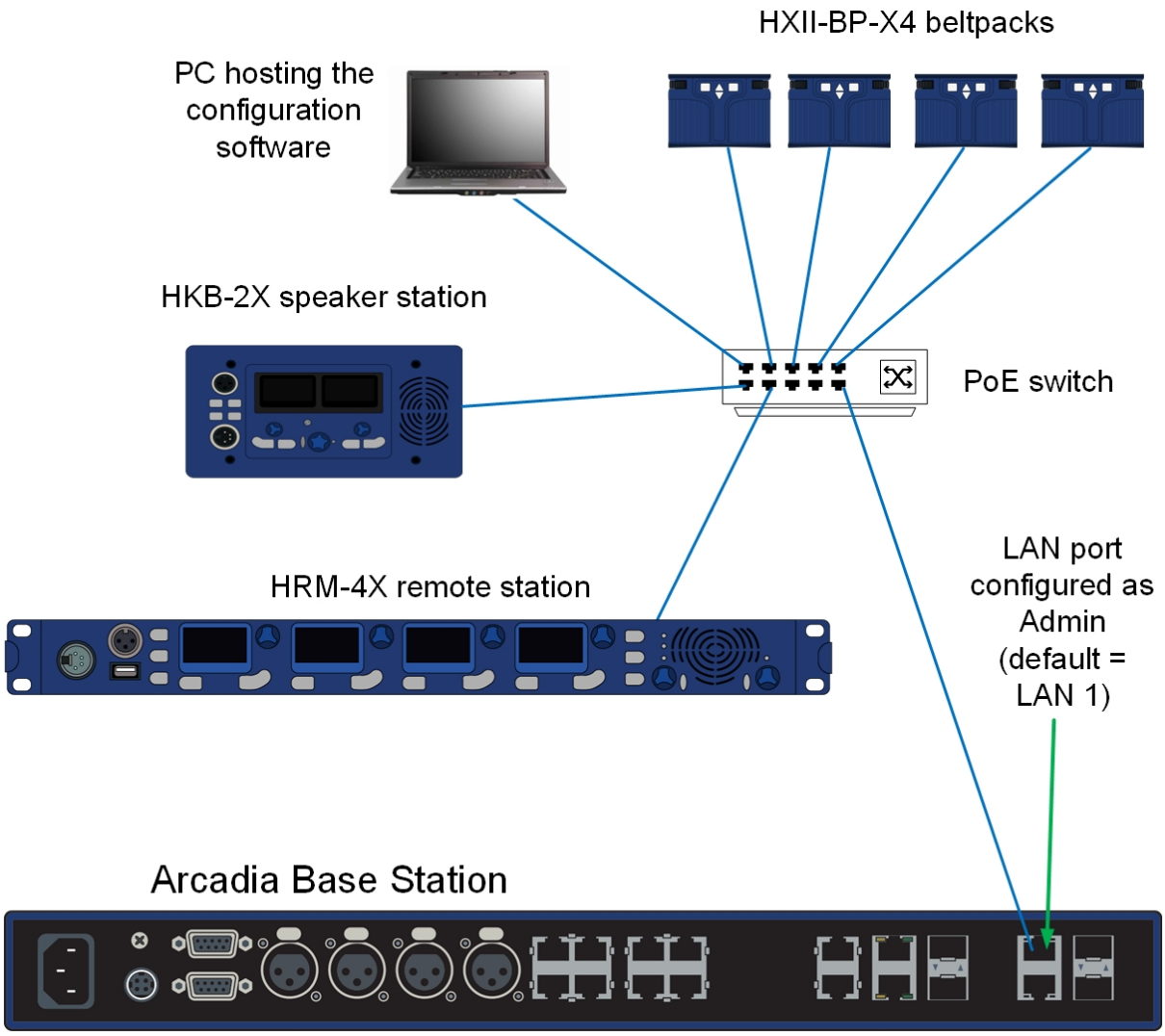
Note: *Cabling for a HelixNet system should always be screened.*

This guide helps you install, configure, and use the **HelixNet Partyline** system when used with the Arcadia® Central Station.

HelixNet wired devices (beltpacks, remote stations and speaker stations) are connected to the Arcadia Central Station on the LAN port that is being used for Admin (default LAN 1) using Cat 5, 5e or 6 Ethernet cable (RJ45).

They are connected to the same network as the PC hosting the configuration software. To power the beltpacks, the network switch must carry Power over Ethernet (PoE).

An example of a HelixNet system connected to an Arcadia Central Station is given below.



HelixNet endpoints can operate using PoE. However, remote stations and speaker stations should be powered locally with the PSU that is supplied with the device.

Note: *When using an IEEE-802.3af compliant PoE switch, you must take into account the switch's power budget. Each HXII-BP requires 4 Watts. The HRM-4X and the HKB-2X each require 13 Watts. Do not exceed the power budget of the switch when attaching devices.*

Bear in mind the following:

- You can enable up to 24 channels for HelixNet. How many channels you use is limited by how many port licenses you have. One HelixNet enabled channel consumes one port license.
- HelixNet connectivity in Arcadia is currently channel based only. There are no direct/point-to-point connections available.
- The speaker station can be used with an S-Mount bracket or inside a NEMA standard 4-gang wall box.

1.1 Further Information

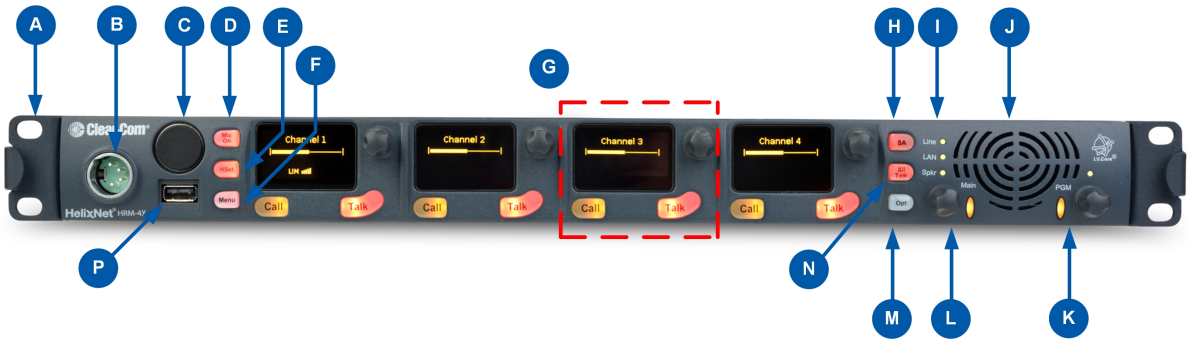
For the latest information about HelixNet Partyline, including software updates, see the HelixNet Knowledge Center.

www.clear com.com/
helixnet-knowledge-center /

For more information about the Arcadia Central Station, see The Arcadia Central Station Knowledge Center.

www.clearcom.com/
arcadia-knowledge-center/

2 Remote Station: Front panel



Key to Remote Station: Front panel	
Feature	**Description**
A	**Ear for rack mounting Remote Station.**
B	**Headset socket (4-pin XLR–M)**

Pin	Function
1	Mic ground
2	Mic +
3	Earphone ground
4	Earphone

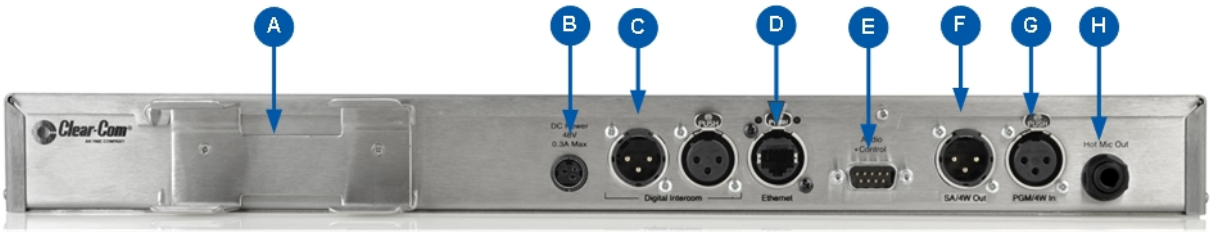
C	**Gooseneck microphone socket** (3-pin female Tuchel connector)
D	**Mic control [MIC ON]**. Press to activate mic audio.

Key to Remote Station: Front panel	
E	**Headset key [HSET].** Press to activate the headset mic. When the headset is connected, the gooseneck microphone is disconnected. Audio output to the loudspeaker is diverted to the headphones.
F	**Menu**. Press to display the menus in the display screens [**G**]. Use the rotary control for each display screen to scroll and select menu items. See **Remote Station: Channel Keyset and Display on page 14**.
G	**Channel keyset**. There is a keyset (set of controls) addressable to any of the available Channels. See **Remote Station: Channel Keyset and Display on page 14**.
H	**Stage Announce [SA].** Press to talk to connected Public Address (PA) / Stage Announce (SA) system SA mutes any active Talk key on the station, and transmits audio from either headset or gooseneck microphone to the SA Output port on the rear of the unit. If the SA is assigned to a Channel, then any talker within the Channel has their audio routed to the associated SA Port. When the SA is pressed, Mic select [MIC ON] is also lit bright red, indicating that mic audio is active. See **Line and LAN LEDs on page 41**.
I	Powerline connectivity is not available for Arcadia.
J	**Loudspeaker**. When a headset is connected [**B**] and selected [**E**], loudspeaker output is diverted to the headphones.

Key to Remote Station: Front panel	
K	**Program feed audio level rotary control [Program]**. • To increase the volume of the program feed to the loudspeaker / headphones, turn clockwise (up to 360°). • To decrease the volume, turn anticlockwise (up to 360°). As you increase or decrease the volume, the level control LEDs pass through a range of indicator colors: **LED color** / **Volume level** Green / Low Amber / Green / Low / Medium Amber / Medium Red / Amber / Medium / High Red / High • To mute or unmute the program audio, push the rotary control.
L	**Loudspeaker / Headphone audio level rotary control [Main]**. To increase the volume to the loudspeaker / headphones, turn clockwise (up to 360°). To decrease the volume, turn anticlockwise (up to 360°). Push to mute or unmute.
N	**All Talk**. Press to talk to all Channels (intercom devices and systems) connected to the Remote Station.
P	**USB 2.0 (Standard-A) connector**. Used for updating the Remote Station software.

***Note**: The Remote Station does not have a power switch, button or key. The system powers up when you connect the power supply. Power up time depends on the amount of equipment connected.*

2.1 Remote Station: rear panel



Key to Remote Station: rear panel	
Feature	**Description**
A	PSU holder for a separate external AC-DC power supply. The external PSU provides the 48V required and at its input takes 100-240V, 50-60Hz.
B	**Power supply**. The power input connector is a low voltage DC connection. It is 48VDC at a max power of 12.95W.
C	**Line 1 (digital Partyline). (3-pin male and female XLR connectors).**

Pin	Function
Pin 1	Ground
Pin 2	+30V DC and Audio
Pin 3	-30V DC and Audio

Key to Remote Station: rear panel	
D	**Ethernet/Power Over Ethernet (RJ45 connector)** An LED on the left-hand side of the connector illuminates when the link is working. An LED on the right-hand side of the connector flashes green when there is network activity.

Pin	Name	Function
1	TX+	Transmit Data+
2	TX-	Transmit Data-
3	RX+	Receive Data+
4	n/c	Not connected
5	n/c	Not connected
6	RX-	Receive Data-
7	n/c	Not connected
8	n/c	Not connected

When connected over PoE, the Remote Station draws 15.4 Watts from the PoE switch.

Key to Remote Station: rear panel

E

Control input/output (DB9 connector)

Pin	Function
Pin 1	Audio out +
Pin 2	Audio in +
Pin 3	GND
Pin 4	Relay NC
Pin 5	Relay NO
Pin 6	Audio out -
Pin 7	Audio in -
Pin 8	Opto
Pin 9	Relay pole

The audio connections in this connector are wired directly to the SA and program connectors. Only one or the other can be used at one time.

F

SA [Stage Announce] line out (3-pin female XLR).

Pin	Function
Pin 1	Ground
Pin 2	Positive
Pin 3	Negative

G

Program Input (3-pin m XLR).

Pin	Function
Pin 1	Ground
Pin 2	Positive
Pin 3	Negative

Key to Remote Station: rear panel	
H	**Hot Mic output**. This connection is a 1/4-in (0.64 cm) phone jack. It provides an output signal from the selected headset or panel microphone. The Hot Mic output is always live. Audio from the mic is routed through the Hot Mic output even if the mic is inactive (off).

Pin	Function
Tip	Mic
Ring	IFB mute signal
Sleeve	Ground

2.2 Remote Station: Channel Keyset and Display

Key to Remote Station front panel: Channel keyset	
Feature	**Description**
A	**Display screen**. There are multiple screensaver options. If the Rotary controls are touched, this screen also displays the sound level on the Channel (controlled by the rotary) and the system information icons. See the next table for an explanation of system information icons. In **Menu** mode, the display screens display the four levels of menu. The menu hierarchy proceeds left to right: • The top level menu is presented in the first screen (furthest left on the front panel). • The lowest level menu is presented in the fourth screen (furthest right on the front panel). If the display is in Menu mode, the display screen times out of Menu mode and displays the Channel label if no key is pressed for 20 seconds. For more information about Menu mode, see **Using the Menus on page 17**
B	**Rotary control**. Turn to increase or decrease the listen volume level for the Channel. Also, push the control to mute or unmute audio level. In Menu mode, use the control to scroll menu items. To select menu items, press the control.
C	**Talk key**. Press to talk on the Channel and to all nodes (intercom devices and systems) listening into the Channel.
D	**Call key**. Press to send a call signal to all nodes (intercom devices and systems) listening into the Channel.

Note: *If the Remote Station remains inactive for 10 minutes, the display screens enter screensaver mode, see* ***Setting the Screensaver on page 29***

	Remote Station display icons and indicators	
Name	**Icon**	**Description**
Channel label	Channel A	A descriptive name for the Channel. The maximum length is 10 characters.
Channel listen volume level		The volume of the Channel audio.
Paired		Appears on the Remote Station and Speaker Station when it is connected properly over LAN.
Not paired		Flashes on the Remote Station and Speaker Station when the connection is not configured properly.
Signal strength		Appears on the Remote Station, Speaker Station and beltpack. One to five bars indicate the strength of the signal.
Locked	Locked	Appears on the beltpack when you try to access the menu while the menu has been locked.
Mute		Appears on the Remote Station and Speaker Station when the rotary control for any Channel is pressed.
Opto (GPI)		Appears on the Remote Station close to the Call or Talk button if it is associated with an Opto.
Relay (GPO)/Logic Output Option		Appears on the Remote Station close to the Call or Talk button if it is associated with a Relay (Logic Output Option).
Program	PGM	Appears on the Remote Station, Speaker Station and beltpack when a program input is assigned to a Channel.
IFB	IFB	Appears on the Remote Station, Speaker Station and beltpack when a program input is assigned to a Channel and IFB is enabled.
2W/4W	2W/4W	Appears on the Remote Station and Speaker Station when a 2W/4W input is assigned to a Channel.
Limiter	LIM	Appears on the Remote Station, Speaker Station and beltpack when the headset limiter is enabled.

	Remote Station display icons and indicators	
Expansion		Appears on the Remote Station when the device is part of an Expansion Group.
Warning		Appears on the Remote Station, Speaker Station and beltpack when something is wrong. Warning messages can be accessed in the Diagnostic menu.

2.3 Configuring and managing Remote Station from front panel menus

This section describes how to configure the settings and manage the Remote Station using **Menu mode**. It also shows you how to monitor and diagnose performance issues, using the **Diagnostics** menus.

Tip: For a quick reference to the Remote Station menus, see**Menu Maps on page 93** .

2.3.1 Using the Menus

To place the Remote Station in **Menu mode**, press the **Menu key** to the left of the first display screen.

In Menu mode, the display screens display the four levels of menu. The menu hierarchy proceeds left to right:

The **top level** menu is presented in the first screen.

The **lowest level** menu is presented in the fourth screen (furthest right on the front panel).

***Note**: If Menu mode is **locked**, you must unlock the menus from CCM before you can enter the menu.*

Configuring Settings

1. For each menu, turn the **rotary control** clockwise to scroll down the menu items. Turn counter clockwise to scroll up the menu items.

   Off-screen menu items are indicated by arrows at the top and/or bottom of the screen.

   Selected menu items (which create your path through the four menus) are highlighted in solid yellow.

   The fourth menu displays the settings that relate to your previous menu choices (system features or functionality).

   The **current setting** is indicated by a dotted box around the menu item

2. When you have selected a setting by rotating the right hand rotary control, push that rotary control to enable the setting on the Station.

Exiting Menu Mode

To exit menu mode press the menu key.

***Note**: If no key is pressed for 20 seconds, the menu will time out and display screens will revert to their normal mode of operation.*

2.3.2 Configuring the Audio settings

Audio settings for the headset

To configure the audio settings for the headset:

1. In **Menu mode**, select **Audio Settings** and then **Headset**.

2. To adjust the level of sidetone on the headset:

   In the third menu, select **Sidetone Gain**.

   a. In the fourth menu, select one of the following:

      - 0dB
      - - 6dB
      - - 12dB (default)
      - - 18dB

   b. To enable (confirm) the selected setting, press the **rotary control**.

3. To limit the audio level delivered to the headphones (or to disable headphone limiting):
   a. In the third menu, select **Headphone Limit**.
   b. In the fourth menu, select one of the following:
      - Off
      - +6dB
      - 0dB (default)
      - - 6dB
   c. To confirm the selected setting, press the **rotary control**.

   Note: *When Headphone Limit is set to anything but Off, a LIM indication will be shown on the leftmost display.*

4. To set the **Headphone Gain**:
   a. In the third menu, select **Headphone Gain**.
   b. In the fourth menu, select one of the following:
      - OdB (default)
      - +3dB
      - +6dB
      - +9dB
      - +12dB
   c. To confirm the selected setting, press the **rotary control**.

5. To set (or disable) sidetone tracking on the headset:
   a. In the third menu, select **Sidetone Control**.
   b. In the fourth menu, select one of the following:
      - **Tracking** - The sidetone volume will follow (track) the Main volume level.
      - **Non-Tracking -** The sidetone volume is set to use the selected level.
      - **Disabled -** Sidetone is disabled.

   Note: *The default is **Tracking**.*

   c. To confirm the selected setting, press the **rotary control**.

6. To select the type of microphone on the headset:
   a. In the third menu, select **HS Mic Type**.

   Note: HS = Headset.

   b. In the fourth menu, select either of the following types of microphone:
      - Electret (-15dB)
      - Dynamic (0dB) (default)
      - Dynamic (low)
   c. To confirm the selected setting, press the **rotary control**.

Audio Settings for the Microphone

To configure the audio settings for the microphone:

1. In Menu mode, select **Audio Settings** and then **Microphone**.
2. To select the Headroom:
   a. From the third menu, select **Headroom**.
   b. From the fourth menu, select one of the following:
      - Normal (default)
      - High - Reduces the analog input gain and increases the digital gain accordingly. That reduces digital clipping at the A/D converter but increases the noise floor. This setting is intended for use in environments with very high background noise.
3. To enable or disable the Contour Filter:
   a. From the third menu, select **Contour Filter**
   b. From the fourth menu, select one of the following:
      - **Enabled -** The Contour filter is a Clear-Com algorithm enhancing speech intelligibility, especially when whispering or talking at a low volume.
      - **Disabled**

   Note: *The default is **Disabled**.*

Audio Settings for the Program Input

To configure the label (name) for the Program Input (Program Feed) gain:

1. In **Menu mode**, select **Audio Settings** and then **Program Input**.

2. From the third menu, select **Label**.
3. From the fourth menu, select the existing label by scrolling to it and pushing the rotary controller. Edit the label by rotating the controller to scroll through letters and digits and pushing to select a letter/digit.
4. When you have done, scroll to **Save** and push the rotary controller. To exit without saving changes, go back to the third screen.

To configure the audio setting for the Program Input (Program Feed) gain:

1. In **Menu mode**, select **Audio Settings** and then **Program Input**.
2. From the third menu, select **Gain**.
3. From the fourth menu, select one of the following:
   - + 12dB
   - + 6dB
   - 0dB (default)
   - - 6dB
   - - 12dB
4. To confirm the selected setting, press the **rotary contro**l.
5. The action trigger activates a relay when receiving a call or activating a talk on a Partyline Channel. You can enable or disable the action trigger. To configure the audio setting for the action trigger:
   a. In **Menu mode**, select **Audio Settings** and then **Program Input**.
   b. From the third menu, select **Action Trigger**.
   c. From the fourth menu, select one of the following:
      - Enabled (default)
      - Disabled
   d. To confirm the selected setting, press the **rotary control**.

   Note: *You can also configure the action trigger using Menu Mode > Modules Settings.*

To select the VOX:

1. From the third menu, select **VOX**.

2. From the fourth menu, select one of the following:
   - Enabled
   - Disabled (default)
3. To confirm the selected setting, press the **rotary control.**

To select the VOX Off Delay:

1. From the third menu, select **VOX Off Delay**.
2. From the fourth menus, select one of the following:
   - .5 sec (default)
   - 1 sec
   - 2 sec
   - 3 sec
   - 4 sec
3. To confirm the selected setting, press the **rotary control**.

Audio Settings for Program IFB [Interruptible Foldback]

IFB allows you to temporarily interrupt the continuous program listen (program feed) and speak to the Channels connected to the program listen. This applies to a Channel to which the Program Input is assigned. If any participant within the Channel talks, the program is dimmed. See also **Assigning the Program Listen to a Channel on page 31**

To configure the audio settings for Program IFB [Interruptible Foldback]:

1. In **Menu mode**, select **Audio Settings** and then **Program IFB**.
2. From the third menu, select **IFB Dim Level**.

   Note: *The IFB Dim Level determines the amount that the volume level of the Program Level is reduced by when it is interrupted by the IFB.*

3. From the fourth menu (fourth display screen), select one of the following:
   - IFB Disabled (default)
   - - 6dB
   - -12dB
   - -18dB
   - -24dB
   - Full Cut
4. To confirm the selected setting, press the **rotary control**.

Audio Settings for the SA (Stage Announce) Output/4-Wire Out

On Remote Stations, SA can be disabled from channel assignment. Once SA is assigned to a channel it becomes a resource consuming output. Not putting SA into channels will conserve system resources.

To configure the settings for the SA output:

1. In **Menu mode**, select **Audio Settings** and then **SA/Audio out**.
2. To select the mode:
   a. From the third menu, select Mode.
   b. From the fourth menu, select one of the following:
      - Channel Assigned (default). When this option is selected, SA will be available to channels.
      - SA. When this option is selected, SA will only be available to the SA output on the rear of the remote station.
   c. To confirm the selected setting, press the **rotary control**.

3. To select the gain:
   a. From the third menu, select **Gain**.
   b. From the fourth menu, select one of the following:
      - +12dB
      - +6dB
      - 0dB (default)
      - -6dB
      - -12dB
   c. To confirm the selected setting, press the **rotary control**.
4. The Program Output setting enables the program to be delivered to this output if it is assigned to a Channel that also has another program feed assigned. To select the program output:
   a. From the third menu, select **Program Output**.
   b. From the fourth menu, select one of the following:
      - Unmute (default)
      - Mute
      - [SA Mode]
   c. To confirm the selected setting, press the **rotary control**.

5. To associate any available Channel (or to disable Channels associations) with the selected port:
   a. From the third menu, select **Channel Assign**.
   b. From the fourth menu, select one of the following:
      - Disabled (default)
      - Channel 1
      - Channel 2
      - Channel 3
      - Channel 4
      - …
   c. To confirm the selected setting, press the **rotary control**.

Audio Settings for the Hot Mic Output

To configure the audio settings for the Hot Mic Output:

1. In **Menu mode**, select **Audio Settings** and then **Hot Mic Output**.
2. From the third menu, select **Gain**.
3. From the fourth menu, select one of the following:
   - + 12dB
   - + 6dB
   - 0dB (default)
   - - 6dB
   - -12dB
4. To confirm the selected setting, press the **rotary control**.

Audio Settings for the Front Panel

To configure the audio settings for the Front Panel:

1. In **Menu mode**, select **Audio Settings** and then **Front Panel**.
2. From the third menu, select **Loudspeaker Dim**.
3. From the fourth menu, select one of the following:
   - 0 dB
   - -3 dB
   - -6 dB (default)
   - -12 dB
   - -24 dB
4. To confirm the selected setting, press the **rotary control**.

2.3.3 Selecting Station Settings

Setting Keyset Assignments

To set the **Keyset Assignments**:

1. In Menu mode, select Station Settings and then **Keyset Assign**.
2. From the third menu, select required **Keyset** (1 – 4).
3. From the fourth menu, select a Channel (1 – 24) to assign to the Keyset.
4. Repeat this procedure for the remaining Keysets.
5. To confirm the selected setting, press the **rotary control**.

Setting Key Latching

To enable or disable front panel keys for latching:

1. In **Menu mode**, select **Station Settings** and then **Keysets**.
2. From the third menu, select either:

Key(s)	Description
Talk #1	Talk keys for the available Channels.
Talk #2	
Talk #3	
Talk #4	
SA Out key	Key used to talk to a connected public address or Stage Announce (SA) system.

Note: *The All Talk and **RMK (Remote Mic Kill)** key are also displayed in the list. Those keys **cannot** be latched. To find out how to configure the RMK and All Talk keys, see* ***Setting the RMK (Remote Mic Kill) Key on page 27****.*

Note: *The All Talk key allows you to talk to all Channels at once with the push of a button. Select **All Channels** to talk to all 12 (or 24 according to license) Channels on your system. Select **Visible Channels** to talk to the Channels visible on your four device Keyset screens.*

3. In **menu** mode select **Station Settings** and then **Keysets**.
4. From the third menu, select **All Talk**.
5. From the fourth menu, select **All Channels** or **Visible Channels**.
6. To confirm the selected setting, press the **rotary control**.

Setting the All Talk Key

The **All Talk** key allows you to talk to all Channels at once with the push of a button. Select **All Channels** to talk to all 12 (or 24 according to license) Channels on your system. Select **Visible Channels** to talk to the Channels visible on your four device Keyset screens.

1. In **menu** mode select **Station Settings** and then **Keysets**.
2. From the third menu, select **All Talk**.
3. From the fourth menu, select **All Channels** or **Visible Channels.**
4. To confirm the selected setting, press the **rotary control**.

Setting the RMK (Remote Mic Kill) Key

The RMK (Remote Mic Kill) key is used to:

- Deselect any latched keyset Talk routes.
- Turn off any latched Talk on connected analog Partyline equipment.

- To enable or disable the RMK (Remote Mic Kill) key:

1. In **Menu mode**, select **Station Settings** and then **Keysets**.
2. From the third menu, select **RMK.**

Note: *Talk Latch and the **SA Output Key** are also listed in this menu.*

3. From the fourth menu, select **either** of the following:
   - All Channels (12 or 24 according to license)
   - Visible Channels (default)
   - Disabled
4. To confirm the selected setting, press the **rotary control**.

Setting Display Screen Brightness

By default, the display screens are set for medium brightness. To set the brightness of the display screens:

1. In **Menu mode**, select **Station Settings** and then **Display**.
2. From the third menu, select **OLED Brightness**.
3. From the fourth menu, select one of the following brightness settings:
   - High
   - Medium (default)
   - Low
4. To confirm the selected setting, press the **rotary control**.

Setting Key Brightness

By default, the front panel keys are set to **High / Low**. To set the brightness of all front panel keys:

1. In **Menu mode**, select **Station Settings** and then **Display**.
2. From the third menu, select **Key Brightness**.
3. From the fourth menu, select one of the following brightness settings:

Key(s)	Description
High / Low	The default setting. Keys are lit bright when active and lit dim when inactive.
High / Off	Keys are lit bright when active and are unlit when inactive.
Low / Off	Keys are lit dim when active and are unlit when inactive.
Off / Off	Keys are unlit, whether or not they are active or inactive.

4. To confirm the selected setting, press the **rotary control**.

Setting the Screensaver

The screensaver features the Channel label and is enabled by default. The display screens enter screensaver mode when the Remote Station has been inactive for 10 minutes.

Tip: To exit screensaver mode, press any key on the front.

To enable or disable the screensaver:

1. In **Menu mode**, select **Station Settings** and then **Display**.
2. From the third menu, select **Screensaver**.
3. From the fourth menu, select:
   - **Channel Name** (default)
   - Hostname
   - Role Name
   - Blank
   - Disabled
4. To confirm the selected setting, press the **rotary control**.

2.3.4 Editing the Channel label

The maximum length for a Channel label is **12 characters**. To edit the Channel label:

1. In **Menu mode**, select **Channels** and then the name of the Channel you want to edit.
2. From the third menu, select **Label**.
3. Select **Clear** and press the rotary control to clear the Channel label.
4. In the fourth menu, the following prompt is displayed above the Channel label:

   [**Press to edit**]

   Press the **rotary control**.

5. The first letter of the Channel label is shown as selected. The following prompt is displayed above the Channel label:

   [Scroll / Press to Select]

   Scroll to the character you want to edit by turning the **rotary control**. To begin editing, press the **rotary control**.

6. The character you have selected for editing is shown in a box with a dotted border.

   To display alternative characters in the box, turn the rotary control. The range of available characters comprises the following:

Characters	Description / range
Numbers (numeric)	0 to 9
Letters	Capital letters = A to Z Small letters = a to z
Symbols	# & * ( ) - _ = + / ! @ : Note: You can also select a space.

   To select a character, press the **rotary control**.

7. When you have selected a replacement character, scroll to the next character you want to edit. When you have finished editing the Channel label, scroll to **Save** (displayed beneath the Channel label).

   To save the Channel label, press the **rotary control**.

Assigning the Program Listen to a Channel

To assign (or unassign) the Program Listen (Program Feed) to a Channel:

1. In **Menu mode**, select **Channels** and then the name of the Channel.
2. From the third menu, select **Program Listen.**
3. From the fourth menu, select either None, or choose from the list of available programs.

   Note: *The default is None.*

4. To confirm the selected setting, press the rotary control.

Tip: When you assign the Program Listen to a Channel, PGM is displayed on the display screen (under the listen level bar, to the left) for that Channel.

Assigning a GPO relay to a Channel

You can assign a relay that is triggered on receiving a call or detecting a talk on a Partyline Channel. To assign (or unassign) a relay:

1. In **Menu mode**, select **Channels** and then the name of the Channel.
2. From the third menu, select **GPO on Talk** or **GPO on Call**.
3. From the fourth menu, select either **None**, or choose from the list of available relays.

   Note: *The default is **None**.*

4. To confirm the selected setting, press the **rotary control**.

Note: *An ActionTrigger initiated by a Program Audio Input VOX can on only be assigned to a GPO on the same device.*

2.3.5 Configuring the Control I/O

The Control I/O connector on the rear panel allows you to connect one relay output or one opto input and control them through the Remote Station keysets:

I/O type	Description
Opto inputs	Opto inputs enable you to connect a foot switch or other control device and use it to trigger Call or Talk functions. Selecting the 'mic' option here allows the user to utilize a footswitch to enable talking to the pre-latched channels on the user station - hands free.
Relay outputs	Relay outputs enable you to use Call or Talk keys to trigger any external device that accepts a standard contact closure (such as a theater curtain or an On Air light).

Configuring Opto Inputs

To configure the Control I/O for the Opto input:

1. In **Menu mode**, select **Control I/O**.
2. From the second menu, select **Inputs**.
3. From the third menu, select **Opto 1**
4. From the fourth menu, select one of the following:
   - None (default)
   - Call Key 1
   - Talk Key 1
   - Call Key 2
   - Talk Key 2
   - Call Key 3
   - Talk Key 3
   - Call Key 4
   - Talk Key 4
   - Mic

     Note: *The number of the key relates to the keyset to which it belongs (for example, Call Key 1 is the Call key for the first keyset / display screen).*
5. To confirm the selected setting, press the **rotary control**.

Configuring the Relay Output

To configure the Control I/O for the Relay output:

1. In **Menu mode**, select **Control I/O**.
2. From the second menu, select **Outputs**.
3. From the third menu, select **Relay 1**
4. From the fourth menu, select one of the following:
   - None (default)
   - Call Key 1
   - Talk Key 1
   - Call Key 2
   - Talk Key 2
   - Call Key 3
   - Talk Key 3
   - Call Key 4
   - Talk Key 4
   - SA Key

     Note: *The number of the key relates to the keyset to which it belongs (for example, Call Key 1 is the Call key for the first keyset / display screen).*
5. To confirm the selected setting, press the **rotary control**.

2.3.6 Networking

In **Menu mode > Networking**, you can:

- See networking settings including Hostname, DHCP, IP address, subnet mask and gateway.
- Pair to an Arcadia Central Station.
- Set the expansion mode for your device.

Viewing Network Preferences

To view network preferences:

1. In **Menu** mode, select **Networking > Preferences**

   You can view the following:

   - Hostname
   - DHCP enabled or disabled
   - IP address
   - Subnet Mask
   - Gateway

Pairing to an Arcadia Central Station

To pair to an Arcadia Central Station:

1. In **Menu** mode, select **Networking > Pair to Station**.
2. Select **By Name** or **By Address**.

Using Expansion Mode

To enable your Remote Station as a host in expansion mode, or to expand to another device:

1. In **Menu** mode, select **Networking > Expansion Mode**.
2. Select **Host** or **Expand to Host**.

2.3.7 Administration

In **Menu mode > Administration**, you can:

- View the current versions of the software for the system.
- Update the software (firmware).
- Reset the Remote Station to the default (factory mode) settings.
- Manually reboot the Remote Station.
- Save and Restore the software settings.

Viewing the Current Versions of the Software

To view the current versions of the software on the Remote Station:

1. In **Menu mode**, select **Administration** and then **Software**.
2. From the third menu, select **Current**.
3. In the fourth menu, use the **rotary control** to scroll the displayed software versions. The software versions for the HelixNet system and Remote Station are shown.

Updating the Software

Software can be updated from an Arcadia Central Station or locally in the USB connector on the front of a Remote Station. Updating from the Arcadia Central Station is recommended when possible.

To update the software:

1. After downloading the software update, copy the update to a USB memory stick.
2. Insert the memory stick into the USB connector.
3. In **Menu mode**, select **Administration** and then **Software**.
4. From the third menu, select **Update**.
5. The fourth menu displays the new software version information on the USB memory stick. To start updating to the new software, press the rotary control.

The process of updating the software takes several minutes. The following system messages are displayed during the process:

Loading image

Erasing flash

Writing to flash

Verifying flash

Successful

Do **not** turn off the power to the Remote Station during the software (firmware) update. Turning off the power can damage the device.

Notes: *Do not remove the USB memory stick from the Remote Station until the software update is completed.*

*The Remote Station resets **automatically**. You are **not** required to restart the Remote Station.*

Resetting the Remote Station to Default Settings

To reset the Remote Station to its default (factory mode) settings:

1. In **Menu mode**, select **Administration** and then **Reset**.
2. The third menu displays a selected menu item: **Reset to Default**.
3. In the fourth menu, select **Reset Now**.

Manually Rebooting the Remote Station

To manually reboot the Remote Station:

1. In **Menu mode**, select **Administration** and then **Reset**.
2. The third menu select **Reboot**.
3. In the fourth menu, select **Reboot Now**.

When the **rotary control** is pressed, the display changes to **Rebooting** … for two seconds, and then the Remote Station reboots.

Saving and Restoring the Software Settings

To save or restore the software settings:

1. In **Menu mode**, select **Administration** and then **Settings**.
2. To save, in the third menu, select **Save**. Once you select **Save** you should not remove the USB stick right away. Depending on the USB stick it might take up to 5 seconds to complete.
   a. In the fourth menu, select either saving to a USB stick or saving locally.
3. To restore, in the third menu, select **Restore**.
   a. In the fourth menu, select either restoring from a USB stick or restoring from a list of files.

2.3.8 Diagnostics

The **Diagnostics** menus help you to monitor the performance of the Remote Station and diagnose possible system issues.

Viewing Network Information

To view network status information:

1. In **Menu mode**, select **Diagnostics** and then **Network**.
2. To view status information about the powerline:
   a. From the third menu, select **Powerline**.
   b. On the fourth menu, the IP address is given.
3. To view status information about the Ethernet:
   a. From the third menu, select **Ethernet**.
   b. On the fourth menu, the IP address is given.

Viewing Keyset Information

To view information about the keysets:

1. In **Menu mode**, select **Diagnostics** and then **Keysets**.
2. From the third menu, select a keyset from 1 to 4.
3. The fourth menu displays the following status information:
   - **Name** – The Channel name
   - **Talkers** – The number of talkers on the Partyline
   - **Beltpacks** – The number of beltpacks listening on the Partyline
   - **Remote** – The number of Remote Stations listening
   - **Speaker** – The number of Speaker Stations listening
   - **2-Wire** – The number of 2-wire ports listening
   - **4-Wire** – The number of 4-wire ports listening

2.4 Using the Remote Station

This section describes how to use theRemote Station, after your HelixNet Partyline system has been installed and configured.

2.4.1 Using the Gooseneck Mic, Loudspeaker and Headset

To use a **gooseneck mic** to talk to connected intercom users, devices (including beltpacks) and systems:

1. Connect the gooseneck mic, using the gooseneck mic connector (3-pin female Tuchel connector) on the left of the front panel.

   ***Note**: For the location of the gooseneck mic connector, see C in **Remote Station: Front panel on page 8**.*

2. To talk to other intercom users and devices:

   a. Press the appropriate **Talk key**

   When the mic (gooseneck or headset) is live, the **Mic On key** is activated automatically.

   b. Speak into the mic.

Use the front panel **loudspeaker** to listen to connected intercom users, devices and the Program Feed.

To adjust the volume level:

3. Adjust the volume of all incoming audio by turning the loudspeaker rotary control **[Main]**, located to the left of the loudspeaker.

   Adjust the volume of the Program Feed in **relation to** the overall volume level by turning the auxiliary loudspeaker rotary control [**Prog**], located to the right of the loudspeaker. The **Prog** volume control is subordinate to the **Main** volume control.

   To increase the volume level, turn the **rotary control(s)** clockwise. To decrease the volume level, turn the **rotary control(s)** counter-clockwise.

   ***Note**: When you connect a headset, incoming audio is routed to the headset instead of the loudspeaker.*

   ***Note:** You can mute the speaker by pressing the rotary control.*

   As you increase or decrease the volume, the level control LEDs pass through a range of indicator colors:

LED color	Volume level
Green	Low
Amber/Green	Low/Medium
Amber	Medium
Red/Amber	Medium/High
Red	High

To use a **headset** to talk and listen to connected intercom users, devices and systems:

1. Connect the headset, using the headset connector (4-pin XLR–M) on the far left of the front panel.

   The **Headset key** is automatically activated. Incoming audio is routed to the headset instead of the loudspeaker.

   Note: *For the location of the headset connector and the headset key, see B & E in* ***Remote Station: Front panel on page 8****.*

   To configure audio settings for the headset, see **Configuring the Audio settings on page 18**

2. To talk to other intercom users and devices:

   a. Press the appropriate **Talk key**.

   When the microphone (gooseneck or headset) is live, the **Mic On key** is activated automatically.

   b. Speak into the microphone.

3. To adjust the volume level of incoming audio to the headset..

   a. Adjust the volume of all incoming audio by turning the loudspeaker rotary control **[Main]**. The control is located to the left of the loudspeaker.

   a. Adjust the volume of the Program Feed in **relation to** the overall volume level by turning the auxiliary loudspeaker rotary control [**Prog**. The control is located to the right of the loudspeaker.

The **Prog** volume control is subordinate to the **Main** volume control.

Switching between the headset mic and the gooseneck mic

When both a Headset microphone and a gooseneck microphone are connected, press the **Headset key** to activate the headset mic.

Press the **Headset key** again to switch to the gooseneck mic (and deactivate the headset mic).

Tip: To find out more about Clear-Com accessories, including headsets and gooseneck microphones, see http://www.clearcom.com/product/accessories.

2.4.2 Entering and Exiting Menu Mode

Use **Menu mode** to:

Configure the settings for the Remote Station, including Channel and audio settings.

Administrate the system, monitor system performance and diagnose system issues.

Perform software updates.

In **Menu mode**, the display screens display the four levels of menu. The menu hierarchy proceeds left to right:

The **top level** menu is presented in the first screen (furthest left on the front panel).

The **lowest level** menu is presented in the fourth screen (furthest right on the front panel).

To place the Remote Station in **Menu mode**, press the **Menu key** to the left of the first (left) display screen. To exit Menu mode, do either of the following:

Press the **Menu key** again.

Wait until Menu mode times out. If you fail to press any key on the front panel for 20 seconds, the display screens revert to showing the standard Channel information.

2.4.3 Using the Channel Keysets

A keyset (set of controls) is located next to each of the four display screens. In operating mode, each keyset is dedicated to the control of one of the four assigned intercom Channels. For details of the standard on screen information for each Channel, see table in **Remote Station: Channel Keyset and Display on page 14**.

Note: *To change (edit) the Channel label (name), see* ***Editing the Channel label on page 30***

The display screens enters screensaver mode (if enabled) if theRemote Station remains inactive for 10 minutes. Press any key to leave screensaver mode.

To send a **call signal** to all the connected devices on that Channel, press the **Call key**.

To **talk** to the all the devices on that Channel:

1. Press the **Talk key**. When the gooseneck or headset mic is live, the Mic **On key** is activated automatically.

2. Speak into the headset or gooseneck mic

To **adjust the volume** of incoming audio per channel, turn the rotary control. Turn the rotary control clockwise to increase the volume, and counter-clockwise to decrease volume. The current volume level is shown on screen.

To **mute** incoming audio per channel, press the **rotary control**. The display screen displays the muted volume bar.

To **unmute** incoming audio (restoring the audio to its previous volume level), press the **rotary control** again.

Note*: In* ***Menu mode****, the* ***rotary control*** *for each Channel keyset is used to scroll and select menu items. For more information, see* ***Using the Menus on page 17***

2.4.4 Using the All Talk Key

To talk to all connected intercom users, devices and systems, **excluding** the SA (Stage Announce) facility:

1. Press the **All Talk key** to the right of the fourth (last) display screen.

   Talk keys for all Channels are activated automatically.

   When the mic (gooseneck or headset) is live, the **Mic On key** is also activated automatically.

2. Speak into the headset or gooseneck mic - see also **Using the Gooseneck Mic, Loudspeaker and Headset on page 37**

Note: ***All Channels*** *will enable you to talk to 12 (or 24, according to license) Channels.* ***Visible Channels*** *will enable you to talk to the four visible Channels.*

2.4.5 Using the SA [Stage Announce] key

Use the **SA [Stage Announce] key** to speak to an attached SA or Public Address system (sometimes simply a loudspeaker within the studio, theater or event area).To make a studio / public announcement:

1. Press the **SA key** to the right of the fourth (last) display screen.

   When the mic (gooseneck or headset) is live, the **Mic On key** is also activated automatically.

2. Speak into the headset or gooseneck mic - see also **Using the Gooseneck Mic, Loudspeaker and Headset on page 37**

2.4.6 Line and LAN LEDs

The LAN LED indicates the status of the Ethernet connection, if present.

The color of the **Line and LAN LEDs** to the left of the front panel loudspeaker indicate the service status:

Green LED = **OK**

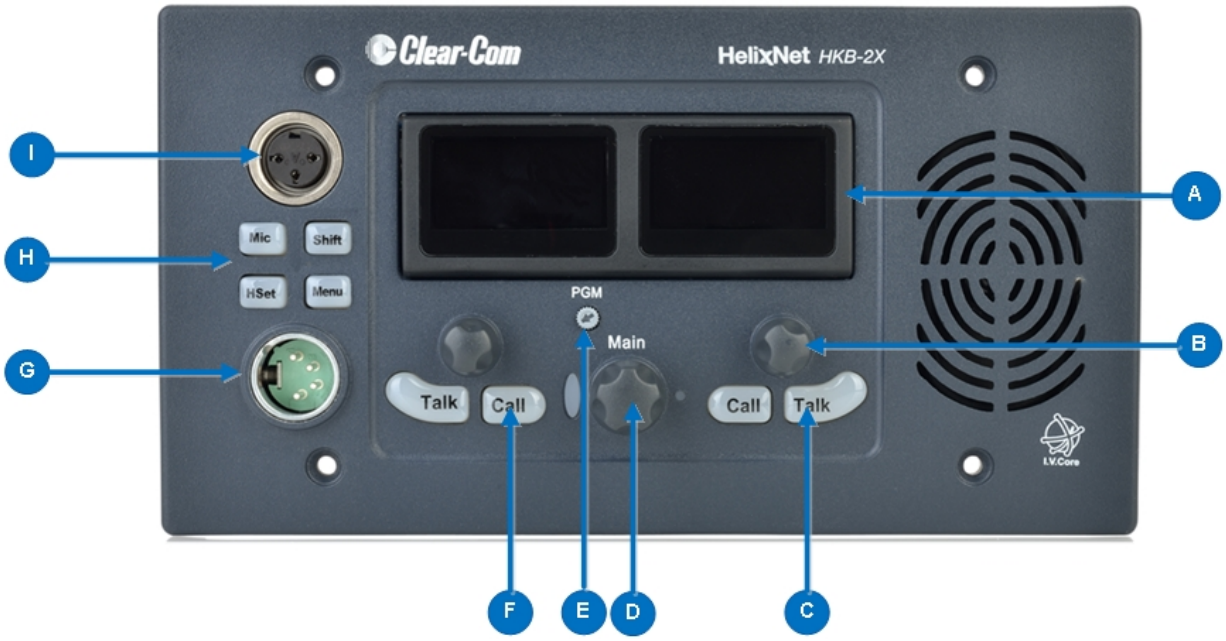
Amber LED = **Busy**

Red LED = **Error**

3 HKB Speaker Station

This chapter describes how to use the HelixNet Speaker Station with Arcadia. It contains the following sections:

3.1 Speaker Station : Front Panel



Key to Speaker Station front panel	
Feature	**Description**
A	**Tilt adjustable display screen**. The following default information is displayed: • The Channel label. • The Channel listen (volume) level. In Menu mode, the display screens display the two levels of menu. The menu hierarchy proceeds left to right: • The top level menu is presented in the first screen (furthest left on the front panel). • The lower level menu is presented in the second screen. If the display is in Menu mode, the display screen times out of Menu mode and displays the Channel label if no key is pressed for 20 seconds. For more information about Menu mode, see **Using the Menus on page 17**
B	**Rotary control.** Turn to increase or decrease the listen volume level for the Channel. Also, push the control to mute or unmute audio level. In Menu mode, use the control to scroll menu items. To select menu items, press the control.

Key to Speaker Station front panel	
C	**Talk key.** Press to talk on the Channel and to all nodes (intercom devices and systems) listening into the Channel.
D	**Loudspeaker / Headphone audio level rotary control [Main]**. To increase the volume to the loudspeaker / headphones, turn clockwise (up to 360°). To decrease the volume, turn counter clockwise (up to 360°). As you increase or decrease the volume, the level control LEDs pass through a range of indicator colors.
E	**Program feed audio level Trim Pot control [PGM].** To increase the volume of the program feed to the loudspeaker / headphones, turn clockwise (up to 360°). To decrease the volume, turn counter clockwise (up to 360°). To mute or unmue the Channel audio, push the control.
F	**Call key.** Press to send a call signal to all Keysets assigned to the same Channel. There are two Call keys on the beltpack, one for each of the displayed Channels.
G	**Headset socket (4-pin XLR–M)**

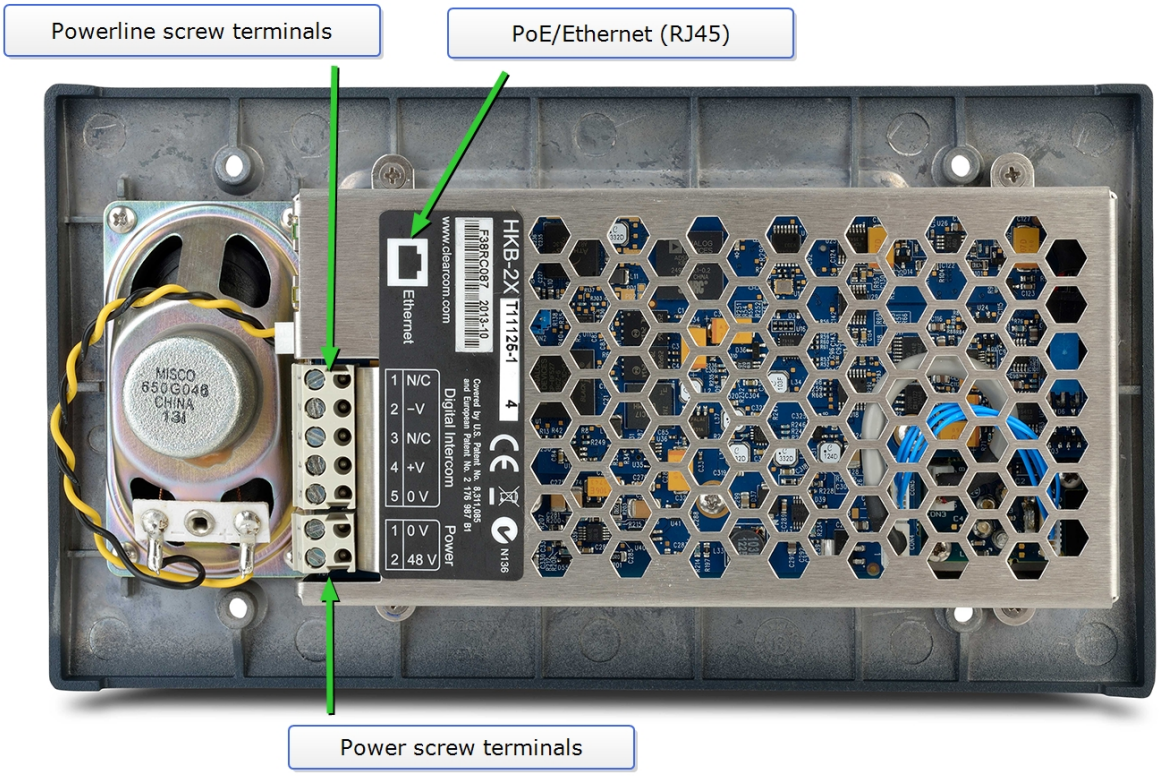
Pin	Function
1	Mic ground
2	Mic positive
3	Earphone ground
4	Earphone positive

H	**Headset/microphone key set. There is a keyset (set of controls) to control the headset/microphone inputs and menu options.**
I	**Gooseneck microphone connector** (3-pin female Tuchel connector)

3.2 Speaker Station Front Panel Function Buttons

Key to Speaker Station front panel function buttons	
Feature	**Description**
A	**Mic control [MIC ON].** Press to activate mic audio.
B	**Shift key**. Press to display two alternative Channels on the Speaker Station displays.
C	**Menu**. Press to display the Speaker Station menus in the display screens. Use the rotary control for each display screen to scroll and select menu items.
D	**Headset key [HSET].** Press to activate the headset mic. When the headset is connected, the gooseneck microphone is disconnected. Audio output to the loudspeaker is diverted to the headphones.

3.3 Speaker Station Rear Panel



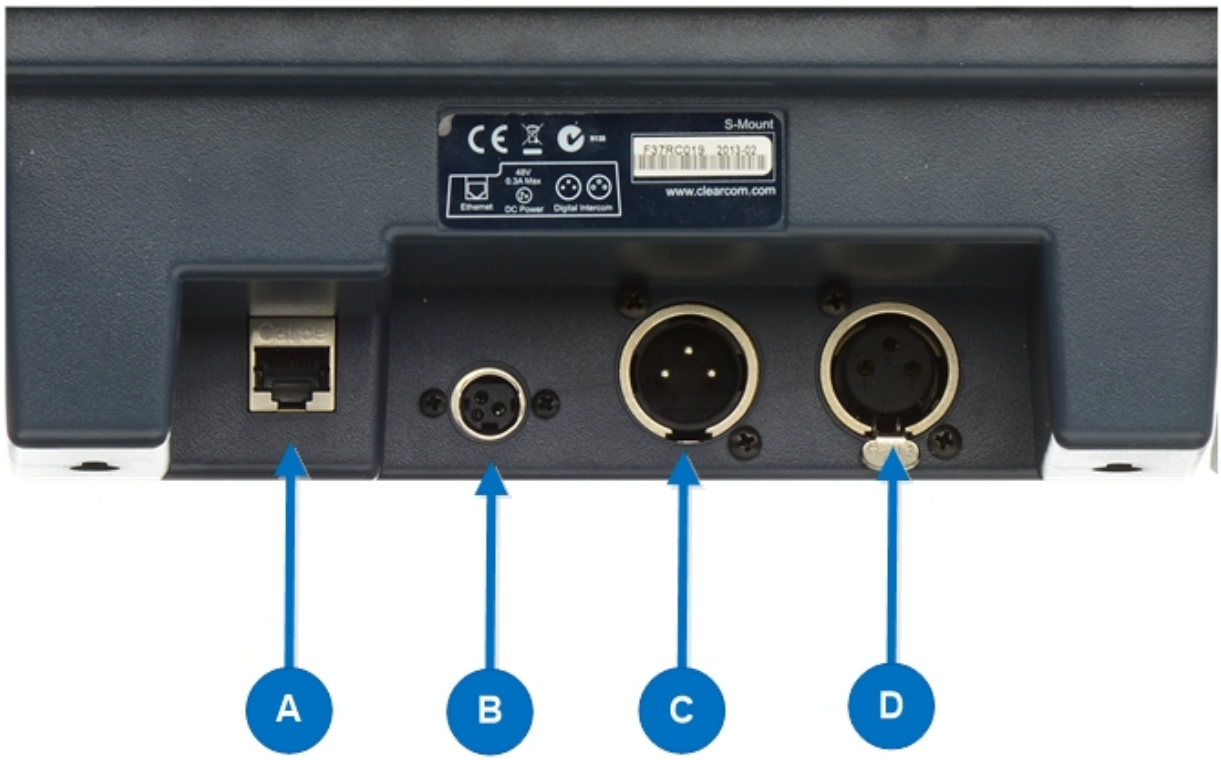
Speaker Station rear connectors	
Digital Intercom	
1	Not connected
2	-30V DC
3	Not connected
4	+30V DC
5	Ground
Power	
1	Ground
2	48V DC

For power draw, see the **Specifications** section in this manual.

3.4 S-Mount Rear Panel

The S-Mount is an optional unit that allows you to mount the Speaker Station on a desk or wall.

Note: *There are cables pre-installed in the S-Mount that connect to the Speaker Station terminals.*



Key to S-Mount rear panel keyset	
Feature	**Description**
A	**Ethernet/Power over Ethernet connection (RJ45).**

Pin	Name	Function
1	TX+	Transmit Data+
2	TX-	Transmit Data-
3	RX+	Receive Data+
4	n/c	Not connected
5	n/c	Not connected
6	RX-	Receive Data-
7	n/c	Not connected
8	n/c	Not connected

B

Power connection.

The power input connector is a low voltage DC connection. It is 48VDC at a max power of 12.95W.

C

Line 1 Digital Partyline. (3-pin male XLR connector).

Pin	Function
Pin 1	Ground
Pin 2	+30V DC and Audio
Pin 3	-30V DC and Audio

Table 1-26 Line 1 pinout

D

Line 2 Digital Partyline. (3-pin female XLR connector).

Pin	Function
Pin 1	Ground
Pin 2	+30V DC and Audio
Pin 3	-30V DC and Audio

3.5 Configuring and Managing Speaker Station from Front Panel Menus

This section describes how to configure the settings and manage the Speaker Station using **Menu mode**. It also shows you how to monitor and diagnose performance issues, using the **Diagnostics** menus.

Tip: For a quick reference to the Speaker Station menus, see **Menu Maps on page 93**.

For general information about using the menus and configuring settings, see Using the Menus.

There is a next and a back activated by pressing the rotary encoders (right one for next, left one for back). There are two levels of the menu, one on the left screen and one on the right. Next and back shifts the menu by one level down or up.

3.5.1 Using the Menus

To place the Speaker Station in **Menu mode**, press the **Menu key**. The Speaker Station menus appear in the display screens.

***Notes**: The **Speaker Station** menu comes up in the **Roles** menu by default.*

If Menu mode is **locked**, you must unlock the menus from CCM before you can enter the menu.

Configuring Settings

To configure settings:

1. For each menu, turn the **rotary control** to scroll the menu items. Turn the rotary control:
   - Counter-clockwise to scroll up the menu items.
   - Clockwise to scroll down the menu items.

To return to the previous level of menu, press the **left-hand rotary key**.

To go to the next level of menu, press the **right-hand rotary key.**

Selected menu items are highlighted in solid yellow.

2. When you have selected a setting, press the **right-hand rotary key** to enable the setting on the Speaker Station.

Exiting Menu Mode

To exit **Menu mode** do either of the following:

Press the **Menu** key.

Wait until Menu mode times out. If you fail to press any key on the Speaker Station for 20 seconds, the display screen reverts to showing the standard Channel information.

3.5.2 Configuring the Audio settings

Audio settings for the headset

To configure the audio settings for the headset, see **Configuring the Audio settings on page 18**.

Audio Settings for the Microphone

To configure the audio settings for the microphone, see **Audio Settings for the Microphone on page 20**.

Audio Settings for the Front Panel

To configure the audio settings for the front panel, see **Audio Settings for the Front Panel on page 26**.

3.5.3 Station Settings

Setting Keyset Assignments

To configure the Keyset Assignments settings, see **Setting Keyset Assignments on page 26**.

Setting key latching

To configure key latching, see **Setting Key Latching on page 26**.

You can also configure key latching so that the Talk keys automatically unlatch whenever the Shift key is pressed. To do so:

1. In Menu mode, select **Station Settings** and then **Keysets**.
2. From the third menu, select **Unlatch on Shift**.
3. From the fourth menu select:
   - Enabled (default)
   - Disabled

Setting display screen brightness

To configure display screen brightness, see **Setting Display Screen Brightness on page 28**.

Setting key brightness

To configure key brightness, see **Setting Key Brightness on page 29**.

Setting the screensaver

To configure the screensaver, see **Setting the Screensaver on page 29**.

3.5.4 Networking

In **Menu mode > Networking**, you can:

- See networking settings including DHCP, IP address, subnet mask and gateway.
- Pair to an Arcadia Central Station.

Viewing Network Preferences

To view network preferences:

1. In **Menu** mode, select **Networking > Preferences**

You can view the following:

- DHCP enabled or disabled
- IP address
- Subnet Mask
- Gateway

3.5.5 Administration

Viewing the current versions of the software

To view the current version of the software, see **Viewing the Current Versions of the Software on page 35**.

Updating the Software

To update the software, see **Updating the Software on page 35**.

Resetting the Speaker Station to Default (Factory Mode) settings.

To reset the Speaker Station to its default (factory mode) settings see:

1. In **Menu mode**, select **Administration** and then **Reset**.
2. The third menu displays a selected menu item: **Reset to Default**.
3. In the fourth menu, select **Reset Now**.

3.5.6 Diagnostics

Viewing network information

To view network information, see **Viewing Network Information on page 37**.

Viewing Keysets Information

To view key sets information, see **Viewing Keyset Information on page 37**.

3.6 Using the Speaker Station

This section describes how to use the Speaker Station, after your HelixNet Partyline system has been installed and configured.

3.6.1 Using the gooseneck mic, loudspeaker and headset

To use a **gooseneck mic** to talk to connected intercom users, devices (including beltpacks) and systems:

1. Connect the gooseneck mic, using the gooseneck mic connector (3-pin female Tuchel connector) on the left of the front panel.

   ***Note**: For the location of the gooseneck mic connector, see **HKB Speaker Station on page 42**.*

2. To talk to other intercom users and devices:

   a. Press the **Talk Key**.

      When the mic (gooseneck or headset) is live, the **Mic** key is activated automatically.

   b. Speak into the microphone.

   Use the front panel **loudspeaker** to listen to connected intercom users, devices and the Program Feed.

To adjust the volume level:

3. Adjust the volume of all incoming audio by turning the loudspeaker rotary control [**Main**], located in the center of the panel.

   To increase the volume level, turn the **rotary control(s)** clockwise. To decrease the volume level, turn the **rotary control(s)** counter-clockwise.

   ***Note**: When you connect a headset, incoming audio is routed to the headset instead of the loudspeaker.*

   ***Note:** You can mute the speaker by pressing the rotary control.*

   As you increase or decrease the volume, the level control LED passes through a range of indicator colors.

LED color	Volume level
Green	Low
Amber/Green	Low/Medium
Amber	Medium
Red/Amber	Medium/High
Red	High

To use a **headset** to talk and listen to connected intercom users, devices and systems:

1. Connect the headset, using the headset connector (4-pin XLR–M) on the far left of the front panel.

   The **Headset key** is automatically activated. Incoming audio is routed to the headset instead of the loudspeaker.

   Note: *For the location of the headset connector and the headset key, see* ***HKB Speaker Station on page 42****.*

   To configure audio settings for the headset, see **Configuring the Audio settings on page 18**.

2. To talk to other intercom users and devices:

   a. Press the appropriate **Talk key**.

   When the microphone (gooseneck or headset) is live, the **Mic key** is activated automatically.

   b. Speak into the microphone.

3. To adjust the volume level of incoming audio to the headset:

   a. Adjust the volume of all incoming audio by turning the loudspeaker rotary control **[Main]**. The control is located to the left of the loudspeaker.

   b. Adjust the volume of the Program Feed using the **PGM** Trim Pot.

Switching Between the Headset Mic and the Gooseneck Mic

When both a Headset microphone and a gooseneck microphone are connected, press the Headset key to activate the headset microphone, and press the **Mic** key to activate the microphone.

Tip: To find out more about Clear-Com accessories, including headsets and gooseneck microphones, see http://www.clearcom.com/product/accessories.

3.6.2 Entering and exiting Menu Mode

Use **Menu mode** to:

Configure the settings for the Speaker Station, including Channel and audio settings.

Administrate the system, monitor system performance and diagnose system issues.

In **Menu mode**, the display screens show two out of four levels of menu. The menu hierarchy proceeds left to right:

The **top level** menu is presented in the first screen (left on the front panel).

The **second level** menu is presented in the second screen (right on the front panel).

Note: *Press the right-hand rotary control to shift to the next menu level.*

To place the Speaker Station in **Menu mode**, press the **Menu key** to the left of the first (left) display screen. To exit Menu mode, do either of the following:

Press the **Menu key** again.

Wait until Menu mode times out. If you fail to press any key on the front panel for 20 seconds, the display screens revert to showing the standard Channel information:

- Channel label (name).
- Listen (volume) level.

This section describes how to use the Speaker Station, after your HelixNet Partyline system has been installed and configured.

Tip: For a quick reference to the functionality of the Speaker Station, the optional interface modules and the , see **Remote Station: Front panel on page 8**.

3.6.3 Using the Channel Keysets

A keyset (set of controls) is located next to each of the two display screens. In operating mode, each keyset is dedicated to the control of one of the four assigned intercom Channels. You can also use the shift key to switch to the other channels configured on keysets 3-4. For details of the standard on screen information for each Channel, see **Speaker Station Front Panel Function Buttons on page 45**.

To send a **call signal** to all the connected devices on that Channel, press the **Call key**.

To **talk** to all the devices on that Channel:

1. Press the **Talk key**. When the gooseneck or headset mic is live, the **Mic On** key is activated automatically.

2. Speak into the headset or gooseneck mic - see also **Using the gooseneck mic, loudspeaker and headset on page 52**.

To **adjust the volume** of incoming audio, turn the **rotary control**. Turn the rotary control clockwise to increase the volume, and counter-clockwise to decrease volume. The current volume level is shown on screen.

To **mute** incoming audio, press the **rotary control**. The display screen displays the muted volume bar.

To **unmute** incoming audio (restoring the audio to its previous volume level), press the **rotary control** again.

Note: *In **Menu mode**, the **rotary control** for each Channel keyset is used to scroll and select menu items. For more information, see* **Using the Menus on page 17**

3.6.4 Using the speaker station with push-to-talk (PTT) actions

The HKB Station is available in a special configuration with a 7-pin XLR headset connector. This is used with two assignable GPI/Push-to-talk (PTT) controls that enable you to configure various buttons press actions from a switch wired to the GPI/PTT.

More than one button press can be configured on each GPI/PTT. There are three configurable actions available: PPT1, PPT2 and PTT 1 & 2 (both buttons pushed at the same time).

The four local talk and call keys, the headset (**Hset**) key and the microphone (**Mlc**) key can be assigned to any GPI/PTT.

The GPI/PTTs can be configured from the CCM or from the front panel menu system.

Please contact your Clear-Com representative for further information about availability of the HKB-2X-X7.

4 HXII-BP Beltpack

This chapter describes how to use the HXII-BP Beltpack with Arcadia. It contains the following sections:

This section covers the HXII-BP beltpack that has a 4-pin headset connector, and the HXII-BP-X5 beltpack that has a 5-pin headset connector for split-ear binaural operation. This enables you to pan the keysets channels between left and right ears.

For more information about the using the HXII-BP-X5 beltpack with binaural audio, see **Binaural Audio on page 77**.

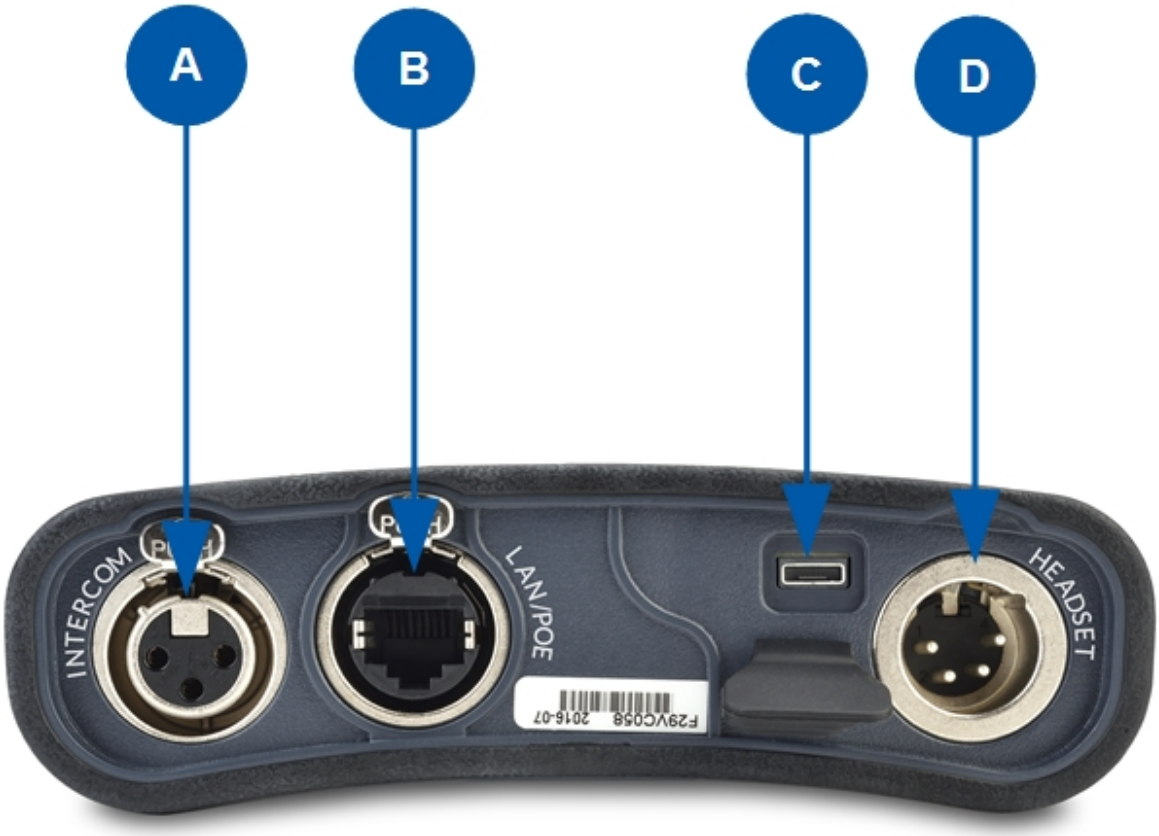
4.1 HXII-BP Beltpack User Controls (Top View)

Key to HXII-BP user controls (top view)	
Feature	**Description**
A B	**Talk keys**. Press to talk to all nodes (intercom devices and systems) listening into the Channel. There are two Talk keys on the beltpack, one for each of the supported Channels.
C D	**Call keys.** Press to send a call signal to all Keysets assigned to the same Channel. There are two Call keys on the beltpack, one for each of the supported Channels. In **Menu** mode, press the right-hand Call key to select (enter) menu items. Use the left-hand Call key to go back one menu level.

4.2 HXII-BP Beltpack Connectors and Controls (Front View)

Key to HXII-BP user controls (front view)	
Feature	**Description**
A E	**Channel volume control.** Turn to increase and decrease the listen volume level for the Channel. In Menu mode, you can turn either of the side-mounted rotary controls to scroll menu items. To select (enter) items, press the right-hand Call key. In Menu mode, you can turn either of the side-mounted rotary controls to scroll menu items. To select (enter) items, press the right-hand Call key. These controls also adjust binaural audio volume in beltpacks with 5-pin headset connectors.
B	**Menu key.** Press firmly to enter **Menu** mode. To exit **Menu** mode, press the **Menu** key again. The display screen times out of **Menu** mode and displays the Channel label(s) if no key is pressed for 20 seconds.
C	**Program feed volume controls.** Use the up and down arrow buttons to increase or decrease the overall listen volume level of the program feed. To assign programs to a Channel, see **Assigning the Program Listen to a Channel on page 31** .
D	**OPT Programmable function key. This button selects the binaural audio volume adjustment screen on beltpacks with a 5-pin headset connector.**

4.3 HXII-BP Beltpack (Bottom View)



Key to HXII-BP user controls (bottom view)	
Feature	**Description**
A	**Line (Digital Partyline)** (3-pin female XLR connector).

Pin	Function
1	Ground
2	+30V DC and Audio
3	-30V DC and Audio

B

etherCon connector. Used for Power over Ethernet (PoE).

Pin	Name	Function
1	TX+	Transmit Data+
2	TX-	Transmit Data-
3	RX+	Receive Data+
4	n/c	Not connected
5	n/c	Not connected
6	RX-	Receive Data-
7	n/c	Not connected
8	n/c	Not connected

When using PoE, the beltpack draws 4 Watts from the PoE switch.

C

USB 2.0 (Micro-AB) connector

Key to HXII-BP user controls (bottom view)	
D	**Headset connector** HX-II-BP-X headset connection: 4-pin XLR male

Pin	Function
1	Mic ground
2	Mic positive
3	Earphone ground
4	Earphone positive

HX-II-BP-X5 headset connection: 5-pin XLR female

Pin	Function
1	Mic ground
2	Mic positive
3	Earphone ground
4	Earphone left
5	Earphone right

4.4 HXII-BP Beltpack (Rear)

Key to HXII-BP Rear	
Feature	**Description**
A	**Beltloops.** Use to thread through a belt or strap for securing the beltpack to a belt or a fixed position. You can also extend the beltloops to allow you to mount the beltpack on a flat surface.
B	**Beltclip.** Use to fasten to a belt or similar. The beltclip additionally includes three screw holes for wall mounting**.**

4.5 Configuring and managing beltpack from front panel menus

This section describes how to configure the settings and manage the beltpacks using **Menu mode**. It also shows you how to monitor and diagnose performance issues, using the **Diagnostics** menus.

Tip: For a quick reference to the Remote Station menus, see **Menu Maps on page 93**.

4.5.1 Using the Menus

To place the beltpack in **Menu mode**, press the **Menu key** on the top of the beltpack.

Notes *The **Beltpack** menu shows the **Roles** menu by default.*

:

*If Menu mode is **locked** on the beltpack, you must unlock the menus from CCM before you can enter the menu.*

To enter the menu mode from the Roles screen, press the left hand Call button.

Configuring settings

To configure settings:

1. For each menu, turn either of the side-mounted **rotary controls** to scroll the menu items. Turn the rotary control:
   - Counter-clockwise to scroll up the menu items.
   - Clockwise to scroll down the menu items.

Off-screen menu items are indicated with arrows at the top and / or bottom of the display screen.

Back (with an arrow pointing **left**) indicates a previous level of menu.

To return to the previous level of menu, press the **left-hand Call key**.

An arrow pointing **right** indicates another level of menu under that menu item.

To go to the next level of menu, press the **right-hand Call key**.

Selected menu items are highlighted in solid yellow.

2. The final level of menu (the second or third display screen) displays the settings that relate to your previous menu choices (system features or functionality).

The **current setting** is indicated by a dotted box around the menu item

When you have selected a setting, press the **right-hand Call key** to enable the setting on the Remote Station.

Exiting Menu mode

To exit **Menu mode** on the beltpack, do either of the following:

Press the Menu key.

Wait until Menu mode times out. If you fail to press any key on the beltpack for 20 seconds, the display screen reverts to showing the standard Channel information.

4.5.2 Configuring the Role Settings

To configure the Role settings for the headset

1. In **Menu mode** press the left-hand Call Key and then select **Roles**.
2. Select the required Role.
3. To confirm the selected setting, press the **right-hand Call key**.
4. The beltpack applies the setting and reverts to the standard display screen.

Viewing Hostname

The hostname (the unique name given to any device on a network) of your beltpack can be seen in the Roles section of the menu.

To view the hostname for your beltpack:

1. In **Menu mode** press the left-hand Call Key and then select **Roles**.
2. The device's hostname can be seen at the top of the list of available Roles.

Note: *You cannot change the hostname from this screen. The hostname for beltpacks must be changed from the browser-based Core configuration Manager (the CCM). From the* ***Overview*** *page of the CCM, click on any device image to access configuration details for that device's hostname.*

4.5.3 Configuring the Audio Settings

To configure the audio settings for the headset:

1. In **Menu mode** press the left-hand Call Key and then select **Audio Settings.**
2. To adjust sidetone gain on the headset:
   a. Select Sidetone Gain.
   b. Select one of the following:
      - 0dB
      - - 6dB
      - -12dB (default)
      - -18dB
   c. To confirm the selected setting, press the **right-hand Call key**.

Go back to the previous menu level by pressing the **left-hand Call key**.

3. To limit the maximum audio level that can be delivered to the headphones:
   a. Select Headphone Limit.
   b. Select one of the following:
      - Off
      - +6dB
      - 0dB (default)
      - - 6dB
   c. To confirm the selected setting, press the **right-hand Call key**.

   ***Note**: When Headphone Limit is set to anything except **Off**, a LIM indication will show up at the top right of the display.*

Go back to the previous menu level by pressing the **left-hand Call key**.

4. Sidetone tracking means that the sidetone level varies according to the main volume level. To set (or disable) sidetone tracking on the headset:
   a. Select Sidetone Control.
   b. Select one of the following:
      - Tracking (default)
      - Non-Tracking
      - Disabled
   c. To confirm the selected setting, press the **right-hand Call key**.

Go back to the previous menu level by pressing the **left-hand Call key**.

5. To set the type of mic on the headset:
   a. Select **HS Mic Type**.
   b. Select either of the following types of mic.
      - Electret (-15 dB)
      - Dynamic (0 dB) (default)
      - Dynamic (low). This setting corresponds to -10 dB gain on HBP-2X and -15 dB gain on HXII-BP.

        ***Note**: In electret mode, phantom power is provided for an electret mic. In dynamic mode, no phantom power is provided. Mic input levels are also adjusted between the different modes to suit the different mic types.*
   c. To confirm the selected setting, press the **right-hand Call key**.

4.5.4 Audio Settings for the Microphone

To configure the audio settings for the microphone:

1. In Menu mode, select **Audio Settings**.

   ***Note**: The Headroom setting is only available on the HBP-2X Beltpack*

2. To select the Headroom:
   a. From the third menu, select **Headroom**.
   b. From the fourth menu, select one of the following:
      - Normal (default)
      - High
3. To enable or disable the Contour Filter:
   a. From the third menu, select **Contour Filter**
   b. From the fourth menu, select one of the following:
      - Enabled
      - Disabled (default)

4.5.5 Configuring the beltpack Settings

In **Menu mode > Beltpack Settings**, you can:

- Assign Channels to the left and right beltpack keysets (set of controls).
- Enable (or disable) **Talk key** latching.
- Enable (or disable) beltpack vibration when a call signal is received.
- Enable (or disable) the USB flasher mode for the beltpack.
- **Tip:** For a quick reference to the keysets on the beltpack, see **HXII-BP Beltpack User Controls (Top View) on page 57**.

Assigning Channels

You can assign any two available Channels to the beltpack (including the same Channel to both keysets).

To assign a Channel:

1. In Beltpack Settings select Left Channel or Right Channel.
2. Select one of the available Channels (or none):
3. To confirm the selected setting, press the **right-hand Call key.**

Setting Talk Key Latching

To enable (or disable) **Talk key** latching:

1. In Beltpack Settings select Right Talk Latch or Left Talk Latch
2. Select one of the following:
   - Latching (default)
   - Non-Latching
   - Disabled

     ***Note**: The setting applies to both Channels on the beltpack.*
3. To confirm the selected setting, press the **right-hand Call key**.

Setting USB Flasher Mode

To enable (or disable) **USB Flasher** mode

1. In Beltpack Settings select either Left Keyset or Right Keyset
2. Select USB Flasher
3. Select one of the following:
   - Disabled (default)
   - Blinking
   - Solid
4. To confirm the selected setting, press the **right-hand Call key**.

Setting the Beltpack to Vibrate When Called

To enable (or disable) vibration when a **Call signal** is received:

1. In Beltpack Settings select Vibrate on Call.
2. Select one of the following:
   - On
   - Off (default)
3. To confirm the selected setting, press the **right-hand Call key**.

4.5.6 Configuring the Display Settings

In **Menu mode > Display Settings**, you can:

- Set the brightness of the display screen.
- Set the brightness of the **Talk** and **Call** keys.
- Enable (or disable) the screensaver.
- Rotate the display.

Setting Display Screen Brightness

By default, the display screen is set to **medium** brightness. To set the brightness of the display screen:

1. In **Menu mode**, press the left-hand Call Key and then select **Display Settings**.
2. Select OLED Brightness.
3. Select one of the following:
   - High
   - Medium (default)
   - Low
4. To confirm the selected setting, press the **right-hand Call key**.

Setting the Brightness of the Talk and Call Keys

By default, the **Talk** and **Call keys** are lit when **active (on)** and dim when **inactive (off) (High / Low).**

To set the brightness of the Talk and Call keys:

1. In **Menu mode**, press the left-hand Call Key and then select **Display Settings**.
2. Select Key Brightness.
3. Select one of the following brightness settings:

Key(s)	Description
High / Low (default)	Keys are brightly lit when active (on) and dim when inactive (off).
High / Off	Keys are lit when active (on) and are unlit when inactive (off).
Low / Off	Keys are lit dim when active (on) and are unlit when inactive (off).
Off / Off	Keys are unlit, whether or not they are active (on) or inactive (off).

4. To confirm the selected setting, press the **right-hand Call key.**

Set Rotate Display

You can set the beltpack display to rotate according to its physical position.

1. In **Menu mode**, press the left-hand Call Key and then select **Display Settings**.
2. Select **Rotate Display**.
3. Select one of the following:
   - Enabled
   - Disabled (default)

Setting the Screensaver

The screensaver is displayed on screen after 10 minutes of inactivity on the beltpack. To enable (or disable) the screensaver:

1. In **Menu mode**, press the left-hand Call Key and then select **Display Settings**.
2. Select **Screensaver**.
3. Select one of the following:
   - Channel Name (default)
   - Hostname
   - Role Name
   - Blank
   - Disabled
4. To confirm the selected setting, press the **right-hand Call key.**

4.5.7 Network - Ethernet

***Note**: This section applies only to the HXII-BP-X when powered over Ethernet.*

In **Menu mode > Networking**, you can:

- See networking settings including DHCP, IP address, subnet mask and gateway.
- Pair to an Arcadia Central Station.

Viewing Network Preferences

To view network preferences:

1. In **Menu** mode, select **Networking > Preferences**

   You can view the following:

- DHCP enabled or disabled
- IP address
- Subnet Mask
- Gateway

Pairing to an Arcadia Central Station

To pair to aArcadia Central Station:

1. In **Menu** mode, select **Networking > Pair to Station**.

   Select **By Name** or **By IP Address**.

4.5.8 Administration

In **Menu mode** > **Administration**, you can:

- View the current version of the software on the beltpack.
- Reset the beltpack to default (factory mode) settings.
- The beltpacks receive updated (default) Channel label information. Other local beltpack settings will not be reset if the Arcadia Central Station is reset to default settings.

To View the Current Version of the Software on the Beltpack:

1. In **Menu mode**, press the left-hand Call Key and then select **Administration**.
2. Select **Software Version**.
3. The current version of the software is displayed. The software version information will appear similar to the following example:

   npl-x.x.xx.xxxx, uboot

   Where x is a numerical value.

Resetting the Beltpack to Default (Factory Mode) Settings

To reset the beltpack to default (factory mode) settings:

1. In **Menu mode**, press the left-hand Call Key and then select Administration.
2. Select **Reset to Default**.
3. **Reset Now** is displayed (shown as selected). To reset the beltpack, press the **right-hand Call key**.

   ***Note**: Resetting the beltpack to default (factory mode) settings will delete any IP settings, and remove the pairing with the Arcadia Central Station.*

4.5.9 Diagnostics

The **Diagnostics** menus help you to monitor the performance of the beltpack and diagnose possible system issues.

Viewing Information About the Hardware (Main PCB) on the Beltpack

To view information about the **Part, Revision** and **Serial number** of the main PCB on the beltpack:

1. In **Menu mode**, press the left-hand Call Key and then select **Diagnostics**.
2. Select **Hardware > Main PCB**.

   The **Part, Revision** and **Serial number** for the PCB are displayed. The format is similar to the following:

   Part xxxxxxx
   Revision: x
   Serial: x

   Where x is a numerical value.

4.6 Using the HXII-BP Beltpack

This section describes how to use the HXII-BP Beltpack, after your HelixNet Partyline system has been installed and configured. The HXII-BP Beltpack

For more information about integrating and using HelixNet Partyline with your existing intercom infrastructure.

4.6.1 Using the Beltpack Keysets

The HXII-BP Beltpack supports two Partyline Channels, with a separate keyset (set of controls) dedicated to the control of each Channel:

The **left-hand keyset** controls the first (top) Channel displayed on screen.

The **right-hand keyset** controls the second (bottom) Channel displayed on screen.

For details of the standard on screen information for each Channel, see **Remote Station: Channel Keyset and Display on page 14**.

Note: *For more information about using the beltpack in Menu mode, see* ***Configuring and managing beltpack from front panel menus on page 65***.

The display screens enter screensaver mode (if enabled) if the beltpack remains inactive for a period of time. Press any key to exit screensaver mode.

To send a **call signal** to all the connected devices on that Channel, press the **Call key**.

To **talk** to all the devices connected to the Channel:

1. Connect a headset, using the 4-pin or 5-pin XLR–M connector on the base / rear of the beltpack.

   Note: *For the location of the headset connector and the headset key, see D in* ***HXII-BP Beltpack (Bottom View) on page 61***.

2. Press the **Talk key**.
3. Speak into the headset mic.

To adjust the volume of incoming audio for a Channel, turn the appropriate side-mounted **rotary control**.

Turn the rotary control clockwise to increase the volume, and counter-clockwise to decrease volume. The current volume level for the Channel is shown on screen.

4.6.2 Entering and Exiting Menu Mode

Use **Menu mode** to:

Configure the settings for the Beltpack, including Channel and audio settings.

Monitor beltpack performance and diagnose issues.

To enter Menu mode, press the **Menu key**. To exit Menu mode, press the Menu key again.

For more information about using Menu mode on the beltpack, see **Configuring and managing beltpack from front panel menus on page 65** .

4.6.3 Adjusting the Program Feed Volume Level

To adjust the listen level (volume) of the **Program Feed** to the beltpack, use the up and down controls on the front of the beltpack.

Use the up arrow control to increase the listen level (volume), and use the down arrow control to decrease the listen level (volume).

While the listen level is adjusted, the listen level for the Program Feed replaces the standard Channel information on screen.

The Remote Station is used to assign the **Program Feed** to Channels. For more information, see **Assigning the Program Listen to a Channel on page 31**.

4.6.4 Binaural Audio

The HXII-BP-X5 beltpack with 5-pin headset connector has a binaural audio adjustment for the left and right earphone. This means that you can separately adjust the audio volume level in the left and right earphone. To adjust the left or right hand earphone volume:

1. Press the **OPT** button on the beltpack.
2. Use the left and right rotary controllers to balance the volume of the left and right channels respectively. Turn the rotary control clockwise to balance the volume to the right ear, and counter-clockwise to balance the volume to the left ear. The current balance level for each Channel is shown on screen.

5 Specifications

This chapter lists the technical specification for HelixNet Digital Partyline with Arcadia. It contains the following sections:

5.1 HRM Remote Station

5.1.1 Connectors

Specification	Description / value
Intercom Powerline Outputs	Powerline connectivity is not available for Arcadia.
Headset	4-pin XLR–M
Gooseneck mic	3-pin Tuchel
USB	USB Type A
Program	3-pin XLR–F
SA (Stage Announce)	3-pin XLR–M
Hot Mic / IFB Interface	1/4 in. (0.64 cm) phone jack
Control and audio input/output	9-pin D-type
DC power	3-pin KPJX-PM-3-S

5.1.2 Microphone Pre-Amplifier

Specification	Description / value
Headset Mic impedance:	200Ω (Dynamic)
Headset Mic Voltage	1.7V (Electret selectable)
Limiter	+23dB
Routed to 4-wire output @ 0dBu out	
Mic gain	60dB (dynamic) 45dB (electret)
Frequency response	300Hz – 10kHz + / -3dB (contoured for intelligibility)
Distortion	<0.2% THD @ 1 kHz
Noise-	<-55dBu dynamic, <-65dBu electret

5.1.3 Headphone Amplifier

Specification	Description / value
Load impedance	32Ω
Output level	+12dBu before clipping
Sidetone	-12dB (selectable)
Routed from a 4-wire input @ 0dBu in	
Max gain	0dB
Frequency response	180Hz - 10kHz ±3dB
Distortion	<0.1% THD @ 1 kHz
Noise	<-65dBu
Headphone limiter	0dBu (selectable)

5.1.4 Loudspeaker Amplifier

Specification	Description / value
Load impedance	8Ω
Output level	+18dBu before clipping
Max gain	18dB
Routed from a 4-wire input @ 0dBu in:	
Frequency response	200Hz - 10kHz ±3dB
Distortion	<0.1% THD @ 1 kHz
Noise	<-50dBu

5.1.5 Program Line Input

Specification	Description / value
Maximum level before clipping	18dBu
Nominal input level	0dBu(selectable)
Input impedance	>= 10 KΩ
Routed to 4-wire output @ 0dBu out	
Frequency response	20Hz - 10kHz ±3dB
Distortion	<0.2% THD @ 1kHz
Noise	<-65dBu

5.1.6 Four-wire module outputs

Specification	Description / value
Maximum level before clipping	18dBu
Nominal input level	0dBu(selectable)
Input impedance	<= 100Ω

5.1.7 Stage Announce Output

Specification	Description / value
Maximum level before clipping	18dBu
Nominal output level	0dBu(selectable)
Output impedance	<= 100Ω
Routed from a dynamic headset:	
Frequency response	300Hz – 12kHz ±3dB
Distortion	<0.1% THD @ 1kHz
Noise	<-55dBu

5.1.8 20.4.8 Hot Mic Output

Specification	Description / value
Maximum level before clipping	+12dBu
Nominal output level	0dBu(selectable)
Output impedance	<= 100Ω
Routed from a dynamic headset:	
Frequency response	300Hz - 12kHz ±2dB
Distortion	<0.2% THD @ 1 kHz
Noise	<-55dBu

5.1.9 Power

Specification	Description / value
Voltage	48V DC
Current (Max)	0.3A
Power (Max)	14.4W
BTU (Max)	49BTU/hr
Powerline connectivity is not available for Arcadia	
Input voltage	±29.5V DC
Input current (speaker off)	0.3A
Input current (Max)	0.5A
Powerline utilization	
HRM (local power) =	1 beltpack

Specification	Description / value
HRM (speaker off) =	2 beltpacks
HRM (speaker on) =	3 beltpacks
Powerline connectivity is not available for Arcadia.	
AC adapter - inline	
Input Voltage range	100 – 240VAC
Input frequency range	50 – 60Hz
Input power connector	IEC-C14
Output voltage	48V DC
Output power (Max)	15W
Output power connector	KPPX-3-P
Input power	<=14W
PoE - Power over Ethernet	
Device class	IEEE 802.3af-2003 - Class 0
PSE	15.4W DC max @ Power Source Req.
PD	12.95W DC max @ Powered Device Draw

5.1.10 Environmental

Specification	Description / value
Temperature	0˚C - 40˚C (32˚F - 104˚F)
Humidity	0 - 90% relative humidity

5.1.11 Dimensions and Weight

Specification	Description / value
Dimensions	19 in. W x 1.75 in. H x 6.4 in. D (483 mm x 44 mm x 165 mm)
Weight	4 lbs. (1.8 kg)

5.2 HKB Speaker Station

5.2.1 Connectors

Specification	Description / value
Powerline	Powerline connectivity is not available for Arcadia
Ethernet/PoE	RJ45
Headset	4-pin XLR–M
Gooseneck mic	3-pin Tuchel
Input power connector	Terminal Block 2 Pole, 5mm

5.2.2 Microphone Pre-Amplifier

Specification	Description / value
Headset Mic impedance:	200Ω (Dynamic)
Headset Mic Voltage	1.7V (Electret selectable)
Limiter	+23dB
Routed to 4-wire output @ 0dBu out:	
Mic gain	60dB (dynamic) 45dB (electret)
Frequency response	300Hz – 10kHz + / -3dB (contoured for intelligibility)
Distortion	<0.1% THD @ 1kHz
Noise-	<-55dBu dynamic, <-65dBu electret
Headphone limiter	0dB (selectable)

5.2.3 Headphone Amplifier

Specification	Description / value
Load impedance	>32Ω
Output level	+12dBu before clipping
Sidetone	-12dB (selectable)
Routed from a 4-wire input @0dBu in:	
Max gain	0dB
Frequency response	40Hz - 10kHz ±3dB
Distortion	<0.1% THD @ 1 kHz
Noise	<-65dBu (@ max gain)
Headphone limiter	-0dBu (selectable)

5.2.4 Power

Specification	Description / value
Voltage	48V DC
Current (Max)	0.3A
BTU (Max)	49BTU/hr
Input power connector	Terminal Block 2 Pole, 5mm
Powerline connectivity is not available for Arcadia	
Input Voltage	±29.5V DC
Input current (speaker off)	0.3A
Input current (Max)	0.5A
Powerline utilization	
HKB (local power) =	1 beltpack
HKB (speaker off) =	2 beltpacks
HKB (speaker on) =	3 beltpacks
Powerline connectivity is not available for Arcadia	
AC adapter - wall (not included)	
Input Voltage range	100 - 240V AC
Input frequency range	50 - 60Hz
Input power connector	Universal
Output Voltage	48V DC
Output power (Max)	15W
Output power connector	KPPX-3-P
PoE - Power over Ethernet	

Specification	Description / value
Device class	IEEE 802.3af-2003 – Class 0
PSE	15.4 W DC max @ Power Source Req.
PD	12.95 W DC max @ Powered Device Draw Environmental

5.2.5 Environmental

Specification	Description / value
Temperature	0˚C - 45˚C (32˚F - 113˚F)
Humidity	0 - 90% relative humidity

5.2.6 Dimensions and Weight

Specification	Description / value
Weight	18.8 oz (0.53 kg)
Dimensions	4.5 x 8.2 x 2.4 in (114 x 209 x 61 mm) HxWxD

5.3 HXII-BP Beltpack

5.3.1 Connectors

Specification	Description / value
XLR Powerline	Powerline connectivity is not available for Arcadia
LAN/PoE	RJ45 etherCON
Headset	4-pin XLR–M
USB	Micro-AB

5.3.2 Microphone Pre-Amplifier

Specification	Description / value
Headset Mic impedance:	200Ω (Dynamic)
Headset Mic Voltage	1.7V (Electret selectable)
Routed to 4-wire output @ 0dBu out:	
Mic gain	60dB (dynamic) 45dB (electret)
Frequency response	300Hz – 10kHz + / -3dB (contoured for intelligibility)
Distortion	<0.2% THD @ 1kHz
Noise-	<-55dBu dynamic, <-65dBu electret

5.3.3 Headphone Amplifier

Specification	Description / value
Load impedance	>32Ω
Output level	+12dBu before clipping
Sidetone	-12dB (selectable)
Routed from a 4-wire input @0dBu in:	
Max gain	0dB
Frequency response	40Hz - 10kHz ±3dB
Noise	<-65dBu (@ max gain)
Headphone limiter	-0dBu (selectable)

5.3.4 Power Requirements

Specification	Description / value
Voltage	48V DC
Current (Max)	0.09A
Power (Max)	4W
BTU (Max)	13BTU/hr
Unit powered by Powerline	
Input Voltage	±29.5V DC
Input Current (Max)	0.13A
Powerline utilization	
HXII-BP =	1 beltpack
Powerline connectivity is not available for Arcadia.	
Unit powered by Power over Ethernet (PoE)	
Class of device	IEEE 802.3af-2003 - Class 1
PSE	4.0W DC max @Power Source Req
PD	3.84 DC max @ Powered Device Draw

5.3.5 Environmental

Specification	Description / value
Temperature	0˚C - 40˚C (32˚F - 104˚F)
Humidity	0 - 90% relative humidity

5.4 Network

5.4.1 Network Protocols (HelixNet v.4)

Specification	Description / value
Ethernet IPv4	Unicast audio and control
mDNS (multicast domain name system)	Multicast device discovery
Layer 3 (OSI model)	Routable with mDNS function limitations
WavPac	Audio codec

5.4.2 Network Ports (HelixNet v.4)

	Description / Value
Unicast	• Port 80 TCP – web interface, system management, expansion • Port 655 TCP – Link Group audio/database • Port 6001 TCP - System management • Port 6001 UDP – Audio Streams
Multicast	• Port 5353 UDP – mDNS, names, discovery, linking, expansion. Optional for device names and linking. Mandatory for HRM expansion

5.4.3 Network Parameters (HelixNet v.4)

	Description / Value
Endpoint support	64 endpoints
Bandwidth	• 300-600 (max) kbps from each audio input • 1200-2400 (max) kbps to each endpoint
Network jitter tolerance	<= 128ms jitter buffer per audio stream received, automatically adjusted to network performance
QoS tags	DSCP=46, High Priority/Expedited Forwarding (EF)
Default link-local IP address range	169.254.0.0/16
Reserved IP ranges	• 10.0.0.0/8 for endpoints • 172.23.0.0/16 for Link Group

5.4.4 Recommended Ethernet Switch Features (HelixNet v.4)

Required switch features
Managed Ethernet Switch – Layer 3
100/1000Base-T ports for endpoints
1000Base IP Trunks between switches
QoS Configuration
Energy Efficient Ethernet bypass option
IGMP Snooping bypass option

6 Menu Maps

This chapter describes the menu maps that you can use with HelixNet Digital Partyline with Arcadia. It contains the following sections:

6.1 HRM-4X Remote Station Menu Map

Menu 1 (First) >	Menu 2 >	Menu 3 >	Menu 4 (Last)
Audio Settings	Headset	Sidetone Gain	Range: 0dB to -18dB Default: -12db
		Headphone Limit	Off + Range: +6dB to -6dB Default: 0db
		Sidetone Control	Tracking Non-Tracking Disabled Default: Tracking
		HS Mic Type	Electret Dynamic (0 dB) Dynamic (low) Default: Dynamic (0 dB)
	Microphone	Headroom	Normal High Default: Normal
		Contour Filter	Enabled Disabled Default: Disabled
	Program Input	Mode	Enabled/Disabled

Menu 1 (First) >	Menu 2 >	Menu 3 >	Menu 4 (Last)
		Gain	Range: +12dB to -12dB Default: 0db
		IFB Dim Level	Range: --6dB to -24dB Default: Off
		Action Trigger	Enabled Disabled Default: Enabled
		VOX	Enabled Disabled Default: Disabled
		VOX Off Delay	Range: 0.5 - 4sec Default: 0.5sec

Menu 1 (First) >	Menu 2 >	Menu 3 >	Menu 4 (Last)
	SA Output	Mode	Channel Assigned SA Default: Channel Assigned
		Gain	Range: +12 to -12dB Default: 0dB
		Program Output	Unmute Mute Default: Mute
		Channel Assign	Disabled Channel A Channel B Channel C Channel D Up to the maximum number of licensed channels. Default: Disabled
	Hot Mic Output	Gain	Range: +12 to -12dB Default: 0dB
	Front Panel	Loudspeaker Dim	Range: 0dB to -24dB Default: -6dB

Menu 1 (First) >	Menu 2 >	Menu 3 >	Menu 4 (Last)
Station Settings	Preferences	Roles	Default: HRM – [unique ID Select Role or Local Config]
	Keyset Assign	Keyset 1 – 4	Channel 1 – 12 (or 24)
	Keysets	Talk 1 - 4	Latching Non-Latching Permanent Disabled Default: Latching
		All Talk	All Channels Visible Channels
		SA Output Key	Latching Non-Latching Default: Non-latching
		RMK	Enabled Disabled Default: Enabled
	Display	OLED Brightness	High Medium Low Default: Medium
		Key Brightness	High / Low High / Off Low / Off Off / Off Default: High / Low
		Screensaver	Enabled Disabled Default: Enabled

Menu 1 (First) >	Menu 2 >	Menu 3 >	Menu 4 (Last)
Channels	Channel 1 Channel 2 Channel 3 Channel 4 […]	Label	Press to Edit Max. length for labels = 12 characters
		Program Listen	None List of programs Default: None
		GPO on Talk	Default: None Relay 1 - 4
		GPO on Call	Default: None Relay 1 - 4
Control I/O	Inputs	Opto 1	None Call Key 1 Talk Key 1 Call Key 2 Talk Key 2 Call Key 3 Talk Key 3 Call Key 4 Talk Key 4 Default: None
	Outputs	Relay 1	

Menu 1 (First) >	Menu 2 >	Menu 3 >	Menu 4 (Last)
Network	Preferences	Hostname (12 char) DHCP enabled/disabled IP address (enter if required) Subnet mask Gateway	
	Pair to Station	By Name By Address	Enabled Disabled Default: Enabled
	Expansion mode	Host (enabled/disabled) Expand to host (none/hostname)	
Administration	Software	Current	HelixNet System Version Remote Station Version
		Update	None or version list
	Reset	Reset to Default	Reset Now
		Reboot	Reboot Now
	Settings	Save	USB drive or local
		Restore local	USB drive or file list

Menu 1 (First) >	Menu 2 >	Menu 3 >	Menu 4 (Last)
Diagnostics	Main PCB		
	Powerlines	Powerline 1	**Status: [status]** DMC: {MAC] HMC: [MAC] MMC: [MAC] Rx rate: [Mbps] Tx rate: [Mbps]
	Network	Status	IP Address
		IP Address	
		IP Mask	
		Mac	
	Keysets	Keyset 1 Keyset 2 Keyset 3 Keyset 4	Name: Channel name Talkers: Number of talkers on Partyline Devices: Number of beltpacks listening on Partyline 2-Wire: Number of 2-Wire ports listening 4-Wire: Number of 4-Wire ports listening

6.2 HKB-2X Speaker Station Menu Map

Menu 1 (First) >	Menu 2 >	Menu 3 >	Menu 4 (Last)
Roles	Select Role or Local Config.		
Audio Settings	Headset	Sidetone Gain	Range: 0dB to -18dB Default: -12db
		Headphone Limit	Off + Range: +6dB to -6dB Default: 0dB
		Headphone Gain	0 to +12dB Default: 0dB
		Sidetone Control	Tracking Non-Tracking Disabled Default: Tracking
		HS Mic Type	Electret (-15dB) Dynamic (0 dB) Dynamic (low) Default: Dynamic (0 dB)
	Microphone	Contour Filter	Enabled Disabled Default: Disabled
	Front Panel	Loudspkr Dim	Range: 0dB to --24dB Default: 0db
		Loudspker Mute	Toggle w HS Ctrl (Default) Muted Toggle Unmute w HS Ctrl Unmuted

Menu 1 (First) >	Menu 2 >	Menu 3 >	Menu 4 (Last)
Station Settings	Keyset Assign	Keyset 1 – 4	Channel 1 – 12 (or 24 depending on license)
	Keysets	Talk 1 - 4	Latching Non-Latching Permanent Disabled Default: Latching
		Secondary Talk Action 1 - 4	Unassigned (Default) Call Control Event 1 Control Event 2
		Shift Page	Auto Shift (Default) Toggle Disabled
		Interlock	Talk #1 Talk #2 Talk #3 Talk #4 * indicates that this key is in a keygroup

Menu 1 (First) >	Menu 2 >	Menu 3 >	Menu 4 (Last)
	Display	OLED Brightness	High Medium Low Default: Medium
		Key Brightness	High / Low High / Off Low / Off Off / Off Default: High / Low
		Screensaver	Enabled Disabled Default: Enabled
	Headset button	Latch Mode	Toggle (Default) Permanent Disabled Non-Latching
Network	Pair to Station	By Name By Address	Separate IP address: xx.xx.xx.xx where x is a numeric value
	Preferences	DHCP	Enabled Disabled Default: Enabled
		IP Address	IP address: xx.xx.xx.xx where x is a numeric value
		Gateway	IP address: xx.xx.xx.xx where x is a numeric value
		Subnet Mask	IP address: xx.xx.xx.xx where x is a numeric value

Menu 1 (First) >	Menu 2 >	Menu 3 >	Menu 4 (Last)
Administration	Software	Current	HelixNet Speaker Station
	Reset	Reset to Default	Reset Now
		Reboot	Reboot Now
Diagnostics	Powerlines	Powerline 1	Status: [OK or BUSY (according to responses to MME requests)]. DMC:[MAC of powerline modem] HMC: [MAC of local blackfin processor Rx rate:[Mbps] Tx rate:[Mbps] Status:[status] IP Addr [IP Address] IP Mask [Subnet Mask] MAC:[MAC Address]
	Networking	Ethernet	
	Keysets	Keyset 1 Keyset 2 Keyset 3 Keyset 4	Name: Channel name Talkers: Number of talkers on Partyline Devices: Number of beltpacks listening on Partyline 2-Wire: Number of 2-Wire ports listening 4-Wire: Number of 4-Wire ports listening
	Hardware		

6.3 HXII-BP Beltpack Menu Map

Menu 1 (First) >	Menu 2 >	Menu 3 (Last)
Roles	Select Role or Local Config	
Audio Settings	Sidetone Gain	Range: 0dB to -18dB Default: -12dB
	Headphone Limit	Off + Range: +6 to -12dB Default: 0dB
	Headphone Gain	0 - 12dB (increments of 3 dB) Default : 0dB
	Sidetone Control	Tracking Non-tracking Disabled Default: Tracking
	HS Mic Type	Electret (-15dB) Dynamic (0dB) Dynamic (low) for HXII-BP Default: Dynamic (0dB) Note: Electret = 35dB fixed gain, non-user adjustable. Dynamic = 50dB fixed gain, non-user adjustable.
	Headroom (only for HBP-2X)	Normal High Default: Normal
	Contour Filter	Enabled Disabled Default: Disabled

Menu 1 (First) >	Menu 2 >	Menu 3 (Last)
Beltpack Settings	Left Keyset Right Keyset: the same as Left Keyset	Channel assign (1 – 24) Talk (latch/non latch/disabled) Default: Latch Secondary Talk Action (unassigned/call/control event 1/control event 2) USB flasher (disabled/blinking/solid) Default: disabled
	Vibrate on Call	On/Off Default: Off
Display Settings	OLED Brightness	High Medium Low Default: Medium
	Key Brightness	High / Low High / Off Low / Off Off / Off Default: High / Low
	Rotate Display	Enabled Disabled Default: Disabled
	Screensaver	Channel Hostname Role (default) Blank Disabled

Menu 1 (First) >	Menu 2 >	Menu 3 (Last)
Network (HXII-BP powered over Ethernet only)	Pair to Station	By Name By Address
Administration	Software Version	npl-1.0.x, uboot
	Software Update	npl-1.0.x
	Reset to Default	Reset Now
Diagnostics	Hardware Important Note: There are 4 levels of Menu for Hardware	Main PCB Part: [Part_Number] Revision: [Revision] Serial number: [Serial number]

Menu 1 (First) >	Menu 2 >	Menu 3 (Last)	
	Powerline Note: Line (Partyline) that connects beltpack to the network (and which also powers the beltpack).	Status: [OK or BUSY (according to responses to MME requests)]. DMC:[MAC of powerline modem] HMC: [MAC of local blackfin processor] Rx rate: Range: 140 – 150 Mbps Tx rate: Range: 140 – 150 Mbps Volts:	
	Networking (HXII-BP over Ethernet and Powerline)	Ethernet	Connection Type: Ethernet or Powerline IP address

Menu 1 (First) >	Menu 2 >	Menu 3 (Last)	
		DHCP (Ethernet only)	
		IP address	
		Gateway	
		Subnet mask	
		Mac address	
		IVP Router	(Ethernet only)
		Keysets 1 & 2	Name: Channel name Talkers: Number of talkers on Partyline Beltpacks: Number of beltpacks listening on Partyline 2-Wire: Number of 2-Wire ports listening 4-Wire: Number of 4-Wire ports listening

7 Cabling reference

This chapter describes the cables that you should use to connect HelixNet devices. It contains the following sections:

7.1 Introduction

You can connect beltpacks using:

- A wide range of standard microphone (intercom) cable types (16 AWG – 26 AWG).
- CAT5, CAT5e and CAT6 cable types.

XLR cable	CAT5/6 cable
Pin 1	Pin 1 and Pin 2 and shield/drain wire
Pin 2	Pin 4, Pin 6 and Pin 8
Pin 3	Pin 3, Pin 5 and Pin 7

Clear-Com recommends the following cable types:

Belden 9207 for fixed installation

Belden 9463F for portable installations

***Note**: Cat 5 screen should be connected to chassis at one end of cable only.*

You can also mix CAT cables and microphone cables when connecting to the Arcadia Central Station. For example, you might use CAT cables to trunk long distances, and flexible microphone cables to connect beltpacks to bulkheads.

***Note**: The cabling information provided in this guide is for guidance only. For in-depth, tailored advice on cabling, Clear-Com recommends that you contact your Clear-Com representative.*

7.2 Ethernet Cable Recommendations

Cable recommendations	
Category (Cat)	Higher Cat numbers will support a higher bandwidth. Therefore, by using a higher Cat number you are future proofing you system to some extent. Example: • Cat 5 : up to 1 GB • Cat 6: up to 10 GB Use Cat 5e or higher.
American Wire Gauge (AWG)	The lower the AWG number, the less temperature rise there wil be in the cable when using PoE. This is particularly important for bundles. Local building regulations may rule out the use of 26 AWG or higher, depending on the installation. Check with your local building regulations. Use AWG 24 or lower.
Shielded Twisted Pair (STP) or Foiled Twisted Pair (FTP)	Using shielded cable means less problems with interference from other sources. This means that your network will be more robust if you use shielded cables.

***Note**: Overall recommendation: Use Cat 6a, 23 AWG STP cable.*

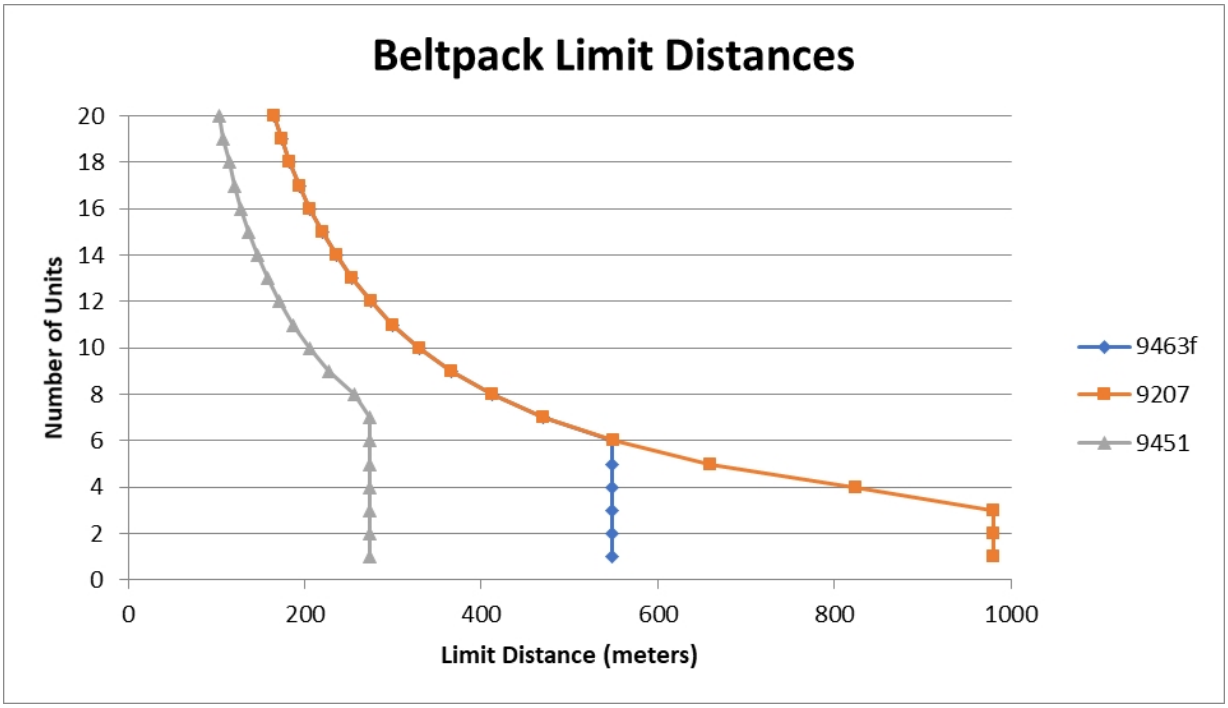
7.3 Microphone Cable Recommendations

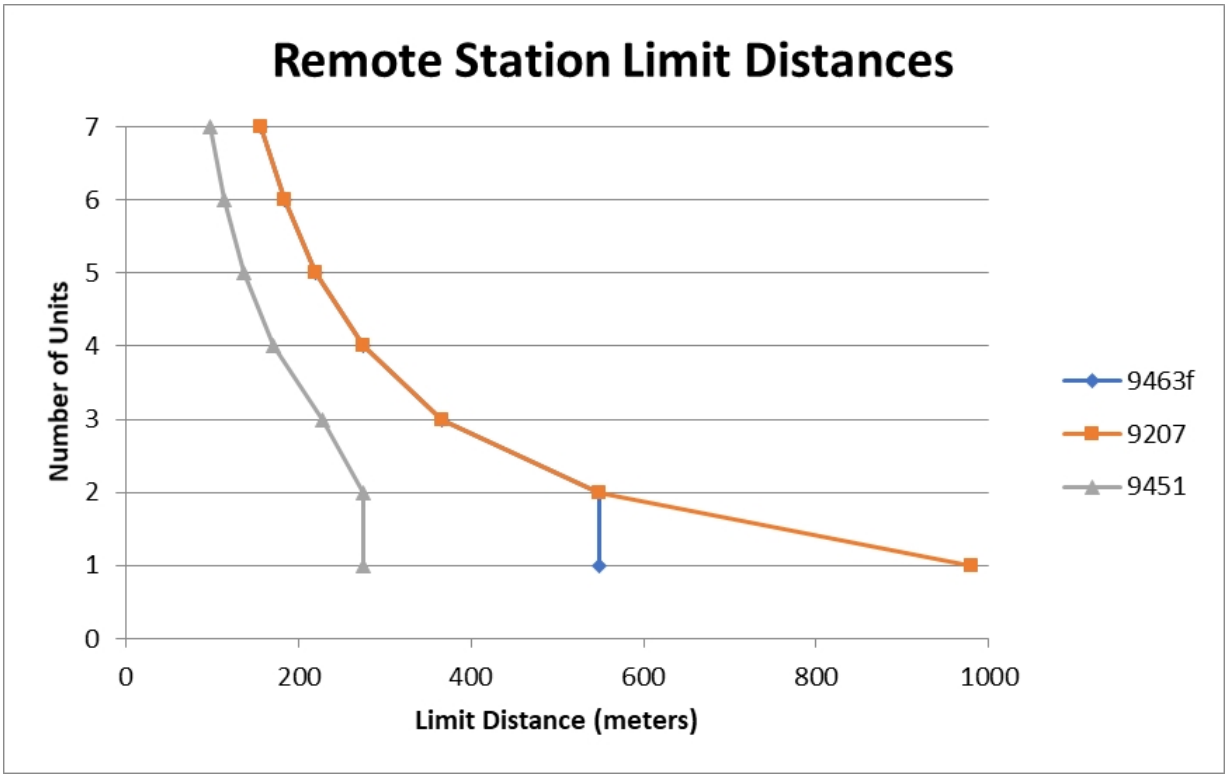
Standard microphone cables impose distance limitations at their upper limits due to cable capacitance.

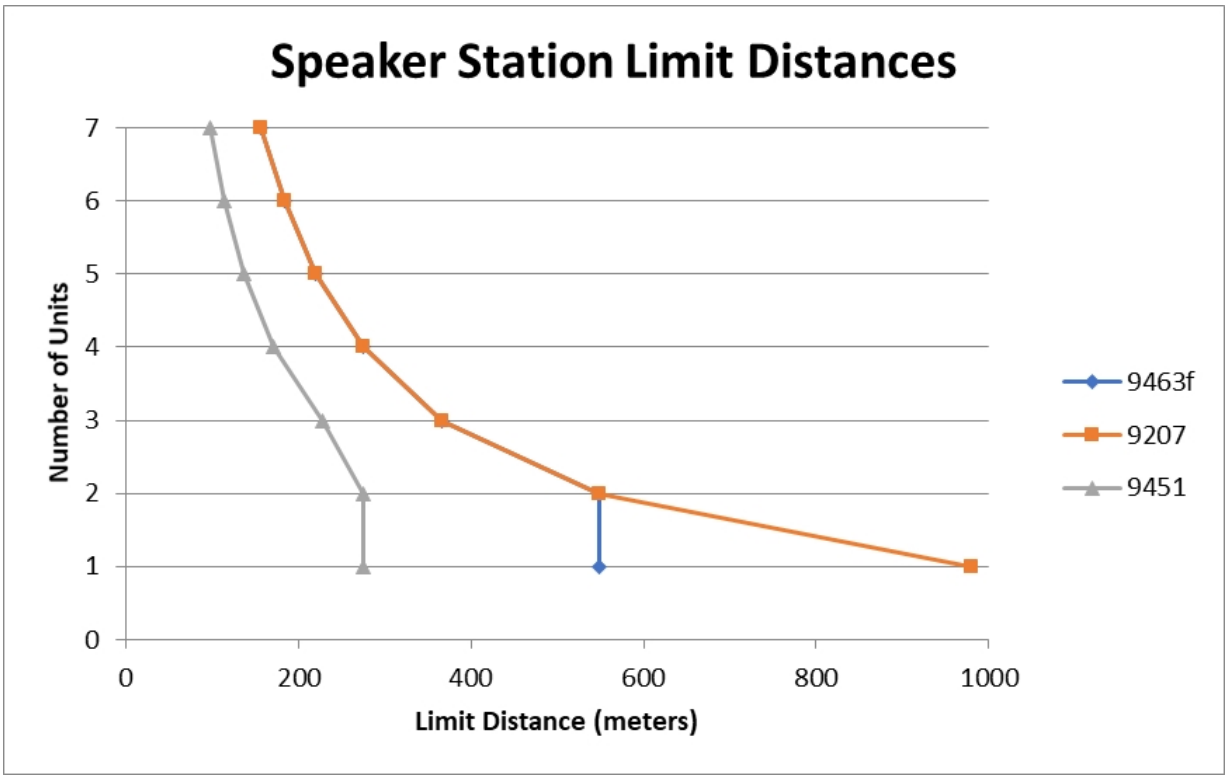
If your priority is audio quality, experiment with attaching one or two fewer devices to each line. Your choice of topology (daisy chain, star or tree) may also impact audio quality over distance.

Manufacturer	Cable type	Gauge (AWG)	Style	Attenuation / 100m
Belden	9463f	20	Std	16 dB
Belden	9207	20	Std	9 dB
Belden	1533P	24	Cat5e	11 dB

7.3.1 Quick reference: Cable capacity versus distance







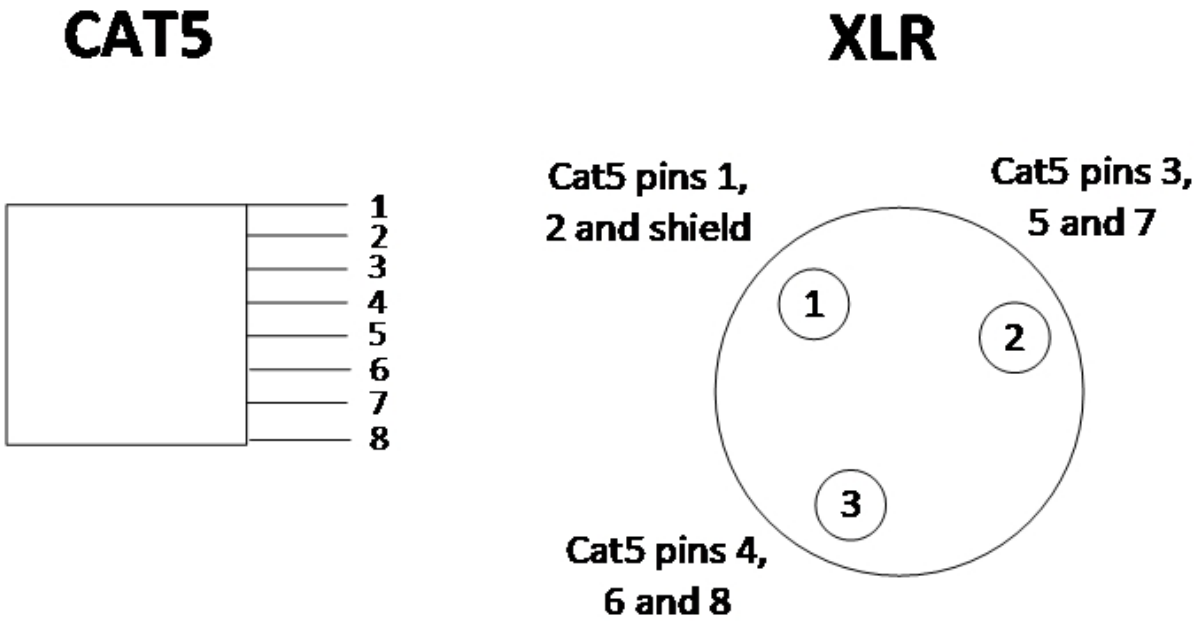
***Note**: The above graphs are intended as a general guide only. Actual cable performance may vary, depending on the conditions and complexity of the installation.*

7.4 Cable Connections

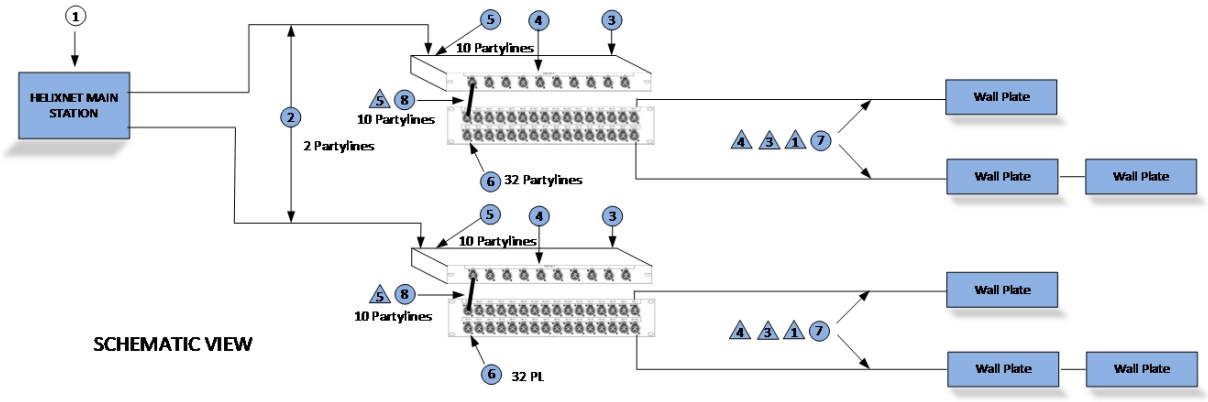
The diagrams on the following pages reference the following labels and notes.

Label	Manufacturer	Part Number	Description
2	Belden	8760,9207 Or 9463F	18 or 20 AWG twisted pair cable terminated with 3-pin XLR
3	Middle Atlantic (or equivalent)	CH-1	1 RU shielded chassis
4	Neutrik (or equivalent)	NC3FD-L-B-1	3 pole female chassis mount
5	Neutrik (or equivalent)	NC3MD-L-B-1	3 pole male chassis mount
6	Neutrik (or equivalent)	NA3MDF	3 PIN XLR M-F FEED THRU ADAPTER
7	Belden (or existing cabling)	1351A or 1533P	24 AWG, shielded cat 6 cabling
8	Belden	8760,9207 or 9463F	XLR3 M-F patch cord
9	Belden	8760,9207 or 9463F	18 or 20 AWG twisted pair cable

Label	Note
1	Wire according to table
2	Equipment rack, breakout box chassis and patch panel must be connected to safety earth
3	Connect up to 32 wall plate locations to patch panel with individual CAT 5 cables
4	If multiple wall plates are co-located at a remote location, daisy chain their wiring at the remote location and connect a single CAT 5 cable from the remote location back to the patch panel
5	Use short length, high quality XLR patch cords with shielded connectors
6	Do not patch between separate power lines
7	Assemble item 6 to panel with male connectors to front



RJ-45	XLR
1 white/orange	1
2 Orange	1
3 White/green	3
4 Blue	2
5 White/blue	3
6 Green	2
7 White/brown	3
8 Brown	2



POWER LINE #1A

POWER LINE #1A WALL PLATE

POWER LINE #1B

POWER LINE #1B WALL PLATE

8 Troubleshooting

Issue	Solution
The Call functionality on my analog beltpack is no longer working.	HelixNet Partyline operates at different voltage levels than analog two-wire Partyline systems. Contact Clear-Com for repair options.
I cannot pass audio to wired / wireless intercom equipment over the Two-wire module.	Two-wire option modules require an external power supply.
Why do I hear an echo when interfacing via a two-wire audio port?	Run auto-nulling. Ensure that all unused Talk keys in the system are unlatched.
Echo occurs even after Two wire module has been auto-nulled.	Check to ensure all open Talk keys are not latched and re-null.
There is no audio or only partial audio (send or receive, but not both) between other audio systems / sources connected over four-wire.	Check the cable used to connect the equipment. HelixNet to Eclipse four-wire connections only require a standard CAT cable, whereas other four-wire connections (to Tempest™, CellCom / FreeSpeak, and other systems) require an audio crossover cable. See:
Line 1 (or Line 2) LED is blinking red.	There is a short-circuit somewhere on that Powerline. Unplug everything from that Powerline and add cables and Beltpacks one at a time until you find the short-circuit. Powerline connectivity is not available for Arcadia.

Issue	Solution
Line 1 (or Line 2) LED is steady red and one or more Beltpack has no bars showing up for signal strength.	There are digital errors or there is cross-talk on that Powerline. Look at the Diagnostics->Powerlines->Powerline 1(or 2) page. If the number of Beltpacks showing there is greater than what you physically connected to that Powerline, cross-talk is happening between the Powerlines. Make sure you are using properly shielded Mic cables or Cat cables. If the number of Beltpacks showing there does match what you physically connected to that Powerline and errors or high collision rate is displayed, verify that you don't exceed the number of Beltpacks per Powerline or distance as per the Cable capacity versus distance table. High collision rate means communication issues on the powerline. Possible causes are: • Unshielded or bad cables • Powerline 1 looped back into Powerline 2 (or from one HMS to another) • Cables too long • Too many cables in the infrastructure (even unconnected strand count) • Too many devices on the Powerline • Faulty device Powerline connectivity is not available for Arcadia.
My connection to the CCM is intermittent.	This is generally caused by more than one device using the same IP address. Check with your network administrator that there is no IP clash.
My device has gone into link-local mode. (IP address = 169.254.XX.XX)	If your device is set to Dynamic Host Configuration Protocol (DHCP) and there is no DHCP available on the network, it is connected to it will revert to link-local automatically. You need to allocate a static IP address to this device.

9 Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do **not** use this apparatus near water.
6. Clean only with dry cloth.
7. Do **not** block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do **not** install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do **not** defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-cord supply or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

***Warning**: To reduce the risk of fire or electric shock, do not expose this product to rain or moisture.*

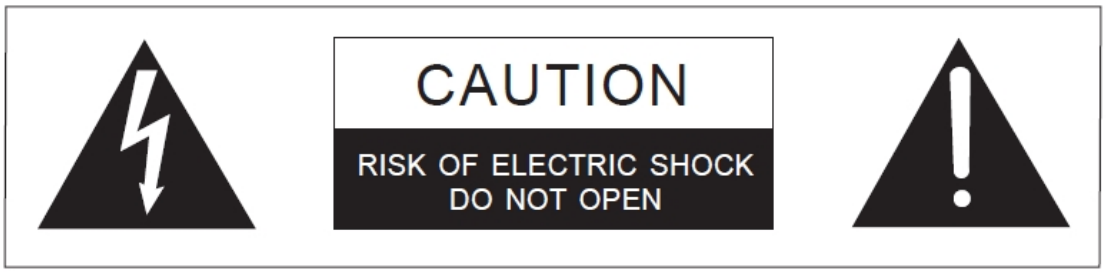
10 Additional instructions

1. The equipment is for use in locations where children are not likely to be present.
2. Do not open the equipment as this will void the safety warranty.
3. The coin-cell battery is not operator replaceable and only to be replace by qualified personnel.
4. Replacement of incorrect battery type can defeat a safeguard.
5. Disposal of a battery into a fire or hot oven, or mechanically crushing or cutting of a battery can result in an explosion.
6. Leaving a battery in extreme high temperature surrounding environment can result in an explosion or leakage of flammable liquid or gas.

10.1 Safety symbols

Familiarize yourself with the safety symbols in the diagram below.

These symbols are displayed on the apparatus and warn you of the potential danger of electric shock if the system is used improperly.



This symbol alerts you to the presence of uninsulated dangerous voltage within the product's enclosure that might be of sufficient magnitude to constitute a risk of electric shock. Do not open the product's case.

This symbol informs you that important operating and maintenance instructions are included in the literature accompanying this product.

Note**: For compliance purposes, see* ***Regulatory Information on page 124*.*

11 Regulatory Information

Manufacturer

HM Electronics Inc.
Carlsbad
California
US

FCC notice

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communication. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by Clear-Com, LLC, an HM Electronics, Inc. company could void the user's authority to operate this equipment.

Industry Canada Compliance Statement

This Class[A] digital device complies with Canadian ICES-003.

Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la class[A] est conforme à la norme NMB-003 du Canada.

11.1 United Kingdom (UKCA Mark)

The UKCA (UK Conformity Assessed) marking is a new UK product marking that will be used for goods being placed on the market in Great Britain (England, Wales and Scotland). The UKCA marking alone cannot be used for goods placed on the Northern Ireland market, which require the CE marking or UK(NI) marking.

Korean notice

A급 기기 (업무용 방송통신기자재)

이 기기는 업무용(A급)으로 전자파적합기기로

서 판매자 또는 사용자는 이 점을 주의하시기

바라며, 가정외의 지역에서 사용하는 것을 목

적으로 합니다.

The HRM-4X, HKB, HXII-BP-X4 products comply with the following specifications:

EN55022 and EN5032	Emissions
EN55024	Immunity

Electromagnetic Compatibility Directive 20014/30/EU

Low Voltage Directive 2014/35/EU

Warning: 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.

Waste Electrical And Electronic Equipment (WEEE)

The European Union (EU) WEEE Directive (2002/96/EC) places an obligation on producers (manufacturers, distributors and/or retailers) to take-back electronic products at the end of their useful life. The WEEE Directive covers most Clear-Com products being sold into the EU as of August 13, 2005. Manufacturers, distributors and retailers are obliged to finance the costs of recovery from municipal collection points, reuse, and recycling of specified percentages per the WEEE requirements.

Instructions for Disposal of WEEE by Users in the European Union

The symbol shown below is on the product or on its packaging which indicates that this product was put on the market after August 13, 2005 and must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of the user's waste equipment by handing it over to a designated collection point for the recycling of WEEE. The separate collection and recycling of waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local authority, your household waste disposal service or the seller from whom you purchased the product.