

# HXII-BP Beltpack

Digital Partyline Solutions

Linking  
People  
Together



HXII-BP

## Key Features and Benefits

### Beltpack

- Easy to use front panel with OLED display & backlit keys
- 2 Keysets assignable to channels
- Stacked keys allow unique combination of channels
- Independent Program Audio control
- USB call signal flasher
- Binaural controls on HXII-BP-X5

### Connectivity

- Ethernet Network port with PoE\*
- Powerline via XLR cable to HMS-4X\*\*/\*\*

### Mechanical

- Rugged, lightweight polycarbonate enclosure
- IP53 environmental rating

### HelixNet System

- Wired Partyline - Networked
- Hosted by Arcadia or HMS-4X\*\*\*
- Up to 24 Channels - Licensed
- Up to 64 HelixNet Endpoints
- Program Audio user level control

### Effortless Management

- Easy to use CCM browser configuration
- Fast front panel control & configuration
- Central discovery & pairing on Arcadia
- Plug-and-go powerline to HMS-4X\*\*/\*\*
- Central firmware upgrades from host

HelixNet® is a networked partyline intercom with up to 24 channels and Program Audio over XLR, LAN or WAN.

## Description

The HelixNet HXII-BP beltpack is a two-channel intercom user station hosted by Arcadia® Central Station or HelixNet HMS-4X\*\*\* main station.

## Beltpack

The beltpack provides two keysets assignable to any intercom channel and allows multiple channels to be uniquely stacked onto a keyset. The beltpack comes with a headset connection, independent Program Audio level control and a micro-USB Flasher connection to a third-party USB light.

HXII-BP-X5 has connection to dual ear five-pin headsets for split-ear binaural operation, allowing the user to pan the keysets channels between left and right ears.

## Local and Central Management Options

HXII-BP can be added to an Arcadia or a HelixNet system host without central configuration or interruption. Front panel allows tactile device configuration and channel assignment.

Roles can be created and applied to one or multiple HXII-BP remotely or locally. Roles can be edited locally or centrally managed from the Core Configuration Manager™ (CCM\*).

## Connectivity and Power Options

HXII-BP connects to Arcadia Central Station or HMS-4X\*\*\* main stations with HLI-ET2 Ethernet module over network. Power is supplied to the HXII-BP with Power over Ethernet (PoE) from 3rd party devices.

Alternatively, HXII-BP can connect to HelixNet HMS-4X\*\*\* main stations over XLR Powerline with power.\*\*

\*CCM and Endpoint network connection to HMS-4X requires HLI-ET2

\*\*XLR Powerline is not available for Arcadia. Contact Clear-Com for further information.

\*\*\*HMS-4X is a legacy product as of 2022

## Technical Specifications

### HelixNet System Hosts

**Arcadia:** Supports up to 64 HelixNet endpoints (HRM-4X, HKB-2X & HXII-BP) over Ethernet. Up to 24 Channels can be HelixNet Enabled using a Licensed Port for assignment to any HelixNet endpoints keyset.

**HMS-4X\*\*\*:** Supports up to 64 endpoints (HRM-4X, HKB-2X, HBP-2X, HXII-BP, HLI-2W2, HLI-4W2, LQ port). User stations can connect via the 2 Powerlines (note power and data limits) or over Ethernet via optional HLI-ET2 module. HMS allows use of 12 channels which can be expanded to 24 using optional license.

### Connectors

**XLR Powerline\*\*:** 3-pin XLR-F

**LAN/PoE\*:** RJ45 etherCON

**Headset:** 4-pin XLR-M (-X4) or 5-pin XLR-F (-X5)

**USB:** Micro AB

### Microphone Pre-Amplifier

**Headset Mic Impedance:** 200Ω (Dynamic)

**Headset Mic Voltage:** 1.7V (Electret selectable)

**Limiter:** +23dB

Route to 4-wire output at 0dBu out:

**Mic Gain:** 60dB (Dynamic), 45dB (Electret)

**Frequency Response:** 300Hz - 10 kHz ± 3dB, contoured for intelligibility

**Distortion:** <0.2% THD @ 1kHz

**Noise:** <-55dBu (Dynamic), <-65dBu (Electret)

### Headphone Amplifier

**Load Impedance:** >32Ω

**Output Level:** +12dBu before clipping

**Sidetone:** -12dB (selectable)

Route from a 4-wire input at 0dBu in:

**Max Gain:** 0dB

**Frequency Response:** 40Hz - 10kHz ±3dB

**Distortion:** <0.2% THD @ 1kHz

**Noise:** -65dBu

**Headphone Limiter:** 0dB (selectable)

### Device Power

**Voltage:** 48V DC

**Current (Max):** 0.09A

**Power (Max):** 4W

**BTU (Max):** 13BTU/hr

This unit can be powered via:

### PoE - Power over Ethernet\*:

IEEE 802.3af-2003 - Class 1

**PSE:** 4.0W DC max @ Power Source Req.

**PD:** 3.84W DC max @ Powered Device Draw

### Powerline\*\*:

**Input Voltage:** ±29.5V DC

**Input Current (Max):** 0.13A

### Powerline Utilization:

HXII-BP = 1 beltpack

Note the maximum Powerline capacity of the HMS-4X\*\*\*

Use [HelixNet Cable Calculator](#) to validate load and cable distance.

### Environmental

32° to +104°F (0° to +40°C)

0 - 90% relative humidity

IP53 rated

### Dimensions

3.9 x 5.3 x 1.7in (WxHxD)

99 x 135 x 43mm (WxHxD)

### Weight

12.2oz (0.35kg)

## Network Specifications

(Firmware Version 4.2+)

### Network Protocols

Ethernet IPv4-Unicast Audio and Control  
mDNS-Multicast Device Discovery  
Layer 3 routable with mDNS function limitations  
HTTP-Management  
RTP-Audio Transport  
WavPack-Audio Codec

### Network Ports

#### Unicast:

Port 80 TCP-System Management  
Port 6001 TCP-System Management  
Port 6001 UDP-Audio Streams

#### Multicast:

Port 5353 UDP-mDNS, Names, Discovery, Linking  
Optional for device names and linking

### Network Parameters

**HMS-4X\*\*\* Endpoint Resource Use:** 1 (-X4 variant)

**HMS-4X\*\*\* Endpoint Resource Use:** 2 (-X5 for binaural)

### Bandwidth:

300 (max) kbps from each HXII-BP to HMS  
1200 (max) kbps from HMS to each endpoint

### Network Jitter Tolerance:

<= 128ms jitter buffer per audio stream receiver automatically adjusted to network performance

### QoS Tags:

DSCP=41, Assured Forwarding (AF)

### Link-Local Default IP Address Range:

169.254.0.0/16

### System Reserved IP Range:

10.0.0.0/8 for endpoints

### Recommended Ethernet Switches

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

Please refer to the [Clear-Com HelixNet Network Guide](#) for additional switch settings and network characteristics.

\*Ethernet to HMS-4X requires HLI-ET2

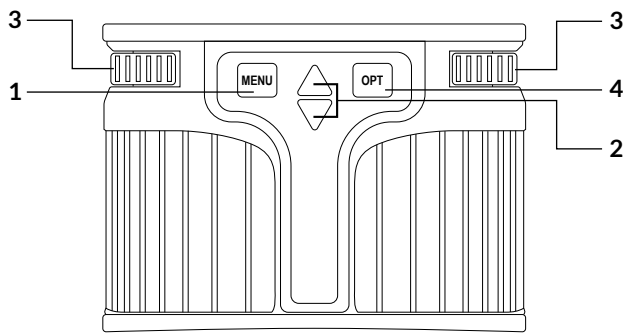
\*\*Not available for Arcadia. Contact Clear-Com

\*\*\*HMS-4X is a legacy product as of 2022

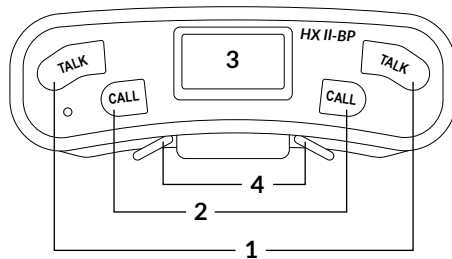
# HXII-BP Beltpack

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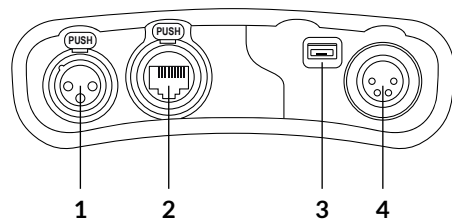
Front



Top



Bottom



## Legend

### Front

1. Menu access
2. Program level
3. Volume level
4. Option button for Binaural Balance Adjustment (-X5 only)

### Top

1. Talk key
2. Call key
3. OLED display screen
4. Desktop feet/belt clip

### Bottom

1. 3-pin XLR-F powerline
2. Ethernet Connector
3. USB Micro AB connector
4. XLR headset jack  
4-pin M (-X4 only)  
5-pin F (-X5 only)

## Order Code

HXII-BP-X4

HXII-BP-X5

*For Powerline daisy-chaining, the following must be ordered:*

**SP-2**



[www.clearcom.com/  
helixnet-knowledge-center/](http://www.clearcom.com/helixnet-knowledge-center/)



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**WARNING:** Cancer and Reproductive Harm - [www.P65Warnings.CA.Gov](http://www.P65Warnings.CA.Gov)