

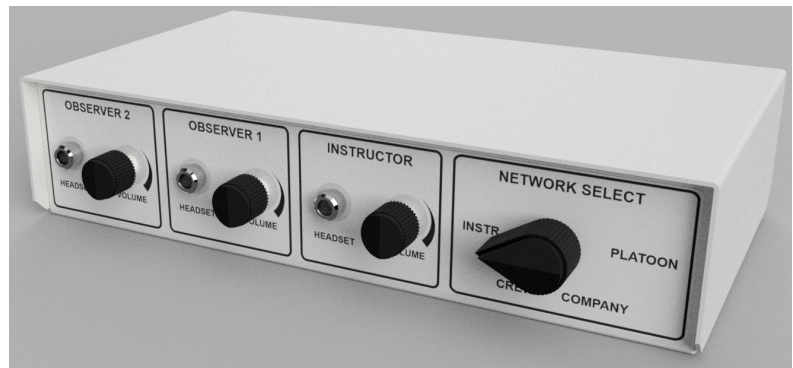
## DcAN 3-Channel Instructor Headset Interface

Part No 11457

Rev -

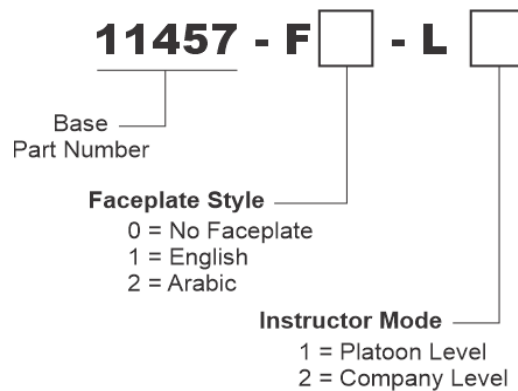
### Features:

- Aluminum Enclosure
- Powder-Coated White
- Gigabit Ethernet
- Power-over-Ethernet Capable
- Multiple faceplate configurations



*Part number shown: 11457-F1-L1*

### Part Number Information



## Product Description

The 3-Channel Instructor Headset Interface Box for DisComm Audio Network (DcAN) is a device that can accommodate three headsets in order to interface them to the audio network. This device is compatible with other devices that operate on the DisComm Audio Network.

The enclosure is made of aluminum and has front connectors for 3 headsets and individual volume control for each. The interface box also has a switch available for the user to select a specific channel on which to talk and monitor.

A power connector is available on the back of the unit, but the unit can also be powered using Power-over-Ethernet (PoE). An external speaker can be connected to the back of the unit.

Audio and Digital I/O is interfaced through a network port from a locking RJ-45 connector on the back of the unit. This interfaces to our DisComm Audio Network using 1Gbps Ethernet allowing the use of standard network switches and Cat5e/Cat6 cabling.

## About DisComm Audio Network

DisComm Audio Network (DcAN) uses IP-based networking to create a local voice network for a high-quality, low-latency audio network suitable for local intercoms and other full-duplex, clear-com applications. The network can also handle digital I/O for switches and displays. UDP/IP packets are used for digitized audio and digital I/O, control, and status.

The protocol for DisComm Audio Network is similar to Voice-over-IP (VoIP) and Audio over Ethernet but with some minor changes to work efficiently in a simulated intercom architecture. The packet format and protocol definition for DcAN is non-proprietary and is freely available to developers and end users.

Digitized audio packets are raw audio streams typically set at 16 bit samples at 8000 samples per second. Each audio packet contains as few samples as possible in order to reduce latency from talker to listener. A listener can capture one or more audio streams from the network and mix them into its output.

External communications, such as over a simulated radio, can be accomplished by using an application that has access to the DisComm Audio Network and to the distributed network. Our DisComm software can be used to build such an application that translates DisComm Audio Network packets to DIS PDUs and vice versa. DisComm also has built-in radio modeling and many other effects useful for distributed radio communications. Please contact eMDee Technology for more information about our compatible software products.

### Faceplate Options

#### -F1-L1

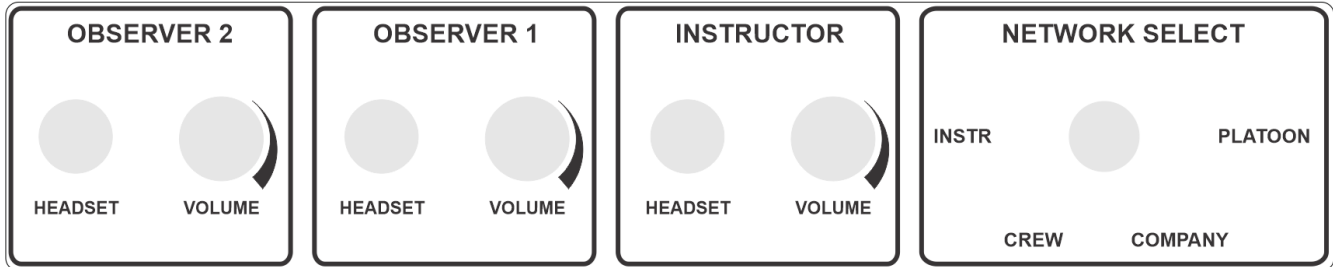


Figure 1: English Faceplate - Platoon Level (-F1-L1)

#### -F1-L2

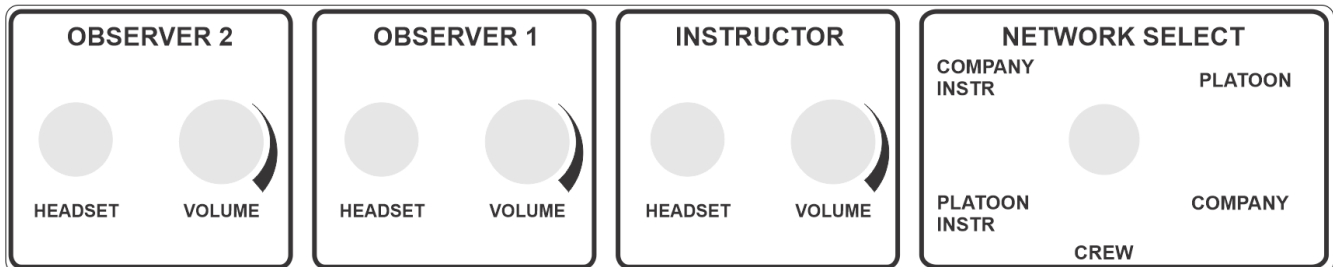


Figure 2: English Faceplate - Company Level (-F1-L2)

### Dimensions

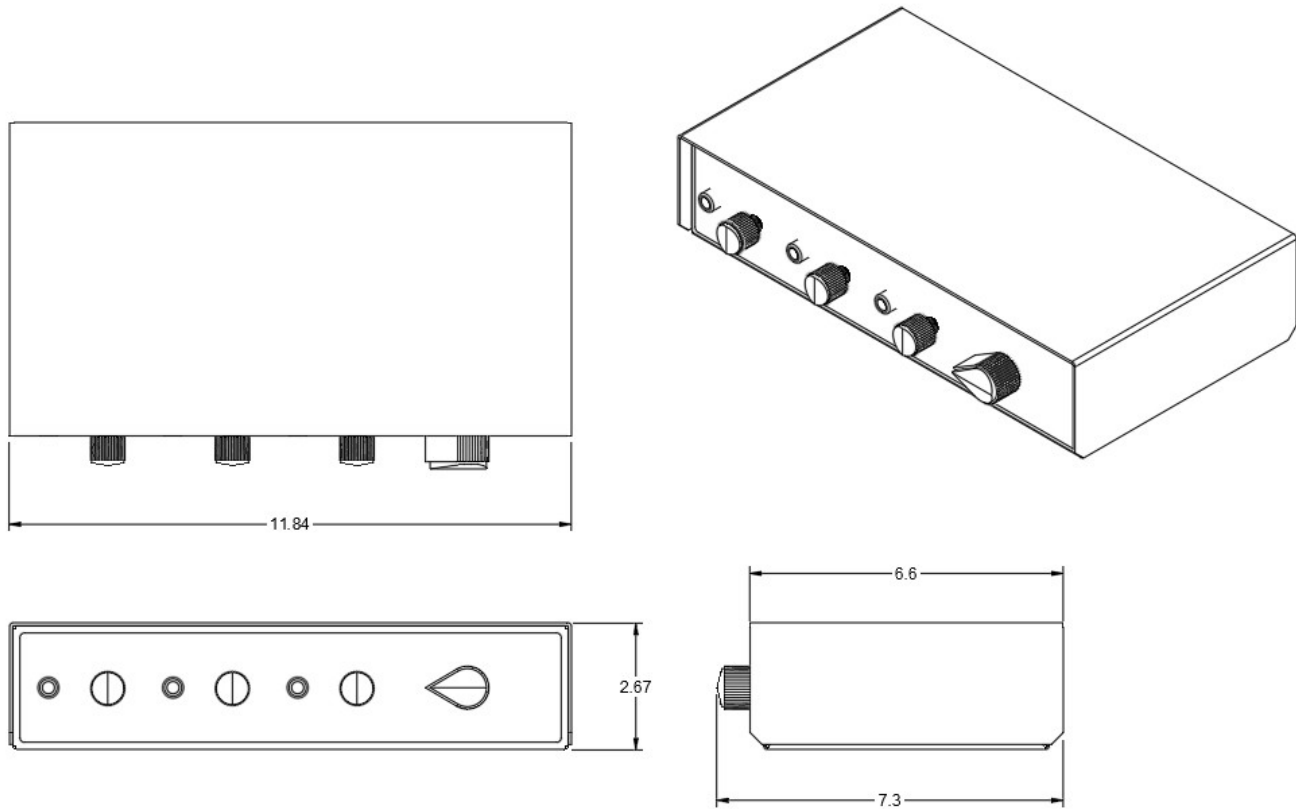
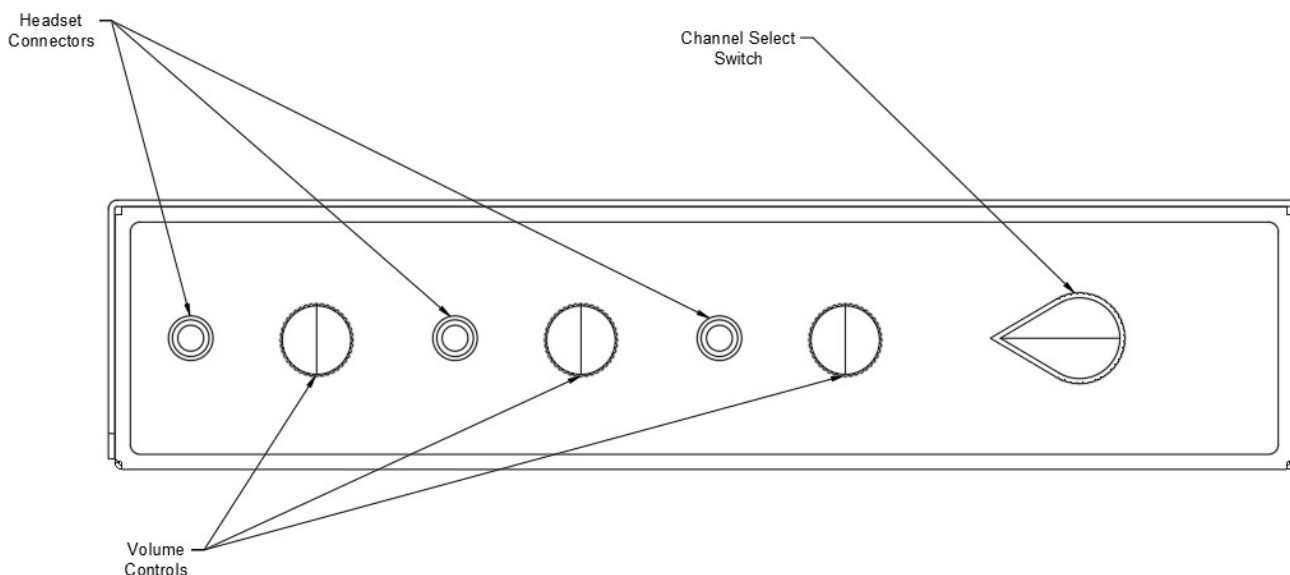


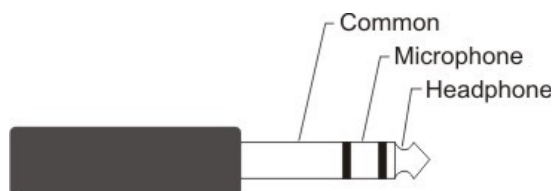
Figure 3: Enclosure Dimensions

## Front Connectors



*Figure 4: Front View*

The connector from the headset cable should have a 3-conductor 1/4" connector with the following pinout:



*Figure 5: Headset Connector Pinout*

## Compatible Headsets

The headset interface box is compatible with headsets that have a powered dynamic microphone or an electret microphone such as the David Clark M-7A microphone element. The microphone should be capable of accepting a 12VDC microphone bias voltage. The speaker part of the headset should have an impedance between 150 and 600 ohms.

## Rear Connectors

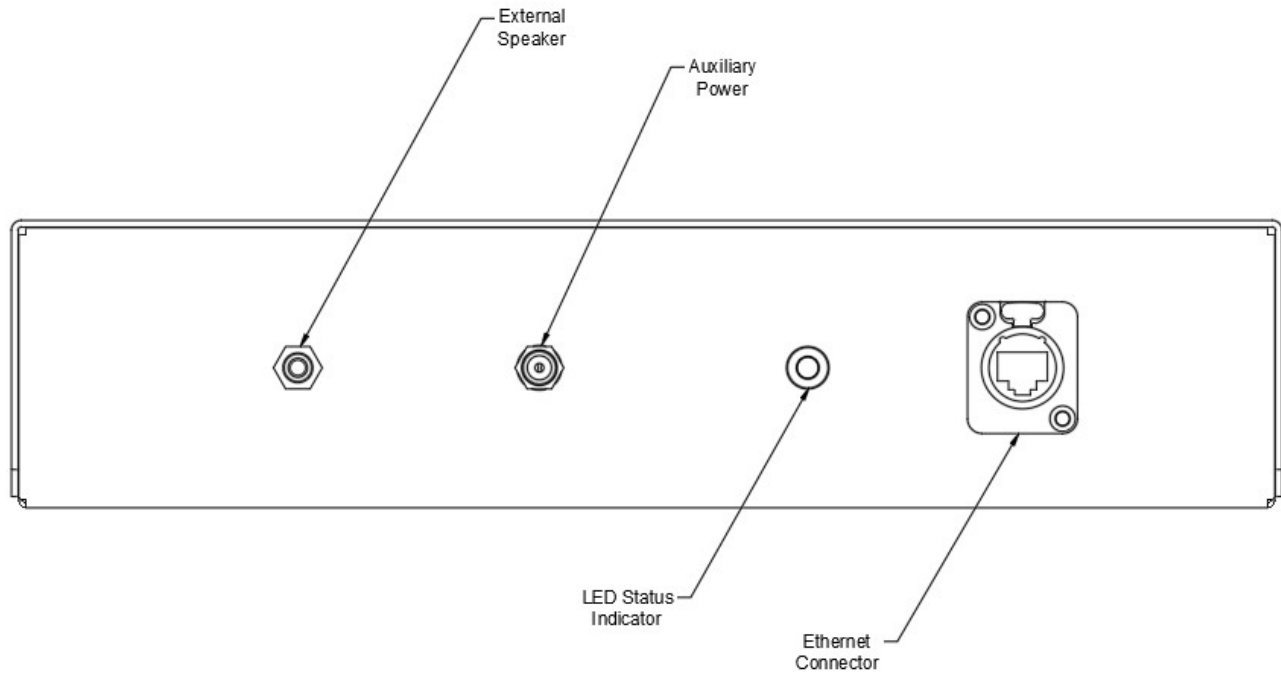


Figure 6: Rear View

### External Speaker

A set of amplified speakers can be attached to the interface box. The speakers should have an integrated amplifier and a 1/8" stereo phone plug. Connect the speakers to the connector marked "EXT SPKR" on the back of the device.

### Auxiliary Power

The recommended power source for this device is supplied through a Power over Ethernet (PoE) network connection. When a PoE network is not available, a standard Ethernet network connection can still be used but an external power source will need to be connected to the auxiliary power connector.

An external power supply can be purchased separately. The part number for the power supply is:

eMDee Part No.	Description
11321	12VDC 3A Power Supply

### *LED Status Indicator*

The LED status indicator on the rear of the interface box shows the power status of the unit. When the interface box is properly powered it will glow amber until it is fully initialized. Then it will glow green when the device is powered and running.

### *Ethernet Connector*

The Ethernet connector on the rear of the unit is compatible with a standard CAT5e/6 network cable with RJ-45 plugs. For a more durable connection, an XLR-type locking connector can be added to any CAT5e/6 cable such as the Neutrik NE8MC-B or any other compatible EtherCON product.

## IP Address Configuration

The IP address of the interface box is configurable to a number of different addresses through a 16-position selector switch that is accessible from the bottom of the enclosure (see Fig 7). The table below shows the IP address that will be used for the interface box corresponding to the position of the selector switch.

When the selector switch is set to position F, the interface box will use DHCP to assign its IP address. When using this setting, a DHCP server must be accessible from the audio network.

When the selector switch is changed, the power to the interface box must be cycled to apply the new IP address settings.

Switch Setting	IP Address
0 (default)	10.200.1.100
1	10.200.1.101
2	10.200.1.102
3	10.200.1.103
4	10.200.1.104
5	10.200.1.105
6	10.200.1.106
7	10.200.1.107
8	10.200.1.108
9	10.200.1.109
A	192.168.33.0
B	192.168.33.1
C	192.168.33.2
D	192.168.33.3
E	192.168.33.4
F	DHCP



### IP Address Configuration (Cont.)

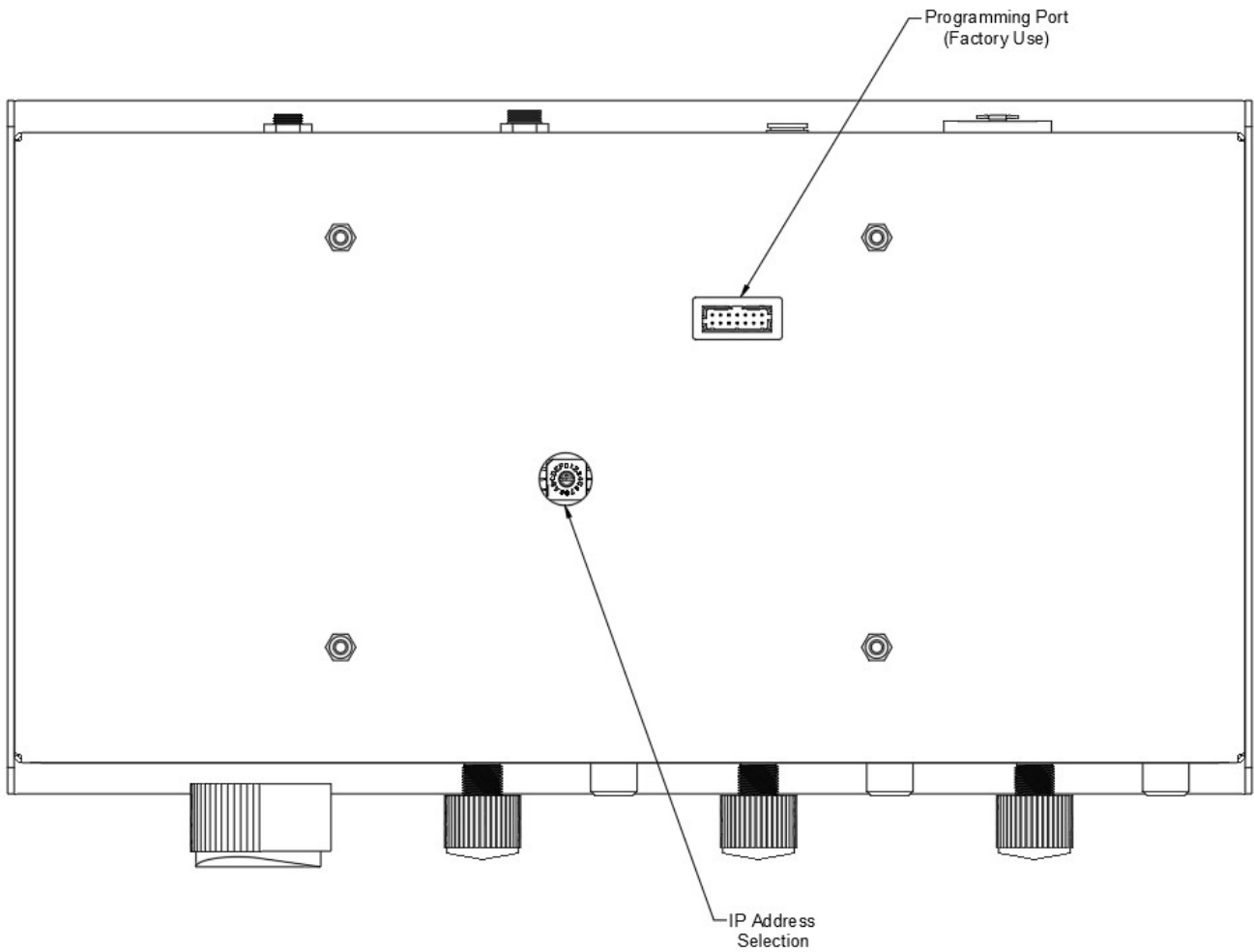


Figure 7: Bottom View

## Specifications

### Connectors

Headset	1/4" TRS Phone Jack
Aux. Power	2.1mm x 5.0mm barrel connector jack
Ext. Speaker	1/8" Stereo Phone Jack
Network	Neutrik NE8FDX-P6-B (compatible with standard RJ-45 connector)

### Power

Input Power	when not using PoE: +12VDC, 3A provided at Aux Power connector when using PoE: IEEE 802.3af Power-over-Ethernet at Network connector
Power Consumption	10W Max
Current Protection	Internal resettable fuse

### Mechanical

Size (W x D x H)	11.84 x 7.3 x 2.67 in (301 x 185 x 68 mm)
Enclosure	Powder coated aluminum
Color	White

### Environmental

Storage Temperature	-20° to +70° C
Storage Humidity	5% to 95% Non-condensing
Operating Temperature	0° to +40° C
Operating Humidity	5% to 95% Non-condensing

## Made in the USA