

AMP-450BP PoE+ Amplifier

Installation & Operation Guide



Product Description

The AMP-450BP is a four-channel PoE+ (IEEE 802.3at Class 4, 30W) conferencing amplifier for use in Tesira® systems. Suitable for air handling spaces, the amplifier is designed to be mounted directly to the back of a Desono™ C-IC6 loudspeaker, minimizing cabling requirements.

Each AMP-450BP comes with an optional enclosure to protect electrical connections and comply with typical code requirements for above-ceiling installations. The AMP-450BP includes an internal limiter, and is capable of providing 3 watts of continuous power to all four channels.

The Tesira AMP-450BP is also capable of operating in a burst mode to handle peak signals, providing up to 50 watts (4Ω load) or 30 watts (8Ω load) per channel. The output channels are software configurable, including selectable power versus channel count.

The amplifier serves as a dedicated endpoint in a Tesira system, making installations easier to design, support, and maintain. The AMP-450BP is ideal for TesiraFORTÉ®-equipped conference rooms or other applications where sound reinforcement is needed.

Setup and Use

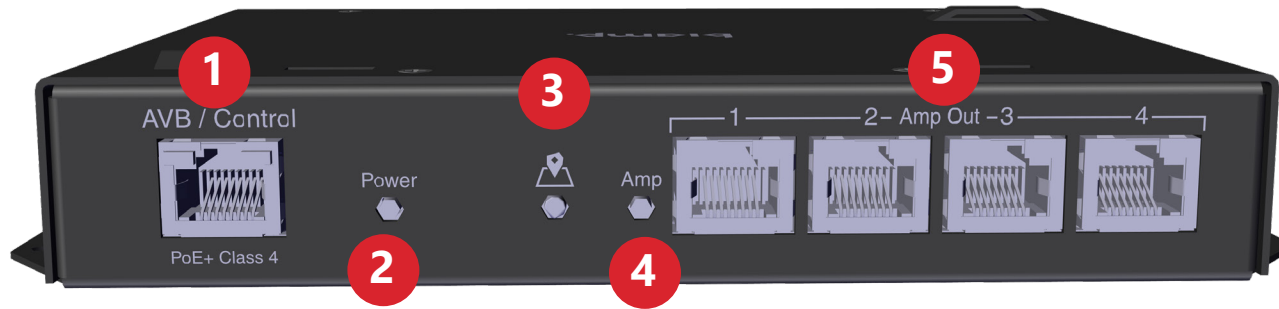
The Tesira software provides an intuitive interface for setup and programming of the AMP-450BP. The information supplied by this manual relates to physical connections and device setup. For more details on software setup, please consult the [Tesira Help File](#).

Installation

Install away from heat sources, such as vents, radiators, heat registers and stoves. Also avoid installing near water or steam. The conferencing loudspeaker has a secondary support point via chain or wire for connecting to the building structure. Do not exceed the maximum ambient operating temperature of 32° - 104° F (0° - 40° C).

Features

- Four channels; 3 watts of continuous power per channel
- Burst mode to handle peak signals in accordance with ANSI/CTA-2006-B; supports up to 50 watts (4Ω load) or 30 watts (8Ω load) per channel
- Powered by PoE+ (IEEE 802.3at Class 4, 30W)
- Class D amplifier topology
- Fan-less operation
- Includes internal limiter function
- Software-selectable power versus channel count
- Evaluated to the requirements of UL 2043 and is suitable for use in air handling spaces
- LED indicators for power and amplifier status
- Configurable via Tesira software



Front Panel and Connectors

1. AVB/Control

Facilitates connection to the Tesira AVB network for audio and control. This RJ-45 port may either be connected directly to the Tesira AVB port (via a PoE+ injector) for a single device system or via a PoE+ network switch in a multi-device AVB system. IEEE 802.3at Power over Ethernet Plus (POE+) Class 4 is required as there are no other provisions for power inlet.

2. Power/System LED Status Indicator

A multi-color LED provides information about the status of the device

Status	LED Indicator
No Power	Off
Powered but not ready to receive configuration	Red Solid
Ready to receive configuration or updating firmware	Yellow Solid
Configured and ready to participate in the system	Green Solid
Amplifier is in Locate mode (triggered from the software)	Green Flashing
Unit has a Major Alarm condition	Red Flashing
Unit has a Minor Alarm condition	Yellow Flashing
Unit has both a Major and Minor Alarm condition	Red/Yellow Flashing

3. Locate

Pressing the locate button will play an audible signal that cycles through each connected output.

4. Amp Status

A multi-color LED provides information about the status of the amplifier.

Status	LED Indicator
No Power	Off
Clip detected	Red Solid
Amplifier limiter engaged	Yellow Solid
Powered	Green Solid
Amplifier is in Locate mode (triggered from the software)	Green Flashing
Amplifier has failed to initialize, an error is present, or the amp is temporarily muted due to an audio burst	Red Flashing
PoE+ power is not available or insufficient to power the amplifier so it has been turned off	Red/Yellow Flashing

5. Outputs 1-4

RJ-45 speaker connections. 4 x 3W RMS or 2 x 7W RMS or 1 x 15W RMS output at low impedance 4Ω/8Ω.

Desono Speaker Installation

The AMP-450BP is designed to power and mount on top of a C-IC6 Desono™ loudspeaker with an optional Backpack Clip (BPAK). The AMP-450BP includes an optional cover to protect Euroblock and RJ-45 connections on the AMP-450BP and Desono loudspeaker.

See Figures 1 through 3 at right. To install the AMP-450BP on the Desono loudspeaker with the BPAK, do the steps that follow:

1. Attach the BPAK clips to the mounting locations on each side of the speaker with the provided hardware as shown.
2. Slide the AMP-450BP into the clips.
3. Connect the loudspeaker to the AMP-450BP with Ethernet cable via the RJ-45 ports on both devices.
4. Make sure knock-outs are removed on the AMP-450BP cover as required.
5. Feed cabling through the knock-outs and install the cover on to the loudspeaker and amplifier.
 - a. The cover attaches to the AMP-450BP/C-IC6 via clips and a thumbscrew.
6. Install the speaker per the appropriate Desono Installation and Operation Guide.

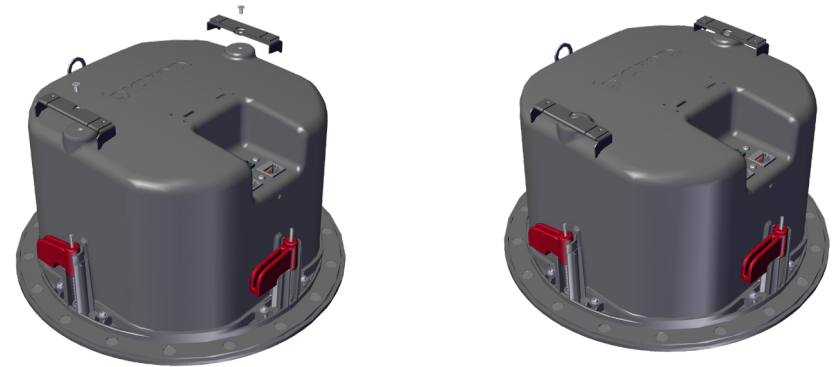


Figure 1 - Clip Installation

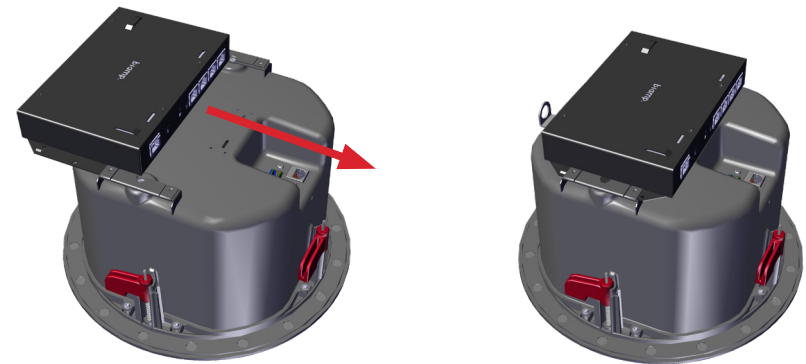


Figure 2 - AMP-450BP Installation

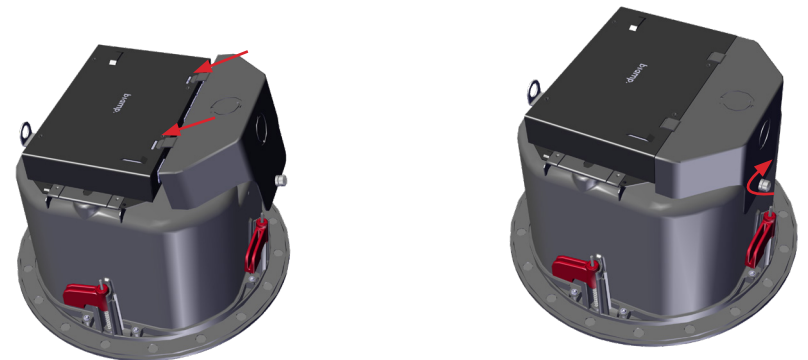


Figure 3 - Cover Installation

Wiring and Connections

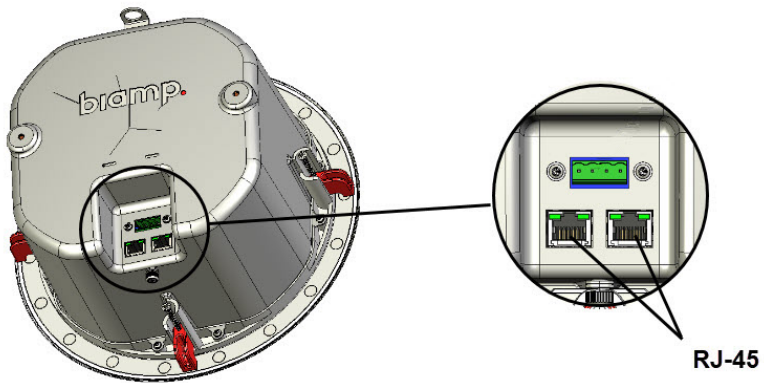
The AMP-450BP connects to a Tesira AVB network for audio and control via the AVB/Control RJ-45. Cabling should be Cat 5e or better.

The AMP-450BP has four RJ-45 ports (channels) for speaker connections.

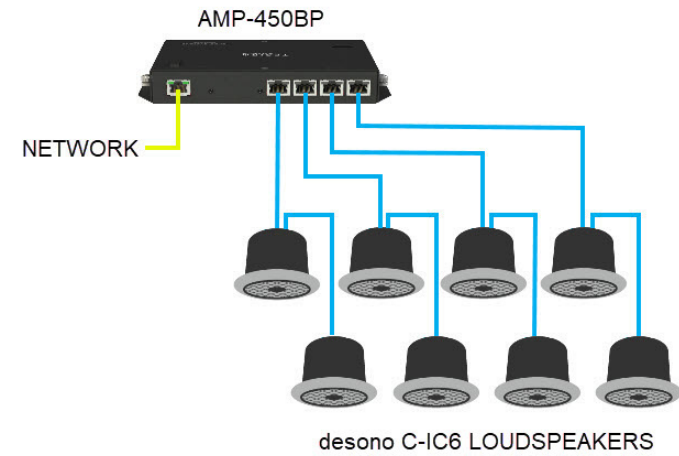
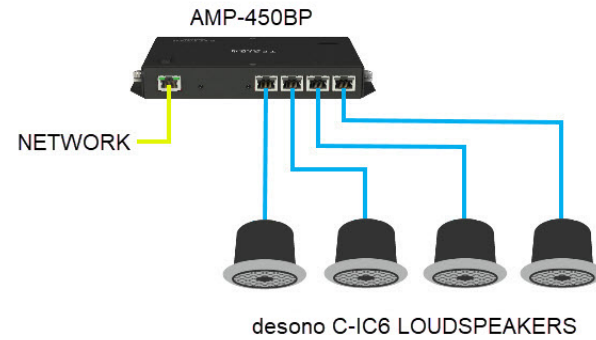
Continuous Power Output:

- Single Channel Driven (4Ω, 8Ω): 15W
- Dual Channel Driven, (4Ω, 8Ω): 7W
- Four Channel Driven, (4Ω, 8Ω): 3W

C-IC6 Wiring Connections:



Wiring Examples:



Pin Number	Function
1	Speaker +
2	Speaker +
3	Speaker +
4	Speaker -
5	Speaker -
6	Speaker +
7	Speaker -
8	Speaker -

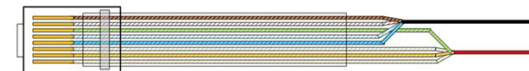
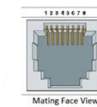


Figure 4 - AMP-450BP Speaker Outputs

CONTACT US

Email

support@biamp.com

Web

support.biamp.com



Note: Every effort has been made to ensure that the information contained in this manual was complete and accurate at the time of printing. However, due to ongoing technical advances, changes or modifications may have occurred that are not covered in this manual. The latest version is available at www.biamp.com.

DEC 2020