PA-10 / PA-10T

Digital Mixer Amplifier

Instruction Manual



Date:2024/3 | Firmware:V1.8.0

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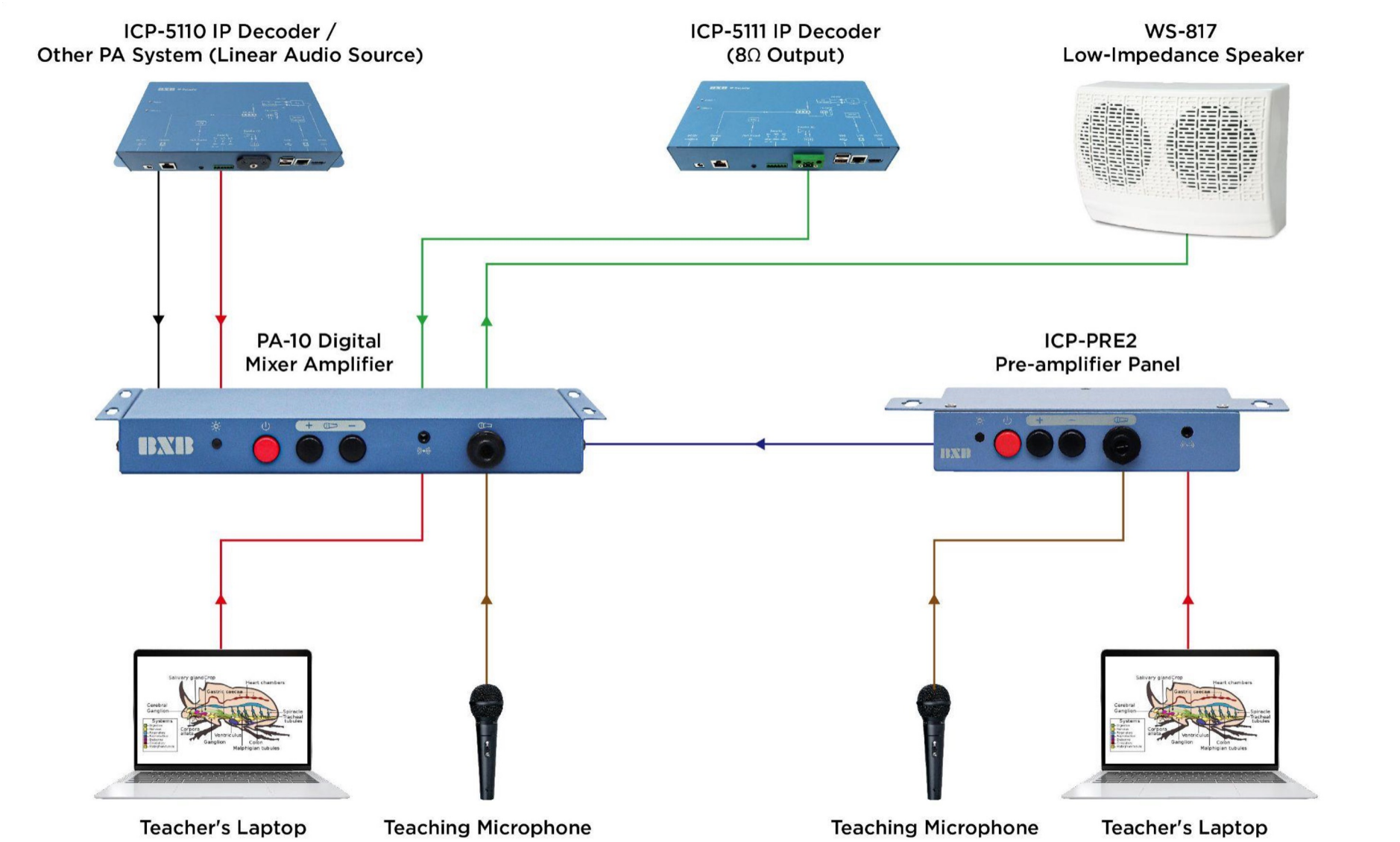
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We make no representations or warranties, either expressed or implied, with respect to the contents of this manual, its merchantability or fitness for any particular purpose.
The contents in this manual may vary depending on the product / software version. BXB reserves the right to alter the information of this manual at any time. At all times, BXB will try to give correct and complete information. However, no responsibility is assumed for inaccuracies.

Safety Instruction

1. Read the instruction manual carefully before installing and using this unit.
2. Please keep this manual safe.
3. Follow the instructions in the manual and pay attention to the warnings.
4. Do not use attachments not recommended by the dealer.
5. Use only original parts supplied by the manufacturer; the manufacturer is not liable for damages caused by improper mounting.
6. Ensure the power cord is properly and securely fixed.
7. Do not use three-prong plugs or extension cords to avoid fire or short circuit.
8. Do not insert any objects into the machine or spill any liquids on it to prevent short circuits.
9. Contact a repair technician if the following conditions occur:
    a. The power cord or plug is damaged.
    b. Water has entered the machine.
    c. Unable to operate normally despite following the operating instructions.
    d. The machine has fallen to the ground or the casing is damaged.
    e. Other equipment issues that may require repair.
10. When connecting equipment from outdoor cable systems, ensure the cable system is properly grounded to prevent lightning strikes.
11. Do not use three-prong plugs or extension cords to avoid fire or short circuit.
12. Do not insert any objects into the machine or spill any liquids on it to prevent short circuits.

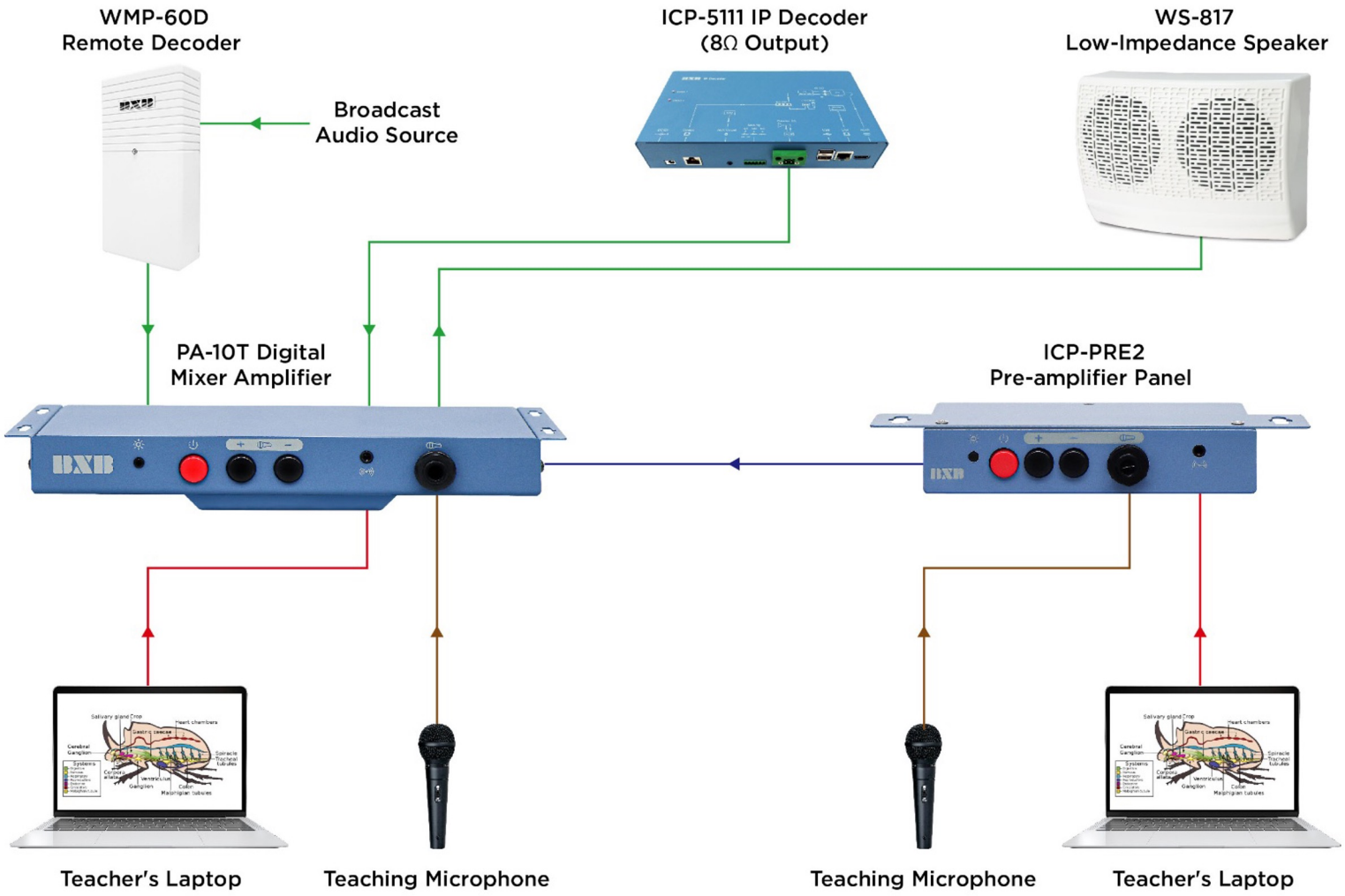
Connection Diagram

PA-10



Connection Diagram

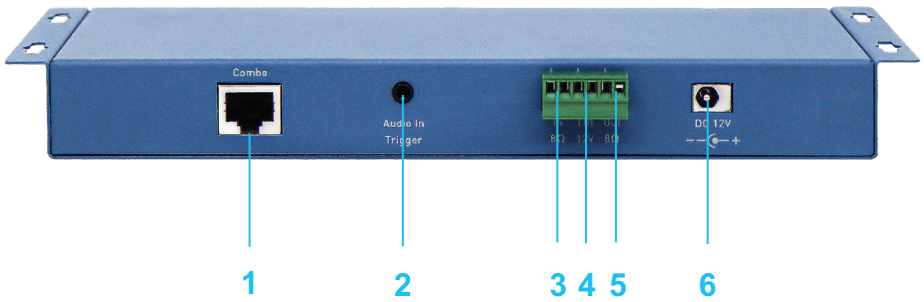
PA-10T

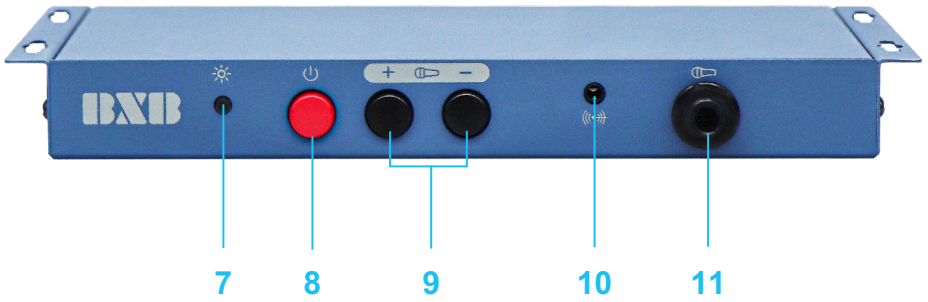


Speaker Cable Audio Source Cable Microphone Cable CAT5E

Physical Description

PA-10 Panel Description

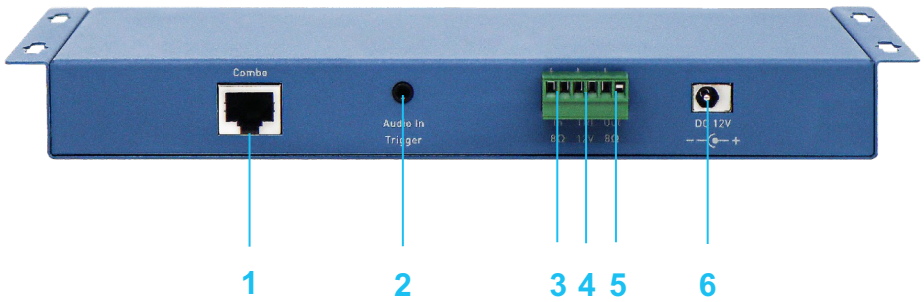


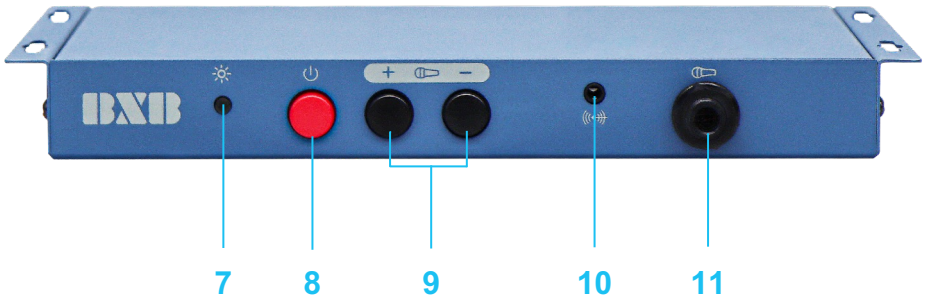


1. Input Ports for the Predecessor Board: Connects to the ICP-PRE2 for expanding input source connections.
2. Linear Audio Input: Port for linear audio input, capable of connecting to educational or broadcasting audio devices for mixing purposes.
3. 8Ω Audio Input: Connects to 8Ω audio signals, serving as input for broadcasting audio.
4. Broadcast Mixing Trigger: Short-circuit N.O. dry-contact points for triggering, activating the 8Ω broadcasting voice control mixing mode. Connects to DC-12V trigger for broadcasting audio mixing broadcast output.

Physical Description

PA-10 Panel Description

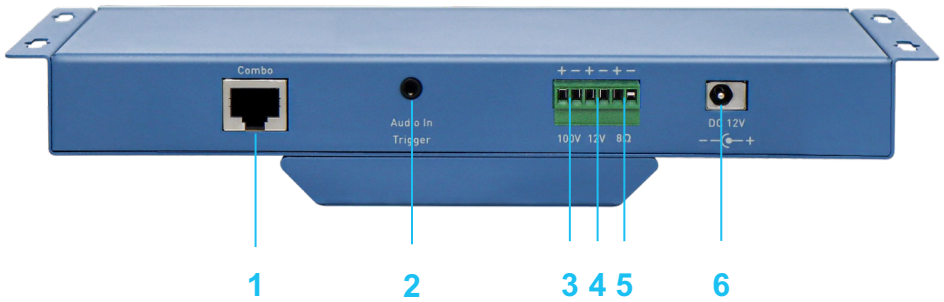


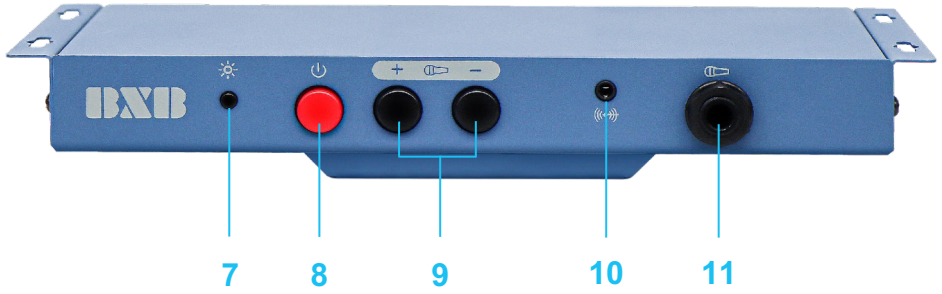


5. Speaker Output Connection: Connects to 4Ω or 8Ω low-impedance speakers, with a maximum of 15W audio output.
6. Transformer Connection Port: Connects to the accessory 12V/2A transformer to supply operational power.
7. Status Indicator Lights: Indicates device power and amplifier status.
8. Output Switch Button: Toggles the front panel's linear and microphone audio source outputs.
9. Volume Adjustment Buttons: Adjusts the volume of the "Microphone Audio Source Input."
10. Linear Audio Input: Connects stereo linear audio sources for instructional mixing input.
11. Microphone Input Port: Connects microphone audio sources for instructional mixing input.

Physical Description

PA-10T Panel Description

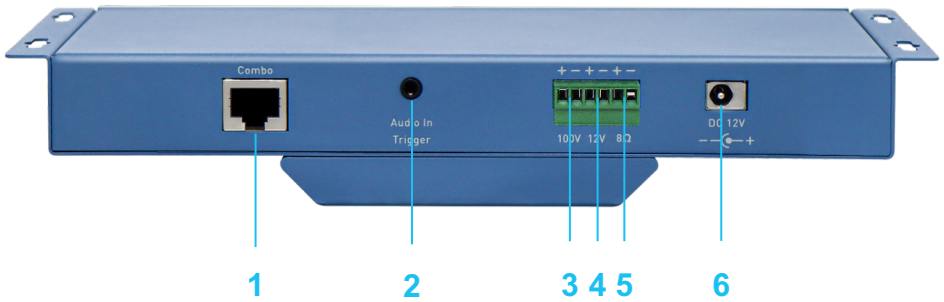


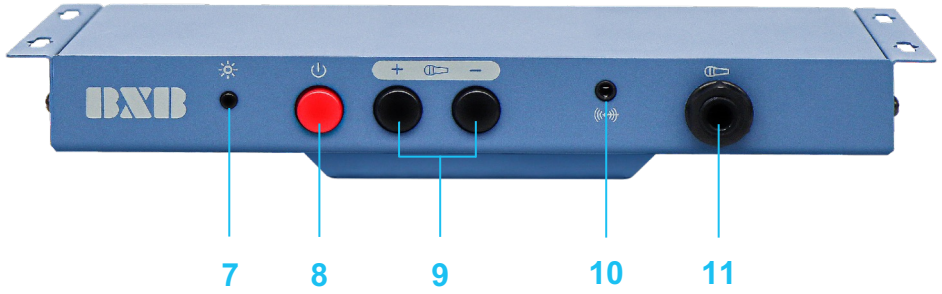


1. Preamp Board Connection Port: Connects to the ICP-PRE2 for input source expansion.
2. Line-Level Audio Input: Line-level audio input port, connects to instructional or broadcasting audio source equipment for instructional or broadcasting mixing.
3. 100V Audio Input: Connects to the 100V audio signal, serving as a broadcasting audio source input.
4. Broadcast Mixing Trigger: Short-circuit N.O. dry contact point for triggering, activating the 100V broadcasting voice-controlled mixing mode. Connects to DC-12V to trigger broadcasting audio source mixing output.
5. Speaker Output Connection: Connects to 4Ω or 8Ω low-impedance speakers, providing up to 15W of audio output.

Physical Description

PA-10T Panel Description





6. Transformer Connection Port: Connects to the accessory 12V/2A transformer to supply operating power.
7. Status Indicator Lights: Indicates device power and mixing status.
8. Audio Output Switch: Switches between front panel line-level and microphone audio outputs.
9. Volume Adjustment Buttons: Adjusts the volume of the "microphone audio input."
10. Line-Level Audio Input: Connects stereo line-level audio as instructional mixing input.
11. Microphone Input Port: Connects microphone audio source as instructional mixing input.

Operating Instructions

Power On

After connecting the power supply to PA-10 / PA-10T, the status indicator light will display the current operating mode.

1



2



Using the accessory DC 12V/2A transformer to connect to PA-10/PA-10T for power activation.
Mode one does not activate the front panel device connection detection function. Even without devices connected to the front panel, the instructional amplifier can still be operated by pressing buttons.

Mode two activates the front panel device connection detection function. Devices must be connected to the front panel to operate the instructional amplifier by pressing buttons.

Operating Instructions

Power On

After connecting the power supply to PA-10 / PA-10T, the status indicator light will display the current operating mode.

1



2



In mode one (default setting) for PA-10/PA-10T, the status indicator will flash red five times to display the mode status. In mode two, the status indicator will flash green five times to display the mode status.

Operating Instructions

Microphone Input

PA-10 / PA-10T can connect to a microphone, carry out teaching audio amplification output, and simultaneously adjust the output volume through buttons.

1



2



When in standby mode (red light steady) for PA-10/PA-10T, connect the microphone to the microphone input port.

Once PA-10/PA-10T detects that a device is connected to the microphone input port, it will automatically activate the teaching mixing. You can then turn on the microphone, and the sound will be amplified and output through the connected 8Ω low-impedance speaker.

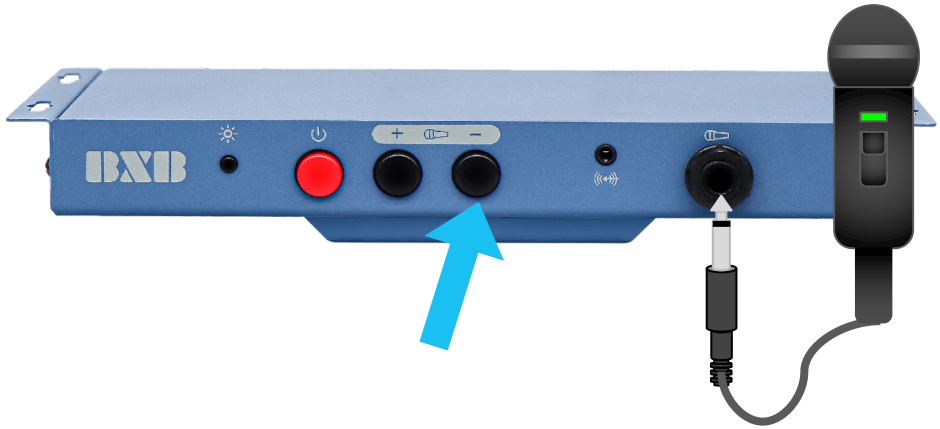
Operating Instructions

Microphone Input

3



4



Pressing the "+" button allows you to individually increase the microphone volume. There are 16 levels of volume available beyond the default volume setting. If the status indicator light does not flash while adjusting the volume, it indicates that the volume has been adjusted to the maximum level.

Pressing the "–" button allows you to individually decrease the microphone volume. There are 16 levels of volume available for reducing the volume beyond the default setting. If the status indicator light does not flash while adjusting the volume, it indicates that the volume has been adjusted to the minimum level.

Operating Instructions

Microphone Input (Only supports Mode 1)

5



Simultaneously pressing the " + " and " - " buttons restores the microphone input amplification level to the default setting.
When restoring the default value, the status indicator light will flash green three times. After restoring the default volume, you can then use the volume adjustment buttons to adjust the volume up or down by 16 levels.
If the microphone level is too high, the PA-10 / PA-10T will activate protection to pause the output, and the status indicator light will flash quickly in green as a warning.

Operating Instructions

Microphone Input(Only supports Mode 1)

6



Pressing the "Output Switch Button" can turn off the teaching mix output (steady red light). If you need to turn on the teaching mix output again, simply press the "Output Switch Button" again, and the microphone and linear audio source teaching mix output will be activated (steady green light).

※ This teaching mix function only supports the application of "Mode 1" (power on, red light flashes five times).

Operating Instructions

Linear Audio Input

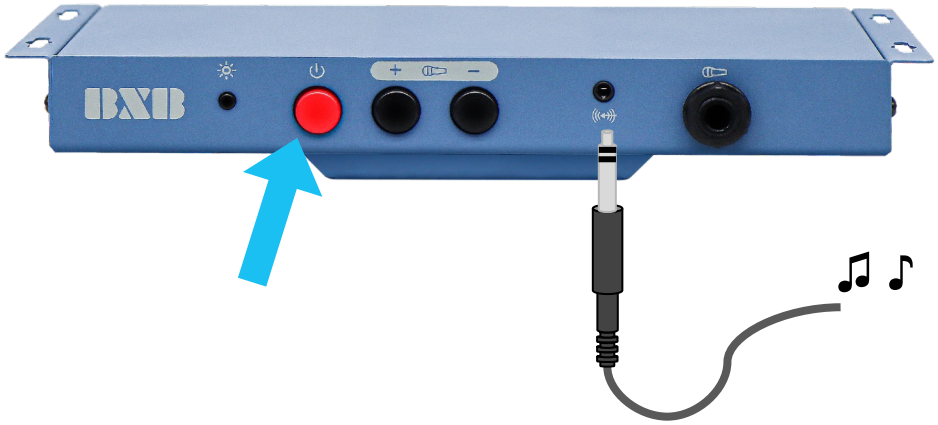
PA-10 / PA-10T can connect to a computer or other devices' stereo linear audio sources as a mixing input for teaching audio amplification output.

1



While the PA-10 / PA-10T is in standby mode (red light steady), use a 3.5mm phone jack audio cable to connect to the input port for teaching mixing and amplification.

2



Operate the "output switch button" to turn on the teaching mixing output (green light steady), then play sound from the source, which will be amplified through the connected 8Ω low impedance speakers.

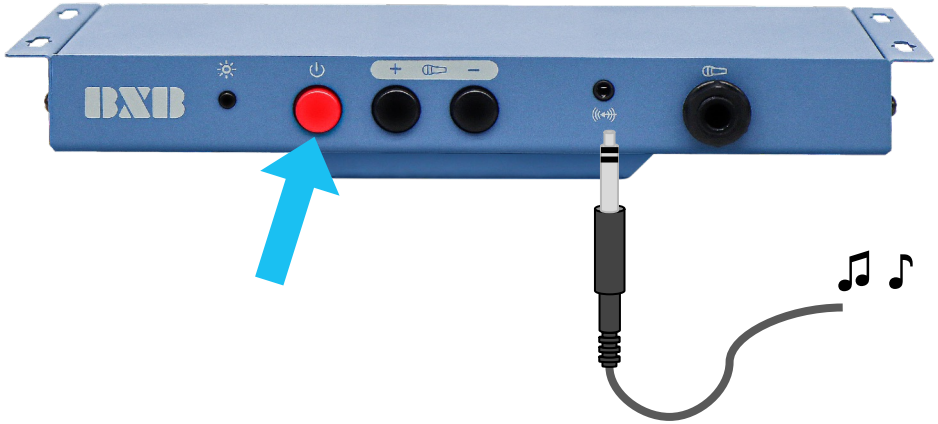
Operating Instructions

Linear Audio Input

3



4



The volume control buttons on the PA-10 / PA-10T only adjust the amplification level for "microphone input"; if the "linear audio input" volume is too low or too high, adjustments must be made at the playback source, such as the computer or other devices themselves.

Operate the "output switch button" to turn off the teaching mixing output (red light steady); to turn on the teaching mixing output again, operate the "output switch button" again to start the linear audio source and microphone teaching mixing output (green light steady).

Operating Instructions

Linear Audio Source Teaching Mixing

The Φ3.5 port on the back panel of PA-10 / PA-10T can connect to linear audio source teaching equipment for teaching amplification.

1



2



When PA-10 / PA-10T is in standby mode (red light steady), use a 3.5mm phone jack audio cable to connect to the input port for teaching mixing and amplification.

Operate the "output switch button" to turn on the teaching mixing output (green light steady), then play sound from the source, which will be amplified through the connected 8Ω low impedance speakers.

Operating Instructions

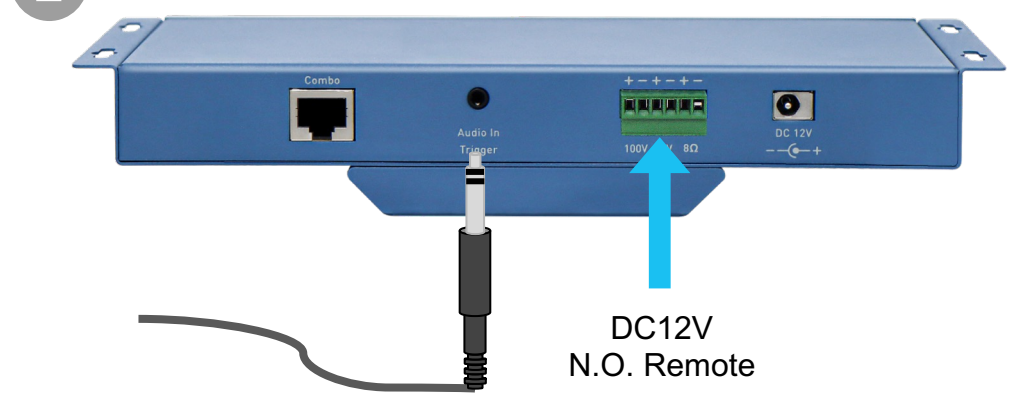
Broadcast audio source triggers broadcast mixing.

PA-10 / PA-10T can connect to broadcast equipment stereo linear audio sources and manage broadcast audio source mixing output through external triggering.

1



2



PA-10 / PA-10T broadcast linear audio input can connect to broadcast equipment (such as ICP-5110 linear audio output) as a trigger for mixing audio sources.

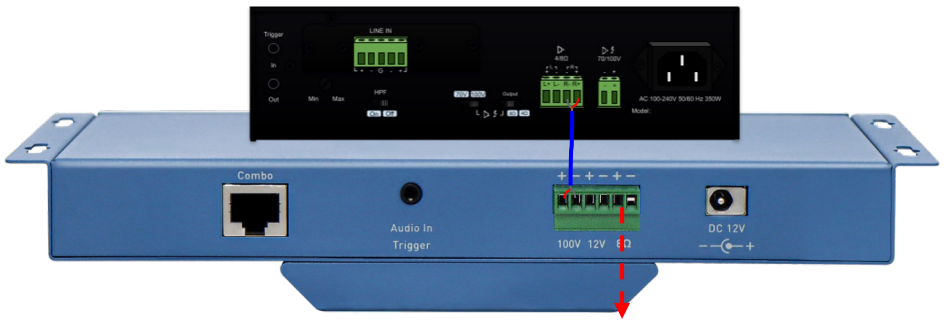
By triggering PA-10 / PA-10T through DC-12V or N.O. dry contact, the broadcast mixing can be activated, and the status light will slowly flash green when the broadcast mixing is activated.

Operating Instructions

Low impedance audio source signal input (Only PA-10)

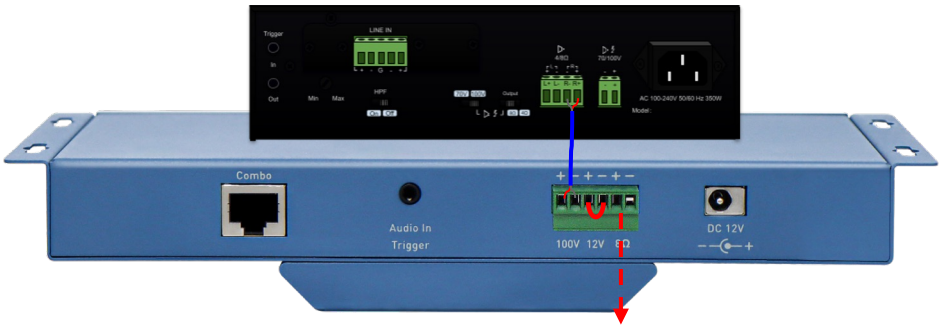
PA-10 can connect to broadcast equipment with an 8Ω audio signal for broadcast mixing.

1



Low Impedance Speaker

2



Low Impedance Speaker

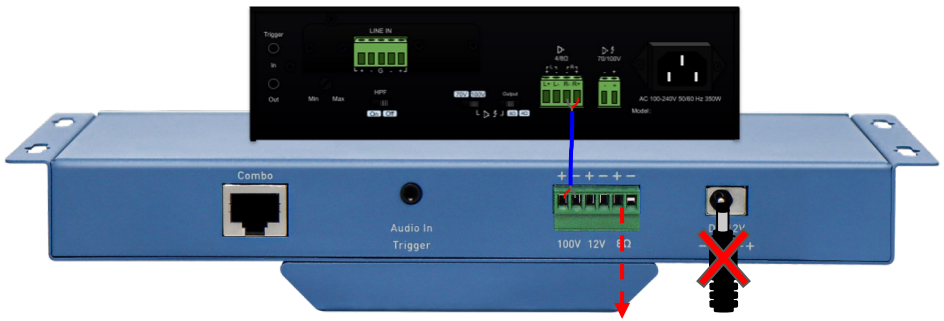
PA-10 8Ω input can connect to a broadcasting amplifier's 8Ω audio output. When there is a broadcast audio signal input, PA-10 will directly start the broadcast mixing.

PA-10 short circuit triggers a contact point to start sound-controlled broadcast mixing. When the 8Ω input signal level reaches the activation threshold, PA-10 will initiate the broadcast mixing output; if the level falls below the activation threshold 30 seconds after activation, it will shut off the broadcast mixing.

Operating Instructions

Low impedance audio source signal input (Only PA-10)

3



Low Impedance Speaker

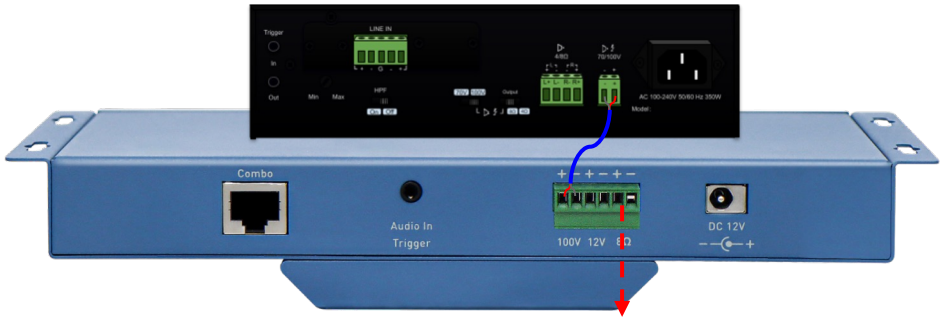
When the PA-10 power supply is disconnected, the 8Ω broadcast audio channel will automatically connect. At this time, regardless of whether a short circuit triggers the sound-controlled broadcast mixing function, the broadcast audio input will be directly transmitted to the connected low impedance speaker output.

Operating Instructions

High resistance audio source signal input (Only PA-10T)

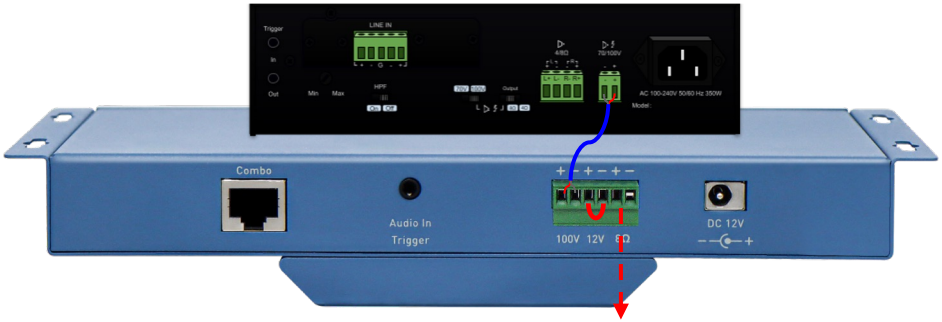
PA-10T can connect to broadcast equipment with a 100V high-voltage audio signal for broadcast mixing.

1



Low Impedance Speaker

2



Low Impedance Speaker

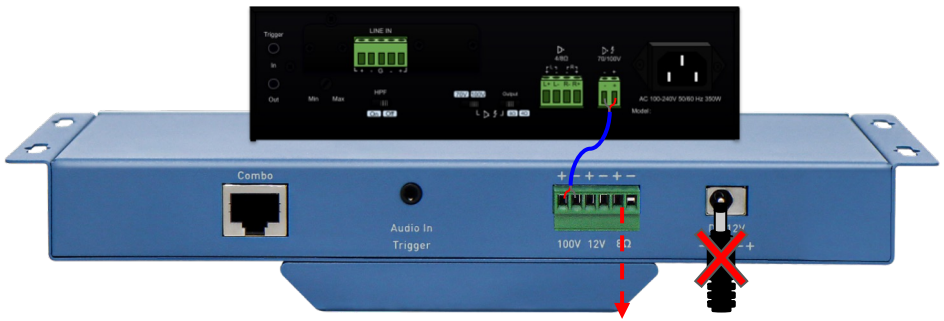
PA-10T 100V input can connect to a broadcasting amplifier's 100V audio output. When there is a broadcast audio signal input, PA-10T will directly activate the broadcast mixing.

PA-10T short circuit triggers a contact point to start the sound-controlled broadcast mixing. When the 100V input signal level reaches the activation threshold, PA-10T will open the broadcast mixing output; if the level is below the activation threshold 30 seconds after starting, it will close the broadcast mixing.

Operating Instructions

High resistance audio source signal input (Only PA-10T)

3



Low Impedance Speaker

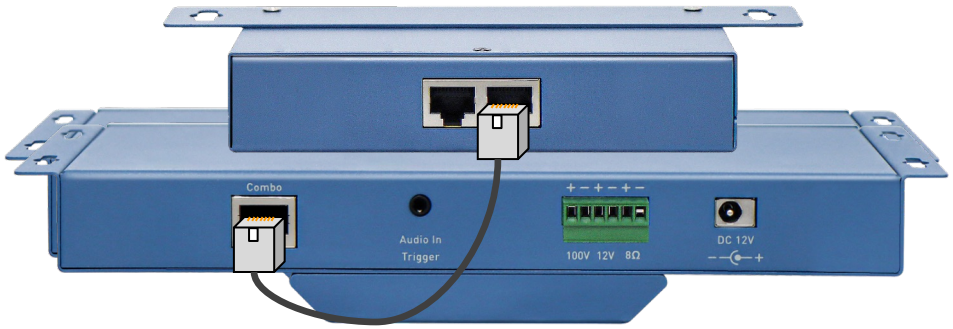
When the PA-10T power supply is disconnected, the 100V broadcast audio source channel will automatically connect. At this time, regardless of whether a short circuit triggers the sound-controlled broadcast mixing function, the broadcast audio input will be directly transmitted to the connected low impedance speaker output.

Operating Instructions

Connect ICP-PRE2

PA-10 / PA-10T can connect to ICP-PRE2 to expand the teaching audio source ports (up to 3 units). Through PA-10 / PA-10T connecting low impedance speakers, it will carry out teaching mix output of the related audio inputs.

1



PA-10 / PA-10T COMBO connects through BXB CAT5E cable to ICP-PRE2 for preamp input port expansion.

2



When ICP-PRE2 turns on teaching mixing, it will perform mixing output through the 8Ω low impedance speakers connected to PA-10/PA-10T.

Operating Instructions

Abnormal load

PA-10 / PA-10T can connect to 4 to 8Ω low impedance speakers, with a maximum output of 15W. When the connected low impedance speakers or lines are abnormal, causing abnormal load and inability to amplify sound properly, PA-10 / PA-10T will indicate with rapidly flashing lights.

1



2



PA-10 / PA-10T connects to 4 to 8Ω low impedance speakers, capable of up to 15W output for teaching and broadcast mixing.

When the connected low-impedance speakers or lines are abnormal, causing abnormal load and failure to amplify sound properly, the PA-10 / PA-10T status indicator will flash rapidly in red.

Appendix

Installation Instructions

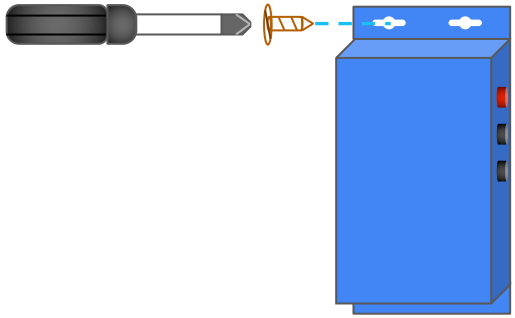
Use screws to fix the PA-10 / PA-10T under the blackboard.



Appendix

Installation Instructions

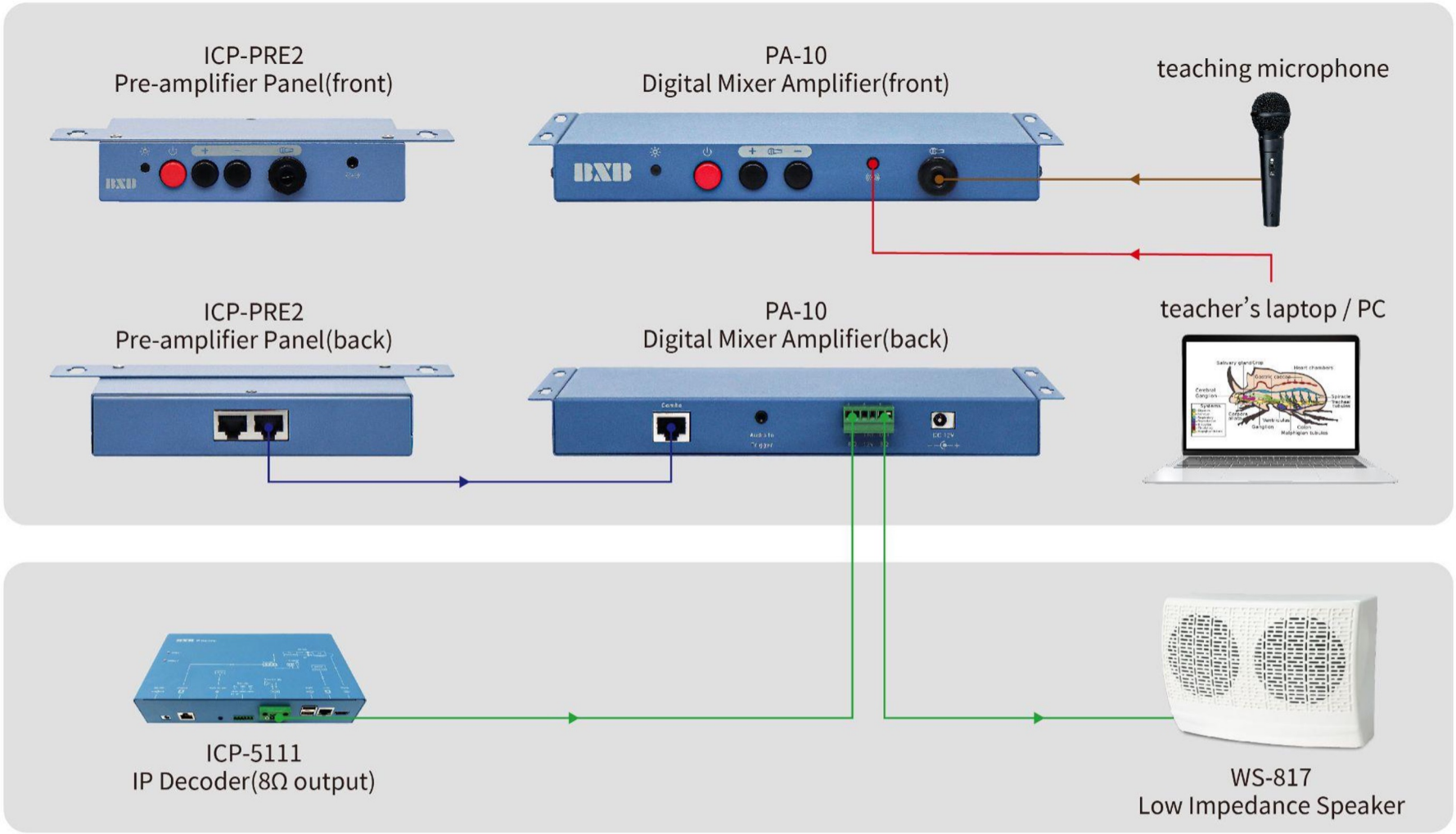
Use screws to fix PA-10 / PA-10T to the wall.





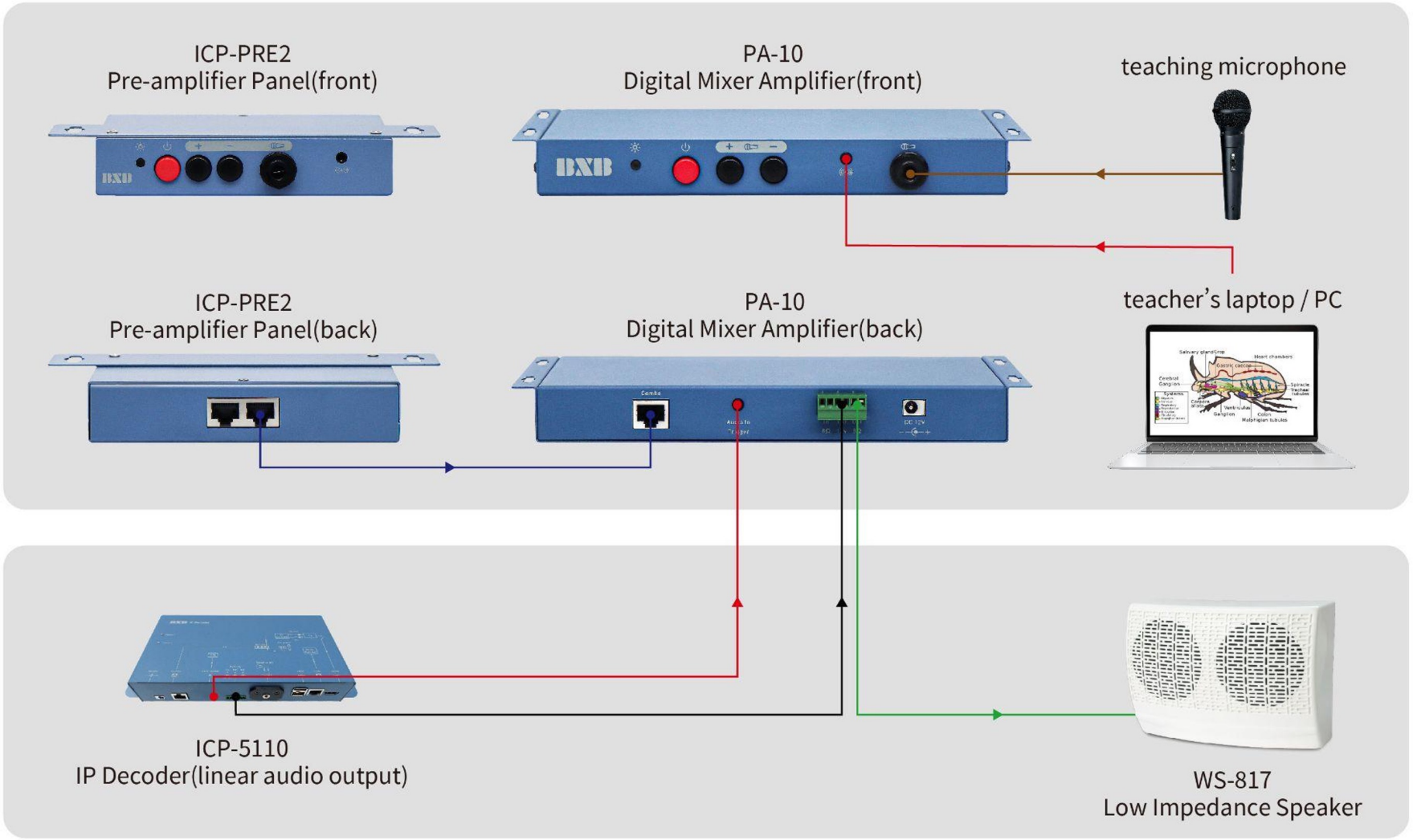
Appendix

Wiring diagram for PA-10 with ICP-5111



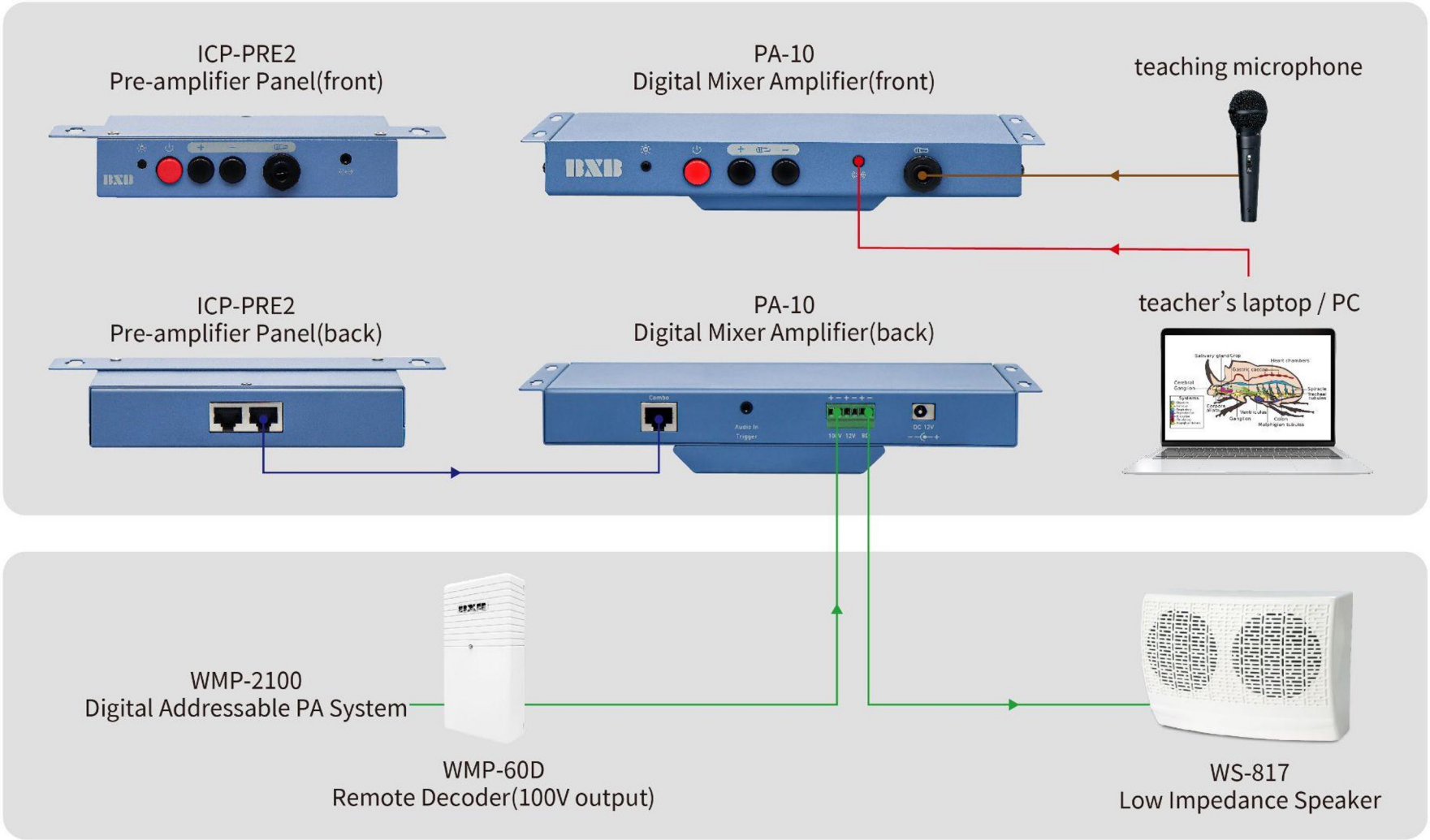
Appendix

Wiring diagram for PA-10 with ICP-5110



Appendix

PA-10T Wiring Diagram





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