AudioPressBox®

APB-448 SB

Press Conference Audio Distribution Amplifier
Owner's manual

WARNING

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards. These precautions include, but are not limited to, the following:

Power supply/Power cord

- Only use the voltage specified as correct for the device. The required voltage is printed on the name plate of the device.
- Use only the specified AC power adaptor.
- Do not place the power cord near heat sources such as heaters or radiators, and do not excessively bend or otherwise damage the cord, place heavy objects on it, or place it in a position where anyone could walk on, trip over, or roll anything over it.

Do not open

- Do not open the device or attempt to disassemble the internal parts or modify them in any way. The device contains no user-serviceable parts. If it should appear to be malfunctioning, discontinue use immediately and have it inspected by qualified AudioPressBox service personnel.

Water warning

- Do not expose the device to rain, use it near water or in damp or wet conditions, or place containers on it containing liquids which might spill into any openings.
- Never insert or remove an electric plug with wet hands.

If you notice any abnormality

- If the power cord or plug becomes frayed or damaged, or if there is a sudden loss of sound during use of the device, or if any unusual smells or smoke should appear to be caused by it, immediately turn off the power switch, disconnect the electric plug from the outlet, and have the device inspected by qualified AudioPressBox service personnel.
- If this device or the AC power adaptor should be dropped or damaged, immediately turn off the power switch, disconnect the electric plug from the outlet, and have the device inspected by qualified AudioPressBox service personnel.

CAUTION

Always follow the basic precautions listed below to avoid the possibility of physical injury to you or others, or damage to the device or other property. These precautions include, but are not limited to, the following:

Power supply/Power cord

- Remove the electric plug from the outlet when the device is not to be used for extended periods of time, or during electrical storms.
- When removing the electric plug from the device or an outlet, always hold the plug itself and not the cord. Pulling by the cord can damage it.
- To avoid generating unwanted noise, make sure there is 50cm or more between the AC power adaptor and the device.
- Do not cover or wrap the AC power adaptor with a cloth or blanket.

Location

- Before moving the device, remove all connected cables.
- When setting up the device, make sure that the AC outlet you are using is easily accessible. If some trouble or malfunction occurs, immediately turn off the power switch and disconnect the plug from the outlet.
- Avoid setting all controls to their maximum. Depending on the condition of the connected devices, doing so may cause feedback and may damage the speakers.

2

- Do not expose the device to excessive dust or vibrations, or extreme cold or heat (such as in direct sunlight, near a heater, or in a car during the day) to prevent the possibility of panel disfiguration or damage to the internal components.
- Do not place the device in an unstable position where it might accidentally fall over.

Connections

- Before connecting the device to other devices, turn off the power for all devices. Before turning the power on or off for all devices, set all volume levels to minimum.

Handling caution

- When turning on the AC power in your audio system, always turn on the power amplifier LAST, to avoid speaker damage. When turning the power off, the power amplifier should be turned off FIRST for the same reason.

- Do not insert your fingers or hands in any gaps or openings on the device.
- Avoid inserting or dropping foreign objects (paper, plastic, metal, etc.) into any gaps or openings on the device If this happens, turn off the power immediately and unplug the power cord from the AC outlet. Then have the device inspected by qualified AudioPressBox service personnel.
- Do not use the device or headphones for a long period of time at a high or uncomfortable volume level, since this can cause permanent hearing loss. If you experience any hearing loss or ringing in the ears, consult a physician.
- Do not rest your weight on the device or place heavy objects on it, and avoid use excessive force on the buttons, switches or connectors.

XLR-type connectors are wired as follows (IEC60268 standard): pin 1: ground, pin 2: hot (+), and pin 3: cold (-).

AudioPressBox cannot be held responsible for damage caused by improper use or modifications to the device, or data that is lost or destroyed.

Always turn the power off when the device is not in use.

The performance of components with moving contacts, such as switches, volume controls, and connectors, deteriorates over time. Consult qualified AudioPressBox service personnel about replacing defective components.

Illustrations herein are for explanatory purposes only, and may not match actual appearance during operation.

Company names and product names herein are trademarks or registered trademarks of their respective companies.

Specifications and descriptions in this owner's manual are for information purposes only. AudioPressBox reserves the right to change or modify products or specifications at any time without prior notice. Since specifications, equipment or options may not be the same in every locale, please check with your AudioPressBox dealer.

⚠ CAUTION

Use only the adaptor included with this AudioPressBox. Use of a different adaptor may result in equipment damage, overheating, or fire.

Be sure to unplug the adaptor from the outlet when not using AudioPressBox, or when there are lightning storms in the area.

To avoid generating unwanted noise, make sure there is 50 cm or more between the power adaptor and AudioPressBox.

APB-448 SB

Dear customer,

Thank you for purchasing **AudioPressBox® APB-448 SB**, the most sophisticated press conference distribution amplifier. Signal from four lectern's microphones or line inputs (i.e. mixing console) is distributed to independent microphone/line outputs used by multiple journalists, TV Camera operators, audio recorders and reporters at the same time. No more hassle with the multiple microphones on the table or disturbing late-coming reporters. With **AudioPressBox®** you are set in a minute with providing the perfect signal to every reporter!

Unpacking your AudioPressBox®

Your AudioPressBox® comes to you packaged in the transfer box with the filling material in used to avoid any damage caused by transport.

In the package, you should find:

1) Power supply with mains cable

2) AudioPressBox®

3) This manual

Please be careful while unpacking all the components from original packaging.

Using your AudioPressBox®

Using every AudioPressBox® model is simple and it can be presented in 4 simple steps:

1) **Plug** your microphone in

2) **Set** your levels

3) Connect your outputs / extenders

4) **Start** using your AudioPressBox® by providing perfectly processed signal to every

recipient, who connects his device into the output section.

APB-448 SB - Front panel (Input section)
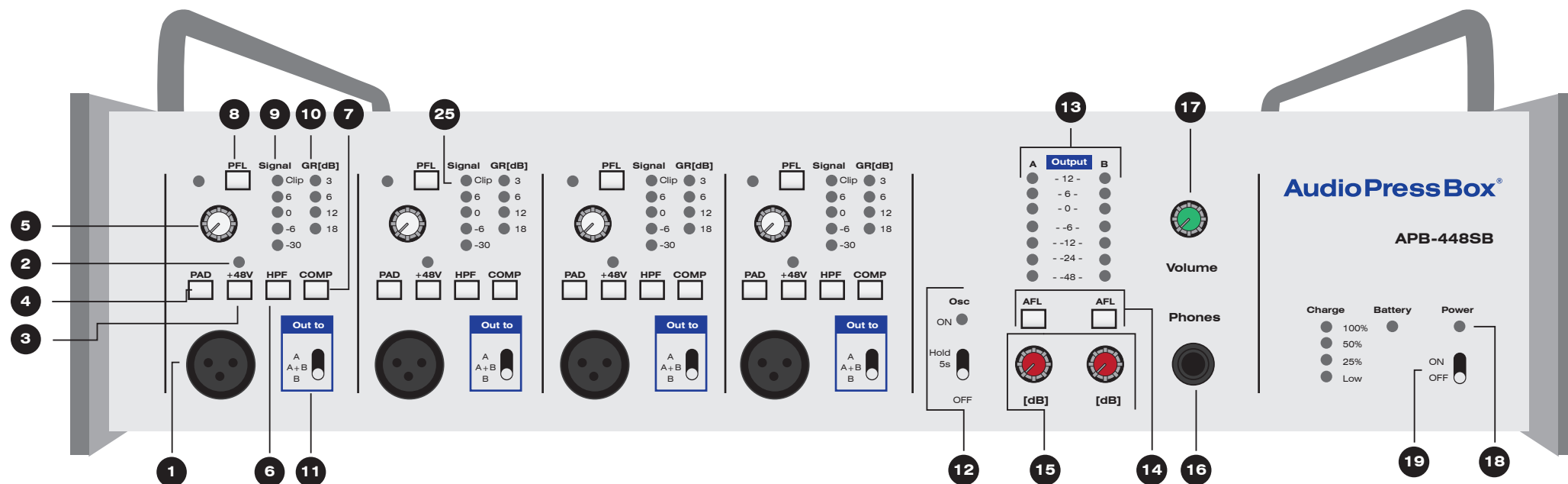
1) Input XLR microphone/line connector

Input your microphone or line-level source into this XLR balanced connector. You can connect any type of condenser either dynamic microphone here.
(1:Ground; 2:Hot, 3:Cold).

2) Phantom power indicator

If the Phantom power is on, this is indicated with solid red light.

3) +48V button

If you are about to use condenser microphone, turn Phantom power switch ON to feed your microphone with 24/48V. If you use dynamic microphone or microphone with his own power, you can switch this OFF.

⚠ **CAUTION** Be sure to leave this switch off (▬) if you do not need phantom power.

When tuning the switch on (▬), be sure that only condenser mics are connected to the XLR input. Devices other than condenser mics may be damaged if connected to the phantom power supply. Note, however, that the switch may be left on when connecting to balanced dynamic microphones.

To avoid damage to speakers, be sure to turn off amplifiers (or powered speakers) before turning this switch on or off. We also recommend that you turn all output controls to their minimum settings before operating the switch to avoid the risk of loud noises that could cause hearing loss or device damage.

4) PAD button

If you are using microphone as an input, this button should be set to "Off" position. If you are using input from the mixing console or CD player, please set this switch to "On" position.

5) Input gain level knob

After connecting your microphone, you can set the input level to reach perfect understanding of lectern's speech.

6) $\sqrt{160}$ Switch (High Pass Filter)

This button helps to avoid distributing low-end rumble like a microphone handling noise or pops. You have 2 options – full range or 160Hz low-cut frequency. The one you choose depends on the sound, you want to filter out.

You can check the result with your headphones plugged in.

7) Compressor/Limiter operation button

To provide perfect output signal without clipping or distortion, you can switch the Comp button ON. If you switch this OFF, signal in output could contain signal clipping or distortion.

8) PFL button

To check your levels only for one input, push this button and you can see the level of output for corresponding input. You can easily see if all microphones have the good output levels and identify, if some of the microphones are too loud or too silent in the output.

9) Microphone level indicator bar

You can visually monitor the level of each microphone output signal in 5-segment output indicator bar with signal clip LED. If this red light is flashing, you should reduce the gain of the microphone.

10) Gain Reduction indicator bar

If Comp switch is set to ON, you can visually monitor the level of Gain reduction on this 4-segment indicator bar.

11) Routing switch

Each microphone could be routed to 2 separated groups or to both groups at the same time. This is useful, if you have two (or four) lecterns and you want to route signal from each microphone (or group of 2 microphones) to separated tracks. Reporters can edit the recording easily, if they have both lecterns on separated tracks. You can label the outputs in the output extender with names of the lecterns or groups and reporters easily decide which group output they want to use.

12) Test signal oscillator operation switch

To test signal level, which is coming to the outputs, you can switch this Test 1kHz sine signal oscillator on. After recipients set the levels in their recording devices, you should switch this function OFF. When compressor switch is set to ON, output signal level won't exceed this maximum output level.

13) Global group output level indicators

You can check output levels of each group individually here in 7-segment level indication bar.

14) AFL button

For better check your levels, you can isolate output from each group to your headphones. You can check the output levels of each group by hearing. Just push the button and you will hear output from particular group.

15) Output level knobs

Set output levels to each group individually and adjust them that they will not reach the higher levels (6 – 12 values) constantly. You can check the levels with the headphones.

16) Headphones output connector

If you want to monitor the output by your headphones, you can plug them to this connector (6.3 TRS/Jack stereo connector).

17) Headphones output level knob

If you have your headphones plugged in, you can adjust the level of monitoring the output by turning this knob to set your comfort hearing level. Please be careful when setting the levels, too high monitoring volumes can damage your hearing ability!
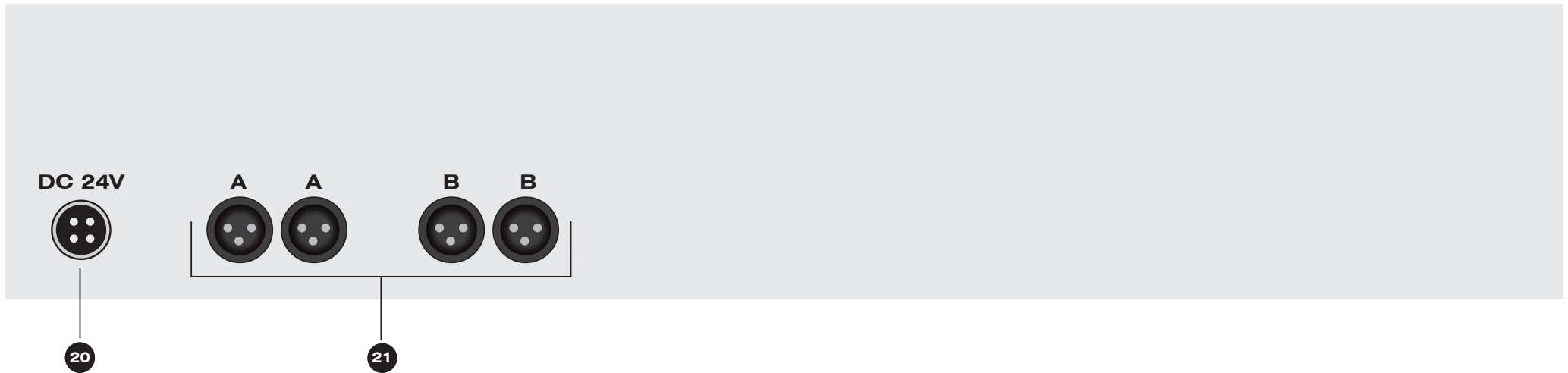
18) Power ON indicator

When AudioPressBox® is turned on, this indicator lights up.

19) Power switch

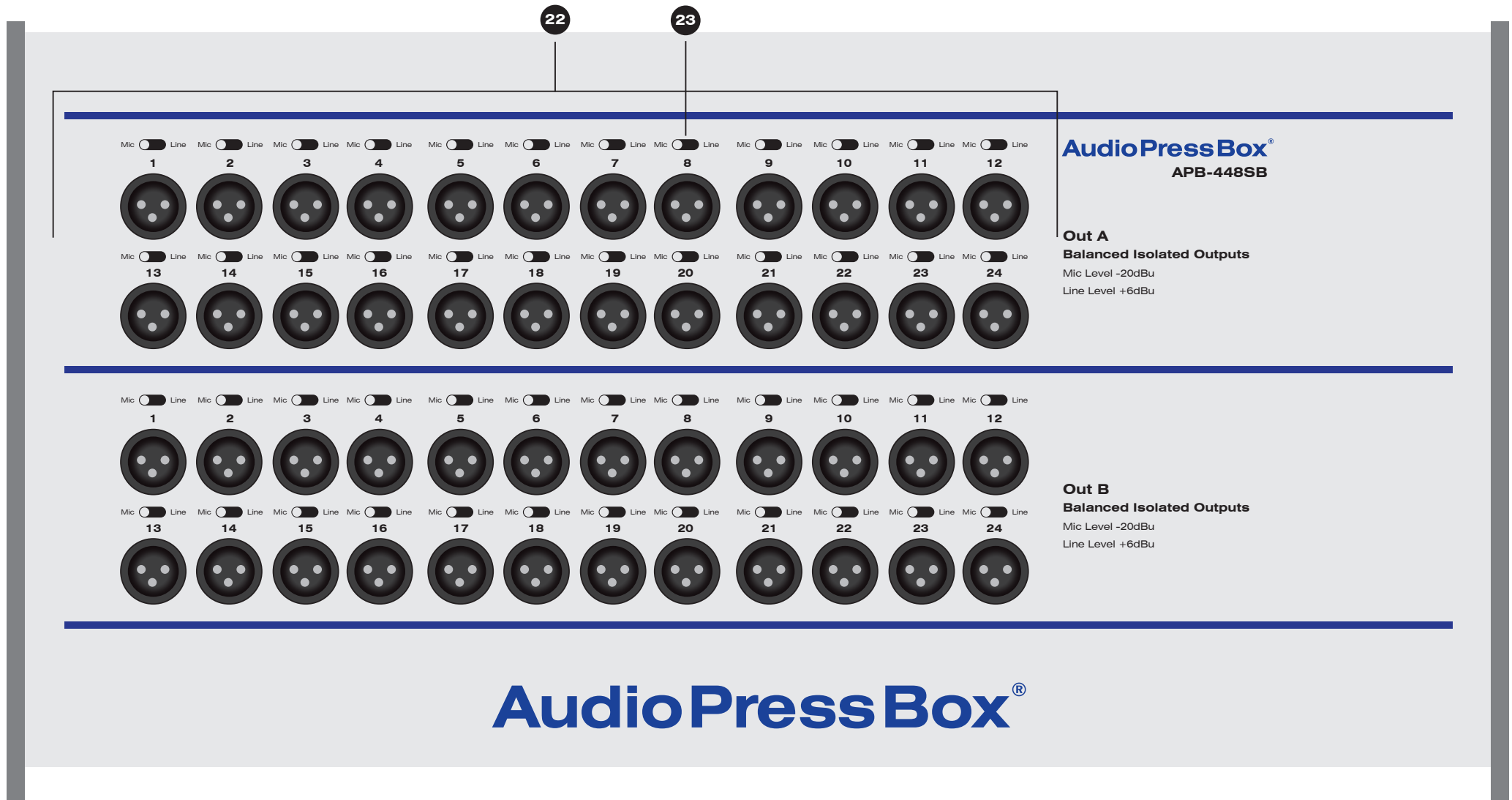With the power switch, you can turn your AudioPressBox® ON or OFF.

APB-448 SB - Rear panel

DC 24V   A   A   B   B

20

21

20) Power supply connector

Plug the mains cable to AudioPressBox® here.

21) XLR connectors for output extenders

With these connectors you can connect extenders

(APB-024 R-EX, APB-008 OW, APB-008 IW, APB-P112SB)

to provide outputs to reporters

APB-448 SB - Rear panel

22) Group A Mic/Line Outputs 1-24 + Group B Mic/Line Outputs 1-24

Mic level output XLR connectors – every output is individually transformer isolated.

23) Mic/Line level select switch

You can set if you want to get Mic (-20dBu) or Line (+6dBu) level from individual output

Get your AudioPressBox® operational:

1. Plug mains cable to connector of the AudioPressBox® (20).

2. Turn AudioPressBox® on by switching Power switch (19) ON.

3. Plug your microphone into input XLR connector (1).

4. If you are using condenser microphone, switch Phantom power (2) ON.

5. Switch Comp (7) ON

6. Speak to the microphones and adjust the Input gain (5) level to get visual confirmation on microphone signal level indicator (9)

   as you speak, this indicator will light up continuously.

7. Set routing path for each microphone (11)

8. If you want to hear your output signal, plug your headphones (with 6.3mm TRS connector) to headphone connector (16) and adjust monitoring level (17) to listen to the output.

9. Recipients can plug their recording devices to specified outputs in the extenders.

10. You are ready to go!

Good to know:

What are compressor and limiter?

These elements automatically control your signal and provide the best signal condition for every output. You will get perfect signal without clipping or distortion. You can switch this element on or off for each input depending your needs.

What is the signal generator for?

A signal generator, also called a test signal generator is an electronic device designed to produce sine signal - frequency of 1kHz, which can help to set your levels correctly.
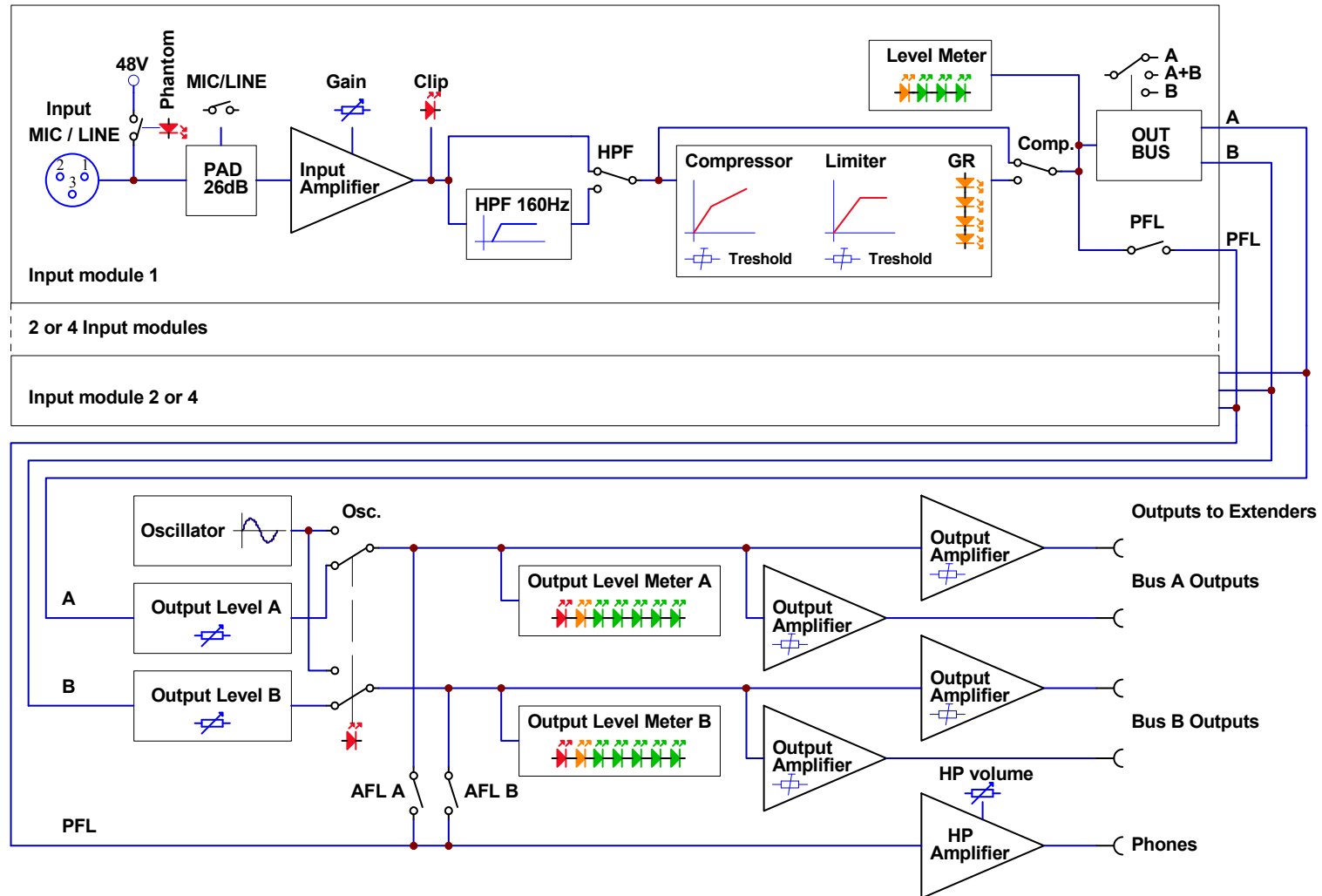
Specifications

Audio Press Box APB-448SB		
Type	4 in 48	
Groups	2	
Input section		
Inputs	4	
Input connectors	Balanced, XLR	
Input Gain	MIC	LINE
	+22/+62 dB	-4/+36 dB
Max. input level	Limiter ON	Limiter OFF
	MIC: -10/-30dBu	MIC: -2/-42dBu
	LINE: +36/-4dBu	LINE: +24/-16dBu
Phantom Voltage	48V	
Input Impedance	MIC: 2,4 kOhm	LINE: 3,5 kOhm
Output section		
Outputs	48 MIC/LINE:	
	24x Output A (transformer isolated, balanced, XLR connector)	
	24x Output B (transformer isolated, balanced, XLR connector)	
	Extender:	
	2x Bus A (balanced, XLR connector)	
	2x Bus B (balanced, XLR connector)	
Nominal Output Level	+6dBu	
Maximum Output Level	+20dBu (no load)	
	+14dBu (600kOhm)	
Output impedance	MIC: 220 Ohm	LINE: 600 Ohm
SNR	86dB	
Frequency Response	20/160Hz (filter) to 30kHz/-1dB	

Controls	Input section:	Output section:
	26dB PAD, Input gain, Phantom, High-pass filter, Compressor, PFL, routing switch	Oscillator, Output level for Bus A and Bus B, AFL for Bus A and Bus B, Phones level, Power, Output PAD
Indicators	Input section:	Output section:
	Input Clip, Phantom power, Input level, Gain reduction, PFL	Output level for Bus A and Bus B, Oscillator, Power, Battery status
Power Supply	24V DC, 300mA external adaptor	
Battery	Li-Ion, 14,4V 2200mAh (optional)	
Battery Operation Time	min. 6hrs	
Dimensions (WxHxD)	430x260x100mm	
Weight	6,8kg	

Jack list

Input and Output Jacks	Polarities	Configurations
MIC INPUT	Pin 1: Ground Pin 2: Hot (+) Pin 3: Cold (–)	INPUT OUTPUT

Block diagram

AudioPressBox®