

**AHUJA**<sup>®</sup>**PA Mixer  
with ECHO-REVERB****FMX-112DP**

- ◆ Please read this manual thoroughly before making connections and turning on the power. Following the instructions in this manual will enable you to obtain optimum performance from your new AHUJA PA Mixer.
- ◆ Please retain this manual for future reference.

## • Safety Instructions

**Read the Instructions:** Please read all the instructions in this section carefully before installation or use of the product. All the safety instructions must be followed.

**Retain the Instructions:** Please retain this Instruction Manual for future reference.



This symbol, wherever it appears, alerts you to the presence of uninsulated hazardous voltage that may be sufficient to constitute a risk of electric shock. External wiring to any terminal marked with this symbol must be done by a trained and instructed person only.



This symbol, wherever it appears adjacent to a component, alerts you that the concerned component can only be replaced by another of the exact same specifications.

### **WARNING**

To reduce the risk of electric shock, do not remove the cover. No user serviceable parts inside. Refer all servicing to qualified personnel only.

### **CAUTIONS**

**Water & Moisture:** To reduce the risk of fire or electrical shock, do not expose this set to rain or moisture. Do not use this set near water or in a wet location. Do not keep any object filled with liquid, such as a vase, on top of this set. Do not insert or remove the AC mains plug with wet hands.

**Power Source:** The voltage & frequency of the AC mains supply, to which this set can be connected, is marked on the rear panel of the set. Do not connect this set to any power source other than that specified on the rear panel.

**Power Cord Protection:** Do not cut, kink, damage or modify the AC power cord supplied with this set. Keep the AC power cord away from heaters and harmful chemicals. Do not keep any heavy object on the power cord.

**Operation on Generator:** When operating this set on a generator, make sure the set is switched off till the generator voltage has stabilized.

**Stability:** This set must be kept in a stable and flat horizontal position, and never in a tilted position. Do not place this set on an unstable stand, tripod, bracket or mount. Do not use attachments which are not supplied or explicitly recommended by the manufacturer.

**Earthing:** This set must be earthed properly before use. A wire from the Earth terminal on the rear panel must be connected to electrical earth.

**Cleaning:** Disconnect this equipment from the AC mains before cleaning. Clean with a damp cloth, but do not allow any liquid to enter the set. Do not clean with liquids or aerosols.

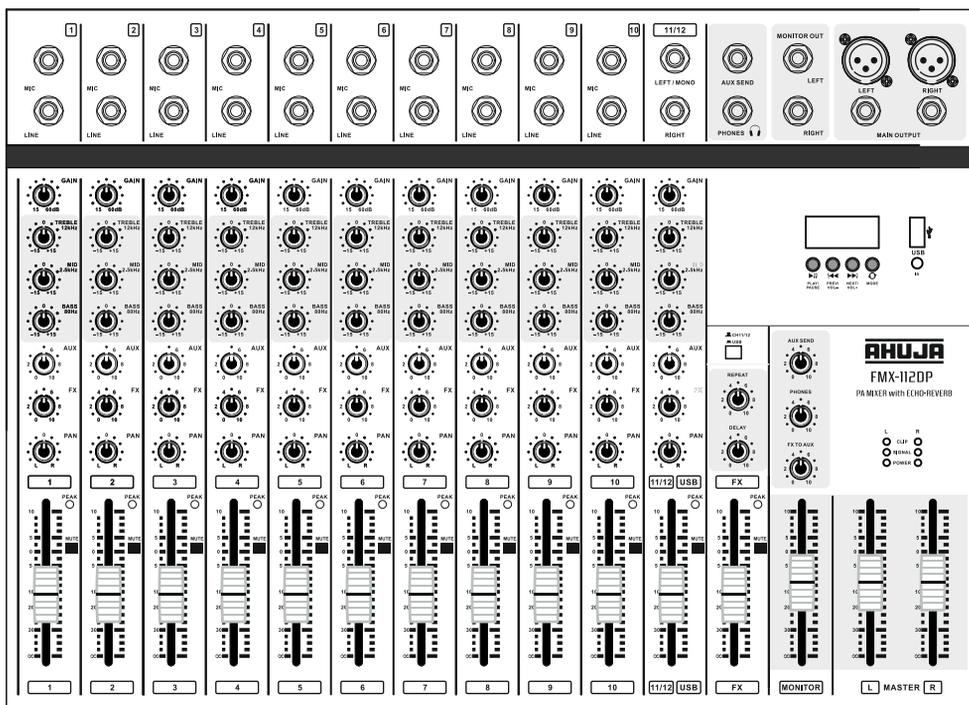
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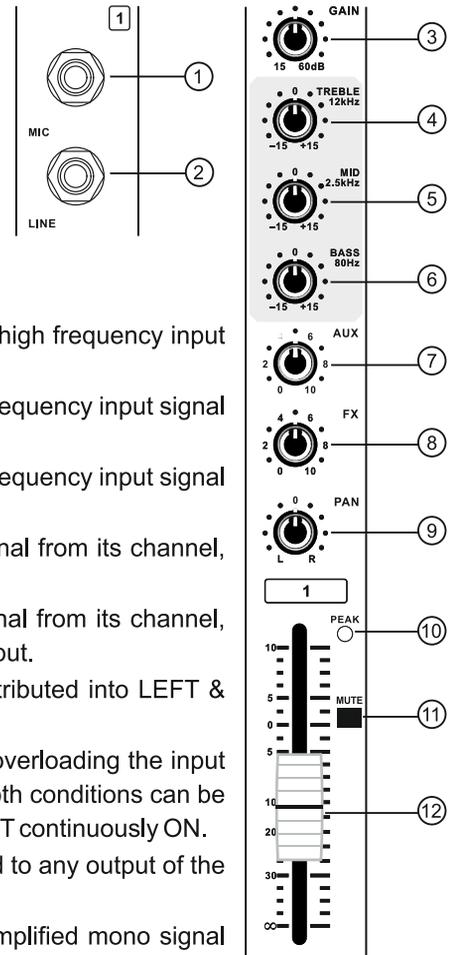
• **Features/General Description of Product, Top Panel**

- Professional 12 channel mixer with user friendly features, in a compact & aesthetically superior construction.
- 10 MIC, 10 LINE & 01 STEREO Balanced inputs, through 6.3mm ( 1/4") stereo phone jack socket.
- Built-in digital MP3 player with recording & BT functions.
- Digital Effects channel with DELAY, REPEAT & LEVEL controls.
- Each input channel has a GAIN control, 3 band active EQ controls, AUX, FX and PAN controls.
- The STEREO channel has a GAIN control, 3 band active EQ controls, AUX, FX and PAN controls.
- Each input channel provides Peak LED to indicate excessive input signal levels.
- Each channel has a signal Mute switch and a slide fader control for accurate setting of signal level.
- Selector switch available between Stereo channel (Ch. 11/12) & USB playback channel.
- Balanced Left & Right MAIN Mix outputs through M/XLR connectors as well as 6.3mm (1/4") stereo phone jack sockets.
- MONITOR L&R outputs through 6.3mm (1/4") phone jack sockets and individual monitor fader control.
- AUX SEND output with independent level control.
- Headphone output with Phones Control for output monitoring.
- Operates on 240V 50Hz AC mains.



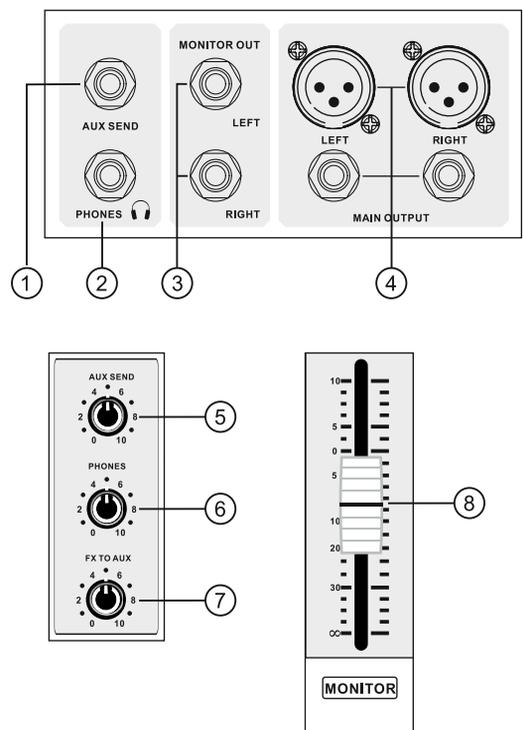
## • Input Channel Controls and Functions

- MIC INPUT (Channel 1 to Channel 10):** For connecting low impedance dynamic & condenser (self-powered) microphones through 6.3mm (1/4") stereo jack, either in balanced or unbalanced mode.
- LINE INPUT (Channel 1 to Channel 10):** For connecting signal sources like Drum Machine, Keyboards, DI for guitars etc. through a 6.3mm (1/4") stereo phone jack, either in balanced or unbalanced mode.
- GAIN CONTROL:** The input level of both the Mic & Line signals can be adjusted by this control. Reduce the GAIN setting if PEAK LED glows continuously.
- TREBLE (12kHz) CONTROL:** It is used to obtain a 15dB cut or boost of high frequency input signal with 12kHz as center frequency.
- MID (2.5kHz) CONTROL:** It is used to obtain a 15dB cut or boost of mid frequency input signal with 2.5kHz as center frequency.
- BASS (80Hz) CONTROL:** It is used to obtain a 15dB cut or boost of low frequency input signal with 80Hz as center frequency.
- AUX CONTROL:** This control is used to adjust the level of pre-fader signal from its channel, which is then routed to AUX SEND output.
- FX CONTROL:** This control is used to adjust the level of post-fader signal from its channel, which is then routed to built-in effects processor and also to AUX SEND output.
- PAN CONTROL:** The signal of mono MIC & LINE input channels is distributed into LEFT & RIGHT MAIN line outputs.
- PEAK LED:** This RED LED lights up to indicate that either the signal is overloading the input circuit or the GAIN control setting is high enough to distort the signal. Both conditions can be overcome by appropriate adjustment of GAIN control so that this LED is NOT continuously ON.
- MUTE SWITCH:** When pressed, the signal from the channel is not routed to any output of the mixer.
- CHANNEL FADER:** This slide volume control adjusts the level of pre-amplified mono signal which is routed to MAIN mix and post fader FX section.



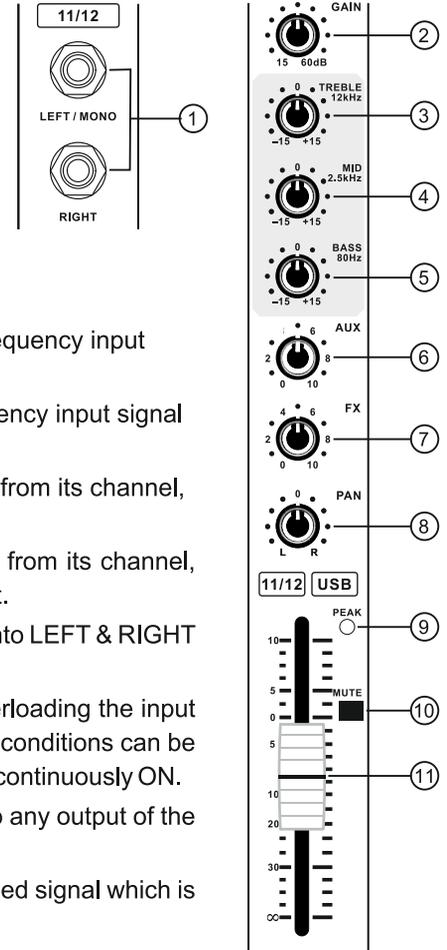
## • Aux Send, Headphones, Monitor and Main Output Section

- AUX SEND OUTPUT:** It provides the combined AUX output of all the input channels through a 6.3mm phone jack. This output is mainly used for stage monitoring applications.
- PHONES OUTPUT:** For connecting a stereo headphone (not less than 8Ω impedance) through a 6.3mm stereo phone jack. The headphone output is used for personal monitoring & its level is not affected by the setting of master control.
- MONITOR L&R OUTPUTS:** For obtaining L&R Main or PFL outputs for monitoring purposes. If PFL switch of any channel is ON, then PFL signal of that channel is available at MONITOR output.
- MAIN L&R OUTPUTS:** Balanced Line level outputs have been provided for the LEFT & RIGHT channels through individual 3 Pin M/XLR connectors as well as 6.3mm phone jack sockets. For making balanced and unbalanced output connections, refer to "Plugs Wiring Details" page no. 8 of this manual.
- AUX SEND CONTROL:** For adjusting the output level of the signal, which is taken from AUX SEND Output phone jack socket.
- PHONES CONTROL:** It is used for adjusting the level of stereo signal which is available through Headphone output.
- FX TO AUX CONTROL:** For routing the desired level of FX signal to AUX SEND output.
- MONITOR FADER CONTROL:** For controlling the signal level of MONITOR L&R outputs.

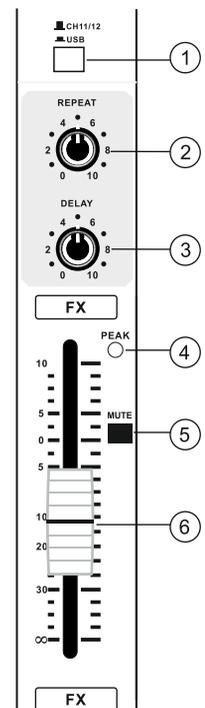


## • Stereo / USB Channel & Effects Controls and Functions

- STEREO L/MONO & R INPUTS:** For accepting balanced stereo line level signals through 6.3mm stereo phone jack sockets. However, these inputs can also accept either unbalanced stereo signals, balanced mono signals or unbalanced mono signals. Sources like CD Player, DJ Mixer Synthesizes etc. can be connected to this channel.
- GAIN CONTROL:** The input level of the stereo line signal or USB playback signal can be adjusted by this control.
- TREBLE (12kHz) CONTROL:** It is used to obtain a 15dB cut or boost of high frequency input signal with 12kHz as center frequency.
- MID (2.5kHz) CONTROL:** It is used to obtain a 15dB cut or boost of mid frequency input signal with 2.5kHz as center frequency.
- BASS (80Hz) Control:** It is used to obtain a 15dB cut or boost of low frequency input signal with 80Hz as center frequency.
- AUX CONTROL:** This control is used to adjust the level of pre-fader signal from its channel, which is then routed to AUX SEND output.
- FX CONTROL:** This control is used to adjust the level of post-fader signal from its channel, which is then routed to built-in effects processor and also to AUX SEND output.
- PAN CONTROL:** The signal of stereo L&R input or USB input is distributed into LEFT & RIGHT MAIN line outputs.
- PEAK LED:** This RED LED lights up to indicate that either the signal is overloading the input circuit or the GAIN control setting is high enough to distort the signal. Both conditions can be overcome by appropriate adjustment of GAIN control so that this LED is NOT continuously ON.
- MUTE SWITCH:** When pressed, the signal from the channel is not routed to any output of the mixer.
- CHANNEL FADER:** This slide volume control adjusts the level of pre-amplified signal which is routed to MAIN mix and post fader FX section.

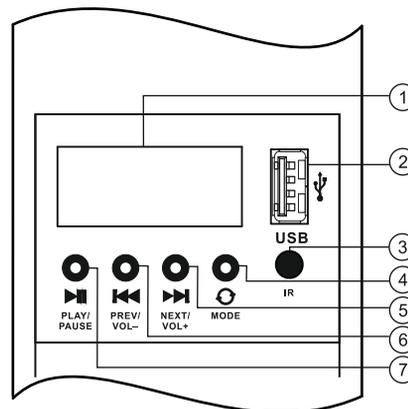


- SELECTOR SWITCH:** Keep this switch in released position when stereo input channel 11/12 is being used. Keep this switch in pressed position when USB input is being used.
- REPEAT CONTROL:** For setting the number of repetitions within the selected delay time. For example in speech applications, this control may be adjusted towards lower position. For singing applications, it may be adjusted towards a more higher position.
- DELAY CONTROL:** For setting the delay time according to the desired application. For example in speech applications, the delay control may be adjusted towards the lower position. For singing applications, adjust the delay control towards a higher position.
- PEAK LED:** The red LED glows to indicate that the signal to the effects section is approaching the saturation (clipping) levels. Continuous glow of this LED can be controlled by FX control in each channel.
- FX MUTE SWITCH:** For switching effect function ON or OFF during setting up and in live program. Keep the switch in pressed down position if digital effects are not to be routed to the mixer output.
- EFFECTS LEVEL CONTROL:** For setting the level of delay signal in the overall output signal. Nominal position of this control can be near middle position. However, more thrust/impact can be generated in initial repeat signals by setting this control towards maximum position.

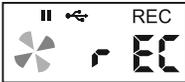


## • MP3 Record & Playback Controls & Functions

- LCD DISPLAY:** When USB device is inserted, the display turns ON & the USB starts to playback. Here the display appears like this: 
- USB Connector:** Insert the USB drive here. Ensure that the USB drive is inserted in correct direction so as to prevent any damage to the connector.
- IR Sensor:** Picks up signal from the Remote Control.
- MODE BUTTON:** MP3 player has three modes of operation, i.e., USB/REC/BT. These modes can be selected by repeated pressing of Mode button for short duration. If Mode button is repeatedly pressed for longer duration then various preset EQ options can be selected as listed below:  
POP (POP), ROC (ROCK), JAZ (JAZZ), CLA (CLASSIC), CUT (LF CUT), NOR (NORMAL)
- ▶▶ NEXT/VOL+:** For selecting the next track of USB, press this button for short duration. For increasing the output level of MP3 player, press this button for longer duration.
- ◀◀ PREV/VOL-:** For selecting the previous track of USB, press this button for short duration. For decreasing the output level of MP3 player, press this button for longer duration.
- ▶|| PLAY/PAUSE:** Press PLAY/PAUSE once to Pause if music is already playing. Press PLAY/PAUSE again to resume playing. By pressing this button for longer duration, various options of REPEAT function can be selected as listed below:  
ONE (repeat only one track), ALL (repeat all tracks), RAN (repeat randomly), FOLD (repeat folders)

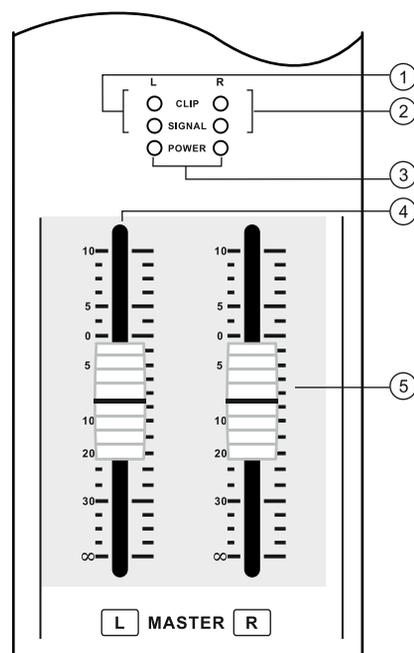


### RECORDING FUNCTION

- Insert a USB drive and press MODE button to select REC function. The LCD display will now appear like this: 
- The REC function remains in || (PAUSE) mode till ▶|| (PLAY/PAUSE) button is pressed so as to start the recording. The LCD display will appear like this: 

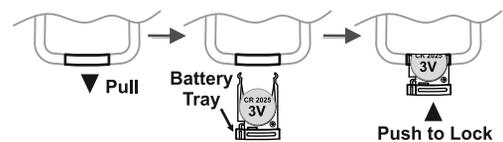
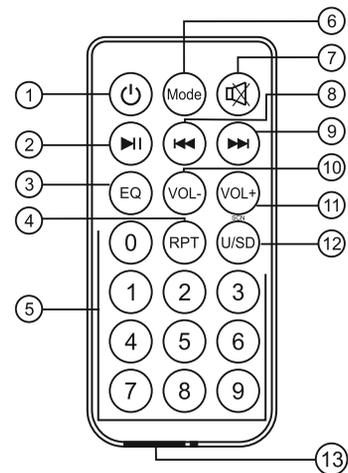
## • Master Controls and LED Indications Section

- LEFT CHANNEL SIGNAL & CLIP LED:** The green SIGNAL LED glows when nominal signal level is available in LEFT MAIN output. The red CLIP LED glows when excessive (saturated) signal level is present in LEFT MASTER output. Occasional glowing of CLIP LED is normal.
- RIGHT CHANNEL SIGNAL & CLIP LED:** The green SIGNAL LED glows when nominal signal level is available in RIGHT MAIN output. The red CLIP LED glows when excessive (saturated) signal level is present in RIGHT MASTER output. Occasional glowing of CLIP LED is normal.
- LEFT & RIGHT CHANNEL POWER LED:** These red POWER LEDs will glow when the power switch is put ON and supply voltage is available for both L & R channels.
- MASTER 'LEFT' FADER CONTROL:** For adjusting the level of output signal as available through LEFT output connections.
- MASTER 'RIGHT' FADER CONTROL:** For adjusting the level of output signal as available through RIGHT output connections.



## • Remote Control

- Power:** Press once to switch OFF MP3 player, press again to switch ON the MP3 player.
- ▶|| PLAY/PAUSE:** Press Play/Pause once to Pause when music is already playing. Press Play/Pause again to resume playing.
- EQ:** For selecting the equalizer setting from six preset EQ options.
- RPT:** For selecting various repeat options one by one.
- Number key 0 to 9. To choose the track number to be played.
- MODE :** To select , USB, REC or Bluetooth option.
- MUTE:** Press once to mute the sound, press again to resume the sound.
- ◀◀:** Press to select the previous track.
- ▶▶:** Press to select the next track.
- Vol-:** Press to decrease the volume of MP3 Player.
- Vol+:** Press to increase the volume of MP3 Player.
- U/SD:** NOT FUNCTIONAL
- Battery Replacement:** Pull out the battery tray and replace the battery with positive electrode facing upwards as shown in fig. below. Push the battery compartment back to the close position. Use CR2025 or equivalent lithium coin cell.



## • Pairing of Bluetooth Device

SWITCH ON the mixer in use. The default condition of the MP3 digital Player is USB mode. The display shows NO.

To play the MP3 programme from mobile phone or laptop via bluetooth, the PAIRING of the bluetooth devices of mobile phone & mixer is necessary. To use Bluetooth, press Mode switch to select BLUE (Bluetooth).

### Pairing is done as follows:

SELECT the Bluetooth option in Mobile Phone or laptop & follow the instructions appearing on mobile/laptop screen.

### Normally the following general instructions are followed:

Press ACTIVATE /ON/DISCOVERABLE/SEARCH, etc, as applicable in the mobile phone or laptop used.

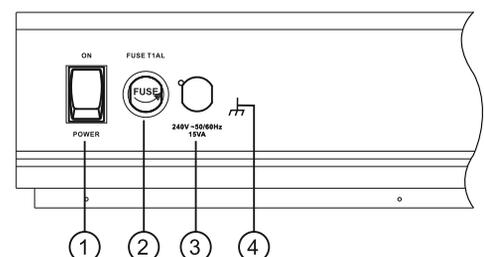
The mobile phone or laptop starts searching for the new Bluetooth device. The moment FMX appears on the mobile phone or laptop, select the new device i.e. FMX and press OK or allow it to appear on mobile. System is ready to use.

Select the MP3 programme from mobile phone or laptop and press PLAY. The same song starts playing on the Ahuja mixer. We can SELECT Volume, Fast Forward, Rewind, Play/Pause function either from keys or through Remote Control.

**Note:** It is not necessary that all functions of remote control will be activated through Bluetooth and compatibility varies from mobile to mobile.

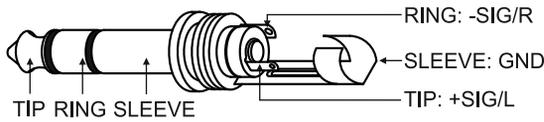
## • Power Supply Section

- POWER SWITCH:** Push the top part of the knob to switch the mixer ON. Push the bottom part of the knob to switch the mixer OFF.
- AC MAINS FUSE Rating 1Amp 250V (T 1A L):** This protects the mixer from any excessive current flow.
- 2 CORE AC MAINS CABLE WITH PLUG**
- EARTHING SCREW TERMINAL**

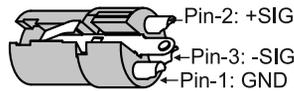


## •Plugs Wiring

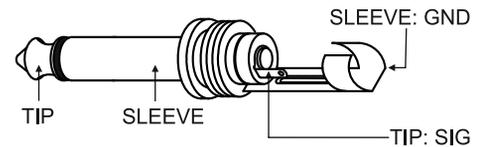
### MIC, LINE, MAIN OUTPUT (Bal.) & PHONES



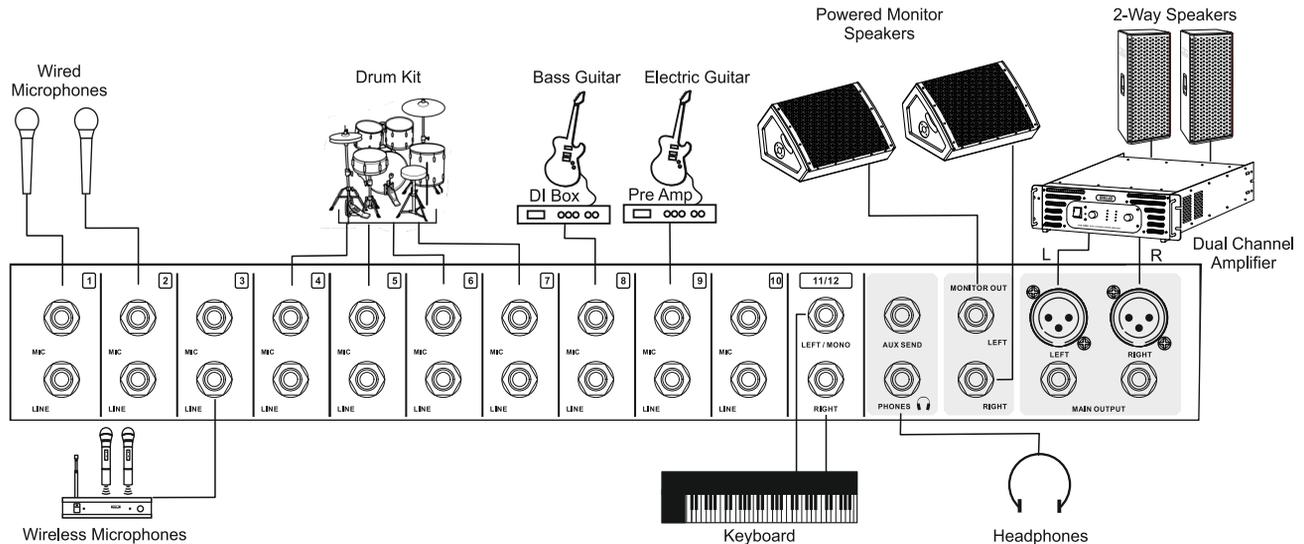
### MAIN OUTPUT (Bal.)



### AUX SEND, MONITOR OUT



## •Typical Application



## •Specifications

<b>MIC INPUT</b>	
Impedance/Gain	: 2k $\Omega$ Balanced/65dB
<b>LINE INPUT</b>	
Impedance/Gain	: 20k $\Omega$ Balanced/45dB
<b>STEREO INPUT (L/Mono &amp; R)</b>	
Impedance/Gain	: 10k $\Omega$ Balanced/20dB
<b>THD</b>	: <0.1%
<b>FREQUENCY RESPONSE</b>	
L/R Line Output	: 25Hz - 20kHz (+0, -1dB)
<b>EQUALIZATION</b>	
TREBLE/MID/BASS	: $\pm$ 12dB at 12kHz/2.5kHz/80Hz
<b>CLIP LED INDICATION</b>	: 4 dB prior to true clip
<b>LINE OUTPUT</b>	
Nominal/Max Level	: 4dBu/21dBu (1.22V/9V)
Impedance	: 600 $\Omega$
<b>DELAY SYSTEM</b>	: Digital Signal Processing
<b>DELAY RANGE SETTINGS</b>	: Variable from 20 to 300ms
<b>DIGITAL PLAYER</b>	: MP3 Player/Recorder with USB Reader, Bluetooth
<b>HEADPHONE OUTPUT</b>	: 200mV at 8 $\Omega$ , THD <1%
<b>MONITOR OUTPUTS (L&amp;R)</b>	: 1.6V
<b>SIGNAL TO NOISE RATIO</b>	: >80dB
<b>POWER SUPPLY</b>	: AC: 220-240V, 50/60Hz
<b>DIMENSIONS</b>	: W520 $\times$ H105 $\times$ D350mm
<b>WEIGHT</b>	: 5.20kg Approx.

Design and Specifications are subject to change without notice owing to continuous product up-gradation. Technical specifications are subject to production tolerances.

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