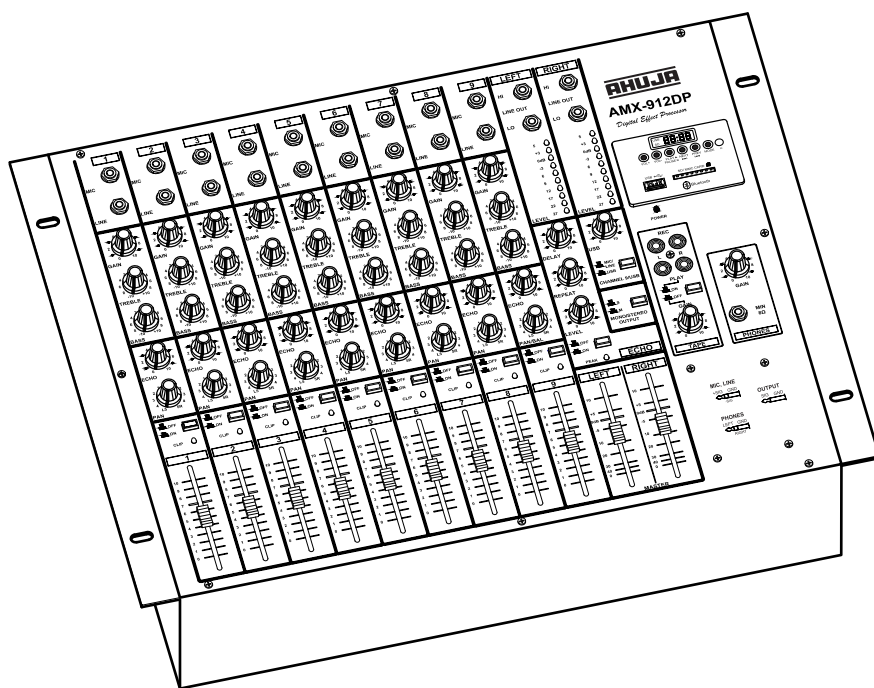


AHUJA[®]**PA AUDIO MIXER****AMX-912DP**

- ♦ Thank you for purchasing the AHUJA PA Audio Mixer.
- ♦ 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 Audio 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

I To reduce the risk of electric shock, do not remove the top 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, and the voltage of the external battery, (if applicable) 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 those 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.

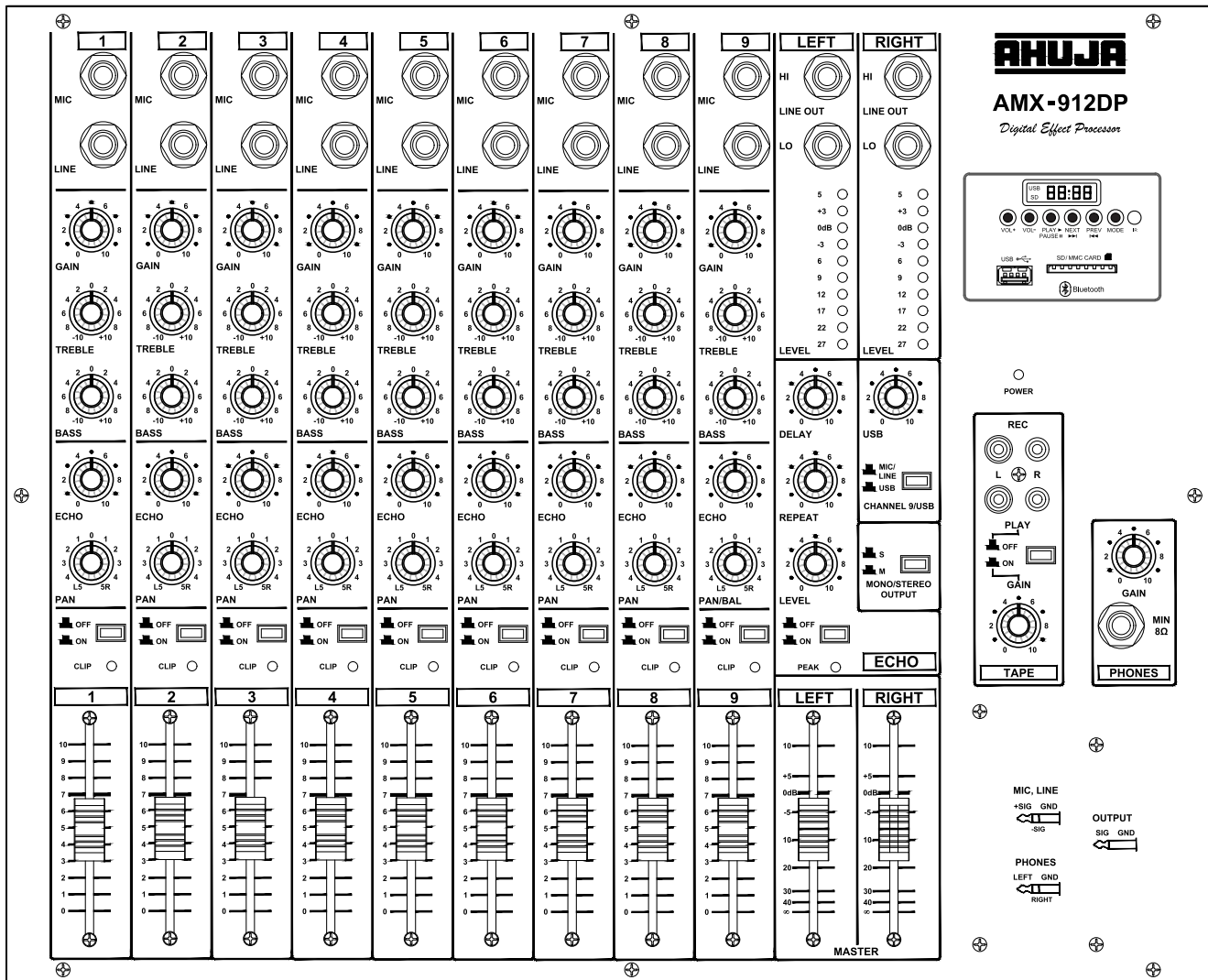
Cleaning: Disconnect this equipment from the AC mains and external battery before cleaning. Clean with a damp cloth, but do not allow any liquid to enter the set. Do not clean with liquids or aerosols.

Contents	Page No.
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• Features/General Description of Product

- I A high quality 9 channel PA audio mixer with built-in MP3 player and digital effect processor.
- I Nine balanced/unbalanced MIC inputs for connecting low impedance microphones.
- I Nine balanced/unbalanced LINE inputs for connecting CD Player, Keyboard etc.
- I Each channel has a GAIN control, BASS & TREBLE controls, ECHO and PAN controls.
- I Slide fader control is provided for each input channel and Master L&R outputs.
- I Individual On/Off switch for each channel is provided.
- I MP3 playback facility is available through a built-in MP3 module which is switchable with channel 9. Separate level control for MP3 player is available.
- I MP3 player with remote, facilitates playback of audio content through USB, Pen drive, SD Card or bluetooth.
- I Digital effect processor for Echo, Reverb and Chorus effects through Repeat, Delay and Echo Level controls. Echo On/Off switch and PEAK LED is also provided.
- I High and Low unbalanced Line outputs provided for the Left and Right channels.
- I Mono/Stereo switch for High & Low Line outputs.
- I Seperate 10 segment LED arrays for monitoring L&R Line output levels.
- I Stereo playback inputs through L&R RCA sockets provided with ON/OFF switch and level control.
- I Stereo record output through L&R RCA socket is also available.
- I Headphone output with level control for monitoring purposes.
- I Operates on 240V 50Hz AC mains as well as 24V DC through external battery.
- I Standard 19" rack mounting.

• Front and Rear Panel



• The Input Section

1. MIC INPUT

Input through balanced 6.3mm (1/4") stereo phone jacks for accepting both balanced and unbalanced signals. For low impedance microphones, 200 ohms to 1000 ohms.

2. LINE INPUT

Input through balanced 6.3mm (1/4") stereo phone jacks and accepts both balanced and unbalanced signals from sources such as CD Players, Keyboards, Drum Machines etc.

3. GAIN CONTROL

The gain control sets the signal level for the Mic and Line inputs. When Clip LED glows, to indicate the maximum input level, then the gain control should be used to attenuate the level of input signal.

4. TREBLE CONTROL

The Treble control gives 12 dB of boost or cut at 10 kHz. High boost livens up a "dead" room acoustics imbalance.

5. BASS CONTROL

The Bass control gives 12 dB of boost or cut at 100Hz. Low cut avoids boominess in some rooms.

6. ECHO CONTROL

Echo level control is for deciding the level of that channel in the final echo mix. This is post-equalizer (Bass & Treble) and post-fader. Therefore, the level will be affected by the setting of its channel fader.

7. PAN CONTROL

This control routes the channel to either Left or Right Output. Centering the control positions the signal equally in both the outputs. This is usable when the mixer output is connected in the Stereo mode. In Mono mode, the setting of this control is ineffective. In case of channel 9, this control also acts as L/R balance control for USB stereo signal.

8. ON/OFF SWITCH

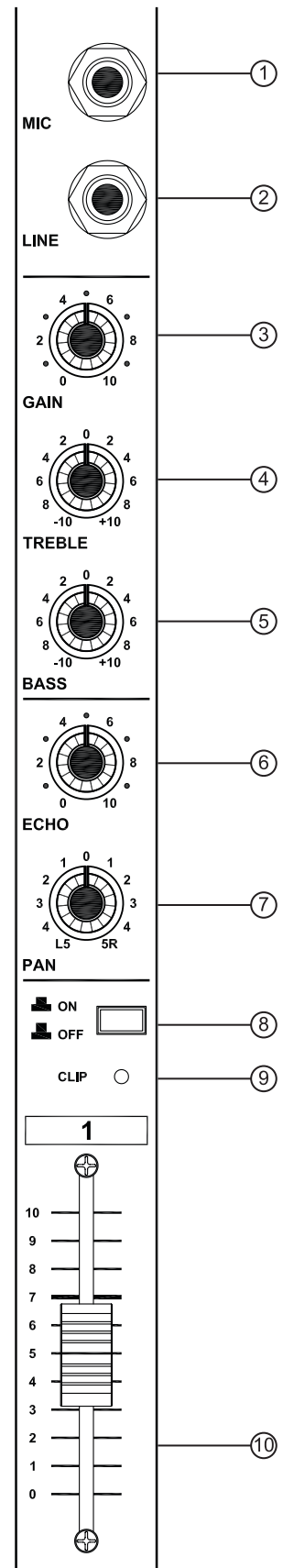
This switch is provided for switching OFF the signal from main output, without disturbing the control settings. Also, channels which are not in use can be switched OFF through this switch.

9. CLIP

The Clip LED lights up when the signal in the channel is approaching overload (clip) level. Setting this correctly ensures maximum "Signal to Noise ratio", that is the best signal level with the minimum amount of background noise. It should be set just before the overload level. Occasional flashing of the LED during loud sounds is OK.

10. CHANNEL FADER

The Fader "slider" control determines the output level of the channel in the overall mix.



• The Output Section

1. LINE OUTPUT HI

Unbalanced High Line Outputs have been provided for the Left and Right channels through 6.3mm (1/4") phone jacks. These are for connecting to the LINE INPUT of the Power Amplifier. The Line Output levels (0mV to 775mV) can be adjusted by Master Faders.

2. LINE OUTPUT LO

Unbalanced Low Line Output have been provided for the Left and Right channels through 6.3mm (1/4") phone jacks. This output is for connecting to the AUX INPUT of a Monitor/Power Amplifier. The Preamplifier Output (0mV to 250mV) can be adjusted by Master Faders. This lower signal output has been given in addition to the Line Output HI as many amplifiers have only an Aux Input. This can also be used for connecting to a monitor amplifier while the Line Output HI is connected to the main power amplifier.

3. LED BARGRAPH

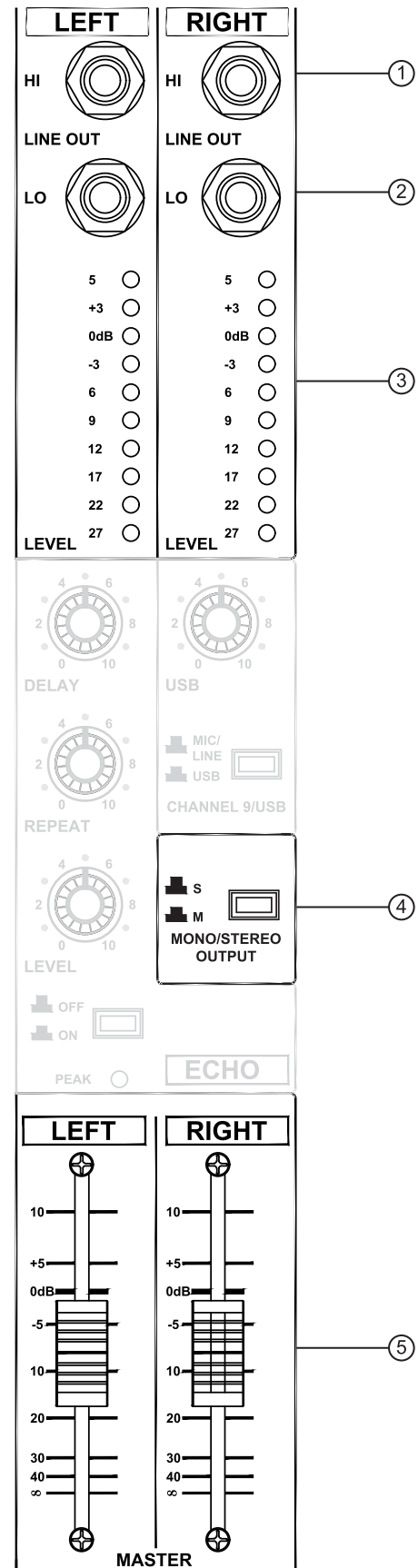
The 10 segment LED arrays display the Left & Right output levels. The 0dB LEDs correspond to 250mV (LO Line output) and 775mV (HI Line output).

4. MONO/STEREO OUTPUT SWITCH

Mono or Stereo Output mode can be selected through this switch. In case of Mono, the same mixed mono output is available through any of the Left or Right output jacks. If the Left Output jack is used, then the signal level can be set by the Left Master Fader. Similarly, the mono signal from the Right Output jack can be set by the Right Master Fader.

5. LEFT/RIGHT MASTER FADERS

The Left & Right faders are the master output level controls. These determine the level of all the signals (mix) sent by the Channel Faders and Tape Playback, to the L/R Line Outputs High and Low Output jacks.



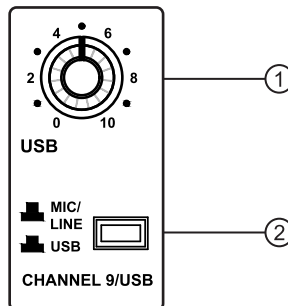
Channel 9/USB Section

1. USB CONTROL

The signal level from MP3 module can be adjusted by this control before it is fed in channel 9.

2. MIC/LINE OR USB SELECTOR SWITCH

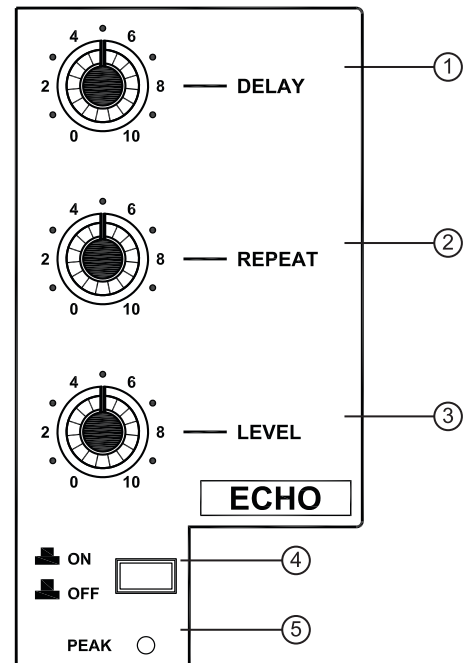
The switch is provided to select between MIC/LINE signal and MP3 module signal in channel 9 only.



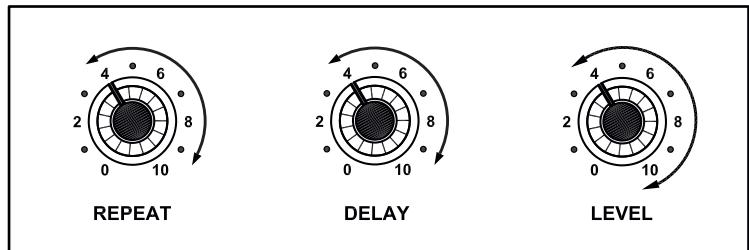
• The Echo Section

The ECHO section provides ECHO, REVERB and CHORUS effects to all the Input channels. These Effects can be obtained by different settings of Delay, Repeat and Level Controls. The Echo section can be switched Off through an On/Off switch.

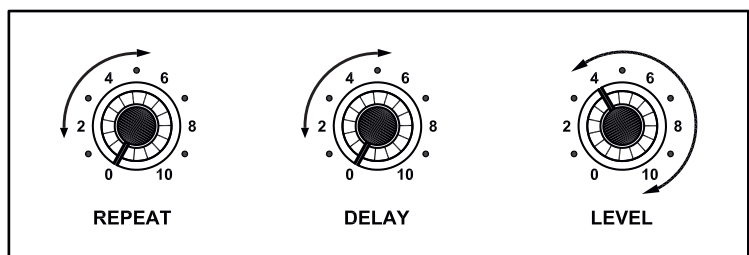
1. **DELAY Control**
For setting the time gap (delay) between ECHO repetitions.
2. **REPEAT Control**
This controls the number of repetitions of ECHO. Higher setting of this control, results in more number of repetitions.
3. **LEVEL Control**
For setting the level of effects (ECHO/Reverb/Chorus) in the main output.
4. **ECHO ON/OFF Switch**
When this switch is in OFF position, the mixer operates without Echo/Effects on all the inputs irrespective of the settings of the Echo controls of individual channels.
5. **PEAK LED**
The Echo Controls & Fader Controls of each channel and Level Control of Echo Section should be set at a level just below the flickering level of this Peak LED. This LED is for optimizing the Inputs and Echo levels.



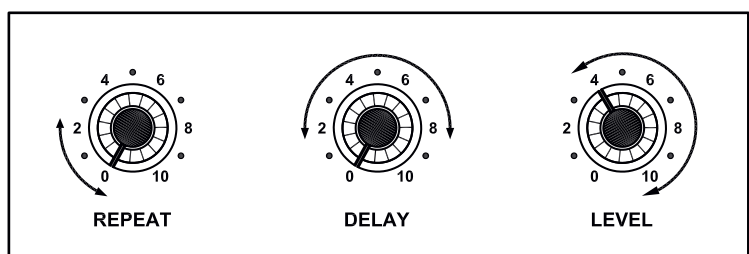
ECHO - Echo Effect is used to repeat the original sound many times to give multiple voice effect and is used for vocals. The Control settings for Echo are as shown in the diagram.



REVERB - Reverb is used for giving Hall Effect to the original sound as repeated reflecting sound raises overall level of the signal. This is also used for public announcement in Stadia and Open Air Performances. The Control settings for Reverb are as shown in the diagram.



CHORUS - Chorus Effect is used by a singer to create an effect as if a Group is performing. The control settings for Chorus are as shown in the diagram.



• The Tape Section

A 4 way RCA connector has been provided for connecting a Stereo Recorder to this audio mixer for Playback / Recording. Alternatively, a separate Stereo Recorder and a Stereo Player can be simultaneously connected for Recording and Playback respectively.

1. STEREO RECORDING OUTPUT

The stereo unbalanced recording output is available through individual left and right RCA sockets. This output can be used to record the main stereo mix signal from the mixer onto a tape recorder, CD recorder etc. Also, an additional power amplifier can be connected to these RCA output sockets. The recording output level is affected by the setting of master fader controls.

2. STEREO PLAYBACK INPUT

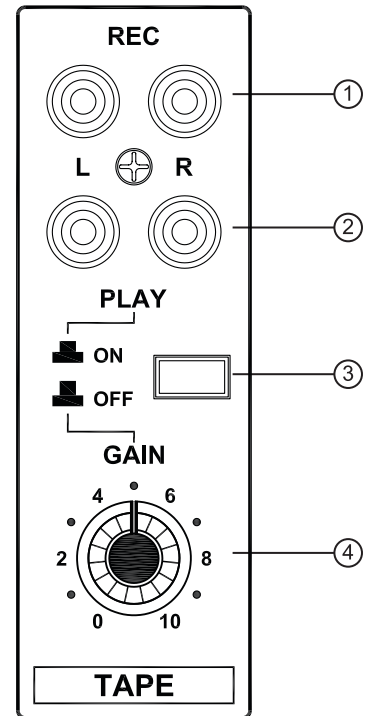
The left & right RCA socket are provided for connecting the stereo unbalanced line level signal from a stereo cassette player, a CD player, a DVD player, a USB player, an IPOD etc. The stereo playback input is an independent input channel, which is directly mixed with the L&R main mix signal. This means that stereo playback signals are available at LINE OUTPUT, REC OUTPUT & Headphone output.

3. PLAYBACK ON/OFF SWITCH

For switching the playback signal ON or OFF during setting-up & live program.

4. PLAYBACK CONTROL

It is used to adjust the level of playback signal into the main mix signal.



The Headphones Section

A Stereo Headphone Output is available through a 6.3mm (1/4") stereo jack for program monitoring.

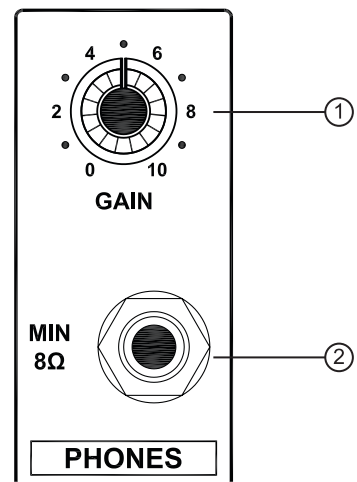
Do not use Headphones of less than 8 Ohms Impedance.

1. GAIN Control

A dual gain control has been provided for setting the level of the Headphone Output.

2. HEADPHONE Output

An output has been provided through a 6.3 mm (1/4") stereo jack for connecting a Headphone for monitoring the overall program



• Power Supply Section

1. AC FUSE 1 Amps. 250V (T1AL)

This protects the Mixer from damage in case of excessive current flow. In case the fuse blows, replace with another one of the same rating.

2. 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.

3. AC MAINS CORD

This is for connecting to AC mains supply. The Mixer is connected for 240V / 50Hz operation and will perform satisfactorily even when the AC Mains voltage drops to 200 V.

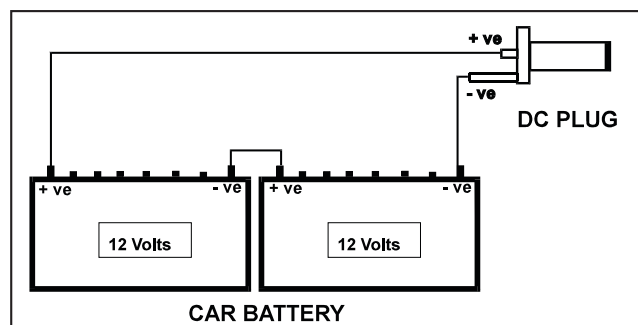
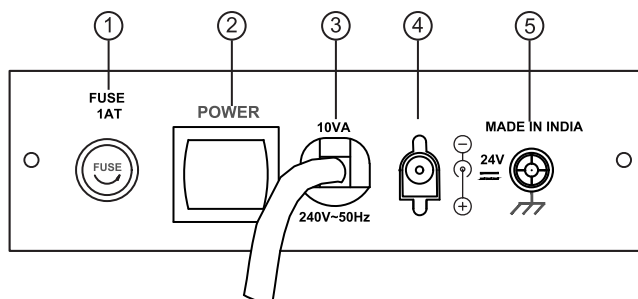
4. STANDBY 24V CAR BATTERY OPERATION

2 x 12V Car Batteries can be connected through the DC Plug (supplied as an accessory) to the DC Socket as shown in the diag. In case of power failure, the Mixer continues to operate uninterrupted through the standby 24V DC Supply. Make sure the battery polarity is connected correctly.

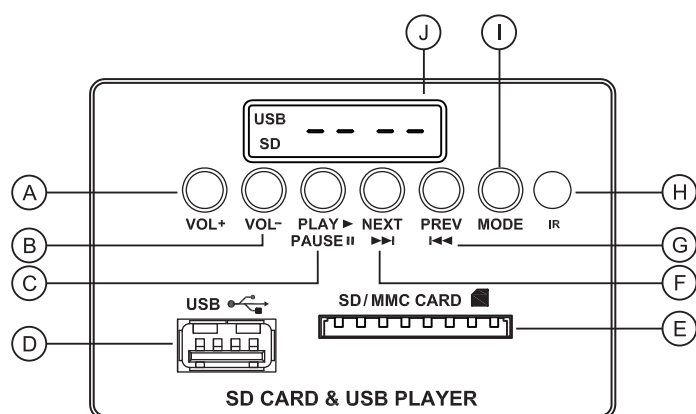
- Use 2x12V car batteries exclusively for this equipment and do not connect any other equipment to these car batteries.
- Connect car batteries only through pre wired DC plug supplied With this equipment.
- Do not connect negative of car battery to earth terminal.
- This equipment operates on floating 24V DC.

5. EARTH TERMINAL

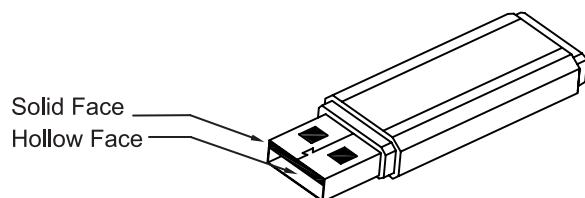
Before operating, the Mixer should be grounded by connecting a wire from this Earth Terminal to a water pipe or an electrical earth.



• MP3 Playback Facility: Controls & Features



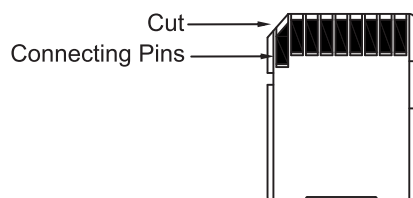
- A. **VOL+ :** To increase volume level of MP3 player.
- B. **VOL- :** To decrease volume level of MP3 player.
- C. **▶|| PLAY/PAUSE:** Press PLAY/PAUSE once to Pause if music is already playing. Press PLAY/PAUSE again to resume playing.
- D. **USB Connector:** Insert the USB drive here. While inserting USB drive into the USB connector, hold the USB drive in such a way that hollow part of the USB drive is downwards as shown in Figure.



Any forceful insertion in wrong direction will damage the connector.

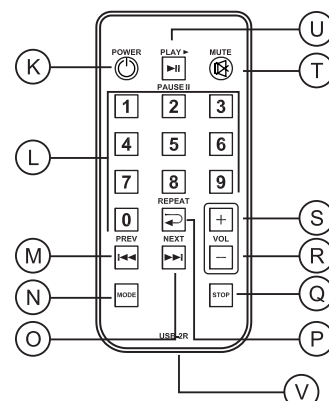
- E. **SD/MMC Card Connector:** Insert the SD/MMC Card into the slot to play. When taking out the card, push the card to take out.

While inserting SD/MMC card into the slot, ensure that the card is inserted in such a way that all pins are facing upward and cut is towards left as shown in figure.



- F. **▶▶ Next:** Press NEXT to select next forward music track. Pressing NEXT repeatedly will move the system to successively next forward tracks. Then press PLAY/PAUSE for playing the track so selected.
- G. **◀◀ Prev:** Press PREV to Select the previous track. Pressing PREV repeatedly will move the system to successively previous tracks.
- H. **IR Sensor:** Picks up signal from the Remote control.

Remote Control

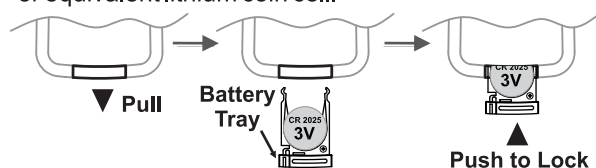


Point the Remote control toward this sensor for best results.

- I. **Mode:** To select USB, SD or Bluetooth when USB SD both are inserted. Default condition of the set is “ _ _ _ ”
- J. **LED Display:** Instantly displays 3 digits of the track selected play to i.e 001 to 999. During play, display the time duration of the track played.

Remote Control

- K. **Power:** Press once to switch off MP3 player, press again to switch ON.
- L. **Number key 0 to 9.** To choose the track number to be played.
- M. **◀◀ :** To select the previous track.
- N. **MODE :** To select SD, USB or Bluetooth Option.
- O. **▶▶ :** Press to select the next track.
- P. **↺** Press once to repeat the song being played. Press twice to repeat all the songs.
- Q. **STOP:** Press to stop the track being played.
- R. **Vol:** Press to decrease the volume of MP3 Player.
- S. **Vol:** Press to increase the volume of MP3 Player.
- T. **MUTE:** Press once to mute the sound, press again to resume the sound.
- U. **▶|| PLAY/PAUSE:** Press Play/Pause once to Pause when music is already playing. Press Play/Pause again to resume playing.
- V. **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.



• Operation

1. Connect the microphones or line input sources like a CD player or Keyboard to the input jacks. Do not connect both *Mic and Line to any one channel simultaneously*. Connect the output jacks to the desired equipment. Refer APPLICATIONS Section, page # 12, 13.
2. Keep all the rotary control settings of the mixer at '0' position.
3. Keep all the Channel Faders at '0' position and the Left/Right Master Faders at minimum position.
4. Keep all the channel ON/OFF switches and Tape Play Switch at OFF position.
5. Connect the AC plug of the mixer to the nearest mains socket and connect the battery lead to car battery for interruption free operation. Refer Power Supply Section, page # 10.
6. Now switch 'On' the Mixer and the Input Sources.
7. Switch 'On' **Channel-1 only**, through its Channel On/Off Switch.
8. Connect the Headphones and position the Headphone Gain Control for a comfortable audible level.
9. Increase the Gain Control of **Channel-1 only** till the Clip LED lights up. Now decrease the gain control so that the Clip LED just flickers. This is the ideal setting of the gain control.
10. Set the Bass & Treble Controls to the desired levels. Changing the settings of the Bass & Treble Controls may effect the overall gain. Therefore the Gain Control should be subsequently adjusted to bring the Clip LED to the correct level.
11. Now move the Slider Fader control of **Channel-1 only** to position '7'.
12. In case **Echo Effect** is desired on **Channel-1** move the Echo Control of **Channel-1** to position '7' or above.
13. Switch 'On' the Echo Section and set the Echo Section (Delay, Repeat, & Level Controls) for the desired effects. Refer to the Echo Section for the settings of the Delay, Repeat, & Level Controls, page #8.
14. Adjust the **Pan Control** to set the level of the signal in the Left & Right Outputs. Turning the control fully anti-clockwise will send the signal only to the Left Output of the mixer, and turning it clockwise will send it to the Right Output.
15. Once **Channel-1** is set, do not disturb the control settings of this channel. Then switch 'Off' this channel through the Channel On/Off Switch.
16. Repeat the above procedure for setting the remaining 8 channels.
17. After all the channels are set adjust the individual Channel Faders to obtain the desired MIX at the outputs.
18. Now adjust the Master Faders for desired output levels. However take care that the red LEDs of the LED Bargraph Array do not glow continuously. Refer Output Section, page # 7.
19. For Recording and Playback refer to the Tape Section, page # 9.
20. For operating USB module, keep channel 9/USB switch in USB position. For detailed operation of MP3 module refer MP3 Playback Facility Control & Features on page # 11.

• Pairing of Bluetooth Device

SWITCH ON the mixer in use. The Default condition of the MP3 digital Player is USB/SD mode. The display shows ———.

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

In some mobiles, it asks for a code to allow access. Press 0000 and follow the steps, like pressing "OK", "Allow once", "Allow always" etc. and make the device ready for 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 on the mixer or through Remote Control.

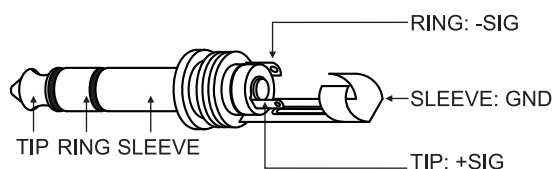
Note: It is not necessary that all functions of remote control will be activated through Bluetooth and compatibility varies from mobile to mobile.

* However, some mobile phones/computers may require a different procedure. Please read the user manual of the phone/computer.

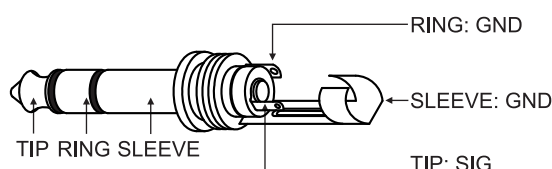
• Plugs Wiring Details

- Pin connection of a 6.3mm (1/4") Stereo Phone Plug for MIC Input and LINE Input.

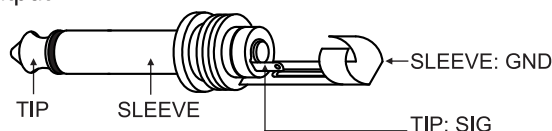
a) For balanced signal



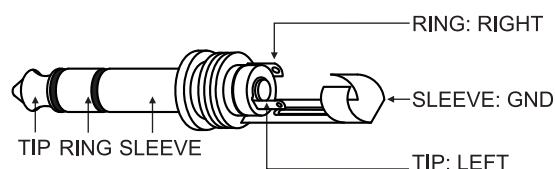
b) For unbalanced signal



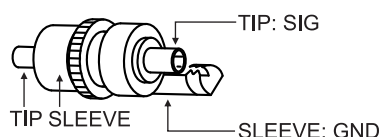
- Pin connection of a 6.3mm (1/4") Mono Phone Plug for connecting unbalanced signal in MIC and LINE Input LINE Hi Output and LINE Lo Output.



- Pin connections of a 6.3mm (1/4") Stereo Phone Plug for Headphone Output.

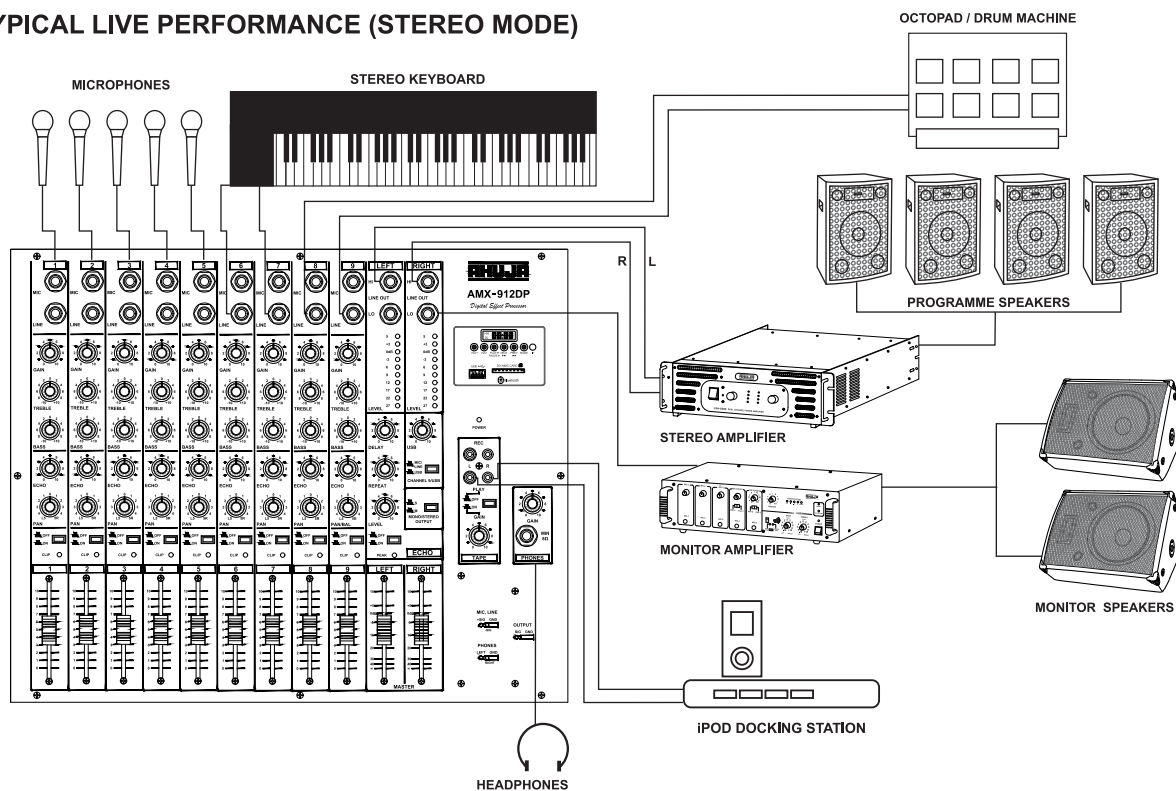


- Pin connection of on RCA plug for RECORD Output and PLAYBACK Input.

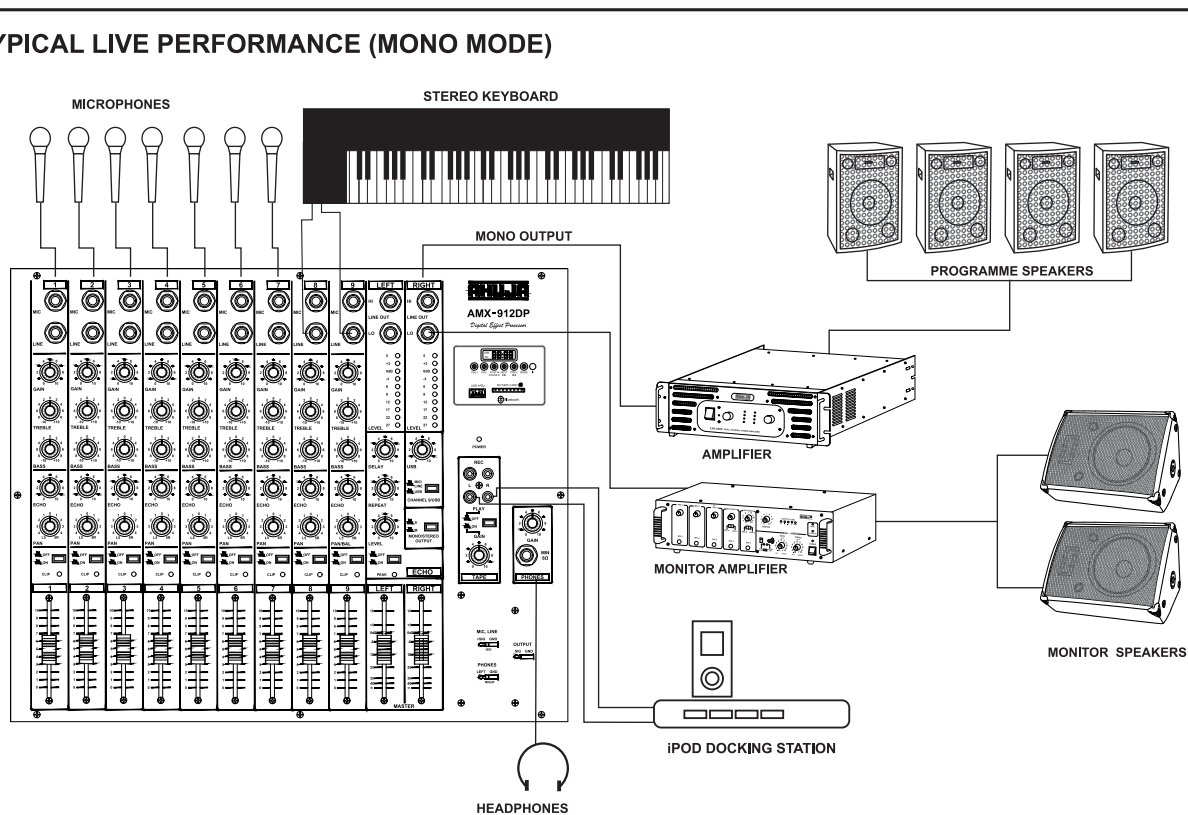


• Typical Applications

TYPICAL LIVE PERFORMANCE (STEREO MODE)

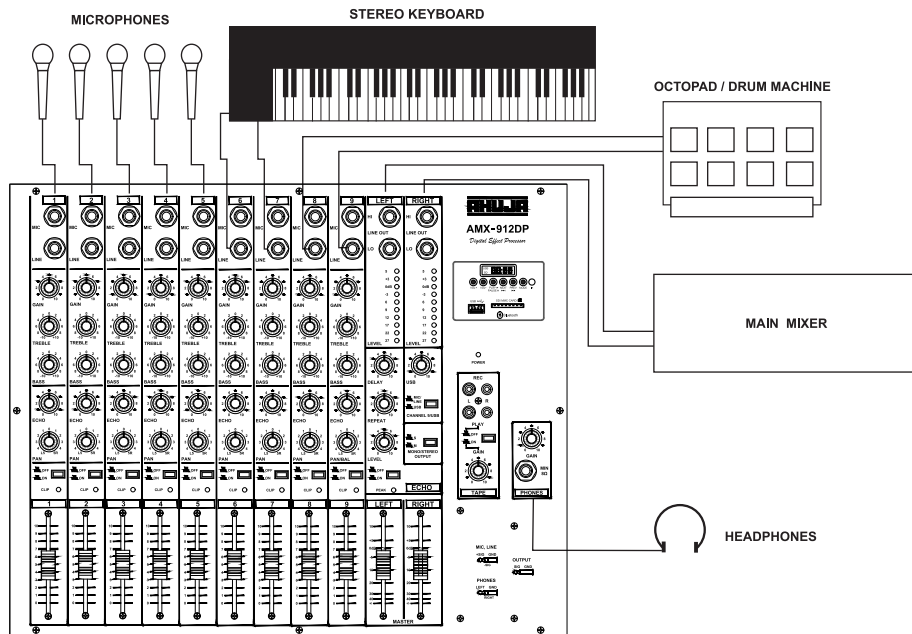


TYPICAL LIVE PERFORMANCE (MONO MODE)

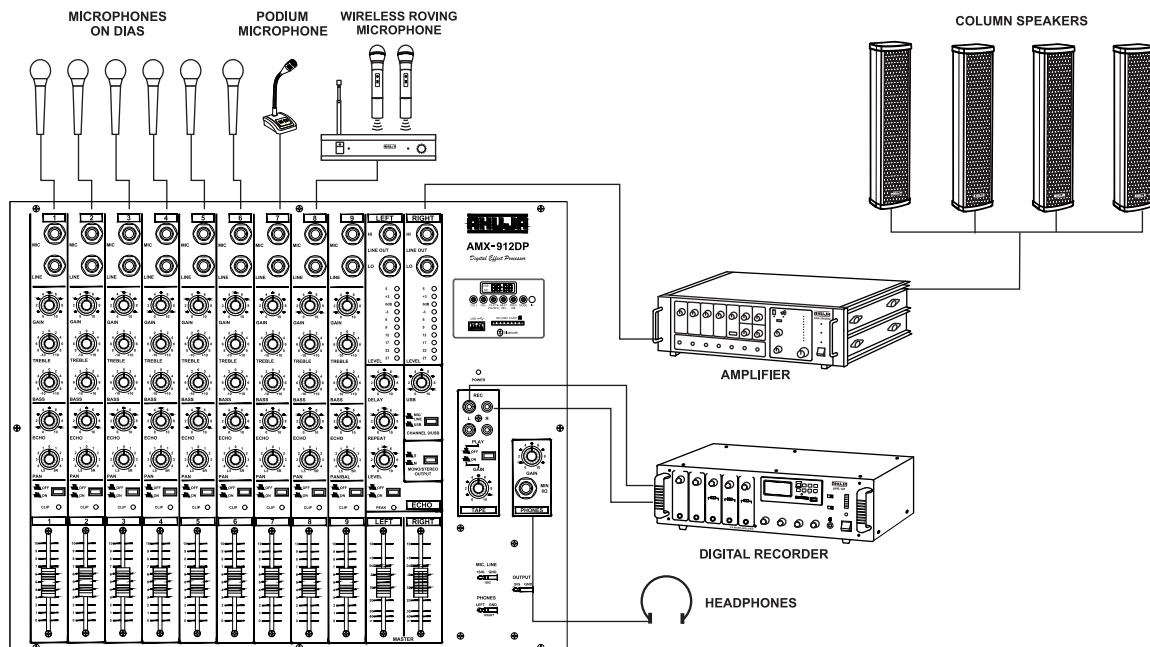


• Typical Applications

TYPICAL SUBMIXING SETUP



TYPICAL CONFERENCE / CONVENTION SETUP



• Specifications

MIC INPUT Impedance / Gain	2k ohms Balanced / 62 dB
LINE INPUT Impedance / Gain	20k ohms Balanced / 42 dB
THD	< 0.08 %
FREQUENCY RESPONSE L/R Line Output High L/R Line Output Low	30 Hz - 20 kHz (+0, -1 dB) 30 Hz - 20 kHz (+0, -1 dB)
EQUALIZATION Bass / Treble	± 12 dB at 100 Hz / 10kHz
CLIP LED INDICATION	4 dB prior to true clip
OUTPUTS Line Output LO L/R Nominal / Max. Level	-10 dBu / +2 dBu (200mV / 1 V)
Line Output HI L/R Nominal / Max.Level	0 dBu / +17 dBu (775mV / 5.5 V)
Impedance	600 ohms
MAXIMUM GAIN Mic Input to Line Outputs Line Input to Line Outputs	76 dB 55 dB
DELAY SYSTEM DELAY RANGE	Digital Signal Processing Variable from 30 to 400ms
DIGITAL PLAYER	MP3 Player with USB, SD and MMC Card Reader
TAPE Record Output Playback Input	240mV RMS / 600 ohms 50mV - 1V RMS/1K ohms, variable thru' GAIN control
HEADPHONE Output	150 mV at 8 ohms, THD < 1%
SIGNAL TO NOISE RATIO	>70 dB
POWER SUPPLY	AC: 220-240V, 50Hz DC: 24V
DIMENSIONS	W 483 x H 93 x D 366 mm
NET WEIGHT	6.90 kg

Design & Specifications subject to change without notice.
Specifications claimed are subject to permissible production tolerances.

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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06/06/18