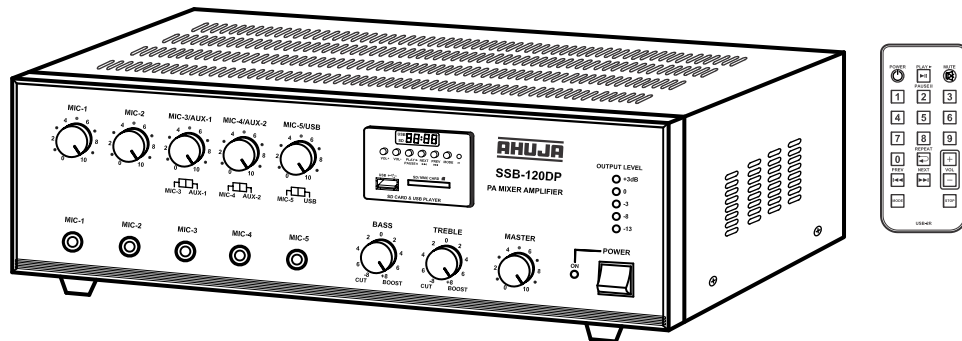


AHUJA®

PA Mixer Amplifier

120W RMS/160W Max.

SSB-120® DP



- ◆ Thank you for purchasing the AHUJA PA Mixer Amplifier.
- ◆ 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 Amplifier.
- ◆ 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 top cover. No user serviceable parts inside. Refer all servicing to qualified personnel only.
- Before replacing any fuse, make sure the set is switched off and disconnected from the AC mains or any other power source. Replace a fuse only with another of exactly same specification.

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.

Ventilation: This set should be situated so that its location or position does not interfere with its proper ventilation. Do not cover the ventilation holes / slots. Do not insert or drop anything into the ventilation holes / slots.

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.

Cover Strip: The cover strip of the 100V / 70V audio output terminal strip, and of any other high voltage output terminal strip, must be replaced after making connections. Failure to do so may result in exposure to hazardous voltages.

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.

Exposure to Heat: Do not touch the heatsinks while the set is working.

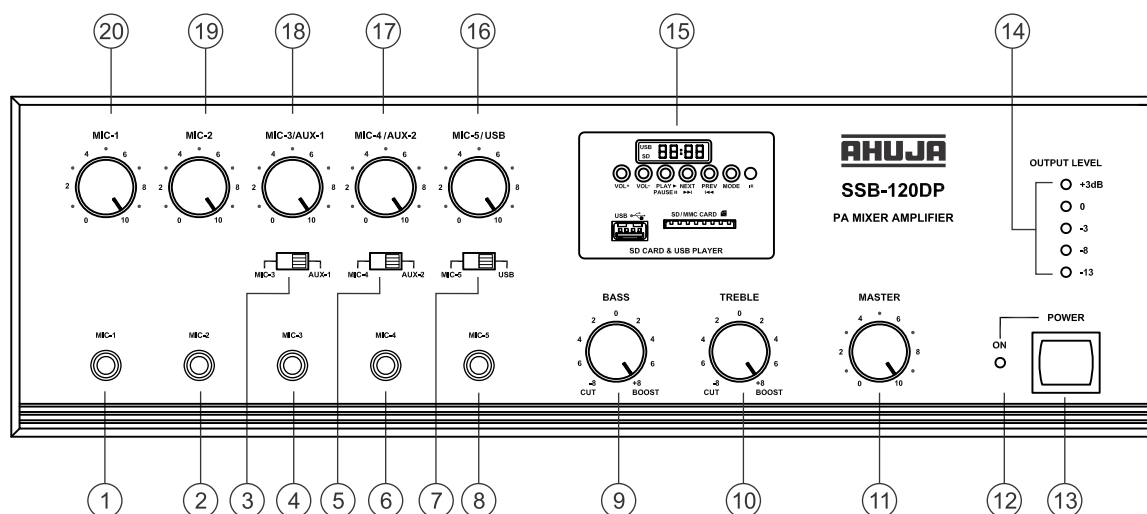
• Table of Contents

Contents	Page No.
• Features/General Description of Product	4
• Front Panel Controls & Features	5
• Rear Panel Controls & Features	6
• MP3 Playback Facility: Controls & Features	7
• Interconnections	8
• Speaker Connection Guidelines	10
• Specifications	12

• Features/General Description of Product

- Designed for use in a wide variety of PA applications.
- SSB-120®DP is a 120 Watts PA Mixer Amplifier with two unbalanced independent Mic inputs and further three unbalanced Mic inputs alternate to AUX-1, AUX-2 or USB.
- Built-in MP3 playback facility with remote control is provided.
- SSB-120®DP has a Preamp output for recording the program and a Line output for connecting to a Booster Amplifier
- Bass and Treble Controls have been provided which help to shape the tonal quality of music and speech to the desired requirement.
- LED array has been provided for visual monitoring of output level of music and speech. For safe operation, avoid having the +3dB LED continuously or frequently ON.
- Provision for automatic changeover from AC to Battery Operation ensuring continuity of program (if 12V battery is connected) has been provided.
- Protection provided against the reverse polarity of battery connections.
- Ease of operation, combined with service accessibility has been optimized in the design.

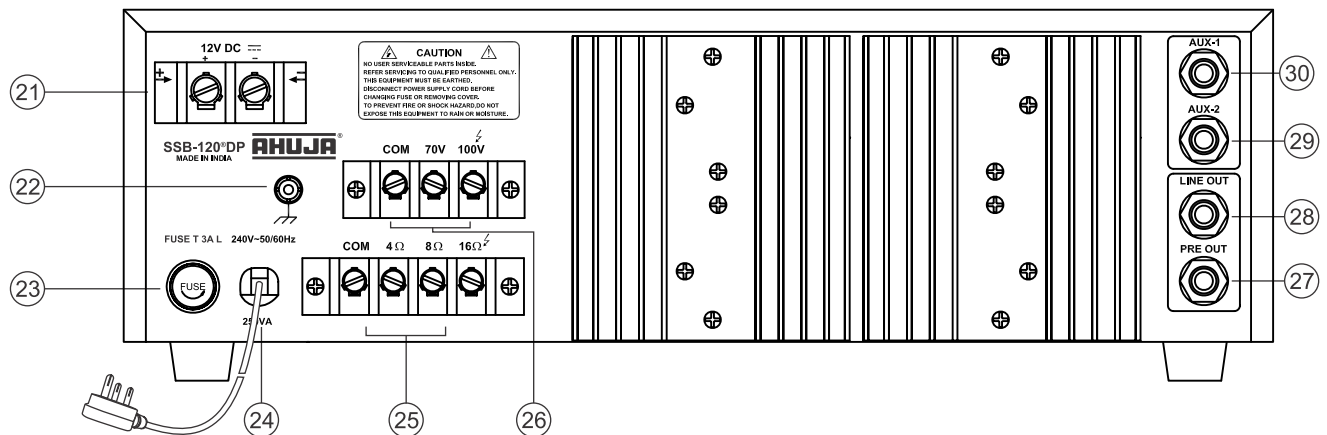
• Front Panel Controls & Features



1. **MIC-1 Input Jack Socket** : For accepting unbalanced signal from a low impedance microphone.
2. **MIC-2 Input Jack Socket**
3. **MIC-3 /AUX-1 Selector Switch**
4. **MIC-3 Input Jack Socket**
5. **MIC-4 /AUX-2 Selector Switch**
6. **MIC-4 Input Jack Socket**
7. **MIC-5/USB Selector Switch**
8. **MIC-5 Input Jack Socket**
9. **BASS Control**: For attenuating or boosting the signal level of low frequencies.
10. **TREBLE Control**: For attenuating or boosting the signal level of high frequencies.
11. **MASTER Volume Control**: For adjustment of the overall volume level from the amplifier.
12. **POWER LED**: This LED glows when the amplifier power is ON.
13. **POWER Switch**: Push the top part of the knob to switch the amplifier ON. Push the bottom part of the knob to switch the amplifier OFF.
14. **LED Array**: This indicates the output level of the amplifier.
15. **MP3 Playback Facility** (see description page)
16. **MIC-5/USB Volume Control**
17. **MIC-4/AUX-2 Volume Control**
18. **MIC-3/AUX-1 Volume Control**
19. **MIC-2 Volume Control**
20. **MIC-1 Volume Control**

NOTE: USB playback level is also controlled by the volume “+” / volume “-” controls on the USB panel and remote control. If USB playback level appears to be insufficient even after turning rotary control (16) fully clockwise, check USB volume setting from the “+” / “-” controls on the remote or the USB panel.

• Rear Panel Controls & Features



21. BATTERY Terminal Block

For connecting a 12V Car Battery as standby power source.

22. EARTH Terminal

23. AC MAINS FUSE 3 AMP 250V (T 3A L)

This protects the amplifier from any excessive current flow.

24. 3 Core AC Mains Cable With Plug

25. SPEAKER Terminal Block (4,8 and 16 ohm)

For connecting low impedance speakers.

26. SPEAKER Terminal Block (70V, 100V)

For connecting speakers with 100V line matching transformers.

27. PREAMPLIFIER Output Jack Socket

For connecting to the AUX input of another amplifier or a MP3 recorder for recording purpose.

28. LINE Output Jack Socket

For connecting to a booster amplifier to obtain combined higher power output.

29. AUX-2 Input Jack Socket

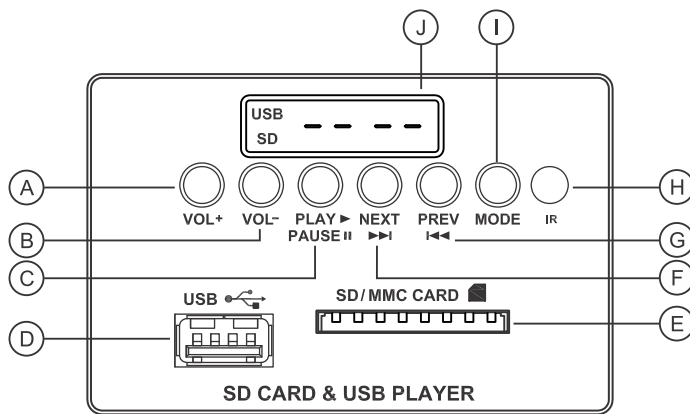
For accepting an unbalanced signal from an auxiliary source like a Tuner, MP3 Player, Echo or CD Player etc.

30. AUX-1 Input Jack Socket

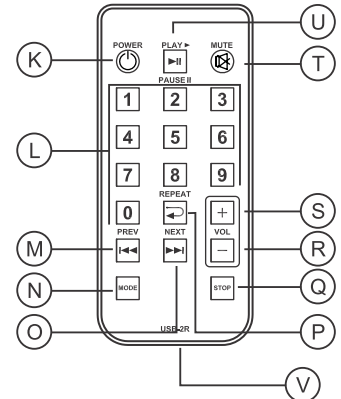
Caution

- The equipment must be earthed properly before operating it to avoid electric shock. A wire from the Earth Terminal must be connected to electrical earth for safe operation.

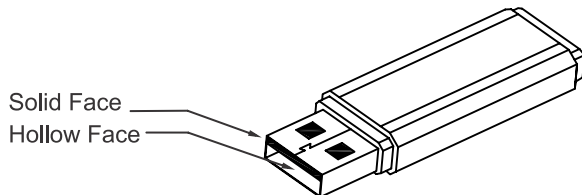
• MP3 Playback Facility: Controls & Features



Remote Control



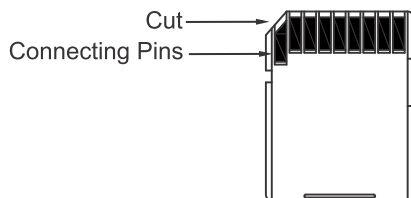
- A. **VOL+ :** To increase volume level of MP3 player.
- B. **VOL- :** To decrease volume level of MP3 player.
- C. **▶|| PLAY/PAUSE:** Press PLAY/PAUSE once to Pause if music is already playing. Press PLAY/PAUSE again to resume playing.
- D. **🔌 USB Connector:** Insert the USB drive here. While inserting 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 its appropriate slot to play. When taking out the card, pull 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.

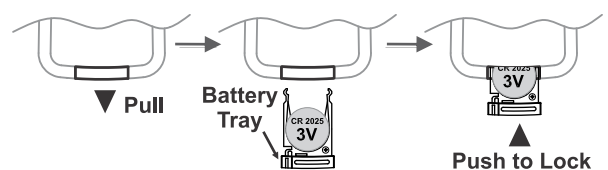


- F. **▶▶ Next:** Press NEXT to select next forward music track. Pressing NEXT repeatedly will move the system to successively next forward tracks.
- G. **◀◀ Prev:** Press PREV to Select the previous track. Pressing PREV repeatedly will move the system to successively previous tracks.

- H. **IR Sensor:** Picks up signal from the Remote control. Point the Remote control toward this sensor for best results.
- I. **Mode:** To select USB or SD when both are inserted.
- J. **LED Display:** Instantly displays 3 digits of the track selected to play i.e 001 to 999. During play, displays the time duration of the track played.

Remote Control

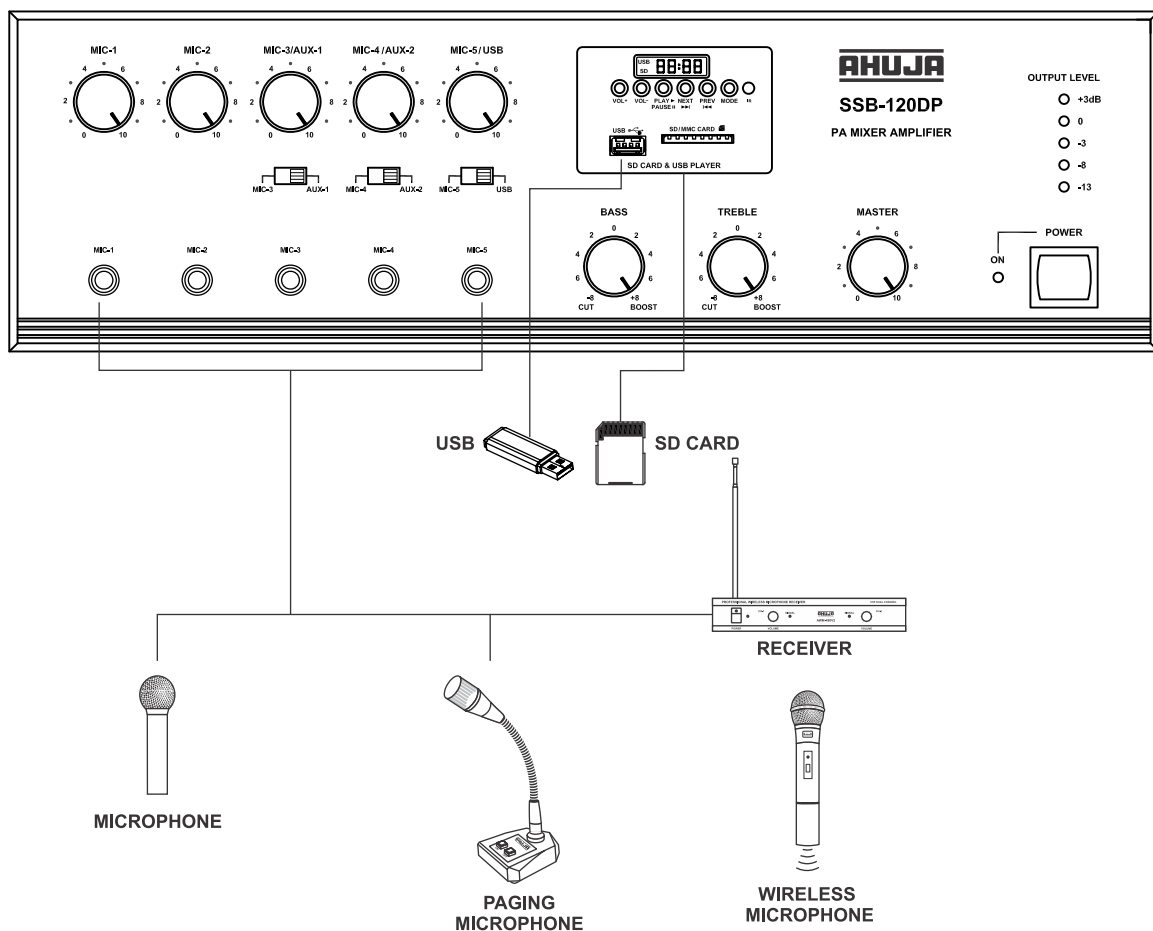
- K. **Power:** Press once to switch off MP3 digital player, press again to switch ON.
- L. Number key 0 to 9. To choose the track number to be played.
- M. **◀◀ :** To select the previous track.
- N. **MODE :** To select SD or USB if both are inserted.
- O. **▶▶ :** Press to select the next track.
- P. **↺** Press once to repeat the song being played. Press again to repeat all the songs.
- Q. **STOP:** Press to stop the track being played.
- R. **Vol:** Press to decrease the volume of Digital Player.
- S. **Vol:** Press to increase the volume of Digital 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.



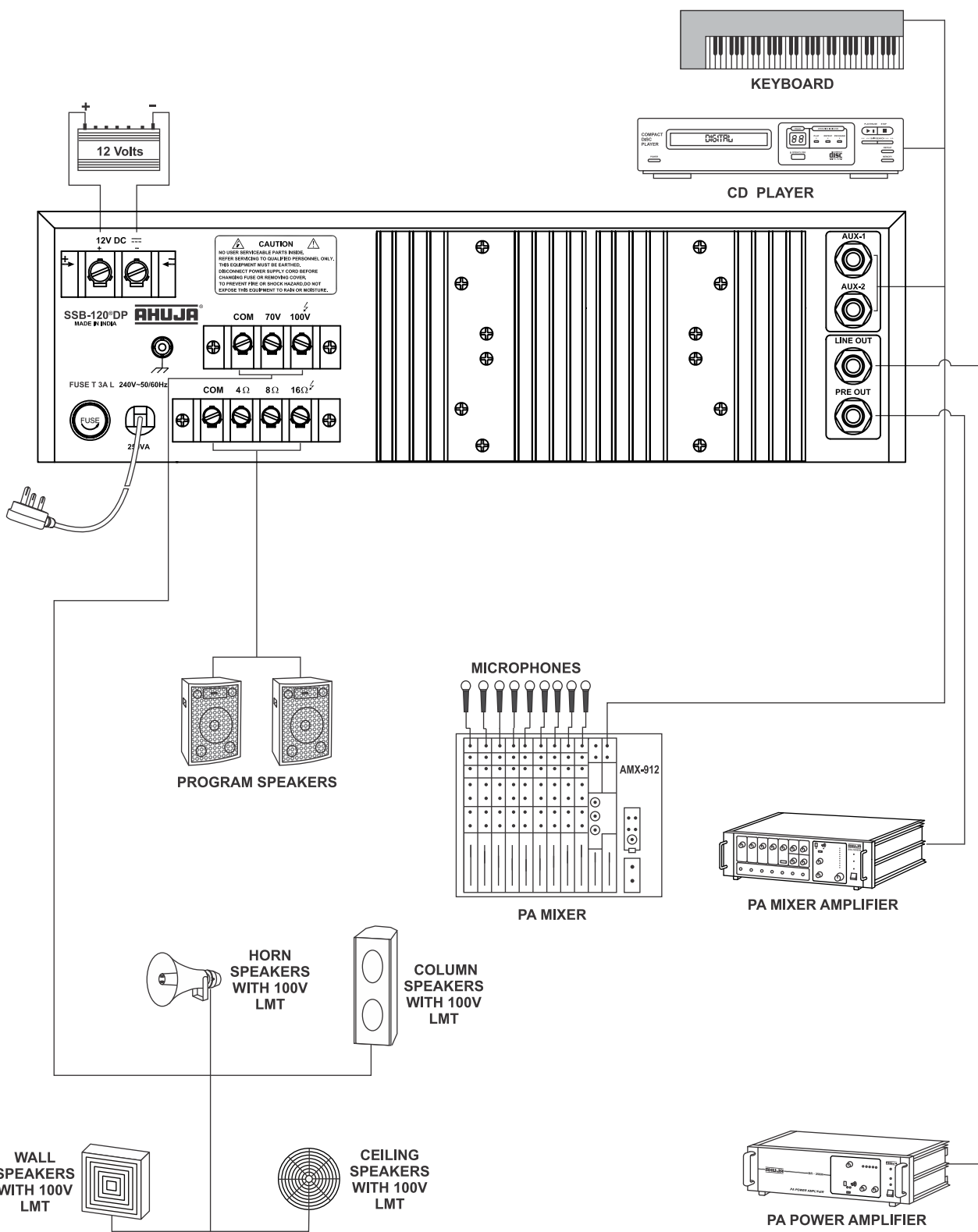
• Interconnections

- The amplifier can be placed as a tabletop unit. The amplifier should be situated so that its location or position does not interfere with its proper ventilation.
- The amplifier must be powered through an AC earthed mains outlet.
- The amplifier may also be operated from a DC supply of 12 Volts (one car battery).
- All connections must only be carried out or changed with the amplifier switched OFF and the power cord disconnected from the AC mains.
- To avoid loud switching noise, always switch ON the Power amplifier after all other units of the audio system have been switched ON. After operation switch it OFF first, then the other units.
- Always use sufficiently thick cables for speaker connection in order to avoid power losses in the cables. Use of 40/36 or thicker cable is recommended when low impedance speakers are being used.
- The connection diagrams that follow display typical types of input sources (Mics, Keyboard, MP3 Player, Mixer, CD Players etc.) and speakers (Wall, Ceiling, Box, Horn, Column) which can be connected to the amplifier. For correct connections and operation check the specifications of the connected equipment.

FRONT PANEL - SSB-120®DP

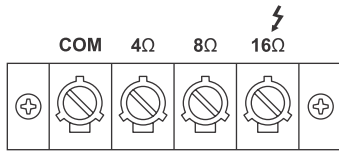


REAR PANEL - SSB-120®DP



• Speaker Connection Guidelines

SSB-120®DP is a medium powered PA mixer amplifier. Therefore it is important that correct loudspeaker connections are made to avoid damage to the amplifier or speakers.

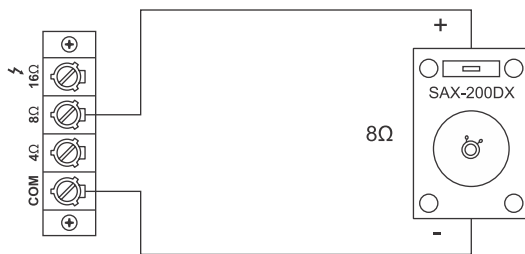


Low Impedance Speaker Connections

- Box type speakers like SAX-150DX / SRX-120®DX can be directly connected to COM-4Ω / 8Ω / 16Ω terminal strip.
- Driver units without LMT like AU-40® / AU-60® can be directly connected to COM-4Ω / 8Ω / 16Ω terminal strip.
- PA Wall Speakers like PS-500T (8Ω tap) can be directly connected to COM-4Ω / 8Ω / 16Ω terminal strip.

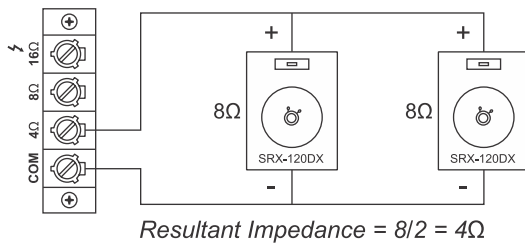
Connecting one SAX-200DX Speaker

SAX-200DX speaker (200W) should be connected to COM & 8Ω tap as shown in the figure.



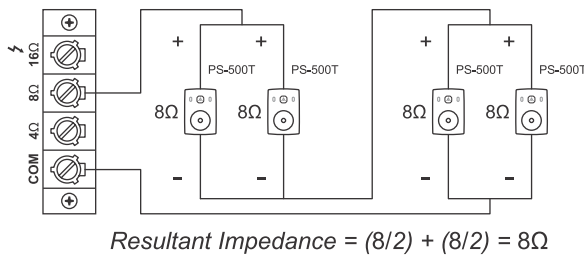
Connecting two SRX-120®DX Speakers

The loudspeakers like SRX-120®DX should be wired in parallel as shown in the figure. As the resulting impedance of the speaker system is 4Ω, they should be connected to the 4Ω tap of the amplifier.



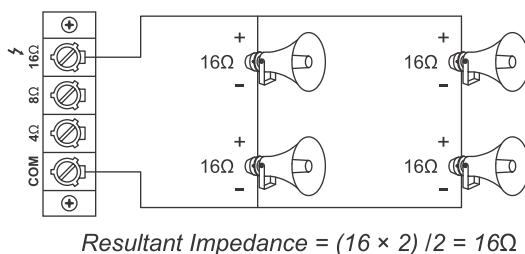
Connecting four Wall Speakers like PS-500T

If it is required to use wall speaker on low impedance tap, then four PA Wall Speakers like PS-500T (8Ω tap) can be wired in two groups of two wall speakers each (in parallel) and then connecting the two groups in series as shown in figure. As the resulting impedance of the speaker system is 8Ω, they should be connected to the 8Ω tap of the amplifier.

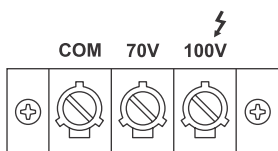


Connecting four AU-40® Driver Units

Four driver units like AU-40® / AU-60® should be wired in two groups of two driver units each in series and then two groups are connected in parallel as shown in figure. The resulting impedance of the system is 16Ω. The speaker system should be connected to 16Ω tap of the amplifier.



Speaker Connection Guidelines....

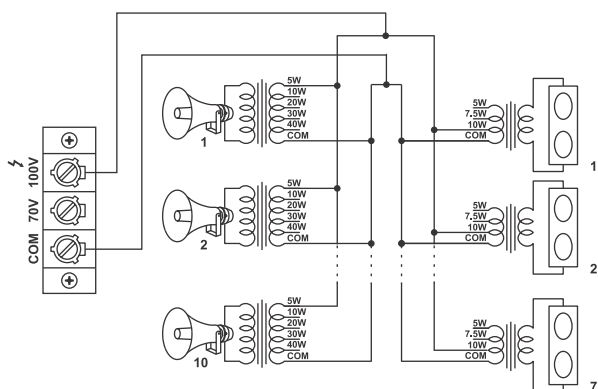
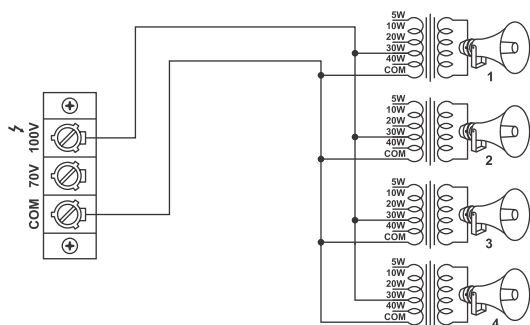


High Impedance Speakers or Speakers Using A 100V Line Matching Transformer

- Only Driver Units / Horn Speakers / Column Speakers with 100V Line Matching Transformers are to be connected to Com-70V / 100V Terminal Strip.
- The power drawn from the amplifier should not exceed 120 Watts.

Connecting Four Driver Units with 100V LMT

- 4 Driver Units with 100V Line Matching Transformer each connected at 30 Watts tap can be operated as shown.



Connecting a Combination of Driver Units and Column Speakers with 100V LMT

- 7 Column Speakers with 100V LMT at 10 Watts and 10 Driver Units with 100V LMT at 5 Watts can be connected together. The power drawn from the amplifier should not exceed 120 Watts.

Use of 70 Volt Line

A loudspeaker / Driver Unit with its LMT adjusted to the 10W tap, when connected to COM and 100V terminals on the amplifier's Terminal Strip will draw 10W from the amplifier but when the same is connected to COM and 70V it will only draw half power i.e. 5W. A good use of 70V line tap can be made in installations where large number of speakers / driver units are to be installed for more even distribution of sound.

Correct Phasing of Loudspeakers

- When two or more Speakers / Units installed in the same area and are facing the same direction, it is essential that their cones / diaphragms act in unison. Otherwise the sound level of one speaker will be canceling the sound level of the other. To avoid any mistake, the terminals of Box speakers and the Driver Units are marked '+' & '-'. Always connect the COM of the Amplifier to '-' of speaker & 4 / 8 / 16Ω of the amplifier to the '+' of the speakers.
- In case of LMTs the COM of all the LMTs should be connected to the COM of the red strip terminal of the amplifier and the power tap to 100V line as shown above.

IMPORTANT

- When speakers are connected to COM-4Ω / 8Ω / 16Ω Terminal Strip, no speaker should be connected to the Terminal Strip marked COM-70V / 100V. Speaker should be connected to COM and only one of the taps 4Ω, 8Ω, 16Ω.
- When 70 / 100 Volt line is being used, no speaker / driver unit should be connected to 4Ω / 8Ω / 16Ω (Low Impedance) Tap.

• Specifications

Model	SSB-120®DP
Power Output	160 Watts RMS Max. 120 Watts RMS at 10% THD 105 Watts RMS at 5% THD
Output Regulation	≤2db (no load to full load at 1kHz)
Inputs Channels	5 × Mic 0.65mV / 4.7kΩ Aux-1 : 100mV / 470kΩ Aux-2 : 100mV / 470kΩ
MP3 Playback	Built-in MP3 playback facility (USB, SD and MMC card) Remote Control provided
Frequency Response	50Hz - 15,000Hz ± 3dB
Tone Controls	Bass : ±8dB at 100Hz Treble : ±8dB at 10kHz
Signal to Noise Ratio	60dB
Pre-amp Output	200mV / 600Ω
Line Output	1V / 1kΩ
Output Taps for Speaker Matching	4Ω, 8Ω & 16Ω (for direct connections) 70V & 100V Line (for use with LMT)
Power Source	AC: 220-240V 50 / 60Hz; DC: 12V (Car Battery)
Protection	AC: Fuse 3Amp. (T 3A L); DC: Fuse 14Amp. (T 14A L)
Power Consumption	AC: 250VA; DC: 5.5 Amps (average)
Dimensions	W420 × H135 × D275 mm
Weight	10.30kg approx.

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

Design and Specifications are subject to change without notice owing to continuous product up-gradation. Technical specifications are subject to production tolerances.
We cannot be held responsible for printing errors, should they occur. **AHUJA** is a registered trademark of Ahuja Radios in India and other countries.
© Copyright Ahuja Radios, 2017. All rights reserved. Any unauthorized reproduction or use of logos, images or design elements is strictly prohibited by law.
No part of this compilation may be reproduced in any manner or translated without written permission.