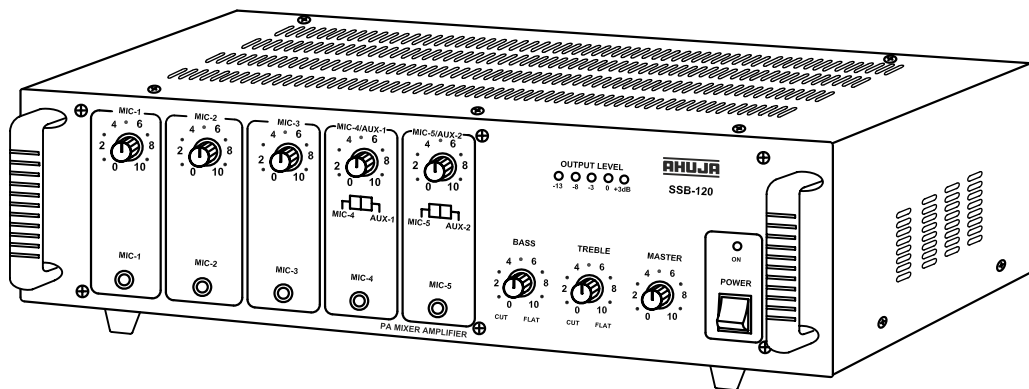


**AHUJA**<sup>®</sup>**PA Mixer Amplifier**

120W RMS / 160W Max.

**SSB-120**<sup>®</sup>

- ◆ Thank you for purchasing the AHUJA Portable 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.

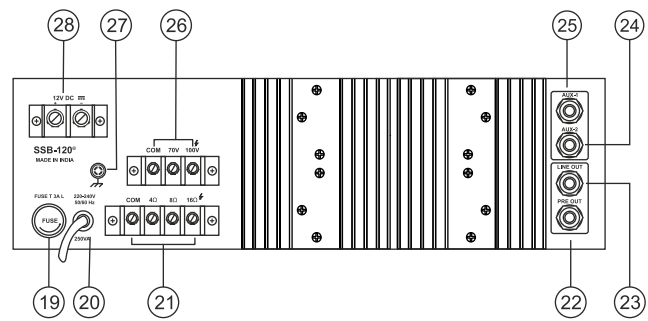
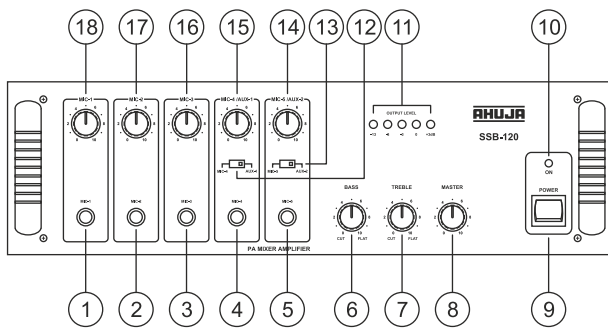
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## • Features/General Description of Product

- Designed for use in a wide variety of PA applications.
- SSB-120® is a 120 Watts Mixer Amplifier with Three Unbalanced Independent Mic inputs and Two Unbalanced Mic Inputs alternate to Two Auxiliary inputs.
- SSB-120® has a Preamp output for recording the program, 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.
- Provision for automatic changeover from AC to Battery Operation ensuring continuity of program 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 & Rear Panel Controls & Features



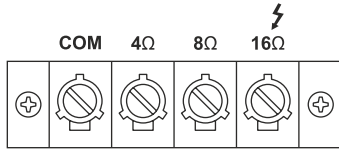
1. **MIC-1 Input Jack Socket**  
For connecting Lo-impedance microphones.
2. **MIC-2 Input Jack Socket**
3. **MIC-3 Input Jack Socket**
4. **MIC-4 Input Jack Socket**
5. **MIC-5 Input Jack Socket**
6. **BASS CONTROL**  
For attenuating the signal level of low frequencies.
7. **TREBLE CONTROL**  
For attenuating the signal level of high frequencies.
8. **MASTER CONTROL**  
For adjustment of the overall volume level from the amplifier.
9. **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.
10. **POWER LED**  
This LED glows when the amplifier is switched 'ON'.
11. **LED Array (5 LEDs)**  
It indicates roughly the power output that is being delivered to the loudspeakers by the amplifier.
12. **MIC-4 / AUX-1 Selector Switch**
13. **MIC-5 / AUX-2 Selector Switch**
14. **MIC-5 / AUX-2 Volume Control**
15. **MIC-4 / AUX-1 Volume Control**
16. **MIC-3 Volume Control**
17. **MIC-2 Volume Control**
18. **MIC-1 Volume Control**
19. **AC MAINS FUSE 3 Amp 250V (T 3A L)**  
This prevents excessive current flow caused by any defect / short circuit in the amplifier.
20. **3 Core AC Mains Cable With Plug**
21. **SPEAKER Terminal Block (4, 8 and 16Ω)**  
For connecting low impedance speakers.
22. **PRE OUT Jack Socket**  
For connecting to Recorder for recording the overall program or for feeding to Aux input of any amplifier for obtaining combined high power output.
23. **LINE OUT Jack Socket**  
For connecting to Line input of a Booster amplifier or any other amplifier.
24. **AUX-2 Input Jack Socket**  
For connecting MP3, CD Player, Echo Mixer or Audio Mixer etc.
25. **AUX-1 Input Jack Socket**
26. **Speaker Terminal Block (70V, 100V)**  
For connecting Column Speakers / Driver Units with 100V line matching transformers.
27. **EARTH Terminal**
28. **BATTERY Terminal block**  
For connecting a 12V Car Battery as standby power source.

### 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.

# • Speaker Connection Guidelines

SSB-120® 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.

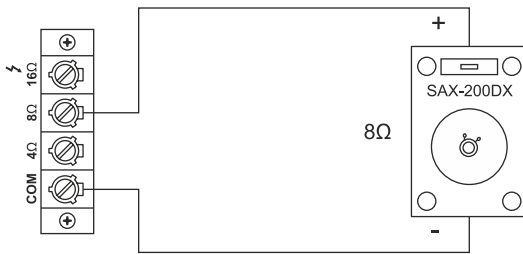


## Low Impedance Speaker Connections

- Box type speakers like SAX-200DX / SRX-120DX 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.

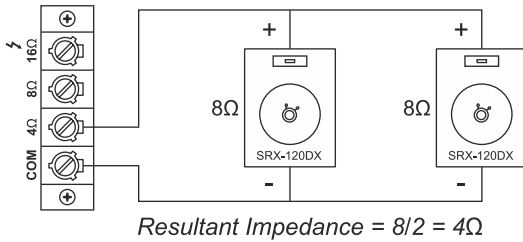
## Connecting one SAX-200DX Speaker

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



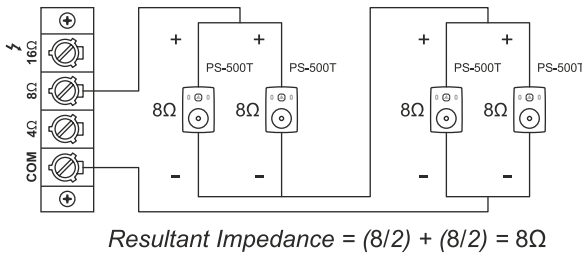
## Connecting two SRX-120DX Speakers

The loudspeakers like SRX-120DX 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.



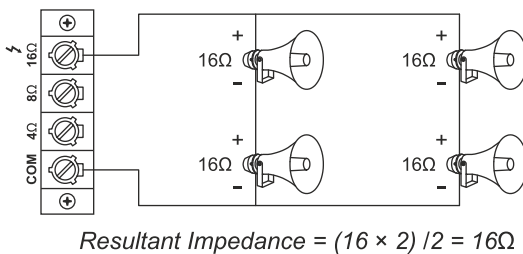
## Connecting four Wall Speakers like PS-500T

Four PA Wall Speakers like PS-500T (8Ω tap) should 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.

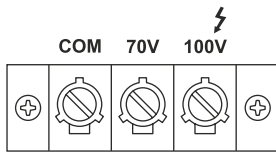


## Connecting four AU-40 Driver Units

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 Connections Guidelines....

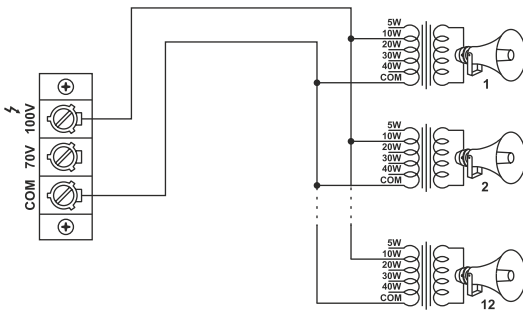


### High Impedance Speakers or Speakers Using A 100V Line Matching Transformer

- 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.

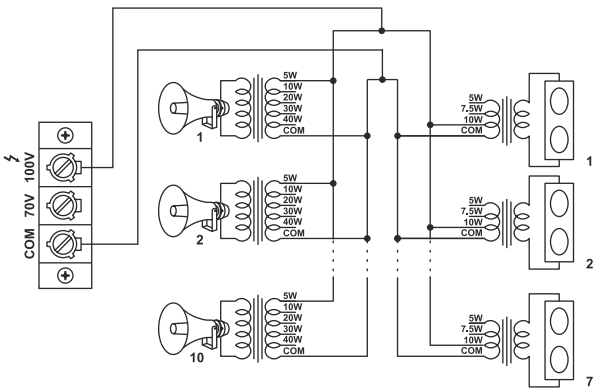
### Connecting Ten Driver Units with 100V LMT

12 Driver Units with 100V Line Matching Transformer connected at 10 Watts tap can be operated.



### 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.
- When 70 / 100 Volt line is being used, no speaker / driver unit should be connected to 4Ω / 8Ω / 16Ω (Low Impedance) Tap.

## • Specifications

<b>Model</b>	<b>SSB-120®</b>
<b>Power Output</b>	160 Watts RMS Max. 120 Watts RMS at 10% THD 105 Watts RMS at 5% THD
<b>Output Regulation</b>	≤2db (no load to full load at 1kHz)
<b>Inputs Channels</b>	5 × Mic 0.65mV / 4.7kΩ Aux-1 : 100mV / 470kΩ Aux-2 : 100mV / 470kΩ
<b>Frequency Response</b>	50Hz - 15,000Hz ± 3dB
<b>Tone Controls</b>	Bass : -10dB at 100Hz Treble : -10dB at 10kHz
<b>Signal to Noise Ratio</b>	60dB
<b>Pre-amp Output</b>	200mV / 600Ω
<b>Line Output</b>	1V / 1kΩ
<b>Output Taps for Speaker Matching</b>	4Ω, 8Ω & 16Ω (for direct connections) 70V & 100V Line (for use with LMT)
<b>Power Source</b>	AC: 220-240V 50 / 60Hz; DC:12V (Car Battery)
<b>Protection</b>	AC: Fuse 3Amp. (T 3A L); DC: Fuse 14Amp. (T 14A L)
<b>Power Consumption</b>	AC: 250VA DC: 5.5 Amps (average)
<b>Dimensions</b>	W420 × H135 × D295 mm
<b>Weight</b>	11.30 kg approx.

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

### AHUJA RADIOS

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