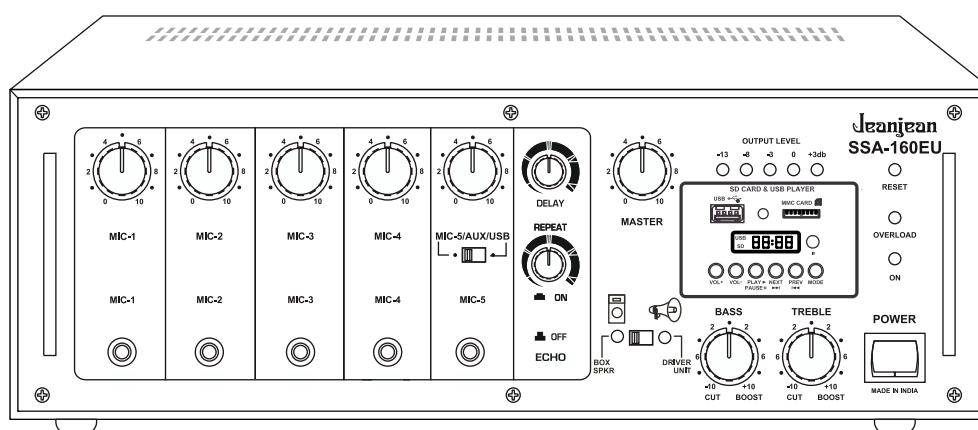


Jeanjean

PA Mixer Amplifier

160W RMS / 220W Max.

SSA-160EU



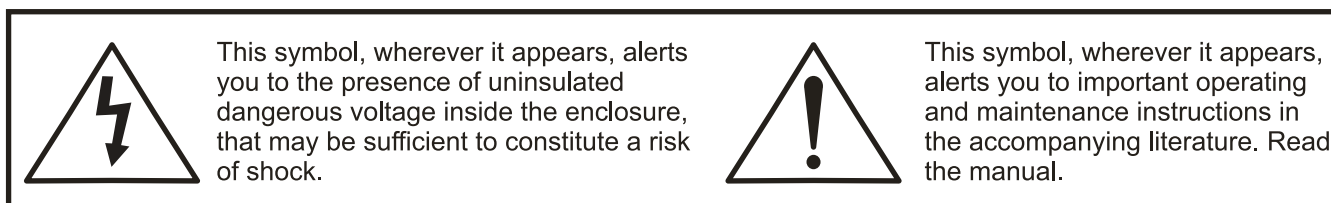
- ♦ Thank you for purchasing the JeanJean P.A. Mixer Amplifier.
- ♦ Please read this manual thoroughly before making connections and turning on the power. Following the instructions in this manual will enable you to obtain optimum performance from your new JeanJean P.A. Mixer Amplifier.
- ♦ Please retain this manual for future reference.

• **Safety Instructions**

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



WARNING: To reduce the risk of fire or electrical shock, do not expose this equipment to rain or moisture.



Detailed Safety Instructions: All the safety instructions in this manual should be read before operating this equipment.

Retain Instructions: The operation manual should be kept for future reference.

Follow Instructions: All operation and safety instructions should be followed.

Water and Moisture: In order to prevent any fire or shock hazard, do not expose this equipment to rain or moisture.

Power Source: The equipment should be connected to a 220-240V 50Hz AC or a 24V DC power source. For 220V AC operation, a tap on the power transformer is available, which should only be changed by authorised dealer.

Power-cord Protection: Do not cut, kink, damage or modify the power supply cord supplied with the equipment. Keep the power supply cord away from heaters & harmful chemicals. Do not place heavy objects on the power cord.

Operation on Generator: When operating the amplifier on a generator, make sure it is switched 'OFF' till the generator voltage has stabilized and then only switch the amplifier 'ON'.

Ventilation: The amplifier should be situated so that its location or position does not interfere with its proper ventilation. Also do not insert or drop anything into the ventilation holes.

Prevention of Loss in Speaker Cables: Always use thick cables for low impedance speaker connections. Use of cable type 23/36 or thicker is recommended as heavy current flows through the cables.

Proper Selection of Output Terminals: When 100V line is being used, do not connect speakers to 4Ω, 8Ω or 16Ω tap. Similarly do not connect speakers to 100V line when 4Ω, 8Ω or 16Ω tap is being used.

Grounding or Earthing: The equipment must be earthed properly before operating it to avoid electric shock. A wire from the Earth Terminal must be connected to either water pipe or to electrical earth for safe operation.

Replacing AC Mains Fuse: After disconnecting the AC mains and rectifying the defect in the amplifier, change the fuse with another of the specified rating only. Insert and tighten the fuse holder completely to avoid any loose contact.

Replacing DC Fuse: The DC Fuse should be replaced with another of the specified rating only.

Exposure to Hot Region: Do not touch the Heat Sink while the amplifier is in operation.

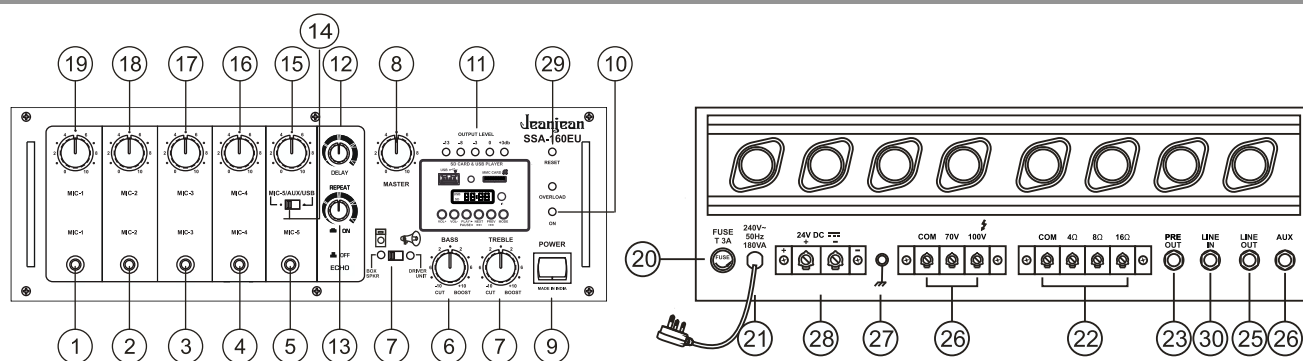
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• Speaker Connection Guidelines	6
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• **Features/General Description of Product**

- Designed for use in a wide variety of PA applications.
- SSA-160EU is a 160 Watts Mixer Amplifier with Four Unbalanced Independent Mic inputs and One Unbalanced Mic Inputs alternate to One Auxiliary input.
- SSA-160EU 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



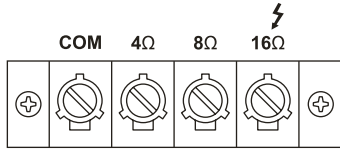
- 1. MIC-1 Input Jack Socket**
For connecting Lo-impedance microphones.
- 2. MIC-2 Input Jack Socket**
- 3. MIC-3 Input Jack Socket**
- 4. MIC-4 Input Jack Socket**
- 5. MIC-5 Input Jack Socket**
- 6. BASS CONTROL**
For attenuating the signal level of low frequencies.
- 7. TREBLE CONTROL**
For attenuating the signal level of high frequencies.
- 8. MASTER CONTROL**
For adjustment of the overall volume level from the amplifier.
- 9. POWER Switch**
- 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. ECHO Delay**
- 13. ECHO Delay**
- 14. MIC-5 / AUX / USB Selector Switch**
- 15. MIC-5 Volume Control**
- 16. MIC-4 Volume Control**
- 17. MIC-3 Volume Control**
- 18. MIC-2 Volume Control**
- 19. MIC-1 Volume Control**
- 20. AC MAINS FUSE 3 Amp 250V**
This prevents excessive current flow caused by any defect / short circuit in the amplifier.
- 21. 3 Core AC Mains Cable With Plug**
- 22. SPEAKER Terminal Block (4, 8 and 16Ω)**
For connecting low impedance speakers.
- 23. PRE OUT Jack Socket**
For connecting to Cassette Recorder for recording the overall program or for feeding to Aux input of any amplifier for obtaining combined high power output.
- 24. LINE OUT Jack Socket**
For connecting to Line input of a Booster amplifier or any other amplifier.
- 25. AUX Input Jack Socket**
For connecting Cassette Player, CD Player, Echo Mixer or Audio Mixer etc.
- 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 24V Car Battery as standby power source.
- 29. RESET Button**
This button pops out when the circuit protector trips. Rectify the cause and press the RESET button for resetting normal operation of the amplifier.
- 30. LINE IN Jack Socket**
For connecting inputs such as CD Player. Also for connecting external Mixer to enhance the number of inputs

⚠ Caution

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

• Speaker Connection Guidelines

SSA-160EU is a medium powered amplifier. Therefore it is important that correct loudspeaker connections are made to avoid damage to the amplifiers or speakers.

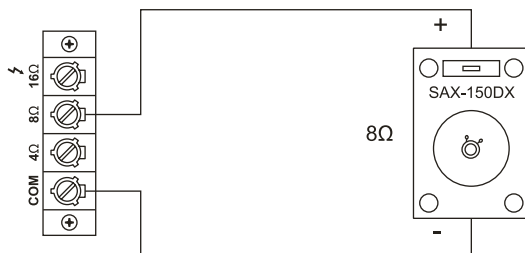


Low Impedance Speaker Connections

- Box typespeakers like SAX-150DX/SRX-120DX can be directly connected to COM-4Ω / 8Ω/ 16Ω terminal strip.
- Driver units without LMT like PU-40 / PU-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.

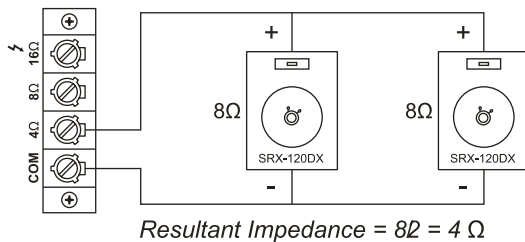
Connecting one SAX-150DX Speaker

SAX-150DX speaker (150W) should be connected to COM & 8Ω tap as shown in the figure.



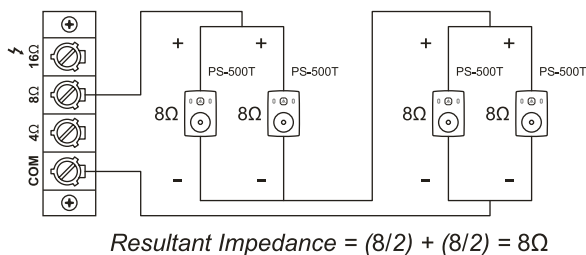
Connecting two SRX-120DX Speakers

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.



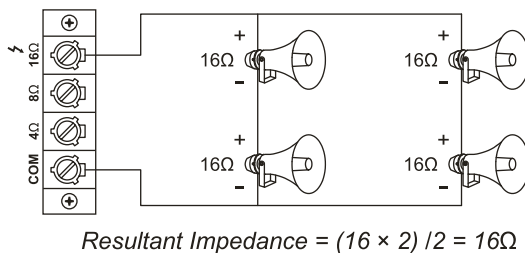
Connecting four Wall Speakers like PS-500T

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.

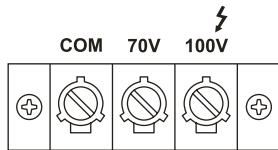


Connecting four PU-40 Driver Units

Four driver units like PU-40 / PU-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....

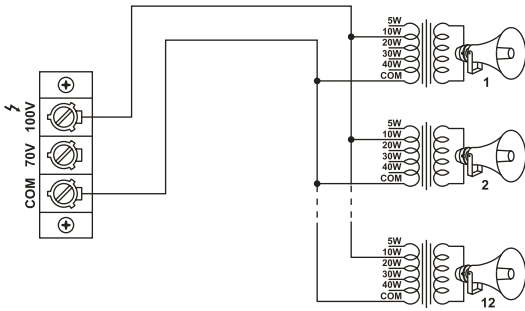


High Impedance Speakers or Speakers Using A 100V Line Matching Transformer

- 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 160 Watts.

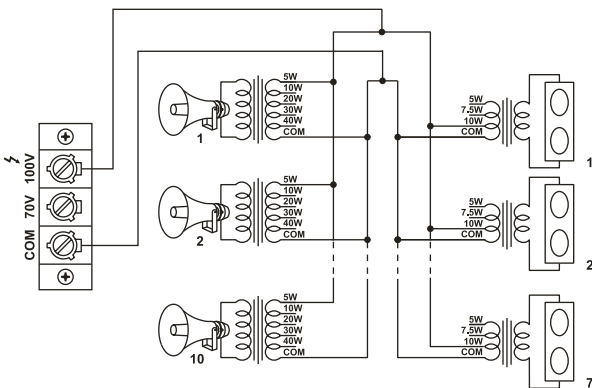
Connecting Ten Driver Units with 100V LMT

16 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

8 Column Speakers with 100V LMT at 10 Watts and 16 Driver Units with 100V LMT at 5 Watts can be connected together. The power drawn from the amplifier should not exceed 160 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.

⚠ Caution

- 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**

Model	SSA-160EU
Power Output	220 Watts RMS Max. 160 Watts RMS at 10% THD 140 Watts RMS at 5% THD
Output Regulation	≤2db (no load to full load at 1kHz)
Inputs Channels	5 × Mic 0.65mV / 4.7kΩ Aux : 100mV / 470kΩ
Frequency Response	50Hz - 15,000Hz ± 3dB
Tone Controls	Bass : ±10dB at 100Hz Treble : ±10dB at 10kHz
Signal to Noise Ratio	60dB
Pre-amp Output Line Output	200mV / 600Ω 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: 2 x 12V (Car Battery)
Power Consumption	AC: 300VA DC: 4.0 Amps (average)
Dimensions	W410 × H140 × D302 mm
Net Weight	13.6kg