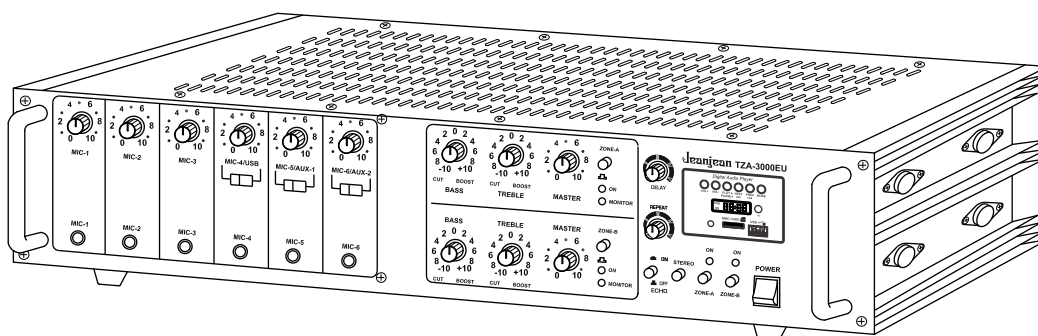


Jeanjean

PA Mixer Amplifier

300W RMS/400W Max.

TZA-3000EU

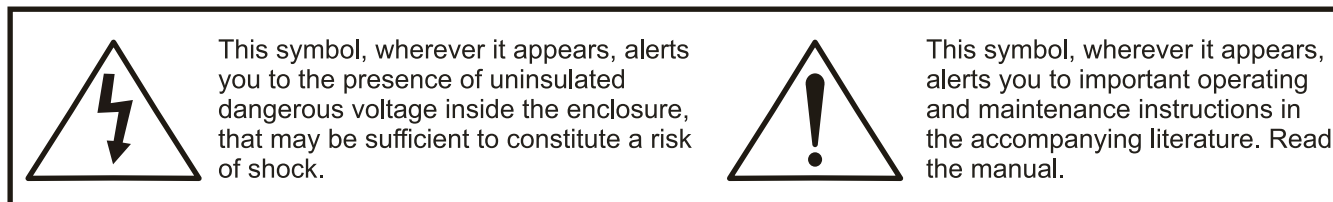


- ◆ Thank you for purchasing the JeanJean P.A. Mixer Amplifier.
- ◆ Please read this manual thoroughly before making connections and turning on the power. Following the instructions in this manual will enable you to obtain optimum performance from your new JeanJean P.A. Mixer Amplifier.
- ◆ Please retain 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 Instruction: All the safety instructions in this manual should be read before operating this product.

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 2x12V DC power source.

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 voltages 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.

Protection Against Shocks: The cover strip of the 100V output terminals should be replaced after making connections. Failure to do so may result in exposure to voltage of upto 100V. Also do not plug in or remove the power supply plug with wet hands so as to avoid electric shock.

Prevention of Loss in Speaker Cables: Always use thick cables for speaker connections. Use of cable type 40/36 or thicker is recommended for connecting low impedance speakers to avoid power loss in the cables, as heavy current flows through the cables.

Proper Selection of Output Terminals: When 100V line is being used on one zone, do not connect speakers to 4Ω or 8Ω tap on that zone. Similarly do not connect speakers to 100V line when 4Ω or 8Ω tap is being used on the same zone. But if in one zone the 100V line is being used than in the other zone 4Ω or 8Ω taps can be used and vice-versa.

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.

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

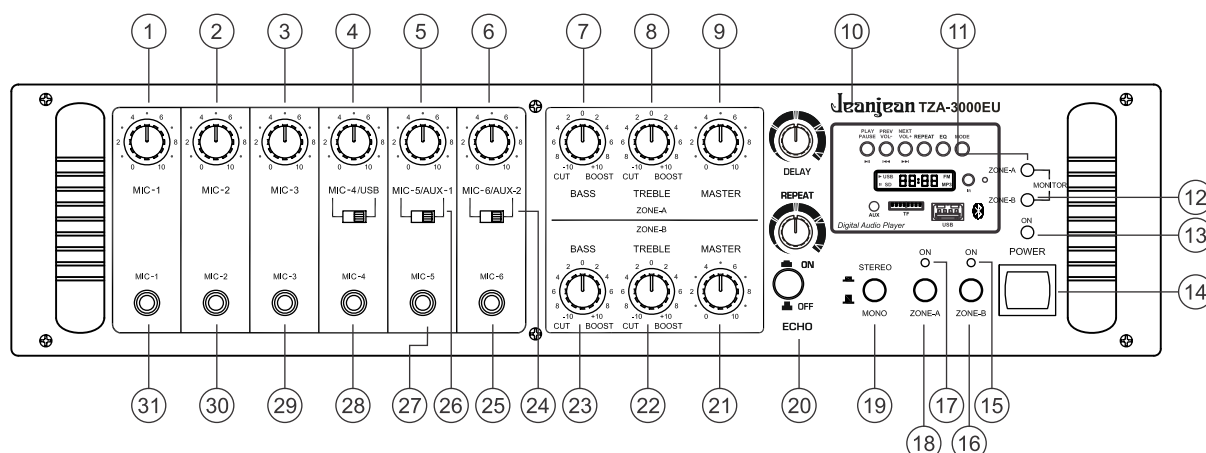
• **Table of Contents**

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• Front Panel Controls & Features	5
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• Interconnections	7
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• **Features/General Description of Product**

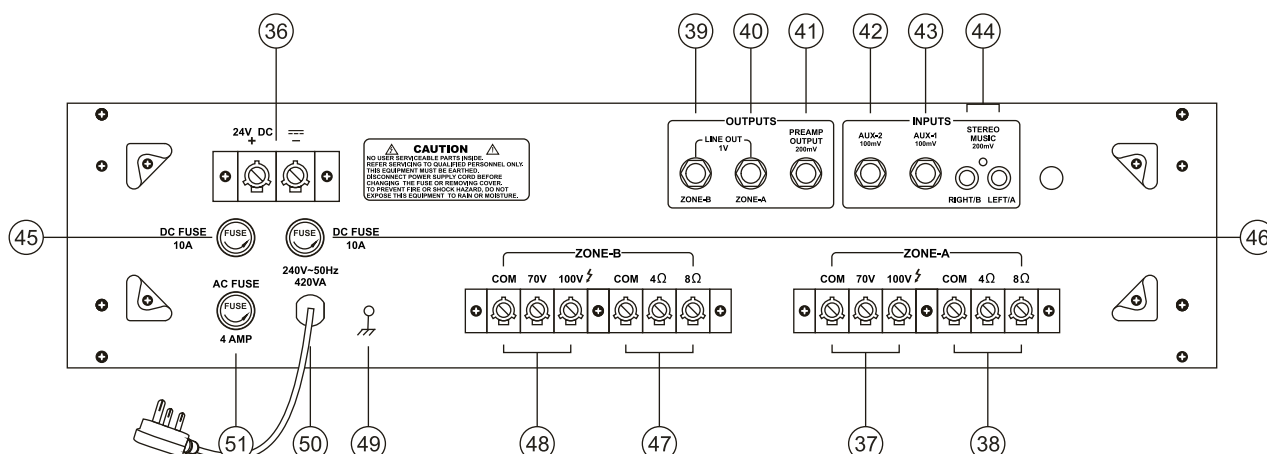
- Ideal for use in a wide variety of 2- Zone PA applications where high power is required.
- TZA-3000EU is a 300 Watts 2- Zone mixer amplifier with each zone having its independent tone and master controls for separate and combined operation.
- Line Outputs have been provided for each zone separately to enable interconnections with other power amplifiers for more power if the need arises.
- The amplifier has Mono and Stereo input jacks. Thus it can be used for Stereo music reproduction as well as mono. Switching of Stereo/Mono can be done using 'STEREO/MONO' switch provided in the front panel.
- TZA-3000EU has individual Zone ON/OFF facility. Sound from each zone can be switched on and off without disturbing the settings of tone and volume controls. LEDs are provided for individual zone ON/OFF.
- 12 Amp DC Fuse has been provided for each zone. It safeguards the amplifier against overload and short circuit.
- Power losses in speaker wirings are reduced as the Two zones share the delivering of 300W of power.
- Provision for automatic changeover from AC to battery operation ensuring continuity of program.
- 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 Volume Control**
2. **MIC-2 Volume Control**
3. **MIC-3 Volume Control**
4. **MIC-4 Volume Control**
5. **MIC-5 / AUX-1 Volume Control**
6. **MIC-6 / AUX-2 Volume Control**
7. **BASS Control (Zone A)**
For cutting or boosting the signal level of low frequencies.
8. **TREBLE Control (Zone A)**
For cutting or boosting the signal level of high frequencies.
9. **MASTER Volume Control (Zone A)**
For adjustment of the volume level.
10. **MP3 Playback Facility** (For details see on page 6).
11. **MONITOR (Zone A)**
For monitoring the output level of Zone A.
12. **MONITOR (Zone B)**
13. **Power LED**
This LED glows when the amplifier is switched ON.
14. **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.
15. **LED for Zone B ON/OFF indication**
16. **ON/OFF Switch (Zone B)**
17. **LED for Zone A ON/OFF indication**
18. **ON/OFF Switch (Zone A)**
19. **MONO / STEREO input Selector Switch**
For STEREO music applications, select the mono/stereo switch to stereo position provided left and right speakers are located to left and right side of ambience respectively.
20. **ECHO Delay & Repeat**
21. **MASTER Volume Control (Zone B)**
22. **TREBLE Control (Zone B)**
23. **BASS Control (Zone B)**
24. **MIC-6 / AUX-2 Selector Switch**
25. **MIC-6 Input Jack Socket**
26. **MIC-5 / AUX-1 Selector Switch**
27. **MIC-5 Input Jack Socket**
28. **MIC-4 Input Jack Socket**
29. **MIC-3 Input Jack Socket**
30. **MIC-2 Input Jack Socket**
31. **MIC-1 Input Jack Socket**

• Rear Panel Controls & Features



36. BATTERY Terminal Block

For connecting two 12V Car Batteries in series (which becomes 24V) as standby power source.

37. SPEAKER Terminal Block for Zone A (70 and 100V)

For connecting speakers with 100V line matching transformers.

38. SPEAKER Terminal Block for Zone A (4Ω and 8Ω)

For connecting low impedance speakers.

39. LINE Output Jack Socket for Zone A

For connecting to the LINE Input of a booster amplifier to obtain combined higher power output.

40. LINE Output Jack Socket for Zone B

41. PREAMPLIFIER Output Jack Socket

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

42. AUX-2 Input Jack Socket

For accepting an unbalanced signal from an auxiliary source like a Tuner, Cassette Player, Echo or Audio Mixer etc.

43. AUX-1 Input Jack Socket

44. STEREO RCA Jack

These two RCA Jacks for connecting STEREO Input from a Cassette or CD Player.

45. Zone A DC Fuse (10 Amp)

46. Zone B DC Fuse (10 Amp)

47. SPEAKER Terminal Block for Zone B (4Ω and 8Ω)

48. SPEAKER Terminal Block for Zone B (70 and 100V)

49. EARTH Terminal

50. 3 CORE AC MAINS CABLE WITH PLUG

51. AC MAINS FUSE (Rating 5 AMP 250V)

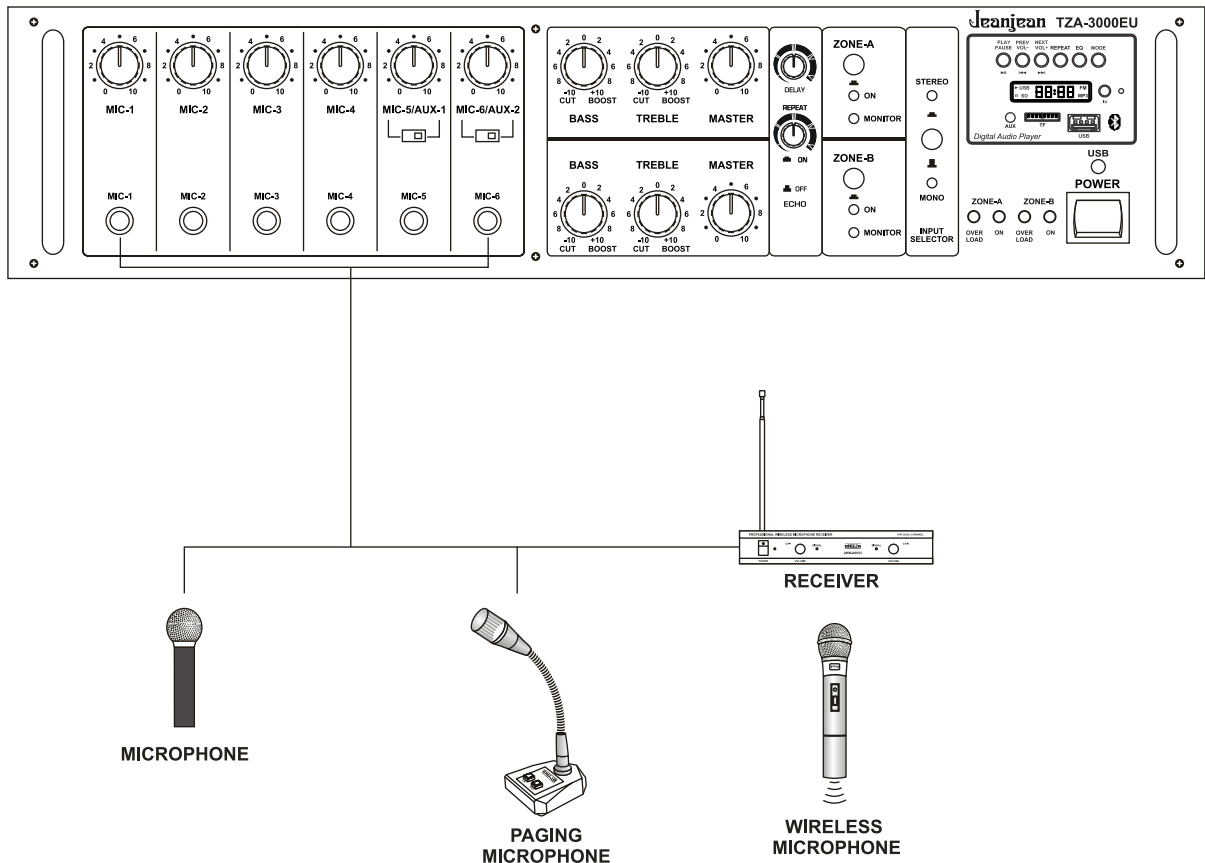
Caution

- 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.

• Interconnections

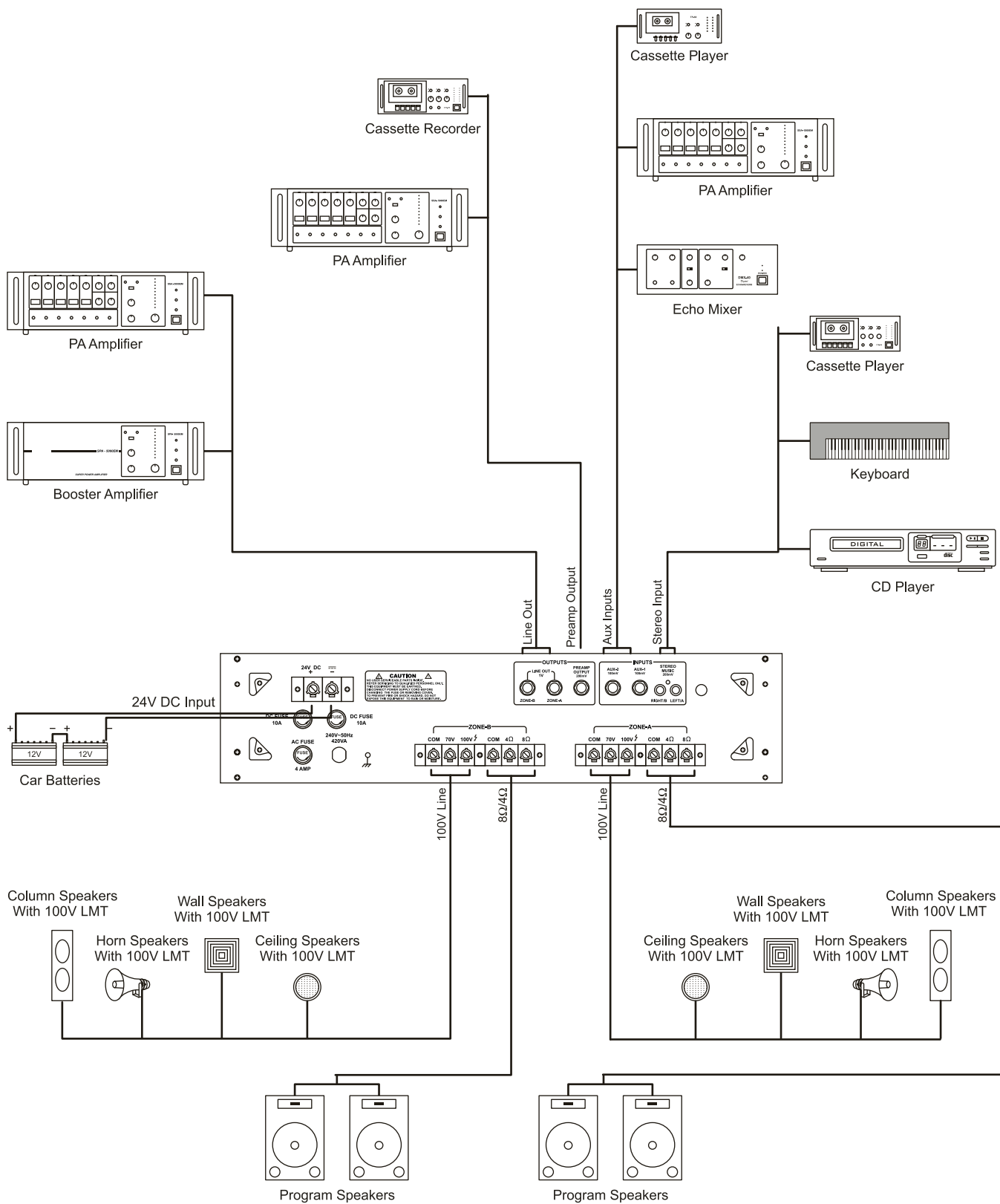
- The amplifier can be placed as a tabletop unit. Considerable heat is generated inside the amplifier during continuous use, therefore, the amplifier should be situated so that its location or position does not interfere with its proper ventilation.
- The amplifier must be powered through an AC earthed mains outlet.
- All connections must be carried out or changed only when the amplifier is switched OFF.
- The amplifier may be operated from a DC supply of 24 Volts (two car batteries connected in series).
- 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 and then the other units.
- The connection diagram below, displays the typical types of input sources (Mics, Keyboard, Cassette Player, Mixer, CD Player 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 - TZA-3000EU



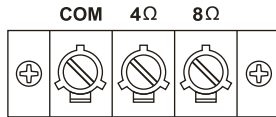
• Interconnections....

REAR PANEL - TZA-3000EU



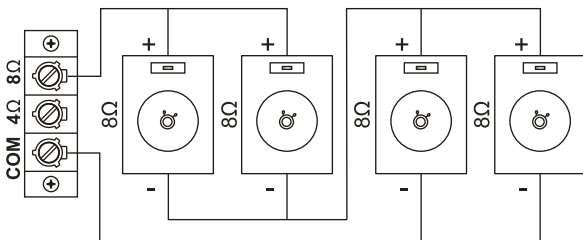
• Speaker Connection Guidelines

TZA-3000EU is a high-powered amplifier. Therefore it is very important that correct loudspeaker connections are made to avoid damage to the amplifier or speakers.



Low Impedance Speaker Connections

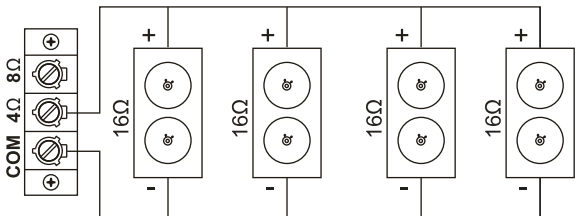
- Box type Speakers can be directly connected to Com-4Ω/8Ω Terminal Strip.
- No Driver Units / Horn Speakers / Column Speakers (with 100V LMT) should be connected to Com-4Ω / 8Ω.



Resultant Impedance = $(8 \text{ Ohm}/2) \times 2 = 8 \text{ Ohm}$

Connecting Four SRX-120DX Speakers on Each Zone

Four SRX-120DX Speakers (Each speaker can handle 100W of power) should be wired in a parallel-series combination to each zone as shown in figure. Two groups of two speakers each are connected in parallel and then the groups are connected in series. The resulting impedance will be 8Ω. The speaker system should be connected to the 8Ω tap of the amplifier.



Resultant Impedance = $(16 \text{ Ohm}/4) = 4 \text{ Ohm}$

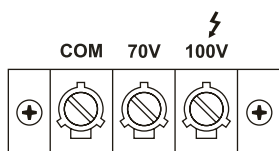
Connecting Four SRX-50DX Speakers on Each Zone

Four SRX-50DX Speakers (Each speaker can handle 50W of power) should be wired in a parallel combination to each zone as shown in figure. The resulting impedance will be 4Ω. The speaker system should be connected to the 4Ω tap of the amplifier.

⚠ Caution

- When speakers are connected to COM-4Ω/8Ω Terminal Strip NO speakers should be connected to the Red Terminal Strip marked COM-70V/100V of the same zone.
- Speakers should be connected only to either COM-4Ω or COM-8Ω terminals as illustrated above but never to more than one set of terminals.

Speaker Connection Guidelines....



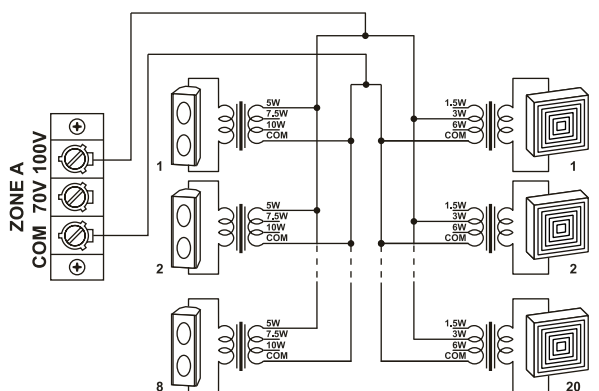
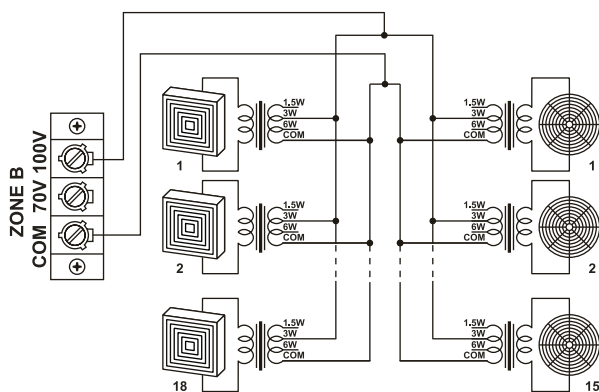
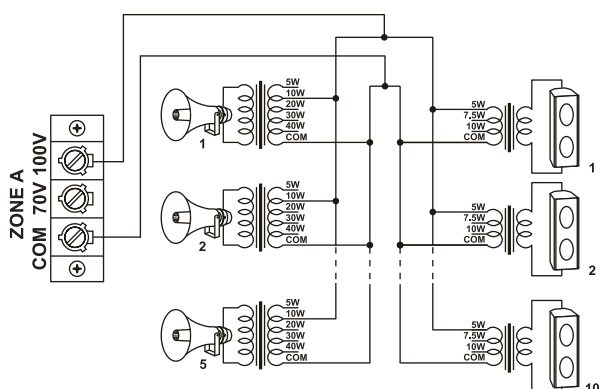
High Impedance Speakers or Speakers Using A 100V Line Matching Transformer

- Driver Units/Horn Speakers/Column Speakers with 100V Line Matching Transformers are only to be connected to Com-70V/100V Terminal Strip.
- When any of the above speakers are connected to the Com-70V/100V Terminal Strip of a zone than No Box Speakers should be connected to the COM-4Ω-8Ω Terminal Strip of that same zone.
- The power drawn from the amplifier should not exceed 300 Watts.

Connecting a combination of Driver Units and Columns Speakers with 100V LMTs on Zone A, Wall Speakers & Ceiling Speakers with 100V LMT on Zone B

- 8 Driver Units with 100V LMTs connected at 10W and 14 Columns Speakers with 100V LMTs connected at 5W can be operated on Zone A.

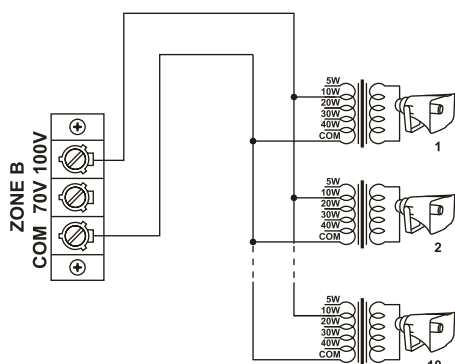
- 25 Wall Speakers with 100V LMT connected at 3W and 25 Ceiling Speakers with 100V LMT connected at 3W can be operated on Zone B.



Connecting a combination of Column Speakers and Wall Speakers with 100V LMTs on Zone A, Horn Speaker with 100V LMT on Zone B

- 15 Column Speakers with 100V LMT connected at 5W tap and 25 Wall Speakers with 100V LMT connected at 3W can be operated on Zone A.

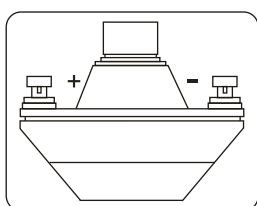
Speaker Connection Guidelines....



- On Zone B, 15 SUH-40XT Horn Speakers with 100V LMT connected at 10W can be operated.

Use of 70 Volt Line

A loudspeaker/Driver Unit with its LMT adjusted to the 15W tap, when connected to COM and 100V terminals on the amplifier's Terminal Strip will draw 15W from the amplifier but when the same is connected to COM and 70V it will only draw half power or 7.5W. 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 & 4/8Ω 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 in figure.

Caution

- When 70/100 Volt line is being used, no speakers/driver unit should be connected to 4Ω/8Ω (Low Impedance) Tap of the same zone.
- Loudspeaker/driver unit should be connected to either COM-100V or COM-70V terminals, but never to more than one set of terminals.

• Specifications

MODEL TZA-3000EU	ZONE-A	ZONE-B
Power Output	200W RMS Max. 150W RMS at 10%THD 120W RMS at 5% THD 100W RMS at 2% THD	200W RMS Max 150W RMS at 10%THD 120W RMS at 5% THD 100W RMS at 2% THD
Output Regulation	±2 dB no load to full load at 1kHz	
Input Channels	Mic: (1-6) 0.6 mV/4.7kΩ (Mic Source Imp. 50Ω to 1kΩ) Aux 1 & 2: 100 mV/470kΩ Stereo: Right Channel : 250 mV/47kΩ Left Channel : 250 mV/47kΩ	
Frequency Response	50Hz – 15,000Hz ± 3dB	50Hz – 15,000Hz ± 3dB
Signal to Noise Ratio	60dB	60dB
Tone Controls	Bass : ±10 dB at 100 Hz Treble : ±10 dB at 10 kHz	
Preamp Output	200 mV/600Ω	
Line Output	1V/1kΩ	1V/1kΩ
Output Taps for Speaker Matching	4 & 8Ω (for direct connections) 70 & 100V Line (for use with LMT)	
Power Supply	AC : 220-240V 50/60Hz DC : 24V (2x12V Car Battery)	
Protection	AC Fuse 1 × 5A DC Fuse Each Zone 15A	
AC Power Consumption	560 VA	
DC Power Consumption	3.25 A	3.25 A
Dimensions	W500 x H140 x D340 mm	
Net Weight	20.0 kg	