

True Voice®

USER MANUAL

PA-60

PA-120

PA-240

MIXER AMPLIFIER



WARNING: THIS APPLIANCE MUST BE EARTHED

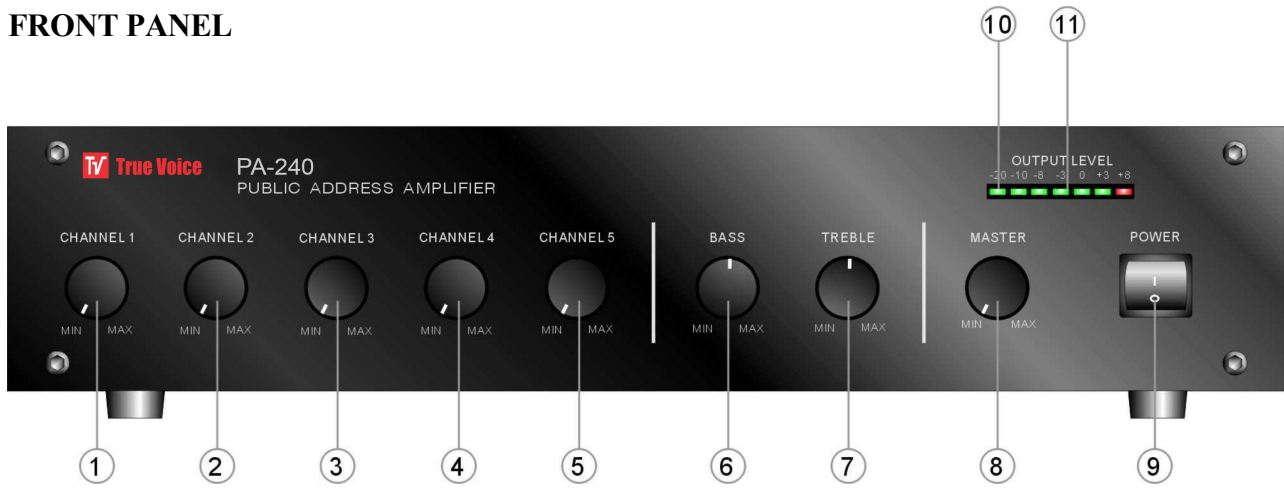


<p>IMPORTANT</p> <p>The wires in the mains lead are coloured In accordance with the following code:</p> <p>Green and Yellow : Earth (E)</p> <p>Blue : Neutra (N)</p> <p>Brown : Live (L)</p>	<p>As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows: The wire which is coloured green and yellow must be connected to the terminal which is marked with the letter N or coloured black. The wire which is marked with the letter L or coloured red.</p> <p>If a 13 Amp (B.S.1363) plug or any other type of plug is used, a 5 Amp fuse must be fitted either in the plug or at the distribution board.</p>
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GENERAL INSTALLATION

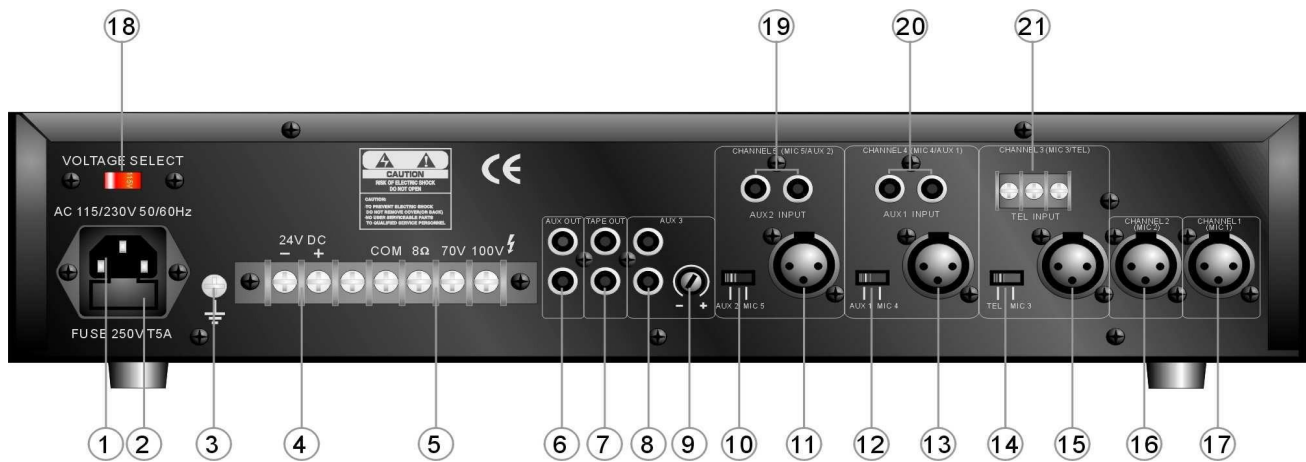
- DO NOT run microphone cables near mains, data, telephone or 70V line cables.
- DO NOT run 100V line cable near data, telephone or other low voltage cables.
- DO NOT exceed 90% of the amplifiers output power when using 70V line (speech only).
- DO NOT exceed 70% of the amplifiers output power when using 70V line (high level background music).
- DO NOT use re-entrant horn loudspeakers for background music unless the loudspeaker has been specifically designed for this purpose.
- AVOID jointing the microphone cable, when this is unavoidable make sure a good screened connector is used, e.g. Phono.
- ALWAYS use a unbalanced or floating low impedance microphone terminating into a unbalanced input on long microphone cable runs.
- ALWAYS use a mains grade double insulated cable for the loudspeaker cable runs. ENSURE that all loudspeakers are in-phase.
- ENSURE that there are no short circuits on the loudspeaker line before connecting to the amplifier

FRONT PANEL



- | | | |
|-------------------------------|----------------|----------------------------------|
| 1. Channel 1 | Volume Control | 7. Master Tone Control (Treble) |
| 2. Channel 2 | Volume Control | 8. Master Volume Control |
| 3. Channel 3 | Volume Control | 9. Power On / Off switch |
| 4. Channel 4 | Volume Control | 10. Power On / Off indicator LED |
| 5. Channel 5 | Volume Control | 11. Output Level indicator |
| 6. Master Tone Control (Bass) | | |

REAR PANEL



- | | |
|---------------------------------|-----------------------------------------------|
| 1. Mains Input Socket | 13. MIC 4 Input (XLR Jack) |
| 2. Power Fuse | 14. MIC 3/TEL Selector Switch |
| 3. Earth Connection Screw | 15. MIC 3 Input (XLR Jack) |
| 4. DC Power Supply Terminals | 16. MIC 2 Input (XLR Jack) |
| 5. Speaker Output Terminals | 17. MIC 1 Input (XLR Jack) |
| 6. Aux Output (RCA Jack) | 18. Mains Voltage (115V/230V) Selector Switch |
| 7. Tape Output (RCA Jack) | 19. Aux 2 Input (RCA Jack) |
| 8. Aux 3 Input (RCA Jack) | 20. Aux 1 Input (RCA Jack) |
| 9. Aux 3 Level Control | 21. Tel Page Input (Screw Terminals) |
| 10. MIC 5/Aux 2 Selector Switch | |
| 11. MIC 5 Input (XLR Jack) | |
| 12. MIC 4/Aux 1 Selector Switch | |

Mains Connection

The supply transformer has been designed for use on either 115Vac or 230Vac, selected by slide switch on rear panel. The amplifier is factory set at 230Vac mains voltage.

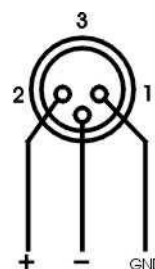
Battery Connection (24Vdc)

When using external batteries, earth the amplifier via the screw terminal because of the high voltages present. Electrical stability of the system is increased by earthing the case.

NOTE: the connection cable must be fitted with an in-line fuse. Quick blow type F10A when Connecting batteries please ensure correct polarity

Microphone Connection

Mic1~5 inputs are balanced standard XLR Jack , rear panel



Mic1 input has VOX priority which will override Channel 3~6 and Line input signals but NOT the Channel 2 input

Line (Aux/CD) Connection

The equipment provides an auxiliary input which may be used for connecting other signal sources such as a Radio Tuner, CD or Cassette player. A slide switch is located on the rear panel for selection of, Mic3→Tel, Mic4→Aux4, Mic5→Aux5.

The line level Control operates on each of the input sources.

To operate select the desired music source using the slide switch and turn the “Channel” control clockwise to increase the volume or anticlockwise to reduce the volume.

The Aux / input sockets are standard stereo RCA Jack phono, single sockets are supplied and these are linked together internally, this allows stereo signal source to be used without the need to obtain a special lead, however you may wish to check with the manufacturer of the signal source to ensure that no damage will result if the left and right output channels are put in parallel.

RCA Phono plug connections

Sleeve - Screen

Pin - Signal



Tape output Connection

These standard RCA stereo Jack phono sockets provide a mixed output suitable for connection to a tape or Cassette recorder.

Aux out

Connects the mixer/preamplifier stage to the power amplifier stage. The connecting link must be plugged in for normal operation as a mixer/amplifier. "AUX OUT" is after the tone controls and the master volume control.

Power outline voltage comply with power input voltage (IEC voltage). Loudspeaker

Connection

Note: Use only 100V or 70V (Selectable) Line Loudspeakers

Low Impedance (8Ω)

This output allows connection of standard low impedance loudspeakers, the minimum load impedance must be 8Ω, when two or more loudspeakers are used ensure that they are wired in such a way that the load impedance is between 16Ω or between (4Ω).

Connecting a Mixer Amplifier to a Power Amplifier

These amplifiers can be connected using phono to phono leads from the mixer amplifier PRE out to the power amplifier input RCA socket. Further power amplifiers can be connected by connecting from the output of the first power amplifier to the input of the second. Up to three power amplifiers can be connected in this way.

Input must be from power amp in (Rear Panel) (Mic1 XLR Jack)

Technical Specifications

Type	Mixer Amplifier			
Model	PA-60	PA-120	PA-240	
Supply	Mains Voltage	AC 115V/ 230V, 50 / 60Hz ± 10% Switchable		
	Battery Voltage	DC 24V (MAX 10% deviation)		
Output power	Max:	90W	180W	380W
	Rated (RMS)	60W	120W	240W
Output	Speaker outputs: Music/speech: , 8Ω, 70V, 100V Tape output: 1V 150KΩ Aux output: 1V, 150Ω			
Inputs	Mic 1~5: sensitivity. Adjustable (1mV), 600Ω balanced. Aux 4~6: 150mV, stereo 22K, TEL: 150mV, Adjustable 600Ω, balanced			

Frequency response	50 HZ ~ 20K Hz +/3dB		
Total harmonic distortion (THD)	<= 1 % @ 1 KHz		
Signal to noise ratio	All Volume Controls C.C.W.: 86dB below rated power		
Tone Controls	Bass: 100Hz ± 10dB Treble: 10KHz ± 10dB		
Controls	Front Panel Power switch Channel 1~5 volume control Tone controls (Bass, Treble) Master volume control Rear Panel: Aux 3 volume control Mic 3/Tel Slide switch Mic 4/Aux 1 Slide switch Mic 5/Aux 2 Slide switch AC 115V / 230V voltage Selector switch		
Indicators	Power indicator (LED), output level indicators (6 LEDS)		
AC power consumption	160W	320W	640W
DC power consumption	5A	8A	15A
Phantom power	Set up Mic 1 "off" Mic 2 "off" Mic 3 "on" Mic 4 "off" Mic 5 "off" Phantom power output 16V		
Priority	Priority level (Mic 1: 0.3mv) Channel 1 can mute Channel3 ~5, Aux3		
Dimensions (H x W x D)mm	88 (H) x 425 (W)x 305 (D)		
Weight	8.5 kgs	10 kgs	11 kgs
Color	Black		
Mounting options	Table top or 19" rack mountable		