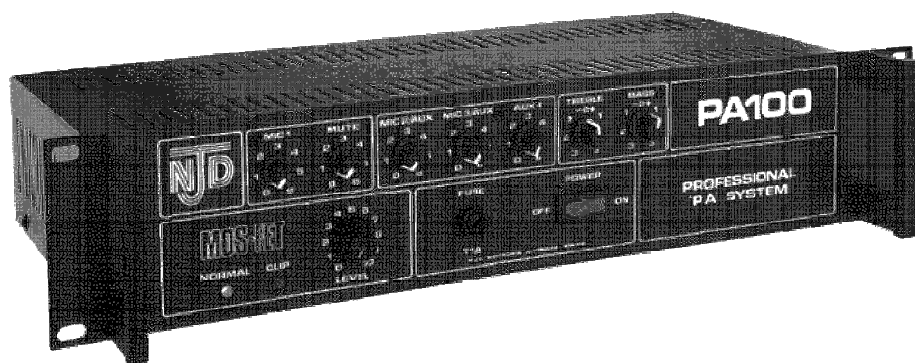


PA100



User Guide

Features of the PA100

- | One balanced microphone input with “voice-over”
- | Two switchable balanced microphone/line inputs
- | One auxilliary line input
- | 120W output
- | Treble and bass controls

Installation

Connect the PA100 to a mains supply of nominally 230V AC 50Hz, using the mains lead provided. If using a (British) BS1363 13 Amp mains plug, fit a 13 Amp fuse in the plug.

- | Brown = Live
- | Blue = Neutral
- | Green/Yellow = Earth
- | The PA100 must be earthed.

NEVER disconnect the earth, even in an attempt to prevent ‘hum’. If the earth were disconnected, it could result in equipment connected (even indirectly) to the input, such as microphones, becoming live in the event of a fault (such as a liquid spillage into the amplifier).

The PA100 is cooled by convection, so it must be installed where air can flow freely into and out of the slots in the case. Also, the heat generated must be allowed to escape, so do not install the amplifier in a cupboard.

OPERATION

Connect the inputs to the ¼” jacks on the rear panel, using single core screened lead for unbalanced microphones, or line inputs, or screened twisted pair for balanced line microphones. Connections are as follows:

Unbalanced microphone: Use a mono jack plug. Connect signal to tip and screen/earth to sleeve.

Balanced microphone: Use a stereo jack plug. Connect signal+ (also called “phase” or “hot” to the ring contact. Connect signal- (also called “non-phase” or “cold” to tip, connect earth/screen to sleeve.)

Line input (Mic 1, Mic 2/Aux and Mic 3/Aux): Use a stereo jack plug. Connect signal to ring, connect earth/screen to sleeve. Make no

connection to tip.

Line input (Aux 4): Use a mono jack plug. Connect signal to tip and earth/screen to sleeve

Note: The output from a radio microphone receiver is often at line level.

The PA100 mixer is earthed, so the screen of input cables should not be connected to earth at the signal source in order to avoid hum loops. If the signal source has a connection to mains earth then this **MUST NOT** be removed. If a hum loop occurs then the connection between the cable screen and mains earth needs to be removed. It may be necessary to consult a dealer if this involves modification to either unit.

Set the Volume control for the required output volume for each particular channel.

The 'AUX' inputs can be used for the connection of any line level (0dBm) input such as Tape, CD, video sound, keyboard etc.

The PA100 is not directly compatible with magnetic cartridges (use an external magnetic cartridge preamp with RIAA equalisation).

The BASS and TREBLE tone controls affect all four inputs. A boost or cut of 12dB can be achieved.

The slave out socket is a line level output to allow the connection of an external slave amplifier.

Connect low impedance loudspeakers to the PA100 using the ¼" jacks on the rear panel, loudspeakers can be connected to the low-impedance output with a minimum of 4W.

For speakers connected in PARALLEL:

Speakers	Combined impedance
2 x 16 W	8 W
3 x 16 W	5.3 W
4 x 16 W	4 W
1 x 16 W, 1 x 8 W	5.3 W
2 x 16 W, 1 x 8 W	4 W
2 x 8 W	4 W

For more than 4 speakers, a 100V line system based on the PA100/100V should be considered.

Speaker Leads

Speaker leads should be chosen with care, Also, never connect the output of the amplifier to a light controller with screened lead: use thin speaker cable.

Cable size	Maximum length for:		
	4 Wload	8 Wload	16 Wload
0.5mm ²	2.3m	4.6m	9.2m
0.75mm ²	3.5m	7.0m	14.0m
1.0mm ²	4.7m	9.4m	18.8m
1.25mm ²	5.85m	11.7m	23.4m
1.31mm ²	6.0m	12.0m	24.0m
1.5mm ²	6.75m	13.5m	27.0m
2.5mm ²	11.4m	22.8m	45.6m

Note: Speaker cables should not be run in the same conduit or trunking as mains cables unless the speaker cables are insulated to the same specification as the mains cables (IEE wiring regulations, 16th edition, Chapter 52).

Standards

The PA100 complies with:

BS EN60065 Electrical Safety), BS6840 (Sound System Equipment)

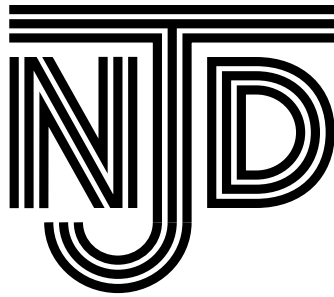
Portable Appliance Testing

The PA100 should be checked for Electrical Safety annually, and if it is hire equipment, before it is hired out. A high-voltage test (at 500V or 1000V) should be carried out between live and earth, and an earth bonding test between the case and the earth connection (at 10A or 16A). Insulation resistance should be greater than 10MW and earth bonding resistance less than 0.5W. A high voltage test may also be carried out between the audio inputs and live, if the equipment has passed the live-earth test.

Not all parts of the case are bonded to earth - these are separated from live parts by double insulation.

Do not test high-voltage or earth bonding between audio inputs and earth - this will destroy the electronics.

Technical	Specification
Dimensions:	483×89×279mm
Weight:	6.9kg
Cooling:	Natural convection.
Output voltage:	96V peak-peak
Output impedance:	0.05W
Power output:	120W RMS into 4W
(at onset of clipping.)	90W RMS into 8W
	50W RMS into 16W
Input impedance (mic):	10kW
Input impedance (aux):	10kW
Input sensitivity: (mic):	3mV (-48dBm)
Input sensitivity (aux):	100mV (-18dBm)
Slave Output:	775mV @ 1kW (0dBm)
Tone Controls:	±12dB
Frequency response:	
(low impedance)	20Hz to 20kHz ±3dB
Hum and noise:	-80dB
Harmonic Distortion:	0.1% at 100Watts into 4W
Stability:	Unconditionally stable
	Open and short circuit protected.
	DC output protected.
Power requirement:	230V AC 50Hz 120VA
Connections:	
Mains:	0.75mm ² cable to BS6500
Inputs:	¼" stereo jacks (balanced line)
Output:	¼" jacks
Fuse:	T1A (1Amp anti-surge 5×20mm HBC)
	<i>Do not replace by a glass cased fuse.</i>



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