



WARNING: THIS APPLIANCE MUST BE EARTHED



IMPORTANT

The wires in the mains lead are coloured in accordance with the following code:

Green and Yellow: Earth (E)
Blue: Neutral (N)
Brown: Live (L)

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 by the letter E or by the safety earth symbol or coloured green and yellow. The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

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.

INSTALACION GENERAL

DO NOT run microphone cables near mains, data, telephone or 100V line cables.

DO NOT run 100V line cables near data, telephone or other low voltage cables.

DO NOT exceed 90% of the amplifiers output power when using 100V line (speech only).

DO NOT exceed 70% of the amplifiers output power when using 100V 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. XLR.

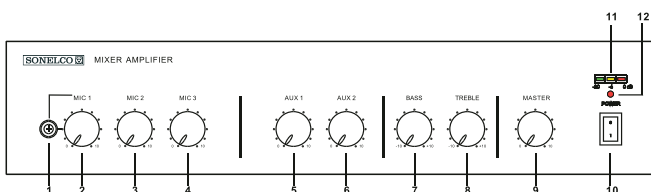
ALWAYS use a balanced or floating low impedance microphone terminating into a balanced input on long microphone cable runs.

ALWAYS use a mains grade double insulated cable for the loudspeaker cable runs.

ENSURE that all loudspeakers are in-phase.

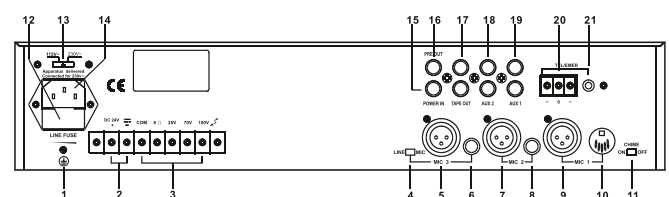
ENSURE that there are no short circuits on the loudspeaker line before connecting to the amplifier.

FRONT PANEL

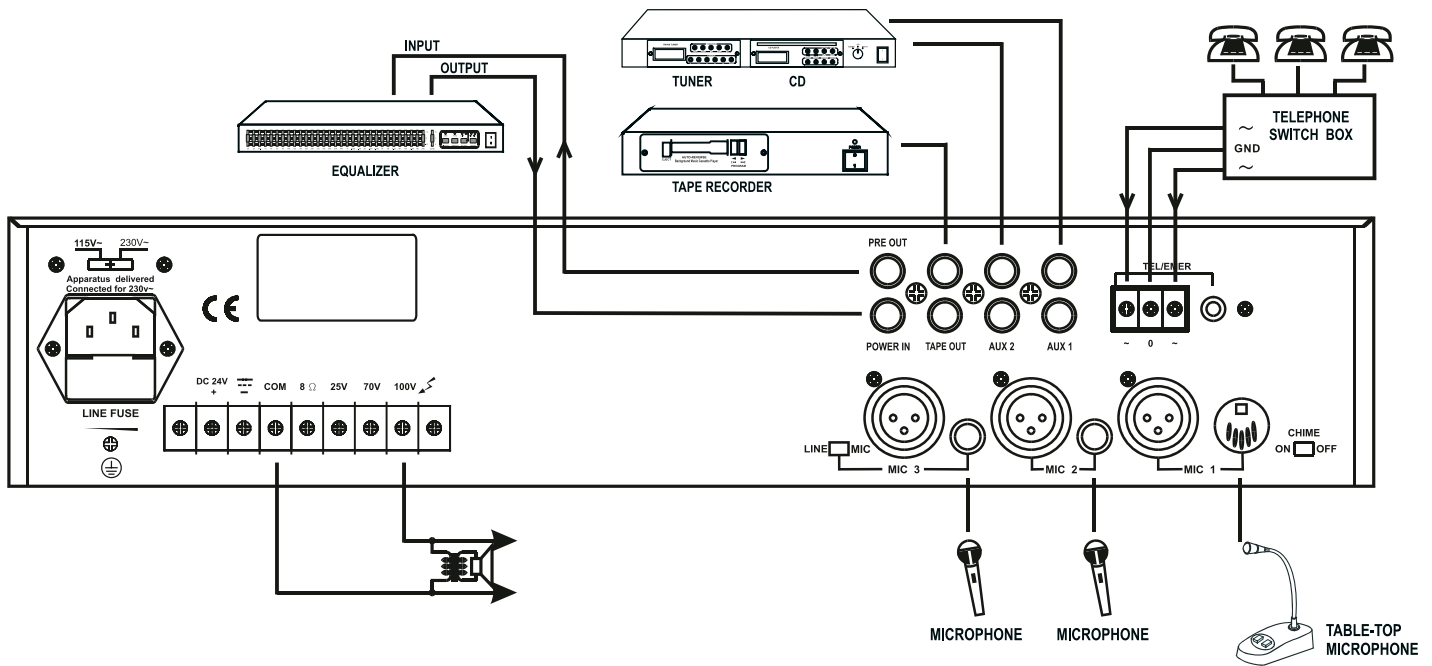


1. Mic 1 Input (phone) 6.35 mm jack
2. Mic 1 Volume Control
3. Mic 2 Volume Control
4. Mic 3 Volume Control
5. Aux 1 Volume Control
6. Aux 2 Volume Control
7. Master Tone Control (Bass)
8. Master Tone Control (Treble)
9. Master Volume Control
10. Power On/Off Switch
11. Output Level Indicator LED
12. Power On/off Indicator LED

REAR PANEL



1. Earth Connection Screw
2. DC power supply terminals
3. Loudspeaker output terminals
4. Mic3 (Line / Mic) Selector Switch
5. Mic3 input (XLR / balanced)
6. Mic3 input (phone / balanced)
7. Mic2 input (XLR / balanced)
8. Mic2 input (phone / balanced)
9. Mic1 input (XLR / balanced)
10. Mic1 input (DIN / balanced)
11. Chime on/off switch
12. AC fuse holder
13. Mains Voltage (115V/230V) selector switch
14. Mains input socket
15. Power input (RCA phono)
16. Pre output (RCA phono)
17. Tape output (2X RCA phono)
18. Aux2 input (2X RCA phono)
19. Aux1 input (2X RCA phono)
20. TEL / EMER input terminals
21. TEL / EMER input level Control



CONNECTIONS

Mains Connection

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

Battery Connection(24V dc)

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.

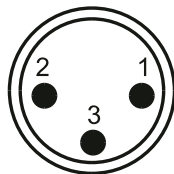
NOTE: The connection cable must be fitted with an in-line fuse, quick blow type F15A. When connecting batteries please ensure correct polarity.

Microphone Connections

Mic1 input is either a balanced standard 6.35 mm (1/4") stereo jack on front panel or XLR and DIN on the rear panel (With selectable phantom power). Wiring is as follows:

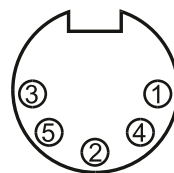
XLR (Balanced operation)

- Pin 1: Screen
- Pin 2: Signal (live)
- Pin 3: Signal (return)



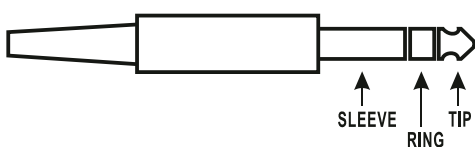
DIN (Balanced operation)

- Pin 1: Signal (live)
- Pin 2: GND
- Pin 3: Signal (return)
- Pin 4: Priority control
- Pin 5: GND



6.35 mm Stereo Jack Plug (Balanced operation)

- Tip: Signal (live)
- Ring: Signal (return)
- Sleeve: Screen



Mic1 input has VOX priority which will override Mic2-3 and Aux1-2 input signals but NOT the TEL/EMER input.

Mic1-3 inputs are XLR,DIN and phone jack with selectable phantom power located on the rear panel and wired as above. The phantom power is factory set to off and be enabled as follows:

1. Remove power lead from the AC wall socket.
2. Remove top cover.
3. Locate the link pins (Marked SW102) on the PCB behind microphone XLR input socket.
4. Connect the black shorting plug to the centre pin and ON position to enable the phantom power

Chime

Switching on the manual chime on/off switch on the rear panel and short the pin4, pin5 of DIN socket or short the sleeve and ring of phone plug-Mic1 will activate the chime function ("Ding-Dong" attention signal preceding a call).The default volume of the chime is pre-set at the factory and is adequate for most applications.)

Telephone Connection

This input is for emergency announcements/signals and is not effected by the master volume control. Input level can be set by level control on the rear panel. The TEL input has the highest priority and will override all other inputs.

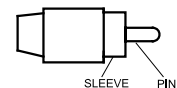
Aux Connection

The equipment provides two auxiliary inputs which may be used for connecting other signal sources such as a Radio Tuner, CD or Cassette player. The level Control operates on each of the input sources.Turn the control clockwise to increase the volume or anticlockwise to reduce the volume.

The Aux input sockets are standard RCA phono, two sockets are supplied and these are linked together internally, this allows stereo signal sources 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 connection

- Sleeve - Screen
- Pin - Signal



Tape Output Connection

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

Power in and pre 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. If a compressor/limiter, equaliser, or other external signal processor is used in the sound system, connect the "PRE OUT" to the input of the external processor and the output of the processor to "POWER IN" In the signal chain, "PRE OUT" is after the tone controls and the master volume control.

Loudspeaker Connection

This equipment provides four different types of loudspeaker output, these are 100V, 70V, 25V line and low impedance. You can only use one of these output at any one time, any attempt to use two or more of these may result in damage to the amplifier

100V Line

These loudspeakers are most commonly used in the Europe for PA distribution. When the amplifier is at full output 100V RMS will be present at the output terminals. Only use 100V line loudspeakers with this output. All loudspeakers are wired in parallel and the sum of the power tapping of each loudspeaker must not exceed the rated output of the amplifier. Ideally, due to the nature of loudspeaker and transformer impedance's, it is advisable not to load the amplifier to greater than 70% of its rated output when using music sources.

70V / 25V Line

This system is common in the USA, it operates on exactly the same principals as 100V line except that at rated output the amplifier will have 70V RMS or 25V RMS on its output terminals.

Low Impedance (8 Ohm)

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

TECHNICAL SPECIFICATIONS

	Type Model	Mixer Amplifier MP3120M
Supply	Mains Voltage	AC 115/230 V, 50/60 Hz +/-10% switchable
	Battery Voltage	24 VDC (Max 10% deviation)
Output power	Max	180 W
	Rated	120 W
Outputs	Speaker outputs: 8 Ω /25V/70V/100V Tape Out:350mV, 4.7K Ω Pre Out: 1V, 600 Ω	
Inputs	Mic1- Mic3: 1 mV, 250 Ω balanced with phantom power selectable Aux1: 200mV, 47K Ω , unbalanced Aux2: 500mV, 47K Ω , unbalanced Line (Mic3): 200mV, 47K Ω , balanced Tel: 0.1-1V, 600 Ω , adjustable, balanced Power in: 1V, 47K Ω , unbalanced	
Frequency response	Mic1-3 : 60 Hz - 15 KHz +/- 3dB Aux1-Aux2: 60 Hz - 15 KHz +/- 3dB TEL: 100 Hz - 15 KHz +/- 3dB	
Total harmonic distortion	<1% at 1 KHz, rated power	
Signal to noise ratio	All Volume Controls C.C.W.: 75dB below rated power Mic1-Mic3: 60 dB below rated power Aux1-2: 70 dB below rated power TEL: 70 dB below rated power	
Tone controls	Bass: +/- 10 dB at 100 Hz Treble: +/- 10 dB at 10 KHz	
AC power consumption	360 W	
DC power consumption	8 A	
Chime	Two tone chime (Ding-dong attention signal preceding a call)	
Priority	Priority level (Using for Mic1 the 5-pole DIN connector, the phone jack or the corresponding XLR connector) TEL/ Emer Mic1 Mic2 Mic3 Aux/CD 3 2 1 1 1	
Dimensions (W x H x D)	430 x 88 x 260 mm	
Weight	Approx. 9.5 Kg	
Colour	Black	
Mounting options	Table top or 19" rack mountable	