

4FA019301

MIXER AMPLIFIER MP5120C - MP5240C



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.

GENERAL INSTALLATION

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.

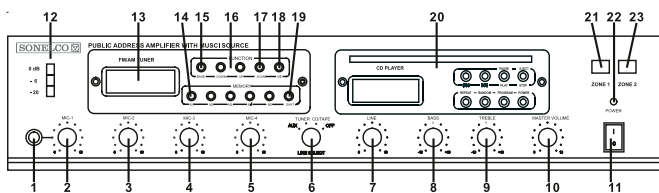
ALWAYS use a balanced or floating low impedance microphone terminating into a balanced input on long microphone cable runs.

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

ENSURE that all loudspeakers are in-phase.

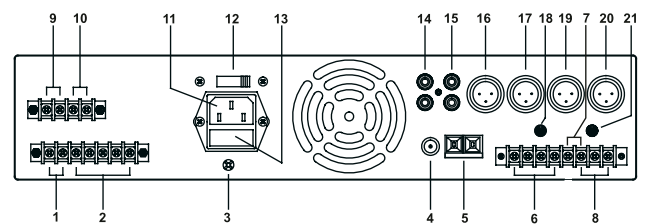
ENSURE that there are no short circuits on the loudspeaker line before connecting to the amplifier.

FRONT PANEL



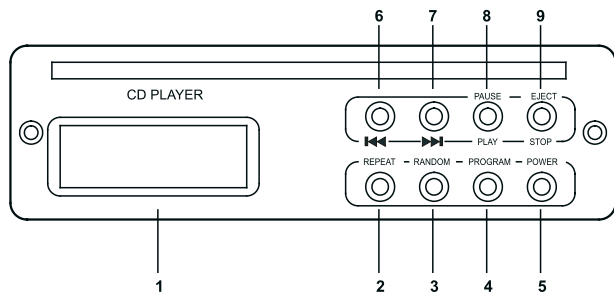
1. Mic1 input (6.35mm phone jack/balanced).
2. Mic1 volume control.
3. Mic2 volume control.
4. Mic3 volume control.
5. Mic4 volume control.
6. Music Source Select (AUX/TUNER/CD-TAPE/OFF).
7. Line (Music Source) volume control.
8. Master tone control (Bass).
9. Master tone control (Treble).
10. Master volume control (all inputs except TEL).
11. Power ON/OFF switch.
12. VU meter (LEDs for -20, -6, 0dB)
13. Tuner display.
14. Memory keys.
15. AM/FM selection key.
16. Frequency up/down key.
17. Scan key.
18. Set memory key.
19. Shift key.
20. CD player unit built in slot.
21. Zone 1 select switch button.
22. Power on indicator LED.
23. Zone 2 select switch button.

REAR PANEL



1. 24V dc power supply terminals.
2. Loudspeaker output terminals(80hm/25V/70V/100V)
3. Earth connection screw.
4. FM antenna input.
5. AM antenna input.
6. MOH (music on hold)output terminals.
7. Manual muting terminals
8. TEL input terminals.
9. Zone 1 loudspeaker output terminals.
10. Zone 2 loudspeaker output terminals
11. Mains input socket.
12. Mains voltage 115v/230v switch.
13. AC fuse holder
14. Line output (2xRCA phono).
15. Auxiliary input (2xRCA phono).
16. Mic-4 input (XLR/balanced with selectable phantom power).
17. Mic-3 input (XLR/balanced with selectable phantom power).
18. MOH output level control
19. Mic-2 input (XLR/balanced with selectable phantom power).
20. Mic-1 input (XLR/balanced with selectable phantom power).
21. TEL input level control

CD PLAYER UNIT



1. CD display.
2. Repeat key.
3. Random key
4. Program key.
5. CD power on/off key
6. Previous key.
7. Next key.
8. Play/pause key.
9. Stop/eject key.

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.

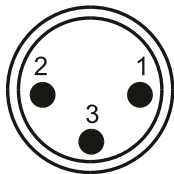
NOTE: The connection cable must be fitted with an in-line fuse, quick blow type F15A. When connecting batteries please ensure correct polarity.

Microphone Connections

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

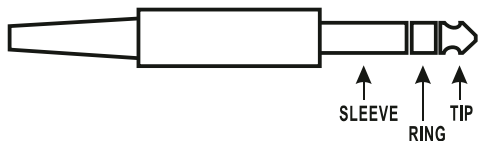
XLR (Balanced operation)

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



6.35 mm Stereo Jack Plug (Balanced operation)

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



Mic1 input has VOX priority which will override Mic2-4 and Aux (Line) input signals but NOT the TELEPHONE input.

Mic1-4 inputs are XLR 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 jump 1, 2, 3 & 4) on the PCB behind each microphone XLR input socket.
4. Connect the black shorting plug to the centre pin and ON position to enable the phantom power

Chime

Switching the manual muting terminals on the rear panel 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 rotary control on the rear panel. The TEL input has the highest priority and will override all other inputs.

MOH (Music On Hold) Output Connection

Two MOH output are provided on the rear panel.

- (i) 600 Ohm/1V. to feed an EPABX system.
Output level adjustable Please consult your EPABX handbook to utilise this facility.
- (ii) 8 Ohm, 1W for monitoring applications.

Aux (Line) Connection

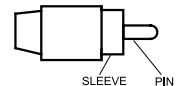
The equipment provides an auxiliary input which may be used for connecting other signal sources such as a Radio Tuner, CD or Cassette player. Line level Control is shared with the built-in Tuner and CD. A rotary switch is located on the front panel for selection of Tuner, CD/Cassette, Aux and OFF. The line level control operates on each of the input sources. To operate select the desired music source using the rotary switch and turn the "Line" 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 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 connection

- Sleeve - Screen
- Pin - Signal



Line Output Connection

This equipment provides two booster output sockets which can be used to drive a booster amplifier in situations where more power is required. Connection is via RCA phono pluge. (See above)

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.

Zone 1 & 2

In addition to the normal 100V line output there are two sets of 100V line terminals for 2 zones which can be selected using the push buttons on the front panel.

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.

OPERATION

CD OPERATION

- 1 Select **CD** mode with (**LINE**) select switch.
- 2 Press (**POWER**) key on CD player.
- 3 Load disc (label side up) into player and **PLAY** starts automatically.
- 4 Press **PAUSA** key and symbol **II** appears in the display and play is suspended. Press pause key to resume play.
- 5 Pressing **▶▶** key selects the next track and **◀◀** key the previous track.
- 6 Press the (**RANDOM**) key, random appears in the display and tracks are played out of sequence.
- 7 Press the (**REPEAT**) key once and symbol  appears on the display and the current track is repeated. When the key is pressed twice the symbol  appears and indicates repeat play of the disc. To cancel these functions press the REPEAT key.
- 8 Programming the CD player – in STOP mode.
 - (i) Press the "**PROGRAM**" key
 - (ii) Use the next **▶▶** or previous **◀◀** key to select a track.

(iii) Press (**REPEAT**) key to memorise the selected track in your program. Repeat stages (ii) and (iii) to program a maximum of 20 tracks.

(iv) Press the **PLAY** key to start the program
(Note: The program repeats itself until the CD player is stopped).

TUNER OPERATION

For FM reception connect a dipole aerial using 75 Ohm coaxial to the socket at the rear of the unit. Connect the supplied antenna to the AM spring loaded terminals.

1. Select (**TUNER**) mode with the Line select switch
2. Select **AM** or **FM** with the **BAND** key
3. Use the **UP/DOWN** keys to set a frequency manually or the **SCAN** key to automatically search for the desired station.
4. To program a station press the **ME** (Memory) key
5. Press a **MEMORY** key (M1 to M5) or **SHIFT** key and memory key (M6 to M10) to store a frequency.

TECHNICAL SPECIFICATIONS

	Type	PA Amplifier with Music Sources	
	Model	MP5120C	MP5240C
Supply	Mains Voltage	AC 115/230 V, 50/60 Hz +/-10% switchable	
	Battery Voltage	24 VDC (Max 10% deviation)	
Output power	Max	180 W	360 W
	Rated	120 W	240 W
Outputs	Speaker outputs: 8 Ω/25V/70V/100V MOH output: 8 Ω, 1W / 600 Ω, 1V balanced Line output: 600 Ω, 1V		
Inputs	Mic1: 1 mV, 250 Ω balanced with phantom power selectable (Jump 1) Mic2: 1 mV, 250 Ω balanced with phantom power selectable (Jump 2) Mic3: 1 mV, 250 Ω balanced with phantom power selectable (Jump 3) Mic4: 1 mV, 250 Ω balanced with phantom power selectable (Jump 4) Aux: 200mV, 47KΩ, unbalanced Tel: 0.1-1V, 600 Ω, adjustable, balanced		
Frequency response	60 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-Mic4: 60 dB below rated power Aux: 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		400 W	760 W
DC power consumption		8 A	16 A
Chime	Two tone chime (Ding-dong attention signal preceding a call)		
Priority	Priority level (Using for Mic1 the phone jack or the corresponding XLR connector) TEL/Emer Mic1 Mic2 Mic3 Mic4 Aux/Tuner/CD-Tape 3 2 1 1 1 1		
Dimensions (W x H x D)	430 x 88 x 385 mm		
Weight		Approx. 10 Kg	Approx. 13 Kg
Colour	Black		
Mounting options	Table top or 19" rack mountable		

MPCD-2 CD Player unit

Type	CD player unit
Model	MP CD-2
Distortion	< 0.1 %
S / N	> 80 dB
Output	850 mV
Function	Eject/Stop, Pause/Play, Next key, Previous key, Power, Program, Random, Repeat.

MPTM-2 AM/FM Digital tuner

Type	AM/FM Digital Tuner
Model	MP TM-2
Tuning range	FM: 87.5 – 108 Mhz AM: 522 – 1620 KHz
Sensitivity	FM: 2 µV (26 dB S/N) AM: 30 µV (30 dB S/N)
Frequency response	30 Hz – 15 KHz (+1 / -3 dB)
Distortion	< 1 %
S / N	> 63 dB (1 mV/FM)
Output	500 mV (0 – 1 V adjustable)

100 V. LINE
2 ZONES

