



PUBLIC ADDRESS SERIES

EVOLUTION SERIES



Owner's Manual



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EV6 – EV120B – EV240B

EV120B and EV240B integrated amplifiers and EV6 mixer have been designed to satisfy the demand of a market on a continuous technological evolution, in the most flexible and professional way.

PRODUCT DESCRIPTION

Monophonics amplifier and mixer of EVOLUTION Series has 6 MIC/AUX inputs (labelled with nos. 1-6), electronically balanced, adjustable for medium-high level microphone and sources, connected to input sockets for a simple use (as later indicated), 1 SEND output and 1 RETURN input to insert an external additional equipment, for ulterior elaboration of the sound (larsen effect suppressor, equalizer, level processor, etc.), in the circuit, 1 LINK IN input, 1 PRE OUT output. A 24 VCC potential is available for the first 4 MIC sockets, which could be inserted by a 4 way micro-switch and conveyed on the phonic line, the same potential for the eventual direct “phantom” power supply of electret microphones.

It has a power indicator and led vu meters, sensitivity controls (GAIN), tones (TREBLE, MIDDLE, BASS), volume (LEVEL) separated to each input and main volume control (MASTER).

Audio power outputs for loudspeakers of amplified series (EV120B and EV240B) are arranged for connection to constant impedance lines and constant voltage.

The whole electronic circulation has quality and safety features in working; it is provided with “earth-lift” switch (on the back).

Metal framing is suitable to be supported on a surface (table, etc.) and is equipped with separated stirrups for assembly in 19” rack; in this case it occupies 2 U units = 88mm.

POSSIBLE USES

- conferences
- places of worship
- hotels
- schools
- airports
- offices
- supermarkets
- restaurants
- motorway restaurants
- auditoriums
- industries
- gyms

POWER SUPPLY

The unit is expected to work with 230 VCA – 50/60 Hz distribution system and with 24 VCC battery.

In case of power dysfunction, check the outside and inside protection fuses (for 24 VCC) and eventually replace them with others of same calibration; if one of them burns out immediately, do not go on and have check the unit by qualified personnel.

Take away plug from 230 VCA electric power socket and 24 VCC battery always, before removing fuses and, in any case, open the unit framing.



SIGNAL INPUTS AND OUTPUTS CONNECTION

Even though it has 6 input channels with a wide versatility in using (adjusted sensitivity from 2,5 mV to 500 mV), separated sockets are available for a quick typological connection:

- MICROPHONES

6 connectors of 3 female poles XLR type with balanced audio input are used.

On channel 1 (XLR + 5-pole DIN) pin 5 of socket M1 is connected to a “Priority” activation circuit; if a microphone (or a microphone base) with a priority consent is being connected, by pressing the speaking key, the other preamplifier inputs (M2, M3, M4, M5, M6) softening could be achieved. On the above mentioned DIN (pin 4) socket a 24 VCC potential is available for eventual amplified microphonic places.

As OPTIONAL it is possible to assemble a DIN-DON card, activated with the priority function (1 of fig. 4).

A 24 VCC potential for direct “phantom” supply of electret-type microphones could be joint to M1 – M2 – M3 – M4 sockets (on the same balanced phonic line), through the multi-micro switch placed on the back; therefore, before connecting a microphone it should pay attention to the model (if dynamic or electret). In case of dynamic microphone do not insert 24 VCC; insert it with electret microphone only.

5 and 6 microphonic socket cannot be used at the same time of CD and TAPE socket use, because electronic circuits are in common: M5 with CD, M6 with TAPE.

-Scalar Priority function

On request it is possible to have a model equipped with a “scalar priority” card connected to M1, M2 and M3 sockets, and with six 5-pole Din as input connectors.

In this model input 1 has the priority on the other inputs M2, M3, M4, M5, M6; input 2 has the priority on inputs M3, M4, M5, M6, and so on.

-AUX function (CD and Tape excluded)

For this function, i.e. the use of tuners and radio microphones, audio from video projectors, outside audio lines (to be protected by inserting a separator transformer), message and tone generators, etc., both microphones connectors (i.e. those remained available) and those further on described.

- CD

For the use of CD a couple of mono-female-RCA connectors (unbalanced audio) is arranged. Listening will be monophonic also using stereo cables directly plugged in.

Using CD sockets, it will be impossible connecting anything to Microphone 5 socket, because Sensibility, Tones and Volume adjustments for “CD” are made with “Micro 5 sector” of preamplifier.

- TAPE REC-PLAY

For the use of tape Recorders or spools 2 couples of mono-female-RCA connectors (unbalanced audio) are arranged. Listening and recording will be monophonic also using stereo cables directly plugged in.

As already said, it is impossible to connect anything to Microphone 6 socket by using Rec-Play sockets, because Sensibility, Tones and Volume adjustments for “Tape” are made with “Micro 6 sector” of preamplifier.



- ANTILARSEN SEND-RETURN

SEND and RETURN sockets are available for intermediate connection of outside sound processing devices (antilarsen, equalizer, level processor, etc.) in order to improve sound reproduction quality and to correct the environment response, or to satisfy particular specifications requirements.

M1, M2, M3, M4, M5 inputs are involved with the above mentioned insert devices.

6.3 mm female Jack mono connectors are used (unbalanced connector); In order to permit inner circuit continuity, when plug is non inserted (male plug), Jack connector on the RETURN socket is in commutation configuration.

- LINK IN

LINK IN input is arranged for the eventual connection from other external audio source, directly "mixed" to preamplifier; female XLR 3 pin connector is used (balanced connector).

- PRE OUT

It is the preamplifier output with the independent or dependent audio signal (PRE/POST) from the Master volume regulator; it could be internally selected by JUMPER (1 of fig. 3); a 6,3-mm stereo female Jack connector is used (balanced connector).

LOUDSPEAKER CONNECTIONS (For EV120B and EV240B only)

The device is provided with a multi-way output terminal board for connection to constant impedance and constant voltage lines.

- CONSTANT IMPEDANCE LINES

4 and 8 Ohms terminals should be used.

In order to achieve the maximum efficiency of the system and to take precautions from amplifier bad working, it is necessary to check the effective loading impedance of the lines. The total speakers impedance should be equal or higher than pre-selected value for connection.

To get that, each loudspeaker should be without transformer and should be connected in series or in series-parallel groups; In any case loudspeakers should also have the same power handling (see fig. 2a).

- CONSTANT VOLTAGE LINES

50 V, 70 V, 100 V terminals should be used with each loudspeaker provided with line transformer and parallel connected (see fig. 2b).

In order to achieve the maximum efficiency of the system and to take precautions from amplifier bad working, it is necessary to check the effective total power handling of the loudspeakers that has to be equal or lower than the RMS power value of used amplifier. It's a good rule arranging a 10-20% safety margin on the amplifier power capability.



SPECIFICATIONS: EV6 – EV120 – EV240

TAPE/CD input sensitivity	-34 ÷ +14 dBm	15mV ÷ 3,8V
MICRO input sensitivity	-50 ÷ -2 dBm	2,5 ÷ 500 mV
Balanced input impedance	10 Kohm	
Bass control	± 12 dB a 60 Hz	
Middle control	± 8 dB a 700 Hz	
Treble control	± 12 dB a 10 KHz	
TAPE REC output level	-5 dBm 430 mV	
LINK IN input level	-0 dBm 775 mV	
PRE output nominal level with red led on	+6 dBm 1,5V	
PRE output with master level to max	+9dBm	
SEND and RETURN level	+0 dBm 775 mV	
Frequency response MIC (@-3 dB)	80-16.000 Hz	
Frequency response LINE (@-3 dB)	60-17.000 Hz	
Frequency response LINK IN (@-3 dB)	60-18.000 Hz	
Nominal power distortion @ 1 KHz	< 1%	
Signal/noise ratio (20÷20KHz weighted):		
MICRO	>62 dB	
AUX	>80 dB	
Power supply voltage:		
from CA mains	230 V CA 50÷60 Hz	
from battery	24 VCC	
EV6		
Consumption	15 VA	
Dimensions (WxHxD)	482x88x205mm	
Weight (Kg)	3,8	
	EV120B	EV240B
RMS nominal power	120 W	240 W
I.H.F. power	180 W	360 W
Consumption	220 VA	440 VA
Dimensions (WxHxD)	482x88x256mm	482x88x340mm
Weight	9 Kg	14 Kg
Loudspeaker output:		
constant impedance	4-8 Ohm	
constant voltage	50-70-100 V	

COMMANDS AND FUNCTIONS (as per Fig.1)

- 1) POWER – power switch.
- 2) LEVEL – MIC/AUX input volume.
- 3) BASS – Bass adjustment.
- 4) MIDDLE - Middle adjustment.
- 5) TREBLE – Treble adjustment.
- 6) GAIN – gain adjustment.
- 7) MASTER LEVEL – main volume.
- 8) VU meter – Pre output level indicator.
- 9) MAINS - 230 V~ supply socket.
- 10) FUSE – CA mains protection fuse, gauge 1AT (delayed).
- 11) GND LIFT – Ground lift selector.
- 12) PRE OUT – Pre amplifier mixed output.
- 13) LINK IN – high level input from external compatible source.
- 14) ANTILARSEN SEND - output from external device.
- 15) ANTILARSEN RETURN – input from external device.
- 16) TAPE REC-PLAY – Stereo input/output for audio recorder, available on M6 channel
- 17) CD - Compact disc input available on M5 channel.
- 18) PHANTOM - Micro-switch for phantom supply 24 VCC, for micro input from M1 to M4.
- 19) MICRO1÷6 – Microphone inputs in variable sensitivity configuration. When CD and TAPE are used M5 and M6 refer to them and just 4 channel are available for micro use.
- 20) POWER OUT – Loudspeaker lines output.
- 21) BATT. - 24 VCC supply input from external battery.
- 22) MICRO 1 PRIORITY – microphonic input with DIN connector for connection to devices having priority function button.

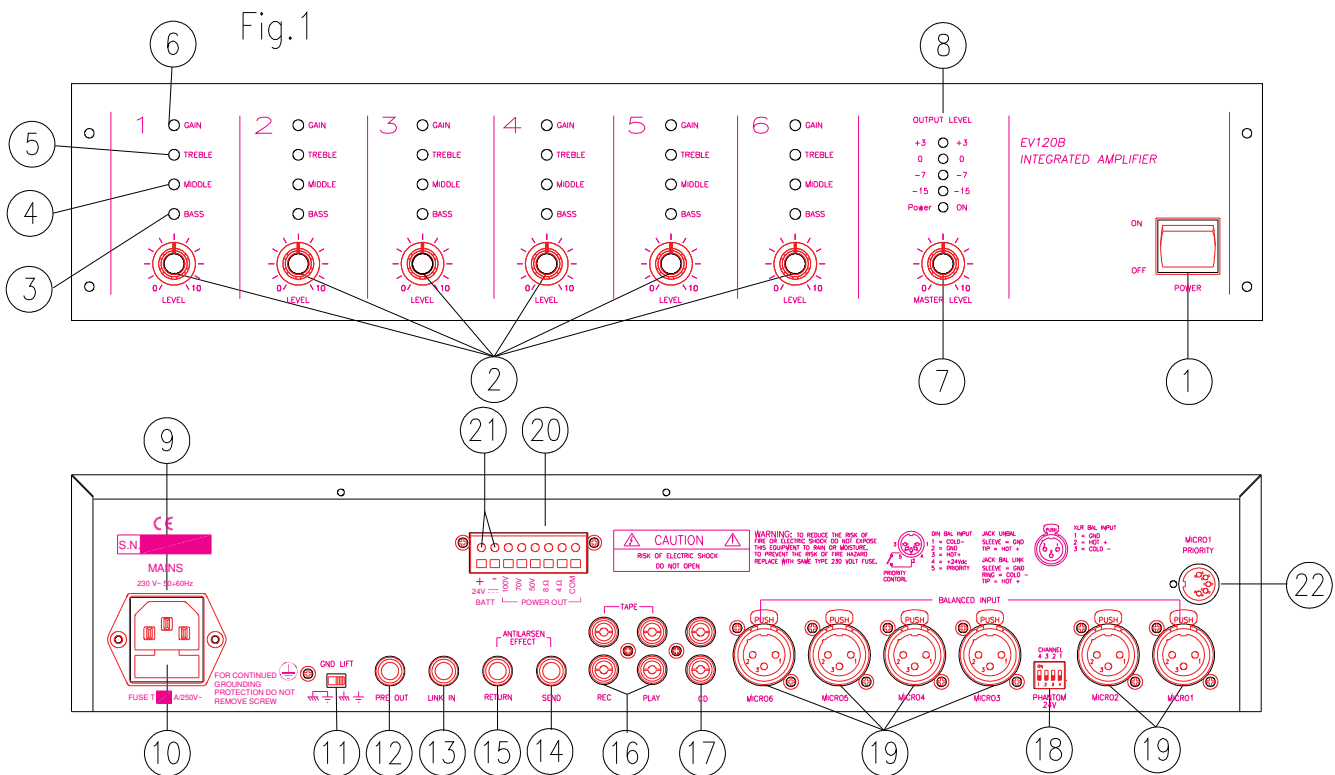


Fig.2 _ LOUDSPEAKER CONNECTIONS

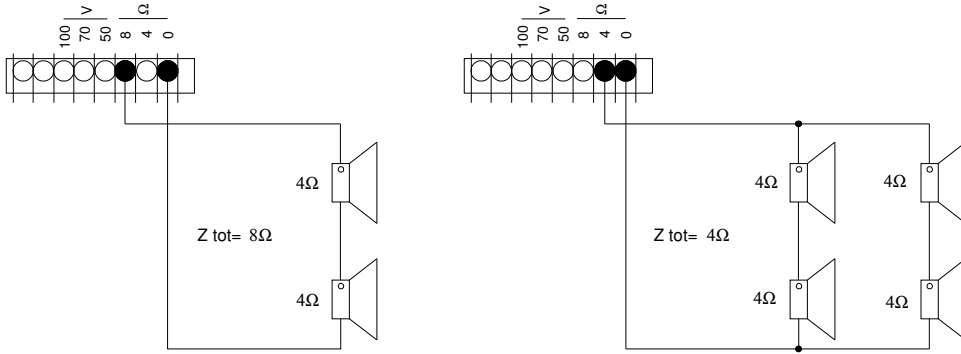


Fig.2a _ Constant impedance lines

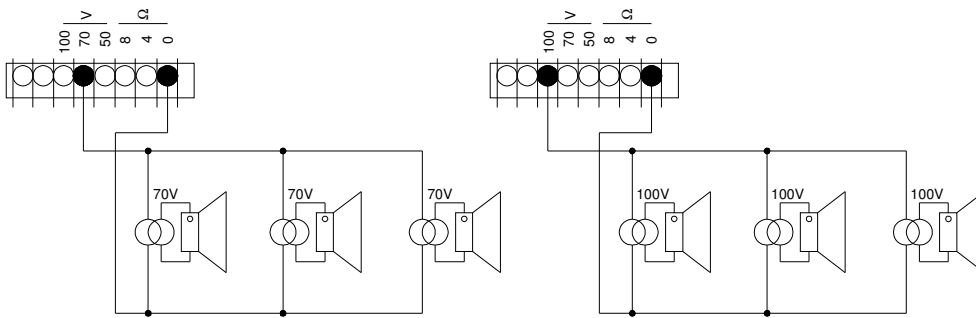


Fig.2b _ Constant voltage lines

Fig.3

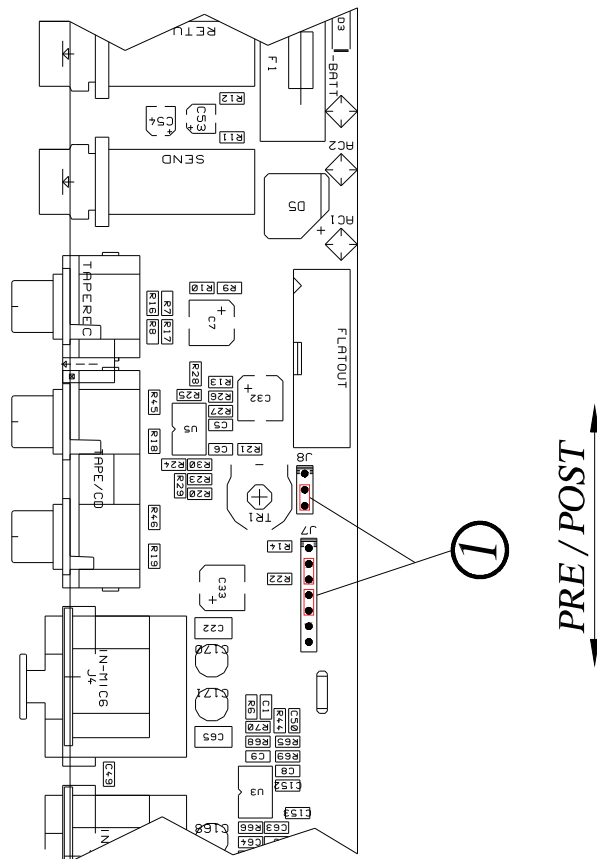


Fig.4

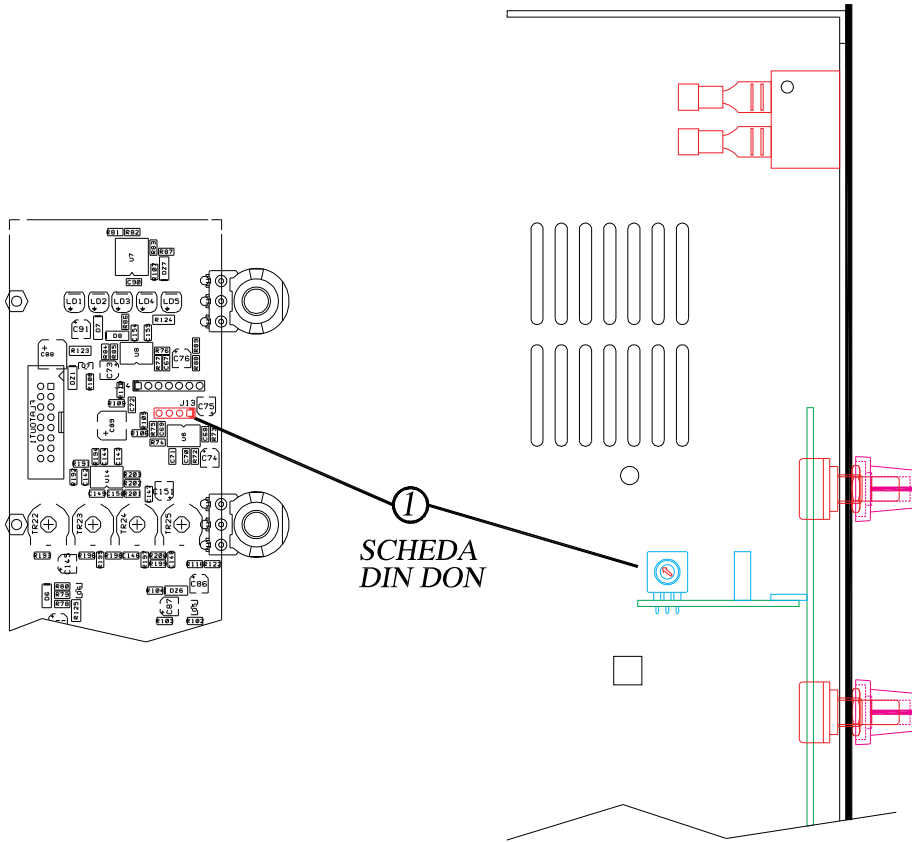
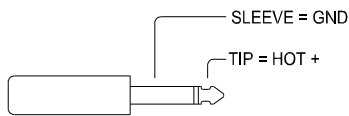


Fig.5

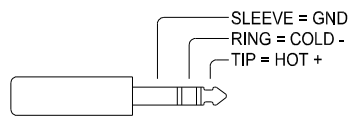
PLUGS AND BARRIER STRIP

JACK MONO



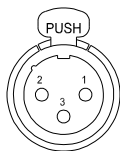
LINK IN / SEND / RETURN

JACK STEREO



PRE OUT

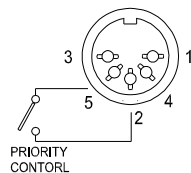
XLR



1 = GND
2 = HOT +
3 = COLD -

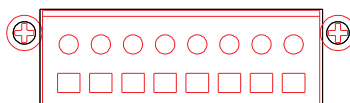
MICRO INPUT

DIN



1 = COLD-
2 = GND
3 = HOT+
4 = +24Vdc
5 = PRIORITY

MICRO PRIORITY



+ - 100V 70V 50V 8Ω 4Ω COM
 24V ≡ BATT — POWER OUT —