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MLA-4

MICROPHONE MIXER

INSTALLATION AND OPERATING INSTRUCTIONS







The MLA-4 is a microphone mixer with four audio inputs and one audio output. It is designed to combine up to four microphones (or up to four speaker/microphones) to expand the listening area of an audio zone. The MLA-4 is located between the microphones (or speaker/microphones) and the Louroe base station. In addition, it has a line driver amplifier that allows for runs up to 5,000 ft. between the MLA-4 and the Louroe base station and up to 1,000 ft. between the MLA-4 and the remote microphone (or speaker/microphone) for a total of 6,000 ft.

WIRING REQUIREMENTS:

Microphone Only:
Louroe Verifact® A, B, C, D, D-V, E, K or L-DT

2 Conductor **shielded** cable, 22 gauge with a 24 gauge drain wire

NOTE: Unshielded cable is not satisfactory for audio systems

West Penn 452 or equivalent



Microphone/Speaker
Louroe Model TLI, TLM, TLMC, TLO, TLSP

4 Conductor consisting of:
+2 Conductor **shielded**, 20 gauge with 22 gauge drain (microphone connection)
+2 Conductor **unshielded**, 18 gauge (speaker connection)
All in the same jacket

West Penn 356 or equivalent



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POWER REQUIREMENTS

For Cable runs 1,000' and under

If the total distance from the remote microphone (or speaker/microphone) to the MLA-4 Mixer and on to the Louroe Base Station is under 1,000 ft., the MLA-4 will receive power from the base station. No power is required at the MLA-4.

For Cable runs 1,000 to 5,000'

If cable run between MLA-4 and Louroe Base Station is over 1,000 ft and up to 5,000 ft, 12 Vdc power is required. An input jack for power is located on MLA-4 chassis. For this length of run, MLA-4 should be mounted within 1,000' of the microphone.

IMPORTANT NOTE

1. If Model MLA-4 Mixer is to be powered for a cable run between 1,000 ft. and 5,000 ft. from the Louroe base station, do not use terminal "A" connection between the MLA-4 and the Louroe base station.

2 For cable runs that exceed 1000 ft or up to 5,000 ft, MLA-4 Mixer should not be positioned more then 1,000 ft. from the Louroe microphone or speaker/microphone.

NOTE: If alternate power supply is used, ***DO NOT*** USE POWER SUPPLY IN BASE STATION

MICROPHONE CONNECTION:

At the top part of the PC board are 4 Terminal blocks marked 1 through 4 (for 4 zones). Each terminal block has 5 Pins marked - A, B, C, SP and G . Bring in wire from remote microphone (or speaker/microphone) and connect as follows:

Pin A (12 Vdc) from remote microphone to Pin A of MIC 1 terminal block of MLA-4(red wire)
Pin B (audio) from remote microphone to Pin B of MIC 1 terminal block of MLA-4(black wire)
Pin C (ground) from remote microphone to Pin C of MIC 1 terminal block of MLA-4.(bare wire)

Repeat connections for ZONE 2 to ZONE 4.

Use 2 Cond Shielded cable (see page1) if only microphones are to be connected.

SPEAKER CONNECTION (used only if microphone/speaker units are being connected):

Green wire from speaker to Pin SP of MIC1 terminal block of MLA-4
White wire from speaker to Pin G of MIC 1 terminal block of MLA-4

Repeat this connections for the rest of the zones.

Use 4 Cond shielded cable such as West Penn 356 (see page1) if microphone/speaker units are used.

OUTPUT CONNECTION FROM MLA-4 MIXER TO LOUROE BASE STATION

(Note: Power supply of the MLA-4 must not be used when connecting to a Louroe base station.)

MICROPHONE CONNECTION:

Located at the bottom of the PC Board is a single 3-pin terminal block marked “AUDIO OUT” and contains three pins marked A, B, C using the shielded portion of recommended cable connect as follows:

Red wire goes to Pin “A” (12Vdc)
Black wire goes to Pin “B” (Audio Output)
Bare wire goes to Pin “C” (ground)

SPEAKER CONNECTION:

Applies only if speaker/microphones are being connected. If remote units are microphones only, skip this step and use the recommended cable shown in page 1.

The speaker input connection utilizes the 2-pin terminal block marked “SPEAKER”.

Pin marked “SP” of MLA-4 (green wire) connects to Pin “SP” also of terminal block at the base station
Pin marked “G” of MLA-4 (white wire) connects to Pin “G” of terminal block at the base station

For connections to the speaker inputs of the Louroe base station, please refer to the specific installation instructions for that model.

OUTPUT CONNECTION FROM MLA-4 MIXER TO OTHER RECEIVING DEVICES SUCH AS DVRS, ETC.

(Note: Power supply of the MLA-4 must be used when connecting to receivers other than Louroe base station

Using the recommended cable (2 Cond. Shielded 22 AWG) see page 2 for connecting the microphone to the input terminal blocks (Zone 1 to 4) MLA-4, matching Pin A to A, B to B and C to C.

The MLA-4 has 2 types of audio outputs.

When using the 3-pin terminal block, connect 2 wires to Pin B and Pin C. Pin B is positive audio which can be connected to the positive of the audio input of the receiving device. Pin C is ground and can be connected to the ground of the audio input of the receiver.

The other output is an RCA jack which can be connected to an RCA type input of the receiving device.

Plug in power supply (included) to +12Vdc power jack.

MICROPHONE ADJUSTMENT CONTROLS

On MLA-4 PC board are eight potentiometers (marked 1 thru 4) and one MASTER CONTROL marked “MAIN”. They are for controlling the microphone gain and have been pre-set at the factory. DO NOT MAKE ANY ADJUSTMENTS ON THE MLA-4 UNTIL ALL MICROPHONE AND SPEAKER CONNECTIONS HAVE BEEN MADE TO THE LOUROE BASE STATION OR OTHER RECEIVING DEVICE.

A. If connected to a sound activated ALARMING BASE STATION (Models DG-25III and DG-12II)

1. First set zone threshold following procedures outlined from base station installation instructions.

2. If the zone is too sensitive and goes into alarm unnecessarily, adjust MASTER CONTROL potentiometer on MLA-4 board (marked “MAIN”) 1/8 of a turn counterclockwise. If still too sensitive, decrease by 1/8 turn counterclockwise until desired sensitivity is attained. In the event zone is not sensitive enough, adjust master control potentiometer 1/8 turn clockwise. Repeat if necessary.

3. If it is determined that a particular microphone within the zone is too sensitive, adjust the correct potentiometer (marked 1 thru 8) counterclockwise 1/8 turn. Repeat 1/8 turn as necessary.

B. If MLA-4 is connected to a NON-ALARMING LOUROE BASE STATION (APR-1, AP-2, AP-4, AP-8, AP-12TB or AP-16TB). Potentiometer adjustment is usually unnecessary.
EXCEPTION: If microphones are overdriving DVR/VCR or other external equipment, adjust master control potentiometer 1/8 turn counterclockwise to reduce microphone sensitivity. Repeat if necessary.

If it is necessary to increase or decrease the signal or gain of a particular microphone, rotate clockwise to increase or counterclockwise to decrease the input potentiometer for that microphone.

SPECIFICATIONS

Input Impedance	18 KΦ
Output	Line level (0dBV, 1kΦ @1 kHZ +10dB max gain adjustable
Frequency Response	100 Hz to 10 kHz
Current Drain	25 mA
Voltage Supply	12 Vdc, 500 mA
Dimensions	6 1/8”L x 4 5/8”W x 1 3/8”H
Weight	5.5 oz
Shipping Weight	1 lb

NOTES

IMPORTANT NOTICE

When this equipment is used as part of an audio monitoring system, the law requires that the public be given notice of AUDIO MONITORING ON THE PREMISES. A decal notice is included with each microphone shipped.



Federal Law References:
Federal Regulations, US Code, Title 18. Crime and Criminal Procedure, Sec 2510.

WARRANTY

LOUROE ELECTRONICS warrants that at the time of shipment products manufactured by LOUROE ELECTRONICS to be free of defects in material and workmanship. Should a defect appear within five years (60 months) from date of shipment, LOUROE ELECTRONICS will, at its sole discretion, repair or replace the defective equipment. This equipment shall not be accepted for repair or return without prior notification by LOUROE ELECTRONICS .

This warranty does not extend to any Louroe product that has been subjected to improper or incorrect installation, misuse, accident, or in violation of installation instructions provided by LOUROE ELECTRONICS.

Returned shipments to LOUROE ELECTRONICS shall be at customer's expense. LOUROE ELECTRONICS will return the equipment prepaid via best way.

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