



LOUROE ELECTRONICS®

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AP-2/AP-4/AP-8

AUDIO MONITORING BASE STATION INSTALLATION AND OPERATING INSTRUCTIONS



Model AP-2
2 zone Audio Base Station



Model AP-4
4 zone Audio Base Station



Model AP-8
8 zone Audio Base Station

DESCRIPTION

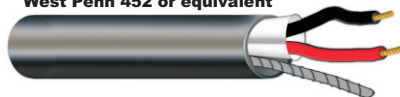
Models AP-2, AP-4 and AP-8 are non-alarming audio monitoring base stations for providing 2, 4 and 8 audio zones. Each model has the same amount of audio outputs (RCA) as it does for microphone inputs. Example: Model AP-4 will accommodate four Louroe Microphones and has four line level audio outputs. All models contain a built-in speaker for producing live audio and audio playback from a DVR. In addition, each model contains a selectable RCA audio output for interfacing with a DVR with only one audio input, or with a VCR. Zone selection is by pushbutton. All Louroe microphones are compatible with the AP-2, AP-4 and AP-8.

WIRING REQUIREMENTS

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



INSTALLATION AND OPERATING INSTRUCTIONS

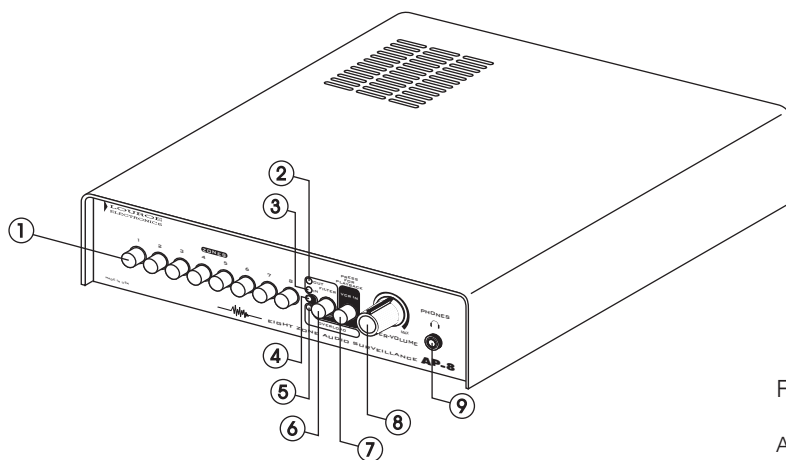


Fig. 1 Front view of AP-8

AP-2 and AP-4 have the same features except for the number of Zones

Fig. 1 Front of AP-8

DESCRIPTION AND FUNCTION OF PARTS

- | | |
|-------------------------------------|--|
| [1] - Zone Selector Switches | Selects zone for monitoring. Press switch of desired zone to listen to live audio. Pressing more than one switch is possible when it is necessary to monitor more than one zone at a time, but audio may be difficult to understand if there is audio activity at several zones. |
| [2] - Filter-OUT Indicator | Lights (green) when audio filter is not in use. Indicates power is "ON". |
| [3] - Filter-IN Indicator | Lights (red) when Filter Switch[6] is pushed in to "ON" position. |
| [4] - DVR/VCR-IN Indicator | Lights (yellow) when DVR/VCR switch[7] is pushed in to "ON". |
| [5] - Overload Indicator | Lights (red) when a short or overcurrent in the power supply occurs. If this occurs, turn OFF the Power-Volume Knob[8] and check wiring connections (see troubleshooting, pg7). |
| [6] - Filter Switch | Normally used when playing back audio from a Time Lapse recorder. This function is no longer available on this product. |
| [7] - DVR/VCR-IN Switch | Press to connect DVR/VCR into the unit. Depressing switch bypasses the DVR/VCR even if it is connected physically to the back of the unit. This eliminates the need to disconnect the DVR/VCR when not in use. |
| [8] - Power-Volume Control Knob | Rotating knob clockwise turns on power to the unit, as indicated by the Filter-OUT Indicator[2]. Rotating further clockwise increases the volume of the monitored audio produced through the Monitor Speaker[10]. |
| [9] - Headphone Jack (3.5mm stereo) | Used for private listening. Any monaural headset with 8 to 600Ω impedance maybe used. Mutes the speaker output when in use. |

INSTALLATION AND OPERATING INSTRUCTIONS

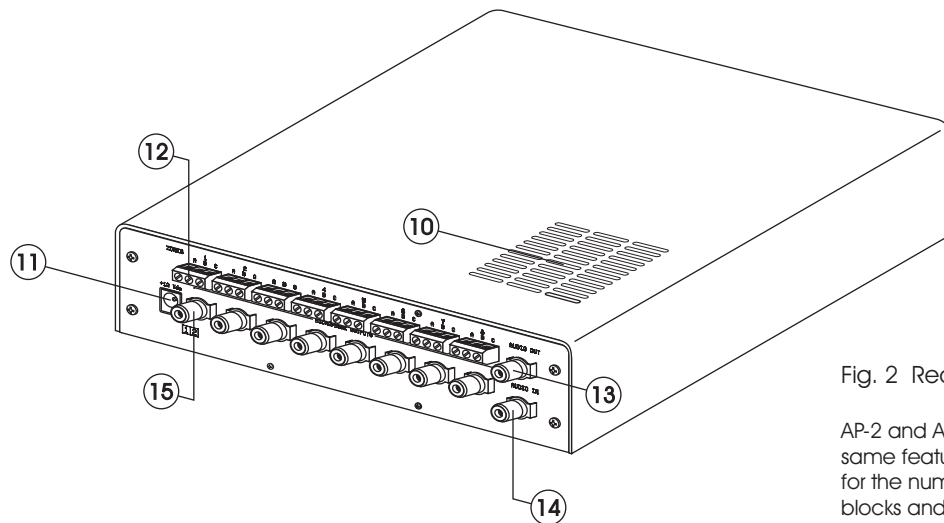


Fig. 2 Rear view of AP-8

AP-2 and AP-4 have the same features except for the number of terminal blocks and mic output jacks for each zone

DESCRIPTION AND FUNCTION OF PARTS

- | | |
|---------------------------------------|---|
| [10] - Monitor Speaker | Provides live audio through the 3" built-in speaker. Muted when a headphone is connected to headphone jack. [9]. |
| [11] - Power Jack | Accepts 12 Vdc from external power supply (included). |
| [12] - Mic Input 3-Pin Terminal Block | Connects to remote Louroe microphones. |
| [13] - Audio Out Jack (RCA) | Provides audio to DVR/VCR for recording or to other audio devices accepting line level input. |
| [14] - Audio In Jack (RCA) | Receives audio playback from DVR/VCR, etc. and is broadcast through the built-in speaker. [10]. |
| [15] - Mic Output Jack | Used for connection to a DVR with multiple audio inputs or to a soundcard module for audio recording. May also be used for paralleling to a second Louroe audio base station. |

INSTALLATION AND OPERATING INSTRUCTIONS

MICROPHONE CONNECTIONS TO AP-2, AP-4 OR AP-8

All Louroe Verifact™ Microphones contain a 3-pin terminal block marked A, B, C. All Louroe base stations contain similar 3-pin terminal blocks marked A, B, C. Refer to interconnection diagram p 5.

A = 12Vdc Power (red wire)
B = Audio Output (black wire)
C = Common Ground (bare wire)

- 1) Take one end of recommended cable to first microphone location and connect:
Red wire to terminal A (12Vdc)
Black wire to terminal B (Audio Output)
Bare wire to terminal C (Ground)
- 2) Run other end of cable to the AP-2, AP-4 or AP-8 Base Station location and connect to the 3-pin terminal block of the audio zone in which the remote microphone is assigned (example zone 1). Again connect Red wire to Pin A, Black wire to Pin B and Bare wire to Pin C.
- 3) Repeat the same procedure for the remaining microphones using the additional terminal blocks marked zone 2, zone 3, etc.

CONNECTING AP-2/AP-4/AP-8 TO A RECORDING DEVICE (DVR, ETC.)

- A) If connecting to a VCR or to a DVR with one audio input:
- 1) Connect an RCA cable to the Audio Out jack [13] of AP-2/AP-4 or AP-8 and connect other end to Audio In (or line in) of VCR/DVR
 - 2) To record, press the Zone Selector Switch [1] located on front panel of base station for the audio zone to be recorded
 - 3) For audio playback, connect another RCA cable from Audio Out (or line out) of VCR/DVR to Audio In [14] of AP-2/AP-4/AP-8
 - 4) Press in the VCR Button [7] of front panel
 - 5) Press the play or playback button on VCR/DVR to start audio playback. Playback will be broadcast through the base station's built-in speaker. As an alternate playback may be channeled through a CCTV monitor with amplifier or through DVR's speaker system
- 2) If connecting to a DVR with multiple audio inputs or to a soundcard module:
AP-2, AP-4 and AP-8 have 2, 4 and 8 line level RCA Mic Output Jacks [15]
- 1) Connect RCA cables between the Mic Output Jacks [15] and Audio Inputs of DVR
 - 2) For audio playback from base station (AP-2, etc.), press in the VCR IN button [7] located on base station's front panel. Playback may also be channeled through other audio sources
 - 3) To select a specific audio zone for playback, refer to DVR's instruction manual

APPLYING POWER TO THE AP-2, AP-4 OR AP-8

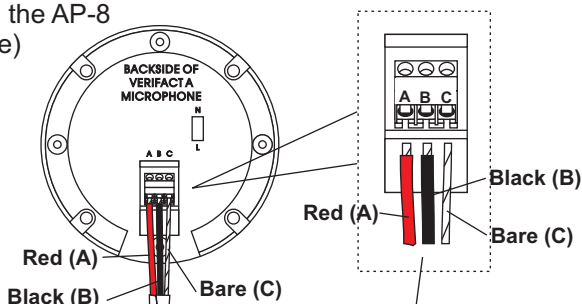
A 12Vdc power supply is included with the above units. First connect the small end with the 90° plug to the above units DC Jack[11] and connect large end to a standard 120Vac outlet or power strip.

Maximum distance between AP-2, etc. and Louroe microphones is 1,000 ft. (305m)

INTERCONNECTION DIAGRAM FOR LOUROE VERIFACT™ A MICROPHONE AND AP-8 AUDIO BASE STATION (Includes Model AP-2 and AP-4)

VERIFACT™ A MICROPHONE

All Louroe Microphones are compatible with the AP-8
(Verifact™ A is shown as an example)



TERMINAL BLOCK IDENTIFIER

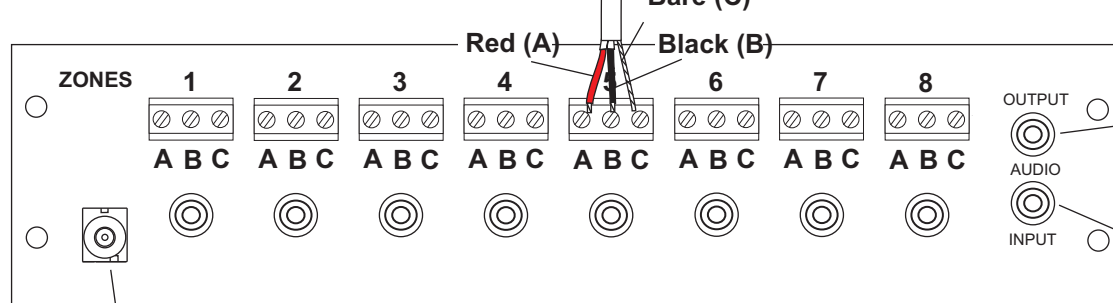
For Verifact™ A Mic and AP-2, AP-4 and AP-8 Base Station

- A = 12Vdc (red)
- B = Audio Output (black)
- C = Ground (bare)

WIRING REQUIREMENTS

2 Conductor shielded cable,
22 gauge with a 24 gauge
drain wire.
West Penn 452, Belden 8451
or equivalent

REAR OF AP-8 BASE STATION



SELECTABLE AUDIO OUTPUT

Used only if recording device has only one Audio Input

Used for Audio Playback from recorder

12 Vdc Power Supply

INSTALLATION AND OPERATING INSTRUCTIONS

OPERATION AND TEST

After microphones and power supply are connected, proceed as follows:

- 1) Turn on power to the unit by rotating the Power-Volume Knob[8] clockwise to “ON” position. The green LED [2] will illuminate, indicating power to the unit. Rotate Power-Volume Knob further clockwise to increase the volume of monitored audio.
- 2) Press Zone Selector Switch[1] marked zone 1. Audio from zone 1 should be present at the Monitor Speaker[10]. If there is no audio, remove wires connected to Mic Input 3-Pin Terminal Block[12] for zone 1 at the rear of the unit. With a DC voltmeter, check that 12 Vdc is present at terminals “A” and “C”. If voltage is not present, unit has defective regulator. If voltage is present, check to assure that wires are connected properly to the right terminals. Otherwise microphone is defective. Call factory for assistance.
- 3) Repeat step 2 for the remainder of the zones.
- 4) When a recorder is connected to the unit, press DVR/VCR-IN Switch[7]. DVR/VCR-IN indicator[4] will light. Start recording live audio. The DVR/VCR-IN Switch[7] must be depressed or in the “OUT” position when a recorder is not connected to the unit.
- 5) Playback recorded audio through the AP-2, etc. built-in amplifier and speaker.

SUMMARY

Please check that wiring and power connections conform to the above instructions. In the event of a malfunction, refer to the troubleshooting guide, next page. Should the problem persist, factory assistance is available from 8:00 AM to 4:00 PM (Pacific Time) by calling (818) 994-6498.

TROUBLESHOOTING

I. Overload Indicator[5] illuminated.

- a. When the Overload Indicator is illuminated, it is an indication that there is a short in wiring connections to the microphone. Check the following:
 - 1) Check that each wire is connected to their proper terminals See steps 1 and 2 of connections page 5.
 - 2) Check that there are no reversed or crossed wire connections.
 - 3) Check that none of the wires are touching each other or shorted to ground.
- b. Turn ON power back to the unit after checking all wiring connections. If the Overload Indicator[5] no longer lights, proceed to step 2 of the operation. If the Overload Indicator remains illuminated, remove the microphone connections (power still ON) one at a time until the Overload Indicator turns OFF. After removing a wire, wait a few seconds before removing the next wire. This will give the overload protection circuit time to reset itself. The last wire disconnected that turned OFF the Overload Indicator is the one that has a short. Check for shorts on the wire and remote microphone.

II. No audio present.

- a. Using a DC Voltmeter, check the voltage across terminal "A" and "C" ("A" positive; "C" ground) of the Mic 3-Pin Terminal Block[12]. It should read 12V. The microphone requires 12Vdc to work.
 - 1) Check connections to the microphone.
- b. Remove the wire connected to the "B" terminal of the Mic 3-Pin Terminal Block. Using an AC meter (set to lowest voltage range), check the presence of audio from the microphone. Place the meter leads between wire removed (positive) and terminal "C" (ground). Generate some loud noise close to the remote microphone while observing the meter reading. If audio is present, the meter reading will start to fluctuate. If there is no movement, the remote microphone is defective. Call factory for assistance.

Factory assistance is available between 8:30 AM to 4:00 PM Pacific time. Call (818) 994-6498.

SPECIFICATIONS

■ Input sensitivity (from remote mic)	0.78Vrms
■ Monitor power output	1.5W @ 8Ω
■ Audio line output impedance	600Ω or higher
■ Audio input impedance	10kΩ
■ Freq. response (flat)	100 Hz to 10kHz
■ Headphone impedance	8 to 600Ω
■ Power input	12 Vdc, 500mA
■ Dimensions	8 ½"W x 9 ½"L x 2 1/8"H
■ Weight	3.5 lbs (1.6 kg)

MANUFACTURED IN THE



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 one year (12 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.