

# ASK-4® #101-RM

## AUDIO MONITORING SYSTEM

### INSTALLATION AND OPERATING INSTRUCTIONS

The ASK-4® 101-RM is a rack mounted single zone audio monitoring system designed to interface with a DVR, VCR or other recording devices that accept line level input. The APR-1 Audio Base Station contains a built-in 3" speaker and volume control for producing live audio and audio playback. The Verifact® A is an omnidirectional pre-amplified microphone that produces line level output.



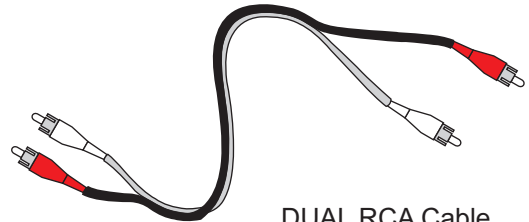
APR-1 Base Station



AD-1 Power Supply



VERIFACT® A



DUAL RCA Cable

Contents	Description
APR-1	UL listed Audio Base Station. Used for listening to live audio from microphone, as well as audio playback from DVR's, VCR's or other audio devices.
Verifact® A Microphone	Line Level, Electret condenser microphone with preamp. Picks up normal sounds within 30' circle. May be located Up to 1000' from APR-1 Base Station. UL listed
AD-1	UL listed AC ADAPTER. Supplies 12 Vdc to APR-1 and Microphone.
Dual RCA Cable	RCA cable for connection to a DVR/VCR or other Audio devices that accept line level input (0dB @ 600Ω).
RM-1935-APR	Rack mount assembly (19"W x 3 1/2 'H)

#### 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

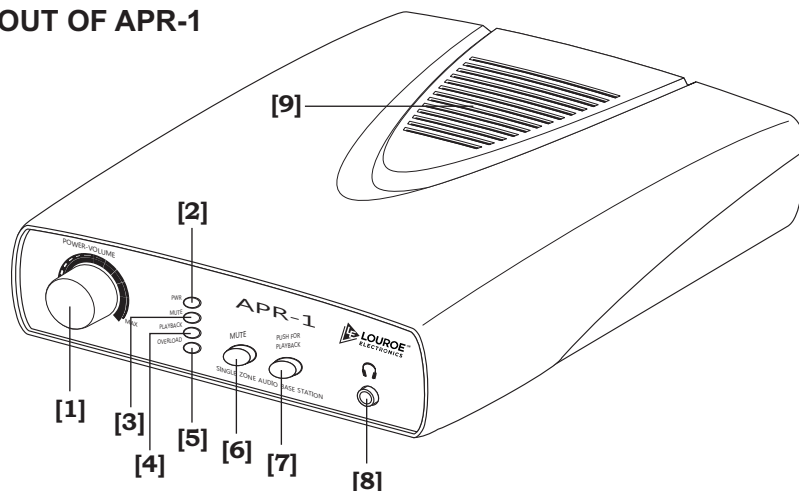


# INSTALLATION AND OPERATING INSTRUCTIONS

## DESCRIPTION

THE APR-1 IS SHOWN BELOW. ALL CONTROLS ARE LOCATED AT THE FRONT PANEL. ALL CONNECTIONS ARE MADE AT THE REAR PANEL.

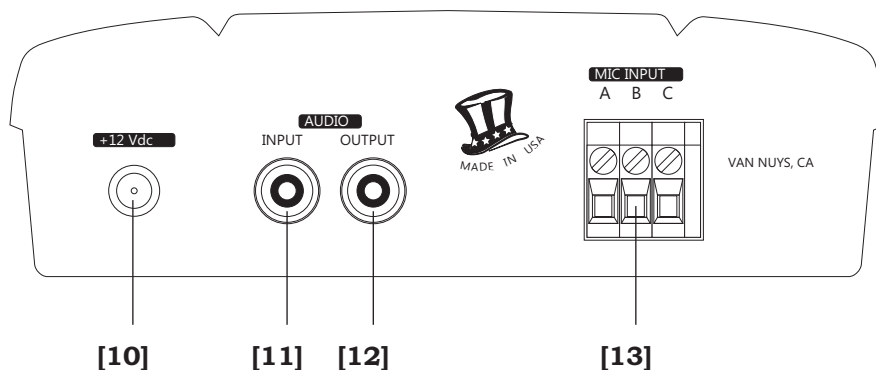
### FRONT PANEL LAYOUT OF APR-1



- |                        |   |
|------------------------|---|
| [1] Power-Volume       | Turns "ON" power to the unit and controls the audio volume through the <b>Speaker[9]</b> .  |
| [2] Power Indicator    | Lights (green) when the power is present to the unit.   |
| [3] Mute Indicator     | Lights (orange) when <b>Mute Switch[6]</b> is pushed in. Audio is muted.  |
| [4] Playback Indicator | Lights (yellow) when <b>Push for Playback[7]</b> is pushed in to "ON" position.   |
| [5] Overload Indicator | Flashes (red) when there is a short in the power supply.  |
| [6] Mute Switch        | Used to mute the audio on both live and playback mode.  |
| [7] Push for playback  | Used for DVR/VCR playback. May also be used to listen to audio from an external source. Press switch to listen to playback. Switch must be "OUT" or "OFF" when monitoring and recording, otherwise live audio is muted. |
| [8] Headphone Jack     | Used for private listening. Any 3.5mm stereo headphone with 8Ω to 600Ω impedance can be used.   |
| [9] Speaker (3")       | Provides live audio. Muted when a headphone is connected to <b>Headphone Jack [8]</b> .   |

# INSTALLATION AND OPERATING INSTRUCTIONS

## REAR PANEL LAYOUT OF APR-1



- [10] Power Jack Accepts 12Vdc power from Model AD-1 Power Supply (included with APR-1 Audio Base Station). AD-1 has a 90° 2.1mm female plug.
- [11] AUDIO IN Jack (RCA) Accepts audio playback from an external source (DVR/VCR). Audio playback is produced through the speaker. The Push for Playback[7] must be "IN" during audio playback and "OUT" when not used for playback.
- [12] AUDIO OUT Jack (RCA) Provides audio output and connection to a DVR, VCR, etc.
- [13] Audio Terminal Block A 3-pin terminal block marked A, B, C. Accepts wiring from the remote Louroe™ Microphone.
- A is 12Vdc Power  
B is Audio  
C is Ground

## SENSITIVITY SWITCH OF VERIFACT® A MICROPHONE

For special installations that require less microphone sensitivity or where there is background noise, a sensitivity switch is mounted to the microphone pre-amp (PC Board) and has two positions, N and L:

- N represents normal sensitivity (0dB output into 1kΩ)
- L represents low sensitivity (-6dB output into 1kΩ)

Louroe VERIFACT™ microphones are always shipped with the sensitivity switch in normal (N) position. Do not change unless necessary. To change the sensitivity setting, use a small screwdriver and move slide switch from N to L position. The switch is mounted on the back side of the microphone housing.

## NOTE REGARDING INTERFACING ASK-4® #101-RM WITH A DVR OR PC SOUND CARD

The APR-1 Audio Base Station is compatible with all commercial DVR's and PC Soundcards that accept line level input (0dB@600Ω). An RCA cable is included with the kit for connecting **Audio Out** to **Audio In** of DVR. If DVR's audio input is a 3.5mm jack, an RCA to 3.5mm adapter (not supplied) must be attached to the plug that connects to DVR's **Audio Input**. Check with DVR's specifications to determine if the audio input requires a **stereo** or **mono** 3.5mm plug.

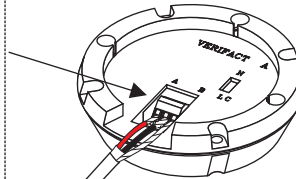
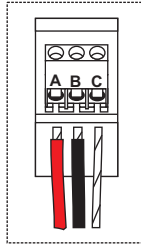
PC soundcards contain a standard **3.5mm stereo Audio Input** or **Line Input**. **Do not use Mic Input** of soundcard. Louroe microphones are line level (0dB@600Ω) and will overdrive the Mic Input. Use **"Audio Input"** or **"Line Input"** of the soundcard.

## INTERCONNECTION DIAGRAM

### VERIFACT<sup>®</sup> "A" MICROPHONE TO APR-1 BASE STATION TO DVR, ETC.

**Terminal Block Identifier  
for Microphone**

- (A) Red - 12Vdc power
- (B) Black - Audio Output
- (C) Bare - Ground

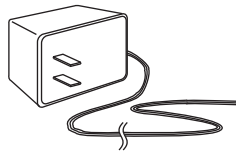


**WIRING REQUIREMENTS**

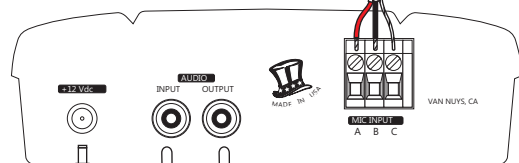
2 Conductor **shielded** cable, 22 gauge with a 24 gauge drain wire.

**NOTE:** Unshielded cable is not satisfactory for audio systems.

**West Penn 452 or equivalent**



**AD-1  
AC Adapter**  
120V/12Vdc, 500mA

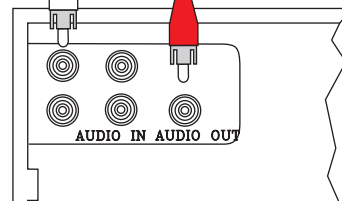


**Rear Panel of APR-1**

**"Audio Out" of APR-1  
connects to "Audio In"  
of DVR or other receiving device**

**"Audio In" of APR-1  
connects to "Audio Out"  
of DVR or other receiving device**

REAR PANEL OF DVR WITH  
RCA TYPE AUDIO INPUT



**NOTE:** If DVR's audio input and output are 3.5mm (mini jack) type, use the appropriate adapter at one end of RCA patch cable for connection. Check with manufacturer's specifications to determine if 3.5mm audio input/output is mono or stereo.

# INSTALLATION AND OPERATING INSTRUCTIONS

## WIRING CONNECTIONS AND TEST

Both the Verifact<sup>®</sup>A Microphone and APR-1 Audio Base Station contain a 3-pin terminal block marked A, B, C.

A = 12Vdc Power  
B = Audio  
C = Ground

Red Wire  
Black Wire  
Bare Wire

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

1. Starting with the microphone, connect **RED** wire to Pin A, **BLACK** wire to Pin B and **BARE** wire to Pin C. Connect other end of cable to Terminal Block on back panel of APR-1 Base Station matching **RED** wire to Pin A, **BLACK** wire to Pin B and **BARE** wire to Pin C. Refer to drawing on page 4.
2. Plug AD-1 power supply (AC Adapter) into the **Power Jack[10]** located on back panel of APR-1 first. Then connect 2-prong block into standard 110/120 AC wall receptacle or power strip.
3. Turn "ON" power to APR-1 by rotating the **Power-Volume Knob[1]** clockwise. The green **PWR[2]** LED will illuminate. Adjust volume of audio by rotating the knob either clockwise to increase or counterclockwise to decrease. Locate microphone so as not to create feedback with the APR-1. The further the microphone is from the APR-1 the less feedback it generates. System works best if there is an acoustical barrier between the microphone and the APR-1, such as a wall or room divider. If there is no wall or barrier, microphone should be mounted at least 25 ft.
4. Plug 3.5mm cable from panel into the **Headphone Jack[8]**. **Speaker[9]** output is muted and sound is now transmitted through the speaker on the panel.
5. Using the dual RCA cable (supplied), connect DVR/VCR's AUDIO OUT jack to APR-1's **AUDIO IN Jack[11]**.
6. Connect DVR/VCR's AUDIO IN jack to APR-1's **AUDIO OUT Jack[12]**.
7. Press "REC" on the recording device and record live audio for several minutes.
8. Press **Push for Playback Switch[7]** to "ON" position. **Playback Indicator LED[4]** will illuminate yellow.
9. Press "PLAY" on the DVR/VCR to playback recorded audio from the APR-1.
10. Press **Mute Switch[6]** to mute audio heard on the speaker. **Mute Indicator LED[3]** will light and no audio can be heard on the speaker on both live and playback audio. When **Mute Switch[6]** is ON **Playback Indicator LED[4]** will not light even when the **Push for Playback Switch[7]** is pushed in and the audio is muted.

## INSTALLATION TIPS

1. Use overall shielded audio cable only. West Penn 452, Belden 8451 or equivalent. UNSHIELDED CABLE IS NOT SATISFACTORY FOR SOUND SYSTEMS.
2. When used in cashier's booth, microphone should be installed closer to the customer rather than the cash register, as the drawer sound may dominate the recording. It should be installed closest to the area that needs to be monitored and documented.
3. Avoid installing microphone near air vents, air conditioner, fans and other equipment that generate high sound and air pressure.
4. The APR-1 and microphone should have a barrier or solid wall between them in order to avoid audio feedback, especially when they are in close proximity to each other up to 25' (7.6 m).

## NOTES

### **SPECIFICATIONS (Microphone - Model A)**

■ Type	Electret Condenser
■ Output	Line Level (0 dBV, 600Ω @ 1 kHz)
■ Frequency response	40 Hz to 15 kHz ± 1 dB
■ Current drain	10 mA
■ Supply voltage	12Vdc
■ Dimensions	4"Dia x 1 ½"H

### **SPECIFICATIONS (Base Station - APR-1)**

■ Monitor output power	1W@8Ω
■ Audio line output impedance	600Ω or higher
■ Audio input impedance	10KΩ
■ Freq. response	100 Hz to 10 kHz
■ Headphone impedance	8 to 600Ω
■ Universal power supply	12 Vdc, 500 mA
■ Dimensions	19"L x 3 1/2"W x 8 1/4"D
■ Weight	2 lb 6 oz
■ Weight (shipping) of kit	4 lbs

# INSTALLATION AND OPERATING INSTRUCTIONS

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## 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.

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