

SA-1A

SOUND ACTIVATED SWITCH

INSTALLATION AND OPERATING INSTRUCTIONS



SA-1A
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DESCRIPTION

The SA-1A is a sound activated switch, based on sound pressure level, that can be used with the Louroe ASK-4 Kit 101, any Louroe base station or as a stand alone with any Louroe Microphone. The SA-1A provides an adjustable threshold that activates when the microphone is subjected to a noise or sound that exceeds the set threshold level.

The unit has two sets of NO/NC relay contacts for activating a camera, light, machinery, etc. A Louroe base station is used if sound (audio) is to be monitored or recorded. The SA-1A can accommodate a 10K balanced or 10K unbalanced input. All Louroe microphones produce an unbalanced 600Ω line level output.

The length of release latching time can be set from 0.5 to 60 seconds. A built-in LED illuminates when the threshold setting has been exceeded and the unit is triggered.

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

SPECIFICATIONS (Model SA-1A)

■ Minimum input signal	50 mVrms
■ Audio input impedance	10K balanced or unbalanced
■ Relay contact	5A @ 277 Vac or 5A @ 30Vdc
■ DC input	12Vdc, 70mA
■ Relay latch time	0.5 to 60 seconds
■ Dimensions	6 1/8"L x 4 5/8"W x 1 7/8"H
■ Weight, net	8 oz. (226 g)

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INSTALLATION AND OPERATING INSTRUCTIONS

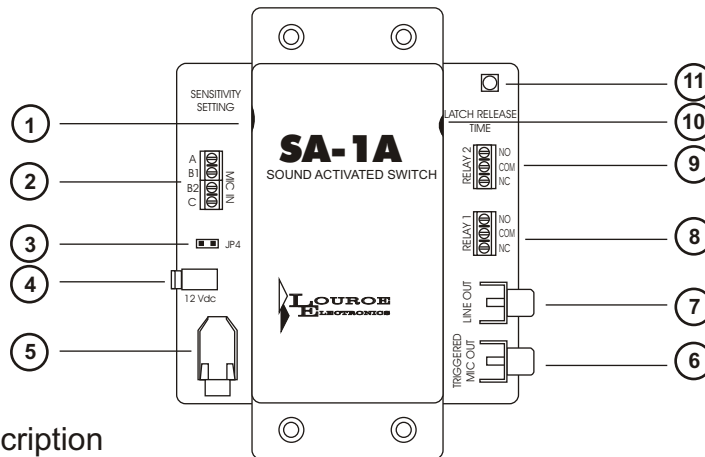


Fig. 1 SA-1A Panel Description

- | | | |
|-------------|-----------------------------------|---|
| [1] | Sensitivity Setting Potentiometer | Sets the level of sound for activating the switch. Rotating the potentiometer clockwise increases the sensitivity of the VOX switch. The more sensitive the setting, the less sound level is needed to trigger the unit. |
| [2] | MIC-IN Terminal Block | Connects to remote microphone or other audio devices. May be connected to balanced or unbalanced audio source. Mic input is factory set for unbalanced connections. When using balanced audio source, remove jumper marked "JP4". Louroe microphones are unbalanced and utilize terminals A, B1 and C. |
| [3] | Jumper | JP4 jumper is removed when using a balanced audio source. (microphone with a 600Ω balanced output) |
| [4] | Power Jack | + 12Vdc AC Adapter (supplied). |
| [5] | MIC IN/OUT Jack
(seldom used) | Unswitched audio output from remote microphone or other audio device can be monitored using audio jack. May also be used to accept audio from external sources without using the Mic Input Terminal Block[2]. |
| [6] | Triggered MIC Out Jack | Switched audio output from remote microphone or other audio device can be monitored using RCA jack. No audio is produced until the unit is triggered. |
| [7] | Line OUT Jack | Unswitched audio output level from RCA jack can be adjusted by rotating the Sensitivity Setting Potentiometer[1]. Rotating clockwise increases the threshold sensitivity as well as the audio output. Rotating counterclockwise decreases audio output. |
| [8] | Relay Output 1 | 3-Pin terminal block marked NO(normally open), COM (common), NC (normally closed). Provides relay closure when the unit is triggered. Maximum contact rating is 5A @ 30 Vdc or 5A @ 277 Vac. |
| [9] | Relay Output 2 | 3-Pin terminal block marked NO(normally open), COM (common), NC (normally closed). Provides a second relay closure when unit is triggered. |
| [10] | Latch Release Potentiometer | Sets relay latching time. Rotate the potentiometer shaft slowly clockwise for more time release or counterclockwise for less. Time can be set from 0.5 to 60 seconds. |
| [11] | Alarm LED | Illuminates when unit is triggered or is in alarm. Turns OFF when the latching time for the relay expires. |

INSTALLATION AND OPERATING INSTRUCTIONS

CONNECTIONS AND TEST (See sample interconnection diagram on page 4)

The following connections and test procedures below use Louroe's Microphone and Base Station. If using microphone or audio receiving device from another manufacturer, refer to its installation and operating instructions.

West Penn 452 is used as sample cable for this procedure.

Red wire is 12Vdc
Black wire is Audio Output
Bare wire is Ground

CONNECTING LOUROE MICROPHONE TO SA-1A

1) CONNECT ONE END OF 2 CONDUCTOR SHIELDED CABLE TO 3-PIN BARRIER BLOCK OF REMOTE MICROPHONE AS FOLLOWS:

- a) Connect RED wire to terminal marked "A" of microphone.
- b) Connect BLACK wire to terminal marked "B" of microphone.
- c) Connect BARE wire (drain) to terminal marked "C" of microphone.

2) CONNECT THE OTHER END OF 2 CONDUCTOR CABLE TO THE MIC INPUT TERMINAL BLOCK [2] OF SA-1A AS FOLLOWS:

IF USING A LOUROE MICROPHONE (3 WIRE CONFIGURATION)

- a) Connect RED wire to terminal marked "A" of SA-1A.
- b) Connect BLACK wire to terminal marked "B1" of SA-1A.
- c) Connect BARE (drain) wire to terminal marked "C" of SA-1A.

IF USING A MICROPHONE FROM OTHER MANUFACTURERS WITH 600Ω BALANCED OUTPUT (2-WIRE CONFIGURATION)

- a) Connect one wire to terminal B1
- b) Connect one wire to terminal B2
- c) Remove JP4 jumper from socket [3]

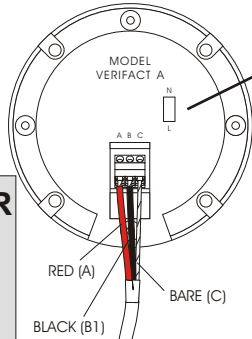
CONNECTING SA-1A TO A LOUROE BASE STATION (If applicable)

- 1) Using an RCA connector cable, cut the RCA plug off of one end. Connect the end with the RCA plug to the RCA jack marked Triggered MIC OUT[6] on the SA-1A.
- 2) Connect the other end (stripped wire) of RCA cable to terminal block of base station marked A, B, C as follows
 - ① The larger wire of stripped end (with jacket) connects to terminal B of base station.
 - ② The copper wire (bare) goes to terminal C of base station. **Terminal A of base station is not used with this application.**

TEST AND OPERATION

- 1) Plug 12Vdc power supply to Power Jack[4].
- 2) Plug AC Adapter to a standard 115Vac wall outlet or power strip.
- 3) Rotate the Latch Release Potentiometer [10] clockwise to desired length of time. Latch time is from 0.5 to 60 seconds.
- 4) Turn "ON" power to the Louroe Base Station. A 12Vdc AC Adapter is included with base station.
- 5) Rotate the Volume Control Knob of the Base Station clockwise to increase the volume of audio.
- 6) Generate some noise at the area where the remote microphone is located. Rotate the Sensitivity Setting Potentiometer[1] clockwise to increase the level of audio sensitivity until the SA-1A goes into alarm, as indicated by the illuminated Alarm LED[11]. The two relay outputs should all be closed. (COM - Common; NO - Normally Open; NC - Normally Closed)
- 7) If Triggered MIC Output Jack[6] is connected to the Base Station, audio from the microphone at the remote location will be present at the speaker as soon as the SA-1A goes into alarm. Audio remains on until the time set for the latch release expires.
- 8) If the sound that initiated the alarm continues, the SA-1A will re-activate for the time set and again shut off. This procedure will continue until the sound falls below the threshold level or ceases.

**INTERCONNECTION DIAGRAM
FOR
VERIFACT A MICROPHONE
SA-1A SOUND ACTIVATED SWITCH
APR-1 AUDIO BASE STATION**



Microphone gain adjust: N is normal, L is low

All Louroe Verifact Microphones are compatible with SA-1A and are 600Ω unbalanced

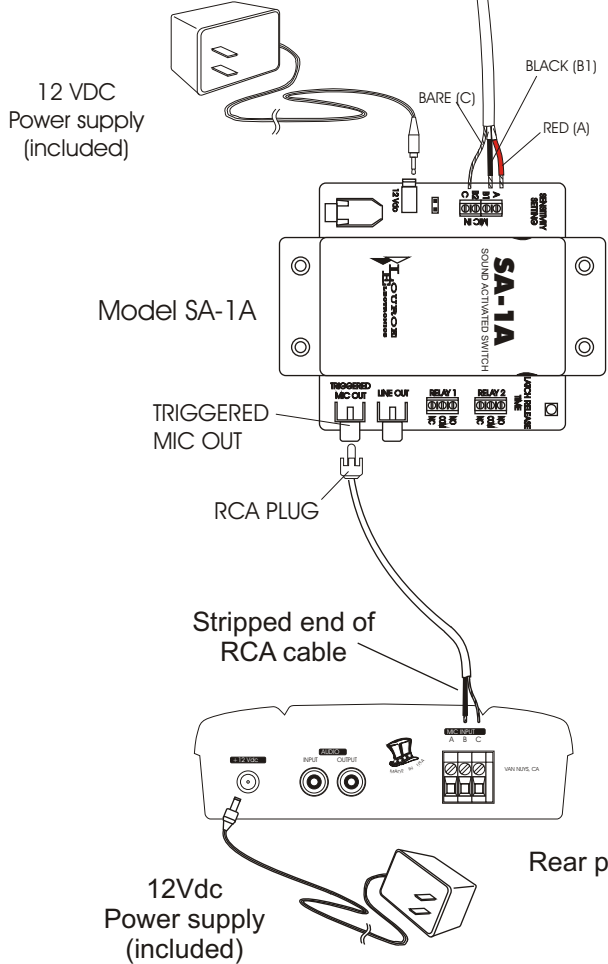
Verifact A Microphone shown as an example

TERMINAL BLOCK IDENTIFIER FOR MICROPHONE:

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

WEST PENN 452 OR EQUIVALENT
2 COND. SHIELDED 22 GAUGE

MAXIMUM DISTANCE BETWEEN MICROPHONE
AND SA-1A IS 1,000 FT (305m)



TERMINAL BLOCK IDENTIFIER FOR SA-1A:

- (A) - 12Vdc
- (B1) - Unbalanced Audio (Louroe Microphone)
- (B2) - Balanced Audio (microphone from other manufacturers)
- (C) - Ground

WIRING REQUIREMENTS

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

NOTE: Unshielded cable is not satisfactory for audio systems



Rear panel of APR-1 Audio Base Station

Notes

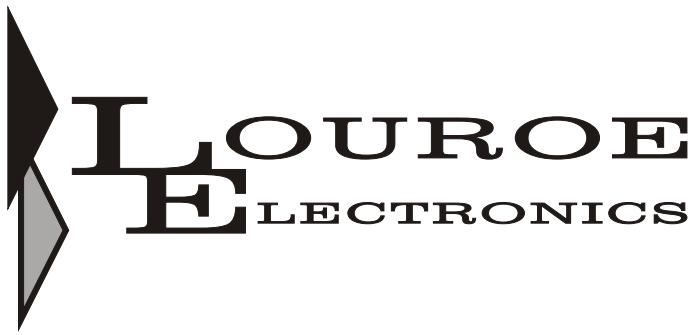
INSTALLATION AND OPERATING INSTRUCTIONS

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.



**MANUFACTURED
IN THE**



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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