



**Backbox (plastic) for flush mounting to wall or flat surface**



**Backbox (metal) for surface mounting to wall or flat surface**

## DESCRIPTION

Model AOP-SP-W is a wall mount speakerphone designed to provide 2-way audio (listen/talkback) with various modes of audio/video transmission systems such as:

- IP Camera
- DVRs
- Video Servers

Provided with the unit are two back boxes for either flush or surface mounting to a wall. The AOP-SP-W can be used as a stand alone unit or with companion AOP-XD. If used as a stand alone unit, the AOP-SP-W must be powered by a 12Vdc, 500mA power supply.

The AOP-XD Audio Transceiver unit provides two-way audio with the receiving device (IP Camera, DVR, etc). It also provides power to the AOP-SP-W. It receives the audio signal from the audio output of the receiving device and amplifies it before it goes to the speaker portion of the AOP-SP-W. It also drives the audio signal into the audio input of the receiving device. The AOP-XD contains adjustable level controls for audio signals coming from the AOP-SP-W and receiving device. Two RCA type of audio output/input jacks are provided by the AOP-XD which can be used to accommodate most DVRs, IP Cameras, etc. audio inputs.

## OPERATIONS

The gain of the microphone and speaker are factory adjusted. If it is necessary to change the gain of either or both the audio output of the microphone and speaker of the unit, it has to be done in small increments. For adjusting the gain of the microphone, rotate clockwise to increase or counterclockwise to decrease, the potentiometer marked "MIC" slowly until the desired level is attained. Somebody at the head-end has to listen to it while the adjustments are made. If the microphone's gain is too high, it will attenuate the audio output of the speaker. The output of the speaker will then be cutting off as you talk. If this happens, rotate the potentiometer marked "MIC" slowly counterclockwise to decrease the gain of the microphone until the talkback sound at the speaker no longer cuts off.

To adjust the audio output of the speaker, rotate the "SPKR" potentiometer clockwise (increase) or counterclockwise (decrease) slowly until the desired loudness is attained. If the audio from the microphone becomes attenuated, rotate the "SPKR" potentiometer counterclockwise a small increment at a time until the microphone audio becomes louder again.

This unit has a built-in muting system that if the microphone's adjustment (MIC) is too high it is going to mute the speaker. Also if the speaker's adjustment (SPKR) is too high, it's going to mute the microphone.

# INSTALLATION AND OPERATING INSTRUCTIONS

## WIRING CONNECTION TO SPEAKER AND MICROPHONE OF AOP-SP-W

Color Code of recommended wiring is:

RED - 12Vdc power to microphone  
BLACK - Audio Output  
BARE - Ground (microphone and speaker)  
WHITE - Speaker

Color Code may vary among wire manufacturers

### WIRING REQUIREMENTS

3 Conductor consisting of:

- 2 Conductor **shielded**, 20 gauge with 22 gauge drain
  - 1 Conductor **unshielded**, 20 gauge
- All in the same jacket

West Penn 358 or equivalent



## WIRING CONNECTION TO AOP-SP-W

Located on the bottom right side of PC board is a 4-pin terminal block marked A, B, C, SP

A = +12Vdc power (red wire)  
B = Audio output of microphone  
C = Ground (microphone and speaker)  
SP = Speaker input

Bring one end of recommended cable and connect as follows:

- 1) Connect RED wire to terminal marked "A"
- 2) Connect BLACK wire to terminal marked "B"
- 3) Connect BARE wire to terminal marked "C"
- 4) Connect WHITE wire to terminal marked "SP"

Drill an opening top, bottom or back side of backbox for passing wiring or for connecting conduit.

## WIRING CONNECTION FROM AOP-SP-W TO COMPANION AOP-XD AUDIO INTERFACE UNIT

The rear panel of AOP-XD has a 4 pin terminal block marked A, B, C, SP

Bring in other end and connect as follows:

- 1) Red wire to terminal A
- 2) Black wire to terminal B
- 3) Bare wire to terminal C
- 4) White wire to terminal SP

This completes the wiring between the AOP-SP-W and AOP-XD. For operation instructions and functions regarding Model AOP-XD Transceiver Interface unit, refer to the AOP-XD instructions that accompany the unit.

**INTERCONNECTION DIAGRAM  
BETWEEN LOUROE™ MODEL AOP-SP-W  
AND  
AOP-XD AUDIO TRANSCEIVER INTERFACE**

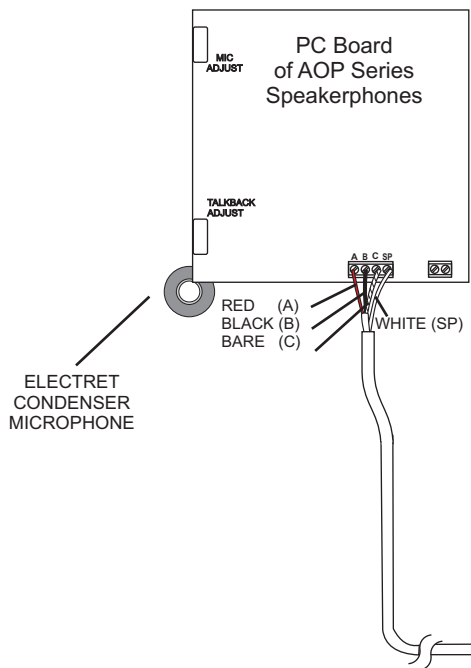
**WIRING REQUIREMENTS**

3 Conductor consisting of:

- 2 Conductor **shielded**, 20 gauge with 22 gauge drain
- 1 Conductor **unshielded**, 20 gauge

All in the same jacket

**West Penn 358 or equivalent**

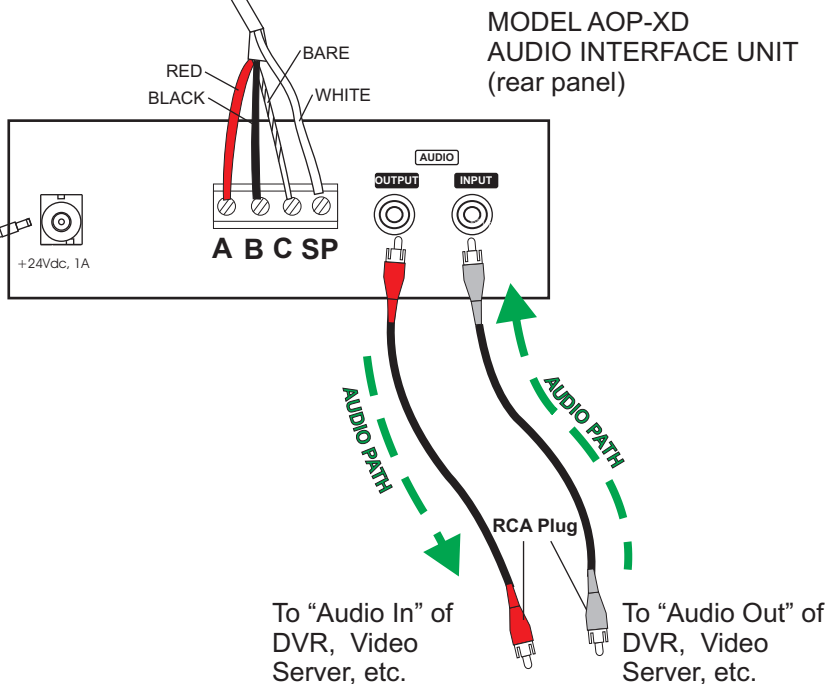
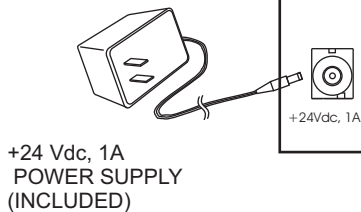


Color Code of recommended wiring is:

- RED - 12Vdc power to microphone
- BLACK - Audio Output
- BARE - Ground (microphone)
- WHITE - Speaker

**Terminal Block Identifier**

A = 12Vdc power } Microphone Connection  
 B = Audio Output }  
 C = Ground }  
 SP = Speaker Connection



# INSTALLATION AND OPERATING INSTRUCTIONS

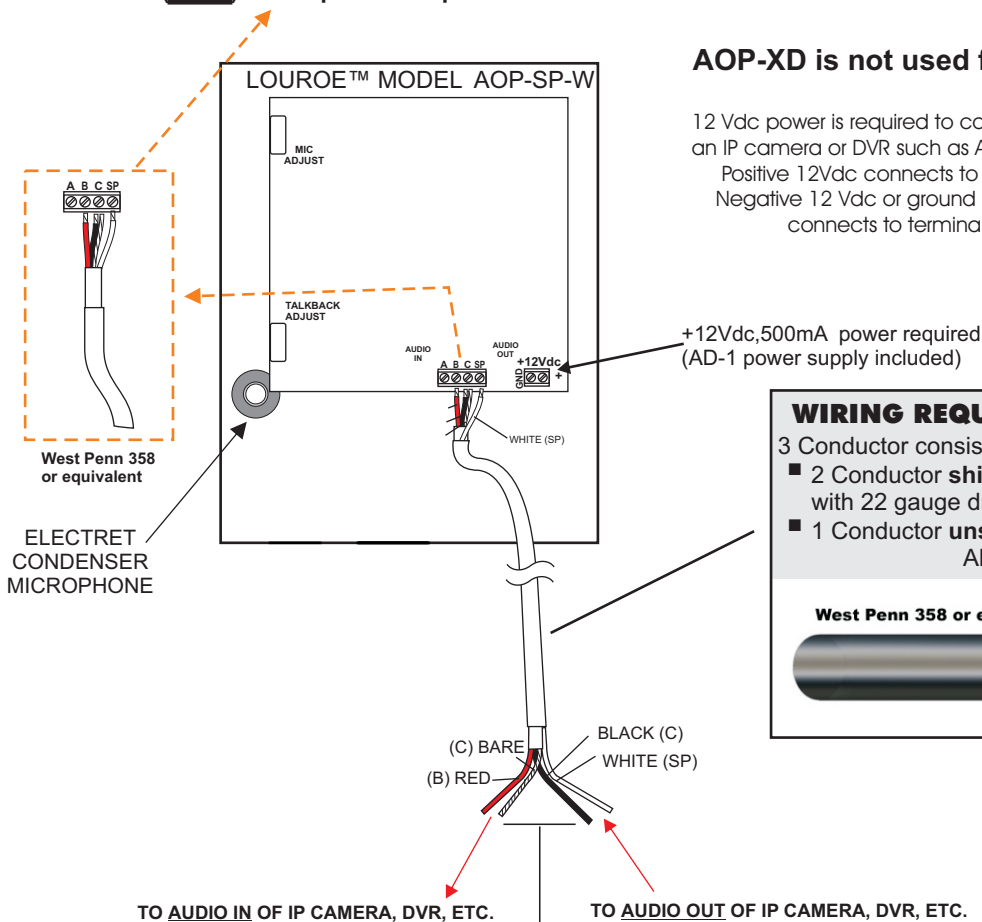
## INTERCONNECTION DIAGRAM CONNECTING LOUROE™ MODEL AOP-SP-W DIRECTLY TO AN IP CAMERA, DVR, VIDEO SERVER, ETC. USING 3-COND. SHIELDED CABLE

### 4-PIN TERMINAL BLOCK IDENTIFIER OF AOP-SP-W (A,B,C,SP)

- A = not used with this application
- (red) B = Audio Output
- ( ) C = Ground (audio) and Ground (speaker) (black wire)
- (white) SP = Speaker output

**AOP-XD is not used for this application.**

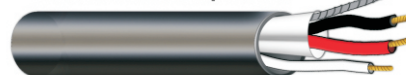
12 Vdc power is required to connect the AOP-SP-W directly to an IP camera or DVR such as AD-1 power supply.  
Positive 12Vdc connects to terminal marked "+"  
Negative 12 Vdc or ground (wire with white stripes) connects to terminal marked "GND"



### WIRING REQUIREMENTS

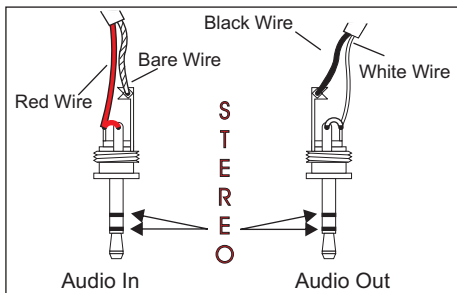
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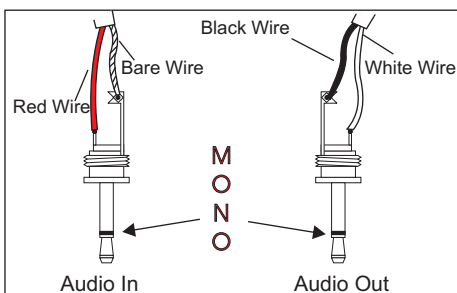


NOTE: BLACK AND BARE WIRES ARE COMMON GROUND

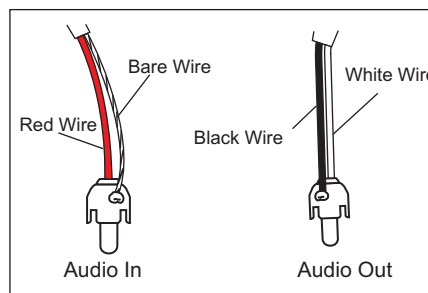
### 3.5mm STEREO CONNECTION



### 3.5mm MONO CONNECTION



### RCA CONNECTION



# INSTALLATION AND OPERATING INSTRUCTIONS

## **SPECIFICATIONS** (Microphone)

▪ Type	Electret Condenser
▪ Microphone output	line level (0 dB @ 1k $\Omega$ )
▪ Microphone element sensitivity	-45dB
▪ Frequency response	40 Hz to 15 kHz $\pm$ 1 dB
▪ Output Impedance	600 $\Omega$ unbalanced
▪ Supply voltage	12 Vdc, 500mA

## **SPECIFICATIONS** (Speaker)

▪ Speaker Power output	2W
▪ Speaker Impedance	8 $\Omega$
▪ Speaker magnet	3 oz. ceramic
▪ Speaker size	4" (10cm)
▪ Weight, net	3 Lbs. (1.4 Kg)

## **SPECIFICATIONS** (Mechanical)

▪ Dimensions (Face Plate)	6 1/4"H x 8"W metric (158mm H x 203mm W)
▪ Backbox for AOP-SP-W	
Surface Mount Box (metal)	6 1/4"H x 8"W x 2 3/4"D metric (158mm H x 203mm W x 70mm D)
Flush Mount Box (plastic)	
Backbox Portion	5"H x 6 7/8"W x 2 5/8"D metric (127mm H x 175mm W x 67mm D)
Total including flange	6 1/4"H x 8"W x 2 5/8"D metric (158mm H x 203mm W x 67mm D)

### **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.

# INSTALLATION AND OPERATING INSTRUCTIONS

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## NOTES

### 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.

# INSTALLATION AND OPERATING INSTRUCTIONS

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## NOTES

MANUFACTURED  
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