



**SYSTEM
SENSOR®**



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SPECTRAlert
ADVANCE
from System Sensor

SpectrAlert Advance SP and SPV Series Dual Voltage Speakers for Fire Protective Signaling Systems

For use with the following models: SPRA, SPWA, SPRVA, SPWVA, SPRKA, SPWKA, SPCWA, SPCRA, SPCWVA, SPCRVA, and SPCWKA

PRODUCT SPECIFICATIONS

Operating Temperature	Standard	32°F to 120°F (0°C to 49°C)	K Series	-40°F to 151°F (-40°C to 66°C)
Humidity Range	Standard	10% to 93% Non-condensing	K Series	Meets NEMA 4X and IP56 requirements
Nominal Voltage	25 Volts or 70.7 Volts (nominal)			
Maximum Supervisory Voltage	50 VDC			
Speaker Frequency Range	400 - 4000 Hz			
Power Settings	1/4, 1/2, 1, 2 watts			
Input Terminal Wire Gauge	12-18 AWG			

Dimensions for Speakers and Accessories

NOTE: V suffix refers to high volume device, C suffix refers to ceiling device.

Wall Product	Length	Width	Depth	Ceiling Product	Diameter	Depth
SP Speaker	6.0"	5.0"	2.8"	SPC Speaker	6.8"	2.8"
SPV Speaker	6.0"	5.0"	2.9"	SPCV Speaker	6.8"	2.9"
Weatherproof Back Box**	6.5"	5.5"	2.9"	Weatherproof Back Box**	7.2"	2.9"
Surface Mount Skirt	6.5"	5.5"	2.7"	Surface Mount Skirt	7.2"	2.7"

*Depth above finished surface of wall or ceiling. **Weatherproof back box dimensions do not include the two mounting tabs.

Mounting Box Options

Indoor Products	K Series Products	
4 × 4 × 2 1/8 or deeper		
	PWBB - red wall plastic weatherproof back box	MWBB - red wall metal weatherproof back box
	PWBBW - white wall plastic weatherproof back box	MWBBW - white wall metal weatherproof back box
	PWBBCW - white ceiling plastic weatherproof back box	MWBBCW - white ceiling weatherproof back box

The indoor SP, SPV, SPC, and SPCV Series are suitable for dry environments.

The "K" Series models are suitable for use in both indoor and outdoor applications.

NOTICE: This manual shall be left with the owner/user of this equipment. The "K" models are suitable for outdoor use in wet environments with outdoor backbox supplied with the product.

GENERAL DESCRIPTION

The SpectrAlert Advance series of notification appliances offers a wide range of indoor and outdoor speakers for wall and ceiling applications, indoors and outdoors. They are designed to be used at either 25 or 70.7 volts, and operate at any one for four input power levels. These products are electrically backward compatible with the previous generation of SpectrAlert speakers. With its low total harmonic distortion, the SpectrAlert Advance SP series offers high fidelity sound output. The SpectrAlert Advance SPV series offers greater sound output at every tap setting for applications with high ambient noise levels. Wall and ceiling products may be used interchangeably (wall products may be used on the ceiling and ceiling products may be used on the wall). K Series products are designed to be used over a wider range of temperatures and are suitable for use in wet locations.

FIRE ALARM SYSTEM CONSIDERATIONS

All wiring must be installed in compliance with CSA C22.1 Canadian Electrical Code and applicable local codes. System Sensor recommends installing fire alarm speakers in compliance with CAN/ULC-S524.

Electrical Wiring

1. Connect the speaker as shown in Figure 1.

NOTE: Do not loop electrical wiring under terminal screws. Wires connecting the device to the control panel must be broken at the device terminal connection in order to maintain electrical supervision.

2. There are two rotary switches on the back of the product. The first switch is used to select either 25 or 70.7 volts input. The second switch is used to select the input power of 1/4, 1/2, 1 or 2 watts.

FIGURE 1. WIRING DIAGRAM:

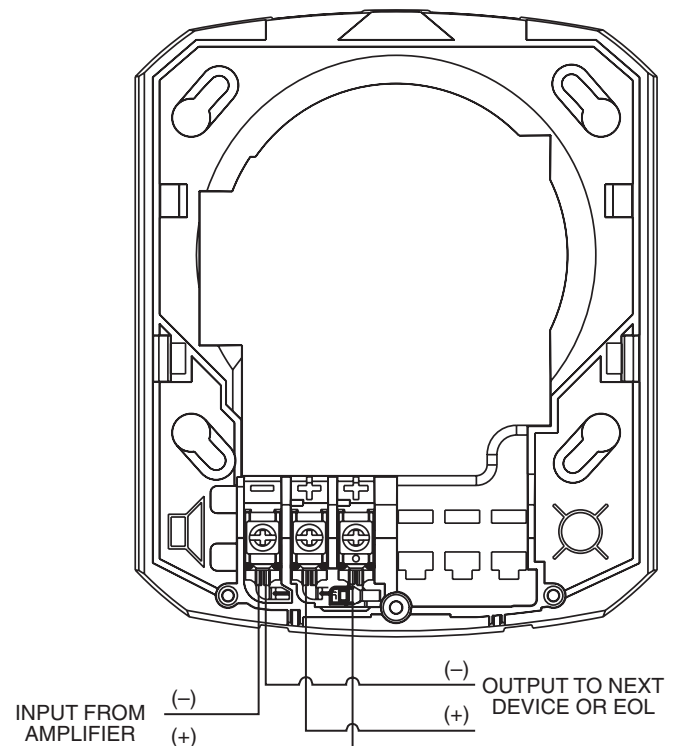
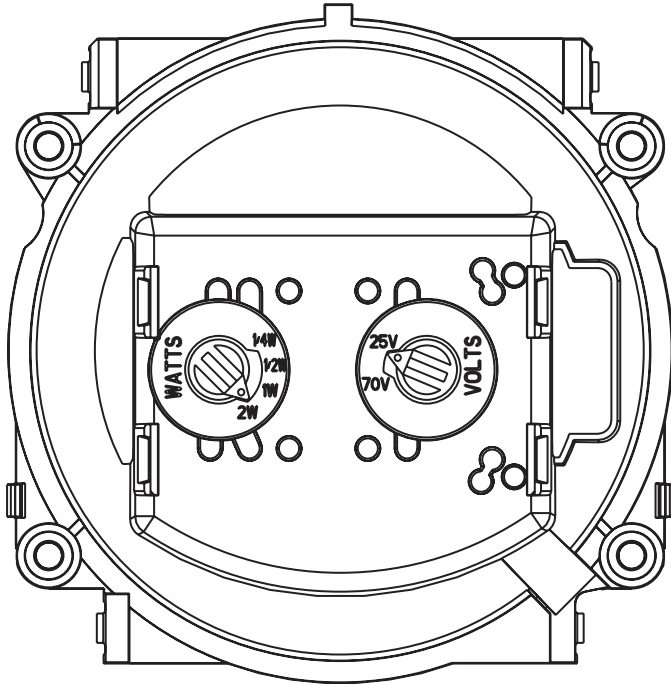


FIGURE 2. SPEAKER WATTAGE AND VOLTAGE SETTINGS:

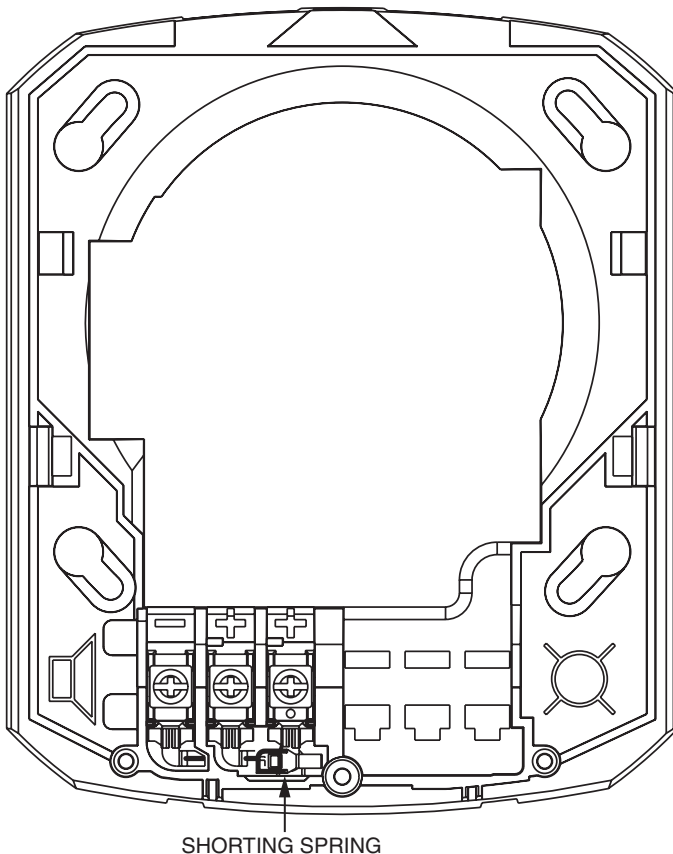


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SHORTING SPRING

NOTE: A shorting spring is provided between terminals 2 and 3 of the mounting plate to enable wiring checks after the system has been wired, but prior to installation of the final product. This spring will automatically disengage when the product is installed, to enable supervision of the final system.

FIGURE 3:



SHORTING SPRING

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TABLE 1. SOUND LEVELS FOR EACH TRANSFORMER POWER

TAP AND DIRECTIONAL CHARACTERISTICS:

ULC Anechoic (dBA @ 10 ft.)	SP, SPC	SPV, SPCV, K
2W	86	91
1W	83	88
1/2W	80	85
1/4W	77	82

ANGLE (DEGREES)	
30	-3dB
75	-6dB

NOTE: V suffix refers to high volume device,
C suffix refers to ceiling mount device.

CAUTION

Signal levels exceeding 130% rated signal voltage can damage the speaker. Consequently, an incorrect tap connection may cause speaker damage. This means that if a 25V tap is selected when a 70.7V amplifier is being used, speaker damage may result. Therefore, be sure to select the proper taps for the amplifier voltage/input power level combination being used. Finish of units must not be painted or altered.

MOUNTING INDOOR WALL OR CEILING PRODUCTS

1. Attach mounting plate to junction box as shown in Figures 4 and 5. The mounting plate is compatible with 4" x 4" x 2 1/8" junction boxes. If using a back box skirt or trim ring, attach the mounting plate to the skirt or trim ring and then attach the entire assembly to the junction box (see Figures 4, 5, 6 and 7).
2. Connect field wiring to terminals, as shown in Figure 1.
3. If the product is not to be installed at this point, use the paint cover to prevent contamination of the mounting plate.
4. To attach product to mounting plate, remove the paint cover, then hook tabs on the product housing into the grooves on the mounting plate.
5. Then, swing product into position to engage the pins on the product with the terminals on the mounting plate. Make sure that the tabs on the back of the product housing fully engage with the mounting plate.
6. **Secure product by tightening the single mounting screw in the front of the product housing.** For tamper resistance, the standard cap-tivated mounting screw may be replaced with the enclosed Torx screw.

K SERIES MOUNTING

1. K Series products may be used indoors or outdoors. They must be installed using the proper SpectrAlert Advance weatherproof back box. Do not attempt to use boxes other than those specified for use with the product.
2. The plastic weatherproof back box is equipped with removable side flanges for mounting. The back box may be secured directly to the wall or ceiling using the flanges (plastic or metal back boxes) or by using the knockout plugs (plastic back boxes). Knockout plugs are provided to mount directly to the wall or ceiling or to a 1900 weatherproof electrical box, see Figure 12.
3. Threaded holes are provided in the sides of the box for 3/4 inch conduit adapters. Knockout plugs in the back of the box can be used for 1/2 or 3/4 inch rear entry. Unused holes must be sealed. Plugs and O-Rings are provided with the box for this purpose.
4. It is the responsibility of the installer to make sure that all openings and connections are sealed properly. Outdoor installations that are protected from direct exposure to rain are still subject to condensation or leakage through hidden areas, such as a soffit.
5. Water may pool on the back box due to condensation or direct exposure to rain or snow. Use watertight fittings for all wiring connections, including the knockout plugs on the back of the box. When using the plastic plugs to fill unused threaded holes, make sure the O-rings supplied are properly positioned on the plug. The plugs must be sealed with PTFE

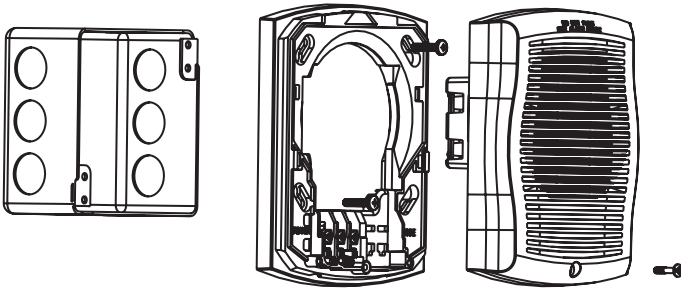
thread seal tape.

6. Attach the mounting plate to the weatherproof back box using the four non-painted screws.
7. Follow steps 2-5 of the indoor mounting instructions to wire and attach the product. The product must be mounted to the weather proof back box using the painted screws (wall product has 4 screws, ceiling product has 3 screws)

CAUTION

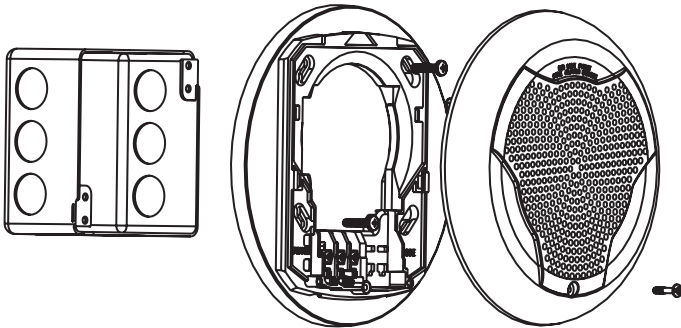
The 'hold-in-place' snaps are not intended to secure the product to the back box. The product must be secured to the back box using the screws provided

FIGURE 4. WALL MOUNT PRODUCT WITH TRIM RING:



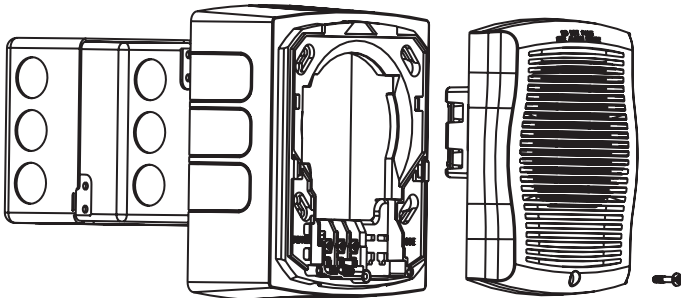
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FIGURE 5. CEILING MOUNT PRODUCT WITH TRIM RING:



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FIGURE 6. WALL MOUNT PRODUCT WITH BACK BOX SKIRT:



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FIGURE 7. CEILING MOUNT PRODUCT WITH BACK BOX SKIRT:

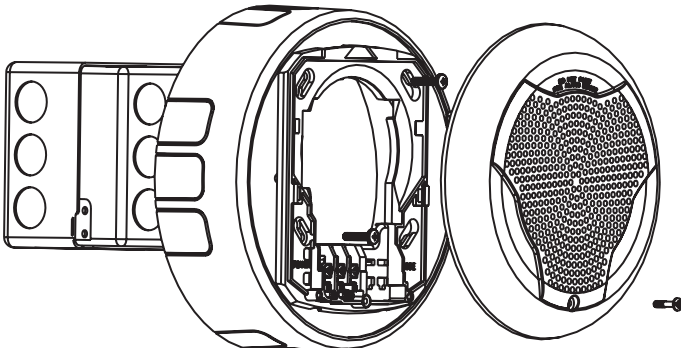
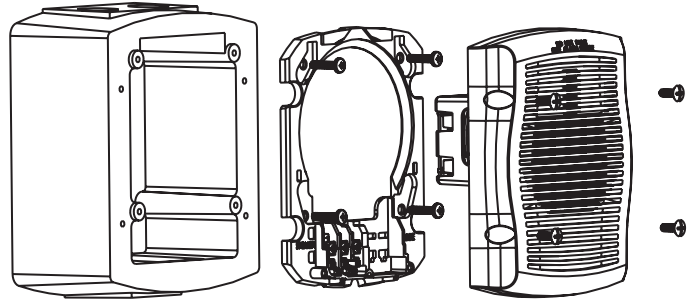
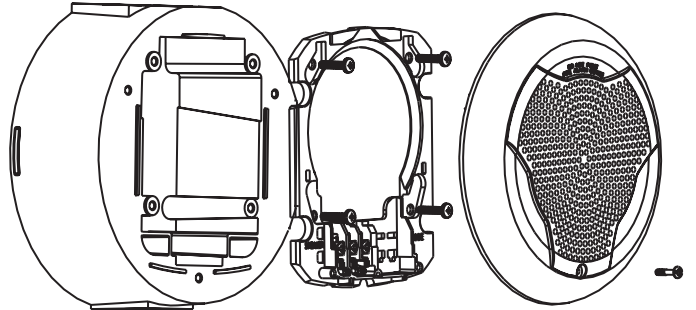


FIGURE 8. OUTDOOR WALL MOUNT PRODUCT WITH PLASTIC WEATHERPROOF BACK BOX:



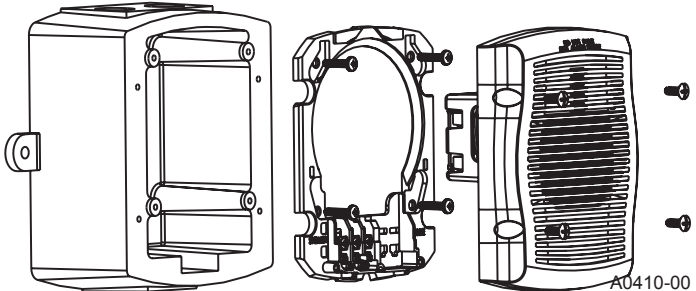
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FIGURE 9. OUTDOOR CEILING MOUNT PRODUCT WITH PLASTIC WEATHERPROOF BACK BOX:



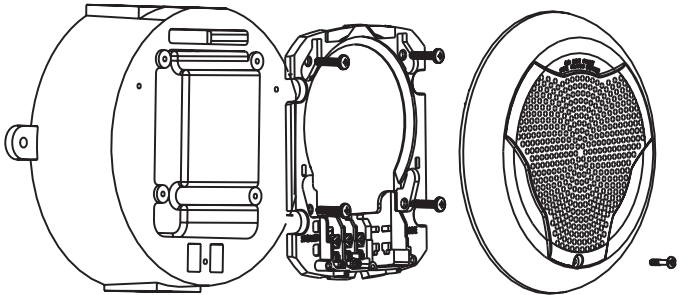
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FIGURE 10. OUTDOOR WALL MOUNT PRODUCT WITH METAL WEATHERPROOF BACK BOX:



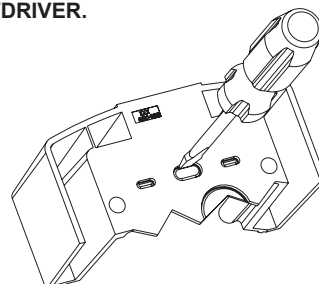
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FIGURE 11. OUTDOOR CEILING MOUNT PRODUCT WITH METAL WEATHERPROOF BACK BOX:



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FIGURE 12. FOR KNOCKOUTS USE A FLAT BLADE SCREWDRIVER.



NOTE: Place the blade along the edge of the slot and slowly work your way around the slot as you strike the screwdriver.

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Please refer to insert for the Limitations of Fire Alarm Systems



THE LIMITATIONS OF SPEAKERS

Always make sure that the individual speakers are tested after installation per CAN/ULC-S536 regulations.

The speaker may not be heard. The loudness of the speaker meets (or exceeds) the current Underwriters Laboratories' standards. However, the speaker may not attract the attention of a sound sleeper or one who has recently used drugs or has been drink-

ing alcoholic beverages. The speaker may not be heard if it is placed on a different floor from the person in hazard or if placed too far away to be heard over the ambient noise. Traffic, air conditioners, machinery, or music appliances may prevent even alert persons from hearing the alarm. The speaker may not be heard by persons who are hearing impaired.

THREE-YEAR LIMITED WARRANTY

System Sensor warrants its enclosed product to be free from defects in materials and workmanship under normal use and service for a period of three years from date of manufacture. System Sensor makes no other express warranty for this product. No agent, representative, dealer, or employee of the Company has the authority to increase or alter the obligations or limitations of this Warranty. The Company's obligation of this Warranty shall be limited to the repair or replacement of any part of the product which is found to be defective in materials or workmanship under normal use and service during the three year period commencing with the date of manufacture. After phoning System Sensor's toll free number 800-SENSOR2 (736-7672) for a Return Authorization number, send defective units postage prepaid to: System Sensor, Returns Department,

RA # _____, 6581 Kitimat Road, Unit 6, Mississauga, Ontario L5N-3T5. Please include a note describing the malfunction and suspected cause of failure. The Company shall not be obligated to repair or replace units which are found to be defective because of damage, unreasonable use, modifications, or alterations occurring after the date of manufacture. In no case shall the Company be liable for any consequential or incidental damages for breach of this or any other Warranty, expressed or implied whatsoever, even if the loss or damage is caused by the Company's negligence or fault. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.