SPCW8 8 Inch Dual Voltage Speaker for Fire and General Signaling Systems

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www.systemsensor.com

Ceiling Speaker: SPCW8 with listed enclosure
Intended for use with separately sold tile support bracket: SB-SPC8

SIGNALING
UL LISTED UL LISTED ULC LISTED

PRODUCT SPECIFICATIONS

Standard Operating Temperature:	32°F to 120°F (0°C to 49°C)
Humidity Range:	10 to 93% Non-condensing
Nominal Voltage:	25 Volts or 70.7 Volts
Maximum Supervisory Voltage:	50 VDC
Speaker Frequency Range:	400 – 4000 Hz (Fire Alarm) 200Hz – 15KHz (General Signaling)
Power Settings:	⅛, ¼, ½,1,2, 4, 8 Watts
Input terminal wire gauge:	12 to 18 AWG (2.5 mm²)

DIMENSIONS FOR PRODUCTS AND ACCESSORIES		
Ceiling Speaker	Diameter	Depth
SPCW8 Speaker with grill	12.8” 325.1mm	2.7” 68.6mm
SPCW8 Speaker with back can	12.8” 325.1mm	4.2” 106.7mm

MOUNTING BOX OPTIONS
SPEAKERS
Supplied Enclosure

Tile Support Bracket	Length	Width	Diameter opening
SB-SPC8	23.75” 603.3mm	4.125” 104.8mm	10.75” 273.1mm

NOTICE: This manual shall be left with the owner/user of this equipment.

BEFORE INSTALLING

Please read the System Sensor Voice Evacuation Application Guide, which provides detailed information on speaker notification devices, wiring and special applications. Copies of this manual are available from System Sensor. NFPA 72, CAN/ULC S524 and NEMA guidelines should be observed.

Important: The notification appliance used must be tested and maintained following NFPA 72 requirements.

GENERAL DESCRIPTION

System Sensor series of notification appliances offer a wide range of audible and visible devices for life safety notification. The SPCW8 speaker is designed to be used at either 25 or 70.7 volts, with field selectable tap settings from ⅛ to 8 Watts. These products are designed for high efficiency sound output with low total harmonic distortion to offer high fidelity sound output.

Its clear audibility is designed to meet life safety needs from fire to emergency communication messages. With its wide frequency range it can also be used for general signaling such as paging and background music. The SPCW8 speaker is listed to ANSI/UL 1480, CAN/ULC S541 and CSA C22.2 No. 205 requirements for public mode and general signaling applications as well as ANSI/UL 2043 plenum rated. Speaker is suitable for indoor and damp installations.

FIRE ALARM SYSTEM CONSIDERATIONS

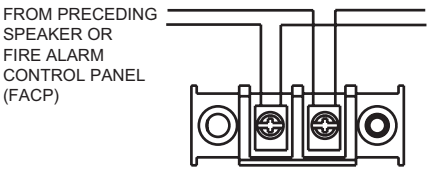
All wiring must be installed in compliance with the National Electrical Code (NEC , Canadian Electrical Code) and applicable local codes. System Sensor recommends installing fire alarm speakers in compliance with NFPA 72, ANSI/UL 1480 , CAN/ULC S524 and NEC 760.

WIRING AND MOUNTING

All wiring must be installed in compliance with the National Electric Code and the local codes as well as the authority having jurisdiction. Wiring must not be of such length or wire size which would cause the notification appliance to operate outside of its published specifications. Improper connections can prevent the system from alerting occupants in the event of an emergency.

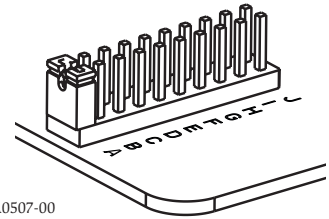
Wire sizes up to 12 AWG (3.31 mm²) may be connected to the wiring terminals. The terminals are pre-set to accommodate 12 AWG wiring.

FIGURE 1. WIRING DIAGRAM



A0506-00

FIGURE 2. JUMPER SETTINGS FOR SPEAKER VOLUME



A0507-00

Make wire connections by stripping about 3/8" of insulation from the end of the wire. Then slide the bare end of the wire under the appropriate clamping plate and tighten the clamping plate screw.

1. Connect the speaker as shown in Figure 1.

2. Set speaker volume by selecting voltage input jumpers as shown in Figure 2.

3. Mount according to instructions for the application's appropriate configuration.

WIRING TERMINALS

1. Speaker Positive (+). Line in and out
2. Speaker Negative (COM). Line in and out.

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.

SET SPEAKER VOLUME

In order to select the tap settings for given voltage input (25V or 70.7V) select the jumper selections as noted. Use the jumper connector to select tap setting for the desired speaker volume.

Jumper Selection	Voltage Input 25V	Voltage Input 70V
A	8W	
B	4W	
C	2W	
D	1W	8W
E	½W	4W
F	¼ W	2W
G	⅛W	1W
H		½W
I		¼ W
J		⅛W

AVAILABLE POWER SETTINGS

System Sensor offers a wide range of power settings for your life safety needs, including ⅛,¼,½,1, 2, 4 and 8W.

Sound levels data per UL 1480 and CAN/ULC-S541 can be found in Table 1. Directional characteristics can be found in Table 2.

TABLE 1. SOUND LEVELS FOR EACH TRANSFORMER POWER SETTING

Wattage Setting	Reverberant (dBA @ 10ft)	Wattage Setting)	Anechoic (dBA @ 10ft)
⅛ W	75	⅛ W	82
¼ W	78	¼ W	85
½ W	81	½ W	88
1 W	84	1 W	91
2 W	87	2 W	94
4 W	90	4 W	97
8W	93	8 W	100

⚠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.

TABLE 2 DIRECTIONAL CHARACTERISTICS

Angle (degrees)	Decibels
± 30°	-3dB
± 60°	-6dB

FIGURE 3 BACK CAN

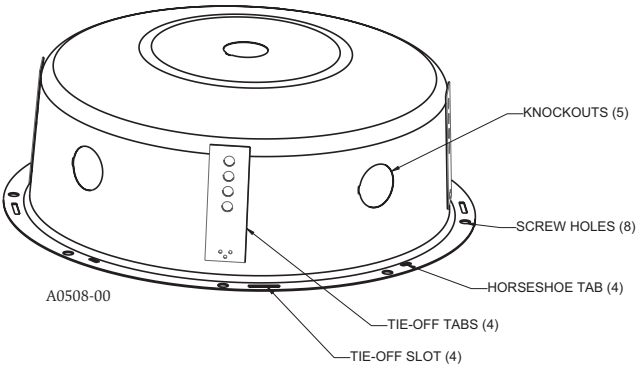
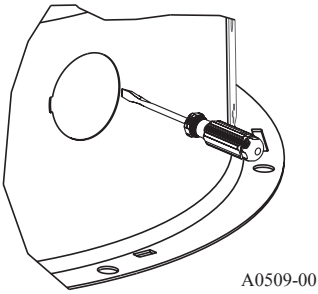


FIGURE 4 REMOVING KNOCKOUTS



SUPPLIED BACK CAN

¾ inch knockouts are provided for conduit entry way. Compatible with plenum rated cable and plenum whip flex conduit.

To remove the ¾ inch knockout, we recommend you use a flat head screwdriver, place the blade of the flat head screwdriver in the inner edge of the knockout. Strike the screwdriver as you work your way around as shown in Figure 4:

FLUSH MOUNTING INSTALLATION

1. Connect field wiring to terminals, as shown in Figure 1.

2. Select the power tap settings using the jumper for ⅛, ¼, ½, 1, 2, 4, 8W.

3. Mount speaker to supplied back can using mounting screws provided.

⚠CAUTION

Factory finish should not be altered: Do not paint!

CEILING TILE INSTALLATION (WITH BACK CAN)

1. Place ceiling tile with finished surface facing up over a large garbage can (provides support and saves clean up time).

2. Cut hole in the center of the ceiling tile using the SB-SPC8 tile support opening as a template.

3. Flip the ceiling tile over and position the SB-SPC8 tile bridge on the unfinished side of the ceiling tile.

4. Punch out knockout in the supplied back can and wire per the NEC. The back can is listed to accommodate plenum cable or plenum cable whip and feed cable or whip through the knockout.

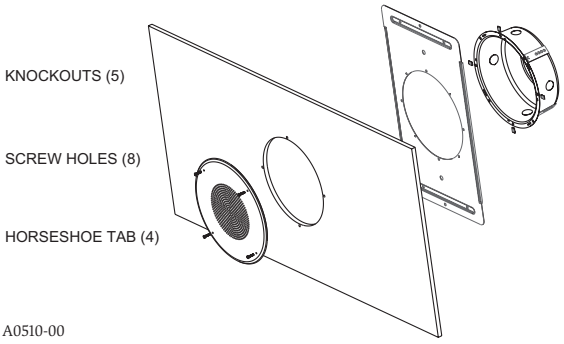
5. Install the SB-SPC8 tile bridge to the backcan using the supplied clips and customer supplied screws.

6. Connect field wiring to terminals, as shown in Figure 1.

7. Select the power tap settings using the jumper for ⅛, ¼,½, 1, 2,4,8W.

8. Install the ceiling speaker using (4) 8-32 screws provided with the ceiling speaker, sandwiching the SB-SPC8 tile bridge and ceiling tile in between. The screws anchor into the extruded threaded holes in the SB-SPC8 tile bridge.

FIGURE 5 CEILING TILE WITH BACK CAN



Please refer to insert for the Limitations of Fire Alarm Systems

⚠WARNING

THE LIMITATIONS OF SPEAKERS

Always make sure that the individual speakers are tested after installation per NFPA regulations. The speakers may not be heard. The loudness of the speaker meets (or exceeds) current Underwriters Laboratories' standards. However, the speaker may not alert a sound sleeper or one who has recently used drugs or has been drinking 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 such as traffic, air conditioners, machinery or music appliances that may prevent 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 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: Honeywell, 12220 Rojas Drive, Suite 700, El Paso TX 79936, USA. Please include a note describing the malfunction and suspected cause of failure. The Company shall not be obligated to 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.

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