

# SPHP

## POWERTONE® SPEAKERS

(With or without Strobe Warning Light)

### SAFETY MESSAGE

*People's lives depend on your safe installation, test, operation, and maintenance of our products. Read, understand, and follow all safety messages and instructions. Refer to "Safety Messages for Equipment Used in Fire-Protective Signaling Systems" and any other documentation shipped with equipment before performing any system related duty.*

### I. GENERAL.

These two PowerTone models are 25 Vrms and 70 Vrms, indoor/outdoor rated, selectable power output (0.5 to 15 watts) loudspeakers for use with fire alarm signalling systems such as CPG's PowerTone system. They are designed to reproduce electronically generated warning tones, which command rapid recognition, and full range voice communication. They are suitable for use in areas with high ambient noise levels. These speakers are equipped with a blocking capacitor to allow use in supervised alarm signalling systems. The PowerTone Model SPHP speaker is also available with an optional 24VDC strobe light attached. All strobes are listed by Underwriters Laboratories in their respective categories. For additional information regarding the attached strobe and message label(s) attachment, refer to Model V1971 strobe instruction sheet (CPG Part No. 2561088 or 2561090) or Model VST strobe instruction sheet (CPG Part No. 2561310). Model V1971 may be used outdoors when Model VW outdoor kit is employed; otherwise, Model V1971 is for indoor use only. Model VST may be used for indoor use only. Speaker projectors on all models are adjustable and may be repositioned to obtain desired sound distribution.

### II. SPECIFICATIONS.

Operating Voltage	25 Vrms or 70 Vrms
Power Input (selectable)	0.5 W, 1 W, 2 W, 7 W and 15 W
Weight (approx.)	5 lb. (2.25kg)
Size	11-7/8" (302mm) high, 8-1/8" (206mm) wide, 8" (203mm) deep.
Construction	Aluminum enclosure painted with red enamel. Amplifier housing sealed with neoprene rubber gasket.

#### Approval Agency Listings:

Underwriters Laboratories Inc.  
Model SPHP: File S6476(Guide UUMW  
California State Fire Marshal—7230-1517:110  
New York City—(Listing is pending.)

Audibility information is shown in table 1.

### III. INSTALLATION.

#### A. Unpacking.

After unpacking the speaker, examine it carefully for possible damage that may have occurred in transit. If equipment has been damaged, immediately file a claim with the carrier stating extent of damage. Carefully check all shipping labels and tags for special instructions before removing or destroying them.

#### B. Mounting Arrangements (see figure 1).

The speaker can be mounted on any relatively flat surface. Conduit connection can be made to two 1/2" threaded openings at the bottom of the housing or to 7/8" knockout in rear of housing. A 1/2" conduit plug is supplied for field installation if one of the 1/2" threaded openings is not utilized. After the mounting location and mounting method have been selected, proceed with the applicable instructions below.

### WARNING

*Property damage, serious injury, or death could occur if an accumulation of water, snow, dust, etc. resides in the speaker projector, severely reducing or preventing operation of this device. Mount the unit so speaker projector is pointed horizontally or slightly downward.*

#### 1. Flat Surface Mounting

a. Remove and retain the two screws that secure cover to housing. Remove the cover.

b. Select the mounting location and place rear of housing against mounting surface.

c. Using the mounting holes (two (2) inside housing) as a template, scribe drill position marks on the mounting surface. See figure 1 for mounting hole locations and dimensions.

### CAUTION

*Before drilling holes in any surface, ensure that both sides of surface are clear of items that could be damaged.*

d. Secure the unit to a wooden mounting surface with #10 x 1" wood screws. If mounting on a metal surface, drill 13/64" diameter holes and secure the unit with #10 screws, lockwashers and nuts.

e. Route power and supervision leads through conduit to the audible signal. Install a 1/2" electrical connector at the bottom of the audible signal. Route wires through conduit and electrical connector into the audible signal

POWER TAP	UL SOUND LEVEL @ 10' dB(A)
0.5watt	87
1 watt	93
2 watt	96
7 watt	99
15 watt	102

Table 1. Power Tap Setting vs. Sound Output on Model SPHP.

housing. Install supplied 1/2" conduit plug if only one 1/2" conduit entrance is used.

### WARNING

Property damage, serious injury or death could occur if the projector is mishandled during installation or over time. DO NOT rotate the projector more than 180 degrees or internal speaker wiring may be damaged.

f. Reposition speaker projector if necessary to obtain desired sound coverage. Loosen collar nut (see figure 1) and move projector to desired position.

g. Before reinstalling the housing cover, read paragraph III.C. Electrical Connections below and make the necessary electrical connections.

#### 2. Concealed Conduit Mounting.

a. Remove and retain the two screws that secure cover to housing. Remove the cover.

b. Remove the 7/8" knockout at rear of housing.

c. Install the conduit connection.

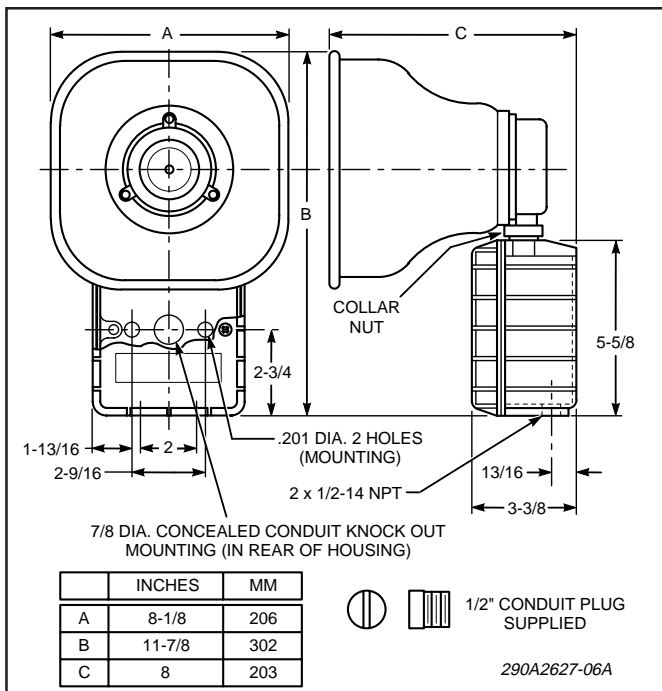


Figure 1. Model SPHP Speaker Dimensions.

### NOTE

If installation on an existing electrical box is desired, an optional Model CC adapter plate is required.

d. Select the mounting location and place rear of housing against mounting surface.

e. Using the two (2) mounting holes as a template, scribe drill position marks on the mounting surface. See figure 1 for mounting hole locations and dimensions.

### CAUTION

Before drilling holes in any surface, ensure that both sides of surface are clear of items that could be damaged.

f. Secure the unit to a wooden mounting surface with #10 x 1" wood screws. If mounting on a metal surface, drill 13/64" diameter holes and secure the unit with #10 screws, lockwashers and nuts.

### WARNING

Property damage, serious injury or death could occur if the projector is mishandled during installation or over time. DO NOT rotate the projector more than 180 degrees or internal speaker wiring may be damaged.

g. Reposition speaker projector if necessary to obtain desired sound coverage. Loosen collar nut (see figure 1) and move projector to desired position. Install two 1/2" conduit plugs in the unused bottom entryways (one plug supplied).

h. Before reinstalling the housing cover, read paragraph III.C. Electrical Connections below and make the necessary electrical connections.

#### C. Electrical Connections.

National Electrical Code as well as local codes must be adhered to in installation of these models. All electrical wiring must be routed through approved conduit and fittings.

##### 1. Model SPHP (without Strobe Light Option).

a. See figures 2 and 3. Connect the audio common (-) leads to the speaker's common terminal and audio positive (+) leads to desired wattage terminal.

### WARNING

An uninsulated section of a single conductor must NOT be looped around a terminal and used as two separate connections. NFPA 72 requires that the wire is severed to provide electrical supervision of the connection.

b. See Figure 3. Connect the yellow lead, found in the speaker, to the 25V or 70V terminal as appropriate.

**WARNING**

Property damage, serious injury, or death could occur if the housing is not closed properly.

c. Be sure the neoprene rubber cover gasket is properly seated in the housing groove and reinstall the housing cover.

## 2. Model SPHP (with Strobe Light Option).

**DANGER**

A high voltage shock hazard may be present inside the strobe light, even if power is not connected. It is recommended that strobe light NOT be opened. If access to the printed circuit board assembly is required (removal or replacement of damaged unit), disconnect unit from power source and wait 5 minutes.

a. See figure 2. Connect the strobe light's red (+) lead to the power source positive (+) lead. Connect the strobe light's black (-) lead to the power source negative (-) lead.

**WARNING**

An uninsulated section of a single conductor must NOT be looped around a terminal and used as two separate connections. NFPA 72 requires that the wire is severed to provide electrical supervision of the connection. In addition, common strobe leads must NOT be terminated within the same wire nut.

b. See figures 2 and 3. Connect the audio common (-) leads to the speaker's common terminal and audio positive (+) leads to desired wattage terminal.

c. See figure 3. Connect the yellow lead, found in the speaker, to the 25V or 70V terminal as appropriate.

d. Be sure the neoprene rubber cover gasket is properly seated in the housing groove and reinstall the housing cover.

**IV. TESTING/OPERATING.**

A. After installation is complete, be sure to test the system to verify that each speaker and optional strobe light operates satisfactorily. If it is found that the unit is too loud for its location, a lower wattage tap may be selected. Carefully remove the housing cover and move the positive (+) lead to a lower wattage tap (see Figure 4). Reinstall the housing cover and retest.

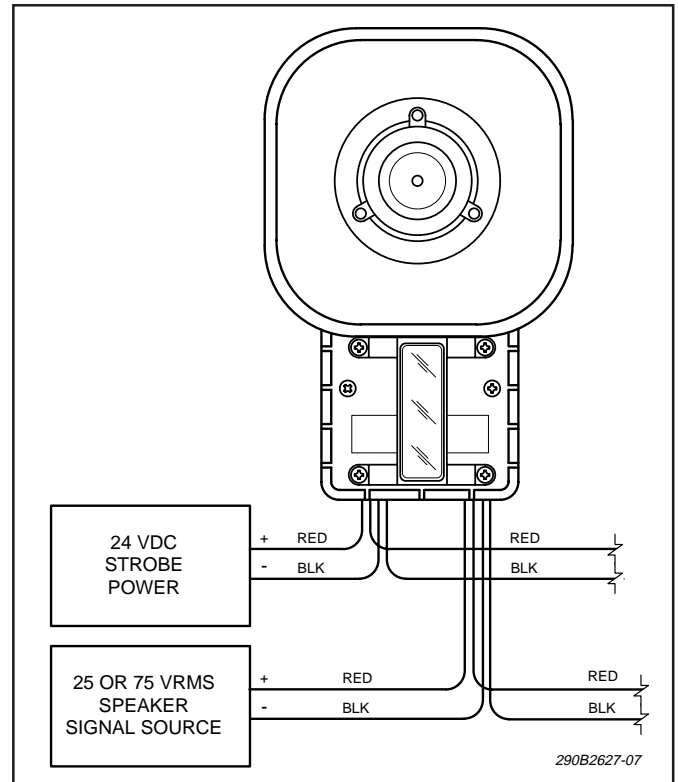


Figure 2. Typical Installation Wiring.

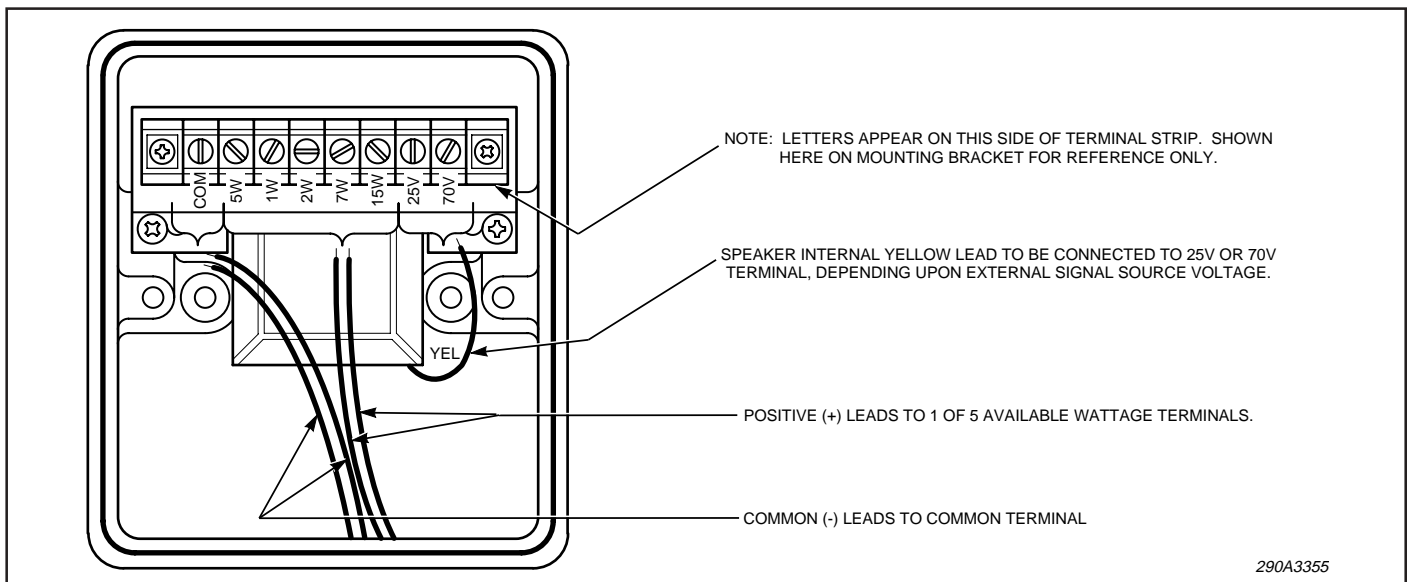


Figure 3. Internal Multi-tap Wiring Set-up.

**WARNING**

*Property damage, serious injury, or death could occur if the housing is not closed properly.*

B. After completion of initial system test, establish a program for periodic testing of this device. Refer to NFPA 72, local Fire Codes and the authority having jurisdiction for this information.

C. Provide a copy of these instructions for the Safety Engineer, system operator(s) and maintenance personnel.

**V. MAINTENANCE.**

A. Periodically check this device to verify that there are no foreign substances in, or in front of, the speaker which will reduce its effectiveness.

B. Testing should be periodically performed. Refer to NFPA 72, local Fire Codes and the authority having jurisdiction for information.

C. In the event a volume adjustment or other repair is required, be sure to refer to the Safety Message For Maintenance Personnel before proceeding.

**WARNING**

*Unauthorized repair/servicing of the unit may result in degradation of performance and/or property damage, serious injury, or death to you or others. If a malfunctioning unit is encountered, do not attempt any field repair/retrofit of parts.*

**VI. SERVICE.**

This product is covered by a 5 year warranty. See CPG terms and conditions for more details.

The factory will service your equipment or provide technical assistance with any problem that cannot be handled locally with satisfaction or promptness.

If any unit is returned to factory for repair, it can be accepted only if we are notified by mail or phone in advance of its arrival. Such notice should clearly indicate service requested and give all pertinent information regarding nature of problem and, if possible, its cause.

Communications and shipments should be addressed to:

Technical Service Department  
Commercial Products Group  
2519 - 4th Avenue  
Moline, IL 61265  
800.521.8219 • FAX 800.225.4109

PowerTone is a registered trademark of Commercial Products Group (CPG).