CPG
life safety signals
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Model ASHP

PowerTone® Amplified Speaker (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.

GENERAL.

This PowerTone Model ASHP is a continuous duty, polarized, indoor/outdoor rated, high output (with internal volume adjustment), amplified speaker for use with fire alarm systems. It is suitable for use in areas with high ambient noise levels that require a loud distinctive signal. Any one of ten plug-in tone cards (purchased separately) may be used (see table 2). In addition, one of two available Model PTCK plug-in connector cards can be used. The Model PTCK plug-in connector cards will allow use of externally generated tone or voice signals (see table 2) from a remote audio amplifier, such as CPG's PowerTone System.

The PowerTone Model ASHP is available with an optional strobe light attached to the 24Vdc units. For additional information regarding the attached strobe and message label(s) attachment, refer to Model V1971 strobe instruction sheet (Part No. 2561088 or 2561090) or Model VST strobe instruction sheet (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. The speaker projector is adjustable and may be repositioned to obtain desired sound distribution.

INSTALLATION.

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

Mounting Arrangements
The amplified speaker can be mounted on any relatively flat surface. Conduit connections 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 (see figure 1).

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.

WARNING

Property damage, serious injury, or death could occur if any objects are in front of speaker, severely reducing optimum sound distribution. For maximum effectiveness, ensure that the front of the speaker is clear of obstructions.

Specification	Rating	
UL Listed	File S5565 (Guide UEAY, UUMW)	
CSFM Listed	7135-1517:101	
NYC MEA Approved	MEA 11-92-E Vol V	
Operating voltage	24VDC	120VAC
Supervisory voltage	24VDC max	
Operating current (depends on tone card or signal used)	0.225A (5.4W) .06A standby	0.28A
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.	
Environmental rating	Outdoor wet	
Temperature range	-40°to +151°F (-40°to +66°C)	
Relative Humidity	95% Non-condensing	

Table 1. Specifications

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

WARNING

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. Route power and supervision leads through the 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 housing. Install supplied 1/2" conduit plug if only one 1/2" conduit entrance is used.

   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 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.

Tone Card Sound (Model UTC)			Audible Frequency (Hz)	Repetition rate (cycles/min)	Audibility	
Selection	**Name**	**Description**			**dB(A) Sound Power**	**UL dB(A) Sound Pressure**
TM1	Wail	Conventional siren	550-1250	11	118.1	97.5
TM2	Yelp	Rapid siren	550-1250	3.3 Hz	118.0	97.4
TM3	Hi-Lo	Alternating high and low	560 and 760	50	116.9	96.3
TM4	Bell	Bell, struck repeatedly	800	50	115.8	95.2
TM5	Yeow	Descending high to low, repeated	1300 and 550	36	118.0	97.4
TM6	Horn	Steady horn	470	Continuous	112.2	91.6
TM7	Beep	Slow intermittent horn	470	50	110.8	90.2
TM8	Stutter	Rapid intermittent horn	470	5	110.3	89.7
TM9	Slow Whoop	Slow ascending, low to high – repeated	420 and 1160	15	116.1	95.5
TM10	Temporal Slow Whoop	NFPA coded slow whoop (fire alarm use only)	420 and 1160	15	113.9	93.3
Connector card model		**Rated voltage**				
PTCK25		25 VRMS			112.4	97.8
PTCK70		70 VRMS			112.2	97.6

Table 2. Tone and connector card ratings for Model ASHP

f. 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).
g. Before reinstalling the housing cover, read section 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.

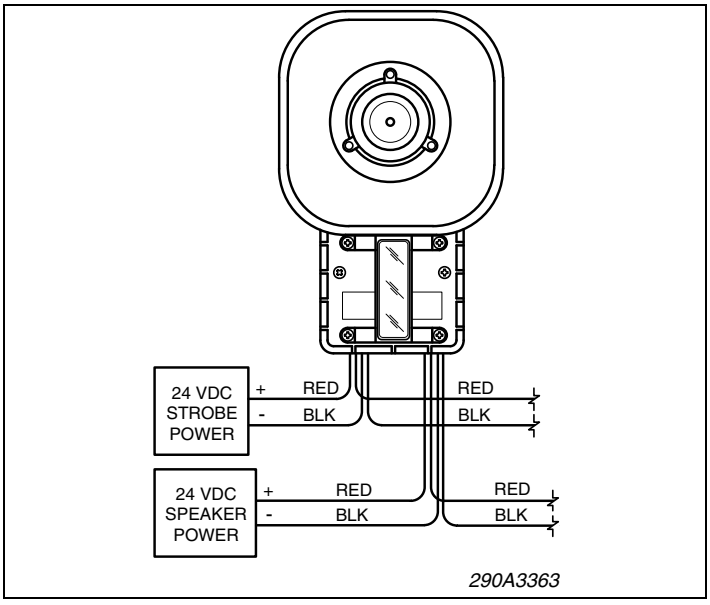


Figure 2. Typical Tone Card Installation Wiring

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.

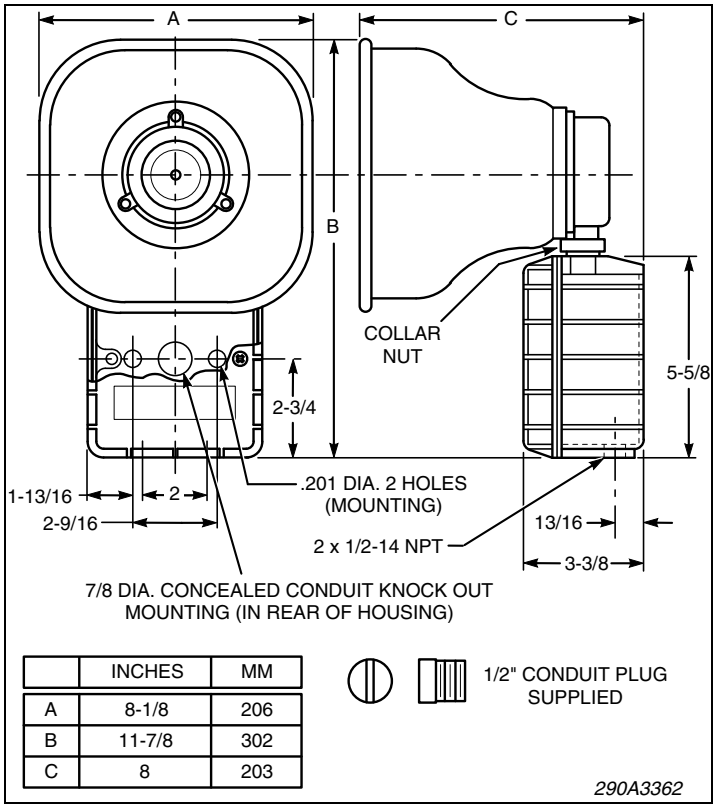
g. Reposition speaker projector if necessary to obtain desired sound coverage. Loosen collar nut (see figure 1) and move projector to desired position. Install two 1/2" conduit plugs in the unused bottom entryways (one plug supplied).
h. Before reinstalling the housing cover, read section Electrical Connections below and make the necessary electrical connections.

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

WARNING

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

1. Tone Card Installation



	INCHES	MM
A	8-1/8	206
B	11-7/8	302
C	8	203

Figure 1. Model ASHP Dimensions

a. See figure 2. Connect the device's red (+) leads to the power source positive (+) lead. Connect the device's black (-) leads to the power source negative (-) lead.
b. Plug the desired tone card into the socket as shown in figure 3.
c. To ensure a proper seal, be sure that the neoprene rubber cover gasket is properly seated in the housing groove and reinstall the housing cover.

2. PTCK Connector Kit Installation

WARNING

Property damage, serious injury, or death could occur if independent conductors are terminated together; both wiresof the same polarity must be used as two separate connections. NFPA 72 requires that the wires be terminated independently to provide electrical supervision of the connection, for both the 24 Vdc speaker power and 25 VRMS or 70 VRMS audio lines.

a. See figure 2. Connect the device's red (+) leads to the power source positive (+) lead. Connect the device's black (-) leads to the power source negative (-) lead.
b. Plug the desired PTCK connector card (purchased separately) into the socket as shown in figure 3.
c. Connect the white leads from the connector card to the audio input and outputs.

NOTE

Check with authority having jurisdiction for proper application of EOL resistor and power supervision relay required (see figure 4).

d. To ensure a proper seal, be sure that the neoprene rubber cover gasket is properly seated in the housing groove and reinstall the housing cover.

3. Model ASHP (with Strobe Light Option).

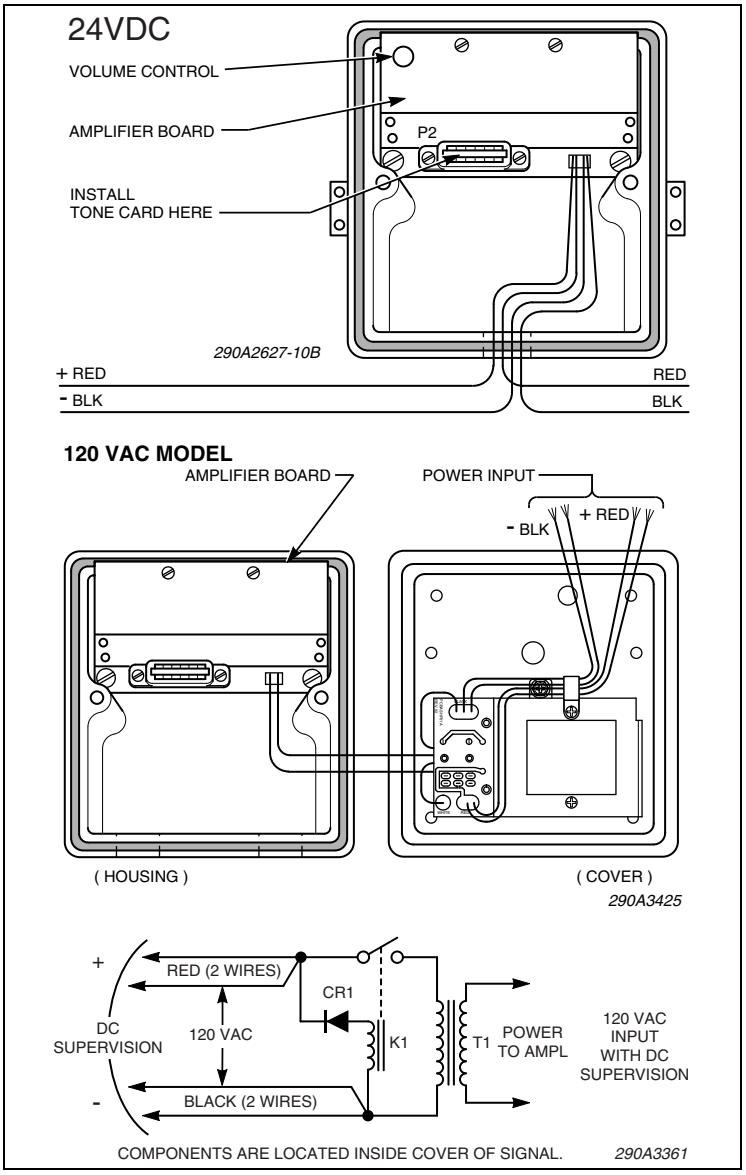


Figure 3. Tone/Connector Card Installation

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. If independent control of the strobe light(s) is not needed, the leads may be joined with the ASHP's power leads.

WARNING

Property damage, serious injury, or death could occur if independent strobe conductor wires are terminated together; both wires of the same polarity must be used as two separate connections. NFPA 72 requires that the wires be terminated independently to provide electrical supervision of the connection.

b. See figures 3 and 4. Perform the procedure in section Tone Card Installation or section PTCK Connector Kit Installation as applicable.

OPERATION/TESTING.

WARNING

Under certain conditions these devices are capable of producing sounds loud enough to cause hearing damage. Adequate hearing protection should be worn if standing within close proximity to device while testing. Recommendations in the OSHA Sound Level Standard (29 CFR 1910) should not be exceeded.

Property damage, serious injury, or death could occur if the housing is not closed properly. To reduce possibility of explosion, housing cover must be kept tight (all eight bolts fully tightened) while circuits are energized.

After installation is complete, be sure to test the system to verify that each amplified speaker operates satisfactorily. If it is found that the unit is too loud for its location, an internal volume control can be adjusted. Remove the housing cover and insert a slotted screwdriver with an 1/8" blade into the hole shown in figure 3. Gently turn control to desired loudness. Reinstall the housing cover.

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.

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

MAINTENANCE.

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

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

In the event a repair is required, be sure to refer to the Safety Message To Maintenance Personnel before proceeding.

SERVICE.

This product is covered by a 5 year limited warranty. See warranty terms and conditions for 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.

To get help with problems or questions not covered in these instructions, contact:

Technical Service Department
Commercial Products Group (CPG)
2519 - 4th Avenue
Moline, IL 61265
(800) 521-8219

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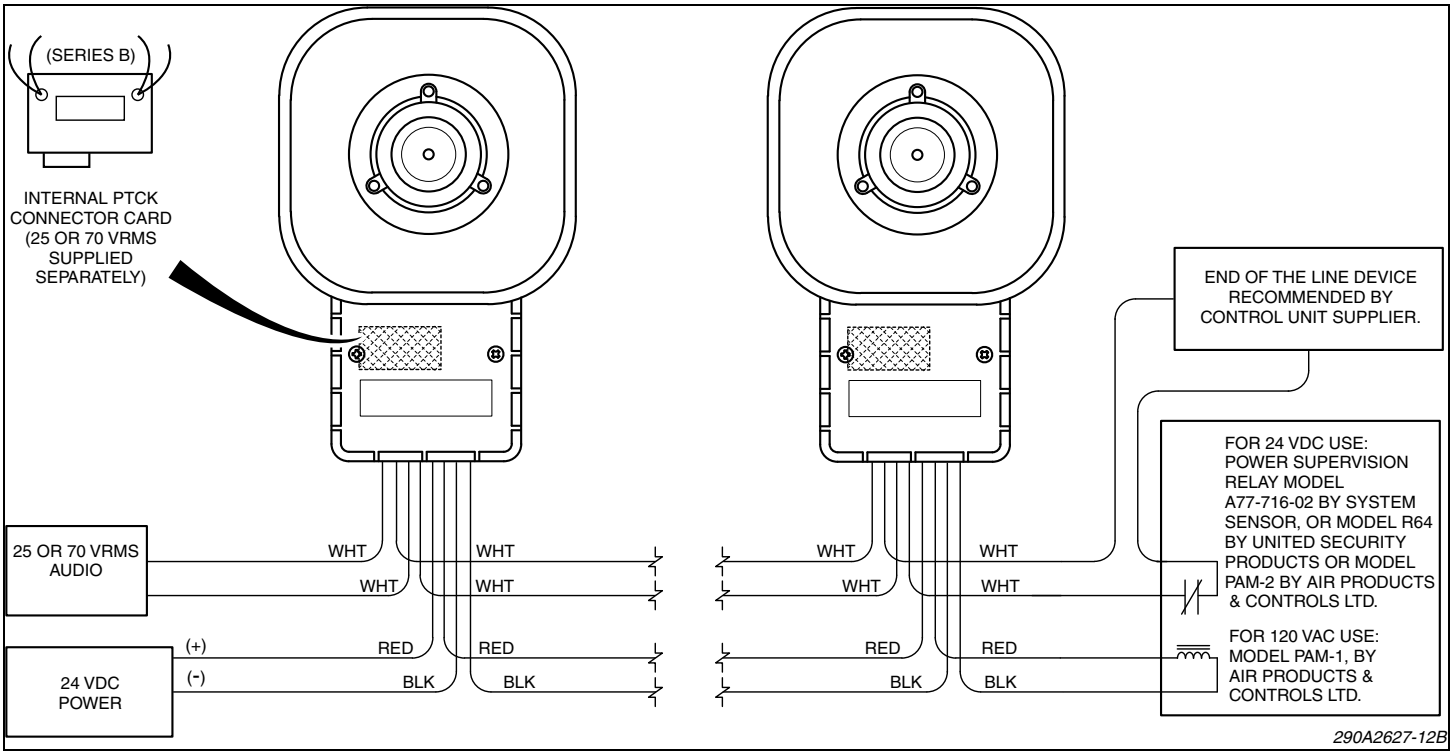

Figure 4. Typical connector card (PTCK) installation wiring