

# ASHH

## POWERTONE® AMPLIFIED SPEAKERS

### SAFETY MESSAGE TO INSTALLERS

People's lives depend on your safe installation of our products. It is important to read, understand and follow all instructions shipped with this product. Listed below are some other important safety instructions and precautions you should follow:

- This unit must be installed by a qualified electrician in accordance with NFPA 72, and National and local Electrical and Fire Codes, under the direction of the authority having jurisdiction.
- Do not connect this unit to system wiring when circuits are energized.
- For optimum sound distribution do not install this device where objects would block any portion of front of speaker.
- All effective warning speakers produce loud sounds which, in certain circumstances, may cause permanent hearing loss. Take appropriate precautions such as wearing hearing protection. Recommendations in OSHA Sound Level Standard (29 CFR 1910) should not be exceeded.
- After installation and completion of initial system test, a program for periodic testing of this device must be established. Refer to NFPA 72, local Fire Codes and the authority having jurisdiction for this information.
- After installation and completion of initial system test, provide a copy of this instruction sheet to all personnel responsible for operation, periodic testing and maintenance of this equipment.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death to you and others.

### I. GENERAL.

The PowerTone Model ASHH 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 1). 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 1) from a remote audio amplifier, such as CPG's PowerTone System.

The PowerTone Model ASHH is suitable for use in NEC Class I, Groups A, B, C, & D, Division 2; Class II, Groups F & G, Division 2; and Class III hazardous locations. The speaker projector is adjustable and may be repositioned to obtain desired sound distribution.

### II. SPECIFICATIONS.

Operating Voltage	24 Vdc
Current (depends on tone card or signal used)	0.55A max./0.06A standby
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. External mounting bracket on Model ASHH.

### Listings:

Underwriters Laboratories Inc.

Model ASHH: File E190743 (Guide UGKZ) Listed as a "FIRE PROTECTIVE SIGNALING SPEAKER FOR USE IN HAZARDOUS LOCATIONS" when used with a Model PTCK25 or PTCK70 connector card or as an "AUDIBLE SIGNAL APPLIANCE FOR FIRE ALARM SERVICE IN HAZARDOUS LOCATIONS" when used with a Model TC-WL, TC-YP, TC-HL, TC-BL, TC-YW, TC-HN, TC-BP, TC-ST, TC-SW, or TC-TW tone card.

Audibility information is shown in table 1.

### III. INSTALLATION.

#### A. 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.

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

#### CAUTION

To maintain the hazardous location rating of the Model ASHH, do not use the 7/8" knockout (concealed conduit mounting).

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.

#### 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.

- 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.

- Select the mounting location and place rear of housing against mounting surface.
- Using the mounting holes (four (4) in external

Tone Card	Sound	Audible Frequency	Repetition Rate	Audibility
				UL dB(A) Sound Pressure
TC-WL Wail	Conventional siren	600 - 1250 Hz	8 Cycles/min.	97
TC-YP Yelp	Rapid Siren	600 - 1250 Hz	3.6 Hz	97
TC-HL Hi-lo	Alternating High & Low	Low tone 560 Hz; Hi tone 760 Hz	50 Cycles/min.	94
TC-BL Bell	Bell, struck repeatedly	500 - 1200 Hz, adj.	30 -150 Cycles/ min. adj.	94
TC-YW Yeow	Descending high to low - repeated	Hi freq. 1200 Hz low freq. 600 Hz	40 Cycles/min.	97
TC-HN Horn	Steady Horn	470 Hz	Continuous	91
TC-BP Beep	Slow intermittent horn	470 Hz	50 Cycles/min.	88
TC-ST Stutter	Rapid intermittent horn	470 Hz	5 Hz	88
TC-SW Slow Whoop	Slow ascending, low to high - repeated	Low freq. 500 Hz; Hi freq. 1200 Hz	15 Cycles/min.	94
TC-TW Temporal Slow Whoop	NFPA coded slow whoop (fire alarm use only)	Low freq. 500 Hz; Hi freq. 1200 Hz.	6.5 sec. full cycle	94
Connector Card Model		At Rated Voltage		
PTCK25		25 VRMS		96*
PTCK70		70 VRMS		96*

\* Based on pink noise measurement.

Table 1. Tone and Connector Card Ratings.

mounting bracket) 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. 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.*

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.

#### C. Electrical Connection.

#### DANGER

To avoid electrical shock, do not connect wires when circuits are energized.

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. To reduce possibility of explosion, the housing cover must be kept tight while circuits are energized.*

#### 1. Tone Card Installation.

#### WARNING

*Property damage, serious injury, or death could occur if independent conductors are terminated together; separate connections. NFPA 72 requires that the wires be terminated independently to provide electrical supervision of the connection.*

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 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, 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.

## IV. TESTING/OPERATING.

### 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.*

A. 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.

### WARNING

*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 while circuits are energized.*

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.

### SAFETY MESSAGE TO OPERATORS

*Even if your warning system is operating properly, it may not be completely effective. People may not hear or heed your warning signal. You must recognize this fact and ensure that your warning signal achieves its intended effect through*

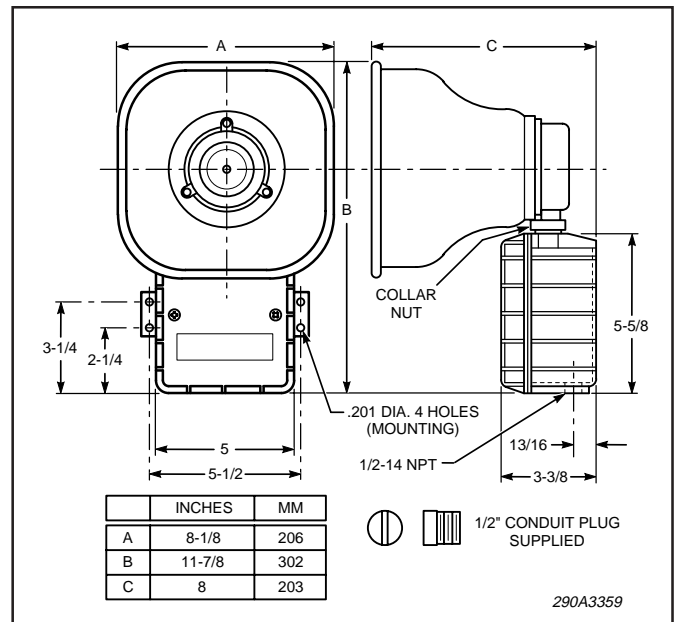


Figure 1. Model ASHH Dimensions.

*proper test/training sequences within your specific application(s).*

## V. MAINTENANCE.

### SAFETY MESSAGE TO MAINTENANCE PERSONNEL

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death to you or others.

- Read and understand all instructions before performing maintenance on this unit.
- To reduce the risk of electrical shock or ignition of hazardous atmospheres, do not perform maintenance or service on this unit when circuits are energized.
- Periodic checks should be made to ensure that effectiveness of this device has not been reduced because speaker has become clogged with a foreign substance or because objects have been placed in front of the speaker.
- Any maintenance to this unit MUST be performed by a trained electrician in accordance with NEC guidelines and local codes.
- Never alter this unit in any manner. Safety in hazardous locations may be jeopardized if additional openings or alterations are made to Model ASHH.
- The nameplates, which contain cautionary or other information of importance to maintenance personnel, should not be obscured if exterior of device is painted.

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 72G, 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.

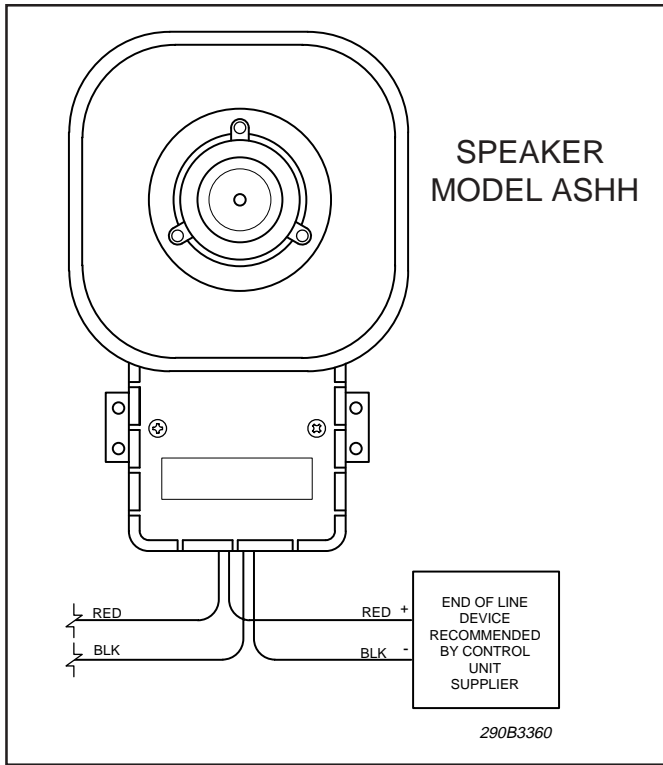


Figure 2. Typical Tone Card Installation Wiring.

**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.

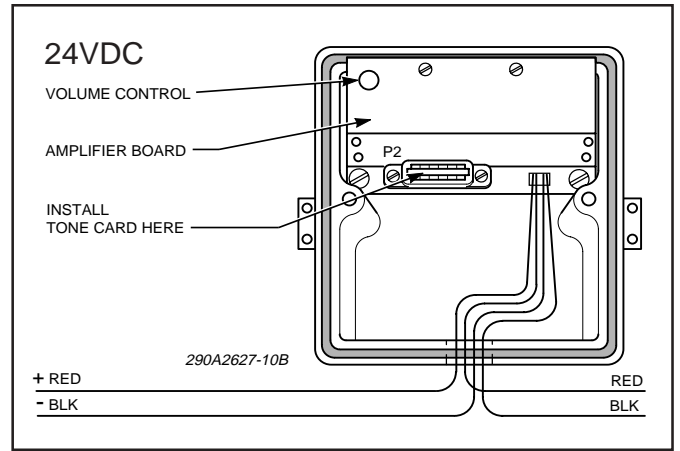


Figure 3. Tone/Connector Installation and Volume Control Location.

**VI. SERVICE.**

This product is covered by a 5 year limited warranty. See CPG 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.

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

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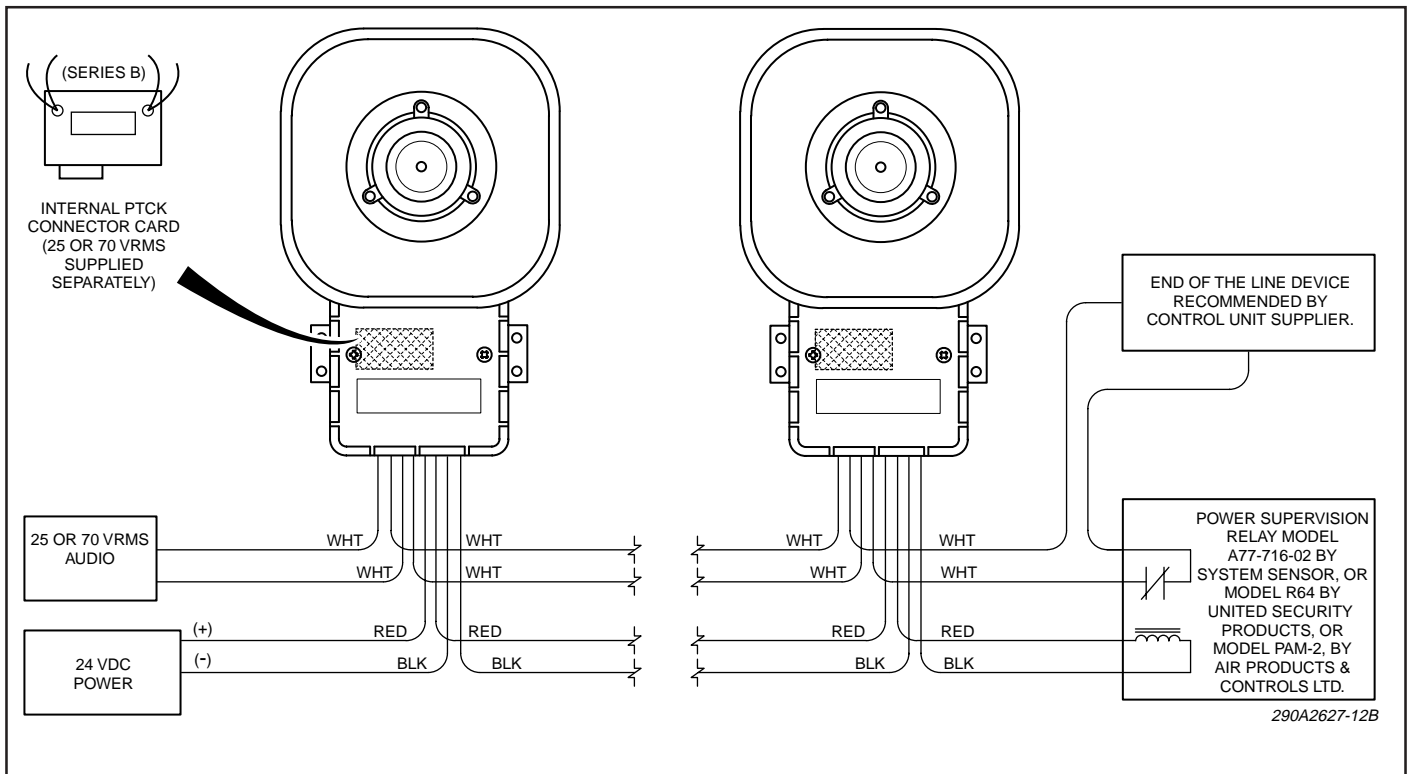


Figure 4. Typical Connector Card (PTCK) Installation Wiring.