

Cautions and Warnings

DO NOT INSTALL ANY SIMPLEX PRODUCT THAT APPEARS DAMAGED. Upon unpacking your Simplex product, inspect the contents of the carton for shipping damage. If damage is apparent, immediately file a claim with the carrier and notify Simplex.



ELECTRICAL HAZARD - Disconnect electrical power when making any internal adjustments or repairs. Servicing should be performed by qualified Simplex Representatives.



STATIC HAZARD - Static electricity can damage components. Therefore, handle as follows:

1. Ground yourself before opening or installing components.
2. Keep uninstalled component wrapped in anti-static material at all times (use the 553-484 Static Control Kit).



RADIO FREQUENCY ENERGY - This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area cause interference in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.

TrueAlert™ Speaker Operation

TrueAlert Speakers (see Figures 1 and 2) are notification appliances that reproduce audio signals when activated from a Simplex 4100 Fire Alarm Control Panel (FACP), Simplex 4003 Voice Control Panel, or a UL-listed FACP with compatible audio NAC interface. **When the notification appliance emits sound, it indicates the possibility of an emergency situation that requires your immediate attention.**

The TrueAlert Speaker is a two-wire appliance that operates only on a standard audio NAC channel (4100/4003) to reproduce amplified analog audio signals.

Input can be either 25VRMS or 70.7VRMS that can be selected via a jumper to one of four available audible power wattage levels (¼ W, ½ W, 1W, 2W).

Note: Unlike other TrueAlert peripherals, the speaker does not support the addressable features of the TrueAlert Comm Channel. The TrueAlert Speaker is non-addressable and does not support audio wire T-tapping.

Table 1 lists the available speaker models.

Table 1. TrueAlert Speaker Models

Description	Model	Cover Color
Wall-Mount Speaker	4902-9716	Red
Wall-Mount Speaker	4902-9717	White
Ceiling-Mount Speaker	4902-9721	



Figure 1. TrueAlert Wall-Mount Speaker

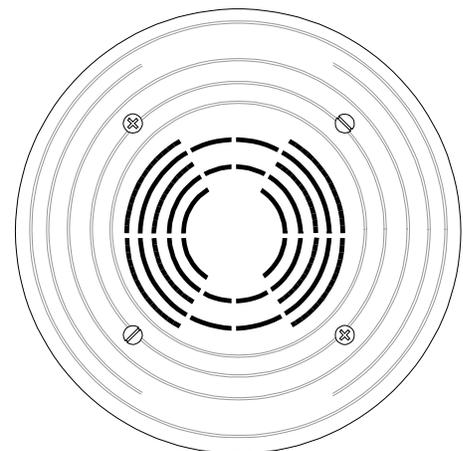


Figure 2. TrueAlert Ceiling-Mount Speaker

TrueAlert Speaker Wiring

Warning: Make sure that all electrical power is disconnected before starting the installation.

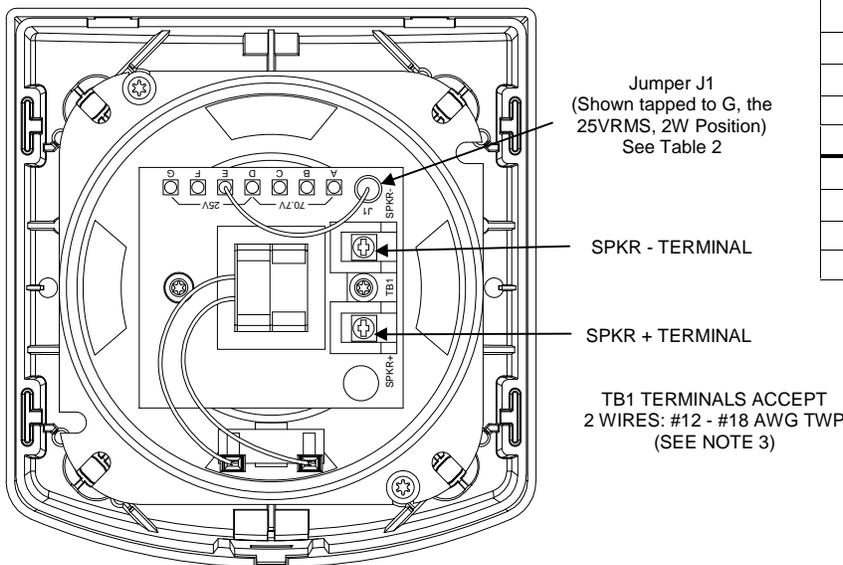
Caution: Connect wiring to terminals as shown. Do not loop wires under terminals. Break wire runs to provide supervision of connections. Do not bring conduit through the rear of the electrical box. Strip lead insulation to 3/8” maximum.

Note: Ceiling- and wall-mount speaker wattage jumper settings and wiring connections are identical. The wall-mount speaker is illustrated below.

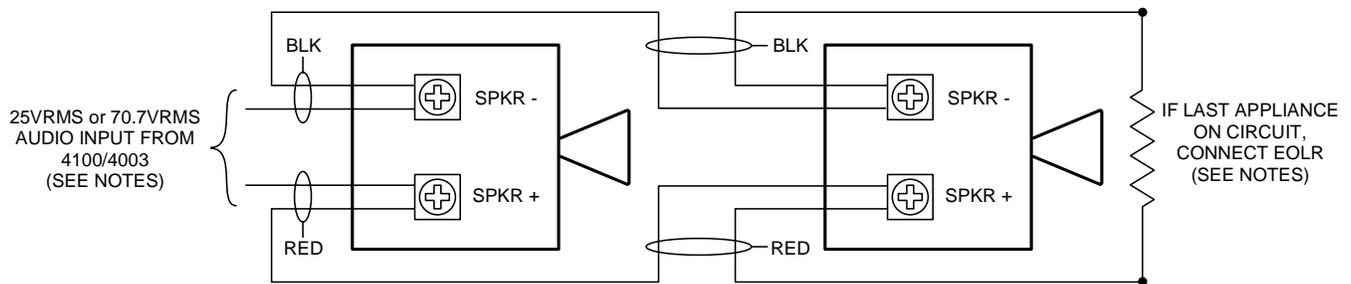
1. At the enclosure box, connect the wires to the SPKR + and SPKR - terminals at the rear of the speaker unit. **Torque terminal block screws 12-15 in/lbs. to ensure proper continuity.** See Figure 3.
2. Ensure that correct polarity is maintained for each unit.
3. Ensure that the RMS value of the connected audio circuit matches the RMS value of the connected speaker. An incorrect tap setting may damage the speaker. Configure the speaker wattage setting using Table 2. The factory default setting for the speaker is J1 to Tap E (25VRMS, ½ W).
4. Audio NAC wiring must be twisted pair (TWP).

Table 2. TrueAlert Speaker Jumper Settings

Jumper Position	Voltage	Wattage Setting
J1 to Tap A	70.7VRMS	¼
J1 to Tap B		½
J1 to Tap C		1
J1 to Tap D		2
J1 to Tap D	25VRMS	¼
J1 to Tap E		½
J1 to Tap F		1
J1 to Tap G		2



TrueAlert Wall-Mount Speaker Configuration (Rear View)



Notes:

1. Refer to the field wiring diagrams supplied with the 4100/4003 for additional NAC wiring information.
2. Notification appliances are rated per individual nameplate label.
3. Maintain correct polarity on terminal connections. Do not loop wires under terminals.
4. All NAC wiring connections are supervised and power-limited.

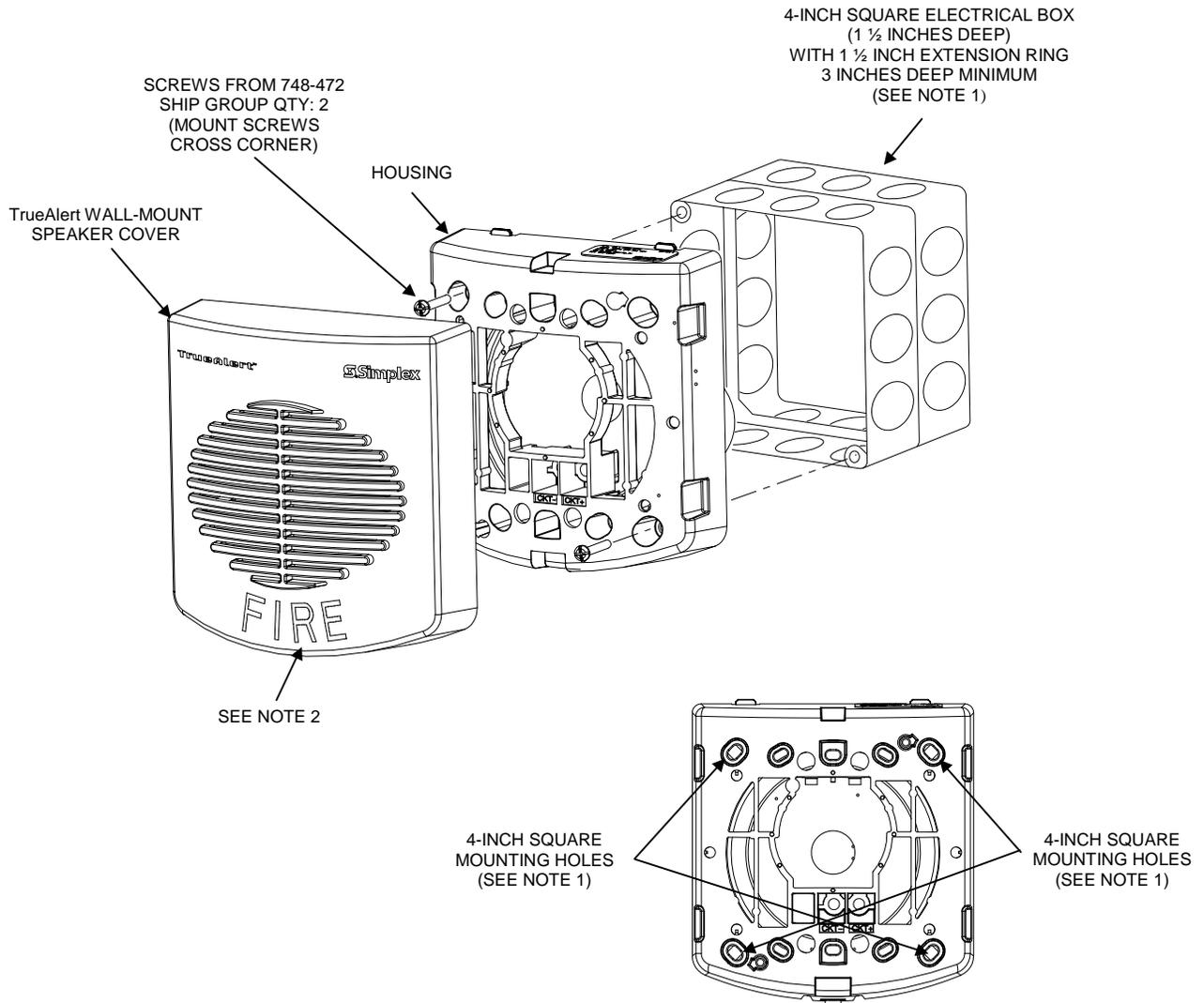
Figure 3. TrueAlert Speaker Wiring

Mounting the TrueAlert Wall-Mount Speaker

See Figure 4 for mounting the TrueAlert wall-mount speaker to the enclosure box. When surface mounting the speaker, the 4905-9941 or 4905-9942 TrueAlert™ Surface Mount Skirt is recommended. Refer to the 4905 TrueAlert™/QuickAlert™ Skirt Installation Instructions (574-790) for this mounting application.

Caution: Do not bring conduit through the rear of the electrical box.

1. Tighten mounting screws snugly (do not overtighten). **Torque mounting screws 5-7 in/lbs.**
2. For semi-flush mounting, install the box either flush with the wall or with a maximum ¼-inch recess.



Notes:

1. The TrueAlert wall-mount speaker attaches directly to a standard 4-inch square electrical box (not supplied) flush mounted or surface mounted. Mounting the speaker to the 4-inch square electrical box is shown. Attach the speaker to the electrical box using two screws (supplied) mounted cross corner.
2. To remove the cover, press the snap release in at the bottom of the speaker with a flat tip screwdriver while pulling the cover up with the other hand.
3. NAC terminals (CKT+, CKT-) are not accessible through the front after mounting.

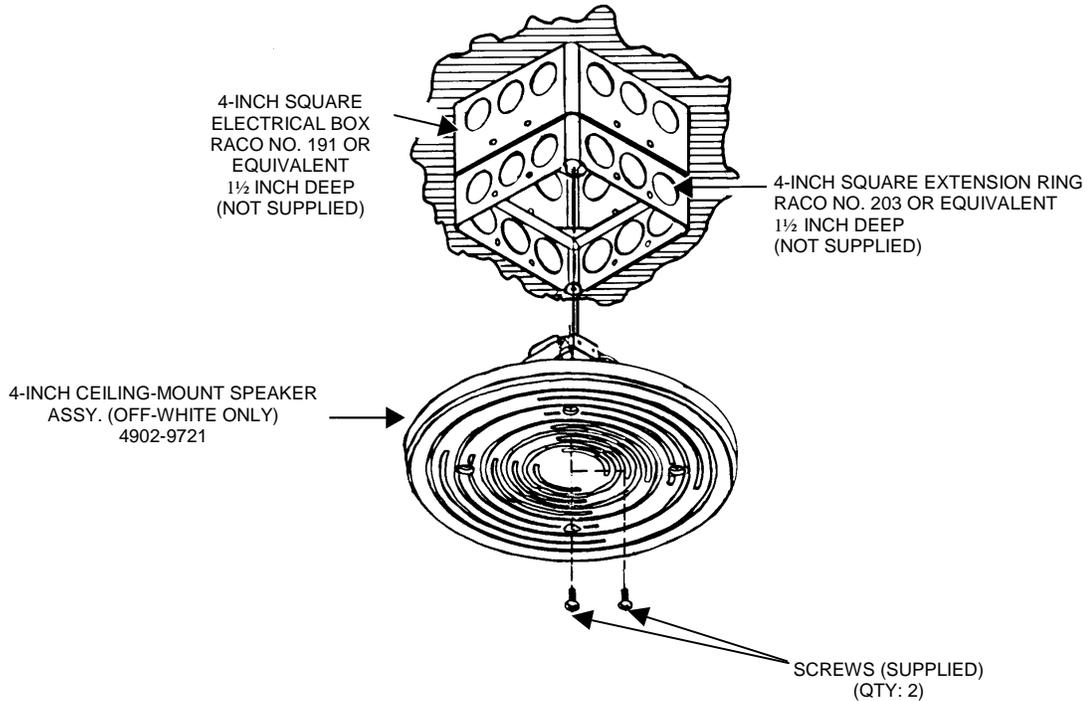
Figure 4. 4902-9716, 4902-9717 TrueAlert Wall-Mount Speaker Mounting

Mounting the TrueAlert Ceiling-Mount Speaker

See Figure 5 for mounting the TrueAlert ceiling-mount speaker to the enclosure box.

Caution: Do not bring conduit through the rear of the electrical box.

1. Tighten mounting screws snugly (do not over tighten). **Torque mounting screws 5-7 in/lbs.**
2. For semi-flush mounting, install the box either flush with the ceiling or with a maximum 1/4-inch recess.



Notes:

1. The TrueAlert ceiling-mount speaker attaches directly to a standard 4-inch square electrical box (not supplied) semi-flush mounted or surface mounted.
2. Ensure correct orientation of box with extension in relation to location of mounting screws.
3. For installation in plaster or concrete ceiling, mount box with extension flush or with maximum 1/4-inch recess; for suspended ceiling, use a suitable bridge that rests on tile to support box with extension.

Figure 5. 4902-9721 TrueAlert Ceiling-Mount Speaker Mounting

Speaker Sound Pressure Level Measurements

Refer to Table 3 (Wall-Mount Speaker) and Table 4 (Ceiling Mount Speaker) for sound pressure level measurements for each power tap setting.

Note: Reverberant dBA measurements are a minimum UL rating based on sound power level measurements made in UL's reverberant test chamber.

Table 3. TrueAlert Wall-Mount Speaker Sound Pressure Level Measurements

Voltage in VRMS	Jumper J1 to Tap	Tap Setting in Watts	Sound Pressure Level Measurement (dBA) Reverberant Room at Ten Feet Per UL1480 (See Note)
70.7VRMS	A	¼	78
	B	½	81
	C	1	84
	D	2	87
25VRMS	D	¼	78
	E	½	81
	F	1	84
	G	2	87

Table 4. TrueAlert Ceiling-Mount Speaker Sound Pressure Level Measurements

Voltage in VRMS	Jumper J1 to Tap	Tap Setting in Watts	Sound Pressure Level Measurement (dBA) Reverberant Room at Ten Feet Per UL1480 (See Note)
70.7VRMS	A	¼	75
	B	½	78
	C	1	81
	D	2	84
25VRMS	D	¼	75
	E	½	78
	F	1	81
	G	2	84

Limitations, Safety, and Placement of Notification Appliances

Notification appliances, and the fire alarm system itself, have certain limitations and requirements for safety, placement, installation, and test. Since you must know the limitations and adhere to the requirements, **keep** these instructions at a central location for future reference so that all people who use, maintain, and test the fire alarm system have access to this information.

Limitations

Notification appliances do not sense any hazardous conditions such as smoke, fire, explosion, etc.; they are activated by a control panel as part of a system that does sense such conditions.

Notification appliances do not provide their own power. They receive their power from the fire alarm system. If power is not supplied to the notification appliances (for whatever reason), this notification appliance will not provide an audible warning. **THEREFORE, BACK-UP POWER SUPPLIES, OR OTHER BACK-UP POWER SOURCES, ARE REQUIRED FOR THE FIRE ALARM SYSTEM.**

Notification Appliances provide a specific rated output level of sound. The output level must meet the requirements of the intended protected area(s). Although the 4902 TrueAlert Speaker notification appliance meets the current UL standards for sound, the protected area(s) may have walls, doors, carpeting, furniture, insulation, or other obstacles that reduce or even block the sound. For all applications, the sound output must provide enough intensity to alert all occupants of the protected area(s) including those occupants that are sleeping or hearing impaired for whatever reason. If these occupants cannot hear the notification appliances within the protected area(s), you must increase the intensity of the sound output or add additional notification appliances so that the occupants can hear the notification appliances when activated. Refer to National Fire Protection Association (NFPA) National Fire Alarm Code 72, Chapter 4.

Notification Appliances are not a substitute for insurance coverage. All users should have adequate levels of life and property insurance.

Safety

Always install, maintain, and test notification appliances within their specifications. **Failure to follow all safety precautions and instructions may result in loss of life and property due to non-functioning notification appliances.**

Some notification appliances use high voltage. To avoid electrical hazards and avoid damage to appliances, make sure that the electrical power for the notification appliance circuit is disconnected at the control panel before installing, repairing, or internally adjusting any notification appliances.

Even with electrical power removed, some notification appliances store a high voltage charge. The high voltage can cause injury resulting in death from electrical shock. **DO NOT TOUCH EXPOSED CIRCUITRY.**

Placement

The placement of Notification Appliances must conform to:

- Latest NFPA standards and guidelines (Refer to National Fire Alarm Code 72, Chapter 4)
- Sound (Sound Pressure Level) Analysis of Intended Protected Areas
- Local Authority Having Jurisdiction (AHJ) Requirements

Notification appliances are not intended for installation within hazardous locations as defined by the National Electrical Code (NEC) or the NFPA. Contact Simplex for information on explosion-proof notification appliances designed for hazardous environments.