Cautions, warnings, and regulatory information

READ AND SAVE THESE INSTRUCTIONS Follow the instructions in this installation manual. These instructions must be followed to avoid damage to this product and associated equipment. Product operation and reliability depend upon proper installation.

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

ELECTRICAL HAZARD Disconnect electrical field power when making any internal adjustments or repairs. All repairs should be performed by a representative or an authorized agent of your local Autocall product supplier.

STATIC HAZARD Static electricity can damage components. Handle as follows:
- Ground yourself before opening or installing components.
- Prior to installation, keep components wrapped in anti-static material at all times.

TrueAlert Speaker Operation

TrueAlert Speakers are notification appliances that reproduce audio signals when activated from an Autocall fire alarm control panel (FACP), Autocall 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 to reproduce amplified analog audio signals. Input can be either 25 VRMS or 70.7 VRMS that can be selected via a jumper to one of four available audible power wattage levels (¼ W, ½ W, 1W, 2W).

Table 1: TrueAlert Speaker Details

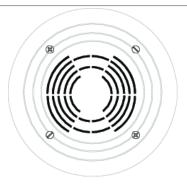|		
Note: Unlike other TrueAlert peripherals, the speaker does not support the addressable features of the TrueAlert comm channel. The TrueAlert speaker is non-addressable and does not support audio wire T-tapping. Ceiling mount speakers are not intended for use in air-handling spaces.	Figure 1: TrueAlert Ceiling-Mount Speaker A4902-9721 – White, and A4902-9722 – Red	Figure 2: TrueAlert Wall-Mount Speaker A4902-9716 – Red, and A4902-9717 – White

TrueAlert Speaker Wiring

1. At the enclosure box, connect the wires to the SPKR + and SPKR - terminals at the rear of the speaker unit. **Torque the terminal block screws to 12 to 15 in/lbs. to ensure proper continuity.** See Figure 3 .
2. Ensure that the 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 (25 VRMS, 0.5 W).
4. The maximum normal supervisory voltage is 40 VDC.
5. Audio NAC wiring must be a twisted pair (TWP).

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

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

Table 2: TrueAlert Speaker Jumper Settings

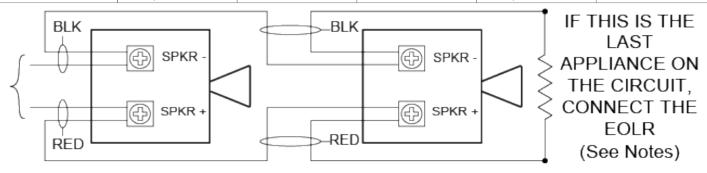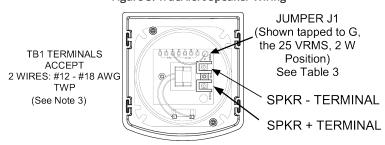| Voltage	Jumper position	Wattage setting	Voltage	Jumper position	Wattage setting
70.7 VRMS	J1 to Tap A	0.25	25.0 VRMS	J1 to Tap D	0.25
	J1 to Tap B	0.50		J1 to Tap E	0.50
	J1 to Tap C	1.00		J1 to Tap F	1.00
	J1 to Tap D	2.00		J1 to Tap G	2.00

Figure 3: TrueAlert Speaker Wiring

Figure 4: TrueAlert Wall-Mount Speaker Configuration (Rear View)

Note:

1. Notification appliances are rated per individual nameplate label.
2. Maintain correct polarity on terminal connections. Do not loop wires under terminals.
3. All NAC wiring connections are supervised and power limited.

Mounting the TrueAlert Wall-Mount Speaker

See Figure 5 for mounting the TrueAlert wall-mount speaker to the enclosure box. When surface mounting the speaker, either the A4905-9941 or A4905-9942, a TrueAlert surface mount skirt is recommended. Refer to the *A4905 TrueAlert Skirt Installation Instructions (574-790AC)* for this mounting application.

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

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

SCREWS FROM 748-472
SHIP GROUP QTY: 2
(Mount screws cross corner)

HOUSING

4-INCH SQUARE ELECTRICAL BOX
(1 ½ inches deep)
WITH 1 ½ INCH EXTENSION RING
3 INCHES DEEP MINIMUM
(See Note 1)

TrueAlert WALL-MOUNT
SPEAKER COVER

4-INCH SQUARE
MOUNTING HOLES
(See Note 1)

4-INCH SQUARE
MOUNTING HOLES
(See Note 1)

SEE NOTE 2

Figure 5: A4902-9716, A4902-9717 TrueAlert Wall-Mount Speaker Mounting

Note:

1. The TrueAlert wall-mount speaker attaches directly to a standard 4-inch square electrical box (not supplied) flush mounted or surface mounted. Attach the speaker to the electrical box using two screws (supplied, ship group 748-472) mounted cross-corner.
2. To remove the cover, depress the snap at the bottom of the speaker with a flat tip screwdriver, while pulling the cover up with the other hand.
3. The NAC terminals (CKT+, CKT-) are not accessible through the front after mounting the speaker.

Mounting the TrueAlert Ceiling-Mount Speaker

See Figure 6 for mounting the TrueAlert ceiling-mount speaker to the enclosure box.

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

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

Note:

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 the correct orientation of the box with the extension in relation to the location of the mounting screws.
3. For installation in plaster or concrete ceiling, mount the box with extension flush or with maximum recess of 1/4-inch. For a suspended ceiling, use a suitable bridge that rests on the tile to support the box with the extension.
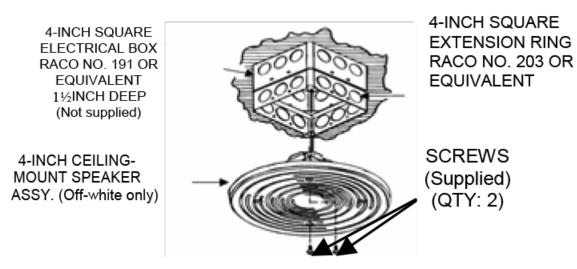
4-INCH SQUARE
ELECTRICAL BOX
RACO NO. 191 OR
EQUIVALENT
1½INCH DEEP
(Not supplied)

4-INCH SQUARE
EXTENSION RING
RACO NO. 203 OR
EQUIVALENT

4-INCH CEILING-
MOUNT SPEAKER
ASSY. (Off-white only)

SCREWS
(Supplied)
(QTY: 2)

Figure 6: A4902-9721 and A4902-9722 TrueAlert Ceiling-Mount Speaker Mounting

Speaker sound pressure level measurements and STI Guards

Refer to Table 3 for sound pressure level measurements for each power tap setting.

Table 3: Wall-Mount and 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 (Wall-Mount) (See Note)	Sound Pressure Level Measurement (dBA) Reverberant Room at Ten Feet Per UL1480 (Ceiling-Mount) (See Note)
70.7 VRMS	A	0.25	79	79
	B	0.50	82	82
	C	1.00	85	85
	D	2.00	88	88
25.0 VRMS	D	0.25	80	79
	E	0.50	83	82
	F	1.00	85	85
	G	2.00	88	88

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

Note: Frequency Response for Fire Alarm = 400 Hz to 4 KHz

Table 4: STI Guard Mounting Information

Model #	STI Guard	STI Gasket	Surface Skirt	Sound Loss
A4902-9716	STI-1210D (Surface,-1210E (Flush))	None	A4905-9941	STI-1210D=1.1 STI 1210E=2.9
A4902-9721	STI-1217 (Flush only)	None	No	STI-1217=5.4

Note: Refer to the STI installation manuals packed with each guard for mounting and maintenance instructions for the vandal guards. The guards are not listed for ULC applications.

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. 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 provide a specific rated output level of sound. The output level must meet the requirements of the intended protected area(s). Although the A4902 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 NFPA 72®, the *National Fire Alarm and Signaling Code*®, from NFPA (National Fire Protection Association).

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.

Placement

The placement of Notification Appliances must conform to:

- Latest NFPA standards and guidelines (Refer to NFPA 72)
- 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 Autocall for information on explosion-proof notification appliances designed for hazardous environment.