


IMPORTANT: When the notification appliance emits light or sound, it indicates the possibility of an emergency situation that requires the immediate attention of all occupants.

LOCATION REFERENCE: Location and quantity of appliances required must conform to the applicable local standards and guidelines (the National Fire Alarm and Signaling Code (NFPA 72); ULC Standard CAN/ULC-S524, Installation of Fire Alarm Systems; the appropriate model building codes, etc.) and specific requirements of the Local Authority Having Jurisdiction (AHJ). These notification appliances are not intended for installation within hazardous locations as defined by the National Electrical Code (NEC) or NFPA.



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 (such as visible strobes) store a high voltage charge. The high voltage can cause injury resulting in death from electrical shock. **DO NOT TOUCH EXPOSED CIRCUITRY.**

UL listed TrueAlert ES indoor product identification reference

Type	Colors	Models			Operation
 Wall Mount Horn Audible Only (AO)	• Red • White	Complete appliances: 49AO-WRF 49AO-WRF-BA 49AO-WRS-BA 49AO-WWF 49AO-WWF-BA 49AO-WWS-BA 49AO-WRS 49AO-WRQ	Components: 49AO-APPLW 49AO-APPLW-BA Backplate: 49MP-AVVOWR 49MP-AVVOWW	Covers: 49AOC-WRBLNG 49AOC-WRFEU 49AOC-WRFIRE 49AOC-WRS 49AOC-RBLANK 49AOC-WWBLNG 49AOC-WWFEU 49AOC-WWFIRE 49AOC-WWS 49AOC-WBLANK	These appliances provide an audible (AO) warning of an alarm condition when activated from the control panel of a compatible UL/ULC Listed, Simplex Fire Alarm System.

Note: For information about TrueAlert ES appliance testing, see *TrueAlert ES Addressable Appliances testing and applications guide* (579-1049).

Mounting instructions

Kit contents	Appliance x 1	Cover x 1	Backplate x1 with 8-32 1 inch mounting screws x 2, and 6-32 1 inch mounting screws x 2.
Not included	Electrical box 1-1/2 inch (38.1 mm) minimum depth required: single gang, double gang, or 4 inch (101.6 mm) square.		

1. Select the mounting location and install the electrical box using screws suitable for the mounting surface. See *Figure 1* for mounting and location information.
2. Bring the building wiring through the rectangular opening in the backplate.
3. Connect the building wires to the backplate. See the wiring section on *page 2*.
4. Secure the backplate to the electrical box using the provided hardware. Install with the writing **Install this side up** at the top. Use a torque wrench to tighten the screws to 12-15 inch-pounds. Do not over-tighten the screws.
5. Attach the cover to the appliance.
6. Set the appliance settings. See *page 3*.
7. Attach the assembled appliance onto the backplate.

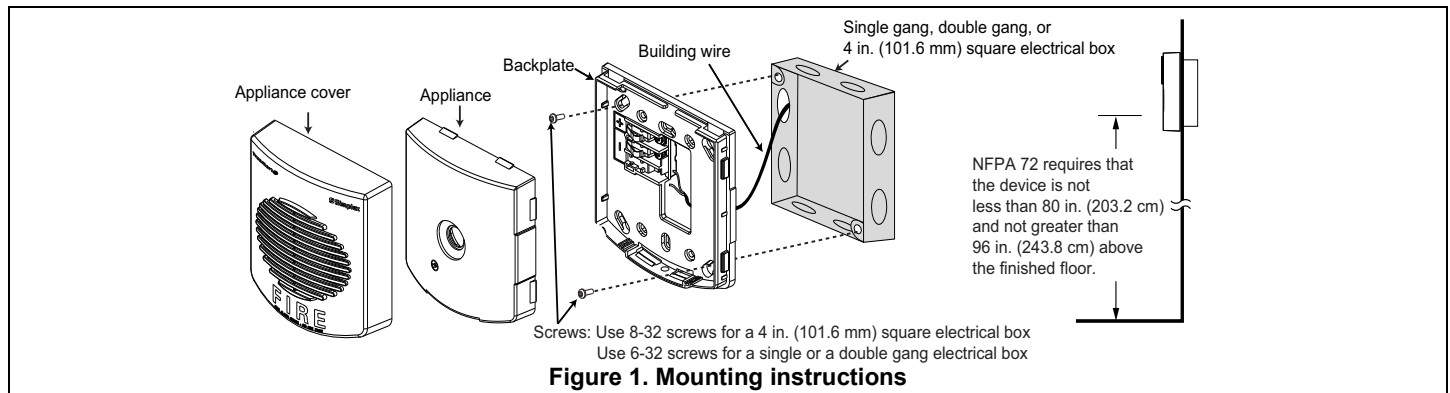


Figure 1. Mounting instructions

Wiring instructions



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

1. At the electrical box, connect the building wiring to the CKT + and CKT - terminals on the backplate.
2. To ensure proper continuity, use a torque wrench to tighten the terminal block screws to 12-15 inch-pounds.
3. Ensure that correct polarity is maintained for each unit.
4. Signaling Line Circuit (SLC) wiring must be twisted pair (TWP). CKT terminals accept two wires: 12-18 American Wire Gauge (AWG) TWP.

IMPORTANT: Do not bring the conduit through the rear of the electrical box. Strip the lead insulation to 7/16 inch maximum.

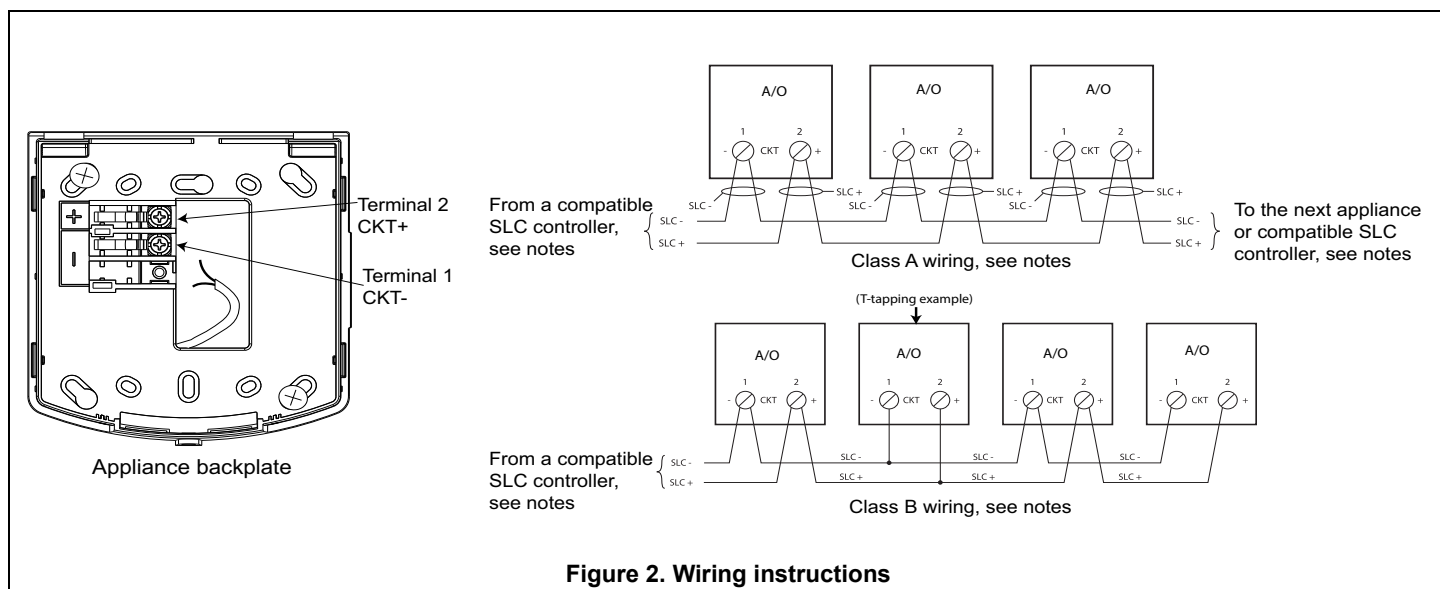


Figure 2. Wiring instructions

Wiring notes

- The maximum number of appliances on a circuit is 63. The maximum wire resistance between appliances is 26 ohms. See the field wiring diagrams for the driving compatible fire alarm control panel for further instructions.
- Notification appliances are rated using an individual module label.
- Maintain the correct polarity on the terminal connections.
- Terminals 1 and 2 can each accommodate two wires, one wire going in and one wire going out to the next appliance.
- TrueAlert SLC wiring connections are supervised and power-limited.
- These appliances are rated to the operating voltage limits of 17-31 VDC. The appliance may fail to operate as intended, and cause permanent damage to this equipment if it operates outside of these limits.
- Only operate the TrueAlert ES AO appliances using a compatible power supply.
- T-tapping is not permitted on Class A wiring.

Setting the address DIP switch

Each addressable TrueAlert ES notification appliance has a unique address that is set using an eight position DIP switch (ADDR1). Assign up to 63 unique addresses to an SLC, however, the total appliance loading available may be less due to appliance current requirements.

To set the address, complete the following steps:

1. Insert a number 1 or number 2 Phillips screwdriver, or a similar sized object, into the opening at the bottom of the appliance and unclip the appliance from the backplate. See *Figure 3*.
2. Set the switches using a non-metallic stylus, or the equivalent.
3. Record the set address.

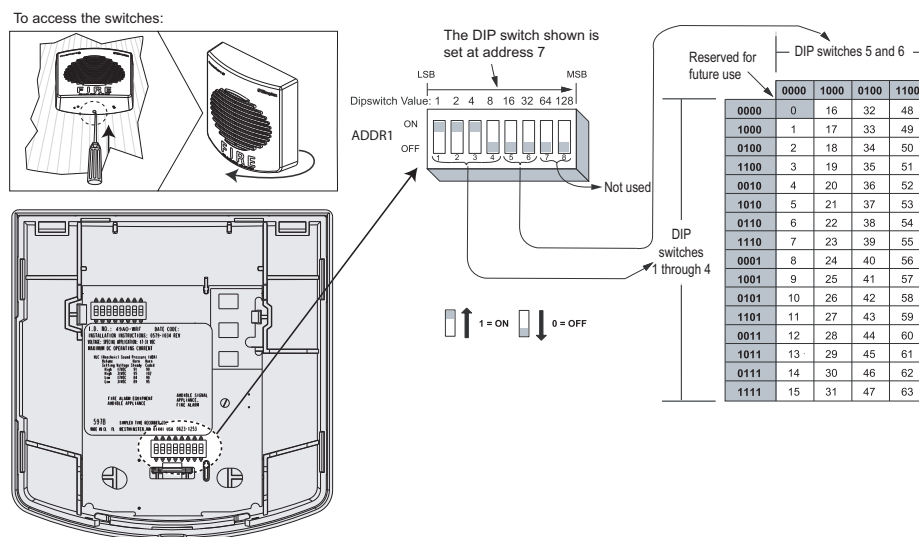


Figure 3. Setting the DIP switch address

Setting the horn configuration switch

Certain options for the horn can be configured directly on the appliance using the Configuration switch (CFG1) on the back of the appliance. See *Figure 4*.

AO Settings

Position 1	Configuration Control: OFF to enable Local Audible control (positions 2-7 below), ON for Panel control.
Position 2	Audible Volume: High (OFF), Low (ON).
Position 3	CAN Horn mode: switch must be set to OFF.
Position 4	Legacy NAC mode: switch must be set to OFF.
Position 5, 6, 7, 8	These switches are unused by the horn. Leave them set to OFF.

To access the switches:

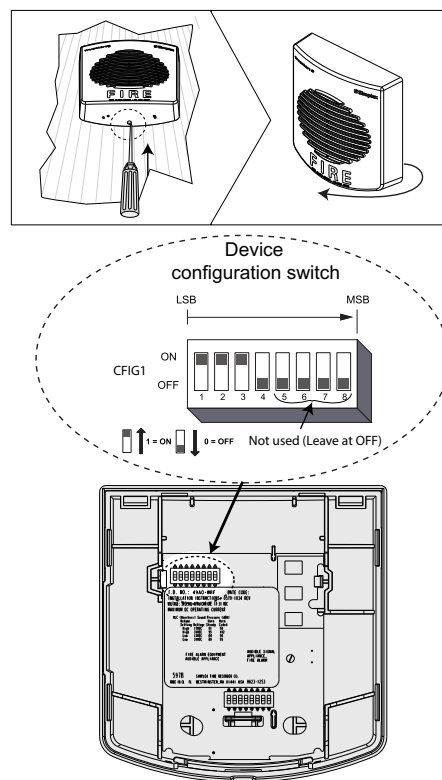


Figure 4. Setting the appliance configuration

Appliance specifications

Environmental specifications:	
Rated voltage range	Special application 17 - 31 VRMS
Temperature range	32° F to 120° F (0° C to 49° C)
Humidity range	10% to 93%, non-condensing at 104° F (40° C)
Connections	Terminal for 18 AWG to 12 AWG (0.82 mm ² to 3.31 mm ²)

CAUTION:

- The appliances are available in red and white. Do not paint or otherwise alter the factory finishes in any way.
- Anechoic dBA levels below 85 do not meet ULC requirements for public notification.

Sound pressure level measurement (dBA)			
Reverberant Room at 10 Feet in accordance with UL464 (See Note 2)	Voltage (Vrms)	Horn mode steady	Horn mode coded (See Note 1)
High volume setting using addressable controller (See Note 3)	17 (Min.)	87.6	83.1
	23	89.8	86
	31 (Max.)	91.9	86
Low volume setting using addressable controller (See Note 3)	17 (Min.)	80.6	76.9
	23	83.4	79.2
	31 (Max.)	86.2	82.3
Anechoic Room at 10 feet in accordance with ULC S525, see note 4.			
High volume setting	17 (Min.)	89.9	89.6
	23	92.5	92.4
	31 (Max.)	94.4	93.9
Low volume setting	17 (Min.)	84.1	83.6
	23	86.7	86.6
	31 (Max.)	89.1	88.6
Notes: 1. The coded category covers both Temporal and March time cadences. 2. Reverberant dBA measurements are a minimum UL rating based on sound power level measurements made in UL's reverberant test chamber. 3. High and low volume settings are configured with DIP switch (CFG1) on the controller. 4. If you install the 4905-9838 Sound Damper, the anechoic measurements decrease by approximately 9 dBA.			

Current draw		
Application	Appliance type	Maximum RMS operating current
UL464/ ULCS525 (0° C TO 50° C)	AO	23 mA

ULC directional characteristics for horn		
Access	Angle	dBA
Horizontal	61.5° left and right	-3 dBA
	90° left and right	-4.6 dBA
Vertical	62° up and down	-3 dBA
	90° up and down	-3.8 dBA