4901 True*Alert*™ Non-Addressable Horn Installation instructions

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.

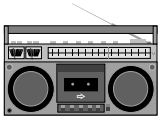


ELECTRICAL HAZARD - Disconnect electrical power when making any internal adjustments or repairs. Servicing should be performed by qualified Simplex Representatives.



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 may 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™ Non-Addressable Horn Operation

The 4901-9820 TrueAlert Horn (see Figure 1) is a non-addressable wall-mounted Notification Appliance that provides an audible warning indication of an alarm condition when activated from the control panel of a UL-listed, Simplex Fire Alarm System. **When the Notification Appliance emits sound, it indicates the possibility of an emergency situation that requires your immediate attention.**

The Horn is a Notification Appliance that operates on a reverse polarity Notification Appliance Circuit (NAC). When this NAC circuit is in the reverse polarity, or supervision state, the Horn does not operate and presents high impedance to the circuit. The Horn operates when the NAC changes polarity, entering the "alarm" state.

When the Horn powers up, it checks the setting of Switch (SW1) to determine whether to operate in either Free-Run **(SW1 "OFF")** or Smart*Sync*™ (SW1 "**ON")** Mode. If the switch is set for Free-Run mode, the Horn sounds for as long as power is applied. Otherwise, the Horn waits in silence for commands from the NAC.

CAUTION: When switch SW1 is in the SmartSync™ mode, the horn will not operate unless connected to a SmartSync Control Module (4905-9938), 4010 Fire Alarm Control Panel, or 4009 IDNet NAC Extender. The factory default setting for SW1 is "OFF."



Figure 1. TrueAlert Horn

When set for SmartSync Mode, the Horn responds to Turn-ON, Turn-OFF, March Time, and Temporal command signals received from the SmartSync circuit. The Horn responds immediately on any valid received command, resetting sounder operation to the new mode. The Horn will output an audible ½ second pulse every 1.0 second when either March Time or Temporal command is detected, with every fourth pulse removed under the Temporal (Code 3) command.

See Table 1 for sound output levels and current draw information on the TrueAlert Horn.

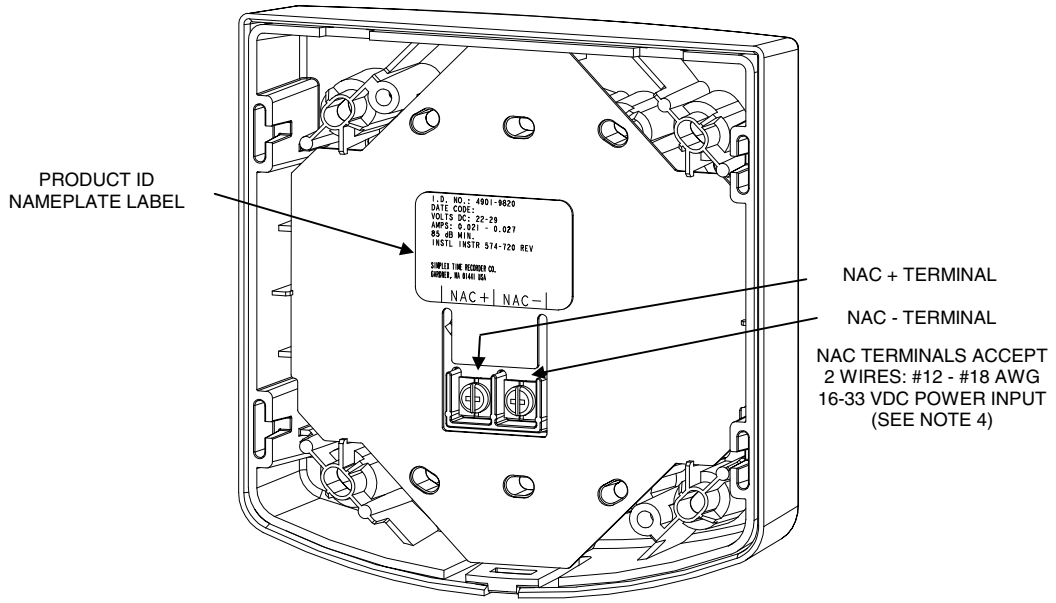
2000 Simplex Time Recorder Co., Westminster, MA 01441-0001 USA.
All specifications and other information shown were current as of publication, and are subject to change without notice.
TrueAlert™ and SmartSync™ are trademarks of Simplex Time Recorder Company.

TrueAlert Non-Addressable Horn Wiring

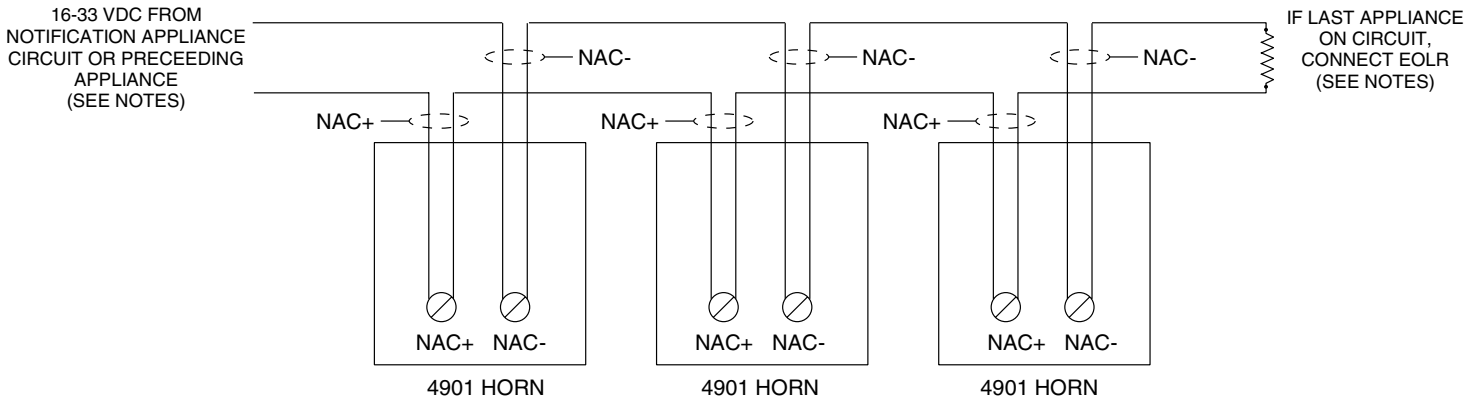
WARNING: Make sure that all power is disconnected before starting the installation.

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.

1. At the enclosure box, connect the contractor wires to the NAC + and NAC - terminals at the rear of the Horn unit. See Figure 2.
2. When connecting more than one Horn to a circuit, ensure that correct polarity is maintained for each unit.
3. When connecting the last Horn on a circuit, connect an end-of-line resistor (EOLR) to the Horn terminals.



TrueAlert Horn (Rear View)



Notes:

1. Notification Appliances are rated per individual nameplate label.
2. Maintain correct polarity on terminal connections. Do not loop wires under terminals.
3. Refer to the Field Wiring Diagrams supplied with the FACP for detailed NAC wiring information.
4. These appliances were only tested to the operating voltage limits of 16VDC and 33VDC. Do not operate these appliances outside these limits: doing so may cause appliance to fail to operate, and/or cause permanent damage to this equipment.

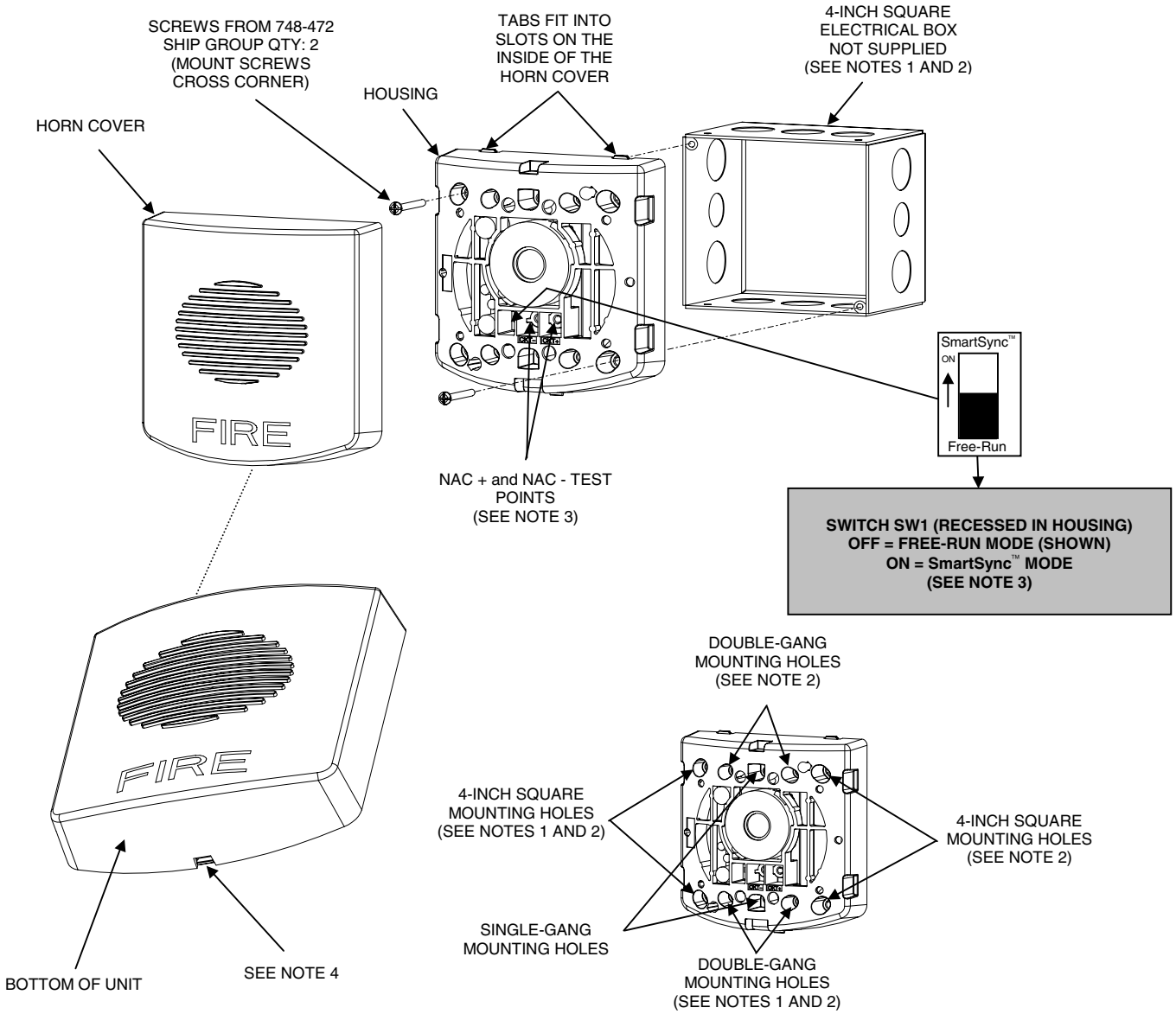
Figure 2. TrueAlert Horn Wiring

Mounting the TrueAlert Non-Addressable Horn

See Figure 3 for mounting the TrueAlert Horn to the enclosure box. When surface mounting of the horn, the 4905-9937 or 4905-9940 Surface Mount Skirt is recommended. Refer to the *4905 TrueAlert™ NAC Surface Mount Skirt Installation Instructions (574-790)* for this mounting application.

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

Tighten mounting screws snugly (do not overtighten).
For semi-flush mounting, install the box either flush with the wall or with a maximum 0.25-inch recess.



Notes:

1. The TrueAlert Horn attaches directly to standard single-gang, double-gang, or 4-inch square electrical box(s) (not supplied) mounted semi-flush or surface to the wall's surface.
2. There are two holes for single-gang and four holes for double-gang electrical box mounting; secure the housing to the single-gang or double-gang box using two mounting screws (#6/32 x 1 1/8-inch long not supplied). The two mounting screws are placed cross corner (opposite top and bottom holes) on the double-gang installation. Mounting the Horn to the 4-inch square electrical box is shown.
3. Switch SW1 and NAC + and – test points are accessible after mounting with the Horn cover removed.
4. To remove cover, press snap release in with a flat tip screwdriver while pulling up cover with other hand.

Figure 3. TrueAlert Horn Mounting

Table 1. TrueAlert Horn Sound Pressure Level Measurements

VOLTAGE (VDC)	CURRENT (mA)	HORN MODE (SEE NOTE 1)	SOUND PRESSURE MEASUREMENT (dBA)	
			ANECHOIC ROOM AVERAGE AT TEN FEET (SEE NOTE 2)	REVERBERANT ROOM AT TEN FEET PER UL464 (SEE NOTE 3)
16 (Minimum)	21	Steady	90	86
		Coded	86	83
24 (Nominal)	23	Steady	91	89
		Coded	86	85
33 (Maximum)	27	Steady	92	92
		Coded	88	88

Notes:
1. The coded category covers both Temporal and March Time cadences.
2. Average anechoic dBA measurements are measured on axis in a non-reflective test chamber using fast meter response.
3. Reverberant dBA measurements are a minimum UL rating based on sound power level measurements made in UL's reverberant test chamber.

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 4901 TrueAlert Horn 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 6.

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 6)
- 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.