Simplex

*UL, ULC, CSFM Listed;FM Approved; MEA (NYC) Acceptance**

TrueAlert Notification Appliances

4901-9820 Electronic Horn, Free-Run or SmartSync Operation, Non-Addressable

Features

Low current, 24 VDC electronic horn provides:

- Harmonically rich sound output suitable for either steady or pulsed operation
- Diode polarized input for connection to reverse polarity, supervised NACs
- Rugged, high impact, flame retardant red thermoplastic housing with white "FIRE" lettering (white cover is available separately)

Switch selectable horn operation modes:

- Free-Run mode tracks the output of a conventional fire alarm control panel notification appliance circuit (NAC)
- SmartSync two-wire control mode accepts horn control commands from compatible control panels (see list on page 2)

Free-Run Mode operation provides:

- Horn activated when NAC is in alarm; suitable for Temporal pattern, March Time patterns, or Coded patterns as determined by control panel operation

SmartSync two-wire control of audible and visible notification appliance provides:

- SmartSync control of horn tone as Temporal Pattern, March Time pattern (at 60 BPM), or on continuously; controlled separately from visible appliances on the same circuit
- Visible appliances on the same circuit operate at a synchronized 1 Hz flash rate
- Operation that allows "on-until-silenced" and "on-until-reset" on the same two-wire pair

TrueAlert notification appliance design provides flexible, easy, and convenient semi-flush or surface wall mounting:

- Easily mounts to single gang, double gang, or 4-inch square electrical box
- In/out wiring terminals, 18 AWG to 12 AWG
- Rear of housing does not extend into box

Optional Accessories:

- Mounting adapters to cover surface mounted electrical boxes and to adapt to Simplex 2975-9145 boxes
- UL listed wire guard 4905-9961*
- UL/ULC listed sound damper for locations requiring attenuation of 5 to 6 dBA (stairwells, small rooms, highly reverberant areas, etc.)
- White cover with red "FIRE" lettering for on-site color conversion (ordered separately)

Listing Reference:

- UL listed to Standard 464
- ULC listed to Standard S525
- NEMA 1 rated. See Product Selection for more information.

Description

TrueAlert non-addressable horn model 4901-9820

TrueAlert non-addressable horn model 4901-9820 is an audible notification appliance with a loud and penetrating, harmonically rich sound that can be controlled either directly from a standard NAC (free-run operation mode) or by the SmartSync two-wire operation mode.

Standard (free-run) operation mode.

In the free-run mode, a positive voltage from the controlling NAC will activate the horn according to the desired output of continuous or coded output per the controlling NAC's capabilities.



Figure 1: 4901-9820 TrueAlert Non-Addressable Horn, Red Cover with White Lettering

SmartSync mode.

When selected for SmartSync mode and used with compatible Simplex control (refer to list on page 2), this horn can be wired onto the same two-wire NAC circuit as visible appliances but with separately controlled operation. Typical applications are audible notification activated as "on-until-silenced" and visible notification appliances activated "on-until-reset." In addition, visible appliances (strobes) on the same circuit are activated with synchronized flashes.

SmartSync control two-wire advantage.

Allowing these separate controls to be carried on the same two-wire NAC circuit can significantly reduce installation time and expense for both retrofit and new construction.

Flexible mounting.

This horn can be semi-flush or surface mounted on a standard single gang, double gang, or 4" square (102 mm) electrical box. Optional accessories are available to increase mounting and application flexibility.

SmartSync Two-Wire Control

SmartSync operation mode allows a two-wire circuit to provide the ability to activate both the horn and strobe on the same NAC and then allow the horn to be silenced while the strobe remains flashing. The horn operates as "on-until-silenced" while the strobe operation is "on-until-reset."

SmartSync Control Sources

SmartSync two-wire control is available from:

- 4006, 4007ES Hybrid, 4008, 4010, 4010ES, and 4100U Fire Alarm Control Panels (refer to individual product data sheets for more information)
- 4009 IDNet NAC Extenders (refer to data sheet S4009-0002)
- SmartSync Control Module (SCM) Model 4905-9938 (refer to data sheet S4905-0003)

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Product Selection

Table 1: Product Selection

Model	Description	Dimensions
4901-9820 [1]	TrueAlert non-addressable electronic horn, red with white "FIRE" lettering	5-1/8" H x 5" W x 1-1/2" D (130 mm x 127 mm x 38 mm)
4905-9838	Optional Sound Damper; package of 20; field installed adhesive backed horn output attenuator; reduces output 5 to 6 dBA **Note:** After Sound Damper installation, measure sound level to ensure compliance with applicable code requirements	1-3/4" Diameter (44.5 mm) with 0.31" (8 mm) sound opening

[1]NEMA 1 rated when used with 4905-9931 adaptor plate and 2975-9145 back box.

Table 2: Adapters

Model	Description		Dimensions
4905-9937	Surface mount red adapter skirt	Use to cover 1-1/2" deep surface mounted boxes	5-3/8" H x 5-1/4" W x 1-5/8" D (136 mm x 133 mm x 41 mm) Total depth with horn = 3-1/8" (79 mm)
4905-9940	Surface mount white adapter skirt		
4905-9931	Adapter Plate, red, for mounting to Simplex, 2975-9145 box (typically for retrofit, may be mounted vertical or horizontal)		8-5/16" x 5-3/4" x 0.060" Thick (211 mm x 146 mm x 1.5 mm)
2975-9145	Red mounting box, requires Adapter Plate 4905-9931		7-7/8" x 5-1/8" x 2-3/4" D (200 mm x 130 mm x 70 mm)

Table 3: Synchronization Control Module

Model	Description	Dimensions
4905-9938	SmartSync Control Module, Class A or Class B, installs in 4" square box; refer to data sheet *S4905-0003* for details	4" x 4-1/8" x 1-1/4" D (102 mm x 105 mm x 32 mm)

Table 4: Covers and Guard

Model	Description	Dimensions
4905-9988	Red horn cover with white "FIRE" lettering, available for replacement if required	5-1/8" H x 5" W x 1-1/2" D (130 mm x 127 mm x 38 mm)
4905-9989	White horn cover with red "FIRE" lettering, use to convert cover color on-site	
4905-9961*	Wire guard with mounting plate, red, compatible with semi-flush or surface mounted boxes	6-1/16" H x 6-1/16" W x 3-1/8" D (154 mm x 154 mm x 79 mm)
* UL listed by Space Age Electronics Inc.		

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4901-9820 TrueAlert Non-Addressable Horn Specifications

Table 5: Horn Specifications

Rated Voltage Range		16 VDC to 33 VDC, see Note 1					
Current Ratings		16 VDC		24 VDC		33 VDC	
		21 mA		23 mA		27 ma	
Sound Output Characteristics		2400 to 3700 Hz sweep, modulated at 120 Hz rate					
Sound Output Ratings @ 10 ft (3 m) (see Note 2)		16 VDC		24 VDC		33 VDC	
	Sound Type (Note 2)	Steady	Coded	Steady	Coded	Steady	Coded
	UL 464 Reverberant Chamber	86 dBA	83 dBA	89 dBA	85 dBA	92 dBA	88 dBA
	Anechoic Chamber	93 dBA	89 dBA	96 dBA	92 dBA	96.3 dBA	92.3 dBA

Table 6: General Specifications

Temperature Range	32° to 122° F (0° to 50° C)
Humidity Range	10% to 93%, non-condensing @ 100° F (38° C)
Connections	Terminal blocks for 18 AWG to 12 AWG (0.82 mm^2 to 3.31 mm^2); two wires per terminal for in/out wiring

Note:

1. The rated voltage range listed is the absolute operating range. Operation outside of this range may cause permanent damage. Please note that 16 VDC is the lowest operating voltage that is allowed at the last appliance on the notification appliance circuit under worst case conditions. NAC voltage drops and standby battery calculations should be made using anticipated operating conditions.
2. Coded values are typical of the output measured with a Temporal pattern or a March Time pattern pulse and with a sound level meter reading on a "fast" setting. Under the same test conditions, coded horn output "peak" sound level readings are typically 4 dBA higher. Anechoic horn output ratings are typically more representative of actual installed sound output.

Installation Reference

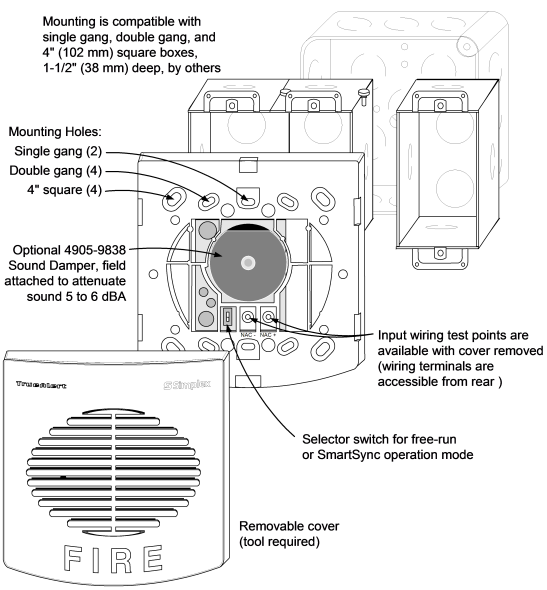


Figure 2: Surface or Semi-Flush Horn Mounting

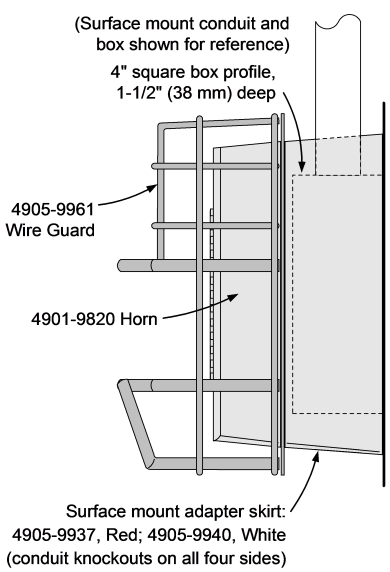
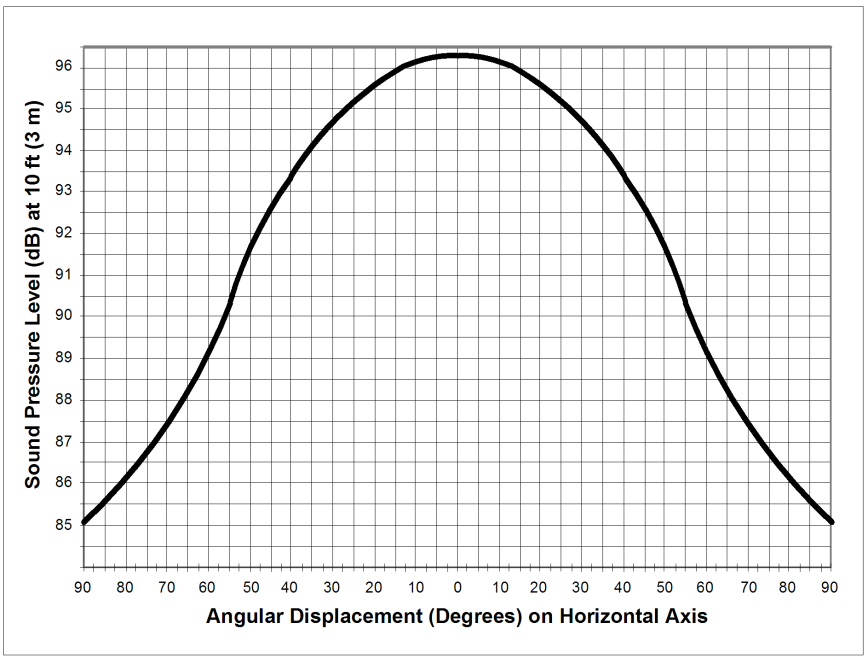


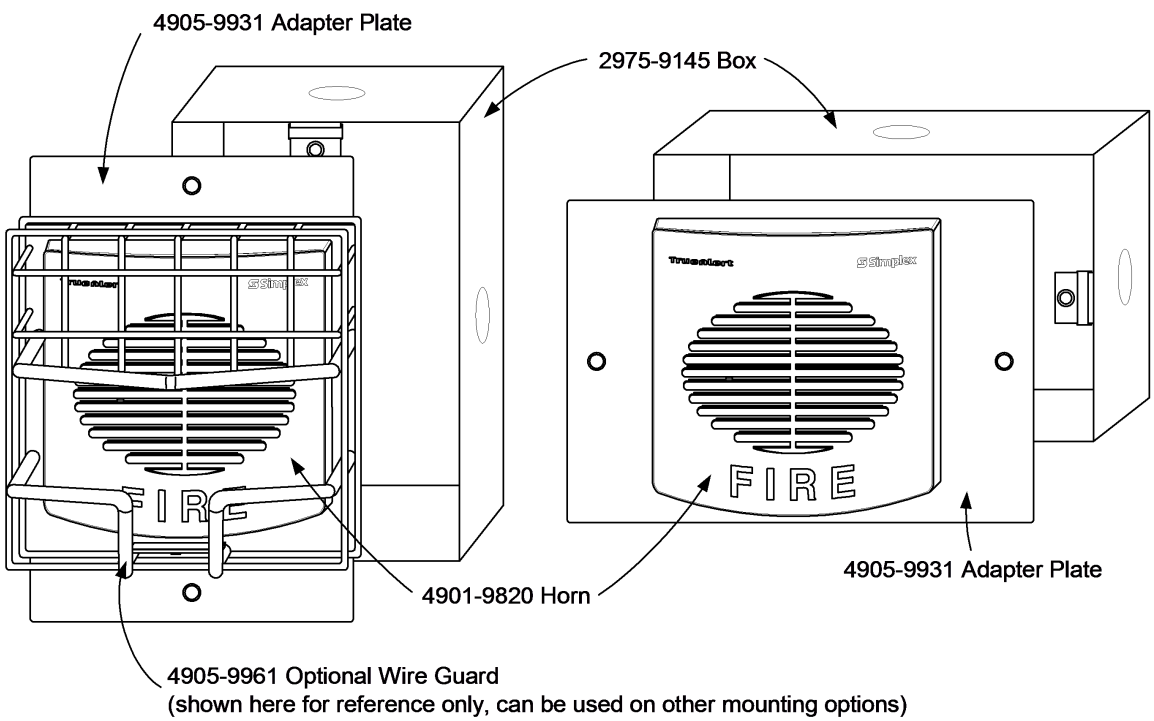
Figure 3: Side View of Horn with Surface Mount Adapter Skirt

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Polar Sound Output per ULC Standard S525



4905-9931 Adapter Plate Installation Information



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