TrueAlert Non-Addressable A/V and V/O Weatherproof Appliances Installation Instructions

Cautions and Warnings

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 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 an authorized Simplex product supplier.

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

FCC RULES AND REGULATIONS – PART 15 - This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

In this Document

This publication discusses the following topics:

TrueAlert Non-Addressable A/V and V/O Weatherproof Appliances

Non-addressable TrueAlert A/V and V/O Weatherproof Appliance Operation

The TrueAlert Weatherproof Units (see Figure 1) are non-addressable wall-mounted Notification Appliances that provide visible (V/O) and audible (A/V) warning indications of an alarm condition when activated from the control panel of a UL-listed, Simplex Fire Alarm System. When the Notification Appliance emits sound and/or light, it indicates the possibility of an emergency situation that requires your immediate attention. The units are notification appliances that operate on a reverse polarity Notification Appliance Circuit (NAC). When this NAC is in the reverse polarity, or supervision state, these appliances do not operate, and present a high impedance to the circuit. They operate when the NAC changes polarity, entering the “alarm” state. The wall-mounted A/V units activate a high intensity pulsed light output with electronic sounder at a rate that is determined by A/V configuration. The units respond to a synchronization signal received from the NAC. The "Synchronous" Strobe appliance flashes when it detects either SmartSync or standard Simplex NAC synchronization signals. On the other hand, the A/V strobe appliance flashes when it detects SmartSync synchronization signals from the NAC only. The A/V horn cadence is determined by a coded message within the SmartSync signal. Both appliance types have a manual strobe intensity selection jumper to configure the appliance for 75cd for UL1638 service, or 15/60/75 cd for UL1971 service. Table 1, Table 2, and Table 3 describe A/V features, current ratings, and sound pressure level measurements.

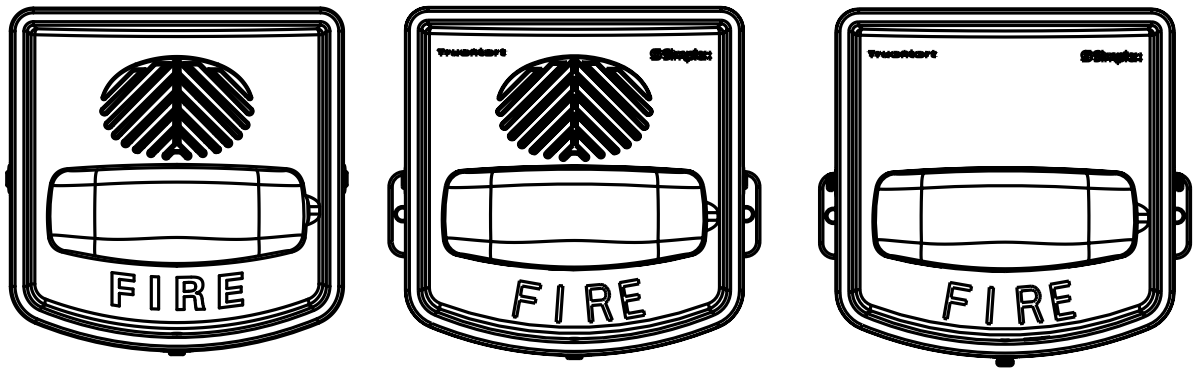


Figure 1. TrueAlert Weatherproof Appliances

Table 1: TrueAlert Non-Addressable Weatherproof Units Identified

APPLIANCE DESCRIPTION	PRODUCT ID (PID) MODEL NUMBERS
Weatherproof V/O, Red, No Logo	4906-6131
Weatherproof V/O, Red	4906-9105
Weatherproof V/O, White	4906-9106
Weatherproof A/V, Red	4906-9131
Weatherproof A/V, White	4906-9132
Weatherproof Backbox, Red	4905-9828
Weatherproof Backbox, White	4905-9829

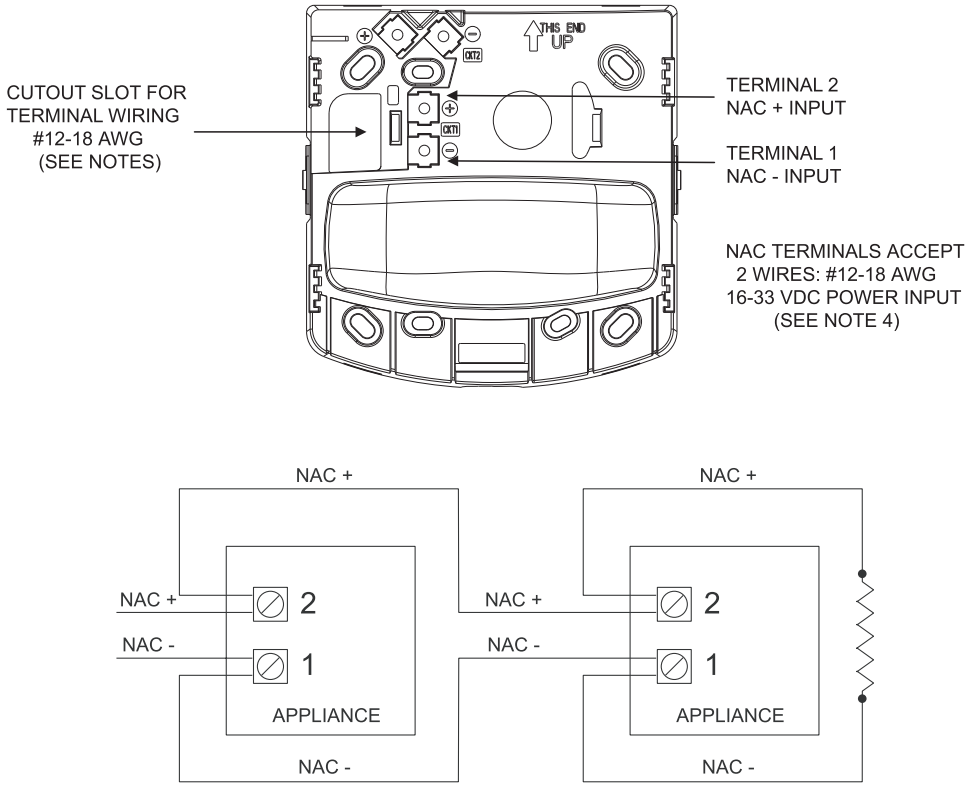
TrueAlert Non-Addressable A/V and V/O Weatherproof Appliances

Non-addressable TrueAlert Weatherproof 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 use the knockout at the rear of the backbox to mount the box. Use the tabs on the sides of the box for a secure mount. Make sure the conduit is properly sealed. Strip lead insulation to 3/8-inch maximum.

1. At the enclosure box, run contractor wiring through the cutout slot and connect the wires to the NAC + and NAC - terminals at the front of the unit. Torque terminal block screws 12-15 in/lbs. to ensure proper continuity. See Figure 2.
2. When connecting more than one unit to a circuit, ensure that correct polarity is maintained for each unit.
3. When connecting the last unit on a circuit, connect an end-of-line resistor (EOLR) to the terminals.



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 fire alarm control panel (FACP) for detailed NAC wiring information.
4. These appliances were only tested to the operating voltage limits of 16 - 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.
5. Maximum 24 appliances per circuit. Maximum 30 ohms wire resistance between appliances. Refer to the Field Wiring Drawings of the driving FACP for further instructions.

Figure 2. Non-Addressable Weatherproof Appliance Wiring

TrueAlert Non-Addressable A/V and V/O Weatherproof Appliances

Mounting the Non-Addressable TrueAlert Weatherproof Units

See Figure 3 for mounting the TrueAlert Weatherproof A/V and V/O units to the weatherproof enclosure.

CAUTION: Do not use the knockout at the rear of the backbox to mount the box. Use the tabs on the sides of the box for a secure mount.

Note: - Unit must be wall-mounted with the text “This end up” at the top and the drain holes facing down.
- A SimplexGrinnell weatherproof backbox must be used with a weatherproof appliance. See Page 2 for compatible weatherproof backbox PIDs.
- The knockout locations on the top, rear and the sides of the weatherproof backbox are for 3/4” conduit. A watertight conduit fitting is required for outdoor or weatherproof applications.

1. Assemble the housing onto the weatherproof backbox assuring even contact with the gasket around the periphery.
2. Using the mounting holes indicated in Figure 3, assemble the housing to the weatherproof backbox.
3. Tighten the 6-32, 7/16” screws provided snugly (do not overtighten). This should be equivalent to a torque of 5-7 in/lbs.
4. Assemble the escutcheon to the weatherproof backbox using the (3) 6-32, 7/16” screws provided. Tighten those snugly, equivalent to a torque of 5-7 in/lbs (do not overtighten).

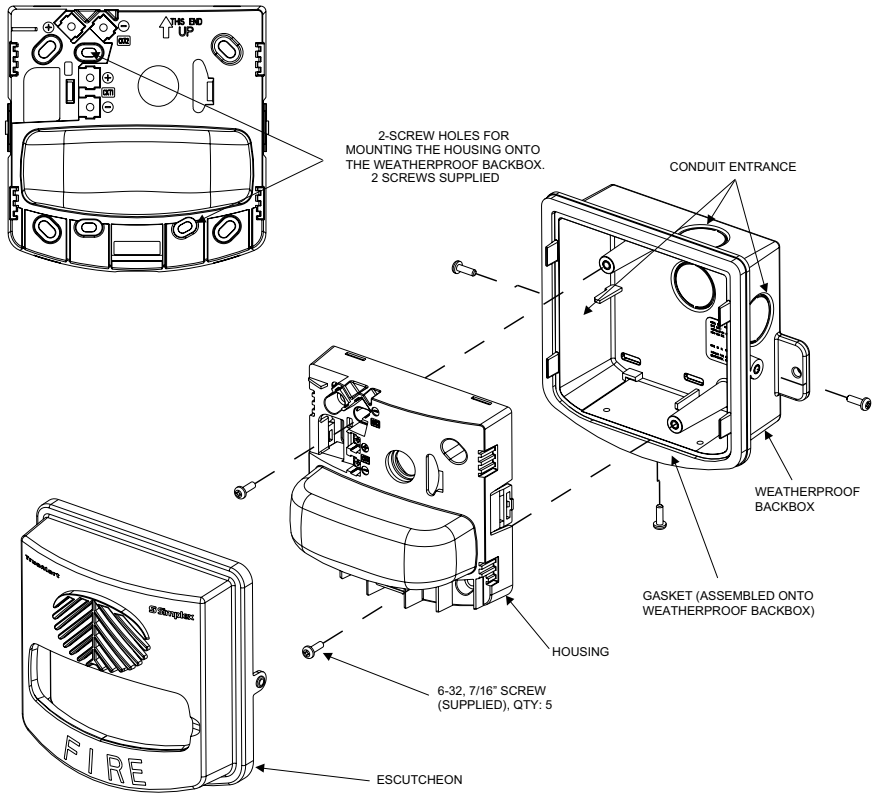


Figure 3. TrueAlert Weatherproof Mounting (A/V Shown)

Setting the Strobe Candela Rating

All 4906 Weatherproof Non-Addressable Multi-Candela notification appliances have jumper selectable candela ratings for the strobe. The strobe can be selected to the desired intensity by inserting the jumper in the appropriate position (15, 60, 75 or WP75 candela). See Figure 4.

Note: The jumper is pre-installed (WP75 candela setting) at the factory and needs to be set for your configuration requirements during installation. Selected candela setting can be seen through strobe lens.

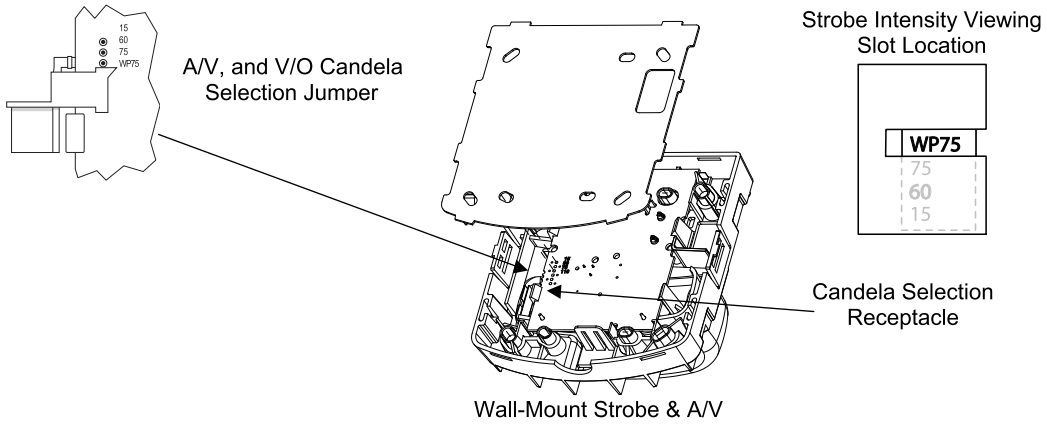


Figure 4. Setting the Strobe Candela Rating

Non-Addressable TrueAlert Weatherproof Unit Ratings

Table 2: TrueAlert Weatherproof Units - Current Rating

APPLICATION	APPLIANCE TYPE	CANDELA SELECTION	MAXIMUM RMS OPERATING CURRENT
UL1638, to -35°C	V/O	'WP75'	273mA
	A/V		277mA
UL1638, to 0°C	V/O	'WP75'	189mA
	A/V		205mA
UL1971 (0 to 50°C)	V/O	15	77mA
		60	192mA
		75	231mA
	A/V	15	91mA
		60	204mA
		75	249mA

Continued on next page

Non-Addressable TrueAlert Weatherproof Unit Ratings

Table 3: TrueAlert Weatherproof A/V Units - Sound Pressure Level Measurements

REGULATED 24 DC INPUT VOLTAGE	HORN MODE (SEE NOTE 1)	MINIMUM SOUND PRESSURE LEVEL MEASUREMENT (dBA)	
		ANECHOIC ROOM AVERAGE AT TEN FEET (SEE NOTE 2)	REVERBERANT ROOM AT TEN FEET AS INDICATED IN UL464 (SEE NOTE 3)
16	Steady	96	80.4
	Coded	96	75.8
24	Steady	99	83.4
	Coded	99	78.7
33	Steady	101	85.6
	Coded	101	81.4

Note: 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.

Table 4: WP75 Candela Ratings over Temperature Ranges

WP75 LIGHT OUTPUT	ANGLE				
	STRAIGHT OUT FROM UNIT	VERTICAL BELOW UNIT		(LEFT/RIGHT) HORIZONTAL	
	0^o	45^o	90^o	45^o	90^o
UL 1638 MINIMUM CANDELA RATING (over temperature range)	75	35	10	32	15
TYPICAL CANDELA (at 25^oC)	215	103	24	94	39

Limitations, Safety and Placement of Notification Appliances

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), the Notification Appliances will not provide a visible 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 light. The output level must meet the requirements of the intended protected area(s). Although these Strobe Notification Appliances meet the current UL standards for light intensity, the protected area(s) may have walls, doors, carpeting, furniture, insulation, or other obstacles that reduce or even block the light. For all applications, the light output must provide enough intensity to alert all occupants of the protected area(s) including those occupants that are sleeping. If these occupants cannot see the effect of the Notification Appliances within the protected area(s), you must increase the intensity of the light output or add additional Notification Appliances so that the occupants can see the effect of 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 (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.

Placement

The placement of Notification Appliances must conform to:

- Latest NFPA standards and guidelines (Refer to National Fire Alarm Code 72, Chapter 6)
- Light Intensity 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 your product supplier for information on Explosion-Proof Notification Appliances designed for hazardous environments.