

## Introduction

### Wall mount indoor and outdoor addressable speaker (S/O) notification appliances

Use a Simplex fire alarm control unit (FACU) IDNAC signaling line circuit (SLC) to individually power, address and control wall mount indoor and addressable S/O notification appliances. A separate compatible Simplex FACU audio NAC supplies audio. Electronic monitoring of wiring supervision means you can T-tap audio and IDNAC wiring for Class B wiring, which reduces wiring costs and wiring distances.

Install wall mount indoor and addressable S/O notification appliances on standard 4 inch square 2 1/8 inch deep USA electrical boxes for flush installations, provided by others, or surface or weatherproof (WP) backboxes, see Table 7, for surface or WP installations.

Appliances are available in 400 Hz to 4000 Hz and 200 Hz to 10000 Hz high fidelity models. Separate appliance and cover selection greatly simplifies the ordering and installation process. Model numbers ending in -BA are assembled in the USA.

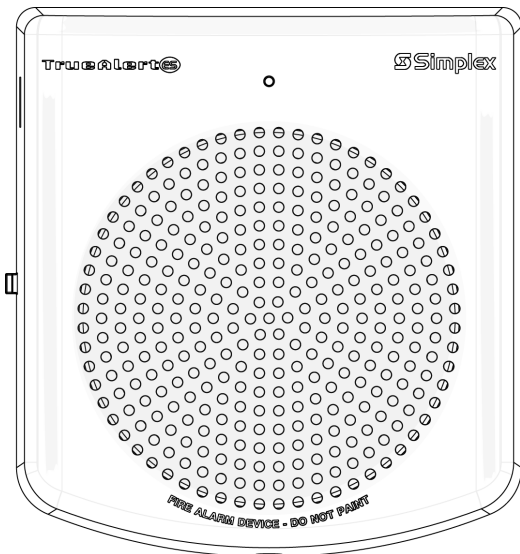


Figure 1: Wall mount addressable speaker notification appliance

## Features

### General

- Separate appliances, covers, back boxes, and wire guards provide complete flexibility for meeting customers installation requirements
- The TrueAlert device reports provide important appliance information details including point ID, custom label, type, and candela settings
- Rugged, high impact flame retardant thermoplastic housings
- The covers can be easily removed without disturbing the connected housing
- Terminals for wiring sizes 18 AWG to 12 AWG
- The appliance LED can be selected to display during each polling cycle indicating appliance supervision
- Magnet test diagnostics to assist checkout and testing of appliances
- Compatible with the Americans with Disabilities Act (ADA) requirements

## IDNAC Signalling Line Circuit (SLC)

- The advanced addressable notification controlled by IDNAC SLCs provides regulated 29 VDC for low current operation even during battery backup conditions
- The wiring supervision is electronically monitored and allows IDNAC SLC wiring to be **T-tapped** for Class B wiring, which provides flexibility in reducing wiring sizes and or distance, and which reduces costs for wiring installation
- The strobe intensity can be selected within programming from the FACU

## Audio (speaker)

- The wiring supervision is electronically monitored and allows audio (speaker) wiring to be **T-tapped** for Class B wiring, which provides flexibility in reducing wiring sizes and or distance, and which reduces costs for wiring installation
- High quality voice and tone reproduction with taps for 1/4 W, 1/2 W, 1 W, or 2 W at 25 VRMS or 70.7 VRMS
- The audio (speaker) circuits are wired separately from IDNAC SLCs
- High fidelity models (200 Hz to 10,000 Hz) are also available
- Compliant with NFPA 72, 520 Hz Low frequency signal requirements for sleeping areas
- Listed to UL 1480 and ULC S541\*
- UL 1480 Reverberant dBA measurements (10 ft or 3 m)
- ULC S541 Anechoic dBA measurements (10 ft or 3 m)

## Wall mount addressable speaker product selection

Table 1: Wall mount addressable speaker S/O appliances

Model	Description	Installation instructions
49SO-APPLW 49SO-APPLW-BA	S/O appliance only. Select cover, mounting plate, and surface or WP box separately, if required.	579-1190

Table 2: High fidelity appliances

Model	Description	Installation instructions
49HF-APPLW 49HF-APPLW-BA	High fidelity S/O appliance only. Select cover, mounting plate, and surface or WP box separately, if required.	579-1190

\* Additional listings may be applicable, contact your local Simplex® product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co.

**Table 3: S/O covers (required when ordering APPLW models)**

Model	Color	Wording
49SOC-WRBLANK	Red	No lettering
49SOC-WWBLANK	White	
49SOC-WRBA	Red	حريق/FIRE
49SOC-WWBA	White	
49SOC-WRBC	Red	火警/FIRE ALARM
49SOC-WWBC	White	
49SOC-WRBF	Red	FEU/FIRE
49SOC-WWBF	White	
49SOC-WRFEU	Red	FEU
49SOC-WWFEU	White	
49SOC-WRFIRE	Red	FIRE
49SOC-WWFIRE	White	
49SOC-WRS	Red	Logo only
49SOC-WWS	White	
49SOC-WRALT	Red	ALERT
49SOC-WWALT	White	

**Weatherproof product selection**
**Table 4: Weatherproof wall mount addressable speaker S/O appliances**

Model	Description	Installation instructions
49SO-APPLW-O 49SO-APPLW-O-BA	S/O appliance only. Select cover, mounting plate and surface or WP back box separately.	579-1237

**Table 5: S/O covers, required when ordering APPLW-O models**

Model	Color	Wording
49SOC-WRBLANK-O	Red	No lettering
49SOC-WWBLANK-O	White	
49SOC-WRBA-O	Red	حريق/FIRE
49SOC-WWBA-O	White	火警/FIRE ALARM
49SOC-WRBC-O	Red	
49SOC-WWBC-O	White	FEU/FIRE
49SOC-WRBF-O	Red	
49SOC-WWBF-O	White	FEU
49SOC-WRFEU-O	Red	
49SOC-WWFEU-O	White	FIRE
49SOC-WRFIRE-O	Red	
49SOC-WWFIRE-O	White	Logo only
49SOC-WRS-O	Red	
49SOC-WWS-O	White	ALERT
49SOC-WRALT-O	Red	
49SOC-WWALT-O	White	

**Table 6: S/O wall mount plate, non-weatherproof and weatherproof**

Model	Description	Installation instructions
49MP-SOWR	Mounting back plate in red.	579-1193
49MP-SOWW	Mounting back plate in white.	

**Table 7: Surface or WP back boxes**

Model	Color	Description	Installation instructions
49WPBB-SOWR	Red	Surface or WP back box in red.	579-1239
49WPBB-SOWW	White	Surface or WP back box in white.	

**Table 8: Wire guard back box and wire guard**

Model	Description
49WGBB-SOWR-O	Wire guard back box, wall, red, WP
49WG-SOWR	Wire guard, wall, red

## Wall mount speaker specifications

**Table 9: Non-weatherproof appliance general specifications**

Specification	Rating
<b>Dimensions</b>	5 1/2 in. x 5 in. x 1 1/2 in. or 139 mm x 128 mm x 38 mm (H x W x D)
<b>Environmental</b>	32°F to 120°F or 0°C to 49°C, 10% to 93%, non-condensing at 104°F or 40°C
<b>Connections</b>	Terminal blocks for 18 AWG to 12 AWG or 0.82 mm <sup>2</sup> to 3.31 mm <sup>2</sup> , two wires for each terminal for in/out wiring. Use Unshielded Twisted Pair (UTP) for IDNAC and audio wiring.

**Table 10: Weatherproof appliance general specifications**

Specification	Rating
<b>Dimensions</b>	5 1/2 in. x 5 in. x 1 1/2 in. or 139 mm x 128 mm x 38 mm (H x W x D)
<b>Environmental</b>	UL/ULC temperature rating: Outdoor private: -40°F to 150.8°F (-40°C to 66°C) Indoor and uncontrolled wet Public Mode: 32°F to 122°F (0°C to 50°C)
	FM temperature rating: -40°F to 120°F (-40°C to 49°C)
	UL/ULC humidity range: 95 %, non-condensing at 140°F (60°C)
<b>Connections</b>	Terminal blocks for 18 AWG to 12 AWG or 0.82 mm <sup>2</sup> to 3.31 mm <sup>2</sup> , two wires for each terminal for in/out wiring. Use Unshielded Twisted Pair (UTP) for IDNAC and audio wiring.

**Table 11: Speaker audio specifications**

Specification	Rating
<b>Input voltage</b>	25 VRMS or 70.7 VRMS
<b>Power taps</b>	1/4 W, 1/2 W, 1 W, and 2 W
<b>Frequency response</b>	400 Hz to 4000 Hz (S/O), 200 Hz to 10000 Hz (H/F)   General signaling = 125 Hz to 12 kHz

**Table 12: Speaker output ratings 25 Vrms or 70.7 Vrms at 10 ft or 3 m**

Wattage tap Model	1/4 W		1/2 W		1 W		2 W	
	S/O	H/F	S/O	H/F	S/O	H/F	S/O	H/F
Reverberant Chamber Test, per UL 1480 (dBA)	79	76	83	80	87	83	90	86
Anechoic Chamber Test, per ULC-S541 (dBA)	80	76	84	79	88	82	91	85

**Table 13: Polar dispersion reference, per ULC-S541 anechoic chamber testing**

Attenuation	Angle	Attenuation	Angle
-3 dB	70°	-6 dB	80°

**Table 14: IDNAC SLC specifications**

Specification	Rating
<b>Typical operating voltage range</b>	23 VDC to 30 VDC, special application
<b>Appliance voltage design reference</b>	23 VDC (with 6 VDC drop)
<b>Current consumption at 23 VDC on IDNAC addressable SLC</b>	9 mA
<b>Supervisory requirements</b>	1 unit load (= 0.8 mA control unit current)
<b>IDNAC SLC loading</b>	Maximum of 127 addresses for each SLC, 139 unit loads. See device and compatible Fire Alarm Control Unit Installation Instructions for circuit current load limits.
<b>IDNAC SLC wiring specifications</b> (refer to the control unit installation instructions for more information)	UTP, unshielded twisted pair recommended
	Maximum wire length allowed with T-Taps for Class B wiring for each SLC = 10,000 ft or 3048 m Maximum wire length to any appliance = 4000 ft or 1219 m. This can be doubled to 8000 ft or 2438 m by using a 4009 IDNAC Repeater.

**Equipment compatibility reference**

Compatible equipment	Data sheet reference
4100ES with EPS+ or EPS Power Supply	S4100-0100
4009 IDNAC Repeater	S4009-0004
4100ES Flex 35 and 50 Watt Amplifiers	S4100-0034
4100ES 100 Watt Amplifiers	
4100ES Constant Supervision and Audio NACs	

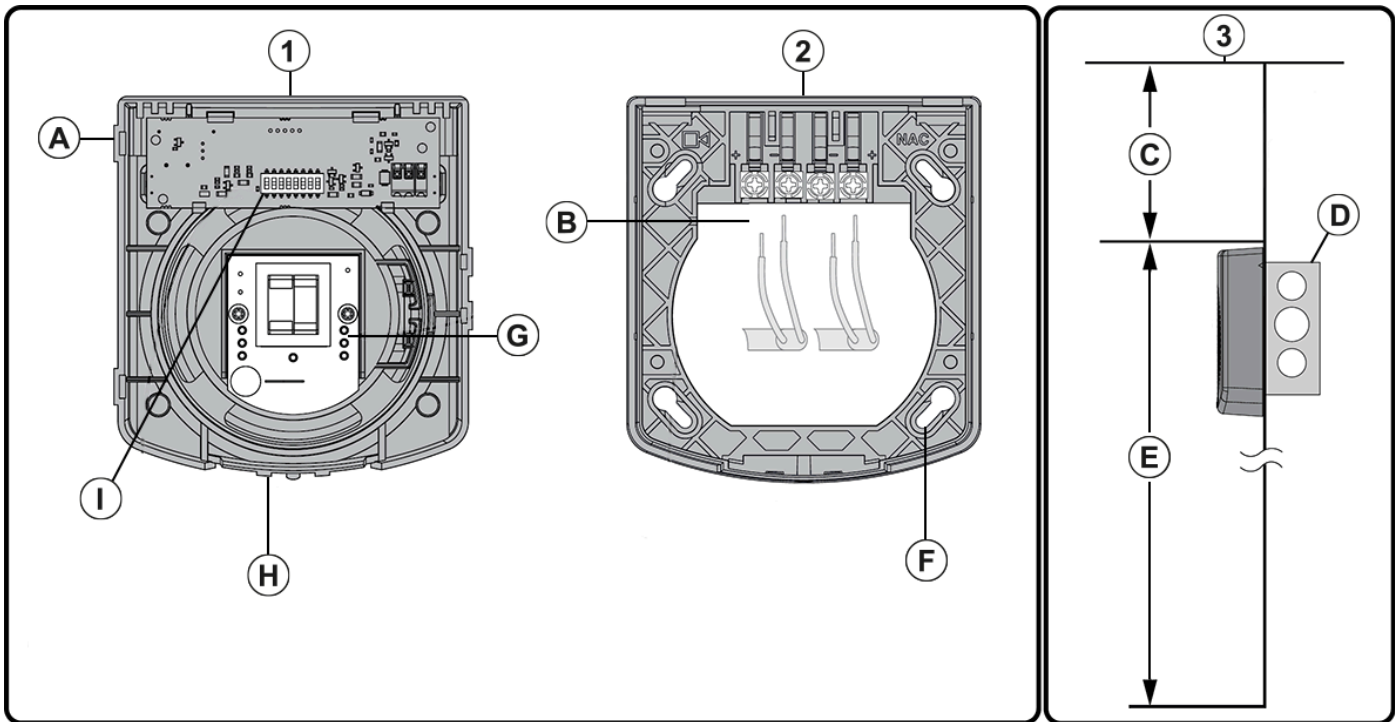
**Wall mount S/O installation reference**


Figure 2: Installation reference

Callout	Description	Callout	Description
1	Appliance, rear	2	49MP-SO Wall Mount Back Plate
3	Wall mount height reference	A	Magnet test location
B	Wiring terminals and connection clips for speaker and strobe connections accept two #12-18 AWG wires	C	6 in. or 152 mm minimum
D	4 in. X 4 in. (101 mm X 101 mm) electrical backbox 2 1/8 in. (54 mm) deep	E	NFPA 72 requires the top of audible appliance to be 90 in. or 2286 mm minimum above the finished floor and not less than 6 in. or 152 mm below the ceiling, confirm with your local codes.
F	Mount to 4 in. X 4 in. X 2 1/8 in. (101 mm X 101 mm X 54 mm) electrical box using 8-32 screws.	G	Set audio circuit voltage and power tap here.
H	You can remove the appliance and cover from the back plate using a slotted or philips head screwdriver.	I	Address Dip Switch Set a unique address for the appliance through an eight-position DIP switch (ADDR1) on the rear of the appliance.

