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https://docs.jci.com/autocall/truealert-na-multicandela-na-install

Cautions, Warnings, and Regulatory Information

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 AUTOCALL™ PRODUCT THAT APPEARS DAMAGED Upon unpacking your Autocall 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 Autocall product supplier.

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

Product identification reference

See Product specifications for detailed product specifications.

Table 1: Product identification reference

	Strobe (V/O)				Horn strobe (A/V)		Speaker/Visible (S/V)			
Type	FIRE	FIRE	ALERT			FIRE		FIRE	FIRE	
Mount	Wall	Ceiling	Ceiling	Ceiling	Wall	Ceiling	Wall	Ceiling	Ceiling	Ceiling
Model, color	A4906-9101, red A4906-9103, white	A4906-9103, red A4906-9104, white	A4906-9114, red A4906-9115, white	A4906-9116, red A4906-9117, white	A4906-9127, red A4906-9129, white	A4906-9128, red A4906-9130, white	A4906-9151, red A4906-9153, white	A4906-9154, red, see note A4906-9157, white, see note A4906-9160, white, see note	A4906-9158, white	A4906-9159, white
Operation	Reverse polarity notification appliance with output selectable for 15, 30, 75, or 110 candela, and synchronized 1 Hz flash. Strobes provide the polar light dispersion requirements of UL1971 and ULC-S526.				Built-in electronic horn operating under SmartSync control.		Wired separately from strobes; selectable for 25 VRMS or 70.7 VRMS; selectable for 1/4 W, 1/2 W, 1 W, or 2 W.			

Table 1: Product identification reference

	Strobe (V/O)	Horn strobe (A/V)	Speaker/Visible (S/V)
Compatibility	• A/Vs: IDNet NAC Extender models A009-9201(CA) and A009-9301. • SmartSync Control Module (SCM) A4905-9938. • Autocall Fire Alarm Control Panels (FACPs) providing SmartSync control NACs.	As with Strobe (V/O) • Strobe Synch Modules A4905-9914 and A4905-9922. • Autocall FACPs providing strobe sync NACs.	• Listed fire alarm audio NACs.

Note: A4906-9154 and A4906-9160 are not ULC listed. A4906-9157 is ULC only.

Ceiling Mounting Reference Notes

Note:

• Before attaching the strobe assembly to housing, select the desired S/V and V/O candela and attach V/O NAC wiring.

• For S/Vs, run strobe assembly wire leads through the housing opening and attach to the terminal block assembly; Red to POS, Black to NEG. See Figure 5 for more detail.

• For strobe assembly mounting, attach the housing to the box using two supplied screws, align the mounting tabs of the strobe assembly to the housing slots, and snap them into place.

• On model A4906-9157, temporarily push the gasket for acoustic performance to the side to feed the wires through.
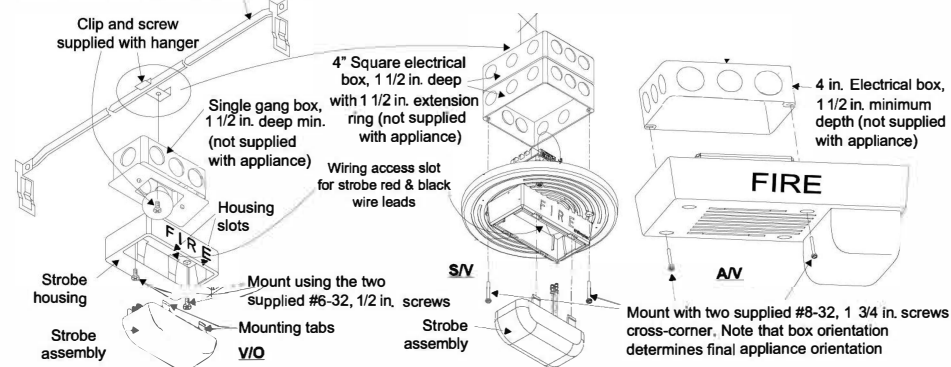

Figure 1: Ceiling Mounting Reference

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).

CAUTION: 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 appliances. Some appliances use high voltage. To avoid electrical hazards and damage to appliances, disconnect electrical power for the notification appliance circuit at the control panel before installing, repairing, or internally adjusting any appliances. Even with electrical power removed, some appliances, such as strobes, store a high voltage charge that can cause injury resulting in death from electrical shock. Do not touch exposed circuitry.

Wall Mount Reference

Note:

1. For each type, recess flush mount boxes 1/4 in. (6.35 mm) maximum from wall surface. Do not over-tighten the screws.
2. For S/V mounting, do not bring conduit through the rear of the electrical boxes.
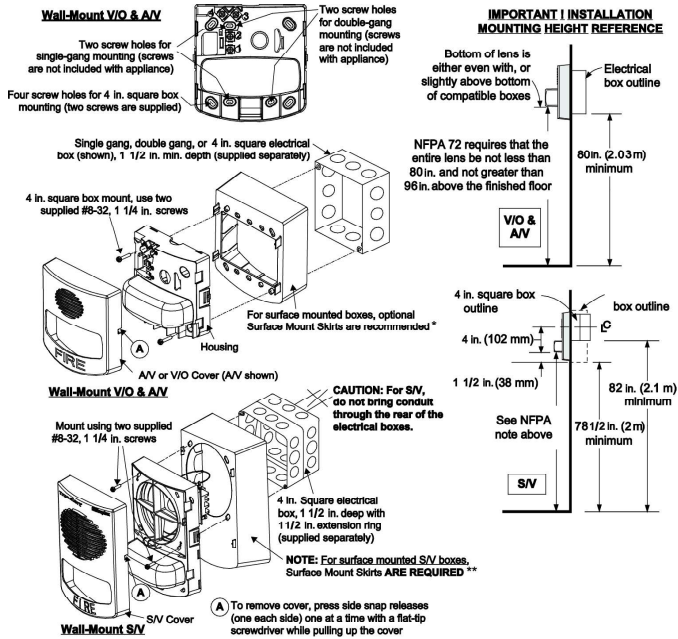

Figure 2: Wall Mount Reference

Note:

- For surface mounted A/V or V/O boxes, optional skirts are recommended: A4905-9937 (red) or A4905-9940 (white).
- For surface mounted S/V boxes, skirts are required: A4905-9946 (red) or A4905-9947 (white).
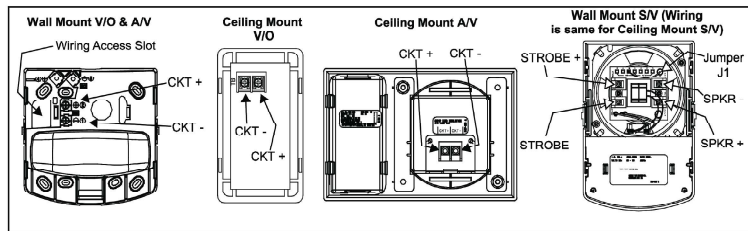
Wiring Termination Reference

Figure 3: Wiring Termination Reference

NAC Wiring Information

- Refer to the fire alarm control unit (FACU) documentation for additional information.
- NAC wiring connections are supervised and power-limited by the FACU.
- Maximum of 35 appliances for each circuit.
- Maximum resistance between appliances is 30 ohm.
- For audio/voice systems, speaker circuits are wired separately from strobe circuits.
- Strip lead insulation to 3/8 in. (9.5 mm) maximum.
- Wire size is 18 AWG to 12 AWG (0.82 mm^2 to 3.31 mm^2).
- Class B NAC, End-of-Line Resistors: When connecting the last appliance on a NAC, connect an end-of-line resistor harness to the terminals. Refer to FACU documentation for correct value.
- Speaker factory setting is 25 VRMS, 0.5 W (J1 to Tap E). Select speaker wattage setting per Figure 5.

Note: An incorrect tap setting may damage the speaker.
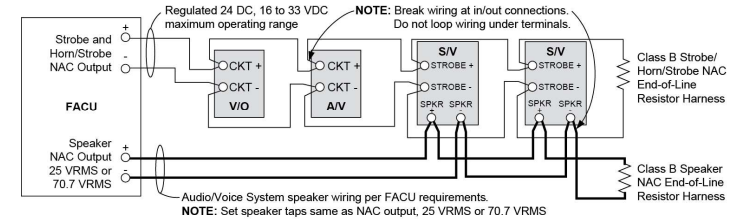
Figure 4: NAC Wiring Reference

Setting Strobe Candela & Speaker Tap

Note: The factory setting for strobe intensity is 15 cd. You can select higher intensity by jumper position (30 cd, 75 cd, or 110 cd).
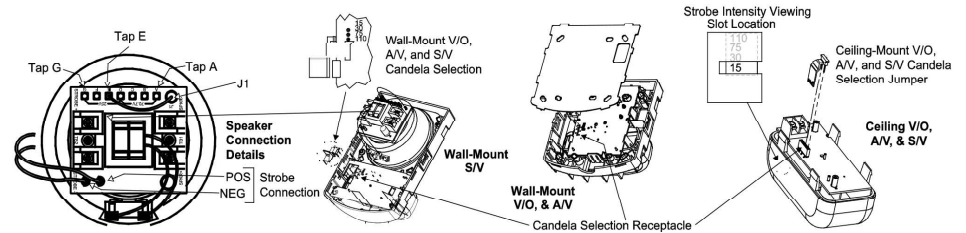
Figure 5: Strobe Candela and Speaker Tap Reference

Table 2: VRMS Input

25 VRMS Input		70.7 VRMS Input	
Jumper J1 to Tap	Tap Setting	Jumper J1 to Tap	Tap Setting
D	0.25 W	A	0.25 W
E*	0.5 W*	B	0.5 W
F	1 W	C	1 W
G	2 W	D	2 W
* Factory setting.			

STI Guards, UL Listed Compatability Reference

Table 3: STI Guards, UL Listed Compatibility Reference

Model	STI Guard (Mounting Type)	Light Loss	Sound Loss, A/V or S/V	Required Surface Mount Skirt (See Instructions 574-790AC)
Wall V/O: A4906-9101 & A4906-9103 **Wall A/V:** A4906-9127 & A4906-9129	STI-1210D (Surface)	41.7%	-3.7 dBA	A4905-9937 (red) or A4905-9940 (white)
	STI-1210E (Flush)	31%	-4.9 dBA	
	STI-1215 (Flush)	33.3%	-5.7 dBA	
	STI-1217 (Surface) See Note 3	30.7%	-6.3 dBA	
Ceiling V/O: A4906-9102 & A4906-9104	STI-1217 (Surface)	21.5%	N/A	None
	STI-1217 (Flush)	39.4%	N/A	
Wall S/V: A4906-9151 & A4906-9153	STI-1210D (Surface)	34.3%	-1.5 dBA	A4905-9946 (red) or A4905-9947 (white)
	STI-1210E (Flush)	31%	-3.3 dBA	
Ceiling S/V: A4906-9154 and A4906-9160	STI-1217 (Flush)	23.6%	-1.4 dBA	None

Note:
- Guards are not listed for ULC applications.
- Refer to STI Installation Manuals packed with each guard for mounting and maintenance instructions.
- STI adhesive backed spacer to mounting surface gasket required; cover to spacer gasket is not used.

Product specifications

Table 4: Product specifications

Rated Strobe and A/V Current; Maximum Operating Current @ 16 VDC					General Specifications	
Candela Rating	Wall Mount V/O & S/V	Wall Mount A/V*	Ceiling Mount A/V*	Ceiling Mount V/O & S/V	Rated Voltage Range	Regulated 24 DC, 16 to 33 VDC
15 cd	60 mA	75 mA	86 mA	75 mA	Strobe Flash Rate	1 Hz
30 cd	94 mA	116 mA	132 mA	125 mA	NAC Loading	35 synchronized strobes maximum per NAC
75 cd	186 mA	221 mA	250 mA	233 mA		
110 cd	252 mA	285 mA	320 mA	316 mA		
A/V Horn Sound Pressure Level Measurements (UL464 Reverberant Room Testing; ULC-S525 Anechoic Room Testing)					Temperature Range	32°F to 120°F (0°C to 49°C)
Horn Mode	ULC-S525 at 3 m		UL464 at 10 ft		Humidity Range	10% to 93%, non-condensing at 100°F (38°C)
	Wall A/V	Ceiling A/V	Wall A/V	Ceiling A/V		
Steady	88 dBA	90 dBA	86 dBA	87 dBA	Connections; two wires per terminal for in/out wiring	Terminal blocks for 18 AWG to 12 AWG (0.82 mm² to 3.3 mm²)
Coded	94 dBA	98 dBA	82 dBA	83 dBA		

Horn Dispersion: SPL decreases by 3 dB at an angular displacement of 40° and by 6 dB at an angular displacement of 50° both horizontally and vertically. With the A4905-9838 Sound Damper installed, measurements decrease 5 dB to 6 dB.

*A/V current is with horn steady on

Table 5: Speaker specifications

Speaker Output Ratings (UL1480 Reverberant Room Testing; ULC-S541 Anechoic Room Testing)							Speaker Specifications	
Voltage	Jumper J1 to Tap	Tap Setting In Watts	UL1480 at 10 ft		ULC-S541 at 3 m		Input Voltage	25 VRMS or 70.7 VRMS; for connection to conventional fire alarm audio circuits
			Wall-S/V all models	A4906-9254, A4906-9255, A4906-9256 Ceiling S/V	Wall S/V All models	Ceiling S/V for ULC		
70.7 VRMS	A	1/4 W	76 dBA	76 dBA	77 dBA	80.9 dBA		
	B	1/2 W	79 dBA	79 dBA	80 dBA	84.1 dBA	Power Taps	1/4 W, 1/2 W, 1 W, and 2 W
	C	1 W	82 dBA	82 dBA	83 dBA	87.3 dBA		
	D	2 W	85 dBA	85 dBA	86 dBA	90.2 dBA	**Speaker Frequency Response**	
25 VRMS	D	1/4 W	76 dBA	76 dBA	77 dBA	81.6 dBA	Fire Alarm	400 Hz to 4000 Hz
	E	1/2 W	79 dBA	79 dBA	80 dBA	84.3 dBA	General Signaling	125 Hz to 12 kHz
	F	1 W	82 dBA	82 dBA	83 dBA	87.1 dBA		
	G	2 W	85 dBA	85 dBA	86 dBA	89.7 dBA		

Speaker Dispersion: SPL decreases by 3 dB at an angular displacement of 30° and by 6 dB at an angular displacement of 55°.

Strobe Polar Output

Ref. UL 1971 and ULC-S526 room temperature test results.

Table 6: Strobe Polar Output

Wall Mount Light Output at any Candela Setting						Ceiling Mount Light Output at any Candela Setting					
Vertical Dispersion			Horizontal Dispersion			Vertical Dispersion			Horizontal Dispersion		
X-Angle	UL Min.	Typical	Y-Plane	UL Min.	Typical	X-Angle	UL Min.	Typical	Y-Plane	UL Min.	Typical
0	100%	322%	0	100%	320%	0	100%	327%	0	100%	343%
5	90%	217%	±5	90%	214%	±5	90%	293%	±5	90%	160%
10	90%	168%	±10	90%	177%	±10	90%	281%	±10	90%	175%
15	90%	179%	±15	90%	175%	±15	90%	197%	±15	90%	129%
20	90%	210%	±20	90%	174%	±20	90%	168%	±20	90%	145%
25	90%	184%	±25	90%	170%	±25	90%	142%	±25	90%	165%
30	90%	149%	±30	75%	169%	±30	75%	143%	±30	75%	152%
35	65%	172%	±35	75%	157%	±35	75%	155%	±35	75%	144%
40	46%	189%	±40	75%	151%	±40	75%	156%	±40	75%	139%
45	34%	203%	±45	75%	138%	±45	75%	134%	±45	75%	129%
50	27%	152%	±50	55%	130%	±50	55%	115%	±50	55%	129%
55	22%	166%	±55	45%	121%	±55	45%	104%	±55	45%	123%
60	18%	166%	±60	40%	117%	±60	40%	103%	±60	40%	111%
65	16%	164%	±65	35%	109%	±65	35%	98%	±65	35%	120%
70	15%	163%	±70	35%	105%	±70	35%	87%	±70	35%	103%
75	13%	159%	±75	30%	98%	±75	30%	90%	±75	30%	75%
80	12%	138%	±80	30%	90%	±80	30%	96%	±80	30%	83%
85	12%	113%	±85	25%	78%	±85	25%	96%	±85	25%	70%
90	12%	88%	±90	25%	67%	±90	25%	83%	±90	25%	47%

Limitations

Notification Appliances do not provide their own power. They receive 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 and/or audible warning. Therefore, back-up power supplies, or other back-up power sources, are required for the fire alarm system. Visible notification appliances provide a specific rated output light level and must meet the requirements of the intended protected area(s). Although these strobe equipped appliances meet the current UL and ULC-S526 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 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.