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INSTALLATION INSTRUCTIONS
WHEELOCK ELUXA ADDRESSABLE MULTI-TONE, AND MULTI-TONE STROBE APPLIANCES WALL MOUNT (CLEAR LENS)

Use this product according to this instruction manual. Please keep this instruction manual for future reference.

GENERAL:

The Wheelock Eluxa Addressable Multi-Tone Strobe ELAMTST and Eluxa Addressable Multi-Tone ELAMT appliances are designed for easy installation. Eluxa ELAMTST is UL Listed for fire protection service under Standard 1971 for Signaling Devices for the Deaf and Hard of Hearing, UL1638 for Visual Signaling Devices, and ULC Listed under Standard ULC526 for Visual Signaling Devices. ELAMTST and ELAMT are UL Listed under Standard 464 for Audible Signaling Devices, and under Standard ULC525 for Audible Signaling Devices for Fire Alarm Systems. ELAMTST is listed for indoor use, for wall mount, and for 24V operation only. ELAMT is listed for indoor use, wall or ceiling mount and for 12V or 24V operation.

Wheelock Eluxa ELAMTST/ELAMT appliances are unique multi-tone alarm signals with separate input terminals for each sound. They are the ideal choice for suppression systems and emergency signaling systems where distinctive multiple alarm conditions are required. Eight groups of three self-prioritized sound outputs are provided with separate electrically isolated input terminals for each sound (see Table 2 for sound selections). Sound output can be field set to provide either HIGH (HI) dBA or STANDARD (STD) dBA sound output level. Eluxa ELAMTST/ELAMT is designed for use with either filtered or unfiltered Full-Wave-Rectified (FWR) input voltage. The ELAMTST/ELAMT Appliance has separate input terminals for alarm tone activation and strobe activation. The strobes can be field wired to operate independently or in unison with any one audible input (PRI 1, PRI 2, PRI 3). All inputs are polarized for compatibility with standard reverse polarity supervision of circuit wiring by a fire alarm control panel (FACP).

The Wheelock Eluxa Series meets NFPA 2016 20 millisecond light pulse duration code requirements. In addition, the Wheelock Eluxa and LED3 product lines have been UL/ULC listed as compatible with all Fire Alarm Control Panels (FACP) and accessories that have been determined to be compatible with Wheelock model RSS Strobe based products including the RSS, ASWP, CH, E, EH, ET, ST, HS, MT, S8, SA, STH, and Z Series. The maximum number of Eluxa devices per NAC is determined by dividing the maximum current rating of the FACP NAC by the total current rating of one Eluxa device, with a maximum of 105 Eluxa (or LED3) devices per NAC. Refer to FACP installation instructions for more detail. The Wheelock Eluxa Series and Exceder LED3 Series strobes may be installed in the same notification zone and field of view with any RSS Strobe based product.

Eluxa Strobe can provide a non-synchronized strobe appliance when connected directly to a Fire Alarm Control Panel (FACP) or provide a synchronized strobe appliance when used in conjunction with an FACP that incorporates the Wheelock Sync Protocol, a Dual Sync Module (DSM) or a Wheelock Power Supply.

⚠**CAUTION: Do not change factory applied finishes. "DO NOT PAINT".**

⚠**ATTENTION: Ne pas modifiez les finitions appliquées en usine. "NE PAS PEINTURER"**

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. FAILURE TO COMPLY WITH ANY OF THE FOLLOWING INSTRUCTIONS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

SPECIFICATIONS:

Table 1: Specifications

Models	ELAMTST (Addressable Multi-Tone Strobe), ELAMT (Addressable Multi-Tone)
Agency	UL464, UL1638, UL1971, ULC525, ULC526
Input Voltage	ELAMTST: 16 – 33VDC/VRMS (Regulated 24) ELAMT: 8.0 – 17.5VDC/VRMS (Regulated 12) or 16 – 33VDC/VRMS (Regulated 24)
Volume Setting	STD (standard) or HI (high) (selectable via DIP switch SW1 POS1)
Tone Settings	Eight (8) selectable tones (via DIP switch SW1, POS 2,3,4)
Strobe Light Output	15, 30, 75, 110, 150, 185cd (field selectable). See Note 1.
NAC Characteristics	Max. line resistance: 35Ω
Environmental	Indoor Use Only. 0°C to +50°C (32°F to +122°F) 93% RH

Table 2: Strobe Current Ratings (AMPS)**

Candela Setting	15cd	30cd	75cd	110cd	135cd	185cd
DC	0.017	0.022	0.053	0.079	0.106	0.161
FWR	0.036	0.050	0.092	0.142	0.196	0.274

** Setting will determine the current draw of the product.

NOTES:
1. The strobe will produce 1 flash per second over the "Regulated Voltage" range.
2. Strobe is not designed to be used on coded systems in which the applied voltage is cycled on and off.
3. The maximum number of Eluxa or LED3 strobes on a single notification appliance circuit shall not exceed 105.
4. These appliances are UL Listed as "Regulated". They are intended to be used with FACPs whose notification circuits are UL Listed as "Regulated." Refer to the FACP instructions or the Wheelock Strobe Compatibility Data Sheet (P85328) for special application and strobe synchronization compatibility.
5. The effect of shipping and storage temperatures shall not adversely affect the performance of the appliance when it is stored in the original cartons and not subjected to misuse or abuse.

When calculating the total currents: Use Table 2, 3 to determine the highest value of "RMS Current" for an individual appliance, then multiply these values by the total number of appliances; be sure to add the currents for any other appliances powered by the same source and include any required safety factors. Make sure that the total RMS current required by all appliances that are connected to the system's PRIMARY and SECONDARY power sources, NAC circuits, DSM Sync Modules or Wheelock Power Supplies does not exceed the power sources' rated capacity or the current ratings of any fuses on the circuits to which these appliances are wired. Check the minimum and maximum output of the power supply and standby battery, and subtract the voltage drop from the circuit wiring resistance to determine the applied voltage to the appliance.

Table 3: Eluxa ELAMT and Eluxa ELAMTS – Horn Current and Sound Pressure Level Ratings

Tone	Tone Description	Volume	Maximum RMS Current (AMPS)				Reverberant dBA at 10ft Per UL464/ULC525	
			Regulated 12V (ELAMT only)		Regulated 24V			
			8-17.5VDC	8-17.5VFWR	16-33VDC	16-33VFWR	Regulated 12V (ELAMT only)	Regulated 24V
Horn	Broadband Horn (Continuous)	HI	0.210	0.230	0.108	0.092	88	88
		STD	0.058	0.103	0.044	0.050	72	83
Bell	1560 Hz Modulated (0.07 Sec. ON/Repeat)	HI	0.117	0.150	0.057	0.067	78	81
		STD	0.031	0.057	0.026	0.028	63	74
March Time	Horn (0.25 Sec. ON/0.25 Sec. OFF/Repeat)	HI	0.210	0.229	0.108	0.092	85	88
		STD	0.059	0.091	0.035	0.050	69	83
Code 3 Horn	Horn (ANSI S3.41 Temporal Pattern)	HI	0.210	0.241	0.122	0.092	84	88
		STD	0.057	0.093	0.043	0.050	68	83
Code 3 Tone	500 Hz (ANSI S3.41 Temporal Pattern)	HI	0.168	0.216	0.135	0.110	81	81
		STD	0.052	0.100	0.035	0.032	65	76
Slow Whoop	500-1200Hz Sweep (4 sec ON/0.5 sec OFF/Repeat)	HI	0.182	0.212	0.112	0.092	87	87
		STD	0.056	0.110	0.044	0.050	69	81
Siren	600-1200Hz Sweep (1.0 Sec. ON/Repeat)	HI	0.177	0.197	0.104	0.092	86	87
		STD	0.055	0.107	0.042	0.043	69	81
HI/LO	1000/800 Hz (0.25 Sec. ON/Alternate)	HI	0.131	0.186	0.064	0.063	86	84
		STD	0.028	0.088	0.035	0.035	68	79
Vibrating Chime	700Hz (1.0 Sec. Decay/Repeat)	HI	0.090	0.108	0.041	0.044	75	77
		STD	0.028	0.042	0.020	0.029	58	71

Table 4: Directional Characteristics

-3dB	+/- 43 Degrees Horizontal, +/- 48 Degrees Vertical
-6dB	+/- 53 Degrees Horizontal, +/- 56 Degrees Vertical
-18dB	+/- 90 Degrees Horizontal/Vertical

WIRING DIAGRAMS:

Figure 1A: Audible Circuits (PRI 1-3)
Continuous voltage or may be coded.

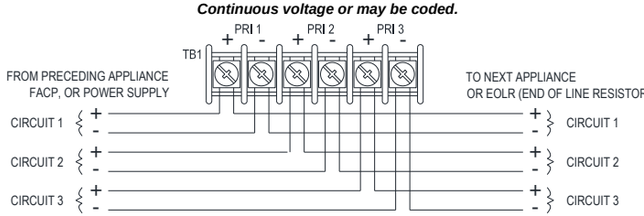
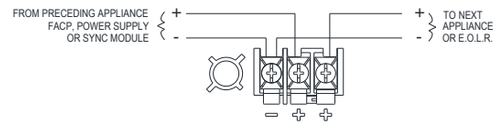
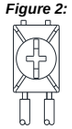


Figure 1B: Strobe Circuit (ELAMTST only)
Continuous voltage or with sync. See note 2.



*Refer to Sync Module instruction sheets DSM (P83177) or Wheelock's Power Supplies for additional information.

Figure 2:



1. This model has in-out wiring terminals that accept two #12 to #18 American Wire Gauge (AWG) wires at each screw terminal. Strip leads 3/8 inches and connect to screw terminals.

2. Break all in-out wire runs on supervised circuits to assure integrity of circuit supervision as shown in Figure 2. The polarity shown in the wiring diagrams is for operation of the appliances. The polarity is reversed by the FACP during supervision.

NOTES:
6. Isolated inputs are provided for independent supervision and actuation of the three audible tones. Leave any unused inputs disconnected.
7. In case of simultaneous inputs, the three audible outputs are self-prioritized as follows: 1st priority= PRI 1; 2nd priority = PRI 2; 3rd priority = PRI 3.
8. The factory settings for ELAMT Audible are: HIGH dBA SW1 POS 1 set on 1; SW1 POS 2, 3, 4 set on 1 - 1 - 1. PRI 1 = Horn, PRI 2 = Bell, PRI 3 = Siren.
9. For non-supervised applications, a common negative or common positive may be used to reduce the total number of conductors.

⚠**CAUTION: If Eluxa ELAMT appliances are operated within 15 inches of a person's ear, they can produce a sound pressure level that exceeds the maximum 120 dBA permitted by ADA and OSHA rules. Exposure to such sound levels can result in damage to a person's hearing.**

⚠**ATTENTION: Si les appareils Eluxa ELAMT sont utilisés à moins de 15 pouces de l'oreille d'une personne, ils peuvent produire un niveau de pression acoustique supérieur à la vitesse maximale de 120 dBA permise par les règles de l'ADA et de l'OSHA. L'exposition à de tels niveaux sonores peut endommager l'ouïe d'une personne.**

SETTINGS: To set Volume and Tone, use Switch (SW1). Refer to Table 5,6 and Figures 3,4.

Figure 3: Switch (SW1) and DP1 located as shown.

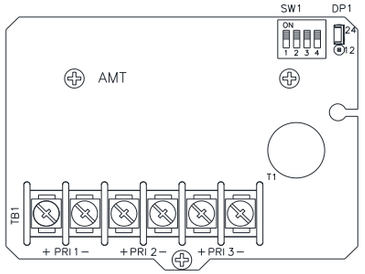


Figure 4: Switch (SW1) and DP1 Settings. (Use Needle Nose Pliers to move Jumper Plug)

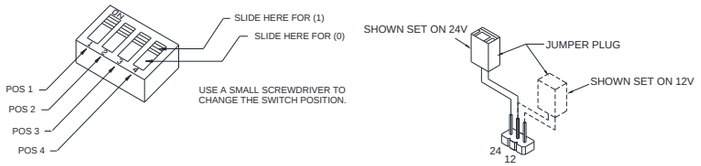


Table 5: ELAMT Input Voltage and dBA Sound Output Level Settings	
Input Voltage/Sound Output Level	Jumper DP1 and Switch SW1 Settings
24 VDC/HIGH dBA	Set DP1 on 24; set SW1 POS 1 on 1 (Factory Setting)
24 VDC/STD dBA	Set DP1 on 24; set SW1 POS 1 on 0
12 VDC/HIGH dBA	Set DP1 on 12; set SW1 POS 1 on 1
12 VDC/STD dBA	Set DP1 on 12; set SW1 POS 1 on 0

ELAMTST can be set for any one of eight groups of self-prioritized tones by setting switch (SW1). The prioritized tones in each group are factory pre-set. (see Table 6)

Table 6: Alarm Tone Settings					
Tones			Switch Settings (SW1)		
PRI 1	PRI 2	PRI 3	POS 2	POS 3	POS 4
Horn**	Bell**	Siren**	1	1	1
Code 3 Horn	Siren	Vibrating Chime	1	0	1
Slow Whoop	March Time Horn	HI/LO	0	0	1
March Time Horn	HI/LO	Vibrating Chime	1	1	0
Code 3 Horn	Bell	Siren	0	1	1
Siren	Horn	Vibrating Chime	0	1	0
Bell	March Time Horn	Siren	1	0	0
Code 3 Tone	HI/LO	Siren	0	0	0

** The factory settings: Switch SW1 POS 2, 3, 4 set to "ON" (1, 1, 1).

The Code 3 Horn and Code 3 Tone incorporate the temporal pattern specified by ANSI/NFPA/ISO for standard emergency evacuation signaling. Code 3 shall be used only for fire evacuation signaling and not for any other purpose. The Horn and Bell Tones can be used on coded systems with a minimum On-Time of 1/4 second. All other tones are recommended for use only on continuous (non-coded) systems.

Figure 5: Candela Setting
Set from rear (PCB side). Factory Setting is 15cd.

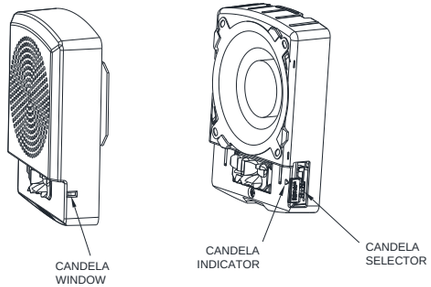
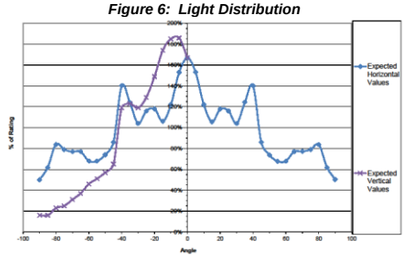


Figure 6: Light Distribution



Strobe device has only one mounting orientation. LED light element should be oriented toward the floor.
NFPA 72/ANSI 117.1 provide means for determining equivalent illumination using fewer, higher intensity strobes within the protected area.

Figure 7: Grille Removal ***

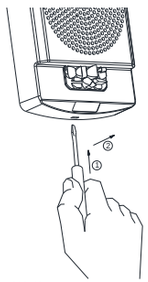
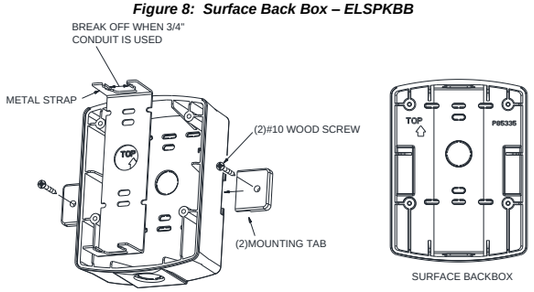


Figure 8: Surface Back Box – ELSPKBB

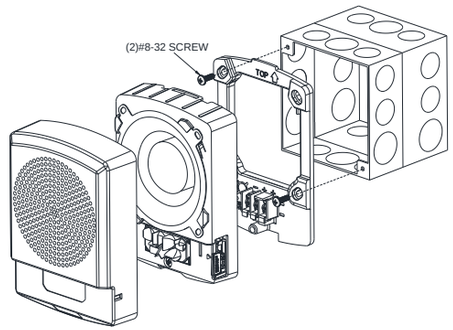


***** Grille removal:** 1) Insert Screwdriver into slot and push to release snap. 2) Lift Up to remove the grille.

MOUNTING OPTIONS:
The following figures (A and B) show the maximum number of field wires (conductors) that can enter the back box used with each mounting option. If these limits are exceeded, there may be insufficient space in the back box to accommodate the field wires and stresses from the wires could damage the product.

Check that the installed product will have sufficient clearance and wiring room prior to installing back boxes and conduit, especially if sheathed multiconductor cable or 3/4" conduit fittings are used.

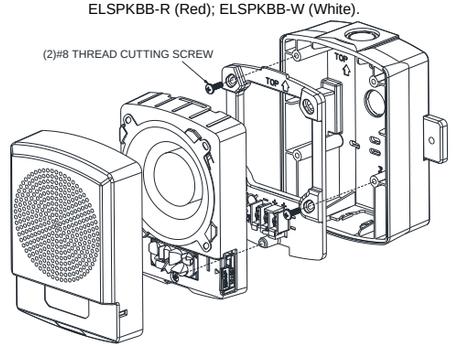
Figure A: Flush Mount
DBB or 4" SQ x 2 1/8" Box w/EXT



Maximum Number of Conductors

AWG	#18	#16	#14	#12
ELAMTST	16	16	16	16
ELAMT	12	12	12	12

Figure B: Surface Mount
ELSPKBB-R (Red); ELSPKBB-W (White).



Maximum Number of Conductors

AWG	#18	#16	#14	#12
ELAMTST	16	16	16	16
ELAMT	12	12	12	12

All installations shall be in accordance with:
1) In the United States, the National Electrical Code, NFPA 70, and the National Fire Alarm and Signaling Code, NFPA 72.
2) In Canada, CSA C22.1, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations, Section 32; and the Canadian Standard for the Installation of Fire Alarm Systems ULC-S524.

MOUNTING PROCEDURES:

1. Select a mounting option and install the back box. ELSPKBB requires 5 1/8" spacing for surface mounting. Screws are provided. Conduit entrances to the back box should be selected to provide sufficient wiring clearance for the installed product. Do not pass additional wires (used for other than the signaling appliance) through the back box. Such additional wires could result in insufficient wiring space for the signaling appliance.
2. Install the Mounting Plate on the back box. Use 8-32 screws for 4" square back box or hi-lo screws for the ELSPKBB.
3. **Pre-Wire:** Connect field wires to terminals on mounting plate for strobe circuit (reference Figure 1 and 2). Use care and proper techniques to position the field wires in the backbox so that they use minimum space and produce minimum stress on the product. This is especially important for stiff, heavy gauge wires and wires with thick insulation or sheathing. When terminating field wires, do not use more lead length than required. Excess lead length could result in insufficient wiring space for the signaling appliance.
4. **Pre-Test:** Mounting Plate contains a SHUNT between adjacent "+" terminals (strobe circuit only) to facilitate testing before device is attached. Note: Shunt will open permanently when device is installed on mounting plate.
5. Verify appliance settings are correct for your application. Settings are shown in Fig. 3-5. Factory settings are 24V(Regulated 24), HIGH dBA, 15cd.
6. Connect field wires to terminals on PCB for PRI 1.,2,3 audible circuits (reference Figure 1 and 2). Use care and proper techniques to position the field wires in the backbox so that they use minimum space and produce minimum stress on the product.
7. Place the Eluxa appliance over the mounting plate. Engage TOP hook on mounting plate, then secure with screw at the bottom.
8. Align cover to the appliance with strobe opening over LED lens. Then, snap the cover in place.
9. To remove the cover/grille, insert a small flat-bladed screwdriver into the bottom opening 1/2" as shown in Figure 7. Then lift up to remove the grille.

Important: Do not fully back out terminal screws. Do not over tighten screws or terminals. Excessive torque may affect operation. When using power tools, ensure the torque is set to the lowest setting available.

NOTE: Final acceptance is subject to Authorities Having Jurisdiction.

Check the installation instructions of the manufacturers of other equipment used in the system for any guidelines or restrictions on wiring and/or locating Notification Appliance Circuits (NAC) and notification appliances. Some system communication circuits and/or audio circuits, for example, may require special precautions to assure immunity from electrical noise (e.g. audio crosstalk).

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.

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe A respecte toutes les exigences du Réglement sur le matériel brouilleur du Canada.

Any material extrapolated from this document or from Cooper Wheelock manuals or other documents describing the product for use in promotional or advertising claims, or for any other use, including description of the product's application, operation, installation, and testing is used at the sole risk of the user and Cooper Wheelock will not have any liability for such use. IN NO CASE WILL SELLER'S LIABILITY EXCEED THE PURCHASE PRICE PAID FOR A PRODUCT. **2/25**