INSTALLATION INSTRUCTIONS
WHEELOCK ELUXA TYPE 4X/3R WEATHERPROOF MULTI-TONE STROBE,
WITH PRE-WIRE/PRE-TEST
WALL/CEILING MOUNT (CLEAR OR AMBER LENS)

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

GENERAL:

The Wheelock Eluxa weatherproof series EL4XMTST/EL3RMTST Multi-Tone Strobe appliances are designed for easy installation with a pre-wire capable EL4XBB surface box or EL3RMP mounting plate. Eluxa 4X/3R Multi-Tone Strobe 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 Standard 464 for Audible Signaling Devices. The Eluxa 4X/3R Multi-Tone is also ULC Listed under Standard ULC-526 for Visual Signaling Devices and under Standard ULC-525 for Audible Signaling Devices for Fire Alarm Systems. All Eluxa 4X/3R models are listed for indoor/outdoor use, and for wall or ceiling mount.

Eluxa 4X/3R Multi-Tone appliances can be field set to produce any one of eight commonly used alarm tones. Sound output can be field set to provide either HIGH (HI) dBA or STANDARD (STD) dBA sound output level. Eluxa Multi-Tone appliances are designed for use with either filtered or unfiltered Full-Wave-Rectified (FWR) input voltage. All inputs are polarized for compatibility with standard reverse polarity supervision of circuit wiring by a Fire Alarm Panel (FACP). The Eluxa Multi-Tone appliance can be field set to provide a synchronized code 3 horn when used in conjunction with the Dual Sync Module (DSM) or Wheelock power supply.

The Wheelock Eluxa 4X/3R 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 4X/3R 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.

SPECIFICATIONS:

Table 1: Specifications	
Models*	EL4XMTST, EL3RMTST (Clear). EL4XMTSTA, EL3RMTSTA (Amber)
Agency	Strobe: UL1638, UL1971,ULC-526
	Multi-Tone: UL464, ULC-525
Input Voltage	DC or FWR, 24V Regulated, 16 to 33V (All models)
Volume Setting	STD (standard) or HI (high) (selectable via DIP switch SW1 POS1)
Tone Setting	Eight (8) selectable tones (via DIP switch SW1, POS 2,3,4)
Strobe Light Output	Strobe (Clear): 15, 30, 75, 110, 150, 185cd (field selectable). See Note 1. Strobe (Amber): 15, 30, 75, 95, 150, 177cd (field selectable). SeeNote 1, 4.
NAC Characteristics	Max. line resistance: 35Ω
Environmental	Indoor/Outdoor Use. -40° C to 66° C (-40° F to 150° F) 95% R.H.

*Prefix "ELWP" indicates "Subassembly". Requires EL4XBB surface box or EL3RMP mounting plate for installation.

Table 2: Eluxa 4X/3R Strobe - Current Ratings (AMPS) **						
ELWPMTST (Clear)	15cd	30cd	75cd	110cd	150cd	185cd
ELWPMTSTA (Amber)	15cd	30cd	75cd	95cd	150cd	177cd
DC	0.026	0.038	0.070	0.097	0.179	0.206
FWR	0.034	0.053	0.098	0.137	0.235	0.308

** 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. **Amber strobe is certified as Emergency Warning Visual Signal**.
5. 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.
6. 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 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.

⚠ **CAUTION: If Eluxa Multi-Tone 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 Multi-Tone 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.**

Table 3: Eluxa 4X/3R Multi-Tone - Current and Sound Pressure Level Ratings				
Tone	Volume	Maximum RMS Current (AMPS)		Reverberant dBA at 10ft Per UL464/ULC-525
		16-33VDC	16-33VFWR	
Horn	HI	0.108	0.087	88
	STD	0.044	0.045	83
Bell	HI	0.053	0.067	81
	STD	0.024	0.028	75
March Time	HI	0.104	0.087	88
	STD	0.087	0.045	83
Code 3 Horn	HI	0.122	0.087	88
	STD	0.035	0.045	83
Code 3 Tone	HI	0.135	0.110	81
	STD	0.035	0.032	76
Slow Whoop	HI	0.098	0.092	87
	STD	0.037	0.042	81
Siren	HI	0.104	0.092	87
	STD	0.042	0.040	81
HI/LO	HI	0.057	0.063	84
	STD	0.035	0.035	79

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: One circuit.
Eluxa Multi-Tone and Strobe activate in unison.

FROM PRECEDING APPLIANCE FACP, POWER SUPPLY OR SYNC MODULE

TO NEXT APPLIANCE OR E.O.L.R.
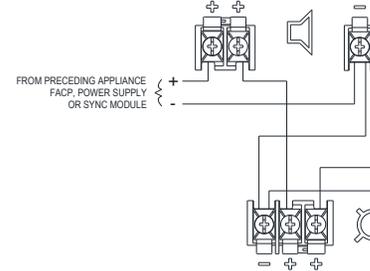
Figure 1B: Two Circuits (Multi-Tone may be Coded)
Eluxa Multi-Tone and Strobe will operate independently

FROM PRECEDING APPLIANCE FACP, POWER SUPPLY OR SYNC MODULE

TO NEXT APPLIANCE OR E.O.L.R.

FROM PRECEDING APPLIANCE FACP, POWER SUPPLY OR SYNC MODULE

TO NEXT APPLIANCE OR E.O.L.R.
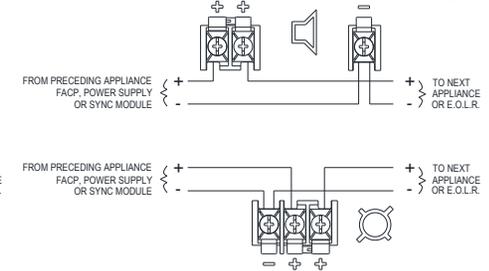
*Refer to Dual Sync Module instruction sheets DSM (P83177) or Wheelock's Power Supplies for additional information.
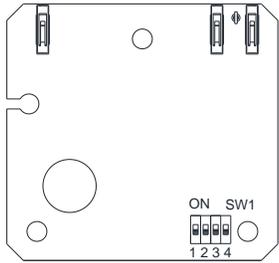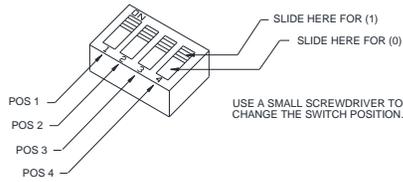
Figure 2:

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.

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

Figure 3: Switch (SW1) located as shown

Figure 4: Switch (SW1) Settings

SLIDE HERE FOR (1)
SLIDE HERE FOR (0)

POS 1
POS 2
POS 3
POS 4

USE A SMALL SCREWDRIVER TO CHANGE THE SWITCH POSITION.

ON SW1
1 2 3 4

Table 5: dBA Sound Output Level Setting	
Sound Output Level	Switch SW1 Settings
High dBA	SW1 POS 1 on 1 (Factory Setting)
Standard dBA	SW1 POS 1 on 0

Table 6: Alarm Tone Settings

Tone	Pattern Description	Switch (SW1)		
		POS 2	POS 3	POS 4
Horn**	Broadband Horn (Continuous)	1	1	1
Bell	1560 Hz Modulated (0.07 Sec. ON/Repeat)	1	0	1
March Time Horn	Horn (0.25 Sec. ON/0.25 Sec. OFF/Repeat)	0	0	1
Code 3 Horn	Horn (ANSI S3.41 Temporal Pattern)	1	1	0
Code 3 Tone	500 Hz (ANSI S3.41 Temporal Pattern)	0	1	1
Slow Whoop	500-1200Hz Sweep (4 sec ON/0.5 sec OFF/Repeat)	0	1	0
Siren	600-1200Hz Sweep (1.0 Sec. ON/Repeat)	1	0	0
HI/LO	1000/800 Hz (0.25 Sec. ON/Alternate)	0	0	0

** Factory setting is Horn with Switch SW1 POS 2, 3, 4 set 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. They 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.

The ELWPMT must be set for Code 3 horn when used with the sync module. Refer to instruction sheets for DSM (P83177) or Wheelock power supplies for additional information.
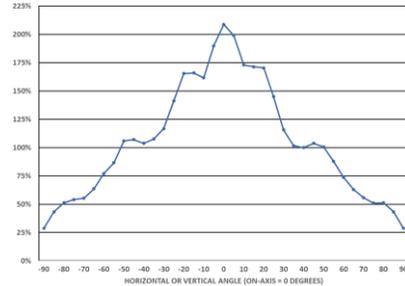
SETTINGS: To set candela, slide the selector switch to the desired setting. See Figure 5.

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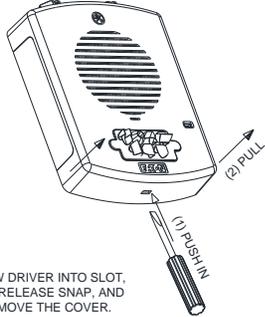Set from rear (PCB side). Factory Setting is 15cd.

CANDELA SETTING
CANDELA WINDOW
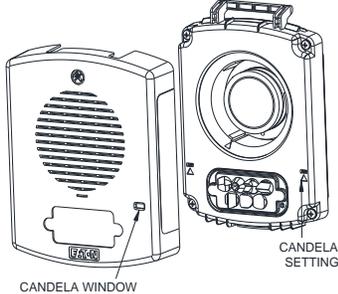
Figure 6: Light Distribution
(Expected % of Rated Candela)
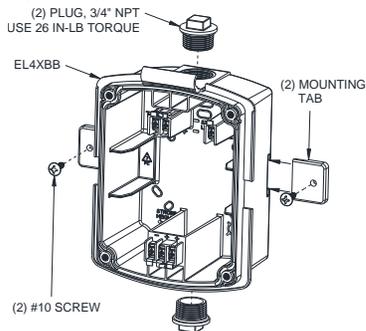

HORIZONTAL OR VERTICAL ANGLE (ON-AXIS = 0 DEGREES)

NFPA 72/ANSI 117.1 provide means for determining equivalent illumination using fewer, higher intensity strobes within the protected area.

Figure 7: Cover/Grille Removal *

INSERT SCREW DRIVER INTO SLOT,
1) PUSH IN TO RELEASE SNAP, AND
2) PULL TO REMOVE THE COVER.

(2) PULL
(1) PUSH IN

Figure 8: Type 4X/IP66 Surface Box (EL4XBB)*

(2) PLUG, 3/4" NPT USE 26 IN-LB TORQUE
EL4XBB
(2) MOUNTING TAB
(2) #10 SCREW

**Refer to Instruction sheet P85820 for additional information on EL4XBB surface box and EL3RMP mounting plate.
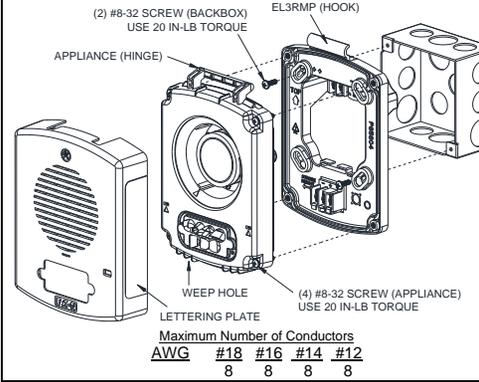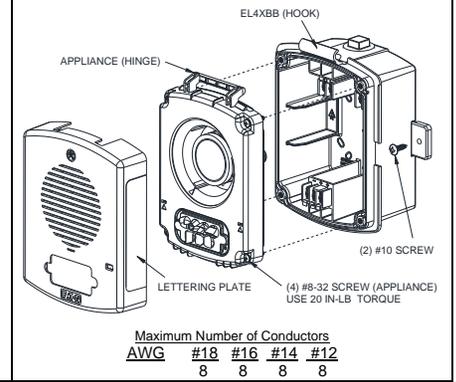
MOUNTING OPTIONS:
The following figures (A and B) show the maximum number of field wires (conductors) that can enter the backbox used with each mounting option. If these limits are exceeded, there may be insufficient space in the backbox to accommodate the field wires and stresses from the wires could damage the product.

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

Figure A: Type 3R/IP54 Flush Mount (EL3RMP)**	Figure B: Type 4X/IP66 Surface Mount (EL4XBB)**

(2) #8-32 SCREW (BACKBOX) USE 20 IN-LB TORQUE
EL3RMP (HOOK)
APPLIANCE (HINGE)
WEEP HOLE
LETTERING PLATE
(4) #8-32 SCREW (APPLIANCE) USE 20 IN-LB TORQUE

EL4XBB (HOOK)
APPLIANCE (HINGE)
(2) #10 SCREW
LETTERING PLATE
(4) #8-32 SCREW (APPLIANCE) USE 20 IN-LB TORQUE

Maximum Number of Conductors

AWG	#18	#16	#14	#12
	8	8	8	8

Maximum Number of Conductors

AWG	#18	#16	#14	#12
	8	8	8	8

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-524.

MOUNTING PROCEDURES:

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.

1. Preliminary Info: Use EL3RMP for flush mount, or EL4XBB for surface mount. Screws are provided for installation. Conduit entrances to the backbox 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 backbox. Such additional wires could result in insufficient wiring space for the signaling appliance.
2. A: Install the **EL3RMP** Mounting Plate on the 4" square 2-1/8" deep backbox (flush mount only) using 8-32 screws. EL3RMP is suitable for mounting to brick, ceramic tile, concrete and masonry surfaces. For Type 3R/IP54 wall mount applications, a weep hole knock-out is provided below the strobe. See Figure A. To open the weep hole knock-out (1/8" dia.), use a small screwdriver.
   B: Install the **EL4XBB** Back Box – Two external mounting tabs must be used along with two #10 screws (provided). See Figure 6. Mounting hole spacing is 5-9/16". Conduit fittings must be rated Type 4X/IP66 and UL certified. Installer must ensure ground continuity when metallic conduit is used. Teflon tape must be used on all conduit fittings. 3/4" NPT Plugs must be installed using Teflon tape and O-Ring (provided). Secure NPT plug and conduit fitting with *26in-lb torque*.
   Note: "HOOK" must be on top for wall mounting.
3. **Pre-Wire:** Connect field wires to terminals on EL3RMP or EL4XBB (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:** EL3RMP and EL4XBB contain a SHUNT between adjacent "+" terminals to facilitate testing before device is attached.
   Note: Shunt will open permanently when device is installed.
5. Verify appliance settings are correct for your application. Settings are shown in Fig. 3-5. Factory settings are HIGH dBA, Horn, 15cd.
6. Place the appliance "HINGE" over the "HOOK" on the EL3RMP or EL4XBB. Verify the appliance is aligned to the EL3RMP/EL4XBB, then secure with four #8-32 screws attached to appliance with *20in-lb torque*. Verify the gasket is seated correctly and not "pinched".
7. Align grille with lettering plates to the appliance and snap in place. (Note: Insert letter plates with "T" tab down on strobe/logo-side).
8. Recommend applying outdoor rated silicone to all outdoor Type 4X/3R installations.
9. To remove the appliance grille, insert a small flat-bladed screwdriver into the bottom opening to release snap as shown in Figure 7. Then "pull" to remove the cover/grille.

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.

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