

INSTALLATION INSTRUCTIONS

SERIES MT4-115-WH MULTI-TONE STROBE (120VAC)
VERSION 2 (WALL MOUNT)

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Eaton.com/Lifesafetynotification

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

GENERAL:

Series MT4-115-WH Multi-Tone Strobe appliances are UL Listed under Standard 464 for Audible Signaling Devices, and Standard 1638 for Visual Signaling Devices. The MT4-115-WH is also ULC Listed under Standard ULC526 for Visual Signaling Devices and Standard ULC525 for Audible Signaling Devices for Fire Alarm Systems. They are listed for wall mount only and for both indoor and outdoor use with the backboxes specified in these instructions (See Mounting Information).

MT4-115-WH Multi-Tone Strobe appliance 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. The MT4-115-WH incorporates an LED strobe with an intensity of 15 candela (cd), and meets NFPA 2016 20 millisecond light pulse duration code requirements.

The MT4-115-WH appliances have separate input terminals for audible and strobe activation. Shunt wires are provided to operate both the audible and the strobe simultaneously on a single input circuit (See Wiring Diagrams).

Application Note: Not recommended for use at refrigerator/freezer door entrances or other areas with persistent condensations.

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

ATTENTION: Ne pas modifier 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	MT4-115-WH (Multi-Tone Strobe)
Agency	UL464, UL1638, ULC525, ULC526
Input Voltage	120VAC 60Hz. Regulated 120
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	15cd. See Figure 5
Environmental	Indoor/Outdoor Use. -40° C to 66° C. (-40° F to 150° F) 95% R.H.

Table 2: Strobe Current Rating (Amps)			
Regulated Voltage (VAC)	Voltage Range (VAC)	Rated Candela (cd)	Maximum RMS Current (AMPS)
120	96-132	15	0.070

NOTES:

- The WH strobe is designed to flash at 1 flash per second (minimum) with continuous nominal applied voltage.
- Strobe is not designed to be used on coded systems in which the applied voltage is cycled on and off (Interrupted).
- 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.

IMPORTANT:

Ensure the total RMS current required by all appliances that are connected to the systems primary and secondary power sources do not exceed the power sources rated capacity or the current ratings of any fuses on the circuits to which these appliances are wired. Overloading power sources or exceeding fuse ratings could result in loss of power and failure to alert occupants during an emergency, which could result in property damage and serious injury or death to you and/or others.

When calculating the total currents: Use Table 2 and 3 to determine the highest value of RMS Current for an individual MT4 appliance (across the expected operating voltage range), then multiply these values by the total number of MT4 appliances; be sure to add the currents for any other appliances, including audible signaling appliances, powered by the same source and include any required safety factors.

Ensure all fuses used on signaling circuits are rated to handle the maximum inrush or peak current from all devices on those circuits. Failure to do this may result in loss of power to the signaling circuit and the failure of all devices on that circuit to operate.

Table 3: dBA and Current Ratings for Multi-Tone (Audible Only)				
Tone	Maximum RMS Current (AMPS)		Reverberant dBA at 10 Ft Per UL464/ULC525	
	HI	STD	HI	STD
Horn	0.050	0.045	89	86
Bell	0.045	0.045	80	74
March Time Horn	0.050	0.045	86	83
Code-3 Horn	0.050	0.045	85	82
Code-3 Tone	0.045	0.045	84	81
Slow Whoop	0.050	0.045	87	84
Siren	0.045	0.045	87	84
HI/LO	0.045	0.045	84	80

Table 4: ULC Directional Characteristics	
-3dB	+/- 12 Degrees Horizontal, +/- 18 Degrees Vertical
-6dB	+/- 20 Degrees Horizontal, +/- 30 Degrees Vertical

WIRING DIAGRAMS:

Figure 1A:
Audible and Visual Operate Independently.

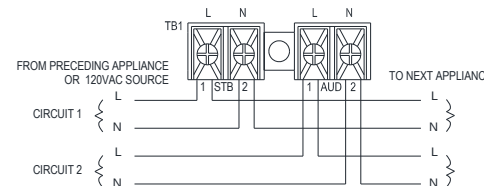
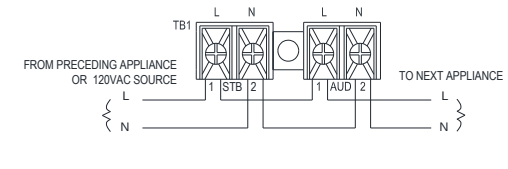


Figure 1B:
Audible and Visual Operate in Unison.
(shunt wires are supplied)



Application Note (Figure 1B): If the strobe and audible are wired to operate in unison on a single circuit, add strobe current from Table 1 to audible signal current from Table 3 to obtain total current for each unit. This wiring arrangement is for use only on continuous (non-coded) systems. The strobe may not flash if used on coded systems.

Figure 2:



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.

CAUTION: If MT4 Multitone 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 MT4 Multitone 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:

The Switch (SW1) on the Multitone appliance is used to set the desired dBA sound output level and alarm tone. The factory settings are shown below. Read these instructions carefully before changing any of these factory settings

STEP 1 – SET SOUND OUTPUT LEVEL:

Sound output level may be set to HIGH or STD using SW1 POS 1. See Figure 4 and Table 5.

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

Figure 3:

Switch (SW1) located as shown

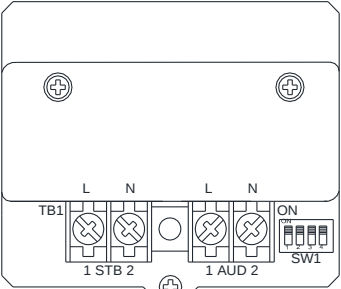
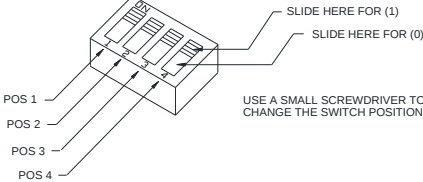


Figure 4:

Switch (SW1) Settings



STEP 2 - SET ALARM TONE:

Multi-Tone appliance may be field set for any one of eight alarm tones by setting switch (SW1). See Figure 4 and Table 6.

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

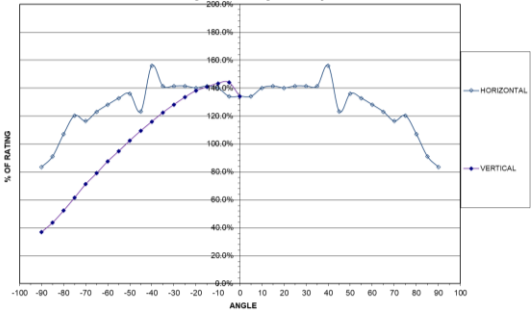
** Factory settings is Horn with Switch SW1 POS 2, 3, 4 set to "ON" (1, 1, 1).

NOTES:

1. The Code-3 Horn and Code-3 Tone (set on HIGH dBA) incorporate the temporal pattern specified by ANSI/NFPA for standard emergency evacuation signaling. Code 3 shall be used only for fire evacuation signaling and not for any other purpose.
2. The Horn and Bell Tones can be used on coded systems with a minimum On-Time and Off-Time of 250 milliseconds each. All other tones are recommended for use only on continuous (non-coded) systems.

Application Note: A possibility exists that the use of multiple strobes within a person's field of view, under certain circumstances, might induce a photo-sensitive response in persons with epilepsy. Strobe reflections in a glass or mirrored surface might also induce such a response. To minimize this possible hazard, Cooper Notification strongly recommends that the number of strobes installed within a single room, hallway or other field of vision not exceed the parameters prescribed by applicable laws, standards, regulations and guidelines. Cooper Notification also strongly recommends that the intensity and flash rates of such strobes not exceed those levels established by applicable laws, standards, regulations and guidelines.

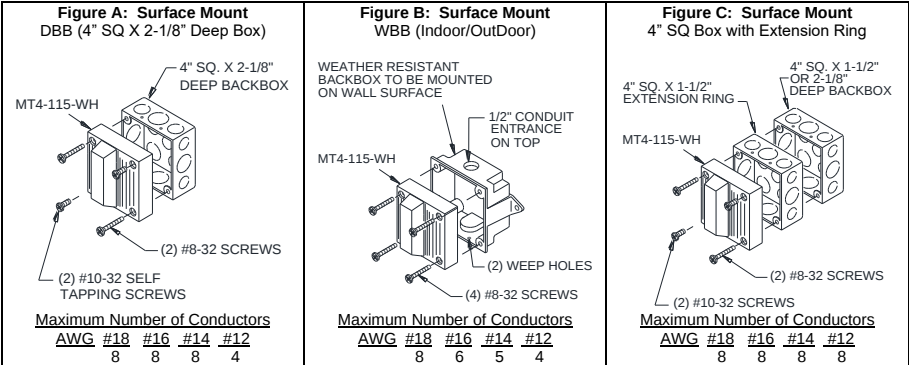
Figure 5 Light Output



MOUNTING OPTIONS:

The following figures (A thru C) 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.



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. **Shut off all power** before starting the installation. Electric shock can cause death or serious injury
2. Select a mounting option and **install the backbox**. Screws are provided. 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.
3. For **outdoor use**, the WBB is designed with two weep holes. WBB should be positioned with weep holes on the bottom side wall for wall mounting. See Figure B.
4. **Verify appliance settings** are correct for your application: Change MT Settings (Volume, Tone) to match your application and needs (Table 5, Table 6).
5. **Connect field wiring to the appliance**. When terminating field wires, do not use more lead length than required. Excess lead length could result in insufficient wiring space for the appliance. 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.
6. 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.
7. **Use correct orientation for MT mounting**. The MT grille should be oriented correctly when it is mounted to the backbox. Refer to Figures A to C..
8. **Mount the MT appliance** to the backbox with screws provided. (Use 10-32 screws to fill unused mounting holes on grille)

Important: 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 Règlement sur le matériel brouilleur du Canada.

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