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#### Thank you for using our products. INSTALLATION INSTRUCTIONS MULTITONE STROBE APPLIANCES

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

#### **GENERAL:**

The Multitone Strobe Appliances are UL Listed under Standard 1971 for Emergency Devices for the Hearing Impaired and UL Standard 464 for Audible Signal Appliances. The LSM strobes are listed at 15 candela under UL Standard 1971 and meet 75 candela intensity on axis with low current draw. They are listed for indoor use with the backboxes specified in these instructions (See Mounting Options). Models with LS, MS and IS strobes are Listed for wall or ceiling mounting; models with LSM strobes are Listed for wall mounting. The Multitone Strobe Appliances use a Xenon flashtube with solid state circuitry enclosed in a rugged Lexan® lens to provide maximum visibility and reliability for effective visible signaling.

Multitone Strobe 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.

All Multitone Strobe models are designed for use with either filtered DC or unfiltered Full-Wave-Rectified (FWR) input voltage. The Multitone Strobe Appliances have separate input terminals for alarm tone activation and strobe activation. Shunt wires are provided to operate both the alarm tone and the strobe simultaneously on a single input circuit (See Wiring Diagram). All inputs are polarized for compatibility with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP).

**NOTE:** All **CAUTIONS** and **WARNINGS** are identified by the symbol  $\triangle$ . All warnings are printed in bold capital letters.

A WARNING: PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE USING THIS PRODUCT. FAILURE TO COMPLY WITH ANY OF THE FOLLOWING INSTRUCTIONS, CAUTIONS AND WARNINGS 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.

A WARNING: THE MULTITONE STROBE APPLIANCES MUST BE FIELD SET TO THE DESIRED dBA SOUND OUTPUT LEVEL AND ALARM TONE BEFORE THEY ARE INSTALLED. THIS IS DONE BY PROPERLY INSERTING A JUMPER PLUG AND ADJUSTING A FOUR POSITION SWITCH IN ACCORDANCE WITH THESE INSTRUCTIONS. INCORRECT SETTINGS WILL RESULT IN IMPROPER PERFORMANCE AND MAY DAMAGE THE PRODUCT, WHICH COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

#### **SPECIFICATIONS:**

Table 1: UL Listed Models							
Model	Nominal	Rated	Strobe	Anechoic	Mounting		
	Voltage	Voltage	Candela	dBA at	Options		
	(VDC)	(VDC)	(CD)	10 Feet			
MT-12-LS	12	10.5-15.6	15	87-99			
MT-12-LSM	12	10.5-15.6	15*	87-99			
MT-12-MS	12	10.5-15.6	30	87-99			
MT-24-LS	24	20.0-31.0	15	87-99	A,B,C,D		
MT-24-LSM	24	20.0-31.0	15*	87-99	E,F,G		
MT-24-MS	24	20.0-31.0	30	87-99			
MT-24-IS	24	20.0-31.0	75	87-99			
MT4-12-LS	12	10.5-15.6	15	87-99			
MT4-12-LSM	12	10.5-15.6	15*	87-99			
MT4-12-MS	12	10.5-15.6	30	87-99			
MT4-24-LS	24	20.0-31.0	15	87-99	Н		
MT4-24-LSM	24	20.0-31.0	15*	87-99			
MT4-24-MS	24	20.0-31.0	30	87-99			
MT4-24-IS	24	20.0-31.0	75	87-99			

\*15cd models are Listed at 15cd and meet 75cd on axis

A WARNING: 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 SIGNALING DEVICE.

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## WARNING: THESE APPLIANCES WERE TESTED TO THE OPERATING VOLTAGE LIMITS OF 20-31 VOLTS FOR 24V MODELS AND 10.5-15.6 MODELS VOLTS FOR 12V MODELS USING FILTERED (DC) OR UNFILTERED FULL-WAVE RECTIFIED (FWR). DO NOT APPLY 80% AND 110% OF THESE VOLTAGE VALUES FOR SYSTEM OPERATION.

Table 2: Current Ratings for Multitone Audible Appliances							
		Rated Average Current					
Tone	Tone Description	12V	/DC	24V	'DC		
		HI dBA	STD dBA	HI dBA	STD dBA		
Horn	Broadband Horn (Continuous)	0.100	0.020	0.040	0.023		
Bell	1560 Hz Modulated (0.07 Sec. ON/Repeat)	0.031	0.010	0.014	0.012		
March Time Horn	Horn (0.25 Sec. ON/0.25 Sec. OFF/Repeat)	0.100	0.020	0.040	0.023		
Code 3 Horn	Horn (ANSI S3.41 Temporal Pattern)	0.100	0.020	0.040	0.023		
Code 3 Tone	500 Hz (ANSI S3.41 Temporal Pattern)	0.060	0.015	0.028	0.017		
Slow Whoop	500-1200 Hz Sweep (4.0 Sec. ON/0.5 Sec. OFF/Repeat)	0.100	0.025	0.048	0.026		
Siren	600-1200 Hz Sweep (1.0 Sec. ON/Repeat)	0.082	0.020	0.036	0.023		
HI/LO	1000/800 Hz (0.25 Sec. ON/Alternate)	0.044	0.012	0.020	0.014		

Add 25% more input current than shown in Table 2 when operating the unit at maximum input voltage.

Add strobe current from Table 4 to audible appliance current from Table 2 to obtain total current for each unit, if the strobe and audible are wired to operate in unison on a single circuit.

Table 3: dBA - Multitone With Strobe								
		echoic	Reverberant dBA at 10 Feet					
	dBA a	t 10 Feet		Per UL	464			
Tone	No	minal	Mini	mum	Max	timum		
	Vc	oltage	Vol	tage	Vo	ltage		
	HI	STD	HI	STD	HI	STD		
Horn	99	93	85	79	88	82		
Bell	92	87	79	75	82	75		
March Time Horn	99	93	82	75	85	79		
Code 3 Horn	99	93	79	75	82	75		
Code 3 Tone	95	90	75	70*	79	73*		
Slow Whoop	99	94	82	75	85	79		
Siren	98	93	82	75	85	79		
HI/LO	93	88	79	75	82	75		

Anechoic dBA is measured on-axis in a non-reflective (free field) test room using fast meter response. For peak dBA (measured with peak meter response), add 5 dBA to anechoic values shown in Table 3. Reverberant dBA is a minimum UL rating based on sound power measurements in a reverberant test room.

A WARNING: MULTITONE STROBE MODELS SET ON "CODE 3 TONE" WITH STANDARD dBA DO NOT MEET THE 75 dBA MINIMUM UL REVERBERANT SOUND LEVEL REQUIRED FOR PUBLIC MODE FIRE PROTECTION SERVICE (NOTED BY \* IN TABLE 3). MODELS WITH SETTINGS WHICH PRODUCE LESS THAN 75dBA MAY NOT BE HEARD. THIS SETTING IS ACCEPTABLE ONLY FOR GENERAL SIGNALING (NON-FIRE ALARM) USE. USE THE "HIGH" dBA SETTING WITH THIS TONE OR USE A DIFFERENT TONE FOR PUBLIC MODE SERVICE.

	Table 4: Strobe Current Requirement (AMPS)											
Voltage	R	ated Aver	age Current	t		Rated Pea	k Current		H	Rated Inrush Current		
	LS	MS	LSM	IS	LS	MS	LSM	IS	LS	MS	LSM	IS
10.5VDC	0.160	0.235	0.220		0.340	0.560	0.470		0.300	0.500	0.440	
12.0VDC	0.160	0.235	0.220		0.340	0.560	0.470		0.300	0.500	0.440	
15.6VDC	0.160	0.235	0.220		0.340	0.560	0.470		0.390	0.650	0.470	
10.5VDC	0.175	0.240	0.230		0.475	0.730	0.660		0.420	0.700	0.620	
12.0VDC	0.175	0.240	0.230		0.475	0.730	0.660		0.420	0.700	0.620	
15.6VDC	0.175	0.250	0.240		0.475	0.730	0.660		0.545	0.910	0.660	
20.0VDC	0.080	0.135	0.115	0.240	0.160	0.288	0.250	0.500	0.210	0.280	0.225	0.650
24.0VDC	0.080	0.135	0.115	0.225	0.190	0.296	0.260	0.450	0.250	0.280	0.270	0.660
31.0VDC	0.080	0.135	0.115	0.195	0.210	0.296	0.260	0.370	0.320	0.300	0.360	0.880
20.0VFWR	0.080	0.135	0.125	0.253	0.210	0.390	0.350	0.700	0.320	0.390	0.315	0.920
24.0VFWR	0.081	0.135	0.125	0.233	0.216	0.390	0.365	0.640	0.380	0.390	0.380	0.930
31.0VFWR	0.091	0.135	0.125	0.196	0.240	0.390	0.365	0.520	0.450	0.420	0.500	1.250

NOTE: All VFWR voltages are measured with DC volt meter. Multiply VFWR voltage by 1.11 to convert to VRMS.

#### A WARNING: MAKE SURE THAT THE TOTAL AVERAGE CURRENT, TOTAL PEAK CURRENT AND TOTAL INRUSH CURRENT REQUIRED BY ALL APPLIANCES THAT ARE CONNECTED TO THE SYSTEM'S PRIMARY AND SECONDARY POWER SOURCES, APPLIANCE CIRCUITS, 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 average, peak or inrush currents: Use Table 4 to determine the highest value of "Rated Average Current" for an individual strobe (across the expected operating voltage range of the strobe) to determine the highest value of "Rated Inrush Current" or "Rated Peak Current" (whichever is higher) of an individual strobe (across the expected voltage range of the strobe) then multiply these values by the total number of strobes; 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.

If the inrush current or peak current exceeds the power supplies' inrush capacity, the output voltage provided by the power supplies may drop below the listed voltage range of the appliances connected to the supply and the voltage may not recover in some types of power supplies. For example, an auxiliary power supply that lacks filtering at its output stage (either via lack of capacitance and/or lack of battery backup across the output) may exhibit this characteristic.

**CAUTION:** Strobes are not designed to be used on coded systems in which the applied voltage is cycled on and off.

**NOTE**: In addition to the inrush current shown in Table 4, the 75cd strobes also produce a brief inrush current that lasts about 15 microseconds with a peak value of 2.0 Amps (2.8 Amps for FWR input).

All models are UL Listed for indoor use with a temperature range of  $+32^{\circ}$ F to  $+120^{\circ}$ F ( $0^{\circ}$ C to  $+49^{\circ}$ C) and maximum humidity of 85% RH.

	Table 5: Horizontal Plane								
Horizontal	15	cd	15cd*	30cd		75cd			
Angle (in deg.)	UL Min.	Typ. LS	Typ. LSM	UL Min.	Typ. MS	UL Min.	Typ. IS		
0	15.0	21	100	30.0	42	75.0	90		
5	13.5	20	75	27.0	40	67.5	92		
10	13.5	20	38	27.0	40	67.5	89		
15	13.5	20	28	27.0	40	67.5	86		
20	13.5	20	22	27.0	40	67.5	86		
25	13.5	20	19	27.0	40	67.5	83		
30	11.3	19	19	22.5	38	56.3	77		
35	11.3	17	17	22.5	34	56.3	70		
40	11.3	17	17	22.5	34	56.3	65		
45	11.3	15	16	22.5	30	56.3	62		
50	8.3	10	15	16.5	20	41.3	42		
55	6.8	8	15	13.5	16	33.8	35		
60	6.0	8	15	12.0	16	30.0	33		
65	5.3	8	15	10.5	16	26.3	31		
70	5.3	8	15	10.5	16	26.3	31		
75	4.5	8	15	9.0	16	22.5	31		
80	4.5	7	15	9.0	14	22.5	30		
85	3.8	7	15	7.5	14	18.8	27		
90	3.8	6	14	7.5	13	18.8	26		

#### LIGHT DISTRIBUTION:

\*15cd models are Listed at 15cd and meet 75cd on axis.

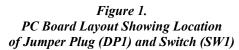
Table 5A: Vertical Plane									
Vertical	150	d	15cd*	30cd		75cd			
Angle (in deg.)	UL Min.**	Typ. LS	Typ. LSM	UL Min.**	Typ. MS	UL Min.**	Typ. IS		
0	15.0	21	100	30.0	42	75.0	90		
5	13.5	21	100	27.0	42	67.5	88		
10	13.5	21	100	27.0	42	67.5	87		
15	13.5	20	100	27.0	40	67.5	83		
20	13.5	19	100	27.0	38	67.5	79		
25	13.5	19	98	27.0	38	67.5	74		
30	13.5/11.3	18	96	27.0/22.5	36	67.5/56.3	70		
35	9.8/11.3	18	94	19.5/22.5	36	48.8/56.3	68		
40	6.9/11.3	16	92	13.8/22.5	32	34.3/56.3	66		
45	5.1/11.3	14	90	10.2/22.5	28	25.5/56.3	63		
50	4.0/8.3	12	84	8.1/16.5	24	20.0/41.3	59		
55	3.3/6.8	12	77	6.6/13.5	24	16.3/33.8	54		
60	2.7/6.0	9	70	5.4/12.0	18	13.5/30.0	52		
65	2.4/5.3	8	63	4.8/10.5	16	12.0/26.3	40		
70	2.3/5.3	8	56	4.5/10.5	16	11.3/26.3	31		
75	2.0/4.5	8	50	4.0/9.0	16	10.0/22.5	29		
80	1.8/4.5	8	30	3.6/9.0	16	9.0/22.5	29		
85	1.8/3.8	8	20	3.6/7.5	16	9.0/18.8	28		
90	1.8/3.8	8	8	3.6/7.5	16	9.0/18.8	24		

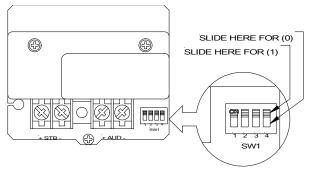
\*15cd models are Listed at 15cd and meet 75cd on axis. \*\* Wall/Ceiling

	Table 6: Typical Flashes Per Second Across Rated Voltage Range									
Models	Volts	20.0	22.0	24.0	26.0	28.0	31.0	10.5	12.0	15.6
LS	DC	1.0	1.1	1.3	1.4	1.5	1.7	0.9	1.0	1.5
	FWR	1.0	1.1	1.3	1.4	1.6	1.8	0.9	1.0	1.5
LSM	DC	1.0	1.2	1.3	1.4	1.5	1.6	0.9	1.0	1.6
	FWR	1.0	1.2	1.3	1.4	1.5	1.7	0.9	1.0	1.5
MS	DC	1.0	1.1	1.2	1.4	1.5	1.6	0.9	1.0	1.6
	FWR	1.0	1.1	1.2	1.4	1.4	1.6	0.9	1.0	1.4
IS	DC	1.1	1.2	1.3	1.3	1.4	1.5			
	FWR	1.0	1.1	1.2	1.3	1.3	1.4			

NOTE: ADA guidelines presently specify a flash rate of 1 to 3 flashes per second.

**MULTITONE SETTINGS:** (The Jumper Plug DP1 is used to set dBA sound pressure level for 12VDC versions only.) The Jumper Plug (DP1) and Switch (SW1) of the Multitone Strobe Appliances, shown in Figure 1, are used to set the dBA sound output level and alarm tone. The factory settings are shown below. **Read these instructions carefully before changing any of these factory settings.** 





The factory settings for 12VDC models are:12VDCDP1 set on 12VDCHIGH dBA:SW1 POS 1 set on 1HORN TONE:SW1 POS 2, 3, 4 set on 1, 1, 1

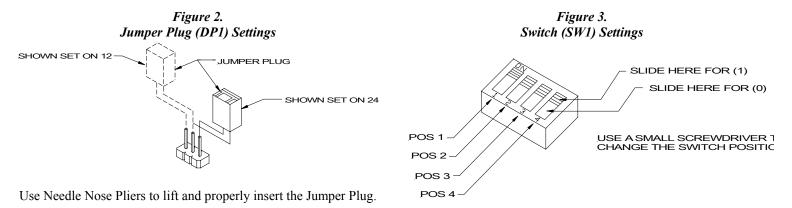
The factory settings for 24VDC models are: HIGH dBA: SW1 POS 1 set on 1 HORN TONE: SW1 POS 2, 3, 4 set on 1, 1, 1

#### <u>STEP 1:</u>

Set desired dBA sound output level as follows (Refer to Figures 2 and 3):

Multitone Strobe Appliances cannot be field set for input voltage. Multitone Strobe Appliances are field set for dBA sound output level by inserting a Jumper Plug (DP1) and adjusting a four position Switch (SW1) as shown in Table 7 and Figures 2 and 3. Use DP1 and SW1 Position 1 to select the desired dBA sound output level.

Table 7: dBA Sound Output Level Settings				
12VDC/HIGH dBA:	Set DP1 on 12; set SW1 POS 1 on 1 (Factory Setting for 12VDC Models)			
12VDC/STD dBA:	Set DP1 on 24; set SW1 POS 1 on 1			
24VDC/HIGH dBA:	Set SW1 POS 1 on 1 (Factory Setting for 24VDC Models)			
24VDC/STD dBA:	Set SW1 POS 1 on 0			



# **A** WARNING: DO NOT APPLY 24VDC INPUT IF THE JUMPER PLUG (DP1) IS SET ON 12. THIS CAN DAMAGE THE UNIT. DOUBLE CHECK THE JUMPER PLUG (DP1) AND SWITCH (SW1) SETTINGS TO MAKE SURE THEY ARE CORRECT. IMPROPER SETTINGS CAN RESULT IN A dBA SOUND OUTPUT LEVEL THAT IS BELOW THE 75 dBA MINIMUM CODE REQUIREMENT FOR PUBLIC MODE FIRE PROTECTION.

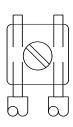
#### **STEP 2:**

Set desired alarm tone as follows (refer to Figure 3 and Table 8).

Multitone Strobe Appliances are field set for any one of eight alarm tones by setting a four-position switch (SW1) as shown in Figure 3 and Table 8. Use SW1 POS 2, 3, 4 to select the desired alarm tone.

Table 8.	Switch Settings			
Tone	POS	POS	POS	
	2	3	4	
Horn	1	1	1	
Bell	1	0	1	
March Time Horn	0	0	1	
Code 3 Horn	1	1	0	
Code 3 Tone	0	1	1	
Slow Whoop	0	1	0	
Siren	1	0	0	
HI/LO	0	0	0	

- 1) Multitone Strobe models have 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 on right. The polarity shown in the wiring diagrams is for operation of the appliances. The polarity is reversed by the FACP during supervision.



**NOTE:** 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. They should 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 if the audible and strobe are wired to operate independently. All other tones are recommended for use only on continuous (non-coded) systems.

#### WIRING INFORMATION:

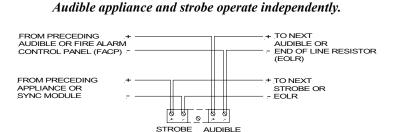


Figure 4.

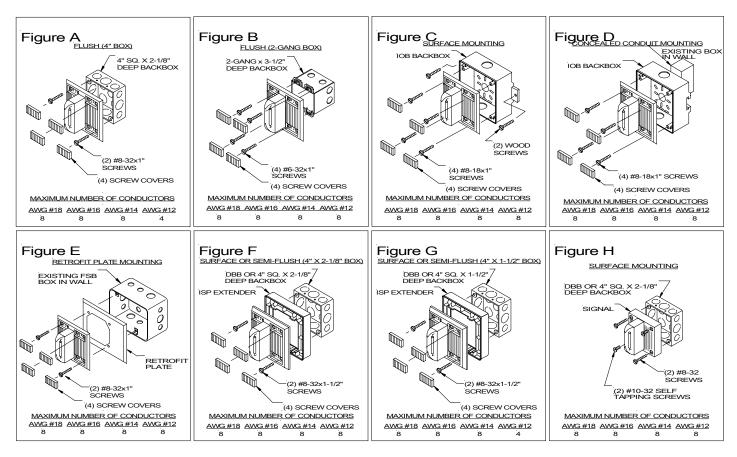
Figure 5.
Audible appliance and strobe operate in unison.
Red and black shunt-wires are supplied.

FROM PRECEDING + APPLIANCE OR FIRE ALARM CONTROL PANEL (FACP)	RED BLACK S GND S STROBE AUDIBLE	
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#### **MOUNTING OPTIONS:**

**CAUTION:** The following figures 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.

Although the limits shown for each mounting option comply with the National Electrical Code (NEC), Wheelock recommends use of the largest backbox option shown and the use of approved stranded field wires, whenever possible, to provide additional wiring room for easy installation and minimum stress on the product from wiring.



#### **MOUNTING NOTES:**

CAUTION: 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.

- 1. Multitone Strobe models can be flush mounted to a standard 4 inch square by 2-1/8 inch deep electrical box (Figure A) or a standard 2-gang by 3-1/2" inch minimum deep electrical box (Figure B).
- 2. All models can also be surface mounted to Wheelock's model IOB backbox (Figure C or D) or to a 4" square backbox (model DBB or BB) with Wheelock's model ISP extender (Figure F and G).
- 3. Multitone Strobe models can also be retrofitted to an existing FSB backbox to replace Wheelock's model 7001 Strobe Horn when used with Wheelock adapter plate model RP (Figure E).
- 4. All models are supplied with four snap-in covers to hide the mounting holes and provide an attractive installation. The snap-in covers are interchangeable and have slots on each end so they can be removed if necessary (by prying them up with a thin blade screwdriver). To insert snap-in cover, slide the outside edge of the cover (furthest edge from the strobe lens) partially into the mounting hole recess; then align the cover so it is parallel to the grille (not tilted) and snap cover into place.
- 5. The IOB surface backbox has 1/2-inch conduit knockouts on two sides. It has a variety of knockouts on the back for mounting it to recessed electrical boxes and for wire entrances (Figure D). It can also be mounted to a surface with the two mounting ears that are supplied. The ears slide into slots on the back of the box (Figure C). Use appropriate anchors for the wood screws that are supplied with the box (if necessary).
- 6. The IOB includes a prefastened gasket and four hole plugs. Make sure the condensation drain holes on the box face down and that the box is vertical to permit drainage of any moisture. Use the mounting ears to secure the box (do not use the back knockouts). Use the hole plugs to seal the unused mounting holes on the Multitone grille (press them in securely from the backside of the grille). Mount the unit to the IOB with the four #8-18 screws supplied with the box.
- 7. Mounting hardware for each mounting option is supplied.
- 8. Conduit entrances to the backbox should be selected to provide sufficient wiring clearance for the installed product. When extension rings are required, conduit should enter through the backbox, not the extension ring. Use Steel City #53151 (1-1/2" deep) or #53171 (2-1/8" deep) extension rings (as noted in the mounting options) or equal with the same cutout area.
- 9. When terminating field wires, do not use more lead length than required. Excess lead length could result in insufficient wiring space for the signaling device.
- 10. 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.
- 11. Do not pass additional wires (used for other than the signaling device) through the backbox. Such additional wires could result in insufficient wiring space for the signaling device.

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

A WARNING: WHEN INSTALLING STROBES IN AN OPEN OFFICE OR OTHER AREAS CONTAINING PARTITIONS OR OTHER VIEWING OBSTRUCTIONS, SPECIAL ATTENTION SHOULD BE GIVEN TO THE LOCATION OF THE STROBES SO THAT THEIR OPERATING EFFECT CAN BE SEEN BY ALL INTENDED VIEWERS, WITH THE INTENSITY, NUMBER, AND TYPE OF STROBES BEING SUFFICIENT TO MAKE SURE THAT THE INTENDED VIEWER IS ALERTED BY PROPER ILLUMINATION, REGARDLESS OF THE VIEWER'S ORIENTATION. FAILURE TO DO SO COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

A WARNING: A SMALL 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, WHEELOCK STRONGLY RECOMMENDS THAT THE STROBES INSTALLED SHOULD NOT PRESENT A COMPOSITE FLASH RATE IN THE FIELD OF VIEW WHICH EXCEEDS FIVE (5) Hz AT THE OPERATING VOLTAGE OF THE STROBES (SEE TABLE 6). WHEELOCK ALSO STRONGLY RECOMMENDS THAT THE INTENSITY AND COMPOSITE FLASH RATE OF INSTALLED STROBES COMPLY WITH LEVELS ESTABLISHED BY APPLICABLE LAWS, STANDARDS, REGULATIONS, CODES AND GUIDELINES.

**NOTE:** NFPA 72/ANSI 117.1 conform to ADAAG Equivalent Facilitation Guidelines in using fewer, higher intensity strobes within the same protected area.

These appliances can produce a distinctive three pulse Temporal Pattern Fire Alarm Evacuation Signal (For total evacuation in accordance with NFPA 72 1999 Edition.

**CAUTION:** 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 electrical noise immunity (e.g. audio crosstalk).

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# IMPORTANT: READ SEPARATE "GENERAL INFORMATION" SHEET FOR INFORMATION ON THE PLACEMENT, LIMITATIONS, INSTALLATION, FINAL CHECKOUT, AND PERIODIC TESTING OF NOTIFICATION APPLIANCES.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: 1) Reorient or relocate the receiving antenna, 2) Increase the separation between the equipment and receiver, 3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected, and 4) Consult the dealer or an experienced radio/TV technician for help.

## **Limited Warranty**

These products must be used within their published specifications and must be PROPERLY specified, applied, installed, operated, maintained and operationally tested in accordance with these instructions at the time of installation and at least twice a year or more often and in accordance with local, state and federal codes, regulations and laws. Specification, application, installation, operation, maintenance and testing must be performed by qualified personnel for proper operation in accordance with all of the latest National Fire Protection Association (NFPA), Underwriters' Laboratories (UL), Underwriters' Laboratories of Canada (ULC), National Electrical Code (NEC), Occupational Safety and Health Administration (OSHA), local, state, county, province, district, federal and other applicable building and fire standards, guidelines, regulations, laws and codes including, but not limited to, all appendices and amendments and the requirements of the local authority having jurisdiction (AHJ). These products when properly specified, applied, installed, operated, maintained and operationally tested as provided above are warranted against mechanical and electrical defects for a period of three years from date of manufacture (as determined by date code). Correction of defects by repair or replacement shall be at manufacturer's sole discretion and shall constitute fulfillment of all obligations under this warranty. THE FOREGOING LIMITED WARRANTY SHALL IMMEDIATELY TERMINATE IN THE EVENT ANY PART NOT FURNISHED BY THE MANUFACTURER IS INSTALLED IN THE PRODUCT. THE FOREGOING LIMITED WARRANTY SPECIFICALLY EXCLUDES ANY SOFTWARE REQUIRED FOR THE OPERATION OF OR INCLUDED IN A PRODUCT. THE MANUFACTURER MAKES NO REPRESENTATION OR WARRANTY OF ANY OTHER KIND, EXPRESS, IMPLIED OR STATUTORY WHETHER AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER MATTER.

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