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INSTALLATION INSTRUCTIONS SERIES AS AUDIBLE STROBE APPLIANCES (WALL MOUNT VERSIONS)

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

GENERAL:

Wheelock's Series AS Audible Strobe Appliances are the industry's first 2-wire horn strobe alarm appliance that provides a selectable continuous or code 3 horn tone and continuous strobe when connected directly to the fire alarm control panel (FACP), or provide a synchronized code 3 horn tone and synchronized strobe when used in conjunction with a Sync Module (SM), Dual Sync Module (DSM) or Wheelock power supplies. The AS Appliances are UL Listed under Standard 1971 for Emergency Appliances for the Hearing Impaired and UL Standard 464 for Audible Signal Appliances. The 1575W candela wall mounted 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 wall mounting and indoor use only and equipped with a universal mounting plate (UMP) that can be mounted to single-gang, double-gang, 4" backbox, 100mm European backbox or SHBB surface backbox (See wiring and mounting information). The AS Appliances use a xenon flashtube with solid state circuitry enclosed in a polycarbonate lens to provide maximum visibility and reliability for effective visible signaling.

Series AS Appliances can be field set to provide either high (HI) dBA, medium (MED) dBA or low (LO) dBA sound output.

These strobe models are designed for use with either filtered DC (VDC) or unfiltered full-wave-rectified (FWR) input voltage. All inputs are polarized for compatibility with standard reverse polarity supervision of circuit wiring by a (FACP).

NOTE: The Code 3 temporal pattern (1/2 second on, 1/2 second off, 1/2 second on, 1/2 second off, 1/2 second on, 1-1/2 off and repeat) is specified by ANSI and NFPA 72 for standard emergency evacuation signaling. *The Code 3 Horn should be used only for fire evacuation signaling and not for any other purpose.*

⚠ 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.

SPECIFICATIONS:

Table 1: UL/ULC Ratings and Models									
Models	Regulated Voltage (VDC/VRMS)	Voltage Range Limit Per UL 464 / UL 1971 (VDC/VRMS)	Voltage Range Per CAN/ULC-S526-02 And CAN/ULC-S525-99 (VDC/VRMS)	Strobe Candela (cd)					
	, i	, , , , , , , , , , , , , , , , , , ,		UL	ULC				
AS-241575W*	24	16.0-33.0	20.0-31.0	15	75				
AS-121575W*	12	8.0-17.5	20.0-31.0	15	75				

^{* 1575}W models are UL Listed for 15cd and meet 75cd on axis.

Table 2: dBA Sound Output for 24VDC Models							
Description	Volume	Reverberant Per UL 464		Anechoic dBA Per CAN/ULC-S525-99			
		16.0VDC	24.0VDC	33.0VDC	20.0VDC	24.0VDC	31.0VDC
	Low	80	83	86	88	90	91
Continuous Horn	Medium	85	88	91	93	95	97
	High	88	91	93	97	99	100
	Low	75	79	82	88	90	91
Code 3 Horn	Medium	80	84	86	93	95	97
	High	84	87	90	97	99	100

Table 2A: dBA Sound Output for 124VDC Models							
Description	Volume	Volume Reverberant			Anechoic dBA Per CAN/ULC-S525-99		
		8.0VDC	12.0VDC	17.5VDC	10.5VDC	12.0VDC	15.6VDC
Continuous Horn	Low	80	83	86	88	90	91
	Medium	85	88	91	93	95	97
	High	88	91	93	97	99	100
Code 3 Horn	Low	75	79	82	88	90	91
	Medium	80	84	86	93	95	97
	High	84	87	90	97	99	100

NOTES

- Strobe will produce 1 flash per second over the "Regulated Voltage" range.
- These strobe/horn models meet the required light distribution patterns defined in UL 1971.
- 3. These models are UL/ULC Listed for indoor use with a temperature range of +32°F to +120°F (0°C to +49°C) and maximum humidity of 93% +/- 2% RH. 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.

AUTION: The AS appliance is not designed to be used on coded systems in which the applied voltage is cycled on and off.

⚠ WARNING: THESE APPLIANCES WERE TESTED TO THE REGULATED VOLTAGE LIMITS OF 16.0-33.0 VOLTS FOR 24V MODELS USING FILTERED DC OR UNFILTERED FULL-WAVE-RECTIFIED VOLTAGE. DO NOT APPLY VOLTAGE OUTSIDE OF THIS RANGE.

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 APPPLIED VOLTAGE TO THE STROBES. THE MAXIMUM WIRE IMPEDANCE BETWEEN STROBES SHALL NOT EXCEED 35 OHMS.

When calculating the total current: Use Table 3 to determine the highest value of "RMS Current" for an individual AS Appliance then multiply the value by the total number of AS Appliances. Be sure to add the currents for any other appliances powered by the same source and include any required safety factors.

NOTE: The maximum number of strobes on a single notification appliance circuit shall not exceed 50.

	Table 3: Current Ratings (AMPS) for 24VDC and 12VDC Wall Models							
	Maximum RMS Current with Hi dBA Setting							
	Voltage	AS-241575W	Voltage	AS-121575W				
DC	16.0VDC-33.0VDC	0.121	8.0VDC-17.5VDC	0.280				
FWR	16.0VRMS-33.0VRMS	0.178	8.0VRMS-17.5VRMS	0.360				
Maximum RMS Current with Med dBA Setting								
	Voltage	AS-241575W	Voltage	AS-121575W				
DC	16.0VDC-33.0VDC	0.107	8.0VDC-17.5VDC	0.240				
FWR	16.0VRMS-33.0VRMS	0.161	8.0VRMS-17.5VRMS	0.325				
Maximum RMS Current with Low dBA Setting								
	Voltage	AS-241575W	Voltage	AS-121575W				
DC	16.0VDC-33.0VDC	0.100	8.0VDC-17.5VDC	0.225				
FWR	16.0VRMS-33.0VRMS	0.157	8.0VRMS-17.5VRMS	0.320				

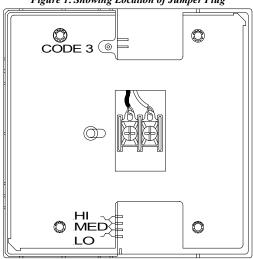
CAUTION: These notification appliances are UL Listed as "Regulated". They are intended to be used with FACPs whose notification circuits are UL Listed as "Regulated." These appliances shall not be used on UL Listed "Special Application" notification circuits unless the appliances are identified to be compatible in the installation instructions of the FACP or unless the FACP is identified to be compatible in this instruction manual.

WARNING: MAKE SURE THAT THE TOTAL RMS CURRENT REQUIRED BY ALL APPLIANCES THAT ARE CONNECTED TO THE SYSTEM'S PRIMARY AND SECONDARY POWER SOURCES, APPLIANCE CIRCUITS, SM, DSM SYNC MODULES AND 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. 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. LIGHT DISTRIBUTION PER UL 1971:

SOUND OUTPUT (SPL) SETTINGS:

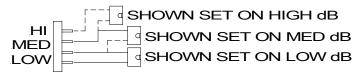
WARNING: THE AUDIBLE STROBE APPLIANCES MUST BE FIELD SET TO THE DESIRED TONE AND dBA SOUND OUTPUT LEVEL BEFORE THEY ARE INSTALLED. THIS IS DONE BY PROPERLY INSERTING JUMPER PLUGS IN ACCORDANCE WITH THESE INSTRUCTIONS. INCORRECT SETTINGS WILL RESULT IN IMPROPER PERFORMANCE, WHICH COULD RESULT IN PROPERTY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

Figure 1: Showing Location of Jumper Plug

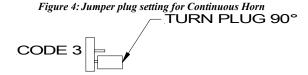


Factory setting is on medium dB and Code 3.

Figure 3: Jumper plug settings for High, Medium, Low and Code 3



(Use needle nose pliers to pull and properly set the jumper plugs)



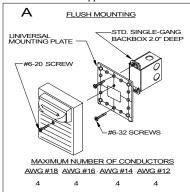
No jumper plug is needed for continuous horn setting. However, it is recommended that the jumper plug be retained in the unit for future use (if needed) as shown in Figure 4.

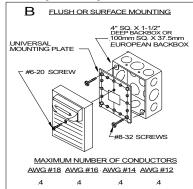
NOTE: The AS must be set for Code 3 when used with a synchronized notification appliance circuit (NAC).

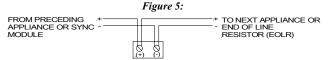
WIRING AND MOUNTING INFORMATION:

CAUTION: The following figures (A-D) 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.

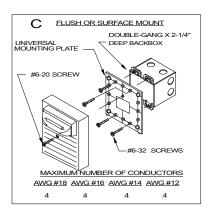
Although the limits shown for each mounting option comply with the National Electrical Code (NEC), Wheelock recommends use of the largest backbox option shown and the use of approved stranded field wires, whenever possible, to provide additional wiring room for easy installation and minimum stress on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

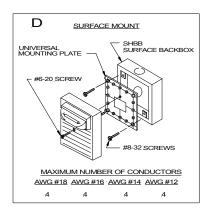


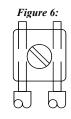




When the sync module is used, the audible tone will be the <u>Code 3 sound</u> <u>only</u>. Refer to Sync Module installation instruction sheets SM (P83123), DSM (P83177) or Wheelock's Power Supplies for additional information







- AS Appliance has in-out wiring terminals that accepts two #12 to #18 American Wire Gauge (AWG) wires at each screw terminal. Strip leads 3/8" inches for connection to screw terminals.
- Break all in-out wire runs on supervised circuit supervision as shown in Figure 6. The polarity shown in the wiring diagrams is for the operation of the appliances. The polarity is reversed by the FACP during supervision.

MOUNTING PROCEDURES:

- 1. This model can be flush mounted to a standard single-gang backbox (Figure A), 4" backbox (Figure B) or double-gang backbox (Figure C). They can also be surface mounted to a 4" or 100mm backbox (Figure B), a double-gang backbox (Figure C) or a SHBB surface backbox (Figure D). Mounting hardware for each mounting option is supplied. For proper mounting, be sure to use the mounting screws supplied with the unit.
- 2. The Universal Mounting Plate (UMP) must be oriented correctly when it is mounted to the backbox. Turn the UMP so that the arrow above the words "Horizontal Strobe" points to the top side of the UMP.
- 3. 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.
- 4. 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. 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.
- 5. Thread the 4 field wires through the opening of the UMP. Mount the UMP to backbox.
- 6. Connect 4 field wires to the AS terminal block (polarity must be observed). Bend the 4 field wires up 90° at the connection to the terminal block.
- 7. Carefully push the 4 field wires into the backbox through the opening of the UMP by hand.
- 8. Hook the 2 slots on the inside wall of the AS onto the 2 tabs of the UMP and screw the AS to the UMP using the #6-20 screw supplied.

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.

⚠ WARNING: THE AS STROBE APPLIANCE IS A "FIRE ALARM DEVICE - DO NOT PAINT."

<u>CAUTION:</u> If audible 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.

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

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. 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.

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 immunity from electrical noise (e.g. audio crosstalk).

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital appliance, 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.

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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.

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