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**INSTALLATION INSTRUCTIONS
SERIES ASWP AUDIBLE STROBE WEATHERPROOF APPLIANCE
(WALL/CEILING MOUNT VERSION)**

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

GENERAL:

Wheelock's Series ASWP appliance is 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 provides 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 ASWP appliance is UL Listed for indoor/outdoor use under Standard 1638 for Emergency Devices for the Hearing Impaired (Visual Signal Appliances) and UL Standard 464 for Audible Signal appliances. The ASWP is also ULC Listed under Standard CAN/ULC-S526-02 for Visual Signaling Appliances and Standard CAN/ULC-S525-99 for Audible Signaling Appliances. The strobe has an intensity of 75 candela on axis at -35°C and low current draw. For outdoor application the ASWP must be mounted to the Weatherproof Backbox (WPBB). The ASWP uses a xenon flashtube with solid state circuitry enclosed in a polycarbonate lens to provide maximum visibility and reliability for effective visible signaling.

The ASWP appliance can be field set to provide either high (HI) dBA, medium (MED) dBA or low (LO) dBA sound output.

The strobe is 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.

NOTE: All Canadian Installations should be in accordance with the Canadian Standard for the Installation of Fire Alarm Systems - CAN/ULC-S524-01 and Canadian Electrical Code, Part 1. Final acceptance is subject to authorities having jurisdiction (AHJ).

⚠ 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:

| Model | Regulated Voltage (VDC/VRMS) | Voltage Range Limit Per UL 1638/464 (VDC/VRMS) | Voltage Range Per CAN/ULC-S525-99/S526-02 (VDC/VRMS) | UL Rated Light Output at | | ULC Rated Light Output |
|------------|------------------------------|------------------------------------------------|------------------------------------------------------|--------------------------|-------|------------------------|
| | | | | +25°C | -35°C | |
| ASWP-2475W | 24 | 16.0-33.0 | 20.0-31.0 | 180cd | 75cd | 30cd |
| ASWP-2475C | 24 | 16.0-33.0 | 20.0-31.0 | 180cd | 75cd | 30cd |

ASWP-2475W is for wall applications. ASWP-2475C is for ceiling.

| 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 |
| 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 |

| Axis | Angle (Reference 90°) | | OSPL - 101dB |
|-----------------|-----------------------|------|--------------|
| | 136° | 145° | |
| Horizontal Axis | 145° | 180° | 95dB |
| | 180° | | 90dB |
| | Angle (Reference 90°) | | OSPL - 102dB |
| | 113° | | |
| 120° | | | |
| Vertical Axis | 180° | | 91dB |

NOTES:

1. Strobe will produce 1 flash per second over the "Regulated Voltage" range.
2. These models meet the required light distribution patterns defined in UL 1638 and ULC S526-02.
3. All models are UL/ULC Listed for indoor and outdoor use with a temperature range of -31°F to 150°F (-35°C to +66°C) and maximum humidity of 98%, ± 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 is not subjected to misuse or abuse.

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

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) | | |
|------------------------------------------|---------------|-------|
| Maximum RMS Current with Hi dBA Setting | | |
| Voltage | | |
| DC | 16.0-33.0VDC | 0.168 |
| FWR | 16.0-33.0VRMS | 0.235 |
| Maximum RMS Current with Med dBA Setting | | |
| Voltage | | |
| DC | 16.0-33.0VDC | 0.155 |
| FWR | 16.0-33.0VRMS | 0.225 |
| Maximum RMS Current with Low dBA Setting | | |
| Voltage | | |
| DC | 16.0-33.0VDC | 0.150 |
| FWR | 16.0-33.0VRMS | 0.220 |

CAUTION: These notification appliances are UL Listed as "Regulated". They are intended to be used with FACP's 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: 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 APPLIED VOLTAGE TO THE STROBES. THE MAXIMUM WIRE IMPEDANCE BETWEEN STROBES SHALL NOT EXCEED 35 OHMS.

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

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

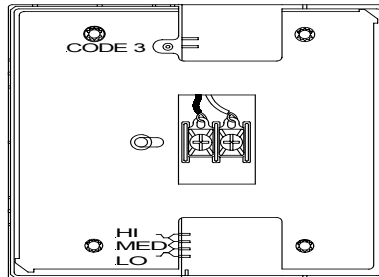
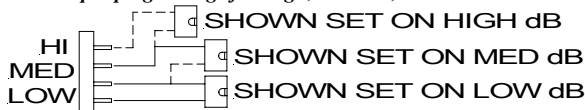
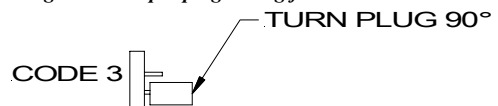


Figure 2: Jumper plug settings for High, Medium, Low and Code 3



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

Figure 3: Jumper plug setting for Continuous Horn



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 ASWP must be set for Code 3 when used on synchronized notification appliance circuit (NAC).

WIRING AND MOUNTING INFORMATION:

Figure 4:

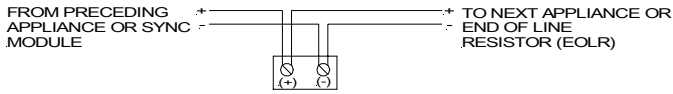
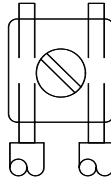


Figure 5:



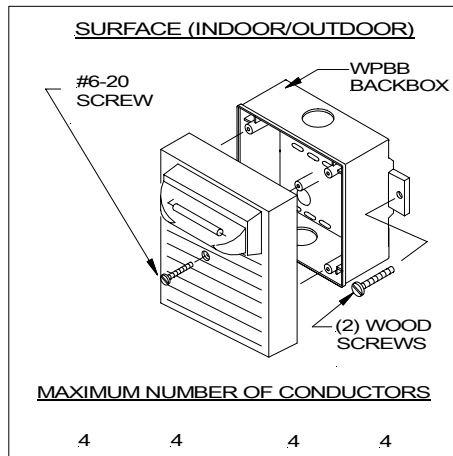
- The ASWP Appliance has in-out wiring terminals that accepts two #12 to #18 American Wire Gauge (AWG) wires at each screw terminal. Strip leads 3/8" inches for connection to screw terminals.
- Break all in-out wire runs on supervised circuit supervision as shown in Figure 5. The polarity shown in the wiring diagrams is for the operation of the appliances. The polarity is reversed by the FACP during supervision.

When the sync module is used, the audible tone will be the **Code 3 sound only**. Refer to Sync Module installation instruction sheets SM (P83123), DSM (P83177) or Wheelock power supply instructions for additional information.

CAUTION: The following figure shows 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 is used.

WARNING: IF THE ASWP HOUSING DOES NOT PROPERLY CONTACT THE GASKET ON THE WPBB BACKBOX, MOISTURE MAY SEEP INTO THE ASWP WHEN USED IN A OUTDOOR APPLICATION AND THIS COULD RESULT IN IMPROPER OPERATION OF 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.



WARNING: THIS UNIT MUST BE MOUNTED ON A FLAT SURFACE, SO THAT THE SURFACE COVERS THE ENTIRE BACK SURFACE OF THE BACKBOX. WHEN USED IN AN OUTDOOR APPLICATION OR A NEMA 3R APPLICATION, USE WEATHER PROOF RATED CONDUIT FITTING ON ALL KNOCKOUTS OF THE BACKBOX.

1. Conduit entrances to the backbox should be selected to provide sufficient wiring clearance for the installed product. The knock-out opening on the backbox is sized for a 1/2" conduit and matching connector. Be sure that a proper watertight conduit fitting is used to connect the backbox for outdoor/severe environment applications. 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. 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.
3. Connect 4 field wires to the ASWP terminal block (polarity must be observed).
4. Bend the 4 field wires up 90° at the connection to the terminal block and carefully push the 4 field wires into the backbox by hand.
5. **Carefully press the ASWP to the backbox, verifying that the ASWP is in contact with the gasket all the way around. It should not be resting on the lip of the backbox.**
6. Screw the ASWP to the WPBB using the #6-20 screw.

CAUTION: 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.

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

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: 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.

⚠ WARNING: REMOVAL OF THE PRINTED CIRCUIT BOARD COVER AT THE BACK OF THE MOUNTING PLATE COULD RESULT IN SEVERE ELECTRIC SHOCK.

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

⚠ 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).

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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