

*Thank you for using our products.*

## INSTALLATION INSTRUCTIONS SERIES RSS AND RSSP MULTI-CANDELA 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 RSS and RSSP Multi-Candela Strobes 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 a Sync Module (SM), Dual Sync Module (DSM) or a Wheelock power supply utilizing the Wheelock sync protocol. The Series RSS and RSSP Multi-Candela Strobe Appliances are UL Listed under Standard 1971 (Signaling Devices for the Hearing Impaired) for indoor Fire Protection Service and ULC Listed under Standard CAN/ULC-S526-02 for indoor Fire Protective Service. The Multi-Candela Strobe provides four selectable light output intensities in one unit. These strobes are listed for **wall mount only** with the backboxes specified in these instructions (see mounting options). RSS models have an integrated strobe mounting plate that can be mounted to a single-gang, double-gang, 4" backbox, 100mm European backbox or SHBB surface backbox. The strobes use a xenon flashtube with solid state circuitry enclosed in a polycarbonate lens to provide maximum visibility and reliability for effective visible signaling. All inputs are polarized for compatibility with standard reverse polarity supervision of circuit wiring by the FACP.

**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 the authority having jurisdiction (AHJ).

**⚠ WARNING: PLEASE READ THESE INSTRUCTIONS CAREFULLY. FAILURE TO COMPLY WITH ANY OF THE FOLLOWING INSTRUCTIONS, CAUTIONS AND WARNINGS COULD RESULT IN IMPROPER APPLICATION, CANDELA SETTING, 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:**

<b>Table 1: UL/ULC Ratings</b>					
Model	Regulated Voltage (VDC/VRMS)	Voltage Range Limit Per UL 1971 (VDC/VRMS)	Voltage Range Per CAN/ULC-S526-02 (VDC/VRMS)	Strobe Candela (cd)	Mounting Options
RSS-24MCW	24	16.0-33.0	20.0-31.0	15/30/75/110	A,B,C,D
RSSP-24MCW	24	16.0-33.0	20.0-31.0	15/30/75/110	E,F

<b>Table 1A: Audibles/Speakers for RSSP Strobe/Plate</b>	
Product	Series
Multitone Appliances	AMT, MT, MT4
Horns	AH, NH
Motor Bells	MB-G6/G10
Speakers	ET-1010/1080, ET70, E70
Chimes	CH70

**NOTES:**

1. Strobes will produce 1 flash per second over the "Regulated Voltage" range.
2. These strobes meet the required light distribution patterns defined in UL 1971 and ULC-S526-02.
3. All models are listed by UL/ULC 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 is not subjected to misuse or abuse.

**⚠ WARNING: CANDELA SETTING WILL DETERMINE THE CURRENT DRAW OF THE PRODUCT.**

<b>Table 2: Current Ratings (AMPS)</b>					
Maximum RMS Current					
	Voltage	15cd	30cd	75cd	110cd
DC	16-33VDC	0.060	0.092	0.165	0.220
FWR	16-33VRMS	0.102	0.155	0.253	0.347

When calculating the total currents use Table 2 to determine the highest value of RMS current for an individual 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 to include any required safety factors.

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

**⚠ 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.**

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

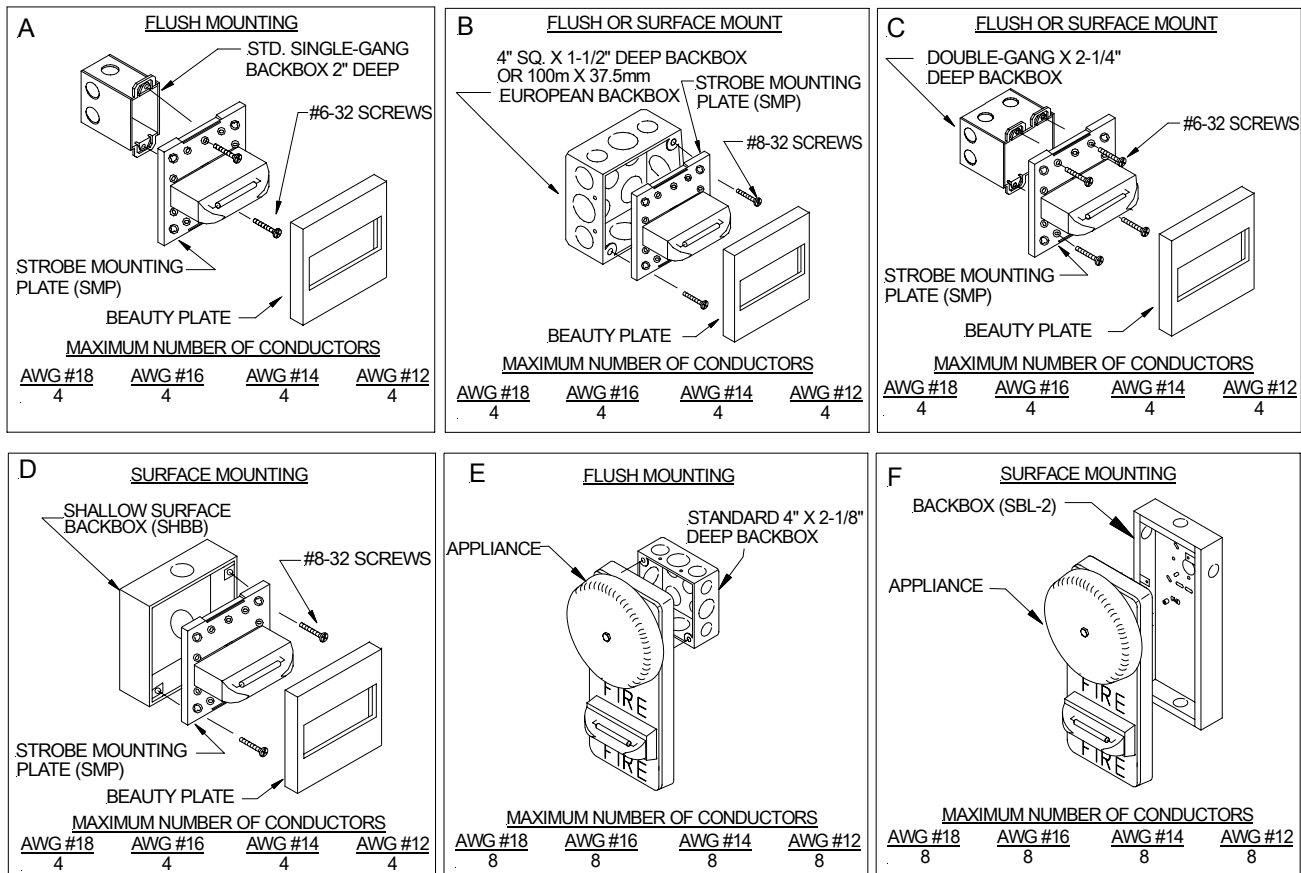
**⚠ WARNING: MAKE SURE THAT THE TOTAL RMS CURRENT REQUIRED BY ALL APPLIANCES THAT ARE CONNECTED TO THE SYSTEM'S PRIMARY AND SECONDARY POWER SOURCES, NOTIFICATION APPLIANCE CIRCUITS, SM, DSM SYNC MODULES, OR WHEELLOCK POWER SUPPLIES DOES NOT EXCEED THE POWER SOURCES' RATED CAPACITY OR THE CURRENT RATINGS 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.**

**WIRING AND MOUNTING INFORMATION:**

**⚠ CAUTION:** The following figures (A-F) 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.

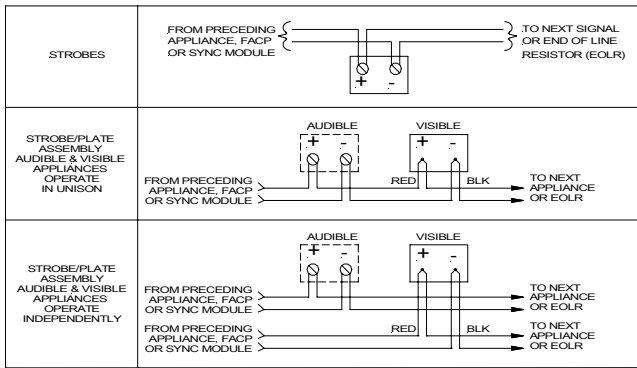
**⚠ CAUTION:** Check that the installed product will have sufficient clearance and wiring room prior to installing backboxes and conduit, especially if sheathed multiconductor cable or 3/4" conduit fittings are used.

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.

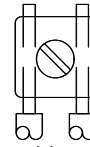


Figures E and F are shown with optional 6" bell. See Table 1A for other possible appliance combinations.

**Figure 1: Wiring Diagrams**



**Figure 2:**

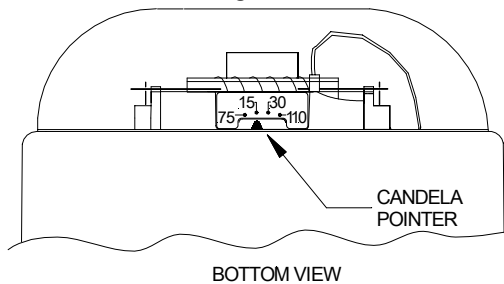


- All strobe appliances have in-out wiring terminals that accepts two #12 to #18 American Wire Gauge (AWG) wires at each screw terminal. Strip leads 3/8 inches and connect to screw terminals.
- Break all in-out wire runs on supervised circuits to ensure integrity of circuit supervision as shown in Figure 2. Strobe/Plate assembly has two red leads and two black leads for in-out wiring. The polarity shown in the wiring diagrams is for the operation of the appliances. The polarity is reversed by the FACP during supervision.

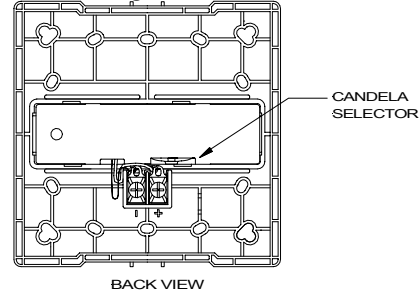
Refer to instruction sheets for SM (P83123), DSM (P83177) or Wheelock power supplies for additional information.

1. This RSS model can be flush mounted to a standard single-gang backbox (Figure A), 4" or 100mm backbox (Figure B) or double-gang backbox (Figure C). It can also be surface mounted to a 4" or 100mm backbox (Figure B), double-gang backbox (Figure C) or the SHBB (Figure D). The RSSP model can be flush mounted to a 4" backbox (Figure E) or surface mounted to a SBL-2 backbox (Figure F). Mounting hardware for each mounting option is supplied.
2. 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. When terminating field wires, do not use more lead length than required. Excess lead length could result in insufficient wiring space for the appliance.
4. 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.
5. This RSS model has an integrated Strobe Mounting Plate (SMP) which must be oriented correctly when it is mounted to the backbox. Turn the SMP so that the arrow above the words "Horizontal Strobe" points to the top side.
6. Move the selector switch to the desired candela setting. The setting is indicated by a pointer and can be seen on the bottom side of the lens. See Figures 3 and 4 below.
7. Mount the SMP first to the backbox. Next slide the beauty plate over the SMP until the 2 snaps of the beauty plate engage with the SMP.
8. The beauty plate can be removed from the strobe assembly once engaged. First, gently insert a screwdriver into one of the slots located on the top and bottom edges of the beauty plate. Second, gently pull away from the wall with the inserted screwdriver to disengage the snap. Third, repeat the first and second steps for the second slot. Finally, gently lift the beauty plate away from the SMP.

**Figure 3:**



**Figure 4:**



**NOTE:** The RSS/RSSP Multi-Candela come pre-set at 15cd.

**⚠ WARNING: THE CANDELA SELECT SWITCH MUST BE FIELD SET TO THE REQUIRED CANDELA INTENSITY BEFORE INSTALLATION. WHEN CHANGING THE SETTING OF THE CANDELA SELECT SWITCH, MAKE CERTAIN THAT IT "CLICKS" IN PLACE. AFTER CHANGING THE CANDELA SETTING, THE APPLIANCE MUST BE RETESTED TO VERIFY PROPER OPERATION. IMPROPER SETTING OF THE CANDELA SELECT SWITCH MAY RESULT IN OPERATION AT THE WRONG CANDELA, WHICH COULD RESULT IN A CURRENT DRAW EXCEEDING THE POWER SUPPLY'S CAPACITY.**

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

**⚠ WARNING: THE RSS 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.**

The 110cd setting is Listed for use in sleeping or non-sleeping areas when installed in accordance with appropriate NFPA Standards and the Authority Having Jurisdiction.

**⚠ WARNING: INSTALLATION OF WHEELOCK 110 CANDELA STROBE PRODUCTS IN SLEEPING AREAS SHOULD BE WALL MOUNTED AT LEAST 24" BELOW THE CEILING AS FOLLOWS: (1) THE ON-AXIS (DIRECTLY IN FRONT OF LENS) LIGHT OUTPUT SHOULD BE DIRECTED AT THE EYELIDS OF THE SLEEPING PERSON, E.G., PILLOW END OF BED, BED HEAD; (2) NO PART OF THE BED SHALL BE MORE THAN SIXTEEN (16) FEET FROM THE STROBE NOTIFICATION APPLIANCE. INSTALLERS MUST ADVISE OWNERS AND OPERATORS OF BUILDINGS WITH SLEEPING OCCUPANTS, E.G., HOTELS AND MOTELS, TO WARN GUESTS, RESIDENTS AND EMPLOYEES TO NOT MOVE THE BED LOCATION TO A POSITION VIOLATING POINTS (1) AND (2) ABOVE OR SERIOUS INJURY AND/OR LOSS OF LIFE MAY OCCUR DURING A FIRE EMERGENCY.**

**⚠ 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 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.**

**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 and notification appliances. Some system communication circuits and/or audio circuits, for example, may require special precautions to ensure 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 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.

**ANY MATERIAL EXTRAPOLATED FROM THIS DOCUMENT OR FROM WHEELOCK MANUALS OR OTHER DOCUMENTS DESCRIBING THE PRODUCT FOR USE IN PROMOTIONAL OR ADVERTISING CLAIMS, OR FOR ANY OTHER USE, INCLUDING DESCRIPTION OF THE PRODUCT'S APPLICATION, OPERATION, INSTALLATION AND TESTING IS USED AT THE SOLE RISK OF THE USER AND WHEELOCK WILL NOT HAVE ANY LIABILITY FOR SUCH USE.**

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

#### **Limited Warranty**

Wheelock 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). Wheelock 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 Wheelock'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 WHEELOCK IS INSTALLED IN THE PRODUCT. THE FOREGOING LIMITED WARRANTY SPECIFICALLY EXCLUDES ANY SOFTWARE REQUIRED FOR THE OPERATION OF OR INCLUDED IN A PRODUCT. WHEELOCK 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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