

Thank you for using our products.


INSTALLATION INSTRUCTIONS HORNS

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

GENERAL:

Wheelock offers a complete line of high performance AC horns. Wheelock's Horns are ideal for General Signaling Applications where high output, low current draw and dependability are of critical concern.

All models provide rugged, vandal resistant construction with die cast housing to protect the horn mechanism. A full range of mounting options are provided for indoor and outdoor installations.

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

⚠ WARNING: PLEASE READ THESE INSTRUCTIONS CAREFULLY. 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, SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

⚠ WARNING: THE 31T HORN APPLIANCE IS A "FIRE ALARM DEVICE – DO NOT PAINT."

SPECIFICATIONS:

<i>Table 1: Ratings Per UL</i>					
Model Number	Regulated Voltage (VRMS)	Voltage Range (VRMS)	Maximum RMS Current (AMPS)	Reverberant dBA Per UL 464	Mounting Options
31T-115	120	96-132	0.160	87	A,B,C,D,E

⚠ WARNING: FOR UL APPLICATIONS THESE APPLIANCES WERE TESTED TO THE OPERATING VOLTAGE LIMITS OF 96-132 VOLTS. DO NOT APPLY 80% AND 110% OF THESE VOLTAGE VALUES FOR SYSTEM OPERATION.

⚠ WARNING: MAKE SURE THAT THE TOTAL RMS CURRENT REQUIRED BY ALL APPLIANCES THAT ARE CONNECTED TO THE SYSTEM'S 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 1 to determine the highest value of "RMS Current" for an individual horn (across the expected operating voltage range of the horn), then multiply these values by the total number of horns; 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.

WIRING DIAGRAM:

Figure 1:

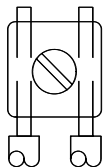
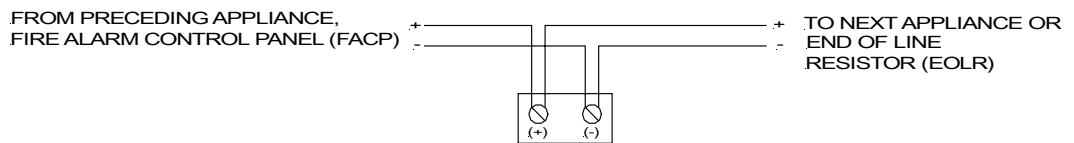


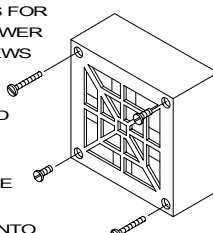
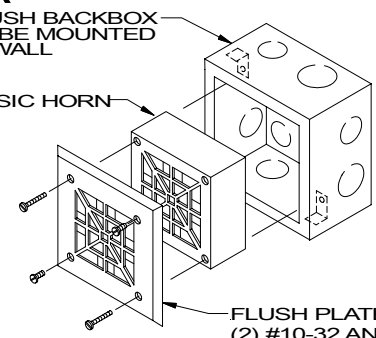
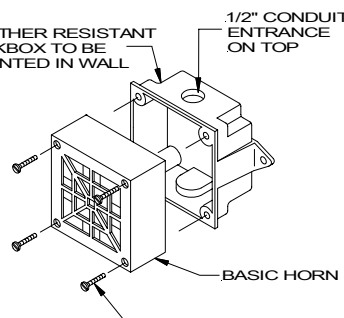
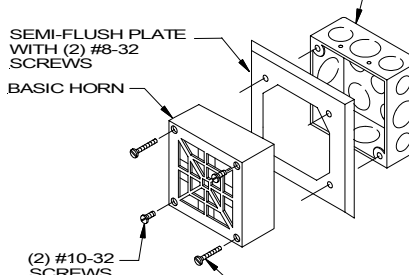
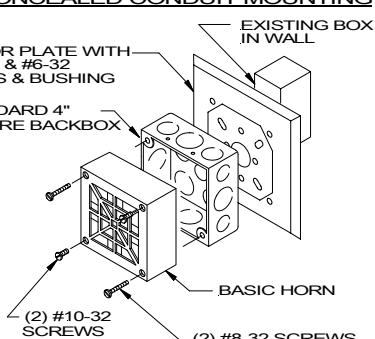
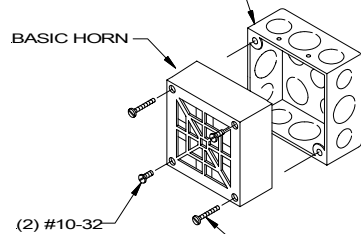
Figure 2: Typical Wiring



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.

<p style="text-align: center;">BASIC HORN</p> <p>THE BASIC HORN IS SUPPLIED WITH SCREW TERMINALS FOR CONNECTION TO THE POWER SOURCE, (2) #10-32 SCREWS FOR ACCESSORIES * MOUNTED TO THE UNIT GRILLE IF REQUIRED, AND (2) #8-32 SCREWS FOR INSTALLATION. * IF NO ACCESSORIES ARE USED REQUIRING THESE SCREWS, INSERT THEM INTO THE UNUSED HOLES.</p> 	<p style="text-align: center;">A FLUSH MOUNTING</p> <p>FLUSH BACKBOX TO BE MOUNTED IN WALL</p> <p>BASIC HORN</p>  <p>FLUSH PLATE WITH (2) #10-32 AND (2) #8-32 SCREWS</p> <p style="text-align: center;">MAXIMUM NUMBER OF CONDUCTORS</p> <p style="text-align: center;"><u>AWG #18</u> <u>AWG #16</u> <u>AWG #14</u> <u>AWG #12</u></p> <p style="text-align: center;">4 4 4 4</p>
<p style="text-align: center;">B WEATHER RESISTANT MOUNTING</p> <p>WEATHER RESISTANT BACKBOX TO BE MOUNTED IN WALL</p> <p>1/2" CONDUIT ENTRANCE ON TOP</p>  <p>BASIC HORN</p> <p>(4) #8-32 SCREWS</p> <p style="text-align: center;">MAXIMUM NUMBER OF CONDUCTORS</p> <p style="text-align: center;"><u>AWG #18</u> <u>AWG #16</u> <u>AWG #14</u> <u>AWG #12</u></p> <p style="text-align: center;">4 4 4 4</p>	<p style="text-align: center;">C SEMI-FLUSH MOUNTING</p> <p>STANDARD 4" SQUARE BACKBOX TO BE MOUNTED IN WALL</p> <p>SEMI-FLUSH PLATE WITH (2) #8-32 SCREWS</p> <p>BASIC HORN</p>  <p>(2) #10-32 SCREWS</p> <p>(2) #8-32 SCREWS</p> <p style="text-align: center;">MAXIMUM NUMBER OF CONDUCTORS</p> <p style="text-align: center;"><u>AWG #18</u> <u>AWG #16</u> <u>AWG #14</u> <u>AWG #12</u></p> <p style="text-align: center;">4 4 4 4</p>
<p style="text-align: center;">D CONCEALED CONDUIT MOUNTING</p> <p>ADAPTOR PLATE WITH (4) #8-32 & #6-32 SCREWS & BUSHING</p> <p>EXISTING BOX IN WALL</p> <p>STANDARD 4" SQUARE BACKBOX</p>  <p>BASIC HORN</p> <p>(2) #10-32 SCREWS</p> <p>(2) #8-32 SCREWS</p> <p style="text-align: center;">MAXIMUM NUMBER OF CONDUCTORS</p> <p style="text-align: center;"><u>AWG #18</u> <u>AWG #16</u> <u>AWG #14</u> <u>AWG #12</u></p> <p style="text-align: center;">4 4 4 4</p>	<p style="text-align: center;">E SURFACE MOUNTING</p> <p>STANDARD 4" SQUARE BACKBOX TO BE MOUNTED ON WALL SURFACE</p> <p>BASIC HORN</p>  <p>(2) #10-32 SCREWS</p> <p>(2) #8-32 SCREWS</p> <p style="text-align: center;">MAXIMUM NUMBER OF CONDUCTORS</p> <p style="text-align: center;"><u>AWG #18</u> <u>AWG #16</u> <u>AWG #14</u> <u>AWG #12</u></p> <p style="text-align: center;">4 4 4 4</p>

MOUNTING PROCEDURES:

⚠ CAUTION: If sheathed multiconductor cable or 3/4" conduit fittings are used, check that installed product has sufficient clearance and wiring room prior to installing backboxes and conduit.

1. For weather resistant installation, use outdoor mounting option (see Mounting Option B). Outdoor backbox must be mounted vertically with "TOP" as marked to allow any moisture or condensation to drain properly through drain holes on bottom of backbox.
2. Operate only within specified voltage range for rated performance and endurance.
3. All horns will operate on "coded systems" up to 3 on-off cycles per second.
4. Anechoic dB ratings are for "free field" (anechoic) conditions. Such conditions are approximated in outdoor installations. Indoor installations provide greater dB because of reflected sound energy.
5. For terminals with wire clamps, (2) leads #12-#22 American Wire Gauge (AWG) wire per position are allowed. Strip leads approximately 3/8" for connection to terminals. Break wire run to provide electrical supervision.
6. Select largest backbox shown in Mounting Options where possible, to provide additional wiring room for easy installation.
7. Conduit entrance to backboxes should be selected to insure sufficient wiring clearance for installed equipment. When extension rings are required, conduit should enter through backbox, not extension ring. Use Steel City #53151/1-1/2" deep or #53171/2-1/8" deep extension rings or equal with same area cut out in back.
8. Backboxes for all horns should be securely mounted. Looseness may degrade sound output.

⚠ CAUTION: If these 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.

⚠ 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).

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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