

*Thank you for using our products.*  
**INSTALLATION INSTRUCTIONS**  
**MIZ-MINI HORNS**

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

**GENERAL:**

Electronic MIZ-Mini Horns are designed to produce high sound output with minimal current requirements. They are UL Listed under UL 464, Standard for Audible Signal Appliances and ULC Listed under Standard CAN/ULC-S525-99, Standard for Audible Signal Appliances For Fire Alarm Systems. All inputs are polarized for compatibility with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP). MIZ-Mini Horns are recommended for alarm signaling for individual rooms in apartments, motels, hotels and offices. These appliances are attractive in appearance and reliable performers. They mount to standard backboxes to reduce the cost of installation. All models are Listed for indoor use with the backboxes specified in these instructions (See Mounting Options).

They provide a selectable Continuous or Code 3 horn tone when connected directly to a Fire Alarm Control Panel (FACP). They can also provide a synchronized Code 3 horn tone when used in conjunction with a Sync Module (SM), Dual Sync Module (DSM) or Wheelock’s Power Supplies.

MIZ-Mini Horns can be used on coded systems where the applied voltage is cycled on and off.

**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 AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.**

 **WARNING: THE MIZ APPLIANCE IS A “FIRE ALARM DEVICE – DO NOT PAINT.”**

**SPECIFICATIONS:**

**Table 1: UL and ULC Listed Models and Ranges**

Models	Regulated Voltage (VDC/VRMS)	Voltage Range Limit Per UL 1638/464 (VDCVRMS)	Voltage Range Per CAN/ULC-S525-99/S526-02 (VDC/VRMS)
MIZ-24S	24	16.0-33.0	20.0-31.0

**Table 2: UL/ULC dBA Sound Output**

Description	Reverberant Per UL 464 @ 10 Ft.			Anechoic dBA Per CAN/ULC-S525-99		
	16.0VDC	24.0VDC	33.0VDC	20.0VDC	24.0VDC	31.0VDC
Continuous Horn	79	83	85	84	87	90
Code 3 Horn	75	78	81	84	87	89

**Table 3: UL Current Ratings (AMPS)**

Maximum RMS Current		
DC	16.0-33.0VDC	0.026
FWR	16.0-33.0VRMS	0.043

**Table 3A: ULC Current Ratings (AMPS)**

Rated Average Current	
20.0VDC	.024
24.0VDC	.025
31.0VDC	.026
20.0VRMS	.027
24.0VRMS	.038
31.0VRMS	.043

**⚠ WARNING: FOR UL APPLICATIONS THESE APPLIANCES WERE TESTED TO THE OPERATING VOLTAGE LIMITS OF 16.0-33.0 VOLTS FOR 24.0VDC MODELS USING FILTERED (DC) OR UNFILTERED FULL-WAVE-RECTIFIED (FWR). DO NOT APPLY 80% AND 110% OF THESE VOLTAGE VALUES FOR SYSTEM OPERATION.**

**⚠ WARNING: FOR ULC APPLICATIONS THESE APPLIANCES WERE TESTED TO THE OPERATING VOLTAGE LIMITS OF 20.0-31.0 VOLTS FOR 24VDC MODELS USING FILTERED (DC) OR UNFILTERED FULL-WAVE-RECTIFIED (FWR). APPLY 80% AND 110% OF THESE VOLTAGE VALUES FOR SYSTEM OPERATION.**

**NOTE:** 1. Anechoic dBA is measured in anechoic chamber with fast meter response. 2. Reverberant dBA is rated per UL 464, Standard for Audible Signal Appliances. 3. As per ULC requirement, the -3dB off-axis is 15° and the -6dB off-axis is 30°.

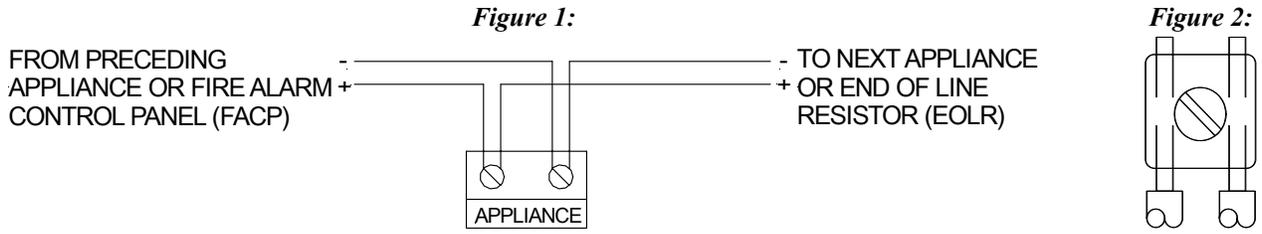
**⚠ WARNING: CHECK THE MINIMUM AND MAXIMUM OUTPUT OF THE POWER SUPPLY AND STANDBY BATTERY AND SUBTRACT THE VOLTAGE DROP FROM THE CIRCUIT WIRING RESISTANCE TO DETERMINE THE APPLIED VOLTAGE TO THE STROBES.**

**⚠ WARNING: MAKE SURE THAT THE CURRENT REQUIRED BY ALL APPLIANCES THAT ARE CONNECTED TO THE SYSTEM'S PRIMARY AND SECONDARY POWER SOURCES, NAC CIRCUITS, SM, DSM SYNC MODULES OR WHEELOCK'S POWER SUPPLIES 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 current: use Table 1 to determine the highest value of "Rated Average Current" for an individual horn (across the expected operating voltage range of the device); then multiply this value by the total number of devices; be sure to add the current for any other devices powered by the same source and include any required safety factors.

**⚠ WARNING: MAKE SURE THAT ALL FUSES USED ON SIGNALING CIRCUITS ARE RATED TO HANDLE THE MAXIMUM INRUSH OR PEAK CURRENT FROM ALL APPLIANCES ON THOSE CIRCUITS. FAILURE TO DO THIS MAY RESULT IN LOSS OF POWER TO THE SIGNALING CIRCUIT AND THE FAILURE OF ALL APPLIANCES ON THAT CIRCUIT TO OPERATE, WHICH COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.**

**WIRING INFORMATION:**



1. Appliances 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 shown in Figure 1. The polarity shown in the wiring diagrams is for the operation of the appliances. The polarity is reversed by the FACP during supervision.

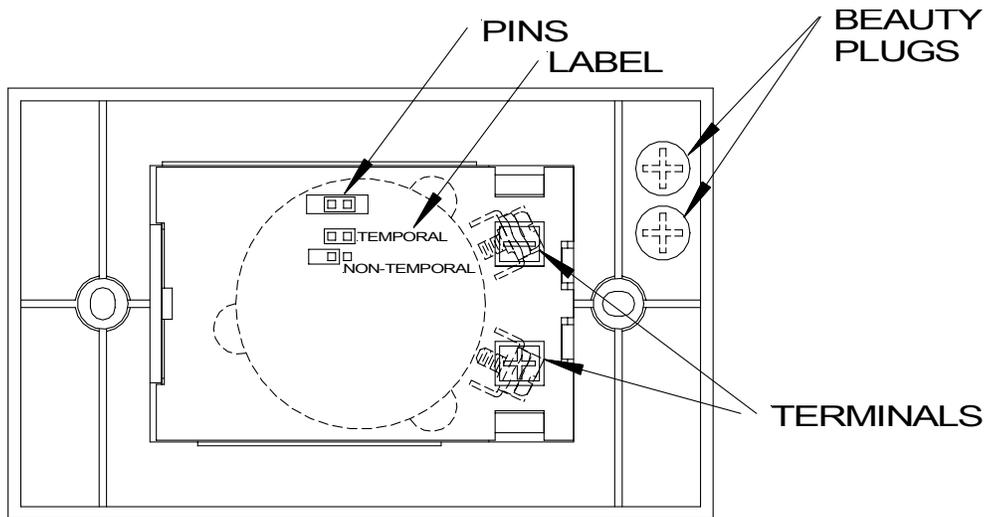
**TEMPORAL (CODE 3) / NON-TEMPORAL (CONTINUOUS) JUMPER SETTINGS:**

*Table 2: Jumper Settings*

FACP NAC	MIZ-24S	Result
Continuous	Continuous	Continuous
Continuous	Temporal	Code 3
Code 3	Continuous	Code 3
Continuous with SM/DSM *	Temporal	Synchronized Code 3

\* Requires use of SM, DSM, or Wheelock's Power Supplies in Wheelock Sync mode.

**Figure 3: Temporal (Code 3) / Non-Temporal (Continuous) Select**



**NOTE:** Temporal (shorted) Non-Temporal (open)

Unit is shipped from factory with Temporal (Code 3) selected (jumper to right). Installer can select Non-Temporal (Continuous) audible signal by moving the factory installed jumper to the left one position. The jumper will be placed only on the left pin, leaving the circuit open to select Continuous. Detach 'Beauty Plugs' from rear of grille before installing unit.

Figure 4:

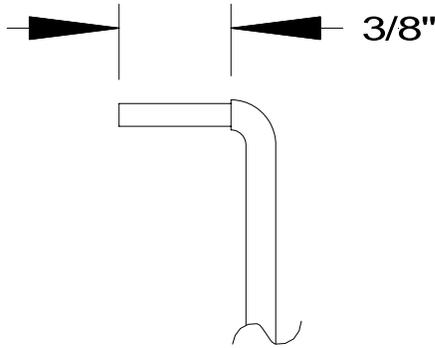
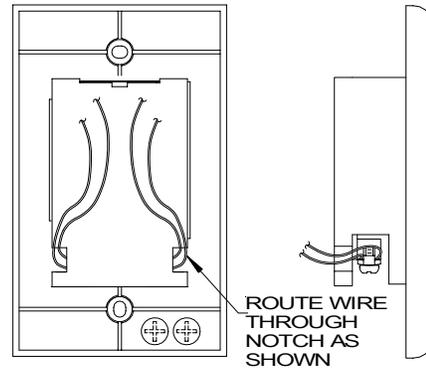


Figure 5:



**MOUNTING PROCEDURES:**

Use this mounting procedure 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.

1. Bend the 4 field wires 90° as shown in Figure 4.
2. Connect the 2 field wires to each screw terminal (in-out wiring) and dress the 2 wires through the slot as shown in Figure 5 (polarity must be observed).
3. Gently push the 4 field wires into the backbox by hand and screw the unit to the backbox.

**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.

A <u>FLUSH MOUNTING</u>	B <u>SURFACE MOUNTING</u>
<p>SINGLE-GANG X 3-1/2" DEEP BACKBOX</p>	<p>SINGLE-GANG X 1-3/4" DEEP WIREMOLD BACKBOX</p>
<p><u>MAXIMUM NUMBER OF CONDUCTORS</u></p> <p><u>AWG #18</u> <u>AWG #16</u> <u>AWG #14</u> <u>AWG #12</u></p>	<p><u>MAXIMUM NUMBER OF CONDUCTORS</u></p> <p><u>AWG #18</u> <u>AWG #16</u> <u>AWG #14</u> <u>AWG #12</u></p>
<p>4      4      4      4</p>	<p>4      4      4      4</p>

## **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. Mounting hardware for each mounting option is supplied.
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. 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.
4. 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.
5. Place 'Beauty Plugs' over screw heads after installation using the mounting hardware supplied.
6. All models are UL Listed for indoor use with a temperature range of +32°F to +120°F (0°C to +49°C) and maximum humidity of 93% RH, ±2%.

**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.**

If this appliance is required to produce a distinctive three-pulse Temporal Pattern Fire Alarm Evacuation Signal (for total evacuation) in accordance with NFPA 72, 1999 Edition, the appliance must be used with a Fire Alarm Control unit that can generate the temporal pattern signal. Refer to manufacturer's installation manual for details.

**⚠ 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).

**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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