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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 Power Supply (PS-12/24-8). The AS Appliances are UL Listed under Standard 1971 for Emergency Appliances for the Hearing Impaired and UL Standard 464 for Audible Signal Appliances. 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 Mounting Options). The AS Appliances use a Xenon flashtube with solid state circuitry enclosed in a rugged Lexan® 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 horn incorporates the temporal pattern (1/2 second on, 1/2 second off, 1/2 second on, 1/2 second on, 1-1/2 off and repeat) specified by ANSI/NFPA 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 **CAUTIONS** and **WARNINGS** are identified by the symbol  $\triangle$  All warnings are printed in bold capital letters.

⚠ 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 Ratings and Models										
Models	Regulated Voltage (VDC/VRMS)	Voltage Per UL 1971/464		Mounting Options						
AS-2415W	24	16.0-33.0	15	A,B,C,D						
AS-2430W	24	16.0-33.0	30	A,B,C,D						
AS-2475W	24	16.0-33.0	75	A,B,C,D						
AS-24110W	24	16.0-33.0	110	A,B,C,D						
AS-1215W	12	8.0-17.5	15	A,B,C,D						

NOTE: THE MAXIMUM WIRE IMPEDANCE BETWEEN STROBES SHALL NOT EXCEED 35 OHMS. THE MAXIMUM NUMBER OF STROBES ON A SINGLE NAC CIRCUIT SHALL NOT EXCEED 47.

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Table 2: dBA Sound Output for 24.0VDC Models										
Description	Volume	Revei	berant Per Ul	L 464	Anechoic dBA					
		16.0VDC	24.0VDC	33.0VDC	16.0VDC	24.0VDC	33.0VDC			
	Low	80	83	86	86	90	92			
Continuous Horn	Medium	85	88	91	91	95	98			
	High	88	91	93	95	99	101			
	Low	75	79	82	86	90	92			
Code 3 Horn	Medium	80	84	86	91	95	98			
	High	84	87	90	95	99	101			

Table 2A: dBA Sound Output for 12VDC Models										
Description	Volume	Revei	rberant Per Ul	L 464	Anechoic dBA					
		8.0VDC	12.0VDC	17.5VDC	8.0VDC	12.0VDC	17.5VDC			
	Low	80	83	86	86	90	92			
Continuous Horn	Medium	85	88	91	91	95	98			
	High	88	91	93	95	99	101			
	Low	75	79	82	86	90	92			
Code 3 Horn	Medium	80	84	86	91	95	98			
	High	84	87	89	95	99	101			

#### **NOTES:**

- 1. Strobe will produce 1 flash per second over the "Regulated Voltage" range.
- 2. Anechoic dBA is measured on-axis in a non-reflective (free field) test room using fast meter response. For peak dBA (measured with peak meter response), add 5dBA to anechoic values shown in Table 2 and 2A. Reverberant dBA is a minimum UL rating based on sound pressure measurements in a reverberant test room.
- 3. 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 85% RH.

⚠ WARNING: THESE APPLIANCES WERE TESTED TO THE OPERATING VOLTAGE LIMITS OF 16.0-33.0 VOLTS FOR 24V MODELS AND 8.0-17.5 VOLTS FOR 12V MODELS USING FILTERED (DC) OR UNFILTERED FULL-WAVE RECTIFIED (FWR). DO NOT APPLY 80% AND 110% OF THESE VOLTAGE VALUES FOR SYSTEM OPERATION.

⚠ 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.

	Table 3: Current Ratings (AMPS) for 12VDC and 24VDC Wall Models with Hi dBA Setting												
	Rated Average Current *												
Voltage	e AS-2415W		AS-2430W		AS-2475W		AS-24110W		AS-1215W				
	Mean	RMS	Mean	RMS	Mean	RMS	Mean	RMS	Mean	RMS			
16.0VDC	0.109	0.109	0.160	0.162	0.253	0.258	0.306	0.311	0.319	0.320			
24.0VDC	0.092	0.092	0.126	0.131	0.186	0.205	0.213	0.261	0.235	0.250			
33.0VDC	0.095	0.106	0.125	0.140	0.160	0.195	0.193	0.241	0.225	0.243			
16.0VRMS		0.144		0.201		0.341		0.395		0.341			
24.0VRMS		0.127		0.168		0.272		0.321		0.313			
33.0VRMS		0.137		0.168		0.263		0.299		0.297			
	Rated Peak Current **												
Voltage	AS-2	415W	AS-2430W		AS-2	AS-2475W		AS-24110W		S-1215W			
16.0VDC	0.1	130	0.180		0.340		0.440		0.230				
24.0VDC	0.1	145	0.200		0.365		0.470		0.260				
33.0VDC	0.1	155	0.220		0.390		0.500		0.280				
16.0VRMS	0.1	160	0.230		0.	0.380		0.490		0.275			
24.0VRMS	0.2	220	0.	0.260		0.420		0.540		0.280			
33.0VRMS	0.4	470	0.	540	0.570		0.570		0.310				
	_		5	Rated I	nrush Curre	ent ***	ā.		-				
Voltage	AS-2	415W	AS-2	2430W	AS-2	.475W	AS-24110W		AS-1215W				
16.0VDC	0.1	110	0.110		0.110		0.110		0.081				
24.0VDC	0.1	165	0.	165	0.	165	0.	165		0.100			
33.0VDC	0.2	0.230		230	0.	230	0.	230		0.145			
16.0VRMS	0.	0.155		155	0.	155	0.	0.155		0.098			
24.0VRMS	0.2	235	0.	235	0.	235	0.235			0.140			
33.0VRMS	0.3	325	0.	325	0.	325	0.	325		0.190			

Table 3A	Table 3A: Rated Average Current (AMPS) for 12VDC and 24VDC Wall Models with Medium and Low dBA Setting												
	Rated Average Current (Medium)												
Voltage	AS-2	415W	AS-2	430W	AS-2475W		AS-24110		AS-1215W				
	Mean	RMS	Mean	RMS	Mean	RMS	Mean	RMS	Mean	RMS			
16.0VDC	0.094	0.094	0.147	0.148	0.236	0.237	0.291	0.305	0.264	0.265			
24.0VDC	0.076	0.077	0.110	0.110	0.164	0.195	0.193	0.244	0.180	0.180			
33.0VDC	0.071	0.073	0.097	0.102	0.137	0.173	0.166	0.185	0.155	0.155			
16.0VRMS		0.117		0.181		0.318		0.377		0.310			
24.0VRMS		0.099		0.141		0.241		0.296		0.261			
33.0VRMS		0.097		0.135		0.224		0.268		0.229			
				Rated Av	erage Curre	ent (Low)							
Voltage	AS-2	415W	AS-2430W		AS-2475W		AS-24110		AS-1215W				
	Mean	RMS	Mean	RMS	Mean	RMS	Mean	RMS	Mean	RMS			
16.0VDC	0.090	0.090	0.142	0.166	0.229	0.229	0.285	0.291	0.250	0.250			
24.0VDC	0.067	0.067	0.103	0.104	0.157	0.185	0.186	0.232	0.164	0.184			
33.0VDC	0.061	0.072	0.088	0.088	0.123	0.171	0.156	0.181	0.139	0.153			
16.0VRMS		0.111		0.176		0.317		0.373		0.282			
24.0VRMS		0.092		0.137		0.234		0.293		0.225			
33.0VRMS		0.088		0.128		0.218		0.263		0.212			

<sup>\*</sup> Rated average current is measured using mean value. \*\* The time duration for the peak current is 100 microseconds.

\*\*\* The time duration for the inrush current is 4 milliseconds.

⚠ WARNING: MAKE SURE THAT THE TOTAL AVERAGE CURRENT, TOTAL PEAK CURRENT AND TOTAL INRUSH CURRENT REQUIRED BY ALL APPLIANCES THAT ARE CONNECTED TO THE SYSTEM'S PRIMARY AND SECONDARY POWER SOURCES, NAC CIRCUITS, SM, DSM SYNC MODULES OR PS-12/24-8 POWER SUPPLY 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 average, peak or inrush currents: Use Table 3 and 3A to determine the highest value of "Rated Average Current" for an individual strobe (across the expected operating voltage range of the strobe) or use Table 3 and 3A to determine the highest value of "Rated Inrush Current" or "Rated Peak Current" (whichever is higher) of an individual strobe (across the expected voltage range of the strobe) then multiply the value 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 include any required safety factors.

If the inrush current or peak current exceeds the power supplies' inrush capacity, the output voltage provided by the power supplies may drop below the listed voltage range of the appliances connected to the supply and the voltage may not recover in some types of power supplies. For example, an auxiliary power supply that lacks filtering at its output stage (either via lack of capacitance and/or lack of battery backup across the output) may exhibit this characteristic.

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

### **LIGHT DISTRIBUTION PER UL 1971:**

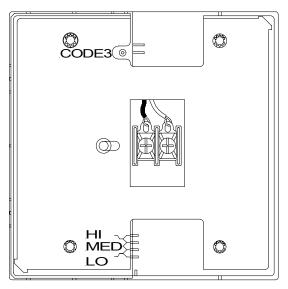
	Table 4: Horizontal Plane											
Horizontal	15	5cd	30	30cd 75cd			110cd					
Angle (in deg.)	UL Min.	Typ. 15cd	UL Min.	Typ. 30cd	UL Min.	Typ. 75cd	UL Min.	Typ. 110cd				
0	15.0	24	30.0	46	75.0	103	110.0	149				
5	13.5	24	27.0	46	67.5	103	99.0	152				
10	13.5	24	27.0	45	67.5	104	99.0	151				
15	13.5	24	27.0	46	67.5	100	99.0	151				
20	13.5	23	27.0	43	67.5	101	99.0	148				
25	13.5	23	27.0	43	67.5	98	99.0	140				
30	11.3	21	22.5	41	56.3	94	82.5	135				
35	11.3	20	22.5	40	56.3	89	82.5	129				
40	11.3	14	22.5	39	56.3	83	82.5	124				
45	11.3	18	22.5	41	56.3	81	82.5	133				
50	8.3	18	16.5	36	41.3	77	60.5	121				
55	6.8	12	13.5	27	33.8	60	49.5	85				
60	6.0	11	12.0	30	30.0	59	44.0	95				
65	5.3	13	10.5	35	26.3	71	38.5	113				
70	5.3	17	10.5	29	26.3	73	38.5	81				
75	4.5	13	9.0	22	22.5	53	33.0	72				
80	4.5	8	9.0	17	22.5	35	33.0	50				
85	3.8	7	7.5	15	18.8	30	27.5	38				
90	3.8	6	7.5	15	18.8	30	27.5	43				

Table 4A: Vertical Plane											
Vertical	15	cd	30c		75c	d	110cd				
Angle (in deg.)	UL Min.**	Typ. 15cd	UL Min.**	Typ. 30cd	UL Min.**	Typ. 75cd	UL Min.**	Typ. 110cd			
0	15.0	24	30.0	46	75.0	103	110.0	149			
5	13.5	24	27.0	46	67.5	103	99.0	149			
10	13.5	24	27.0	46	67.5	103	99.0	137			
15	13.5	24	27.0	45	67.5	102	99.0	120			
20	13.5	24	27.0	41	67.5	104	99.0	110			
25	13.5	21	27.0	48	67.5	89	99.0	129			
30	13.5	23	27.0	40	67.5	96	99.0	114			
35	9.8	22	19.5	45	48.8	91	71.5	119			
40	6.9	13	13.8	39	34.3	57	50.6	109			
45	5.1	9	10.2	24	25.5	36	37.4	66			
50	4.0	9	8.1	16	20.0	33	29.7	45			
55	3.3	8	6.6	15	16.3	31	24.2	43			
60	2.7	8	5.4	15	13.5	31	19.8	40			
65	2.4	8	4.8	14	12.0	31	17.6	40			
70	2.3	8	4.5	15	11.3	31	16.5	39			
75	2.0	8	4.0	14	10.0	31	14.3	39			
80	1.8	8	3.6	13	9.0	27	13.2	36			
85	1.8	7	3.6	13	9.0	27	13.2	37			
90	1.8	3	3.6	9	9.0	12	13.2	28			

#### SOUND OUTPUT (SPL) SETTINGS:

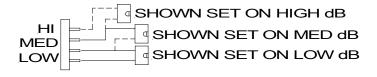
⚠ WARNING: THE AUDIBLE STROBE APPLIANCES MUST BE FIELD SET TO THE DESIRED TONE AND dBA SOUND OUTPUT LEVEL BEFORE THEY ARE INSTALLED. THIS IS DONE BY PROPERLY INSERTING JUMPER PLUGS IN ACCORDANCE WITH THESE INSTRUCTIONS. INCORRECT SETTINGS WILL RESULT IN IMPROPER PERFORMANCE, WHICH COULD RESULT IN PROPERTY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

Figure 1: Showing Location of Jumper Plug



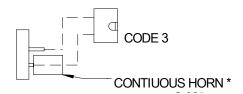
Factory setting is on medium dB and Code 3.

Figure 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 and Code 3

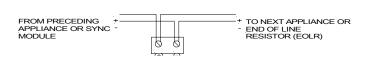


No jumper plug is needed for continuous horn setting. However, it is recommended that the jumper plug be retained in the unit for future use (if needed) as shown in Figure 3.

**NOTE:** The AS must be set for code 3 when used with the sync module. \* Continuous horn operation without sync module.

## WIRING INFORMATION:

Figure 4.



When the sync module is used, the audible tone will be the <u>Code 3 sound only</u>. Refer to Sync Module installation instruction sheets SM (P83123), DSM (P83177) or PS-12/24-8 (P83862) for additional information.

Figure 5.

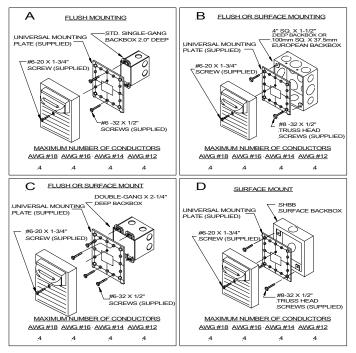


- 1) AS Appliance has in-out wiring terminals that accepts two #12 to 18 American Wire Gauge (AWG) wires at each screw terminal. Strip leads 3/8" inches for connection to screw terminals.
- 2) Break all in-out wire runs on supervised circuit supervision as shown in Figure 5. The polarity shown in the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

#### **MOUNTING OPTIONS:**

<u>CAUTION:</u> 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.



### **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.

**NOTE**: 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.

- 1. Thread the 4 field wires through the opening of the UMP.
- 2. Mount the UMP to backbox.
- 3. Connect 4 field wires to the AS terminal block (polarity must be observed).
- 4. Bend the 4 field wires up 90° at the connection to the terminal block.
- 5. Carefully push the 4 field wires into the backbox through the opening of the UMP by hand.
- 6. 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 X 1-3/4" screw supplied.

## **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. All models 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).
- 2. All models are equipped with a Universal Mounting Plate (UMP).
- 3. Mounting hardware for each mounting option is supplied. For proper mounting, be sure to use the mounting screws supplied with the unit.
- 4. Conduit entrances to the backbox should be selected to provide sufficient wiring clearance for the installed product.
- 5. 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.
- 6. 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.

ACAUTION: 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: 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.

AWARNING: 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 EYE-LIDS 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 (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.

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

These appliances can produce a distinctive three pulse Temporal Pattern Fire Alarm Evacuation Signal (for total evacuation) in accordance with NFPA 72, 1999 Edition.

ACTION: 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.

## **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.

USERS ARE SOLELY RESPONSIBLE FOR DETERMINING WHETHER A PRODUCT IS SUITABLE FOR THE USER'S PURPOSES, OR WHETHER IT WILL ACHIEVE THE USER'S INTENDED RESULTS. THERE IS NO WARRANTY AGAINST DAMAGE RESULTING FROM MISAPPLICATION, IMPROPER SPECIFICATION, ABUSE, ACCIDENT OR OTHER OPERATING CONDITIONS BEYOND WHEELOCK'S CONTROL.

SOME WHEELOCK PRODUCTS CONTAIN SOFTWARE. WITH RESPECT TO THOSE PRODUCTS, WHEELOCK DOES NOT WARRANTY THAT THE OPERATION OF THE SOFTWARE WILL BE UNINTERRUPTED OR ERROR-FREE OR THAT THE SOFTWARE WILL MEET ANY OTHER STANDARD OF PERFORMANCE, OR THAT THE FUNCTIONS OR PERFORMANCE OF THE SOFTWARE WILL MEET THE USER'S REQUIREMENTS. WHEELOCK SHALL NOT BE LIABLE FOR ANY DELAYS, BREAKDOWNS, INTERRUPTIONS, LOSS, DESTRUCTION, ALTERATION, OR OTHER PROBLEMS IN THE USE OF A PRODUCT ARISING OUT OF OR CAUSED BY THE SOFTWARE.

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IN NO CASE WILL WHEELOCK'S LIABILITY EXCEED THE PURCHASE PRICE PAID FOR A PRODUCT.

# **Limitation of Liability**

WHEELOCK'S LIABILITY ON ANY CLAIM OF ANY KIND, INCLUDING NEGLIGENCE AND BREACH OF WARRANTY, FOR ANY LOSS OR DAMAGE RESULTING FROM, ARISING OUT OF, OR CONNECTED WITH THIS CONTRACT, OR FROM THE MANUFACTURE, SALE, DELIVERY, RESALE, REPAIR OR USE OF ANY PRODUCT COVERED BY THIS ORDER SHALL BE LIMITED TO THE PRICE APPLICABLE TO THE PRODUCT OR PART THEREOF WHICH GIVES RISE TO THE CLAIM. WHEELOCK'S LIABILITY ON ANY CLAIM OF ANY KIND SHALL CEASE IMMEDIATELY UPON THE INSTALLATION IN THE PRODUCT OF ANY PART NOT FURNISHED BY WHEELOCK. IN NO EVENT SHALL WHEELOCK BE LIABLE FOR ANY CLAIM OF ANY KIND UNLESS IT IS PROVEN THAT OUR PRODUCT WAS A DIRECT CAUSE OF SUCH CLAIM. FURTHER, IN NO EVENT, INCLUDING IN THE CASE OF A CLAIM OF NEGLIGENCE, SHALL WHEELOCK BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE PRECEDING LIMITATION MAY NOT APPLY TO ALL PURCHASERS.

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