

Installation and Operation Instructions

CODE 3®


H3 Covert™ Siren H3CS and H3CS-W

IMPORTANT! Read all instructions before installing and using. Installer: This manual must be delivered to the end user.



WARNING!

Failure to install or use this product according to manufacturer's recommendations may result in property damage, serious injury, and/or death to those you are seeking to protect!

 **Do not install and/or operate this safety product unless you have read and understood the safety information contained in this manual.**

1. Proper installation combined with operator training in the use, care, and maintenance of emergency warning devices are essential to ensure the safety of emergency personnel and the public.
2. Emergency warning devices often require high electrical voltages and/or currents. Exercise caution when working with live electrical connections.
3. This product must be properly grounded. Inadequate grounding and/or shorting of electrical connections can cause high current arcing, which can cause personal injury and/or severe vehicle damage, including fire.
4. Proper placement and installation is vital to the performance of this warning device. Install this product so that output performance of the system is maximized and the controls are placed within convenient reach of the operator so that they can operate the system without losing eye contact with the roadway.
5. Do not install this product or route any wires in the deployment area of an air bag. Equipment mounted or located in an air bag deployment area may reduce the effectiveness of the air bag or become a projectile that could cause serious personal injury or death. Refer to the vehicle owner's manual for the air bag deployment area. It is the responsibility of the user/operator to determine a suitable mounting location ensuring the safety of all passengers inside the vehicle particularly avoiding areas of potential head impact.
6. It is the responsibility of the vehicle operator to ensure daily that all features of this product work correctly. In use, the vehicle operator should ensure the projection of the warning signal is not blocked by vehicle components (i.e., open trunks or compartment doors), people, vehicles or other obstructions.
7. The use of this or any other warning device does not ensure all drivers can or will observe or react to an emergency warning signal. Never take the right-of-way for granted. It is the vehicle operator's responsibility to be sure they can proceed safely before entering an intersection, drive against traffic, respond at a high rate of speed, or walk on or around traffic lanes.
8. This equipment is intended for use by authorized personnel only. The user is responsible for understanding and obeying all laws regarding emergency warning devices. Therefore, the user should check all applicable city, state, and federal laws and regulations. The manufacturer assumes no liability for any loss resulting from the use of this warning device.

Specifications

Size:	Siren	6.14"[156mm] x 5.43"[138mm] x 2.36"[60mm]
	Controller	4.76"[121mm] x 2.17"[55mm] x 1.06"[27mm]
	Wire Input Box	5.07"[129mm] x 2.32"[59mm] x 1.14"[29mm]

Weight: 4.3lbs

Input Voltage: 10-16 VDC

Max. Current: 8A @ 12VDC Nominal

(Note: Operation above 15VDC for an extended period of time may result in speaker damage)

Rated Power: 100W

Temp. Range: -40°C[-40°F] to 65°C[149°F]

H3CS - H3 Covert with Handheld includes the following features:

- 100W Amp
- Handheld with Backlit Buttons and PA with Built-In Noise Cancelling Microphone
- Primary Tones: Wail, Yelp, Hi-Lo, Hyper-Yelp, Hyper-Lo, Whoop, Air Horn
- Level 1, Level 2, and Level 3 (Level 2 + siren)
- 12ft Extension Cable

H3CS-W - H3 Covert with Input Wire Box includes the following features:

- 100W Amp
- Input Wire Box with 6 Input Control Wires to Control Lighting and Tones
- Primary Tones: Wail, Yelp, Hi-Lo, Hyper-Yelp, Hyper-Lo, Whoop, Air Horn
- Level 1, Level 2, and Level 3 (Level 2 + siren)
- 12ft Extension Cable



WARNING!

Sirens produce loud sounds that may damage hearing.



- Wear hearing protection when testing
- Use siren only for emergency response
- Roll up windows when siren is operating
- Avoid exposure to the siren sound outside of vehicle

Installation and Mounting

Using the hardware supplied, the Controller may be mounted in various locations in the vehicle: below the dash, on the tunnel, etc. The controller can also be mounted with a magnetic mounting kit (sold separately). Ease of operation and convenience to the operator should be the prime consideration when mounting the siren and controls. The amplifier may be mounted at an appropriate location within the vehicle, and the 12ft extension cord can be used to couple the hand-held controller to the amplifier.



WARNING!

All devices should be mounted in accordance with the manufacturer's instructions and securely fastened to vehicle elements of sufficient strength to withstand the forces applied to the device. Ease of operation and convenience to the operator should be the prime consideration when mounting the siren and controls. Adjust the mounting angle to allow maximum operator visibility. Do not mount the Hand-Held Controller in a location that will obstruct the driver's view. Mount the Hand-Held Controller mounting base in a convenient location to allow the operator easy access. Devices should be mounted only in locations that conform to their SAE identification code as described in SAE Standard J1849. For example, electronics designed for interior mounting should not be placed underhood, etc. Controls should be placed within convenient reach* of the driver or if intended for two person operation the driver and/or passenger. In some vehicles, multiple control switches and/or using methods such as "horn ring transfer" which utilizes the vehicle horn switch to toggle between siren tones may be necessary for convenient operation from two positions.

**Convenient reach is defined as the ability of the operator of the siren system to manipulate the controls from their normal driving/riding position without excessive movement away from the seat back or loss of eye contact with the roadway.*

The H3 Covert amplifier is not waterproof. It must be mounted in a location that is sheltered from rain, snow, standing water, etc. It must be also installed in an adequately ventilated area. Do not install near heater ducts or under the vehicle's hood. Using the mounting holes on the amplifier as a template, scribe four drill position marks at the mounting locations. Be sure that both sides of the mounting surface are clear of parts that may be damaged. The siren accessory kit with mounting hardware supplied provides the user with a choice of mounting hardware. Secure the H3 Covert amplifier to the mounting surface, using the mounting hardware, including lock washers.

The connection between the H3 Covert amplifier box and the Handheld Controller or the Input Wire Box is a RJ45 connector.

Wiring Instructions

Notes:

1. Larger wires and tight connections will provide longer service life for components. For high current wires it is highly recommended that terminal blocks or soldered connections be used with shrink tubing to protect the connections. Do not use insulation displacement connectors (e.g., 3M Scotchlock type connectors).
2. Route wiring using grommets and sealant when passing through compartment walls. Minimize the number of splices to reduce voltage drop. All wiring should conform to the minimum wire size and other recommendations of the manufacturer and be protected from moving parts and hot surfaces. Looms, grommets, cable ties, and similar installation hardware should be used to anchor and protect all wiring.
3. Fuses or circuit breakers should be located as close to the power takeoff points as possible and properly sized to protect the wiring and devices.
4. Particular attention should be paid to the location and method of making electrical connections and splices to protect these points from corrosion and loss of conductivity.
5. Ground termination should only be made to substantial chassis components, preferably directly to the vehicle battery.
6. Circuit breakers are very sensitive to high temperatures and will "false trip" when mounted in hot environments or operated close to their capacity.

(Reference Figures 1 and 2)

1. Disconnect the cable on the negative end of the battery before performing installation. Do not connect the H3 Covert system to vehicle battery until all other electrical connections are made and mounting of all components is complete. Verify the polarities of the cable and ensure that no short circuits exist before connecting to the battery terminals. If routing the extension cable requires drilling a hole in sheet metal or other material, drill a 5/8" hole in the material and install a 5/8" grommet (not supplied) to protect the cable.
2. User-supplied 12-gauge red and black wires are required for positive (+12V) and negative (NEG) connections. User-supplied 18-gauge wires are required for the speaker connections.
3. Attach the Handheld Controller or Input Wire Box to the amplifier using the provided RJ45 cable. If the amplifier is remotely mounted, use the included 12' extension cord and coupler.
4. To install the positive and negative power wires, strip 1/4" of insulation from the end of the wires, insert the red wire into the terminal block position labeled +12V, and the black wire into the terminal block position labeled NEG, and tighten the screws. The "+12V" position may be connected either directly to a +12V source (such as a battery), or through a switch (such as an ignition switch).
5. Speaker – the siren is designed to operate with one 11-ohm impedance speaker (100W). Speakers are not included as part of the siren. Any 11-ohm 100W speakers for use with emergency vehicle may be considered to use. To meet SAE J1849, only approved speakers must be used.



Connection of a 58 watt speaker to the siren amplifier will cause the speaker to burn out, and will void the speaker warranty!

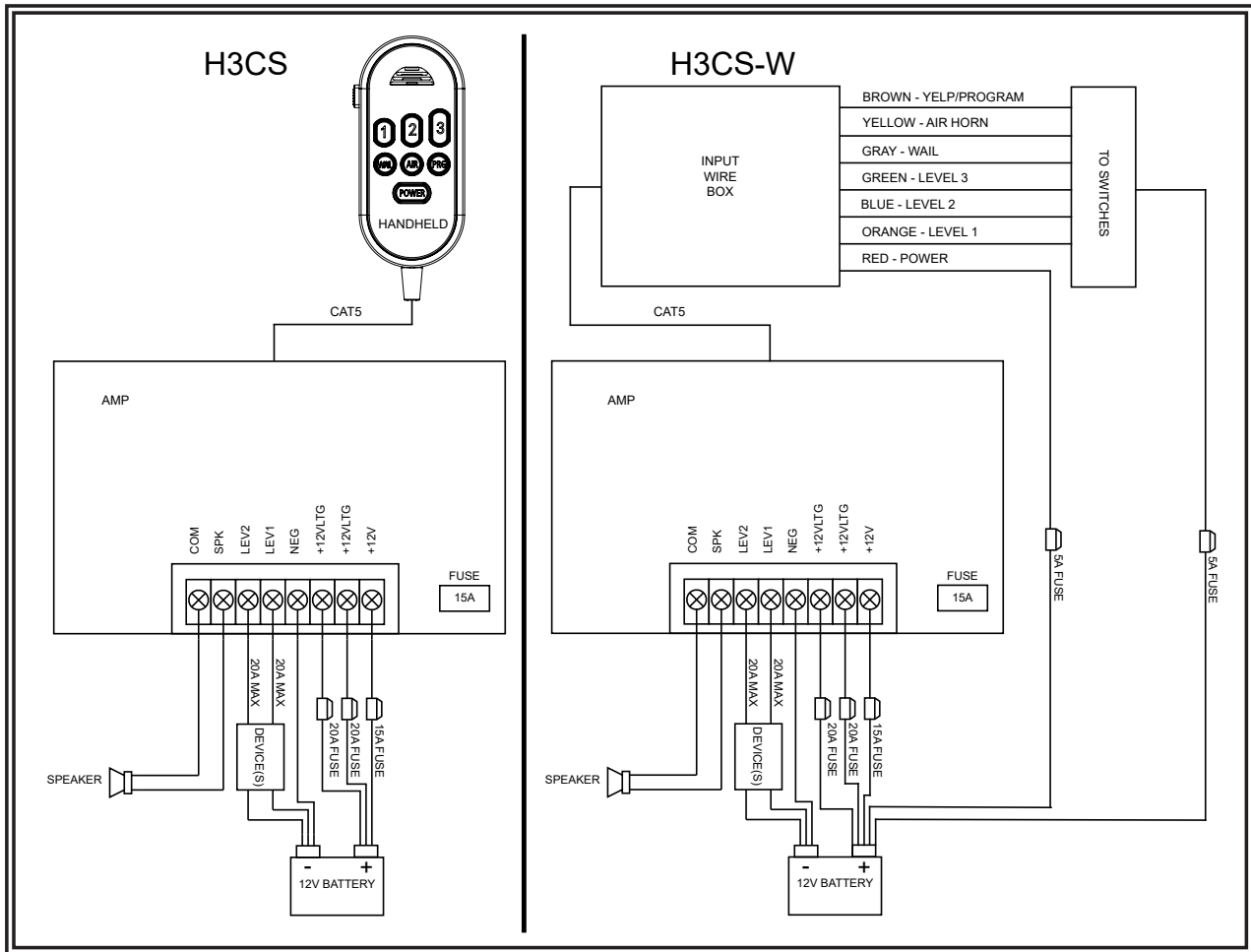


Figure 1

6. To install power wires from lighting products (ie lightbar, directional lighting), strip approximately 1/4" of insulation from the end of the wires. Insert the wires in the appropriate terminal of the Amplifier's terminal block and tighten the screw. Note that terminals LEV1 and LEV2 each have a 20 amp maximum current.
7. Both +12VLTG terminals should be connected directly to a 12V source. This connector provides power to LEV1 and LEV2, progressive lighting outputs. This connection is designed so that nothing smaller than #10 gauge wire should be connected to it. If a fuse is installed, it should be sized for the actual load of the lighting used and located as close to the battery positive as possible.
8. Ensure that there are no loose wire strands or other bare wire that may cause a short circuit. All wires must be protected from any sharp edged that could eventually cut through the insulation. Also use an ohmmeter to verify that a short circuit does not exist between the positive (+) leads and the vehicles chassis.
9. Perform visual check of all connections and wiring before connecting the red wire to the positive (+) terminal and black wire to the negative (-) terminal of the battery.

Operating Instructions

IMPORTANT WARNINGS TO USERS OF SIRENS: "Wail" and "Yelp" tones are in some cases (such as the state of California) the only recognized siren tones for calling for the right of way. Ancillary tones such as "Air Horn", "Hi-Lo", "Hyper-Yelp", and "Hyper-Lo" in some cases do not provide as high a sound pressure level. It is recommended that these tones be used in a secondary mode to alert motorists to the presence of multiple emergency vehicles or to the momentary shift from the primary tone as an indication of the imminent presence of any emergency vehicle.

H3CS: Programming Mode

1. Press the PRG button, its blue backlighting will turn on.
2. YELP tone will be activated as the default siren tone.
3. Press the PRG button again, its blue backlighting will turn off, and the siren will turn off.
4. Hold down the PRG button for 3 seconds to activate the siren tones to cycle to select a tone setting. The tone will change to the next siren tone with a short press of the PRG button.
5. The tones will cycle between (1) Wail, (2) Yelp, (3) Hi/Lo, (4) Hyper Yelp, (5) Hyper Lo, (6) Whoop, and (7) Off.
6. When a tone runs for 2 seconds without a button press, the current running tone will be selected.

Any electronic device may create or be affected by electromagnetic interference. After installation of any electronic device, operate all equipment simultaneously to insure that operation is free of interference.

H3CS-W: Programming Mode

1. Hold the brown wire to the battery's negative (-) wire for 5 seconds to enter programming mode. Programming mode allows the tone to be changed on the brown wire only. The default tone for the brown wire is Yelp.
 2. Tap the brown wire to the negative (-) wire to toggle through the available tones. Note that the user has 6 seconds between each tap to advance to the next tone.
 3. Once the desired tone is playing, hold the negative (-) wire for 6 seconds. The tone will stop playing to indicate the programming was successful. This step also exits the unit from programming mode.
- An alternate method for exiting programming mode is to turn the unit off and back on.

California Title 13 Compliance - Press and hold PRG & POWER for five (5) seconds for the H3 Covert to operate in a California Title 13 Compliance modes. In this mode, the WAIL button will play wail tone & AIR button will only play airhorn tone.

Hand Held Controller (See Figure 2)

1. The microphone for PA.
2. LEV1, when pressed once, supplies power to the load connected to LEV1. When pressed again, turns off power to the load connected to LEV1.
3. LEV2, when pressed once, supplies power to the load connected to LEV1 and LEV2. When pressed again, cuts power to LEV2.
4. LEV3, when pressed once, supplies power to the load connected to LEV1 and LEV2, Wail tone will also be activated. When pressed again, turns off Wail tone and leaves LEV1 and LEV2 powered.
5. AIR activates air horn tone momentarily while the button is pressed. If a siren tone is operating, the siren will resume the siren tone when AIR is released.
6. PTT (Push To Talk) – The PTT button is the push button on top left side on the handheld controller. The PA portion of the siren is activated each time the Microphone PTT button is pressed. When pressed, the PA function over-rides any active siren tone and routes the PA audio through the siren speaker. When the PTT button is released, the siren will automatically switch back to the siren tone (if any) that was active when the button was pressed. PA volume can be adjusted using the potentiometer on the back of the amplifier marked PTT GAIN.
7. POWER, when pressed once when there is no backlighting, will turn on the siren. If POWER is pressed and held for about 2 seconds, siren will turn off and backlighting will be off. If a siren tone is operating, pressing POWER once will turn off the siren tone.

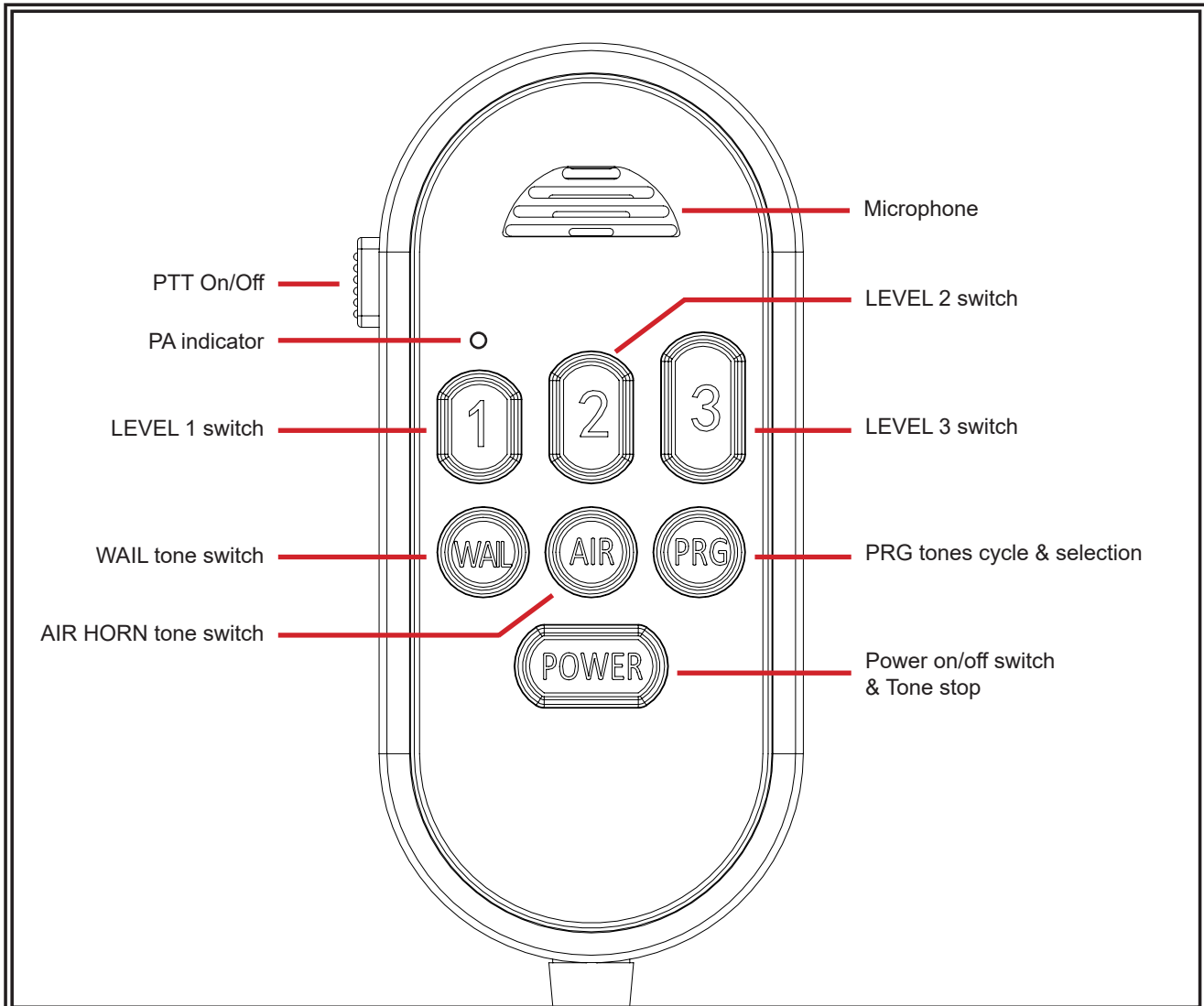


Figure 2

Lighting Specifications:

Level 1	20A maximum
Level 2	20A maximum

Maintenance:

Your Code 3 siren has been designed to provide trouble free service. In case of difficulty, consult the Troubleshooting Guide of this manual. Also check for shorted or open wires. The primary cause of short circuits has been found to be wires passing through firewalls, roofs, etc. If further difficulty persists, contact the factory for troubleshooting advice or return instructions.

Code 3 maintains a complete parts inventory and service facility at the factory and will repair or replace (at the factory's option) any unit found to be defective under normal use and in warranty. Any attempt to service a unit in warranty, by anyone other than a factory-authorized technician, without the express written consent of the factory, will void the warranty.

Units out of warranty can be repaired at the factory for a nominal charge on either a flat rate or parts and labor basis. Contact the factory for details and return instructions. Code 3 is not liable for any incidental charges related to the repair or replacement of a unit unless otherwise expressly agreed to in writing by the factory.

Replacement Parts and Accessories

Description	Part No.
Replacement H3CD HH Controller	CZ0265

Troubleshooting:

PROBLEM	PROBABLE CAUSE	REMEDY
NO SIREN OUTPUT.	A. SHORTED SPEAKER OR SPEAKER WIRES. SIREN IN OVER CURRENT PROTECTION MODE.	A. CHECK CONNECTIONS.
FUSE BLOWS.	A. AMPLIFIER POWER WIRES REVERSED POLARITY.	A. CHECK POLARITY.
NO OUTPUT FROM SPEAKER, TONES HEARD INSIDE AMP MODULE.	A. SPEAKER NOT CONNECTED/ OPEN OR SHORTED SPEAKER WIRING. B. DEFECTIVE SPEAKER (NOTE: SHORTED SPEAKER OR SPEAKER WIRING WILL CAUSE SIREN TO SHUT DOWN).	A. CHECK SPEAKER WIRING. B. DISCONNECT SPEAKER, LISTEN AT SIREN FOR TONES, REPLACE SPEAKER.
SIREN TONES VOLUME TOO LOW OR GARBLED.	A. LOW VOLTAGE TO SIREN AMPLIFIER. B. HIGH RESISTANCE IN WIRING/ DEFECTIVE SPEAKER.	A. CHECK WIRING FOR BAD CONNECTIONS/ CHECK VEHICLE CHARGING SYSTEM. B. CHECK SPEAKER WIRING / REPLACE SPEAKER.
HIGH RATE OF SPEAKER FAILURE.	A. HIGH VOLTAGE TO SIREN. B. 58 WATT SPEAKER CONNECTED TO 100 WATT TAP. 58 WATT NOT ALLOWED.	A. CHECK VEHICLE CHARGING SYSTEM. B. USE CORRECT SPEAKER.
P.A. VOLUME LOW OR NO P.A. AT ALL. VOLUME CONTROL ADJUSTED TO MAXIMUM.	A. DEFECTIVE MICROPHONE. B. MAXIMUM P.A. VOLUME TRIMMER MISADJUSTED . SEE OPERATION SECTION.	A. REPLACE MICROPHONE. B. REFER TO OPERATION SECTION.

Warranty

Manufacturer Limited Warranty Policy:

Manufacturer warrants that on the date of purchase this product will conform to Manufacturer's specifications for this product (which are available from the Manufacturer upon request). This Limited Warranty extends for Sixty (60) months from the date of purchase.

DAMAGE TO PARTS OR PRODUCTS RESULTING FROM TAMPERING, ACCIDENT, ABUSE, MISUSE, NEGLIGENCE, UNAPPROVED MODIFICATIONS, FIRE OR OTHER HAZARD; IMPROPER INSTALLATION OR OPERATION; OR NOT BEING MAINTAINED IN ACCORDANCE WITH THE MAINTENANCE PROCEDURES SET FORTH IN MANUFACTURER'S INSTALLATION AND OPERATING INSTRUCTIONS VOIDS THIS LIMITED WARRANTY.

Exclusion of Other Warranties:

MANUFACTURER MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. THE IMPLIED WARRANTIES FOR MERCHANTABILITY, QUALITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM A COURSE OF DEALING, USAGE OR TRADE PRACTICE ARE HEREBY EXCLUDED AND SHALL NOT APPLY TO THE PRODUCT AND ARE HEREBY DISCLAIMED, EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW. ORAL STATEMENTS OR REPRESENTATIONS ABOUT THE PRODUCT DO NOT CONSTITUTE WARRANTIES.

Remedies and Limitation of Liability:

MANUFACTURER'S SOLE LIABILITY AND BUYER'S EXCLUSIVE REMEDY IN CONTRACT, TORT (INCLUDING NEGLIGENCE), OR UNDER ANY OTHER THEORY AGAINST MANUFACTURER REGARDING THE PRODUCT AND ITS USE SHALL BE, AT MANUFACTURER'S DISCRETION, THE REPLACEMENT OR REPAIR OF THE PRODUCT, OR THE REFUND OF THE PURCHASE PRICE PAID BY BUYER FOR NON-CONFORMING PRODUCT. IN NO EVENT SHALL MANUFACTURER'S LIABILITY ARISING OUT OF THIS LIMITED WARRANTY OR ANY OTHER CLAIM RELATED TO THE MANUFACTURER'S PRODUCTS EXCEED THE AMOUNT PAID FOR THE PRODUCT BY BUYER AT THE TIME OF THE ORIGINAL PURCHASE. IN NO EVENT SHALL MANUFACTURER BE LIABLE FOR LOST PROFITS, THE COST OF SUBSTITUTE EQUIPMENT OR LABOR, PROPERTY DAMAGE, OR OTHER SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES BASED UPON ANY CLAIM FOR BREACH OF CONTRACT, IMPROPER INSTALLATION, NEGLIGENCE, OR OTHER CLAIM, EVEN IF MANUFACTURER OR A MANUFACTURER'S REPRESENTATIVE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. MANUFACTURER SHALL HAVE NO FURTHER OBLIGATION OR LIABILITY WITH RESPECT TO THE PRODUCT OR ITS SALE, OPERATION AND USE, AND MANUFACTURER NEITHER ASSUMES NOR AUTHORIZES THE ASSUMPTION OF ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH SUCH PRODUCT.

This Limited Warranty defines specific legal rights. You may have other legal rights which vary from jurisdiction to jurisdiction. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages.

Product Returns:

If a product must be returned for repair or replacement*, please contact our factory to obtain a Return Goods Authorization Number (RGA number) before you ship the product to Code 3®, Inc. Write the RGA number clearly on the package near the mailing label. Be sure you use sufficient packing materials to avoid damage to the product being returned while in transit.

*Code 3®, Inc. reserves the right to repair or replace at its discretion. Code 3®, Inc. assumes no responsibility or liability for expenses incurred for the removal and /or reinstallation of products requiring service and/or repair.; nor for the packaging, handling, and shipping; nor for the handling of products returned to sender after the service has been rendered.



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