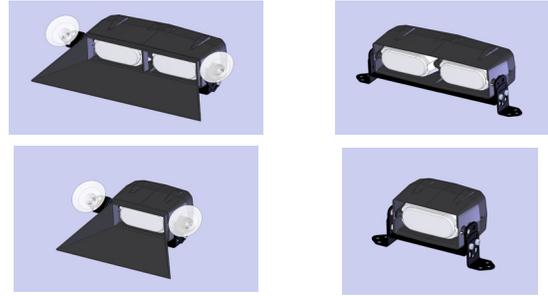


# INSTALLATION & OPERATION MANUAL

## Essex™ Series Interior Lights



**WARNING:** This product contains high intensity LED devices. To prevent eye damage, DO NOT stare into the light beam at close range.

**WARNING:** The use of this or any warning device does not ensure that all drivers can or will observe or react to an emergency warning signal. Never take the right-of-way for granted. It is your responsibility to be sure you can proceed safely before entering an intersection, driving against traffic, responding at a high rate of speed, or walking on or around traffic lanes. The effectiveness of this warning device is highly dependent upon correct mounting and wiring. Read and follow the manufacturer's instructions before installing or using this device. The vehicle operator should insure daily that all features of the device operate correctly. In use, the vehicle operator should insure the projection of the warning signal is not blocked by vehicle components (i.e.: open trunks or compartment doors), people, vehicles, or other obstructions. This equipment is intended for use by authorized personnel only. It is the user's responsibility to understand and obey all laws regarding emergency warning devices. The user should check all applicable city, state and federal laws and regulations. Code 3, Inc., assumes no liability for any loss resulting from the use of this warning device. Proper installation is vital to the performance of this warning device and the safe operation of the emergency vehicle. It is important to recognize that the operator of the emergency vehicle is under psychological and physiological stress caused by the emergency situation. The warning device should be installed in such a manner as to: A) Not reduce the output performance of the system, B) Place the controls within convenient reach of the operator so that he can operate the system without losing eye contact with the roadway. Emergency warning devices often require high electrical voltages and/or currents. Properly protect and use caution around live electrical connections. Grounding or shorting of electrical connections can cause high current arcing, which can cause personal injury and/or severe vehicle damage, including fire. **PROPER INSTALLATION COMBINED WITH OPERATOR TRAINING IN THE PROPER USE OF EMERGENCY WARNING DEVICES IS ESSENTIAL TO INSURE THE SAFETY OF EMERGENCY PERSONNEL AND THE PUBLIC.**

**INSTALLER:** This manual must be delivered to the end user of this equipment.

**WARNING:** This unit must be mounted within the interior passenger compartment of the vehicle only. It is not intended for use in exterior applications. 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.

**THIS UNIT IS NOT DESIGNED TO BE SUSPENDED BY THE SUCTION CUPS ABOVE THE DASHBOARD. WHEN USING THE SUCTION CUPS FOR INSTALLATION, THE UNIT IS TO BE PLACED ON TOP OF THE DASHBOARD. THE SUCTIONS CUPS ONLY PREVENT MOVEMENT OF THE UNIT.**

Driver and/or passenger air bags (SRS) will affect the way equipment should be mounted. This device should be mounted by permanent installation and within the zones specified by the vehicle manufacturer, if any. Any device mounted in the deployment area of an air bag will damage or reduce the effectiveness of the air bag and may damage or dislodge the device. Installer must be sure that this device, its mounting hardware and electrical supply wiring does not interfere with the air bag or the SRS wiring or sensors. Mounting the unit inside the vehicle by a method other than permanent installation is not recommended as unit may become dislodged during swerving, sudden braking or collision. Failure to follow instructions can result in personal injury.

**Introduction: Read all instructions and warnings before installing and using.** The Essex™ Lights are for the emergency vehicle market. The lights are to be connected directly to +12 VDC systems for independent flashing or through electromechanical or solid state flasher units.

**Unpacking & Pre-Installation:** Carefully remove the hardware, taking care not to scratch the lens, and inspect for transit damage. Report any damage to the carrier and keep the shipping carton. Verify the contents of the package (refer to Tables and Figures). Test the lights before installation by inserting the cigarette plug-in of the power cord into an appropriate +12 VDC socket. If problems occur, contact the factory.

### **Installation & Mounting - Suction Cup (or Headliner if Suction Cups Removed)**

The below steps apply to Single and Dual Interior Essex™ Lights. Only the Single is shown. See Figures 1, 2 & 3.

**CAUTION: This unit is not designed to be suspended by the suction cups above the dashboard. When using the suction cups for installation, the unit must be placed on top of the dashboard. The suction cups only prevent movement of the unit.**

1. Attach one suction cup to the T52238 90-degree mounting bracket using one of the #10 self tapping screws. Do not overtighten. Repeat for the second suction cup and T52238 mounting bracket.
2. For split or dual color applications the user will need to determine the desired orientation of the light head assembly prior before moving to the next step (i.e. Red on Left, Blue on Right, etc.). The various brackets can be mounted to either side of the light head, thus allowing for the desired light orientation.
3. Place the T52239 Retention Strip through the large opening in the T52237 or T52247 bracket, then secure the two components to the light head using two T00390 8-32x3/4" machine screws.
4. Install one bracket/suction cup assembly and secure using two T07077 6-32x1/4" machine screws. Do not tighten at this time. Repeat for the second bracket/suction cup assembly.
5. Snap the T52232 or T52242 swivel visor into the light head.
6. Ensure the vehicle is on level ground.
7. Place the assembled light head against the inside of the windshield at the desired location and press the suction cups until they depress and are secured.
8. Rotate the assembled light head until it is at the desired position, and then tighten the previously installed T07077 6-32x1/4" machine screws (4 total). The rotating visor will automatically adjust to fit the curvature of the windshield and minimize flashback.

### **Installation & Mounting - Deck (or Headliner if Light Head Assembly Turned Over)**

The below steps apply to Single and Dual Interior Essex™ Lights. Only the Single is shown. See Figures 4, 5 & 6.

**CAUTION: The unit must be mounted through the steel of the vehicle. Avoid mounting to plastic or other non-structural hardware.**

1. For split or dual color applications the user will need to determine the desired orientation of the light head assembly prior before moving to the next step (i.e. Red on Left, Blue on Right, etc.). The various brackets can be mounted to either side of the light head, thus allowing for the desired light orientation.
2. Secure the T52237 or T52247 bracket to the light head using the two T00390 8-32x3/4" machine screws.
3. Install one T52238 90-degree bracket using two T07077 6-32x1/4" machine screws. Do not tighten at this time. Repeat for the second T52238 bracket.
4. Mark off and drill four mounting holes using the dimensions shown on Figure 7. It is recommended that #6 or larger self tapping or machine screws are used (customer must supply). Verify free clearance exists behind the mounting surface for wires and fasteners before drilling.
5. Secure unit to deck or headliner.
6. Rotate the assembled light head until it is at the desired position, and then tighten the previously installed T07077 6-32x1/4" machine screws (4 total).

### **Wiring Instructions**

All models are stand alone self-contained units ready for installation with no special wiring required. They are delivered with a cigarette plug designed to be used with a +12VDC fused lighter socket. Alternately, the user can remove the plug and connect (through a properly sized fuse) to a user supplied switch. The ribbed wire is positive (+12VDC) and the smooth wire is negative. The following guidelines must be adhered to:

- a. Customer must supply grommet to ensure no wire chafing occurs when routing wires through vehicle.
- b. Use 18 AWG for wires up to 40' length, 16 AWG for wires up to 70' length.
- c. Waterproof connectors are recommended.

Parts List and Exploded Views

TABLE 1

Assembly (Fig 1)	Mount	Part Number	Light Head	Available Colors
Single Interior Essex™	Deck	ESX1RD-X	Solid	X: R (Red), A (Amber), B (Blue), W (White)
	Visor	ESX1VS-X		
	Deck	ESX1RD-XX	Split	XX: RB (Red/Blue), RA (Red/Amber)
	Visor	ESX1VS-XX		
Dual Interior Essex™	Deck	ESX2RD-XX		XX: RR (Red/Red), AA (Amber/Amber), BB (Blue/Blue), WW (White/White), RB (Red/Blue), BA (Blue/Amber), RA (Red/Amber), RW (Red/White), AW (Amber/White), BW (Blue/White)
	Visor	ESX2VS-XX		

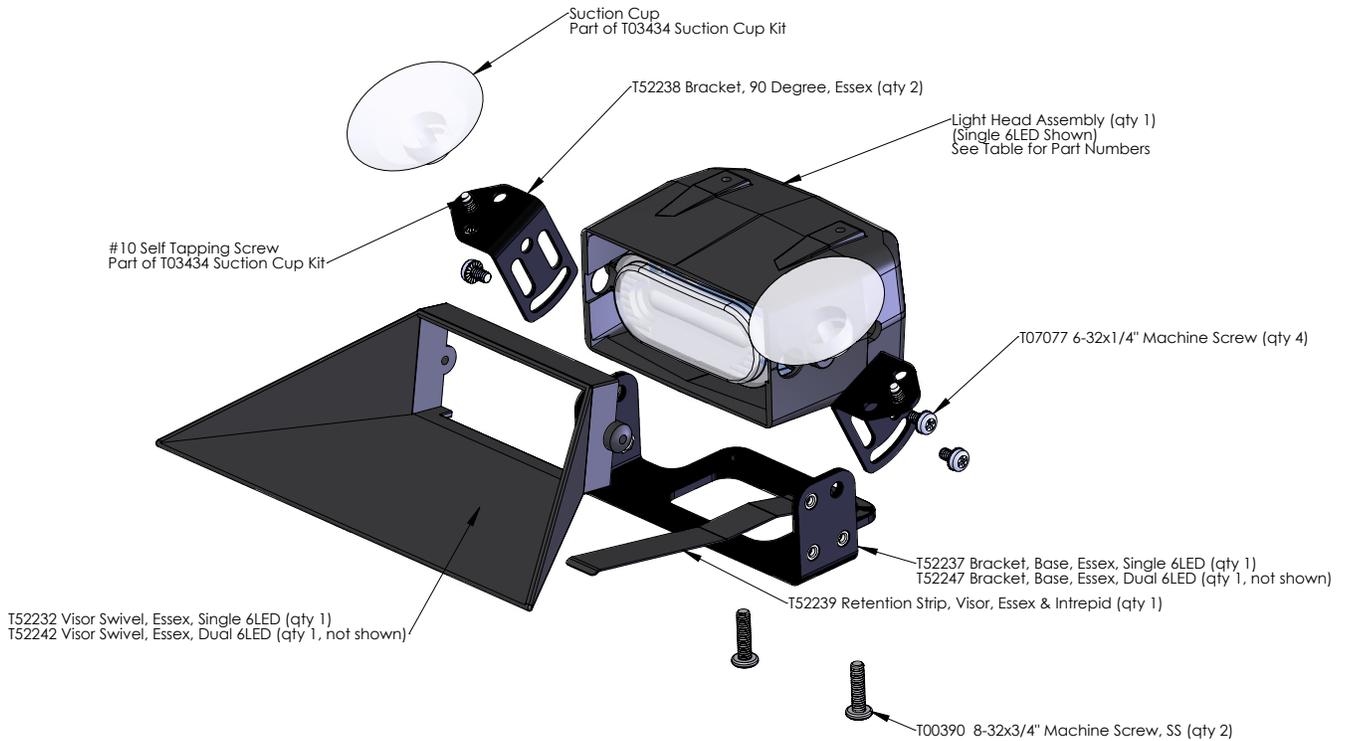


FIGURE 1 - Visor Mount or Headliner Mount

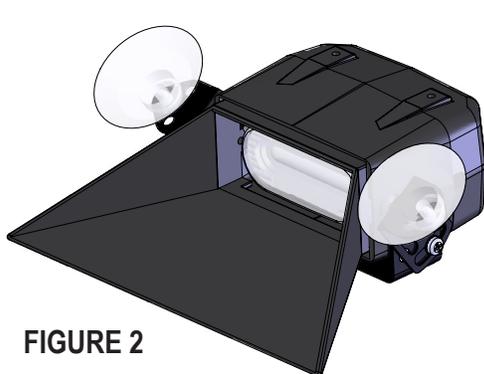


FIGURE 2

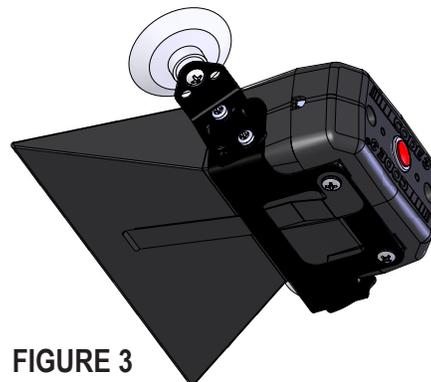
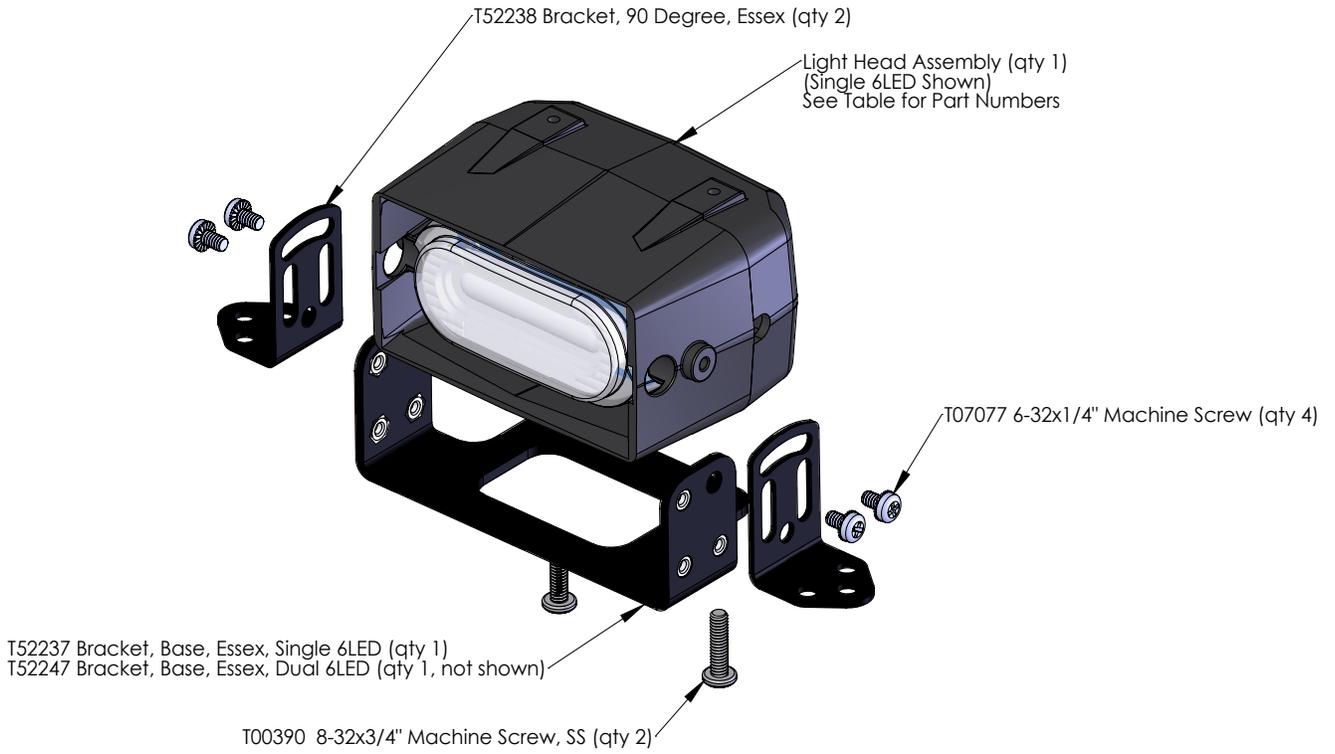
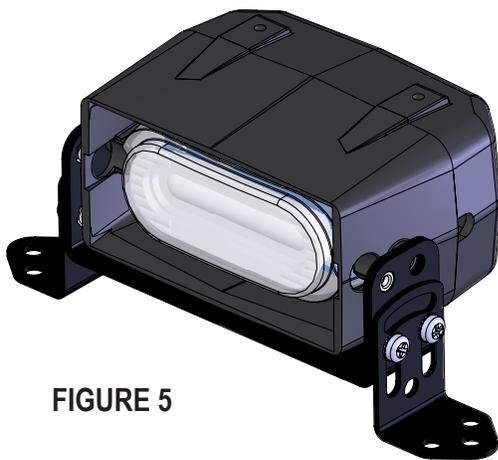


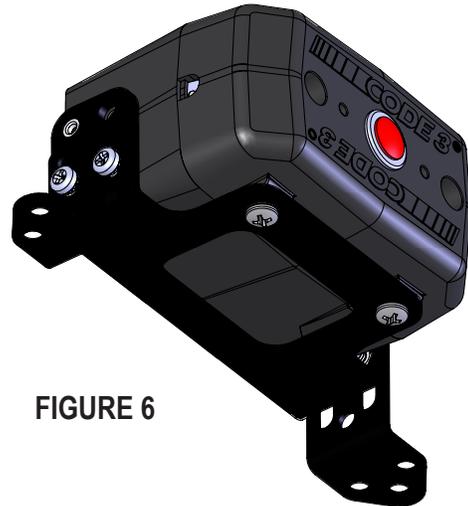
FIGURE 3



**FIGURE 4 - Deck Mount or Headliner Mount**

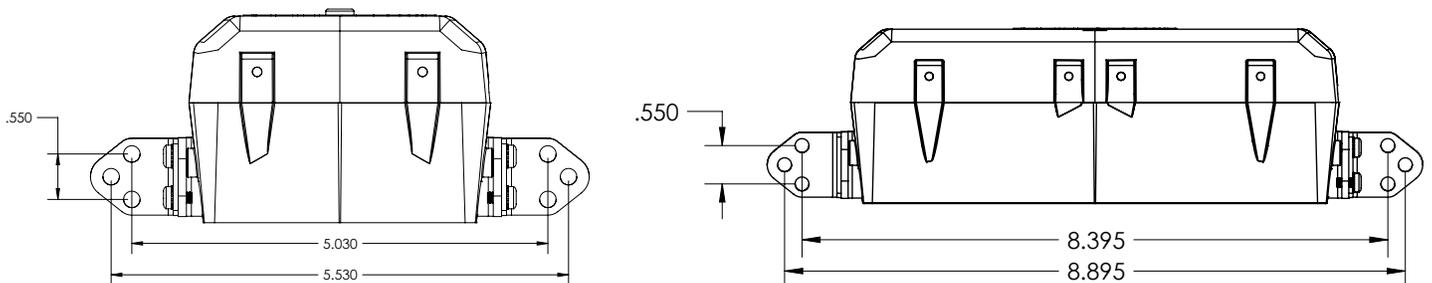


**FIGURE 5**



**FIGURE 6**

**Installation Dimensions - Deck Mount**



**FIGURE 7**

Do NOT scale from drawing supplied.  
Use dimensions as indicated.

## Power Requirements

Essex™ Single 6 LED Light Head  
Essex™ Dual 6 LED Light Head

## CURRENT DRAW Steady Burn (Peak)

0.60 amp average  
1.20 amp average when solid flash pattern chosen

## Operation

All models are stand alone self-contained units ready for installation with no special wiring required. They are delivered with a cigarette plug designed to be used with a +12VDC fused lighter socket.

Alternately, the user can remove the plug and connect (through a properly sized fuse) to a user supplied switch.

The ribbed wire is positive (+12VDC) and the smooth wire is negative.

## Flash Pattern Selection - Single or Split Head

80FPM Quad Flash, Left/Right (Default)  
80FPM Quad Flash, Simultaneous  
Steady Burn  
75FPM Single Flash, Left/Right  
75FPM Single Flash, Simultaneous  
150FPM Single Flash, Left/Right  
150FPM Single Flash, Simultaneous  
75FPM Double Flash, Left/Right  
75FPM Double Flash, Simultaneous  
150FPM Double Flash, Left/Right  
150FPM Double Flash, Simultaneous  
75FPM Triple Flash, Left/Right  
75FPM Triple Flash, Simultaneous

150FPM Triple Flash, Left/Right  
150FPM Triple Flash, Simultaneous  
75FPM Quad Pop Flash, Left/Right  
75FPM Quad Pop Flash, Simultaneous  
150FPM Quad Pop Flash, Left/Right  
150FPM Quad Pop Flash, Simultaneous  
Modular Flash, Left/Right  
Modular Flash, Simultaneous  
75FPM Cycle Flash, Left/Right  
75FPM Cycle Flash, Simultaneous  
150FPM Cycle Flash, Left/Right  
150FPM Cycle Flash, Simultaneous  
Demo Mode, Left/Right  
Demo Mode, Simultaneous

Each flash pattern can be selected by momentarily depressing the button until the unit stops flashing, and then releasing. As each flash pattern is selected it is automatically programmed into the unit such that when power is removed it will always return to the selected pattern the next time power is applied.

## Flash Pattern Selection - Dual Head

80FPM Quad Flash, Left/Right (Default)  
80FPM Quad Flash, Simultaneous  
80FPM Quad Flash, Split Left/Right  
80FPM Quad Flash/Solid  
Steady Burn  
75FPM Single Flash, Left/Right  
75FPM Single Flash, Simultaneous  
75FPM Single Flash, Split Left/Right  
75FPM Single Flash/Solid  
150FPM Single Flash, Left/Right  
150FPM Single Flash, Simultaneous  
150FPM Single Flash, Split Left/Right  
150FPM Single Flash/Solid  
75FPM Double Flash, Left/Right  
75FPM Double Flash, Simultaneous  
75FPM Double Flash, Split Left/Right  
75FPM Double Flash/Solid  
150FPM Double Flash, Left/Right  
150FPM Double Flash, Simultaneous  
150FPM Double Flash, Split Left Right  
150FPM Double Flash/Solid  
75FPM Triple Flash, Left/Right  
75FPM Triple Flash, Simultaneous  
75FPM Triple Flash, Split Left/Right  
75FPM Triple Flash/Solid  
150FPM Triple Flash, Left/Right  
150FPM Triple Flash, Simultaneous  
150FPM Triple Flash, Split Left/Right  
150FPM Triple Flash/Solid

75FPM Quad Pop Flash, Left/Right  
75FPM Quad Pop Flash, Simultaneous  
75FPM Quad Pop Flash, Split Left/Right  
75FPM Quad Pop Flash/Solid  
150FPM Quad Pop Flash, Left/Right  
150FPM Quad Pop Flash, Simultaneous  
150FPM Quad Pop Flash, Split Left/Right  
150FPM Quad Pop Flash/Solid  
Modular Flash, Left/Right  
Modular Flash, Simultaneous  
Modular Flash, Split Left/Right  
Modular Flash/Solid  
75FPM Cycle Flash, Left/Right  
75FPM Cycle Flash, Simultaneous  
75FPM Cycle Flash, Split Left/Right  
75FPM Cycle Flash/Solid  
150FPM Cycle Flash, Left/Right  
150FPM Cycle Flash, Simultaneous  
150FPM Cycle Flash, Split Left/Right  
150FPM Cycle Flash/Solid  
Demo Mode, Left/Right  
Demo Mode, Simultaneous  
Demo Mode, Split Left/Right  
Demo Mode Flash/Solid

Explanation of Dual Head Flash Pattern Operation:

Left/Right: Left light head flashes, then right light head flashes (alternating).

Simultaneous: Both light heads flash together.

Split Left/Right: Half of each light head flashes, then the other half of each light head flashes.

Flash/Solid (for California). Half of the light flashes, the other half is in steady burn mode.

**Maintenance**

Use mild detergent, warm water and a soft cloth to clean lens surfaces. Use of any other chemicals may void product warranty. Thoroughly dry before reinstalling.

# WARRANTY

Code 3®, Inc.'s emergency devices are tested and found to be operational at the time of manufacture. Provided they are installed and operated in accordance with manufacturer's recommendations, Code 3®, Inc. guarantees all parts and components except the lamps to a period of 1 year, LED Light head modules to a period of 5 years (unless otherwise expressed) from the date of purchase or delivery, whichever is later. Units demonstrated to be defective within the warranty period will be repaired or replaced at the factory service center at no cost.

Use of lamp or other electrical load of a wattage higher than installed or recommended by the factory, or use of inappropriate or inadequate wiring or circuit protection causes this warranty to become void. Failure or destruction of the product resulting from abuse or unusual use and/or accidents is not covered by this warranty. Code 3®, Inc. shall in no way be liable for other damages including consequential, indirect or special damages whether loss is due to negligence or breach of warranty.

**CODE 3®, INC. MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY INCLUDING, WITHOUT LIMITATION, WARRANTIES OF FITNESS OR MERCHANTABILITY, WITH RESPECT TO THIS PRODUCT.**

# 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.

**Problems or Questions? Call The Technical Assistance HOTLINE - (314) 996-2800**



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