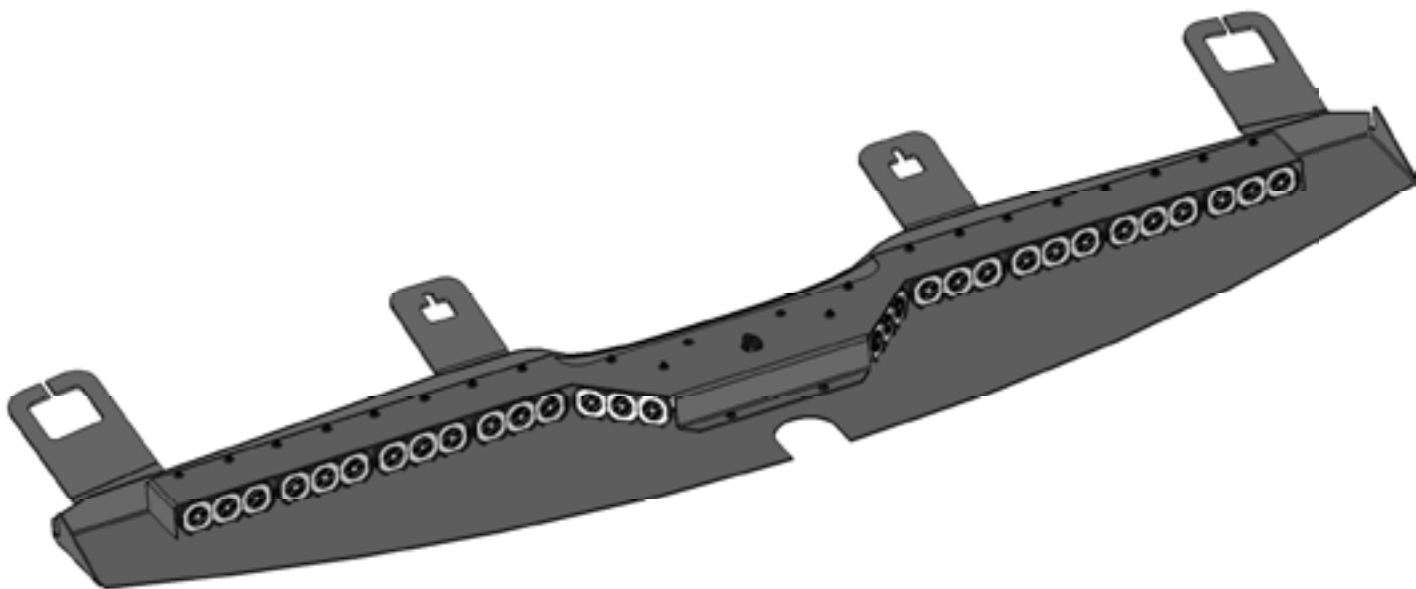


INSTALLATION & OPERATION MANUAL

SuperVisor TS™



CODE 3
A PUBLIC SAFETY EQUIPMENT COMPANY

SuperVisorTS™

Interior Lighting System

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For future reference, record your product's serial no. here _____

IMPORTANT:


Read all instructions and warnings before installing and using.

INSTALLER:

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

Introduction

The SuperVisor TS™ is an interior lighting system that fits in the visor area near the top of the windshield. The SuperVisor has room for up to ten light heads.



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. 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. Never power emergency warning equipment from the same circuit or share the same grounding circuit with radio communication equipment. 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. 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. 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.

Unpacking & Pre-installation


Carefully remove the SuperVisor and place it on a flat surface, taking care not to scratch the lenses or damage the cable coming out of the top. Examine the unit for transit damage, broken lamps, etc. Report any damage to the carrier and keep the shipping carton.

Standard light bars are built to operate on 12 volt D.C. negative ground (earth) vehicles. If you have an electrical system other than 12 volt D.C. negative ground (earth), and have not ordered a specially wired light bar, contact the factory for instructions.

Test the unit before installation. To test, touch the black wire to the ground (earth) and the other wires to +12 volts D.C., in accordance with the instructions attached to the cable (an automotive battery is preferable for this test). A battery charger may be used, but note that some electronic options may not operate normally when powered by a battery charger. If problems occur at this point, contact the factory.

Note: Before beginning the installation process, be absolutely certain that the Light Bar functions as desired (See page 6 for options)!

WARNING!



Utilizing non-factory supplied screws and/or mounting brackets and/or the improper number of screws may result in loss of warranty coverage on the equipment.

Mounting Hardware - All mounting hardware is packed in a small bag inside the main carton. There are four brackets used to mount the SuperVisor to the vehicle. These are discussed in detail later.

Installation and Mounting Instructions

Step 1 Using a thin flat blade screwdriver, remove the plastic covers (if applicable) from the vehicle's driver and passenger outer sun visor pivot brackets (see Figures 1 & 2). Remove the screws from each of the vehicle's visor pivot brackets as shown in Figure 3. Pull the visor pivot brackets down from the headliner and very carefully allow the sun visors to hang by the vehicle's attached vanity mirror light wires if so equipped.

Step 2 Remove the screw(s) that holds each of the vehicle's inner visor clips in place (See Figure 4).

Step 3 Attach the plastic inner visor clips to the SuperVisor Inner Mounting Brackets (See Figure 5) and position them up to the headliner as shown in Figure 6. Use the screws removed in previous step for this. For the Ford NGPI thread the supplied #8 X 1" Phillips Truss Head Black Oxide Screw up through each of the inner visor clips and into the mounting holes in the vehicle's headliner. Do not fully tighten screws at this time..

Step 4 Attach the plastic outer visor pivot brackets to the supplied SuperVisor Outer Mounting Brackets noting the difference between the passenger and driver side and fasten the screws in each bracket (example shown in Figure 7). Tighten the screws to bring the brackets just up against the headliner but do not fully tighten the screws at this time.

Step 5 Route the SuperVisor's cable to the desired side of the vehicle and through the cable clearance slot at the end of the SuperVisor's Outer Panel. Make sure the cable will not interfere with the vehicle's headliner and windshield as you position the SuperVisor up to the headliner in front of the SuperVisor Mounting Brackets as shown in Figure 8.

Step 6 Line up the slots in the SuperVisor Inner Mounting Brackets with the threaded holes in the SuperVisor, and thread the supplied 1/4"-20 screws and internal tooth lock washers through the slots and into the SuperVisor's Outer Panel (see Figure 9).

Step 7 Line up the slots in the SuperVisor Outer Mounting Brackets and thread the supplied 1/4"-20 screws and internal tooth lock washers through the slot in the SuperVisor's Outer Mounting Brackets and into the SuperVisor's Outer Panel (see Figure 10).

Step 8 Center up the SuperVisor in the vehicle and tighten each of the screws in the SuperVisor's Inner Mounting Brackets (example shown in Figure 11), then tighten the screws in each of the SuperVisor Outer Mounting Brackets (example shown in Figure 12). For the Impala model remove the rear view mirror by removing the screws that attach the mirror to the bracket.

Step 9 While pushing the SuperVisor very tightly up against the headliner, tighten the (2) 1/4"-20 SuperVisor Inner Mounting Bracket screws as shown in Figure 13, then again while pushing the SuperVisor very tightly up against the headliner, tighten the (2) 1/4"-20 SuperVisor Outer Mounting Bracket screws (example shown in Figure 14). **Note: It is best to have an assistant push up on the SuperVisor while you tighten each of the 1/4"-20 screws to assure that it is tight against the vehicle's headliner.**

Step 10 Replace the vehicle's driver and passenger outer sun visor pivot bracket covers (see Figure 15).

Note: Example pictures shown are from a SuperVisor TS Ford NGPI installation.



Installation and Mounting Instructions: Cont.

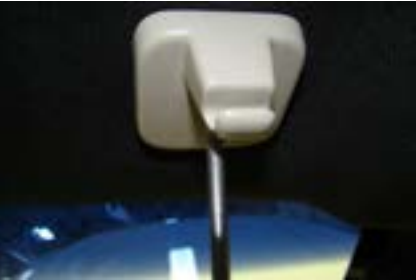


FIGURE 4



FIGURE 5



FIGURE 6



FIGURE 7-DRIVER SIDE SHOWN



FIGURE 8



FIGURE 9



FIGURE 10



FIGURE 11



FIGURE 12



FIGURE 13



FIGURE 14



FIGURE 15

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. 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.

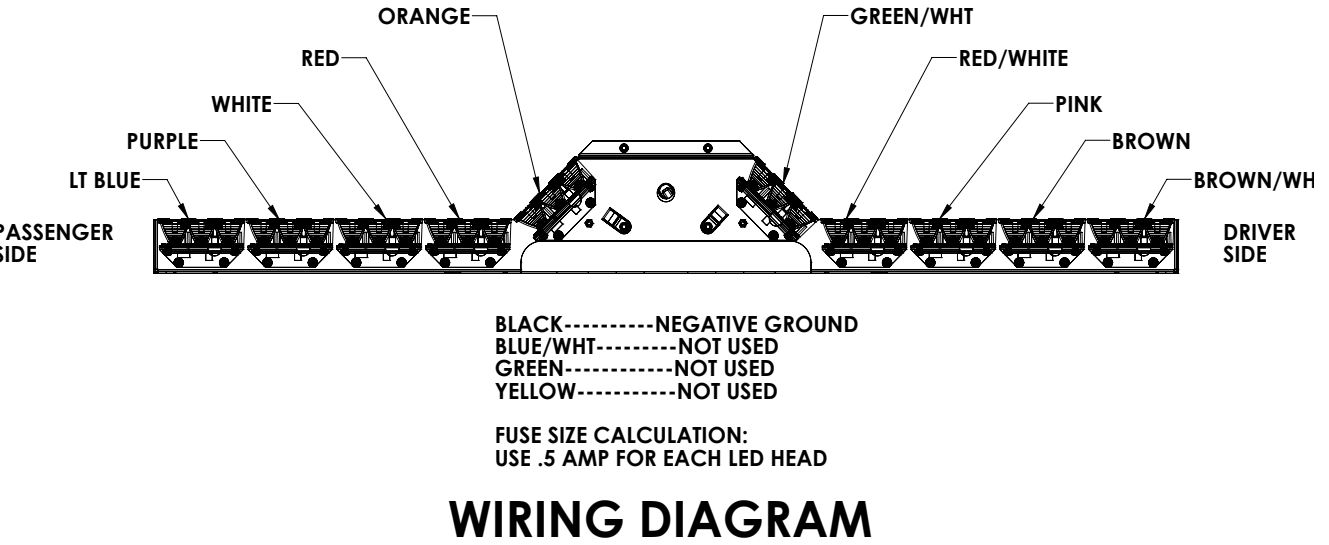
Caution: Drilling into the housing of the light bar could damage wiring or other internal components.

Wiring Instructions

Finish routing the cable as desired. It is advisable to leave an extra loop of cable when installing the light bar to allow for future changes or reinstallations. Connect the black lead to a solid frame ground (earth), preferably the (-) or ground (earth) side of the battery, and the power wire to the +12V terminal of the battery. Connect the remaining wires as shown on page 5.

WARNING!

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). Route wiring using grommets and sealant when passing through compartment walls. Minimize the number of splices to reduce voltage drop. High ambient temperatures (e.g. under hood) will significantly reduce the current carrying capacity of wires, fuses, and circuit breakers. Use "SXL" type wire in engine compartment. 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. 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. 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. Ground terminations should only be made to substantial chassis components, preferably directly to the vehicle battery. The user should install a fuse sized to approximately 125% of the maximum Amp capacity in the supply line to protect against short circuits. For example, a 30 Amp fuse should carry a maximum of 24 Amps. **DO NOT USE 1/4" DIAMETER GLASS FUSES AS THEY ARE NOT SUITABLE FOR CONTINUOUS DUTY IN SIZES ABOVE 15 AMPS.** Circuit breakers are very sensitive to high temperatures and will "false trip" when mounted in hot environments or operated close to their capacity.



LED Fusing Considerations

Although the average current draw per module is very low, due to the type of circuit used to power each module, the instantaneous peak current to a module can be significantly higher during low voltage conditions. To avoid prematurely blowing ATO style fuses or tripping breakers it is recommended the following rule-of-thumb be used to size fuses or breakers. This is especially important in lightbars with many LED modules running off a single fused source.

Minimum fuse size calculation: (See Wiring Diagram page 5)
For LED 12 volt electrical current only
.5 X (number of 3 LED modules being fused) = Total Electrical Current at 12.8 VDC

WARNING!


This Product contains high intensity LED devices. To prevent eye damage, DO NOT stare into light beam at close range.

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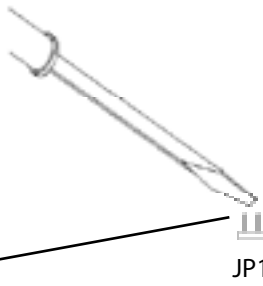
Changing Flash Patterns

To change the flash patterns on the LED Light Heads, remove the mounting screws that attach the SuperVisor's Cover to the Outer Panel to gain access to the printed circuit boards inside (see the exploded view on page 10). Momentarily short and release the pattern change prongs as shown below to change patterns. Carefully replace the SuperVisor's Cover over the Outer Panel and replace the Cover Mounting Screws.

Note: Be extremely careful to replace the wiring such that you don't pinch a wire when you replace the SuperVisor's Cover. Test the unit to be sure that it works properly.

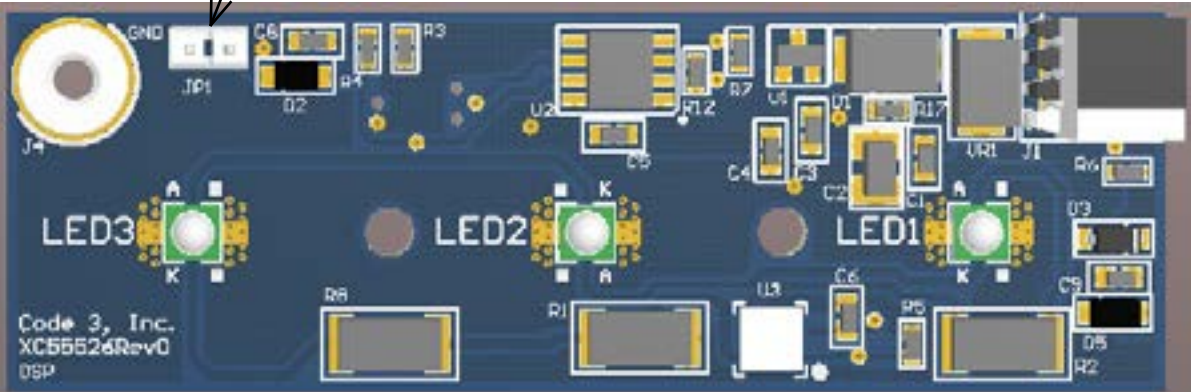
1. Momentarily short and release to change patterns

2. Hold for 5 seconds to reset the flash pattern to the first pattern



Directional Module Flash Pattern - Table 2

Cycle Flash-70 - (DEFAULT)	Variable
Flash Single	
NFPA Quad Flash-80	Cycle Flash-150
Quad Flash-70	Five Flash-150
Steady Burn	Quad Flash-150
Five Flash-70	Triple Flash-150
Triple Flash-70	Double Flash-150
Double Flash-70	Single Flash-150
Single Flash-70	Single Flash-250
Quad Pop Flash-70	Single Flash-375



Torus 3LED PCB

Flash Pattern Header for

Troubleshooting

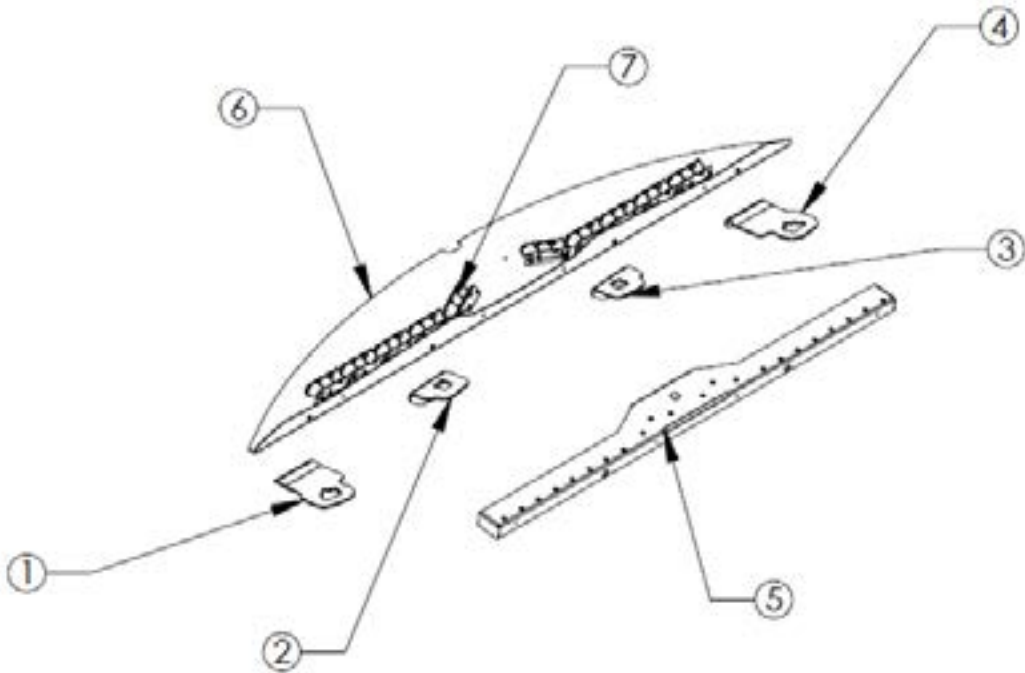
All SuperVisorTLs are thoroughly tested prior to shipment. However, should you encounter a problem during installation or during the life of the product, follow the guide below for information on repair and troubleshooting. Additional information may be obtained from the factory technical help line at 314-996-2800. Follow the guide below

TROUBLESHOOTING GUIDE

Note: LED modules must be replaced as a module. There are no user serviceable parts.

PROBLEM	QUESTIONS	POSSIBLE CAUSE	SOLUTION
LED module not operating when powered.	N/A	a. Bad power/ground connection.	a. Fix connection.
		b. Defective module.	b. Replace module

Parts List



		Part Numbers by SuperVisor TS Models								
Ref. No.	Part Description	Ford VDP	Ford Explorer 11+	Crown Vic 96+	Chevrolet Impala 06+	Chevrolet Tahoe 07+	Ford Exped. 07+	Ford F150 11+	Dodge Charger 11+ Standard	Dodge Charger 11+ w/ Dome
1	Outer Mtg. Brkt. Driv. Side	T15347	T15386	T14709	T14714	T14717	T14780	T15464	T15336	T15336
2	Inner Mtg. Brkt. Driv. Side	T15350	T15386	T14708	T14700	T14719	T14780	T15460	T15341	T15341
3	Inner Mtg. Brkt. Pass Side	T15350	T15394	T14708	T14700	T14719	T14779	T15460	T15341	T15341
4	Outer Mtg. Brkt. Pass. Side	T15348	T15387	T14710	T14713	T14718	T14791	T15465	T15340	T15340
5	Chassis	T15353	T15395	T14712	T14704	T14720	T14770	T15462	T15344	T15437
6	Outer Panel	T15345	T15375	T14711	T14703	T14721	T14786	T15457	T15333	T15433
7	Torus Module	Contact Code 3, Inc. for Lighting Part Number								

Note: Contact Code 3, Inc. for part numbers on earlier model years.

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 Lighthouse 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.

NEED HELP? Call our Technical Assistance HOTLINE - (314) 996-2800

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