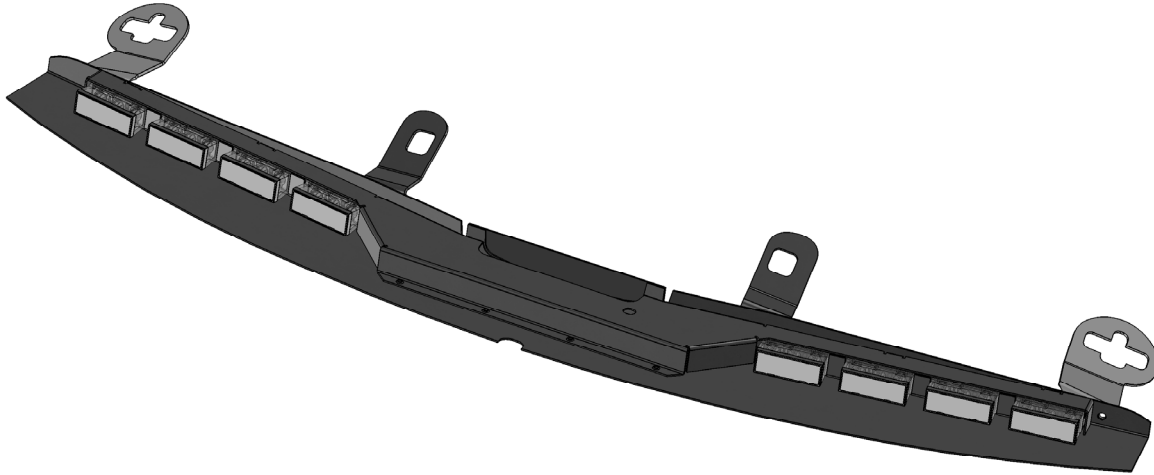


INSTALLATION & OPERATION MANUAL

SuperVisor®



CODE 3[®]
A PUBLIC SAFETY EQUIPMENT COMPANY

SuperVisor® with Tri-Core® Technology

U.S. Patent Nos. 7,153,015 and 7,300,175, Other Patents Pending

Interior Lighting System

Ford Explorer

2007-2009 Model

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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® with TriCore® Technology is an interior lighting system that fits in the visor area near the top of the windshield. The SuperVisor has room for up to eight TriCore light heads.

Product Features

TriCore® light head options: Red, Blue, Amber, and White-----Flashing or Steady Burn Control

Size:48.79" long x 1.69" tall x 8.70" deep-----Weight: 7.5 lbs



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 7 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 Removing Sun Visors

Begin the installation by removing the driver and passenger sun visor pivot brackets. Identify each visor with tape or other marking to indicate the driver from the passenger side unit; they are not always identical. There are two screws that hold the sun visor pivot arm bracket to the headliner. Remove each screw using a #2 Phillips screwdriver as shown in Figures 1 and 2.

Step 2 Remove the visor retaining clips

To remove the sun visor retaining clips, unscrew the single #2 Phillips screw holding each clip in place as shown in Figure 3.



FIGURE 1



FIGURE 2



FIGURE 3

Step 3 Position the SuperVisor®

Route the cable along the top driver side of the SuperVisor so that as you position the SuperVisor it will lay between the headliner edge of the SuperVisor and the headliner of the vehicle (see Figure 4) **(Note: If desired you can route the cable on the passenger side instead of the driver side but the step 3 instructions would all be opposite hand. The cable can also be routed up above the headliner across and down behind the plastic corner door post covers and under the dashboard. Refer to the service manual for the Ford Explorer for detailed instructions as to how to remove the door post cover for access to route the cable.)** Turn the rear view mirror down toward the dashboard as far as possible to keep it out of the way for positioning the SuperVisor (see Figure 5). Begin positioning the SuperVisor by pushing the passenger side end of the SuperVisor up in the upper passenger side corner of the windshield in front of and above the plastic door post cover (see Figure 6). Slowly and carefully move the driver side end up into position as you push the SuperVisor toward the passenger side and press in hard on the driver side plastic door post cover to keep from scratching it as you position the SuperVisor. Once the SuperVisor is in position you can turn the rear view mirror back up against the under side of the SuperVisor to help hold it in place for the next steps of the installation.



FIGURE 4



FIGURE 5



FIGURE 6

Step 4 Attach the pivot arm brackets

Attach the outer mounting brackets that are supplied noting the difference between passenger and driver side brackets (see Figure 7 -Driver side shown). Rotate the pivot arm bracket on the Driver's side sun visor and verify that the orientation of the outer mounting bracket is as shown in Figure 8. Position the Driver's side pivot arm and attach the first Phillips screw as shown in Figure 9, then install the other Phillips screw. Repeat this operation for the Passenger side pivot arm and outer bracket. Do not tighten any of the screws at this time.



FIGURE 7



FIGURE 8



FIGURE 9

Step 5 Mounting the SuperVisor® Inner Mounting Brackets (Driver side shown)

Place the Driver side inner mounting bracket on the Driver side retaining clip and orient as shown in Figures 10 and 11. Attach the inner bracket and retaining clip to the headliner as illustrated in Figure 12. Do not fully tighten the screws at this time. Repeat these steps for the Passenger side Inner mounting bracket. Next line up the mounting holes in the Inner mounting brackets with the threaded holes in the SuperVisor and loosely thread the supplied 1/4"-20 bolts and internal tooth lock washers in the SuperVisor's Outer Panel (see Figure 13). Line up the mounting holes in the outer mounting brackets with the threaded holes in the SuperVisor and loosely thread the supplied 1/4"-20 bolts and internal tooth lock washers in the SuperVisor's Outer Panel (see Figure 14). Tighten the two #2 Phillips Head screws in each of the two outer Pivot Brackets (see Figure 9 again). Tighten both of the inner mounting bracket screws (see Figure 12 again).



FIGURE 10



FIGURE 11



FIGURE 12



FIGURE 13



FIGURE 14

Step 6 Mounting the SuperVisor Outer Mounting Brackets

While pushing up on the SuperVisor's Outer Panel under each of the inner mounting brackets, tighten each of the 1/4-20 bolts (see Figure 15). The idea is to close up any gaps between the vehicle's headliner and the headliner edge of the SuperVisor so that the light from the light bar doesn't leak through. Again while pushing up on the SuperVisor's Outer Panel under each of the outer mounting brackets, tighten each of the 1/4-20 bolts (see Figure 16).



FIGURE 15



FIGURE 16

The bracket fasteners make excellent hard mounting points for radar guns and video cameras, etc.

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

Cable Routing Instructions

Route the wiring cable into the passenger compartment down the door post as shown in Figure 17 (passenger side shown) or as otherwise desired (As stated before in the "Note" in Step 3 the cable can also be routed up above the headliner across and down behind the plastic corner door post covers and under the dashboard. Refer to the service manual for the Ford Explorer for detailed instructions as to how to remove the door post cover for access to route the cable). It is advisable to leave an extra loop of cable when installing the light bar to allow for future changes or reinstallations.



FIGURE 17

Wiring Instructions

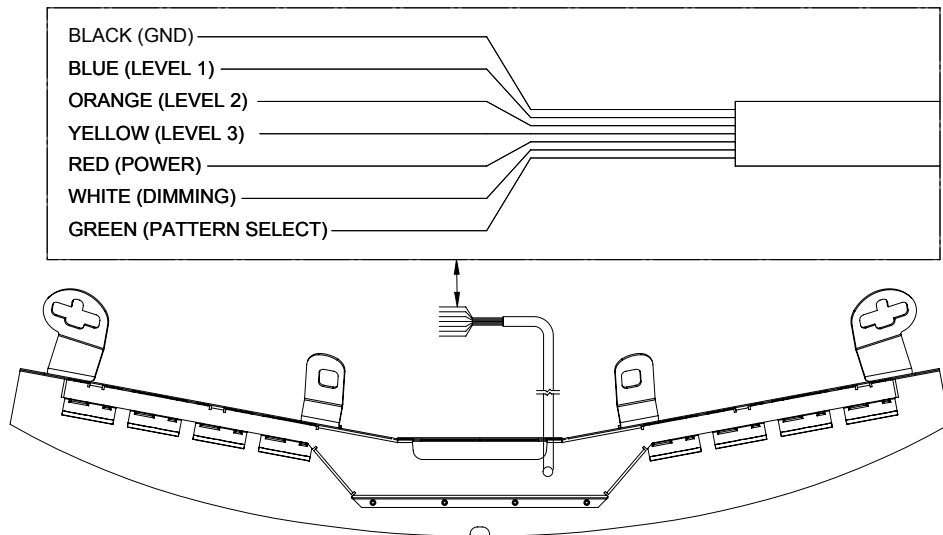
Connect the black lead to a solid frame ground (earth), preferably the (-) or ground (earth) side of the battery, and the power wire to the +12V terminal of the battery. Connect the remaining wires as shown on page 6.



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.

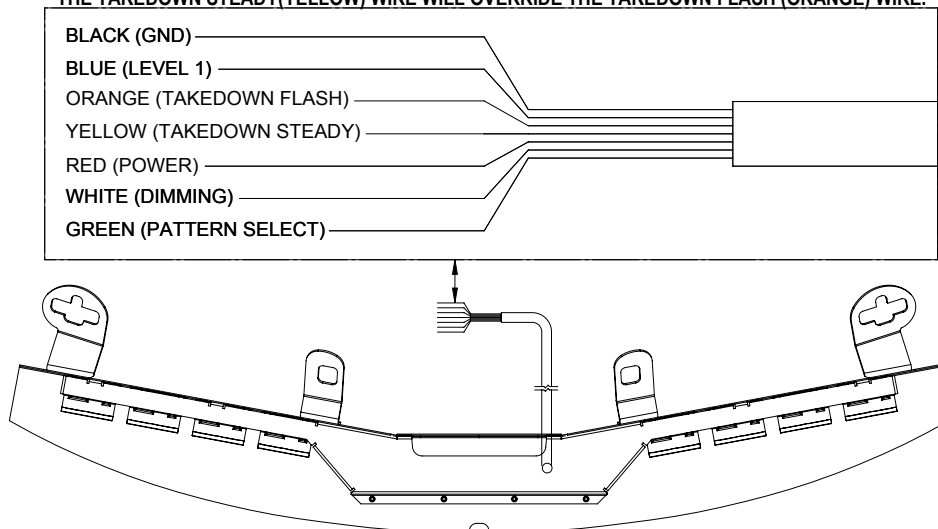
Wiring Diagram - NO TAKE DOWNS

FUSE WITH CUSTOMER SUPPLIED 10 AMP FUSE



Wiring Diagram - WITH TAKE DOWNS

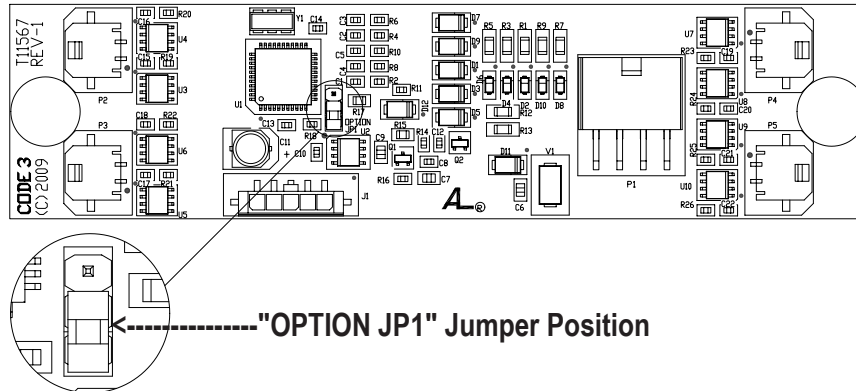
NOTE: FOR SUPERVISORS WITH TAKE DOWN OPTION CONTROL WIRES ARE AS SHOWN BELOW. THE TAKEDOWN STEADY(YELLOW) WIRE WILL OVERRIDE THE TAKEDOWN FLASH (ORANGE) WIRE.



Steady Burn Option

The SuperVisor® can operate Light Head #2 (second Light Head from the driver side) in steady burn mode. To change the #2 Light Head from flashing to steady burn, remove the mounting screws that attach the SuperVisor's Cover to the Outer Panel to gain access to the printed circuit board inside (see the exploded view on page 8). Move the Shunt Option Jumper on the printed circuit board to the "OPTION JP1" position as shown below. The #2 Light Head should now operate in steady burn. 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.



WARNING!



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

TriCore® Light Head Flash Pattern

To change the flash patterns of the TriCore Light Heads, activate the Light Bar in Level 1 and then momentarily touch the Green (Pattern Select) wire to +power. Repeating this procedure allows the operator to cycle through the numerous flash patterns offered until the desired pattern is achieved.

To reset the flash patterns to the factory default, activate the Light Bar in Level 1 and then hold the Green (Pattern Select) wire to +power for approximately 4 seconds.

TriCore Take Down Flash Pattern

Selecting Flash Patterns: The Take Down Lights can be programmed to flash at different rates.

STEP 1: Power-up the light bar. Select the Take Down Flash Mode (ORANGE) by applying +power. Programming will not work if more than one function is selected at a time.

STEP 2: Observe the flash pattern and determine which pattern is in operation (see Take Down Flash Patterns). This table shows the available flash patterns. Once the flash pattern has been determined, proceed to Step 3. **NOTE: The default flash pattern for Take Down Lights is Medium Single 115FPM.**

STEP 3: Scroll to the next pattern by momentarily holding the GREEN wire to +power for ~one (1) second. The light bar will stop flashing when the wire is connected to +power. Release the wire and the next pattern as listed in Table 5 will begin to flash. The new pattern is automatically stored each time.

Flash Patterns

STANDARD LIGHT HEAD FLASH PATTERNS		TAKE DOWN FLASH PATTERNS	
PATTERN NO	PATTERN DESCRIPTION	PATTERN NUMBER	PATTERN DESCRIPTION
1	FAST ALTERNATING QUAD FLASH 100ms/25ms	1	FAST QUAD 80FPM
2	PICKET FENCE SINGLE FLASH 200ms/25ms	2	SLOW QUAD 60FPM
3	ALTERNATING SINGLE FLASH 200ms/25ms	3	FAST SINGLE 375FPM
4	PICKET FENCE QUAD FLASH 100ms/25ms	4	FACTORY DEFAULT MEDIUM SINGLE 115FPM
5	PICKET FENCE SIX FLASH 75ms/25ms	5	SLOW SINGLE 60FPM
6	SLOW ALTERNATING QUAD FLASH 150ms/50ms	6	FAST DOUBLE 115FPM
7	SLOW ALTERNATING SIX FLASH 125ms/25ms	7	SLOW DOUBLE 60FPM
8	FAST ALTERNATING SIX FLASH 75ms/25ms	8	FAST SIX 80FPM
9	VARIABLE RATE PICKET FENCE, SINGLE FLASH	9	SLOW SIX 60FPM
10	ALTERNATING QUAD FLASH, 80 FPM, NFPA COMPLIANT	10	VARIABLE RATE SINGLE
11	CYCLE FLASH	11	NFPA QUAD 75FPM
12	SIMULTANEOUS QUAD FLASH, 75 FPM, NFPA COMPLIANT	12	CYCLE FLASH

Troubleshooting

All SuperVisors® 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 for information on repair and troubleshooting.

TROUBLESHOOTING GUIDE

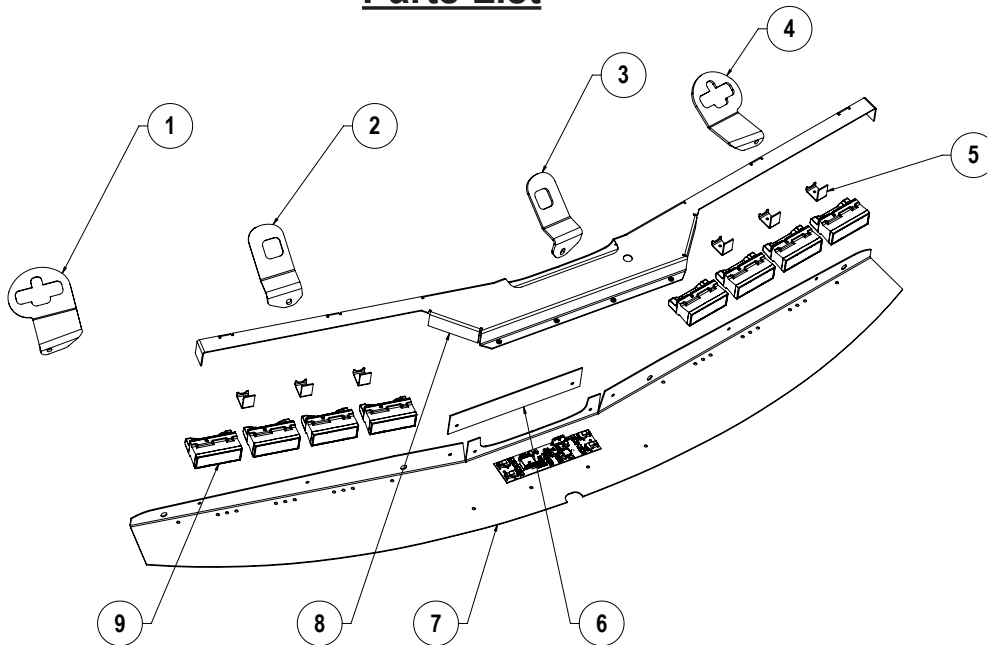
Note: TriCore® Modules must be replaced as a module. There are no user serviceable parts.

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



Any disassembly of any of the TriCore light heads will result in loss of warranty coverage on the equipment.

Parts List



Reference Number	Part Description	Part Number
1	Outer Mtg. Brkt. Pass Side	T14763
2	Inner Mtg. Brkt. Pass Side	T14761
3	Inner Mtg. Brkt. Drivr Side	T14762
4	Outer Mtg. Brkt. Drivr Side	T14764
5	Blank Brkt.	T15056
6	Center Plate for (vehicles without center console)	T56363
7	Outer Panel	T56359
8	Cover	T56360
9	TriCore® Module	Contact Code 3, Inc for P/N

NOTES:

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NOTES:

WARRANTY

This product with TriCore® Technology was tested and found to be operational at the time of manufacture. Provided this product is installed and operated in accordance with the manufacturer's recommendations, Code 3®, Inc. warrants all parts and components (with the exception of all incandescent and halogen bulbs) of the product to be free of defects in material and workmanship for a period of one (1) year and TriCore light heads for a period of five (5) years from the date of purchase. This Warranty excludes normal wear & tear. Units demonstrated to be defective within the warranty period will be repaired or replaced at the factory service center at no cost. Code 3, Inc. will return the repaired product with transportation cost prepaid. Code 3, Inc. assumes no liability for expenses incurred in the packaging, handling, and shipping of the product to the Factory Technical Service Department for repair. For in-warranty product return authorization, questions regarding product warranty coverage or questions regarding out-of-warranty repair quotes, contact the Factory Technical Service Department.

The TriCore light heads are sealed as part of the quality control process. This Warranty is void if, in the judgment of Code 3, Inc. (1) an attempt has been made to break the light head seal or repair the light head, and/or (2) the product has been used with inappropriate or inadequate wiring or circuit protection, and/or (3) the product has failed as a result of abuse or unusual use and/or accidents.

CODE 3, INC. SHALL IN NO WAY BE LIABLE FOR ANY OTHER DAMAGES RELATING TO THE PRODUCT INCLUDING BUT NOT LIMITED TO CONSEQUENTIAL, INCIDENTAL, INDIRECT OR SPECIAL DAMAGES OR LOST PROFITS OR REVENUE; NOR ANY EXPENSES INCURRED IN THE REMOVAL AND/OR RE-INSTALLATION OF PRODUCTS REQUIRING SERVICE AND/OR REPAIR.

EXCEPT AS SET FORTH ABOVE, CODE 3, INC. MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES WHATSOEVER, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, WITH RESPECT TO THIS PRODUCT.

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

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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