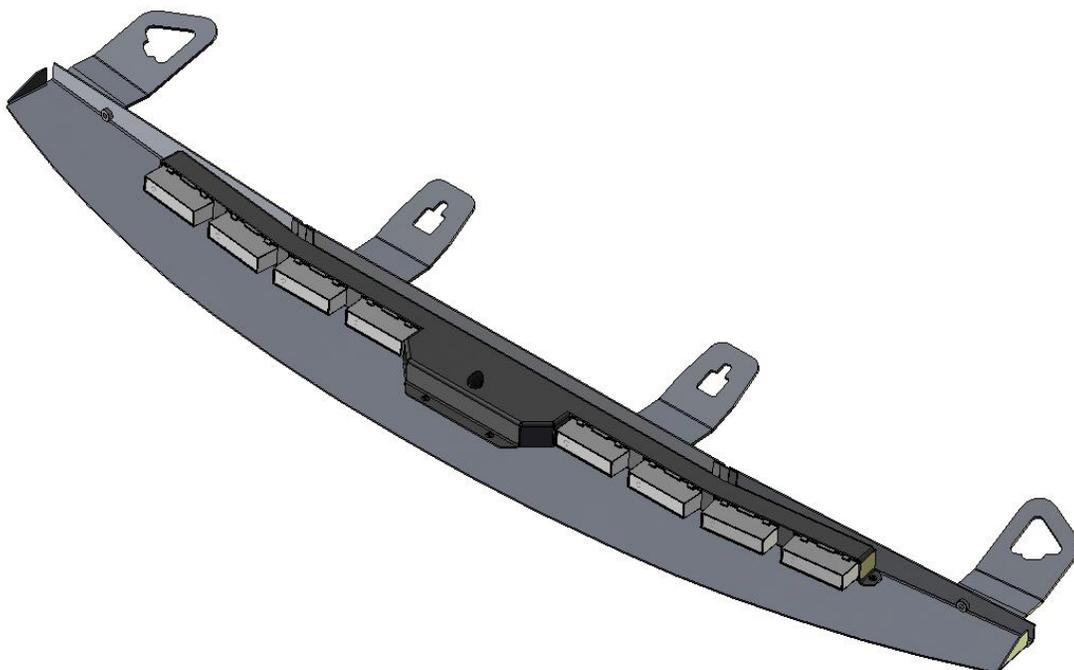


# INSTALLATION & OPERATION MANUAL

## SuperVisor™



**CODE 3**<sup>®</sup>  
A PUBLIC SAFETY EQUIPMENT COMPANY

## SuperVisor™ with TriCore™ Technology

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

Interior Lighting System

Ford Crown Victoria

### CONTENTS:

Introduction .....	2
Unpacking & Pre-Installation .....	2
Installation & Mounting .....	3-4
Wiring Instructions - Flash Pattern Selection .....	5-6
Troubleshooting - Exploded View - Parts List .....	7
Warranty .....	8

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 lightheads.



## 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.**

## 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 lightbars 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 lightbar, 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.



## WARNING!

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

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

# Installation Instructions

## Step 1-Removing Sun Visors

Begin the installation by removing the Crown Victoria's driver and passenger sun visors. Identify each visor with tape or other marking to indicate the driver from the passenger side unit; they are not identical. There are three screws that hold the pivotal arm of the sun visor to the headliner. Remove each screw using a small #20 torx screwdriver starting with the lower screw as shown in Figure 1. Then unclip the sun visor and rotate it over to expose and remove the two upper screws.

## Step 2 Remove the visor retaining clips

Remove the sun visor retaining clips, unscrew the single torx screw holding each one in place as shown in Figure 2.



FIGURE 1



FIGURE 2

## Step 3 Attach the pivot arm brackets

Attach the outer brackets that are supplied noting the difference between passenger and driver side brackets (see Figure 3 -**Driver side shown**). Rotate the Pivot Arm on the Driver's side sun visor and verify the orientation of the Outer Bracket as shown in Figure 4. Position the Driver's Side pivot arm and loosely attach the first Torx screw as shown in Figure 5. Next, move the sun visor over in order to gain access to loosely attach the other two Torx screws. Repeat this operation for the Passenger Side pivot arm and outer bracket. Do not tighten any of the screws at this time.



FIGURE 3



FIGURE 4

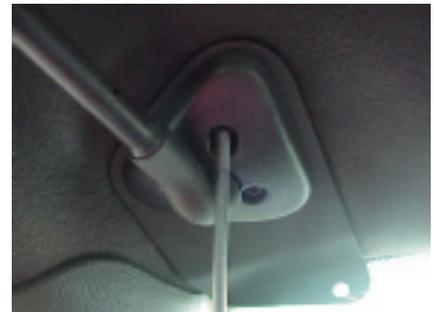


FIGURE 5

## Step 4 Attach brackets to sun visor retaining clips

Place the inner bracket on the retaining clip as shown in Figures 6 and 7. Loosely attach the inner bracket and retaining clip to the headliner as illustrated in Figure 8. Do not tighten these screws at this time.



FIGURE 6



FIGURE 7



FIGURE 8

## Installation Instructions Cont.

### Step 5 Mounting the SuperVisor™

Once all four brackets and sun visors are attached, the SuperVisor is now ready to be installed. Rotate the rear view mirror down as far out of the way as possible. The cable can either be routed across the top of the SuperVisor and down the corner door post as shown in Figure 9 or up under the headliner at the center of the vehicle, then across and down behind the plastic corner door post cover, then down to the floor behind the dashboard (whichever is preferable). **Note: To Route the cable above the headliner and down behind the door post covers, refer to the Ford service manual for detailed instructions as to how to remove the door post cover to gain access to route the cable.** It is advisable to leave an extra loop or loops of cable when installing the light bar to allow for future changes or reinstallations. Carefully move the SuperVisor into position by tilting one end up with the front outer tip of the SuperVisor in front of the corner post of the Crown Vic as shown in Figure 10, then swing the other end up into position being very careful not to scratch the Crown Vic's plastic corner post covers (**Note: As you are moving the SuperVisor into position Make sure you keep the slack out of the SuperVisor's power cable so that it will not interfere with the final positioning of the SuperVisor**). Line up the mounting holes in the outer mounting brackets with the threaded holes in the SuperVisor and thread the supplied 1/4"-20 bolts and internal tooth lock washers into the SuperVisor's Outer Panel (see Figure 11). 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 into holes in the SuperVisor's Outer Panel (see Figure 12). Tighten the 1/4-20 bolts in the Outer Mounting Brackets (see Figure 13), then tighten the three Torx screws in each of the two outer Pivot Brackets. Tighten the two center inner mounting screws, then while pushing up on the SuperVisor's Outer Panel, tighten the last two 1/4-20 bolts at the Inner Mounting Brackets (see Figure 14).



**FIGURE 9**



**FIGURE 10**



**FIGURE 11**



**FIGURE 12**



**FIGURE 13**



**FIGURE 14**

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

**Caution: Drilling into the housing of the lightbar could damage wiring or other internal components.**

### Product Features

TriCore™ lighthouse options:

Red, Blue, Amber, White, and Green;  
Flashing or Steady Burn Control

Size: 46.53" long x 1.69" tall x 6.97" deep

Weight: 7.5 lbs

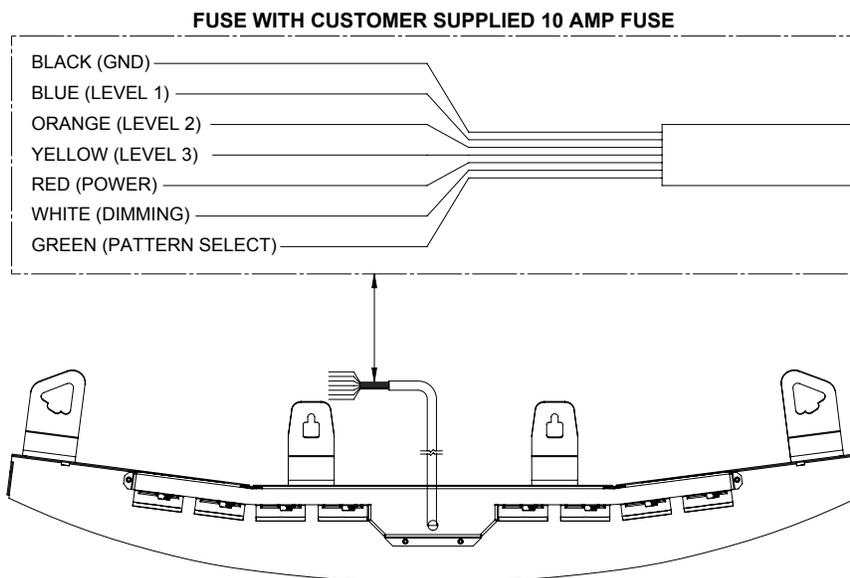
# Wiring Instructions



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. underhood) 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 and Flash Pattern Changes - NO TAKEDOWNS

It is advisable to leave an extra loop of cable when installing the lightbar 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 below.



NOTE: FOR SUPERVISORS WITH TAKE DOWN OPTION SEE DIAGRAM ON NEXT PAGE

**WARNING!**



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

## TriCore Lighthead Flash Pattern

To change the flash patterns of the TriCore Lightheads, activate the Lightbar 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.

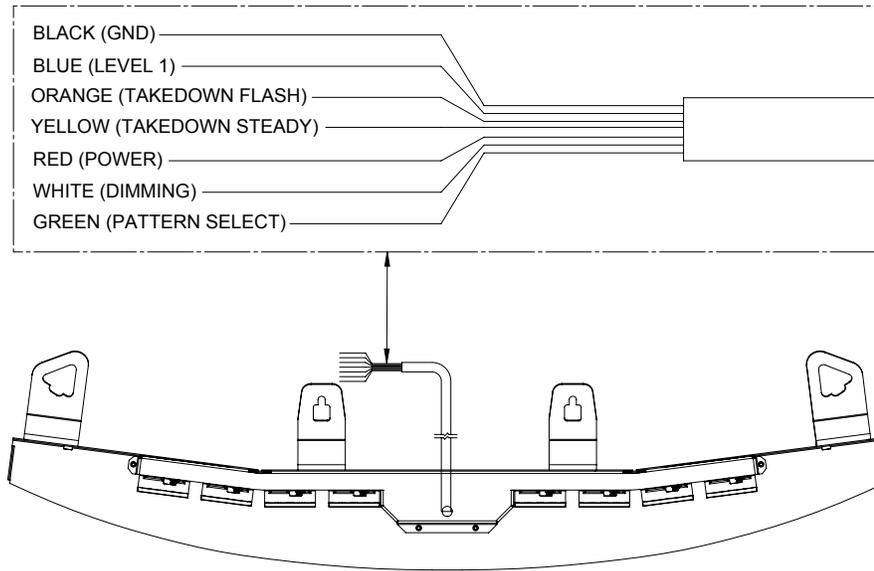
To reset the flash patterns to the factory default, activate the Lightbar in Level 1 and then hold the Green (Pattern Select) wire to +power for approximately 4 seconds.

For table of flash patterns see next page.

# Wiring Diagram and Flash Pattern Changes - WITH TAKEDOWNS

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.



## TriCore Takedown Flash Pattern

### Selecting Flash Patterns:

The Takedown Lights can be programmed to flash at different rates.

**STEP 1:** Power-up the lightbar. Select the Takedown 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 Takedown 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 Takedown 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 lightbar 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.

**NOTE:** To restore the Factory Default Takedown Flash Patterns, hold the GREEN wire to +power for ~four (4) seconds.

### Flash Patterns

STANDARD LIGHT HEAD FLASH PATTERNS		TAKEDOWN 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.

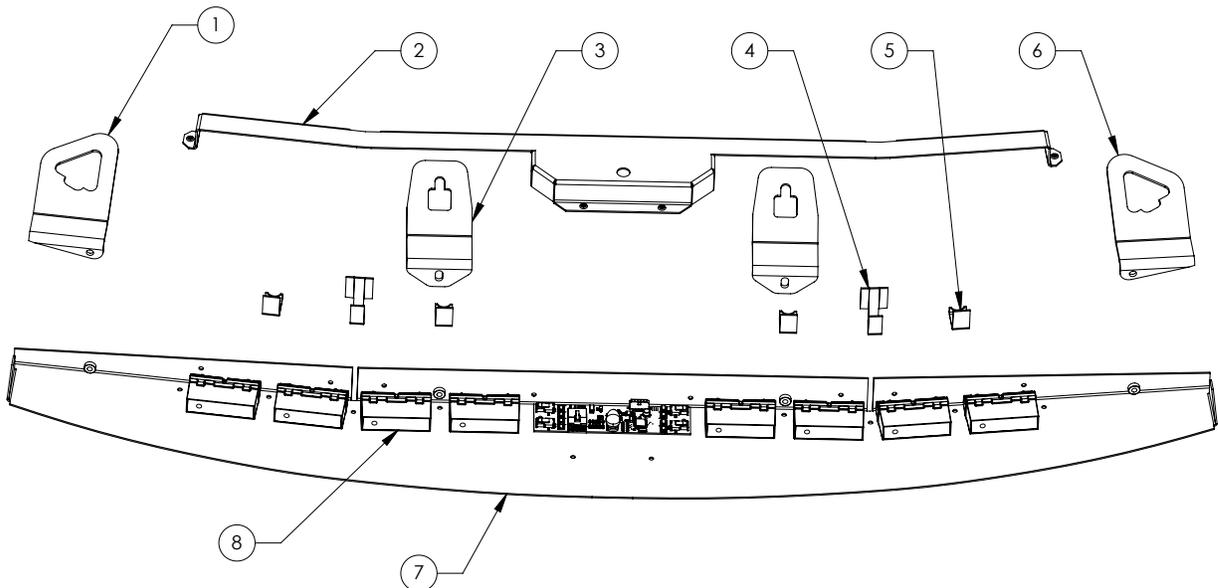
## TROUBLESHOOTING GUIDE

**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



**WARNING!** 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. Crown Vic Pass Side	T14710
2	Cover	T15053
3	Inner Mtg. Brkt. Crown Vic	T14708
4	Light Blocking Brkt. Crown Vic	T15055
5	Blank Brkt. Crown Vic	T15056
6	Outer Mtg. Brkt. Crown Vic Drivr Side	T14709
7	Outer Panel	T15039
8	TriCore™ Module	Contact Code 3, Inc for P/N

# 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.**

# 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**

**Code 3®, Inc.**  
10986 N. Warson Road  
St. Louis, Missouri 63114-2029—USA  
Ph. (314) 426-2700 Fax (314) 426-1337  
[www.code3pse.com](http://www.code3pse.com)