# FLASH PATTERN SELECTION INSTRUCTIONS



#### FOR DEFENDER® LIGHT BARS



AND RX 2700CC LIGHT BARS

**SUPPLEMENT TO MANUALS T11488 & T51171** 



# RX2700CC / DEFENDER® 800 SERIES SOFTWARE

## FLASH PATTERN SELECTION INSTRUCTIONS

#### **CONTENTS:**

LED Modules	2-3
ArrowStik® Modules	4
Takedown and Alley Light Modules	5
Notes	6-7
Warranty	8

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



Read all instruction and warnings before installing and using.

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

### LED/TriCore® Modules:

#### **Selecting Flash Patterns:**

There are seven possible 3-Level modes of operation (see Table 1). These modes are activated by combinations of the L1 (GRN/BLK), L2 (WHT/BLK) and L3 (RED/BLK) wires. For example a standard progressive switch will use the Level-1 (L1), Level-2 (L1 + L2) and Level-3 (L1 + L2 + L3) modes. When using individual switches, make sure to select patterns for all possible switch combinations. Each of the 3-Level modes of operation can individually flash up to 9 pairs of lightheads. Each pair of lightheads is programmed with a different wire in the 16 conductor cable (see Table 2).

#### STEP 1:

Power-up the light bar. Select the desired 3-Level mode to program by applying +power to the appropriate wire in the 16 conductor cable (see Table 1).

#### STEP 2

Continue applying +power to the wire(s) from Step 1. Enter Pattern Selection Mode by applying +power to the BLK/RED wire in the 16 conductor cable.

NOTE: The BLK/RED wire must be connected to +power during Pattern Selection Mode and must be removed from +power when pattern selection is completed. Failure to remove the BLK/RED wire from +power will effect the normal operation of the light bar.

#### STEP 3:

Continue applying power to the BLK/RED wire and the wire(s) from Step 1. Refer to Table 3 for the available flash patterns.

To increment to the next pattern, momentarily hold the appropriate pattern selection wire (see Table 2) to +power for less than two seconds and then release. The four corner light heads will turn on steady to indicate that the pattern has been incremented.

To decrement to the previous pattern, momentarily hold the appropriate pattern selection wire (see Table 2) to +power for two to four seconds and then release. The four corner light heads will turn on steady and then turn off to indicate that the pattern has been decremented.

After the pattern selection wire has been released, the new pattern will begin to flash and is automatically stored each time. Repeat this step for each pair of heads using the appropriate pattern selection wire (see Table 2).

NOTE: To restore the Factory Default Emergency Warning Flash Patterns, hold any of the pattern selection wires to +power for more than four seconds. The four corner light heads will turn on steady, turn off and then turn on steady again to indicate that the Factory Default Emergency Warning Flash Patterns have been restored. The factory defaults for a progressive switch application (Level-1, Level-2 and Level-3) are identified in Table 4.

#### STEP 4:

Repeat steps 1 through 3 for each of the seven possible 3-Level modes as desired.

TABLE 1: 3-LEVEL MODES OF OPERATION		
MODE NUMBER	WIRES ACTIVATED	
L1	GRN/BLK (LEVEL-1)	
L2	WHT/BLK	
L1 + L2	GRN/BLK & WHT/BLK (LEVEL-2)	
L3	RED/BLK	
L1 + L3	GRN/BLK & RED/BLK	
L2 + L3	WHT/BLK & RED/BLK	
L1 + L2 + L3	GRN/BLK, WHT/BLK, & RED/BLK (LEVEL-3)	

TABLE 2: PATTERN SELECTION WIRES		
WIRE COLOR	PAIR OF HEADS CONTROLLED	
GRN/WHT	FRONT OUTBOARD	
BLU/BLK	FRONT INBOARD	
ORG/BLK	FRONT CENTER	
GRN	FRONT CORNER	
BLK/WHT	REAR OUTBOARD	
RED/WHT	REAR INBOARD	
BLU/WHT	REAR CENTER	
BLU	REAR CORNER	
BLK	ARROWSTIK® END FLASH	

TABLE 3: EMERGENCY WARNING FLASH PATTERNS		
PATTERN NUMBER	PATTERN DESCRIPTION	
1	FAST QUAD 80FPM *	
2	SLOW QUAD 60FPM *	
3	FAST SINGLE 375FPM	
4	MEDIUM SINGLE 115FPM *	
5	SLOW SINGLE 60FPM *	
6	FAST DOUBLE 115FPM *	
7	SLOW DOUBLE 60FPM *	
8	FAST SIX 80FPM *	
9	SLOW SIX 60FPM *	
10	VARIABLE RATE SINGLE	
11	NFPA QUAD 75FPM *	
12	CYCLE FLASH	
13	NULL FLASH (OFF)	

<sup>\*</sup> Pattern is CA Title 13 compliant.

TABLE 4: FACTORY DEFAULT EMERGENCY WARNING FLASH PATTERNS (PROGRESSIVE SWITCH)			
LAMP POSITION	LEVEL-1 DEFAULT	LEVEL-2 DEFAULT	LEVEL-3 DEFAULT
FRONT OUTBOARD	NULL FLASH (13)	FAST QUAD (1)	CYCLE FLASH (12)
FRONT INBOARD	NULL FLASH (13)	FAST QUAD (1)	CYCLE FLASH (12)
FRONT CENTER	NULL FLASH (13)	FAST QUAD (1)	CYCLE FLASH (12)
FRONT CORNER	NULL FLASH (13)	FAST QUAD (1)	CYCLE FLASH (12)
REAR OUTBOARD	FAST QUAD (1)	FAST QUAD (1)	CYCLE FLASH (12)
REAR INBOARD	FAST QUAD (1)	FAST QUAD (1)	CYCLE FLASH (12)
REAR CENTER	FAST QUAD (1)	FAST QUAD (1)	CYCLE FLASH (12)
REAR CORNER	FAST QUAD (1)	FAST QUAD (1)	CYCLE FLASH (12)
ARROWSTIK® END FLASH	FAST QUAD (1)	FAST QUAD (1)	CYCLE FLASH (12)

### ArrowStik® Modules:

#### Selecting the ArrowStik® Pattern:

The Central Controller is designed to offer user selectable traffic directing and traffic warning flash patterns. Each of the ArrowStik functions (LEFT, CENTER-OUT, RIGHT or FLASH) can be programmed individually for unique patterns and flash rates. This allows the greatest flexibility when controlling the various light bar configurations available. The light bar can be ordered with a 5, 6, 7 or 8 lighthead configuration. The light bar will come from the factory with the Building Fast pattern as the default for LEFT, CENTER-OUT and RIGHT. The default pattern for FLASH is the Standard Flash. If it is desired to change the pattern for any of the functions, follow the programming procedure below.

#### STEP 1:

Power-up the light bar. Select the ArrowStik function that you wish to program (LEFT, CENTER-OUT, RIGHT or FLASH).

Make sure +12v is only applied to the function you are trying to program - otherwise program function will not operate.

#### STEP 2:

Continue applying power to the wire from Step 1. Refer to Table 5 for the available flash patterns.

To increment to the next pattern, momentarily hold the BLK/RED wire to +power for less than two seconds and then release. The four corner light heads will turn on steady to indicate that the pattern has been incremented.

To decrement to the previous pattern, momentarily hold the BLK/RED wire to +power for two to four seconds and then release. The four corner light heads will turn on steady and then turn off to indicate that the pattern has been decremented.

After the pattern selection wire has been released, the new pattern will begin to flash and is automatically stored each time.

Notice that for the LEFT, CENTER-OUT and RIGHT functions there are four pattern choices (Building, Building with 3 Flash for the end lightheads, Traveling Ball with 3 flash for the end lightheads, and Build/Collapse) and three speeds (Fast, Medium and Slow). There are a total of twelve possible selections for each function and then you return to the top selection.

For the FLASH function there are nine traffic warning patterns available. Flash patterns marked with an asterisk "\*" can be selected in Fast, Medium or Slow flash rate.

NOTE: To restore the Factory Default ArrowStik Flash Patterns, hold the BLK/RED wire to +power for more than four seconds. The four corner light heads will turn on steady, turn off and then turn on steady again to indicate that the Factory Default ArrowStik Flash Patterns have been restored.

#### STEP 3:

Repeat steps 1 through 2 for the other ArrowStik functions as desired.

TABLE 5:	TABLE 5: TRAFFIC DIRECTING / TRAFFIC WARNING FLASH PATTERNS			
Mode	LEFT	CENTER-OUT	RIGHT	FLASH
1	Building	Building	Building	Standard Flash*
2	Building, 3 Flash	Building, 3 Flash	Building, 3 Flash	Quad Flash Standard
3	Traveling Ball, 3 Flash	Traveling Ball, 3 Flash	Traveling Ball, 3 Flash	Simultaneous Flash*
4	Build/Collapse	Build/Collapse	Build/Collapse	Quad Flash Simultaneous
5				Even/Odd Flash*
6				Quad Flash Even/Odd
7				Left/Right Flash*
8				Quad Flash Left/Right
9				Traveling Ball Flash*
	All Patterns have a fast, medium, or slow speed.	All Patterns have a fast, medium, or slow speed.	All Patterns have a fast, medium, or slow speed.	Patterns with the * have a fast, medium, or slow speed.

## **Take Down and Alley Light Modules:**

#### **Selecting Flash Patterns:**

The Take Down and Alley Lights can be programmed to flash at different rates.

NOTE: Certain rates are designed for use with LED/TriCore® Take Down or Alleys and may not work well with Halogen Lamps.

#### STEP 1:

Power-up the light bar. Select the Take Down Flash Mode (BLK) or the Alley Flash Mode (BLU/WHT) by applying +power to the appropriate wire. Programming will not work if more than one function is selected at a time.

#### STEP 2:

Continue applying power to the wire from Step 1. Refer to Table 6 for the available flash patterns.

To increment to the next pattern, momentarily hold the BLK/RED wire to +power for less than two seconds and then release. The four corner light heads will turn on steady to indicate that the pattern has been incremented. To decrement to the previous pattern, momentarily hold the BLK/RED wire to +power for two to four seconds and

then release. The four corner light heads will turn on steady and then turn off to indicate that the pattern has been decremented.

After the pattern selection wire has been released, the new pattern will begin to flash and is automatically stored each time.

NOTE: To restore the Factory Default Take Down and Alley Flash Patterns, hold the BLK/RED wire to +power for more than four seconds. The four corner light heads will turn on steady, turn off and then turn on steady again to indicate that the Factory Default Take Down and Alley Flash Patterns have been restored. The default flash pattern for Take Down and Alley Lights is Medium Single 115FPM.

#### STEP 3:

Repeat steps 1 through 2 for the Take Down Flash Mode or the Alley Flash Mode as desired.

TABLE 6: TAKE DOWN AND ALLEY FLASH PATTERNS		
PATTERN NUMBER	PATTERN DESCRIPTION	
1	FAST QUAD 80FPM	
2	SLOW QUAD 60FPM	
3	FAST SINGLE 375FPM	
4	MEDIUM SINGLE 115FPM *	
5	SLOW SINGLE 60FPM *	
6	FAST DOUBLE 115FPM	
7	SLOW DOUBLE 60FPM *	
8	FAST SIX 80FPM	
9	SLOW SIX 60FPM	
10	VARIABLE RATE SINGLE	
11	NFPA QUAD 75FPM	
12	CYCLE FLASH	

<sup>\*</sup>Patterns that work with Halogens and LED/TriCore® Light Heads.
All other patterns are intended for use with LED/TriCore® Light Heads only.

# **Notes:**

# **Notes:**

## WARRANTY

Code 3®, Inc.'s emergency devices with LED or TriCore® Technology are 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.

Problems or Questions? Call The Technical Assistance HOT LINE - (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 repalered.



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

Code 3,Inc., a subsidiary of Public Safety Equipment, Inc.

Revision 2, 12/11 - Supplement No. T16406 ©2010 Public Safety Equipment, Inc. Printed in USA