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**WARNING**: Warning devices are strictly regulated and governed by Federal, State and Municipal ordinances. These devices shall be used ONLY on approved vehicles. It is the sole responsibility of the user of these devices to ensure compliance.

#### MOUNTING INSTRUCTIONS

#### Important: DO NOT over tighten mounting screws or nuts. This could cause permanent damage to the bracket. Use appropriate hardware for mounting.

- 1. Locate flat mounting location for PREDATOR II Surface Mount LEDs.
- 2. Using the gasket as a template, mark and drill pilot holes for mounting screws.

Note: The mounting holes will be slightly greater than 4-1/8" center to center. These dimensions are for approximate reference only.

3. Drill 1/2" hole at the center of the mounting hole pattern (see layout - do not scale).

#### Note: If possible, the back side of this hole should be deburred where drill breakthrough occurs.

- 4. Route cable through hole in gasket and make electrical connections (Red-power, Black-ground. White is for ID and pattern selection and will be taped after selection is made). If the final location of the cable will be inaccessible, ID and pattern selection must be made before final installation.
- 5. Install gasket over rear of light and loosely install unit with #8 self-threading screws and plastic washers. Washer must be installed under the head of the screw. Note: Gasket must be used to prevent oxidation and galvanization of the mounting surface if differing metals come in contact.
- 6. When final position of unit is obtained tighten screws. DO NOT OVER-TIGHTEN!

### **IMPORTANT: DO NOT** connect this

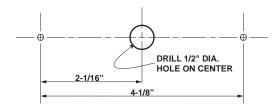
device to a strobe power supply.

## SINGLE SURFACE MOUNT WARNING SYSTEM ASSEMBLY INSTRUCTIONS

EP2SSMDB(x)

## WARNING

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



**OPERATING INSTRUCTIONS** 

through an external flasher.

good, convenient ground.

fuse, to a source of +10-30Vdc.

See setup procedure on second page.

The single Predator II comes equipped with an

internal flasher with 33 user selectable patterns

that can be synchronized either alternating or

simultaneous with up to three other lights. It

can also be put into slave mode and driven

1. Connect the PREDATOR II BLACK wire to a

2. Connect the PREDATOR II RED wire to one

side of a user supplied on/off switch. Connect

the other side of the switch, through a 5Amp

## E PLOSIVE POWER. E TREME ANGLE



### PATTERN SELECTION

- Disconnect WHITE wire from any connections if applicable 1.
- 2 Turn PREDATOR II ON.
- 3. Momentarily touching and removing the WHITE wire(s) to ground will advance the PREDATOR II to the next flash pattern. Touching and removing the White wire for more than a few seconds will allow you to change the PREDATOR II to the previous pattern. See flash pattern table. Continuing to touch and remove the WHITE wire(s) to ground will allow you to scroll through the pattern list. After pattern #33 is reached the list will start over again at pattern #1.

NOTE: The PREDATOR II is equipped with flash pattern memory. Once you have selected a pattern the PREDATOR II will always activate to that pattern every time the unit is turned on. Tape up and secure WHITE wire so that it will not accidentally change your selected pattern.

### PATTERN RESET

- 1. Remove Power.
- 2. Place WHITE (sync) wire to ground.
- 3. With sync wire grounded, re-power RED wire.
- 4. Maintain for one second (light will dim).
- 5. Remove power and ground (pattern 1 set).

#### SLAVE MODE

The PREDATOR II is capable of being activated through the use of a user supplied flasher by putting it in slave mode.

- 1. Permanently connect the PREDATOR II WHITE and BLACK wire to a good. convenient ground.
- Connect the PREDATOR II RED wire, through a 5Amp fuse, to the output of a 2. +10-30Vdc switching flasher.

NOTE: The PREDATOR II is a factory sealed unit that CANNOT be serviced in the field. Any attempt to gain access to the PREDATOR II unit will most likely cause permanent damage and void its warranty.

#### CURRENT DRAW AT 12.8Vdc

1.1 Amps (All configs.)

WIRE HOO	K-UP TABLE
(TOP LED I	MODULE)
Wire Color	Connect to:

Red	+10-30Vdc
Black	Ground (-)
White	ID/Pattern Select



# SINGLE SURFACE MOUNT WARNING SYSTEM

Flash Pattern and ID# Setup



## X-Pattern Sequence

ID#1 > ID#4 > ID#2 > ID#3

## X-Pattern Light Head Placement



## FLASH PATTERNS for SINGLE SURFACE MOUNT PREDATOR II

2     Warp     X     X     X     X       3     Inter-Cycle     X     X     X     X       4     Double Flash     X     X     X     X       5     Quad Flash     X     X     X     X       6     Power Pulse     X     X     X     X       7     Road Runner     X     X     X     X       9     Road Runner     X     X     X     X       10     Quad     X     X     X     X       11     E-Ideal     X     X     X     X       12     E-Ideal     X     X     X     X       13     Quad2 Flash     X     X     X       16     X-Double Flash     X     X     X       17     PowerRunner     X     X     X       14     Double Flash     X     X     X       15     X-Warp     X     X     X       16     X-Double     X     X     X       19     Warp <sup>3</sup> X     X     X       20     Ultra Warp     X     X     X       21     LifeSpeed     X     X     X	ŧ P	Pattern Name	1 Light	Alternating 2 Lights	Simultaneous 2 Lights	X-Pattern 4 Lights	Flashes/ Minute
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		Quint	Х	Х	Х		70
FlashImage: constraint of the second systemFlashXXXX4Double FlashXXXX75Quad FlashXXXX117Road RunnerXXXX118Q-SwitchXXX19Road RunnerXXX110QuadXXX111E-IdealXXX2Steady BurnXXX111E-IdealXXX1Double FlashXXX113Quad Z FlashXXX113Quad Z FlashXXX114Double2 FlashXXX115X-Warp-XX116X-Double-X117PowerRunnerXXX118LCR QuintXXX119Warp <sup>3</sup> XXX120Ultra WarpXXX121LifeSpeedXXX122LifeSpeedXXX123SuperSonicXXX124LCR LifeSpeedXXX125SuperSonicXXX226TempoShift<	1	Warp	Х	Х	Х		350
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			х	х			
		Double Flash	Х	Х	Х		70
7     Road Runner     X     X     X     1       8     Q-Switch     X     X     1       9     Road Runner     X     X     1       10     Quad     X     X     1       11     E-Ideal     X     X     20       12     E-Ideal     X     X     X       13     Quad2 Flash     X     X     1       14     Double Flash     X     X     1       15     X-Warp     X     X     1       16     X-Double     X     X     1       17     PowerRunner     X     X     1       18     LCR Quint     X     X     X       20     Ultra Warp     X     X     X       21     LifeSpeed     X     X     1       22     LiteSpeed     X     X     1       23     SuperSonic     X     X     1       24     LCR LiteSpeed     X     X     1       25     SuperSonic     X     X     1       26     TempoShift     X     X     1       25     SuperSonic     X     X     1       26     TempoShift <td></td> <td>Quad Flash</td> <td></td> <td></td> <td></td> <td></td> <td>80</td>		Quad Flash					80
8     Q-Switch     X     X     X       9     Road Runner     X     X     X       11     Steady Burn     X     X     X       10     Quad     X     X     X       11     E-Ideal     X     X     X       12     E-Ideal     X     X     X       14     Double Flash     X     X     X       15     X-Warp     X     X     X       16     X-Double Flash     X     X     X       17     PowerNuner     X     X     X       18     LCR Quint     X     X     X       19     Warp <sup>3</sup> X     X     X       20     Ultra Warp     X     X     X       21     Thunder and     X     X     X       22     LifteSpeed     X     X     X       23     SuperSonic     X     X     X       24     LCR Liftspreed     X     X     X       25     SuperSonic     X     X     X       26     TempoShift     X     X     X       27     TempoShift     X     X     X       28     SBE2     X			Х	Х	Х		180
9     Road Runner     X     X     X     1       10     Quad     X     X     1     1       11     E-Ideal     X     X     X     2       Single Flash     X     X     X     1       12     E-Ideal     X     X     X     1       13     Quad Z Flash     X     X     X     1       13     Quad Z Flash     X     X     X     1       13     Quad Z Flash     X     X     X     1       14     Double2 Flash     X     X     X     1       15     X-Obuble		Road Runner		х	Х		113
Steady Burn     N     N       10     Quad     X     X       Steady Burn     X     X       Steady Burn     X     X       11     E-Ideal     X     X       21     E-Ideal     X     X       12     E-Ideal     X     X       13     Quad 2 Flash     X     X       14     Double Flash     X     X       15     X-Warp     X     X       16     X-Double     X     X       17     PowerRunner     X     X       18     LCR Quint     X     X       19     Warp <sup>3</sup> X     X       20     Ultra Warp     X     X       21     Thunder and     X     X       22     LiteSpeed     X     X       23     SuperSonic     X     X       24     LCR LiteSpeed     X     X       25     SuperSonic     X     X       26     TempoShift     X     X       27     TempoShift     X     X       28     SBE2     X     X		Q-Switch	Х	Х			
Steady Burn     N     N     N       11     E-Ideal     X     X     X       Single Flash     X     X     X       12     E-Ideal     X     X     X       13     Quad Z Flash     X     X     X       13     Quad Z Flash     X     X     X       14     Double Flash     X     X     X       15     X-Warp     -     -     X       16     X-Double     -     X     X       17     PowerRunner     X     X     X       18     LCR Quint     X     X     X       20     Ultra Warp     X     X     X       21     Thunder and     X     X     X       22     LiteSpeed     X     X     X       23     SuperSonic     X     X     X       24     LCR LiteSpeed     X     X     X       25     SuperSonic     X     X     X       26     TempoShift     X     X     X       27     TempoShift     X     X     X       28     SBE2     X     X     X			х	х			113
Single Flash     N     N     N       12     E-Ideal     X     X     X       Double Flash     X     X     X       13     Quad 2 Flash     X     X     X       14     Double 2 Flash     X     X     X       15     X-Warp     X     X     X       16     X-Double     X     X       17     PowerRunner     X     X     X       18     LCR Quint     X     X     X       19     Warp <sup>3</sup> X     X     X       20     Ultra Warp     X     X     X       21     Thunder and Lightning     X     X     X       23     SuperSonic     X     X     X       24     LCR LiteSpeed     X     X     X       25     SuperSonic     X     X     X       26     TempoShift     X     X     X       27     TempoShift     X     X     X       28     SBE2     X     X     X		Steady Burn		х			80
Double Flash         N <t< td=""><td></td><td></td><td>х</td><td>х</td><td>х</td><td></td><td>200</td></t<>			х	х	х		200
14         Double2 Flash         X         X         X         X         Y         X         Y <thy< th=""> <thy< th=""> <thy< th=""> <th< td=""><td></td><td></td><td>х</td><td>х</td><td></td><td></td><td>146</td></th<></thy<></thy<></thy<>			х	х			146
15     X-Warp     X     X       16     X-Double     X     X       17     PowerNunner     X     X       18     LCR Quint     X     X       19     Warp <sup>3</sup> X     X       20     Ultra Warp     X     X       21     Thunder and     X     X       22     LiteSpeed     X     X       23     SuperSonic     X     X       24     LCR LifeSpeed     X     X       25     SuperSonic     X     X       26     TempoShift     X     X       27     TempoShift     X     X       28     SBE2     X     X	3 0	Quad2 Flash		х			67
16     X-Double     X     X     X       17     PowerRunner     X     X     X       18     LCR Quint     X     X     X       19     Warp <sup>3</sup> X     X     X       20     Ultra Warp     X     X     X       21     Thunder and Lightning     X     X     X       22     LiteSpeed     X     X     X       23     SuperSonic     X     X     X       25     SuperSonic     X     X     X       26     TempoShift     X     X     X       27     TempoShift     X     X     X       28     SBE2     X     X     X	4 1	Double2 Flash	Х	Х	Х		95
17     PowerRunner     X     X     X       18     LCR Quint     X     X     X       19     Warp <sup>3</sup> X     X     X       20     Ultra Warp     X     X     X       21     Thunder and     X     X     X       22     LiteSpeed     X     X     X       23     SuperSonic     X     X     X       24     LCR LiteSpeed     X     X     X       25     SuperSonic     X     X     X       26     TempoShift     X     X     X       27     TempoShift     X     X     X       28     SBE2     X     X     X	5 3	X-Warp					
18         LCR Quint         X         Z         Z         Immediate         Z         Z         Immediate         Z         Z         Immediate         Z         Z         Z         Immediate         Z         Z         Immediate         Z         Z         Z         Z         Z         Z         Z         Z         Z         Z         Z         Z         Z         Z         Z	5 3	X-Double				Х	
19     Warp <sup>3</sup> X     X     X     X       20     Ultra Warp     X     X     X     S       1     Thunder and Lightning     X     X     X     S       22     LiteSpeed     X     X     X     Z       3     SuperSonic     X     X     X     Z       24     LCR LiteSpeed     X     X     X     Z       25     SuperSonic     X     X     X       26     TempoShift     X     X     X       27     TempoShift     X     X     X       28     SBE2     X     X     X     E							
20     Ultra Warp     X     X     X     5       21     Thunder and     X     X     X     7       Lightning     X     X     X     8       22     LiteSpeed     X     X     X     8       23     SuperSonic     X     X     X     1       24     LCR LiteSpeed     X     X     X     1       25     SuperSonic     X     X     X     1       26     TempoShift     X     X     X     1       27     TempoShift     X     X     X     1       28     SBE2     X     X     X     6	3 1	LCR Quint	Х	Х	Х		
21     Thunder and Lightning     X     X     X     X       22     LiteSpeed     X     X     X     8       23     SuperSonic     X     X     X     1       24     LCR LiteSpeed     X     X     X     1       25     SuperSonic     X     X     X     1       26     TempoShift     X     X     X     1       27     TempoShift     X     X     X     1       28     SBE2     X     X     X     6	۶ľ	Warp <sup>3</sup>		х	Х		
Lightning     Lightning     Lightning     LiteSpeed     X     X     X       22     LiteSpeed     X     X     X     X       23     SuperSonic     X     X     X     X       24     LCR LiteSpeed     X     X     X     X       25     SuperSonic     X     X     X     X       26     TempoShift     X     X     X     X       27     TempoShift     X     X     X     X       28     SBE2     X     X     X     6		Ultra Warp	Х	Х	Х		545
23     SuperSonic     X     X     X     1       24     LCR LiteSpeed     X     X     X     1       25     SuperSonic     X     X     X     1       26     TempoShift     X     X     X     X       27     TempoShift     X     X     X       28     SBE2     X     X     X     6			х	х			
24     LCR LiteSpeed     X     X     X       25     SuperSonic     X     X     X       26     TempoShift     X     X     X       27     TempoShift     X     X     X       28     SBE2     X     X     X     6	2 1	LiteSpeed	Х	Х	Х		85
25     SuperSonic     X     X     X     X       26     TempoShift     X     X     X       27     TempoShift     X     X     X       28     SBE2     X     X     X     6	3 3	SuperSonic			Х		170
Ultra </td <td>4 1</td> <td>LCR LiteSpeed</td> <td>Х</td> <td>Х</td> <td>Х</td> <td></td> <td></td>	4 1	LCR LiteSpeed	Х	Х	Х		
27 TempoShift X X X X Warp 28 SBE2 X X X X 66		Ultra		х			
Warp         X         X         6           28         SBE2         X         X         X         6	5	TempoShift	Х	Х	Х		
		Warp					
				Х			67
		C <sup>2</sup>	Х	Х	Х		200
			Х	Х	Х		176
31 UltraGlow X X X							
32 Cyclone X X X	2 (	Cyclone	Х	Х	Х		
33 Chameleon X X X X	3   (	Chameleon	Х	Х	Х		

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## **Predator Sync Configuration Instructions**

#### 1. Set ID#

- a. Identify which pattern and sequence you want and look up ID#s on table.
- b. Connections
  - RED: +10-30Vdc
  - ii. WHT: +10-30Vdc (Note: you will need to disconnect after power is applied)
  - iii. BLK: Ground
- c. Apply power to unit
- d. Without disconnecting power from unit, disconnect WHT wire
   e. Momentarily connect WHT to Ground to change ID #
- Identify ID# by number of sequential flashes
- ii. Possible ID#s: 1 4
- f. Disconnect power from unit to get out of ID mode.
- 2. Set Pattern

  - a. Reapply power to units.b. Once all Light Head ID#s are configured, make sure all lights are flashing the same pattern
  - c. Connect corresponding colored wires of all units together: RED to RED, etc.
  - d. Change Pattern
    - Momentarily connect WHT wires to Ground
  - ii. Observe pattern change on all lights connected e. Insulate all wires by taping with electrical tape
- Connect Master Switch for Application
  - a. IMPORTANT! Ensure WHT Pattern/Sync Wires are tied together

## 1 LIGHT

Single Light Operation: Follow the ID Selection steps and set the PREDATOR II to ID#1 if it is not already. NOTE: Steady Burn is produced for patterns 9 & 10 in Single Operation.

## 2 LIGHTS

ALTERNATING: To obtain Alternating patterns, follow the ID SELECTION steps and set one PREDATOR II to ID#1 and the other to ID#3. Then proceed to the PATTERN SELECTION steps.

SIMULTANEOUS: To obtain Simultaneous patterns, follow the ID SELECTION steps and set both PREDATOR II lights to ID#1. Then proceed to PATTERN SELECTION steps.

## **4 LIGHTS**

X-Pattern: To obtain X-patterns, follow the ID SELECTION steps and set one of the four PREDATOR II lights to ID#1, one to ID#2, one to ID#3, and one to ID#4. Then proceed to PATTERN SELECTION steps. NOTE: Be sure to mount each PREDATOR II in the correct placement based on ID#.