

# Revolution™

## R37LV -xW LED Lighthead

### Installation and Programming Instructions

The Revolution™ R37LV13-xW and R37LV26-xW are multifunction LED lamps with a single-color warning lamp on the top half, and a 13-degree, or 26-degree, tilt down scenelight on the bottom half. The warning lamp and the scenelight operate independently, and are separately wired for power, ground and control.

### WARNING LAMP (Top Half of Lamp) (Scenelight, see pg 8)

#### WIRES

#### INTERNAL FLASHER (SM RT MODE)

- RED            Connect to Battery +12Vdc thru +24Vdc to activate
- BL CK        Connect to Battery GROUND
- YELLOW      Sync Line
- BLUE         Alternate Flash Pattern

#### DIRECT CONTROL

- RED            Connect to Battery +12Vdc thru +24Vdc to activate (Active Low Inputs Only)
- BL CK        Connect to Battery GROUND (Active High Inputs Only)
- YELLOW      Side A or Color 1
- BLUE         Side B or Color 2

#### ELECTRICAL

Input Voltage:            +12Vdc thru +24Vdc

Input Current:

Steady Burn Normal Mode		Steady Burn Dim Mode		Default Flash Normal Mode		Default Flash Dim Mode	
12Vdc	24Vdc	12Vdc	24Vdc	12Vdc	24Vdc	12Vdc	24Vdc

R37LV13-xW  
Warning Light

0.91	0.49	0.26	0.16	0.72	0.39	0.19	0.12
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Note: Complete installation with wire rated for 125% of amperage draw

## SYNCHRONIZE WARNING LAMPS – Internal Flasher (Smart) Modes Only

To synchronize, first program each lamp to the same flash pattern. Unpredictable results will occur if synchronized lamps have different flash patterns selected. Connect the YELLOW wires of up to 10 synchronized iLED lamps together. Do not connect the yellow wires to power or ground. Do not exceed 100 feet of wire between the furthest synchronized units.

## OPERATING CONFIGURATIONS

The Revolution series can be set to one of two Operating Modes, and the Inputs can be set to one of two Active States. This gives four distinct configurations:

Internal Flasher, Active High Inputs  
Internal Flasher, Active Low Inputs  
Direct Control, Active High Inputs  
Direct Control, Active Low Inputs

Internal Flasher – This is the Default Mode. All flash patterns are controlled by the on-board flasher.

Direct Control – Select the direct control mode if you are using an external flasher to control the light head.

Active high inputs – This is the Default Mode. All lamp functions are activated by applying +12Vdc through +24Vdc.

Active low inputs – When set to active low all lamp functions are activated by applying ground.

## PROGRAMMING FLASH PATTERNS AND RATES

### ENTERING PROGRAM MODE

**For Internal Flasher, Active High Inputs Configuration (Default Smart Mode):**

#### **To Program the Primary Flash Pattern**

Connect the Sync (YELLOW) wire and the RED power wire to +12Vdc; connect the BLACK wire to ground.

Continue to apply +12vdc to the Sync (YELLOW) wire for at least 2 seconds.

All LEDs will flash 3 times to indicate you have entered Primary Flash Pattern selection mode.

While maintaining power, remove the Sync (YELLOW) wire from +12vdc and the unit will operate in the currently selected flash pattern.

Tap the Sync (YELLOW) wire to +12vdc to select the Flash Type & Rate.

Tap the Alternate (BLUE) wire to +12vdc to select the Flash Pattern.

Tap both the Sync (YELLOW) and Alternate (BLUE) wires to +12vdc to select the Quadrants.

See the “SELECTING FLASH PATTERNS” section and Pattern Tables below for more details.

**To Program the Alternate Flash Pattern**

Connect the Alternate (BLUE) and Sync (YELLOW) wires and the RED power wire to +12vdc; connect the BL CK wire to ground.

Continue to apply +12vdc to the Alternate (BLUE) and Sync (YELLOW) wires for at least 2 seconds.

11 LEDs will flash 4 times to indicate you have entered Alternate Flash Pattern selection mode.

While maintaining power, remove the Alternate (BLUE) and Sync (YELLOW) wires from +12vdc and the unit will operate in the currently selected alternate flash pattern.

Use the Sync (YELLOW) wire tapped to +12vdc to select the Flash Type & Rate.

Use the Alternate (BLUE) wire tapped to +12vdc to select the Flash Pattern.

Use both the Sync (YELLOW) and Alternate (BLUE) wires tapped to +12vdc to select the Quadrants.

See the "SELECTING FLASH PATTERNS" section and Pattern Tables below for more details.

**For Internal Flasher, Active Low Inputs Configuration:****To Program the Primary Flash Pattern**

Connect the Sync (YELLOW) wire and the BL CK wire to Ground; connect the RED wire to +12Vdc. Continue to apply Ground to the Sync (YELLOW) wire for at least 2 seconds.

11 LEDs will flash 3 times to indicate you have entered Primary Flash Pattern selection mode.

While maintaining power, remove the Sync (YELLOW) wire from Ground and the unit will operate in the currently selected flash pattern.

Use the Sync (YELLOW) wire tapped to Ground to select the Flash Type & Rate.

Use the Alternate (BLUE) wire tapped to Ground to select the Flash Pattern.

Use both the Sync (YELLOW) and Alternate (BLUE) wires tapped to Ground to select the Quadrants.

See the "SELECTING FLASH PATTERNS" section and Pattern Tables below for more details.

**To Program the Alternate Flash Pattern**

Connect the Alternate (BLUE) and the Sync (YELLOW) wires and the BL CK wire to Ground; connect the RED wire to +12vdc.

Continue to apply Ground to the Alternate (BLUE) and Sync (YELLOW) wires for at least 2 seconds.

11 LEDs will flash 4 times to indicate you have entered Alternate Flash Pattern selection mode.

While maintaining power, remove the Alternate (BLUE) and Sync (YELLOW) wires from Ground and the unit will operate in the currently selected flash pattern.

Use the Sync (YELLOW) wire tapped to Ground to select the Flash Type & Rate.

Use the Alternate (BLUE) wire tapped to Ground to select the Flash Pattern.

Use both the Sync (YELLOW) and Alternate (BLUE) wires tapped to Ground to select the Quadrants.

See the "SELECTING FLASH PATTERNS" section and Pattern Tables below for more details.

**For Direct Control, Active High Inputs Configuration:****To Program the Primary Flash Pattern**

Connect the RED power wire to +12vdc; connect the BL CK wire to Ground.  
Wait for at least 2 seconds.

II LEDs will flash **3** times to indicate you have entered Primary Flash Pattern selection mode.  
The LEDs will remain **off**, indicating that the Direct Control mode is currently selected.

Tap the Sync (YELLOW) wire to +12vdc to select the Flash Type & Rate.

Tap the Alternate (BLUE) wire to +12vdc to select the Flash Pattern.

Tap both the Sync (YELLOW) and Alternate (BLUE) wires to +12vdc to select the Quadrants.

See the "SELECTING FLASH PATTERNS" section and Pattern Tables below for more details.

**For Direct Control, Active Low Inputs Configuration:****To Program the Primary Flash Pattern**

Connect the RED power wire to +12vdc; connect the BL CK wire to Ground.  
Wait for at least 2 seconds.

II LEDs will flash **3** times to indicate you have entered Primary Flash Pattern selection mode.  
The LEDs will remain **off**, indicating that the Direct Control mode is currently selected.

Use the Sync (YELLOW) wire tapped to Ground to select the Flash Type & Rate.

Use the Alternate (BLUE) wire tapped to Ground to select the Flash Pattern.

Use both the Sync (YELLOW) and Alternate (BLUE) wires tapped to Ground to select the Quadrants.

See the "SELECTING FLASH PATTERNS" section and Pattern Tables below for more details.

**SELECTING FLASH PATTERNS:**

Use the Sync wire (YELLOW) to step through the Flash Type & Rate table.

Single Tap - Step Forward

Double Tap - Step Backward

Touch and Hold<sup>4</sup> - Reset to Defaults and Toggles the Dim Setting (Bright or Dim)

Use the Alternate wire (BLUE) to step through the Pattern table.

Single Tap - Step Forward

Double Tap - Step Backward

Use the Sync and Alternate wires (YELLOW & BLUE) to step through the Quadrant table.

Single Tap - Step Forward

Double Tap - Step Backward

Touch and Hold<sup>4</sup> - Toggles the Inputs Active State setting (High or Low).

For Active High Inputs:

Tap or Touch and Hold<sup>4</sup> inputs to +12vdc.

For Active Low Inputs:

Tap or Touch and Hold<sup>4</sup> inputs to Ground.



**CONFIGURATION SELECTION NOTES:**

- 1) Direct Control is only selectable from the Primary Pattern selection.
- 2) The Split is Left (L) and Right (R)
- 3) Input Active State settings are High and Low. High means the input wire must be connected to +Vdc to activate the function. Low means the input wire must be connected to Ground to activate the function.
- 4) The hold time for the Touch and Hold action is 3 seconds.
- 5) Patterns in the Multi Pattern Combinations.
  - Multi 1:
    - A) NEOBE FL SH 150 LTERN TE.
    - B) DOUBLE FL SH 250 SIMULT NEOUS PH SE 0.
    - C) SINGLE FL SH 375 LTERN TE.
    - D) NEOBE 150 SIMULT NEOUS PH SE 0.
  - Multi 2:
    - A) NEOBE FL SH 75 LTERN TE.
    - B) DOUBLE FL SH 125 SIMULT NEOUS PH SE 0.
    - C) SINGLE FL SH 150 LTERN TE.
    - D) SINGLE FL SH 75 SIMULT NEOUS PH SE 0.
  - Multi 3:
    - A) DOUBLE FL SH 125 LTERN TE.
    - B) SINGLE FL SH 150 LTERN TE.
    - C) DOUBLE FL SH 250 SIMULT NEOUS PH SE 0.
    - D) SINGLE FL SH 150 SIMULT NEOUS PH SE 0

### **Default Settings**

**For an R37LV13-xW or R37LV26-xW the default Flash Patterns are:**

Smart Control Mode, Inputs are active High.

Primary Flash Pattern: Simultaneous Phase 0 pattern, Neobe flash, 150 FPM,  
Left/Right Quadrant Split, Color 1 (color x), Full Brightness.

Intermittent Flash Pattern: Simultaneous Phase 0 pattern, Neobe flash, 75 FPM,  
Left/Right Quadrant Split, Color 1 (color x), Full Brightness.

## SCENELIGHT (Bottom Half of Lamp)

### WIRES

RED/WHT            Connect to Battery +12Vdc thru +24Vdc to activate  
BL CK/WHT        Connect to Battery GROUND

### ELECTRIC L

Input Voltage:     12Vdc thru 24Vdc

Input Current:	Steady Burn	
	Normal Mode	
	12Vdc	24Vdc

R37LVD13-xxW Scene Light	1.99	0.98
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Note: Complete installation with wire rated for 125% of amperage draw