



**INSTALLATION
& OPERATION MANUAL**
**MODEL CL199/299 SERIES
LED BEACON**



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IMPORTANT:

Read all instructions and warnings before installing and using.

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

Installation & Mounting

Magnetic Mounting:



As with any magnetically-mounted warning device, its use on the exterior of a moving vehicle is at the sole discretion and responsibility of the user. This magnetic mount product provides a secure, temporary installation in most circumstances and is recommended for stationary use only.

The magnetic based beacon provides a secure, temporary installation. The beacon should be placed in the center of the roof where the least amount of curvature occurs. Check the magnet for debris before installation. Any foreign matter can reduce holding power and scratch the vehicle. The roof surface should be dry and have a dull, not glossy finish. A glossy, highly waxed surface will reduce the magnet's holding power. When placed, the beacon should adhere firmly. The user should not attempt to drive with the beacon in place should the unit slide or move easily.

Permanent Mounting:

The permanent mount beacon provides a secure, permanent installation. Use the supplied foam gasket and screws to mount the beacon in the desired location. Wire routing should be taken into consideration when choosing a mounting location.

Pipe Mounting (optional):

The beacon base will accept a standard 1" NPT pipe. Hand tighten the beacon base on the pipe thread until the pipe bottoms out inside the unit.

Voltage Range:

DC 10V~30V

CL199/299 SAE Versions:

Wiring Instructions

Magnetic Mounting:

The magnetic mount beacon is equipped with a light plug with rocker switch, that plugs into a 12 Volt DC cigarette lighter outlet; rotate and push with reasonable moderate force to insure the best possible connection.

Permanent Mount:

The permanent mount beacon wire functions are as outlined below:

<u>COLOR</u>	<u>FUNCTION</u>	<u>CONNECT TO</u>
Red	Power	+VDC
Black	Ground	Chassis Ground
Blue	Pattern Switching	Chassis Ground to Activate
Yellow	Synchronization	See Operation Section
Purple	Low Power	Chassis Ground to Activate
White	Upward Facing Patrol LEDs	Chassis Ground to Activate

Operation

Low Power (Permanent Mount Only):

Connect the Purple wire to Chassis Ground to put the beacon into low power operation. Disable this wire to restore normal, high power operation.

Upward Facing Patrol LEDs:

On permanent mount beacon, connect the White wire to chassis ground to activate the upward facing Patrol LEDs. Disable this wire to restore normal operation. Upward facing Patrol LEDs are flash pattern dependent on magnetic mount version.

Operation (cont.)

Flash Patterns:

The CL199 Series LED Beacon is programmed with 30 different flash patterns. Refer the section below for instructions on how to set the flash pattern.

Synchronous Flash Patterns

FP 1:	Single Alert 75 PHASE 1 (Sim)	FP 12:	Single Flash 150 PHASE 2 (Sim)
FP 2:	Single Alert 75 PHASE 2 (Sim)	FP 13:	Single Flash 75 PHASE 1 (Sim)
FP 3:	Quad Flash 75 PHASE 1 (Sim)	FP 14:	Single Flash 75 PHASE 2 (Sim)
FP 4:	Quad Flash 75 PHASE 2 (Sim)	FP 15:	Single Alert 75 (Alt)
FP 5:	Double Flash 150 PHASE 1 (Sim)	FP 16:	Quad Flash 75 (Alt)
FP 6:	Double Flash 150 PHASE 2 (Sim)	FP 17:	Double Flash 150 (Alt)
FP 7:	Double Flash 75 PHASE 1 (Sim)	FP 18:	Double Flash 75 (Alt)
FP 8:	Double Flash 75 PHASE 2 (Sim)	FP 19:	Single Flash 375 (Alt)
FP 9:	Single Flash 375 PHASE 1 (Sim)	FP 20:	Single Flash 150 (Alt)
FP 10:	Single Flash 375 PHASE 2 (Sim)	FP 21:	Single Flash 75 (Alt)
FP 11:	Single Flash 150 PHASE 1 (Sim)		

Non-Synchronous Flash Patterns

FP 22:	Active Flash (Sim)	FP 27:	Rotator 75
FP 23:	Modular Flash (Sim)	FP 28:	Rotator 125
FP 24:	Modular Active (Alt)	FP 29:	Rotator 250
FP 25:	Modular Active (Sim)	FP 30:	AUTORUN
FP 26:	Rotator 50		

(Sim) - Front and Rear LEDs fire simultaneously, (Alt) - Front and Rear LEDs alternate

Synchronization (Permanent Mount Only):

To sync two beacons, configure both beacons to display the same Phase 1 pattern. With the power off, connect the YELLOW wires from each beacon together. When the beacons are activated, their patterns will be synchronized.

To configure the two lighthoods to alternate their patterns, advance the pattern of either beacon to the Phase 2 mode of the current pattern. **Do not SYNC more than 8 beacons!**

Setting the Flash Pattern:

Magnetic Base Version:

Depress the rocker switch on the lighter plug:

- Less than 1 second for the **NEXT** pattern
- 1 to 3 seconds for the **PREVIOUS** pattern
- 3 to 5 seconds for the **DEFAULT** pattern
- Greater than 5 seconds to **TURN OFF** the beacon

Permanent Mount Version:

Connect blue wire to black wire (chassis ground):

- Less than 1 second for the **NEXT** pattern
- 1 to 3 seconds for the **PREVIOUS** pattern
- 3 to 5 seconds for the **DEFAULT** pattern
- Greater than 5 seconds to **TURN OFF** the beacon



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

CL199 ECE R65 Class 1 Version:

Wiring Instructions

Permanent Mount:

The permanent mount beacon wire functions are as outlined below:

<u>COLOR</u>	<u>FUNCTION</u>	<u>CONNECT TO</u>
Red	Power	+VDC
Black	Ground	Chassis Ground
Blue	Not Used	
Yellow	Synchronization	See Operation Section
Purple	Not Used	

Operation

Flash Patterns:

ECE R65 Single Flash Only



WARNING!

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

CL199/CL299 ECE R65 Class 2 Version: Wiring Instructions

Permanent Mount:

The permanent mount beacon wire functions are as outlined below:

COLOR	FUNCTION	CONNECT TO
Red	Power	+VDC
Black	Ground	Chassis Ground
Blue	Pattern Switching	Chassis Ground to Activate
Yellow	Synchronization	See Operation Section
Purple	Dimming	Chassis Ground to Activate

Operation

Flash Patterns:

The CL199 ECE R65 Class 2 Beacon is programmed with 3 different flash patterns. Refer the section below for instructions on how to set the flash pattern.

FP 1:	ECE R65 Single Flash
FP 2:	ECE R65 Double Flash
FP 3:	R65 Rotator

Setting the Flash Pattern:

Permanent Mount Version:

- Less than 1 second for the **NEXT** pattern
- 1 to 3 seconds for the **PREVIOUS** pattern
- 3 to 5 seconds for the **DEFAULT** pattern (FP2)
- Greater than 5 seconds to **TURN OFF** the beacon



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

Manufacturer Limited Warranty Policy:

Manufacturer warrants that on the date of purchase this product will conform to Manufacturer's specifications for this product (which are available from the Manufacturer upon request). This Limited Warranty extends for Sixty (60) months from the date of purchase.

DAMAGE TO PARTS OR PRODUCTS RESULTING FROM TAMPERING, ACCIDENT, ABUSE, MISUSE, NEGLIGENCE, UNAPPROVED MODIFICATIONS, FIRE OR OTHER HAZARD; IMPROPER INSTALLATION OR OPERATION; OR NOT BEING MAINTAINED IN ACCORDANCE WITH THE MAINTENANCE PROCEDURES SET FORTH IN MANUFACTURER'S INSTALLATION AND OPERATING INSTRUCTIONS VOIDS THIS LIMITED WARRANTY.

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This Limited Warranty defines specific legal rights. You may have other legal rights which vary from jurisdiction to jurisdiction. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages.

PRODUCT RETURNS

In order to provide you with faster service, if you are going to return a product for repair or replacement*, please contact our factory to obtain a Return Goods Authorization Number (RGA number) before you ship the product to ESG. 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.

*ESG reserves the right to repair or replace product at its discretion. ESG assumes no responsibility or liability for expenses incurred for the removal and/or reinstallation of products requiring service and/or repair.

PROBLEMS OR QUESTIONS? CALL OUR TECHNICAL ASSISTANCE HOTLINE (314) 996-2800

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