

Flasher Lighting, Siren and Speaker System - System Operation and Component Description

System Operation

Description and Operation

Spotlamps

The LH and RH spotlamps are mounted on the A-pillars and are equipped with Light Emitting Diodes (LEDs). The spotlamps are provided battery voltage from BCMC fuse 108 (20A) and are grounded to the vehicle body through the spotlamp mount.

Flashing Light Emitting Diodes (LEDs)

The flashing Light Emitting Diodes (LEDs) are turned on and off by zones. There are 2 zones for the flashing Light Emitting Diodes (LEDs):

- Grille, headlamp, exterior mirror and, if equipped, front auxiliary flashing Light Emitting Diodes (LEDs)
- Rear lamp, rear quarter glass, high mount and liftgate (underside) flashing Light Emitting Diodes (LEDs)

When the lighting and siren control module receives a request from the control head for a group of flashing Light Emitting Diodes (LEDs), the lighting and siren control module sends voltage to that group of flashing Light Emitting Diodes (LEDs).

Traffic Control Flashing Light Emitting Diodes (LEDs)

The traffic control flashing Light Emitting Diodes (LEDs) are the LH and RH rear traffic control flashing Light Emitting Diodes (LEDs) mounted in the liftgate spoiler.

The traffic control flashing Light Emitting Diodes (LEDs) will display a variety of flashing and directional patterns as selected on the lighting and siren control module control head.

When the lighting and siren control module receives a request from the control head for a flashing or directional pattern, the lighting and siren control module sends voltage through a variety of circuits to the traffic control flashing LED control module. Then the traffic control flashing LED control module receives voltage in the input circuits indicating the requested flashing or directional pattern, the traffic control flashing LED control module sends the requested flashing or directional pattern over a LIN to each of the traffic control flashing Light Emitting Diodes (LEDs).

High Beam Wig-Wag Function

The high beams are alternately turned on and off by the wig-wag function. The wig-wag function is selected by the lighting and siren control module control head. When the wig-wag function is requested, a ground is provided to the BCM wig-wag input. Then the BCM sees this ground, it will turn on and off the high beams alternately using the vehicle high beam system.

Light Emitting Diodes (LEDs) Flash Patterns

The LED flash patterns are preset from the factory and can be changed in 2 groups.

Refer to: Group Flash Pattern Programming (100-05 Police Equipment, General Procedures).

The 2 groups are:

- Grille, exterior mirror and, if equipped, front auxiliary flashing Light Emitting Diodes (LEDs)
- Rear lamp, high mount and liftgate (underside) flashing Light Emitting Diodes (LEDs)

When a flashing LED is replaced, the flash pattern of the replacement LED may be different than the rest in the group.

Refer to: Individual Flash Pattern Programming (100-05 Police Equipment, General Procedures).

Flashing Light Emitting Diodes (LEDs) Synchronization

Some of the flashing Light Emitting Diodes (LEDs) are synchronized into 3 groups:

The 3 groups are:

- Grille, exterior mirror and, if equipped, front auxiliary flashing Light Emitting Diodes (LEDs)
- Rear lamp, high mount and liftgate (underside) flashing Light Emitting Diodes (LEDs)
- Headlamp flashing Light Emitting Diodes (LEDs)