An ISO 9001:2015 Registered Company

E-BOM750-BC (Blackout Module)

2018-2022 RAM 1500
2018-2020 RAM 2500-5500

Introduction

The E-BOM750-BC module is used for Police RAM Trucks and has the ability to eliminate all exterior lighting to aid in covert operations. When activated, it will eliminate the parking lamps, reverse lights, and the Service Brake lights. Maximum speed can be set between 5-20 mph to automatically return brake lights for safety purposes.

Installation Instructions

Disconnect vehicle battery before proceeding with the installation.

CAUTION

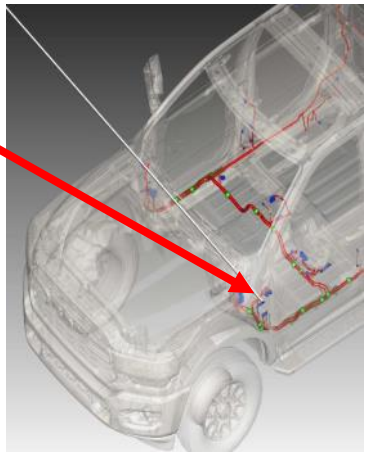
All electronic products are susceptible to damage from Electrostatic Discharge or ESD. Ground yourself before handling or working with the module and harnessing by first touching chassis ground, such as the barrel of the cigarette lighter.

It is the installer's responsibility to route and secure all wiring harnesses where they cannot be damaged by sharp objects, mechanical moving parts and high heat sources. Failure to do so could result in damage to the system or vehicle and create possible safety concerns for the operator and passengers.
It is important to avoid placing the module where it could encounter strong magnetic fields from high current cabling connected to motors, solenoids, etc. Also avoid radio frequency energy from antenna's or inverters next to the module. Finally, avoid high voltage spikes in vehicle wiring by always using diode clamped relays when installing upfitter circuits.

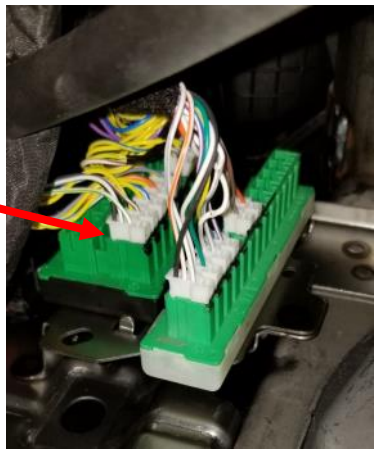
Data Link Harness - 840-00016

1. Locate the vehicle's OBDII Data Link Connector. It is a White 16-pin connector around the area above the drivers left foot.
2. Use a flat screwdriver to remove the OEM OBDII connector. There are tabs on the sides of the connector that allow it to snap into place. Press the tabs and push the connector up and out of its bracket. The E-BOM750-BC kit includes a Data Link harness (see picture). Plug the red connector from the E-BOM750-BC Data Link Harness into the vehicle's OBDII connector. Ensure the connection is fully seated and secured with the supplied wire tie.
3. Mount the White pass through connector from the E-BOM750-BC Data Link Harness in the former location of the vehicle's OBDII connector.
4. Secure the E-BOM750-BC Data Link Harness so that it does not hang below the lower dash panel.
5. Plug the free end of the Data Link Harness into the extended harness which then plugs into the mating 4-pin connector on the E-BOM750-BC module.

6. Locate the STAR connector bank in the location shown (next to the Park Brake).



7. Plug the 2-pin E-BOM750-BC connector into one of the unused ports on the bay with **Yellow** wires towards the rear of the vehicle.



Momentary Push Button (S-H84FX)

The Pink/Black wire (Pin 8 of the 8-pin connector on S-H43EX) is used to enable Blackout Mode. The input requires a momentary push button (included on S-H84FX) connected to Ground.

1. Drill a 16mm (0.630") hole in the desired mounting location.
2. Route the harness through the hole to mount the switch in the hole:

   A. Remove lock nut from switch

   B. Do not dis-assemble the switch to install

   C. Pull the harness through the hole
3. Slide the lock nut onto the harness and snug it down onto the back of the switch.
4. Connect the bullet connector to the mating bullet connector on the S-H43EX harness. Connect the other wire to Ground

BOM Module

Locate the module in an area away from any external heat sources (engine heat, heater ducts, etc.). Do not mount the module until all post installation testing is complete and wire harnesses are routed and secure.

Blackout Input

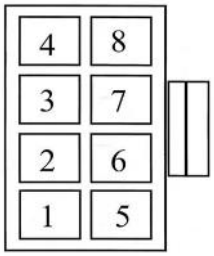
- The Pink/Black wire (Pin 8 of the 8 pin connector on S-H43EX) is the input used to enable Blackout Mode. The input requires a momentary push button (included on S-H84FX) connected to Ground.
- ***NOTE:** Input can be set to +12V by performing a procedure described in page 5.

Blackout Status Output

- The Blue wire (Pin 1 of the 8 pin connector on S-H43EX) will be +12 volts when Blackout mode is active. Connect to an LED (not included).

8-pin connector pin out definition

- Pin #1 - BLUE - Black Out LED Output (12V)
- Pin #2 - N/C
- Pin #3 - N/C
- Pin #4 - N/C
- Pin #5 - N/C
- Pin #6 - N/C
- Pin #7 - N/C
- Pin #8 - PINK/BLACK - Black Out Input (Ground)



Back of Connector

Blackout Mode

Introduction

- The Blackout module has the ability to eliminate all exterior lighting to aid in covert operations. This includes parking lamps, reverse lights, and Service Brake lights. Its intended use is for Police RAM Trucks. A maximum speed can be set to automatically return brake lights for safety purposes.

Blackout Input

- The Pink/Black wire (Pin 8 of the 8 pin connector on S-H43EX) is the input used to enable Blackout Mode. The input requires a momentary push button (included) connected to Ground.

Blackout Status Output

- The Blue wire (Pin 1 of the 8 pin connector on S-H43EX) will be +12 volts when Blackout mode is active. Connect to an LED.

Blackout Mode Operating Instructions:

To enter Blackout Mode. ALL preconditions must be met.

- Cluster Brightness can be turned Off. (Optional described in page 5)
- Speed must be below configured maximum speed. (5-20)
- Momentarily apply ground to Pink/Black wire to enter Blackout Mode. (press momentary button)

Blackout Status Output will be +12 volts when Blackout Mode is active.

To exit Blackout Mode any condition may be applied:

- Turn on High Beams.
- Cluster Level not in the off position.
- Vehicle is moving above maximum speed.
- Momentarily apply ground to Pink/Black wire to exit Blackout Mode. (press momentary button)

Chime Mute

This will silence the following chimes from the interior of the vehicle:

- Lights-on reminder.
- Ignition or accessory on chime.

How to turn OFF Cluster Backlighting

*Set switch to Parking or Low Beams.

Rotate the dimmer control to the extreme left position.

Black Out Input Sense Active High or Active Low

The default input sense for the Pink/Black wire, pin 8 on the E-BOM750-BC module is active Low. If an active High input sense is desired, the following procedure must be performed:

1. Put the Key in the **RUN** position.
2. Short the two test pads together on the module to enter diagnostics mode. Verify the Status LED Flashes
3. Apply the Park Brake.
4. Apply and hold the Service Brake.
5. Put the transmission in **REVERSE.**
6. Cycle the High Beams On/Off 3 times within 5 seconds.
7. All LED's will flash once for confirmation.

Repeating this procedure will toggle between an active High or Low input sense.

Post Installation / Check List

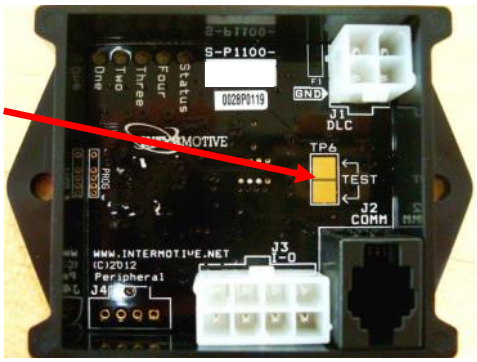
The following checks must be made after installation of the system, to ensure correct and safe operation of the lift. If any of the checks do not pass, do not deliver the vehicle. Recheck all connections per the installation instructions.

1. Turn ignition key On (to “Run”).
2. Apply the Parking Brake
3. Ground Blackout mode input (Pink/Black).
4. Verify blackout output (Blue) is +12 Volts
5. Verify All exterior lights are disabled.
6. Hold Service Brake and verify the Brake lights are disabled.
7. Place transmission in Reverse and verify lights are disabled
8. Apply Blackout mode input to exit Blackout mode (Pink/Black).
9. Verify all lights are functioning properly.

DO NOT PUT VEHICLE IN SERVICE IF IT DOES NOT PASS ALL OF THE ABOVE TESTS
Contact InterMotive at 530-823-1048 for technical assistance

Diagnostics

Diagnostic mode is entered by momentarily grounding the mounting pad labeled “Test” on the module. This can be done with a simple jumper wire by holding one end to chassis ground, while touching the other end to the “Test” pad. The module provides diagnostic LEDs which illuminate according to the following table. To exit this mode simply cycle the key or momentarily ground the “Test” pad again.

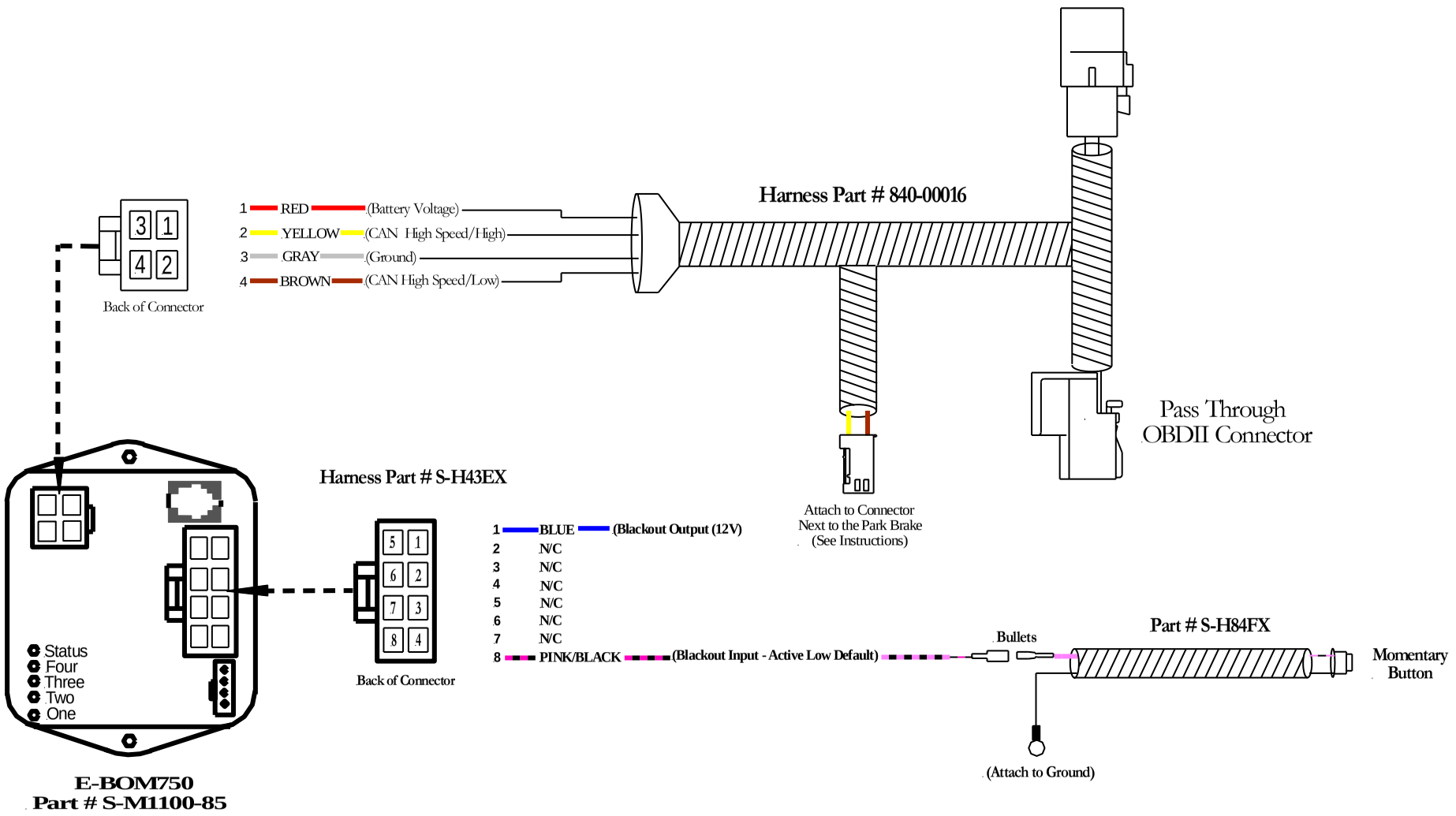


BOM Status Codes

Status Codes provide the current status of the system. The on-board “Status” LED will flash a 2 digit code as shown in the table. The first digit will flash, wait one second, flash the second digit, then wait four seconds before the next code. The Status Codes continue to flash until the module is reset (cycle key), or the test input is momentarily grounded again.

BOM Status Codes	
Status Code	**Description**
1-1	Ready for Black Out
2-4	High Beams On
2-5	Vehicle Speed > Exit Speed
2-7	Cluster Level OFF

U.S. Patent #9,469,261



Submit product registration at www.intermotive.net

If the BOM fails any step in the System Operation Test, review the installation instructions and check all connections.
If necessary, call InterMotive Technical Support at (530) 823-1048

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