EASY FLASH MODULE 3.0
USER MANUAL

MADE IN USA

IMPORTANT NOTES!

Before the installation and use of the Easy Flash Module 3.0 (EFM 3.0), thoroughly read and understand the module features and instructions contained in this manual!

The use of a flashing vehicle light system may be regulated by state, county, or municipal authorities. It is the responsibility of the end user to know and comply with these regulations.

The installation of the EFM 3.0 will modify the vehicle's electronic communication system. This modification may affect the warranty of your vehicle. It is the responsibility of the end user to verify the warranty conditions with the vehicle manufacturer. The use of the EFM 3.0 may shorten the life of the vehicle's light bulbs, headlight assemblies, and electronic modules.

Professional installation is recommended.

Preface

This manual describes the features and operation of the Easy Flash Module 3.0 (EFM 3.0) with software version V3.05. Speed Turtle Engineering recommends you always run the latest available EFM 3.0 software. The latest software is available for download at SpeedTurtleEngineering.com. To check and update your module software version, use the *STE Configuration Utility* program.

General Operation

The EFM 3.0 provides a simple and effective way to flash the factory exterior lights of supported vehicles. The system is easily installed in minutes and is a true plug and play solution. If equipped and supported, the module will flash the following lights:

- Front Low Beams

- Front High Beams

- Front Turn Signals

- Front Fog Lamps

- Front LED Accents

- Rear Turn Signals

- Rear Stop Lamps

- Third / Center Mounted Brake Lamp

- Reverse Lamps

- Pickup Bed Lamp

Unlike other solutions, the EFM 3.0 does not require any cutting or splicing of the vehicle's wiring harness. This allows the module to be easily installed by anyone in minutes. The plug and play installation also allow the module to be removed and installed in another vehicle without repairing or replacing vehicle components.

The module can be activated in a variety of ways. These include:

- By using a supplied toggle switch
- By connecting the module to an external switch or controller
- By using a preexisting factory switch in the vehicle

Supported Vehicles

The following vehicles are currently supported by the EFM 3.0 software release V3.05.

|	
Acadia	2017 - 2020
Canyon	2017 - 2020
Colorado	2017 - 2020
Equinox	2018 - 2020
Sierra 1500 - 3500	2017 - 2020
Silverado 1500 - 3500	2017 - 2020
Suburban	2017 - 2020
Tahoe	2017 - 2020
Terrain	2018 - 2020
Traverse	2018 - 2020
Yukon	2017 - 2020
Escalade	2017 - 2020

Easy Flash Module 3.0 Overview

Module Layout

The Easy Flash Module 3.0 has three connections: The vehicle interface connector, switch interface connector and micro USB port. The module also features a multicolor status LED to display the current module mode.

Installation

Installation of the EFM 3.0 module requires disconnecting four connectors from the vehicles body control module (BCM) and inserting the EFM 3.0 in line. Follow the step by step instructions below.

1. Ensure the vehicle is off and the key is not in the ignition. Disconnecting the vehicle battery is recommended.
2. If the toggle switch or voltage input harness is to be used connect it to the EFM 3.0 module by inserting the small black square connector into the top of EFM 3.0. Ensure the connector locks into place. If only the integrated vehicle switch is to be used this step can be skipped.
3. Located the BCM
   - The BCM is located under the driver's side dash behind and above the OBD-II / on board diagnostic port for all trucks and full-size SUVs.
   - For mid-sized SUVs the BCM is located under the center console and can be accessed from the passenger side trim panel (See below).
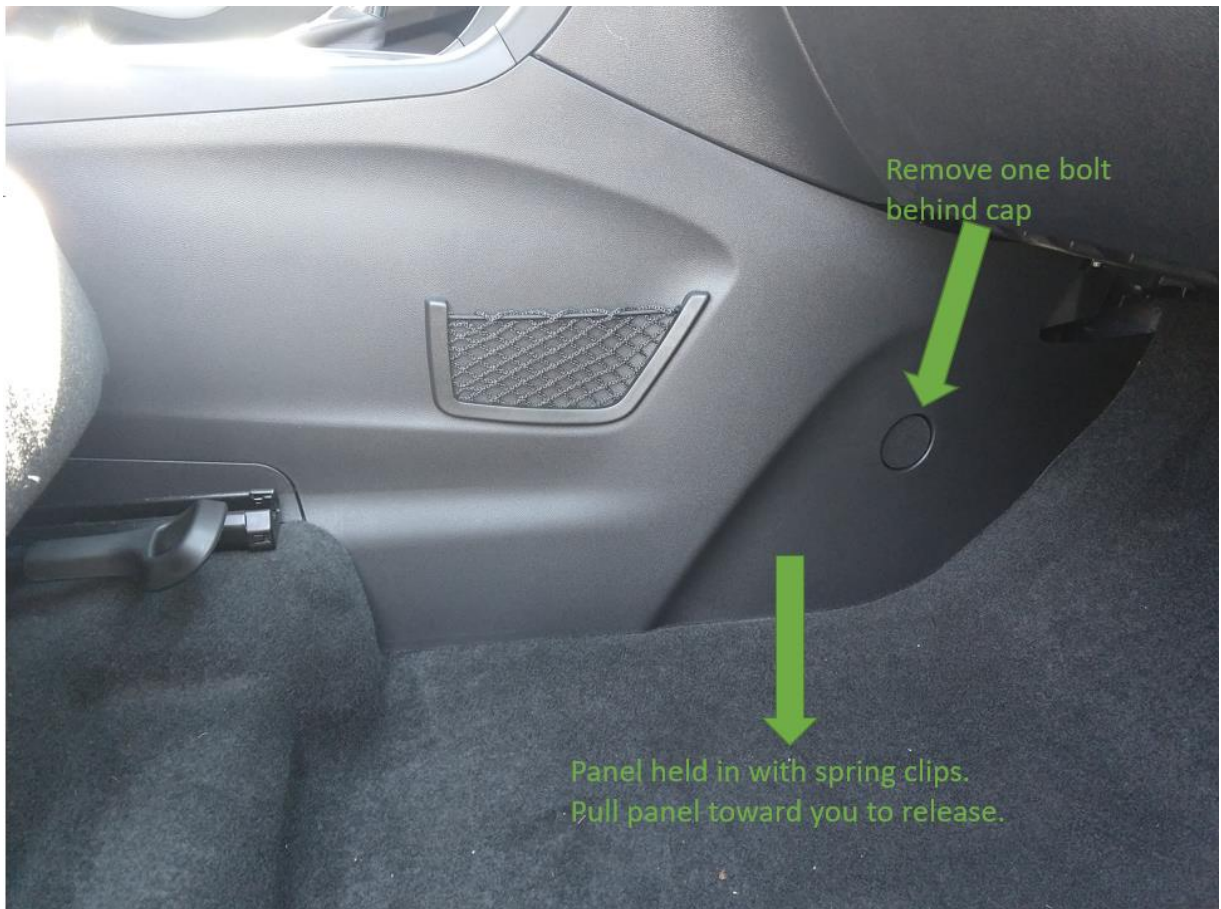
4. Disconnect the natural (white), light blue, pink and gray connectors from the body control module (BCM). It is a rectangular module with seven uniquely colored connectors. To disconnect depress the connector's locking tab and pull the connector. See below for image of the connectors to disconnect. The brown, black and green connectors should be left connected. Note that the connector color may vary slightly. Most notably is the pink connector which appears more purple.

| GRAY | PINK | | | | LIGHT BLUE | NATURAL (WHITE) |

5. Connect the four wire harness connectors previously disconnected from the BCM to the mating connector of the EFM 3.0 vehicle interface harness. Ensure that the connector colors are matching (White to white, blue to blue, pink to pink and gray to gray).

6. Connect the four connectors from the EFM 3.0 harness to the BCM. Ensure the connectors lock into place. The EFM 3.0 vehicle interface harness is intentionally short to keep the module up and away from the drivers footwell.

7. Ensure the module and vehicle interface harness are not hanging below the dash. Secure with zip ties if necessary.

8. If a toggle switch or voltage input harness was connected in step 2 follow the steps below:

    a. **Toggle Switch Harness**: Mount the toggle switch using the self-adhesive pad located on the bottom of the switch in a safe and easily accessible location. Route the switch harness in a manner that does not interfere with normal vehicle operation. Secure with zip ties.

    b. **Voltage Input Harness:** Connect the white and green wires to a 5-17 volt fused switch source. Route the voltage input wire in a manner that does not interfere with normal vehicle operation. Secure with zip ties. The white wire will control Input 1 and the green wire will control Input 2.

9. To complete installation the vehicle must be started to allow the module to finish

initialization. Your vehicle lights may flash momentarily as the setup is completed. The module status LED will blink green once every 15 seconds when the module has successfully completed its setup.

10. The module is now installed and must remain in the vehicle for operation. To uninstall simply follow the installation steps in reverse. No additional steps are required.

Module Activation

The module can be activated via the switch interface harness or via a specified factory button. See below for details on activation options.

Option 1) **Integrated vehicle switch** - A quick double press of this button will activate the module. Another quick double press will deactivate the module. The integrated vehicle switch for pickup trucks is the bed lamp switch located below the radio. The integrated vehicle switch for all other vehicles is the hazard lamp switch.

Option 2) **Toggle switch harness** – The module can be ordered with a toggle switch harness. This harness provides a simple ON/OFF switch with adhesive backing. There are two internal LEDs to the toggle switch with green indicating the switch is ON and red indicating the switch is OFF. While this is the simplest of the two harnesses to install, it only provides one of the two possible switch inputs. The toggle switch harness is connected to Input 1 on the module.

Option 3) **Voltage input harness** - The module can be ordered with a voltage input harness. This harness provides two 'flying lead' input wires. Both wires are inputs and can accept a 5 – 17 volt input signal from a switch or light controller of your choice. The white wire corresponds to switch input 1 and the green wire corresponds to switch input 2. Each input can be configured for specific lights or patterns using the STE Configuration Utility. This option is designed for users who want to use their own switch or controller to activate the device.

Active Modes

EFM 3.0 has five active modes that can individually be configured for both flash pattern and active lights. Configurations can be modified using the *STE Configuration Utility* available for free download on the support page of our website. Active modes are shown below in order of priority:

- Park Mode – Park mode is active when switch input 1, switch input 2, or the integrated vehicle switch is active and the vehicle transmission is in park. Park mode pattern and active light configurations take precedence over any switch configurations. Park mode is disabled by default. This mode is useful for users who want to disable certain lights in park or change the pattern.

- Switch Input 3 Mode (virtual) – Switch input 3 mode is active when the input to switch input 1 and switch input 2 is between 5 – 17 volts. This mode is only available for use with the voltage input harness. Switch input 3 mode pattern and active light configurations take precedence over switch input 1, switch input 2 and integrated vehicle switch configurations. Switch input 3 mode is disabled by default. This mode is useful for users who want a front rear split. Configure switch input 1 for your front lights, switch input 2 for your rear lights and switch input 3 for all lights.

- Switch Input 1 Mode – Switch input 1 mode is active when the toggle switch harness is in the ON position or when the input to the white wire of the voltage input harness is between 5 – 17 volts. Switch input 1 mode pattern and active light configurations take precedence over switch input 2 and integrated vehicle switch configurations.

- Switch Input 2 Mode – Switch input 2 mode is active when the input to switch input 2 is between 5 – 17 volts. This mode is only available for use with the voltage input harness. Switch input 2 mode pattern and active light configurations take precedence over integrated vehicle switch configurations.

- Integrated Vehicle Switch Mode – Integrated vehicle switch mode is active when a specified vehicle switch is pressed twice in quick succession. The bed lamp switch is the integrated vehicle switch for all pickups. The hazard lamp switch is the integrated vehicle switch for all other vehicles. Another quick double press of the button will turn the module off.

Active Mode Priority Example

Example 1 – Park mode disabled: If switch input 2 is active, EFM 3.0 will use the configurations

saved for switch input 2. If switch input 1 is then activated, EFM 3.0 will use the configurations for switch input 1 due to its higher priority.

Example 2 – Park mode enabled: If the vehicle is in park and switch input 1 is activated, EMF 3.0 will use the park mode configurations due to its higher priority. Once the vehicle transmission is taken out of park, EFM 3.0 will use the configurations for switch input 1.

Pattern Selection

There are ten selectable patterns for every vehicle. These patterns are adjusted per vehicle to ensure the best possible pattern selection based on supported vehicle lights and light locations. Individual patterns can be configured for each active mode using the *STE Configuration Utility*. The *STE Configuration Utility* can be download for free from the support page of the Speed Turtle Engineering website.

Individual Lamp Configuration

Much like the pattern configuration, the EFM 3.0 allows individual lamp configuration of each active lamp mode. These individual lamp configurations can be configured using the *STE Configuration Utility*. This configuration allows specific lamps to be deactivated.

Dash Indicator

When the EFM 3.0 module is in any of the five active modes a dash indicator will blink to signify the module is active. The dash indicator is the fog lamp symbol.

Module Overrides

EFM 3.0 has four built in light overrides to ensure normal vehicle light operation is unaffected for specific lamps. Overrides include headlamp, turn signal, reverse and brake lamp. All module overrides are enabled by default. However, only the headlamp override can be disabled using the *STE Configuration Utility*. The headlamp override will allow the headlamps to flash even if they are turned on. Reverse, turn and brake lamp overrides cannot be disabled.

Updating Module Software

The EFM 3.0 allows in field reprogramming of its onboard software. This allows users to take advantage of new features and supported vehicles as well as any bug fixes that are released. Software updating is accomplished by using the supplied micro USB cable and the *STE Configuration Utility* available on the Speed Turtle Engineering website. More information on the installation and use of the *STE Configuration Utility* as well as any updated EFM 3.0 module software can be found on the support page of the Speed Turtle Engineering website.

Status LED Mode

The multicolor LED located on the top of the module indicates the current mode of the EFM 3.0. Determining the current module mode is the first step in troubleshooting any problem. There is a total of twelve modes. These modes are described in detail below.

- *Initialize*: Solid red
- *Startup 1*: Alternating green and blue
- *Startup 2*: Green blink followed by a one second delay
- *Startup 3*: Two green blinks followed by a one second delay
- *Startup 4*: Three green blinks followed by a one second delay
- *Vehicle Not Supported*: Continuous red blinking
- *Normal*: Green blink followed by a 15 second delay
- *Switch Input 1*: Continuous blue blinking
- *Switch Input 2*: Two blue blinks followed by a short delay
- *Switch Input 3*: Three blue blinks followed by a short delay
- *Integrated Switch Input*: Four blue blinks followed by a short delay
- *Park*: Five blue blinks followed by a short delay

Troubleshooting

Troubleshooting begins with determining if you have the latest EFM 3.0 module software. Use the following steps to check your software level:

1. Check for the latest EFM 3.0 software version on the support page of
   SpeedTurtleEngineering.com
2. Ensure the module has the latest software by checking the software version number using
   the *STE Configuration Utility*.
3. If a newer software is available on the website, update your module using the *STE
   Configuration Utility*.

After ensuring you have the most up to date software, reinstall the module in the vehicle. If the
problem persists, the next step is to determine the current module mode. This can be done by
viewing the status LED. The *Status LED Mode* section of this document describes the light pattern for
all 12 module modes. Once the module mode has been determined Table 1 can be used.

Table 1

Troubleshooting Matrix	
Issue	**Troubleshooting Action**
Module stuck in Initialize or Startup 1 – 4 modes	• Check all connections • Ensure the vehicle is running • With the vehicle off disconnect the white connector for 30 seconds and reconnect
Module in Vehicle Not Supported mode	• Ensure your vehicle is contained on the supported vehicle list
Module in Normal mode and will not activate	• Check that the switch interface harness is securely inserted • If using the voltage input harness, ensure there is 5-17 volts applied to the input wire • If using the integrated vehicle switch ensure you are quickly pressing the integrated switch twice. The specified switch for truck is the bed lamp switch and the hazard switch for all other vehicles.
Park mode will not activate	• Ensure vehicle is in park • Ensure switch input 1, switch input 2 or the integrated vehicle switch is activated

	• Ensure Park mode is enabled using the *STE Configuration Utility*.

If problems persist after updating your module software and following the Troubleshooting Matrix, contact us as support@SpeedTurtleEngineering.com or by visiting our website at SpeedTurtleEngineering.com. Provide as many details as possible in addition to: vehicle make, vehicle model, vehicle model year, module mode, current symptom and any troubleshooting steps you may have already taken.