



BIG GUN PART #

**40-R54P**

- Plug and Play Installation
- No Computer Needed, No Dyno Required
- Simple Push Button Adjustment Interface
- Water-Resistant

## BASICS

Proper tuning is just a few easy steps away! The next few pages should help answer questions you may have about your new Power Box including installation, tuning and functionality. Your controller comes pre-programmed with our recommended base settings. We highly suggest installing the controller and going for a test ride before making any adjustments since the tuning development has been done for you ahead of time. If after you try it and still want to adjust further, the function of each mode is explained later. Slight tuning adjustments may need to be made to accommodate for aftermarket air filters, intakes, high-compression cams, head work, etc.

## WARNING

### **DO NOT TURN ALL THE SETTINGS UP TO 8**

More fuel DOES NOT always mean more power. Only proper fuel tuning will allow you to achieve the best performance.

### **ENSURE THE RUBBER SEALS ARE PROPERLY SECURED**

This unit is water-resistant & can handle getting wet or even being submerged in water as long as the seals are secured.

## WARRANTY

This product comes with a 1 year warranty from the original date of purchase against defects in materials or workmanship. The original purchaser must provide a valid proof of purchase in the event a warranty claim is made. Any modifications of the controller (cut wires, soldered wires, extensive abuse, etc.) will void the warranty. Please contact Big Gun Exhaust to obtain a return authorization number to return the product.

## IMPORTANT

This product is not identified as US EPA legal and is intended for closed-course use only unless otherwise stated, and not intended to meet emission regulations for use on public lands, roads or access routes. In California, this product is intended for closed-course competition use only and is not ARB / CARB compliant. Please consult your local jurisdictions regarding relevant laws.



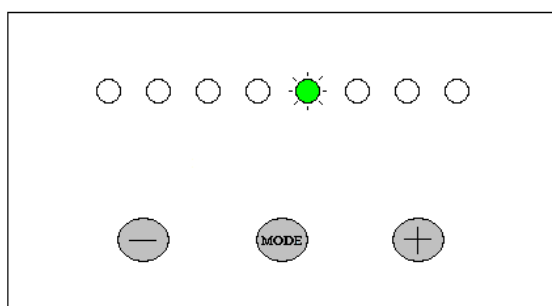
## FUNCTIONALITY & ADJUSTMENT

- Always make sure your vehicle is at normal operating temperature when making tuning adjustments.
- To program your Power Box, the vehicle must be running in order to supply power to the box.
- To enter each successive mode, press the MODE button the same amount of times as the mode number, i.e. to get to mode 3, press the MODE button three times.
- If at any time you stay in an adjusting mode for longer than five (5) seconds without pressing any buttons, the Power Box will exit the adjusting mode and will return to the ready state.
- All setting changes that are made within each mode are saved after the Power Box exits back to the ready state.
- Settings in each mode are adjusted by pressing the PLUS (+) and MINUS (-) buttons. The LED's are numbered 1 through 8. However, the LEDs can be adjusted to half number positions, i.e., 0.5, 1.5, 2.5, etc.

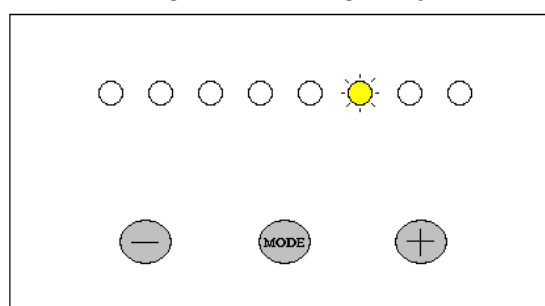
For example, in a particular mode, if LED 4 is flashing, then that mode is set to 4. If you then press the PLUS (+) button once in that mode, LEDs 4 and 5 will flash simultaneously indicating it is now set to 4.5. If you press PLUS (+) again, only LED 5 will flash indicating it is set to 5. The LED display can also be set to 0.5 by pressing the MINUS (-) button and scrolling the LEDs to position 1, then pressing the (-) button once more until the LED in position 1 is flashing twice as fast as normal.

## RECOMMENDED BASE SETTINGS

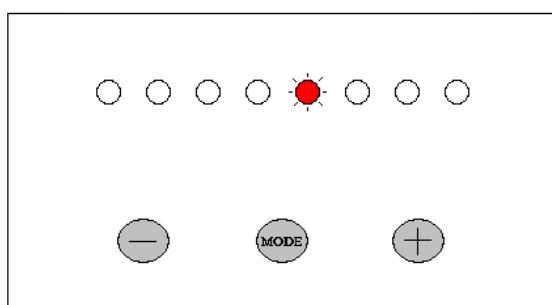
MODE 1 – GREEN – 5



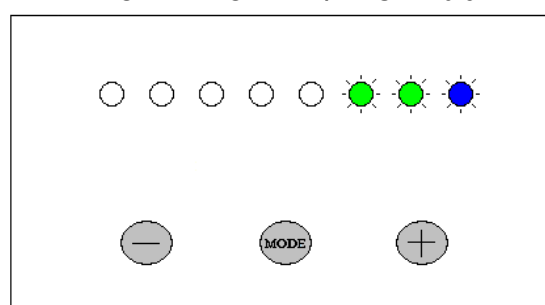
MODE 2 – YELLOW – 6



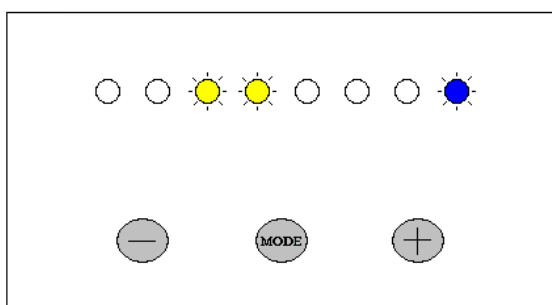
MODE 3 – RED – 5



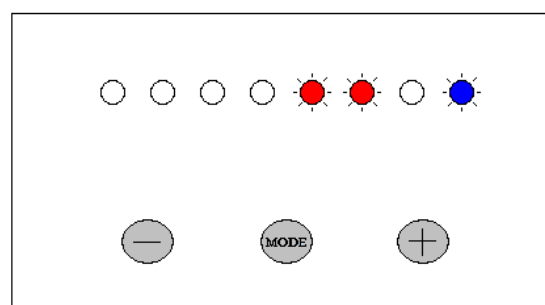
MODE 4 – GREEN / BLUE – 6.5



MODE 5 – YELLOW / BLUE – 3.5



MODE 6 – RED / BLUE – 5.5



## 6 PROGRAMMABLE MODES

### MODE 1 - GREEN - Fuel addition during cruise/steady throttle

Only 1 (or) 2 flashing green LED(s) should appear on the LED display.

### MODE 2 - YELLOW - Fuel addition during acceleration

Tuning for this mode depends greatly upon your individual vehicle and can vary widely from the base setting. Aftermarket high-flow air filters "MAY" cause you to tune differently from the base settings. This could have a setting difference as great as three yellow LED's. Note that this adjustment is only for hard acceleration. Only 1 (or) 2 flashing yellow LED(s) should appear on the LED display.

### MODE 3 - RED - Fuel addition during full throttle

This adjustment deals with adding fuel for primarily 4000 RPM and up to red line. For example, running to red line in 1<sup>st</sup>, shifting, running to red line in 2<sup>nd</sup>, shifting, and continuing this all the way through the gear range, you would have been engaging the red zone all the time. This mode could vary widely from the base settings depending on the set up of your bike and could have a difference as great as three red LED's or more. Only 1 (or) 2 flashing red LED(s) should appear on the LED display.

### MODE 4 - GREEN / BLUE - Adjusts when Mode 1 engages

This mode determines if the green fuel is on at idle or engages slightly above idle. The lowest LED setting (1) will turn the green fuel on at idle. The highest LED setting (8) will turn the green fuel on only during cruise and not during idle. A flashing green LED should appear on the display along with a solid blue LED on the right.

### MODE 5 - YELLOW / BLUE - Adjusts when Mode 2 engages

This mode "MAY" vary from the base settings depending on the set up of your vehicle. The lowest LED setting (1) represents the lightest load to switch on the yellow fuel and the highest LED setting (8) represents the heaviest load to switch on the yellow fuel. A flashing yellow LED should appear on the display along with a solid blue LED on the right.

### MODE 6 - RED / BLUE - Adjusts when Mode 3 engages

The base setting for this mode will rarely have to be changed. The red LED should be engaged during the full throttle period. The lowest LED setting (1) represents the lightest full throttle load to switch on the red fuel and the highest LED setting (8) represents the heaviest full throttle load to switch on the red fuel. A flashing red LED should appear on the display along with a solid blue LED on the right.



# INSTALLATION

1. Make sure your vehicle is cold before starting the installation.
2. Remove the driver's seat, the engine cover behind the seats and the rear engine cover located in the bed.
3. When removing the cover in the bed, take note of the two fuel injectors located right on top of the engine.
4. Determine a location for the Power Box. Suggested locations are either behind the gear shifter or within the battery compartment. Use the supplied Velcro patch to mount the controller.
5. Route and connect the black ground lead to a grounding frame bolt or the negative terminal of the battery. You may cut a section of the ring out, allowing you to slip the ground lead under/around the bolt/nut.
6. Route the Power Box wiring harness from your chosen mounting location, up through the middle engine cover to the fuel injectors.
7. Disconnect the factory fuel injector connectors from the fuel injectors one at a time. Connect one of the Power Box fuel injector connectors in line with the factory fuel injector sub connection. It does not matter which Power Box connector pair goes to which cylinder. For reference though, the connector pair with a double pinned RED and YELLOW wire is the Power Box's channel #1.
8. After connecting the Power Box, check all the wire connections to ensure proper connection. To do this, just pull on the connections to make sure they are properly locked in.
9. Use the supplied zip ties to secure the harness in place and away from hot and moving parts.  
**IMPORTANT: Make sure all connections are firmly secure and allow a little slack at the connections to prevent engine vibration from damaging/breaking a wire on the harness.**
10. Make sure you can view the Power Box and start your vehicle. The LEDs on the Power Box will energize and may scroll back and forth for several seconds. With a proper installation, the LEDs will stop scrolling and go to a steady or slow flashing GREEN LED on the far left. With an improper installation the LED display will consist of a flashing GREEN and a flashing RED LED. This occurs when the Power Box is not receiving a proper injector signal. Re-check the wire connections for any defects.  
**IMPORTANT: The flashing GREEN and RED LEDs is common for a proper installation during deceleration because the stock fuel map may shut off the fuel injectors during this process.**
11. Replace all removed parts in reverse order to complete the installation.

**Note:** After shutting your vehicle off, the LED lights can stay on for upwards of ten minutes depending on the model. This is normal and is not draining your battery.

*Please call technical support for any installation questions.*