



Bigstuff3 GEN4 Touch Screen Dash Instructions

Thank you for purchasing one of the most advanced EFI dashes in the industry. This quality Made in the USA product will provide many years of use and will be continuously updated to add more benefits and features.

****IMPORTANT**** Please note that once this dash is plugged into the ECU, it will override the current calibration settings in the ECU.

For example if the Boost Controller Curve in the ECU was set for 3 and with the dash now connected and you choose Curve 2, the ECU will follow Curve 2.

Another example would be if you have SR2/ETM Curve 1 chosen in the ECU but on the Dash it is set for 3, the ECU will follow Curve 3.

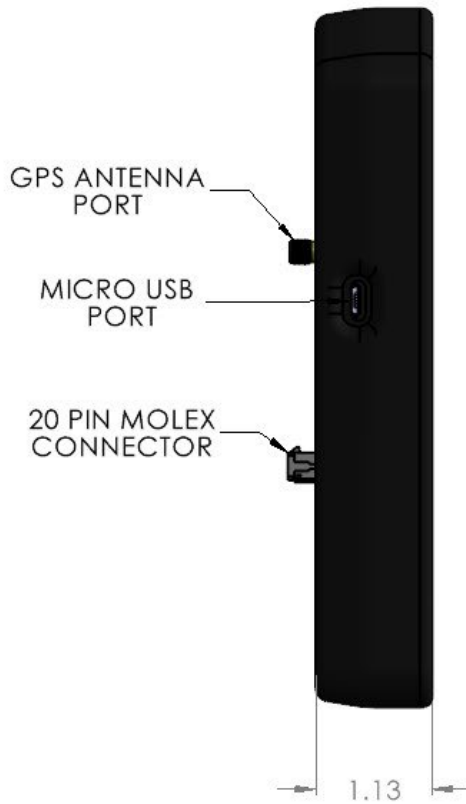
The only exception to this is that in the Rev Limiters Section of the GEN4 software you can choose to disable the dash from writing to the ECU Rev Limiter values.



The dash has (4) 6/32 female holes on the backside to mount to a flat surface or bracket of your choice.

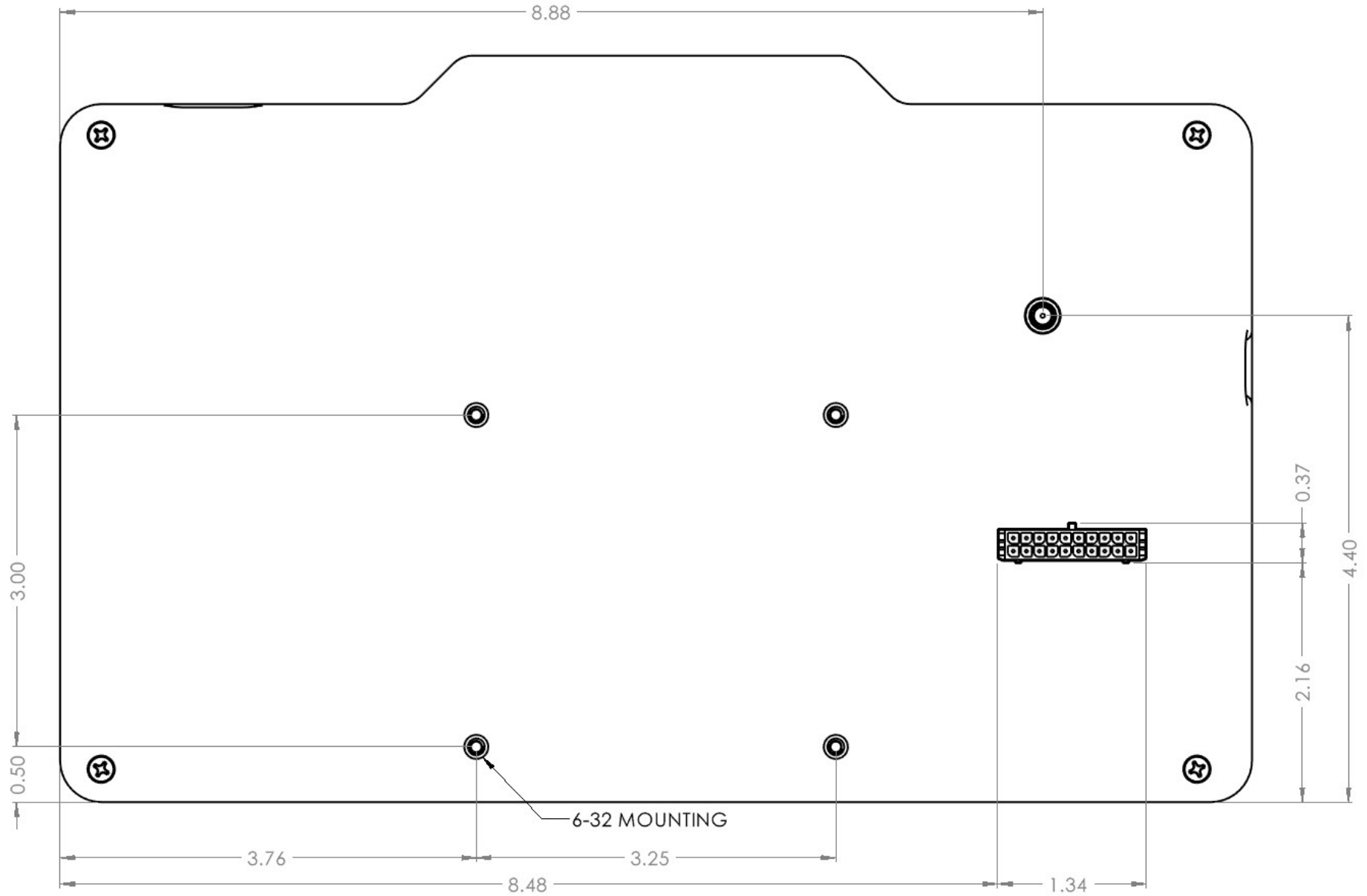
Please reach out to support@bigstuff3efi.com or www.Bigstuff3.com for more information.

BIGSTUFF3 GEN4 DASH MANUAL



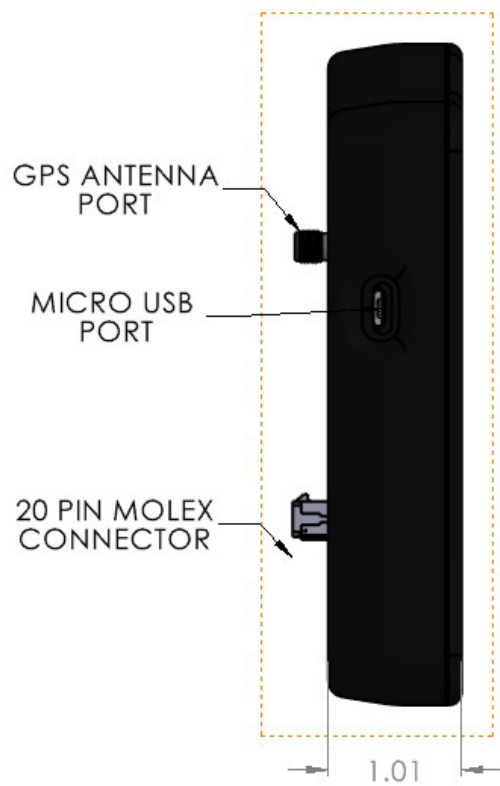
10" DASH

BIGSTUFF3 GEN4 DASH MANUAL



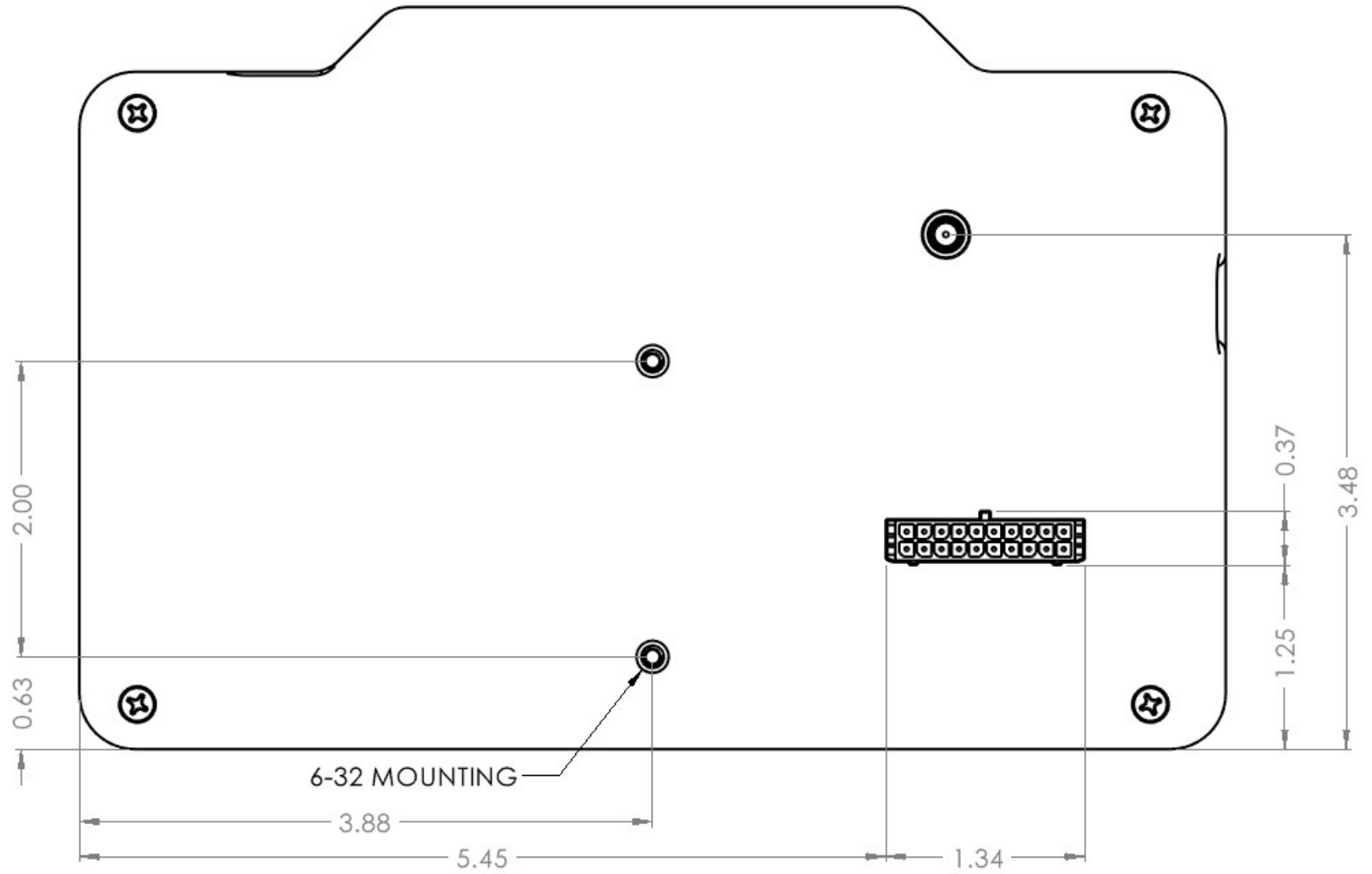
10" DASH

BIGSTUFF3 GEN4 DASH MANUAL



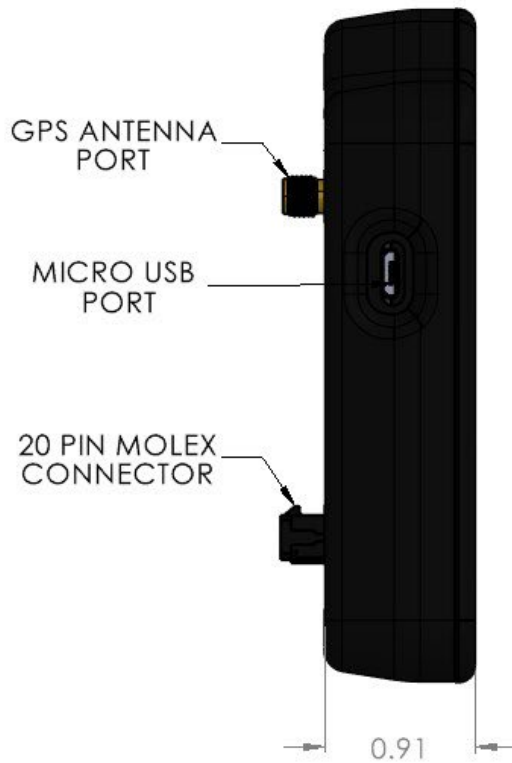
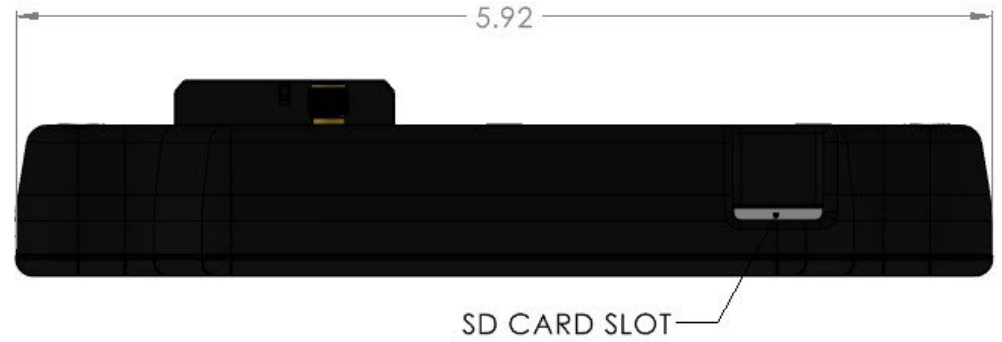
7" DASH

BIGSTUFF3 GEN4 DASH MANUAL



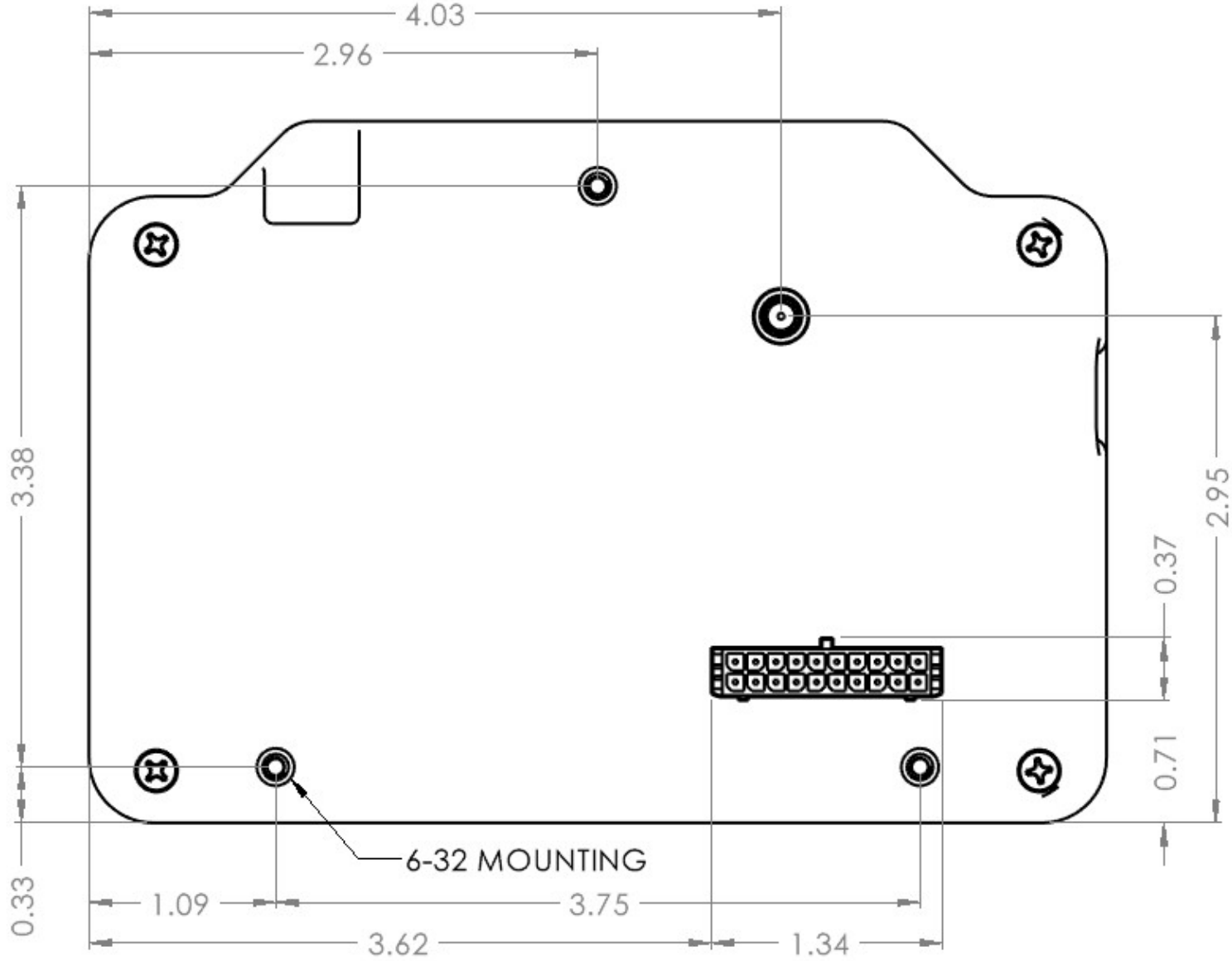
7" DASH

BIGSTUFF3 GEN4 DASH MANUAL



5" DASH

BIGSTUFF3 GEN4 DASH MANUAL



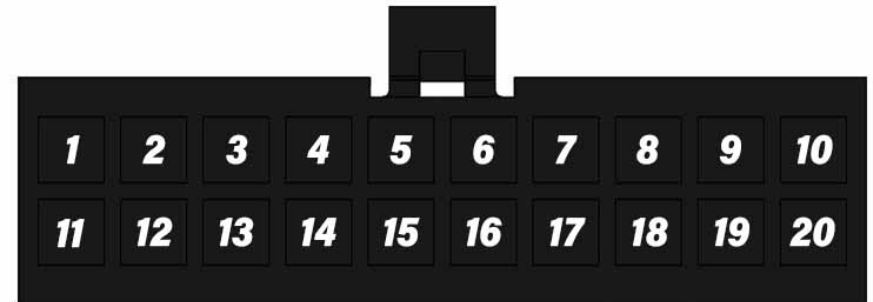
5" DASH

WIRING INFO

PIN	FUNCTION	COLOR	NOTES
1	5V	*	5v Reference
2	RESISTANCE INPUT 1	*	
3	RESISTANCE INPUT 2	*	
4	ANALOG INPUT 5	*	5v Max
5	ANALOG INPUT 4	*	5v Max
6	ANALOG INPUT 3	*	5v Max
7	ANALOG INPUT 2	*	5v Max
8	ANALOG INPUT 1	*	5v Max
9	CAN H	YELLOW	Plug into Comport plug on Main Engine Harness
10	CAN L	WHITE	Plug into Comport plug on Main Engine Harness
11	GROUND	*	
12	SWITCH 5 OUTPUT	*	SWITCHED GROUND
13	SWITCH 4 OUTPUT	*	SWITCHED GROUND
14	SWITCH 3 OUTPUT	*	SWITCHED GROUND
15	SWITCH 2 OUTPUT	*	SWITCHED GROUND
16	SWITCH 1 OUTPUT	*	SWITCHED GROUND
17	N/C	N/C	
18	GROUND	*	
19	GROUND	BLACK	
20	SWITCHED 12V	RED	

- Resistance pins to go to sending unit and configured within settings.
- Analog sensors powered with 5v wire and grounded with open ground pins. Configured via analog settings.
- CAN wires depending on ECU will have to be pinned into the ECU connector.
- **DO NOT** EXCEED 5V ON THE ANALOG INPUTS.
- **DO NOT** CONNECT 12V TO 5V WIRE OR CAN LINES.
- * = End user supplied wire.
- If driving relays with outputs, they cannot see 12v on the coil prior to dash switched 12v.

NOTE: Looking into wire end of connector



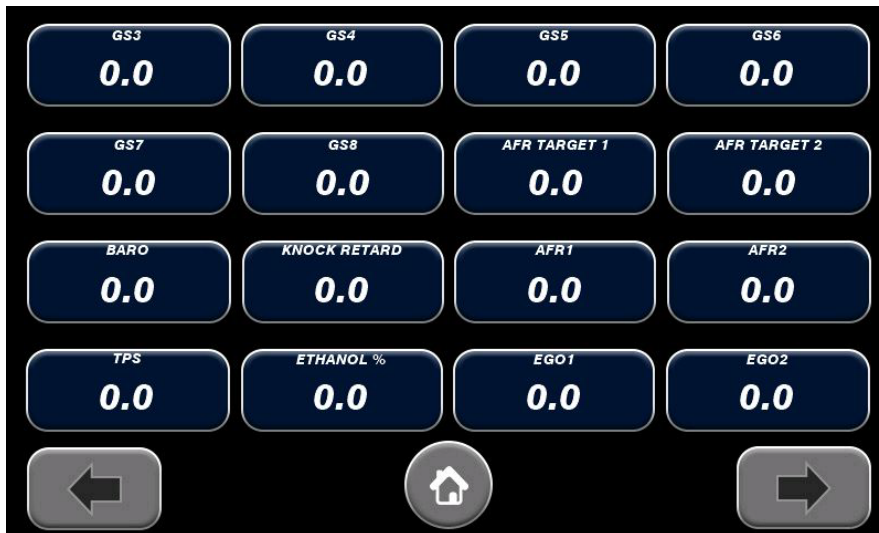
MAIN LAYOUTS



ALL 4 OF THE MAIN PAGES CONTAIN 3 BUTTONS AND EACH REDIRECT TO ANOTHER PAGE.

1. Button 1 will take you to the switches page.
2. Button 2 will take you to the extended data pages.
3. Button 3 will take you to the dedicated EGT page.
4. Button 4 will take you to all the various settings.

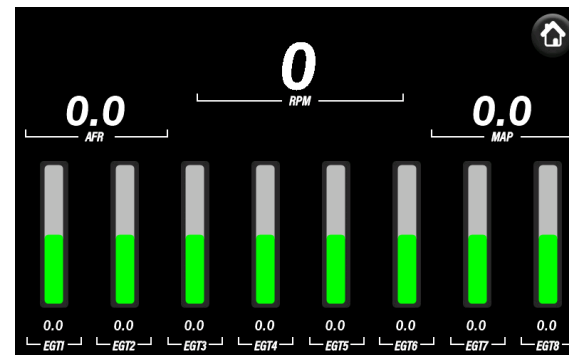
EXTENDED DATA PAGES



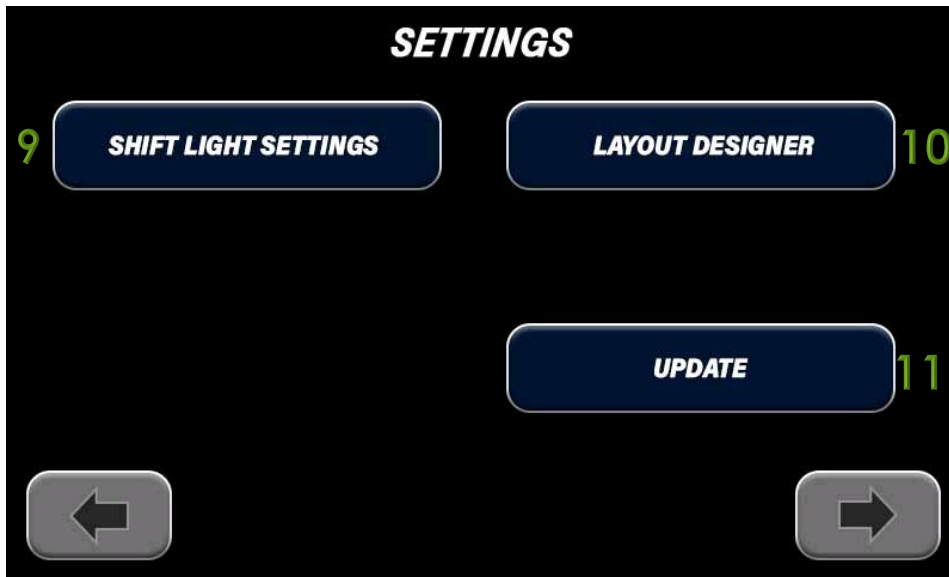
SWITCHES PAGE



EGT PAGE

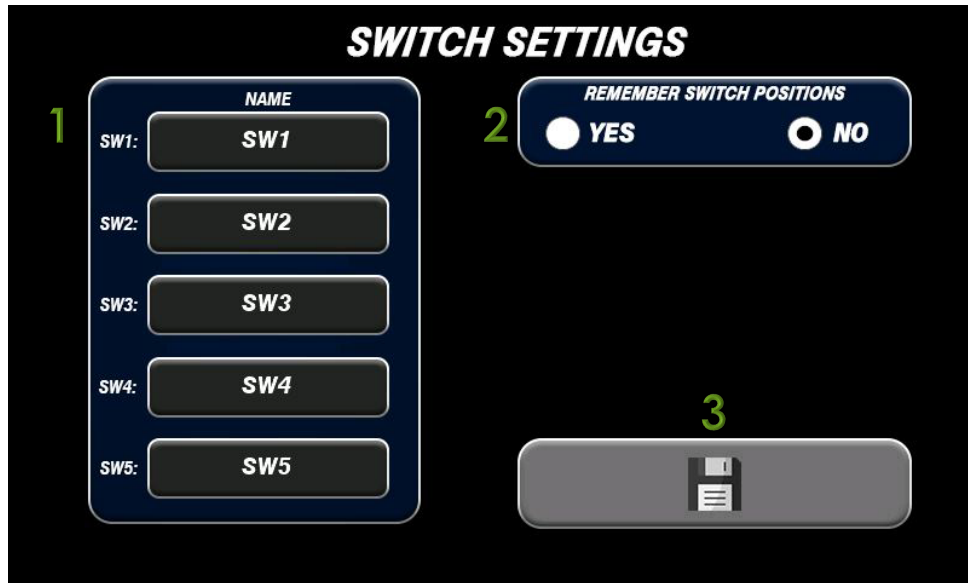


MAIN SETTINGS



1. Brightness slider.
2. Speed source to choose between ECU driven or GPS (if equipped). This uses VSS1 from ecu if ecu source is selected.
3. Layout selector.
4. Button to take you to the switch settings.
5. Button to take you to the various input settings.
6. Button to take you to various limit settings. Limits are used for triggering on screen warnings.
7. Save button to commit all changes to be used on startup.
8. Navigate through setting pages.
9. Button to take you to the shift light settings page.
10. Button to take you to the layout designer to customize the 5th layout.
11. Button used to update the dash when connected to a PC.

SWITCH SETTINGS



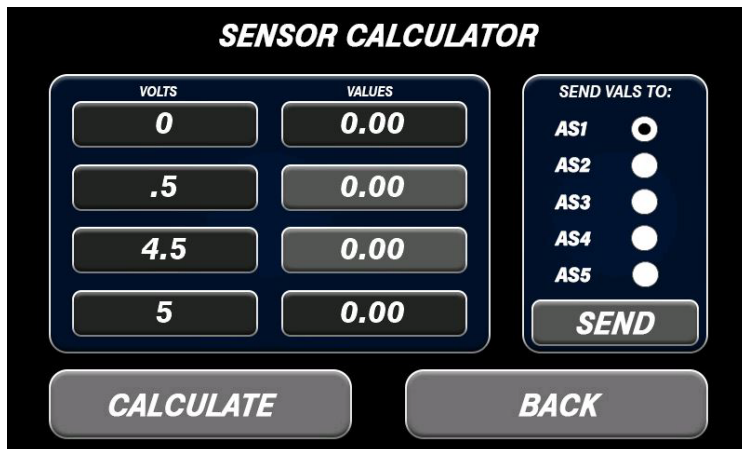
1. Each of these buttons allows you to change the name of the switch that is shown on the switch page.
2. The dash can remember the position of the switches when it is shut down if the option is set to YES. Upon startup the dash will return switches to the positions they were in when the dash was shut down.
3. Save switch settings.

INPUT SETTINGS



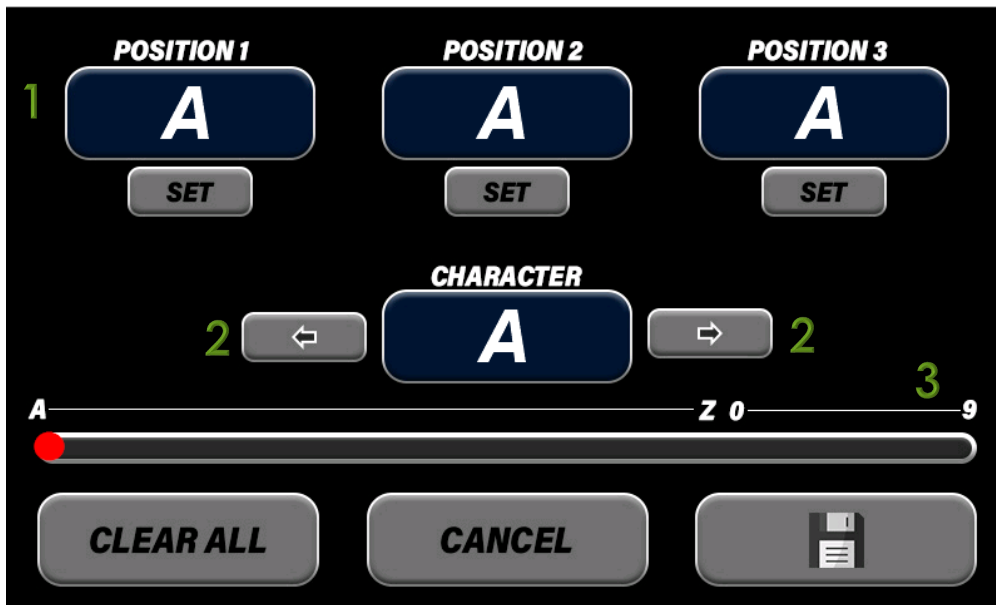
1. Button to take you to the sensor calculator.
2. Name column for each analog input. Selecting one of the name boxes will take you to the character entry to name that input (3 characters).
3. 0v value column for each input.
4. 5v value column for each input.
5. Scrolls through the input settings pages.
6. Commit the entered values.

- Input settings button loads to analog inputs.
- Each box is a button that will take you to an entry screen for either numbers or text.
- Sensor calculator can be used for .5v-4.5v sensors.



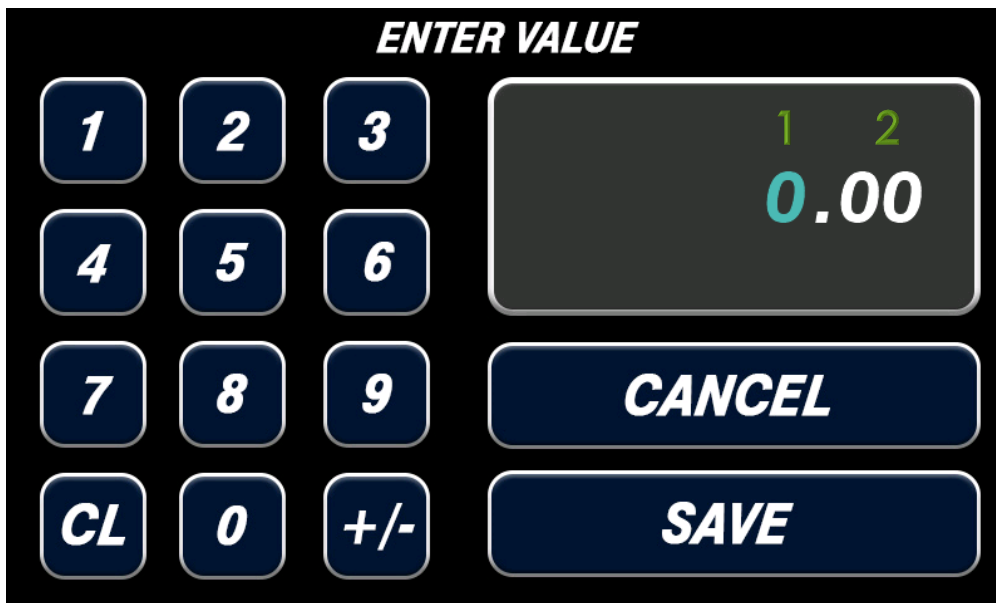
- Sensor calculator requires you to enter the .5v value and the 4.5v value into the light gray boxes.
- Calculate button will calculate the 0v and 5v values.
- Send will send the calculated values to the selected analog input on the analog input page.

BIGSTUFF3 GEN4 DASH MANUAL



1. Characters to be used in each position of the 3 character input name.
2. Arrows to increment letter/number by 1.
3. Slider to rapidly scroll through available values.
4. Clear all will set all positions back to "A".
5. Cancel will return to input settings committing no name changes.
6. Save button commits the naming.

- Name changes go into effect on all main pages as well as limit pages. For example if AS1 (analog sensor 1) name is changed to "OIL" it will appear as "OIL" everywhere used.



1. Select to enter values in front of decimal point.
2. Select to enter values behind decimal point.

- All number input buttons will take you to the value entry page.
- CL will set the value back to 0.00.
- +/- will toggle the value from positive to negative.
- Cancel will not commit values and return to page where the value was selected.
- Save will commit value and return to the page where the value was selected.

INPUT SETTINGS

RESISTANCE INPUTS

	NAME	MIN OHM	MAX OHM
R1:	RS1	0	0
		MIN VALUE	MAX VALUE
		0.00	0.00
R2:	RS2	0	0
		MIN VALUE	MAX VALUE
		0.00	0.00

- Like the analog input page the resistance inputs are also nameable.
- The inputs are configured to the sending unit and its values.
- For example a 10-95Ω fuel sending unit will be configured as:
 - **MIN OHM** = 10
 - **MAX OHM** = 95
 - **MIN VAL** = 0
 - **MAX VAL** = 100
- This can also be configured in other manners to work with various sensors and sending units.

INPUT SETTINGS

MS GENERIC SENSOR INPUTS

	NAME		NAME
GS1:	GS1	GS5:	GS5
GS2:	GS2	GS6:	GS6
GS3:	GS3	GS7:	GS7
GS4:	GS4	GS8:	GS8

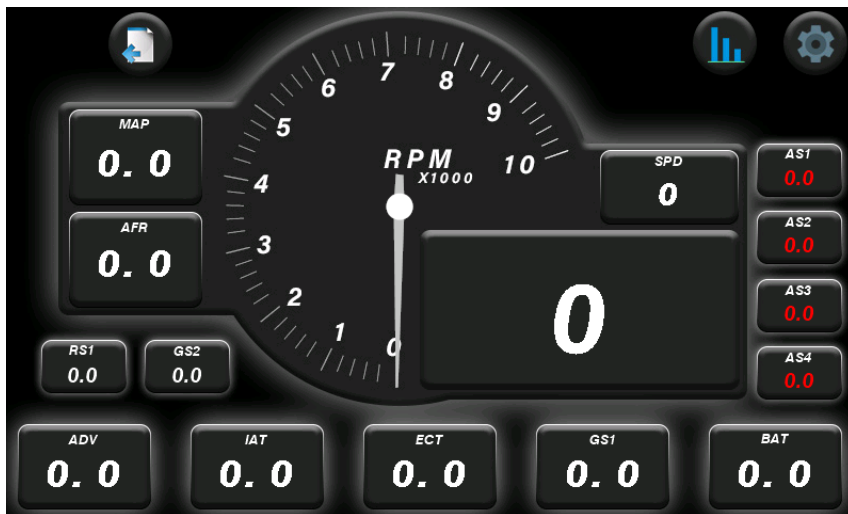
- The MS GENERIC SENSOR INPUT page is strictly to name the generic sensors that are coming over from MS.
- For example if generic sensor 1 input on the ecu is setup for fuel pressure you can rename that value on screen to "FPR" or something of the like.

LIMIT SETTINGS



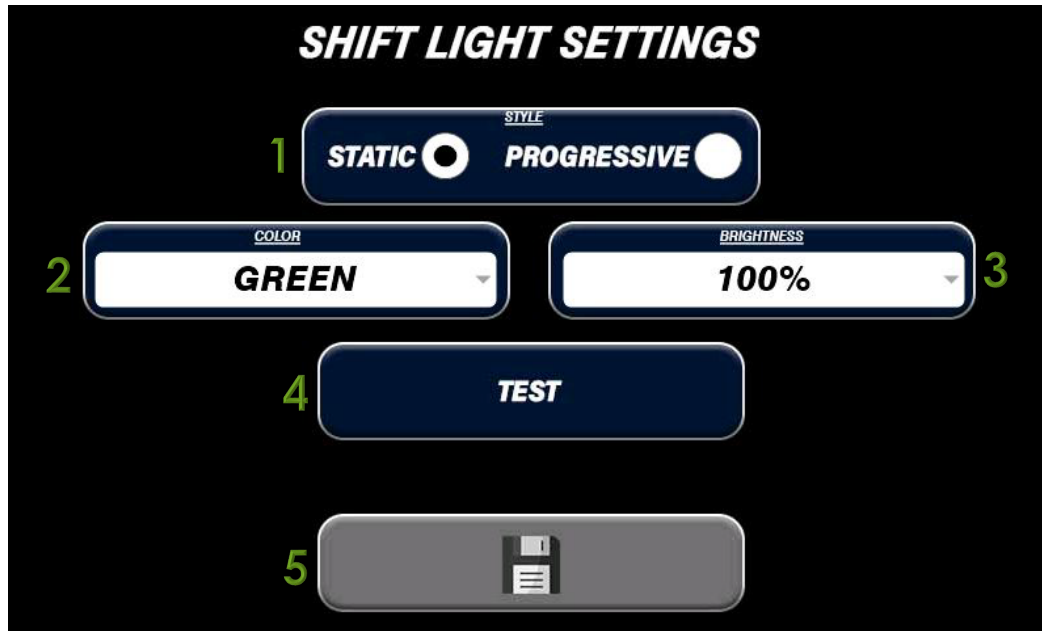
1. The on/off toggle is the global switch to either enable on screen warnings or disable. On screen warning turns the parameters red in the event the conditions are met.
2. All the input parameters can be set as greater than or less than to trigger the warning. Selecting the symbol will toggle between the two.
3. Commit all the limit settings.
4. Change limit settings pages.

- The shift light is triggered when the RPM value exceeds the value set in the limit settings for "RPM" regardless of the global on/off switch.
- All EGT parameters on the EGT page are triggered by the EGT limit.



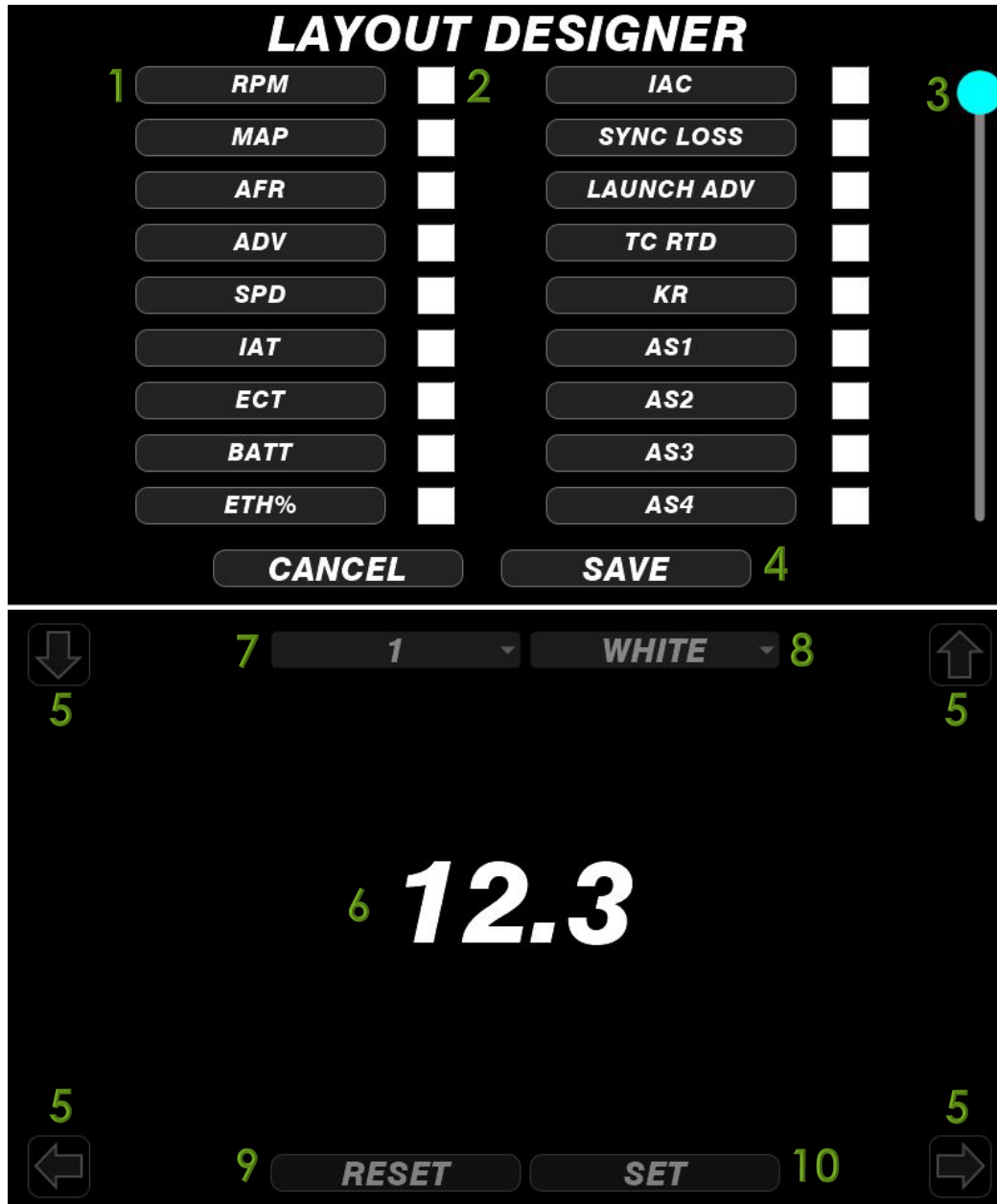
- Example showing the triggered analog input parameters.

SHIFT LIGHT SETTINGS



1. Static or progressive options. Static activates all the LEDs at once while progressive starts a LED sweep starting 1000 RPM below the set point.
2. Color selector.
3. Brightness selector.
4. Test button will perform a LED sweep of the currently selected settings.
5. Save shift light settings.

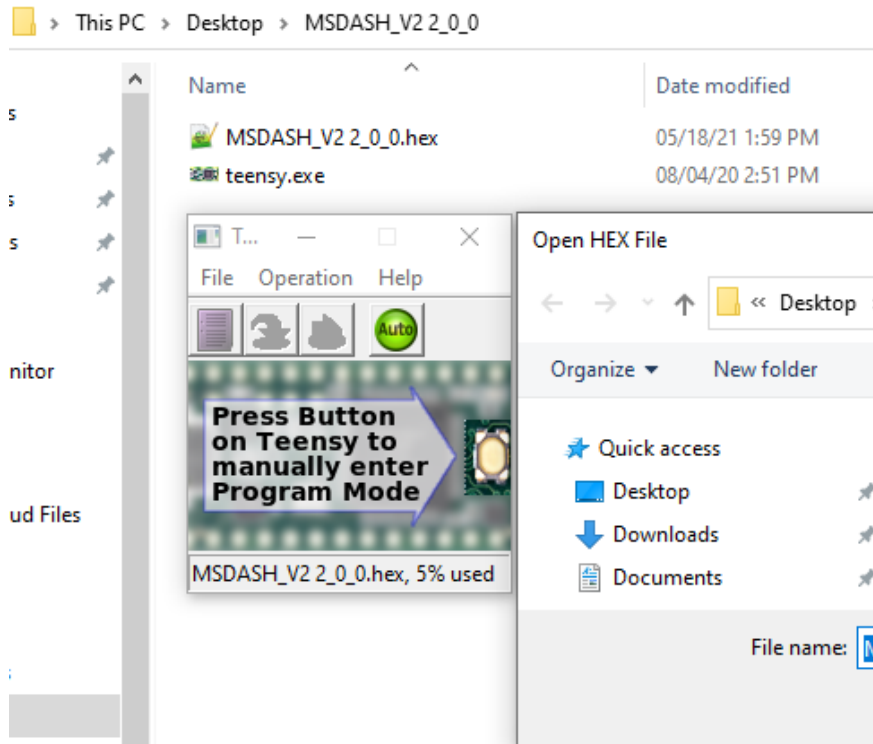
LAYOUT DESIGNER



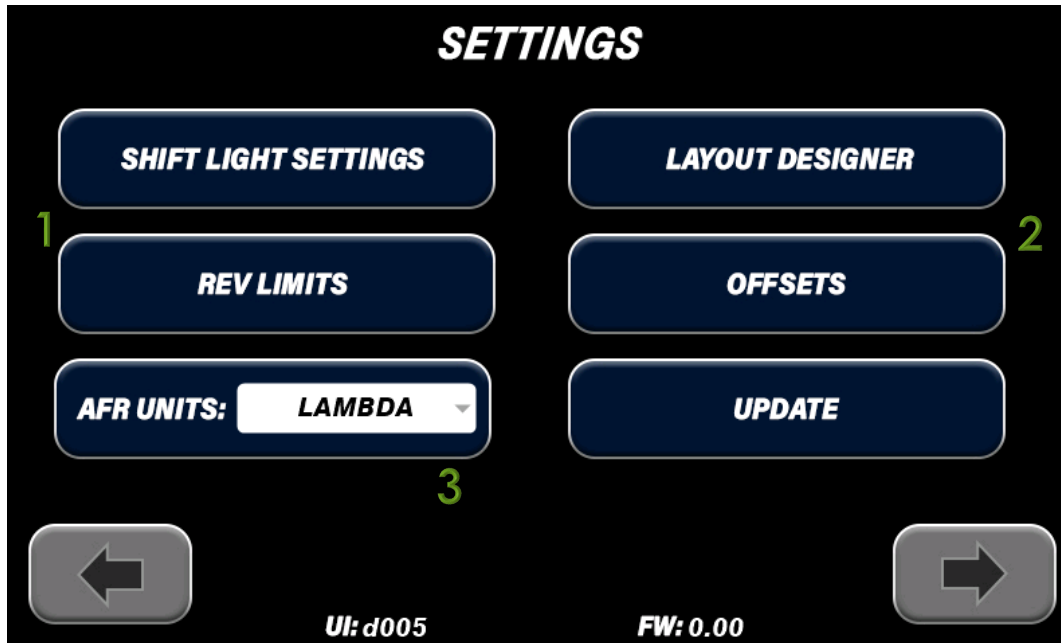
- The 5th layout is customized via the layout designer.
 - The 5th layout uses a background named "BACKGROUND" at the root of the SD card.
 - Size for background is 800x480.
 - All the parameters that can be used are within the list.
1. Button that will take you to the placement screen provided the checkbox for the parameter is checked.
 2. Check box to enable/disable certain parameters.
 3. Scroll bar to access the full list of parameters.
 4. Save configured layout.
 5. Fine adjustment for the position of the parameter or button.
 6. Example of the parameter based on all of the current setting. This can also be moved by dragging it with a finger.
 7. Parameter font size.
 8. Parameter font color.
 9. Reset parameter to default location/font/color.
 10. Set parameter information for custom layout.

UPDATING THE DASH

1. Download and extract the update to a location on your PC. In this example I saved it onto the desktop.
2. Launch teensy.exe.
3. File, Open, and choose the .hex file provided in the download.
4. Once selected it should show that it is loaded into the tool.
5. Connect the pc to the dash via micro USB data cable and power the dash.
6. With the auto button on as show now hit update in the dash settings and it will upload. (if auto is not on you will have to hit the program button in the teensy.exe tool.)
7. Once loaded you can disconnect and reboot the dash.

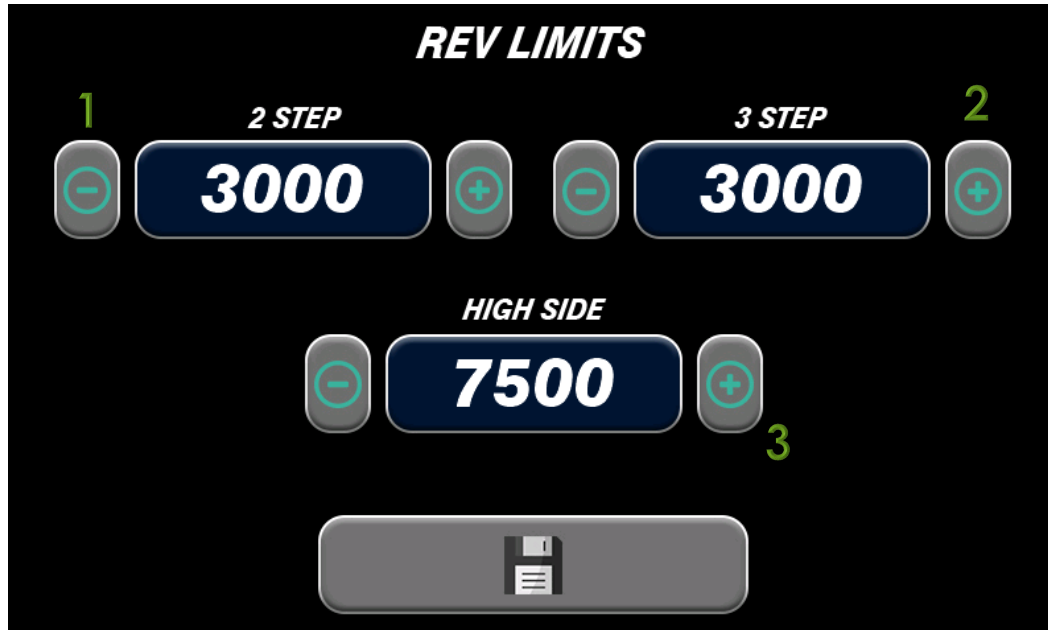


BIGSTUFF3 SETTINGS



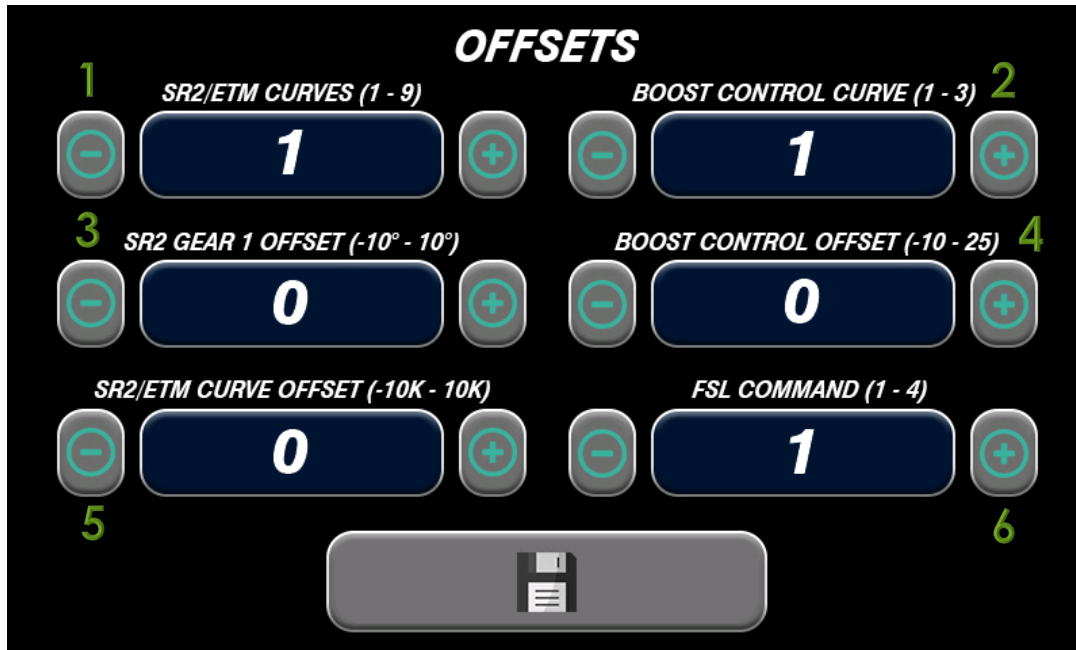
- When the Bigstuff3 Dash is connected to the ECU the dash values take a higher priority and writes over the values see in the software. The only exception is in the software for the rev limiters where the rev limiters can be ignored from the dash.
 - When making any changes from the dash be sure to hit the disc icon at the bottom to save any changes you make.
 - On this setting page the REV LIMITS and OFFSETS section will make change to your current calibration in the ECU.
 - We will go into more detail below on these sections.
1. REV LIMITS – The section can be used to adjust the 2-step, 3-step, and max engine RPM value.
 2. OFFSETS – This section is used to choose different traction control maps, boost control maps, and offsets to the current map chosen
 3. AFR UNITS – Choose which fuel type you are running so that your AFR will be displayed correctly. You can show Lambda if you like as well.

ENGINE REV LIMITERS



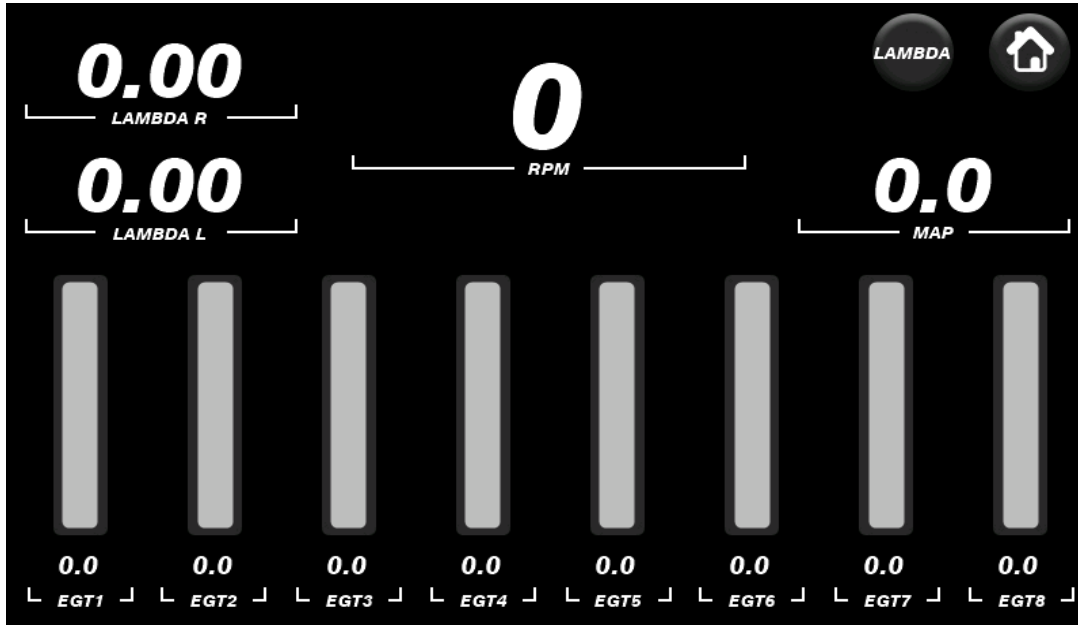
- When the Bigstuff3 Dash is connected to the ECU the dash values take a higher priority and writes over the values see in the software. The only exception is in the software for the rev limiters where the rev limiters can be ignored from the dash.
 - When making any changes from the dash be sure to hit the disc icon at the bottom to save any changes you make.
1. 2-Step RevLimiter – This value can be found in the System Section -> Revlimiters. This revlimiter can be used for any purpose and is a 12vdc signal on Header 1 B2.
 2. 3-Step RevLimiter – This value can be found in the System Section -> Revlimiters. This revlimiter is used for the transbrake or clutch input and will start the race timer on the release. This is a 12vdc signal on Header 2 W1.
 3. High Side Revlimiter – This value can be found in the System Section -> Revlimiters. This is the max engine RPM setting.

OFFSETS

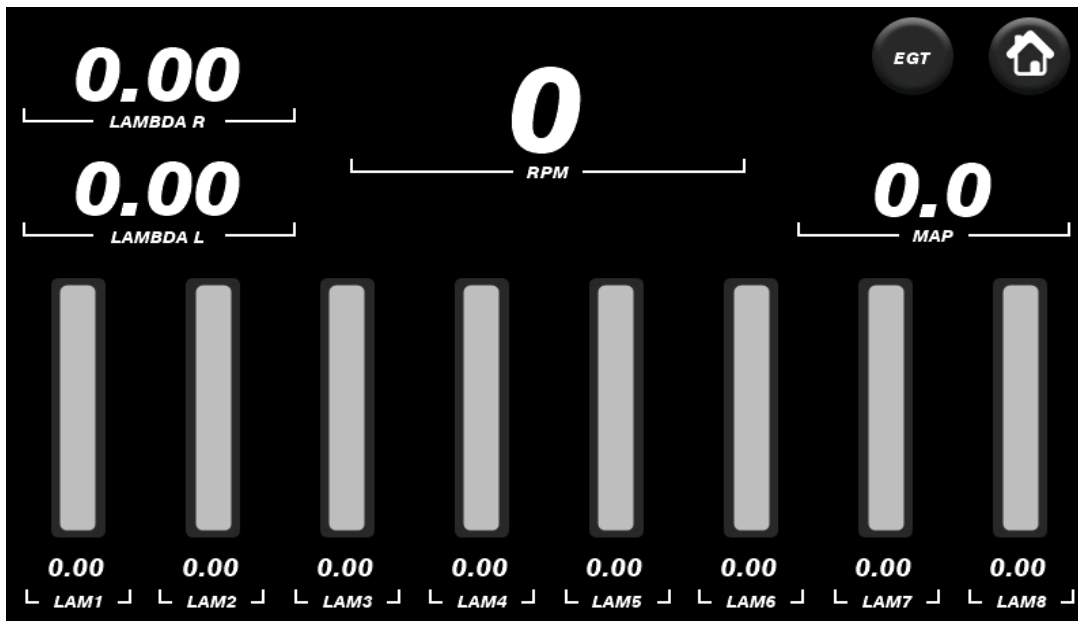


- The OFFSETS section is used to change the calibrations live on the ECU for different traction control maps, Boost Controller maps and offsets to the current maps.
 - Be sure after making the adjustments to hit the disc icon to save the changes.
1. SR2/ETM CURVES (1-9) – Choose which SR2/ETM Curve (1-9) you will be using. Curves 1-3 will use the SR2 Gear Curve, SR2 and ETM accordingly. Curves 4-9 will use the desired SR2 Gear 1 curve chosen but only use the SR2/ETM curve 3.
 2. BOOST CONTROL CURVE – Choose which Boost Controller (1,2 or 3) you will be using.
 3. SR2 GEAR 1 OFFSET – Provide a positive or negative offset to the current SR2 Gear 1 Curve chosen.
 4. BOOST CONTROL OFFSET – Provide a positive or negative offset to the existing boost controller curve.
 5. SR2/ETM CURVE OFFSET – Provide a positive or negative offset to the current SR2/ETM curve chosen.
 6. FSL COMMAND – FUTURE USE

AFR / EGT DISPLAY

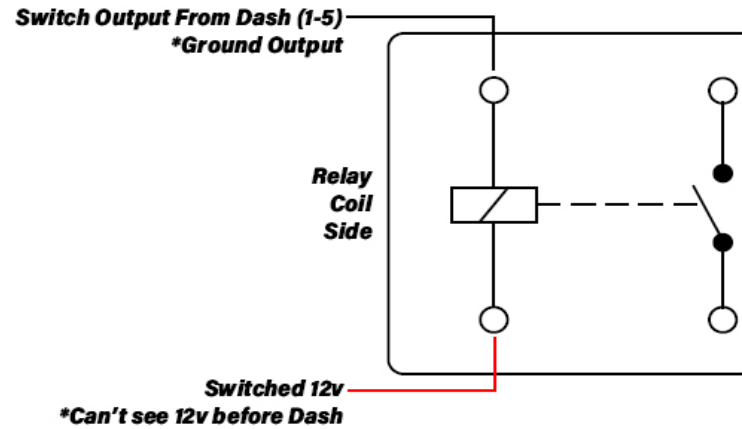


- The AFR and EGT display pages offer the in real time the current AFR and EGT readings based on the sensors on your GEN4 system.
- Depending on if you have AFR or Lambda chosen in the settings section the values will be displayed accordingly.
- The O2 sensors will only start reading after the engine has been running for about 2 seconds.



WIRING

Switch Output Wiring Example



Fuel Gauge Wiring Example

