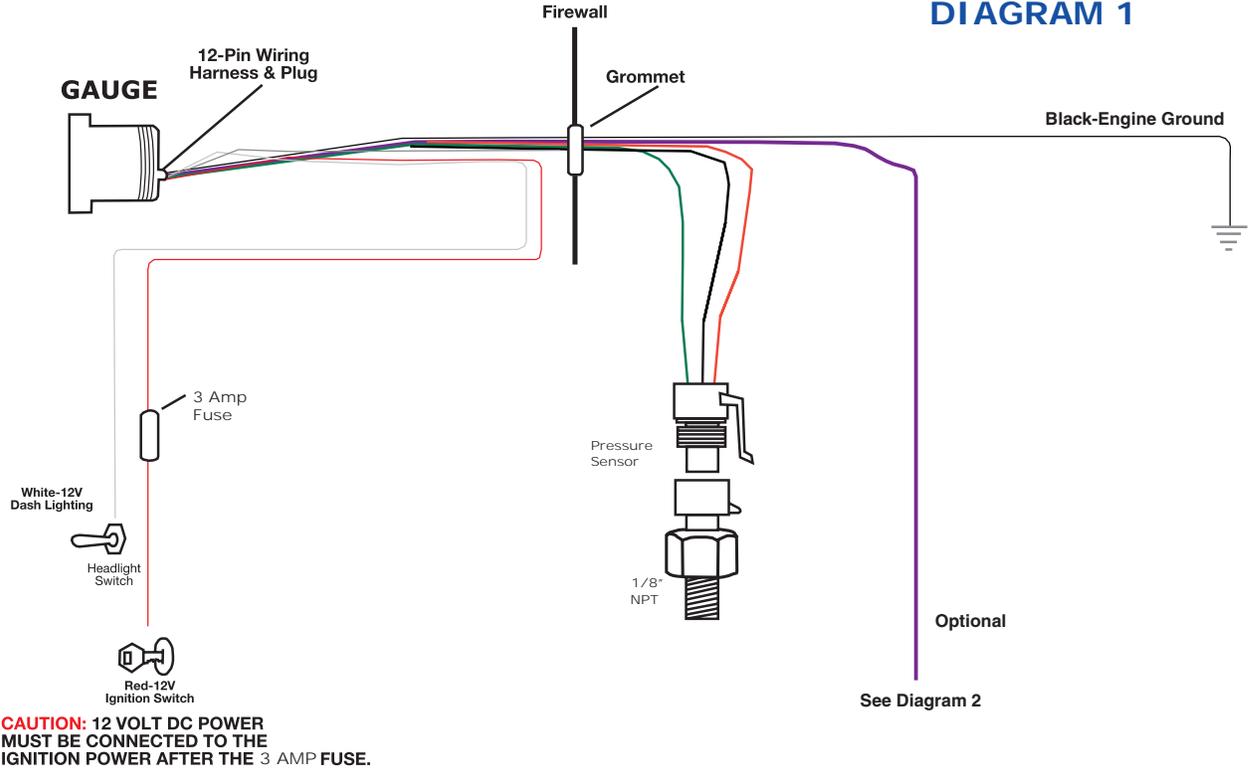
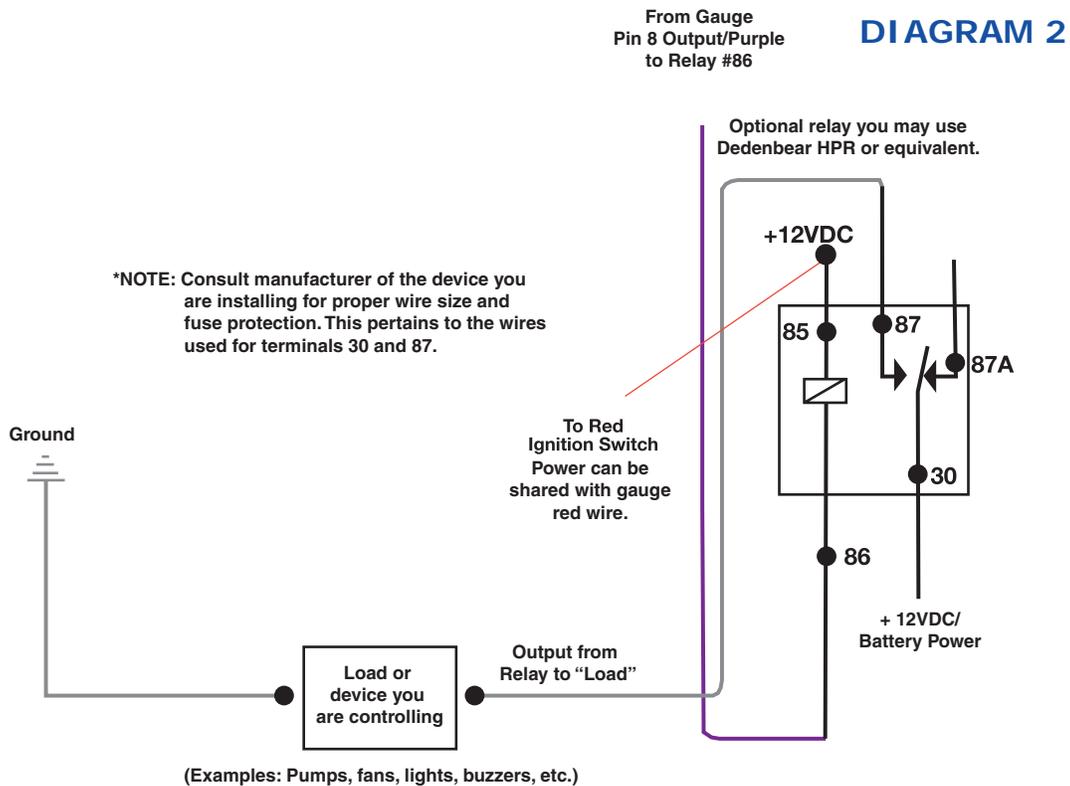


Wiring Installation Instructions for : Boost Pressure 2 1/16" Spek Pro Professional Racing Gauge



Optional: Wiring a Relay for Gauge Controlled Output



Wiring:

Red: Switched, key on power. Protect with 3 amp automotive fuse.

Black: Engine ground.

White: Dash lights dimming circuit (power controlled, not ground controlled)

Purple: Used for triggering (grounding) relay coil when set point of the gauge is triggered.

Programming and Using Your Gauge



Installation:

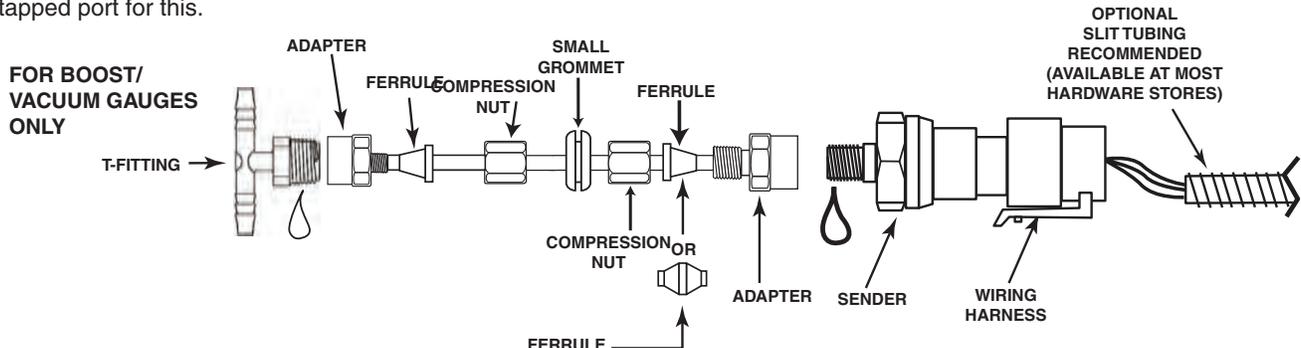
Installing the Boost Sender for Boost-Only gauges: This would be most common on a diesel application. Many diesel applications will require drilling and tapping a 1/8" NPT port. Many Ford 7.3 and 6.0 Power Stroke diesels, and some early Chevy Duramax diesels have a 1/4" I.D. hose that can be referenced for boost. You may use a 1/4" vacuum T for this. When drilling and tapping the upper intake, or the intake pipe, the component should be removed for drilling and tapping. You may use a 5/16", or Letter "R" drill bit. Then use a 1/8" NPT pipe tap.

Choose a location to drill and tap prior to removing any components, and mark this location with a marker, or an awl. When tapping threads, do not run the tap all the way down. These are tapered threads, and you should only run the tap half way down, and then check the fitment of the sender. You do not want the threads loose enough for the sender to thread all the way in. Blow out the shavings, install the sender, and reinstall the intake or pipe.

Installing the Boost Sender for Vac/Boost gauges: Typically a vacuum/boost gauge would be used a gasoline engine that is capable of creating vacuum. These engines will most often have a full port manifold vacuum line that you can T into from either the base of the carburetor or throttle body, or from the intake directly. You may use the supplied vacuum T and nylon tubing with compression fittings (supplied with vac/boost gauges only) to install the sender. The supplied T will fit 3/16" vacuum lines.

If this is being installed on a supercharged application where the throttle body or carburetor sits above the supercharger (Example: roots blower application), you then need to reference vacuum/boost from under the blower in order to be able to see boost when under load.

On centrifugal supercharged, turbo, and "blow through" applications, you may reference vacuum from a vacuum line from the base of the carburetor or throttle body as long as it is "full port manifold vacuum". In some applications, you may install the sender directly into a drilled and tapped port into the intake manifold after the throttle body or carburetor. Some blower applications have a pre-drilled and tapped port for this.



Programming:

The programming is achieved in steps, using the middle button on the face of the gauge. Think of the middle button, as a “Mode” button. The Left & Right buttons work as “Down” & “Up” buttons. Please note, that each push & release of the buttons require about a 1 second push to activate. A quick tap may not register to the gauge, that you have pushed the button. This built in delay is intentional to prevent accidental setting changes.

Illumination Brightness (When no power from dash lighting is used)

This is one of the only steps that you do NOT use the middle button for. Simply push and hold the left button to lower the brightness or push and hold the right button to increase the brightness. The gauge pointer will raise and lower with the brightness to indicate current brightness relative to min. and max., however will return to normal reading almost immediately after the last button push.

Peak

With power on, the first press and release of the middle button will display PEAK. The pointer will move to the peak boost reading, and the word PEAK will continue to flash. If no button is pushed for about 30 seconds the gauge will default back to the current reading, and peak automatically clears. To clear the peak, without waiting for the time-out, push either the left or the right button while in Peak-Mode. If you do not want peak cleared then push and release the middle button 5 times to cycle through all of the remaining menus and back to normal operation.

High Warn Set Point

While in PEAK mode, push and release the middle button. The pointer will move to the current high set point and the word HI will continue to flash. While in HI set mode, push and hold left button to move set point lower or push and hold right button to move the set point higher. If no button is pushed for about 30 seconds the gauge will default back to the current reading. It will also store the last HI set point adjustment. When readings are above high set point, the word HI will illuminate, and gauge lighting will turn red.

Low Warn Set Point

While in High Warn Set Point, push and release the middle button. The pointer will move to the current low set point and the word LOW will continue to flash. While in LOW set mode, push and hold left button to move set point lower or push and hold right button to move the set point higher. If no button is pushed for about 30 seconds the gauge will default back to the current reading. It will also store the last LOW set point adjustment. When gauge reads below your low set point the word LOW will illuminate.

Gauge Illumination Color Set Point

While in Low Warn Set Point, push and release the middle button. The pointer will move to a predetermined reading on the scale (associated with the current color selected) and the face illumination will begin to flash about once every second. The words PEAK, LOW, and HI will also flash together about once every second. Push and release the left button to move the pointer down which also changes the illumination color. Push and release the right button to move the pointer back up, which changes the illumination color. Each left and right button push requires about a 1-second push. If no button is pushed for about 30 seconds, the gauge will default back to the current reading and the last color selected will be stored. If no color (illumination color off) is selected the lighting will remain off, except for the lit pointer. The dial will still warn and light up in red if a low warning is detected.

Changing Lit Pointer Brightness

While in the Gauge Illumination Color Set Point Mode, push and release the middle button. The color will continue to flash like it does in Gauge Illumination Color Set mode, however the PEAK, HI, and LOW indicators will no longer be flashing. Press and hold the left button and the middle button at the same time. The pointer will step all the way up to maximum gauge reading while you are holding the pair of buttons in. Release the buttons when maximum gauge reading is achieved. The illumination will turn off (except for the pointer). You may use the left and right buttons to adjust the pointer brightness. You may either press and release the middle button to store it and to return to normal function, or just let it time out after about 30 seconds.

Demo Mode

While in Gauge Illumination Color Set Point mode, push and hold the middle button and the right button at the same time, and continue to hold until the pointer reaches maximum reading. Release the two buttons. The gauge will now continuously operate in Demo mode (changing colors, and sweeping back and forth) until any button is pushed and released. It will then return to normal operation.

Factory Reset

While in Peak mode, press and hold the middle button and the right button at the same time until the pointer moves to maximum reading. Release both buttons. The gauge will now reset to all factory default settings.

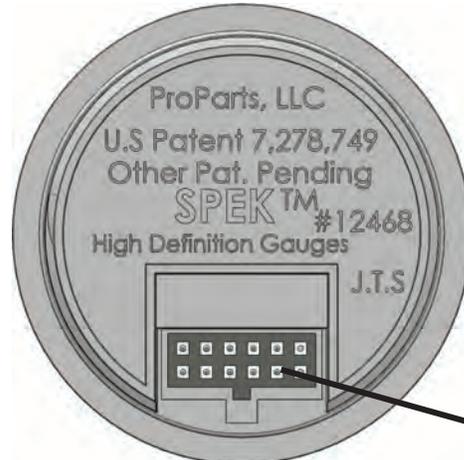
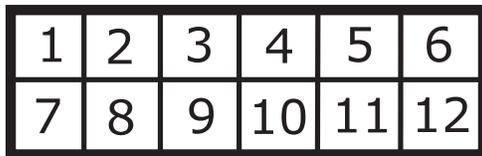
Gauge Output Control Wire (Purple wire).

The purple wire can be used to ground/activate a relay if you want to control another device whenever the gauge goes into HIGH Warning. The purple wire will ground the “coil-side” of a common relay with a maximum load capability of 1.5A (on the purple wire). Generally you would run a key-on power source to terminal 85. Run the purple wire to terminal 86. Connect your power source (most cases battery positive) for the device that you want to control to terminal 30. Terminal 87 will now be that same power source leading to your controlled device anytime the relay is activated (when pressure goes to your HIGH Warn Set Point. See diagram 2.).

SPEK™ GAUGE WIRING DIAGRAM



J1



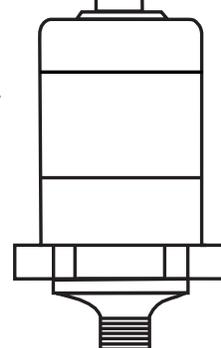
J1

Black Lead - Ground
Pin 3

Red Lead - +5
Pin 4

White Lead -
Output .5 - 4.5 V
Pin 2

Pressure Sensor
Wiring



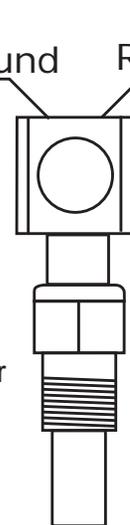
J1

- 1 - PWM - (Yellow) - Data Logger Out
- 2 - Voltage - Fuel Level - Blue
Temperature - (Red) - Thermistor
Pressure Input - (Green/White) (.5V to 4.5V)
- 3 - Input Ground - (Black)(From Sensor)
- 4 - +5V Output to Sensor - (Red/White)
- 5 - Fet Out - (Purple)
- 6 - Dimmer - (White)
- 7 - (N/C)
- 8 - Battery +12VDC - (Red)
- 9 - Thermocouple (-) - (Red) - EGT
- 10 - Thermocouple (+) - (Yellow) - EGT
- 11 - Tachometer - (Green)
- 12 - Ground - (Black)

Pin 3
Black Wire - Ground

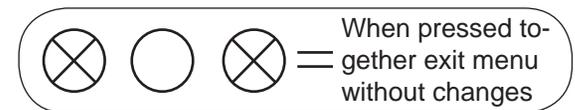
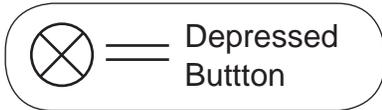
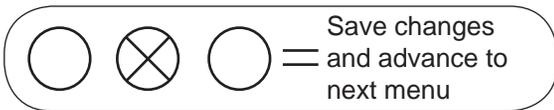
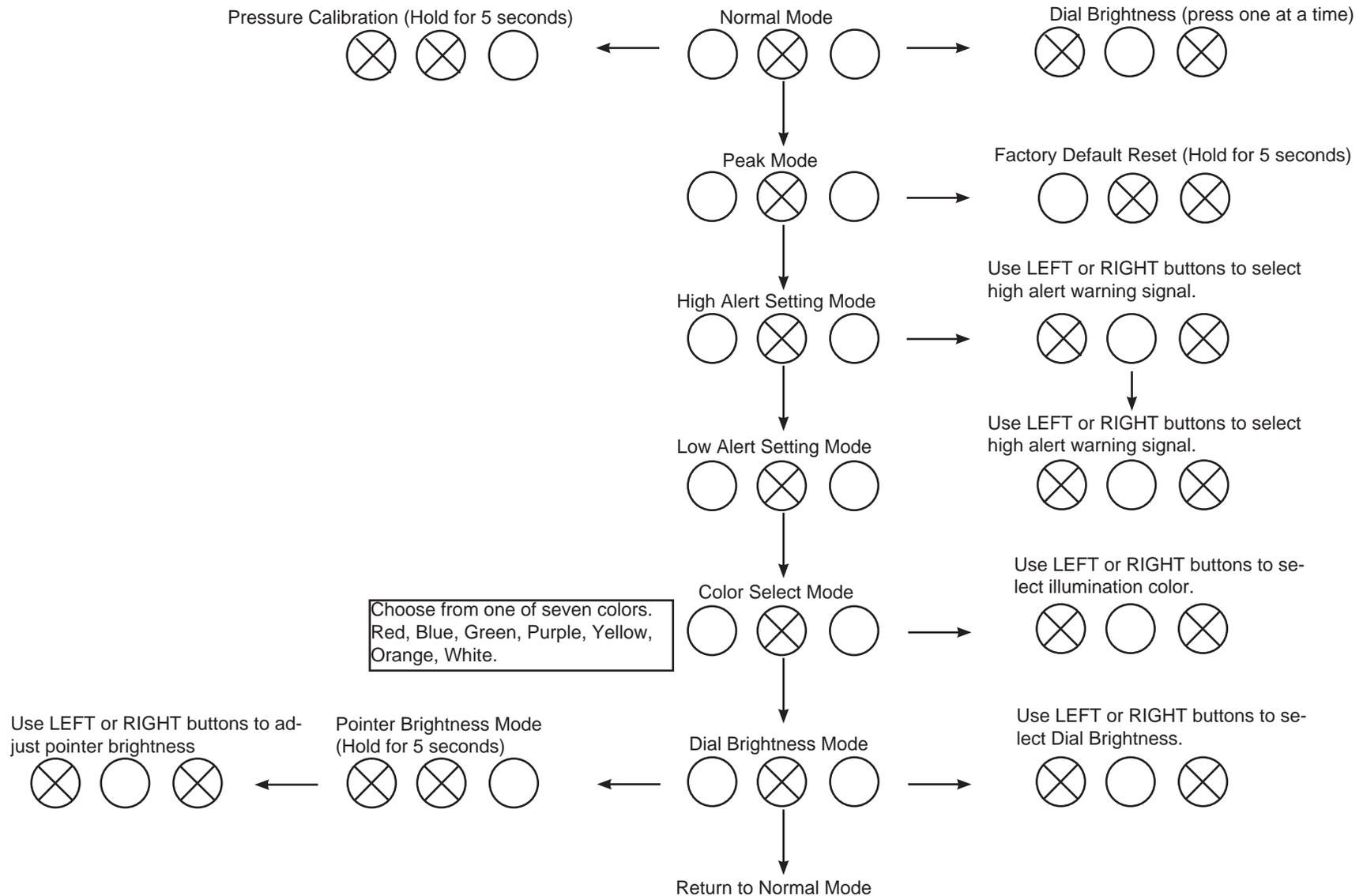
Pin 2
Red Wire - Input

Temp Sensor
Wiring



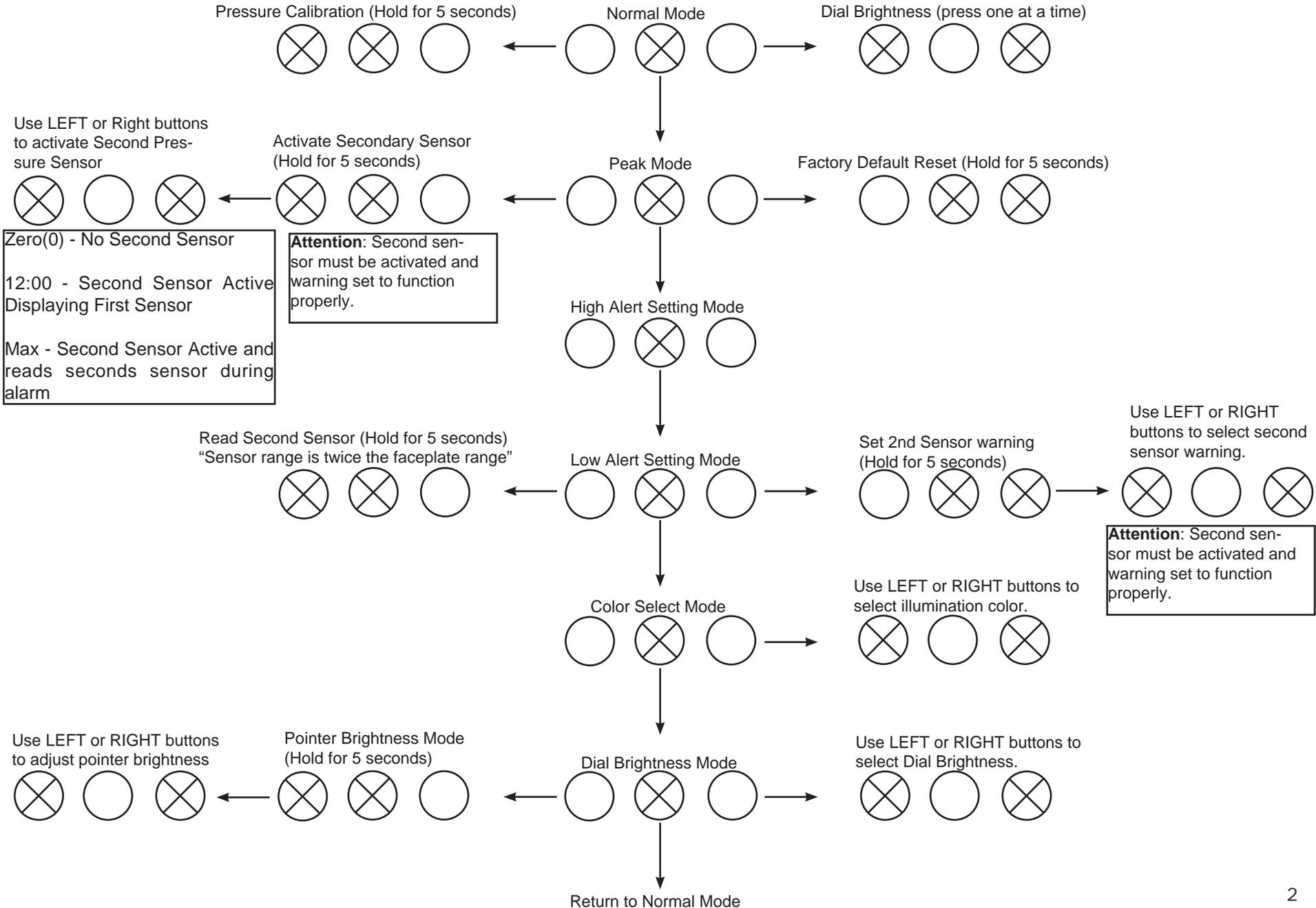
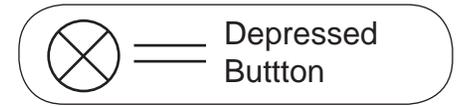


Oil/Water Pressure Programming Quick Reference Guide



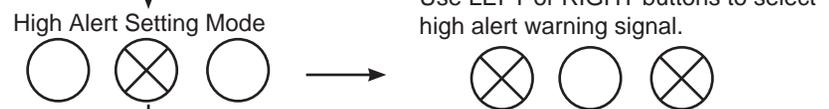
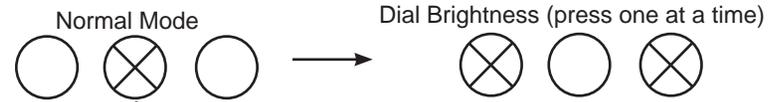


Dual Input Fuel Pressure Programming Quick Reference Guide

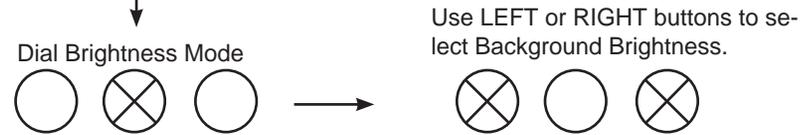
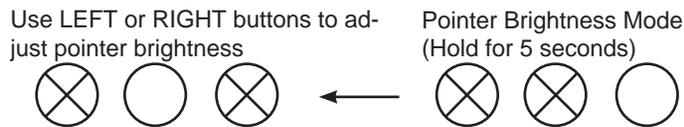
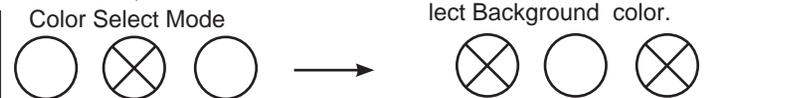




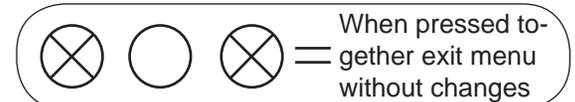
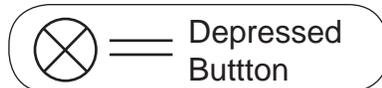
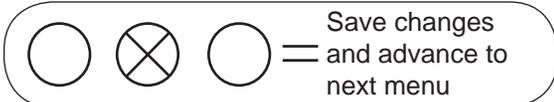
Temperature Programming Quick Reference Guide



Choose from one of seven colors. Red, Blue, Green, Purple, Yellow, Orange, White.

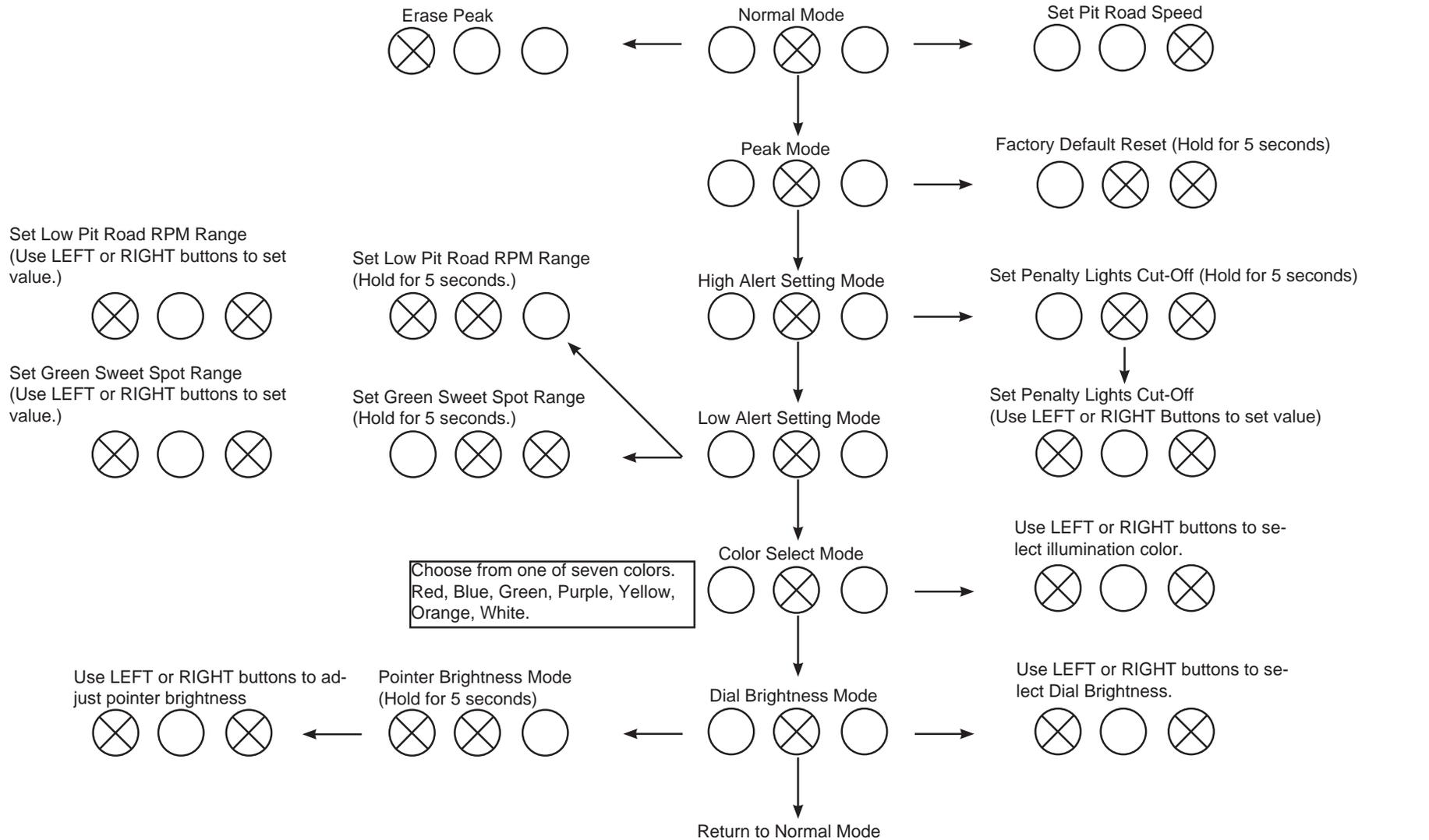


Return to Normal Mode





Tachometer Programming Quick Reference Guide



= Save changes and advance to next menu
 = Depressed Button
 RED BLUE YELLOW
 = When pressed together exit menu without changes