

Product Name:	PE Dash w-CAN
Product Part Number:	92005003 & 92005004
Document Number:	6000708-01

MANUAL REVISIONS

Revision	Date	Description
-01	1/15/21	Initial release of manual – based on firmware v1.00.20

⚠ WARNING! ⚠

The PE Dash with CAN is intended for off-road use only. Proper care must be taken as this device is **NOT** waterproof and should not be exposed to volatile chemicals.

Performance Electronics, LTD assumes no responsibility for any damage that results from incorrect installation or misuse of this product. It is up to the end user to verify the correct setup and determine the suitability for his or her specific application.

⚠ WARNING:
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

INTRODUCTION AND OVERVIEW

The PE Dash is a LCD touchscreen display allowing you to monitor critical engine channels from the driver's seat. The PE Dash provides user configurable channel warnings, full screen alarms and screen recording options to view and playback recorded screen data.

Features

- Compatible with PE3, Honddata and Megasquirt ECUs
- Display up to 8 CAN data channels
- Full color LCD
- Configurable multi-touch display
- Visible in direct sunlight
- Adjustable brightness
- User configured warning and alarms
- Min/Max recall

PART IDENTIFICATION

Handheld Dash Kit (P/N: 92005004)



Panel Mount Dash Kit (P/N: 92005003)



INSTALLATION

Panel Mount Dash

Installation of the Panel Mount dash requires locating and drilling four holes. A template is included at the last page of this document. Be sure there is adequate clearance behind the panel for the mounting nuts and that drilling will not enter any other component, wires or structure. Drill four 3/16" diameter holes. Four nylock nuts are provided for fastening. The communication cable may enter from the top or the bottom as best suits the installation. If needed, you can flip the screen orientation during setup.

Connecting to ECU

If connecting to a current model PE ECU, Megasquirt or Hondata ECU, route PE Dash communication cable to ECU and plug into EFI Pigtail Adapter (PN: 99005004 *Sold Separately)



*EFI Pigtail Adapter PN: 99005004

Wire Color	Wired Connection
Red	Switched +12v
Brown/Tan	CAN Lo
Brown/Pink	CAN Hi
Black	Ground

SETUP AND CONFIGURATION

Note: The dash is a capacitive touch screen which senses the touch of human skin. It may not operate properly if gloves or other hand protection is being used.

Basic Configuration

Switch +12v power to dash. The PE dash will initiate a splash screen with the PE logo, then the home screen will display. Press **Menu** to enter setup area.

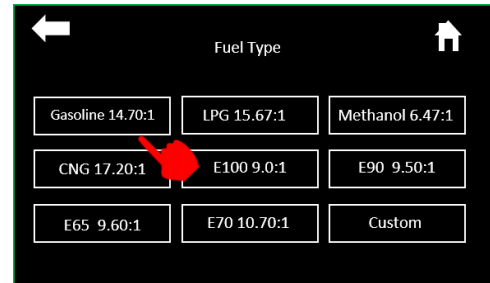
Five initial settings must be established:

- Layout: Select how many channels to display. Press **Layout** and select desired channel layout
- CAN Setup: Press **CAN Setup** and select CAN Bus Speed to match the ECU used or OBDII.
 - PE3 ECUs broadcast 1000(kbps)
 - OBDII data is broadcast 500(kbps)
- Select CAN Bus Type:
 - PE3-8400 ECU broadcast Bosch MS4.3
 - PE-IG2 ECU broadcast PE-IG2
- Display: Press **Display**. The screen can be flipped to best fit your application. Adjust your screen backlight level for best viewing.
- Channel Display: From the home screen, touch the channel you wish to change and select the input to be displayed. Channel options are:
 - RPM
 - Battery Voltage
 - Manifold Boost
 - Engine Temperature (ECT)
 - Fuel Pressure
 - Gear
 - Air Temp (IAT)
 - Ignition Angle
 - Injector Open Time
 - Lambda/AFR#1
 - Lambda/AFR#2
 - Manifold Pressure (MAP)
 - Oil Pressure
 - Oil Temp
 - Speed
 - Throttle Position
 - Off



Note: Depending on your ECU, your available channel list may change from the list above.

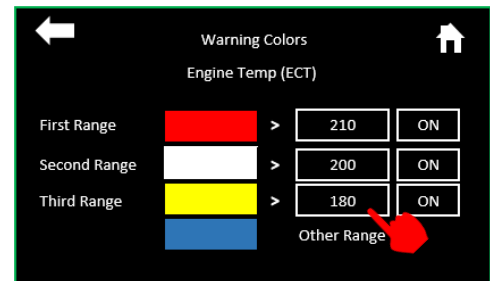
- Fuel Type: Press **Fuel Type** and select one of eight pre-calibrated fuel types, or enter in a custom stoichiometric value.



Channel Warning Colors

Each channel allows you to configure up to four warning colors. When a warning condition is met, the box surrounding the channel on the home screen will change to the specified color. To set these warnings:

- Power on the PE dash, and touch the channel to add warning colors.
- Using this example, the Coolant Temp display will show with a blue box around it until the temperature reaches 180°F, and will then turn to yellow. At 200°F it will turn white and at 210°F, will turn red.

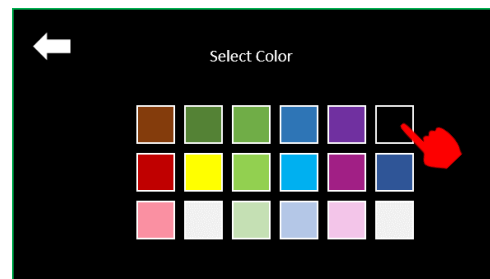


Each range may be adjusted to a specified temperature value by pressing on the range area. A calculator style dialog box will open, enter your value and press Enter.



Each range may be turned on or off as desired.

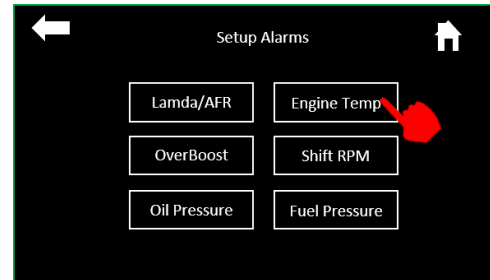
Each range can have its own color by pressing the colored box of your choice. If you do not wish to have a colored box, choose black.



Main Menu – Full Screen Alarms

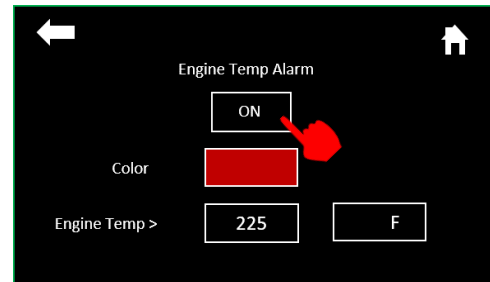
The PE dash may be configured to include full screen alarms for critical engine functions. If an alarm is triggered, the entire dash screen will turn a chosen color and display the data channel value. The alarm screen and home screen will alternate until the alarm is no longer active. In the main menu, press **Alarms** to enter this setup. As many as six full screen alarms may be enabled. The selections and hierarchy is:

1. Oil Pressure
2. Engine Temp
3. Lambda/AFR
4. Fuel Pressure
5. OverBoost
6. Shift RPM



Choose the alarm to set.

- Toggle the Alarm On or Off
- Select Color to display
- Enter Engine Temp Value and unit as desired
- Press the back arrow or home button to exit



OPERATION AND TROUBLESHOOTING

After switched +12V is applied to the dash, data will be displayed as available from the CAN bus.

Main Screen Reset

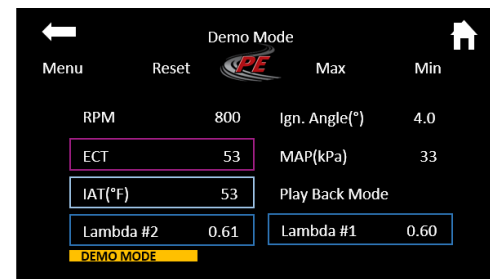
Pressing this will clear all Max/Min data (except demo-mode) stored in the dash.

Main Screen Max or Min

Pressing this will display the maximum or minimum data point value of each channel since the last reset.

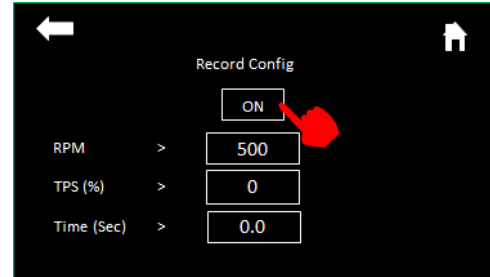
Demo Mode

The dash may be run in Demo Mode by pressing the **Menu** button and pressing **Demo**. The dash will return to the home screen and begin displaying data. Alarms and Warnings are fully functional with demo mode activated.



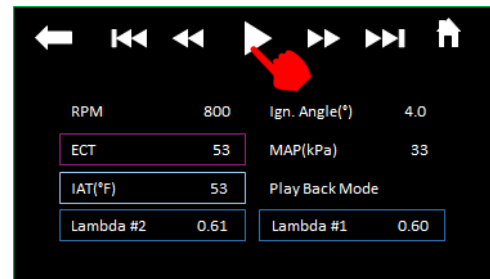
Screen Recording

Press **Menu** and select **Record Config**. This allows you to setup the screen record function. The PE Dash will record up to two runs or 60 minutes of data. Recorded data will remain in memory until a new run is recorded at which time, existing data is overwritten. Data recording may be set to begin at a certain RPM, a certain TPS percentage and/or an amount of time after one or both conditions are met. Leaving value at Zero, disables that specific function.



Playback

Press the **Menu** button and select **Playback**. The screen will open to the beginning of the most recent recorded run. To playback the most recent run, press the play button. To view the previous run, press the Fast Reverse button (⏮) to move to the beginning of the previous run.



Firmware Update

PE products are designed to take full advantage of technology changes. Visit <https://pe-ltd.com/downloads/> to install available updates:

Download Firmware file **peDash v1.00.20** or newer and **PE-Dash Programmer** to a PC with an available USB port.

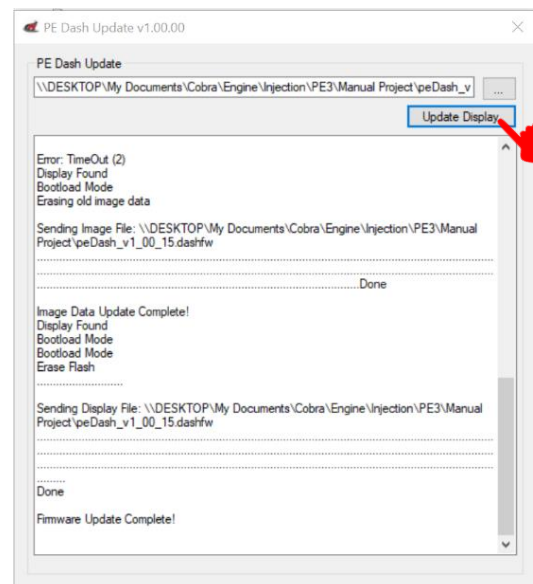
Connect PE-Dash to PC using a mini-USB cable.

Run PE-Dash Programmer on the computer and click on the **Browse** button to navigate to the version of firmware you wish to upgrade.

Power up the PE-Dash, press **Menu** and then press **Update**. You will need to press **Update** again.

WARNING this will erase the current configuration.

On the connected PC, click the **Update Display** button. A progress box will open on the computer and the screen of the dash will turn black. The update process will take approximately 2 minutes to finish. When completed, **Firmware Update Complete!** will be displayed in the PE-Dash Programmer, the PE-Dash will restart and display the home page.



Once complete, a reboot (power cycle) of the PE-Dash is recommended. You can now reconfigure the PE-Dash.

SPECIFICATIONS	
PE Dash Technical Specifications	
Parameter	Specification
Type of Construction	Injection molded enclosure
Size	6.33" (161mm)L x 3.87" (99mm)W x 1.17" (30mm) H
Weight	7.8 oz (221 g)
Environmental Sealing	Protected from limited dust ingress, Not Protected from liquids.
Operating Temperature	Typical -22°F to 167°F (-30°C to 75°C) ambient operating temperature
Communication	CAN bus (adjustable speed)
Operating Voltage	7-22 VDC
Visual Output	Color – TFT capacitive touch-screen display
Screen Recording	8 channels, approx. 60 minutes

PE Panel Mount Dash
Mounting Template

