



Creating and Customizing Virtual Dashboards EFILive V7

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Virtual Dashboards

The EFILive virtual dashboards can be customized to suit any data-logging situation, from fuel mixture analysis, to chasing down intermittent faults, to analyzing spark advance and everything in between.

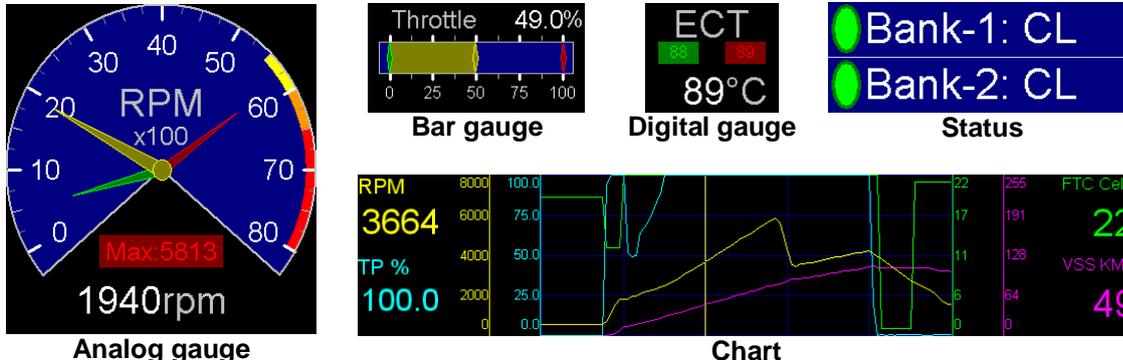
A single dashboard layout cannot provide all the information that you need for each different scanning situation. EFILive allows you to customize and save multiple dashboard layouts. At first, customizing your dashboard may appear complex and overwhelming. Sometimes changing one thing can cause unexpected results elsewhere. However, once you begin to understand the powerful and flexible relationship between dashboard items, dashpages, dashboards and PID selections, you will discover that customizing a dashboard, or even setting up a completely new dashboard is really quite simple.

Terminology

Firstly we need to understand the terminology used to describe various parts of EFILive's virtual dashboard system.

A **dash-item** is a gauge, a status or a chart:

- **Gauge:** Displays a single PID's current value. Gauges can be one of three basic shapes: Analog, Bar or Digital.
- **Status:** Displays the current status values for a single PID.
- **Chart:** Displays the logged data for up to 4 PIDs.



Example dashboard items

A **dashpage** is one of the three dash pages named A, B or C, displayed in the Scan Tool on the **[Dashboard (F10)]** tab page. Dashpages usually contain multiple dash-items.

A **dashboard** is the set of the three dash pages: A, B and C.

A **theme** is a collection of dash-items. The collection may be based on “look and feel” of the dash-items it contains, or it may be based on their function or whatever other criteria the theme designer wants. A theme is just a directory that contains dash-items belonging to it. A Theme's primary purpose is to organise dash-items into easy to find groups.

The **PID selection file** is the name of the *.pid file that is currently loaded into the Scan Tool.

Relationships

The next thing that really needs to be understood, is the hierarchical relationship that exists between the different components used to construct and customize dashboards.

The most important part of configuring a dashboard is selecting the group of PIDs that you want to see. The group of PIDs that you select should be saved in a PID selection file. The PID selection file name determines the dashboard file name that will be loaded and displayed in the Scan Tool.

Whenever EFILive opens a PID selection file, it searches the VDash folder for a matching virtual dashboard file. If it finds a matching virtual dashboard file, then that dashboard is loaded and displayed. If no matching file is found, then the default dashboard is loaded and displayed.



Whether the metric or imperial version of the default dashboard is loaded depends on the regional settings of the PC. If the regional setting is US, then the Default imperial dashboard is loaded, otherwise the default metric dashboard is loaded.

Once the dashboard has been loaded, EFILive then loads each of the three dash pages.

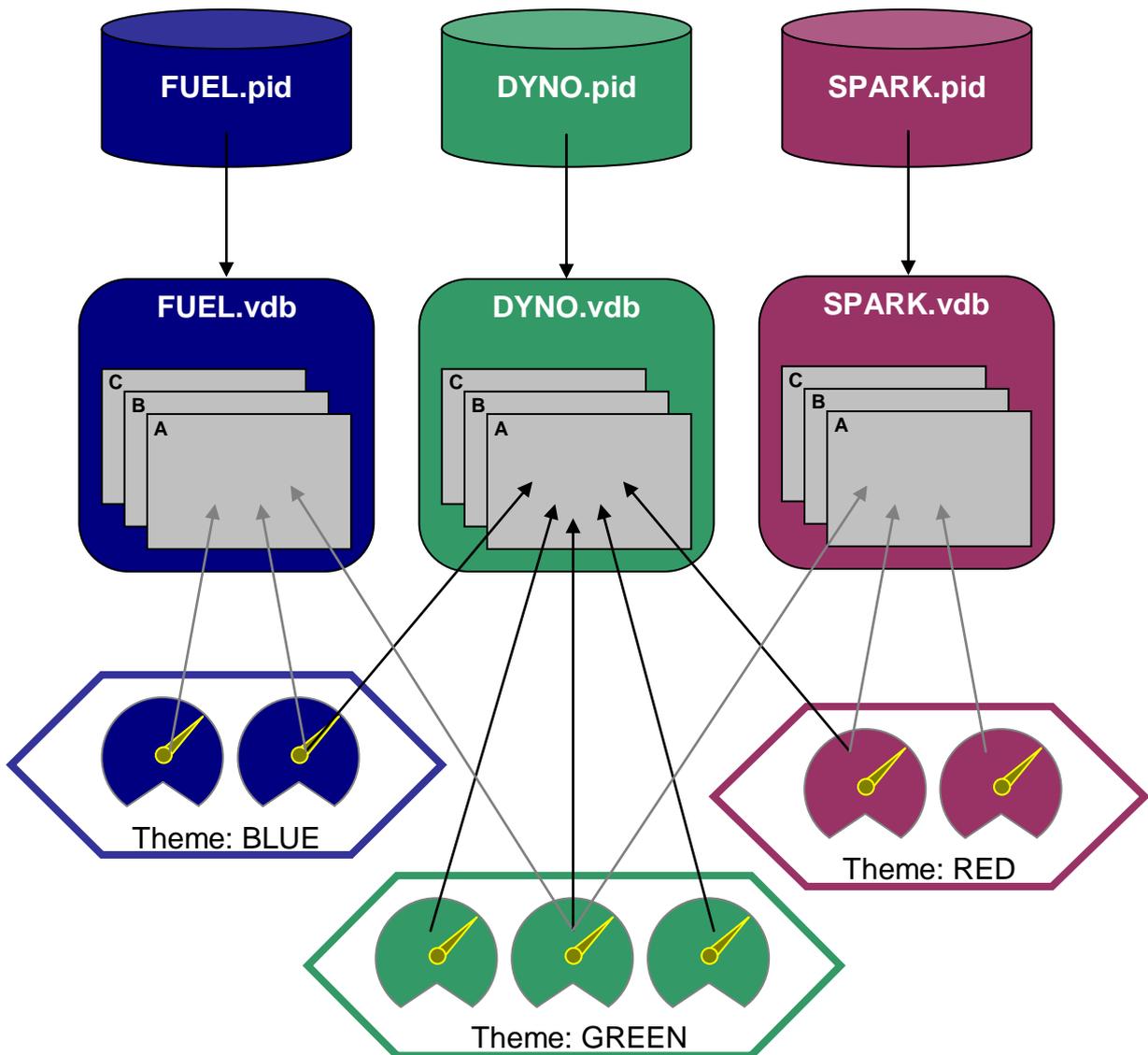
More than one dashboard may share the same dash page. If you have a common dash page that contains your favourite dash items, then you may include that dash page in multiple dashboards. Any changes to the dash page will be reflected in all dashboards that display the dash page.

More than one dash page may share the same dash items. If you have common dash items, such as RPM or Throttle Position, then you may include those dash items on multiple dash pages (even in multiple dashboards). Any changes to the dash item will be reflected in all dash pages that display the dash item.

Heirarchy

The following diagram illustrates just one of many ways that a set of three dashboards may be configured. Based on three PID selection files, each matching dashboard contains three dash pages.

Each dashpage (A, B or C) displays one or more dash-items, usually from the dashboard's own theme. If required, some dash items may be "imported" from other themes.



The Default Dashboard

We recommend that you never change the default dashboards, dash pages or dash items. The defaults settings will usually be overwritten each time you install an EFILive software update.

If you want to modify the default dashboards supplied with the EFILive software, then follow these steps:

1. Load in the default dash that you wish to modify.
2. Select menu option File->Save as->Save dashboard as... and specify a new name for your modified dashboard. That will create four new files <name>.vdb, <name>_A.vdp, <name>_B.vdp and <name>_C.vdp where <name> is the dashboard name that you chose.
A new theme folder named after the dashboard will be created and copies of all dash-items will be saved into the theme folder.



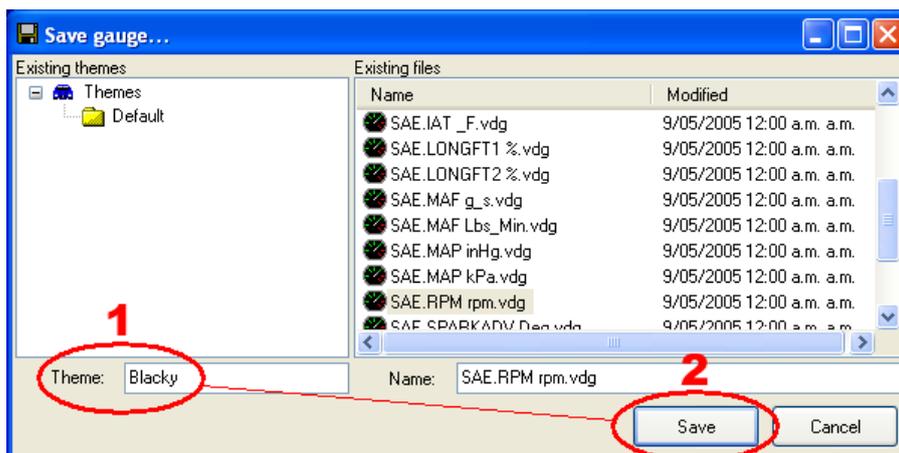
If you do change the default dashboards and later want to restore them back to their original settings, use the menu option Dashboard->Recall installation defaults.

Creating an exclusive copy of a dashboard item

Sometimes you may not want to create an entirely new dashboard, instead you may want to just make a copy of an existing dash-item.

Right click on the dashboard item and select properties.

Click on the **[Save as...]** button and enter a new “Theme” name. We recommend using a theme name that is the same as (or is related to) the dashboard name. Then click **[Save]**.



Creating a new dashboard

This tutorial is step-by-step guide to creating your first dashboard from scratch. We are going to create a dashboard to show the following data:

- Engine Speed (RPM)
- Throttle Position (TP)
- Engine Coolant Temperature (ECT)
- Intake Air Temperature (IAT)
- Spark Advance (SPARK)
- Knock Retard (KR)



Any modifications to the default dashboards, the default dash pages or the default dash-items may be overwritten next time EFILive is updated. We recommend creating new dashboards, new dash pages and new dash-items for customization.

The steps we will follow are:

1. Select the PIDs.
2. Create a new dashboard.
3. Create dash-gauges.
4. Create dash-charts.
5. Customize the dashboard layout.



If you ever resize the Scan Tool Window you can easily adjust the size of all the dashboard items and maps (on the Map tab page) to fit the new window size.

Just click on the  icon (Hotkey Ctrl+F) in the main toolbar.

If you resize the Scan Tool window using the pre-set sizes under the Window menu then the dashboard items and maps are automatically resized.

Step 1: Select the PIDs

Open the **[PIDs (F8)]** tab page.

Clear all selected PIDs by clicking on the **Clear existing PID selection** mini-toolbar icon in the top left corner of the PID display.



Select the PIDs that you want to place on the dashboard:

- Engine RPM {SAE.RPM}
- Absolute Throttle Position {SAE.TP}
- Engine Coolant Temperature {SAE.ECT}
- Intake Air Temperature {SAE.IAT}
- Ignition Timing Advance for #1 Cylinder {SAE.SPARKADV}
- Retard Due to Knock {GM.KR}



You can select a PID by double clicking on it, or by pressing the **Insert** key. You can unselect a PID by double clicking on it or by pressing the **Delete** key.

Click on the **Save PID selection with a new name** mini-toolbar icon and save the PID selection with the name Blacky.



Save the PID selection using the same name that we will use for our dashboard. In this tutorial the dashboard will be called “Blacky”, so save the PID selection as Blacky.

Step 2: Create a new dashboard

Open the **[Dashboard (F10)]** tab page.

Click on the **Clear dashboard (all pages)** dashboard toolbar icon.



Click on the **Save dashboard with a new name (all pages)** dashboard toolbar icon.



Enter the dashboard name Blacky, then click on **[Save]**.



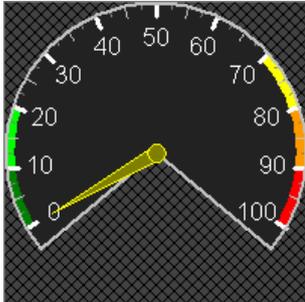
You can check the file names of the dashboard and dashpages by moving the mouse into the dashpage area. The dashboard and the active dashpage filenames are displayed in the status bar at the bottom of the window.

Step 3: Create dash gauges

Select dashpage A.

Right-click anywhere in the dashpage and select Add->Gauge->New gauge.

A new, blank gauge will appear.

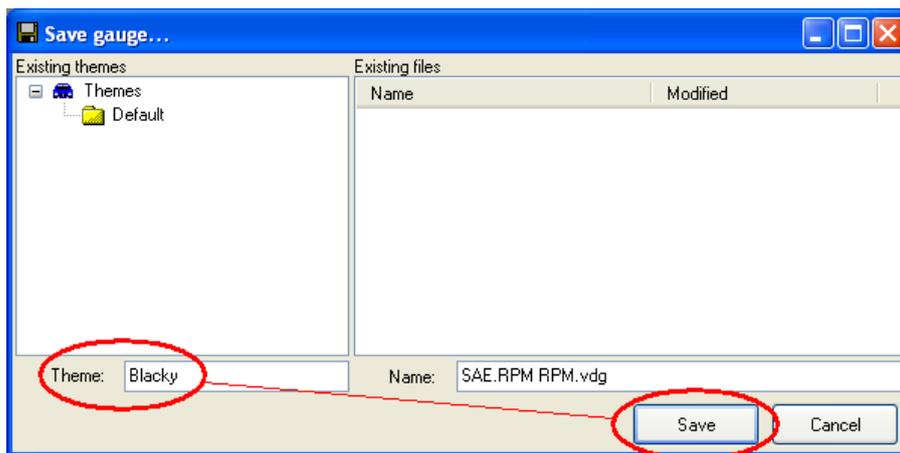


Right click on the gauge and select Properties.

In the **[General]** tab page, select “Engine RPM (RPM)” from the **Parameter** drop down list.

Click **[Ok]**.

The **Save gauge** window will appear, enter the theme name “Blacky” and click **[Save]**.



Repeat step 3 to create gauges for:

- Absolute Throttle Position {SAE.TP}
- Engine Coolant Temperature {SAE.ECT}
- Intake Air Temperature {SAE.IAT}
- Ignition Timing Advance for #1 Cylinder {SAE.SPARKADV}
- Retard Due to Knock {GM.KR}



New dash items are always positioned in the same place on the dashpage. If you have not moved or resized the previous dashboard item, then the new item will most likely obscure the previous item. It can sometime look as if the previous item has reverted to a blank item.

Step 4: Create dash charts.

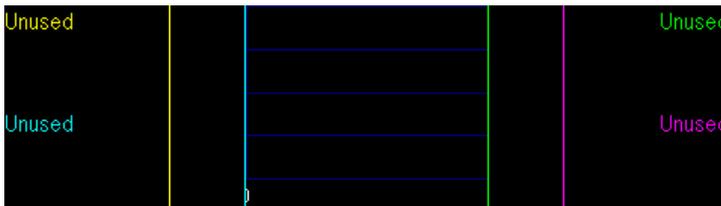
Select dashpage B.



You can place charts on any dashpage, however they are easier to manage if you keep them all on one page. EFILive can distribute all charts evenly across a single dash page – if the dashpage contains charts **only**.

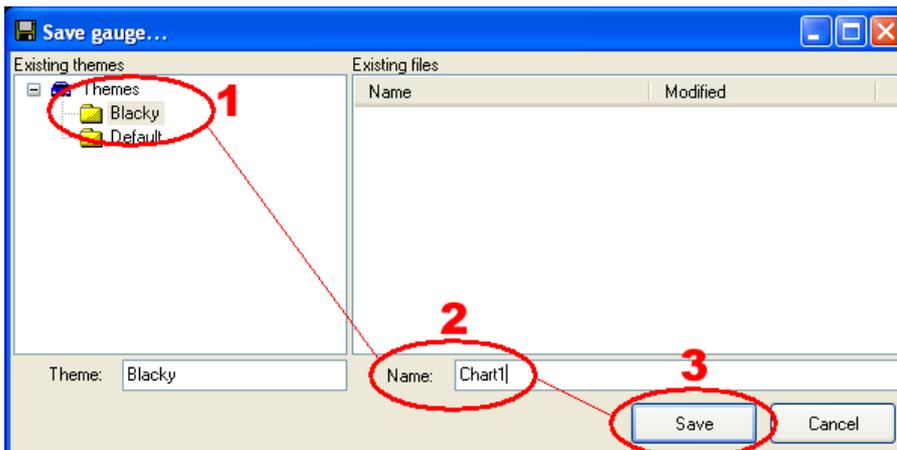
Right-click anywhere in the dashpage and select Add->Gauge->New gauge.

A new, blank chart will appear.



Right click on one of the **Unused** series captions.

Select Other PIDs->{SAE.RPM} (RPM), you will be asked to save the chart if it has not already been saved.



Select the “Blacky” theme, enter a name for the chart and then click on **[Save]**.

Right click on each of the other **Unused** series captions and select a PID for each of them. You may mix and match PIDs from **Metric PIDs**, **Imperial PIDs** and **Other PIDs** in the same chart if you want.

Add more charts if you want to see more than four PIDs.

Click on the **Distribute charts evenly in window** main toolbar icon (Hotkey Ctrl+W) to stretch all charts to their maximum width and maximum height.

Step 5: Customize the dashboard layout.

Each item displayed on the virtual dashboard can be repositioned and resized. Normally the dashboard is **locked**, which prevents accidental moving or resizing of dashboard items. Before you can start repositioning or resizing the dashboard items, you must unlock the dashboard.

Right click anywhere on the dashboard, select **Dash settings**, and uncheck **Lock dashboard**. Every time you start the Scan Tool, or load a new dashboard, this setting defaults back to locked. When the dashboard is unlocked, the mouse pointer will change shape depending on where it is positioned on a dashboard item. Imagine that each dashboard item has invisible borders and an invisible title bar.

The gauge below has been altered to show these invisible sections, called handles. The handles are positioned the same way on the status and chart dashboard items as well.



The following table shows what the mouse pointer will look like when it is positioned over each of the different handles.

Cursor	Position within dashboard item
	Title bar handle.
	Top or bottom edge handle.
	Left or right edge handle.
	Top-left or bottom-right corner handle.
	Top-right or bottom-left corner handle.

To resize the item, position the mouse so that it is over the handle you wish to affect (the mouse pointer will change shape). Then click and hold the left mouse button while moving the mouse. Release the mouse button when the handle is at the desired position and/or size.



Changing the size of an item in its property editor will not change the size of the original item.