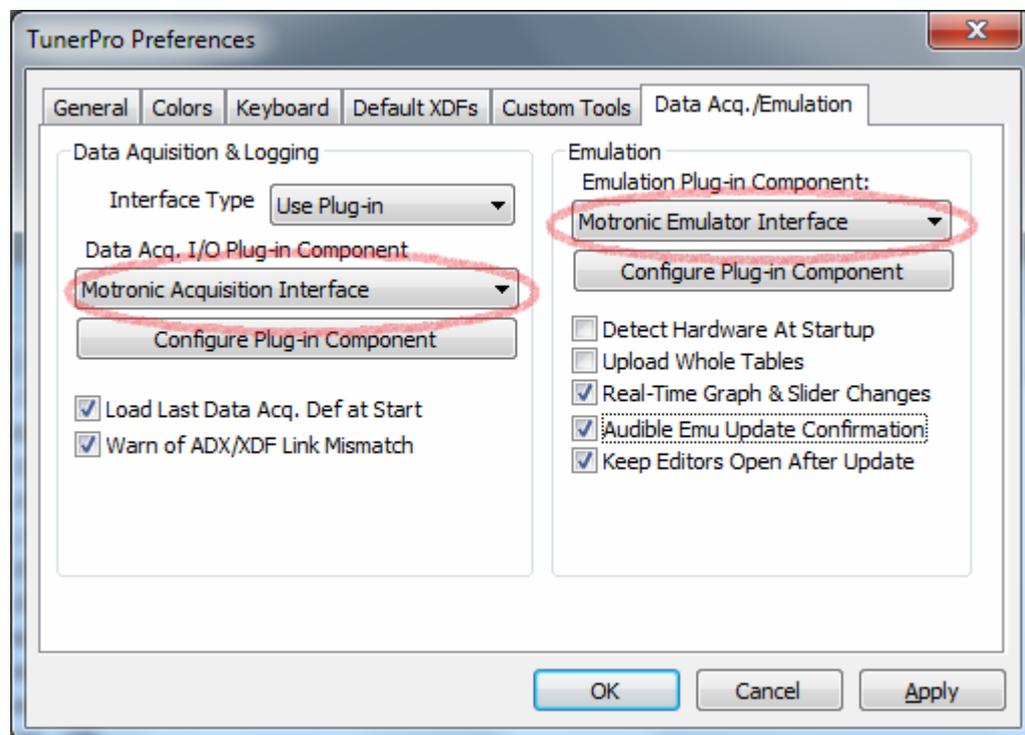
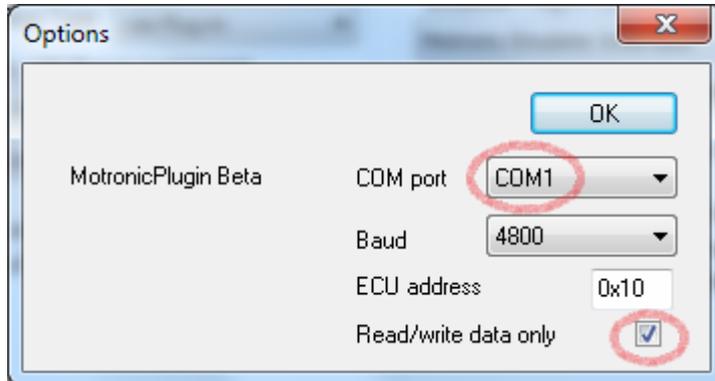


MotronicPlugin Installation

- Install Tuner Pro RT v5. This can be downloaded from <http://www.tunerpro.net/>
You need the RT version of Tuner Pro.
- Extract MotronicPlugin.zip to either the Tuner Pro installation directory (i.e. C:\Program Files\Tuner Pro RT\) for Windows XP, or to “Libraries\Documents\Tuner Pro Files\Plugins\” for Windows Vista/7.
- Start Tuner Pro RT, from the “Help” menu select “Plugins”. Verify that MotronicPlugin is listed.
- From the “Tools” menu, select “Preferences”, and on the “Data Acq./Emulation” tab select the Motronic Interface for both Plug-in Components:



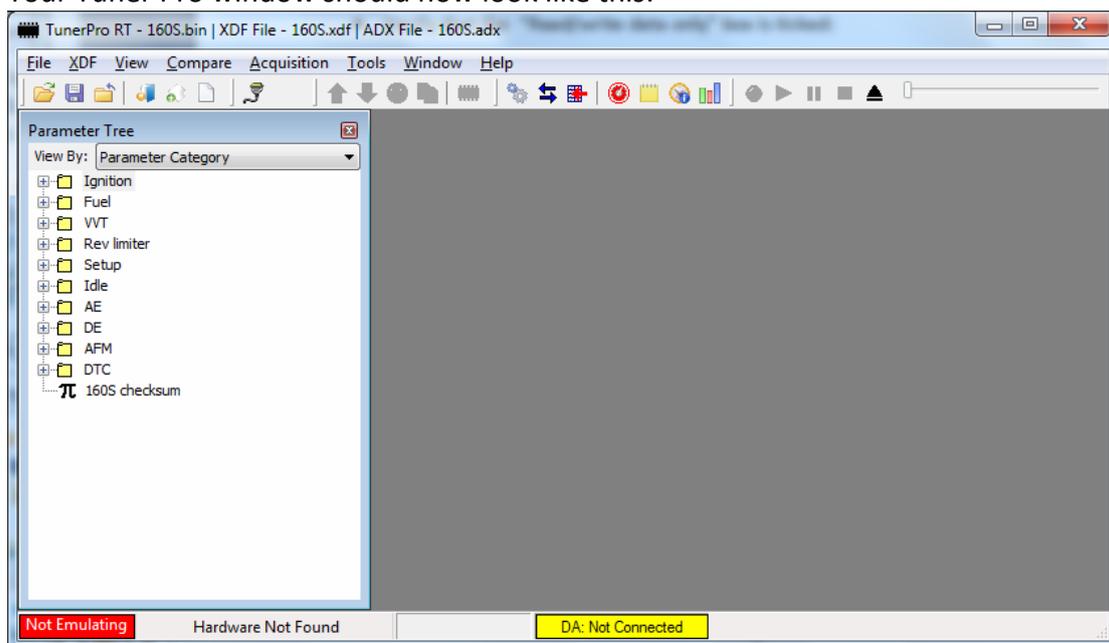
- Click the “Configure Plug-in Component” button (either one, doesn’t matter which) and select the COM port that your diagnostics cable is connected to.
- Verify that the “Read/write data only” box is ticked:



Then click “OK” on both windows to return to the main Tuner Pro screen.

- From the “XDF” menu, select “Select XDF” (or CTRL+E).
Browse to the 160S.xdf file in the XDF folder and select it.
- From the “File” menu, select “Open Bin” (or CTRL+O).
Browse to the 160S.bin file in the BIN folder and select it.
- From the “Acquisition” menu, select “Load Definition File...”
Browse to the 160S.adx file in the ADX folder and select it.

Your Tuner Pro window should now look like this:

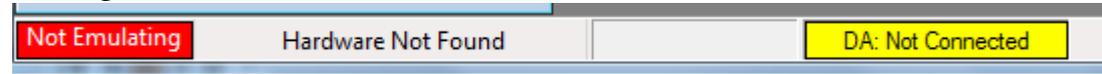


If you don’t see the parameters arranged in folders on the left like this, change the “View By:” option to “Parameter Category”.

A Quick Introduction to Tuner Pro RT

Tuner Pro RT refers to the Real-time kit as Emulation. Don't let this confuse you!

Looking at the bottom of the window:



- “Not Emulating” means that Tuner Pro is in “Offline” mode currently.
- “Hardware Not Found” means it is not communicating with an ECU currently.
- “DA: Not Connected” means that the data acquisition (datalogging) connection is not currently running.

With the diagnostics cable plugged into your car and ignition ON (but engine not running), you are now ready to connect.

Click the “Initialise Emulation Hardware” button  and after about 2 seconds if all goes well the connection will be established.

If you are using an interface that has an Activity LED, it will initially flash slowly for 1-2 seconds before changing to a rapid flash.

If the Activity LED stops flashing, the connection has timed out and you will need to click the Initialise Emulation Hardware button again to continue.

The “Hardware Not Found” message will change to the firmware (bin) ID of the ECU.

Once you are connected, the “Enable/Disable Emulation” button (blue microchip) will now be available. Click this to start “Emulation”. The red “Not Emulating” message will change to a green “Emulating” message.

At this point, you are no longer in “offline” mode and any changes you make will be immediately uploaded to the ECU.

Clicking the Enable/Disable Emulation button again will return you to offline mode, if you do not intend to modify the ECU settings at this time then return to offline mode.

Real-time Tuning Overview

Tuner Pro RT displays three different types of ECU parameters:

- 1) Flags
- 2) Scalars
- 3) Tables

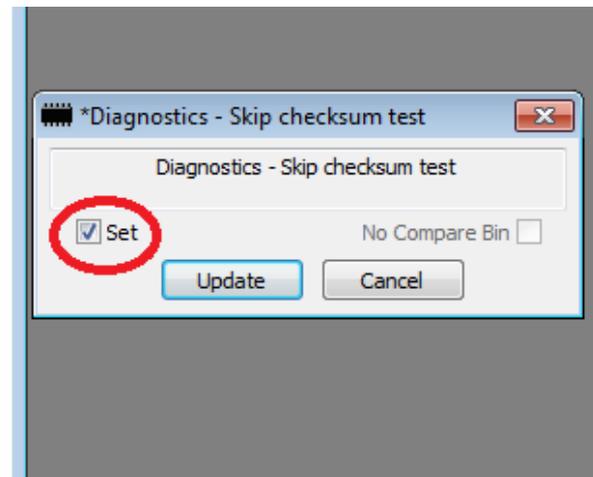
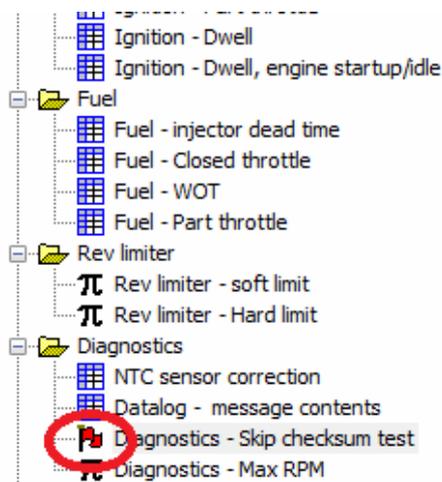
Flags

Flags are like switches, either set to off or on. Flags are used for enabling/disabling functions, and are represented in Tuner Pro with a red flag icon.

A flag object is enabled by ticking its checkbox, or disabled by un-ticking.

The following is an example of a flag object – this one controls whether or not the ECU will skip its ROM checksum test on start-up.

The checkbox is ticked, so the checksum test will be skipped.

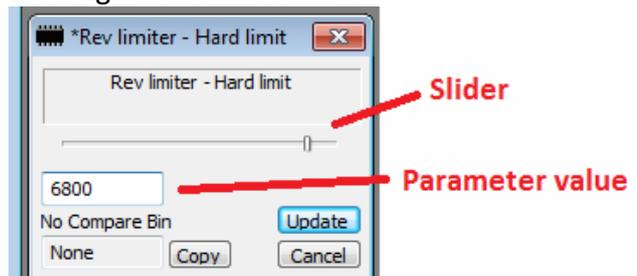
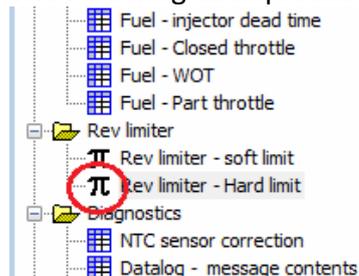


Scalars

Scalars are what Tuner Pro calls simple number parameters that don't rely on outside influences like a table.

Scalars are represented in Tuner Pro by a pi icon, and can either be edited directly or changed via the parameter's slider bar.

The following example shows one of the engine rev limiter scalars:



Tables

Tables are where most of the actual tuning takes place. Tables are often referred to as maps.

Tables are represented in Tuner Pro by a blue grid icon, and displayed similar to a spreadsheet.

Tables come in two types – 2D and 3D.

A 2D table has a single axis (or “key”). The axis are used to “look up” the correct value from the table – an example is the WOT ignition table which uses Engine Speed to determine the table value to use.

An example of a 3D table is the part throttle ignition table, which uses both Engine Speed and Engine Load to determine which table value to use.

Tables can be directly edited just like a spreadsheet, or graphically manipulated with your mouse.

To open the graph view, first open a table then start the Graph View. This can be done by either clicking the red graph icon above the table, by selecting View->Show Graph, or by pressing the F11 key.

If you’re viewing a 2D table graph you’ll see a line representing the table values, whereas a 3D table’s graph appears 3 dimensional (hence the name).

To rotate a 3D graph view, drag the graph with your **right** mouse button.

To manipulate the graph points, click on a point and drag up or down with your **left** mouse button.

On closing the graph window, any table cells that were modified will be shown in **red**.

There are many more tools, options and shortcuts for various functions in Tuner Pro, this is just enough of the basics to get started.

Tuner Pro RT Data Acquisition Overview

Data Acquisition uses the following controls:



Acquire Data (Connect/Disconnect)
Click this button to start datalogging.



Enable/disable data tracing. This highlights the “active” cell in the current table to assist with tuning.



Open the “Dash” window; this displays the engine parameters in a series of gauges etc.



Item list view, this displays the engine parameters in a list as text.



Data history tables, displays parameters as 3D tables.



Monitor window – this displays parameters as traditional 2D graphs

To start datalogging, with the engine running establish a connection to the ECU, click the Monitor window button, then click the Acquire Data button.

If the connection is successful, you will see the graphs start updating within a few seconds.

Right-click on the monitor (graph) window to select/de-select the parameters to display.

To record a datalog, click the red circle button or choose Acquisition->Record. The logs are saved as .XDL files, and can be re-played later for data analysis or exported to Excel etc.