

## J3 Chip Programming Instructions

This guide outlines the process of using the T.I. Performance J3 Programmer, as supplied on this site.

The programming module is a USB device which allows reprogramming of T.I. Performance J3 Chips, which are used to recalibrate Ford EEC-IV and EEC-V Engine Control Units, or ECUs. The device works in conjunction with the [TunerPro RT](#) software. **Make sure to use the RT version.** The software is fully functional without registering but it's a good idea to support the author of this excellent software package in order to get new features added!

As well as reading this guide, be sure to check the EEC Tuning Beginners Guide at <http://www.tiperformance.com.au/documents.html>.

### Components

Programmer

Interconnect cable, USB cable

J3 Chip



### Getting Started

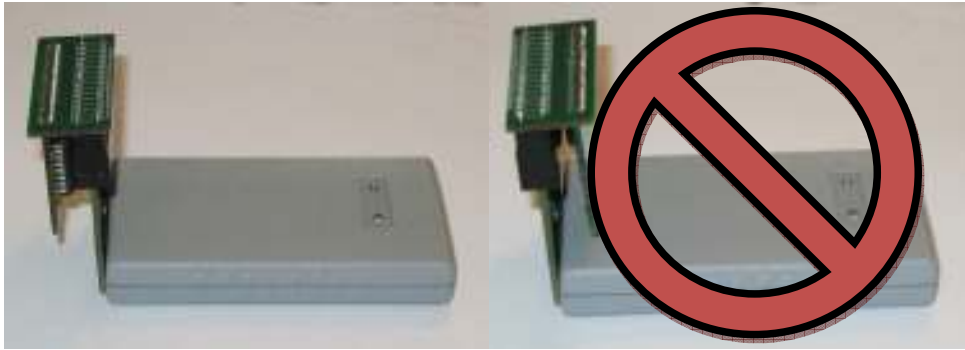
To get started, plug the interconnect cable (or interconnect board where previously supplied) into the programmer. The interconnect cable is keyed and will only fit into the programmer one way.

See pictures below for how to install the interconnect board. Notice in the second picture there is an even gap either side of the board when plugged in. Make sure yours looks the same. It's a good idea to keep these two parts connected.



Next, plug your chip into the interconnecting cable or board as pictured below. When using an interconnect board, please double check the orientation of the chip.

**Failure to follow these instructions when using an interconnect board will result in damage of the chip and or programmer!**



## Installing Drivers

Download the latest driver for the programmer from <http://www.tiperformance.com.au/Software/mchpcdc.inf>. Right click and save this file on your desktop.

Next, plug your programmer into the USB port. The Windows hardware wizard may pop up if the driver install is required. If it does not and the green LED is flashing on the programmer, you may skip this section.

On the dialog that pops up, pick "Install from a list or specific location" and click next.

On the next dialog box, tick "Include this location in the search", click browse and select the location where the mchpcdc.inf file is located (the Desktop).

Click Next.

Follow the rest of the install as normal.

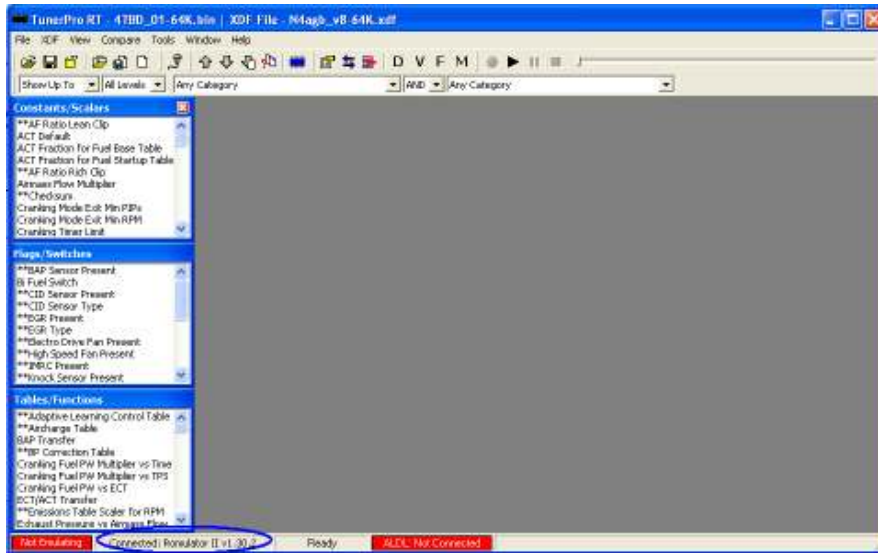
**NOTE:** If you have trouble downloading or installing the above driver, you can try the All-In-One package here: <http://www.tiperformance.com.au/Software/TunerPro-Combo-Install.msi> but the first method is preferred.



## Using the device in TunerPro RT

If you used the separate driver file above, you can now proceed to download and install TunerPro RT from <http://tunerpro.net>.

Once TunerPro RT is installed, the device should be auto detected on start-up, as per the below image:



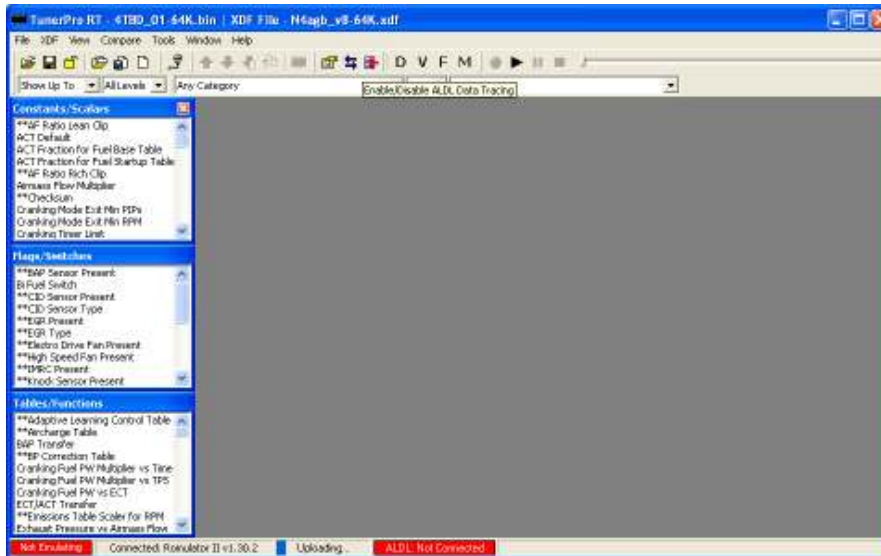
In the status bar, located at the bottom left of the screen, TunerPro RT should display Romulator or Ostrich. The following table explains the difference:

|               |                                 |   |
|---------------|---------------------------------|---|
| Not Emulating | Connected: Romulator II v1.30.2 | Older, 64K programmer. Requires 64K bins and definitions. |
| Not Emulating | Connected: Ostrich USB v10.10.0 | New 256K programmer. Requires 256K bins and definitions.  |

Despite the name there are no emulator capabilities in this hardware; it just uses the Emulator API to make programming simpler.

## Programming a Chip

To test that the chip and programmer are functioning correctly, you should upload a stock unmodified binary to the chip in order to test it. Select a bin/definition combination to suit your programmer and vehicle from <http://www.tiperformance.com.au/technical.html>. Open the bin and definition (xdf) in TunerPro RT. On the TunerPro menu bar select Tools, Emulation and Upload bin to Emulator.



When uploading, TunerPro will show the status of the operation in the bottom status bar. At the end of this process you will see an “Upload successful” or “Upload failed” message. It’s a good idea to verify the upload afterwards, to ensure the burn reads correctly. To do this, go to Tools, Emulation and Verify EMU ram against current Bin. If you see “Verify success” it worked; if it fails try another Upload after double checking your connections and ensuring the contacts on the interconnect board are clean (where supplied).

You are now ready to fit the chip to the car.

## ***Installing the chip***

To install the chip into a car, follow the “Installing a J3 Chip” guide at <http://www.tiperformance.com.au/documents.html>. If you are changing strategies, it is a good practice to clear the KAM memory in the ECU by disconnecting the battery for 10 minutes. This is only needed on the first time install.

## ***Custom Tuning your Binary***

Now that you have verified the hardware is working correctly, you are at the stage where you can start modify your bin to suit your vehicle modifications. You should have already selected a working Bin/definition combination as mentioned above.

A good place to start is the EEC Tuning Beginners guide at <http://www.tiperformance.com.au/documents.html>. There are also tuning guides at the same location which will help with what to change to suit what modifications.

Definition creation is a very time consuming process requiring many hours and hours of work. If you find errors, or new switches, scalars or tables for the definition, please email the authors to have them added. If you would like to see more parameters defined in the definitions, please consider donating to their creators. See <http://www.tiperformance.com.au> for more information about donations.

Good Luck and Happy Tuning!

## ***Programmer Troubleshooting***

This section covers some basic troubleshooting tips for our J3 Programmer. Please read this guide carefully before contacting us for support.

- **Ensure the device is operating.** Once plugged in, the green light should be flashing on the programmer. If this is not the case, try checking the cable. If the red light stays illuminated at all times, try updating the programmer firmware as in the bullet below, starting from the step where you launch HIDBootLoader.exe.
- **Ensure the device is detected by Windows correctly.** Windows should detect the device once plugged in.
- **Ensure the correct drivers are installed.** Use the TunerPro-Combo .msi file at <http://www.tiperformance.com.au/Software/>. TunerPro RT should detect the programmer at startup as an ‘Ostrich 10.0.0’.

- **Ensure you are using the USB cable which came with the programmer.** Some USB cables cannot handle the current required to power the chip when programming. This causes the programmer to disconnect or restart when you attempt to burn the chip, and burning fails. If you have this problem, try another USB cable.
- **Ensure you have the latest firmware.** Early programmer firmware only supports 64K bins & defs. Some early 256K firmware pre-dates the EEC Reader and is not compatible. If you are experiencing issues, try updating your programmer firmware following the instructions at <http://www.tiperformance.com.au/Software/>.