

# FlashScan V2 Quick Start

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# FlashScan V2 Quick Start

#### Paul Blackmore and Jesse Bubb

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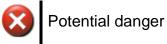
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### Conventions used in this document





Important information



(1) Helpful information

# FlashScan Shipping

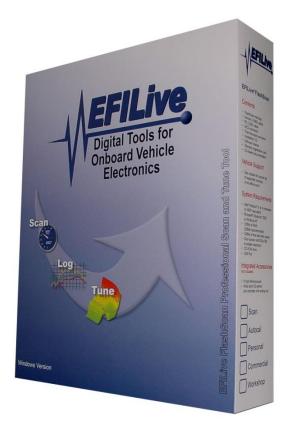
EFILive is committed to quality and service and that commitment extends to our shipping and handling of your order.

If your FlashScan box was delivered with obvious, visible damage, please contact sales@efilive.com and let us know. Please send us a picture of the damage if possible. You may be eligible for a refund of your shipping charges.

If you reside in the USA, and your package does not arrive within two business days, please contact sales@efilive.com and let us know. You may be eligible for a refund of your shipping charges.

### FlashScan V2 Package Contents

- FlashScan V2 interface device
- EFILive software installation CD
- Blue License Registration Card
- Blue Warranty Registration Card
- White EFILive FlashScan Limited Warranty sheet
- Addressed warranty reply envelope
- FlashScan serial number sticker that matches the one on the box
- EFILive pen
- 2 x AD-2 external input connectors
- 4 x clear plastic stick on feet
- EFILive OBDII cable (J1962-A to RJ45)
- EFILive USB cable (USB-A to USB-B)
- EFILive Serial cabel (RJ12 to DB9 female)



# **PC/Laptop Specification**

Configuration	Recommended Minimum <sup>1</sup>		
CPU type	Pentium class CPU (Includes AMD and Cyrix)	Pentium class CPU (Includes AMD and Cyrix)	
CPU speed	800MHz or faster	500MHz	
Free <sup>2</sup> memory	64Mb or more	32Mb	
Free <sup>3</sup> hard disk space	100Mb or more	100Mb	
I/O port <sup>4</sup>	2 x USB 1.1 or 2.0	USB 1.1	
Pointing device	Mouse, trackball, touch pad, etc.		
Keyboard	Standard PC keyboard		
Screen	Standard PC Screen		
Operating System	Win2K, WinXP Win98, WinMe		

<sup>1</sup> PC configurations that are **below** the recommended configuration may not support the full features of EFILive.

<sup>2</sup> Free memory means memory that is not already in use by Windows.

<sup>3</sup> Free hard disk space means space that is not already in use by Windows.

<sup>4</sup> Two USB ports are only required if you are upgrading from FlashScan V1 to FlashScan V2.

### FlashScan V2 Operating and Storage Conditions

Condition	Operating Range		Storage Range		
Condition	Minimum	Maximum	Minimum	Maximum	
Temperature	0°C	50°C	-10°C	60°C	
	32°F	122°F	14°F	140°F	
Humidity	-	90%	-	90%	
Shock	50G, 11ms		50G, 11ms		
Pressure	115kPa		115kPa		
	16.68psi		16.68psi		
5V A/D Input Voltage	0V	6V	-	-	
12V Switch Input Voltage	0V	14V	-	-	
USB Input Voltage	4.75V	5.25V	-	-	
Vehicle Input Voltage	9V	24V	-	-	
Thermocouple Input	Only connect K-Type thermocouple sensors to the thermocouple inputs.				

www.efilive.com

# **Unpacking FlashScan V2**

Remove FlashScan V2 from its sealed bag and retrieve the serial number sticker. Keep the serial number in a safe place. You will need it for all customer service communications with EFILive.

In the same clear plastic bag as the eight orange AD-2 connectors, are four clear plastic domes. If desired, fit the domes over the four screws on the back of the FlashScan V2 unit. Apply pressure by hand for about 5-10 seconds to aid the bonding process.

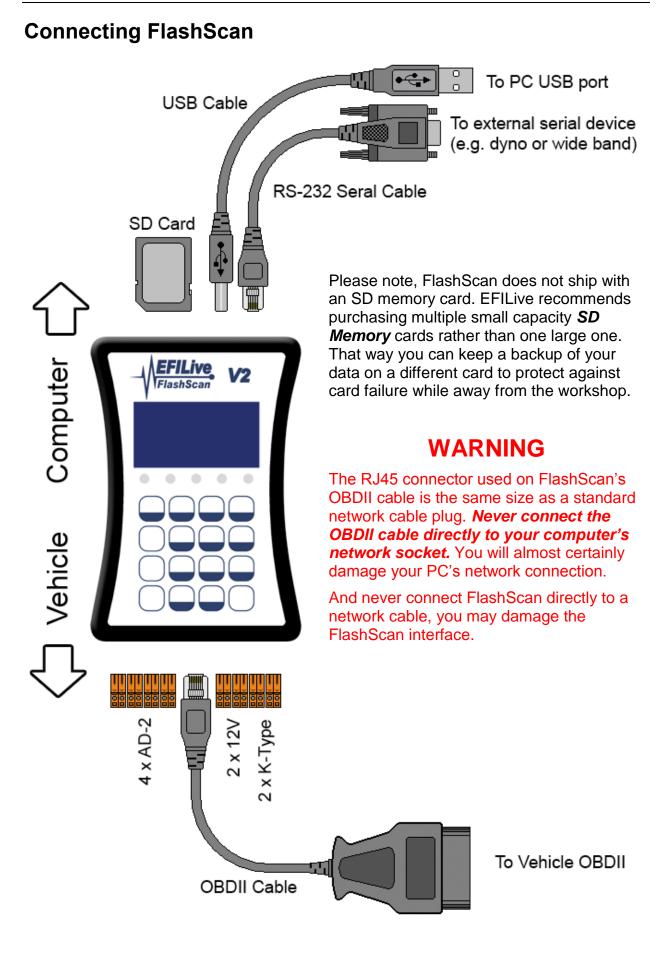
Please fill out the Warranty Registration Card and mail it back to EFILive using the envelope provided. Note that international postage rates may apply. By registering your purchase of FlashScan V2, you ensure that any warranty claim will be dealt with swiftly. In addition, when EFILive publishes urgent and/or important information about your FlashScan V2, EFILive will know how to contact you if required.

Dispose of any packaging that is no longer required, and do not leave any plastic bags or used twist ties within reach of young children.

# Taking Care of FlashScan V2

Your FlashScan V2 device is a sensitive electronic device. Care must be taken when using, transporting or storing FlashScan V2.

- Never leave FlashScan V2 in direct sunlight; it will damage the LCD screen and the polycarbonate keypad.
- Never expose FlashScan V2 to solvents or other corrosive or oxidizing agents.
- Do not immerse FlashScan V2 in any liquid.
- Do not expose FlashScan V2 to high temperatures or open flames.
- Remove ALL connectors from FlashScan V2 before transporting or storing FlashScan V2. Failure to do so may cause internal connections to break.
- Never wrap cables around FlashScan V2 that are still connected, even when not in use. Doing so can put excessive stress on the internal connectors and can cause them to break.
- Do not allow uninsulated wires to contact any part of the vehicle's chassis or electrical system. Take particular care to never allow FlashScan, or any wires connected to FlashScan, to contact the vehicle's battery terminals or other power source.
- Never use a DC to AC power inverter to operate your laptop while FlashScan is connected to either the vehicle or the laptop or both. To power a laptop from the vehicle, EFILive recommends using a purpose built laptop adapter. For example the *iGo Juice 70*, available from <u>www.igo.com</u>



### Installing the EFILive Software

Insert the EFILive CD into your PC CD-ROM drive.

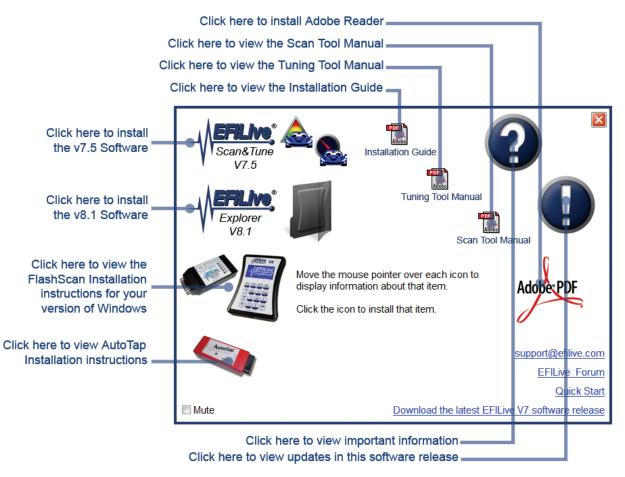
If your PC is configured to *AutoPlay* CDs, then please wait until the EFILive installer begins.

If the EFILive installer does not begin automatically, then your PC may not be configured to *AutoPlay* CDs. You can manually start the EFILive installer by right clicking on the CD drive icon in Windows Explorer and selecting *AutoPlay*.



Some computers have AutoPlay disabled for security reasons. If the AutoPlay option is not able to start the installer, you can start the installation manually by double clicking on the *EFILive\_Installer.exe* program.

The installer will display the following window. Please click on the *Installation Guide* icon to display the installation instructions.



To view the installation instructions, you will need the Adobe Reader installed on your PC. If Adobe Reader is not installed on your PC, you may install it by clicking on the *Adobe PDF* icon.

### Installing FlashScan USB Drivers

When you install the V7.5 or V8.1 software on Windows 2000, Windows XP or Windows Vista, the EFILive installer automatically installs the FlashScan and AutoCal USB drivers.

When you install the V7.5 software on Windows 98 or Windows ME, the FlashScan and AutoCal USB drivers are not automatically installed.

To manually install the USB drivers , please refer to the appropriate FlashScan USB installation document for your Windows operating system.

- Installing FlashScan V2 on Win98.pdf
- Installing FlashScan on Win2K-XP-Vista.pdf

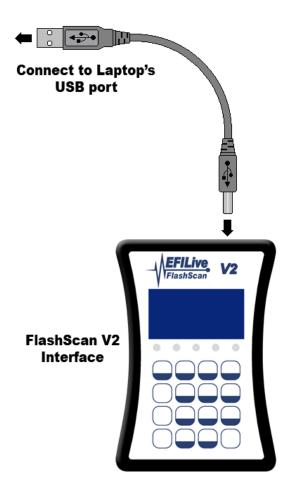
If the EFILive software cannot connect to FlashScan V2, the most probable cause is incorrectly installed USB drivers. If you have trouble with Windows not recognising the FlashScan V2 device, EFILive recommends uninstalling the drivers and reinstalling them again.

The uninstall document is called:

• Uninstalling FlashScan.pdf

These documents can be found on the EFILive CD, in the folder InstDoc

You can also download these documents from EFILive's web site <a href="http://www.efilive.com/download.aspx">http://www.efilive.com/download.aspx</a>



# **Registering FlashScan V2**

From within the Scan Tool or Tuning Tool software, select the menu option: Help->Register EFILive...

Copy the license registration details from the blue License Registration Card into the License Manager window. If this is your first EFILive license, then enter the details in the [License.1] tab page. If there are existing license	License Manager
details, then enter the data in the first unused tab page.	Conboard Vehicle Electronics
License Registration Card	FlashScan serial: 003585162360 RoadRunner serial: Type: Commercial Scan&Tune Issue date: 20- Oct-2006 Key: QENM NNRB LWVO MCSE Paste Ok
a safe place. You will need them whenever you computer. Enter these details using the menu option "Hel	FlashScan V2 003585162360 Commercial Scan&Tune 20-Oct-2006 QENM-NNRB-LWVO-MCSE ense key are important. Please keep these details in a install (or re-install) the EFILive software on your P->Register EFILive" in either the Scan or Tuning the Scan Tool will continue to operate correctly, but your FlashScan cable is not connected.

(į)

All details must be entered exactly as they appear on the License Registration Card. The majority of license registration problems are caused by incorrectly entered data.

Take particularly care to enter the correct date. The year is most often entered incorrectly.

Leave the RoadRunner field empty unless you have been issued a RoadRunner License. To obtain a RoadRunner Real-Time License, please contact MoatesWare LLC at <u>http://www.moates.net/</u>

# Is your software up to date?

The EFILive software is constantly evolving to keep pace with tuning technology. New updates and features are released regularly. Because of this, the CD in your FlashScan V2 package may not contain the latest and greatest software from EFILive.



After installing the software from the CD, which is described in the previous section, we highly recommend checking EFILive's web site for the most up-to-date software.

The web site address for updated software is: www.efilive.com/downloads

To determine the exact version of software that you have installed on your PC or laptop, select the menu option Help->About, in both the Scan Tool and Tuning Tool software.

Build numbers are the key to knowing if you have the latest version. The build number is always unique and increases with each update to the EFILive software. Therefore, a higher build number means a more recent version.



The EFILive software package may be downloaded from our web site. The download is named to show the version and build numbers.

The download package is named as follows:

EFILiveVX.Y.Z.BB.exe

Where

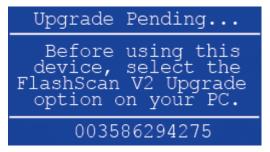
- X.Y.Z is the version number.
- **BB** is the build number.

You may select the "Check for Updates" option in the Windows Start menu: Start->All Programs->EFILive->V7.5->Tools->Check for Updates Or Start-> All Programs->EFILive->V8.1->Tools->Check for Updates

# Upgrading From FlashScan V1 to FlashScan V2

If you have purchased a FlashScan V2 upgrade, some information from your FlashScan V1 device (from which you are upgrading) must be copied into your FlashScan V2 device.

The following message will be displayed on your FlashScan V2 screen until the upgrade has been completed:



Your FlashScan's unique serial number will be displayed at the bottom of the screen, instead of the one shown in this image.

To complete the upgrade process, you must connect both FlashScan V1 and FlashScan V2 devices to your computer. That means your FlashScan V1 device must be in working condition. If it is not in working condition, then you must return your FlashScan V2 device and faulty V1 device to EFILive so that the upgrade can be performed by EFILive.

The upgrade process automatically copies unique and important information from FlashScan V1 to FlashScan V2. Without this information, FlashScan V2 would not be able to unlock PCMs that were locked using FlashScan V1.

The upgrade process also gives you an opportunity to *copy* all the *used* PCM Licenses and/or *move* all the *available* PCM Licenses to from FlashScan V1 to FlashScan V2. If you choose to move available licenses from V1 to V2, they will be marked as *(xx)--->V2*, which means the moved licenses can no longer be used on FlashScan V1



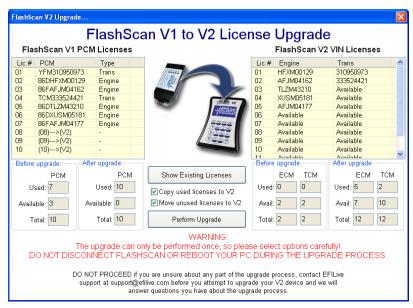
EFILive strongly recommends that you choose to transfer all licenses from FlashScan V1 to FlashScan V2. The reason being that only licenses from your FlashScan V2 device will be considered when you apply for stream discounts.

If you have tuned any transmissions controllers (i.e. Allison transmissions), then you will have the opportunity to merge the Allison transmission licenses with an existing PCM license. Doing so will reclaim one license for each Allison transmission license that is merged.

# Performing the V1 to V2 Upgrade

The V1 to V2 upgrade is a one-time-only process. Please take care when performing the upgrade; there are no second chances. If the upgrade process does not complete successfully, or if you incorrectly classify engine and transmission licenses, you must return both FlashScan V1 and FlashScan V2 devices to EFILive to have them reset.

- 1. Connect both FlashScan (V1 and V2) devices to your PC using their respective USB cables.
- 2. Start the Tuning Tool software.
- 3. Select the menu option Help->FlashScan V2 Upgrade...
- Click the [Show Existing Licenses] button. EFILive will display the current license information of both devices. It should look similar to this:



The licenses displayed above are from LB7, LLY and Allison transmissions.

EFILive attempts to identify Allison TCM licenses automatically by checking the third character of the license. If it is an *M*, then EFILive sets the *Type* designation to Trans. This is only a "best guess" and should not be relied upon to be 100% accurate.



It is important that you take the time to verify that each license is identified correctly as Engine (for ECMs and PCMs) or as Trans for Allison TCMs.

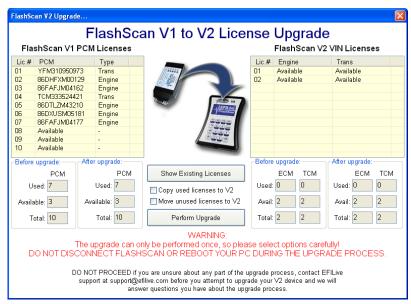
If a transmission license ends up in the Engine column or if an engine license ends up in the Trans column, the licensed controller will no longer be recognised by the EFILive software and you will need to re-license that controller.

You may double click a license to change the *Type* designation from Engine to Trans or from Trans to Engine.

- You may change the Copy used licenses to V2 and Move available licenses to V2 check boxes as often as you like to observe the different scenarios. The upgrade process does not begin until you click the [Perform Upgrade] button.
- 6. Verify that the licenses are displayed in FlashScan V2 as expected.

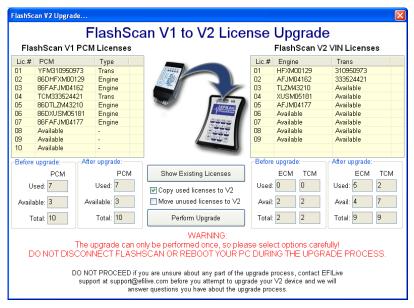
The following three screen shots shows various license configurations prior to the upgrade process being performed.

#### No licenses are selected for transfer



In this screen shot, no license transfers have been selected. What you see here is the exact license details that are present in each of the FlashScan devices.

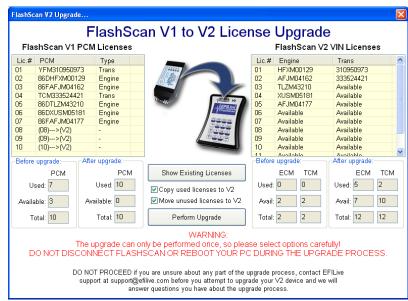
#### Only used licenses are selected for transfer



In this screen shot, only used licenses will be transferred. Notice how two extra VIN licenses have been "reclaimed" because the two Allison TCM licenses have been combined with existing ECM or PCM licenses.

Only the last nine digits/letters are copied from the V1 PCM Licenses to the V2 VIN Licenses. The engine licenses are sent to the Engine column and the transmission licenses are sent to the Trans column.

It does not matter which transmission license is paired with which engine license. What matters is that the transmission licences are placed in the Trans column and the engine licenses are placed in the Engine column.



#### Both used and available licenses are selected for transfer

In this screen shot, all licenses will be transferred; the available FlashScan V1 licenses are marked with (xx)--->(V2). That means they are no longer available on the V1 device. They have been transferred to the V2 device and may only be used from FlashScan V2.

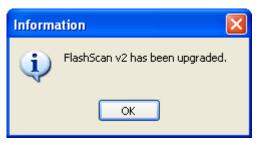
Once you are satisfied that the license details will be transferred correctly, click the [Perform Upgrade] button. The upgrade process takes about 5-10 seconds.



During the upgrade, you must not disconnect either FlashScan device or reboot your PC or the upgrade process will fail and the licenses will not be transferred correctly.

Because the upgrade process is a one-time-only option, please take all due care to minimize the risk of PC failure during the upgrade.

When the upgrade process has completed successfully, you will see this message:



Because the upgrade process is no longer pending, FlashScan V2's LCD screen will display the starting menu:

	FlashScan V2
F2	Select PIDs Scan Tool Tuning Tool Options S-CAN-02-

That means that your FlashScan V2 device has been upgraded and is now ready for use.

If the upgrade fails to complete, you may attempt to retry the process. However, if any single part of the upgrade was actually performed, then the retry will be denied and you will see the following message.

Warnin	ig 🛛 🔀
♪	This FlashScan V2 interface cannot be upgraded. It has either already been upgraded, or is not an upgradeable interface.
	If you believe this FlashScan V2 interface should be upgradeable, then please contact EFILive via email at support@efilive.com.
	ОК

### Using FlashScan V2 to Display Trouble Codes

#### Location of the OBD II Connector

The OBD II connector is located in the passenger compartment within reach of a technician seated in the driver's seat.

Access to the connector does not require any special tools for the removal of any instrument panel cover, connector cover or any barriers that may be obscuring the connector.





Left hand drive

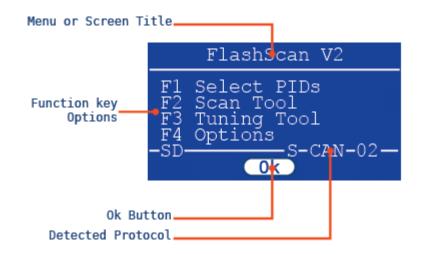
**Right hand drive** 

Turn the vehicle's ignition to the on (or run) position, but do not start the engine.

Connect the OBDII cable from the vehicle to FlashScan.

FlashScan will start up and attempt to connect to the vehicle. You will see activity on one of the orange LEDs to indicate that FlashScan is communicating with the vehicle.

After approximately 2-3 seconds, the following menu will be displayed.



#### **Display System Readiness Test Results**

Press the *F2* button to select the *Scan Tool* option.

Press the F2 button to select the Diagnostics option.

Press the F3 button to select the Test Results option.

Press the *F1* button to select the *System Readiness* tests option.



EFILive documentation often refers to sequences (similar to the steps above), by the appropriate function keys only. So the above example may also be written as: **Select: F2->F2->F3->F1** 

Such notation always assumes that the starting point is the first menu displayed by FlashScan.

Scroll up and down through the eleven test results using the *Up* and *Down* arrow buttons. The top right hand corner of FlashScan's display shows the line number of the last visible item and the total number of lines that can be displayed.

Press the **OK** (or **Cancel**) button to exit from the Readiness Test display screen.

#### **Display Diagnostic Trouble codes**

Select : F2->F2->F2 to select the Current DTCs option.

Scroll up and down through any DTCs that may have been displayed using the *Up* and *Down* arrow buttons.

Press the **OK** (or **Cancel**) button to exit from the Display DTCs screen.

#### **Clear Diagnostic Trouble codes**

Select : F2->F2->F4 to select the Clear DTCs option.

Confirm that you wish to clear the DTCs by pressing the Yes button.

Press the **OK** (or **Cancel**) button to exit from the Clear DTCs option.



Clearing DTCs will also clear all Readiness Tests' Status.

### Making a Backup Copy of the Vehicle's Controller

- 1. Turn the vehicle's ignition to the on (or run) position, but do not start the engine.
- 2. Connect the OBDII cable from the vehicle to FlashScan.
- 3. Connect the USB cable from FlashScan to the PC or laptop.
- 4. Start the EFILive Tuning Tool software by double clicking on the desktop shortcut that looks like this:



- 5. Locate and click once on the green "Read calibration data" toolbar icon at the top of the Tuning Tool window (or select menu: Flash->Read PCM calibrations...").
- 6. The "Read PCM Calibration" window will appear. Select the matching controller type from the drop down list box at the top of the window.

✓ Use high speed	05+ GEN-IV (E40) 97/98 GEN-III 99+ GEN-III 05+ GEN-IV (E40) T42 Transmission Duramax Diesel LB7 Duramax Diesel LLY Allison Transmission Inline 6 (LL8)	Check status Status: ?	
			)
Start Stop			Close



Make sure your vehicle battery is capable of providing 12V for at least 5 minutes.

We recommend that you turn off the headlamps, daytime running lights, radio, air conditioning and as many other accessories as possible.

On some vehicles, applying the park brake 1 "click" may extinguish daytime running lights, if applied before ignition is switched on. 7. Click the [Start] button. Information about the controller will be displayed on the screen, then the read process will start.

Key: Controller: 05+ GEN-IV (E40) ✓ Check status   ✓ Use high speed Status: ✓   FlashScan Cable: V2   12:01:36.578: Scanning for EFILive FlashScan V2 USB   12:01:37.953: Interface firmware model:				
12:01:37:353: Interface firmware version: 2.4.34 12:01:38.015: Interface firmware version: 2.4.34 12:01:38.031: FlashScan serial number: 003585162360 12:01:38.046: FlashScan license number: 003439843547 12:01:38.140: Current protocol: "ISO 15765 CAN" 12:01:38.140: Current protocol: "ISO 15765 CAN" 12:01:38.343: VIN: 1G1YY34U655131818 12:01:38.456: Getting status 12:01:38.453: Status: OK. 12:01:38.593: Bootloader version: E40_v1.1R (0400-61F4) 12:01:38.640: ECM seed is: \$5489 12:01:41.468: ECM ready for reading flash.				
05+ GEN-IV (E40) selected.				
Estimated time left: 01:29	154K of 1024K			
Start Stop	Close			

- 8. Once the read process has completed, follow the onscreen instructions and turn off the ignition for the indicated time. It is important that you turn the ignition off (and leave it off) to allow the PCM time to reset back to normal operation.
- 9. Close the "Read PCM Calibration" window by clicking on the [Close] button.
- 10. To save the data that has just been read from the vehicle, locate and click once on the "Save as..." toolbar icon at the top of the Tuning Tool window (or select menu: File->Save as...").

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11.EFILive recommends saving \*.tun files in the folder: \My Documents\EFILive\V7\Bins



It is a good idea to create sub-folders in the bin folder named after the vehicle's VIN, and save each vehicle's \*.tun files in its own folder.

Use a naming convention like this: 2005\_corvette\_57L\_A4\_stock.tun That way it is easy to keep track of your files. This is just a suggestion; you may name the files anything you like.

12. For peace of mind, backup the original \*.tun files that have been read from each vehicle onto a CD for safekeeping.

Repeat steps 6 through 11 for any other controllers that you wish to backup, including other supported controllers on the same vehicle.

### Congratulations



You have successfully installed, configured, licensed and used your EFILive FlashScan tuning system. You are now ready to start scanning, logging and tuning your vehicle.

Unless you have done this type of tuning before, we recommend you proceed cautiously and make small, incremental adjustments and keep detailed notes of what you change and why.

Where possible, measure the effects of any changes to validate that the changes have a positive effect.

Research and read as much information as you can about tuning EFI engines.

### **More Information**

The Scan Tool User Manual can be accessed from the Scan Tool software menu: *Help->Help contents*.

The Tuning Tool User Manual can be accessed from the Tuning Tool software menu: *Help->Help contents*.

Tutorials can be accessed via the menu: *Help->Tutorials*, from either software package.

Additional documents and tutorials are available from EFILive's web site: <u>http://www.efilive.com/download.aspx</u>

Become a member of EFILive's online community, you may register free on our forum, where you can get instant help from tuners located all over the world: <u>http://forum.efilive.com/</u>

# **Real Time Tuning**



EFILive has partnered with MoatesWare LLC to bring you RoadRunner; the most comprehensive, affordable, real time tuning system for LS1 gas and LB7 diesel vehicles.

Other systems claim to be "real time" but they are just software emulators that attempt to simulate real time tuning. By combining the RoadRunner PCM with EFILive's powerful tuning software, you can make changes to any supported vehicle's PCM in real time and experience the feedback immediately.

To learn more about real time tuning or to purchase your own RoadRunner PCM, go to: <u>http://www.moates.net/</u>

### **Training and Education**



EFILive and EFI University have created an EFILive specific EFI tuning training course. The course is run regularly in the USA and in Australia. Please contact EFI University, (<u>http://www.efi101.com/efilive.html</u>) to obtain course locations, schedules and rates.

# Thank you

Thank you for purchasing EFILive FlashScan. We believe you will have many years of trouble free tuning and quality motoring in your FlashScan tuned vehicle(s).

If you should ever have trouble with any of EFILive's products, please contact the place of purchase to discuss the problem. Most problems can usually be resolved quickly via telephone or email.



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EFILive Limited PO Box 54-160 Bucklands Beach, Auckland, New Zealand www.efilive.com

Support email: <a href="mailto:support@efilive.com">support @efilive.com</a> Support forum: <a href="http://forum.efilive.com/">http://forum.efilive.com/</a>