



AutoCal V3 User Guide

Cindy Myers

AutoCal V3 User Guide

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Prerequisites

Intended Audience

Customers who have purchased custom tunes from a professional tuner who has supplied an AutoCal device and requires basic operational instructions for both AutoCal and the V8 Scan and Tune Tool software.

Computer Knowledge

It is expected that readers have a basic understanding of:

- The Windows operating system;
- Starting and using Windows applications;
- Navigating folders using Windows Explorer.



Introduction

What is AutoCal?

EFILive's AutoCal V3 provides a convenient platform for professional tuners to distribute custom tunes to their customers. And for their customers to collect and submit logged data back to the tuner for analysis. It allows the tuner to update and optimize the original tune without shipping and/or removing controllers from customers' vehicles.

AutoCal can be configured in a variety of different ways to best suit your tuner's operational requirements and the needs of their customers. Your tuner may provide additional support documentation tailored to the specific setup they use for AutoCal

Differences between FlashScan and AutoCal

There are significant differences between FlashScan and AutoCal for end users. It is important that both the tuner and the tuner's customer (end user) understand these differences.

- With FlashScan, users have the ability to create, view, and modify tunes. With AutoCal, only the tuner has that ability.
- AutoCal cannot be used to create or change tune files.
- Tunes from multiple sources can be flashed with FlashScan, however AutoCal is limited to flashing tunes provided by a single tuner.

A FlashScan Device is Required

FlashScan is required to create tunes for an AutoCal device. AutoCal devices cannot create tunes.

End User License Agreement

The EULA is displayed when the EFILive V8 Scan and Tune software is installed. Installation cannot proceed until the user agrees to the EULA.

The EULA is displayed on the AutoCal V3 screen each time AutoCal V3 is connected to power. For AutoCal V3 to be functional, the user must agree to the EULA.

Where AutoCal V3 is connected to a PC and is being used in pass-thru mode, the device will be functional even if the EULA is not confirmed on the AutoCal V3 display because the EULA was accepted during software installation.

The [F7: Licenses] -> [F2: Hardware] tab will display the EULA status of the connected device. The EULA status is updated on the first acceptance of the EULA on the AutoCal V3 device.



Specification & Requirements

AutoCal V3 Package Contents

The contents of your AutoCal product may vary due to being supplied directly from your tuner or parts supplier. At a minimum your AutoCal will be shipped with:

- AutoCal V3.
- OBDII cable (RJ45 to SAE-J1962)
- PC cable (USB A to B)

AutoCal V3 Specification

- Large, easy to read color screen.
- Powerful ARM Cortex-M3, 32-bit CPU.
- Built in 512MB micro SD Card stores hundreds of tune files and/or hundreds of hours of logged data.
- Supports 600 VIN licenses.
- Built-in audible alarms.
- Upgradable firmware.
- Vehicle Input Voltage - Min 9V, Max 28V.
- Supported protocols CAN J1979, CAN J1939 (heavy duty) and VPW.
- Serial interface (RS-232).
- Battery backed real-time clock for accurate timestamps.
- Appears as a Windows USB drive in Windows Explorer.
- Files transfer up to 10 times faster than FlashScan/AutoCal V2.
- Built-in power supply prevents data corruption if external power supply is interrupted.
- Plug-and-Play, uses Windows' built in USB drivers.
- Rugged Molex connectors.

USB Drivers

AutoCal V3 appear as a Windows USB drive in Windows Explorer. There are no external drivers to install.

AutoCal V3 Functionality

Standalone Mode

Reading, flashing, logging and clearing codes.

Pass-thru Mode

Read, log and flash supported controllers using the EFILive V8 software.

Software Requirements

[EFILive V8 Scan and Tune](#) application must be installed for file management.

For AutoCal to be functional, the software and firmware used with your AutoCal will need to be compatible the software and firmware used with your tuner's FlashScan device.



AutoCal users should only update software and firmware at their tuners specific request. Updating to software and firmware versions higher than your tuner may lead to your tuner being unable to offer you support until they update.

Licensing

Each AutoCal device ships with one VIN license that may be used for tuning one engine controller. Supported transmission control modules do not require a VIN License.

Tuners can manage the number of available VIN slots they wish their AutoCal devices to hold. AutoCals will ship with a default maximum VIN slot count set to 1. AutoCal V3 is configurable to a capacity of 600 VIN licenses.

Updating VIN slot limits is at the sole discretion of the tuner. EFILive (and other parties) cannot provide this service.

Although AutoCal can be used to return a vehicle to stock, doing so will not “reset” the VIN license that was used to flash the vehicle. A future version of EFILive software will allow VIN licenses to be copied from one FlashScan or AutoCal device to an AutoCal V3 device where the device license numbers match on both devices. Details will be provided at a later date.

License slot limits can only be viewed via V8 Scan and Tune software. Used and available VIN Licenses can be viewed in both V8 Scan and Tune software and on AutoCal V3;

V8 Scan and Tune software

1. Connect AutoCal V3 to your PC.
2. Open the V8 Scan and Tune software.

3. Navigate to [F7: VIN Licenses] -> [F2: VINs]

The screenshot shows the 'FlashScan and AutoCal Licensing' window. On the left is a navigation pane with 'F2: VINs' selected. The main area displays a table of VIN slots and a summary section.

Lic #	ECM	Engine Serial	Engine VIN
1	CM2350A	000003077139	4UZABRC
2	E80	R1100000152	3G1BC5S
3	Available		
4	Available		
5	Available		

Annotations in the image include:

- Red arrows pointing to rows 1 and 2 with the text "Allocated VIN slots".
- Red arrows pointing to rows 3, 4, and 5 with the text "Available VIN slots".
- A red box around the summary text: "Device summary. The device capacity in this example is 10 slots. 2 used, 3 available and 5 additional VINs may be purchased. This value is managed by Max VIN slots to a device capacity of 600 VIN slots." Below this, another red box highlights: "Engine: 2 used, 3 available. 5 additional VIN licenses may be purchased for this device."

At the bottom, there are input fields for 'Auth Code' and 'Activation Code', a 'License Number' dropdown set to '6', and buttons for 'Generate Auth Code', 'Copy', 'Copy Info', and 'Activate VIN License'. A 'Purchase VIN License Activation Code(s)' link is also present. The bottom toolbar contains 'Backup', 'Refresh', 'Copy', and 'Close' buttons.

AutoCal V3

1. Connect AutoCal V3 to power.
2. Accept the EULA.
3. Navigate to [F4: Options] -> [F3: About] -> [F2: VIN Licenses].
4. Licensed controllers and available licenses are displayed.

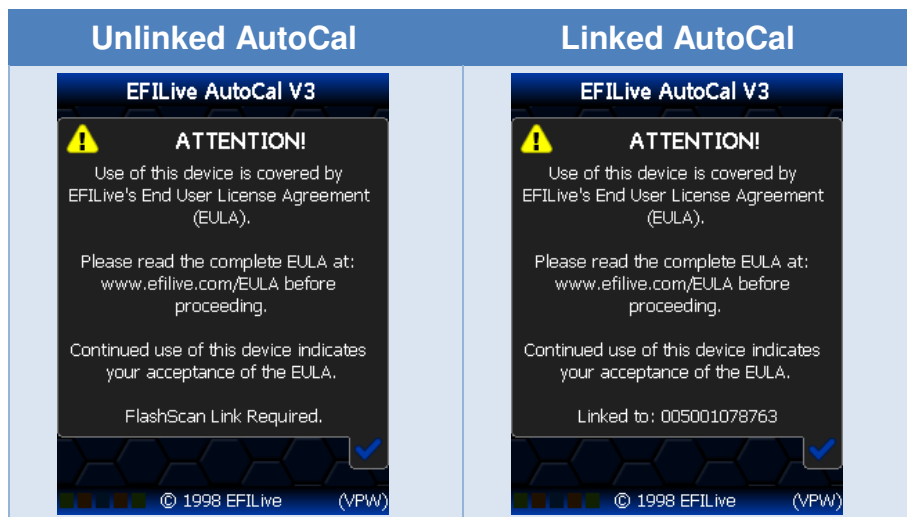


Linking/Unlinking FlashScan to AutoCal

Linking AutoCal

For an AutoCal V3 device to be functional, your tuner must link the AutoCal to their FlashScan device.

The linking status of an AutoCal is displayed on the AutoCal EULA screen when the AutoCal is first powered. Where the AutoCal is linked, the 12 digit number is the license number of the FlashScan that provided the link.



There are two ways to link an AutoCal device to FlashScan.

1. Physically Link AutoCal – where the tuner links the device prior to shipping.
2. Remotely Link AutoCal – where the tuner will send you an activation code and instructions on how to link your AutoCal to the tuner's FlashScan.

Your tuner will select the most convenient for their business model.

There are two methods to identify the FlashScan device which provided the link;

V8 Scan and Tune software

1. Connect AutoCal V3 to your PC.
2. Open V8 Scan and Tune software.
3. Select [F7: Licenses].
4. The license number indicates the FlashScan that AutoCal is linked to.
5. Where the license number and serial number are identical, the AutoCal device is not linked.

AutoCal V3

1. Connect AutoCal V3 to power.
2. Accept the EULA.
3. Navigate to [F4: Options] -> [F3: About] -> [F1: Firmware].
4. The license number indicates the FlashScan that AutoCal is linked to.
5. Where the license number and serial number are identical, the AutoCal device is not linked.

Unlinking AutoCal

An AutoCal can be unlinked from a FlashScan device to allow that AutoCal device to be relinked to another FlashScan device.

Unlinking an AutoCal is at the sole discretion of the tuner. End users should make appropriate inquiries on the tuner's unlinking policy prior to purchase. EFILive (and other parties) cannot provide this service.

There are two ways to unlink an AutoCal device from a FlashScan.

1. Physically Unlink AutoCal; where the tuner requires both FlashScan and AutoCal to unlink the device.
2. Remotely Unlink AutoCal; where the tuner will send you an activation code and instructions on how to unlink your AutoCal from the tuner's FlashScan.

Once an AutoCal has been unlinked, it must be linked to another FlashScan prior to flashing tune files.

Once AutoCal is unlinked, all tune files that were created by the original tuner with the original FlashScan can no longer be flashed by the AutoCal device.

Tuners should implement a process to ensure the end user's stock file is converted from the original FlashScan to the new FlashScan. Failing to do so will prevent end users from flashing their stock tune.

Once an AutoCal has licensed a controller, that controller will remain licensed to that AutoCal. Unlinking and relinking an AutoCal device does not require additional licensing provided the controller originally tuned remains the same. Additional AutoCal VIN licenses are required to tune additional controllers.

Taking Care of AutoCal V3

Care must be taken when using, transporting or storing AutoCal V3.

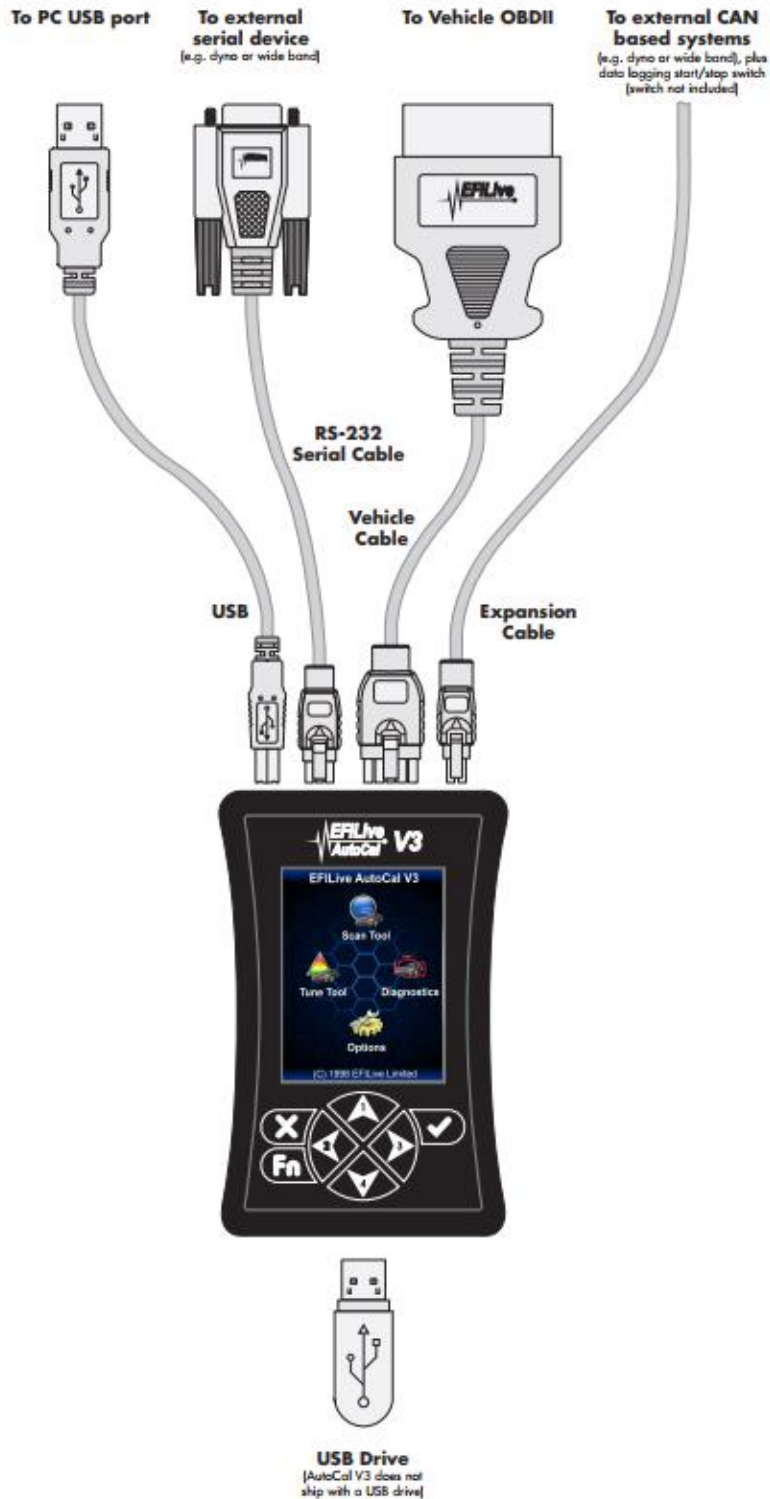
- Never leave devices in direct sunlight; it will damage the LCD screen and the polycarbonate keypad.
- Never expose devices to solvents or other corrosive or oxidizing agents.
- Do not immerse devices in any liquid.
- Do not expose devices to high temperatures or open flames.

- Remove ALL connectors before transporting or storing devices. Failure to do so may cause internal connections to break.
- Never wrap cables around devices 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 devices, or any wires connected to devices, 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 V3 or AutoCal V3 is connected to either the vehicle or the laptop or both.



Using AutoCal V3

Connecting AutoCal V3



AutoCal V3 Display

The AutoCal LCD footer displays a range of communications information to assist users.

LED Communication Indicators

5 LEDs, from left to right display the following communications information.

- Green: RS232 serial data interface is active.
- Orange: Data logging is active - not yet implemented. This LED will never illuminate until this is implemented.
- Blue: SD Card write in progress - not yet implemented. This LED will never illuminate until this is implemented.
- Orange: OBDII interface is active.
- Green: USB interface is active.

Active Communications Protocol

The active communications protocol is displayed on the right hand side of the footer. The display is broken into three distinct areas using the format XXX YY ZZ where;

1. XXX is the current protocol in use and is one of:
CAN = Controller Area Network Protocol; used by most vehicles after 2004.
VPW = Variable Pulse Width Protocol; used by GM vehicles prior to 2005.
2. YY is the type of CAN protocol in use and is one of:
LD = Light Duty (aka SAE-J1979).
HD = Heavy duty (aka SAE-J1939).
This 2 letter code will be omitted when the protocol is VPW.
3. ZZ is the number of controllers detected.

Power-Up Modes

The following power up modes are available for AutoCal V3. Hold down the below key while powering the device. Release that key once the splash screen is visible.

Hold [Fn] key to boot into dead-poll. Used primarily when a firmware upgrade has not executed correctly.

Hold the [Up] key to force V3 into thumb drive mode to reduce menu navigation to launch the thumb drive.

Hold the [X] key to load the standard menu. Used primarily when a Custom menu with reduced menu options is provided.

AutoCal Folder Structure

The AutoCal folder structure is designed to accommodate different groups of files. The menu options you select on your keypad will reference files in these specific folder locations. The function of each folder is described below:

Folder	Purpose
EFILive	Root level folder
Config	Contains configuration files copied to AutoCal V3 to support controller read and flash functions.
Menu	Contains custom menu configuration files. Where a custom menu is installed on AutoCal V3, standard menu configuration files are also copied here.
Scan	Contains files created by the <i>Record Data</i> operation. Files in this folder will typically be provided to your tuner to refine your calibrations.
Trace	Contains files created by the <i>Save Trace File</i> operation. Files in this folder will typically be provided to EFILive to assist with support requests.
Tune	Contains calibration files which can be programmed using the [Program Cal] and [Program Full] tuning options. This is where calibrations from your tuner must reside in order to be available to program your vehicle.
Read	Contains calibration files which you have read from your vehicle controller(s) with the [Read Tune] option. This is where calibrations you will send to your tuner will reside.

Custom folders can be created, refer to USB Thumb drive for instructions.

Tunes placed in custom folders will be accessible using the standard AutoCal menu, or where tunes are correctly mapped using AutoCal Custom menu.

AutoCal V3 SD Card

It is good practice for tuners to physically format the entire SD Card prior to configuring AutoCal V3 for a customer. To format the SD Card;

1. Connect AutoCal V3 to PC.
2. Navigate to Options -> F2: File System -> F2: Manage -> F3: Format Entire SD Card on the AutoCal V3 device.
3. Press Fn+Tick to format the SD Card.

After copying the required BBX configuration and tune files to AutoCal V3, copy a tune files from AutoCal V3 back to the PC and open the tune file in EFILive V8 Scan and Tune.to confirm AutoCal is functional and configured for use.

Communicating with AutoCal V3



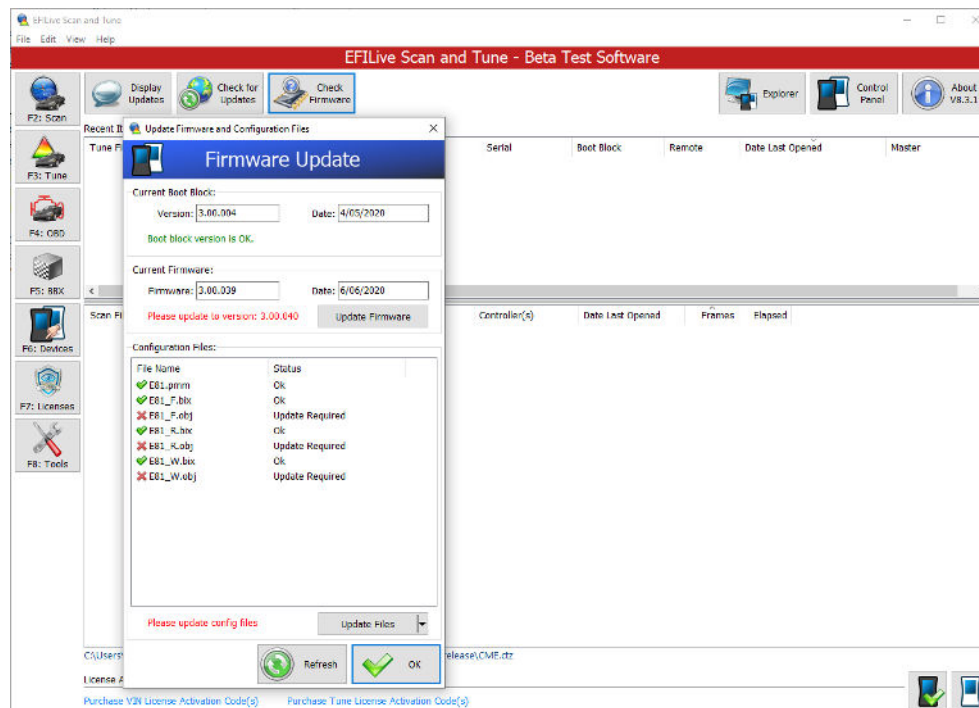
Please avoid rapid connection/disconnection of AutoCal V3's USB cable. Doing so repeatedly may cause the AutoCal V3 to fail to power up via the USB connection. If AutoCal V3 does not power up within 10 seconds of a USB connection, you can reset AutoCal V3 by powering up FlashScan V3 via the OBDII connection.

There are several methods available to move data to/from your AutoCal device. The method used will depend on what data needs to be moved and how the tuner chooses to manage content. Your tuner will provide instructions on how to manage data.

V8 Scan and Tune

Program Firmware

1. Connect AutoCal to your PC and open V8 Scan and Tune software.
2. Select [Check Firmware].
3. Select [Update Firmware].



4. After firmware has been updated if AutoCal V3 requires a boot block update, AutoCal V3 will display the boot block update message on the LCD screen. Where the user does not update the boot block after firmware is updated, the boot block update message will be displayed each time the device is powered.
5. Select [Update Config Files] if configuration files require updating.
6. Select [OK] to close firmware window.

Program Quick Setup

The Quick Setup is the quickest and easiest way to program all files required to make AutoCal functional. The data that is copied into the quick setup file includes:

- The device settings.
- The current Options.txt file which contains the controllers and PID selections.

- All required supporting configuration files (*.obj, *.pmm, *.bix and *.drc).
- Up to 5 *.ctz and/or *.coz tune files.

This method requires your tuner to send you a *.bbx quick setup file via email.

1. Save the *.bbx file your tuner sent to the folder:
 \Documents\EFILive\V8\BBX
2. Connect AutoCal to your PC and open V8 Scan and Tune software.
3. Navigate in the V8 software to [F5: BBX]->[F6: Quick Setup]
4. Select [Open Quick Setup] and navigate to the directory and select the *.bbx file your tuner sent you.
5. **Do not modify any of the settings defined by your tuner unless they request you to.**
6. Select [Program Quick Setup] to program device settings, controller configuration and tune files to your AutoCal.

Program Configuration Settings

This process is used to make changes to Scan and Tune controller selections and PID configurations on AutoCal if your tuner does not send a Quick Setup file.

1. Save the Options.txt file your tuner sent to the folder
 \Documents\EFILive\V8\Config
2. Connect AutoCal to your PC and open V8 Scan and Tune software.
3. Select [F5: BBX]
4. Select Open, and navigate to your required Options.txt file.
5. **Do not modify any of the settings defined by your tuner unless they request you to.**
6. Select appropriate [Program] option. There are 4 options available. Your Tuner should assist you in choosing the correct selection.

Program (Ctrl+P) Programs the attached device with the current configuration and any supporting files that have been updated since the device was last programmed.

Program Selections Only (Faster) programs the attached device with only the configuration file. This option should only be used if you have only changed PID selections. If you have changed the number and or type of controllers for either scanning or tuning then you should use the Program or Program All Required Data options.

Program Selections and Configuration Files (Slower) formats and then programs the attached device with all configuration files regardless of whether they are out of date or not.

Format CONFIG File System formats the CONFIG file system in which the configuration and supporting files are stored. When making significant changes to the BBX options, it is a good idea to format the CONFIG file system to discard any old/unused files prior to programming.

Program Device Settings

This process is used to make changes to AutoCal device settings if your tuner does not send a Quick Setup file.

1. Save the Settings.dat file your tuner sent to the folder
 \Documents\EFILive\V8\Config
2. Connect AutoCal to your PC and open V8 Scan and Tune software.
3. Select [F6: Devices]

4. Select Open, and navigate to your required Settings.dat file.
5. **Do not modify any of the settings defined by your tuner unless they request you to.**
6. Select [Program] to program device settings.

Using AutoCal V3 as a USB Thumb Drive

Use AutoCal V3 as a USB Thumb Drive to move/copy files to/from AutoCal V3.


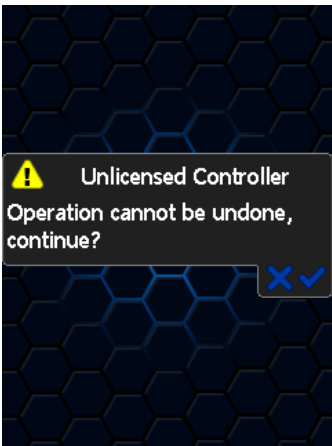
Use windows explorer to manage the files and folders. To ensure data integrity, eject the thumb drive from Windows Explorer before disconnecting the device.

1. Connect AutoCal to your PC.
2. On AutoCal V3 navigate to Options -> F2: File System -> F3: USB Thumb Drive.

Where the thumb drive is active, performing functions like programming device settings and BBX will result in error \$01C3, the FlashScan/AutoCal V3 device is currently being used as a Windows USB thumb drive. De-activate the thumb drive option on FlashScan/AutoCal V3 to use these functions.

Licensing a Controller

After navigating and selecting a tune file to flash, the first time a flash is performed it must be allocated an available VIN license. To perform the allocation you will be presented with two questions on the AutoCal:

Task	Description
	<p>Press the ✓ button on the AutoCal keypad to confirm you wish to license the controller to the AutoCal device.</p> <p>Press the X Button if you do not want to license the controller.</p>
	<p>This is a final confirmation you wish to allocate the license. Pressing the ✓ button on the AutoCal keypad performs the license allocation.</p> <p>Press the X Button if you do not want to license the controller.</p>



AutoCal V3 Menu Navigation

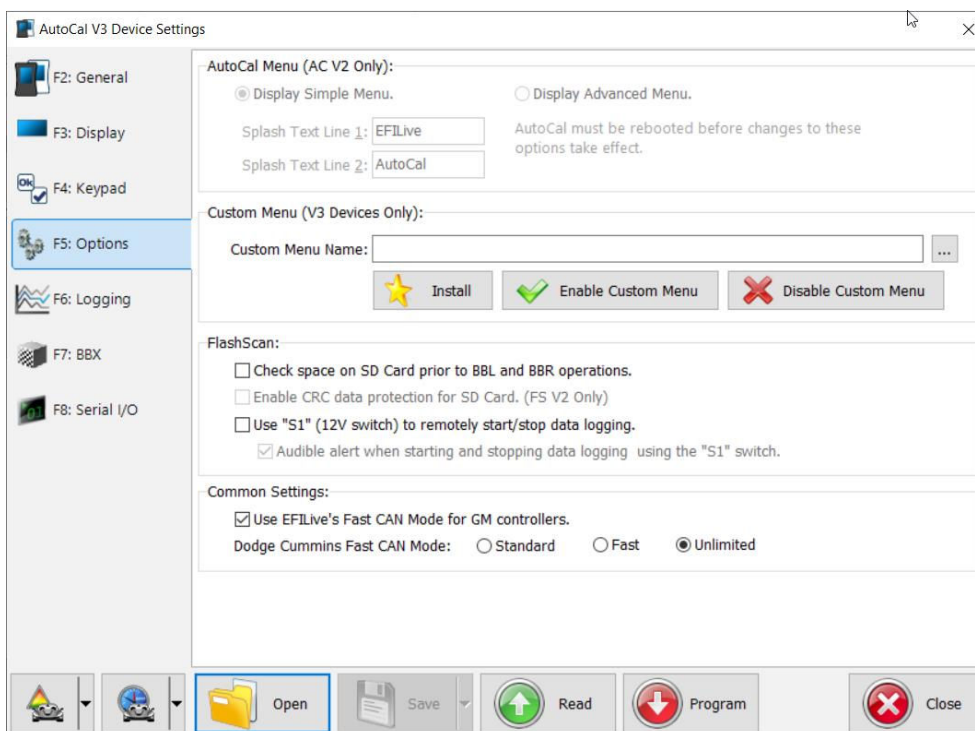
AutoCal V3 supports two menu structures; the EFILive standard menu and the user defined menu. Where a user defined menu is not installed, the EFILive standard menu will be displayed.

User Defined Menu Structure

Tuners can customize the AutoCal V3 menu structure to suit their business allowing the Tuner to define what options they wish their custom to see.

The User Defined menu is managed via text file that is defined in the \Documents\EFILive\V8\User Defined Menus\ SampleCustomMenu.txt file. A working example is also provided.

Custom menus can be installed/removed using the [F6 Devices]->[F5: Options] screen.



[Install] will compile the named *.txt file to the *mainmenu.menu* custom file and copy that file onto the device. At the same time it will remove the file *mainmenu.disabled* from the device (if it exists).

[Disable Custom Menu] will rename the *mainmenu.menu* file to *mainmenu.disabled* and save a copy of the *mainmenu.disabled* to \Documents\EFILive\V8\User Defined Menus\mainmenu.disabled.

[Enable Custom Menu] will attempt to locate the file named *mainmenu.disabled* on the device, if it can't find it on the device then it will try to locate it on the PC in the folder \Documents\EFILive\V8\User Defined Menus and copy that file to the

device. Once the file *mainmenu.disabled* exists on the device it is renamed to *mainmenu.menu* to enable the custom menu.

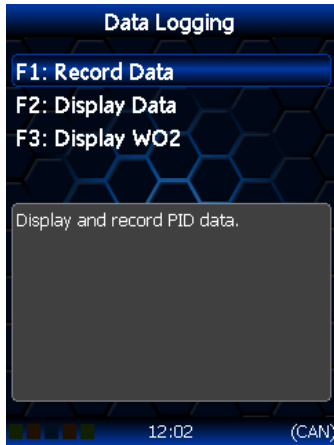
A comprehensive GUI editor for full menu customization including background images, icons, colour and gradients is still in development.

Standard Menu Structure

The following table describes each screen using the AutoCal V3 standard menu structure.

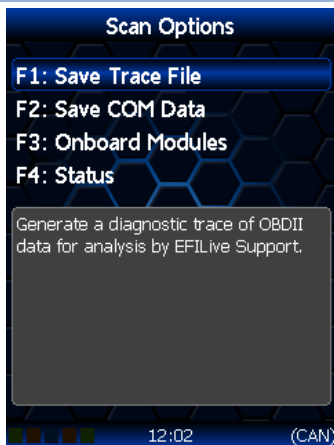
Task	Description
	<p>The EULA is displayed on the FlashScan V3 screen each time FlashScan V3 is connected to power. For FlashScan V3 to be functional, the user must agree to the EULA.</p> <p>Where FlashScan V3 is connected to a PC and is being used in pass-thru mode, the device will be functional even if the EULA is not confirmed on the FlashScan V3 display because the EULA was accepted during software installation.</p>
	<p>FlashScan V3 home page. Use arrow buttons on the AutoCal keypad to navigate to your selection, and the Tick button to execute your selection.</p>
 <h3>Scan Tool Menu</h3>	
	<p>F1: Select PIDs; Select a set of Parameter IDs to monitor or data log that have been pre-programmed to the device.</p> <p>F2: Data Logging; opens Data Logging menu.</p> <p>F3: Scan Options; opens Scan Options menu.</p>

Scan Tool -> [F2: Data Logging] menu



F1: Record Data; Display and record PID data.
 F2: Display Data; Displays but do not record the PID data to the FlashScan V3 screen.
 F3: Display WO2; Display wide band O2 values from wide band controller(s) connected to the serial port.

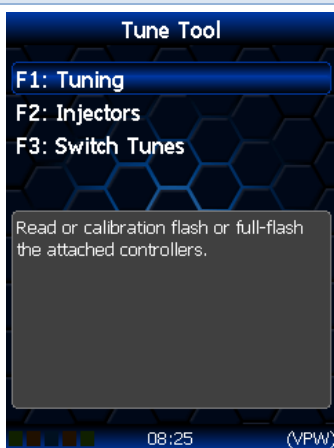
Scan Tool -> [F3: Scan Options] menu



F1: Save Trace File; Generate a diagnostic trace of OBDII data for analysis by EFILive Support.
 F2: Save COM Data; Generate a diagnostic trace of RS232 and CAN peripheral data for analysis by EFILive Support.
 F3: Onboard Modules; Displays a list of detected electronic modules in the vehicle.
 F4: Status: Displays a dynamic list of real time data detected by this device.

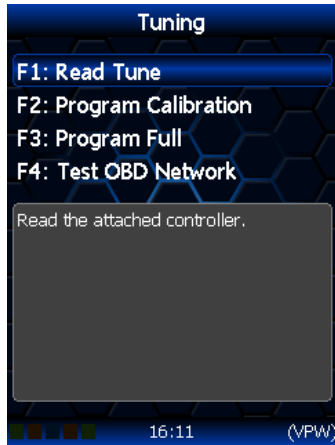


Tune Tool Menu



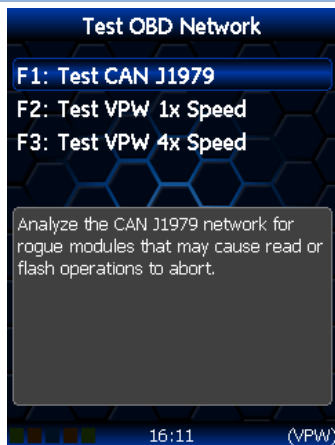
F1: Tuning; opens the Tuning menu to read and/or re-program the vehicle's controller.
 F2: Injectors; opens the Injectors menu to read or reprogram injector data.
 F3: Switch Tunes; Switch between custom tunes.

Tune Tool -> [F1: Tuning] menu



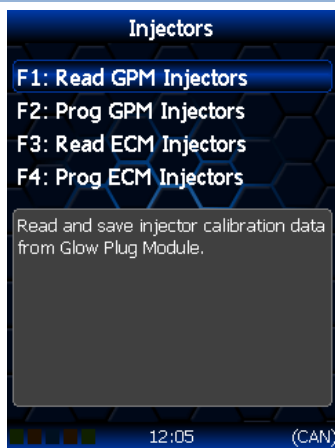
F1: Read Tune; Read the attached controller.
 F2: Program Cal; Calibration flash the attached controllers.
 F3: Program Full; Full-flash the attached controllers.
 F4: Test OBD Network; opens the Test OBD menu.

Tune Tool -> [F1: Tuning] -> [F4: Test OBD Network]



F1: Test CAN J1979; Analyze the CAN J1979 network for rogue modules that may cause read or flash operations to abort.
 F2: Test VPW 1x Speed; Analyze the VPW network at normal speed for rogue modules that may cause read or flash operations to abort.
 F3: Test VPW 4x Speed; Analyze the VPW network at 4x normal speed for rogue modules that may cause read or flash operations to abort.

Tune Tool -> [F2: Injectors] menu



F1: Read GPM Injectors; Read and save injector calibration data from Glow Plug Module.
 F2: Prog GPM Injectors; Program previously saved injector calibration data into Glow Plug Module.
 F3: Read ECM Injectors; Read and save injector calibration data from Engine Control Module.
 F4: Prog ECM Injectors; Program previously saved injector calibration data into Engine Control Module.

Tune Tool -> [F3: Switch Tunes] menu



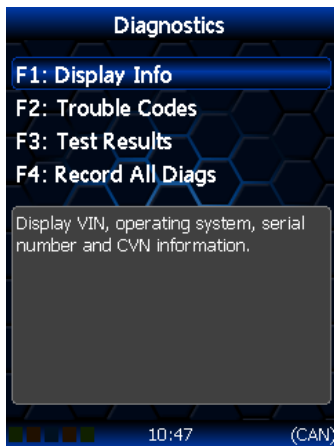
F1: Switch CSP5; Switch between custom CSP5 tunes.

F2: Switch DSP5; Switch between custom DSP5 tunes.

F3: Switch DSP4; Switch between custom DSP4 tunes.



Diagnostics Menu



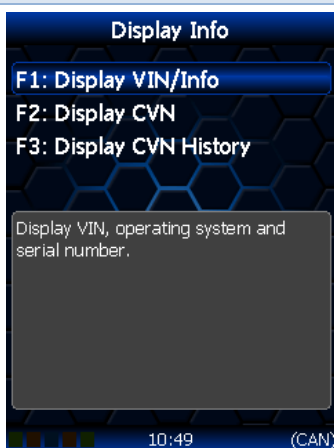
F1: Display Info; opens the Info menu to display VIN, operating system, serial number and CVN information.

F2: Trouble Codes; opens the DTC menu to display and/or clear diagnostic trouble codes.

F3: Test Results; opens the test results menu to display OBDII monitored test results.

F4: Record All Diags; Record all OBDII diagnostics and related information.

Diagnostics -> [F1: Display Info] menu

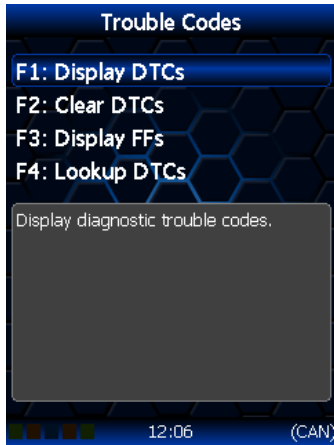


F1: Display VIN/Info; Display VIN, operating system, and serial number.

F2: Display CVN; Display current calibration verification numbers.

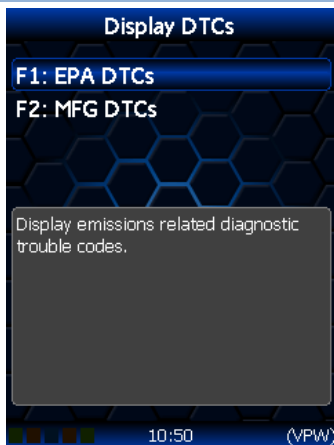
F3: Display CVN History; Display historical calibration verification numbers.

Diagnostics -> [F2: Trouble Codes] menu



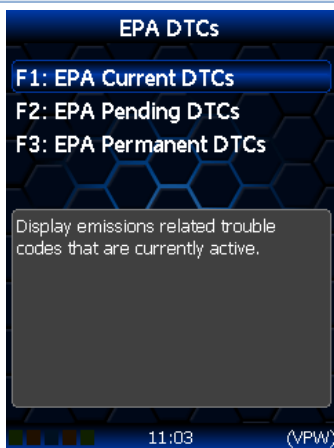
F1: Display DTCs; opens the Display diagnostic trouble codes menu.
 F2: Clear DTCs; Clear diagnostic trouble codes.
 F3: Display FFs; Display data that was captured at the time a trouble code was set.
 F4: Lookup DTCs; Lookup the description for known DTC codes. (not yet available)

Diagnostics -> [F2: Trouble Codes] -> [F1: Display DTCs] menu



F1: EPA DTCs; opens the emissions related trouble codes menu.
 F2: MFG DTCs; opens the manufacturer related trouble codes menu.

Diagnostics -> [F2: Trouble Codes] -> [F1: Display DTCs] -> [F1: EPA DTCs] menu



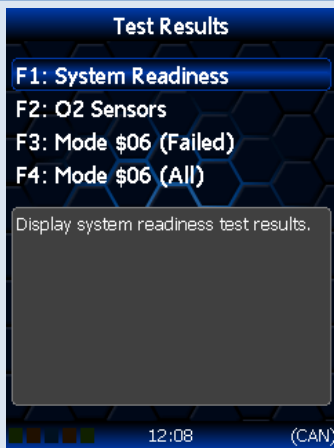
F1: EPA Current DTCs; Display emissions related trouble codes that are currently active.
 F2: EPA Pending DTCs; Display emissions related trouble codes that are potentially about to be set.
 F3: EPA Permanent DTCs; Display emissions related trouble codes that are permanently set.

Diagnostics -> [F2: Trouble Codes] -> [F1: Display DTCs] -> [F2: MFG DTCs] menu



F1: MFG Set DTCs; Display all codes that are currently active.
 F2: MFG All DTCs; Display all codes that are set or about to be set.

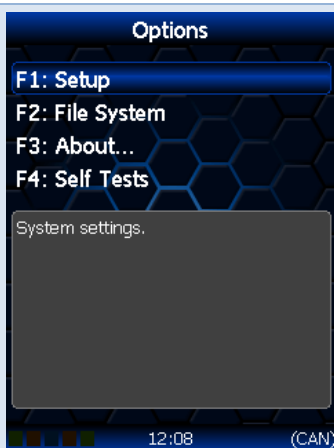
Diagnostics -> [F3: Test Results] menu



F1: System Readiness; Display system readiness test results.
 F2: OS Sensors; Display O2 sensor test results.
 F3: Mode \$06 (Failed); Display only failed mode 6 test results. More info available via OEM supplied, online data. Search for GM "mode 6" or Cummins "mode6".
 F4: Mode \$06 (All); Display ALL (failed and passed) mode 6 test results. More info available via OEM supplied, online data. Search for GM "mode 6" or Cummins "mode6".

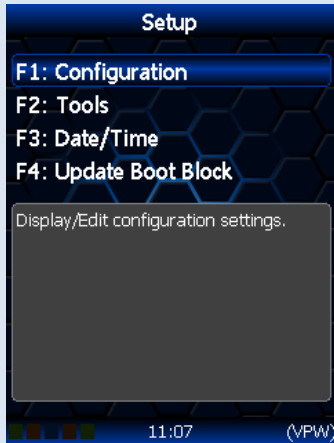


Options Menu



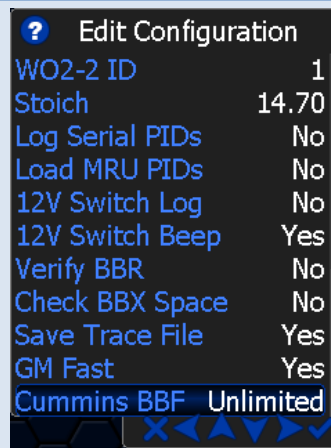
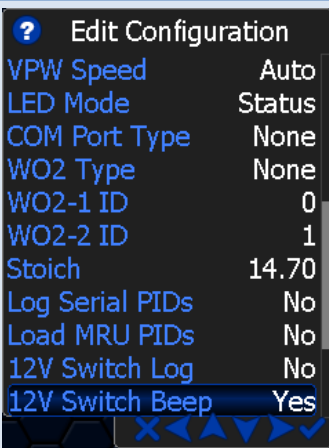
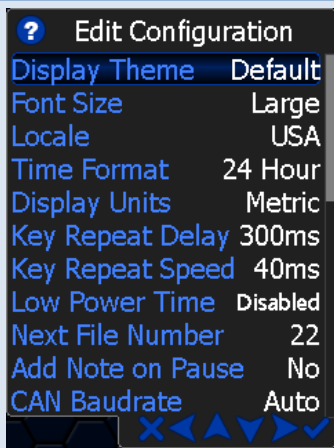
F1: Setup; opens the setup menu.
 F2: File System; opens the file system menu.
 F3: About; opens the device information menu.
 F4: Self Tests; opens the test menu.

Options -> [F1: Setup] menu



F1: Configuration; opens the Display/Edit configuration menu.
 F2: Tools; opens the Tools and utilities menu.
 F3: Date/Time; Display and/or adjust the date and time.
 F4: Update Boot Block; update the Boot Block.

Options -> [F1: Setup] -> Configuration menu



Display Theme	Set the color theme for the display
Font Size	Set the font size for the display. Font size does not control fonts in balloon boxes.
Locale	Locale USA or Locale Non-USA.
Time Format	Set time to 24 hour or am/pm.
Display Units	Metric or Custom.
Key Repeat Delay	Not yet available.
Key Repeat Speed	Not yet available.
Low Power Time	Not yet available.
Next File Number	Set the sequence number for the next automatically generated file name.
Add Note on Pause	Automatically add a note to log file when log file is paused/resumed using [OK]. Set to Yes or No.
CAN Baudrate	Set CAN speed.
VPW Speed	Set VPW speed.
LED Mode	Set to Status, Alarm or Off.
COM Port Type	Set the device connected to serial port. Supported devices are Wide Band O2, External, or Unknown.

Set WO2 Type	Select the type of Wide Band device connected to serial port*.
Set WO2-1 ID	Configure the ID's for multiple ECM AFR wide band controllers.
Set WO2-2 ID	Configure the ID's for multiple ECM AFR wide band controllers.
Set Stoich	Set the stoichiometric value for the fuel that is being used. For Innovate's wide band controllers, the stoich value can't be set using this option, instead it must be set using Innovate's Logworks software.
Log Serial PIDs	Log external digital (ie. Wide Band Serial) PIDs.
Load MRU PIDs	Not yet available.
12V Switch Log	Connect 12V to start logging. Disconnect 12V to stop logging. Set to Yes or No.
12V Switch Beep	Only active when 12V Switch Log is active. Two short beeps indicate start, one long beep indicates stop. Set to Yes or No.
Verify BBR	Perform extended verification of uploaded file. Set to Yes or No.
Check BBX Space	Check available BBX space before copying files. Set to Yes or No.
Save Trace Files	Automatically save trace file for read/flash errors. Set to Yes or No.
GM Fast	Use EFILive's Fast CAN mode which can make CAN flashing twice as fast. Set to Yes or No.
Cummins BBF	Set Cummins flash speed as Unlimited, Fast, or Standard.

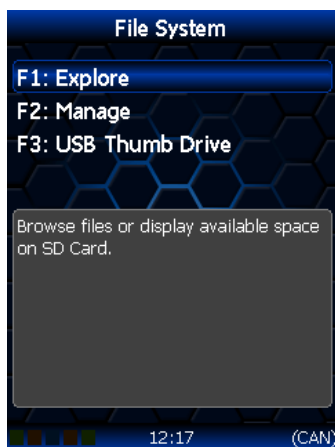
Options -> [F1: Setup] -> [F2: Tools]

F1: Capture Data; Records messages sent between modules on the OBDII network, excluding unsolicited chatter.

F2: Tools; Records ALL data on the OBDII network, including unsolicited chatter.

Recording chatter requires additional storage, please ensure there is sufficient space on the SD Card.

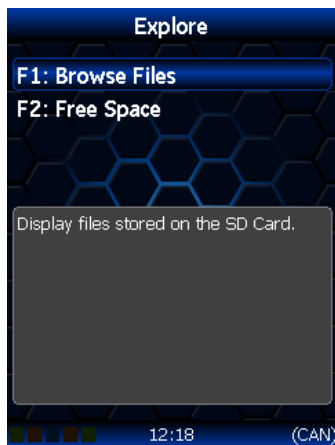
Each set of 64,000 messages requires 1MB of free space on the SD Card.

Options -> [F2: File System] menu

F1: Explore; Opens the Browse File and Free Space menu.

F2: Manage; Manage file system resources.

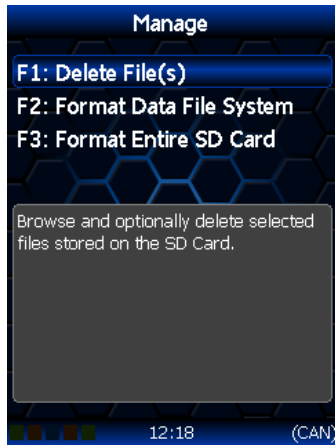
F3: USB Thumb Drive; Connect this device as a USB drive for use with Windows Explorer.

Options -> [F2: File System] -> [F1: Explore] menu

F1: Browse Files; Display files stored on the SD Card.

F2: Free Space; Display free space remaining on the SD Card.

Options -> [F2: File System] -> [F2: Manage] menu



F1: Delete File(s); Display and optionally delete files stored on the SD Card.

F2: Format Data File System; Display and optionally delete files stored on the SD Card. All scan and tune data files will be deleted. This option cannot be undone.

F3: Format Entire SD Card; Format the data file system. ALL FILES including configuration files and scan and tune files WILL BE ERASED.

Options -> [F3: About...] menu



F1: Firmware; Display firmware version numbers and other related information.

F2: VIN Licenses; Display engine controller VIN licenses.

F3: Tuning Licenses; Display tuning licenses installed on this device.

Options -> [F4: Self Tests] menu



F1: User Interface Tests; opens User interface test menu.

F2: File System Tests; opens Internal file system test menu.

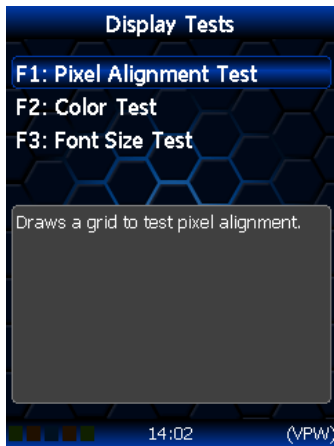
F3: Communications Tests; opens Communications test menu.

Options -> [F4: Self Tests] -> [F1: User Interface Tests] menu



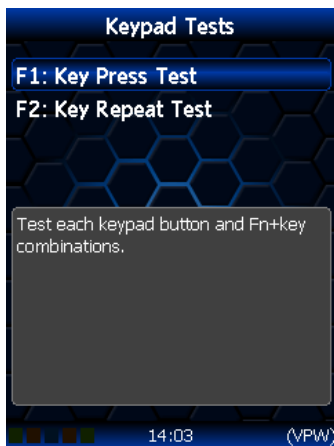
F1: Display Tests; Screen tests.
 F2: Keypad Tests; Keypad tests.
 F3: Buzzer Tests; Buzzer tests.

Options -> [F4: Self Tests] -> [F1: User Interface Tests] -> [F1: Display Tests] menu



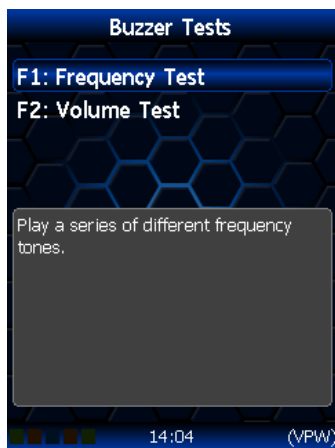
F1: Pixel Alignment Test; Draws a grid to test pixel alignment.
 F2: Color Test; Display color test patterns.
 F3: Font Size Test; Display available font sizes.

Options -> [F4: Self Tests] -> [F1: User Interface Tests] -> [F2: Keypad Tests] menu



F1: Key Press Test; Test each keypad button and Fn+key combinations.
 F2: Key Repeat Test; Test button repeat delay and speed.

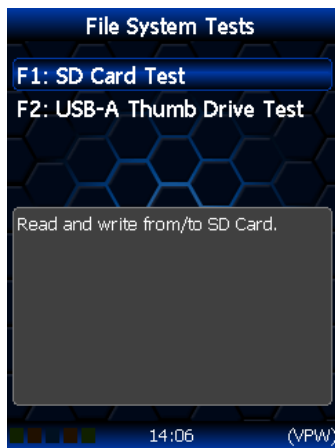
Options -> [F4: Self Tests] -> [F1: User Interface Tests] -> [F3: Buzzer Tests] menu



F1: Frequency Test; Play a series of different frequency tones.

F2: Volume Test; Play a series of different volume tones.

Options -> [F4: Self Tests] -> [F2: File System Tests] menu



F1: SD Card; Read and write from/to SD Card.

F2: USB-A Thumb Drive; Not yet available.

Options -> [F4: Self Tests] -> [F3: Communications Tests] menu



F1: Send/Recv Messages; Test comms protocols by sending and receiving messages.

F2: Mule Mode; Put device into "Mule Mode" to act as remote communications test device.



Support

Supporting AutoCal

Tuners are responsible for supporting customers to whom they have provided AutoCal devices.

Unlike FlashScan, EFILive will not provide support directly to AutoCal end users. EFILive will provide support only to the owner of the FlashScan device to which an AutoCal is registered.

There may be cases where the demarcation of support responsibilities may be unclear or unworkable. In such cases, Tuners should contact EFILive (support@efilive.com) to discuss alternate support solutions.

Error Codes

If an error occurs while using AutoCal, users can look up the error code description in the EFILive V8 Scan and Tune software.

The [F8: Tools] -> [F8: Error Codes] menu item provides an error code lookup function, and the “EFILive Error Codes.pdf” document accessed by selecting the Windows Start Icon and navigating to Program Files->EFILive->V8->Documents->EFILive Error Codes.pdf is also available. Both options provide error code descriptions, causes and actions.

Should the issue not be resolved after reviewing the Error code list, end users should contact their Tuner for support.

Trace Files

AutoCal *.xalm files

Trace files are automatically saved where an error message is presented using the device in BBX mode. Users can manually save trace files where options do not perform the desired outcome, including for pass-thru functions.

To manually generate a trace file on AutoCal V3 navigate to Scan Tool -> F3: Scan Options -> F1: Save Trace.

Trace files are located in the EFILive -> Trace folder on AutoCal V3. Trace files are named using the following naming convention:

yyyymmdd_hhnnss_<desc>.xalm, where:

- yyyymmdd: is the year, month and day that the trace was recorded.
- hhnnss: is the hour, minute and second that the trace was recorded.
- <desc>: is the description where;
 - “User” means user generated trace files
 - “xxx_x_\$xxx” identifies the 3 character controller ID, the communication process upload/download, and the 4 digit error code.
- xalm: is the file extension.

V8 Scan and Tune *.htx files

When V8 Scan and Tune software reads or flashes a controller the details of the read/flash process may be saved in trace files for diagnostic purposes.

In addition, users can manually save trace files where options do not perform the desired outcome.

To manually generate a trace file, generate the error in V8 software, then open the EFILive Control Panel and navigate to [F8: Trace] and select [Save Trace]. Users can set the trace file and save location during this process.

Automatically generated trace files are created on your PC or laptop in the folder: \Documents\EFILive\V8\Trace and are named using the following naming convention:

YYYYMMDD_HHNNSS_T_CCC.htx, where:

- YYYYMMDD: is the year, month and day that the trace was recorded.
- HHNNSS: is the hour, minute and second that the trace was recorded.
- T: is the mode and is one of **R**=Read **F**=Full-Flash **W**=Cal-Flash.
- CCC: Is the controller type
- htx: is the file extension.

Warranty

EFILive will provide a 12 month warranty on all labour and materials.

For AutoCal, customer warranty claims should be made through the Tuner that provided the AutoCal device.

AutoCal V3 must be registered to activate the product warranty. Product registration and warranty information can be entered on the EFILive website directly using the [Product Registration](#) form.

The terms and conditions of the warranty can be found in the [Warranty Policy](#).