



Osiris User Guide

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1 - Software Installation

NOTE: Run the software installer BEFORE you connect your UpRev interface cable to a USB port.

Start by going to www.UpRev.com and then clicking on the link for the “Support” section.

Download the installer for the system that you purchased under “Product Related Downloads” on the right side of the screen.

You can always get the latest software updates by running the UpRev software updater program from the start menu shortcut.

NOTE: Pro Tuners should download the installer from the pro download area. Contact UpRev with a user name and password to get a log in account setup if you don’t have one already. It is recommended that pro tuners run the pro software updater before any tuning session and only download the ROMs for the vehicle you’re planning to work on. It will take a LONG time to download all the ROM files, and the hashing process for all those ROMs will slow down the updater in the future.

2 - Preparation and Precautions before flashing an ECU

Reflashing ECU flash memory can be very tricky. Although UpRev has gone to great lengths to test the software for robustness, there is always the possibility that something could go wrong.

- Be aware of your location while flashing your ECU. It is highly recommended that you NEVER flash your ECU in a place where you could get stranded if the flash fails.
- The most common cause of an ECU flash failure occurs if there is a loss of power during the flashing process. Verify that you have a “healthy” vehicle battery. If your vehicle battery dies after leaving your headlights on for 15 minutes; DO NOT attempt to flash your ECU.
- NEVER shut off the ignition while a flash is in progress.
- Turn off all electrical loads that can be shut off or easily disconnected will reduce the chance of draining the vehicle’s battery charge.
- All electrical loads must remain off or disconnected for the duration of the reflash process.
- Ensure that your PC/Laptop has adequate battery life and/or power supply to for the duration of the flashing process.
- Ensure that the UpRev interface is securely plugged into your vehicle’s OBDII port.
- Electrical noise can cause an ECU reflash failure. Minimize electrical noise during the flashing process. Avoid using power seats, power windows, seat heaters, A/C, stereo, etc... Avoid using your cell phone, or any electronic device that may cause additional electrical noise.

If the ECU does crash during the reflash, please refer to the section on recovering a partially flashed ECU. If the ECU STILL cannot be recovered and Osiris can no longer establish a connection to the ECU, then it will have to be shipped back to UpRev in Austin TX to be recovered.

3 - Reflashing an ECU with Osiris Reflasher

Before getting ready to reflash an ECU it is good practice to shut down all other programs to free up as much CPU time as possible.

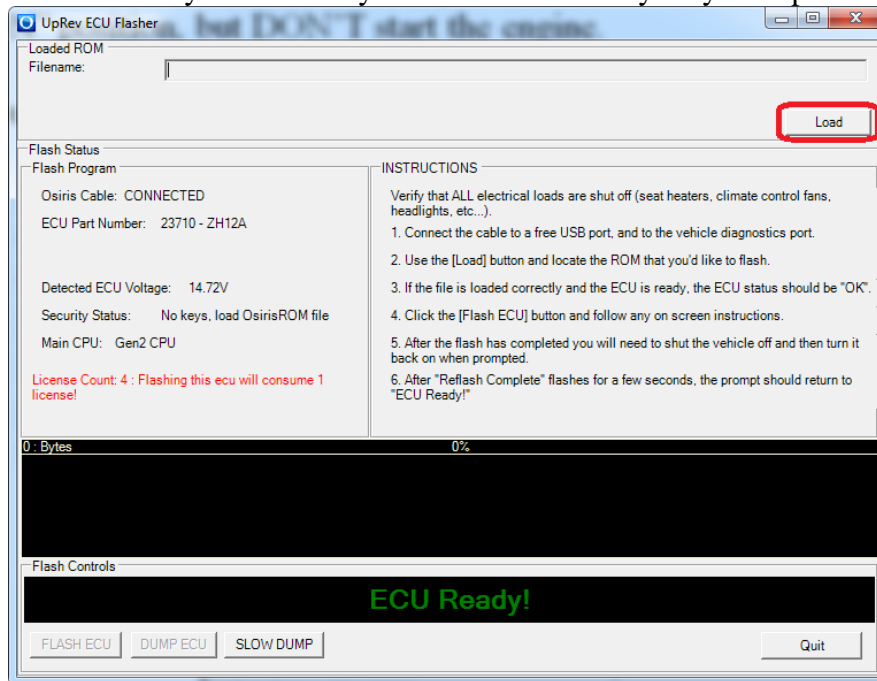
Run Osiris by clicking the Osiris shortcut on the start menu under:
Start >> All Programs >> UpRev >> Osiris

Plug your UpRev interface into your PC and verify that Osiris recognizes it (cable status = connected).

Connect the UpRev interface to your vehicle OBDII diagnostic port and switch the ignition to the “ON” position, but DON’T start the engine.

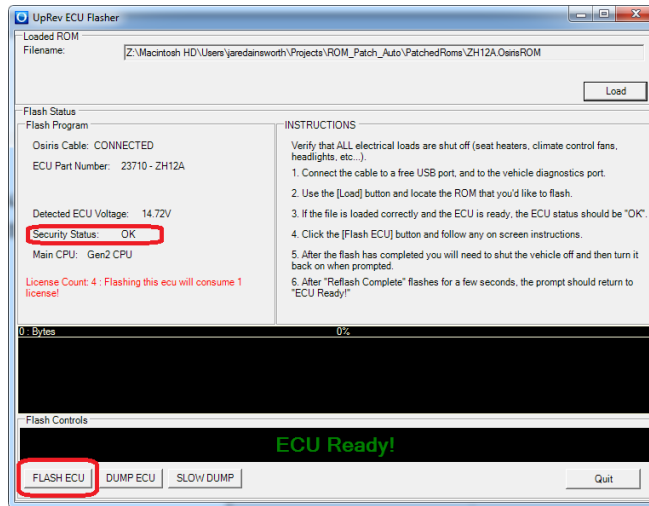
You should see a screen similar to the one below that will tell you:

- If your cable is connected.
- ECU part number
- Current battery voltage (Osiris WILL NOT start the reflash process if the battery V < 10.48V)
- Current ECU security status.
- ECU processor type.
- If the ECU currently has a factory/non-UpRev ROM loaded on it, then you will also see a red prompt below the ECU type that tells you one license will be used up when the ECU is reflashed. It will also tell you how many licenses are currently on your UpRev interface.



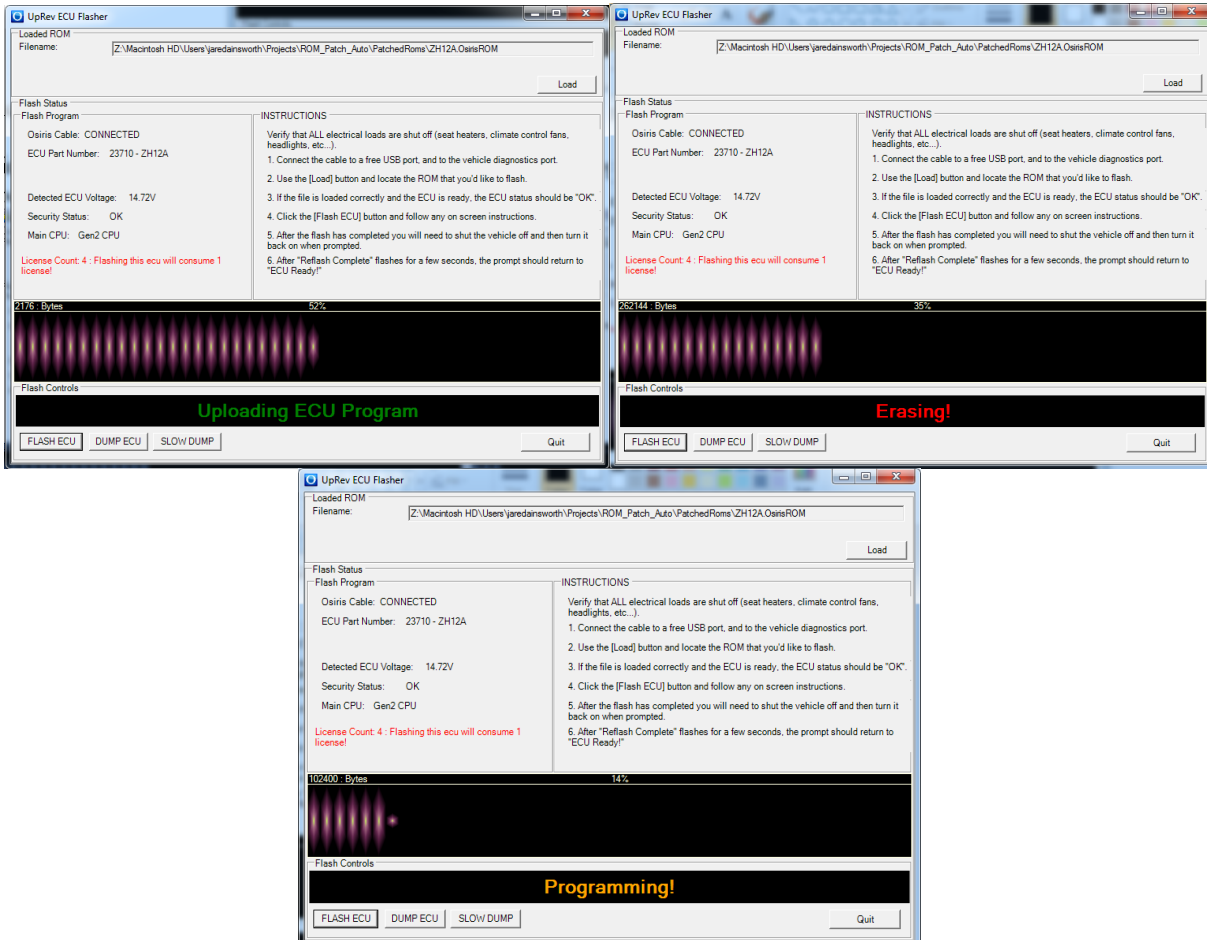
Click the [Load] button and use the windows browser to locate the ROM you want to reflash onto your ECU. Osiris Standard tuned files will be located in the folder “UpRev >> ROM Files”.

Once the ROM has been loaded the ECU security should change to “OK” and the [FLASH ECU] button should become active.

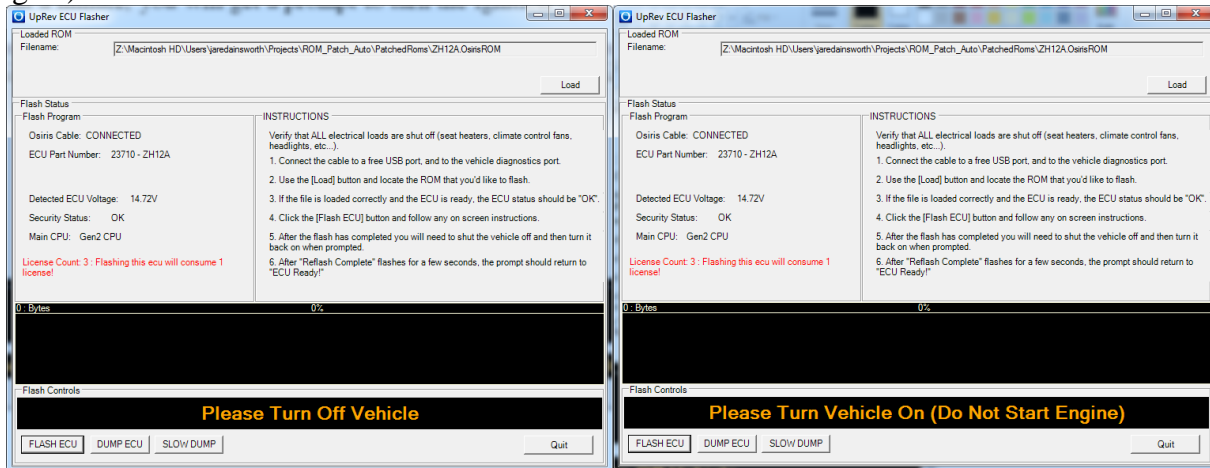


Click the [FLASH ECU] button to begin the reflash process.

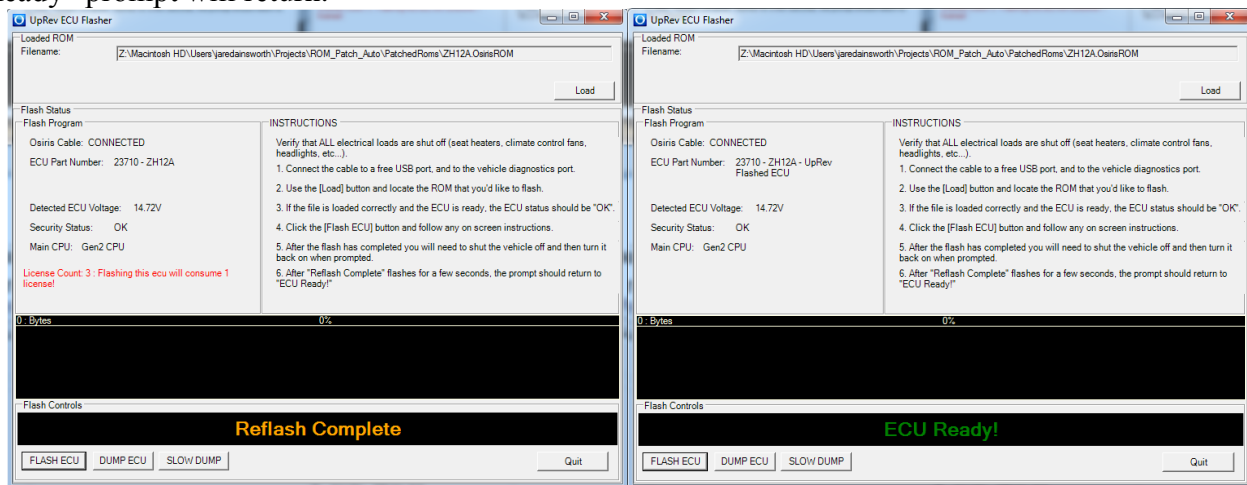
Osiris will first upload a program onto the ECU. After the program has been uploaded the reflash process will start.



After the flash has completed you will get a prompt to turn the vehicle off. After the vehicle has been shut off, for about a minute, you will get a prompt to turn the ignition back on (but don't start engine).



After turning the vehicle back on, "Reflash Complete" will flash for a few seconds, then the "ECU Ready" prompt will return.



At this point the engine should start and run normally.

Flash Errors: Pay close attention to Osiris during the reflash process. If the reflash does fail and crash the ECU it may be helpful to know when the error occurred to aid in troubleshooting.

- Security Error 00: The loaded ROM was not compatible with your ECU.
- Security Error 94: The engine is still running. It needs to be off to reflash.
- Soft reset error: The ECU did not reset properly. You will need to disconnect the battery to reset the ECU then clear any DTCs with Cipher.
- Flash execution error: This error is usually caused by a bad CAN bus. If you are trying to flash a Sentra or a 2003 – 2004 G35 please refer to the appropriate PDF under the support section at UpRev.com for instructions on how to rewire the CAN pins correctly.

4 - Using the UpRev map switching feature (not available on a limited number of ROMs)

Once an ECU has been reflashed with an OsirisROM it will have the added functionality to switch maps using the cruise control buttons.

Map switching happens in real time. You do NOT need to shut down the engine.

To switch maps:

- Hold down the “Set” toggle.
- While holding the “Set” toggle, press the “Cancel” button once for map 1, twice for map 2, three times for map 3, etc...
- Release the “Set” toggle.
- The cruise “Set” light will flash confirmation pulses, once for map 1, twice for map 2, etc...

There are SOME models (Altima and Sentra) that use “Cancel” and the brake pedal instead of the “Set”/”Cancel” combo. For these cars, just hold down “Cancel” and press the brake the number of times that relates to the map you want to select.



5 - eTune update datalogging

The ideal logs for an eTune are two 0-60 runs and one log for around town/highway cruising for whatever maps you would like to get updated. Be sure to try and get the best launches possible with minimum wheel spin.

Use CIPHER to clear the learned fuel settings before doing the data logs. That way your logs are running as close to the tune as possible without the ECU having done any adjustments of its own.

Include the following information in the filename for the log:

- Map that was logged.
- Any weather conditions that you have access to (humidity, temp, etc...)

Email the logs to eTune@UpRev.com and be sure to include your name in the email so we can find your customer files.

Any logs that do not include the proper parameters will take longer to turn around. The following parameters should be logged for eTune updates:

****Verify your ECU is added to the AFR conversion. See CIPHER user guide****

A/F CORR-B1 (%)
A/F CORR-B2 (%)
AFR WB-B1 (AFR)
AFR WB-B2 (AFR)
ACCEL PED POS 1 (V-Accel)
B-FUEL SCHDL (ms)
CAL/LD VALUE (%)
COOLANT TEMP (F)
ENGINE RPM (rpm)
IGN TIMING (BTDC)
INJ PULSE-B1 (ms)
INJ PULSE-B2 (ms)
INTAKE AIR TMP (F)
MAF GM/S (gm/s)
MAS A/F -B1 (V)
NB-O2 SEN 2-B1 (V)
NB-O2 SEN 2-B2 (V)
THROTTLE POS 1 (V-Throttle)
URBINE REV (RPM) (Automatics only)
VEHICLE SPEED (mph)

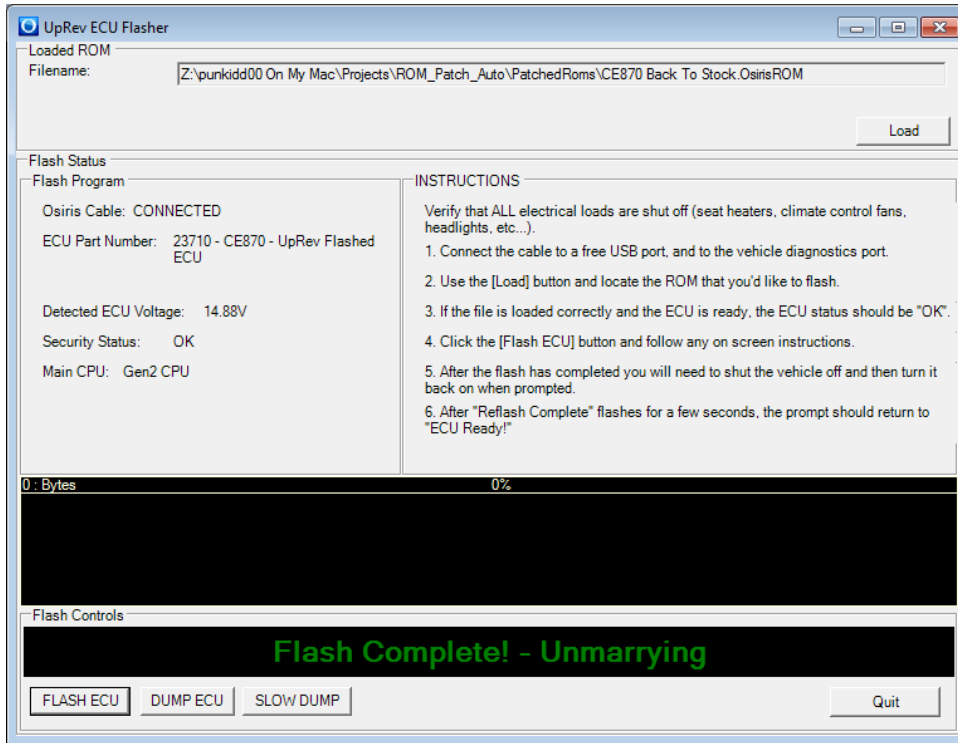
Typical eTune turn around time is ~2 weeks.

6 - Returning an ECU to stock

To return an ECU to stock you simply need to use the latest version of Osiris and flash the ROM named “XXXXX Back To Stock.OsirisROM” where XXXXX is your ECU part number.

After the flash has completed, Osiris will automatically transfer your license off of your ECU and put it back on your cable so it will be ready to flash your ECU later, or be transferred to another vehicle.

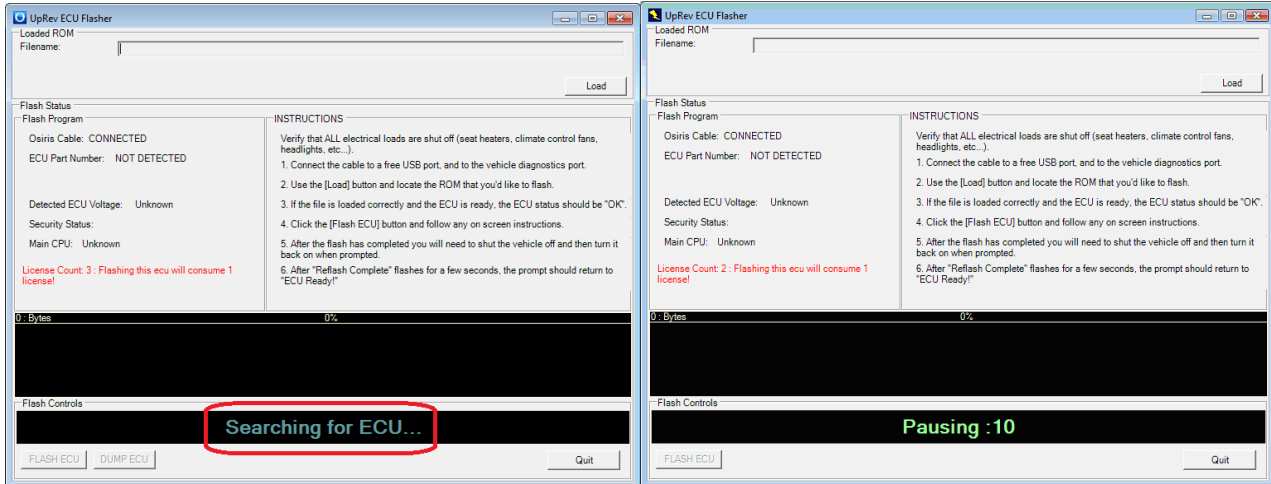
If you need your Back To Stock ROM, please contact us and we will email it to you.



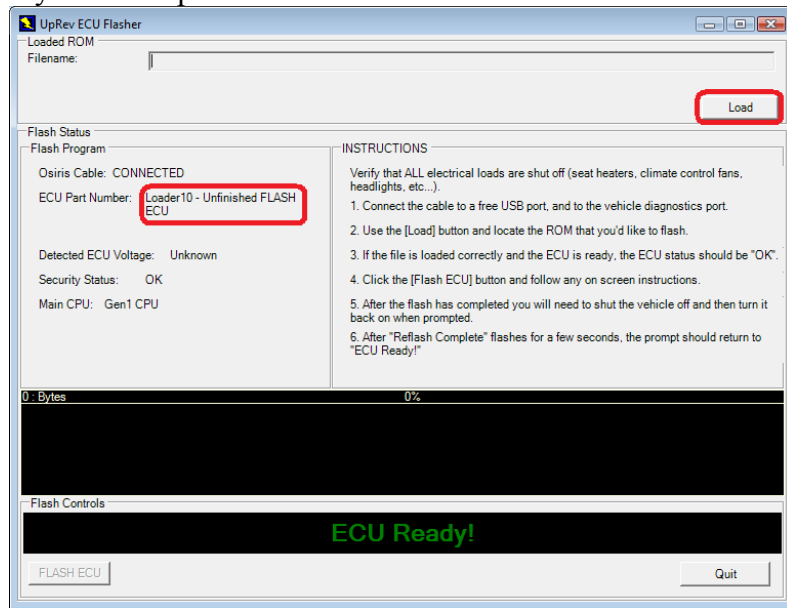
7 - Recovering an ECU from a partial flash

To recover a Gen1 ECU you must first disconnect the battery in order to reset the ECU. After reconnecting the battery, connect your cable to the diagnostic port and start Osiris. You should see the screen below.

Double click on the message “Searching for ECU...” at the bottom of the screen. The message will change to “Paused 10” and begin to count down from 10 to 0.



Switch the ignition to “On” AS SOON AS the counter starts. Osiris should recognize the ECU as a partially flashed ECU before the counter finishes and display “Unfinished FLASH” by the ECU part number.



Once the ECU has been recognized you will be able to load a ROM and flash the ECU normally.

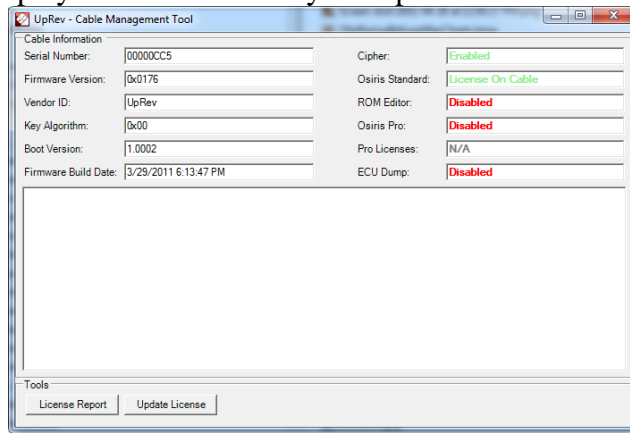
Recovering a Gen2 Gen3 or Gen4 ECU is VERY straight forward. Simply reset the ECU by disconnecting the battery, then run Osiris as if you were going to do a normal flash. It will take Osiris a while to find the crashed ECU (up to 3 minutes). Once Osiris has established communication with the ECU you can load a ROM and flash the ECU normally.

8 - Cable Manager

The cable manager is used to load firmware updates and update license info on your UpRev interface.

Start the “CableManager.exe” and plug in your cable.

The screen should now display all the info about your UpRev interface.



The left column displays everything about the current cable firmware.

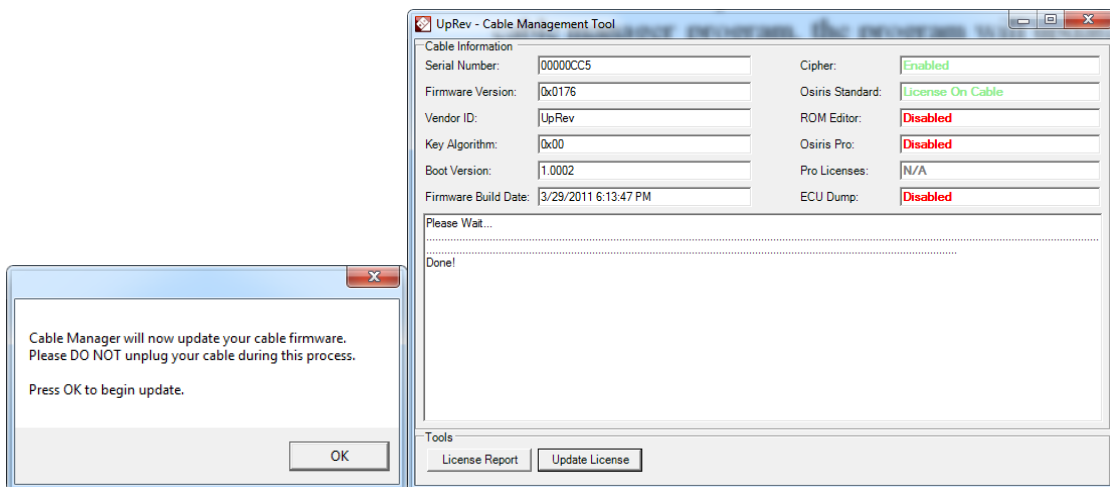
The right column displays the details about what the cable is licensed for.

- Cipher: **Enabled** by default. Data logging and diagnostics is enabled.
- Osiris Standard:
 - **Disabled** = Cable is not able to flash an ECU
 - **License On Cable** = Ready to flash any ECU.
 - **License On ECU** = Only able to flash an ECU that already has a license on it.
- ROM Editor: When **Enabled**, ROM editor can be used to edit ROM files.
- Osiris Pro: **Enabled** only for pro tuners who need to have more than one license per cable.
- Pro Licenses: Tells how many licenses are left on a pro cable.
- ECU Dump: When **Enabled**, Osiris can be used to dump a ROM file in order to send it to UpRev to add new ROM support.

NOTE: Dump files CANNOT be opened by any released software.

Firmware update:

Cable firmware updates are now automatic. If you connect a cable that is out of date and run the cable manager program, the program will prompt you to update the firmware.



License update:

First click the [License Report] button.

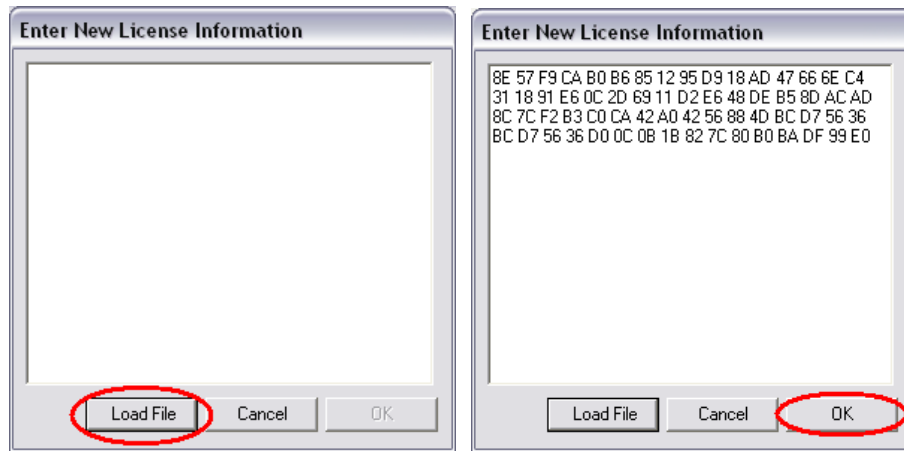
The cable manager will ask you to name & save the output file (.TXT file).

Send the .TXT file to UpRev along with your desired updates (such as additional vehicle licenses, or enabling of the ROM editor).

UpRev will reply with a new TXT file to upload to your cable.

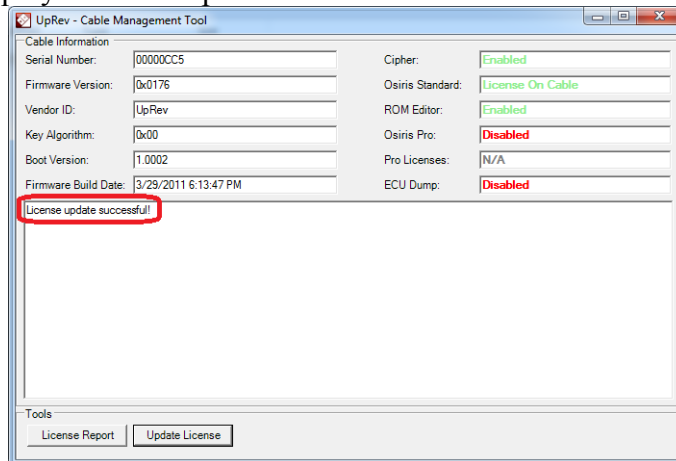
After downloading the new license update file, click the [Update License] button. Then click the [Load] button and browse to the file that you received from UpRev.

After opening the file the window should populate with a bunch of HEX values like the window below on the right.



Click [OK]

The TXT field should display “License update successful!”



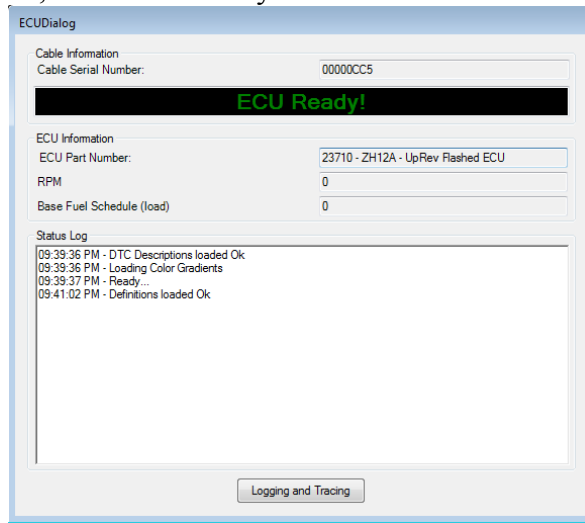
9 - Navigating Osiris ROM editor

NOTE: The Pro software updater will download new ROMs to “UpRev/ROMfiles”.

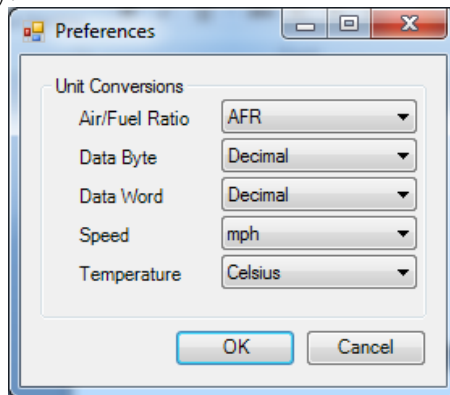
There are two kinds of files to be aware of when setting up a ROM to be reflashed.

- OsirisROM” – This is the standard tuning file that includes real time tuning (RTT).
- “Locked.OsirisROM” – This file is the same as the standard file, but it has RTT disabled so that if you port the tune to this ROM and flash it onto the customer’s ECU when you are finished with the tune, then no other tuner will be able to see what you did in the RTT tables.

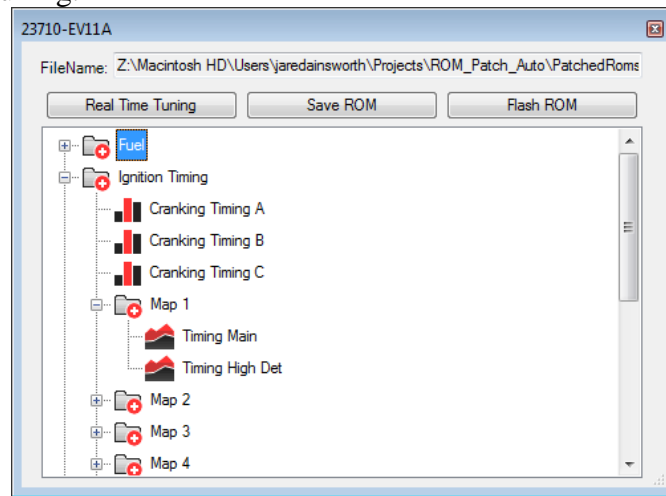
Click “ROM Editor” from your Windows start menu under “All Programs >> UpRev”. The first window open in the ROM editor is the “ECU Dialog” window, which displays information about your cable, and the vehicle you’re connected to.



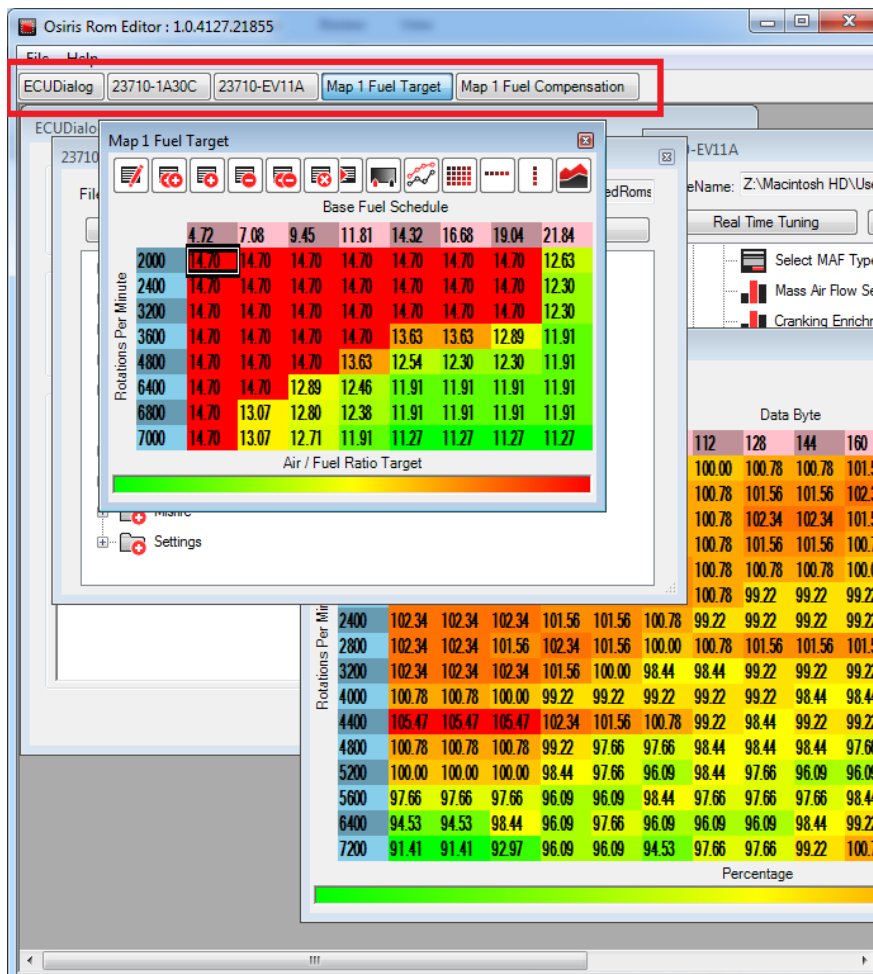
ROM editor “Preferences” window is used to change how data is displayed in the ROM editor. The options are self explanatory.



To edit a file/tune, click “Open” under the “File” menu and browse to the base ROM you would like to modify. The corresponding “ROM Window” that opens contains the parameter tree that organizes the adjustable parameters and includes buttons for the ROM specific tasks of saving, flashing, and real time tuning.














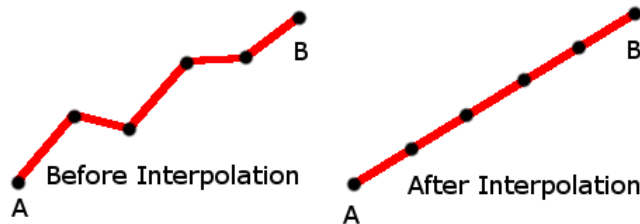
You can open multiple ROMs and tables simultaneously. If you need to bring a hidden window back into view, click the corresponding button on the task bar across the top of the ROM Editor window.




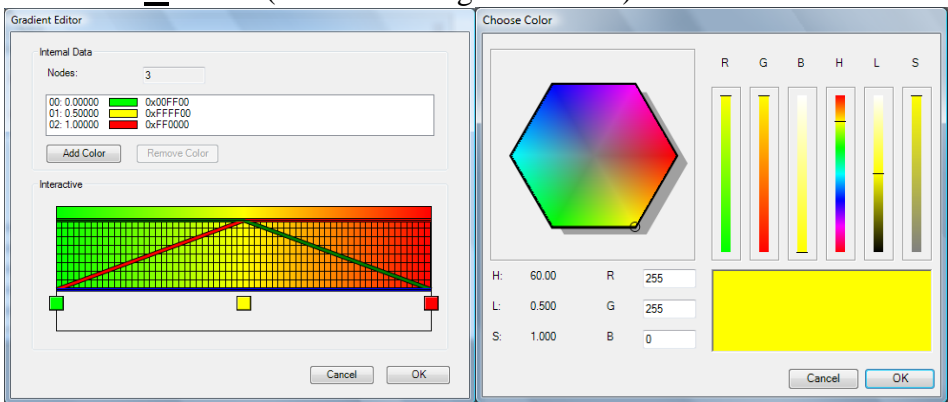
Editing Values

There are multiple ways to edit values in the ROM editor. Each has a corresponding button across the top of the window for the table you have open. Each of the edit commands also have associated hot keys:

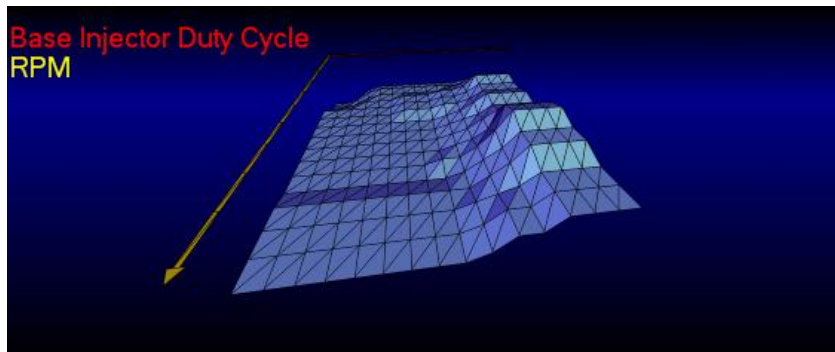
- [Esc] Close current table. 
- [Ctrl + C] Copy selection to clipboard. 
- [Ctrl + V] Paste from clipboard. 
- [Ctrl + A] Select all (current table).
- [+] Increment a value or selection of values. 
- [-] Decrement a value or selection of values. 
- [Ctrl AND + OR -] Large increment/decrement. 
- [E] Enter/Edit a direct value or selection of values. 
- [M] Multiply a value or selection of values. 
- [V] View 3D chard of current table. 
- [S] Smooth curve. 
- [I] Linier Interpolation across a selection (works on 3D tables as well). 



- [G] Edit color Gradient (the color changes on tables). 

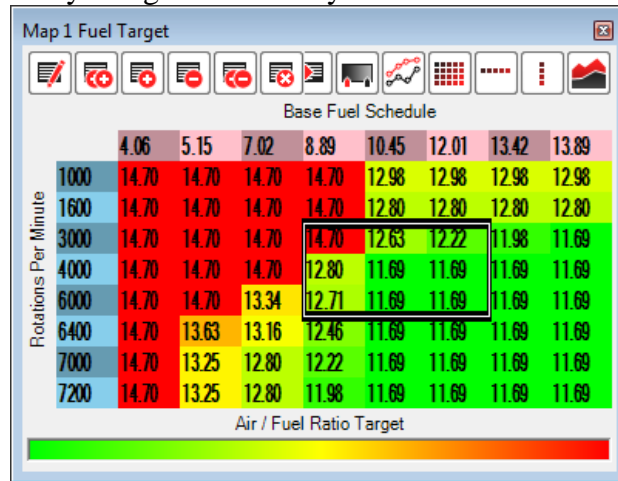


You can change the 3D view angle by clicking and holding anywhere on the map moving the mouse cursor.



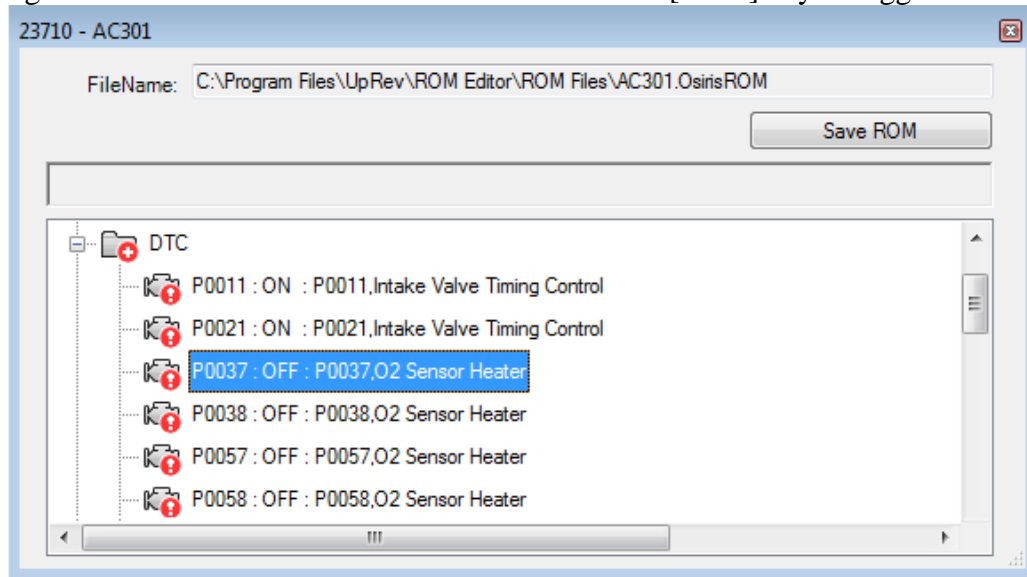
Selecting Multiple values

You can increase and decrease your cell selection of an open table either by click and drag method, or by holding down the shift key and using the arrow keys on your keyboard. You can also move a selection box around a table by using the arrow keys alone.



Disabling Diagnostic Trouble Codes (DTCs)

Turning off DTCs is pretty straight forward. Scroll down to the DTC section of the parameter tree, then highlight the desired DTC to disable/enable and use the [Enter] key to toggle OFF/ON.



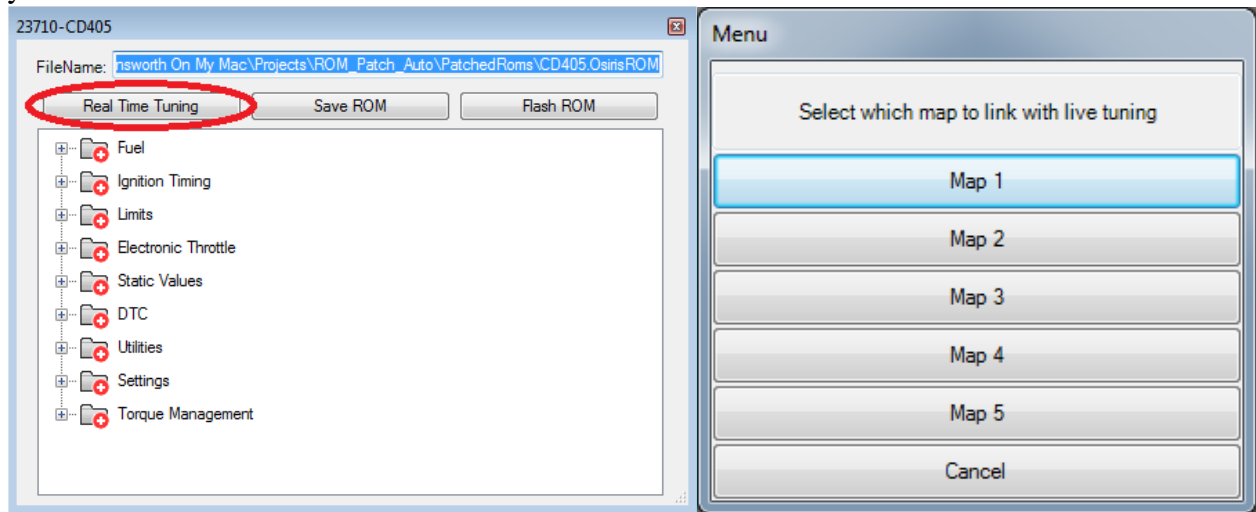
10 - Real Time Tuning with the ROM Editor

UpRev has now streamlined the entire tuning suite so that all the tuning can be done through the ROM editor with no need to transfer files between Cipher, ROM Editor, and Osiris. Real time tuning, data logging, and map tracing can now all be done simultaneously.

Once you have flashed an OsirisROM file onto the ECU you are planning to tune, you will be able to make changes a limited number of parameters in real time without shutting off the engine.

Open the ROM file that you flashed to the ECU in the ROM editor.

When you click on the [Real Time Tuning] button you will get a pop up asking you which map you would like to tune.



After you select which map you want to tune, you will see that all non real time tunable parameters have become grayed out and can no longer be adjusted. This includes RTT parameters for other map slots.

If you cancel RTT to make changes to an axis or other non RTT parameters remember that you must reflash the ECU before the change will take effect.

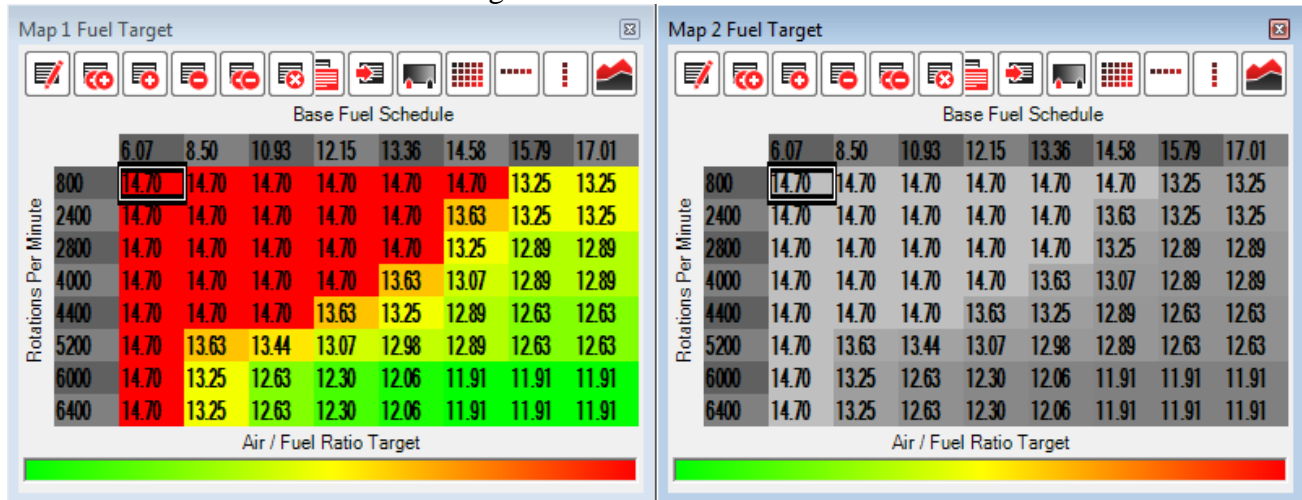
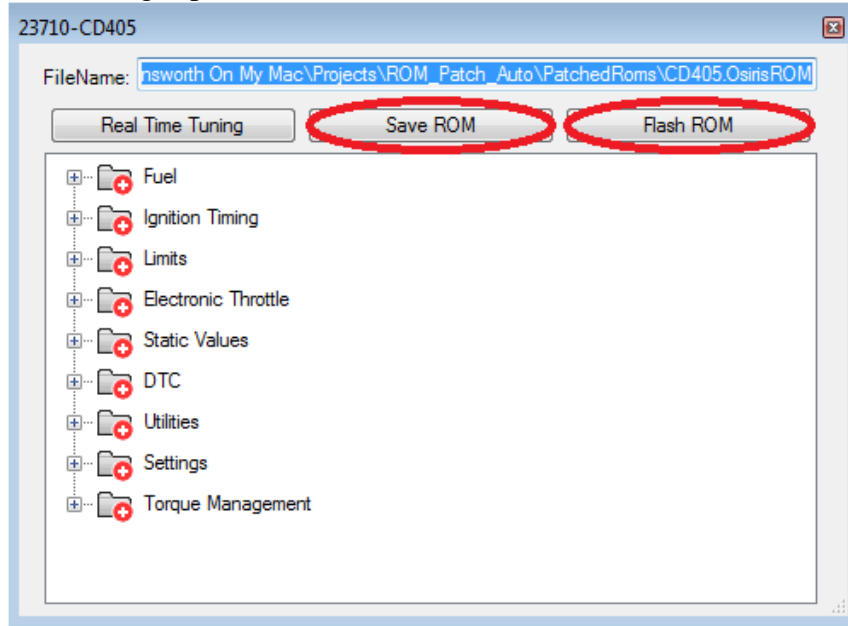


Table axis and other non RTT parameters are grayed out.

Once real time tuning is active, the ROM editor will keep whatever map you have selected for RTT in sync with the RAM on the ECU. Keep in mind that these changes are only semi permanent. If you switch maps with the cruise buttons or disconnect the battery, the RAM will be erased. When you are done with your tuning session simply save the ROM file and reflash it onto the ECU to make the changes permanent.

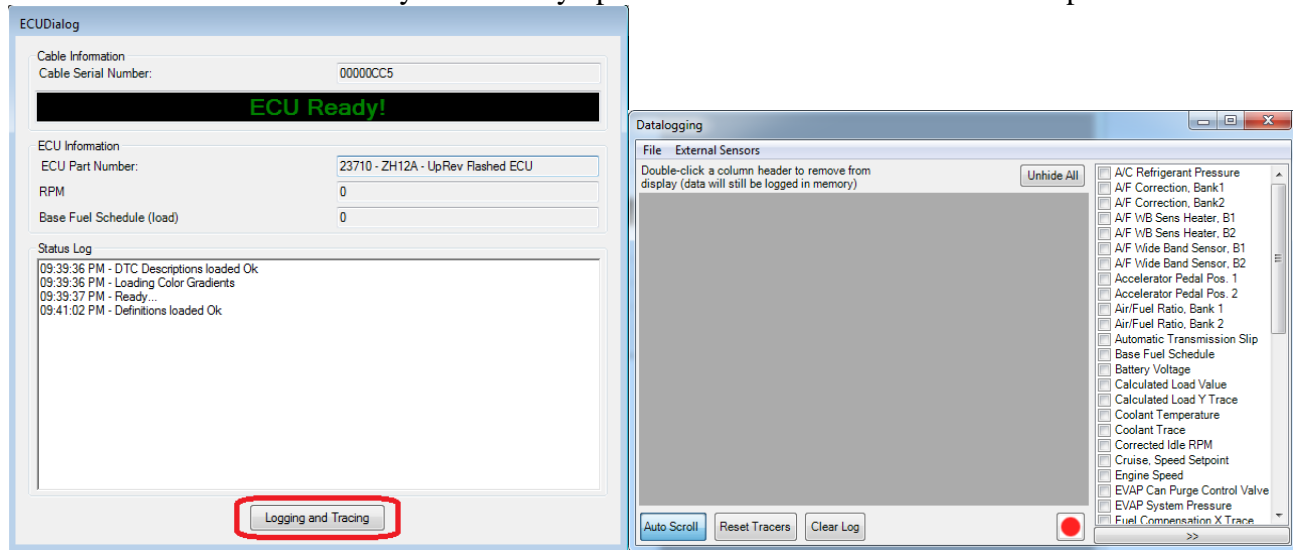


11 - Map tracing and data logging with the ROM editor

In the ROM editor click the [Logging and Tracing] button at the bottom the ECU Dialog screen to bring up the logging and tracing screen.

The Datalogging window will have a list of parameters you can select to log. If you have any tables open in the ROM editor, the X and Y axis parameters will automatically populate and start logging when you press the record button (the one with the red dot).

The tracers will automatically start on any open tables when the record button is pressed.



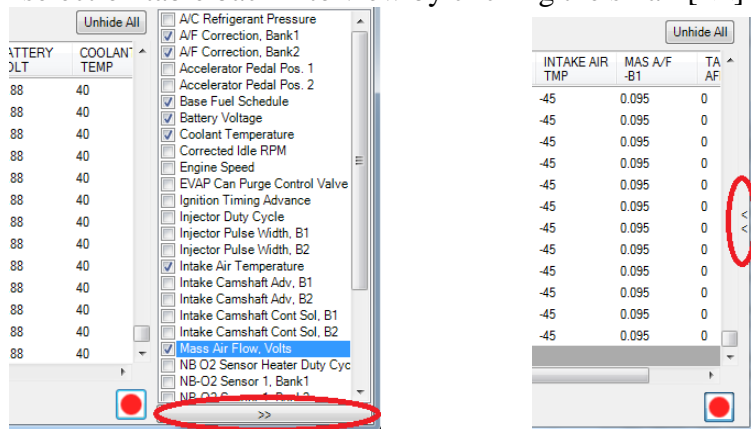
The buttons across the bottom are pretty self explanatory.

- [Auto Scroll] keeps the latest data samples in view on the data chart.
- [Reset Tracers] clears the white tracers from any tables currently in view.
- [Clear Log] resets the data chart and log file.
- The record button with the red dot starts and stops logging and tracing.



The parameter selection table on the right can be hidden so that you can see more data in the table by clicking the [>>] button below the table.

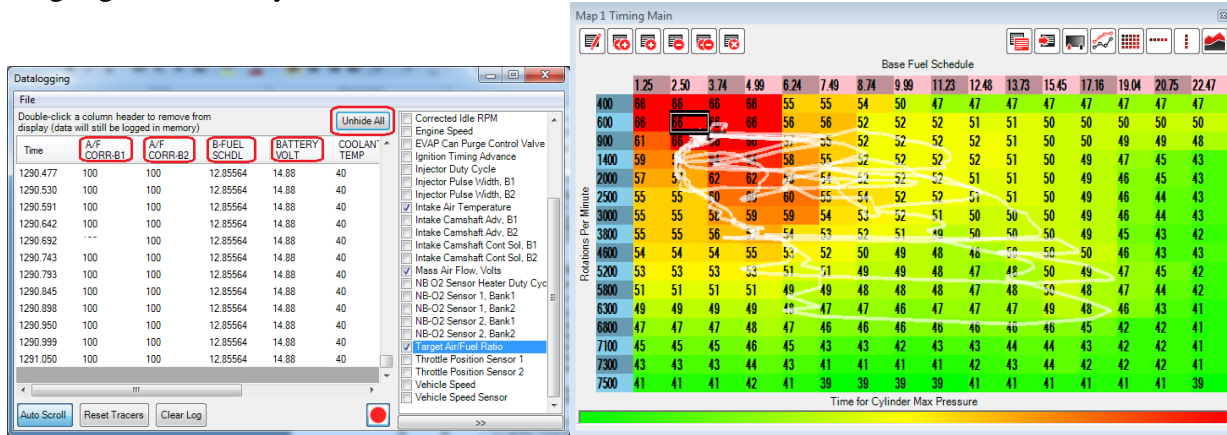
Bring the parameter selection table back into view by clicking the small [<<] button to the right.



Map tracing is automatic on any open table if logging is active.

You can hide entire columns of data on the data chart by double clicking the parameter name at the top of the column. Bring all data columns back by clicking the [Unhide All] button.

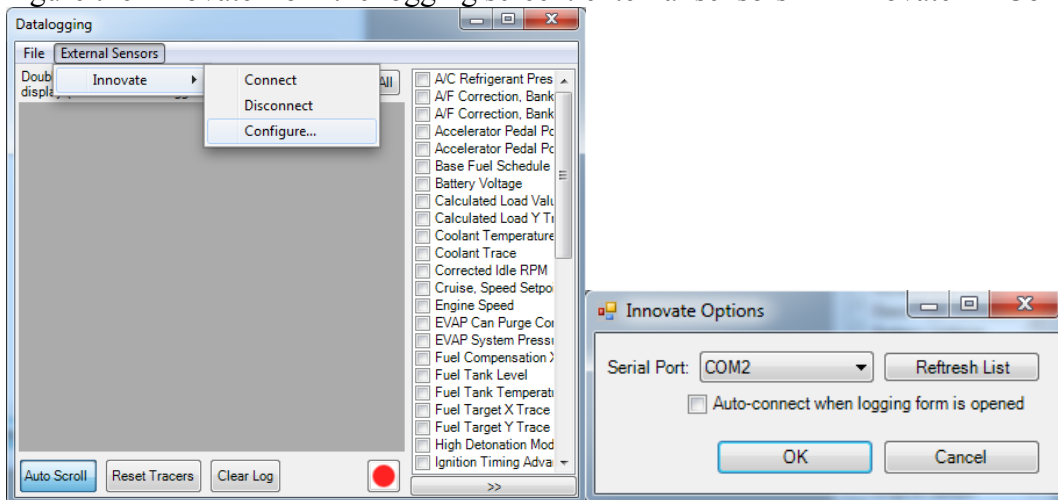
You can find out where a table was being accessed during a data sample by clicking on that sample point in the data chart. When the sample point is selected, the active cell during that sample will be highlighted on every table that is in view in the ROM editor.



You can save the data from the chart/log by going to the file menu in the upper left corner and select “Save...” The file will be saved to the standard .CSV format which can be opened in Cipher to view charts, or opened in a spreadsheet or text editor of your choice.

The ROM editor also supports logging inputs from an Innovate LC/LM-1.

You configure the Innovate from the logging screen: external sensors >> Innovate >> Configure...



12 - Using Osiris to dump a ROM from an unsupported ECU

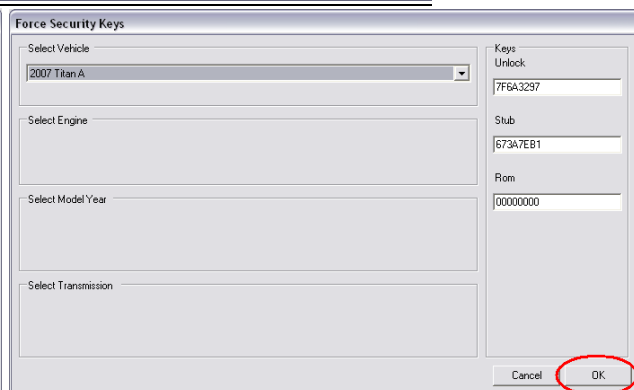
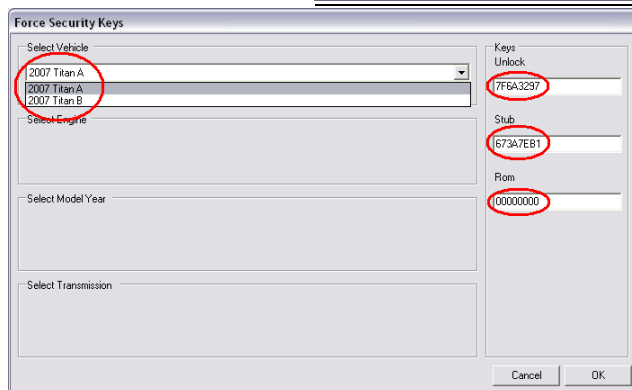
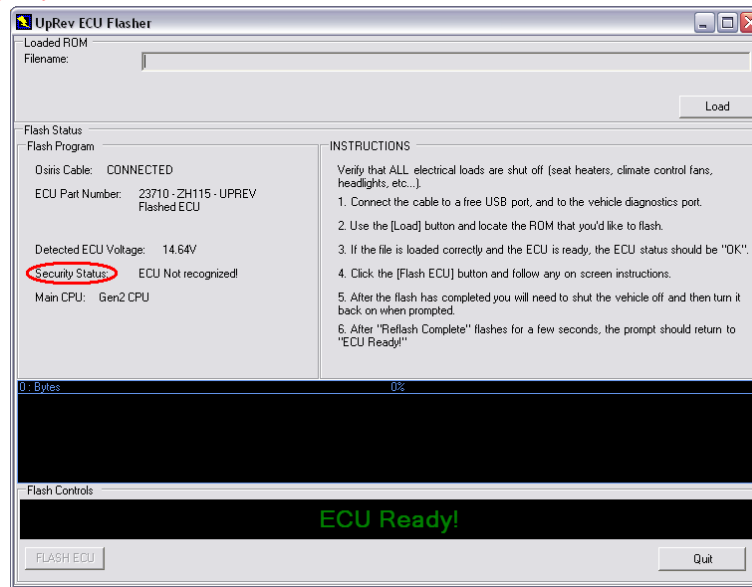
There are two ways to dump an ECU. The standard dump which requires encryption keys to unlock the ECU, and the slow dump which doesn't require any keys.

The standard dump only works on Gen1 and Gen2 ECUs, so all newer vehicles are limited to the slow dump. To do the slow dump, simply run Osiris while connected to the vehicle. Once the ECU is found click the [Slow Dump] button at the bottom of the screen.

There are 3 ways to load the encryption keys into Osiris so that it can unlock an ECU in order to do the standard fast dump:

1. You can load a ROM file that uses the same keys. Many ROMs with a similar part number will use the same keys. Loading the ROM will activate the [Dump ECU] button.
2. You can use the "force security keys" window by double clicking on the "Security Status" in Osiris and then select a similar ROM part number from the drop down menu.
3. Or you can input the keys directly into the "force security keys" window after getting the keys from the "Find keys" hidden utility in Cipher. To bring up the hidden "find keys" utility in Cipher, double click on the picture of the 350Zs on the main screen 12 times. A new button labeled [Find Keys] will appear below the other buttons when you scroll all the way down. After the utility is done it will display two of the three keys. Write down or copy/paste the keys. Exclude the "0x" from the front of the number. Put all zeros in for the third key.

If you get "Security Error 17" the keys were incorrect and you need to try another set of keys or different ROM.



When sending a ROM dump to UpRev to add support for an ECU please include all of your contact info and all of the vehicle info. Needed information with a dump is listed below.

Customer info

Name:
Email:
Phone:
Date dump received:

General Car Info

Year:
Model:
ECU Part Number:
Trim Package

- Cruise control
- VDC
- Tow package
- Flex Fuel
- 4x4/2x4
- Se-R
- Spec V
- Nismo
- Anything else...

Engine

Engine Code:
of Cylinders:
Displacement:
Variable Intake Cams (Y/N):
Variable Exhaust Cams(Y/N):
VVEL (Y/N):

Transmission

Manual, Automatic, or CVT:
If manual, how many gears:

Other comments

13 - ECU Bench Harness Pinouts (for use with UpRev bench harness)

Red – Battery Power | Black – Battery Ground | White (Grey) - Ignition
 Green – CAN L | Blue – CAN H | Yellow – ISO K-line

Gen1/2

Gen3Z/G

Altima

GT-R

Juke

