

EcuTek RaceROM

Feature Files

Install Guide

v1.03

Contents

Introduction	3
Feature list.....	3
Supported Vehicle Models.....	3
Prerequisites	3
Availability	3
Feature File Installation.....	4
Installation Steps	4
1. Open the ROM file in ProECU	4
2. Select the Special Features Tab	4
3. Apply the Correct Feature File for the ROM.....	5
Configuration.....	7
Custom Feature Control Maps	7
Custom Data Logging Parameters	8
Feature File Removal.....	10
Removal Procedure.....	10
Feature File Updates	11
EcuTek Update.....	11

Introduction

EcuTek RaceROM is a package of special software features that can be installed into the ECU of the supported vehicles. You simply open your ECU ROM file using EcuTek software, apply the RaceROM Feature File (Patch) to it, adjust the RaceROM maps as necessary, and then program the ROM file into the vehicle.

Feature list...

The RaceROM features available for each vehicle vary, depending on the characteristics of the ECU. RaceROM Features include:

- Additional Security to protect tuners work
- Custom Data Logging Parameters
- Map Switching
- Per Gear Boost Control
- Per Gear Fuel Enrichment
- Per Gear Rev Limits
- Speed Density
- Launch Control
- Flat Foot Shifting
- Downshift Auto Blip
- Valet Mode

Supported Vehicle Models

EcuTek RaceROM is available for a wide range of vehicles from Subaru, Nissan, Mitsubishi and Mazda.

We are constantly adding support for more vehicles. A complete list can be found on the EcuTek website. Please contact EcuTek support if you require a RaceROM Feature File for a vehicle that is not listed.

Prerequisites

In order to install the Feature File into the vehicle ECU, you require:

- A licensed and up-to-date copy of ProECU software.

Availability

RaceROM Feature File will be made available via EcuTek Update.

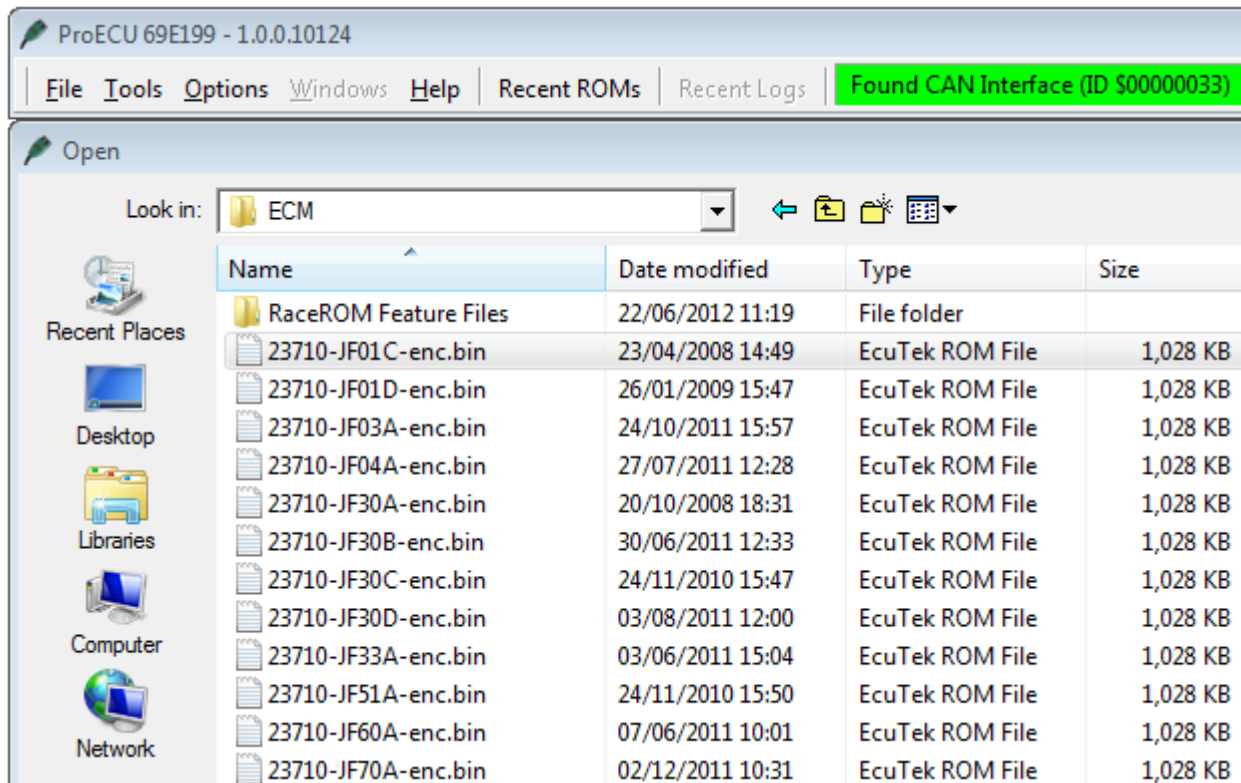
Feature File Installation

Installation Steps

Please follow the steps described next to apply the Feature File to the vehicle ECU.

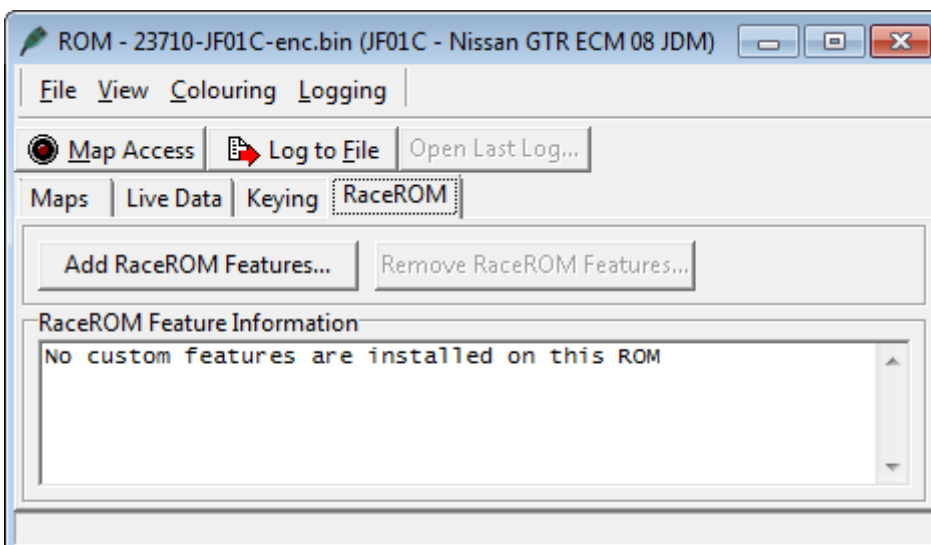
1. Open the ROM file in ProECU

To open a ROM file, select 'Open ROM File...' from the 'File' menu, and select the ROM file that you wish to use.



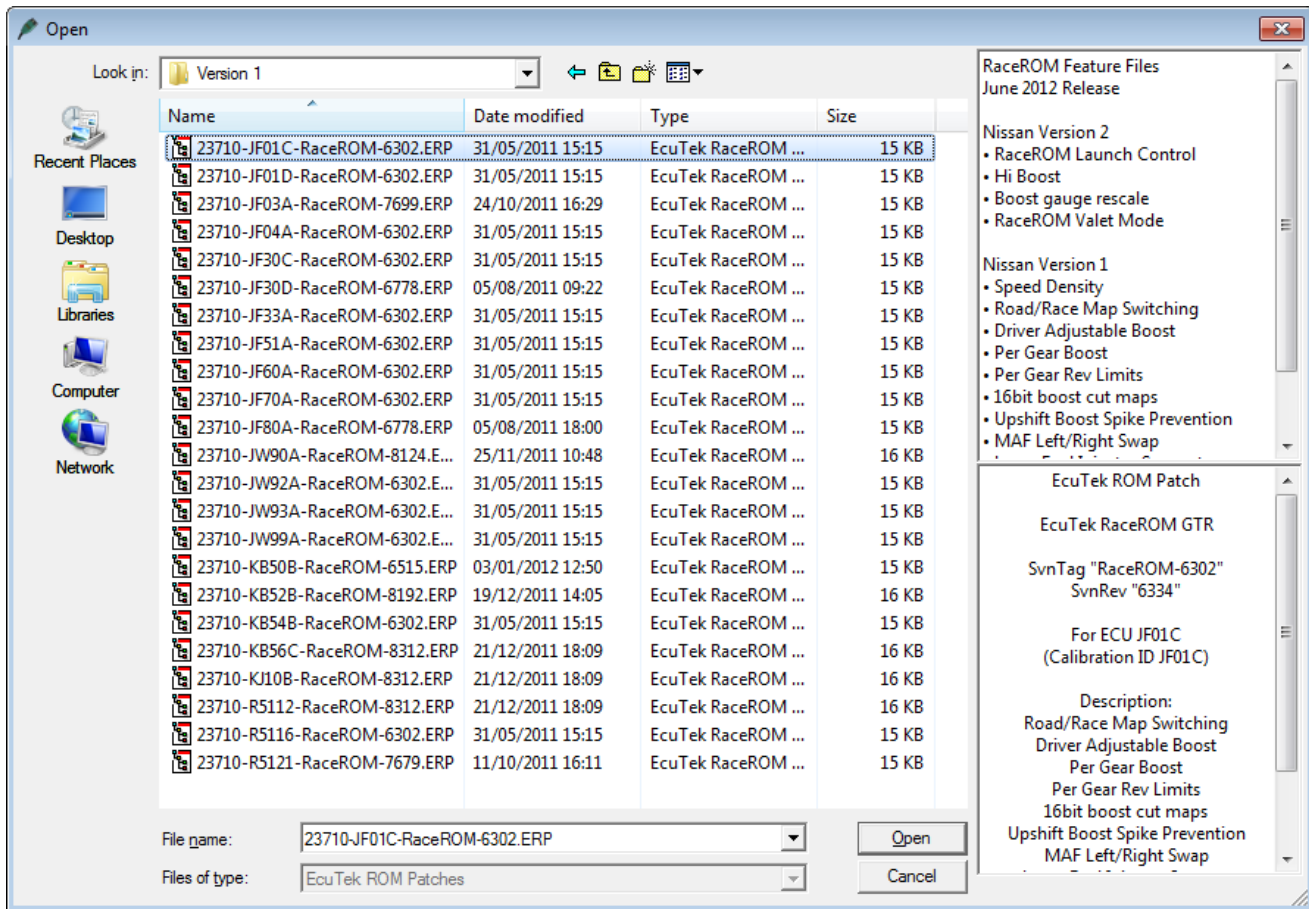
2. Select the Special Features Tab

Go to the 'RaceROM Tab and check that there are no custom features already installed. Click the 'Add RaceROM Features' button:



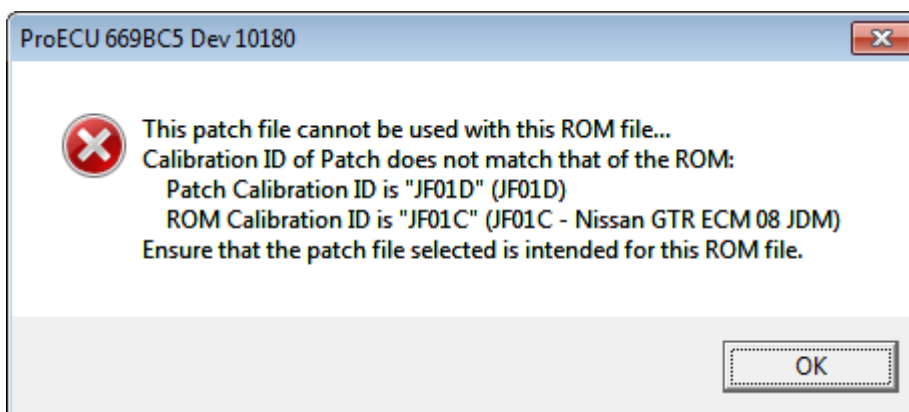
3. Apply the Correct Feature File for the ROM

Select the correct Feature File for the ROM and click the 'Open' button. The RaceROM feature files are located in a folder called 'RaceROM Feature Files' usually located in the same folder as the vehicle manufacturer, such as: *C:\EcuTek\ProECURomFiles\Subaru\RaceROM Feature Files*.

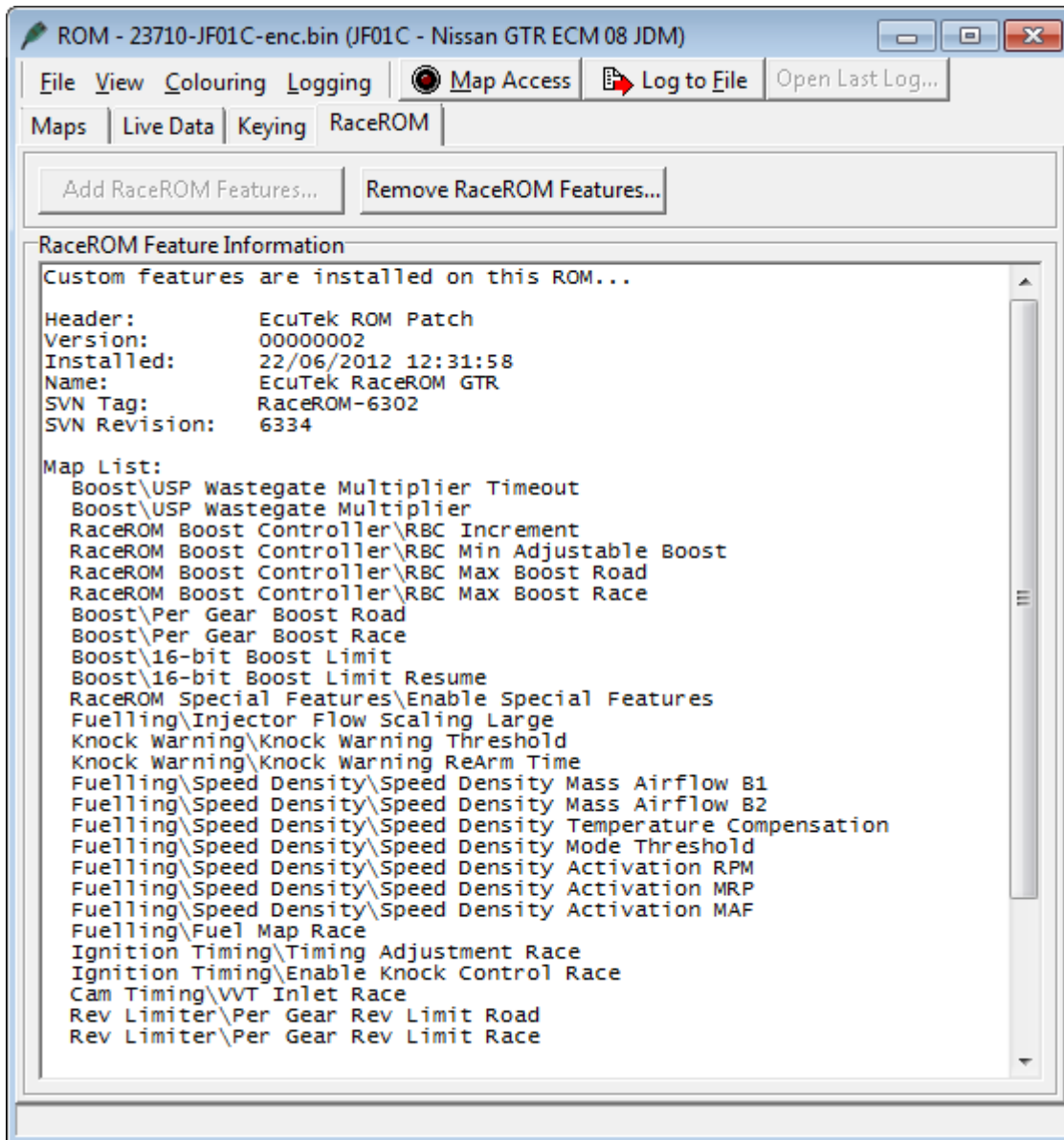


IMPORTANT: The Feature File must have EXACTLY the same name as the ROM file. For example: It is NOT possible to apply a JF01D Feature File to a JF01C ROM.

The below error message will be shown if an incompatibly Feature File is applied:



The 'Feature File' Tab now shows that the custom features have been successfully applied to the ROM.



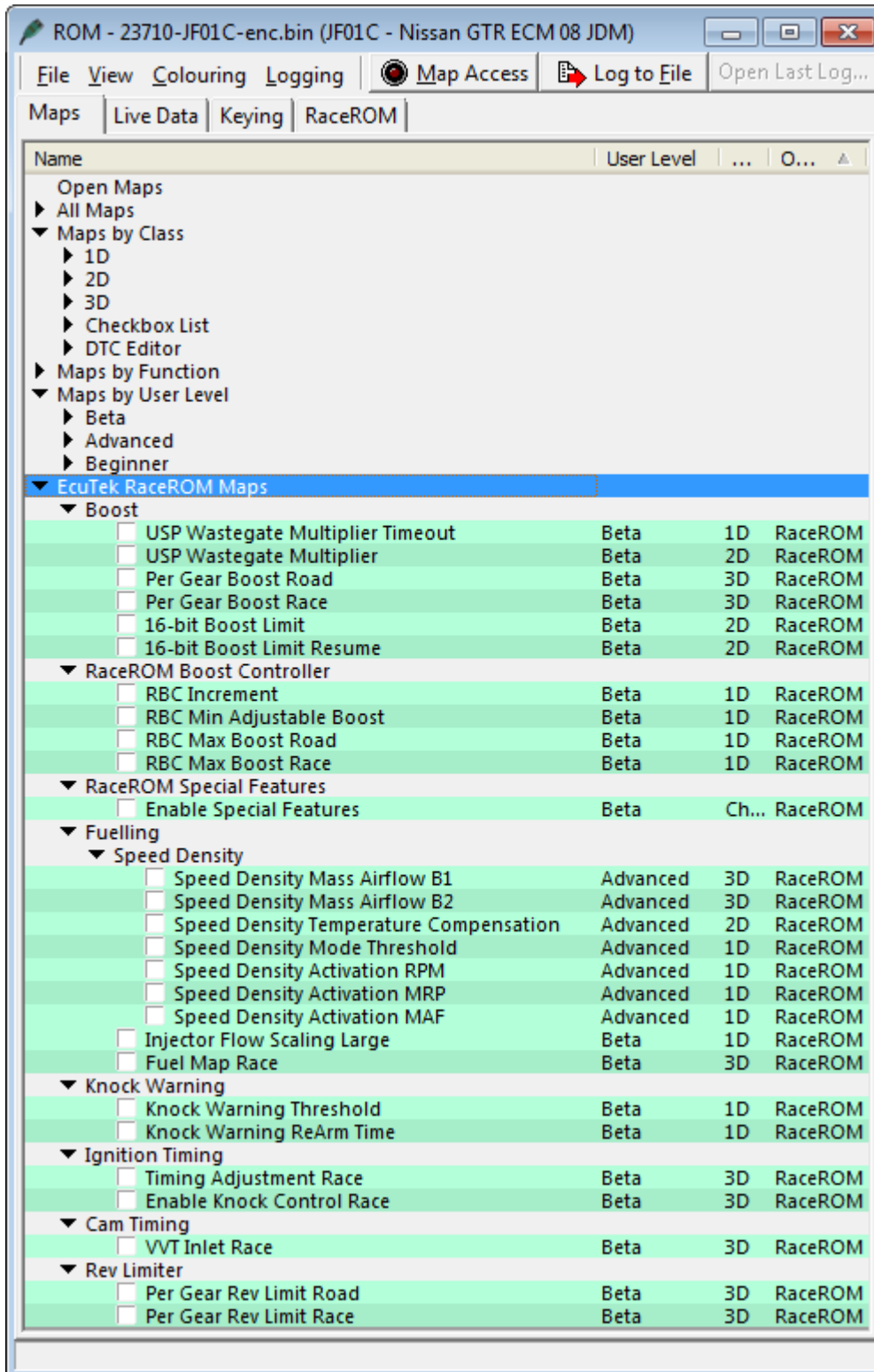
When the Feature File is applied, data is automatically copied from the existing ECU maps into the new maps that are being created. This preserves any tuning work that has already been done to the ROM.

IMPORTANT: You must now save the ROM using a different file name to save the ROM with the additional RaceROM features.

Configuration

Custom Feature Control Maps

Go to the 'Maps' Tab, expand 'EcuTek RaceROM Maps'. This will show you all of the maps that have been added by the Feature File.



Please refer to the Tuning Manual for each specific vehicle for more information.

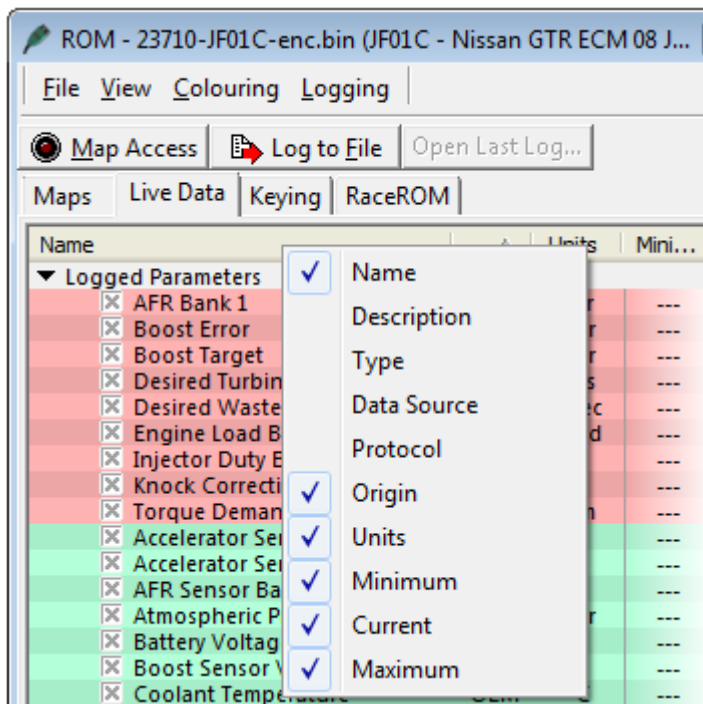
Custom Data Logging Parameters

Go to the 'Live Data' Tab, expand 'All Parameters' list to see all possible logging parameters.

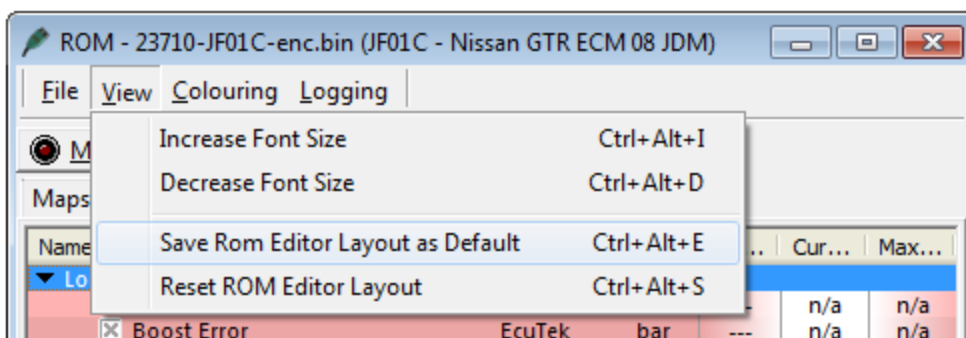
Name	Origin	Units	Min...	Cur...	Max...
Logged Parameters					
<input checked="" type="checkbox"/> AFR Bank 1	EcuTek	afr	---	n/a	n/a
<input checked="" type="checkbox"/> Boost Error	EcuTek	bar	---	n/a	n/a
<input checked="" type="checkbox"/> Boost Target	EcuTek	bar	---	n/a	n/a
<input checked="" type="checkbox"/> Desired Turbine Wheel Air...	EcuTek	g/s	---	n/a	n/a
<input checked="" type="checkbox"/> Desired Wastegate flow	EcuTek	l/sec	---	n/a	n/a
<input checked="" type="checkbox"/> Engine Load B1	EcuTek	load	---	n/a	n/a
<input checked="" type="checkbox"/> Injector Duty B1	EcuTek	%	---	n/a	n/a
<input checked="" type="checkbox"/> Knock Correction	EcuTek	°	---	n/a	n/a
<input checked="" type="checkbox"/> Torque Demand	EcuTek	Nm	---	n/a	n/a
<input checked="" type="checkbox"/> Accelerator Sensor 1	OEM		---	n/a	n/a
<input checked="" type="checkbox"/> Accelerator Sensor 2	OEM		---	n/a	n/a
<input checked="" type="checkbox"/> AFR Sensor Bank 1	OEM	V	---	n/a	n/a
<input checked="" type="checkbox"/> Atmospheric Pressure	OEM	Bar	---	n/a	n/a
<input checked="" type="checkbox"/> Battery Voltage	OEM		---	n/a	n/a
<input checked="" type="checkbox"/> Boost Sensor Voltage B1	OEM	V	---	n/a	n/a
<input checked="" type="checkbox"/> Coolant Temperature	OEM	°C	---	n/a	n/a
<input checked="" type="checkbox"/> Engine Speed	OEM	RPM	---	n/a	n/a
<input checked="" type="checkbox"/> Fuel Trim Long Term Bank 1	OEM	%	---	n/a	n/a
<input checked="" type="checkbox"/> Fuel Trim Long Term Bank 2	OEM	%	---	n/a	n/a
<input checked="" type="checkbox"/> Fuel Trim Short Term Bank 1	OEM	%	---	n/a	n/a
<input checked="" type="checkbox"/> Fuel Trim Short Term Bank 2	OEM	%	---	n/a	n/a
<input checked="" type="checkbox"/> Ignition Timing	OEM	°	---	n/a	n/a
<input checked="" type="checkbox"/> Injector Pulse Bank 1	OEM	ms	---	n/a	n/a
<input checked="" type="checkbox"/> Intake Air Temperature	OEM	°C	---	n/a	n/a
<input checked="" type="checkbox"/> Intake VVT Bank 1	OEM	°	---	n/a	n/a
<input checked="" type="checkbox"/> Mass Airflow Sensor Bank 1	OEM	V	---	n/a	n/a
<input checked="" type="checkbox"/> Throttle Angle Bank 1	OEM		---	n/a	n/a
<input checked="" type="checkbox"/> Vehicle Speed	OEM	km/h	---	n/a	n/a
<input checked="" type="checkbox"/> Wastegate Duty	OEM	%	---	n/a	n/a
All Parameters					
<input checked="" type="checkbox"/> AFR Bank 1	EcuTek	afr	---	n/a	n/a
<input type="checkbox"/> AFR Bank 2	EcuTek	afr	---	n/a	n/a
<input type="checkbox"/> Base Fuel Schedule	EcuTek	bfs	---	n/a	n/a
<input type="checkbox"/> Boost Bank 1	EcuTek	bar	---	n/a	n/a
<input type="checkbox"/> Boost Bank 2	EcuTek	bar	---	n/a	n/a
<input checked="" type="checkbox"/> Boost Error	EcuTek	bar	---	n/a	n/a
<input type="checkbox"/> Boost Target	EcuTek	bar	---	n/a	n/a
<input type="checkbox"/> Calculated Airflow	EcuTek	g/s	---	n/a	n/a
<input checked="" type="checkbox"/> Desired Turbine Wheel Air...	EcuTek	g/s	---	n/a	n/a
<input checked="" type="checkbox"/> Desired Wastegate flow	EcuTek	l/sec	---	n/a	n/a
<input type="checkbox"/> Dig: Safety Mode	EcuTek	Digital	---	???	---
<input type="checkbox"/> Dig: Speed Density	EcuTek	Digital	---	???	---

All the items marked as **EcuTek** in the Origin column are RaceROM custom data logging parameters.

We recommend enabling the following columns by right-clicking on a column header, such as the 'Name' column header:

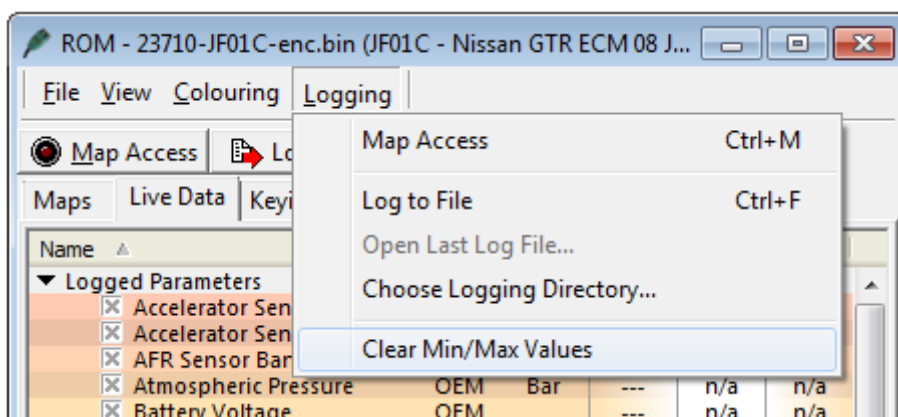


It is possible to save this layout as the default view from the View menu:



Please note that it is not possible to save the selected parameters at this time.

Select the 'Clear Min/Max Value' option from the Logging menu to reset the Max and Min values:

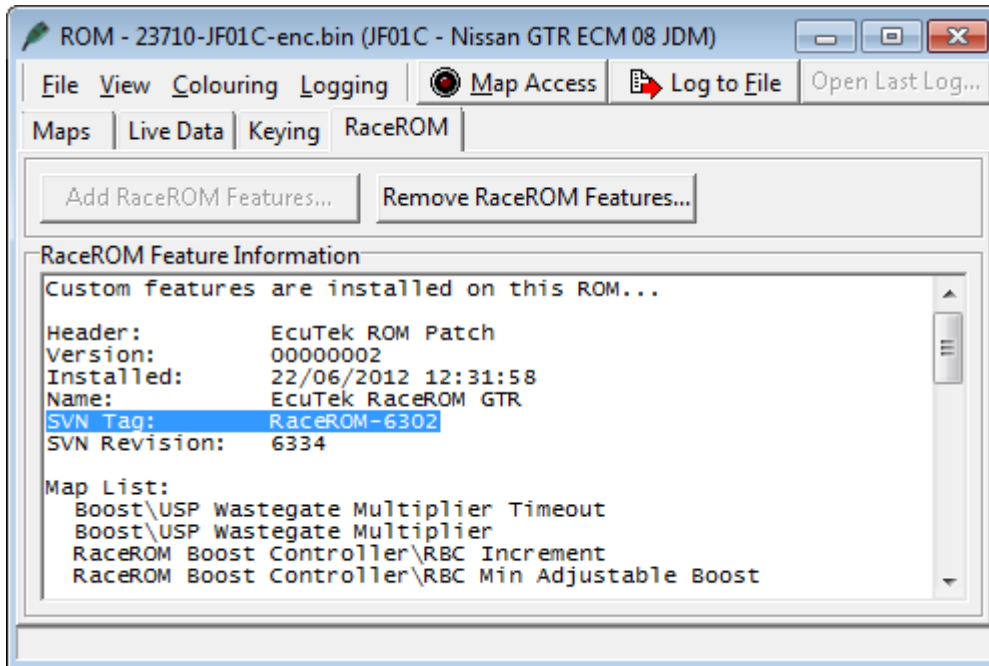


Feature File Removal

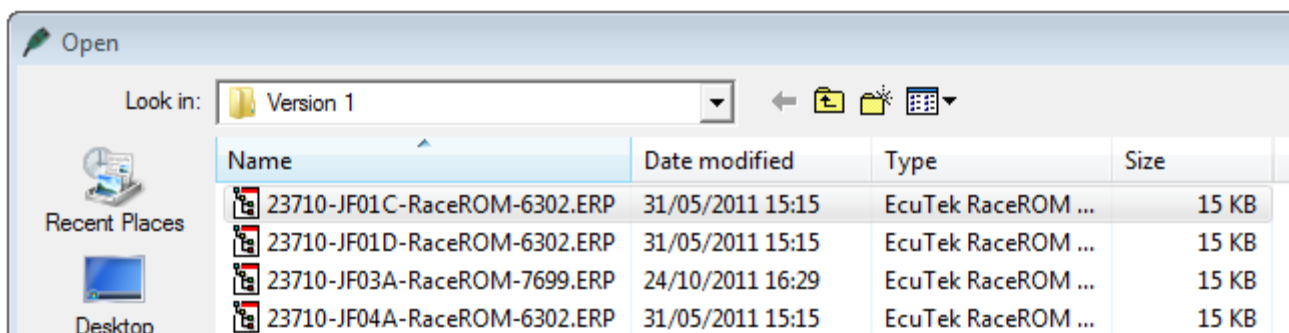
Removal Procedure

Before removing a Feature File, you should be aware that all data that in the additional RaceROM maps will be permanently lost and only the original ECU maps will remain. You are strongly advised to keep a backup copy of the ROM with the Feature File applied.

To remove a Feature File from a ROM file, open the file in ProECU, go to the RaceROM tab and select **Remove RaceROM Features**.



You must then select the Feature File with the same **SVN Tag** that was applied to the ROM (revision 6302 in the above example) and click the **Open** button.



Once the Feature File has been removed, you can save the ROM with the Feature File removed using a new filename. Before reprogramming the file to a vehicle, you should check that the values in the maps are correct.

Feature File Updates

EcuTek Update

EcuTek may release new or updated Feature File via the EcuTek Update. These Feature Files may contain new features and improvements, or may fix problems that have been reported to us. Always use the latest version available to ensure the best possible compatibility with both the EcuTek software and the vehicle ECU.

Further information about the EcuTek Update can be found in the ProECU user manuals.

Before you can apply a new Feature File, you must first remove any existing Feature File in the ROM. When removing the existing Feature File, the data contained in the additional maps will be lost. If you wish to transfer the map data to the new Feature File, you must save a backup copy of the old ROM with the Feature File applied and copy the data manually to the new Feature File applied ROM.