

<b>CUSTOMER DOCUMENTATION</b>	<b>March 15th 2011</b>	<b>FIRMWARE</b>	<b>Release History MYC4</b>
<b>Firmware Release history: MyChron4 – Data key – eBox – GPS</b>			

**March 15<sup>th</sup> 2011**

**Firmup\_MYCHRON4\_110315.exe**

Logger	Version	Changes-additions
<b>MyChron4</b>	31.58.22	<ul style="list-style-type: none"> <li>▪ <b>Fixed bug on split summary visualization in Data Recall</b></li> <li>▪ <b>Added alarms on MyChron Exp temperatures</b></li> </ul>
<b>eBox</b>	32.20	No changes since last release
<b>Languages</b>	34.30	▪ <b>Added strings for alarms on MyChron Exp temperatures</b>
<b>Lambda</b>	25.11	No changes since last release
<b>GPS</b>	35.27	No changes for MyChron4
<b>MyChron Expansion</b>	48.05	No changes since last release
<b>Data key</b>	33.40	No changes since last release

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January 28<sup>th</sup> 2011

**Firmup\_MYCHRON4\_110128.exe**

Logger	Version	Changes-additions
<b>MyChron4</b>	31.58.21	▪ <b>Fixed bug on visualization when a temperature sensor is disconnected</b>
<b>eBox</b>	32.20	No changes since last release
<b>Languages</b>	34.29	No changes since last release
<b>Lambda</b>	25.11	No changes since last release
<b>GPS</b>	35.27	No changes for MyChron4
<b>MyChron Expansion</b>	48.05	No changes since last release
<b>Data key</b>	33.40	No changes since last release

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January 26<sup>th</sup> 2011

Firmup\_MYCHRON4\_110126.exe

Logger	Version	Changes-additions
<b>MyChron4</b>	31.58.19	<ul style="list-style-type: none"><li>▪ <b>Modified management of temperatures for display: now only the temperatures connected to devices (MyChron4, eBox or MyChron Expansion) are sequentially showed</b></li><li>▪ <b>Fixed bug on calibration of the magnetical sensors with eBox Extreme and MyChron Expansion that caused a prolonged procedure</b></li><li>▪ <b>Improved the calibration procedure of the eBox and the MyChron Expansion sensors</b></li><li>▪ <b>Added in "Temp with Lambda" menu the MyChron Expansion temperatures (waterTemp and CHT)</b></li></ul>
<b>eBox</b>	32.20	<ul style="list-style-type: none"><li>▪ <b>Redefined the characteristic curve of pedal position sensor</b></li></ul>
<b>Languages</b>	34.29	No changes since last release
<b>Lambda</b>	25.11	No changes since last release
<b>GPS</b>	35.25	No changes since last release
<b>MyChron Expansion</b>	48.05	<ul style="list-style-type: none"><li>▪ <b>Redefined the characteristic curve of pedal position sensor</b></li></ul>
<b>Data key</b>	33.40	No changes since last release

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September 13<sup>th</sup> 2010

**Firmup\_MYCHRON4\_100913.exe**

Logger	Version	Changes-additions
<b>MyChron4</b>	31.58.16	▪ <b>Added functionality that allows to see in the menu "Sensors View" page the Speed value with MyChron Expansion</b>
<b>eBox</b>	32.18	▪ <b>Added management of inverse polarity of the valve gas sensor</b>
<b>Languages</b>	34.29	No changes since last release
<b>Lambda</b>	25.11	No changes since last release
<b>GPS</b>	35.25	No changes since last release
<b>MyChron Expansion</b>	48.02	▪ <b>Added management of inverse polarity of the valve gas sensor</b> ▪ <b>Correct analogue channels filtering</b> ▪ <b>Fixed bug that sometimes didn't allow to calibrate correctly the pedal sensors</b>
<b>Data key</b>	33.40	▪ <b>Reinforced firmup management</b> ▪ <b>Added GPS maps saving in firmup management</b>

July 30<sup>th</sup> 2010

**Firmup\_MYCHRON4GPS\_100730.exe**

Logger	Version	Changes-additions
<b>MyChron4</b>	31.58.15	<ul style="list-style-type: none"><li>▪ <b>Fixed Data Recall for RPM on short Laps</b></li><li>▪ <b>Faster displaying on Data Recall with the keys &lt;&lt; &gt;&gt;</b></li><li>▪ <b>Added the programming for the MyChron Expansion</b></li><li>▪ <b>Improved SmartyCam management</b></li></ul>
<b>eBox</b>	32.17	No changes since last release
<b>Languages</b>	34.29	<ul style="list-style-type: none"><li>▪ <b>Added dutch strings</b></li></ul>
<b>Lambda</b>	25.11	No changes since last release
<b>GPS</b>	35.25	<ul style="list-style-type: none"><li>▪ <b>Added Info sent to SmartyCam (SpeedUp, Heading)</b></li></ul>
<b>MyChron Expansion (new entry)</b>	48.01	<ul style="list-style-type: none"><li>▪ <b>Migration from first version 40.11 to 48.01</b></li></ul>
<b>Data key</b>	33.37	<ul style="list-style-type: none"><li>▪ <b>Added Upgrade for MyChron Expansion</b></li></ul>

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June 30<sup>th</sup> 2010      **Firmup\_MYCHRON4GPS\_100630.exe**

Logger	Version	Changes-addicions
<b>MyChron4</b>	31.58.13	▪ <b>Fixed bug on steering potentiometer value with eBox Extreme</b>
<b>eBox</b>	32.17	No changes since last release
<b>Languages</b>	34.28	No changes since last release
<b>Lambda</b>	25.11	No changes since last release
<b>GPS</b>	35.24	No changes since last release
<b>Data key</b>	33.35	No changes for MyChron4

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June 3<sup>rd</sup> 2010

**Firmup\_MYCHRON4GPS\_100603.exe**

Logger	Version	Changes-additions
<b>MyChron4</b>	31.58.12	<ul style="list-style-type: none"><li>▪ <b>Added Management of MyChron Expansion</b></li><li>▪ <b>Added possibility to set track width for GPS Lap Timer</b></li></ul>
<b>eBox</b>	32.17	<ul style="list-style-type: none"><li>▪ <b>Added Management of Power Valve</b></li></ul>
<b>Languages</b>	34.28	<ul style="list-style-type: none"><li>▪ <b>Added strings for MyChron Expansion</b></li></ul>
<b>Lambda</b>	25.11	No changes since last release
<b>GPS</b>	35.24	<ul style="list-style-type: none"><li>▪ <b>Fixed bug on GPS Configuration</b></li></ul>
<b>Data key</b>	33.34	<ul style="list-style-type: none"><li>▪ <b>Added Management of MyChron Expansion</b></li></ul>

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March 5<sup>th</sup> 2010      **Firmup\_MYCHRON4GPS\_100305.exe**

Logger	Version	Changes-additions
<b>MyChron4</b>	31.58.10	▪ <b>Fixed bug conflict SmartyCam with GPS</b>
<b>eBox</b>	32.16	No changes since last release
<b>Languages</b>	34.26	No changes since last release
<b>Lambda</b>	25.11	No changes since last release
<b>GPS</b>	35.23	▪ <b>Fixed bug on selected track found with MyChron4</b>
<b>Data key</b>	33.33	▪ <b>Fixed bug on upgrade Firmware GPS with SmartyCam connected</b>

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February 23<sup>th</sup> 2010

**Firmup\_MYCHRON4GPS\_100223.exe**

Logger	Version	Changes-additions
<b>MyChron4</b>	31.58.09	▪ <b>Management of GPS05</b>
<b>eBox</b>	32.16	No changes since last release
<b>Languages</b>	34.26	No changes since last release
<b>Lambda</b>	25.11	No changes since last release
<b>GPS</b>	35.22	▪ <b>Improved calculation of LAP Time (Latitude/Longitude)</b>
<b>Data key</b>	33.32	▪ <b>Management of GPS05</b>

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November 24<sup>th</sup> 2009

**Firmup\_MYCHRON4GPS\_091124.exe**

Logger	Version	Changes-additions
<b>MyChron4</b>	31.58.08	▪ <b>Fixed bug on SmartyCam identification</b>
<b>eBox</b>	32.16	No changes since last release
<b>Languages</b>	34.26	No changes since last release
<b>Lambda</b>	25.11	No changes since last release
<b>GPS</b>	35.20	▪ <b>Introduced direct connection to SmartyCam (fw Smarty ver. 47.05.05)</b>
<b>Data key</b>	33.31	▪ <b>Management GPS04</b>

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June 8<sup>th</sup> 2009      **Firmup\_MYCHRON4GPS\_090608.exe**

Logger	Version	Changes-additions
<b>MyChron4</b>	31.58.07	No changes since last release
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<b>eBox</b>	32.16	▪ <b>Fixed bug that caused a bad behavior in Configuration Wizard</b>
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<b>Languages</b>	34.26	No changes since last release
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<b>Lambda</b>	25.11	No changes since last release
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<b>GPS</b>	35.18	▪ <b>Improved GPS Lap Timing</b>
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<b>Data key</b>	33.30	No changes since last release

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April 28<sup>th</sup> 2009      **Firmup\_MYCHRON4GPS\_090428.exe**

Logger	Version	Changes-additions
<b>MyChron4</b>	31.58.07	<ul style="list-style-type: none"><li>▪ Fixed bug that, in certain conditions, caused bad visualization on GPS speed value</li><li>▪ Added management of SmartyCam</li></ul>
<b>eBox</b>	32.15	<ul style="list-style-type: none"><li>▪ Improved connection procedure in CAN Net</li></ul>
<b>Languages</b>	34.26	No changes since last release
<b>Lambda</b>	25.11	No changes since last release
<b>GPS</b>	35.17	No changes since last release
<b>Data key</b>	33.30	<ul style="list-style-type: none"><li>▪ Added management of SmartyCam</li></ul>

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July 28<sup>th</sup> 2008      **Firmup\_MYCHRON4GPS\_080728.exe**

Logger	Version	Changes-additions
<b>MyChron4</b>	31.57.07	▪ Fixed bug on data memorization that caused, in certain situations, bad visualization on lap number (lap 99)
<b>eBox</b>	32.14	No changes since last release
<b>Languages</b>	34.26	No changes since last release
<b>Lambda</b>	25.11	No changes since last release
<b>GPS</b>	35.17	▪ Fixed bug on Lap Timing functionality
<b>Data key</b>	33.28	No changes since last release

July 1<sup>st</sup> 2008

**Firmup\_MYCHRON4GPS\_080701.exe**

Logger	Version	Changes-additions
<b>MyChron4</b>	31.57.06	<ul style="list-style-type: none"><li>▪ Fixed bug on time visualization in Data Recall (in "Split Summary" page)</li><li>▪ Added GPS Laptimer management</li></ul>
<b>eBox</b>	32.14	No changes since last release
<b>Languages</b>	34.26	Updated strings on Japanese language
<b>Lambda</b>	25.11	No changes since last release
<b>GPS</b>	35.16	<ul style="list-style-type: none"><li>▪ Improved connection procedure in CAN Net</li><li>▪ Added track width configuration from master logger</li><li>▪ Improved test on full memory of maps</li><li>▪ Added management of correspondent tracks on LapTimer</li></ul>
<b>Data key</b>	33.28	Added sub-revision management in Firmup

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24th April 2008

**Firmup\_MYCHRON4GPS\_080424.exe**

<b>Logger</b>	<b>Version</b>	<b>Changes – additions</b>
MyChron4	31.55.06	<ul style="list-style-type: none"><li>• Fixed bug on “Hold Peak RPM” function that didn’t work in some M4 configuration (“High Stall Clutch” transmission type)</li><li>• Fixed bug that sporadically created problems in Data Memorization</li></ul>
eBox	32.14	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
Languages	34.25	<ul style="list-style-type: none"><li>• Updated strings on Dutch language</li></ul>
Lambda	25.11	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
Data key	33.27	<ul style="list-style-type: none"><li>• Fixed problem on upgrade FW with some old M4 firmware versions</li></ul>

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10th March 2008

**Firmup\_MYCHRON4GPS\_080310.exe**

<b>Logger</b>	<b>Version</b>	<b>Changes – additions</b>
MyChron4	31.54.01	<ul style="list-style-type: none"><li>• Fixed bug on 4th digit visualization of Temperatures in Data Recall</li><li>• Fixed bug on GPS Speed visualizaton in Data Recall</li><li>• Added visualization value of Battery level from eBox</li></ul>
eBox	32.14	<ul style="list-style-type: none"><li>• Added sending value of Battery level from eBox to M4</li></ul>
Languages	34.21	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
Lambda	25.11	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
Data key	33.25	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>

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22th February 2008

**Firmup\_MYCHRON4GPS\_080222.exe**

<b>Logger</b>	<b>Version</b>	<b>Changes – additions</b>
MyChron4	31.53.03	<ul style="list-style-type: none"><li>• Fixed bug on 2nd temperature visualization in Road Race Mode</li><li>• Fixed bug on steering wheel calibration</li></ul>
eBox	32.13	<ul style="list-style-type: none"><li>• Fixed bug on 3rd analogic channel of EXTREME</li></ul>
Languages	34.21	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
Lambda	25.11	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
Data key	33.25	<ul style="list-style-type: none"><li>• Fixed bug on M4 Picture Manager</li></ul>

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4th February 2008

**Firmup\_MYCHRON4GPS\_080204.exe**

Logger	Version	Changes – additions
MyChron4	31.52.02	<ul style="list-style-type: none"><li>• Improved procedure of EXTREME sensors calibration</li><li>• Added sensor Brake Pressure management for EXTREME</li><li>• Fixed bug on full scale of GENERIC sensor (0-5V) for EXTREME</li></ul>
eBox	32.12	<ul style="list-style-type: none"><li>• <b>Reversed sign of accelerometer conversion</b></li></ul>
Languages	34.21	<ul style="list-style-type: none"><li>• Added Icons for EXTREME calibration sensors</li></ul>
Lambda	25.11	<ul style="list-style-type: none"><li>• Improved connection procedure in CAN Net</li></ul>
Data key	33.23	<ul style="list-style-type: none"><li>• Added compatibility with MC4 660</li></ul>

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18th January 2008

**Firmup\_MYCHRON4GPS\_080118.exe**

<b>Logger</b>	<b>Version</b>	<b>Changes – additions</b>
MyChron4	31.51.06	<ul style="list-style-type: none"><li>• Fixed bug on 2nd temperature visualization in Road Race mode</li><li>• Fixed bug on Battery Level visualization (sometimes it showed strange values)</li><li>• Added GPS speed (Max and Min values) in Data Recall</li><li>• Added memorization of the last online page configuration</li><li>• Changed the visualization of the Lambda page (now it shows the Lambda value and a temperature chosen among the connected temperatures)</li><li>• Added in “Temperature Setup” a new record to choose the temperature showed in the Lambda Page</li></ul>
	<b>Version</b>	<b>Changes – additions</b>
Languages	34.20	<ul style="list-style-type: none"><li>• Added Strings and Update for Lambda Page management</li></ul>

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12th December 2007

**Firmup\_MYCHRON4GPS\_071212.exe**

<b>Logger</b>	<b>Version</b>	<b>Changes – additions</b>
MyChron4	31.50.01	<ul style="list-style-type: none"><li>• Fixed bug on Japanese strings visualization</li><li>• Added language Portuguese management</li><li>• Added “Direct Drive” option in MYC4 USA version for Oval Race</li></ul>
Data key	33.19	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
Languages	34.19	<ul style="list-style-type: none"><li>• Added new language: Portuguese</li></ul>
GPS	35.12	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
eBox	32.11.01	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>

5th December 2007

**Firmup\_MYCHRON4GPS\_071205.exe**

<b>Logger</b>	<b>Version</b>	<b>Changes – additions</b>
MyChron4	31.49.04	<ul style="list-style-type: none"><li>• Fixed bug on Data Recall (time axis was sometimes wrong in RPM graphic page)</li><li>• Fixed bug on Data memorization in certain situations (for long time data acquisitions)</li><li>• Fixed bug on GPS Speed visualization in GPS page (it didn't convert unit of measurement)</li><li>• Added "Direct Drive" option in MYC4 USA version</li><li>• Improved potentiometers calibration for EXTREME</li><li>• Decreased battery consumption (2 mA)</li></ul>
Data key	33.19	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
Languages	34.18.02	<ul style="list-style-type: none"><li>• Strings and Update for EXTREME management (Japanese)</li></ul>
GPS	35.12	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
eBox	32.11.01	<ul style="list-style-type: none"><li>• Added low battery alarm signalling to MYC4</li></ul>

24th October 2007

**Firmup\_MYCHRON4GPS\_071024.exe**

<b>Logger</b>	<b>Version</b>	<b>Changes – additions</b>
MyChron4	31.48.04	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
Data key	33.19	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
Languages	34.17.01	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
GPS	35.12	<ul style="list-style-type: none"><li>• Improved GPS data management and GPS data reliability in certain situations</li></ul>
eBox	32.10	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>

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19th October 2007

**Firmup\_MYCHRON4GPS\_071019.exe**

<b>Logger</b>	<b>Version</b>	<b>Changes – additions</b>
MyChron4	31.48.04	<ul style="list-style-type: none"><li>• Fixed bug on low battery alarm blinking when GPS is connected</li></ul>
Data key	33.19	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
Languages	34.17.01	<ul style="list-style-type: none"><li>• Strings and icons update for eBox Extreme management (Dutch and German)</li></ul>
GPS	35.11	<ul style="list-style-type: none"><li>• Corrected GPS configuration</li></ul>
eBox	32.10	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>

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9th October 2007

**Firmup\_MYCHRON4GPS\_071009.exe**

<b>Logger</b>	<b>Version</b>	<b>Changes – additions</b>
MyChron4	31.47	<ul style="list-style-type: none"><li>• Added eBox Extreme management with potentiometers calibration</li></ul>
Data key	33.19	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
Languages	34.16	<ul style="list-style-type: none"><li>• Strings and icons update for eBox Extreme management (English and Italian)</li></ul>
GPS	35.08	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
eBox	32.10	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>

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3rd September 2007

**Firmup\_MYCHRON4GPS\_070903.exe**

<b>Logger</b>	<b>Version</b>	<b>Changes – additions</b>
MyChron4	31.46	<ul style="list-style-type: none"><li>• Fixed bug on <b>MyChron 4 2T</b>: the temperatures reading on 2T Models is now correctly shown even if only one temperature sensor is connected.</li></ul>
Data key	33.19	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
Languages	34.15	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
GPS	35.08	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
eBox	32.10	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>

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20th June 2007

**Firmup\_MYCHRON4GPS\_070620.exe (\*)**

<b>Logger</b>	<b>Version</b>	<b>Changes – additions</b>
MyChron4	31.45	<ul style="list-style-type: none"><li>• From now on, selection of temperature measure unit °F - °C is available (US versions only)</li></ul>
Data key	33.19	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
Languages	34.15	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
GPS	35.08	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
eBox	32.10	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>

(\*) **FIRMUP 4.05.17 : Improved Error diagnostic: from now on, USB errors and Datakey Identification errors will be correctly identified.**

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14th June 2007

**Firmup\_MYCHRON4GPS\_070614.exe**

<b>Logger</b>	<b>Version</b>	<b>Changes – additions</b>
MyChron4	31.43	<ul style="list-style-type: none"><li>• Fixed: "BATTERY NOT OK" during firmup with EBox; the firmup is now possible with Battery value = MIN 7V.</li><li>• Changed the led from Red (Right) to Yellow (on the center) during download.</li></ul>
	<b>Version</b>	<b>Changes – additions</b>
Data key	33.19	<ul style="list-style-type: none"><li>• Swapped "Upgrade BOOTER" with "Upgrade LANGUAGES"; the Languages will be upgraded immediately after the upgrade of M4.</li><li>• At the end of FIRMUP " END " will appear (and stay for 10" before Power off with a RED-LED blinking) if the operation is terminated correctly.</li><li>• When an error occurs, a message ERROR with the code of the error appears.</li><li>• At the end of "Download Data" or "No New Data" or "Memory Empty", the RED-LED starts blinking for 10" then the M4 is switched off.</li><li>• Every operation (except the BOOTER upgrade) can be reinitialized, in the bad case of an involuntary interruption (battery, cable, ecc.). Specially the EBOX upgrade can be easily restarted (even if the Firmware is lost).</li></ul>
	<b>Version</b>	<b>Changes – additions</b>
Languages	34.15	<ul style="list-style-type: none"><li>• Some corrections for German and Dutch languages</li></ul>
	<b>Version</b>	<b>Changes – additions</b>
GPS	35.08	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
	<b>Version</b>	<b>Changes – additions</b>
eBox	32.10	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>

8th June 2007

**Firmup\_MYCHRON4GPS\_070608.exe(\*)**

<b>Logger</b>	<b>Version</b>	<b>Changes – additions</b>
MyChron4	31.42	<ul style="list-style-type: none"><li>• Fixed bug on gear menu</li><li>• The accuracy of displayed values of Battery level is improved, specially with EBOX.</li><li>• The Data Download is improved in speed, consistency and reliability.</li><li>• The first Split number after startup is now correct.</li><li>• The Menu pages sequence (USA/EU, languages, various setting etc.) works correctly for all the possible configurations.</li><li>• The logger with GPS module connected automatically power off after 2 minutes of inactivity</li><li>• Fixed “automatic switch off” bug on MC4 systems with Gps connected with no RPM signal</li><li>• The GPS speed value is now displayed. If the Speed of EBOX is also available, the value displayed is the highest of both (the switch being smooth)</li><li>• Should the data rate from GPS slow down, the values would be forced to zero.</li><li>• The status of GPS is displayed in four quality levels: “Searching” “BAD” “WEAK” “GOOD”. In “Searching” and “BAD” status no GPS-Map is possible. In “WEAK” status the error can be more than 2 meters.</li></ul>
	<b>Version</b>	<b>Changes – additions</b>
Data key	33.18	<ul style="list-style-type: none"><li>• The Upgrade procedure of M4/EBOX/GPS (LAMBDA is not yet available) from datakey, shows on the m4 display the status of each operation and blinks the LEDs for further feedback</li><li>• At the end of Upgrade " -- E N D --" is displayed and after 5 seconds the system is powered off automatically.</li><li>• The Booter of M4 is upgraded to the new version 2.06 for a more robust start up on RPM signal (same as on M4)</li></ul>
	<b>Version</b>	<b>Changes – additions</b>
Languages	34.14	<ul style="list-style-type: none"><li>• The maximum length of the strings (for all the languages) is checked up, no more string overflows the maximum number of characters available. Hence all the strings are displayed correctly</li><li>• Strings Update for new Diagnostics and GPS Status.</li><li>• Dutch language upgrade</li></ul>

	Version	Changes - additions
GPS	35.08	<ul style="list-style-type: none"> <li>The GPS programming loop at restart is more robust, for a correct and improved restart of GPS itself.</li> <li>The diagnostics have been improved</li> </ul>

	Version	Changes – additions
eBox	32.10	<ul style="list-style-type: none"> <li>Fixed bug on gear calculation</li> <li>Accelerometer: The filter now works on the correct range, suppressing the frequencies of the kart vibrations.</li> <li>Accelerometer value defaulted to ZERO when not calibrated</li> <li>The acquisition for Internal/External Battery values is improved.</li> </ul>

**(\*) NEW FIRMUP 4.05.17 : - User-friendlier interface, it displays the versions (DATAKEY/MYC4/EBOX/LAMBDA/GPS) contained either in the DATAKEY or in the FIRMUP Program. Now it automatically recognizes 6 Languages: ENG ITA GER SPA FRE. To achieve the best logged data accuracy, we recommend you to use ALL these new versions together without mixing them with older versions. The DATAKEY version must be at least 33.12 for this M4/EBOX/GPS versions.**

23rd March 2007      **Firmup\_M4\_2T\_EBOX\_GPS\_070314.exe (\*)**

Logger	Version	Changes - additions
MyChron4	31.38	<ul style="list-style-type: none"> <li>No changes since last release</li> </ul>
	<b>Version</b>	<b>Changes – additions</b>
Data key	33.15	<ul style="list-style-type: none"> <li>Updated with new Firmup (4.05.16) functions (*)</li> </ul>

Version	Changes – additions
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Languages 34.10 • No changes since last release

**Version Changes - additions**

GPS 35.06 • No changes since last release

**Version Changes – additions**

eBox 32.07 • No changes since last release

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(\*) FIRMUP 4.05.16 - The new version handles in a more comprehensive way three possibilities:

- 1) Disable the DATA-KEY to update M4/EBOX/GPS firmware
- 2) Enable the DATA-KEY to update M4/EBOX/GPS firmware only if M4/EBOX/GPS contains an old version.
- 3) Force the DATA-KEY to update M4/EBOX/GPS firmware even if M4/EBOX/GPS contains the actual version.

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14th March 2007

**Firmup\_M4\_2T\_EBOX\_GPS\_070314.exe**

<b>Logger</b>	<b>Version</b>	<b>Changes - additions</b>
MyChron4	31.38	<ul style="list-style-type: none"><li>• Added MyChron4 2T management</li></ul>
	<b>Version</b>	<b>Changes – additions</b>
Data key	33.14	<ul style="list-style-type: none"><li>• No major changes</li></ul>
	<b>Version</b>	<b>Changes – additions</b>
Languages	34.10	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
	<b>Version</b>	<b>Changes - additions</b>
GPS	35.06	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
	<b>Version</b>	<b>Changes – additions</b>
eBox	32.07	<ul style="list-style-type: none"><li>• Improved calibration process</li></ul>

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22nd February 2007

**Firmup\_MYCHRON4GPS\_070222.exe**

Logger	Version	Changes - additions
MyChron4	31.34	<ul style="list-style-type: none"><li>• Fixed bug on speed channel</li></ul>
	<b>Version</b>	<b>Changes - additions</b>
Data key	33.11	<ul style="list-style-type: none"><li>• Fixed bug on external flash memories that were not completely erased by manufacturer</li></ul>
	<b>Version</b>	<b>Changes - additions</b>
Languages	34.10	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
	<b>Version</b>	<b>Changes - additions</b>
GPS	35.06	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
	<b>Version</b>	<b>Changes – additions</b>
eBox	32.05	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>

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14th February 2007

**Firmup\_MYCHRON4GPS\_070214.exe**

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Logger	Version	Changes - additions
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MyChron4	31.32	<ul style="list-style-type: none"><li>• Added management of GPS Module</li></ul>
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<b>Version</b>	<b>Changes - additions</b>
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Data key	33.10	<ul style="list-style-type: none"><li>• Added management of GPS Module</li></ul>
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<b>Version</b>	<b>Changes - additions</b>
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Languages	34.10	<ul style="list-style-type: none"><li>• Added management of GPS Module</li></ul>
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<b>Version</b>	<b>Changes - additions</b>
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GPS	35.06	<ul style="list-style-type: none"><li>• Added management of GPS Module</li></ul>
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<b>Version</b>	<b>Changes – additions</b>
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eBox	32.05	<ul style="list-style-type: none"><li>• Added management of GPS Module</li></ul>
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28th July 2006      **Firmup\_M4\_060728.exe**

<b>Logger</b>	<b>Version</b>	<b>Changes - additions</b>
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MyChron4	31.26	<ul style="list-style-type: none"><li>• Added management of E-Box</li></ul>
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<b>Version</b>	<b>Changes - additions</b>
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Data key	33.08	<ul style="list-style-type: none"><li>• No changes since last release.</li></ul>
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Version	Changes – additions
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34.08	<ul style="list-style-type: none"><li>◆ Updated strings for E-Box</li></ul>
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Languages

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31st May 2006

**Firmup\_M4\_060531.exe**

Logger

Version	Changes - additions
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MyChron4	31.24	<ul style="list-style-type: none"><li>• Fixed bug in Hold Peak RPM function</li><li>• Fixed bug in Best Rolling function</li><li>• Improved consumption management</li><li>• Fixed bug about Split visualization in +/- Best function</li></ul>
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Version	Changes - additions
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Data key	33.08	<ul style="list-style-type: none"><li>• No changes since last release.</li></ul>
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Version	Changes – additions
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34.07	<ul style="list-style-type: none"><li>◆ Updated strings in the Spanish version</li></ul>
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Languages

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11th May 2006

**Firmup\_M4\_060511.exe**

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<b>Logger</b>	<b>Version</b>	<b>Changes - additions</b>
MyChron4	31.23	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>

	<b>Version</b>	<b>Changes - additions</b>
Data key	33.08	<ul style="list-style-type: none"><li>• Added function to erase data stored in the DataKey from the PC.</li></ul>

	<b>Version</b>	<b>Changes – additions</b>
Languages	34.06	<ul style="list-style-type: none"><li>◆ Updated strings in the Dutch version</li></ul>

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#### 4th May 2006

#### **Firmup\_M4\_060504.exe**

<b>Logger</b>	<b>Version</b>	<b>Changes - additions</b>
MyChron4	31.23	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>

	<b>Version</b>	<b>Changes - additions</b>
Data key	33.07	<ul style="list-style-type: none"><li>• Fixed bug to avoid failure in the updating process of MyChron 4 firmware</li></ul>

	<b>Version</b>	<b>Changes – additions</b>
Languages	34.05	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>

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27th April 2006

**Firmup\_M4\_060427.exe**

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<b>Logger</b>	<b>Version</b>	<b>Changes - additions</b>
MyChron4	31.23	<ul style="list-style-type: none"><li>• Auto switch-off 20 sec after finishing data download from DataKey</li><li>• Fixed bug about visualization on display of underrange value</li></ul>
	<b>Version</b>	<b>Changes - additions</b>
Data key	33.06	<ul style="list-style-type: none"><li>• No changes since last release</li></ul>
	<b>Version</b>	<b>Changes – additions</b>
Languages	34.05	<ul style="list-style-type: none"><li>• Added and updated strings in the Dutch version</li><li>• Added strings in the German version</li></ul>

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