

# MAPTUNER X

**YAMAHA** **SENDOO** **Kawasaki** **Data Logger**

## Quick Start Guide



**Part # RY11UNI-LOG**

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### **This App supports:**

**YAMAHA** | 1.8L / 1.9L / TR-1

**SENDOO** | 2004+ 215 / 230 / 255 / 260 / 300

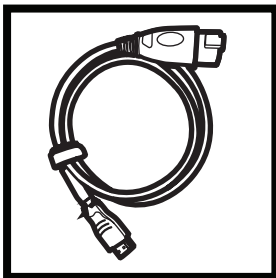
**Kawasaki** | 300 / 310 / SX-R 1500

## Required Parts



### 1. RIVA Maptuner X

Quickly and easily load performance tunes into your watercraft, ATV or UTV eliminating the need to ship out your ECU for programming. Features a slick, full color, touch screen display. There is no limit to the number of vehicles or tunes you can reflash with the MaptunerX. **Part # 01-MTX.**



### 2. Maptuner Diagnostic Cables

The Maptuner Diagnostic cable connects to the Maptuner flash tuner in order to collect diagnostic information from waverunner's port.

**Section 2A: Yamaha**

**2B: BRP**

**2C: Kawasaki**

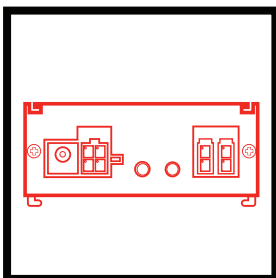


### 3. Data Logger Application

Actively log data on your watercraft in real time using the Maptuner Data Logging Application.

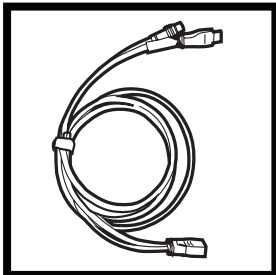
**Part # RY11UNI-LOG**

## Optional Parts



### PLX Wideband Air/Fuel Sensor Module

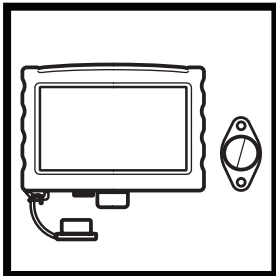
The PLX Wideband AFR (UEGO) combines an accurate, fast response wideband AFR (Air Fuel Ratio) controller with a Bosch LSU4.9 wideband oxygen sensor. The wideband controller (897346002726) works with gasoline, bio diesel, ethanol, methanol, E85, LPG, and CNG. It includes two analog outputs (wideband 0-5V, and narrowband 0-1V) for interfacing with 3rd party devices and one digital serial output for interfacing with the DM-6 gauge and other Multi Gauges. **Part # 897346002726**



### RIVA Maptuner HDMI 3.5mm Expansion Cable

Connects Maptuner to accessories such as Lambda/O2 monitoring devices. This HDMI male/female 3.5mm cable is required for monitoring and logging data from external sensors.

**Sea-Doo Part # 01-MT019**



### Silicone Case with Ball Mount

Designed to protect your Maptuner X from dents, bumps, and scratches along with providing a level of water resistance from spray and splashes. The silicone exterior makes it easy to grip in your hand for avoiding slips and drops. Includes RAM ball mount for attachment to your vehicle with optional bracket. **Part # 01-MT041**

## Icon Definitions



### Programming

Use the programming button to select the files that have been downloaded onto a Riva Maptuner device in order to add to a watercraft's ECU. Will be able to see all downloaded maps, as well as the watercraft requirements for each particular map. Download as many tunes as you want. Connect your RIVA Maptuner to the vehicle you've elected to upgrade and press the Programming button. You can upgrade as many vehicles as you have licenses for and do it as often as you like.



### Home Service Application

Press the Service button to access the Service functions menu. Perform service functions that formerly were limited to dealers only. Your RIVA Maptuner makes it possible for you to perform many critical service functions at home. Diagnose check engine warnings, reset maintenance interval warnings, program Sea-Doo DESS keys, reset the TPS when installing a new throttle body, and more.



### Data Logging Application

The Maptuner Data Logger application is a powerful tuning tool. It allows you to record real time data directly in your Maptuner device for later review. The Data Logger can record any data that is monitored by the MaptunerX including input from outside accessory devices.



### Add Vehicle

Use the Add Vehicle button to connect vehicles to the Riva Maptuner device. Each vehicle must be added in order to use a tuning map. Upgrade multiple vehicles with the RIVA Maptuner. Simply connect a vehicle to the RIVA Maptuner and press the Add Vehicle button.



### My Vehicles

More than one vehicle on your RIVA Maptuner? Maybe you've got a fleet of rental units or a lot of friends who want to go faster? Use the My Vehicles button to see the list and select the unit you want to upgrade today. Use the My Vehicles button to see all vehicles installed on the RIVA Maptuner device. Vehicle type, brand, and serials will be displayed. Users may also select which vehicle to activate and work on from this section.



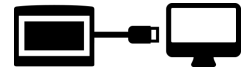
### Information

Do you have the latest firmware update? Find out with the information button. Get version information. Current active vehicle information and status reports. With your RIVA Maptuner as new functions become available you can upgrade your system to even greater functionality. Use the Information button to see specific information based on what vehicle is live from the My Vehicles section. Specifics such as VIN, Maptuner version, and last calibration will be displayed.



### Monitoring

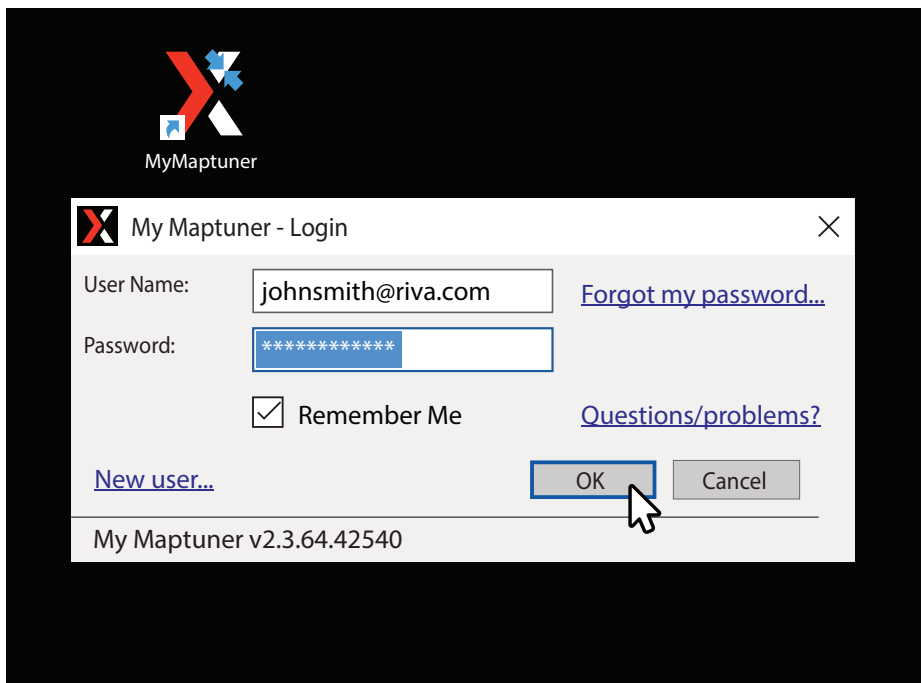
The Monitoring function allows the user to view, in real time, the parameters of various vehicle sensors and systems. This can be useful to diagnose starting and running issues as well as for performance tuning.



## Section 1: Activating MaptunerX Data Logger

Once you have purchased your RIVA Maptuner Data Logger Application it will be activated by the RIVA support Staff. To do this it is necessary for them to know the User Name of your RIVA Maptuner account. You can get this information from the Login screen of your MyMaptuner application.

Contact RIVA Racing Tech Support at 954-785-4820 or email [tech\\_support@rivaracing.com](mailto:tech_support@rivaracing.com) to have your Data Logger application activated. Be sure to include the name on your order, the invoice number, and your Unit ID.



You will receive a return email from RIVA Racing confirming that your Data Logging Application has been activated. The email will also include a coupon code for downloading MegaLogViewer HD (see Section 4 for Viewing a Data Log).

## Section 2: Physical Connections

Note: Connections shown in the following diagram include the use of the PLX 02 Sensor module to collect additional Air/Fuel Ratio Data. This is not required to create a log of data available directly to the Maptuner. Other external sensors may be used and other PLX modules can be installed. Illustrations are for reference only.



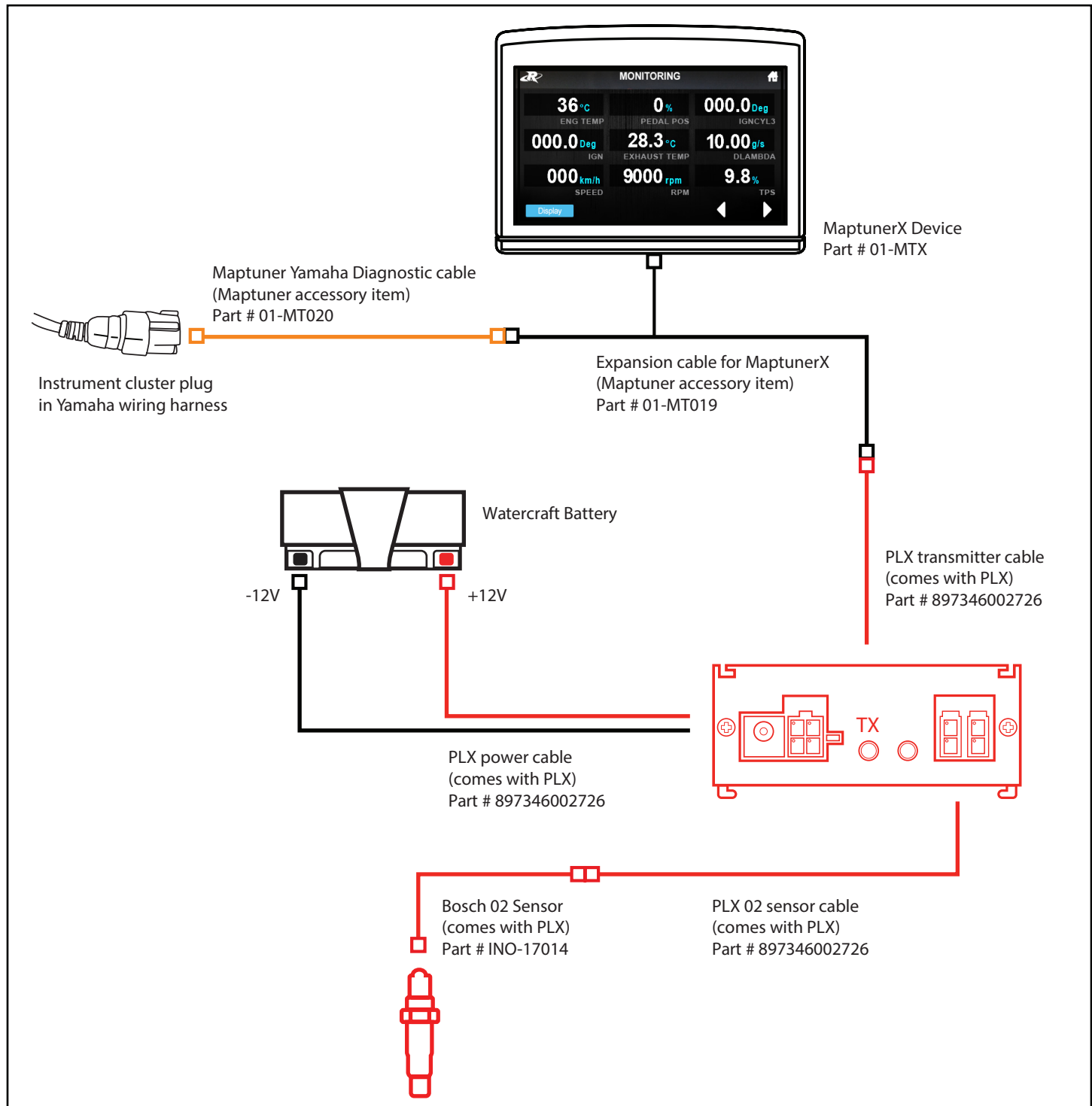
## 2A. Yamaha

### Required Parts:

- 01-MTX Maptuner X Device
- 01-MT020 Yamaha Diagnostic Cable (req. for 1.8L 2017 & earlier)
- 01-MT020/2 Yamaha Diagnostic Cable (req. for TR-1 & 1.8L 2018+)

### Optional Parts:

- 01-MT019 Maptuner Expansion Cable
- PLX-SMAFR1 02 Sensor Module Package
- Other PLX modules (user determined)





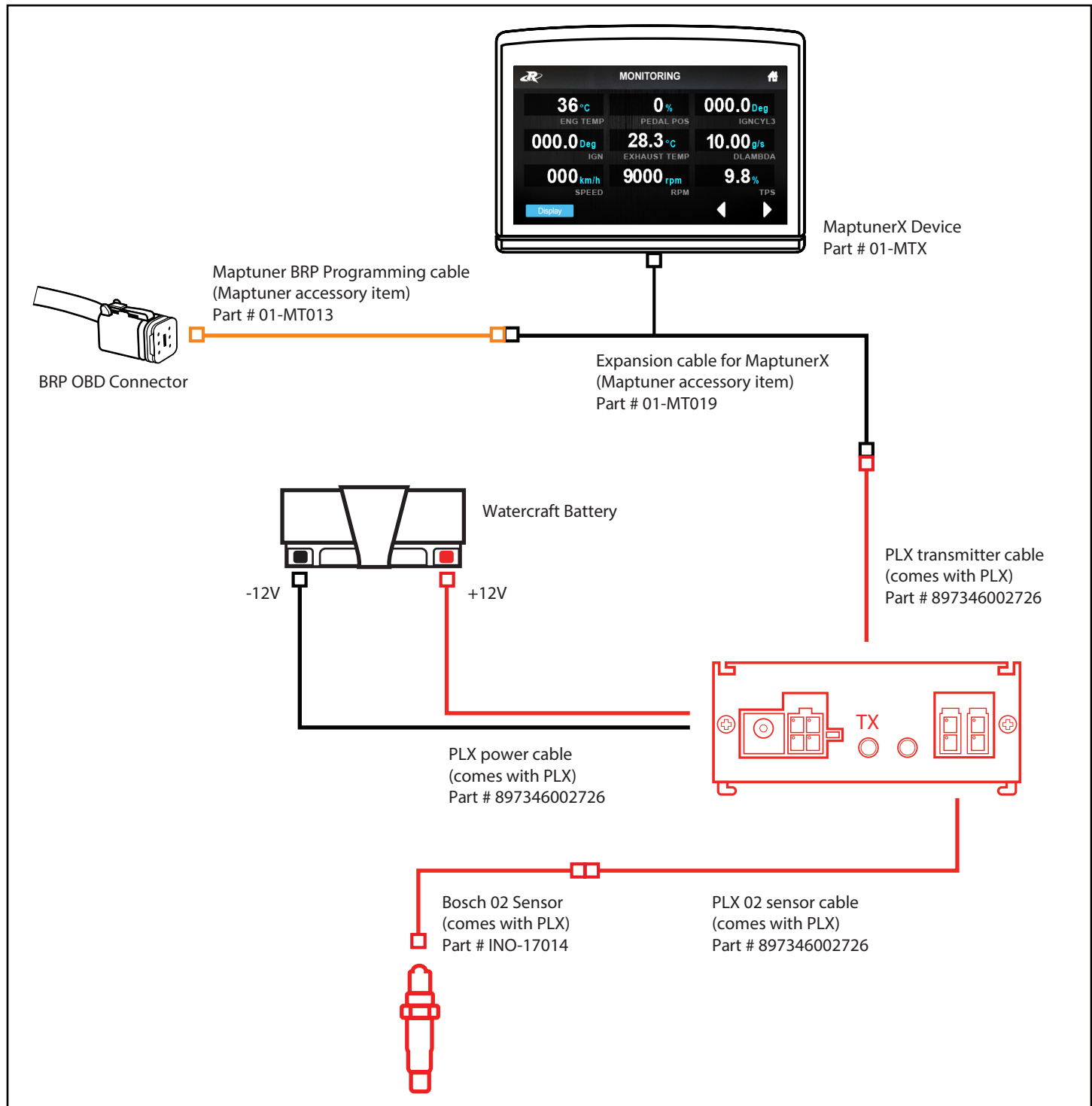
## 2B. Sea-Doo

### Required Parts:

- 01-MTX Maptuner X Device
- 01-MT013 BRP Programming Cable (req. for 2017 & earlier)
- 01-MT013/2 BRP Programming Cable (req. for 2018+)

### Optional Parts:

- 01-MT019 Maptuner Expansion Cable
- PLX-SMAFR1 02 Sensor Module Package
- Other PLX modules (user determined)





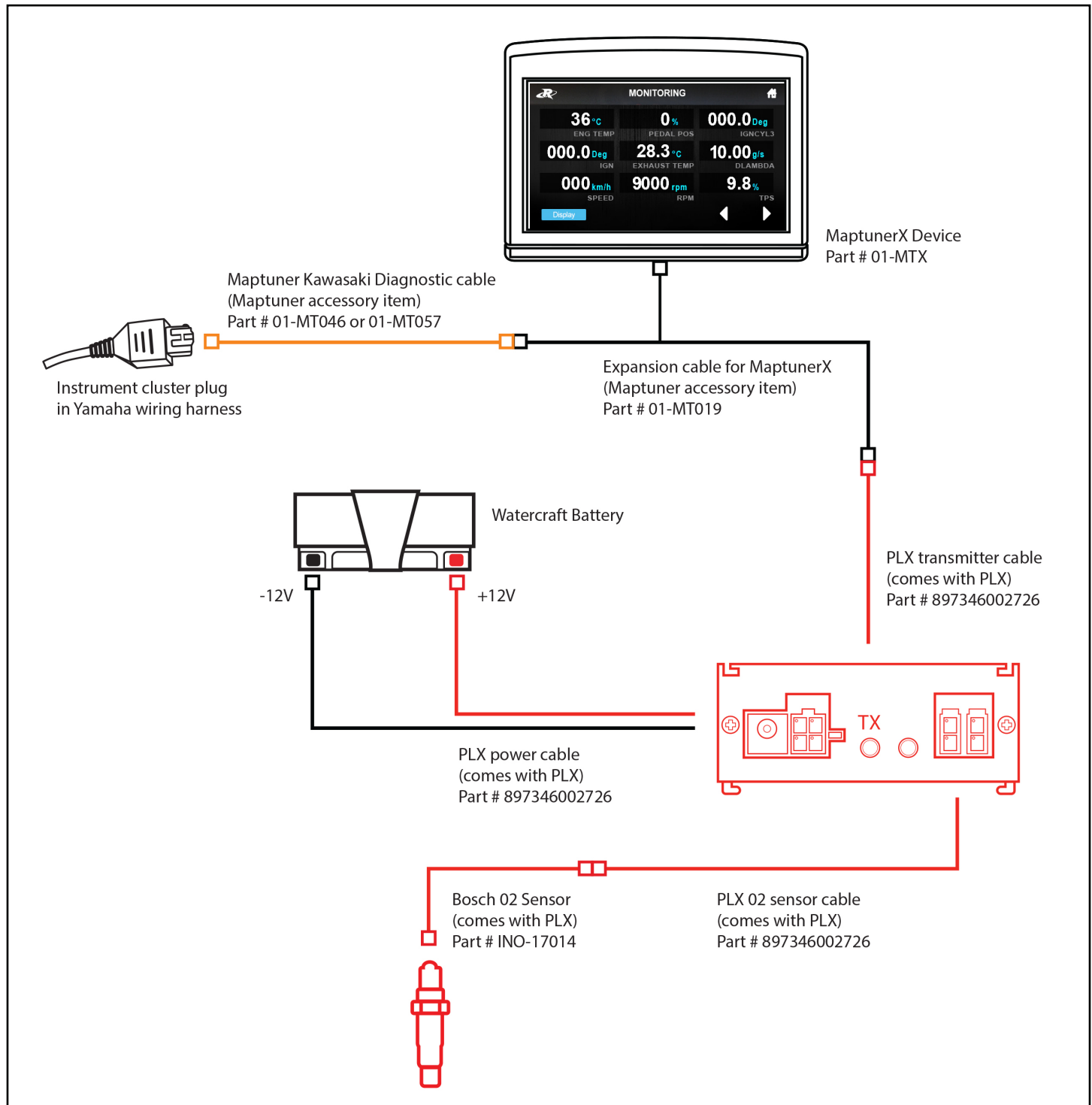
## 2C. Kawasaki

### Required Parts:

- 01-MTX Maptuner X Device
- 01-MT046 Diagnostic Cable (req. for SX-R and '21 & earlier 300/310)
- 01-MT057 Diagnostic Cable (req. for 2022 & newer Ultra 310)

### Optional Parts:

- 01-MT019 Maptuner Expansion Cable
- PLX-SMAFR1 02 Sensor Module Package
- Other PLX modules (user determined)



## Section 3. Creating a Log

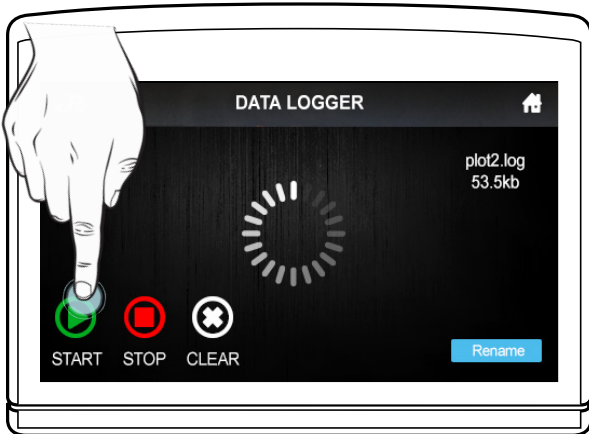
Maptuner log files are called “plots.” These plot files store all data reported to the Maptuner X as well as internal data sensed by the MaptunerX itself from the time the plot is started until it is stopped. The plots are stored as a .csv file with the default name of “plot(n).csv” where (n) is the number of the previous plot file +1.


### Step 1

Press  Add Vehicle button.





### Step 2



Press  **START** to begin recording a Plot File.

The  recording symbol will animate while the Plot is being recorded.

Press  **STOP** to end the recording.

Press  **CLEAR** to erase the current recorded Plot.

Press  **Rename** to give the current Plot a new name.

After you have finished recording your files they can be viewed on your PC.



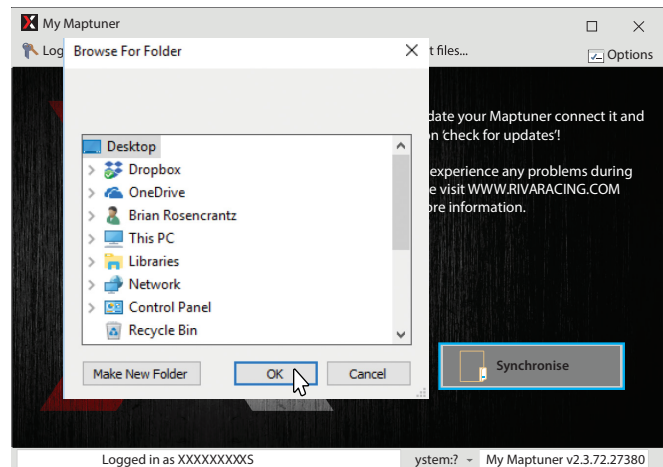
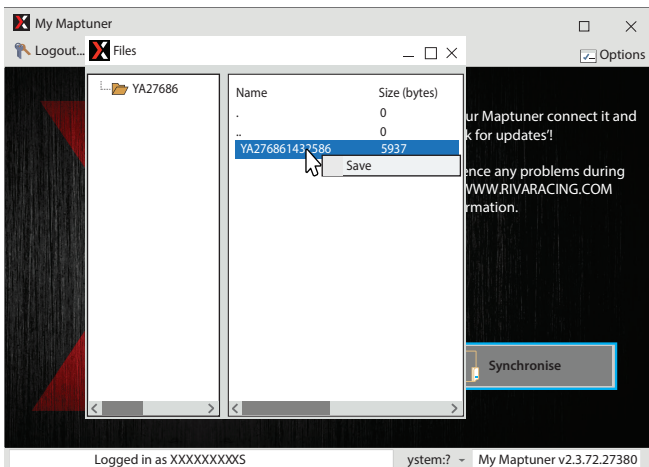
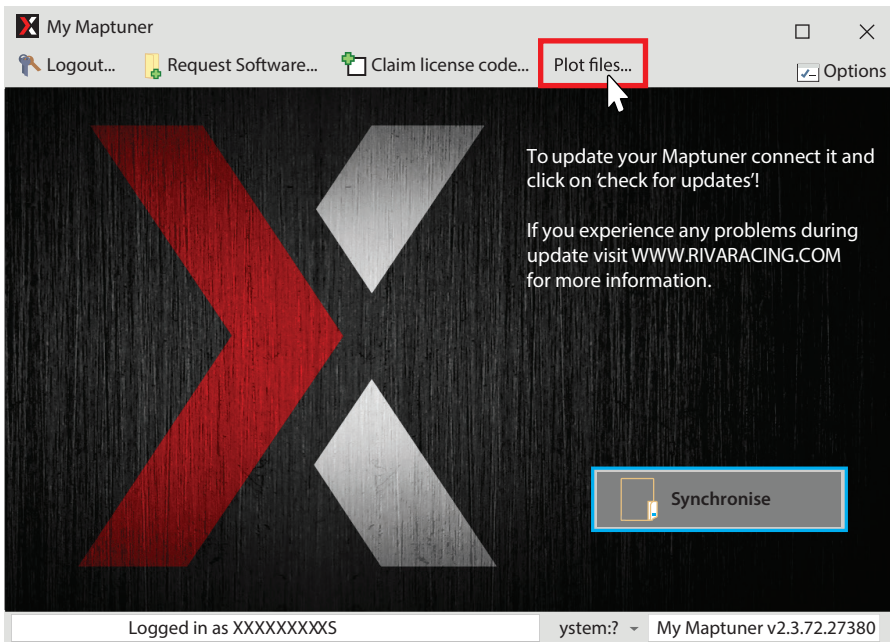
## Step 3

Logs may be viewed on your PC using the MyMaptuner App and a spreadsheet application such as Microsoft Excel.

To view recorded Plot files connect the Maptuner device to the PC using the supplied USB cable.

Open the MyMaptuner application

Click on Plot Files in the toolbar



The Files window will open. Right click the file that you wish to save and select “Save.” The Browse window will open allowing you to select a location on your PC to save the Plot file. Once you have saved your Plot file(s) you can open them on your computer using Microsoft Excel or a specialized log viewer application.

## Section 4. Viewing a Log

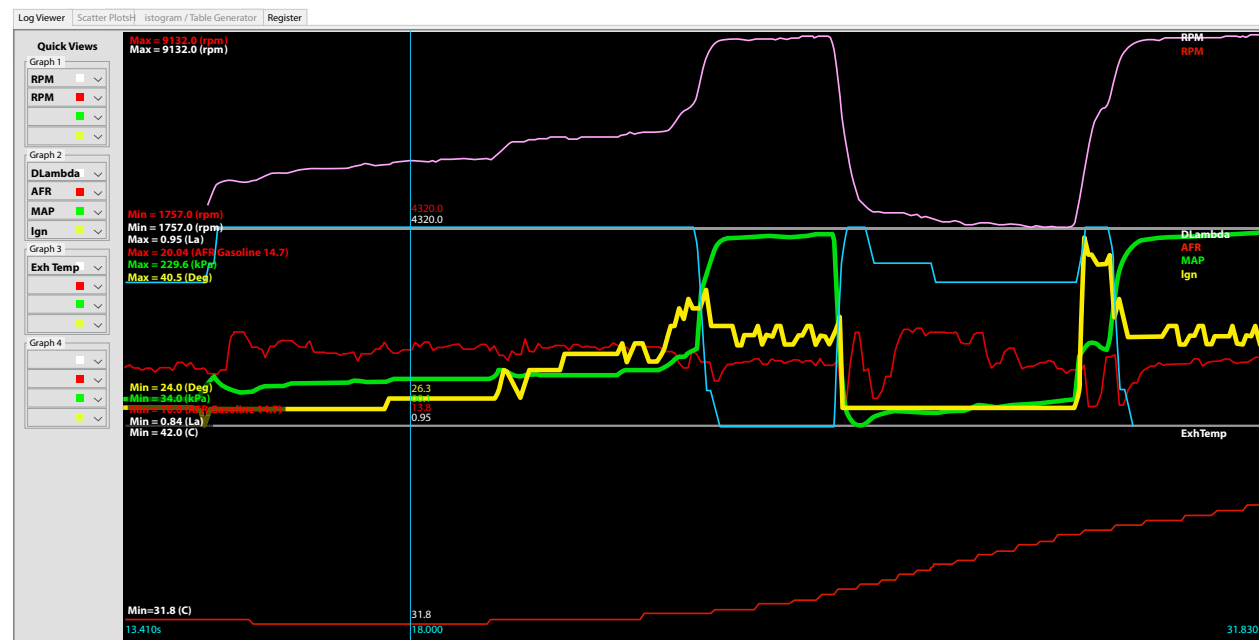
You can open plot files with Microsoft Excel. If you do, the default view will be a screen full of columns and rows of information that can be difficult to understand. An example is shown below:

Time	AFR	Volts	MAP	IgnCyl1	IgnCyl2	IgnCyl3	Ign	ExhTemp	DLambda	Speed	RPM	TPS	EngTemp	IAT	PedalPos	Volt
s	AFR Gasol	V	kPa	deg	deg	deg	Deg	C	La	km/h	rpm	%	C	C	%	V
13.41	12.94	13.59	59.4	15.8	15.8	15.8	25.5	32	0.92	7	1798	5.5	65	36	0	13.6
13.48	13.06	13.59	59	20.3	20.3	20.3	25.5	32	0.92	7	1760	5.5	65	36	0	13.6
13.55	12.94	13.55	59	23.3	23.3	20.3	25.5	32	0.92	7	1815	5.9	65	36	0	13.6
13.62	12.94	13.55	59.2	17.3	17.3	14.3	25.5	32	0.92	7	1842	5.9	65	36	0	13.6
13.69	12.82	13.59	59.4	15	17.3	17.3	25.5	32	0.92	7	1793	5.9	65	36	0	13.6
13.76	12.94	13.59	59.6	21	18	18	25.5	32	0.92	7	1878	5.9	65	36	0	13.6
13.83	12.94	13.59	59.6	13.5	13.5	12.8	25.5	32	0.92	7	1848	5.9	65	36	0	13.6
13.9	12.71	13.55	59.6	14.3	14.3	15.8	25.5	32	0.92	7	1819	5.9	65	36	0	13.4
13.97	12.94	13.61	59.5	19.5	19.5	20.3	25.5	32	0.92	7	1757	5.9	65	36	0	13.6
14.04	12.94	13.61	59.5	21	18.8	18.8	25.5	32	0.92	7	1858	5.9	65	36	0	13.6
14.13	12.94	13.55	59.4	13.5	13.5	14.3	25.5	32	0.92	7	1791	5.9	65	36	0	13.6
14.19	12.86	13.59	59.5	21	21	21	25.5	32	0.92	7	1781	5.9	65	36	0	13.6
14.26	13.18	13.55	59.4	19.5	17.3	17.3	25.5	32	0.92	7	1884	5.9	65	36	0	13.6
14.33	13.18	13.55	59.2	12	12	12	25.5	32	0.92	7	1806	5.5	65	36	0	13.5
14.4	13.02	13.61	59.3	17.3	19.5	19.5	25.5	32	0.92	7	1822	5.5	65	36	1	13.6
14.47	13.18	13.51	59	21	21	17.3	25.5	32	0.92	7	1877	5.9	65	36	1	13.6
14.54	12.9	13.57	59.4	15	15	25.5	25.5	32	0.92	7	1890	9.8	65	36	4	13.3
14.61	12.9	13.57	62.1	25.5	25.5	25.5	25.5	32	0.92	7	1951	14.5	65	36	5	13.6
14.68	12.94	13.53	71.7	24	24.8	25.5	24	32	0.92	7	2287	14.9	65	36	7	13.6
14.75	12.67	13.57	77.4	24	25.5	25.5	25.5	32	0.93	7	2675	16.1	65	36	7	13.6
14.82	12.67	13.57	82.1	25.5	25.5	25.5	25.5	32	0.93	7	3063	14.5	65	36	7	13.6
14.89	12.63	13.67	77.5	25.5	25.5	25.5	25.5	32	0.95	7	3418	14.1	65	36	7	13.8
14.96	12.86	13.69	73.2	25.5	25.5	25.5	25.5	32	0.95	7	3506	14.1	65	36	7	13.6

Logs are best viewed with a specialized log viewer application.

We recommend using **MegaLogViewer HD**: <https://www.efianalytics.com/MegaLogViewerHD/>

Megalog is a very powerful log viewing tool that converts tables into viewable graphs and scales .



There are other log viewers that can be used with Maptuner Plot files. You may view logs with any viewer you choose. Maptuner and RIVA have no affiliation with EFI Analytics.

## Section 5. Installing MegaLogViewer HD

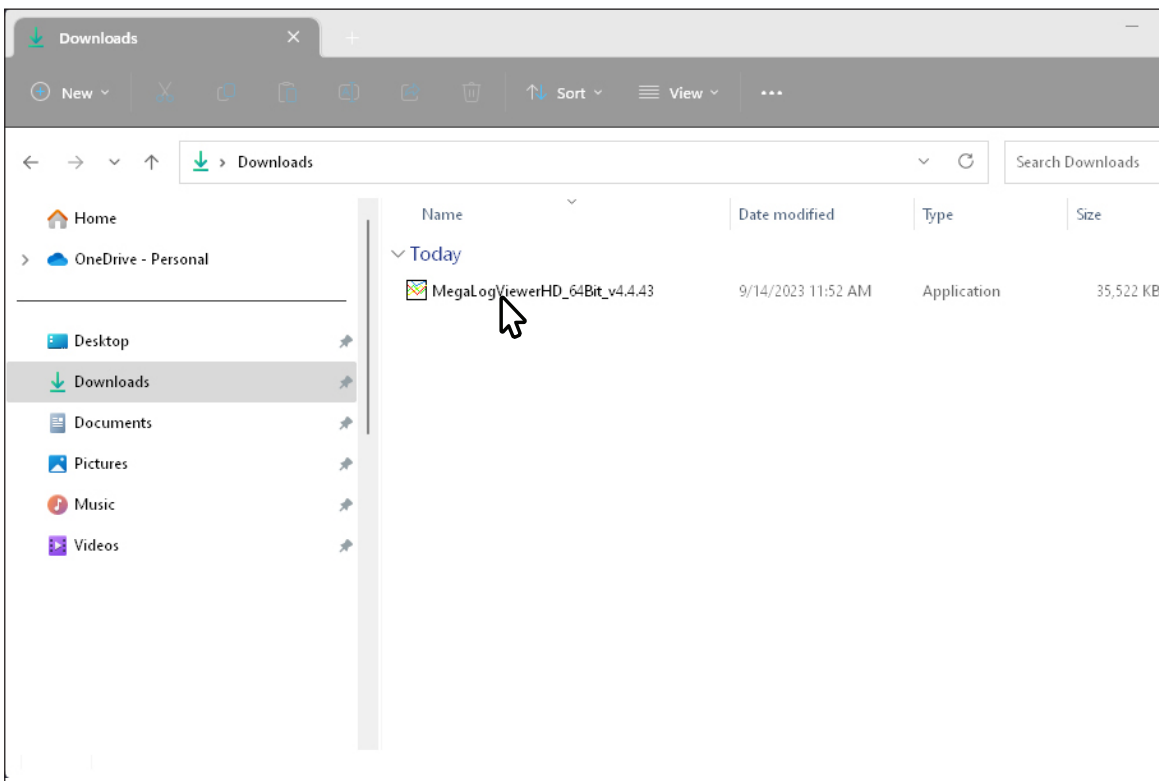
To download MegaLogViewer HD, open a web browser and go to:

<https://www.efianalytics.com/MegaLogViewerHD/download/>



Select the Windows file to download that pertains to your computer.

Navigate to your 'Downloads' folder to install MegaLogViewer HD.



Double-click the file to initiate the installation process. If prompted by Windows or Anti-virus software, click 'Yes' to allow changes to be made to your computer. This is necessary to allow the installation of MegaLogViewer HD software.

Follow prompts to complete installation process and open MegaLogViewer HD.

You may now use the free version of MegaLogViewer HD for basic data review. A paid version is available to access more features and functionality. We recommend upgrading for advance tuners.



**Buy MegaLogViewer HD Today!**  
Unlock paid features and get the most out of your datalogs

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Already have a registration key  
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## The Key to a Perfect Tune is Understanding the Data!

View, Analyze, Tune... Tuning from data, simplified!

In today's world the most important tools are no longer found in your toolbox. Just think, in the 1980's Top Fuel dragsters made 2500 hp using a 500 cubic inch ( 8.2 Liter) Aluminum Hemi headed engine, as amazing as this might sound, today this same displacement and very similar looking hemi headed engines are making over 8000 hp! Why? It is all about optimizing all aspects of the engine to improving efficiency. This demands the tools to gather data so you can understand what is happening inside the engine and identify opportunities to improve efficiency.

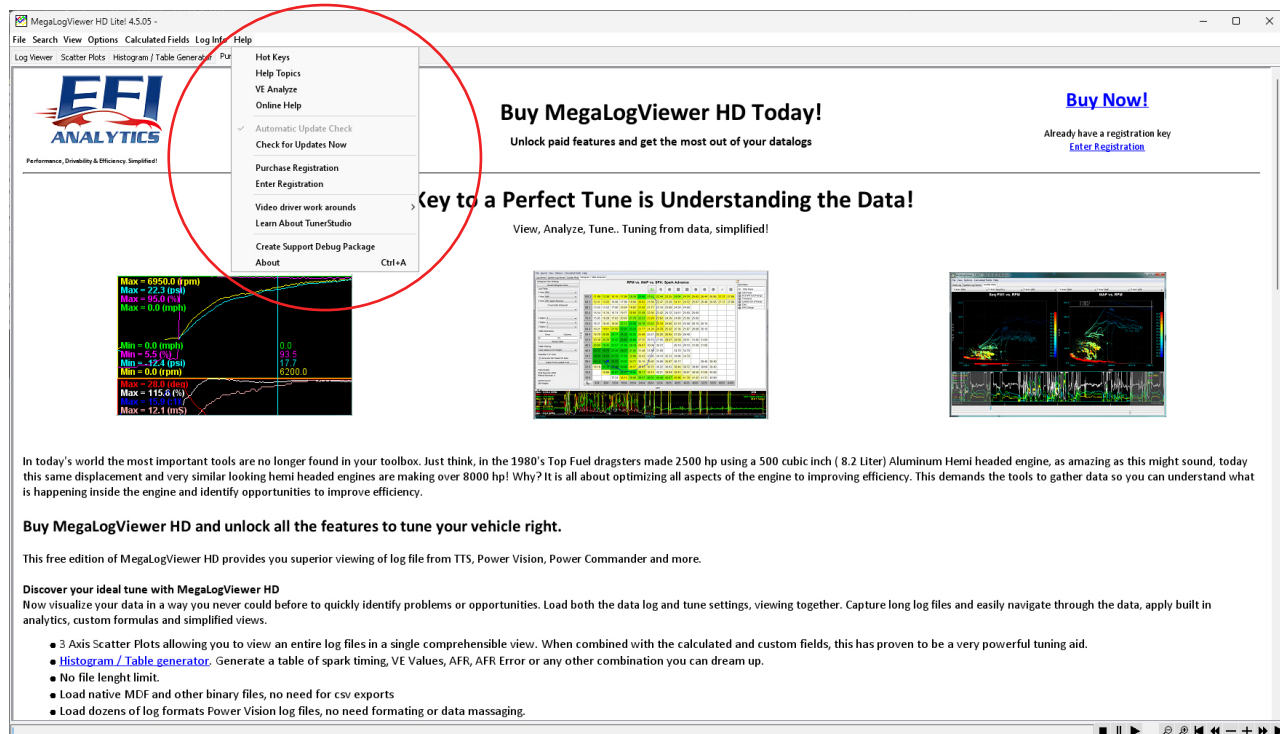
**Buy MegaLogViewer HD and unlock all the features to tune your vehicle right.**

This free edition of MegaLogViewer HD provides you superior viewing of log file from TTS, Power Vision, Power Commander and more.

**Discover your ideal tune with MegaLogViewer HD**  
Now visualize your data in a way you never could before to quickly identify problems or opportunities. Load both the data log and tune settings, viewing together. Capture long log files and easily navigate through the data, apply built in analytics, custom formulas and simplified views.

- 3 Axis Scatter Plots allowing you to view an entire log files in a single comprehensive view. When combined with the calculated and custom fields, this has proven to be a very powerful tuning aid.
- [Histogram / Table generator](#). Generate a table of spark timing, VE Values, AFR, AFR Error or any other combination you can dream up.
- No file length limit.
- Load native MDF and other binary files, no need for csv exports
- Load dozens of log formats Power Vision log files, no need formatting or data massaging.

For assistance or support with MegaLogViewer HD click 'Help' in the main menu bar. Maptuner and RIVA have no affiliation with EFI Analytics.



**Buy MegaLogViewer HD Today!**  
Unlock paid features and get the most out of your datalogs

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## Technical Support & Warranty

**Tech Support Hours:** M-F 9am-6pm EST/US

**Address:** 3671 North Dixie Highway, Pompano Beach, FL 33064 - USA

**Phone:** 954-247-0705

**Email:** [tech\\_support@rivaracing.com](mailto:tech_support@rivaracing.com)

### RIVA MaptunerX Limited Service Warranty Policy

1 year limited warranty on RIVA MaptunerX equipment. For 1 year from the date of original retail purchase, this RIVA product is warranted against defects in material or workmanship. Defective product will receive free repair.

- This warranty applies only to the original purchaser from an authorized RIVA dealer and may not be transferred. Authorized dealers are identified online at [www.rivaracing.com](http://www.rivaracing.com).
- The warranty period for any RIVA MaptunerX product or part used for industrial, professional, or commercial purpose is one year.
- This warranty is void if the product has been used for rental purpose.
- This warranty does not cover damage resulting from modification, alteration, or unauthorized repair.
- This warranty only covers defects arising under normal usage and does not cover any malfunction, failure or defect resulting from misuse, abuse (including overloading of the product beyond capacity and immersion in water or other liquid), accidents, neglect, or lack of proper installation, and improper maintenance or storage.
- This warranty does not cover normal deterioration of the exterior finish, including but not limited to scratches, dents, paint chips, broken screen, or to any corrosion or discoloring by heat, abrasive and chemical cleaners.

### How to Obtain Service

For warranty service, please contact RIVA Racing Customer Support at 954-247-0705 or by email at [tech\\_support@rivaracing.com](mailto:tech_support@rivaracing.com). When requesting warranty service, you must present the original dated sales receipt.

### Additional Limitations

RIVA Racing agrees to repair or at RIVA's option, replace any defective unit without charge, if product is returned to RIVA Racing freight prepaid within the warranty period. Any equipment returned which, in RIVA's opinion, has been subjected to misuse, abuse, overheating or accident shall not be covered by this warranty.

RIVA Racing shall have no liability for special, incidental or consequential damages or injury to persons or property from any cause arising from the sale, installation or use of this product.

No other warranty, express or implied, including, but not limited to the implied warranties of merchantability and fitness for a particular purpose, applies. Various states do not allow for the limitation of incidental or consequential damages and therefore the above exclusion or limitation may not apply to you.

Warranty does not include the expenses related to freight or transportation of parts or compensation for any inconvenience or loss of use while being repaired. A copy of the original invoice and a Return Authorization Number (RA#) must accompany all warranty claims. Warranted replacement parts will be returned freight collect.