ELECTRIC BIKE
SOFTWARE PROVIDER

2015 - Press kit
The ever-changing sports industry is setting greater standards when it comes to high-tech equipped gear. Cycling is not the exception and there is evidence that the electric bike segment is experiencing a year on year growth, not only at a professional sports level but also as a preferred means of transportation for conventional commuters in developed markets. Accurate displayed routes and battery range information turns vital for e-bikers to reach their final destinations, or desired training goals.

GPS Tuner’s proficient navigation technology and superb eBike battery management system, brings the users absolute confidence when riding. It specializes in eBike software and App development, and their integration to dedicated devices and eBike systems. With sound experience in this field, GPS Tuner offers a turnkey solution that provides a flexible and quick integration to new and advanced technologies such as Bluetooth LE, ANT+ and eBike CANBus.
GPS Tuner as a software was first developed in 2003. Shortly after launch it became a best-selling favorite GPS tool among off-roaders as a reliable and versatile application suiting the needs of outdoor enthusiast and professional users alike.

From its early stages GPS Tuner built a best in class generation of off-road navigation software for PDAs, smartphones and dedicated devices.

In recent years, the company has expanded its product portfolio beyond the outdoor navigation field, gradually shifting towards the cycling industry, particularly electric bicycles. Its latest development, ‘eBike Tuner’, is a blend of navigation features empowered with an eBike battery management system.

GPS Tuner is dedicated to continuously improve the software, its industry knowledge and experience. Its aim is to enrich outdoor and cycling activities through continuous product excellence, by anticipating market trends and continuously implementing users’ feedback.
COMPANY FACTS

- Award winning Navigation software since 2003
- Privately held Hungarian Company
- Head Quarters in Budapest, Hungary
- 25 Employees
- OEM Software partner for MiTAC, TranzX, Baros, Bryton, Microsoft, Asus, Pearl, ViewSonic, etc.
- Software provider of the best selling GPS Leisure device of 2013 and 2014 in Germany by GFK.
- Over 1 Million Users downloaded our apps around the world
- Multi-platform offerings: Windows Phone, iPhone, Android and Windows CE
- International software coverage, across North America, Europe, Australia, Africa and Asia
- Exhibiting at high profile tech and cycling events: CES Las Vegas, Taipei Cycle, Computex Taipei, Eurobike & MWC Barcelona
PARTNERSHIPS

- MiTAC (Mio and Magellan)
- TranzX
- Baros
- Bryton
- Microsoft
- Asus
- Pearl
- ViewSonic
EBike Tuner software or App by GPS Tuner has been developed with the mind of e-bike users. The tool’s multifunctional capabilities allow users to carry a complete solution that can display all essential e-bike related information and eliminate battery anxiety. With its sophisticated learning algorithm, the software delivers real range calculation by using the elevation model of the road network along with users’ current statistics. The tool also comprises advanced navigation features through different map content providers as well as exciting training tools. EBike Tuner as a software or App is available for Original Equipment Manufacturers (OEMs) of navigation devices and electric bicycles manufacturers. Offers a turnkey solution to convert CANBus to USB, CANBus to BLE and CANBus to ANT+ or any combination of above including hardware, protocol, and firmware.
LEARNING ALGORITHM

for most precise route planning and range calculations. Monitors the user’s performance and habits, along with the e-bike’s battery performance in different situations to give the most precise range and battery predictions.

RECURSIVE HEIGHT ANALYSIS (RHA)

for accurate e-bike range calculation. Real range calculation that uses the elevation model of the road network and performs active analysis based on user’s current statistics and variable conditions.
## SOFTWARE SPECS

**DEDICATED DEVICES**

**SMARTPHONES**

<table>
<thead>
<tr>
<th>Supported OS</th>
<th>windows CE, Android</th>
<th>iOS, Android, Windows Phone</th>
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<table>
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<tr>
<th><strong>E-bike Connection</strong></th>
<th>USB, Bluetooth</th>
<th>Bluetooth</th>
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<tbody>
<tr>
<td>Via CAN-to-USB and CAN-to-BLE converter</td>
<td>Via CAN-to-BLE converter</td>
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<thead>
<tr>
<th><strong>Functions</strong></th>
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<tbody>
<tr>
<td>Integrated e-bike Display</td>
<td>Integrated e-bike Display</td>
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<tr>
<td>Recursive Height Analysis</td>
<td>Recursive Height Analysis (online/offline)</td>
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<tr>
<td>Assistance recommendations</td>
<td>Assistance recommendations</td>
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<tr>
<td>E-bike optimized route planning</td>
<td>E-Bike optimized route planning (online/offline)</td>
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<tr>
<td>Turn-by-turn voice guidance</td>
<td>Turn-by-turn voice guidance</td>
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<tr>
<td>Learning algorithm</td>
<td>Learning algorithm</td>
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<tr>
<td>Bike diagnostic (if available)</td>
<td>Bike diagnostic (if available)</td>
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<tr>
<th><strong>Supported Maps</strong></th>
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<tbody>
<tr>
<td>OSM, Here, TomTom, IGN, KOMPASS (offline)</td>
<td>OSM, Google, Bing, Apple Mapping (online/offline)</td>
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<tr>
<th><strong>Options</strong></th>
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<tr>
<td>Offline/cloud-based management tool</td>
<td>Offline/cloud-based management tool</td>
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**OEM SOLUTIONS**

- Offers a modular solution that can easily be tailored to fit most e-bike systems and dedicated GPS devices

- Customizable User Interface to meet customers’ brand requirements

- Specializes in integration to new and advanced technologies, such as Bluetooth LE, ANT+ and e-bike CANBus

- Can run on dedicated devices and on all major smartphone platforms (Windows Phone, Android, iOS and Windows CE)

- Online Solutions - cloud-based maps and routing services
  Offline Solutions - all maps and the routing engines are present on the device with various map content support, i.e. raster and vector forms are available

- Can provide selected functionalities via Online or Offline API support

- Flexible and quick integration with deep understanding of customers’ parameters and rapid adjustment to fast changing requirements

- Specializes in integration to new and advanced technologies, such as Bluetooth LE, ANT+ and e-bike CANBus

- Offers a modular solution that can easily be tailored to fit most e-bike systems and dedicated GPS devices

- Can provide selected functionalities via Online or Offline API support
EBike Tuner provides isolated functionalities via API, allowing customers to use selective features depending on their needs. API can be Online or Offline from features like map display, routing services and turn instructions or POI search, to ebike related functions like range calculation or battery management.

### API Support

<table>
<thead>
<tr>
<th>Feature</th>
<th>Online</th>
<th>Offline</th>
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<tbody>
<tr>
<td>Map Display</td>
<td>✔️</td>
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<tr>
<td>Routing Services</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td>Turn instructions</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td>Address/POI search</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td>eBike Support (range calculation, battery management...)</td>
<td>✔️</td>
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END-USER BENEFITS

- Decreases ‘battery anxiety’ by delivering active and accurate battery range information
- Allows the user to optimize battery power delivery by suggesting multiple routes based on continuous route elevation analysis and other variable conditions
- Comprehensive, easy to read heat-map range display for optimal and quick decision making
- Multiple integrated device support for HR monitor, speed, cadence, power meters, etc., via Bluetooth and ANT+
- Automatic gear shifter (Di2)
- SMS and incoming call support
- Integration to indoor training devices like Tacx and Elite
- Multiple training, navigation and bike computer features
INTEGRATION FLOW
**FEATURES**

- Integrated e-bike display for battery capacity, range, gear, power and battery consumption
- Recursive Height Analysis (RHA) for accurate e-bike range calculation and display
- Assistance recommendations ensure that the desired battery charge remains when the destination is reached
- Calculating the most appropriate Assist Level to reach your destination

- HR zone training with instant graph display
- ANT+ and Bluetooth integration for Heart rate, Cadence and E-bike battery display or analysis
- Training modes with route planning based on distance, time or desired calories to be burned
- Configurable bike computers with quick change display options
FEATURES

Route planner with easy multi-point re-planning options

Turn by Turn voice guidance for Pedestrian, Bike and Car navigation

Address Search function with house numbers

Compass view for beeline navigation

POI search around your route or different positions

Creation of complex routes including up to 7 waypoints

Import of trips with POIs, pictures, info from external websites

Display of maps in raster format from different providers
Mit TranzX, Brose und Ansmann bieten jetzt drei E-Bike-Motorenhersteller die Steuerung und Navigation mit Teasi Volt …

Nach einer Arbeitstagung trafen sich im thüringischen E-Bike-Innovationszentrum Tanna die Macher des Teasi Volt: Hersteller Baros (a-Rival), KOMSA für den Vertrieb und GPSTuner aus Ungarn als Software-Lieferant. pocketnavigation.de war exklusiv eingeladen und durfte einen Blick auf die neuen E-Bike-Navis werfen.

www.pocketnavigation.de
Barcelona, Spain: Electric bikes are somewhat like electric cars: battery level and “driving” behavior determine how far you can go, still you need some sophisticated software to calculate that taking into account elevation, etc. Many companies are doing that for cars but still very few for e-bikes. This is an area where GPS Tuner, which develops navigation software for bicycle and hikers, is focusing on.

At the Mobile World Congress in Barcelona GPS Business News met with Tamas Nagy, CEO at GPS Tuner.
After several cycles of intensive product development, GPS Tuner presented at Eurobike ‘14 the first full integration of its ‘eBike Navigation’ software embedded into one of the largest eBike System manufacturers. The tool proved to be running at its full capacity throughout the show where various eBike manufacturers perceived the benefits of embedding the software into their system.

While an integration of this kind can be very complex, given the different protocols that each manufacturer manages, GPS Tuner’s advantage resides on its ability to gain a quick understanding of customers’ parameters and translate them into technologies using BLE, ANT+ or eBike CAN bus. Once the data is converted into one of the previous formats, this is then displayed into a smartphone or a dedicated device with the option of a customized UI (User Interface) to meet customers’ brand requirements.

This year Eurobike demonstrated to be no ordinary show for GPS Tuner, where the interest of eBike manufacturers on linking a battery management software into their products was perceived as a priority and a measure to meet end-user’s demands.
VIDEO

E-BIKE TUNER (30 SEC)

http://youtu.be/I7ChuW9fEGQ
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