E-bike Diagnostic Tool
CanBus Box and USB

Ver. 20150901
# Table of contents

- Announcements
- System requirements
  - Mini USB 5P Cable
  - CanBus Box
- Download software from TranzX Website
- LogiX Installation
- Getting Started
  - Mini USB
  - CanBus Box
- LogiX interface
- Bike data interface
- Bike information
  - Search
  - History
- Service interface
  - Software update
  - Diagnose
- Setting
  - Bike
  - Power support
- Support
  - LogiX
  - Service manual
  - Error code
- Register
- I2C Programmer
- About
Announcements

Before you start with the Diagnostic Box, please make sure all cables and adapters are firmly connected to the E-Bike and Diagnostic Box. Please follow the instructions during each procedure.

System requirements

The following list is the minimum PC requirement for using the software.

Processor:
- PC with a Pentium III-class 600 MHz or up

Memory:
- 1GB up for Windows 7, 8 and Windows 10.

Operating System:
- Windows 7, Windows 8 and Windows 10

Browser:
- Internet Explorer 9.0 and above

Adobe Flash (plug-in):
- Version 10 and above

Adobe reader:
- Version 11 and above

.NET Framework
- Version 4.5 and above

Diagnostic Tool:
- CanBus Box, USB Cable, E-Bike Connector Cable
- Mini USB 5P Cable
- ICD2 or KIT3 (for I2C programming)
LogiX user manual

Mini USB 5P Cable

- The Mini USB 5P Cable can be connected directly to the USB port in the controller of an E-bike. The Mini USB can be used to program the software and diagnose TranzX system.

CanBus Box

- The CanBus is used to aid in diagnosing TranzX Systems. The CanBus box has to be connected between a bike and a PC. The functions of the CanBus are for data transfer and Electronic Control Unit (ECU) reprogramming.

CanBus Box interfaces
### CanBus Box Technical Characteristics

<table>
<thead>
<tr>
<th>Item</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>112<em>54</em>21mm</td>
</tr>
<tr>
<td>Weight</td>
<td>65 g</td>
</tr>
<tr>
<td>Power source</td>
<td>USB only</td>
</tr>
<tr>
<td>Voltage</td>
<td>4.5V~5.5V (USB power)</td>
</tr>
<tr>
<td>Watt</td>
<td>&lt;1.5W</td>
</tr>
<tr>
<td>LED Display</td>
<td>3 LEDs show the box work state</td>
</tr>
<tr>
<td>Operating Temp</td>
<td>0℃ ~ 50℃</td>
</tr>
<tr>
<td>Storage Temp</td>
<td>-20℃ ~ 70℃</td>
</tr>
</tbody>
</table>

**LEDs**: Three Light Emitting Diodes (LEDs) are located on the front of the CanBus Box.

The green Power LED is always on if the box is connected to PC.
The red Error LED is turned on, when a problem is occurred.

<table>
<thead>
<tr>
<th>Power</th>
<th>Run</th>
<th>Error</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ready: Box is ready to use</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Active: Box is working</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Error: A problem occurred</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>No power input</td>
</tr>
</tbody>
</table>

Turn on flash
Download software from TranzX Website

- Login at TranzX website:  http://www.tranzxpst.com

Input the Username and Password then click “Login” button.
Click the DEALER AREA / Software & Diagnostic tools

Download the LogiX for your OS
LogiX Installation

Installation

Double click the setup icon to start the LogiX installation. And follow the InstallShield Wizard step by step.

At the last step, click “Finish” to complete the installation.
**Getting Started**

E-bike can be connected by Mini USB or CanBus Box. Following the steps as below:

1. **Mini USB**

Step 1. Insert the battery and power ON the system

Step 2. Double click the LogiX_Diagnostic_System icon on the desktop

Step 3. Connect the E-bike and PC by the **Mini USB**
2. CanBus Box

Step 1. Connect the “T” connector to the display cable of E-bike and connect the USB to the computer.

Step 2. Insert the battery and power ON the system

Step 3. Double click the LogiX_Diagnostic_Sytem icon on the desktop
LogiX user manual

LogiX interface

- Login
  - Input the Username and Password then press “Login”

※ Language: English, Deutsch, Nederlands

The connection status will be shown on the windows
- If the connection to the sever and bike are connected, it will shows “V”
- If the connection to the sever or bike is fail, it will shows “X”, please check your internet or reconnect the bike.
1. BIKE DATA - Bike information

<table>
<thead>
<tr>
<th>Limits of authority</th>
<th>Connect to bike</th>
<th>Connect to internet</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>OEM and dealer</td>
<td>Yes</td>
<td>Not need</td>
<td>Mini USB or Diag Box</td>
</tr>
</tbody>
</table>

The page will show the entire information about the bike that you connected.

2. BIKE DATA - Search

<table>
<thead>
<tr>
<th>Limits of authority</th>
<th>Connect to bike</th>
<th>Connect to internet</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>OEM and dealer</td>
<td>No</td>
<td>Yes</td>
<td>/</td>
</tr>
</tbody>
</table>

Searching any bike’s information from the manufacturer by the Bike ID or Frame ID.

Input the Bike ID or Frame ID here.
3. BIKE DATA - History

<table>
<thead>
<tr>
<th>Limits of authority</th>
<th>Connect to bike</th>
<th>Connect to internet</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>OEM and dealer</td>
<td>Yes</td>
<td>Yes</td>
<td>Mini USB or Diag Box</td>
</tr>
</tbody>
</table>

Viewing the diagnostic reports, errors or part replacement history of the bike that you connected from the time scale.
Choose the history you want to review on the time scale, and then you can see the information or report on the bottom.

Report file:
You can put some comments then save the file in your PC.
Service interface

1. **SERVICE - Software Update**

<table>
<thead>
<tr>
<th>Limits of authority</th>
<th>Connect to bike</th>
<th>Connect to internet</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>OEM and dealer</td>
<td>Yes</td>
<td>Yes</td>
<td>Mini USB or Diag Box</td>
</tr>
</tbody>
</table>

In the page, updating the software of the bike is provided.

(A) **Automatic program** – connect to the bike and click “Program”, the bike software will be updated to newest one.

(B) **Load files** – if you got the software BIN (*.bin) file, you can load the BIN file and update it to the bike.

(C) **Search new version** – input the software code and click “Search new version”, it will download the newest software in the PC.

(D) **Import and Export file** – import or export JDC file(*.jdc)

(E) **Delete** – delete the software from the list

(F) **Program** – update the software that you choose to the bike
2. SERVICE – Diagnostic

<table>
<thead>
<tr>
<th>Limits of authority</th>
<th>Connect to bike</th>
<th>Connect to internet</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>OEM and dealer</td>
<td>Yes</td>
<td>Yes</td>
<td>Mini USB or Diag Box</td>
</tr>
</tbody>
</table>

This page provides you a process to check the function of the electronic parts, please click “Start” to diagnose the E-bike.

※Please following the instructions.
Crank Test: Please turn the crank by the following instruction.
Please following the instructions.

Warning: The motor will rotate by itself, keep everything away from the wheel and crank.
If your bike is with a regular dynamo click “Yes”, if not click “No”.

Light Test: According to the light status, please click “OK” (or press Enter) if the front light and rear light work well or click “NG” if the lights don’t work.
Remote control test: Following the instructions by pressing the buttons.

After all the processes the windows will show the results as below (Green: OK; Red: NG), moving your cursor to the components and you can see the entire information by clicking the “Info” button.
Click to save, the results can be shown as a professional service report.
Parts description:
- Motor Info

- Display Info
**LogiX user manual**

- **Battery Info**

  ![Battery Info](image1)

<table>
<thead>
<tr>
<th>Part Information</th>
<th>Battery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>48 V</td>
</tr>
<tr>
<td>Capacity</td>
<td>15 Ah</td>
</tr>
<tr>
<td>Nominal current</td>
<td>580 W</td>
</tr>
<tr>
<td>Nominal capacity</td>
<td>5kWh</td>
</tr>
<tr>
<td>Nominal energy</td>
<td>36kWh</td>
</tr>
</tbody>
</table>

- **Controller Info**

  ![Controller Info](image2)

<table>
<thead>
<tr>
<th>Part Information</th>
<th>Controller</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>36 V</td>
</tr>
<tr>
<td>Capacity</td>
<td>15 Ah</td>
</tr>
<tr>
<td>Nominal current</td>
<td>580 W</td>
</tr>
<tr>
<td>Nominal capacity</td>
<td>5kWh</td>
</tr>
<tr>
<td>Nominal energy</td>
<td>36kWh</td>
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</tbody>
</table>
Setting – Bike

<table>
<thead>
<tr>
<th>Limits of authority</th>
<th>Connect to bike</th>
<th>Connect to internet</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>OEM / Dealer</td>
<td>Yes</td>
<td>No need</td>
<td>Mini USB or Diag box</td>
</tr>
</tbody>
</table>

Setting the parameters on the page, and then save it to the bike.

Set the settings and then click “Save to bike”
### Setting – Power Support

<table>
<thead>
<tr>
<th>Limits of authority</th>
<th>Connect to bike</th>
<th>Connect to internet</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>OEM</td>
<td>Yes</td>
<td>No need</td>
<td>Mini USB or Diag box</td>
</tr>
</tbody>
</table>

In the page, you can customize a power support curve for your E-bike. Can also load a Default INI file (*.ini) and adjust the curves in every modes.

When you finish the adjustment, please click “Save” then the power support curve will be updated to the E-bike.
Support – Logix
LogiX manual sheet is available here.

Support – Service manual
Service manual sheet is available here.
Support – Error code

Error code sheet is available here.
Register

<table>
<thead>
<tr>
<th>Limits of authority</th>
<th>Connect to bike</th>
<th>Connect to internet</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>OEM</td>
<td>Yes</td>
<td>Yes</td>
<td>Mini USB or Diag box</td>
</tr>
</tbody>
</table>

Fill up those blanks (*red ones must be filled) or load a model template file by clicking the “Select model” button.

After filling those blanks, click the “Registration” button.
After the registration processing, the bike will be OFF, please power ON the bike. After the LogiX connects to the bike, the diagnostic procedure will be started.

※ Please following the instructions.

※ Please following the instructions.
※ Please following the instructions.

※ Please following the instructions.

※ Please following the instructions.
※ Please following the instructions.

If it shows PASS, the registration is finished.
If it shows FAIL, please check the defect parts and do the registration again.

Finish the registration
The page is for updating the non-CanBus system software of the display.

1. Connect ICD2 or KIT3 to your PC and display
2. Input the name of the software in the blank then click “Download”
3. Choose the compatible software then click “Program”
4. If the programming process is success, you will see “Software updated successfully”, if fail, please check the connector and the software version is compatible with the display or not, then try again

※ For HEX file (*.hex), please use “Update from files” button
※ For JCO file (*.jco), please use “Import files” or “Export files” button
About

Software revision:

Double click