

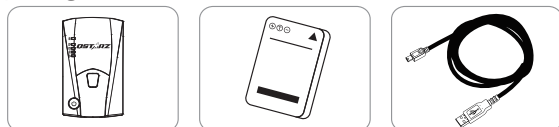


BL-1000ST

# GPS Data Recorder Quick Start Guide

## 01 What's in the box

Please make sure you have everything included in the package



BL-1000ST unit

Li-Ion Rechargeable Battery

Micro USB cable



Scan QR code to download Product Manual and related Software.

<https://qws.qstarz.com/Product/1000ST/DownloadIndex.html>

## 02 Installing the Battery

- Remove the back cover by pushing the battery cover release tab with your thumbnail.
- Insert the battery, and align the battery contacts with the terminals in the battery compartment.
- Place the back cover over the battery compartment, and press it downward until it clicks into place.



## 03 Charging the BL-1000ST

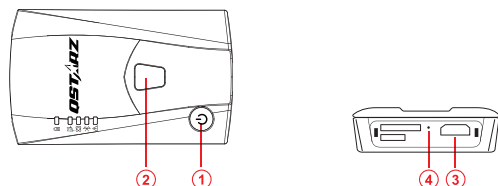
Please FULLY charge the BL-1000ST for the first time use by connecting the supplied Micro USB cable through computer or wall charger.



- Power LED On: On Charging
- Power LED Off: Fully Charged

Caution: Risk of explosion if Battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

## 04 BL-1000ST Function Buttons



- Power button:** Hold 3 seconds to power on or power off device. The three LEDs in the middle will flash alternately when switching on and off, please be sure to wait for the operation to complete.  
Press to show battery status. (Top to down each LED On indicates 20% battery)
- POI button:** Press to record point of interest. Press & hold 1 second to calibrate g-sensor.
- Micro USB Jack:** Device charging/ Downloading/ Updating firmware.
- Reset Button:** Shut down the device (Inside the rubber cover).

## 05 LED Indicators

LED symbol	LED Color	Status	Description
Power	Orange	Flashing	Low Power
	Green	On	Recharging
	Off	N/A	1. Fully charged 2. Device power off or sleep mode
Memory	Orange	Flash 3 times	POI pressed , POI(Point of Interest) is recorded
	Orange	Flash per 2 sec	Low memory (less than 20% left or the records more than 21,600 files)
	Orange	On	Memory is full / SD card error/ the records more than 21,600 files
GPS	Green	On	1.Memory has adequate capacity 2.Device power off or sleep mode
	Off	N/A	GPS position is fixed, device is logging
Bluetooth	Blue	Flash	1.GPS position not fixed 2.Memory is full 3.Device power off or sleep mode
	Blue	On	Searching for device
Alarm	Blue	On	Bluetooth connected
	Orange	On	1.GPS is not connected with satellite 2.Memory is full
	Orange	Flash	Device enter into sleep mode
	Off	N/A	1.GPS position is fixed 2.Device power off

## 06 Beep Code

\*Beep can be turned off from software -> Config GPS.

Status	Beep code	Description
Power On	1 Short beep	One Short beep when device switch On.
Power Off	1 long and 1 short beep	1 long and 1 short beep when device switch Off.
GPS fixed	2 short beep	2 short beep when GPS location is fixed.
POI button	3 short beep	3 short beep when POI button being pressed.
Memory Full	3 long beep	3 long beep when the device is out of memory.
Sleep mode	1 long and 1 short beep	1 long and then 1 short beep when the device enters sleep mode.
Memory error	Long continuous beep	Micro SD Card error or is not detected.

## 07 Acquiring Satellite Signal

- Hold on Power button to power on BL-1000ST.
- Place the device outside under clear view of sky to acquire GPS signals.
- Acquiring GPS signals may take few minutes. The GPS LED is off when it is searching for GPS Satellite signal, and turning to solid Green when GPS is fixed. Then you can start logging data.

## 08 Set up /Firmware Update

- All function must be set up before use. As following: time zone, start recording time, Bluetooth and Buzzer enabled.
- Download and extract the firmware from Qstarz web site: <http://www.qstarz.com/download.php?t=4&m=BL-1000ST>. If you need to update the Bootloader, please also download the latest Bootloader file.
- Power off BL-1000ST and connect with computer via Micro USB cable.
- Copy the firmware file "FW.qst" and Bootloader file "BL.qst" to the root directory of BL-1000ST Micro SD card.
- After copying, please select Safely Remove Hardware and Eject Media (QSTARZ BL-1000ST) in Windows operating system.
- Unplug the Micro USB cable, and firmware update will begin automatically. LEDs will flash in sequence during the update process.
- Once firmware update is completed, the device will turn off automatically. Do not shut down or power off during the update process.

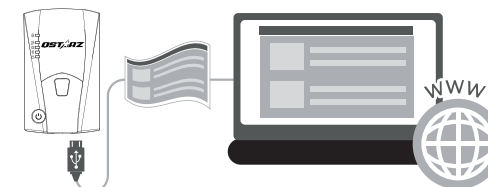
### Note

The failure of the firmware update will cause the device irreparable damage. Before update the latest firmware, please make sure that the battery capacity is over 50% and the back cover is installed.

## 09 Install DataViewer Software

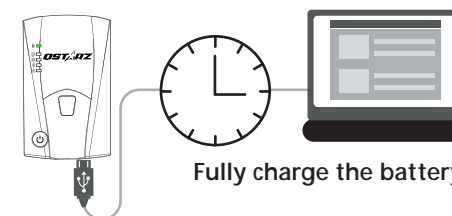
Power off your BL-1000ST device and connect it with Computer, and browse the root directory of BL-1000ST in My Computer. Find the "Download Index\_BL-1000ST.html" file and click it with internet connection. A download webpage will pop-up, then click on the link and follow the on screen steps to install DataViewer software and read related information.

\* DataViewer track data managing software is for PC Windows OS only.

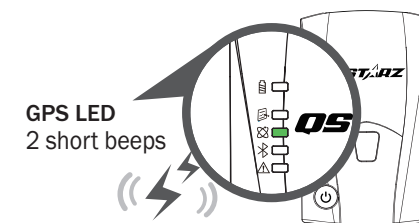


## 10 Start to use

- Fully charge the battery when using at the first time.** A fully charged battery can last up to 25 hours continuously operation (under optimum condition).

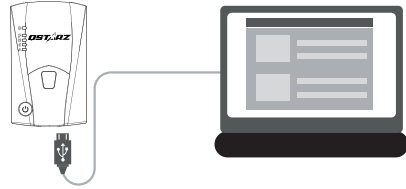


- Getting satellite fixed and record tracks



BL-1000ST is built in GPS module which needs to be used in outdoor environment. Power on your BL-1000ST, and will start to acquire the satellites position. Once the GPS position is fixed, GPS LED will turn to solid Green and you can start record tracks. BL-1000ST can be used to record the travel path or navigate as Bluetooth receiver with handled devices.

### 3. Connect BL-1000ST with your PC

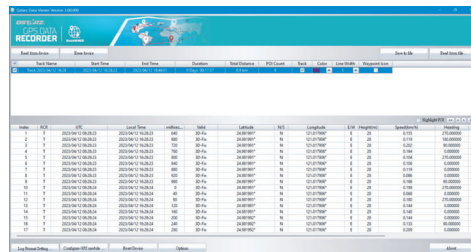


Please turn off device and connect BL-1000ST with your PC by attached Micro USB cable.

#### Note

When BL-1000ST power off, it will first go to data-saving process before shut down. The power off time depends on the length of the recording; wait until it fully shuts down.

### 4. Manage logged files via DataViewer software



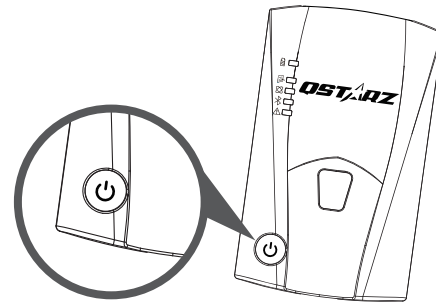
DataViewer™ is Trip Raw Data PC software to manage your data for diversified applications. You can read and view the logged track data easily, and output your track records to GPX / NMEA / KML / CSV / BIN file. Support GPS device configuration, Erase data, or reset device.

## 11 Bluetooth compatibility

- BL-1000ST is compatible with most iOS and Android handheld devices.
- Due to hardware and manufacturer variability, we have not verified compatibility with every Android device.
- Connect with handheld device by Qstarz BLE GPS View App as example.

\* Download the Qstarz BLE GPS View APP on App Store or Google Play

### 1. Power on BL-1000ST.



### 2. Turn on your mobile phone's Bluetooth feature.

- iPhone Setting > General > Bluetooth > On
- Android phone Setting > Wireless & Networks > Bluetooth: On > Searching for available devices > Select BL-1000ST device to make pairing

### 3. Start Qstarz BLE GPS View APP on your phone.

- iPhone: Qstarz BLE GPS View APP will auto search for new BLE device.
- Android phone: Bluetooth pairing is completed. Qstarz BLE GPS View APP will add the new BL-1000ST device into list.



Qstarz BLE GPS View

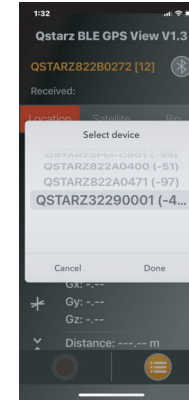


iOS version

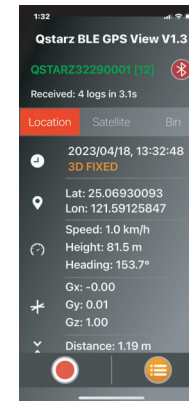


Android version

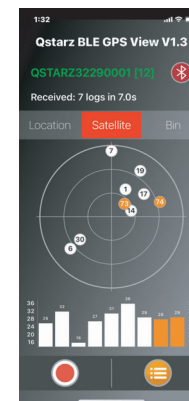
### 4. Your BL-1000ST device ID will be shown with Orange after found. Select the device ID you want to connect, and press Bluetooth icon for iPhone or press turn on slide for Android phone to make connection.



### 5. On APP your BL-1000ST device ID turns to green, and device blue LED will turn to steady On. This means Bluetooth connection is completed and ready to use.



### 6. Start to view GNSS status information, recording GNSS data, save GPS records, or export to CSV files.



## 12 Product Specifications

- Adopt high sensitivity GNSS chip and 3-axis accelerometer
- Bluetooth 4.0 BLE enabled device
- 1Hz Log rate (default set as recording 1 waypoint every 5 second)
- POI button design to record your point of interest immediately
- 5 LED indications to view device status
- Device recognized as USB removable disk for data access with computer conveniently
- Case: Rugged, but not water-resistant
- Power Supply: Rechargeable Lithium-Ion battery, 25hours operation (typical use)
- Temperature: Operating -10~60°C/ Charging 0~45°C/ Storage -20~60°C

## 13 Product Care

- Please take out the battery and store it in dry/cool places when not use for a long period.
- If the device isn't used in temperature between -10°C ~ 60°C, its battery charging capability will decrease.
- Leave the device far from heat or high temperature environment. And also, do not expose your device in temperature higher than 145°F/60°C to prevent the inside battery from overheating, exploding or burning itself. The Lithium battery inside the device should be recycled.
- Do not attempt to open the device by yourself. Unauthorized hacking may damage the unit, and void your warranty.
- Micro SD Card error: If you encounter this error, please take micro SD card reader and plug-in your micro SD card. Use "SD Card Formatter v5.0" tool to execute Quick format to FAT32 format.