CHCNAV

LT800H

ANDROID TABLET User Guide

MAPPING &
GEOSPATIAL

Table of Contents

Preface

Copyright

Safety Warnings

The Global Positioning System (GPS) is operated by the U.S. Government, which is solely responsible for the accuracy and maintenance of the GPS network. Accuracy can also be affected by poor satellite geometry and obstructions, like buildings and heavy canopy.

FCC Interference Statement

This equipment has been designed to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules in the Portable Mode. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

CE Interference Statement

Declaration of Conformity: Hereby, Shanghai Huace Navigation Technology Ltd. declares that this LT800H is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. A copy of the Declaration of conformity can be found at Shanghai Huace Navigation Technology Ltd.

1 Introduction

Thank you for choosing CHCNAV LT800H GNSS RTK Tablet.

This user guide will provide useful information about your receiver. It will also guide you through your first steps of using LT800H in the field.

1.1 Technical Assistance

If you have a problem and cannot find the information you need in the product documentation, contact your local dealer from which you purchased the LT800H. Alternatively, please request technical support using the CHCNAV Website (www.chcnav.com) or CHCNAV technical support email (support@chcnav.com).

1.2 Your Comments

Your feedback about this Getting Started Guide will help us to improve it in a future revision.

Please e-mail your comments to support@chcnav.com.

1.3 Safety Information

This manual describes CHCNAV LT800H RTK Tablet. Before using the LT800H, please make sure that you have read and understood this Getting Started Guide, as well as the safety requirements.

1.4 Warning and Cautions

Absence of specific alerts does not mean that there are no safety risks involved.

A Warning or Caution information is intended to minimize the risk of personal injury and/or damage to the equipment.

WARNING - A Warning alerts you to a potential misused or wrong setting of the equipment.

CAUTION - A Caution alerts you to a possible risk of serious injury to your person and/or damage to the equipment.

1.5 Use and Care

The LT800H is designed to withstand the rough environment that typically occurs in the field. However, the LT800H is high-precision electronic equipment and should be treated with reasonable care.

2 Overview

2.1 Features

LT800H is a high-end GNSS RTK tablet under Android 12 OS. Its dust and waterproof level is IP67 and it can survive 1.2 m fall onto concrete. With 9000 mAh Li-ion battery, it can continuously work up to 8 h. The LT800H tracks GPS + GLONASS + GALILEO + BDS + QZSS.

Item	Specification
Operating System	Android 12.0 GMS certified
CPU	Advanced octa-core CPU 2.0 GHz
RAM	6 GB
ROM	128 GB
Extension	Micro SD card, up to 256 GB
Constellation	BDS: B1I, B2I, B3I, B1C, B2a, B2b GPS: L1C/A, L1C, L2P (Y), L2C, L5 GLONASS: L1, L2 Galileo: E1, E5a, E5b, E6* QZSS: L1, L2, L5, L6* SBAS*: L1, L5
RTK	2 cm HRMS
Autonomous	< 1 m HRMS
Channel	1408
WIFI	Wi-Fi, IEEE 802.11a/b/g/n/ac
Network 4G modem	GSM: 850/900/1800/1900 WCDMA: B1/B2/B4/B5/B8/B19 CDMA EVDO: BC0

	TD-SCDMA: B34/B39 LTE-FDD: B1/B2/B3/B4/B5/B7/B8/ B12/B17/B18/B19/B20/B26/B28 LTE-TDD: B34/B38/B34/B39/B40/ B41
Bluetooth	Bluetooth™ 5.1
USB	Type C/OTG
Li-ion Battery	9000mAh
Voltage	3.8V
Battery Life	8 h
Charging Time	4.0 h Fast charging: QC 3.0
Front Camera	8 megapixels
Rear Camera	16 megapixels
Flashlight	Integrated

2.2 Specifications

Physical specifications

Display

- Size: 8.1” touch screen
- Resolution: 1920 x 1200
- Brightness: 600 cd/m^2
- Touch screen: Capacitive multi-touch, 5 points
- Point touch pen: Mapping pen with high degree of accuracy

- Screen technology: IPS display panel Corning® Gorilla® Glass 3

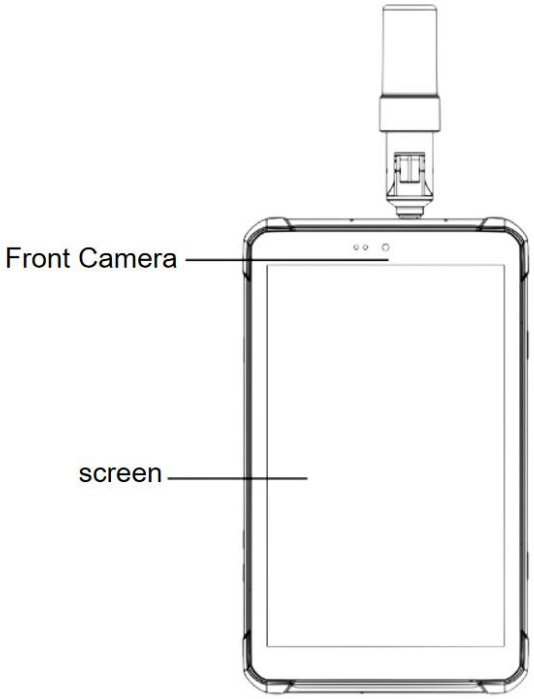
Physical

- Dustproof and waterproof: IP67
- Shock: Survives a 1.2 m drop onto concrete
- Humidity: 5% - 95% RH (without condensation)
- Dimension (L x W x H): 215.5 mm x 130 mm x 14.5 mm (8.5 in x 5.1 in x 0.6 in)
- Weight: 570 g (20.1 oz)
- Operating temperature: -20 °C to +60 °C (-4°F to +140°F)
- Storage temperature: -40 °C to +70 °C (-40°F to +158°F)

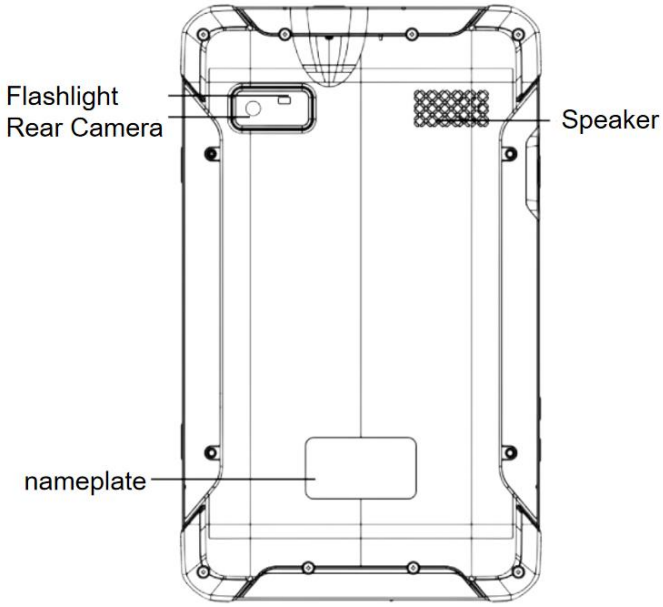
Sensors

- NFC: Support
- G-sensor: Support
- Light sensor: Support
- E-compass: Support
- Gyroscope: Support

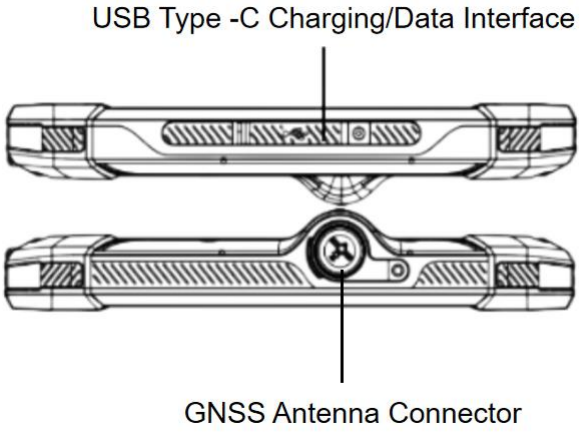
2.3 Front View



2.4 Back View



2.5 Top and Bottom



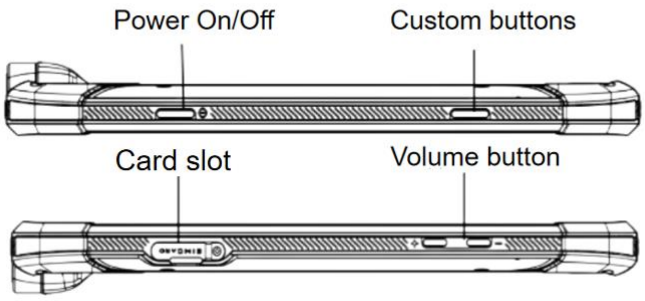
The tablet has a internal rechargeable Lithium-ion battery, charge the battery completely before using it for the first time. To charge the battery, please connect to the AC power via the USB cable and power adapter.

WARNING - Charge the battery only in strict accordance with the instructions. Charging or using the battery in unauthorized equipment or in a wet environment can cause an electric short and damage to the tablet. Do not insert any object into the charging port, it can result in damage to the charging port.

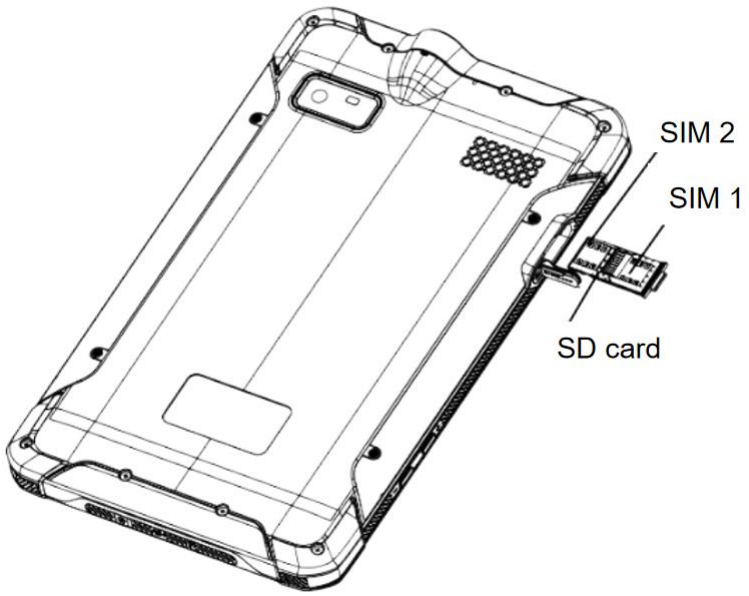
To prevent injury or damage:

•Charge the battery only in CHC authorized equipment. Be sure to follow all instructions that are provided with the battery charger.

2.6 Left/Right Side



2.7 Installation



Please insert the SIM card and the MicroSD card in the direction of the diagram.

3 Basic Operation

3.1 Insert SIM Card and Power On

Refer to **2.7 Installation** to find the SIM card and TF card slot, and then insert the cards into slots correctly.

Before powering on LT800H, please make sure to fully charge the battery. Then long press the power button to turn on LT800H and enter its home screen.

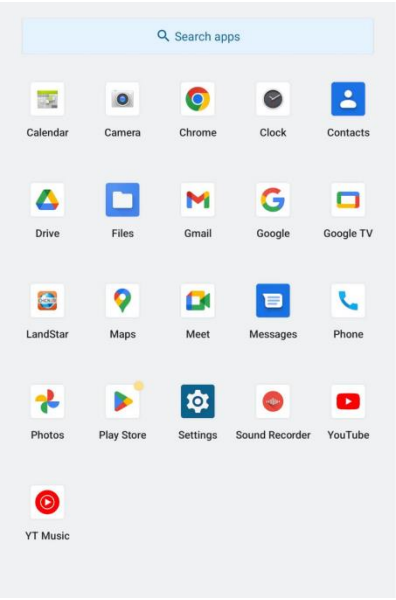
Click to make a phone call.

Click to open a message.

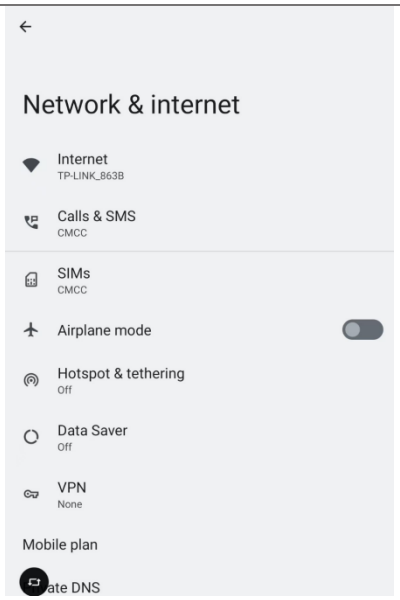
Click to open a calendar.

Click to access contacts information.

Click to turn on the camera.

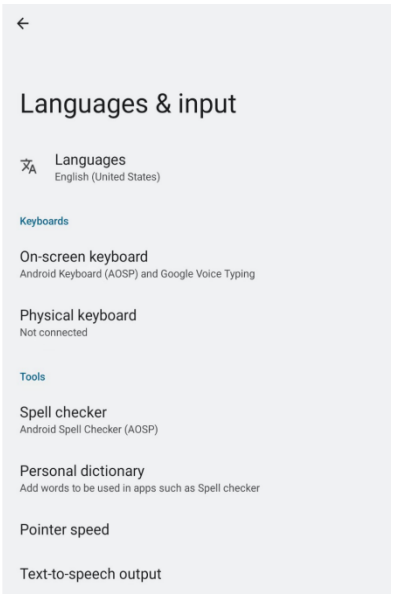


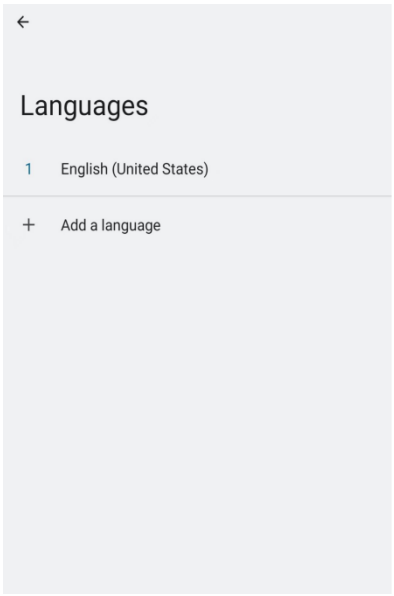
After powering on LT800H, click **Settings**— **Network & Internet** —**SIMS** to turn on the SIM cards.



3.2 Language & Input

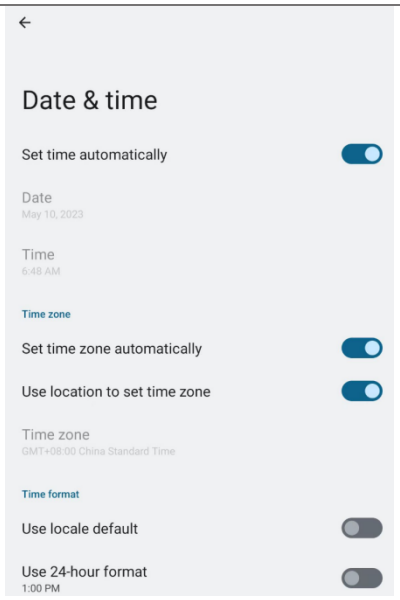
Click **[Settings] – [System]- [Language & input] – [Language]** to select language. If you have not found the language you want to choose, click **[Add a language]** to find the target language.



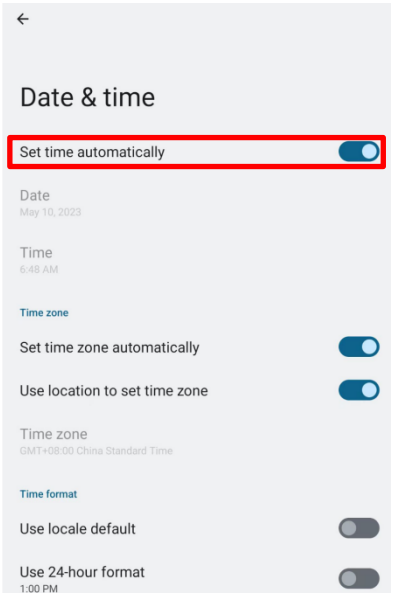


3.3 Set Date & Time

Click **[Settings] – [System]- [Date & time]** and enter **[Date & time]** interface.



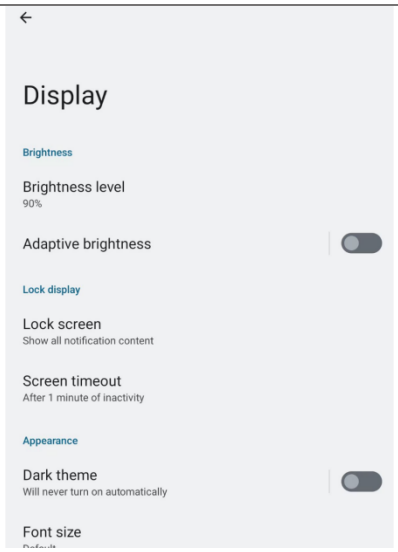
If you want to set date and time by yourself, please turn off the **Set time automatically** first and then click **Date** and **Time** to start your settings.



You can also customize your time zone and choose whether to use the 24-hour format in this interface.

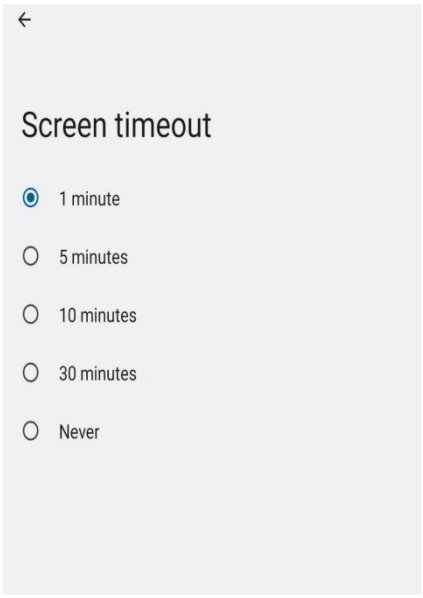
3.4 Display

Click **[Settings] – [Display]** to enter **Display** interface.

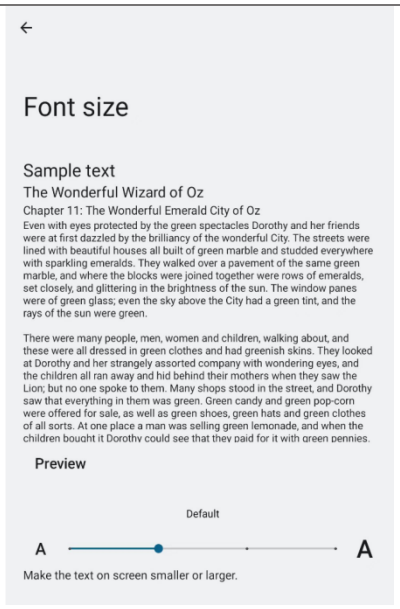


Brightness adjusting: Click **Brightness level** to adjust it according to your preference.

Lock display: Click to optimize the inactivity time LT800H needs to close the screen.

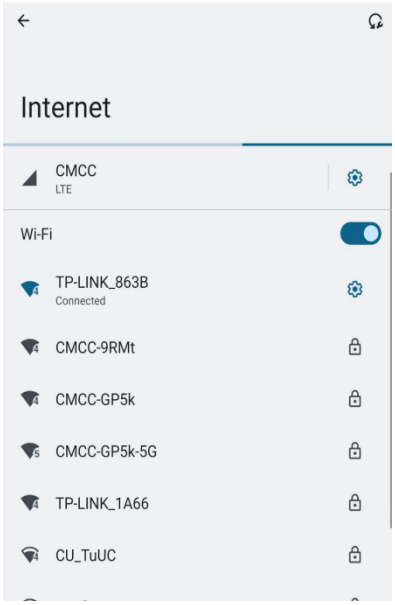


Font size: Click **Font size** to enter Font size interface and then Slide the green dot to change the font size.

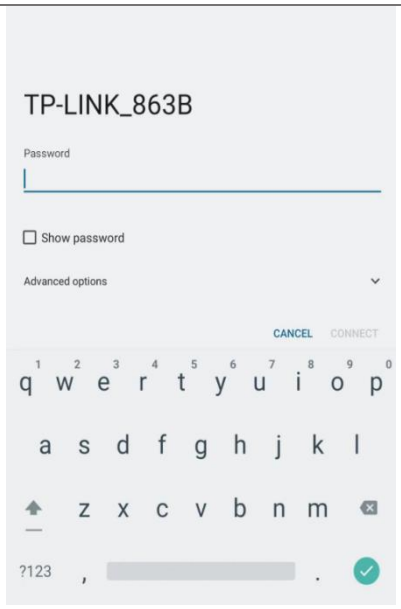


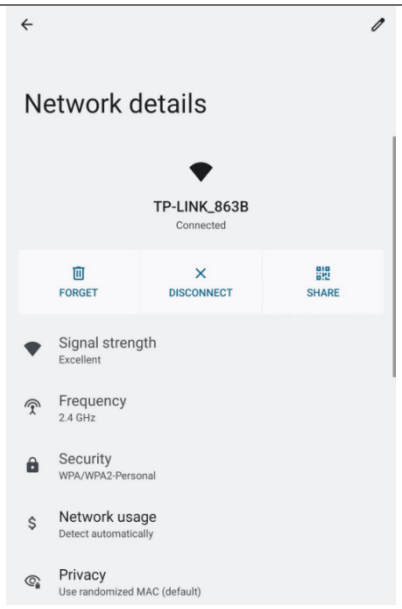
3.5 Wi-Fi

Click **[Settings] – [Network & Internet] – [Internet] – [Wi-Fi]** to switch on the button.



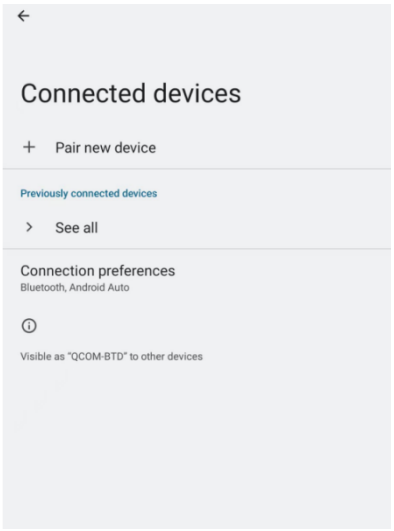
Select **Wi-Fi** and type in its password to connect. After connecting Wi-Fi, the Network info can be checked.





3.6 Bluetooth

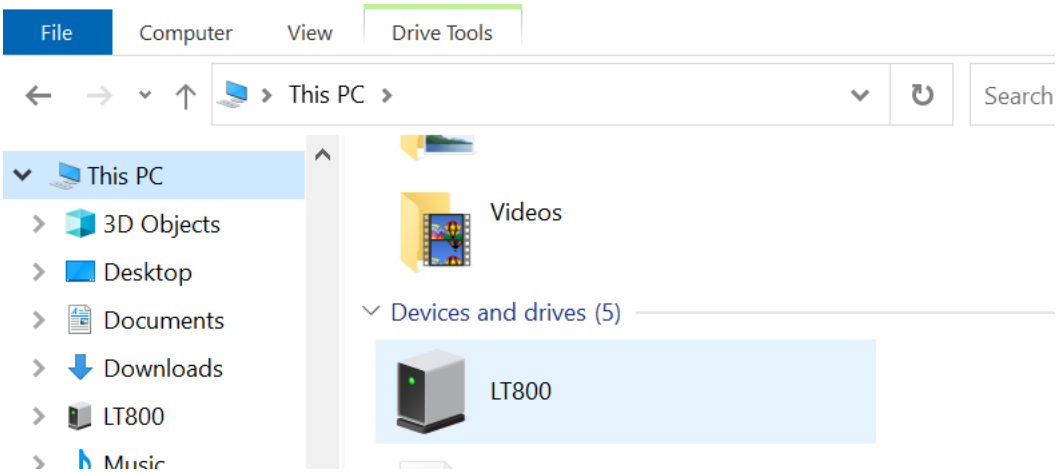
Click **[Settings] – [Connected device] – [Bluetooth]** to find nearby devices and pair with it.



3.7 USB Connection

For connection or data transmission between LT800H and PC, please use the USB data cable as shown below.

After USB data cable connecting with PC, the computer will recognize the storage space of the LT800.



You can also use third party software to manage the documents and data stored in LT800H and install software like GNSS Tool into it.

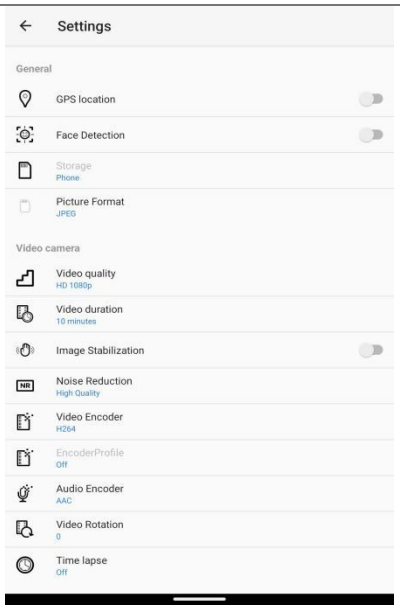
3.8 Use Camera

Click  to select recording the video or panorama mode.

Click  to take a photo.

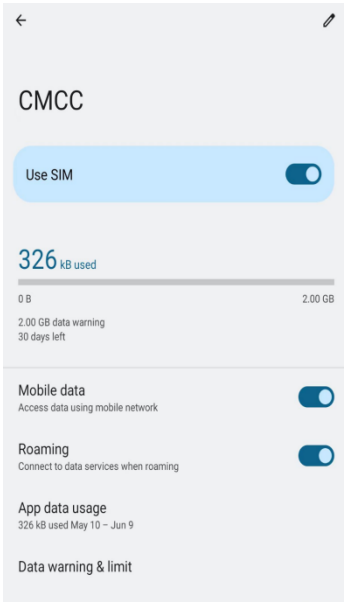
 Camera Settings

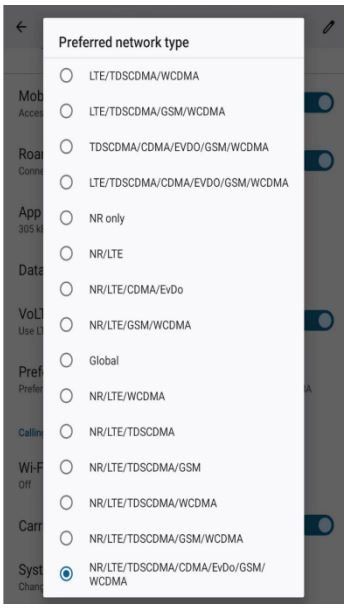
Click to configure related parameters.

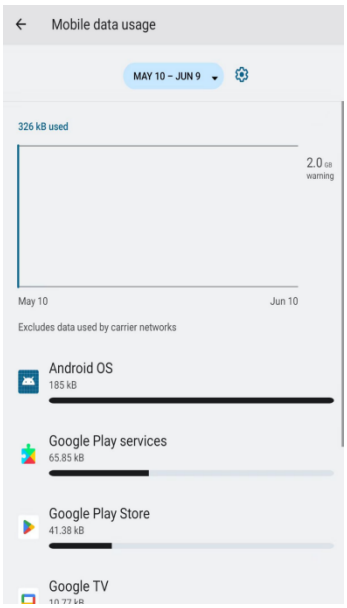


3.9 Log in 4G

After inserting your SIM card, click **[Settings] – [Network & Internet] – [SIMS] – [Preferred network type]** and select corresponding network type of your SIM card. Then turn on **Mobile data** and click **Data usage** to see data usage.



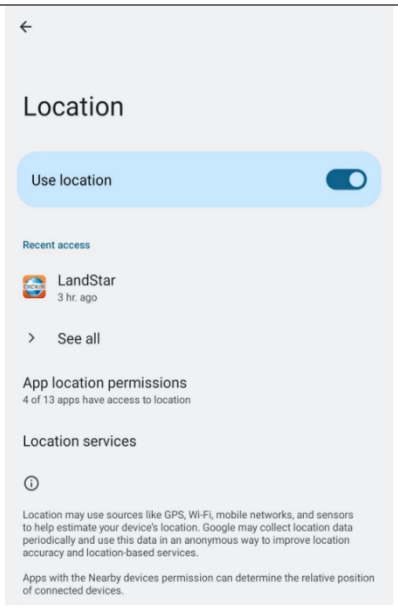




3.10 Location

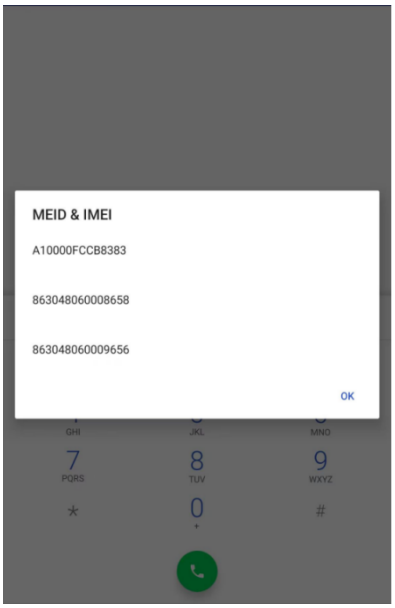
Turn on The Location Service

Click **[Settings] – [Location] – [Use location]** to switch on location service.



3.11 Checking the IMEI Number of The Device

Turn the LT800H on and enter the dialing panel, tap '*#06#', the IMEI numbers show up automatically.



4 Getting Start with LandStar 8

4.1 Connect the LT800H to internet

Please select Wi-Fi or mobile network to enable Internet to allow a connection to your GNSS RTK Corrections Service provider.

4.2 Create a project

Power on the LT800H: Long press the power button for 3-5 seconds.

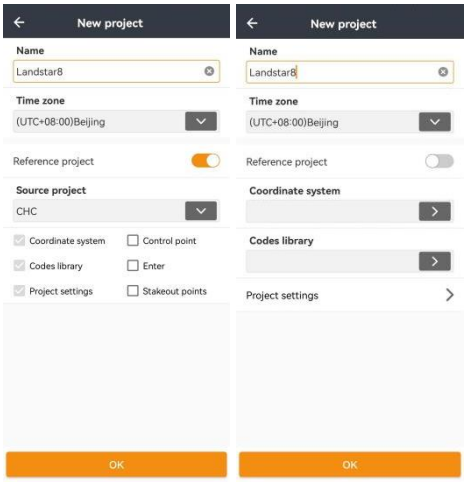
Launch the LandStar 8 software.

Click **New** to create a new project, users should set coordinate, codeList and other survey parameters.

Name: Input the project name, backslash (/) is forbidden.

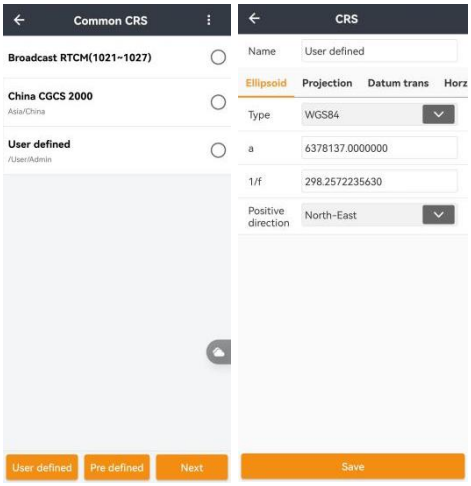
Time Zone: Choose the time zone in drop-down list from UTC-12:00 to UTC+14:00.

Reference project: choose a reference project and get the parameters automatically, including Coordinate system, Codes library and Projects settings. Control point, Enter, and Stakeout points are optional.

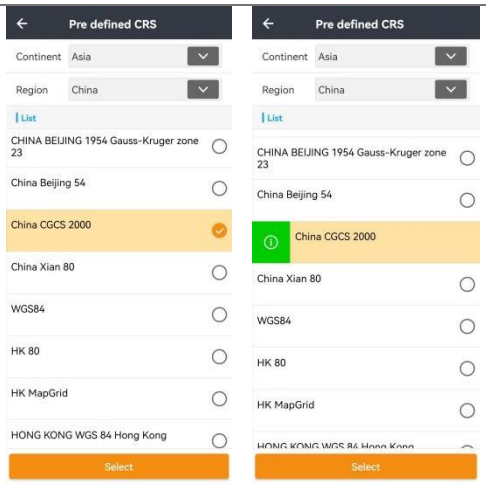


Coordinate System:

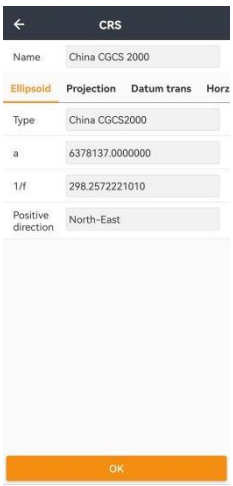
Users can create a new coordinate system or use the template of existing projects. Click **User defined** to create a new coordinate system.



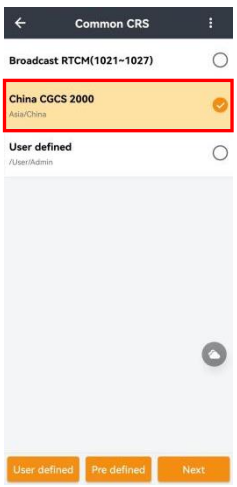
Set the right parameters according to the surveying area, and then click Save to finish CRS configuration.



Click **Pre defined** to enter **Common Coordinate** interface, and then users are able to add a new coordinate system by clicking **Select**. Slide right and click the green button to check the coordinate system information.



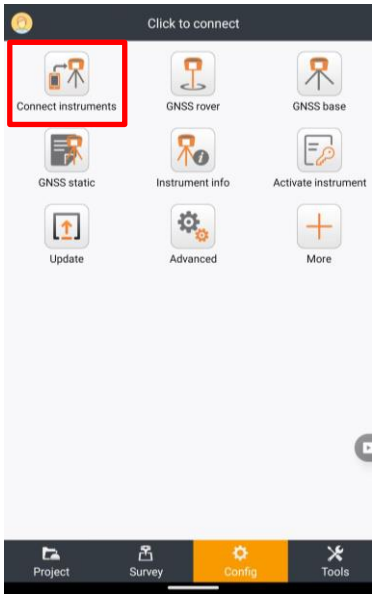
Users can view the parameters of ellipsoid, projection, datum transformation, Horz. adjustment and Vert. adjustment. Click **OK,** it'll return to **Coordinate System** interface, and then click **Select** to finish CRS configuration.



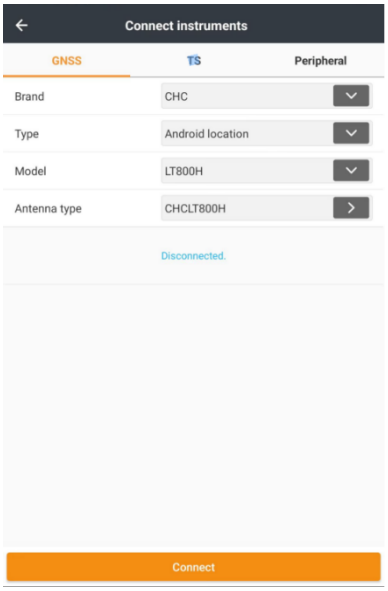
Tick the **Reference project** in Coordinate System to select project template, then it will show a list of historical projects. Users can select one and click **OK** to apply. It's used for applying the transformation parameters for different sites. For example, there is project A which has finished site calibration, while another project B needs the transformation parameters the same as project A. Then users can select project A in the project template while creating project B.

4.4 Connect to the LT800H GNSS Module

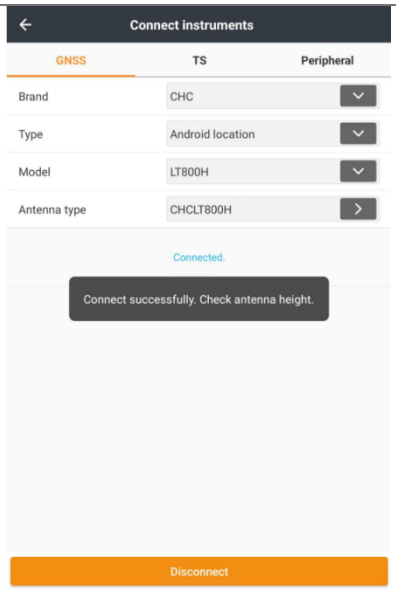
Tap [Config] - [Connect instruments].



Select Brand as **[CHC]**, Type as **[Android location]**, Model as **[LT800H],** Antenna Type as **[CHCLT800H]**.

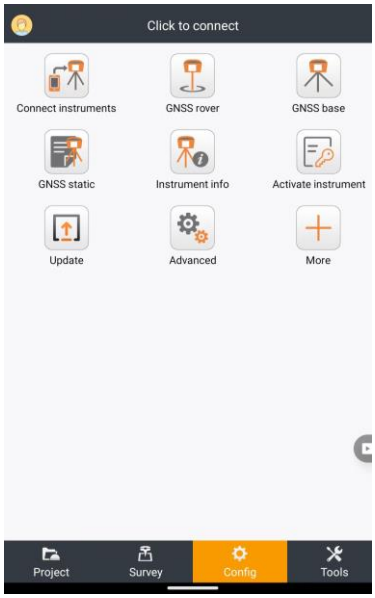


When connected to the LT800H GNSS, the message “Connect successfully.Check antenna height!” appears.

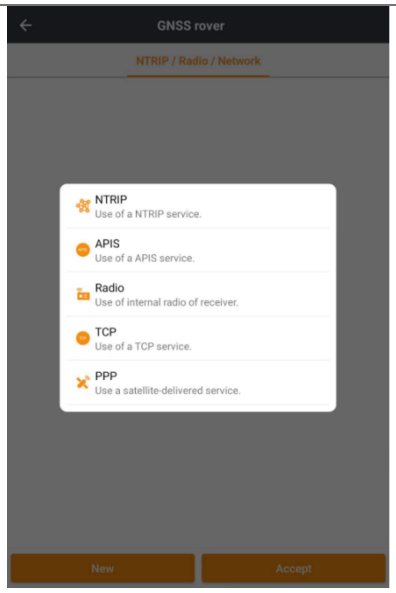


4.5 CORS / RTK Network Correction Login

Click **[Config]** - **[GNSS rover]** to create or accept a work mode.



Click **New** to create a work mode and choose **NTRIP** table.



Name: Enter a name for this work mode.

Network: Choose a model for supplying internet. Include PDA network and Receiver network.

Domain/IP: input the corresponding Ntrip IP.

Port: input the corresponding Port.

Select a server: you could add a server and save it. Next time you can choose it in this interface.

Get Mountpoint: get the Mount point.

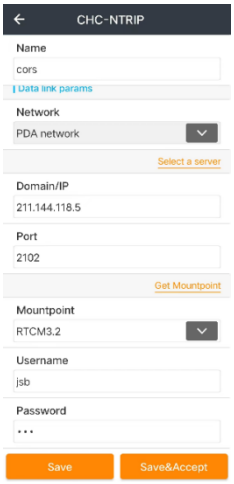
Mount point: choose a Mount point you need

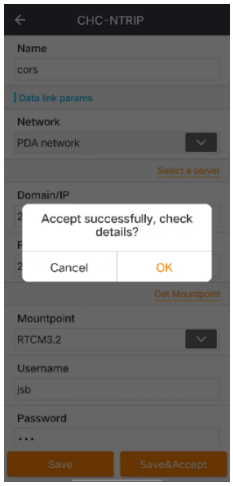
Username: The name of user's Ntrip account.

Password: The password of user's Ntrip account.

Save: just save this work mode.

Save&Accept: save and apply this work mode.

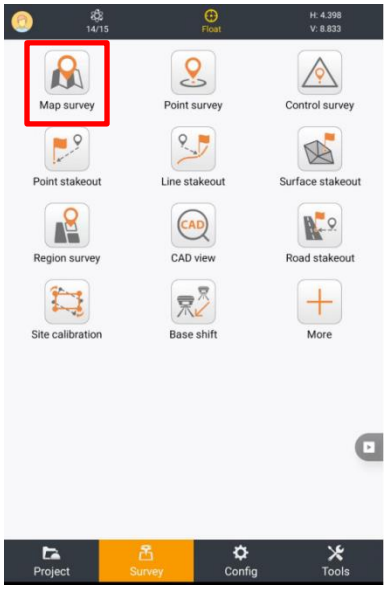




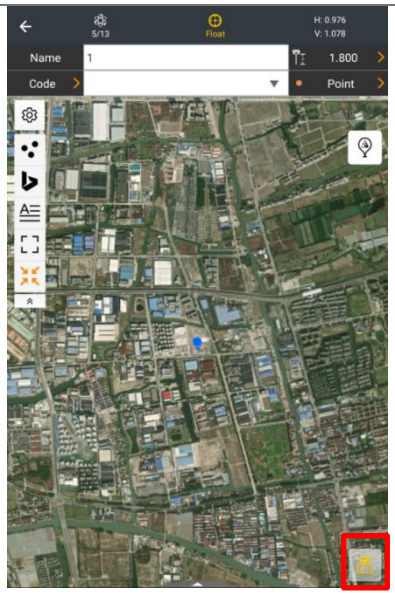
4.6 Survey

Wait until the software shows **[RTD], [Float] or [Fix]**, which means the LT800H is using the GNSS correction data from RTK Network.

Click the **[Survey]** - **[Map suevey]** to start your work.

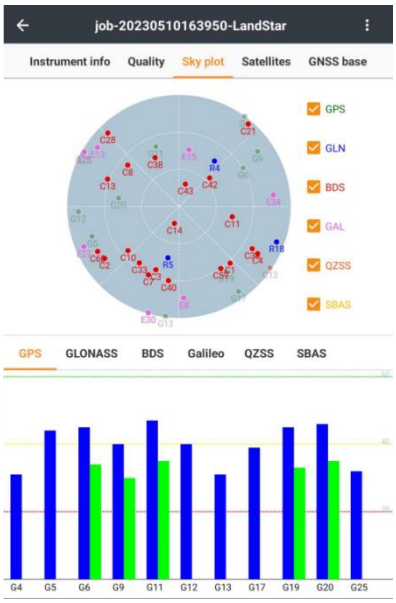


Tap **[Survey]** icon to collect the points.



4.7 Sky Plot

Click **Sky Plot** and see how many satellites (including GPS, GLONASS, BDS, GALILEO and QZSS) the device is currently tracking.



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