STONEX

STONEX SC2200
GNSS Receiver
User Manual

(July 2019)-Ver.1-Rev.0

www.stonex.it

Contents

Statement

Please read carefully:

The final interpretation of this user manual belong to STONEX.

Thank you very much for your purchase. For directions on how to use the product, please be sure to read the user manual.

This user manual is only for your receiver. If your receiver does not match the case in user manual, the actual situation of the receiver shall prevail.

Information in this document is subject to change without notice; STONEX reserves the right to change or improve its products and to make changes in the content without obligation to notify any person or organization of such changes or improvements. If you have any questions, please contact customer service center, or contact our authorized dealers.

Customer safety is important. Please carefully read the notes and instructions in User Manual. In order to avoid unexpected damage, you should only use original supplied parts. If you do not use the system with the correct procedure or connect incompatible accessories, cause the equipment damage and may even endanger other person and your safety. In this regard, the company does not assume any responsibility.

1. Product Overview

SC2200 is a high-performance CORS reference station receiver. Linux system as its development platform and supports for secondary development. It has powerful and stable function and can be used in many fields.

This chapter provides basic information to help you get familiar with your GNSS receiver.

Key Features

- Rugged housing
- 555 channels with Multi-constellation GNSS support.
- Superior carrier phase observations of less than 1mm accuracy.
- Internal battery for more than 20 hours operation.
- 4G LTE and Bluetooth / WLAN datalink support.
- Easy configuration from Web UI and remote server.
- NTRIP server/caster support.
- IP67

1.1 Front view

1)	**Left/Up**	Short Press：Move the cursor left and up Long Press：Return to previous menu
2)	**Right/Down**	Short Press：Move the cursor right and down
3)	**Power key**	Short press: confirm Long press: Power on/off
4)	**Fn key**	Long Press：return to main menu Short Press：switch ◀▶ key to ▲▼ key
5)	**Differential transmission indicator**	When the differential data output, the differential indicator blinks evenly at 1-second interval.
6)	**Bluetooth indicator**	It will be light blue when SC2200 is connected via Bluetooth.
7)	**Static recording indicator**	When start static recording, static recording indicator blinks evenly at 1-second interval.
8)	**Power indicator**	After switching on SC2200 mainframe, the power light is normal on.

1.2 Back view

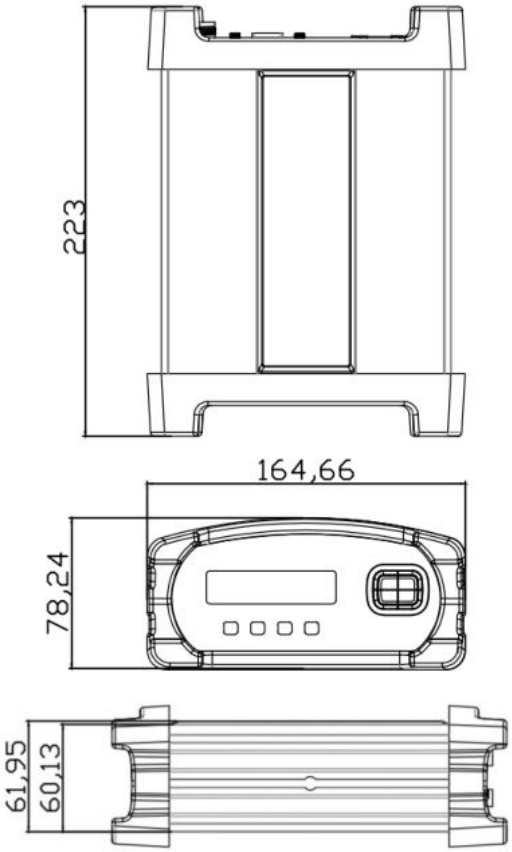
1)	**PWR**	Receiver power supply interface, input voltage DC 9V-28V
2)	**USB**	USB interface
3)	**LTE**	GPRS antenna interface
4)	**SIM/TF**	Standard size SIM card interface/ TF card slot
5)	**GNSS**	GNSS External receiver antenna connector
6)	**OSC**	OSC External receiver antenna connector
7)	**RJ45**	Wired Ethernet port
8)	**1PPS**	1 Pulse Per Second output
9)	**EVENT**	EVENT input
10)	**COM2**	RS232 serial port （Optional RS485 serial port）
11)	**COM3**	DB9 serial port
12)	**COM1**	RS232 serial port
13)	**Air hole**	Maintain internal and external pressure balance

1.3 Left/Right-side view

1.4 Top view

1.5 Bottom view

1.6 Structural Drawings / mounting dimensions



Unit = mm

2. Technical Specification

2.1 GNSS

- Channels: 555

- Tracking signals

Satellite	Signals
GPS	L1 C/A, L1C, L2C, L2P, L5
GLONASS	L1 C/A, L2C, L2P, L3, L5
14) BDS	B1I, B1C, B2I, B2a, B3I
GALILEO	E1, E5 AltBOC, E5a, E5b, E6
IRNSS	L5
SBAS	L1, L5
QZSS	L1 C/A, L1C, L2C, L5, L6
NAVIC (IRNSS)	L5
L-Band	up to 5 channels

- Position Accuracy

Positioning Mode	Horizontal	Vertical
Static	3mm+0.1ppm	3.5mm+1ppm
RTK	8mm+1 ppm	15mm+1 ppm

- Initialization time: < 10s
- Initialization reliability: > 99.9%

2.2 Physical

- Weight = 2 kg
- Dimensions = 222 mm * 164 mm * 79 mm

2.3 Environmental

Operating Temp	-40℃~+65℃
Storage Temp	-40℃~+80℃
Humidity	0%~100% none condensing
Dust and Water Protection	IP67
Drop	Designed to endure to a 2 m pole drop and 1.2 m free drop on concrete floor with no damage

2.4 Electrical

Supply voltage	9-28V DC
Battery	7.2V, 13600mAH, 97.92Wh

2.5 Connector Ports

PWR	1x Lemo-0 female, 2 pin, power input
USB	1x Lemo-0 female, 7 pin, USB2.0 OTG, host / client
COM1	1x Lemo-0 female, 5 pin, RS232
COM2	1x Lemo-0 female, 5 pin, RS232/RS485
COM3	1x Lemo-0 female, 9 pin, DB9
LTE	SMA female
1PPS	SMA female
EVENT	SMA female
SIM	Nano SIM Card, push-pop type
TF card	TF card
RJ45	1x RJ45 waterproof, 100/1000 Mbit POE
GNSS	1x TNC female
OSC	MMCX female, 50Ω, 5/10 MHz

2.6 Data recording

- Storage

Device	Description
Internal Memory	32G
External	TF card / USB Flash Drive / SSD (Unlimited Bytes)

Logging channels	8
Data types	Binary, RINEX, BINEX
Data rates	2S, 5S, 10S, 15S, 30S, 60S 1Hz, 2Hz, 5Hz, (10Hz, 20Hz, 50Hz optional)

2.7 Data streaming

Number of streams	4 NTRIP server streams, 1 NTRIP Client streams, 5 Socket (TCP / UDP) streams
Streaming ports	WiFi, Wireless, Ethernet, COM1, COM2
Navigation outputs	GGA, ZDA, GSA, GSV, GST, VTG, RMC, GLL
Reference outputs	RTCM 2.3, 3.0, 3.2, CMR, CMR+, DGPS, BINEX, RAW
Multi clients	Up to 10 simultaneously web client connections

2.8 User Interface

Buttons	4 keys, function keys, power key
LEDs	4 LEDs, which show the Bluetooth, differential transmission, static record, and power state respectively
OLED display	64 *256 pixels, mono color display

2.9 System Configuration

Operating system	Linux
Bluetooth	Bluetooth 2.1+EDR, V4.0
WIFI	802.11b,g,n Hotspot / client mode
Ethernet	100M / 1000M adjustable

- Network

System	Band
LTE FDD	B1/B3/B5/B7/B8/B20
LTE TDD	B38/B40/B41
WCDMA	B1/B5/B8
GSM	B3/B8

2.10 Networking services

NTRIP	Caster/Server/Client
Remote Management	Remote config by STONEX Cube-net/ Caster
FTP server	For data download
Email alerts	For low storage and other warning messages

3. Web UI

There are two ways to login the WEB interface, which are Ethernet port login and WIFI login.

Ethernet port login: Connect the RJ45 network port with the computer host, and enter the IP on the SC2200 display in the browser for SC2200 access. Enter the user name and password in the pop-up dialog box.

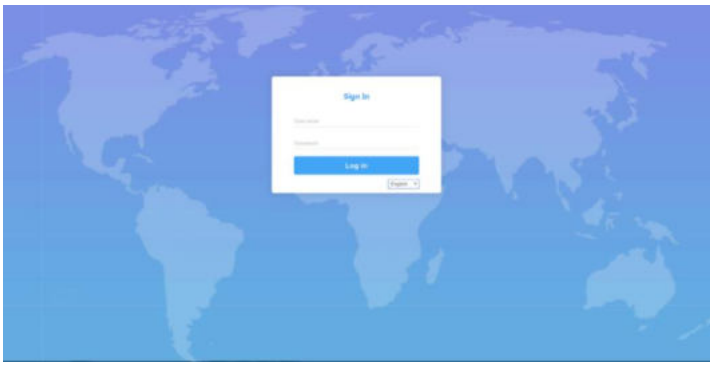
- User name: admin
- Password: password.

WIFI login: first open receiver turns to the page WIFI Info. Mode choose "Master"

The WIFI hotspot name is the serial number of the receiver.

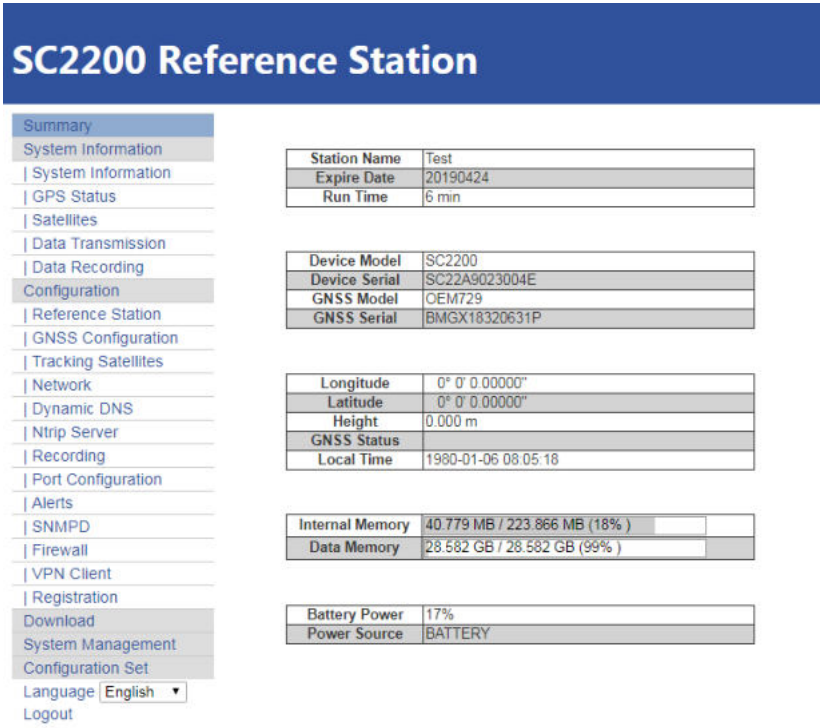
Enter the IP address: **192.168.10.1**. A window will pop up when the user log in, which need to fill in the account and password.

- User name: admin
- Password: password



3.1 Summary

After authentication information to log into the web interface of SC2200. Home page contents Station Name、Expire Data、Run Time、Device Model 、Device Serial、GNSS Model、GNSS Serial and receiver's positional information. It is shown as below:



3.2 System Information

In the system information screen will display the station name, device model, body number, system version, application version information, built-in OEM board models, network parameter information.

Station Name	Test
Expire Date	20190424
Time Zone	GMT+08:00
Device Model	SC2200
Device Serial	SC22A9023004E
IMEI	866758041223161
Hardware Version	NSC200II-V1.0-RS485
BOOT Version	1.10
OS Version	4.1.6-1.13(181031)
APP Version	2.12(190326)(foreign)
Web Version	2.12
GNSS Model	OEM729
GNSS Serial	BMGX18320631P
GNSS Hardware Version	OEM729-2.01
GNSS Firmware Version	OM7MR0500RN0000
GNSS Functionality	FFNRNN5BN (GPS+Glonass+Galileo+BeiDou,5Hz)
DHCP	On
MAC address	0C:AE:7D:D9:B5:D7
IP	192.168.3.129
Mask	-
Gateway	-
Internal Memory	42.129 MB / 223.866 MB (18% Free)
Data Memory	28.582 GB / 28.582 GB (99% Free)
Battery Power	75%
Power Source	BATTERY

3.2.1 GPS Status

Status page displays the current SC2200 positioned state, the base station coordinates and antenna type usage.

Local Time	1980-01-06 11:04:12
Satellites	0
Longitude	0° 0' 0.00000"
Latitude	0° 0' 0.00000"
Height	0.000 m
Status	Idle
PDOP	9999.000
HDOP	9999.000
HRMS	0.000
VRMS	0.000

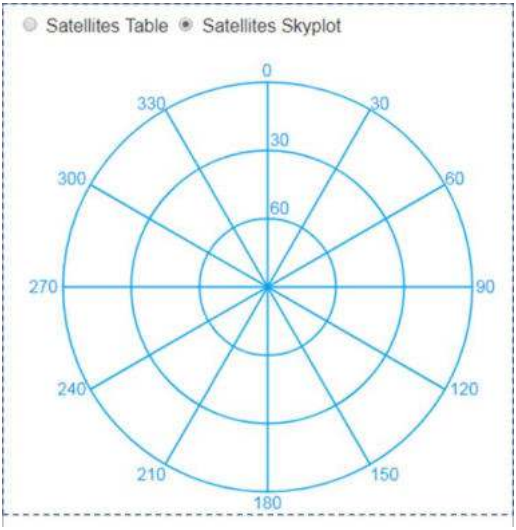
Station Number	0111
Base Longitude	113°21' 59.82440"
Base Latitude	23° 7' 35.67690"
Base Height	30.000 m

MET Type	ZZ11A
Pressure	- hPa
Temperature	- ℃
Humidity	- %RH

Antenna Type	HX-GG486A
Antenna Height	0 mm
Measurement Mode	

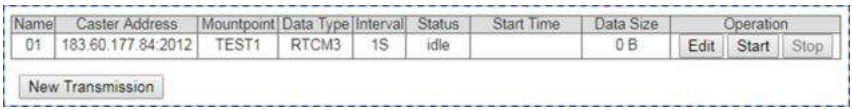
3.2.2 Satellite

in this page, you can view satellite Sky plot and satellite lists.

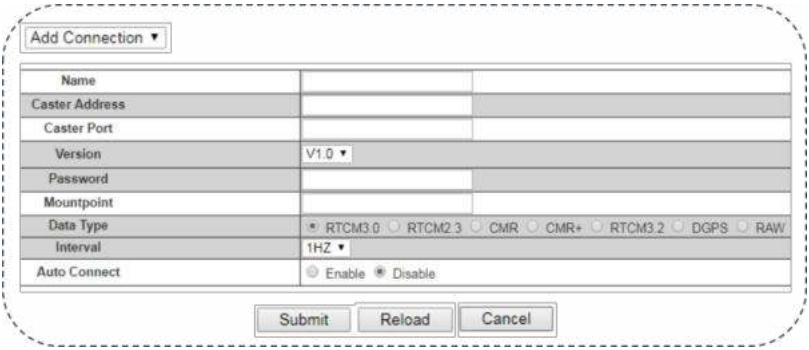


3.2.3 Data Trasmission

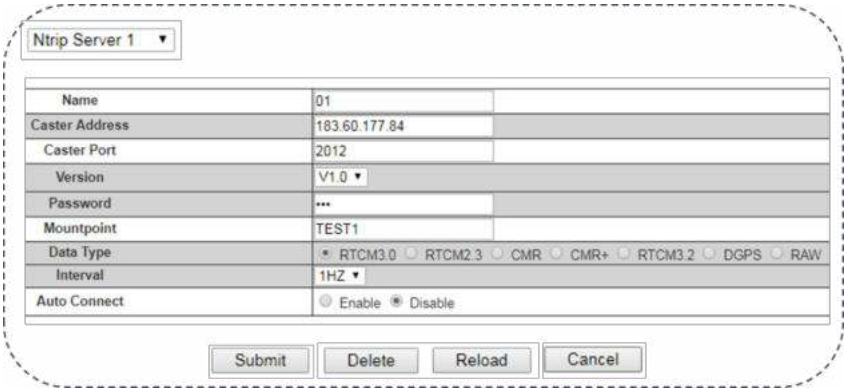
This page shows the current data transmission status, click [Edit] to set the transmission parameters.



When you click 【New Transmission】,it will pop up to this new page【Add Connection】

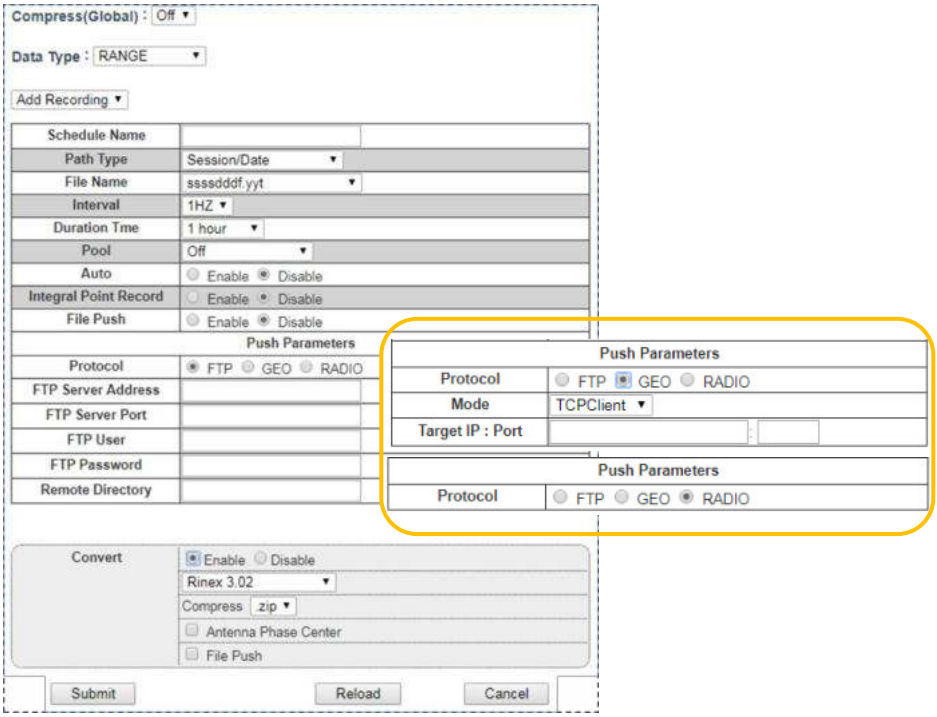


Also you can also choose this 【Ntrip Server 1】



3.2.4 Data Recording

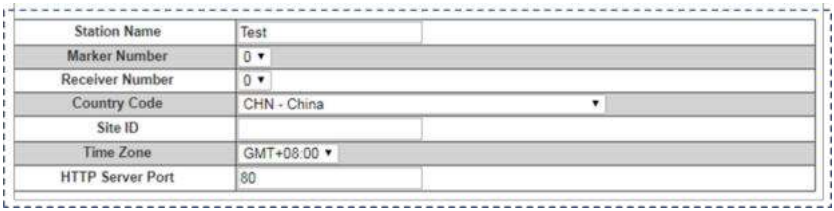
Data recording is used to store static data as data analysis, static solutions, and other post-processing. In this page the user could view the current data recording status, click [Edit] to set the recording parameters.



3.3 Configuration

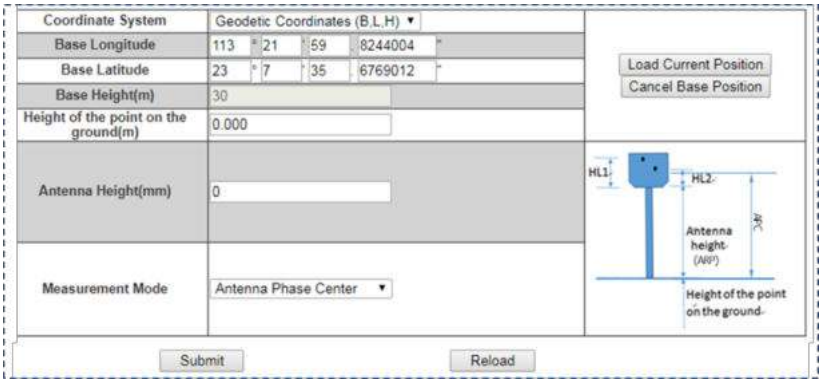
3.3.1 Reference Station

This page mainly sets the station name, Marker Number, Receiver Number, time zone and so on.



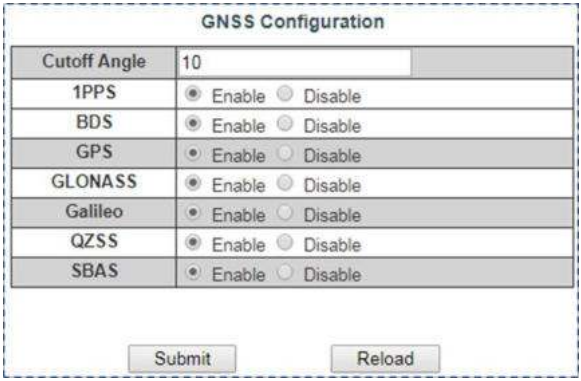
Antenna parameters: chose the corresponding antenna type, and then input the actual antenna height of the station.

Reference station coordinates: If you do not need a known coordinate to start reference station, then click the "Load Current Position" as a reference station coordinate. However, if you need a known coordinate to start reference station, please input the known point coordinates in accordance with the appropriate format.



3.3.2 GNSS configuration

In this page, you can set information of satellite systems and the cutoff angle.



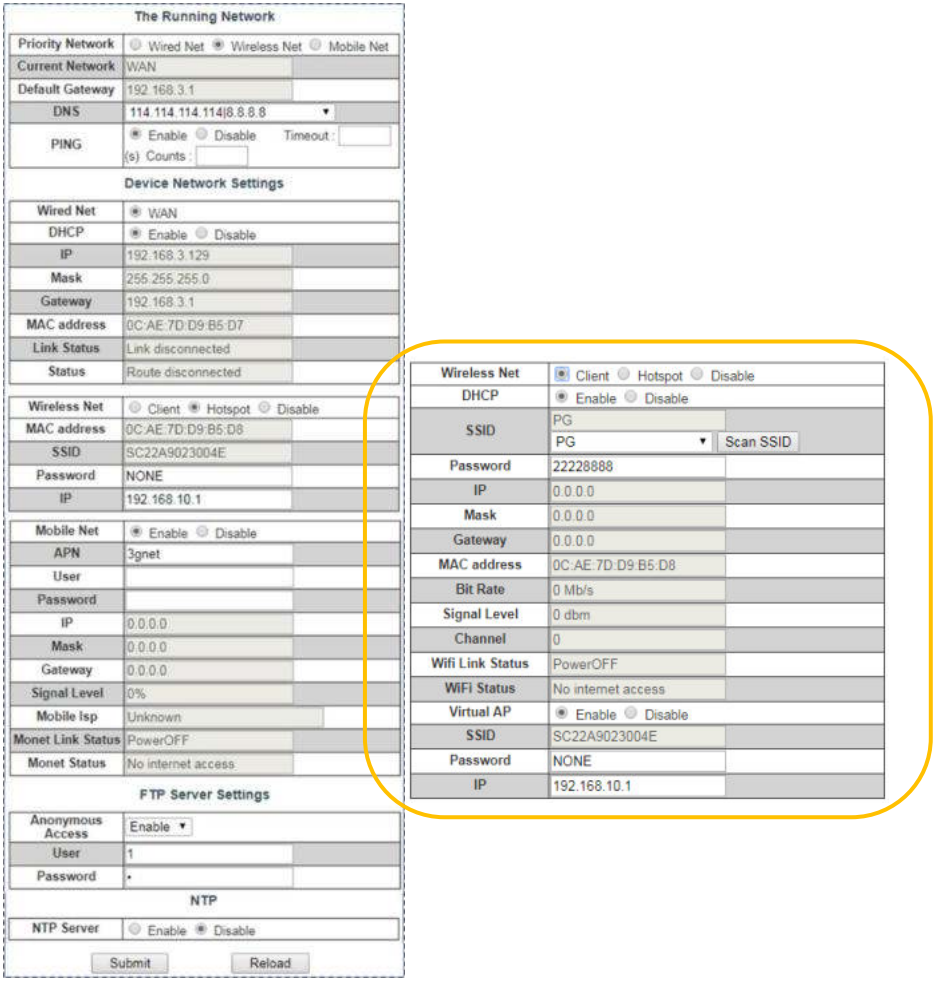
3.3.3 Satellites tracked

In this page, you can select the satellites you want.

Tracking Satellites							
GPS	Don't track	Glonass	Don't track	BeiDou	Don't track	Galileo	Don't track
G1	☐	R1	☐	C1	☐	E1	☐
G2	☐	R2	☐	C2	☐	E2	☐
G3	☐	R3	☐	C3	☐	E3	☐
G4	☐	R4	☐	C4	☐	E4	☐
G5	☐	R5	☐	C5	☐	E5	☐
G6	☐	R6	☐	C6	☐	E6	☐
G7	☐	R7	☐	C7	☐	E7	☐
G8	☐	R8	☐	C8	☐	E8	☐
G9	☐	R9	☐	C9	☐	E9	☐
G10	☐	R10	☐	C10	☐	E10	☐
G11	☐	R11	☐	C11	☐	E11	☐
G12	☐	R12	☐	C12	☐	E12	☐
G13	☐	R13	☐	C13	☐	E13	☐
G14	☐	R14	☐	C14	☐	E14	☐
G15	☐	R15	☐	C15	☐	E15	☐
G16	☐	R16	☐	C16	☐	E16	☐
G17	☐	R17	☐	C17	☐	E17	☐
G18	☐	R18	☐	C18	☐	E18	☐
G19	☐	R19	☐	C19	☐	E19	☐
G20	☐	R20	☐	C20	☐	E20	☐
G21	☐	R21	☐	C21	☐	E21	☐
G22	☐	R22	☐	C22	☐	E22	☐
G23	☐	R23	☐	C23	☐	E23	☐
G24	☐	R24	☐	C24	☐	E24	☐
G25	☐			C25	☐	E25	☐
G26	☐			C26	☐	E26	☐
G27	☐			C27	☐	E27	☐
G28	☐			C28	☐	E28	☐

3.3.4 Network

This page is mainly set for the data link method used by SC2200.



The Running Network

Priority Network	Wired Net / Wireless Net / Mobile Net
Current Network	WAN
Default Gateway	192.168.3.1
DNS	114.114.114.114|8.8.8.8
PING	Enable / Disable Timeout : (s) Counts :

Device Network Settings

Wired Net	WAN
DHCP	Enable / Disable
IP	192.168.3.129
Mask	255.255.255.0
Gateway	192.168.3.1
MAC address	0C:AE:7D:D9:B5:D7
Link Status	Link disconnected
Status	Route disconnected

Wireless Net	Client / Hotspot / Disable
MAC address	0C:AE:7D:D9:B5:D8
SSID	SC22A9023004E
Password	NONE
IP	192.168.10.1

Mobile Net	Enable / Disable
APN	3gnet
User	
Password	
IP	0.0.0.0
Mask	0.0.0.0
Gateway	0.0.0.0
Signal Level	0%
Mobile Isp	Unknown
Monet Link Status	PowerOFF
Monet Status	No internet access

FTP Server Settings

Anonymous Access	Enable
User	1
Password	•

NTP

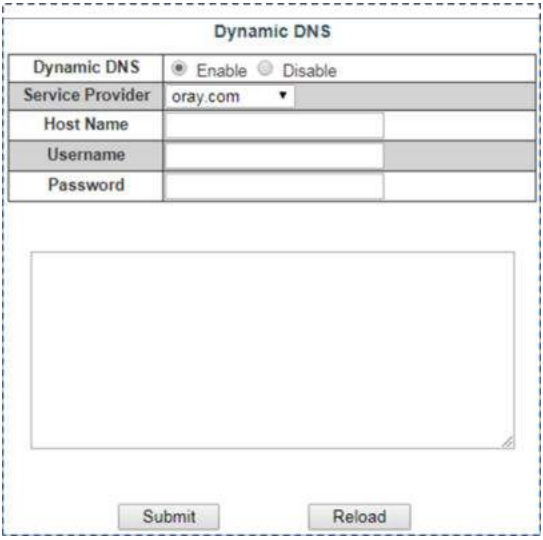
NTP Server	Enable / Disable

Submit Reload

Wireless Net	Client / Hotspot / Disable
DHCP	Enable / Disable
SSID	PG / PG Scan SSID
Password	22228888
IP	0.0.0.0
Mask	0.0.0.0
Gateway	0.0.0.0
MAC address	0C:AE:7D:D9:B5:D8
Bit Rate	0 Mb/s
Signal Level	0 dbm
Channel	0
Wifi Link Status	PowerOFF
WiFi Status	No internet access
Virtual AP	Enable / Disable
SSID	SC22A9023004E
Password	NONE
IP	192.168.10.1

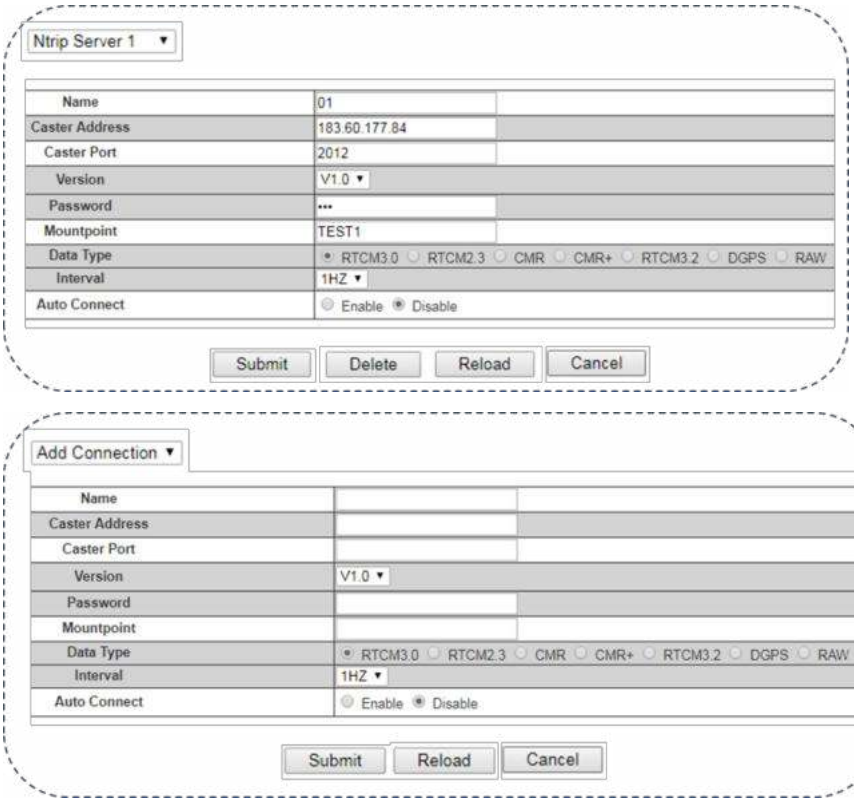
3.3.5 Dynamic DNS

This page is mainly set for dynamic DNS, service provider, host name, user name, password.



3.3.6 NTRIP Server

In this page, you can set the transmission content and the server for the SC2200 reference station.



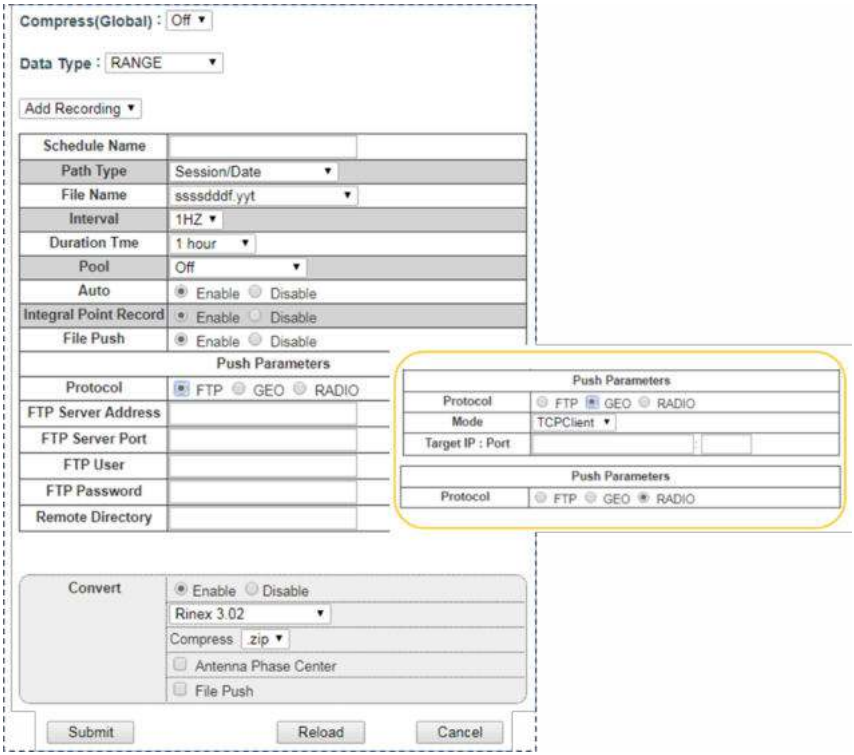
Note:

- The password in this page can be entered arbitrarily, but can not be empty.
- When the [Auto Connect] is chose, after the network is disconnected, the data transmission will be automatically connected, otherwise the transmission will need to be initiated artificially.

- Before setting parameters, please back to the page of reference station and make sure the base station coordinate is correct or not. If you need to start with known coordinates, please input the known coordinate.
- After parameters setting, click "Submit" and the data transmission is turned on. In the status bar, you can see the data transfer status displayed as "transmitting". The differential transmission indicator in the front panel of the mainframe starts to blink. The above process is the establishment of a base station transmission.

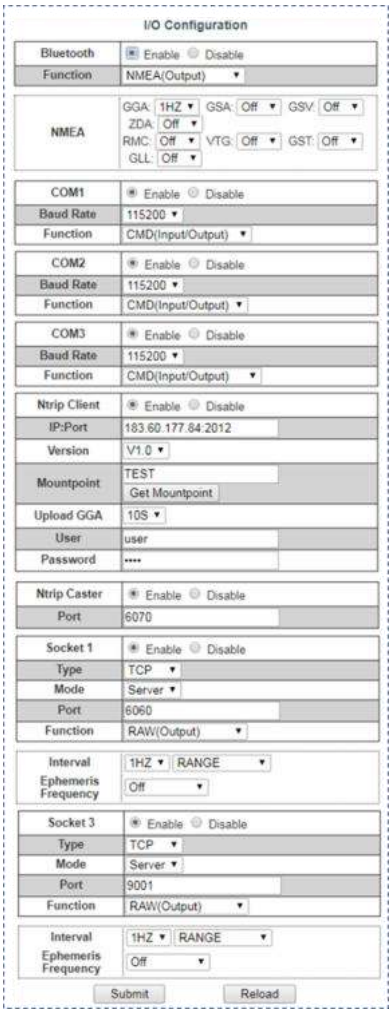
3.3.7 Recording

In this page you can set Schedule Name, Push Parameters, Convert.



3.3.8 Port Configuration

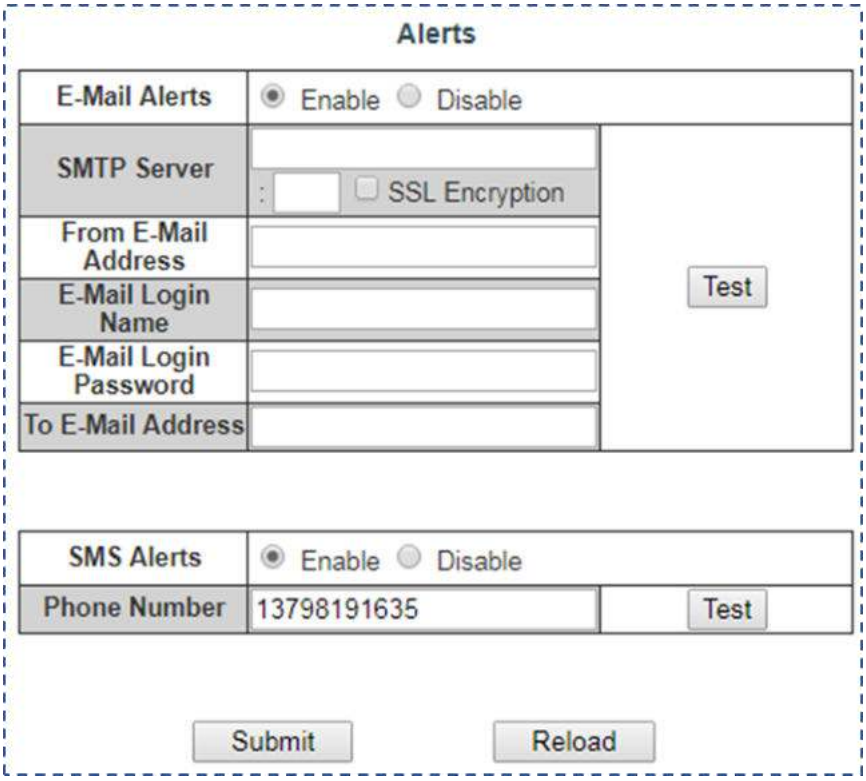
This page is mainly set for Bluetooth, COM1, COM2, COM3, Ntrip Client, Ntrip Caster, Socket 1, Socket .



3.3.9 Alters

This page is mainly set for E-Mail alerts, SMS alerts, phone number.

If you want to send text messages, you need to use a mobile network.

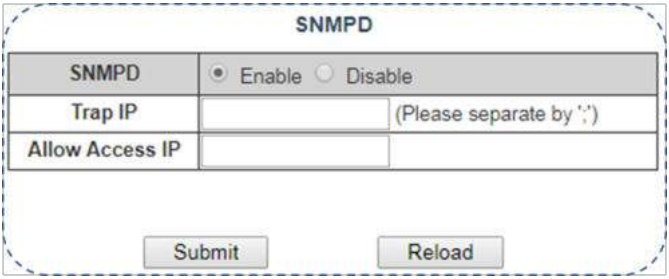


3.3.10 SNMPD

When you come to SNMPD, you can see 【Trap IP】and 【Allow Access IP】.

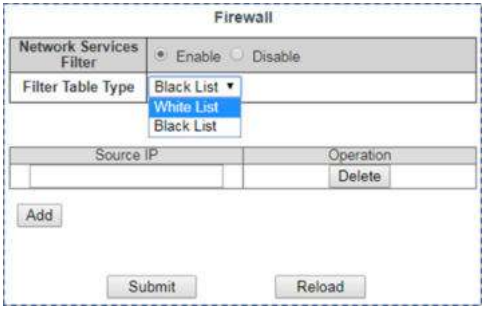
【Trap IP】:Receivers can specify some IPS and then automatically send information to those IPS

【Allow Access IP】:Receivers can allow some devices to proactively obtain information about receivers through IP addresses.



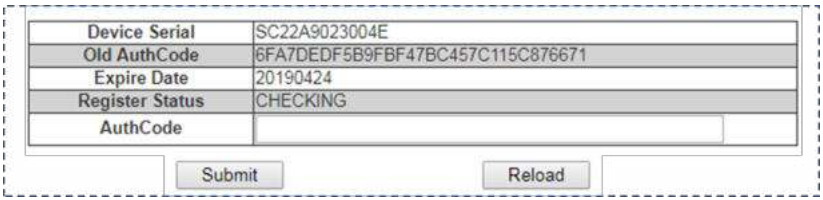
3.3.11 Firewall

On this page, you can choose whether to turn on the firewall.



3.3.12 Registration

You can know registration information of receiver in this page.



3.4 Download

On this page, you can download observation file and ephemeris.

3.5 System Management

In this page you can set upgrade file, remote debug, security.

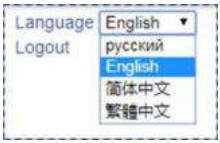
3.6 Configuration Set

In this page you can set config files.

Config Files	Save config	Restore config		
System config	Download	选择文件	未选择任何文件	Upload
Service config	Download	选择文件	未选择任何文件	Upload
User config	Download	选择文件	未选择任何文件	Upload

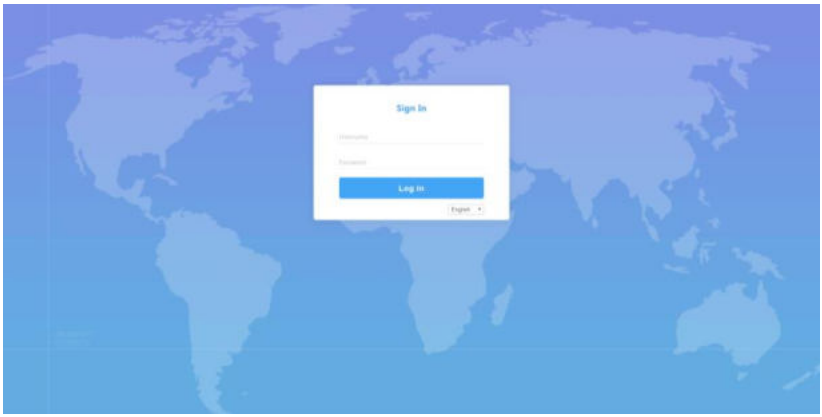
3.6.1 Language

As you can see, SC2200 has 4 languages to set up. They are Russian, English, Simplified Chinese, Traditional Chinese.



3.6.2 Logout

When you click “Logout”.



4. Operation

4.1 Power On

Long press the red power key on the panel, and until the initialization is completed.

You'll see four information pages about this receiver.

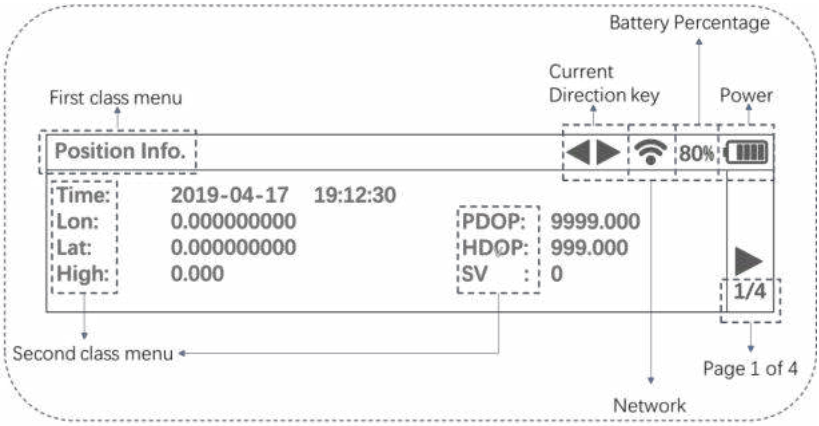
Position Info.

Ethernet Info.

WIFI Info.

GPRS Info.

You can learn this information from every page.

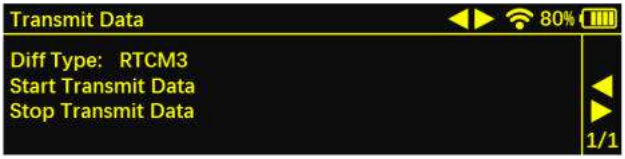


4.2 Start Record

You can see the main menu display on OLED screen.

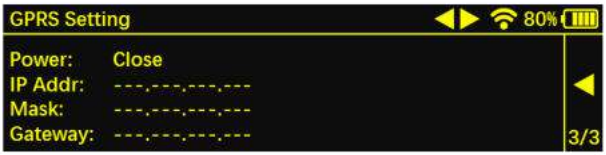
4.3 Trasmit Data

When you transmit data by the panel, first you need to set the transmission parameters in the Web UI page, then you can operate the panel. There doesn't have the transmission parameters setup on the panel.



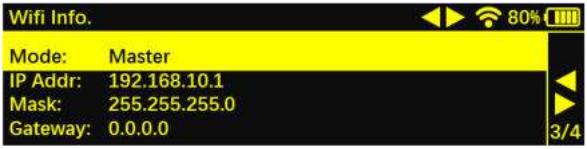
4.4 Network Settings

This page has three settings. They are Ethernet Setting, Wifi Setting, GPRS Setting.



How to change the WIFI Setting Mode?

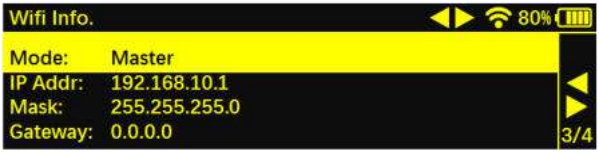
First, you need to move the cursor to the "Mode" column.



Second, short press the power key to Choose what you want to change. “Master” has been selected.

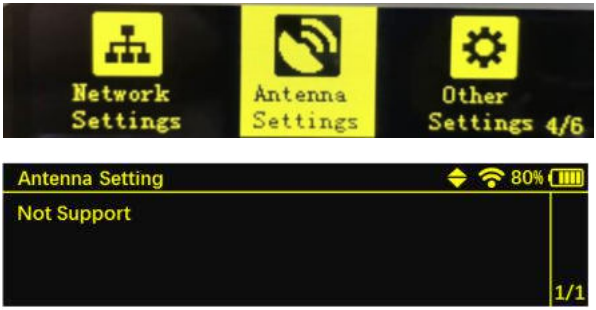
Third, you need to check the direction key on the top. You can only enter the selection interface when the direction key is ▲▼. You can choose Master, Managed, off.

Fourth, after determining the options you want, short press the power button to confirm. Then you can see yellow cursor become long. This means that the setup was successful.



4.5 Antenna Settings

Not support for the moment.



4.6 Other Settings

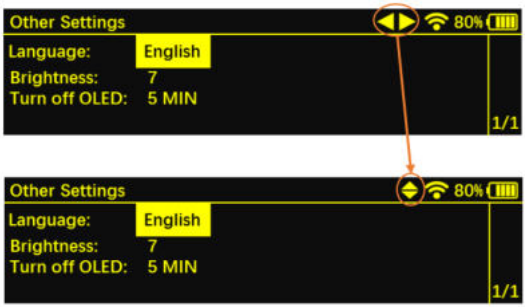
In this page you can set the language, OLED brightness, OLED screensaver time.

How to switch languages?

First, you need to move the cursor to the language column.

Second, you need to short press 【Power key】. The purpose of this is to select the parameters you want to change. After doing that, you can see the "English" has been selected.

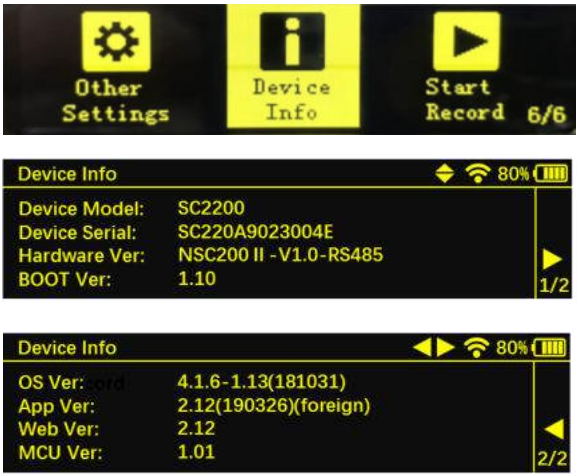
Third, you need to check the direction key on the top. You can only enter the selection interface when the direction key is ▲▼. You can choose English, Simplified Chinese, Traditional Chinese, Russian.



Fourth, after determining the options you want, short press the power button to confirm. Then you can see yellow cursor become long. This means that the setup was successful.

4.7 Device Info

In this page, you can get the information of device model, device serial, hardware version and BOOT version. In page 2, you can get the information of OS Ver, App Ver, Web Ver, MCU Ver.



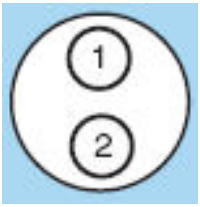
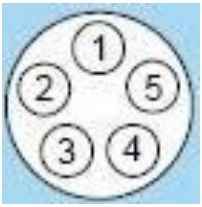
4.8 Power OFF

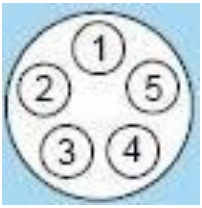
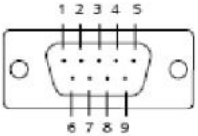
Long press the red power key on the panel, until the screen goes off.

5. Accessories

Accessories of SC2200		
Categories	**Description**	**Qty**
Standard Accessories		
Adaptor	Power Adaptor with 4 plugs (US, UK, AU and EU), 15V/2A, 2PIN	1
Cable	Network cable 3M	1
Optional Accessories		
Antenna	2D Choke Ring GNSS antenna	1
Antenna	3D Choke Ring GNSS antenna	1
Cable	Cable for choke ring antenna (30m)	1
Cable	Lemo 7 to USB	1
Cable	Lemo 5 to DB-9 serial	1
Cable	DB9 female-DB9 female, to debug and transfer data	1
Antenna	4G LTE Antenna, 90°	1
Antenna	4G LTE Antenna, male SMA connector	1

Appendix A – Pin Interface Definiction

Type	Pictures		Definition
PWR		1	Power positive
		2	Power negative
SUB		1	ID
		2	D-
		3	VBUS
		4	D+
		5	NC
		6	NC
		7	GND
COM1		1	NC
		2	NC
		3	TXD output 232
		4	GND
		5	RXD input 232

COM2		1	NC
		2	485(GND)/232
		3	DATA-/TXD
		4	GND
		5	DATA+/RXD
COM3		1	DCD
		2	RXD
		3	TXD
		4	DTR
		5	GND
		6	DSR
		7	RTS
		8	CTS
		9	--

Appendix B FAQ

❶How to change the languages?

Please refer to 【4.6 other settings】.

❷How to change the WIFI Setting Mode?

Please refer to 【4.4 Network settings】.

❸Could the receiver shut down while charging?

No, it could not. SC2200 is usually used as a base station, and its places are mostly remote unattended environments. If the battery runs out due to a power outage shutdown, it must be able to boot automatically when powering up.

❹How to connect to Web UI?

Please refer to 【3.Web UI】

Appendix 1: Copyrights, warranty and environmental recycling

Copyrights and trademarks

STONEX®, the STONEX® logo, and SC2200 GNSS receiver are trademarks of STONEX® Limited.

STONEX® Cube-Connector, STONEX® GPS Processor are trademarks of STONEX® Limited.

Bluetooth is a trademark owned by Bluetooth SIG, Inc. and licensed to Trimble Navigation Limited. All other trademarks are the property of their respective owners.

Release Notice

This is the July 2019 release of the STONEX® SC2200 GNSS new model receiver user guide.

The following limited warranties give you specific legal rights. You may have others, which vary from state/jurisdiction to state/jurisdiction.

Standard Limited Warranty

Version 2019

The terms and conditions of this Limited Warranty constitute the complete and exclusive warranty agreement between The Customer or Dealer and STONEX® for the Product and supersedes any prior agreement or representation made in any STONEX® sales document or advice that may be provided to Customer by any STONEX® representative in connection with Customer's purchase of the Product. No change to the conditions of this Limited Warranty is valid unless it is made in written form and signed by an authorized STONEX® supervisor.

STONEX® warrants that its Products:

- Are free from defects in materials or workmanship for generally 1 year;
- Accessories or specific parts for which different limited warranty period shall apply;
- Have been tested/calibrated in proper working status prior to shipment.

The warranty period starts from date of first sale of the instruments. At its sole discretion, under the warranty period, STONEX® will repair the product or send parts for replacement at its expense. STONEX® agrees to repair or replace the defected instrument within thirty (30) days only if STONEX® Europe recognizes that the defects of the instrument are not caused by human factors or no obvious damage to its surface is visible. STONEX® warrants any new replaced parts or products are warranted to be free from defects in materials and workmanship for thirty (30) days or for the remainder of the Limited Warranty Period of the Product in which they are installed, whichever is longer. Faulty Parts or Products replaced under this Limited Warranty shall become property of STONEX®. All products that have to be repaired have to be returned to our technical representative office location via any delivery company the customer prefers, nevertheless STONEX® is not accountable for the unlikely event that

the Products gets lost in transit. Any damage inflicted by the customer or by third party after the products has been delivered to the customer is excluded from the limited warranty as well any damage arising from an improper use, from any action or use not provided for in the enclosed user guides and/or manuals.

Shipping policy

The Customer or the dealer is required to pay for the charges for shipping of fault parts or instruments to STONEX® representative office and STONEX® is providing the shipping for return. Dealers need to follow STONEX® repair/service procedure to achieve a better and prompt service result.

Return policy Dead on Arrival instruments

All returned products have to be shipped to STONEX® representative office.

The original Purchaser has a period of seven (7) days starting from date of purchasing to signal the existence of a defect in the instrument for a full refund (less shipping and handling), provided the merchandise is in new, resalable condition and returned in the original, undamaged packaging. Customer has to pay for both the return and the original freight fees, regardless of the original freight paid by the Company. All warranty books, instruction manuals, parts and accessories must be included as well as the original box in which the item was shipped. We recommend placing the original carton inside another box, to avoid any additional damage to the carton itself. In some cases, returns of special items will require a re-stock fee. Acceptance of returned merchandise is final only after inspection by STONEX®.

Above terms and policies shall apply as for hardware. Dealers need to follow STONEX® repair/service procedure to achieve a better and prompt service result.

Firmware/Software warranty

Stonex doesn't warrant that operation of Firmware/Software on any instruments will be uninterrupted or error-free, or that functions contained in Firmware/Software will operate to meet your requirements.

Stonex will forward the Software/Firmware Fix to the dealer or customer. Firmware/software Fix means an error correction or other update created to fix a previous firmware version that substantially doesn't conform to the instruments specification.

Over Warranty repair(s) policy

Customer shall pay the standard repair fees for any service (whether part replacement or repairs) and performed by STONEX® under request and explicit authorization of the customer itself. In this case the customer is charged for return shipment's fees as well.

Disclaimer and Limitation of Remedy

All other express and implied warranties for this product, including the implied warranties of merchantability and fitness for a particular purpose and/or not infringement of any third party's rights, are hereby disclaimed. Stonex® expressly disclaims all warranties not stated in this limited warranty. Any implied warranties that may be imposed by law are limited in duration to the term of this limited warranty. Some jurisdictions do not allow the exclusion of implied warranties or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to customer. Customer must read and follow all set-up and usage instructions in the applicable user guides and/or manuals enclosed. If customer fails to do so, this product may not function properly and may be damaged. Customer may lose data or sustain personal injuries. Stonex®, its affiliates and suppliers do not warrant that operation of this product will be uninterrupted or error free; as do all

electronics at times. If this product fails to work as warranted above, customer's sole and exclusive remedy shall be repair or replacement. In no event will Stonex®, its affiliates or suppliers be liable to customer or any third party for any damage in excess of the purchase price of the product. This limitation applies to damages of any kind whatsoever including (1) damage to, or loss or corruption of, customer's records, programs, data or removable storage media, or (2) any direct or indirect damages, lost profits, lost savings or other special, incidental, exemplary or consequential damages, whether for breach of warranty, contract, tort or otherwise, or whether arising out of the use of or inability to use the product and/or the enclosed user guides and/or manuals, even if Stonex, or an authorized Stonex® representative, authorized service provider or reseller has been advised of the possibility of such damages or of any claim by any other party. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages for some products, so the exclusions or limitations may not apply to customer. This limited warranty gives customer specific legal rights, and customer may also have other rights which vary from country/state/jurisdiction to country/state.

Instruments

One (1) year on STONEX® Products:

GNSSS receiver: SC2200 GNSS Series.

Accessories

Accessories & Specific Parts Warranty

For Accessories provided by Stonex with the instruments SC2200 GNSS the following general warranty time is for reference:

- Battery charger: 7 months.
- Adapters for battery charger, Cables: 1 year.

Environmental recycling

The cardboard box, the plastic in the package and the various parts of this product have to be recycled and disposed of in accordance with the current legislation of your Country.

For countries in the European Union (EU)

The disposal of electric and electronic device as solid urban waste is strictly prohibited: they must be collected separately.

Contact Local Authorities to obtain practical information about correct handling of the waste, location and times of waste collection centre. When you buy a new device of ours, you can give back to our dealer a used similar device.

The dumping of these devices at unequipped or unauthorized places may have hazardous effects on health and environment.

The crossed dustbin symbol means that the device must be taken to authorize collection centres and must be handled separately from solid urban waste.

For countries outside European Union (EU)

The treatment, recycling, collection and disposal of electric and electronic devices may vary in accordance with the laws in force in the Country in question.

Appendix 2: Safety Recommendations

Warnings and Cautions

An absence of specific alerts does not mean that there are no safety risks involved in the use of this equipment.

Always follow the instructions that accompany a Warning or Caution, reported in this.

This information is intended to minimize the risk of personal injury and/or damage to propriety. In particular, observe safety instructions that are presented in the following form:

WARNING - A Warning alerts about risk for health and/or damage to the propriety. A warning identifies the nature of the risk and the extent the possible injury and/or damage. It also describes how to protect yourself and/or the equipment from this risk.

CAUTION - A Caution alerts about a possible risk of damage to the equipment and/or loss of data, but no risk for human safety.

Wireless Module Approval

The receivers use internal wireless modules. Regulations regarding the use of the modem vary greatly from country to country. In some countries, the unit can be used without obtaining an approval license. Other countries require specific approval or auto certification by the set maker.

Before using this instrument, check if authorization to operate the receiver is required in your country. It is the responsibility of the importer to verify if it is necessary a certification or license for the equipment in the country of use.

Instrument Approval

Covers technical features of the equipment relatives to electromagnetic emissions that can cause interference and disturbances to other instruments (note like emc compatibility) or generate not correct functionalities of the instrument itself. Approval is granted by the manufacturer of the equipment. Some countries have unique technical requirements for operation in particular frequency bands. To comply with those requirements, Stonex srl may modified the equipment to be subjected to grant.

Unauthorized modification of the units voids already got approvals, the warranty time and the operational licenses of the instrument.

STONEX® SRL

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