

STONEX SC2200 GNSS Receiver **User Manual**



www.stonex.it



Contents

Sta	tement		4
1.	Pro	duct Overview	5
	1.1	Front view	6
	1.2	Back view	7
	1.3	Left/Right-side view	8
	1.4	Top view	8
	1.5	Bottom view	8
	1.6	Structural Drawings / mounting dimensions	9
2.	Tec	hnical Specification	10
	2.1	Gnss	
	2.2	Physical	11
	2.3	Environmental	11
	2.4	Electrical	12
	2.5	Connector Ports	12
	2.6	Data recording	13
	2.7	Data streaming	13
	2.8	User Interface	14
	2.9	System Configuration	14
	2.10	Networking services	15
3.	We	b UI	16
	3.1	Summary	17
	3.2	System Information	
	3.2.1	GPS Status	19
	3.2.2	Satellite	
	3.2.3	Data Trasmission	21



3.2.4	Data Recording	.22
3.3	Configuration	.23
3.3.1	Reference Station	.23
3.3.2	GNSS configuration	.24
3.3.3	Satellites tracked	.25
3.3.4	Network	.26
3.3.5	Dynamic DNS	.27
3.3.6	NTRIP Server	.28
3.3.7	Recording	.30
3.3.8	Port Configuration	.31
3.3.9	Alters	.32
3.3.10	SNMPD	.33
3.3.11	Firewall	.33
3.3.12	Registration	.34
3.4	Download	.34
3.5	System Management	.35
3.6	Configuration Set	.36
3.6.1	Language	.36
3.6.2	Logout	.36
Оре	eration	37
4.1	Power On	.37
4.2	Start Record	.39
4.3	Trasmit Data	.39
4.4	Network Settings	.40
4.5	Antenna Settings	.42
4.6	Other Settings	.42

4.

Stonex SC2200 GNSS Receiver – User Manual 2



	4.7	Device Info	.44
	4.8	Power OFF	.44
Ap	pendix A pendix B	essories – Pin Interface Definiction FAQ Copyrights, warranty and environmental recycling	46 48
	Copyri	ghts and trademarks	.49
	Releas	e Notice	.49
	Standa	ard Limited Warranty	. 50
	Shippi	ng policy	.51
	Return	policy Dead on Arrival instruments	. 51
	Firmw	are/Software warranty	. 52
	Over V	Varranty repair(s) policy	. 52
	Disclai	mer and Limitation of Remedy	. 52
	Instrur	nents	. 53
	Access	sories	. 53
	Enviro	nmental recycling	. 54
	For	r countries in the European Union (EU)	. 54
	Foi	r countries outside European Union (EU)	. 54
Ар	pendix 2:	Safety Recommendations	55
	Warnii	ngs and Cautions	. 55
	Wirele	ss Module Approval	. 55
	Instrur	nent Approval	. 56



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 do		Short Press: Move the cursor right and down
3)	Power key	Short press: confirm
	i olici key	Long press: Power on/off
		Long Press: return to main menu
4)	Fn key	
	-	Short Press: switch key to key
5)	5) Differential transmission indicator When the differential data output, the differential indicator blinks evenly at 1-second interval.	
6)	6) Bluetooth It will be light blue when SC2200 is connected v indicator Bluetooth.	
7)) Static recording 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)	СОМЗ	DB9 serial port
12)	COM1	RS232 serial port
13)	Air hole	Maintain internal and external pressure balance

Stonex SC2200 GNSS Receiver – User Manual 7



1.3 Left/Right-side view



1.4 Top view



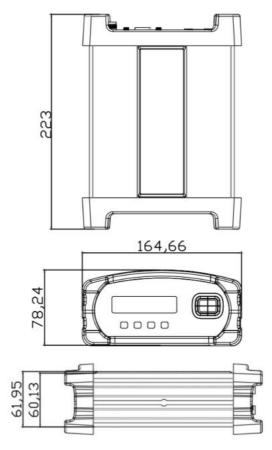
1.5 Bottom view



Stonex SC2200 GNSS Receiver – User Manual 8



1.6 Structural Drawings / mounting dimensions







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°C~+65°C
Storage Temp	-40°C~+80°C
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

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

Stonex SC2200 GNSS Receiver – User Manual 12



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:

SC2200 Reference Station

Summary	
System Information	
System Information	
GPS Status	
Satellites	
Data Transmission	
Data Recording	
Configuration	
Reference Station	
GNSS Configuration	
Tracking Satellites	
Network	
Dynamic DNS	
Ntrip Server	
Recording	
Port Configuration	
Alerts	
SNMPD	
Firewall	
VPN Client	
Registration	
Download	
System Management	
Configuration Set	
Language English •	
Logout	

Station Name	Test
Expire Date	20190424
Run Time	6 min

Device Model	SC2200	
Device Serial	SC22A9023004E	
GNSS Model	OEM729	
GNSS Serial	BMGX18320631P	

Longitude	0° 0' 0.00000''	
Latitude	0° 0' 0.00000''	
Height	0.000 m	
GNSS Status		
Local Time	1980-01-06 08:05:18	

Internal Memory	40.779 MB / 223.866 MB (18%)	
Data Memory	28.582 GB / 28.582 GB (99%)	

Battery Power	17%	
Power Source	BATTERY	



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	
	1	
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	
SNSS Hardware Version	OEM729-2.01	
GNSS Firmware Version	OM7MR0500RN0000	
GNSS Functionality	FFNRNN5BN (GPS+Glonass+Galileo+BeiDou,5Hz)	
	-	
DHCP	lOn	
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)	
	75%	
Battery Power	1/5%	



3.2.1 GPS Status

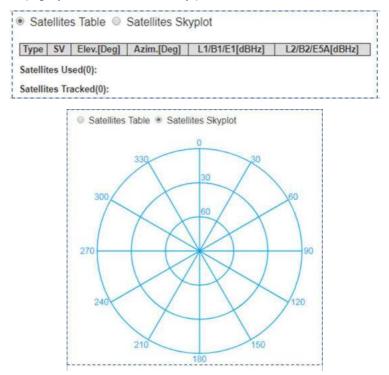
Status page displays the current SC2200 positioned state, the base station coordinates and antenna type usage.

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
Base Longitude Base Latitude	113°21' 59.82440" 23° 7' 35.67690"
Station Number	0111
	23 30,07030
Base Height	30.000 m
Base Height MET Type	30.000 m ZZ11A
Base Height MET Type Pressure	30.000 m ZZ11A - hPa
Base Height MET Type	30.000 m ZZ11A
Base Height MET Type Pressure Temperature	30.000 m ZZ11A - hPa - ℃
Base Height MET Type Pressure Temperature	30.000 m ZZ11A - hPa - ℃



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.

Name	Caster Address	Mountpoint	Data Type	Interval	Status	Start Time	Data Size		Operatio	n
01	183.60.177.84:2012	TEST1	RTCM3	15	idle		0 B	Edit	Start	Stop
	-			L			1	Contraction of the		
New	Transmission									

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

Name							
Caster Address				1			
Caster Port							
Version	Ň	V1.0 •					
Password							
Mountpoint							
Data Type		* RTCM3.0 O RTCM2.3 O CMR O CMR+ O RTCM3.2 O DGPS O RAW					
Interval	1	1HZ •					
Auto Connect		Enable Disable					

Also you can also choose this [Ntrip Server 1]

1 0						
Name	01	1				
Caster Address	183.60.177.84					
Caster Port	2012					
Version	V1.0 •					
Password						
Mountpoint	TEST1					
Data Type	* RTCM3.0 O RTCM2.3 O CMR O CMR+ O RTCM3.2 O DGPS O RAV					
Interval	1HZ ·					
Auto Connect	Enable Disable					

Stonex SC2200 GNSS Receiver – User Manual 21



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.

File Name ssss Interval 1HZ Duration Tme 1 ho Pool Off Auto © E Integral Point Record © E File Push © E	ur • nable ® Dis nable ® Dis nable ® Dis Push Pi	sable		Pusł	n Parameters	
ta Type : RANGE	dddf yyt dddf yyt au able bis bis Push Pi	sable sable sable arameters		Pusł) Parameters	
Ata Type : RANGE	dddf yyt dddf yyt au able bis bis Push Pi	sable sable sable arameters		Pust) Parameters	
dd Recording Schedule Name Path Type Sess File Name Ssss Interval IHZ Duration Tme 1 ho Pool Off Auto File Push File Push File Push File Push File Server Port FTP Server Address FTP Server Port FTP Password FTP Password	dddf yyt dddf yyt au able bis bis Push Pi	sable sable sable arameters		Pust	n Parameters	
Schedule Name Sess Path Type Sess File Name ssss Interval 1HZ Duration Tme 1 ho Pool Off Auto E Integral Point Record E File Push E Protocol F FTP Server Address FTP Server Port FTP User FTP Password	dddf yyt dddf yyt au able bis bis Push Pi	sable sable sable arameters		Pust	n Parameters	
Schedule Name Session Path Type Session File Name ssssion Interval 1HZ Duration Time 1 ho Pool Off Auto E Integral Point Record E File Push E Protocol F FTP Server Address FTP Server Port FTP User E	dddf yyt dddf yyt au able bis bis Push Pi	sable sable sable arameters		Pusi	n Parameters	
Path Type Sess File Name ssss Interval 1HZ Duration Tme 1 ho Pool Off Auto E Integral Point Record E File Push E Protocol Image: File Push FTP Server Address E FTP Server Port FTP Server Port FTP User E	dddf yyt dddf yyt au able bis bis Push Pi	sable sable sable arameters		Pusi	n Parameters	
File Name ssss Interval 1HZ Duration Tme 1 ho Pool Off Auto E Integral Point Record E File Push E Protocol F FTP Server Address FTP Server Port FTP User FTP Password	dddf yyt dddf yyt au able bis bis Push Pi	sable sable sable arameters		Pusł	n Parameters	
Interval 114Z Duration Tme 1162 Duration Tme 1160 Pool Off Auto E Integral Point Record E File Push E FitP Server Address FTP Server Address FTP Server Port FTP User FTP Password FTP Password	▼ nable ● Dis nable ● Dis nable ● Dis Push Pi	sable sable sable sable sable arameters		Pusł	h Parameters	
Duration Tme 1 ho Pool Off Auto E File Push E File Push E FTP Server Address FTP Server Port FTP User FTP Password	ur • nable ® Dis nable ® Dis nable ® Dis Push Pi	sable sable sable arameters		Pust	h Parameters	
Pool Off Auto E Integral Point Record E File Push E Protocol F FTP Server Address FTP Server Port FTP Server Port FTP User FTP Password E	nable ® Dis nable ® Dis nable ® Dis Push Pi	sable sable sable arameters		Pusł	h Parameters	
Auto Enternational Sector Address File Push Fi	nable • Dis nable • Dis Push Pi	sable sable sable arameters		Pust	Parameters	
Integral Point Record E File Push E Protocol F FTP Server Address FTP Server Port FTP User FTP Password	nable • Dis nable • Dis Push Pi	sable sable arameters		Pusł	Parameters	
File Push E Protocol ® F FTP Server Address FTP Server Port FTP User FTP Password	nable Dis Push Pa	sable arameters		Pust	Parameters	
Protocol ® F FTP Server Address FTP Server Port FTP User FTP Password	Push Pa	arameters		Pust	Parameters	
FTP Server Address FTP Server Port FTP User FTP Password				Pust	Parameters	
FTP Server Address FTP Server Port FTP User FTP Password	TR D CEO	DADIO		1 431		
FTP Server Port FTP User FTP Password	IF W GEO	- 104010	Protocol	G ETO B		3
FTP User FTP Password			Mode	TCPClient	GEO CRADIO	
FTP Password				Land our sectores	<u> </u>	
Second Second Second Second			Target IP : Port	t		-
Remote Directory				Push	Parameters	
			Protocol		GEO @ RADIO	Č.
1,11				1	020 - 10210	
Convert		1920				
	able O Disa	Contraction of the local division of the loc				
Contraction of the second s	x 3.02					
	ress zip •					
and the second se	ntenna Phase	e Center				
0 F	ie Push);		



3.3 Configuration

3.3.1 Reference Station

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

Station Name	Test					
Marker Number	0 •					
Receiver Number	0 •					
Country Code	CHN - China 🔹					
Site ID						
Time Zone	GMT+08:00 *					
HTTP Server Port	80					

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

A	Custom			HX-GG	486A	Download	
Antenna Type	选择文件 未选择任何文件				Upload		
Antenna Serial							
R(mm)	0						
H(mm)	0						
HL1(mm)	11.6						
HL2(mm)	14.2		_				

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.



Coordinate System	Geo	de	tic Co	ordinate	es (B,L,	H) 🔻				
Base Longitude	113	1	21	159	824	4004	(*)			
Base Latitude	23	0	7	35	676	9012	-			Current Position
Base Height(m)	30	-		-		1			Can	cel Base Position
feight of the point on the ground(m)	0.00	0]				
Antenna Height(mm)	0)		HLI		HL2 Antenna height (A99)
Measurement Mode	Antenna Phase Center								Height of the point on the ground-	

3.3.2 GNSS configuration

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

Cutoff Angle	10
1PPS	Enable Disable
BDS	Enable Disable
GPS	Enable Disable
GLONASS	Enable Disable
Galileo	Enable Disable
QZSS	Enable Disable
SBAS	Enable Disable



3.3.3 Satellites tracked

			Track	ing Satellit	es		
GPS	Don't track	Glonass	Don't track	BeiDou	Don't track	Galileo	Don't track
G1		R1		C1		E1	
G2		R2	8	C2	0	E2	8
G3		R3		C3		E3	
G4	0	R4		C4	0	E4	
G5	0	R5	6	C5		E5	
G6		R6		C6	6	E6	
G7	0	R7	8	C7	0	E7	
G8	0	R8	0	C8	0	E8	
G9		R9		C9		E9	
G10	6	R10	0	C10		E10	
G11	6	R11	0	C11	6	E11	
G12		R12	0	C12	0	E12	
G13		R13	G	C13	0	E13	
G14	0	R14	8	C14		E14	
G15		R15		C15		E15	
G16	8	R16	0	C16	0	E16	
G17		R17	6	C17		E17	
G18		R18		C18		E18	
G19		R19		C19	0	E19	
G20		R20	0	C20	0	E20	
G21		R21		C21		E21	
G22		R22		C22		E22	
G23	8	R23		C23		E23	
G24		R24	0	C24		E24	
G25				C25	0	E25	
G26				C26	0	E26	
G27				C27	0	E27	
G28				C28	0	E28	

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



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	1			
Default Gateway	192.168.3.1				
DNS	114.114.114.114 8.8.8.8	•			
PING	Enable Disable (s) Counts :	Timeout :			
	Device Network Settings				
Wired Net	* WAN				
DHCP	Enable Disable				
IP	192.168.3.129				
Mask	256 255 255 0				
Gateway	192 168 3 1	3			
MAC address	0C AE 7D D9 85 D7				
Link Status	Link disconnected				
Status	Route disconnected		Wireless Net	🖲 Client 🔍 Hotspot 🔍 [Disable
Wireless Net			DHCP	Enable Disable	enerosi de
MAC address	Client Hotspot E	isable	0.010	PG	
MAC address SSID	0C AE 7D D9 85 08		SSID	PG *	Scan SSID
5.555 (TA)	SC22A9023004E		Password	22228888	
Password	NONE		IP	0000	-
IP	192.168.10.1		Mask	0000	
Mobile Net	Enable Disable		Gateway	0000	-
APN	3gnet		MAC address	0C:AE:7D:D9:85:D8	
User			Bit Rate		_
Password				0 Mb/s	
IP	0.0.0.0		Signal Level	0 dbm	_
Mask	0.0.0.0		Channel	0	
Gateway	0.0.0.0		Wifi Link Status	PowerOFF	
Signal Level	0%		WiFi Status	No internet access	
Mobile Isp	Unknown		Virtual AP	Enable Disable	
Monet Link Status	PowerOFF		SSID	SC22A9023004E	
Monet Status	No internet access		Password	NONE	
	FTP Server Settings		IP	192.168.10.1	
Anonymous Access	Enable *				
User	1				
Password	•				
	NTP				
NTP Server	Enable Disable				



3.3.5 Dynamic DNS

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

Enable O Disable	
oray.com •	
1	



3.3.6 NTRIP Server

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

Name	01
Caster Address	183.60 177.84
Caster Port	2012
Version	V1.0 •
Password	
Mountpoint	TEST1
Data Type	RTCM3.0 RTCM2.3 CMR CMR+ RTCM3.2 DGPS RAW
Interval	1HZ *
Auto Connect	Enable Disable
Add Connection V	Bubmit Delete Reload Cancel
Add Connection	Submit Delete Reload Cancel
Add Connection	Submit Delete Reload Cancel
Add Connection	Submit Delete Reload Cancel
Add Connection Add Connection	
Add Connection Add Connection Caster Address Caster Port Version	Nubmit Delete Reload Cancel
Add Connection Add Connection Caster Address Caster Port Version Password	
Add Connection Add Connection Address Caster Address Caster Port Version Password Mountpoint	
Add Connection Add Connection Caster Address Caster Port Version Password	

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.

Data Type : RANGE	•		
Add Recording *			
Schedule Name			1
Path Type	Session/Date •	l.	1
File Name	ssssdddf.yyt 🔹		-
Interval	1HZ •		
Duration Tme	1 hour •		1
Pool	Off 🔹		
Auto	🖲 Enable 🔍 Disable		1
Integral Point Record	Inable Disable		
File Push	Enable Disable		
	Push Parameters	6	
Protocol	💌 FTP 🔍 GEO 🔍 RADIO		Push Parameters
FTP Server Address		Protocol Mode	G FTP REGEO RADIO
FTP Server Port		Target IP : Port	TCPCient *
FTP User			FL J
FTP Password		Protocol	Push Parameters
Remote Directory		Protocol	© FTP © GEO ● RADIO
Convert	L		
Convert	Enable Disable		
	Rinex 3.02 T		-
	Compress zip •		-
	Antenna Phase Center		-
	File Push		



3.3.8 Port Configuration

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

Bluetooth	Enable Disable
Function	NMEA(Output) *
NMEA	GGA: 1HZ • GSA: Off • GSV Off • ZDA: Off • RMC: Off • GLL: Off •
COM1	Enable Disable
Baud Rate	115200 •
Function	CMD(Input/Output) *
COM2	Enable Disable
Baud Rate	115200 •
Function	CMD(Input/Output) •
COM3	Enable Disable
Baud Rate	115200 •
Function	CMD(Input/Output) ·
Ntrip Client	Enable Disable
IP:Port	183.60.177.84.2012
Version	V1.0 *
Mountpoint	TEST Get Mountpoint
Upload GGA	10S •
User	user
Password	
Ntrip Caster	
Port	6070
Socket 1	Enable Disable
Туре	TCP +
Mode	Server •
Port	6060
Function	RAW(Output) •
Interval Ephemeris Frequency	1HZ + RANGE +
Socket 3	Enable Disable
Type	TCP +
Mode	Server *
Port	9001
Function	RAW(Output) •
Interval Ephemeris	(1HZ ▼ RANGE ▼)

Stonex SC2200 GNSS Receiver – User Manual 31



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.

E-Mail Alerts	Enable Disable	
SMTP Server	: SSL Encryption	
From E-Mail Address		
E-Mail Login Name		Test
E-Mail Login Password		
E-Mail Address		
L-Mail Address		
SMS Alerts	Enable Disable 13798191635	Test



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.

SNMPD	• Enable O	Disable
Trap IP		(Please separate by ';')
Allow Access IP		

3.3.11 Firewall

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

Network Services Filter	🖲 Enable 🔿	Disable	
Filter Table Type	Black List White List		
	Black List		
Source IP			Operation Delete



3.3.12 Registration

You can know registration information of receiver in this page.

Device Serial	SC22A9023004E		
Old AuthCode	6FA7DEDF5B9FBF47BC457C115C876671		
Expire Date	20190424		
Register Status	CHECKING		
AuthCode			

3.4 Download

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

Select	Name	Size	Creation Time	Modification Time	Operation
Select All	Packad	e Dele	te Selected		



3.5 System Management

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

1. Upload File		E-28-85/17/61+	++ (++-	
Upgrade	这样又件	大迎#111193	217	
Remote Debu	g			
Enable	Disable			
IP : Port]	Submit	
View Logs				
1. APP Log	Download	View		
2. OS Log [Download	View		
3. Kernel Log	Download	View		
Security Enable Log Current User : a		ation		
Old Password :				
New Password	2	Chang		nfy New Passwor
Enable Gue	est			
New Guest Pas	sword :		1	Venify New
Password			Change	
Self Test	Reset Devic	o Ent	ory Reset	



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

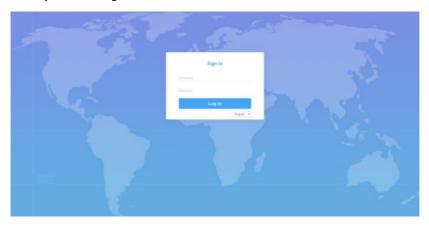
3.6.1 Language

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".



Stonex SC2200 GNSS Receiver – User Manual 36



4. Operation

4.1 Power On

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

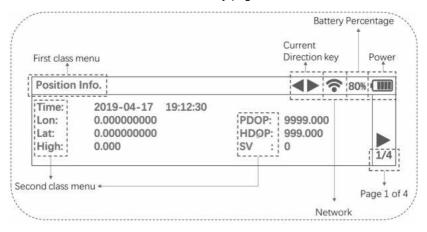


You'll see four information pages about this receiver.

	Position I	nfo.	💶 🕫 < 🖊
Position Info.	Time: Lon: Lat: High:	2019-04-17 19:12:30 0.000000000 0.000000000 0.000	PDOP:9999.000 HDOP:999.000 SV :0 1/4
	Ethernet I	nfo. Web Port:80	💶 🕫 < 🖊
Ethernet Info.	DHCP: IP Addr: Mask: Gateway:	ON 0.0.0.0 0.0.0.0 0.0.0.0	2/4
	Wifi Info.		💶 🕫 🜗
WIFI Info.	Mode: IP Addr: Mask: Gateway:	Master 192.168.10.1 255.255.255.0 0.0.0.0	3/4
	GPRS Info	•	💶 🕫 🔦 🖊
GPRS Info.	Power: IP Addr: Mask: Gateway:	Off 0.0.0.0 0.0.0.0 0.0.0.0	4/4



You can learn this information from every page.





4.2 Start Record

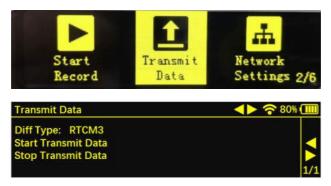
You can see the main menu display on OLED screen.



Data Record	🔶 穼 80% 🎹	
Start Record		
Stop Record	1/1	

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.

Wifi Info.		Wifi Info.		💷 💎 <ا>
Mode:	Master			
IP Addr:	192.168.10.1			
Mask:	255.255.255.0			
Gateway:	0.0.0	3/4		



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

Wifi Info.		💷 🕫 <ا>
Mode:	Master	
IP Addr:	192.168.10.1	
Mask:	255.255.255.0	
Gateway:	0.0.0	3/4

Third, you need to check the direction key on the top. You can only enter the

selection interface when the direction key is $\mathbf{\nabla}$. You can choose Master, Managed, off.

Wifi Info.		※10% (11)	
Mode: IP Addr: Mask: Gateway:	Master 192.168.10.1 255.255.255.0 0.0.0.0	3/4	
Wifi Info.		6 7 80% (
Mode: IP Addr: Mask: Gateway:	Master 192.168.10.1 255.255.255.0 0.0.0.0	3/4	

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.

Wifi Info.		💷 🕫 <> 🕨
Mode:	Master	
IP Addr:	192.168.10.1	
Mask:	255.255.255.0	
Gateway:	0.0.00	3/4



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.

Other Settings		📣 🗢 <>
Language:	English	
Brightness:	7	
Turn off OLED:	5 MIN	
		1/1

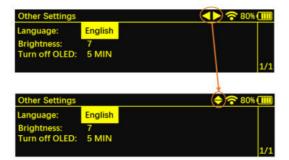


Second, you need to short press **[**Power key**]** . The purpose of this is to select the parameters you want to change. After doing that, you can see the "English" has been selected.



Third, you need to check the direction key on the top. You can only enter the

selection interface when the direction key is **V**. 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.

Other Settings		💶 💎 < 🖊
Language:	English	
Brightness:	7	
Turn off OLED:	5 MIN	
		1/1



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.

Other Setting	Device Info	Start Record	6/6
Device Info		\$? 80	0% (
Device Model: Device Serial: Hardware Ver: BOOT Ver:	SC2200 SC220A9023004E NSC200 II -V1.0-RS485 1.10		
BOOT Ver: Device Info	1.10		1

Device Info		
OS Ver:	4.1.6-1.13(181031)	
App Ver:	2.12(190326)(foreign)	
Web Ver:	2.12	
MCU Ver:	1.01	2/2

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				
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		



	Туре	Picture	es	Definition
PWR	$\left(\right)$	D	1	Power positive
		2)	2	Power negative
SUB			1	ID
			2	D-
		6	3	VBUS
		55	4	D+
		4	5	NC
			6	NC
			7	GND
COM1			1	NC
		D	2	NC
		(5)	3	TXD output 232
		4	4	GND
			5	RXD input 232

Appendix A – Pin Interface Definiction

Stonex SC2200 GNSS Receiver – User Manual 46



		1	NC
		2	485(GND)/232
COM2	(2) (5)	3	DATA-/TXD
	34	4	GND
		5	DATA+/RXD
		1	DCD
		2	RXD
		3	TXD
		4	DTR
СОМЗ		5	GND
		6	DSR
		7	RTS
		8	CTS
		9	

Stonex SC2200 GNSS Receiver – User Manual 47



Appendix B FAQ

How to change the languages?

Please refer to 【4.6 other settings】.

2How to change the WIFI Setting Mode?

Please refer to 【4.4 Network settings】.

3Could 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.

4 How to connect to Web UI?

Please refer to 【3.Web UI】



Appendix 1: Copyrights, warranty and

environmental recycling

Copyrights and trademarks

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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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