



STONEX S950
GNSS Receiver
User Manual



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1. Introduction

This document is the user guide for S950, and it's intended to introduce how to use the receiver correctly.

The S950 is a versatile and advanced GNSS receiver that caters to the needs of various applications, including surveying, mapping, and navigation. It's equipped with two cameras, which provides the operator with real-time visual assistance to identify the point to be staked out.

The S950 incorporates cutting-edge technology to deliver exceptional performance. It boasts a 2W radio transceiver, a positioning speed up to 50Hz, and an integrated IMU, ensuring precise position updates. The device's 64 GB memory capacity resolves any storage issues, while the 4G modem ensures reliable connectivity.

The S950 is designed to withstand challenging environments. It can function perfectly in temperatures ranging from -40°C to +65°C and has an IP67 water and dust resistance rating.

Additionally, the device is drop-resistant up to 2 meters, ensuring reliability even in difficult conditions. Despite its robust capabilities, the S950 maintains a lightweight design of approximately 810 g, making it highly portable without compromising resistance. The long-lasting battery guarantees uninterrupted operation up to 10 hours, further enhancing the device's versatility and convenience

S950 GSM modem is enabled to work with nano sim card and Worldwide LTE, UMTS, GSM based networks.

The Key Features of the S950 are:

- Multi-frequency and multi-constellation satellite reception
- 4G/3G/2G Network connectivity
- 2.1+EDR/5.0 Bluetooth
- Easy configuration using Stonex Cube-a Android application and Web User Interface
- Rugged housing
- IP67
- Tilt correction IMU sensor
- Dual Camera technology for stakeout aid
- Advanced laser distance meter
- TX/RX 2W internal radio module

2. Receiver appearance

2.1 Front view



Num.	Item	Description
1	Satellite indicator	Blinks green according to the number of satellites used for positioning followed by a pause
2	Bluetooth indicator	Green: connected Off: no Bluetooth connection
3	Datalink indicator	Green: the differential corrections are being received/transmitted
4	Charge indicator	Green: charge level between 30% and 100% Flashing green: charge level lower than 30% Device off while charging: Green: charge completed Red: in charge
5	Power button	Power on: keep pressed until you hear a beep. Power off: keep pressed until you hear 3 beeps, then the lights turn off.

2.2 Bottom view



Num.	Item	Description
1	USB type-C port	Charge port The plastic cover is latched to the right.
2	Sim card slot	Slot for Nano SIM Card, the card must not have a PIN code, insert the card while the device is off. The card is locked in by sliding the metal cover. The plastic cover is latched toward the screw connector
3	TNC connector for UHF antenna	Screw connector for UHF module external antenna. The plastic cover is latched to the left.
4	5/8' connector	Screw connector for support
5	Serial Number	Serial number of the device
6	Camera	Camera for stakeout aid. To receive correct indications during stakeout the camera must face away from the operator

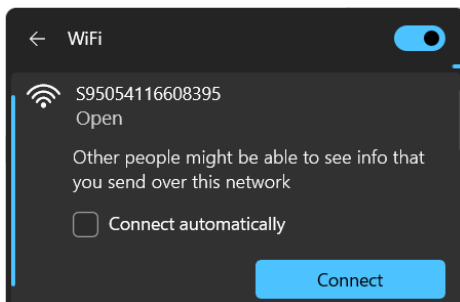
2.3 Back view



Num.	Item	Description
1	Frontal camera	Camera for visual stake out and diastimeter aiming
2	Diastimeter	Laser emitter and receiver

3. Web Interface

S950 Web User Interface (WebUI) functionality allows managing the receiver by connecting to its Wi-Fi hotspot. The name of the Stonex GNSS receiver hotspot is the receiver serial number.



Once connected with a smartphone or PC, using any internet browser the WebUI is found at the IP address: **192.168.10.1**

The standard credentials to access the WebUI are:

User: **admin**

Password: **admin**

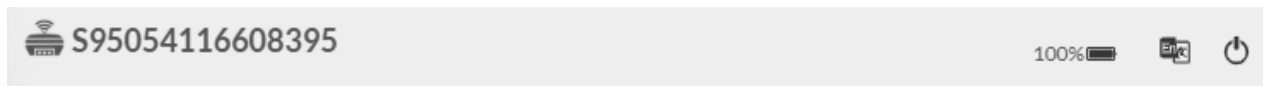
Login

User

Password

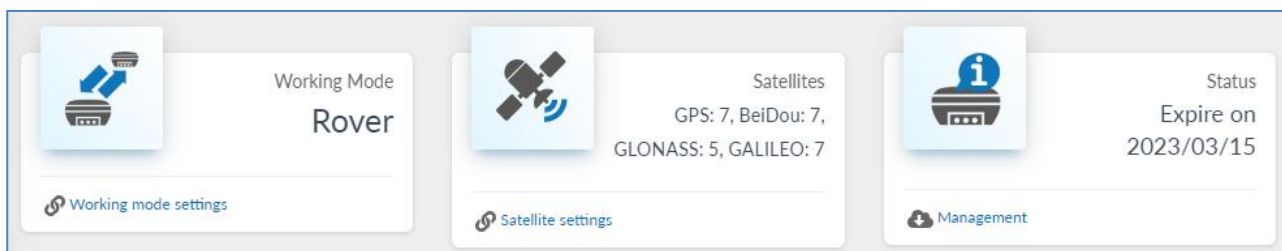
3.1 Dashboard

It's a summary of the status of the receiver, the top line is shared with all the other pages, it contains the serial number of the device, the battery charge status, the language selection button, the power options, and the device model.

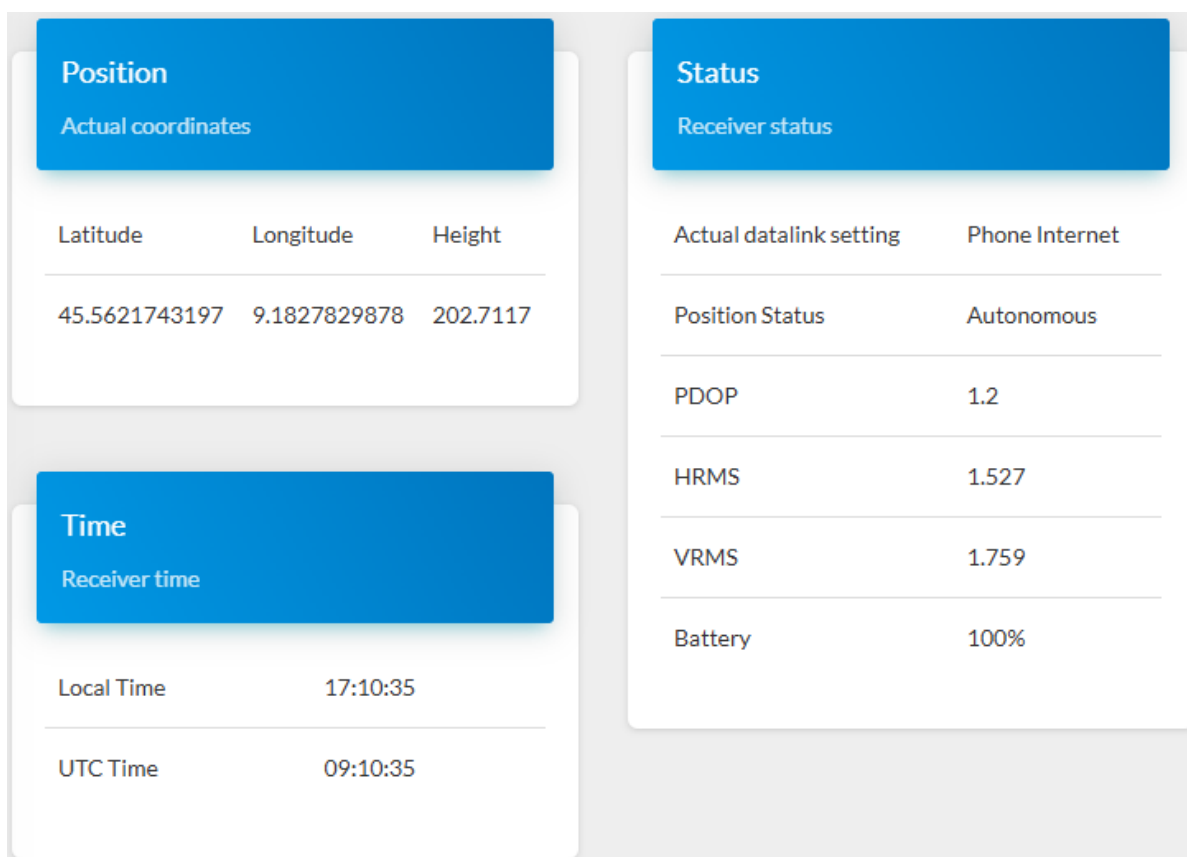


The language selected modify the language of the WebUI and, if available, the language of the voice messages.

The second section contains the current working mode, the number of satellites used for positioning, and the expiration date of the current activation code.



The third section recaps current WGS84 coordinates, Receiver time, and quality of the solution. Local time refers to the time zone set on the [device setting](#) page.



3.2 Satellites

Here are shown the satellites tracked in the form of a Table and Skyplot. In both views, constellations are colour coded. It's also possible to set the cut-off angle, every satellite with a lower elevation will be considered as not tracked.



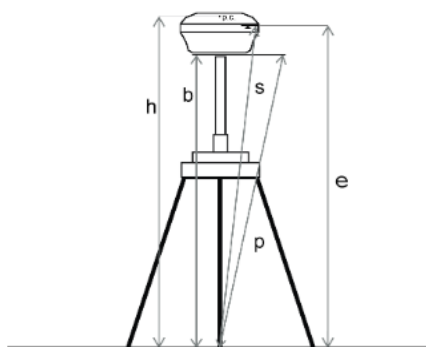
3.3 Static Survey

Although S950 it's able to record raw data while working as a base or as a rover, this page is used to set the option for the only raw data recording. Before changing any setting be sure that the device is not already recording.

The point name can contain at maximum four alphanumeric characters.

The **antenna height** can be measured with four different methods as explained by the picture. Select the correct method so that the correct phase center offset is applied.

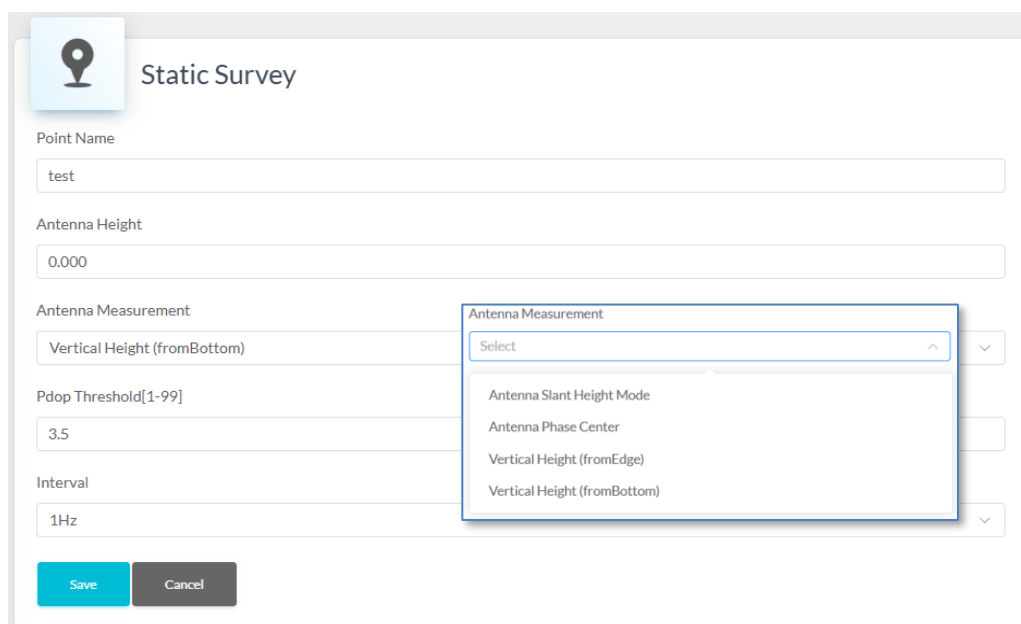
- Vertical height (fromBottom) **b**
- Vertical height (fromEdge) **e**
- Antenna phase center **h**
- Antenna Slant Height Mode **s**



Pdop Threshold: maximum Pdop to start the recording automatically on device startup

Interval: define the frequency of the recording, from once every minute (60 S) to five time in a second (5 Hz).

Save: will save the configuration and start the recording.



The screenshot shows the 'Static Survey' configuration screen. It includes the following fields and controls:

- Point Name:** A text input field containing 'test'.
- Antenna Height:** A text input field containing '0.000'.
- Antenna Measurement:** A dropdown menu currently showing 'Vertical Height (fromBottom)'. A modal window is open, displaying a list of options: 'Select', 'Antenna Slant Height Mode', 'Antenna Phase Center', 'Vertical Height (fromEdge)', and 'Vertical Height (fromBottom)'.
- Pdop Threshold[1-99]:** A text input field containing '3.5'.
- Interval:** A text input field containing '1Hz'.
- Buttons:** 'Save' (blue) and 'Cancel' (grey) buttons at the bottom.

3.4 Download Raw Data

From this page, it's possible to download and delete the raw data recordings and log files.

Download Raw Data

Select	Name	Size	Time	Operation
☐	Go Back to Previous Level			
☐	 1-20250711-001458.txt	330.75 KB	Jul 10 16:18	Download Delete

3.5 Working Mode

This page contains all the settings to set up RTK datalink

3.5.1 Static

Refer to chapter [3.3 Static Survey](#)

3.5.2 Rover

In Rover mode, S950 automatically recognizes the RTK corrections format between:

- RTCM 3.2
- RTCM 3.0

It's necessary to correctly set the datalink between:

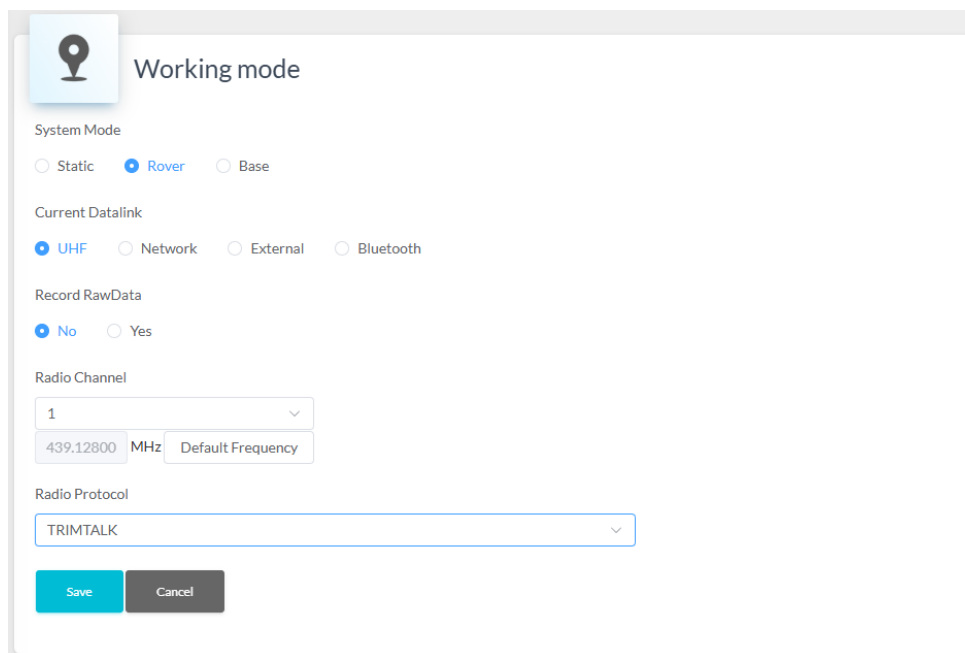
- UHF
- Network (SIM)
- Bluetooth

3.5.2.1 UHF Radio

The S950 radio module frequency range is between 410MHz and 470MHz band, 8 channels with [pre-set frequencies](#) are available for quick configurations.

To receive the RTK corrections from the base, select the same frequency and radio protocol.

Be sure to connect a UHF antenna compatible to the set transmission frequency.



Working mode

System Mode

☐ Static ☒ Rover ☐ Base

Current Datalink

☒ UHF ☐ Network ☐ External ☐ Bluetooth

Record RawData

☒ No ☐ Yes

Radio Channel

1

439.12800 MHz Default Frequency

Radio Protocol

TRIMTALK

Save Cancel

3.5.2.2 Network

S950 can connect to the Internet using a SIM card.

Internet Settings

To use a SIM card, it must not have a PIN code, then set the SIM provider's Access Point Name (APN).

Network Link

☒ SIM Card Network

APN

APN User

APN Password

Connection Settings

S950 uses the NTRIP protocol to receive corrections from the network.

To connect to an NTRIP caster it's necessary to set its IP address and port. The mount point can be written manually or selected from the list obtained by pressing Get Mountpoint, internet connection and caster IP address and port must be already set.

The user and Password are the ones necessary to access the Caster if needed.

Connection Mode

Server Address

Server Port

Mount Point

Select Mountpoint

User

Password

3.5.2.3 Bluetooth

Bluetooth has no settings. The datalink's fully managed by the source of the transmission, for example, a controller with Stonex Cube-a will set the datalink to Bluetooth if the "Phone network" communication mode is selected.

3.5.3 Base

As Base S950 can provide RTK corrections in the following formats:

- RTCM 3.2
- RTCM 3.0

The PDOP threshold limits the use of the base if the PDOP value is higher.

To set the base position select "repeat", the coordinates requested are Longitude/Latitude/Height of the S950 phase center. The phase center offset can be found on the label or in the [Information](#) page.

By selecting the "Single" option for the base coordinates, the S950 will set the phase center coordinates calculated at the start of the base transmission.

System Mode

☐ Static
 ☐ Rover
 ☒ Base

Current Datalink

☒ UHF
 ☐ Network
 ☐ External

DataType

RTCM32

▼

SiteID

Pdop Threshold[1-99]

Base Position

☐ Single
 ☒ repeat

Base Longitude

9.18272385723

Base Latitude

45.56227712551

Base Height

205.9104

3.5.3.1 UHF Radio

The S950 radio module frequency range is between 410MHz and 470MHz band, 8 channels with [pre-set frequencies](#) are available for quick configurations

To receive the RTK corrections from the base, select the same frequency and radio protocol.

Be sure to connect a UHF antenna compatible to the set transmission frequency.

The maximum power output for the S950 UHF module is 2W, when radio power is set to Low the output is 0.5W.

The radio power affects the transmission range and the battery duration.

Attention! Local regulations can limit the use of UHF radio. Check before starting the transmission.

Radio Channel

1

439.12800 MHz

Default Frequency

Radio Protocol

TRIMTALK

Radio Power

High

Save and Start Base

Cancel

3.5.3.2 Network

S950 can connect to the Internet using a SIM card.

Internet Settings

To use a SIM card, it must not have a PIN code, then set the SIM provider's Access Point Name (APN).

Network Link

☒ SIM Card Network

APN

APN User

APN Password

Connection Settings

S950 uses the NTRIP protocol to transmit corrections to a caster.

To connect to an NTRIP caster it's necessary to set its IP address and port.
Mountpoint is fixed to the device serial number.

The password is the one that can be requested by the Caster for the bases.

Connection Mode

Server Address

Server Port

Mount Point

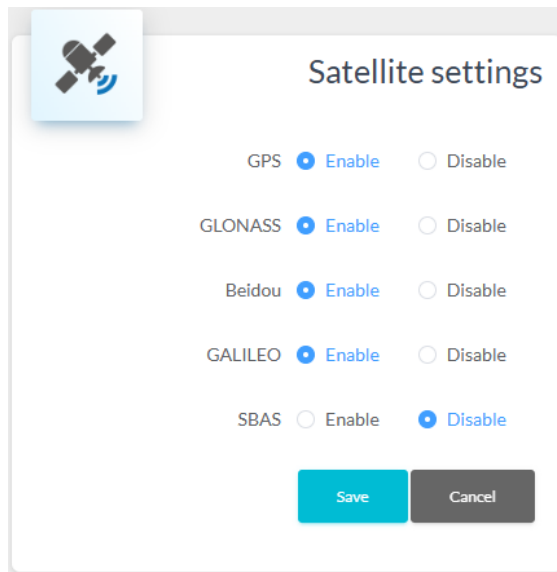
Select Mountpoint

User

Password

3.6 Satellite Settings

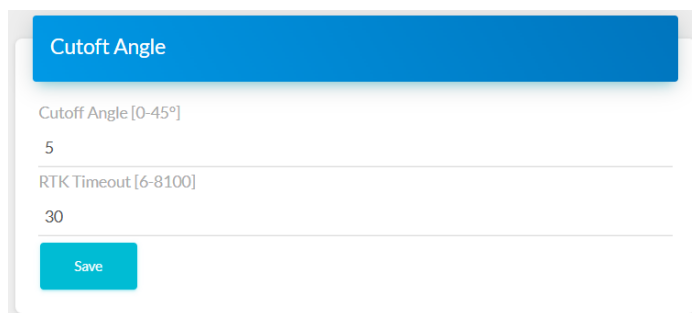
From this page, it's possible to choose which constellation to track.



The 'Satellite settings' dialog box features a satellite icon in the top-left corner. It contains five rows of constellation settings, each with a radio button and a label: 'GPS' (Enable selected), 'GLONASS' (Enable selected), 'Beidou' (Enable selected), 'GALILEO' (Enable selected), and 'SBAS' (Disable selected). At the bottom, there are two buttons: 'Save' (cyan) and 'Cancel' (grey).

Like on the [Satellite](#) page, it's possible to change the satellite cut-off angle.

RTK timeout is the number of seconds that must pass without receiving RTK correction to consider the connections lost and drop the fixed solution.



The 'Cutoff Angle' settings dialog box has a blue header with the title 'Cutoff Angle'. Below the header, there are two input fields: 'Cutoff Angle [0-45°]' with the value '5' and 'RTK Timeout [6-8100]' with the value '30'. A 'Save' button (cyan) is located at the bottom left of the dialog.

3.7 Device Settings

This page contains other configuration option for S950, the first section includes the NMEA messages output (frequency up to 5 Hz):

Output General

GGA1 Hz

ZDA1 Hz

GSA1 Hz

GSV1 Hz

GST1 Hz

VTG5 Seconds

RMCDo Not Output

GLLDo Not Output

SaveCancel

The second section contains:

- Time zone: set the time zone to change the Local time as shown in the [Dashboard](#)
- Speaker: enable/disable the voice messages

DeviceConfiguration

Time Zone

UTC+00:00

7-Pin Serial Port Baud Rate

38400

Speaker

☒ Enable
 ☐ Disable

Automatic Power On with 5-Pin Cable Insertion

☐ Enable
 ☒ Disable

SaveCancel

3.8 Save Backup & Logs

Here is possible to view and download the system log.

View Logs

APP Log

DownloadView

3.9 Information

This page contains information about the S950 hardware and firmware.

In the Receiver section, is shown the motherboard firmware version together with much other useful information like the available memory and the battery status.

Receiver			
Device Model	S950	Serial No	S95054116602849
Hardware Version	V1.0	Firmware Version	V2_0_0-D-20250624
Sensor Firmware	IM19_H2_B2.2_A9.2_29d9831 752adce89961cb	App Version	EC2X-V1_0_4-20250513
Battery	60%	Power Source	Battery
Data Memory	Internal Storage Total:58.38GB; Free:58.23GB		

The GNSS Board section shows the GNSS board serial number and firmware version.

GNSS Board			
GNSS Model	UM980	GNSS Serial	MD22A2244602849
GNSS Hardware Version	2310415000001	GNSS Firmware Version	R4.10BUILD11833

The antenna section contains the model and the geometrical values of the GNSS antenna:

- HL1: distance of the L1 frequency phase center from the GNSS antenna base
- HL2: distance of the L2 frequency phase center from the GNSS antenna base
- H: distance of GNSS antenna base from the S950 base
- R: radius of the GNSS antenna

So, the phase center offsets from the base of the S950 are calculated as $H+HL1$ and $H+HL2$.

Antenna			
Antenna Type	TX-CSX371A	R	70.6
H	34.3	HL1	14.0
HL2	15.9		

In the Network section are located information about the S950 current Internet connection settings.

Network			
IMEI		Signal Level	
Caster Address	1.14.194.9	Mount Point	T03V32000204583
WEB	20250624_v2		

And lastly, the UHF section shows the current radio settings and the current UHF firmware.

UHF			
Firmware Version	V1.1.0	Channel	11
Radio Protocol	TRIMTALK		

3.10 Management

The management page contains functions for the correct operativity of S950.

3.10.1 Firmware Update

To update a firmware, select the firmware file using the file explorer (Select File) then press Upload File.

Install New Firmware

App Version: EC2X-V1_0_4-20250513

Select File

Upload File

Install New OEM

GNSS Firmware Version: R4.10BUILD11833

Select File

Upload File

Install New IMU

Sensor Firmware: IM19_H2_B2.2_A9.2_29d9831752adce89961cb

Select File

Upload File

When the file has been decompressed, press Confirm to start the update. The motherboard firmware update will restart automatically the S950.

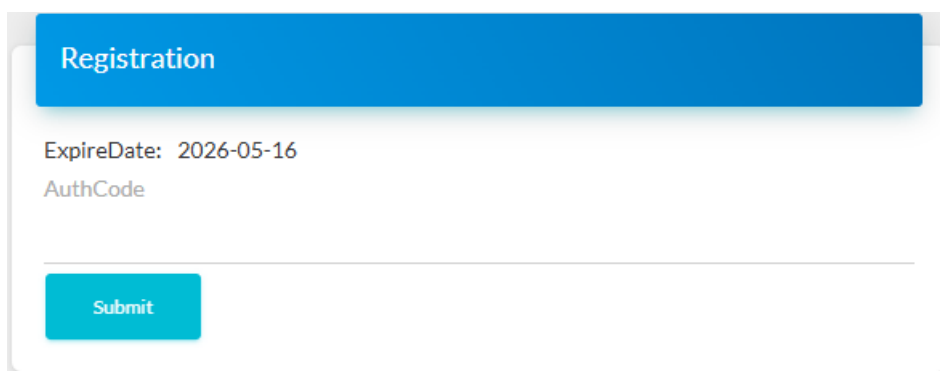
Attention! Do not turn off the receiver during the update.

Attention! Use only firmware files provided by your local reseller.

3.10.2 Device Registration

The S950 must be correctly registered to work properly. If the registration has expired the device will beep and it will not track satellites. Contact your local reseller to request the authorization code.

To upgrade the registration, go in management section and insert in the registration field the 43 characters code provided by the local reseller, without any space, and press Submit. Shortly the new expiration date will be visible.



The image shows a web form titled "Registration" with a blue header. Below the header, the text "ExpireDate: 2026-05-16" is displayed. Underneath, there is a label "AuthCode" followed by a horizontal input line. At the bottom left of the form is a blue "Submit" button.

4. IMU Technology

The S950 is equipped with IMU Technology that allows measurements with a tilted pole.

This brings the following advantages:

- Fast and precise survey.

It's possible to survey and store points with just one measure with a slant up to 60° (5mm + 0.3mm/°).

- Simple and quick initialization process.

After the first calibration, once a FIXED solution is obtained, is a matter of seconds to initialize the sensor and start to work.

- Guided calibration with *Stonex Cube-a*

You can use *Stonex Cube-a* field software to calibrate the sensor; Stonex Cube-a provides all the instructions to initialize and calibrate the IMU sensor.

- Integrated inertial navigation module ensures real-time interference-free tilt compensation.

It's not affected by any geomagnetic and external metal structures or other environmental influences. It adopts "satellite and inertial navigation" dual inspection.



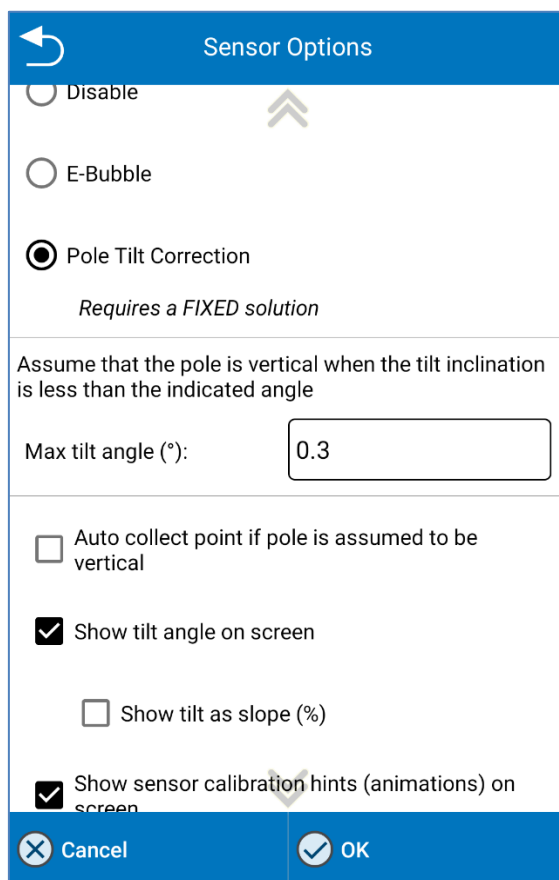
4.1 IMU with Stonex Cube-a

4.1.1 Sensor Activation and Configuration

Before using the receiver to collect points with the slanted pole, check if the pole tilt correction functionality has been enabled. The settings to enable the Pole Tilt Correction using Stonex Cube-a, are in the Configure → System Settings → Sensor Options page or Calibrate → Sensor Options.

On the same screen, it is possible to set the software to show on screen the tilt angle (in decimal degrees, 0° = true vertical).

There is also the possibility of automatically starting the point collection when the pole is considered vertical with respect to the set limit.





Sensor Options

☐ Disable

↑

☐ E-Bubble

☒ Pole Tilt Correction

Requires a *FIXED* solution

Assume that the pole is vertical when the tilt inclination is less than the indicated angle

Max tilt angle (°):

☐ Auto collect point if pole is assumed to be vertical

☒ Show tilt angle on screen

☐ Show tilt as slope (%)

☒ Show sensor calibration hints (animations) on screen

 Cancel

 OK

4.1.2 Initialization

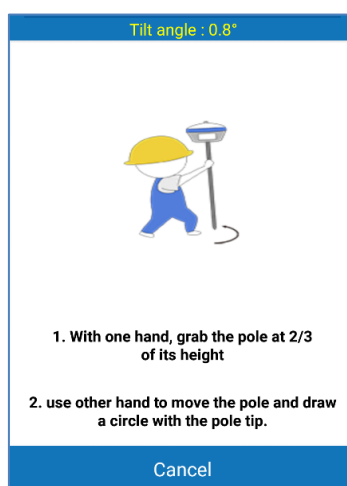
After the activation of the sensor, go to Survey mode.

If the sensor is not ready to work yet, Stonex Cube-a will show you which operations are necessary to perform its initialization, if “Show sensor calibration hints (animations) on screen” is enabled in Configure → System Settings → Sensor Options page.

There is a necessary pre-requisite to use the IMU: the status of the GNSS solution must be Fixed.

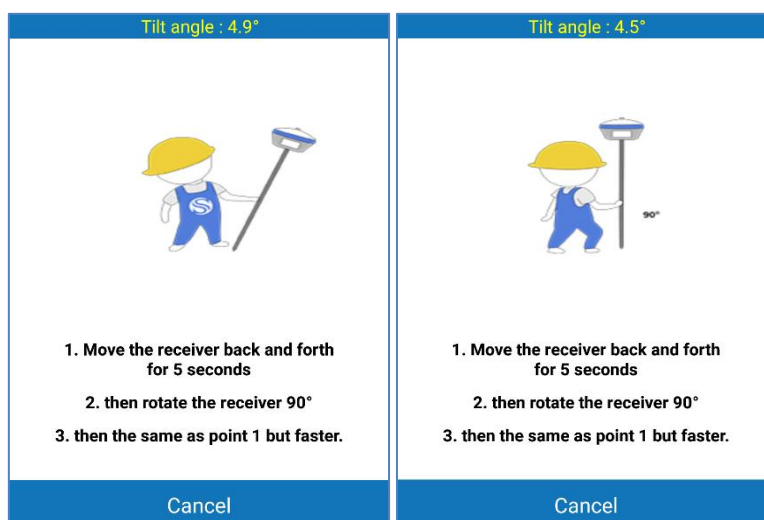
Then, if the sensor needs to be initialized, two different popup screens could show up.

The first screen contains the instruction for the magnetic initialization. Move the pole tip to draw a circle on the ground.



The second screen shows how to aid the sensor to adjust the calibration parameters based on the local GNSS position and accuracy.

Move the receiver back and forth for a few seconds in a direction. Then rotate the receiver by 90 degrees and repeat the movements, in the same direction as before, as shown in the picture below.



If the screen does not disappear, try changing the position to get lower RMS values and then repeat the two steps.

These screens could appear during the survey: this means that the IMU accuracy has degraded and it's necessary to adjust it.

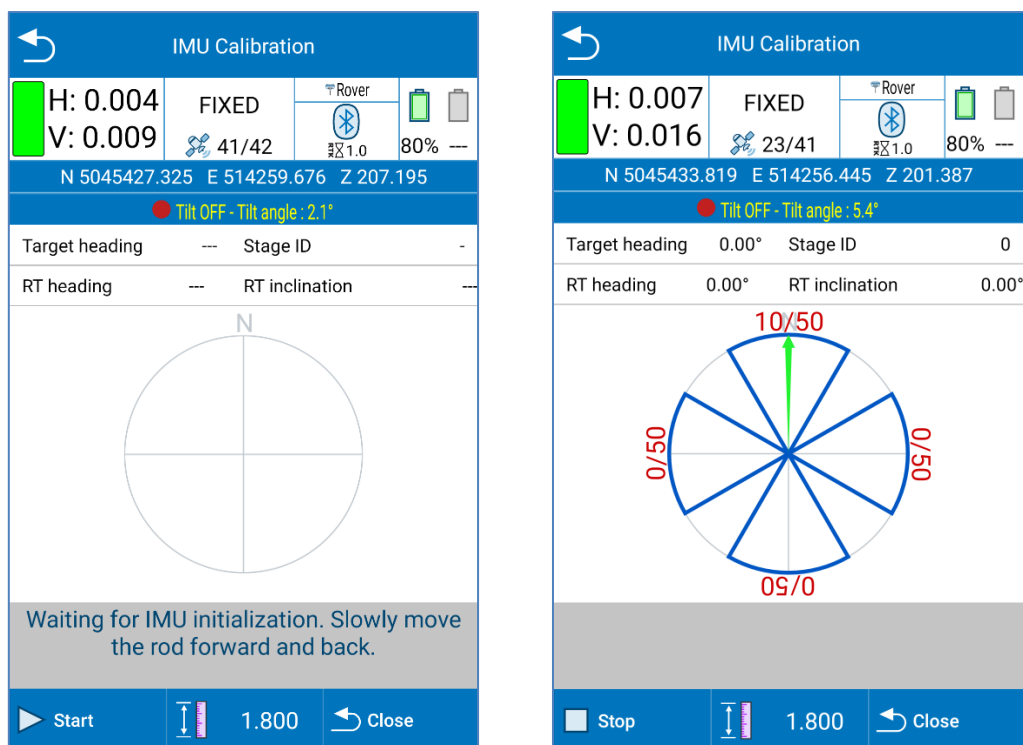
4.1.3 Calibration

To calibrate the sensor, select the Calibrate page and then click on the Calibrate Sensor command.

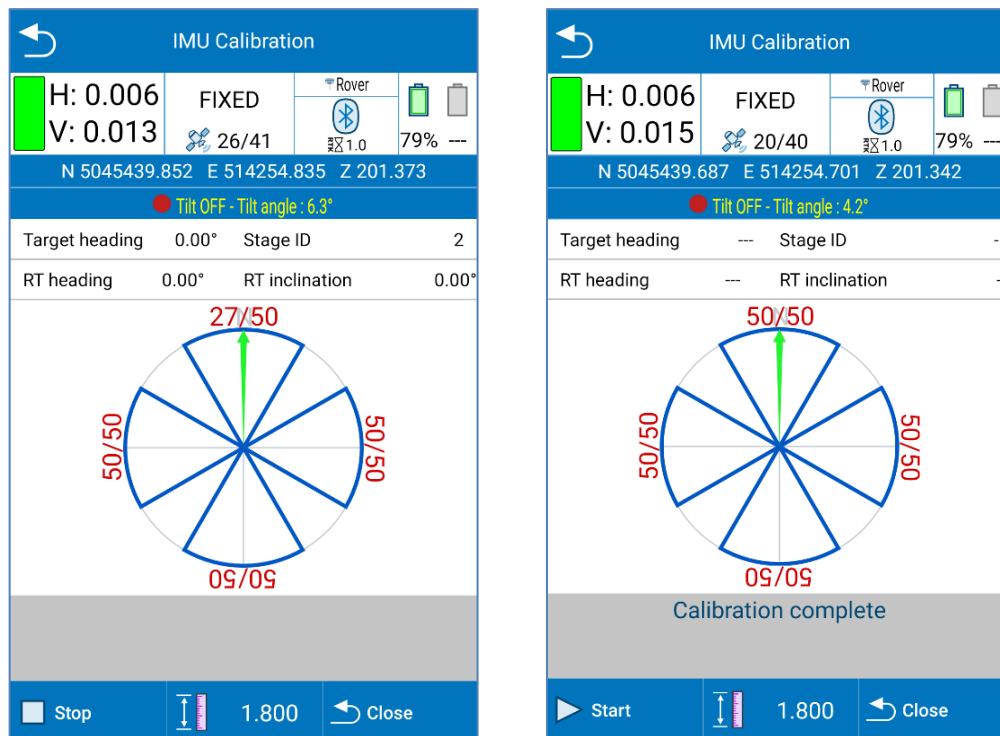
A FIXED solution is mandatory. Set the pole to be high at 1.8m as well as the measured height set in Stonex Cube-a.

To begin, slowly move the rod back and forth to initialize the IMU, then start the calibration by clicking the Start button.

The calibration consists of the same movement repeated along the four orthogonal directions while keeping the pole tip on a fixed point on the ground. Slowly move the receiver forth and back (up to the vertical position) along the current direction until the display shows 50/50 for the current section, the inclination should reach at least 45° but not more than 60° from the vertical position.



Once the first section is completed, rotate the instrument 90 degrees to switch automatically onto the next section and perform the same movement in the new direction. Repeat this process to complete all four sections.



When the calibration is completed the message Calibration Complete appear. Now the S950 is ready to work.

5. Stake Out with Camera aid

The integration between the live feed from the camera and the stakeout is performed in Cube-a.

Three prerequisites must be satisfied to use this function correctly:

- The S950 control panel must face the user.
- The connection with Cube-a is done using the S950 Wi-Fi.
- The tilt corrections must be active (See [IMU](#) chapter).

In Cube-a > Survey > Stake out press the AR button to see the camera feedback.

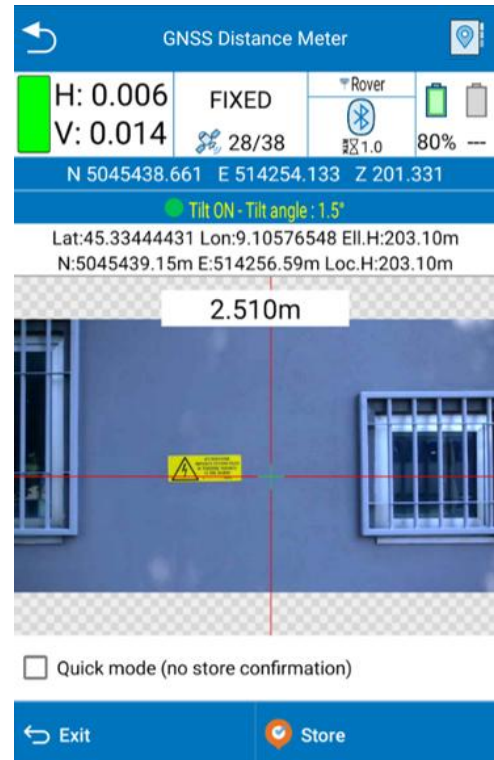
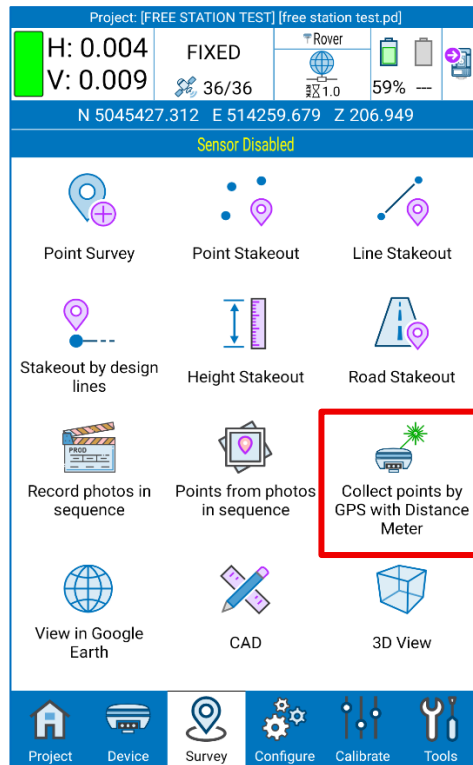
For full instructions on the use of the Camera, check the [video tutorial online](#).

6. Survey with Diastimeter

The S950 includes an integrated laser Diastimeter, this allows to survey points otherwise inaccessible.

To access this functionality, you need Cube-a.

In Survey > Point Survey, select the point type “Point by GPS+Diastimeter” in the Survey menu. The screen will display the Diastimeter’s interface, showing both the real-time coordinates and the distance to the point being targeted. Press Store button to register the point, note that when saved, only the coordinates will be stored, excluding the distance.



7. Accessories

7.1 Standard accessories

Carrying case



Power supply

1 Power adaptor with EU/UK/US/AU power socket

1 Charging cable USB type-C – USB type-C

UHF antenna

1 AR-100. 430-470 MHz, TNC, 10 cm

8. Technical specification

RECEIVER

Satellite signals tracked	GPS: L1 C/A, L2P, L2C, L5
	GLONASS: L1, L2, L3
	BEIDOU: B1I, B2I, B3I, B1C, B2a, B2b
	GALILEO: E1, E5a, E5b, E6
	QZSS: L1, L2, L5, L6
	IRNSS: L5
	SBAS
PPP	B2b PPP, HAS
Channels	1408
Position Rate	Up to 50Hz
Signal Reacquisition	< 1 s
RTK Signal Initialization	< 5 s
Hot Start	Typically < 15 s
Initialization Reliability	> 99.9 %
Internal Memory	64 GB
IMU rate	200 MHz
Tilt range	IMU $\pm 60^\circ$
RTK + IMU	5 mm + 0.3 mm/ $^\circ$

POSITIONING¹

HIGH PRECISION STATIC SURVEYING	
Horizontal	2.5 mm + 0.5 ppm RMS
Vertical	3.5 mm + 0.5 ppm RMS
REAL TIME KINEMATIC (< 30 km) – NETWORK RTK ²	
Fixed RTK Horizontal	8 mm + 1 ppm RMS
Fixed RTK Vertical	15 mm + 1 ppm RMS
PPP Accuracy	< 20 cm RMS
SBAS Accuracy ³	< 60 cm RMS

INTEGRATED GNSS ANTENNA

High-accuracy multi-constellation antenna, zero phase center, with internal multipath suppressive board

INTERNAL RADIO

Type	Tx – Rx 2W
Frequency Range	410 - 470 MHz
Channel Spacing	12.5 kHz / 25 kHz
Range ⁴	3-4 Km in an urban environment Up to 10 Km with optimal conditions

INTERNAL MODEM

Band	LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/ B13/B18/B19/B20/B25/B26/B28 LTE TDD: B38/B39/B40/B41 UMTS: B1/B2/B4/B5/B6/B8/B19 GSM: B2/B3/B5/B8 Nano SIM card
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BELOW CAMERA

Resolution	5 MP
Image Frame rate	20 frame/s
Field of view	76°

REAR CAMERA

Resolution	2 MP
Image Frame rate	20 frame/s
Field of view	52°

LASER

Color	Green
Precision	2 mm
RTK + Laser accuracy	2.5 cm – 5 m / 4 cm – 10 m
Range	30 m

COMMUNICATION

I/O Connectors	Type-C, for charging and data transfer
Bluetooth	2.1 + EDR / V5.2
Wi-Fi	802.11 a/ac/b/g/n
Web UI	To upgrade the software, manage the status and settings and data download. Smartphone, tablet, or other electronic devices with Wi-Fi capability can be used.
Reference outputs	RTCM 3.x
Navigation outputs	NMEA 0183

POWER SUPPLY

Battery	Built-in battery, 7000 mAh
Power	12V DC
Working Time	Up to 10 hours
Charge Time	Typically 4 hours

PHYSICAL SPECIFICATION

Dimensions	Ø 142 x 59 mm
Weight	810 g
Operating Temperature	-40°C to 65°C (-40°F to 149°F)
Storage Temperature	-40°C to 80°C (-40°F to 176°F)
Waterproof/Dustproof	IP67
Shock Resistance	Designed to endure to a 2 m pole drop on hardwood floor with no damage
Humidity	100% non-condensing

Specifications are subject to change without notice.

1. Accuracy and reliability are generally subject to satellite geometry (DOPs), multipath, atmospheric conditions, and obstructions. In static mode, they are also subject to occupation times: the longer the baseline, the longer the occupation time must be.
2. Network RTK precision depends on the network's performances and is referenced to the closest physical base station.
3. Depends on SBAS system performance.
4. Varies with the operating environment and with electromagnetic pollution.

9. Appendix 1: UHF radio technical details

9.1 Default channel frequencies

Channel	Frequency
1	438.125 MHz
2	451.125 MHz
3	452.125 MHz
4	453.125 MHz
5	450.625 MHz
6	451.625 MHz
7	452.625 MHz
8	453.625 MHz

9.2 Protocol tables

Protocol	Baud (Bandwidth [kHz])	Modulation Type	FEC	Scramble
SATEL-4FSK	19200 (25)	4FSK	OFF	N/A
TRIMTALK	9600 (25)	GMSK	OFF	N/A
SOUTH(9600)	9600 (12.5)	GMSK	ON	N/A
TRIMMARK3	19200 (25)	GMSK	OFF	N/A
SOUTH(19200)	19200 (25)	GMSK	ON	N/A
Trimtalk(4800)	4800 (12.5)	GMSK	OFF	N/A

10. Appendix 2: Copyrights, warranty, and environmental recycling

10.1 Copyrights and trademarks

© 2025, STONEX® Srl. All rights reserved.

STONEX®, the STONEX® logo, and the S950 GNSS receiver are trademarks of STONEX® Srl.

STONEX® *Cube-a* is a trademark of STONEX® Srl.

All other trademarks are the property of their respective owners.

10.2 Release Notice

This is the September 2025 release of the STONEX® S950 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.

10.3 Standard Limited Warranty

Version 2023

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® declares that its Products:

(1) are free from defects in materials or workmanship for generally 1 year (accessories or specific parts for which different limited warranty periods shall apply).

(2) have been tested/calibrated in proper working status before shipment.

The warranty period runs from the date of the first sale of the instruments.

At its sole discretion, within the warranty period, STONEX® will repair the product or send parts for replacement at its expense.

STONEX® agrees to repair or replace the defective instrument within thirty (30) days only if STONEX® acknowledges that the defects in the instrument are not caused by human factors or that no obvious damage to its surface is visible.

STONEX® warrants that replaced new parts or products will be free from defects in materials and workmanship for thirty (30) days or the remainder of the Limited Product Warranty Period in which they are installed, whichever is longer.

Defective parts or Products replaced under this Limited Warranty shall become the property of STONEX®.

All products that need to be repaired must be returned to our technical representative's office via whatever delivery company the customer prefers, however, STONEX® is not responsible for the unlikely event that products are lost in transit.

Any damage inflicted by the customer or a third party after the products have been delivered to the customer is excluded from the limited warranty, as is any damage resulting from improper use, any action or use not contemplated in the accompanying user guides, and/or manuals.

10.4 Shipping policy

The Customer or the dealer is required to pay for the charges for shipping faulty parts or instruments to STONEX® representative office and STONEX® is providing the shipping for the return.

Dealers need to follow STONEX® repair/service procedure to achieve a better and prompt service result.

10.5 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 the 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. Customers must 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 to hardware. Dealers need to follow STONEX® repair/service procedure to achieve a better and prompt service result.

10.6 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. A firmware/software Fix means an error correction or other update created to fix a previous firmware version that substantially doesn't conform to the instrument's specification.

10.7 Over Warranty repair(s) policy

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

10.8 Disclaimer and Limitations

All other express and implied warranties for this product, including the implied warranties of merchantability and fitness for a particular purpose and/or non-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.

It is the customer's responsibility to read and follow all setup and usage instructions in the accompanying user guides and/or manuals. Failure to do so may result in product malfunction and damage. The customer may lose data or suffer personal injury.

Stonex®, its affiliates, and suppliers do not guarantee that the operation of this product will be uninterrupted or error-free, as is the case with all electronic products. If this product fails to function as warranted above, the customer's sole and exclusive remedy will be repair or replacement.

In no event shall Stonex®, its affiliates, or suppliers be liable to the customer or any third party for damages more than the purchase price of the product.

This limitation applies to damages of any kind, including:

- (1) damage to, or loss or corruption of, customer's records, programs, data, or removable storage media
- (2) any direct or indirect damages, loss of profits, loss of savings, or other special, incidental, exemplary, or consequential damages, whether for breach of contract, tort or otherwise, or whether arising out of the use of or inability to use the product and/or the accompanying user guides and/or manuals, even if Stonex, or an authorized Stonex® representative, authorized service provider or retailer has been advised of the possibility of such damages or any claim by a third party.

Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages for certain products, so the exclusions or limitations may not apply to you. This limited warranty gives the customer specific legal rights, and the customer may also have other rights that vary from country/state/jurisdiction to country/state.

10.9 Environmental Recycling

The cardboard box, the plastic in the package, and the various parts of this product must be recycled and disposed of by the current legislation of your Country.

10.9.1 For countries in the European Union (EU)

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

Contact Local Authorities to obtain practical information about the correct handling of the waste, location, and times of waste collection center. 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 the environment.

The crossed-out dustbin symbol means that the device must be disposed of in authorized collection centers and must be managed separately from solid urban waste.



10.9.2 For countries outside European Union (EU)

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

11. Appendix 3: Safety Recommendations

11.1 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 property damage. Observe safety instructions that are presented in the following form:

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

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

11.2 Wireless Module Approval

The receivers use internal wireless modules or can be connected to an external data communications UHF radio. Regulations regarding the use of the radio-modems 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 to obtain a certification or license for the equipment in the country of use.

11.3 Instrument Approval

Covers technical features of the equipment relative 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 modify the equipment to be subjected to a grant.

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

11.4 General Antenna Installation Warning

1. All antenna installation and servicing are to be performed by qualified technical personnel only. When servicing the antenna, or working at distances closer than those listed below, ensure the transmitter has been disabled.
2. Typically, the antenna connected to the transmitter is a directional (high gain) antenna, fixed-mounted on the side or top of a building, or a tower. Depending upon the application and the gain of the antenna, the total composite power could exceed 90 watts ERP. The antenna location should be such that only qualified technical personnel can access it, and that under normal operating conditions, no other person can touch the antenna or approach within 0.6 meters of the antenna.

You can see below a table showing the Antenna Gain versus Recommended Safety Distance:

Antenna Gain	0-5 dBi	5-10 dBi	10-16.5 dBi
Minimum RF safety distance	0.6 meters	1.06 meters	2.3 meters

11.4.1 USA

The FCC has adopted a safety standard for human exposure to radiofrequency electromagnetic energy. Proper use of this radio modem results in exposure below government limits. The following precautions are recommended:

DO NOT operate the transmitter when someone is located less than 20 cm (7.8 inches) from the antenna.

DO NOT collocate (place within 20 cm) the radio antenna with any other transmitting instruments.

DO NOT operate the transmitter unless all RF connectors are secure, and any open connectors are properly terminated.

DO NOT operate the equipment near electrical blasting caps or in an explosive atmosphere.

All equipment must be properly used according to the installation instructions for safe operation.

All equipment should be repaired and calibrated only by a qualified technician.

11.4.2 Europe

The European Community provides some Directives for the electronic equipment introduced on the market.

All the relevant information's available on the European Community website:

<https://ec.europa.eu/growth/sectors/electrical-engineering/>

From this link, you can download Directive 2014/53 / UE RED relating to telecommunication equipment, the LVD Low voltage directive, and the EMC directive for electromagnetic compatibility.

11.5 Bluetooth/Wi-Fi radio Module

The radiated output power of the internal Bluetooth module of this equipment is far below the FCC and EU radio frequency exposure limits. In any case, be sure to use the equipment with the radio far at least 20 cm from the human body. The Bluetooth module matches the guidelines found in radio frequency “safety standards and recommendations” published by Scientific organizations.

Stonex Srl, therefore, believes the internal wireless radio is safe for use by end users. The level of energy emitted is far less than the electromagnetic energy emitted by wireless devices such as UMTS phones. However, the use of Bluetooth/Wi-Fi may be restricted in some special situations or places, like aircraft, hospitals, etc. If you are unsure of the existence of restrictions, you should ask for authorization before switching on the Bluetooth radio.

11.5.1 Recommendation for installing antennas for internal radios

UHF Antennas having a gain greater than 5 dBi, are strictly prohibited for use with this device. The required antenna impedance must be 50 ohms.

CAUTION

For your safety, and to match the RF Exposure requirements of the FCC, always observe these precautions:

- Always maintain a minimum separation distance of 20 cm (7.8 inches) between yourself and the radiating antenna.
- Do not collocate (place within 20cm) the radio antenna with any other transmitting device.
- Do not switch on the GSM or UHF module without the antenna mounted to the external connector.

11.6 Rechargeable Lithium-ion batteries

These receivers use a rechargeable Lithium-ion battery.

WARNING

- Avoid direct contact with the rechargeable Lithium-ion battery if it appears damaged. Battery liquids are corrosive and contact with them can result in personal injury or damage to properties.

To prevent injury or damage:

- If the battery leaks, avoid contact with the battery fluid.
- If battery fluid gets into your eyes, immediately rinse your eyes with clean water and seek medical attention. Do not rub your eyes!
- If battery fluid gets onto your skin or clothing, immediately use clean water to wash off the battery fluid.

WARNING

- Do not damage the Lithium-ion battery.

A damaged battery can cause an explosion, with a risk of fire, and can result in personal injury and/or property damage.

To prevent injury or damage:

- Do not use or charge the battery if it appears to be damaged. Signs of damage are discoloration, warping, and leaks of liquids.
- Do not expose the battery to fire, high temperature, or direct strong sunlight.
- Do not introduce the battery in water or liquid substance, in general.
- Do not use or store the battery in very hot ambient.
- Do not drop or puncture the battery.
- Do not open the battery and do not put in short-circuit its electrical contacts.



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