



Mini RTK Receiver

Preface

Welcome to read the "Mini RTK Receiver Quick Start Manual". This manual mainly explains the product specifications, features, device installation, precautions and solutions to common troubleshooting of the receiving station.

Technical Support

From the date of purchasing this product, users will enjoy the long-term technical services and upgrade policies provided by FJDynamics Co., Ltd.

Shenzhen Headquarters

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Official website: <https://www.fjdynamics.com>, you can visit the website to learn about all FJD navigation products, download the latest version of the mobile APP, and access technical documentation.

User Feedback

If you have any feedback about this manual or need further technical support, please contact us at service@fjdynamics.com. We are committed to providing you with excellent service.

User Notice

1. Please read the user manual carefully before operating the device to understand its usage and safety precautions.
2. The device is rated IP67 for outdoor use. However, as time goes by, aging and wear may compromise its protective performance. Please always ensure proper waterproofing and place the device in open, outdoor environments for optimal positioning.
3. Avoid dropping or subjecting the device to strong impacts.
4. Please use lightning protection measures when setting up the device outdoors during rain to prevent damage from lightning strikes.
5. Please strictly follow the product parameter requirements and provide the correct power supply to the device to avoid device damage.
6. If the default power cable or charging interface is damaged, please stop using it immediately, replace it with a new cable or contact us for after-sales service.
7. Damage caused by force majeure (including but not limited to lightning, drops, impacts, high voltage, short circuits, or burning) is not covered by the warranty.
8. Do not disassemble the device. Unauthorized disassembly voids the limited warranty provided by FJDynamics.

Specification Parameters

Sort	Specification Parameters	
Galaxy system	BDS	B1I、B2I、B3I、B1C、B2a、B2b*
	GPS	L1C/A、L2P、L5
	GLONASS	G1、G2
	Galileo	E1、E5b、E5a、E6*
	QZSS	L1、L2、L5
	SBAS	L1C/A
Channel	Parallel Channels	1408
Precision and Reliability	Signal reacquisition	≤1s
	Time to First Fix	Cold Start≤30s
		Hot Start≤5s
	RTK initialization time	< 5 s
	Initialization data reliability	> 99.9%
	Data update rate	Measurement & Positioning: 1Hz、2Hz、5Hz、10Hz、15Hz、20Hz
	Single point solution accuracy(RMS)	H≤1.5 m、V≤2.5 m
	DGPS(RMS)	H≤0.4 m、V≤0.8 m
	RTK(RMS)	H≤0.8 cm+1 ppm、V≤1.5 cm+1 ppm
	Time accuracy (RMS)	20 ns
	Speed accuracy (RMS)	0.03 m/s
Laser Tilt Measurement	3m distance measurement, laser tilt measurement three-dimensional error ≤3cm (tilt angle ≤30°) (V4E PRO)	
Data Types	Differential Data	RTCM2.3, RTCM 3.x, CMR
	Data Format	NMEA-0183
Electrical and Interface parameters	Charging Parameters	5V/2A
	Power Consumption	≤1.5W
	Electrical Interface	USB 2.0 Type-C
	Charging Time	≤3H
	Battery Life	≥12H
Communication	Bluetooth 4.0	Dual-mode Bluetooth
		Working distance: 5m
	WIFI (base station mode)	2.4G Working distance: 300m (base station protocol)
Physical Properties	Shell material	PC+ABS
	Size	182mm*53mm*53mm
	Weight	320g
	Mounting Interface	1/4 thread internal interface
	Button	On/Off key

Sort	Specification Parameters	
Physical Properties	Indicator Lights	Fixed disassembly indicator light, charging indicator light
	Operating temperature	-20°C -60°C
	Charging temperature	0°C -45°C
	Protection	IP67
*: Specific firmware support		

Device Connection

1. Scan the QR code below to download the latest version of the APP.



Android



IOS

2. As shown in the figure below, Long press the power button to turn on or off the device. The satellite indicator flashes blue during operation, indicating that the device is not connected to the APP. After launching the app and connecting the device, a flashing red satellite indicator means the device has not yet achieved a fixed solution. Once you log into an NTRIP account or connects to a base station and obtains a fixed solution, the satellite indicator will turn solid green. The power indicator shows red while charging, when fully charged, the indicator turns green.



3. For the measurement function, please enter the APP as shown below and connect the device for use.



Common troubleshooting solutions

Fault Symptom	Solution
Device turns on normally but automatically shuts down after 10s	The device battery is too low. Automatic protection is activated. Please connect the charger to charge.
Device turns on normally but automatically shuts down after 10min	The device is not connected to the APP, the automatic power saving function is enabled, and it can operate normally when it is turned on and connected to Bluetooth or a base station.
After the device is powered off and left alone for a period, the battery level is normal but the device cannot position.	Long-term storage may cause the hot start power supply to be too low and the positioning to be abnormal. Please keep the device turned on and connected to the mobile APP to charge the hot start power supply to normal working voltage. Positioning will return to normal after approximately 1 hour
The APP repeatedly broadcasts "Differential data disconnected" and "Differential data connected"	Please check the mobile phone signal strength. If the signal is weak, please change the mobile phone or other operator SIM card.
Other abnormalities for which the cause cannot be determined	You can contact us according to the content of the "Technical Support" section, or fill in the "Feedback" in the "Personal Center" of the APP

Kind Tips

Please use the matching charging cable and charger with specified parameters. Using uncertified accessories may lead to fire, explosion, or other hazards.

If the device is not in use for an extended period, please charge it to 50%-80%, store it in a dry, cool environment, according to the parameter requirements. Recharge every two months to prevent deep discharge and battery damage caused by long-term storage.

Disclaimer

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This manual may be updated due to product upgrades or other reasons. FJDynamics reserves the right to modify it without prior notice.

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