





Quick Start Guide

TS20 GNSS Receiver

➤ TS20 for AR Staking



Version 1.0

	Note: Please check each item according to the item list first to confirm that all the accessories are correct for the purchased kit.
	Install the radio antenna before switching the radio transceiver to transmit mode, or the radio transceiver may be damaged due to overheating. The energy to be transmitted cannot be emitted out without the antenna, which may cause the temperature rise and overheat of the radio module.

This Quick Start Guide introduces how to start using TS20 GNSS Receiver quickly, the detailed introduction and operations of TS20 refer to *User Manual for TS20 GNSS Receiver*.



Figure 0.1 TS20 GNSS Receiver

The three steps of TS20 AR staking are outlined below:

1. Rover Setup
2. Configuration via Nuwa
3. AR Staking

1. Rover Setup



Figure 1.1 TS20 as a Rover – Network Mode

Table 1.1 Devices in Figure 1.1

NO.	Device Name
1	TS20 GNSS Receiver
2	Ranging Pole
3	Bracket for TC80
4	TC80 Controller



Figure 1.2 TS20 as a Rover – Internal Radio

Table 1.2 Devices in Figure 1.2

NO.	Device Name
1	TS20 GNSS Receiver
2	410-470MHz Radio Whip Antenna
3	Ranging Pole
4	Bracket for TC80
5	TC80 Controller

2.Configure via Nuwa

2.1 Connect TS20 in Nuwa App

Long press the power button to power on TS20.



Figure 2.1 Power On TS20

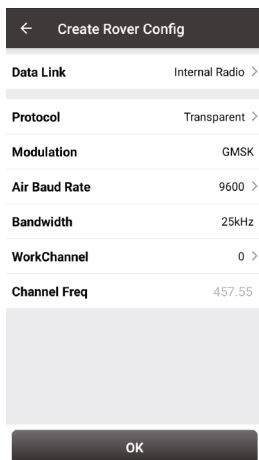
Start Nuwa App, click [Device]-->[Connect], select device TS20 and target WiFi, then click [Connect] to complete the device connection.



Figure 2.2 Connect TS20

2.2 Configure TS20 as a Rover

Go to the Device interface, click [Rover] to create a new Rover mode or edit an existing rover mode as shown below.



Create Rover Config	
Data Link	Internal Radio >
Protocol	Transparent >
Modulation	GMSK
Air Baud Rate	9600 >
Bandwidth	25kHz
WorkChannel	0 >
Channel Freq	457.55
OK	

Figure 2.3 Rover Config

Choose [Internal Radio], [Receiver Network] or [PDA Network] for Data Link to receive the correction data. Fill in the detailed configuration and activate rover mode to get the fixed solution.

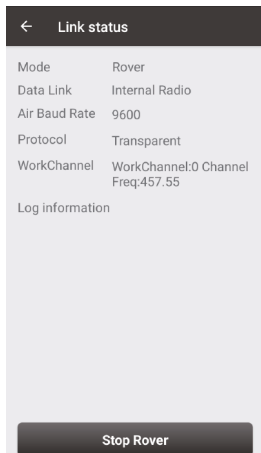


Figure 2.4 Internal Radio

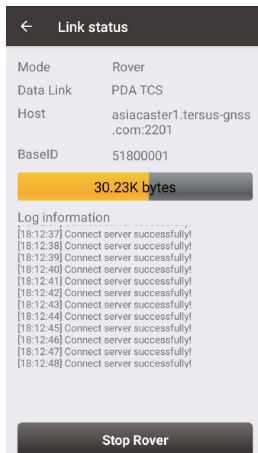


Figure 2.5 PDA Network

NOTE:

1. Requires radio whip antenna required in Internal Radio mode
2. Requires SIM card in TS20 in Receiver Network mode
3. Requires SIM card in controller in PDA Network mode

3.AR Staking

3.1 Open Project

Go to the Project interface, click [Project] to create new project or open a project. Make sure the coordinate system is correct.

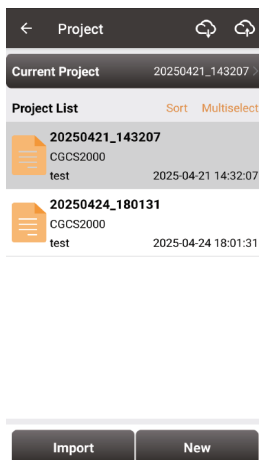


Figure 3.1 Open Project

3.2 Import Targets

Go to the Survey interface, click [Point Stakeout] to enter point stakeout interface. Click ► to show the Staking Point list and click [Import] to import targets from file, from other point lists or directly manually add.

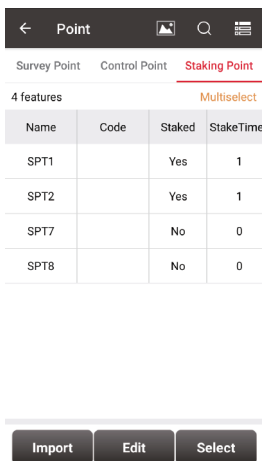


Figure 3.2 Staking Point List

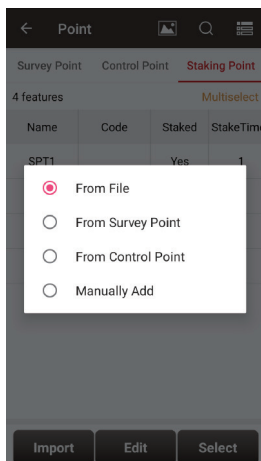


Figure 3.3 Import Targets

3.3 AR Staking

Select one of the point as the target, back to the Point Stakeout interface. Click **AR** to enter AR staking interface as shown below.

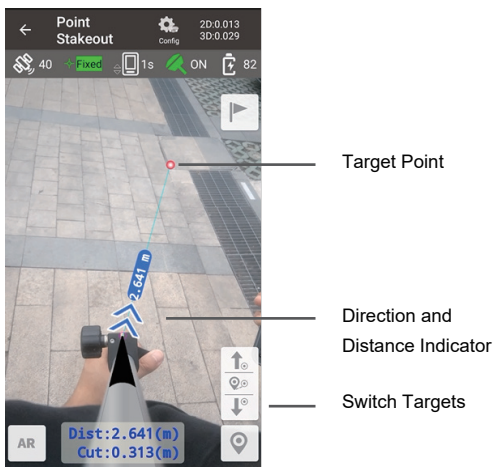


Figure 3.4 AR Staking



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Right to the Point

Get More

This Quick Start Guide briefly introduces the setup and operation for TS20 GNSS Receiver and the operation of Nuwa app. More details please refer to User Manual of TS20 and User Manual of Nuwa app which can be downloaded from Tersus official website:

<https://www.tersus-gnss.com/document>.

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