

## **FJD Trion Survey**

### **Quick Start**

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## Overview

In this article we'll learn how to get quick start. We use internal radio as the means of communication. The operation steps are as follows:

1. Create a project
2. Connect & configure BASE
3. Connect & configure ROVER
4. Site calibration
5. Measure
6. Data export

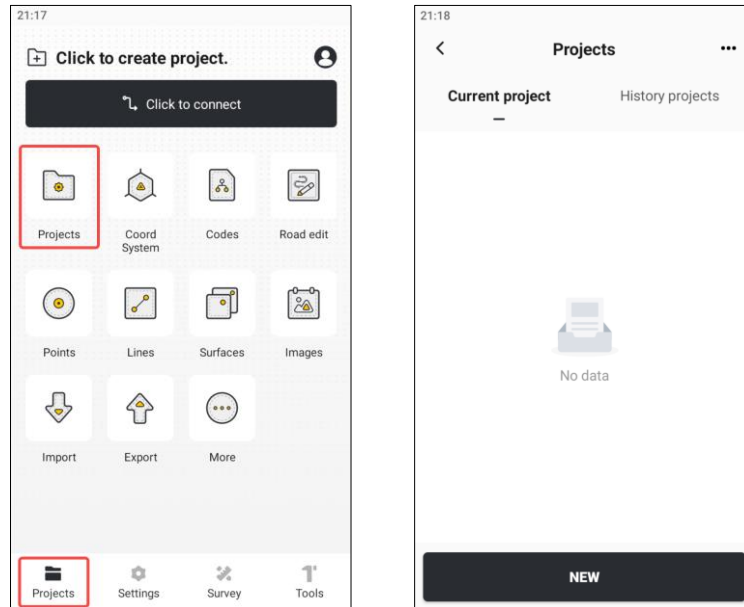
## Preparation

Before starting, please prepare a set of RTK equipment, including a base station and a rover station with a field controller.

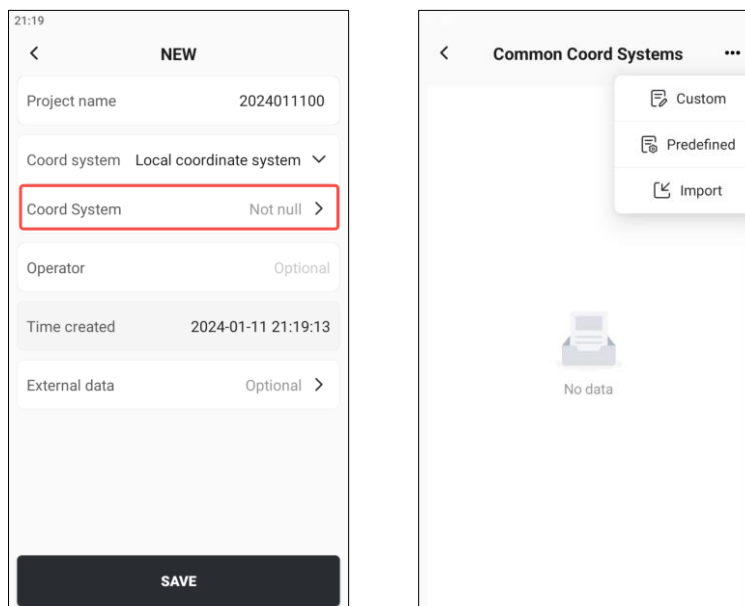


# 1 Create a project

Open **Trion Survey** , click **Projects** on the bottom menu, and then click the first icon **Projects** , click **New** below.

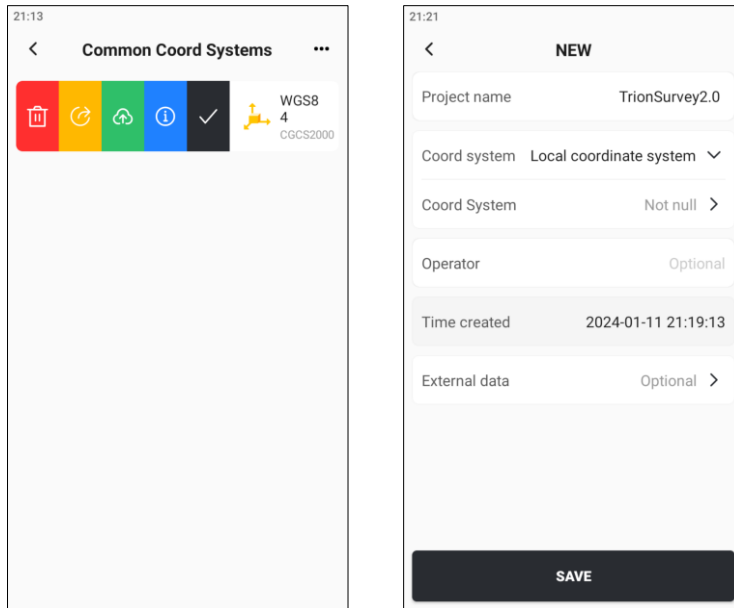


Enter a project name, usually named after the date or actual project name. After finishing editing the project name, select **Coordinate System** and select the coordinate system required for the project.

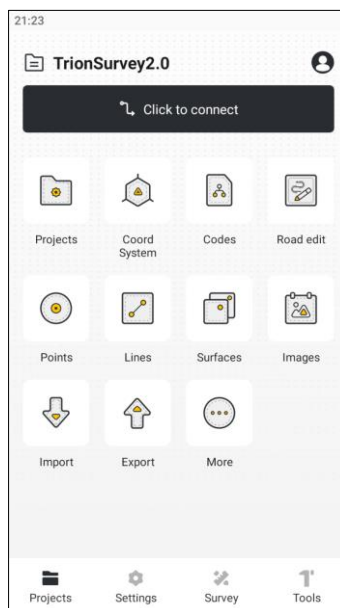


Enter the **Common Coordinate System** page, you can select **[...]** in

the upper right corner to set the required coordinate system through **【Custom】** or **【Predefined】** . The coordinate system is added to **【Common Coordinate Systems】** . After adding it, you can click the corresponding coordinate system and click **【√】** in the side sliding bar.



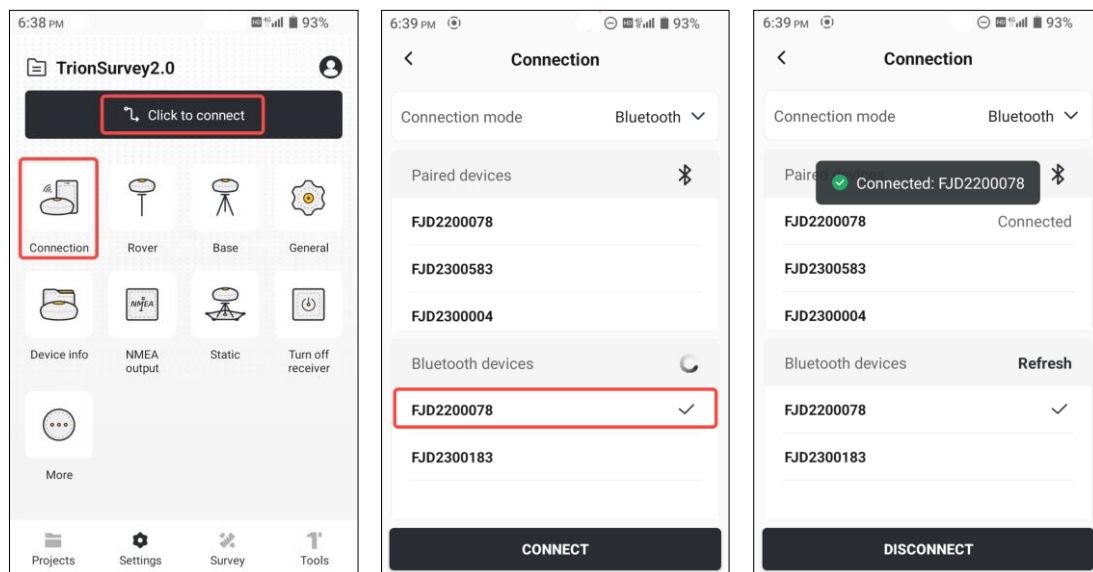
All settings are completed, click **【SAVE】** to Finish creating a project. Back to home page, we can find the project name at the top.



## 2 Connect & configure BASE

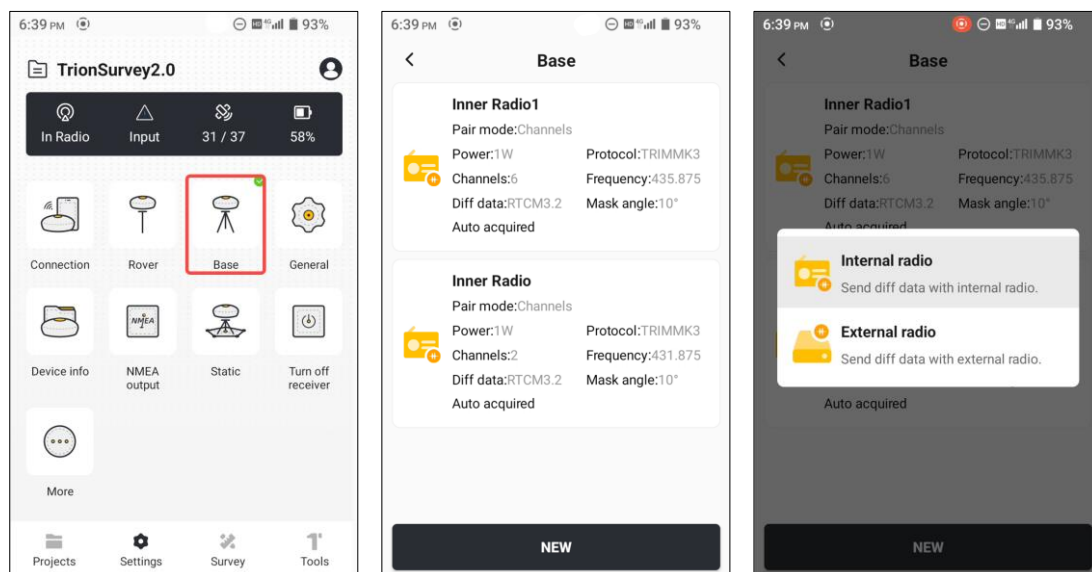
Click **[Settings]** → **[Connection]** , or directly click the button at the top of the page **[Click to connect]** to open the page of Connection. For example, we choose **[Bluetooth]** , then search devices. Select the base number, then click **[CONNECT]** .

After success, back to home page.

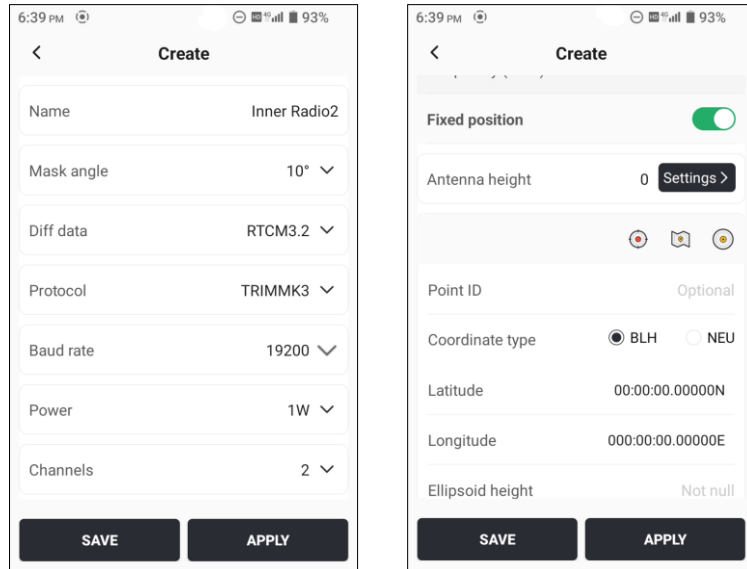


Click **[Base]** , then create a base configuration by clicking **[NEW]** .

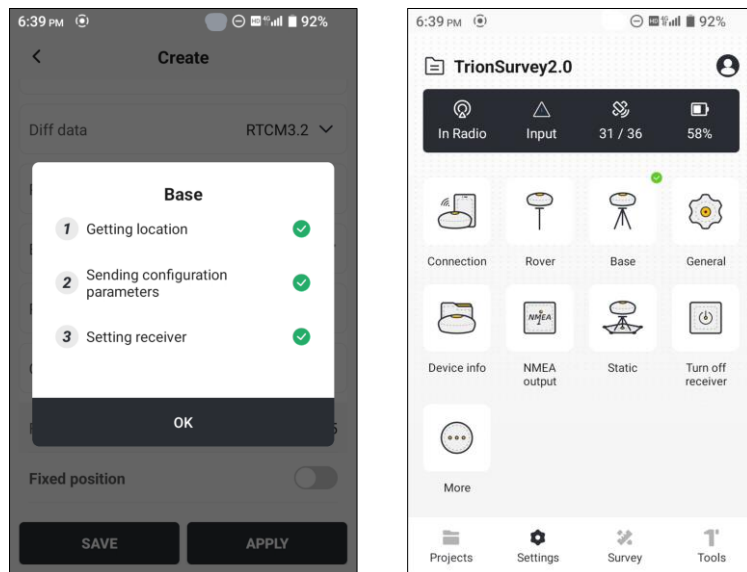
Choose **[Internal radio]** .



Enter a name, and configure GNSS parameters. Switch for "Fixed position" can be turned on and then enter a base coordinate. Or it can be kept off and use the current position directly.

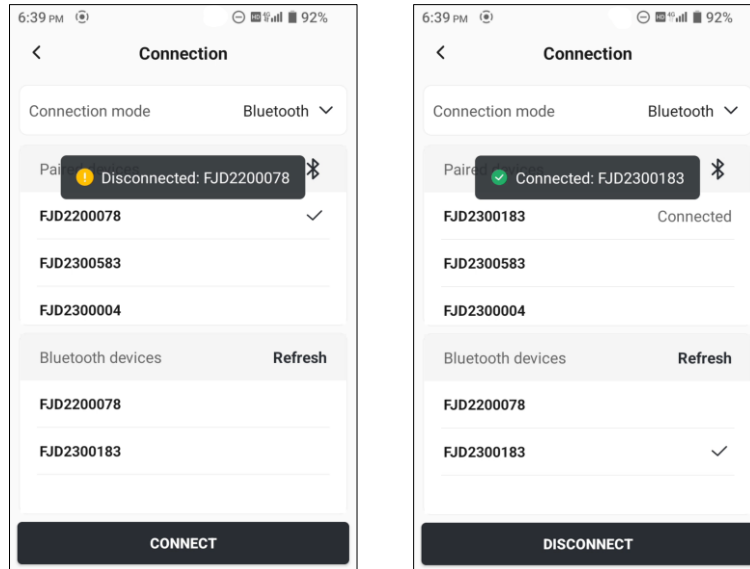


Click **[APPLY]** . After success, click **[OK]** .



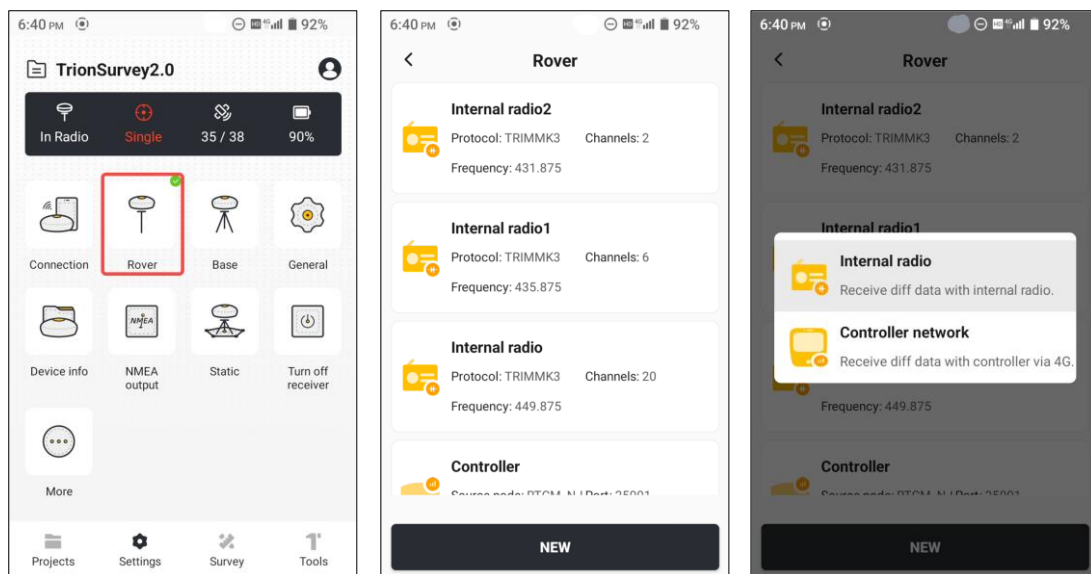
### 3 Connect & configure ROVER

First disconnect the base station from **[Base]** , then select the rover station number and click **[CONNECT]** .

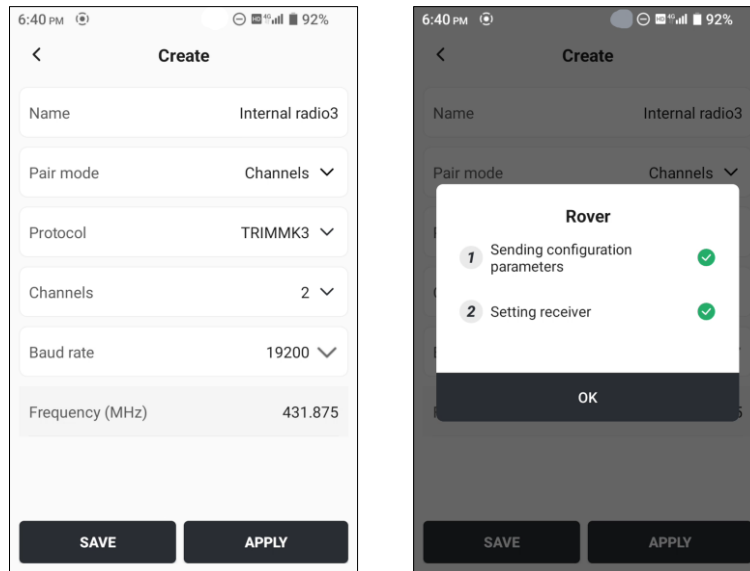


Click **[Rover]** , then create a rover configuration by clicking **[NEW]** .

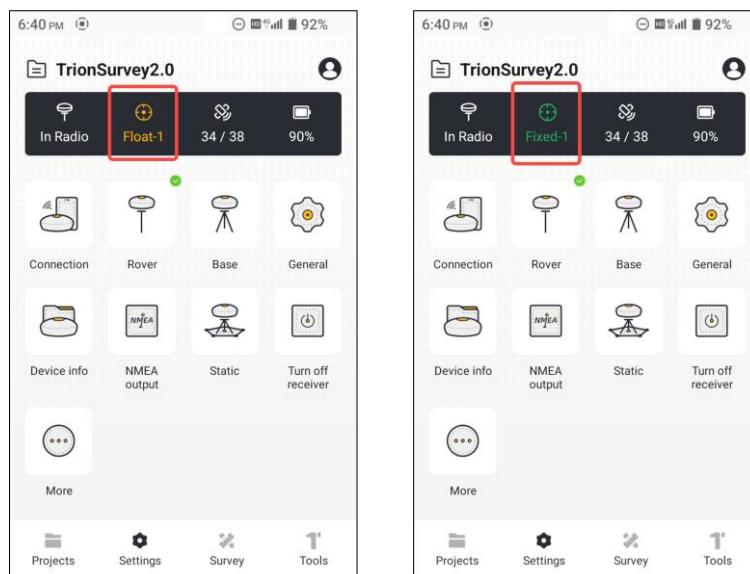
Choose **[Internal radio]** .



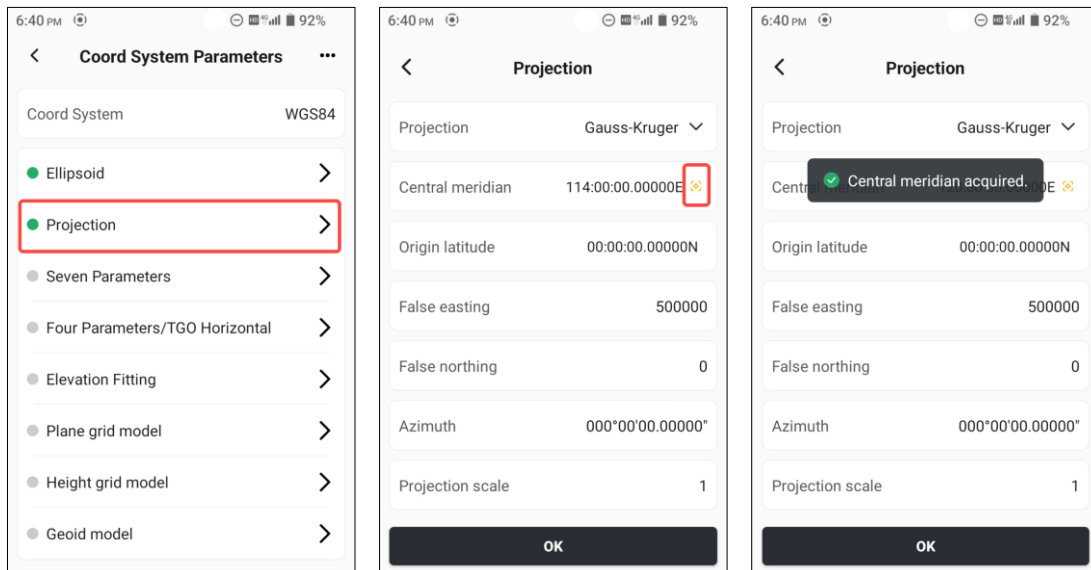
Select the same settings as the base station, especially the radio channel. Then click **【APPLY】** . Trion Survey begins to configure the rover station. After success, click **【OK】** . Then back to home page.



Observe the positioning icon in the status bar, which changed from the single solution to float, then to fixed finally.



Now, we can open the coordinate system, and modify the central meridian in the projection by clicking the icon.

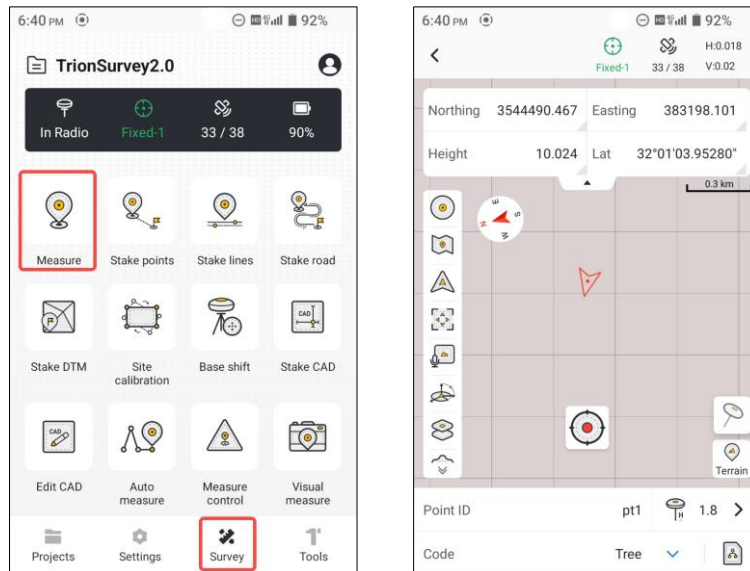


Then back to home page.

## 4 Site calibration

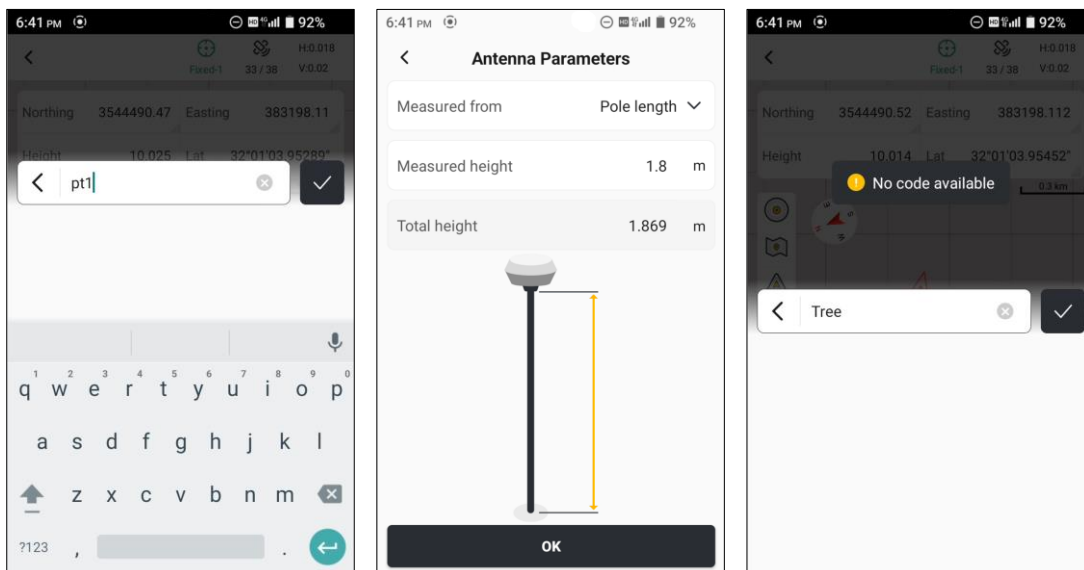
Before site calibration, we need to survey some control points and prepare their local coordinates.

Click **[Survey]** → **[Measure]** , open the page of Measure.

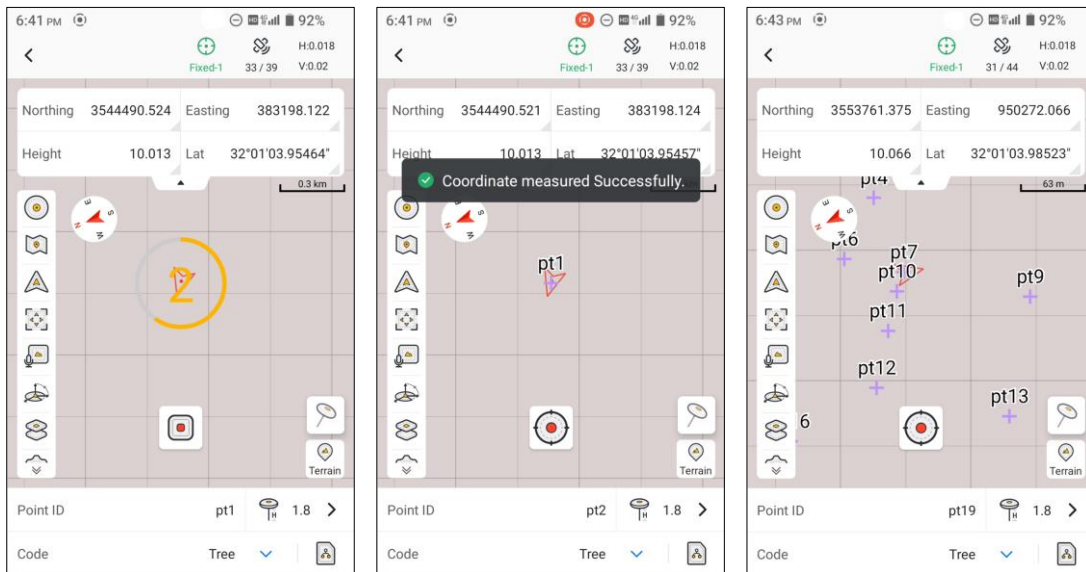


You need:

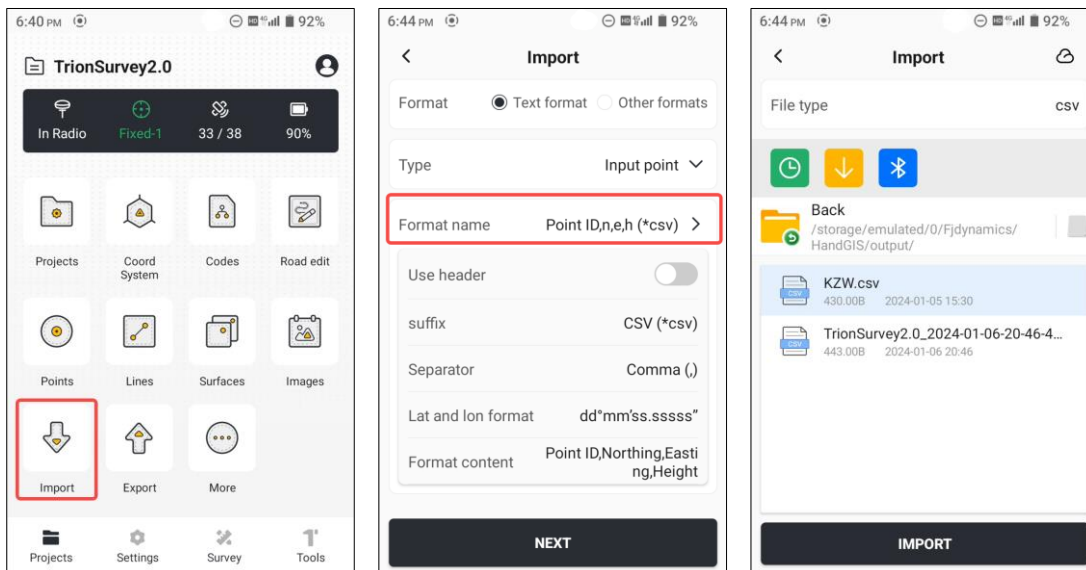
1. Enter the point name.
2. Check antenna height.
3. Enter or select the right code.



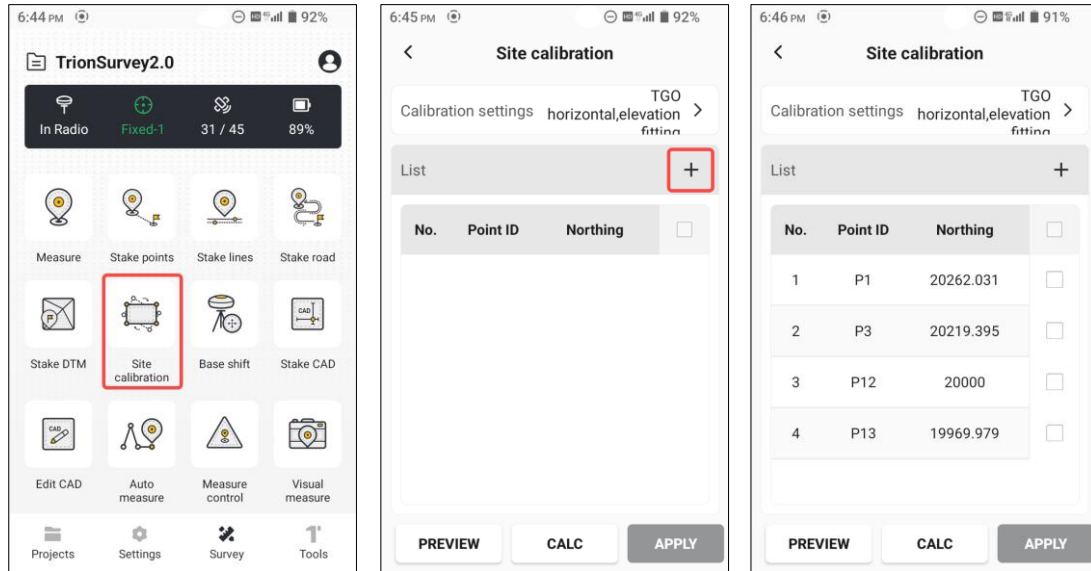
Then click the measure icon. It is strongly recommended to turn off the IMU when measuring.



Next, let's enter some local coordinates, or import directly. Choose right format and file, then click **[IMPORT]** .

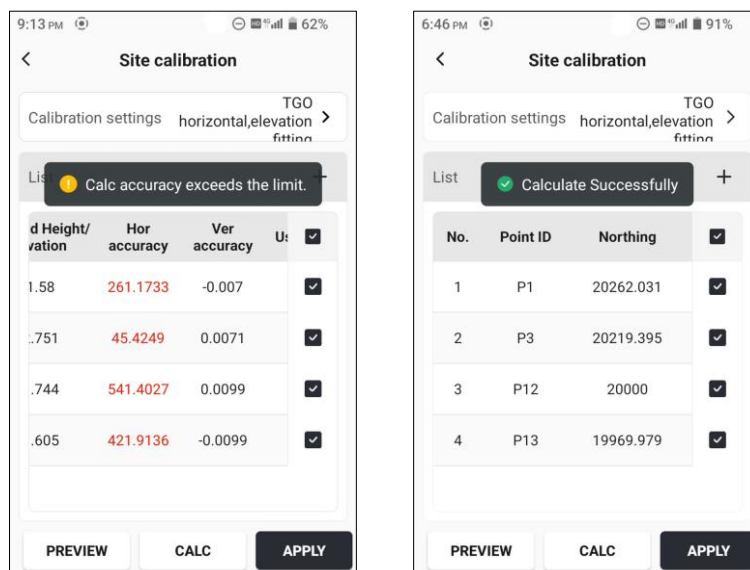


Back to home page. Click **Survey** → **Site calibration** , then add point pairs by clicking the icon. The number of recommended point pairs is no less than three, and the layout is also very important.



Select the needed point pairs, then click **CALC** .

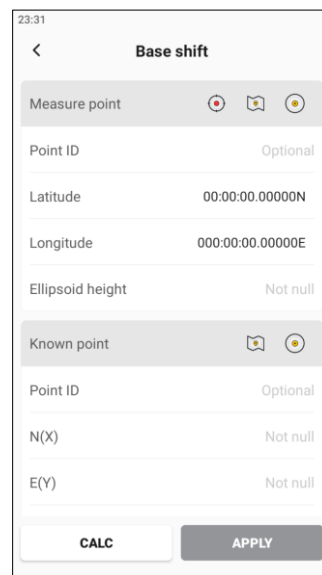
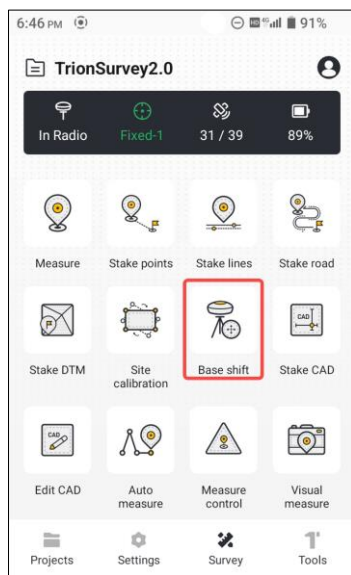
If the coordinate accuracy is poor, when you click **CALC** , the page will stay on the accuracy page, marked in red. Otherwise, it will prompt that the calibration is successful.



Then click **APPLY** to complete Site calibration.

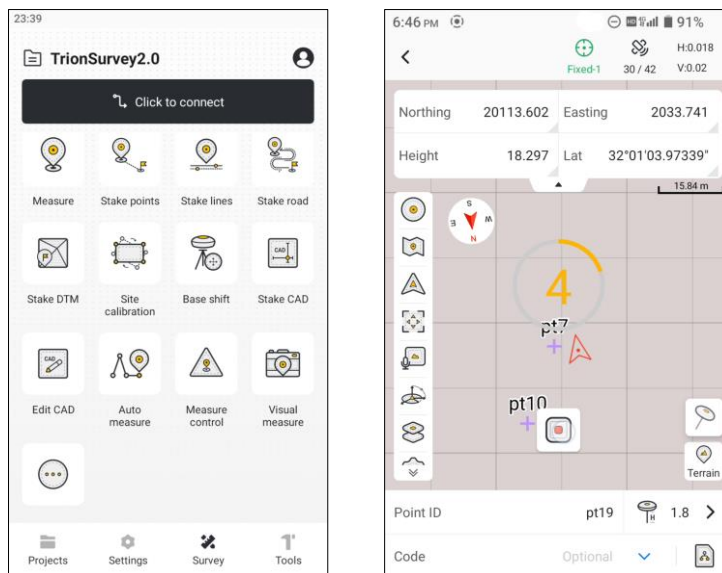
NOTE:

When the base station is shut down or it needs to be moved, click **Base shift** . The operation here is similar to Site calibration, but only a pair of points is needed. Select the corresponding **Measure point** and **Known Point** , and then click **APPLY** .



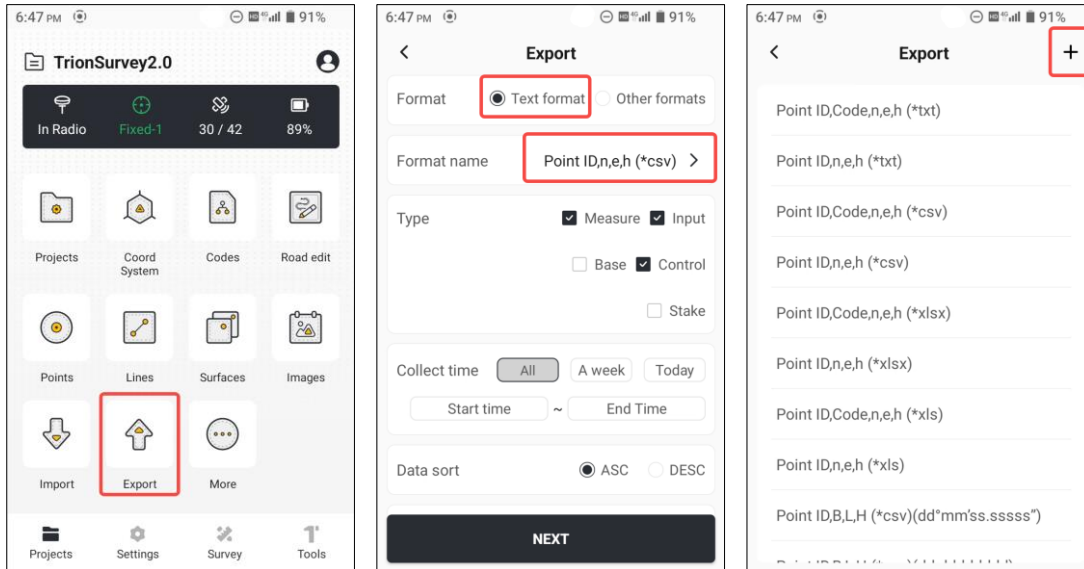
## 5 measure

Measurement work can only be carried out after it is in a fixed state and the Site calibration meets the requirements. Trion Survey software supports conventional measurements, such as Measure, Measure control, Auto measure, Stake points, Stake lines, Stake DTM and also supports non-conventional measurements such as Survey drawing, Stake road, and Stake CAD.

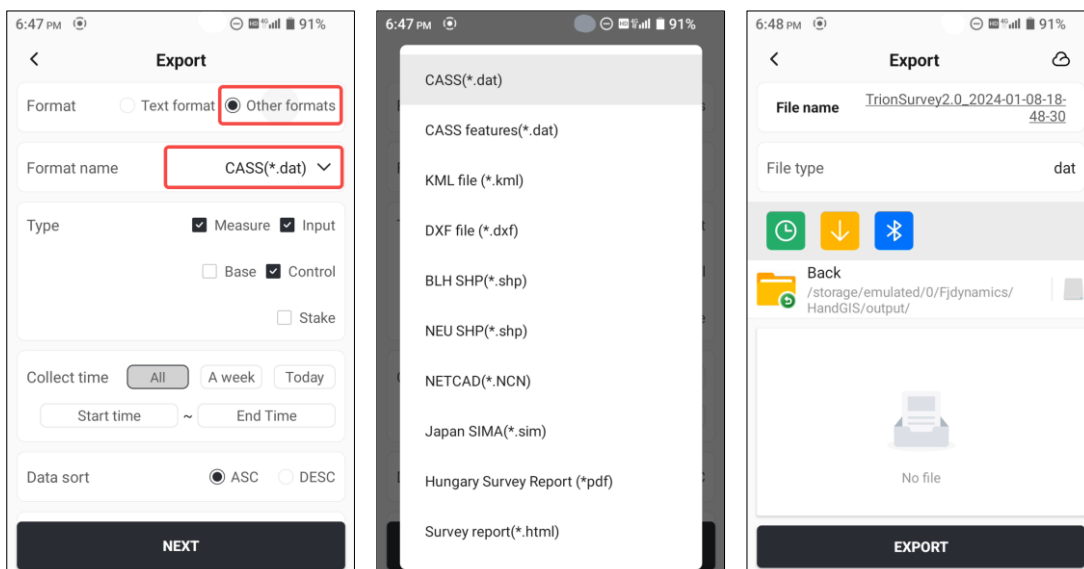


## 6 Data export

How to export the measured data? Click **【Projects】** → **【Export】** . There are many predefined text format files, which can also be customized.



We can also select other formats for export, such as CASS, DXF file, NETCAD, Japan SIMA and so on. Click "NEXT", select the path, and then click "EXPORT" to complete.



Now, you have finished the Quick Start.

Have an enjoy to use Trion Survey!