

Stonex 'Cube A' using SC400A and SC600A - Quick guide

Getting started:

Turn on the GNSS receiver by plugging in the 12 – 24 volt DC power source (Lithium Ion Battery).

Put the GNSS antenna onto the back pack pole and screw in the coax antenna cable.

Turning on the tablet and slide up with finger to show the main screen. There is no password.

Tap on the '**Cube A**' App in the middle of the screen and **then let it go through its intialisation process.**

If outside in view of satellites it will show how many satellites it is receiving.

It will display **DGNSS** when it is receiving the Atlas L-band or SBAS signal.

H:0.020 means the expected horizontal accuracy is 20mm and V: 0.026 is 26mm accuracy. Example below

The **RTK** Icon gives the amount of time from receiving the RTK / DGPS correction signal.

L-Band or SBAS should be between 5 and 20 seconds.

The **battery level** of the receiver is to the right of the bluetooth icon and will show **external power.**

On the main front page at the bottom of the screen are the 6 menu tabs. **Project, Device** and **Survey** etc.

A **Project** name will have been created or it can be done in the Project menu in **Project Manager.**

The **Device** menu is where communication link is established. It should already be configured for the unit.

Surveying:

On the bottom of the screen you will see **Survey.**

In this menu use **Point Survey** to record a point.

Tap on the bottom right **REC** teardrop Icon to record a point at your location. The point is where ever the GPS antenna is located.

Above the REC icon there is P1, P2, P3 list. This is where you can view and edit points.

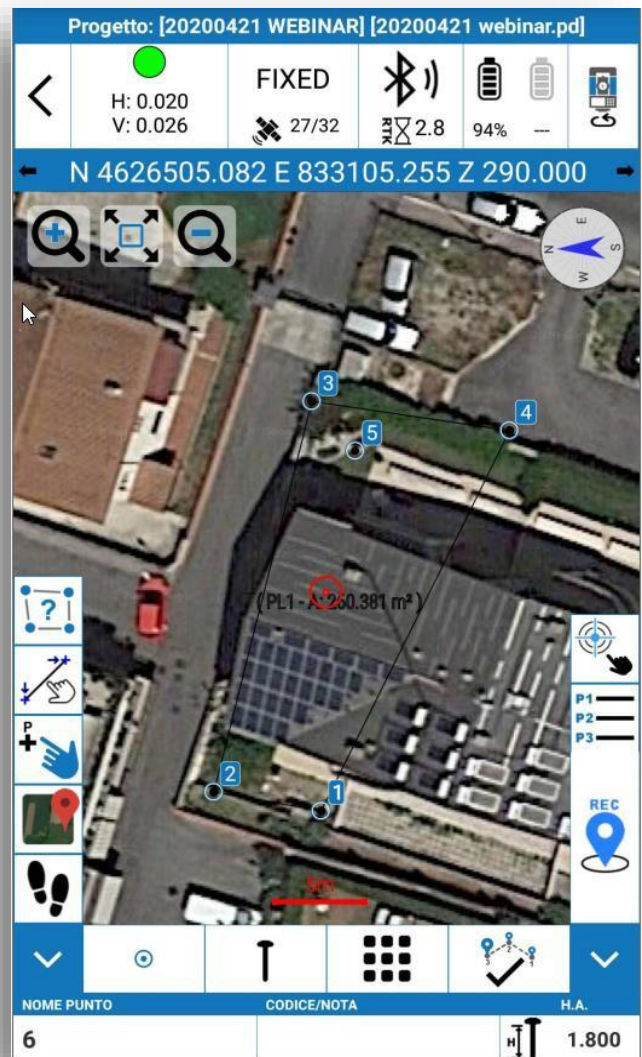
Below the REC icon is where the **antenna height** from ground is entered. In the picture it is 1.8 metres

Setting out a point is done in the Survey menu by selecting the **Point Stakeout** menu. This will allow you to navigate to a selected point. The point is selected from a list or from the map.

Record a **track log** at defined distance or time interval. Click on the pole Icon in the bottom centre of the screen. Select **Auto Point** in the drop down menu and then set the distance or time interval. Distance is refered as Step.

The Google image on the left side of the screen will Bring up a google map of the area. You need to have an Internet connection for this function.

Always remember to keep an eye on **H: & V:** at top of screen to make sure you know the **estimated accuracy.**



To **Export** your recorded points go to the Projects menu in the main screen. Then open Export Data. Select Point Id, East, North, Height and Code in the list. **Also tick the box to share when you export.** This will let you email the data to your personal email. The other way to export data is using the **USB C** cable connected to a PC. Swipe down with your finger from the top of the tablet screen and you will see Android System – Charging this device via USB. Tap on this message to bring up other options. Now select

File Transfer. On your computer open the **Internal shared storage**, then open **StonexCube**, then open the **Export** folder. Your exported CSV will be in this folder.

The Cube A software is **exited by pressing the Return button near the On/Off button**. To turn off the SC400A or the SC600 simply unplug the battery from the power cable. The Lithium Ion battery can now be charged up for the use the next day.

Other useful information when using the CubeA main menus is as follows.

In the **Configure** menu at bottom of screen you will see the following menu tabs

Coordinate System is where **Ellipsoid** is set to **GRS80** when working in Australia

Projection is set to UTM and it is here that you select a different UTM zone. The Central Meridian for Zone 50 is 117 degrees and for zone 51 it is 123 degrees. This can be auto selected by tapping the icon to the right.

Geoid is where a model of mean sea level is selected to change heights from Ellipsoid to AHD. Import the file for your project area.

Local Offsets is sometimes enabled to change coordinates from **GDA2020 to GDA94**. In zone 50 of WA to go from GDA2020 to GDA94 you subtract 1.5m from North and subtract 1m from East of the coordinates.

Display Settings – Display point Name should be selected to show your points on the map screen.

Record Settings is where you can set the acceptable tolerance for the survey points that you collect. The points you collect will be called **Topo points**. When you are using L-Band or SBAS DGPS solution the best settings would be as follows. Solution Limit **DGNSS**

HMRS 0.5 which is 0.5m this is just so you don't get the warning message pop up. Always look at

VRMS 1.50 which is 1.5m the estimated accuracy at the top of screen before recording a point.

Auto Point in the Record Settings menu allows you to create a track log of points using a time interval or a distance interval (labelled Record according to Step).

The **Device** menu at bottom of screen

Working Mode is where you can check the SC400A or SC600A receiver settings.

Select **Rover** Check that in the Communication Mode box that **Atlas L-Band** is selected.

Double check that all the Satellite constellations have been enabled.

Then press Apply to ensure that any changes have been implemented.

The **Project** menu at bottom of Screen

As well as Exporting data the **Import Data** menu allows you to load in your own CSV files. You just need to match the header data for the columns.

Feature Codes can be created for your own list of codes. Simply create New and call it Exploration and then put in codes for common features such as drill hole collars.

Setting up receiver using the Web UI

Firstly connect the receiver to your computer via WiFi. Simply disconnect from your existing connection and select the GNSS receiver from the list of connections. It does not need an internet connection.

Then open a Web browser like Internet Explorer and Type **192.168.10.1** in the browser window.

It will ask for username and password which is **admin** and **password** respectively.

You can now access the receivers information and make changes to the settings.

You can also update firmware and activate Atlas L-Band in the Administration menu.