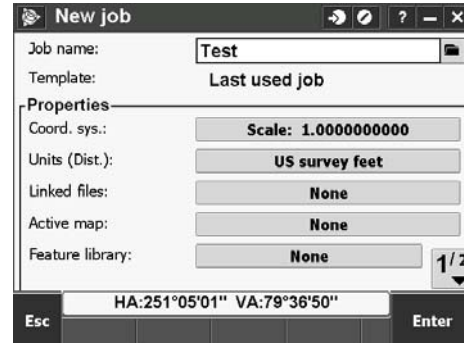
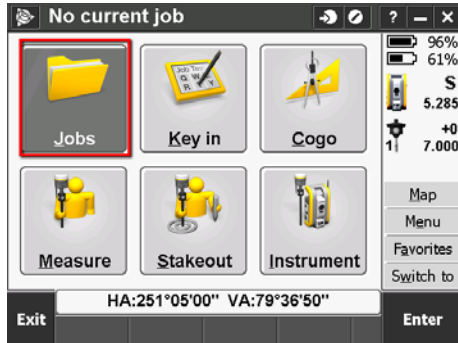


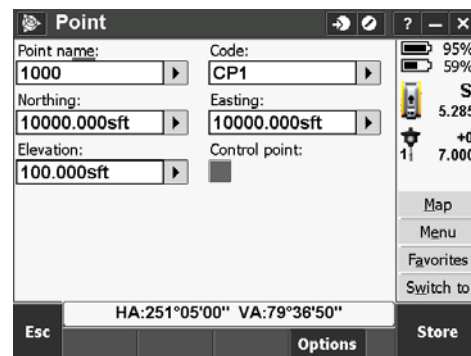
Trimble Robotic TS with Trimble Access

Set up Tripod and Instrument over control point, make sure there is line of site to second control point on your site.

Open Trimble Access / General Survey, wait for General Survey to connect to the instrument.

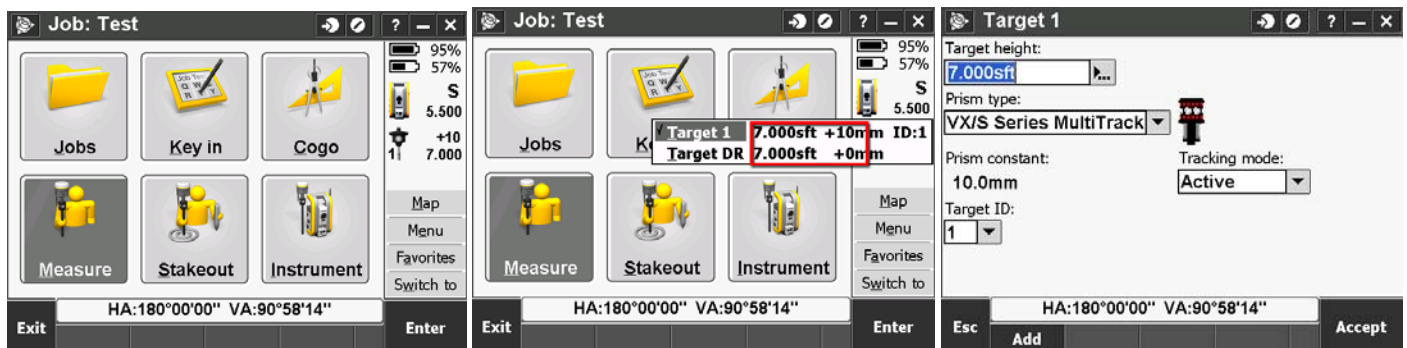


- Select Jobs /New Job.
- Setup your coordinate system as Scale of 1.000000, set your units how you prefer, and link any files and libraries that you need to link into. Select Accept to save the changes.

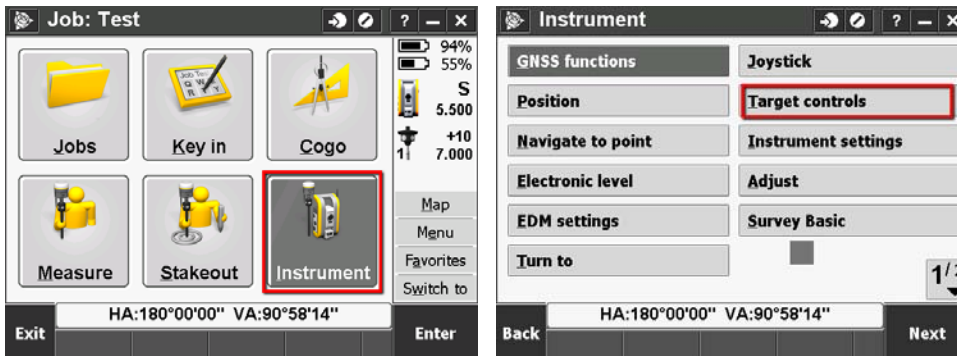


If you did not import a CSV file with your control coordinates, you can key them in.

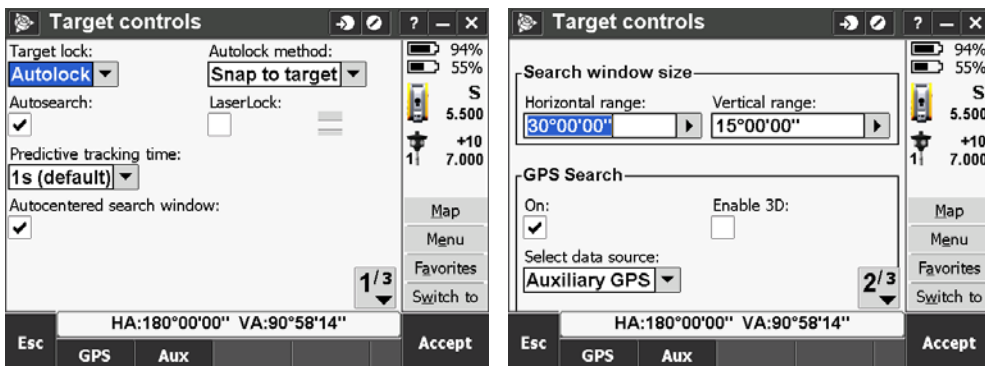
- From General Survey got to Key In / Points
- Key in your point info and select Store, repeat for any additional control points that you have. Select ESC to return to main General Survey Menu.



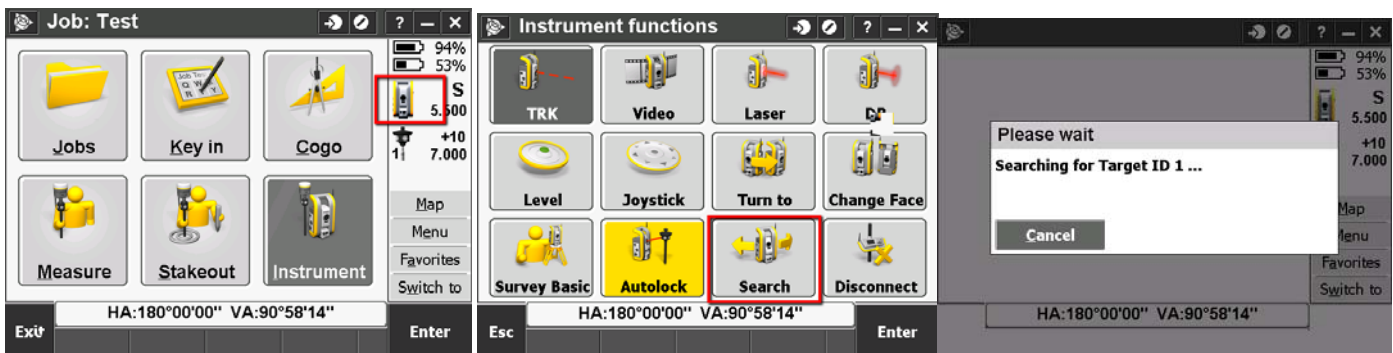
- To verify your prism and target settings, Select the Prism icon on the right side of the screen.
- To view or edit the prism settings, select into the rod height area highlighted in red above.
- You should now be able to adjust the height of rod, prism type, and tracking channel that you set your MT1000 to. Once set, select accept,
- If you have additional prisms you are using in your survey, follow the above steps and select Add to set up the additional prisms. You cannot custom name them so you will need to keep track of them by number.



- Go to the Instrument Icon, Select Target Controls

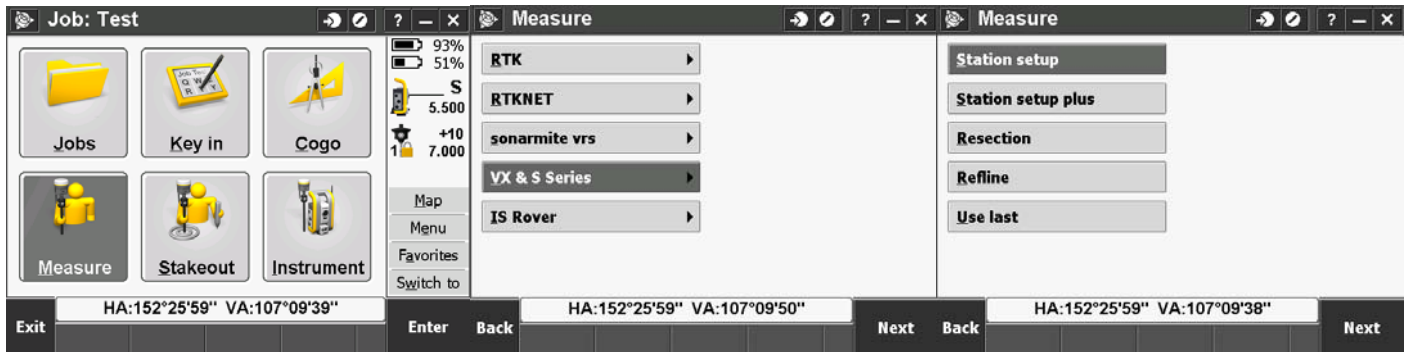


- Make settings match the above pictures. Autolock, Snap to Target, Autosearch Checked, Predictive tracking 1 second, etc..
- On page 2, make sure GPS Search is on. Select Accept.

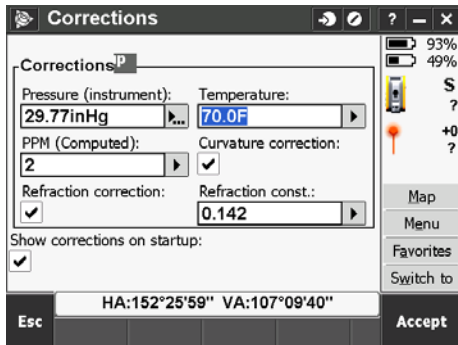


- To get the robot locked on to your prism, turn your prism to the channel you had it set for in your prism settings.
- Get out in front of your instrument, 10 – 15 feet should be good.
- Select the instrument icon in the status bar / Search, the robot should search and find the prism.
- Once it is found, you should see a padlock symbol next to the prism in the status bar.

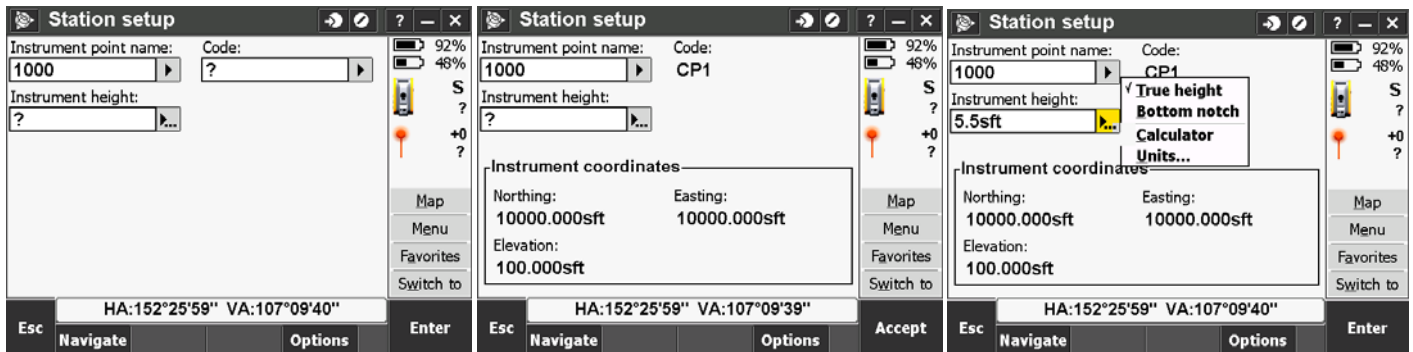
Station Setup



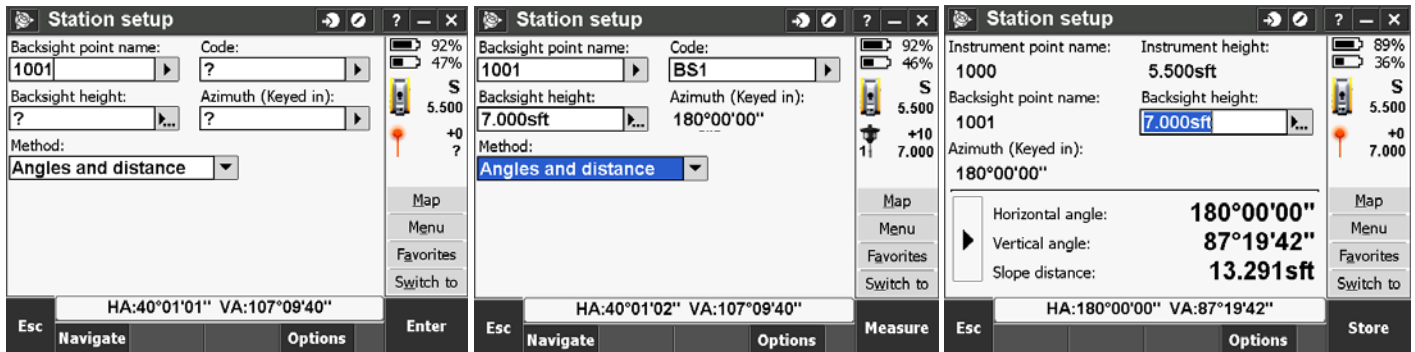
- To start your Station Setup, go to the Measure Icon / VX S Series / Station Setup



- Enter your pressure and temperature and it will auto calculate the PPM error. The arrow next to the fields allow you to change your units of measure if you forgot to set them up in the job setup. Select Accept.

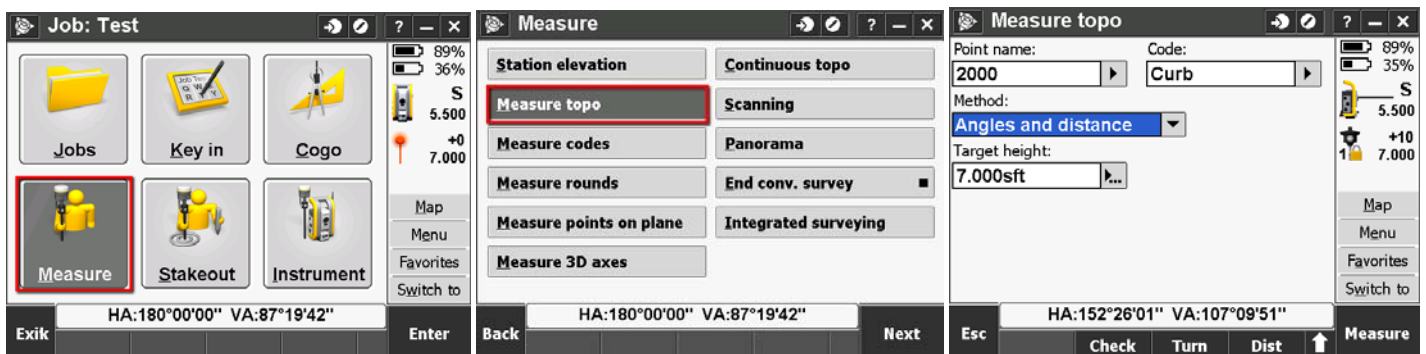


- Enter your control point number that you are setup over and click into another field, the coordinates should then show up on the lower portion of the screen
- Enter your instrument height above the control point. You can measure to the plus or the bottom notch on the Knob side of the instrument, JUST BE SURE TO SELECT THE ARROW TO THE SIDE OF THE FIELD AND SELECT YOUR MEASUREMENT METHOD, TRUE HEIGHT (PLUS), OR BOTTOM NOTCH.
- Select Accept



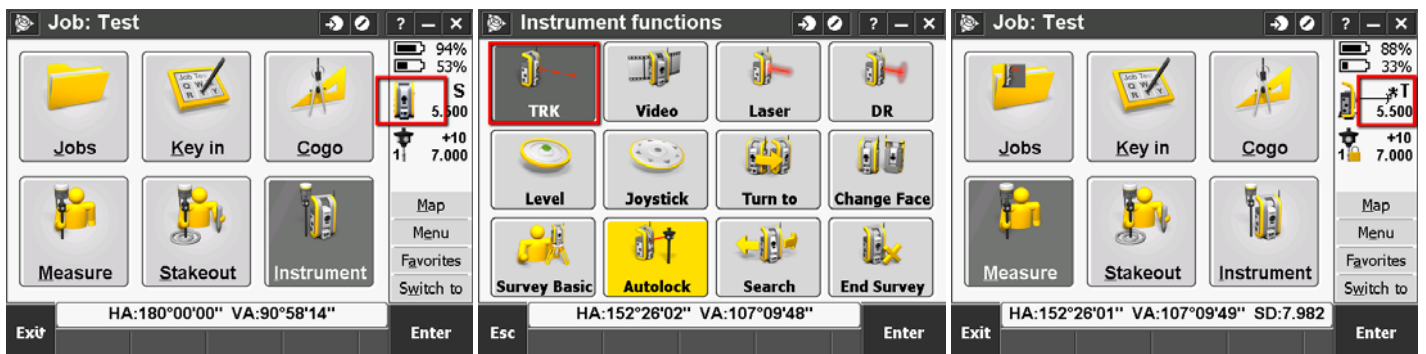
- Go and setup your rod and prism over your Backsight.
- Enter your Backsight point number, when you click or tab into another field, the azimuth should be calculated between the two points you are using for station setup.
- Make sure that Angles and distance is chosen for Method, then select Measure.
- Once the Backsight has been shot, you can select the Store button. An audible notification of STATION SETUP COMPLETED will go off.

Measuring survey points

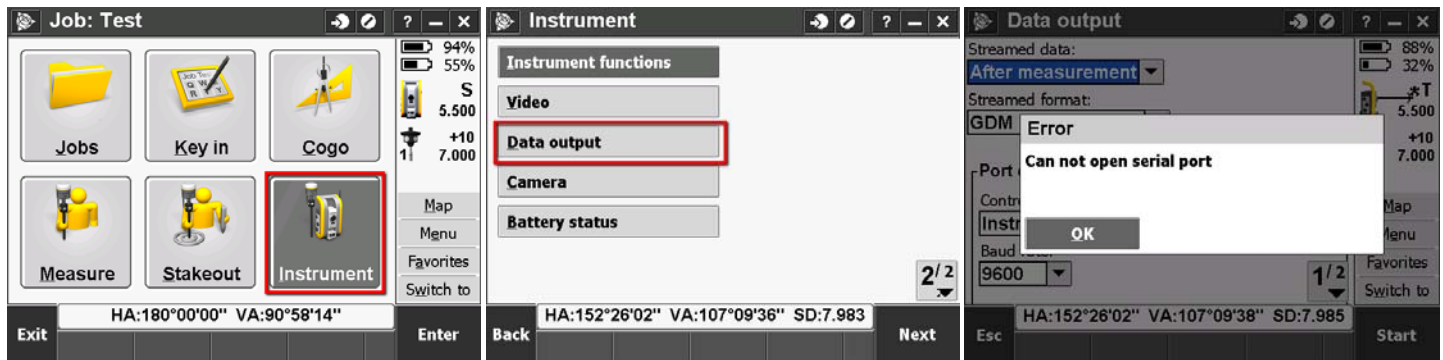


- To measure points, select Measure/Measure topo
- Enter your point name, code, method is angles and distance, and verify your rod height. Select measure.
- Store your point. The point number auto increments to the next point for measure.

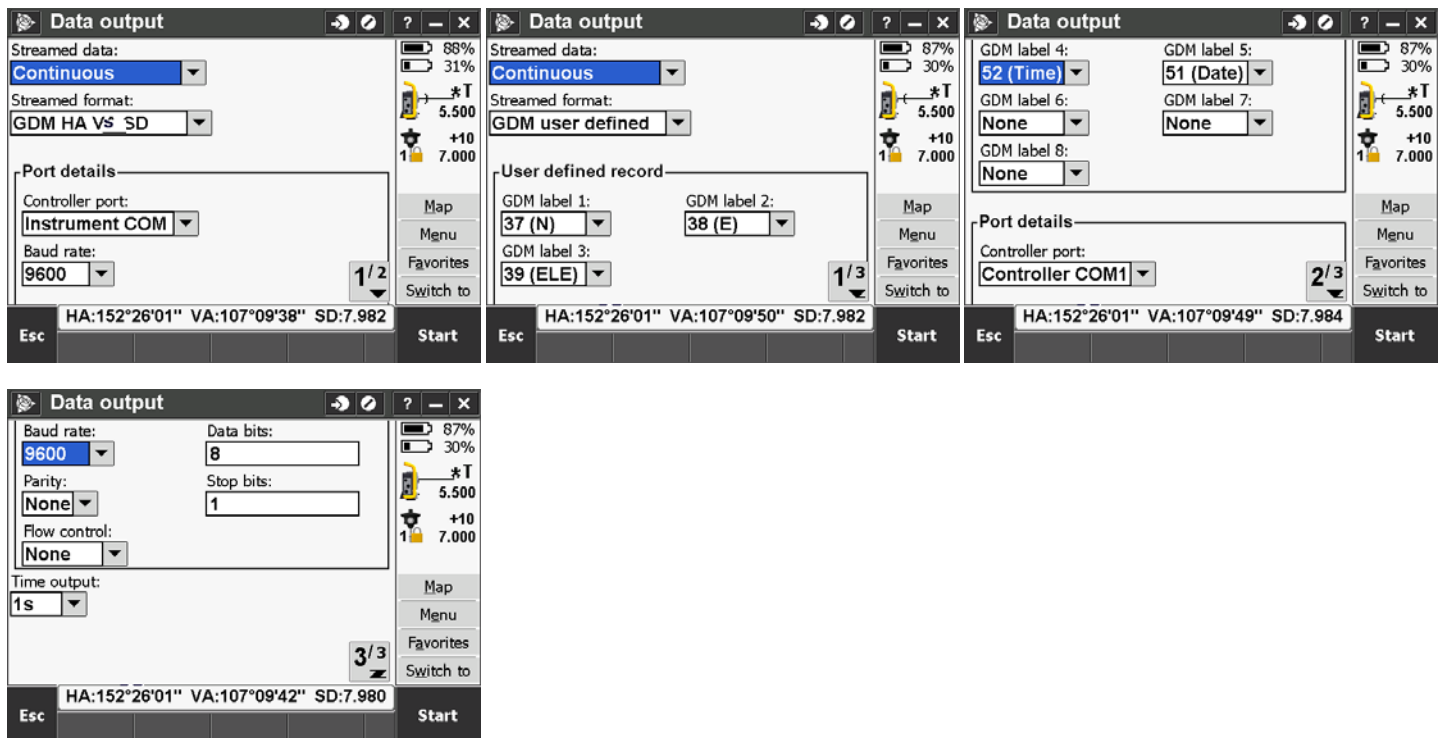
STREAMING POSITIONING DATA



- Set your instruments EDM into Tracking mode by selecting the instrument Icon, then selecting the TRK icon
- The instrument icon in the status bar should now show a T with a little laser line showing that the instruments EDM is continuously firing.



- To setup the data outputs for the data collector, go to the Instrument Icon/ Data Output (page 2).
- You may see an error screen pop up regarding the serial port, Select the OK button.



- To send out grid coordinates, use the following settings:
 - Select the data stream as Continuous
 - Streamed format as GDM user defined
 - Set the fields up in the order in which you would like to stream them
 - Set your controller port to controller COM 1, and your baud, parity, stop bits and flow control to match the device you are streaming to.
 - Set your time output to 1 sec.
- Select the Start Button. You should now be sending out streaming data from the robot.
- To stop, toggle the start/stop button at the bottom of the screen.

MAKE SURE TO ALLOW UNOBSTRUCTED LINE OF SIGHT TO THE PRISM SO THAT THE EDM DOES NOT TIME OUT LOOKING FOR IT. WITH NO SLOPE DISTANCE TO THE PRISM THE COORDINATE YOU ARE EXPORTING CANNOT BE CALCULATED RESULTING IN MISSING RECORDS IN THE STREAMED DATA.