Project: ST2 rotator interface working with G-5400B and Ham Radio Deluxe.

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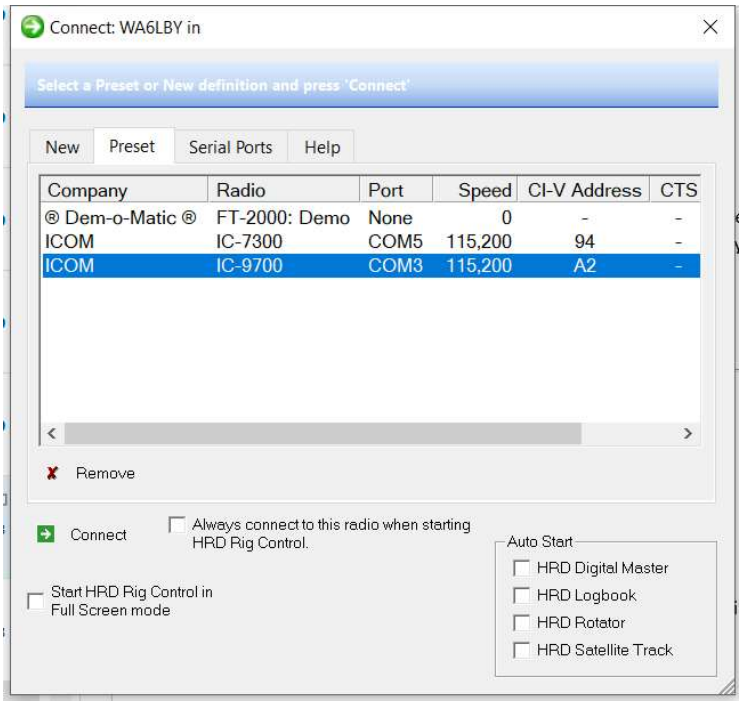
The equipment used are Windows 10 PC, running Ham Radio Deluxe v6.7.0.323, communicating with ST2 interface driving the Yaesu G-5400B controller.

ST2 should be connected to a USB port and the control wires to the G-5400B DIN connector. I set my ST2 power jumper to draw power from my USB3.0 port.

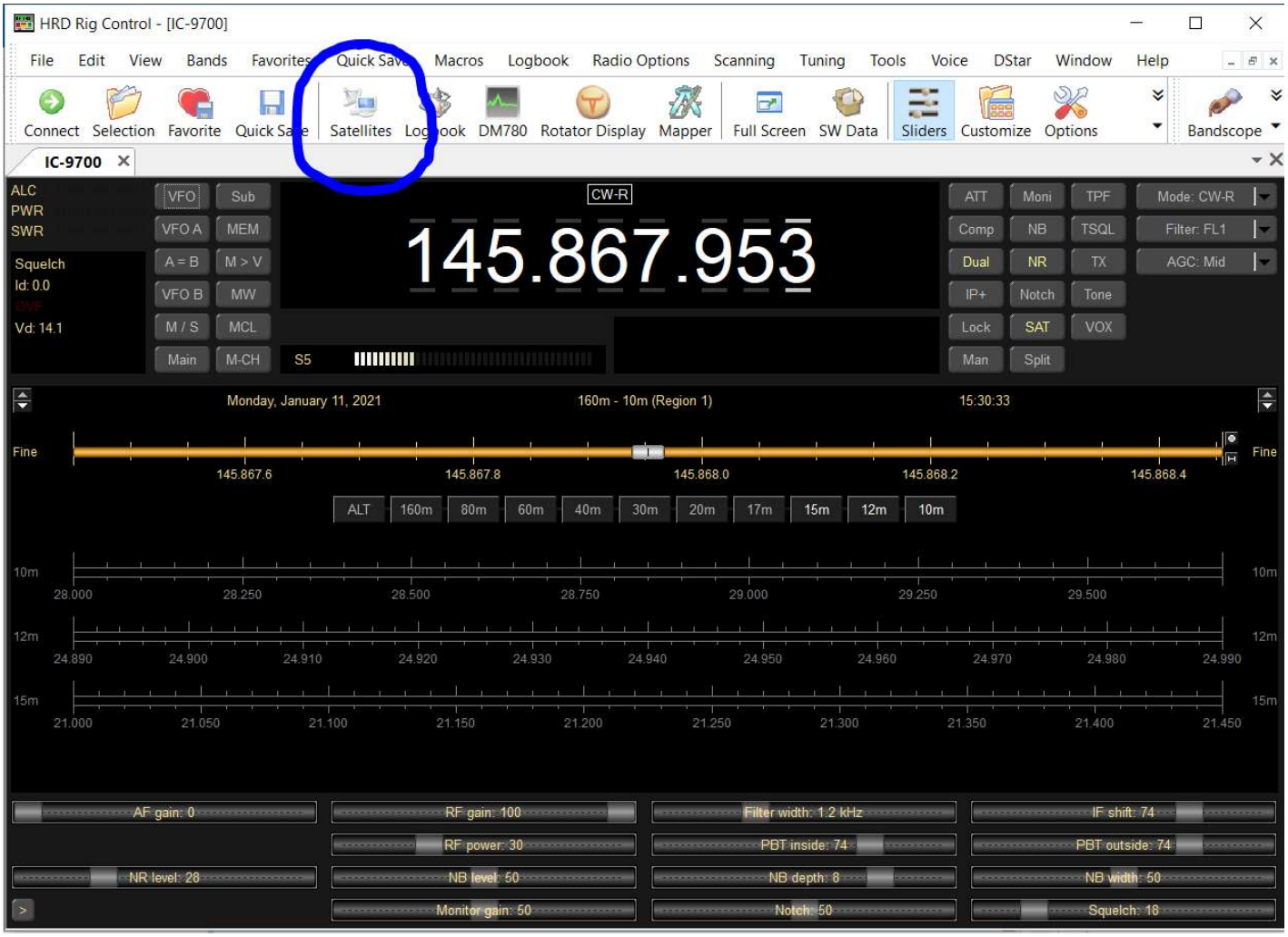
Windows Device Manager shows ST2 driver CH340 appears on COM6 at 9600baud. Yours will likely be different, note down this info for rotator setup later.

Power up the computer, ST2, G-5400B, and transceiver.

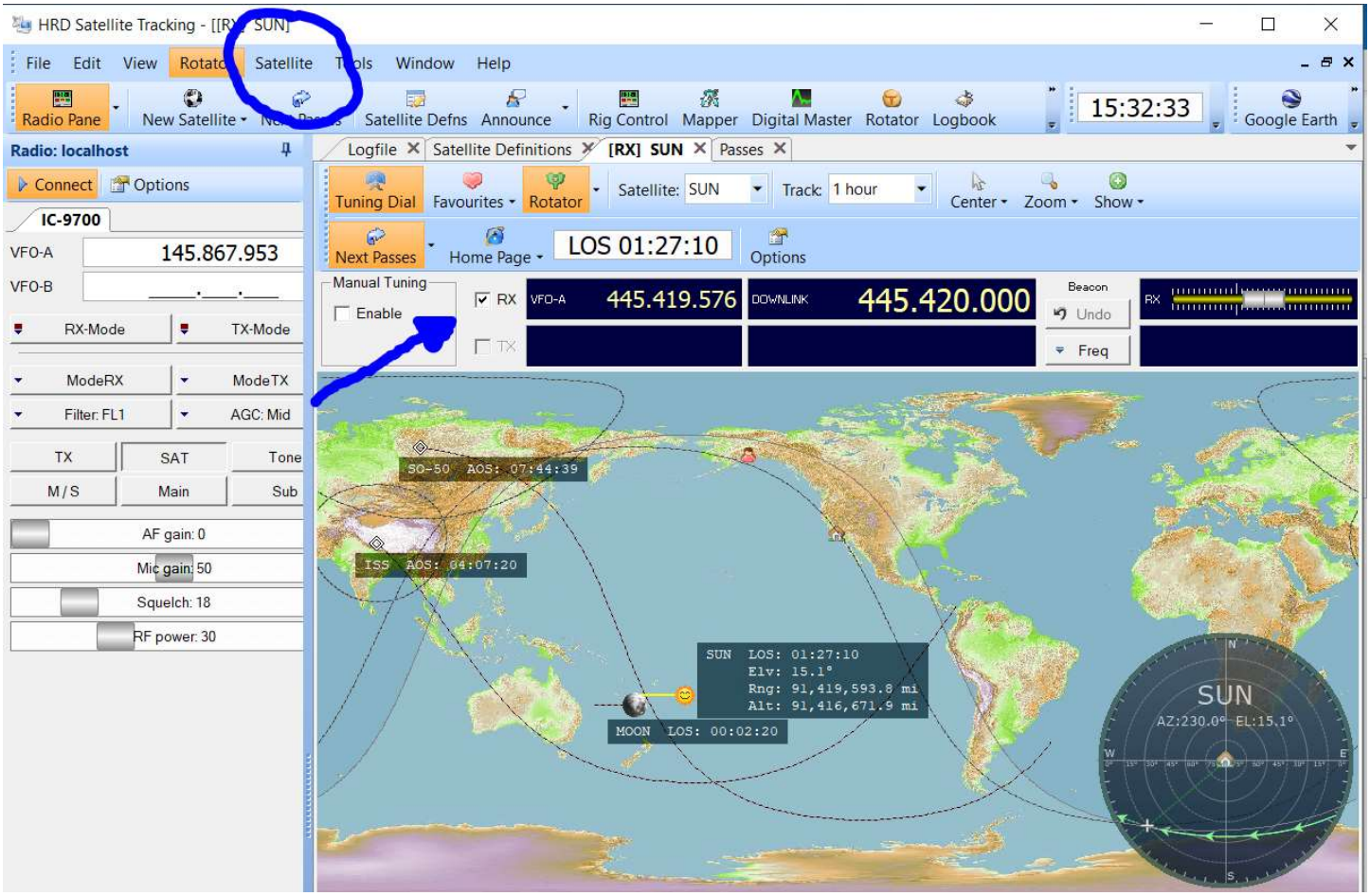
Start HRD. By default it will start up “HRD Rig Control”



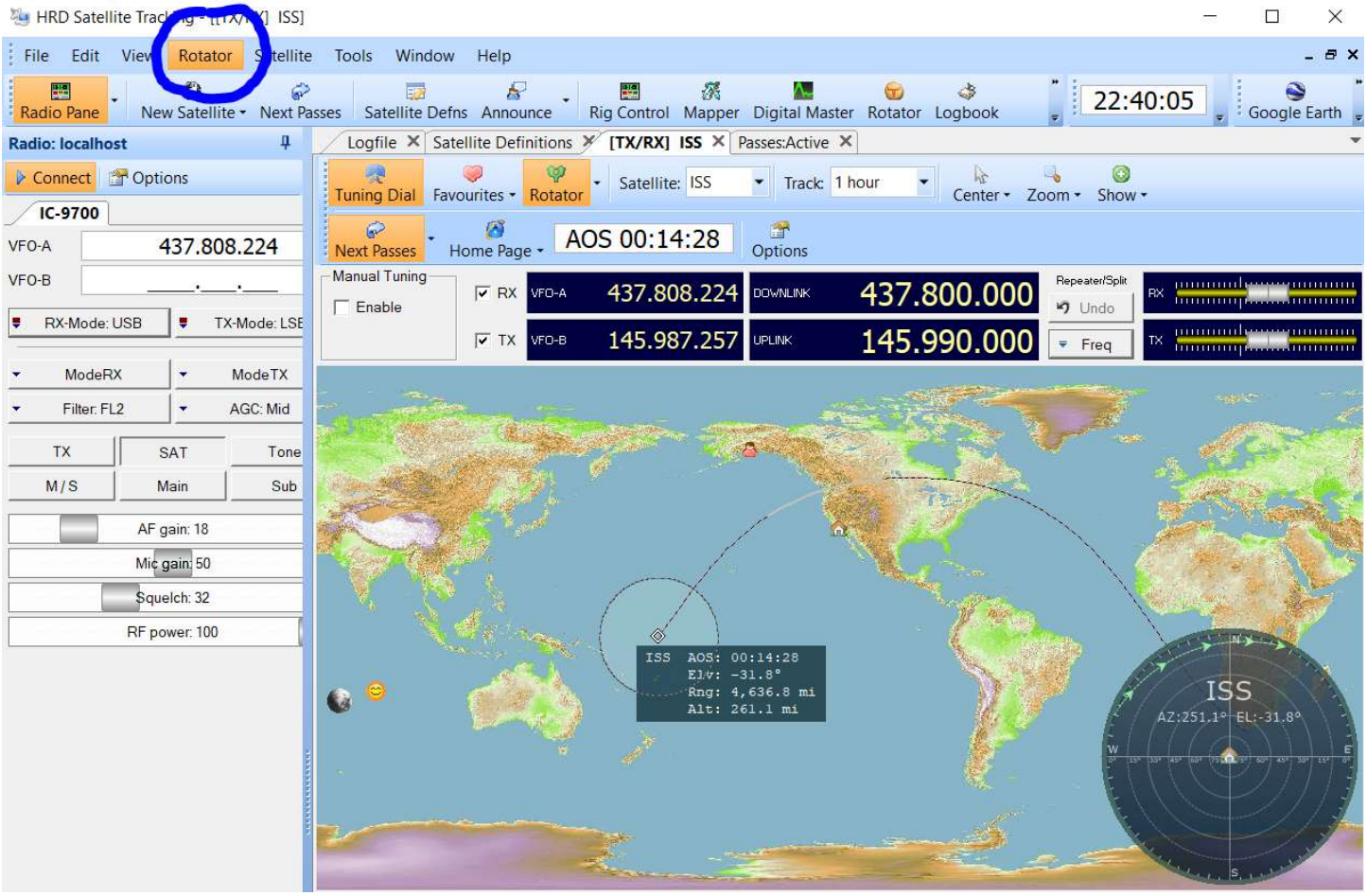
From “HRD Rig Control”, second row icon, click “Satellite”. This will start the “HRD Satellite Tracking” program.



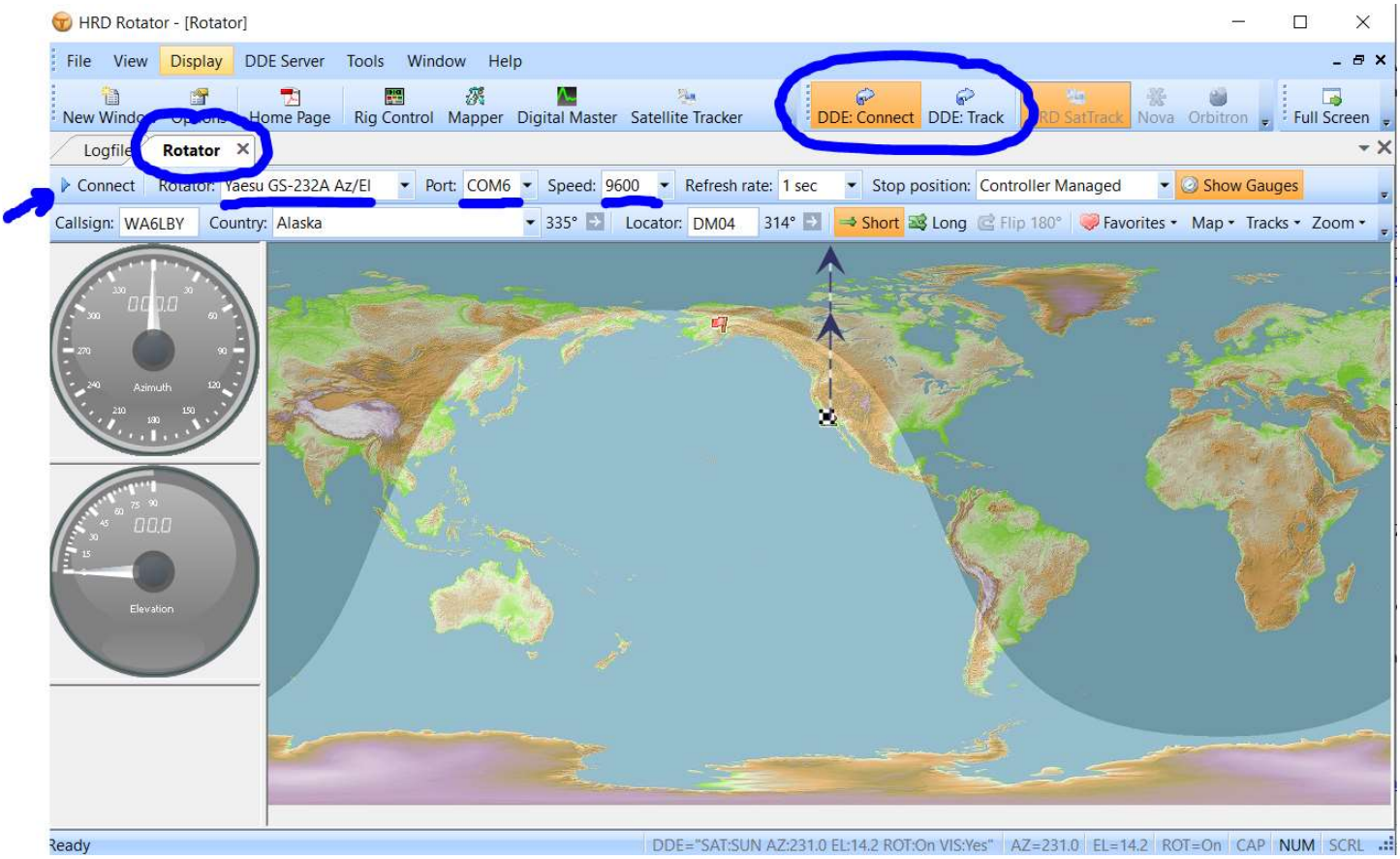
From “HRD Satellite Tracking” ensure that dropdown menu item “Satellite”, “Tuning” is enabled. This will bring up the “Frequency” dialog box. Select the RX Box. For daytime testing, we select tracking for SUN.



From “HRD Satellite Tracking” drop down menu (first row), select “Rotator”, “enable”. This will start and enable the Rotator program, but it wont steer the rotator just yet.



On the HRD Rotator screen, you should see on the third row menu a tab named “Rotator”. If you do not see this, click the “New Window” icon on the second row. Below the “Rotator” tab, you will see a dropdown selector for rotators. Select “GS-232A Az/El”. Port: “COM6” (as noted from device manager assignment to ST2, use your own values). Speed: “9600” (also from device manager). My refresh rate is set to 1sec. Stop Position is computer managed. Now click “Connect” on the left side of the tab menu. Next, click the “DDE Connect” and then the “DDE Track” icons.

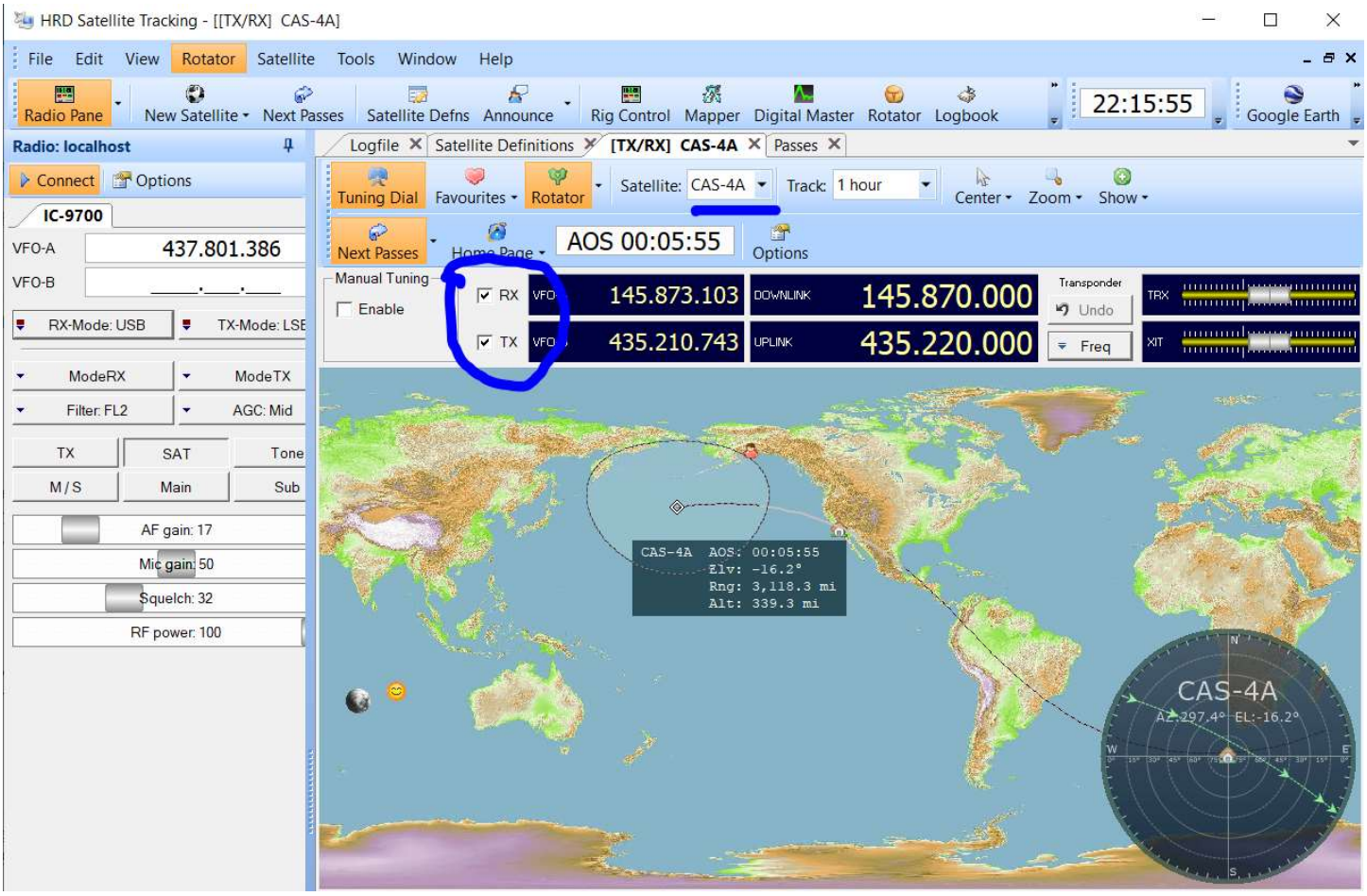


You will see the target coordinates on the ST2 display and hear the G5400 relays respond to the selected rotator heading. I use the SUN as my celestial reference to align the antenna. Don’t sight down the boom at the SUN. Align for minimum boom shadow on the ground.

Remember that for tracking to activate, you must have:

1. Satellite selected
2. Frequency Rx and/or Tx box checked.
3. HRD Rotator “Connect”
4. DDE Connect
5. DDE Track

To track a satellite, use “Satellite Tracking” drop down menu to make your selection. When RX and or TX are checked, tracking will begin. Here is one for CAS-4A:



It is good practice to write up a checklist for your special setup. Satellite passes are swift, don’t get caught fumbling.

Trouble shooting: If no response, on HRD Rotator, deselect and reselect “DDE Connect” and “DDE Track” and it should work.

I have been using ST2 with HRD and G5400B for six months and is very reliable. Communication and support from FD is superb!

Please refer to the HRD online manual for operational details. Now, what did I miss?

Good tracking and 73,
Peter WA6LBY