



## California Spatial Reference Center

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### ***CRTN Connection Troubleshooting, FAQ:***

#### **Important items to remember when connecting to CRTN!**

1. Must support NTRIP connection
2. Username / password ARE case sensitive
3. Base station data type is RTCM3
4. Make sure you have the latest firmware in your RTK receiver
5. Make sure you have an updated NGS antenna calibration file
6. The CRTN network is divided into four sections according to the six zones of the CCS83:
7. CCS83 Zone 1-2: IP=132.239.152.175, Port=2104; CCS83 Zone 3-4: IP=132.239.152.175, Port=2103
8. CCS83 Zone 5: IP=132.239.154.80 Port=2104; CCS83 Zone 6: IP=132.239.154.80, Port=2103

#### **Almost all problems are related to these!**

**1. I need some help with the setup. I am using a Trimble TCS2 and Verizon MIFI. I'm connected but having problems with the settings. Do I use the username and password you sent to on the access information for so cal? I see to use the IP address of 132.239.154.80 but do I use the port number 2103 (RTCM 3.0)?**

You should be using the NTRIP setting in your TSC2. You then enter the IP and port for NTRIP being;

IP: 132.239.154.80      Port: 2103 (RTCM 3.0).

Make sure your settings are for RTCM 3.0.

After connection, you should have a pull down list where you would select BILL and it should look like "BILL\_RTCM3".

**3. We've been using CRTN for a couple of months now and we're having a hard time with elevation. We're expecting to get the same relative vertical accuracies as RTK. Is this a reasonable expectation? What we've seen is a consistent 0.3' systematic error in addition to our expected error (+/- 0.25). Any ideas or pointers regarding resources?**

You should be getting the same accuracies that your RTK receiver specifications state. Keep in mind the ppm error that is associated with the distance from your CRTN base stations. Are you using the proper antenna models? This difference is about the same as the vertical offset from the BPA to the L1-phase center. Download the NGS antenna model file from the NGS website and verify that you have the correct antenna type and offset values.

**4. I am trying to connect to the CRTN network and every time I pick a station I get the following error "Base antenna type not recognized by rover: TRM29659.00. SCIT"**

This error occurs when your receiver firmware does not have the current antenna definition file and it can't determine the appropriate antenna offsets to apply. For Trimble receivers, this information is kept in the firmware of the receiver, not the data collector. Update your firmware to the latest version.

**5. I am using a Trimble 5800 with a TSC2 Survey Controller (version 12.45) and can connect to NTRIP but get no data. I get the “waiting for online transformation data” message.**

On the “Select Coordinate System” page, select “Select from library”. Do NOT select “Broadcast RTCM”. These data streams do not send this information.

**6. I am using a Trimble R6 with a TSC3 Survey Controller and when I connect to a OCRTN station, I get “physical base station information not available” message.**

In Rover settings, change “RTCM 3NET” to RTCM RTK”.

**7. How would you suggest evaluating the quality and availability of CRTN stations while planning a survey?**

First, you can view time series for each of the stations. This will show you the stability of the site. Viewing time series of various sites around your area can give you an idea on what station is more stable than others. You can find these @

<http://geodemo-c.ucsd.edu/gridsphere/gridsphere?cid=Introduction>

This site requires a user name / password and has many useful utilities.

Second, viewing the real-time map that I presented last week is a MUST before going out in the field. This map shows which sites are currently streaming in real-time and can be found @

<http://sopac-old.ucsd.edu/crtn.shtml>

Sometimes these sites are down for various reasons usually due to equipment issues.

**7. I am using a Leica VIVA15 receiver and when I connect to CRTN, get the error message:**

**“ERROR NTRIP CASTOR DOES NOT RECOGNIZE YOUR PRIVLIGES, CHECK NTRIP USER ID AND PASSWORD”.**

**Do you have any idea what would cause this?**

It sounds like the user name or password is incorrect. Just a guess based on what my CRTN user name and password look like, either the caps on the password is incorrect or the underscore was entered as a space instead of an underscore.

**IMPORTANT!** Also, make sure that "**network solution**" in the Leica Viva software is checked "**off**" when using CRTN's "single baseline" solution.

**8. I am using a Trimble R8 and when I connect to a CGPS base station, I get the following error “Rover does not recognize base antennae”.**

Cause:

The base station’s antenna does not have a NGS calibration report.

(The radome model matters (SCIT,SNOW,etc)

Check the most recent GNSS Antenna Information log (Antenna Type) and note the antenna.

You can verify whether there is a NGS calibration by going to:

<https://www.ngs.noaa.gov/ANTCAL/>

**9. I am using a Trimble R8 receiver with a TSC3 controller running “Access” software. I can connect to the NTRIP server and when I connect to a CGPS base station, I get the following error “waiting for info from base”.**

FIX:

Upgrade receiver firmware to version 4.64.

ALSO: select RTCM RTK for data type

**10. Does CRTN apply a network correction like a VRS network?**

No. Using CRTN is no different than using a standard RTK base station. No correction computed, just raw GPS data.