

# THE CALIFORNIA REAL-TIME NETWORK:

## Geodetic RTK Surveying



GREG ST. JOHN, PLS  
CENTRAL CONTRA COSTA SANITARY DISTRICT  
MARCH 25, 2018

# How Do I Connect to CRTN?

1. Need RTK rover with internet access

2. NTRIP Access:

- CCS83 Zone 1-2: IP=132.239.152.175, Port=2104;  
CCS83 Zone 3-4: IP=132.239.152.175, Port=2103  
CCS83 Zone 5: IP=132.239.154.80 Port=2104;  
CCS83 Zone 6: IP=132.239.154.80, Port=2103

3. Need Account ( username & password )




## How Do I Connect to the CRTN?

CRTN Web Page

<http://sopac-csrc.ucsd.edu/index.php/crtn/> ←



# CRTN Registration



CRTN Registration

25%

**1. Please provide your business contact information rather than your personal information. Please double check your information, especially your email address.**

\*Name (First and Last Required):

\*Employer/Company (enter NA if not applicable):

\*Business Address:

Business Address (Continued):

\*City/Town:

\*State/Province:

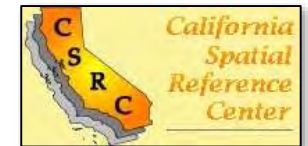

\*ZIP/Postal Code:

\*Phone Number:

\*Business Email Address:

\*Business Website Address (enter NA if not applicable):

Prev Next



([https://surveymonkey.com/r/crtn\\_registration](https://surveymonkey.com/r/crtn_registration))

# Connection Examples

- ✓ **Trimble Access**
- ✓ **Topcon Magnet**
- ✓ **Carlson SurvCE**
- ✓ **Leica Captivate**

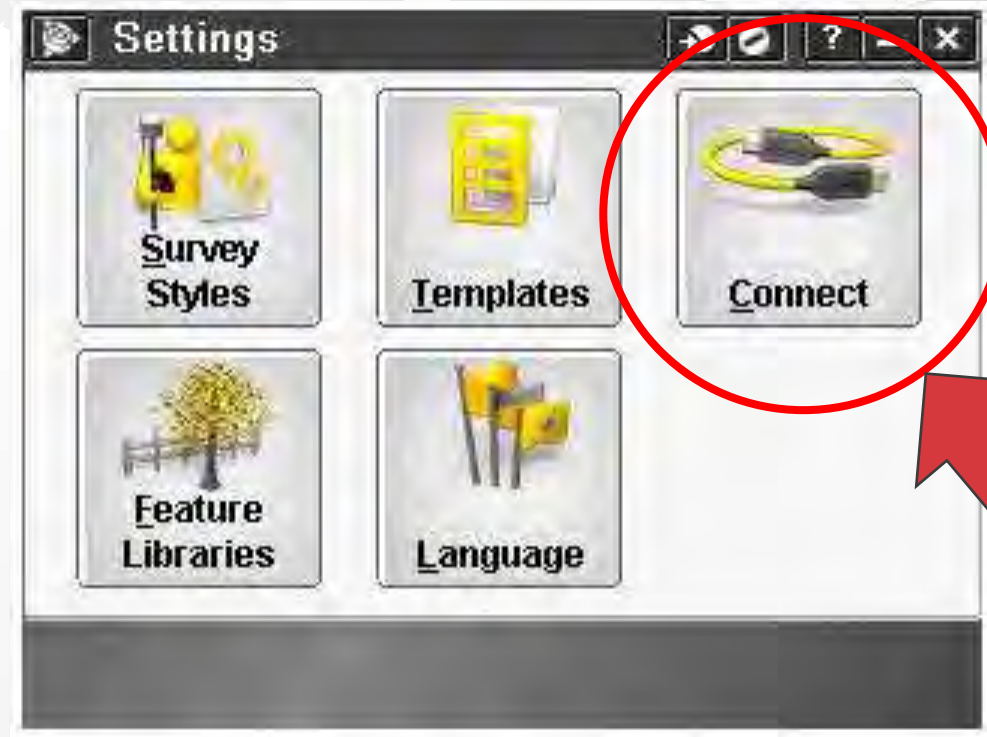


# Trimble Access



## Step 1 – Settings

## Step 2 - Connect

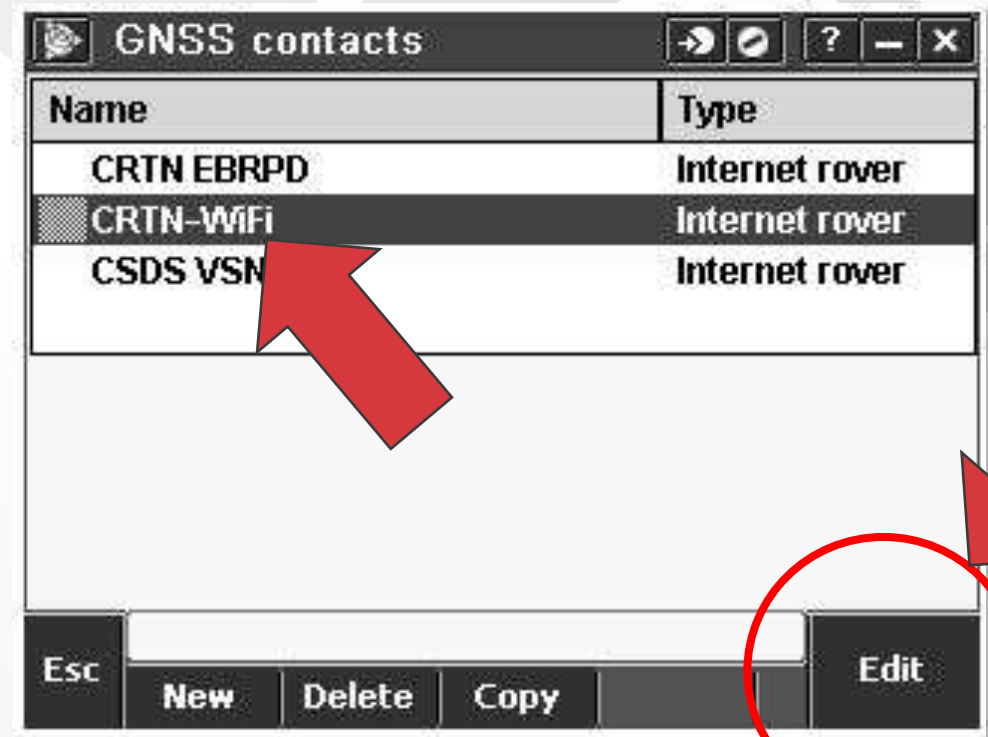
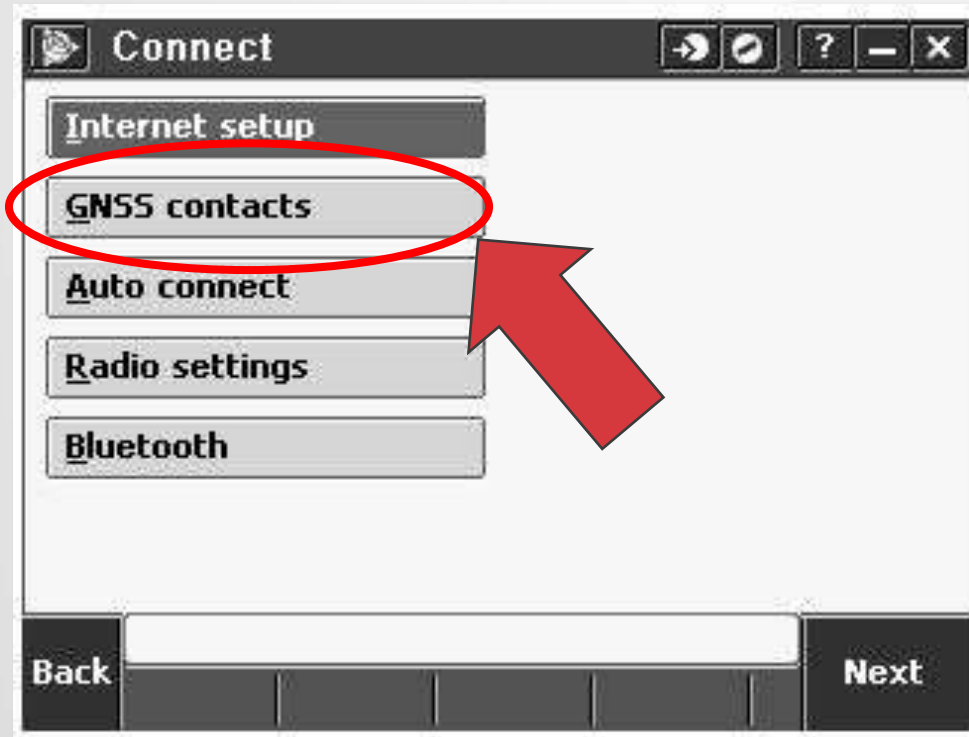


# Trimble Access



## Step 3 – GNSS Contacts

## Step 4 - Connect



# Trimble Access



## Step 5 – Connection Type

**Edit GNSS contact**

Name: CRTN-WiFi

Network connection: **Wi-Fi, ActiveSync**

**NTRIP Configuration**

Use RTX (Internet): <input type="checkbox"/>	Use NTRIP: <input checked="" type="checkbox"/>
Use NTRIP v1.0: <input type="checkbox"/>	Use proxy server: <input type="checkbox"/>

1/2

Esc Store

## Step 6 – Address & Account

**Edit GNSS contact**

Connect directly to Mountpoint:

NTRIP username: **CRTN\_CCSD**

NTRIP password: **\*\*\*\*\***

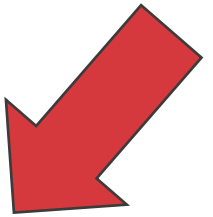
IP Address: **132.239.152.175**

IP Port: **2103**

Send user identity info:

2/2

Esc Store

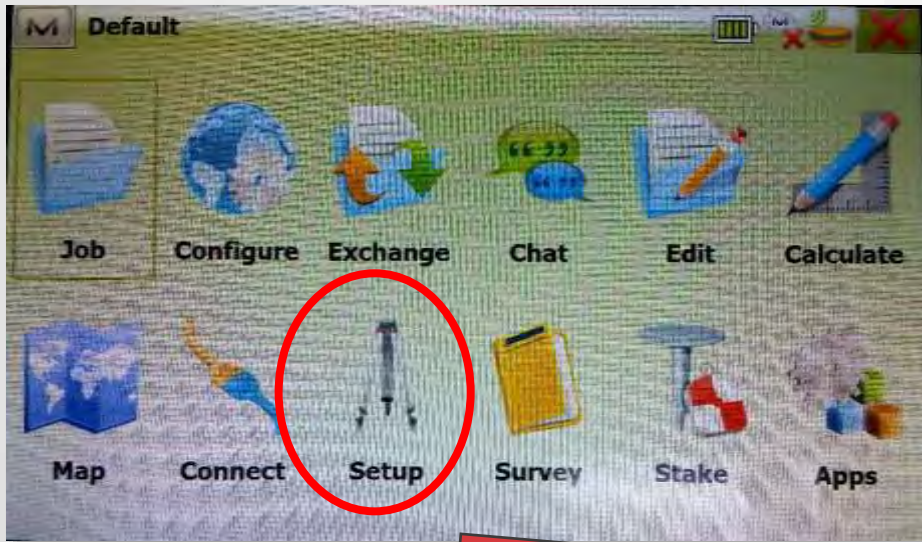




# Topcon Magnet



## Step 1 – Setup



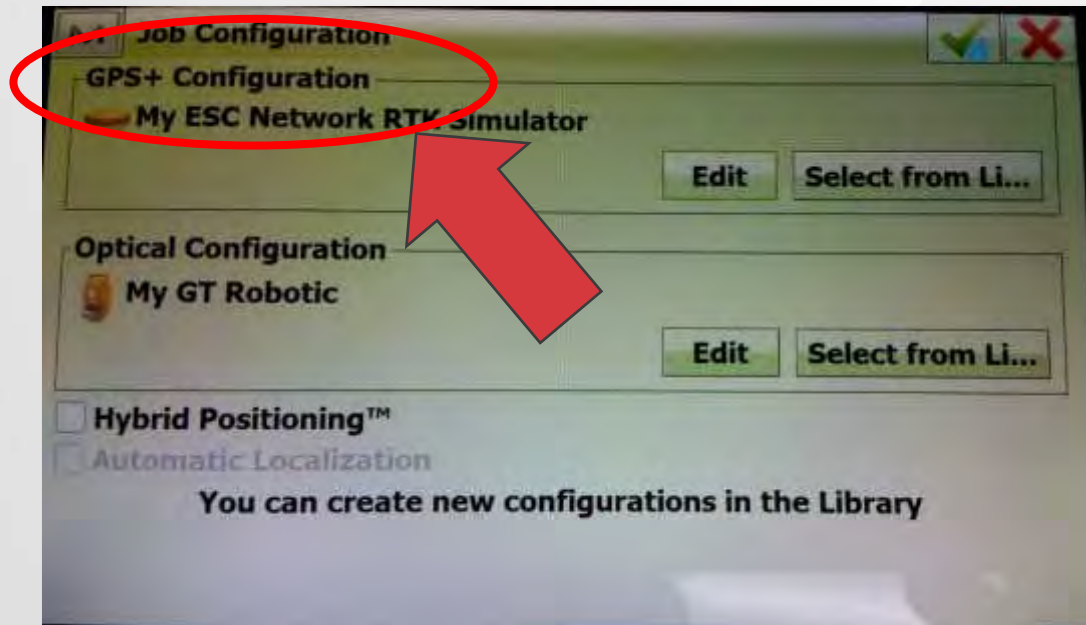
## Step 2 – Survey Settings



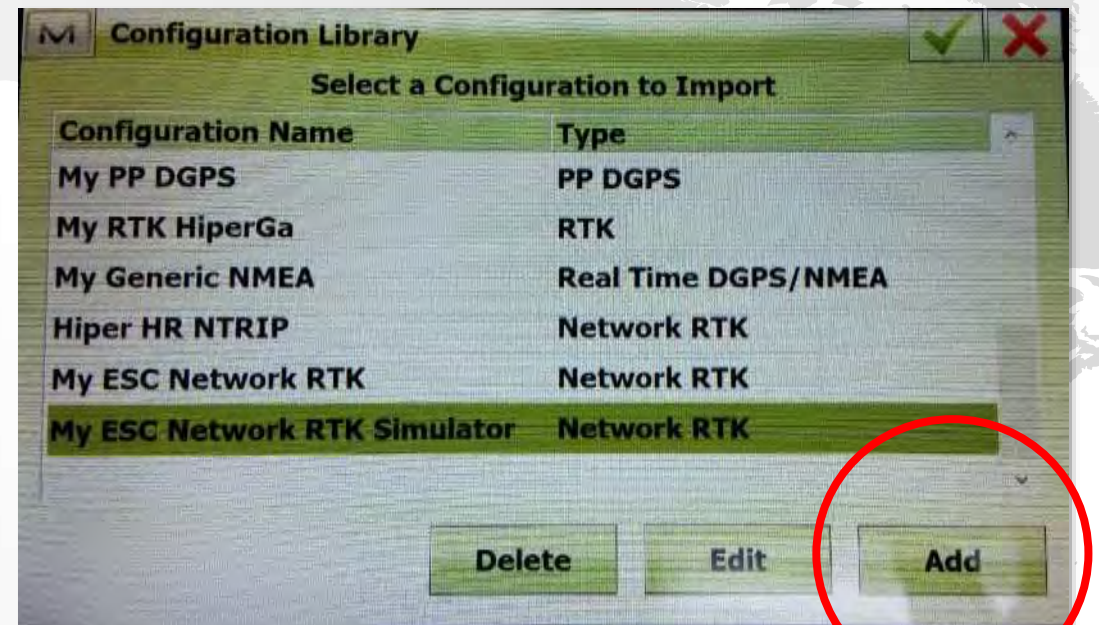
# Topcon Magnet

MAGNET

## Step 3 – GPS Configurations



## Step 4 – Add Configuration



# Topcon Magnet

MAGNET

## Step 5 – Configuration

Configuration

Name: My ESC Network RTK Simulator

Type: Network RTK

Corrections: Single Base

Protocol: NTRIP

Next >>

## Step 6 – Receiver

Config: Receiver Make

Simulation Mode

Rover

Manufacturer: Simulation

Post Processing

<< Back    Next >>

# Topcon Magnet

MAGNET

## Step 7 – Configure Rover

Config: Rover Receiver

Receiver Model: HiPer V

Bluetooth

Serial Number

Elevation Mask: 13 deg

Antenna: HiPer V

Ant Height: 4.75 USft

Peripherals

<< Back Next >>

## Step 8 – Address

Config: Internet Address

Internet Info

Address list

CRTN (132.239.152.175:2103)

Address: 132.239.152.175:2103

Label: CRTN

Delete Add new

Use GPUID

<< Back Next >>

# Topcon Magnet

MAGNET

## Step 9 – Account

**Config: Login Info**

Credentials

User ID

Password

<< Back    Next >>

## Step 10 – Connect

**Connections**

General    Enterprise

Device type

GPS    My ESC Network RTK Simulator

Optical    My GT Robotic

Connect to last used BT device

Prompt for connection at startup

Connect

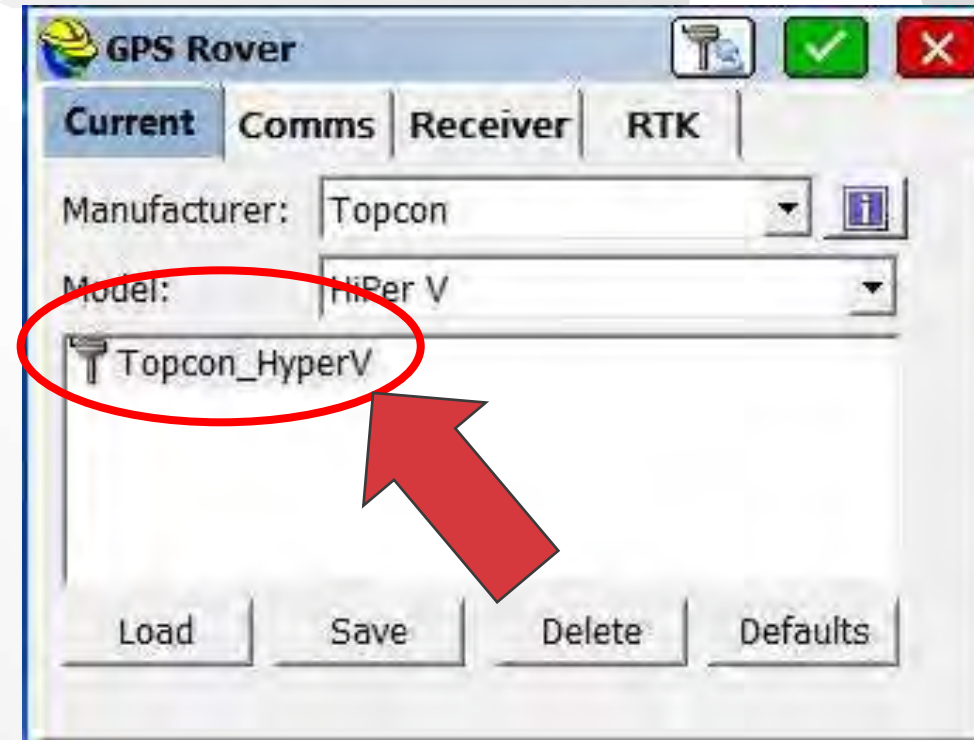
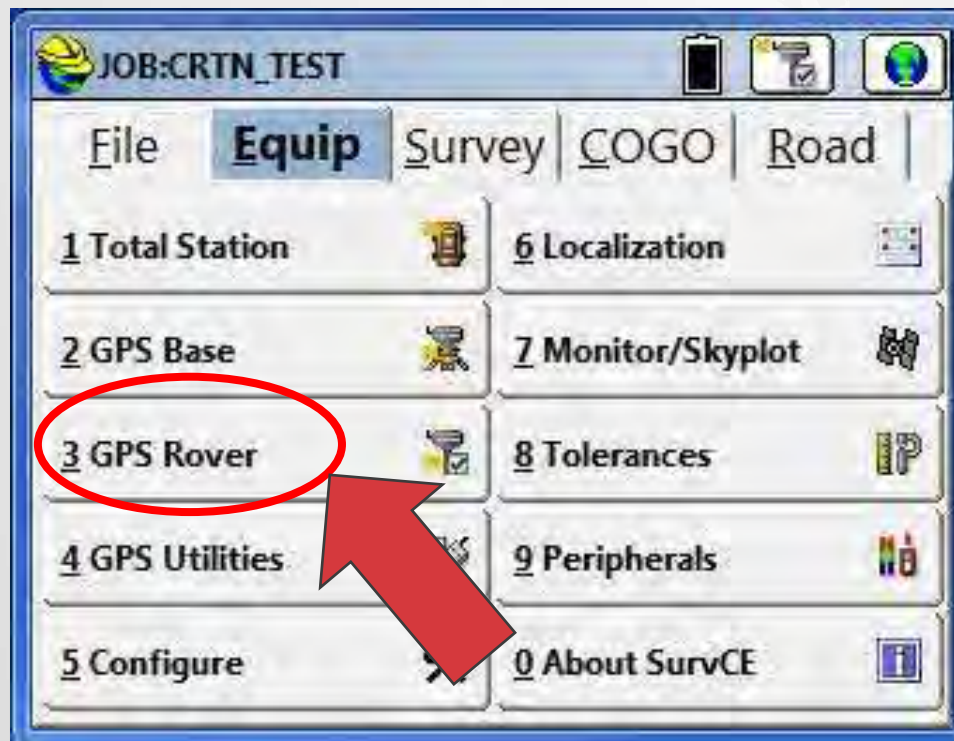


# Carlson SurvCE



## Step 1 – Settings

## Step 2 - Connect

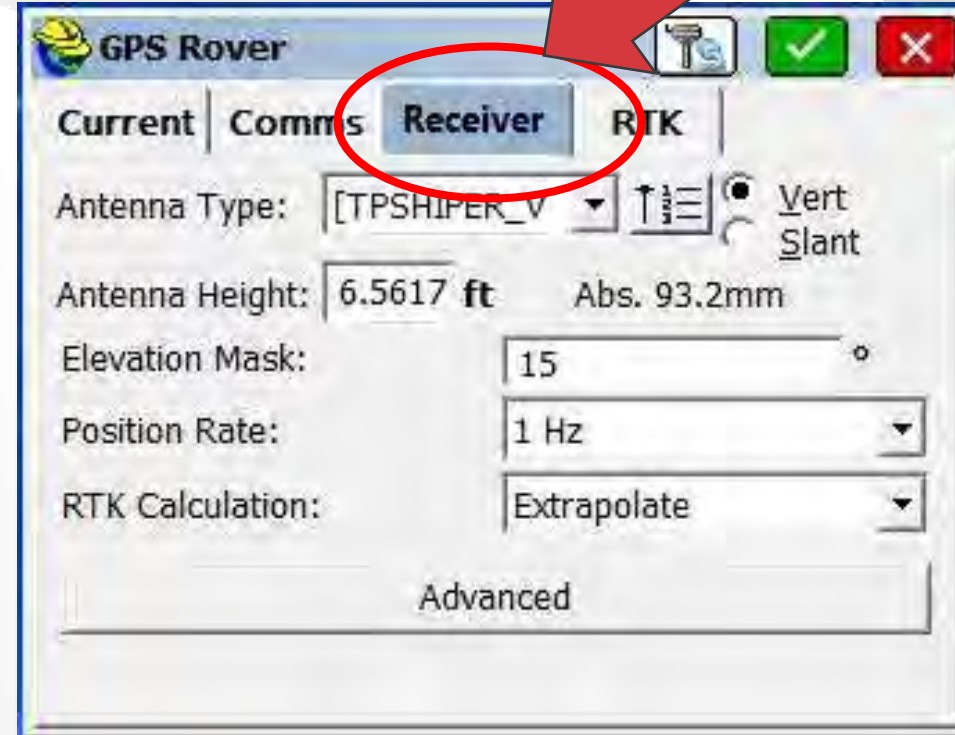
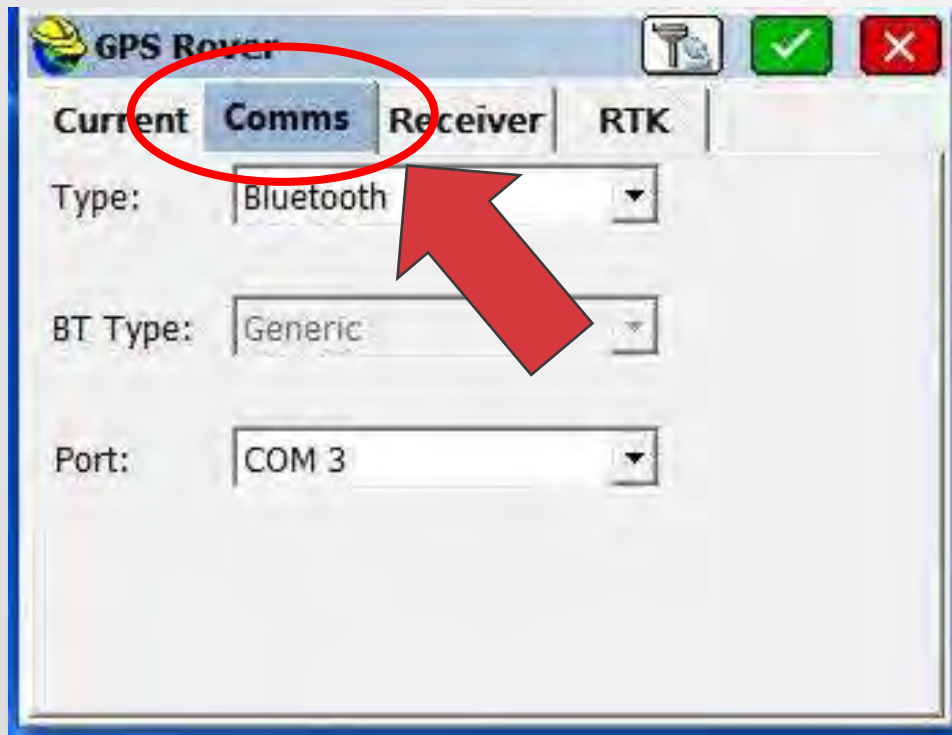


# Carlson SurvCE



## Step 3 – Communications

## Step 4- Receiver

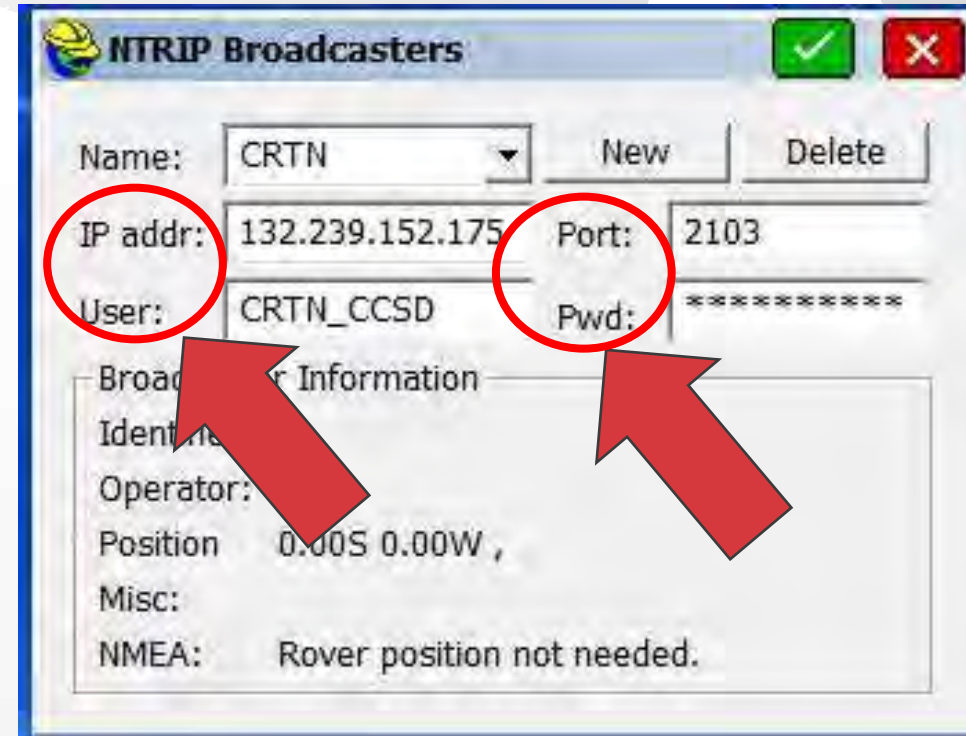
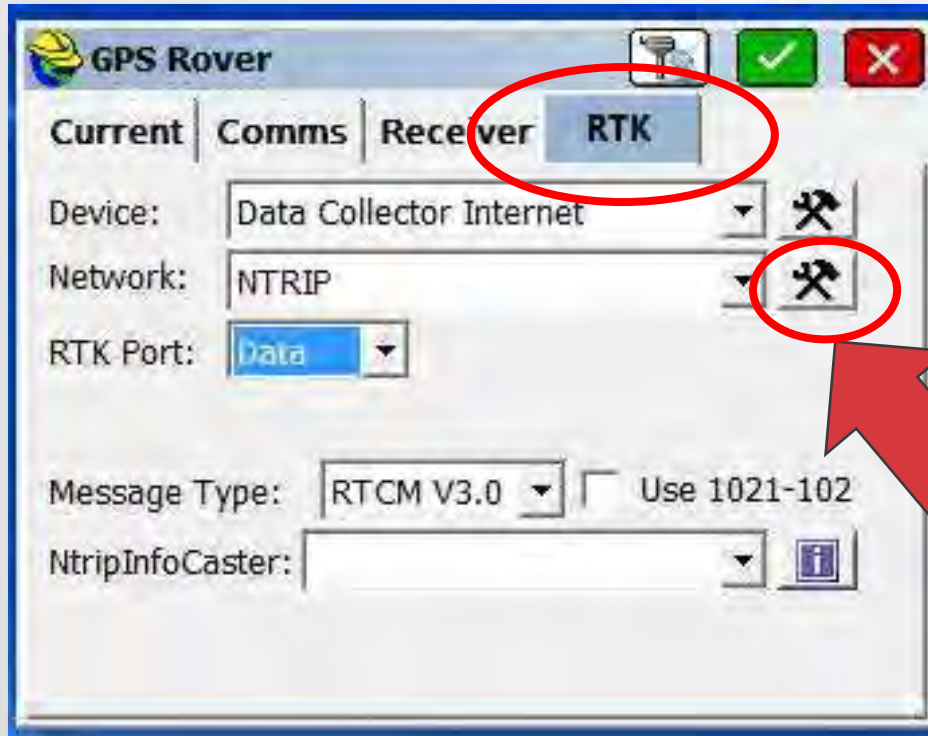


# Carlson SurvCE



## Step 5 – RTK Configuration

## Step 6 – NTRIP setup





# Carlson SurvCE



## Step 7- Station

**Bases for CRTN**

Name: BRIB\_RTCM3 [New] [Delete]

User: CRTN\_CCSD Password: \*\*\*\*\*

Identifier: BRIB:Rural, near Lafayette, Cal

Short Id: BRIB\_RTCM3

Type: GPS L1L2 CRTN\_server/CommLinkProxy

Format: RTCM\_3.0 1004,1006,1019

Position: 37.92N 122.15W USA

Misc: none

Send Rover Position to Network

## Step 8 - Connect

**GPS Rover**

Current | Comms | Receiver | **RTK**

Manufacturer: Topcon [i]

Model: HiPer V

Topcon\_HyperV

[Load] [Save] [Delete] [Defaults]

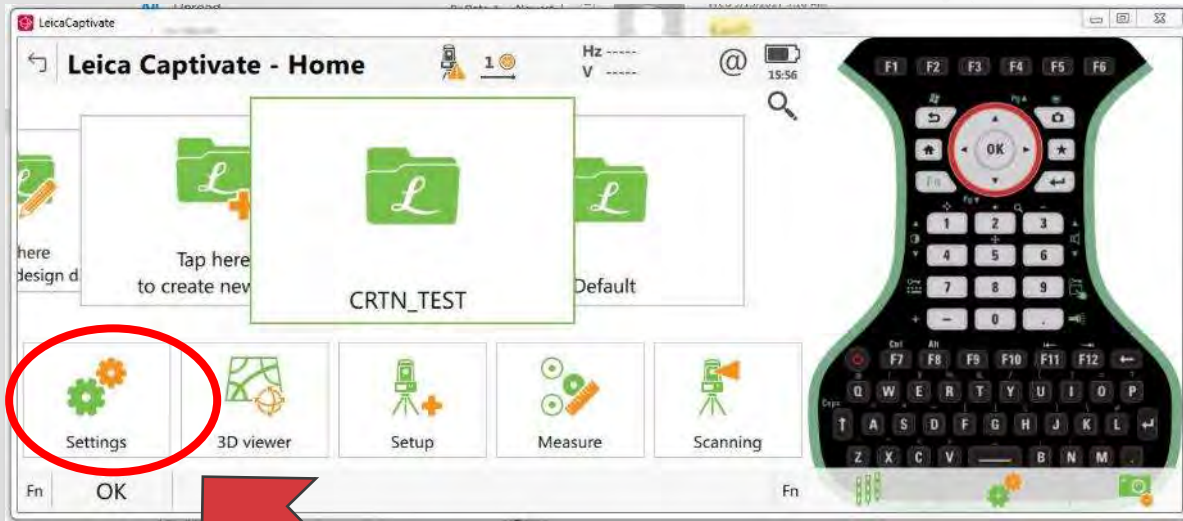


# Leica Captivate



## Step 1 - Settings

## Step 2 - Connections

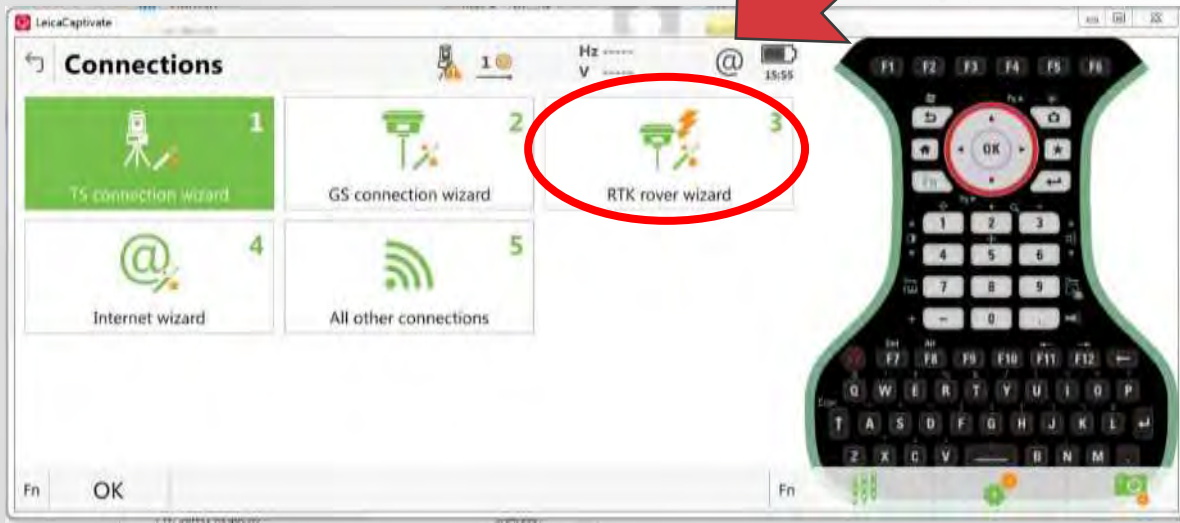


# Leica Captivate



## Step 3 – RTK Rover Wizard

## Step 4 – RTK Profile



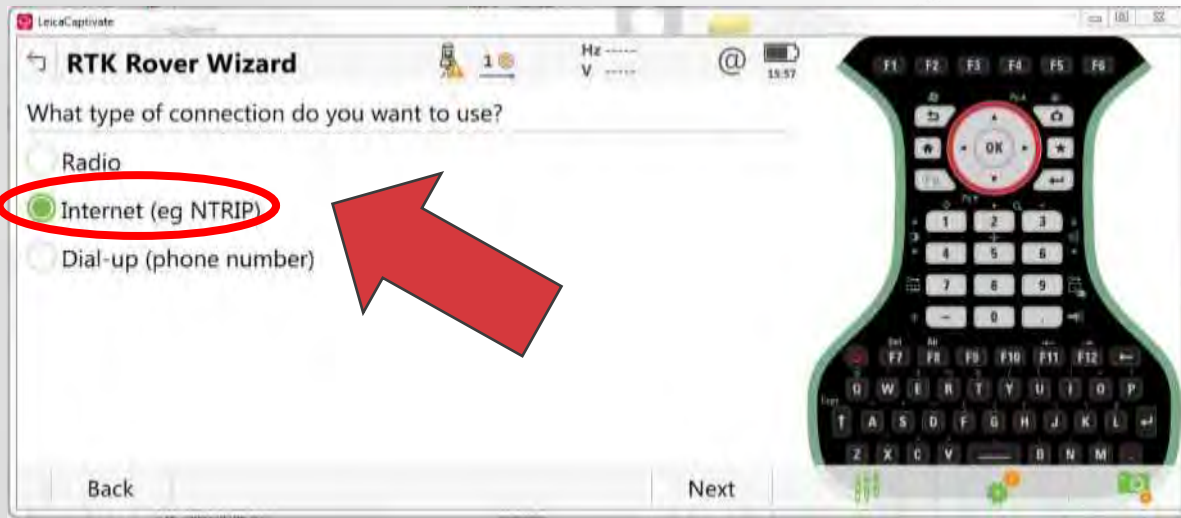
Name your RTK Profile

# Leica Captivate



## Step 5 – Connection

## Step 6 – Port

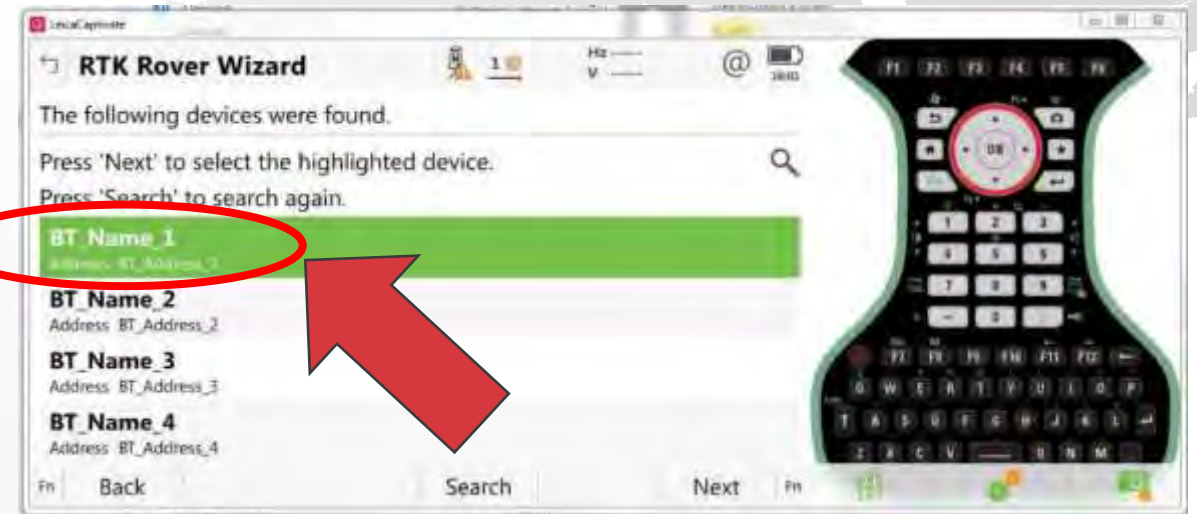
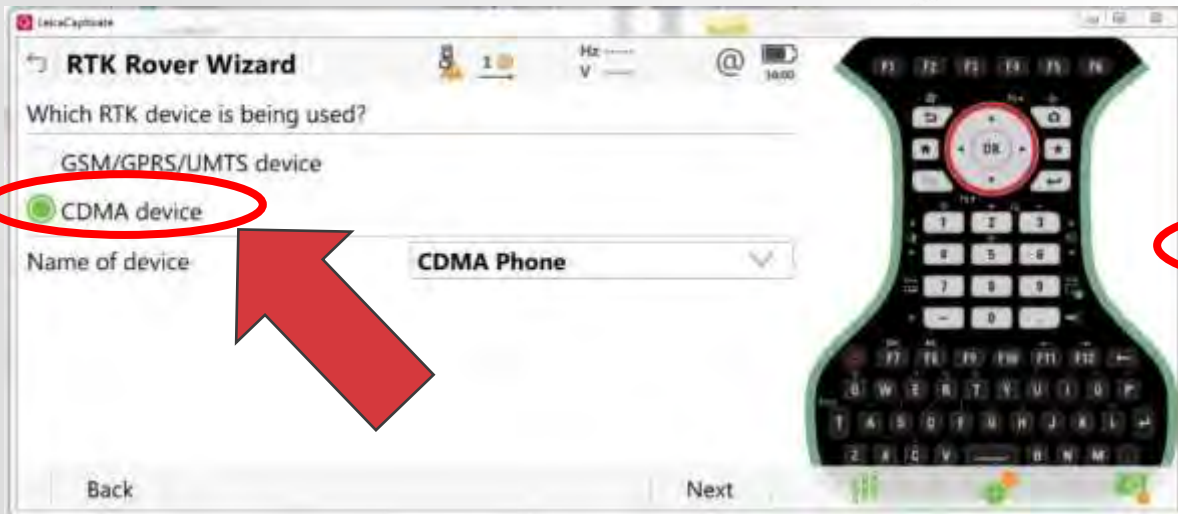


# Leica Captivate



## Step 7 – Device

## Step 8 – Select Device



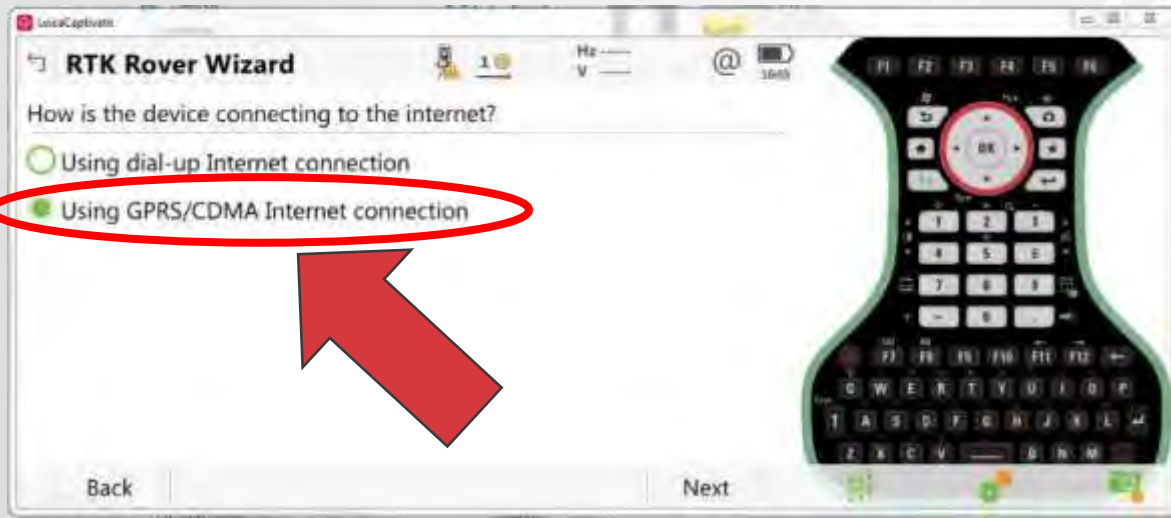
Select your modem

# Leica Captivate



## Step 9 – Method

## Step 10 – Server Details

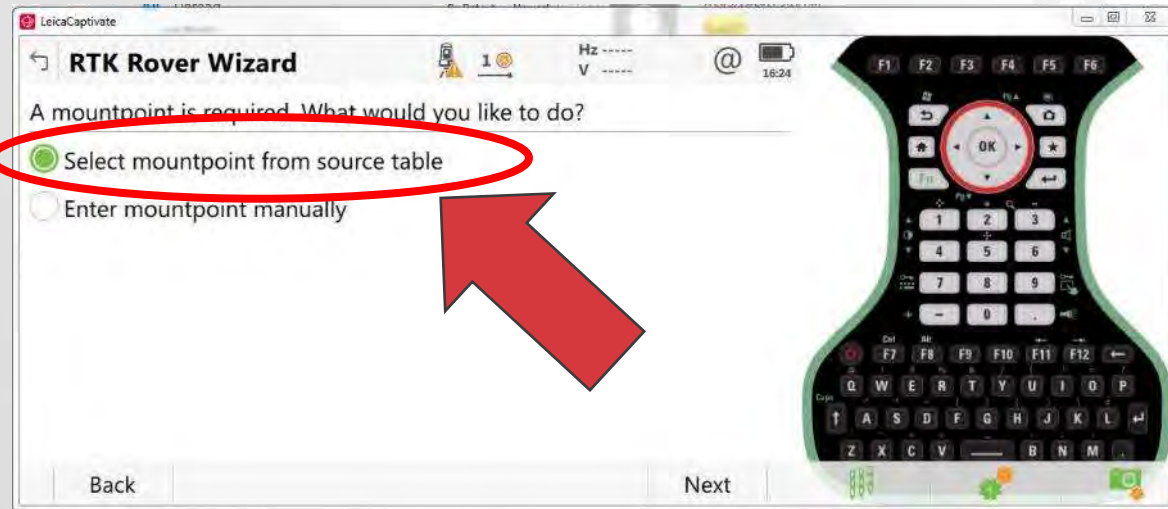


How are you connecting to the internet?

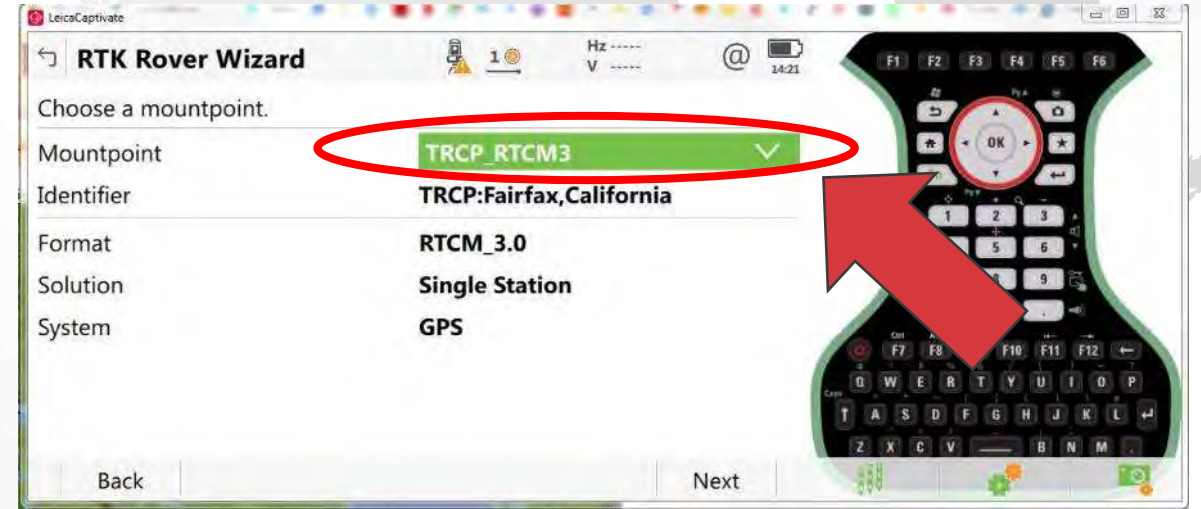
# Leica Captivate



## Step 11 – Mountpoint Method



## Step 12 – Select Mountpoint



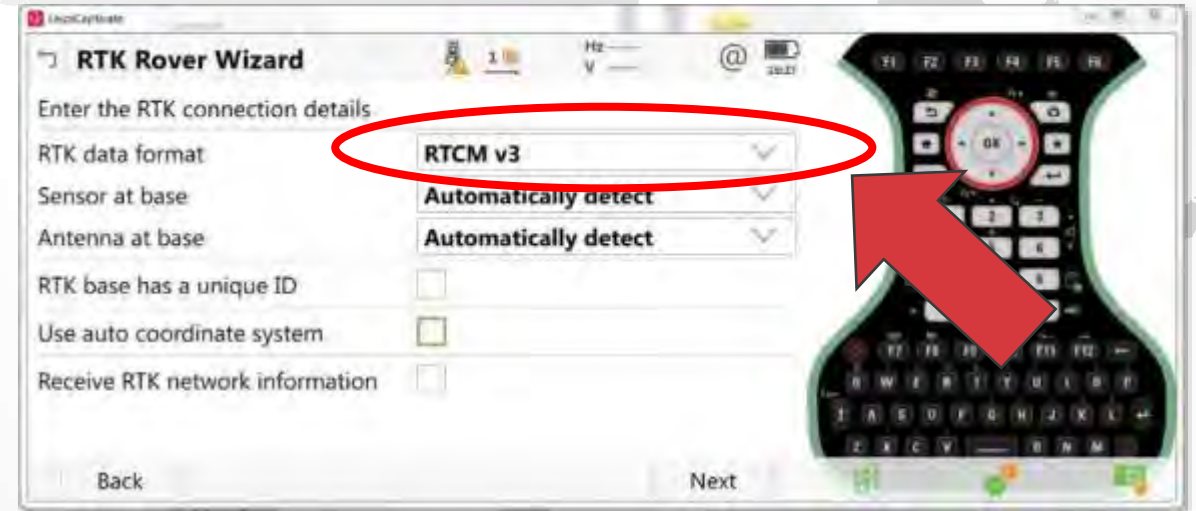
# Leica Captivate



## Step 13 – Network RTK Details



## Step 14 – Connection Details



Do not check "RTK corrections" box for single-baseline solution



# Leica Captivate



## Step 15 – Notifications



## Step 15 – Complete

