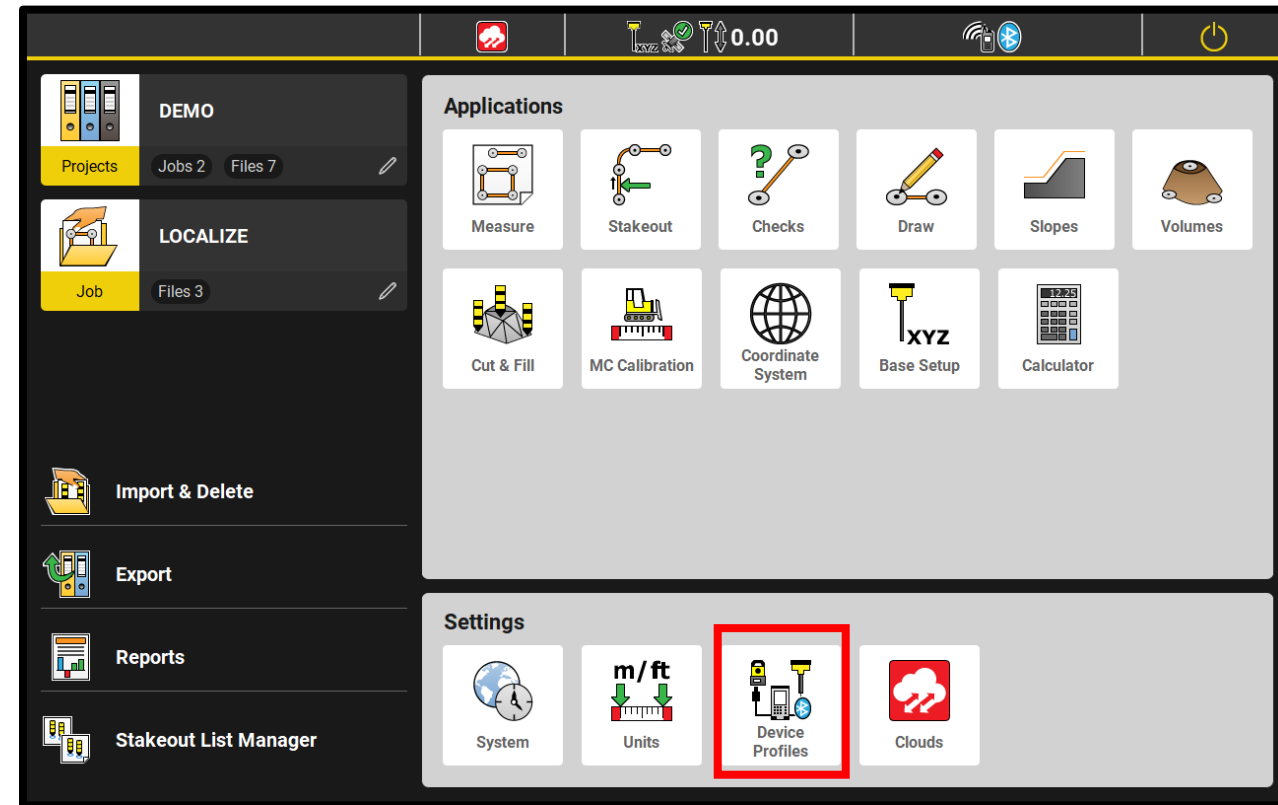


Leica iCON GPS 60/70 Rover Setup





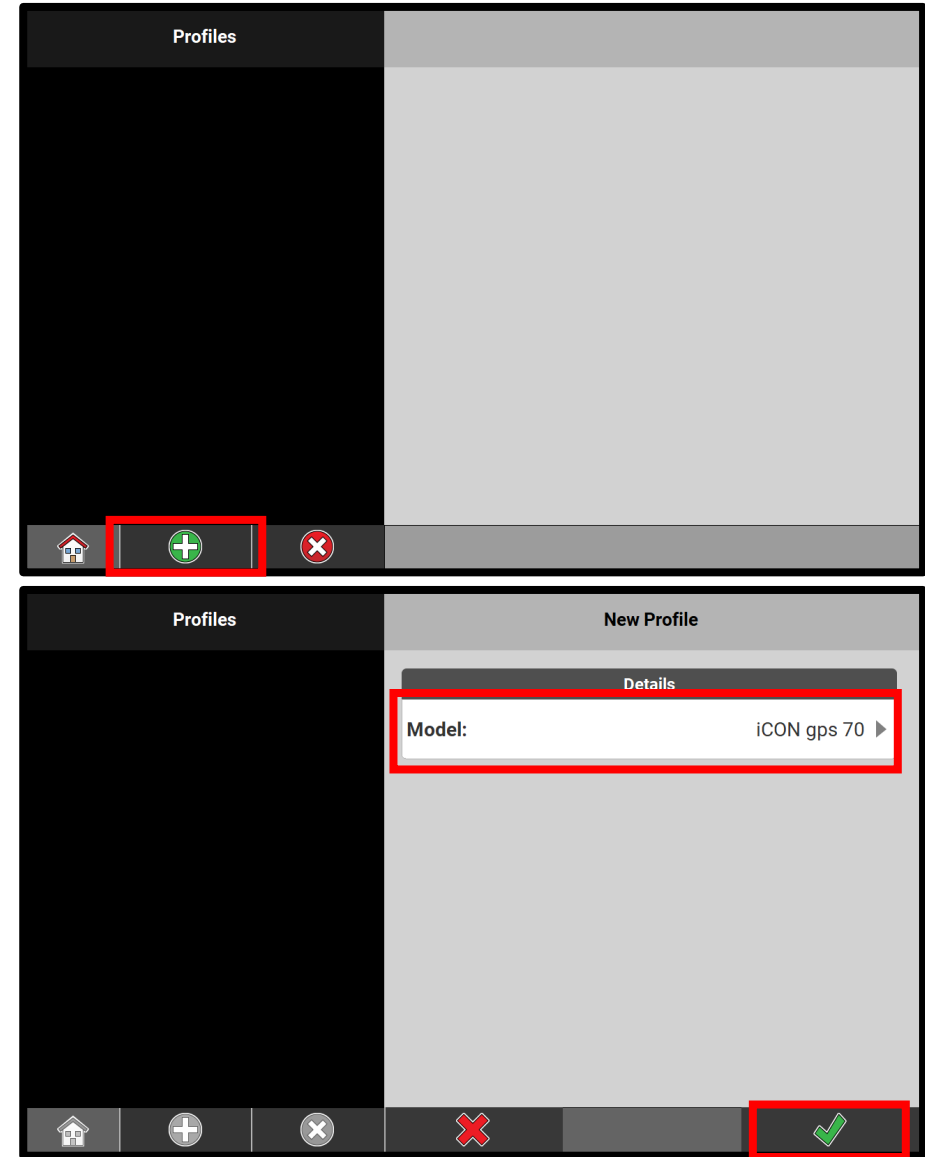
Setting up a Rover

- Turn on Tablet with **black power button** on top right corner
- Turn on rover with **black power button** on left side of rover face
- On Home Screen, select **Device Profiles**




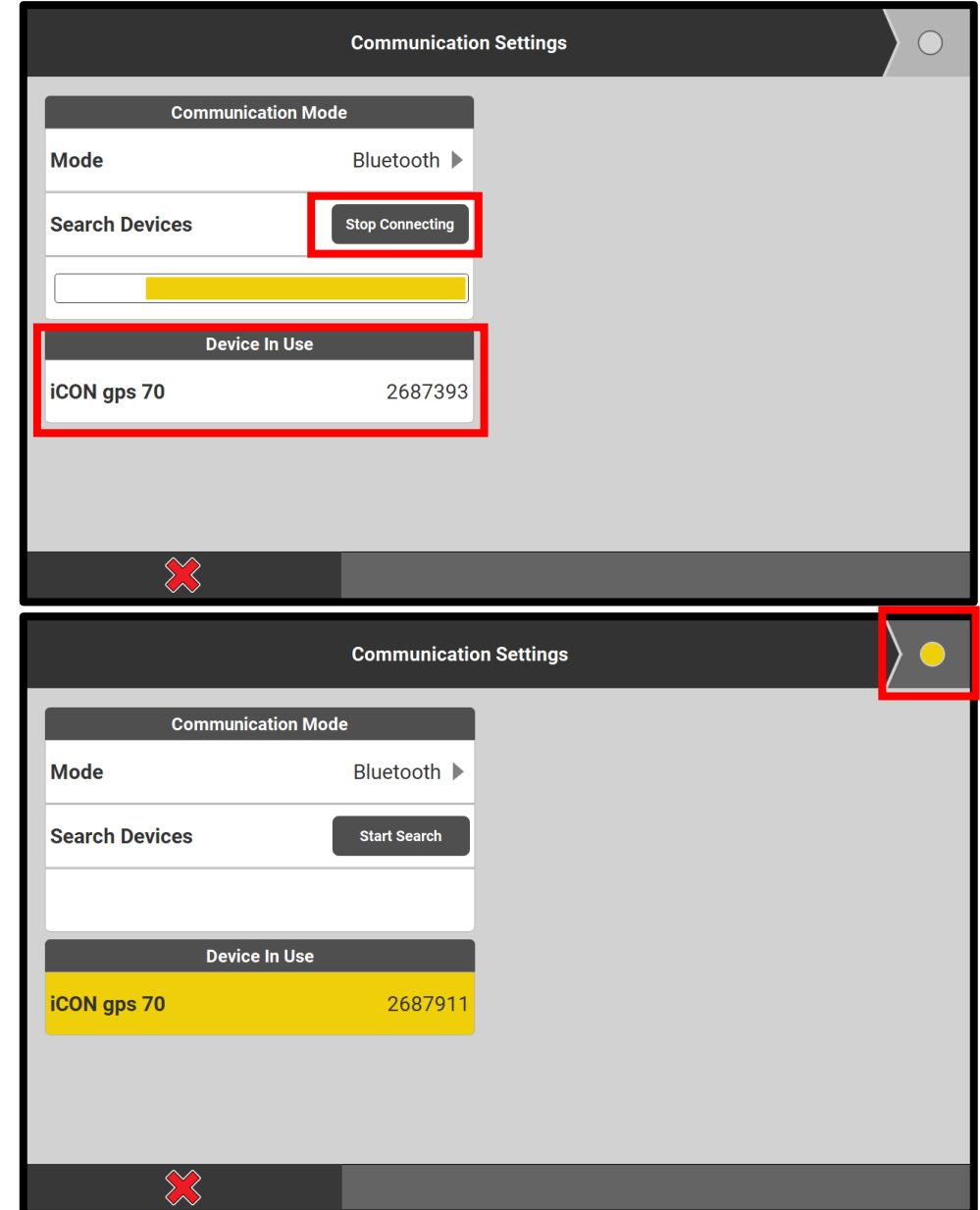
Setting up a Rover

4. Press , change model to either iCG 60 or iCG 70 to match the rover being used
5. Press 




Setting up a Rover

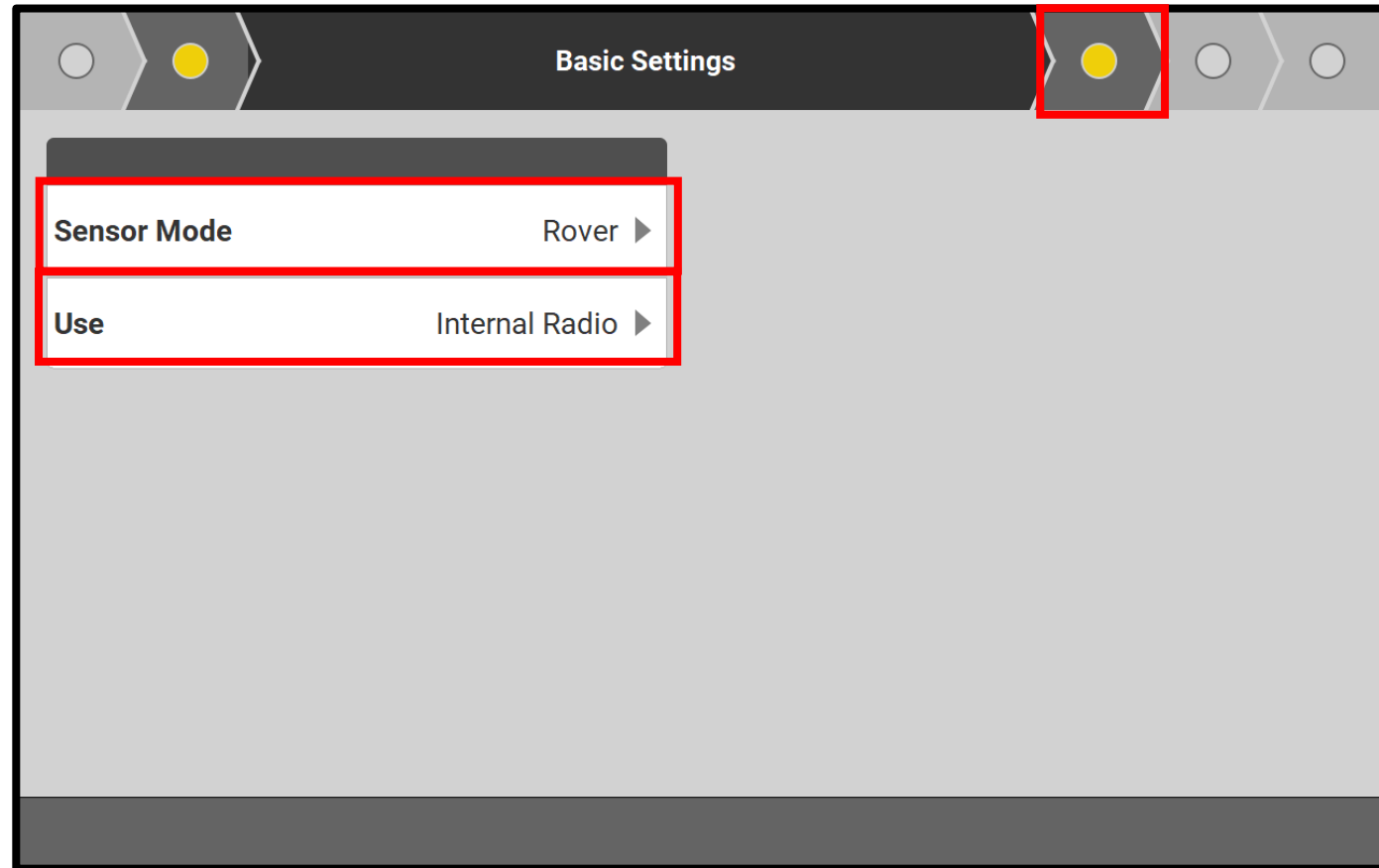
- Mode: **Bluetooth**
- Press **Start Search**
- Device in use will show the rover and serial number, tap once to connect
- The start button will change to 'stop connecting' - this means it's trying to pair to the device
- Once highlighted yellow press 




Setting up a Rover

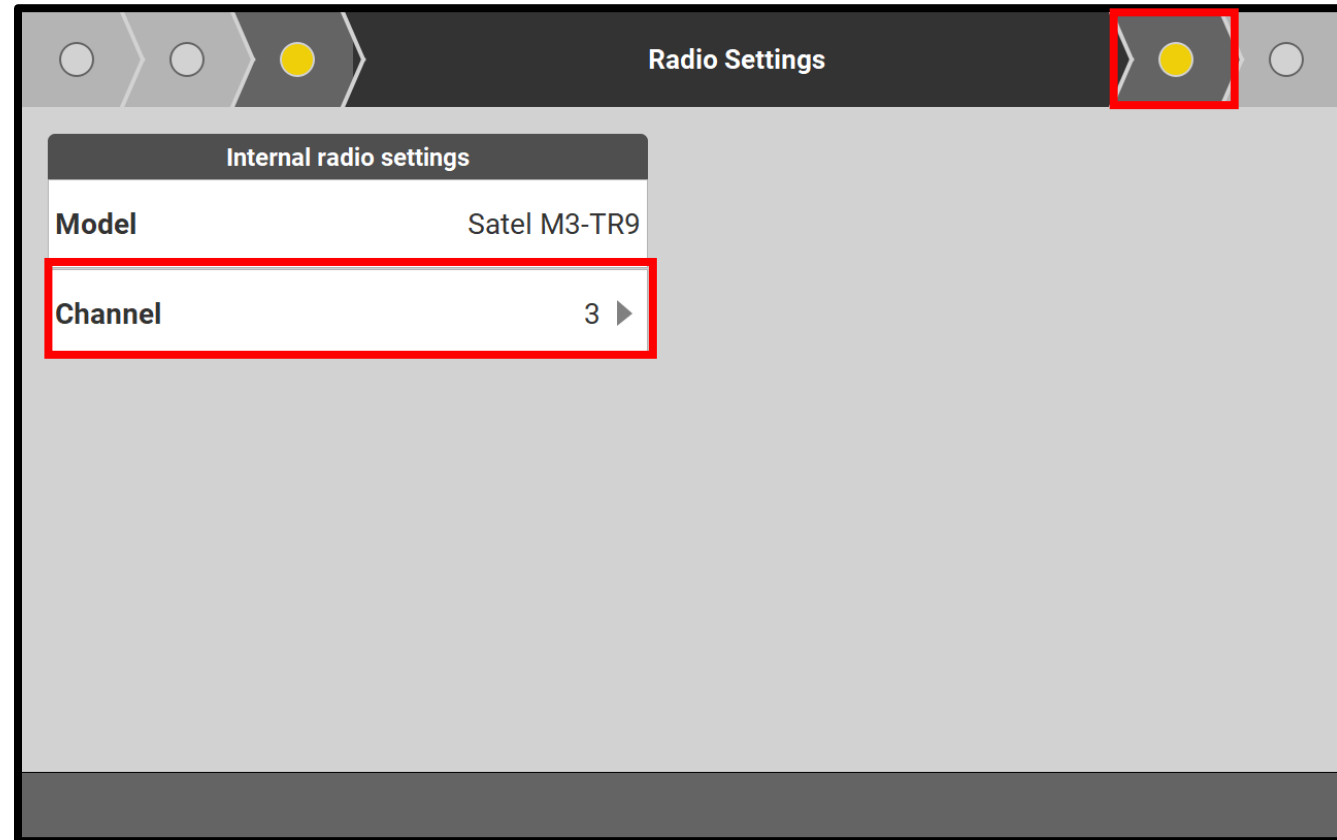
Start Profile Wizard

- Sensor mode: Rover
- Use: Internal radio
- Press 



Setting up a Rover

- **Internal radio settings**, change channel to match channel of base station
- Press 



Radio Settings

Internal radio settings


Model Satel M3-TR9

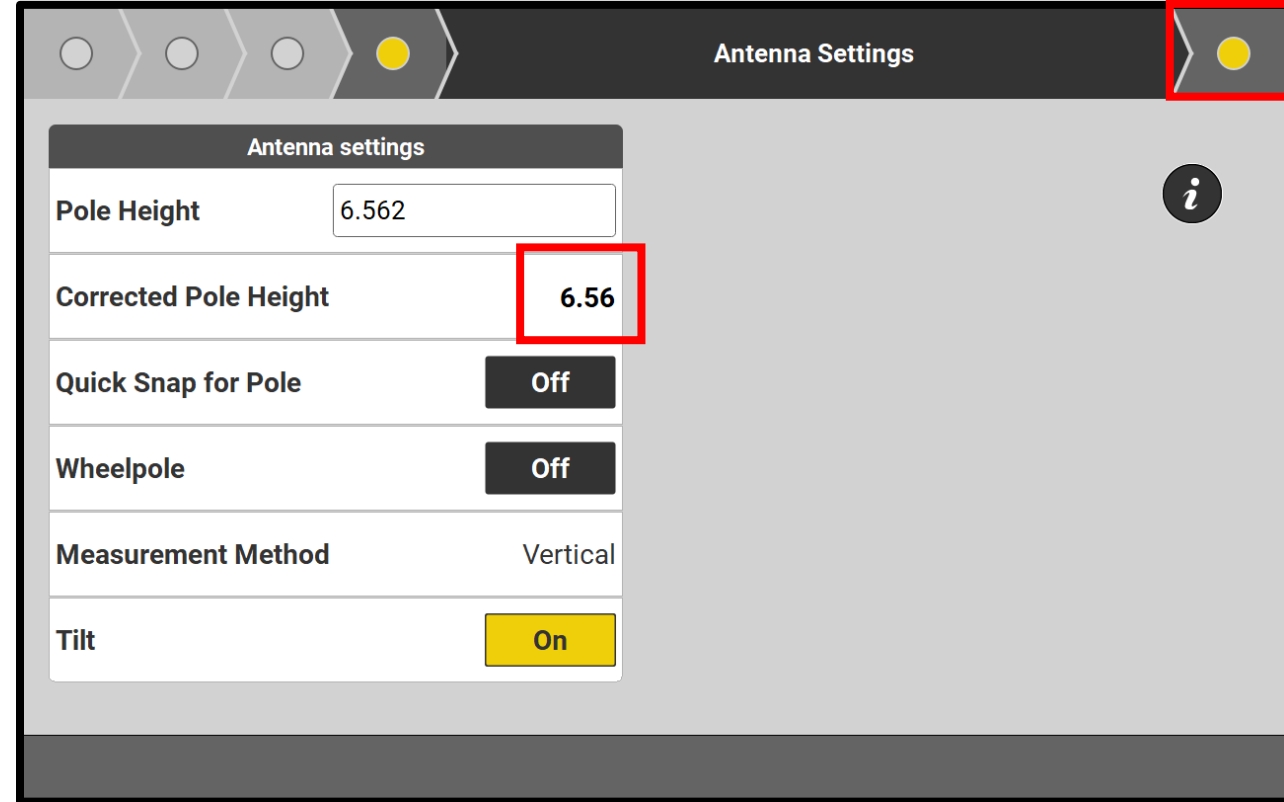
Channel 3 ▶



Setting up a Rover

- **Antenna settings**


- **Antenna height**: 6.56
- If using Quick Snap, change to On
- Press 



Antenna settings	
Pole Height	6.562
Corrected Pole Height	6.56
Quick Snap for Pole	Off
Wheelpole	Off
Measurement Method	Vertical
Tilt	On





Setting up a Rover

- Name the rover profile “iCG70-[last 3 of SN]”
- Once connected to the base, the rover will show the following:
 - 100% corrections
 - Fixed position
 - Flashing downward lightning bolt on rover face
- Press 
- After connection, check in on a control point daily to make sure it is still accurate, see Localization guide for info

Status Page

Status Information

Profile Name	iCG70-ROVER-XXX
GPS Mode	Radio Rover
Radio Channel	3
Corrections, last minute	100 %
Position Quality	Fixed
Detected Base Antenna	CGA60
Detected Base Receiver	iCG60

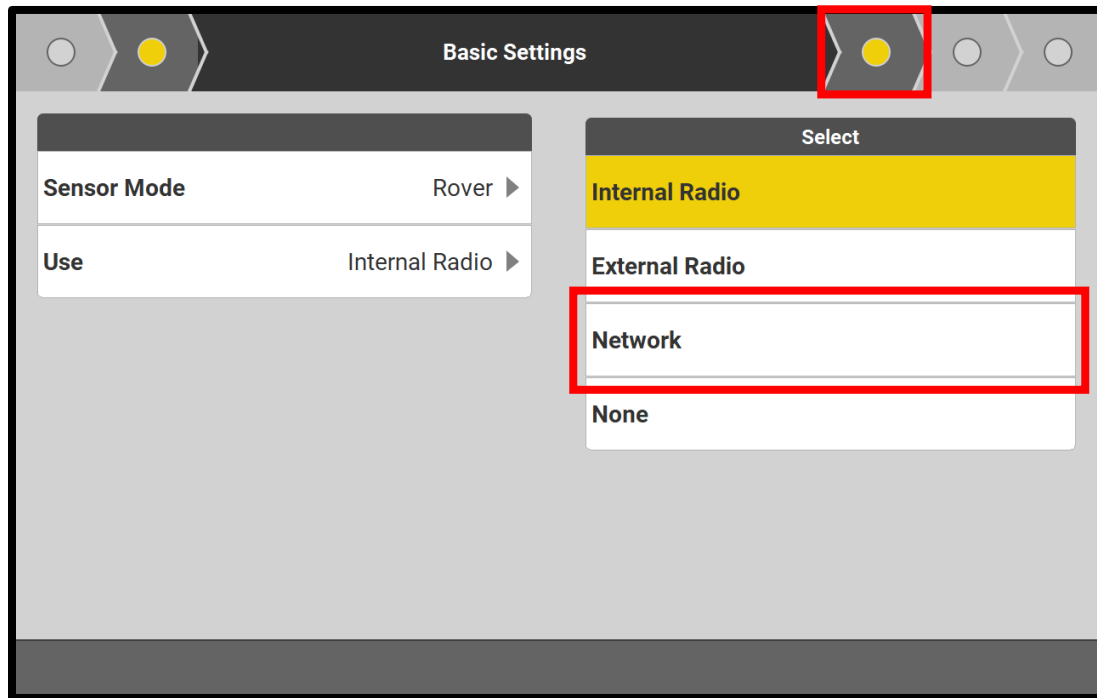
 



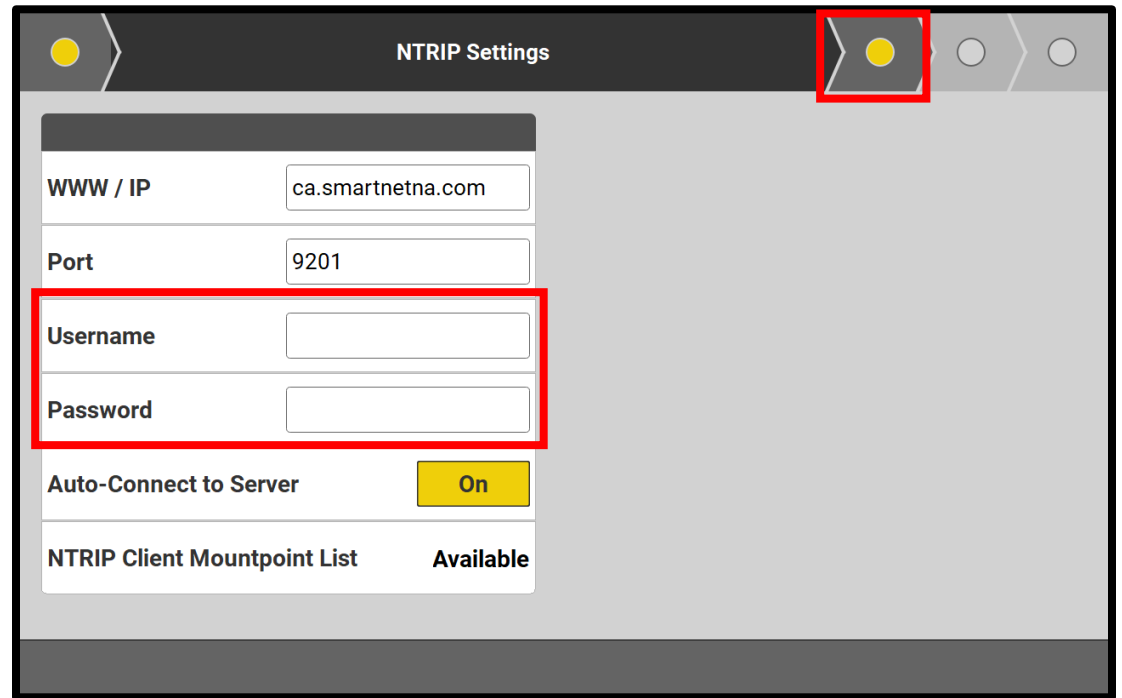
Setting up a Rover

- If using a Rover with a network (such as SmartNet), set Use to Network, press 

- Enter the WWW/IP and Port as shown, fill in credentials, press 





The Basic Settings screen has a top navigation bar with three buttons. The second button, which has a yellow dot, is highlighted with a red box. Below the navigation bar, there are two main sections. The left section contains two dropdown menus: 'Sensor Mode' set to 'Rover' and 'Use' set to 'Internal Radio'. The right section is titled 'Select' and contains three options: 'Internal Radio' (highlighted in yellow), 'External Radio', and 'Network' (highlighted with a red box). Below these options is a 'None' option.

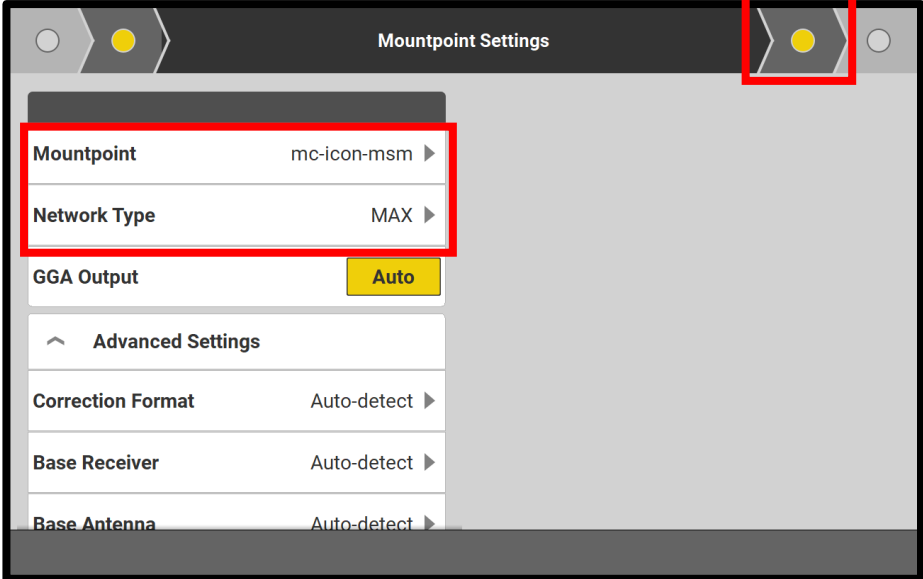


The NTRIP Settings screen has a top navigation bar with three buttons. The second button, which has a yellow dot, is highlighted with a red box. Below the navigation bar, there are several input fields and a toggle. The 'WWW / IP' field contains 'ca.smartnetna.com' and the 'Port' field contains '9201'. Below these are 'Username' and 'Password' fields, both highlighted with a red box. At the bottom, there is an 'Auto-Connect to Server' toggle set to 'On' and an 'NTRIP Client Mountpoint List' set to 'Available'.



Setting up a Rover

- Set the Mountpoint to “mc-icon-msm”
- Set Network Type to “MAX”
- Press 
- Corrections should reach **100%** and Position Quality should read **Fixed**
- Press  to finalize



Mountpoint Settings

Mountpoint mc-icon-msm ▶

Network Type MAX ▶

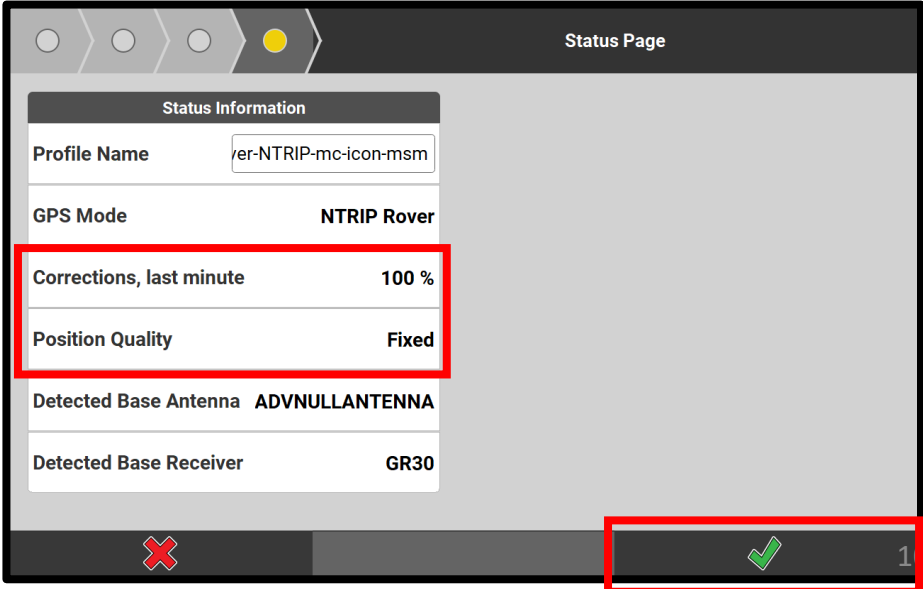
GGA Output Auto

Advanced Settings

Correction Format Auto-detect ▶

Base Receiver Auto-detect ▶

Base Antenna Auto-detect ▶



Status Page

Status Information

Profile Name er-NTRIP-mc-icon-msm

GPS Mode NTRIP Rover

Corrections, last minute 100 %

Position Quality Fixed

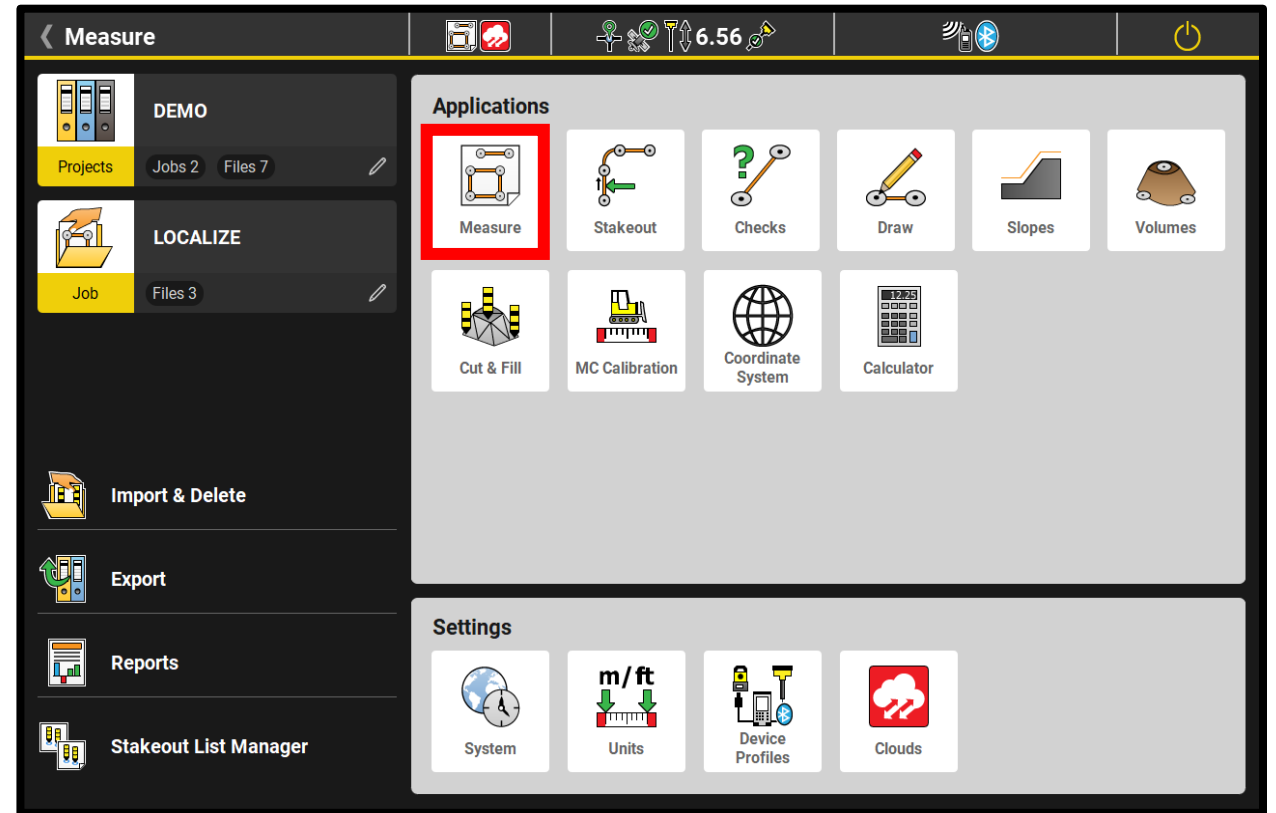
Detected Base Antenna ADVNULLANTENNA

Detected Base Receiver GR30



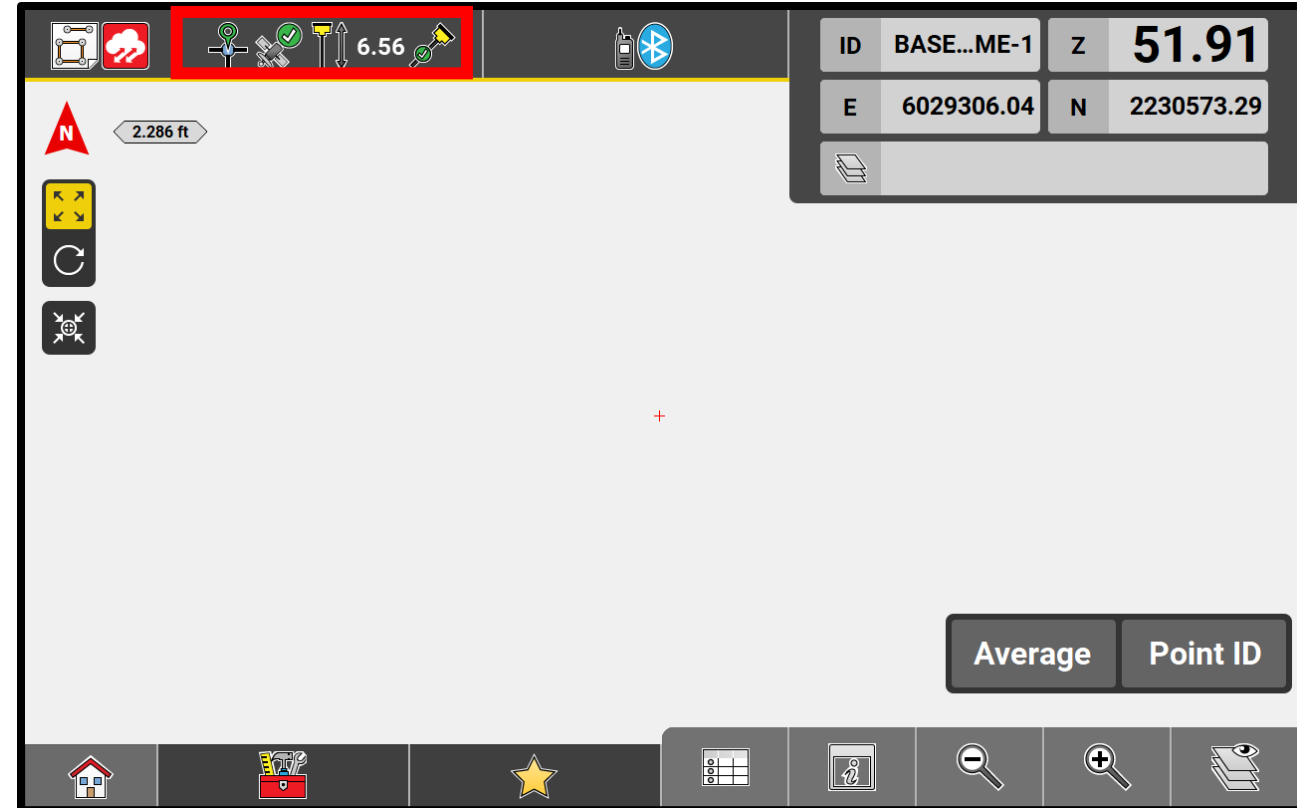
Setting up a Rover

- To check if rover is connected, select **Measure** from the Home screen



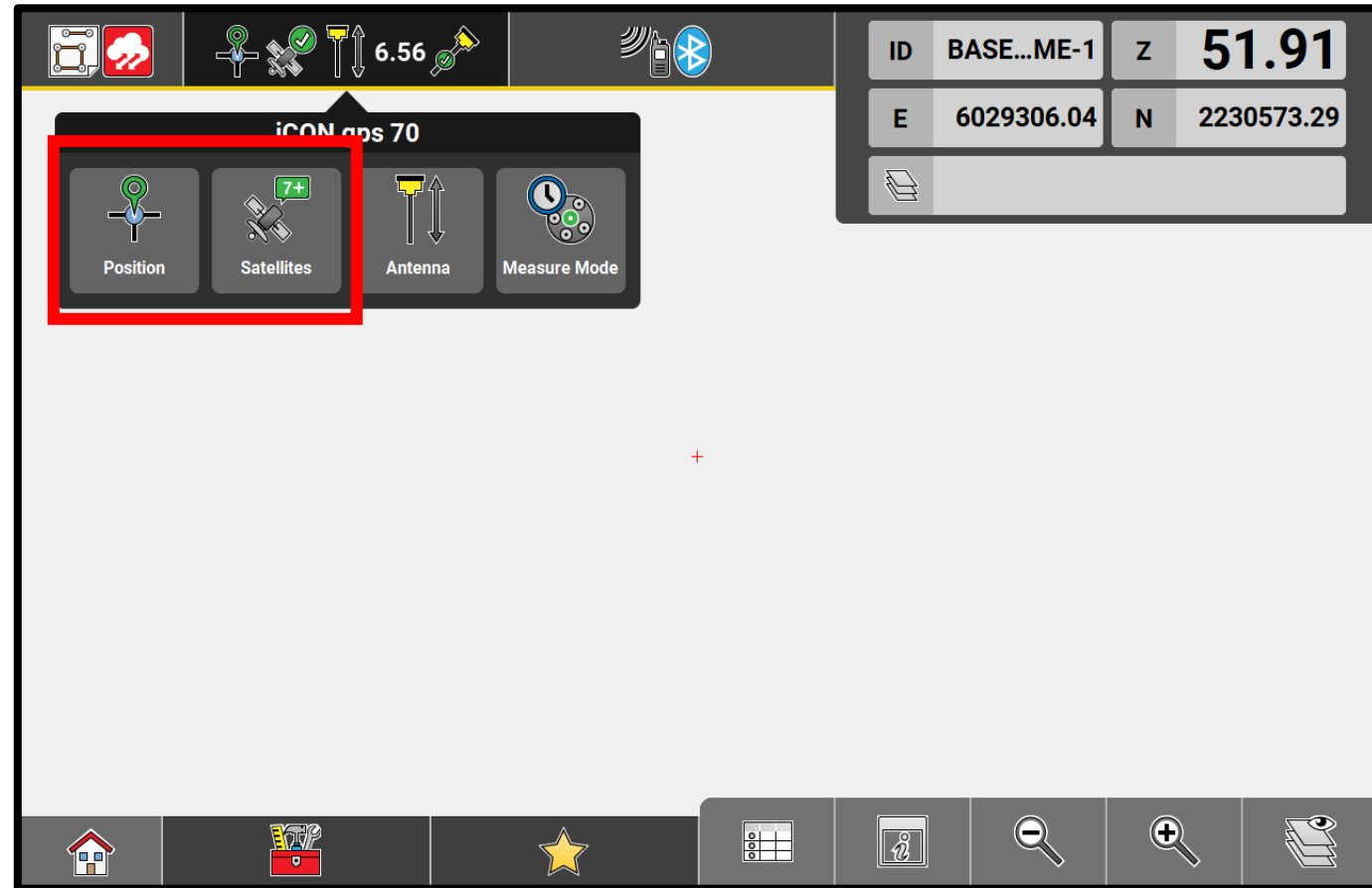
Setting up a Rover

- Press  to check positioning and satellite status



Setting up a Rover

- Select **Position** to check accuracy
- Satellites to see how many are received



Setting up a Rover

- Position and elevation quality should be under 0.10ft

Map		Position	
Northing	2230573.27	Tilt Compensation	
Easting	6029306.05	Tilt	On
Elevation	51.91	Status	Initialized
Quality		Tilt Heading	212.657
Position Quality	0.05	Tilt Angle	11.825
Elevation Quality	0.03	Tilt Azimuth	54.902
GDOP	1.8		
Baseline length	54.01		



Setting up a Rover

- **Satellite Details**: GPS and GLONASS should be on
- If the license allows Galileo or Beidou, they will be tracked and used

Map

Satellite Details

Satellites	used/tracking
GPS	9/9
GLONASS	5/5
Galileo	0/8
Beidou	0/6
Total	14/28


Cut-off angle

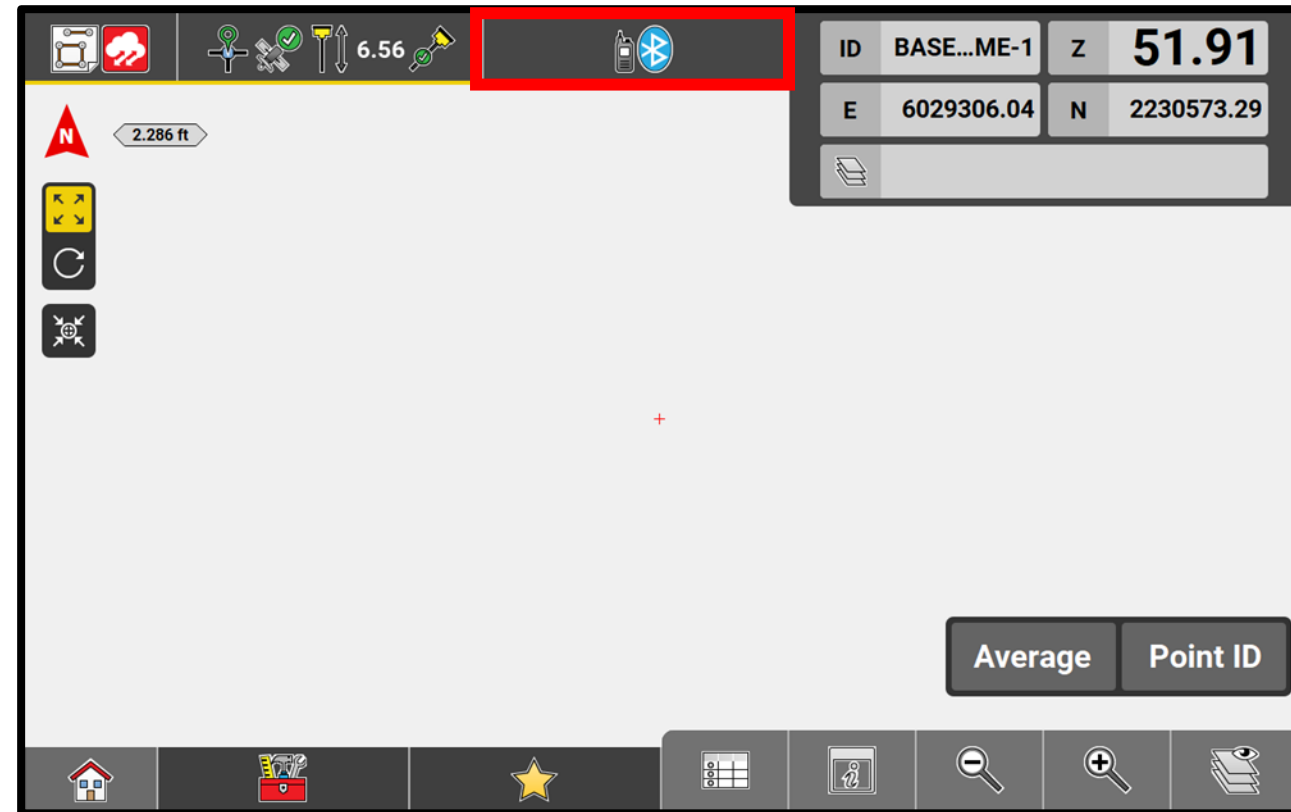
Cut-off angle

10



Setting up a Rover

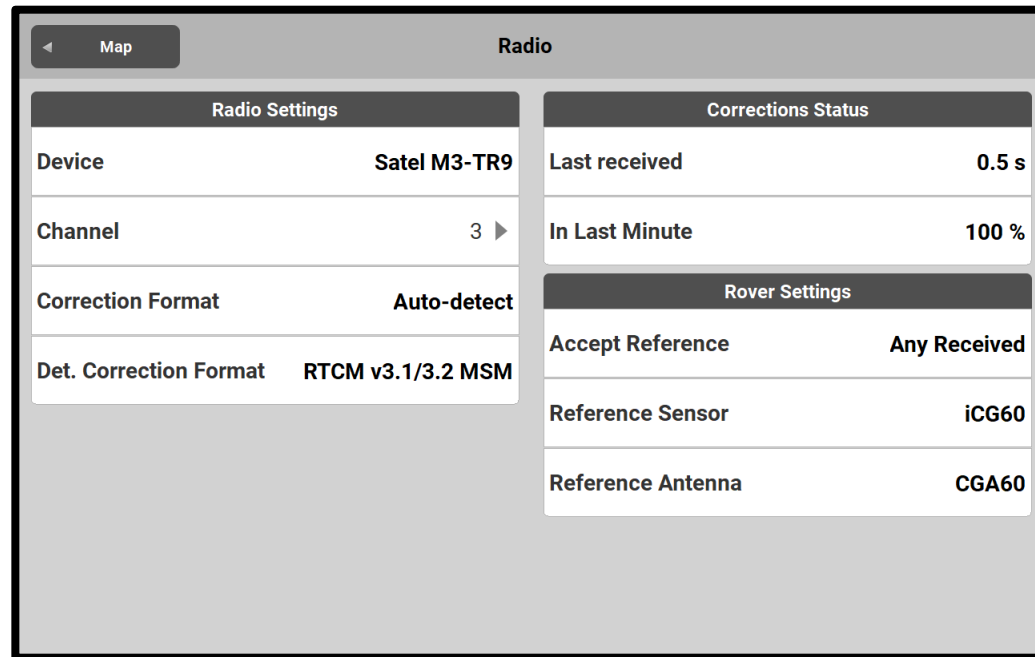
- To check radio connection, press 
- If using Smartnet, the icon will appear as



Setting up a Rover

Radio Corrections

- Channel should match base
- Corrections status: last received < 1s and 100% in last minute if connected correctly



The screenshot shows the 'Radio' settings screen. It has a 'Map' button at the top left. The screen is divided into two main sections: 'Radio Settings' on the left and 'Corrections Status' on the right. Below 'Corrections Status' is a 'Rover Settings' section.

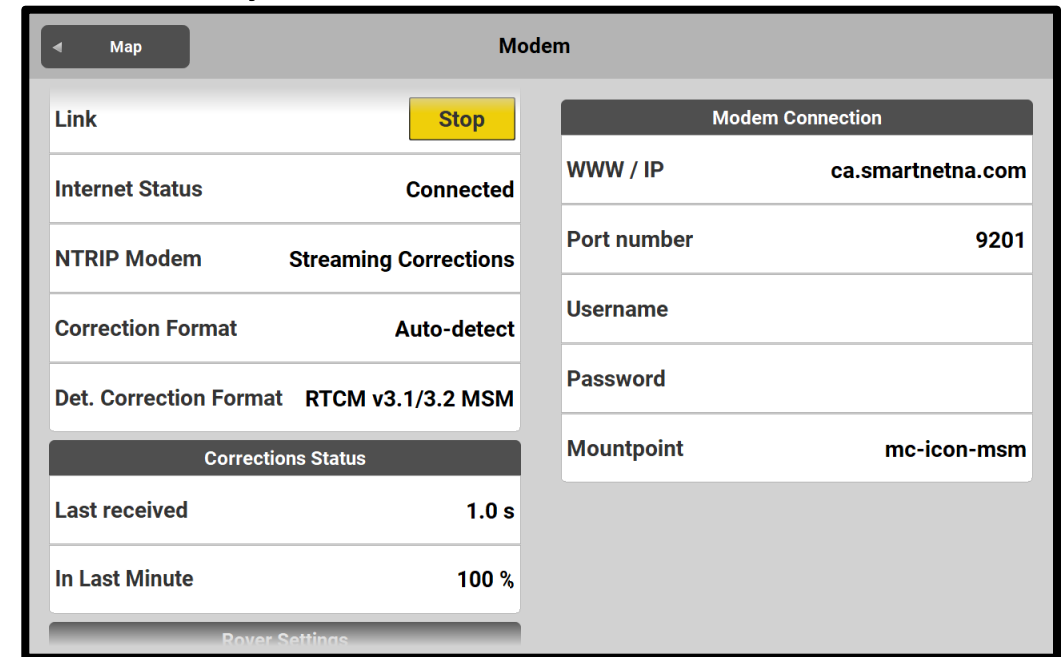
Radio Settings	
Device	Satel M3-TR9
Channel	3 ▶
Correction Format	Auto-detect
Det. Correction Format	RTCM v3.1/3.2 MSM

Corrections Status	
Last received	0.5 s
In Last Minute	100 %

Rover Settings	
Accept Reference	Any Received
Reference Sensor	iCG60
Reference Antenna	CGA60

Network Corrections

- Internet Status should be connected
- Corrections status: last received < 1s and 100% in last minute and NTRIP Modem is streaming if connected correctly



The screenshot shows the 'Modem' settings screen. It has a 'Map' button at the top left. The screen is divided into two main sections: 'Link' on the left and 'Modem Connection' on the right. Below 'Link' is a 'Corrections Status' section. At the bottom is a 'Rover Settings' section.

Link	
Link	Stop
Internet Status	Connected
NTRIP Modem	Streaming Corrections
Correction Format	Auto-detect
Det. Correction Format	RTCM v3.1/3.2 MSM

Modem Connection	
WWW / IP	ca.smartnetna.com
Port number	9201
Username	
Password	
Mountpoint	mc-icon-msm

Corrections Status	
Last received	1.0 s
In Last Minute	100 %

Rover Settings



Setting up a Rover

Rover Panel Icons

1. Fixed position when green
2. Tilt initialized when green
3. Setup as base when lit, press mode button (6) to change to rover mode
4. Receiving signal from base (must be flashing)
5. Power button – press for 3s to turn on / off
6. Mode button to switch from base to rover
7. Bluetooth is connected when lit
8. Internal battery status

