Connecting to the CRTN

NTRIP Connection / IPs & Ports / RTCM Versions

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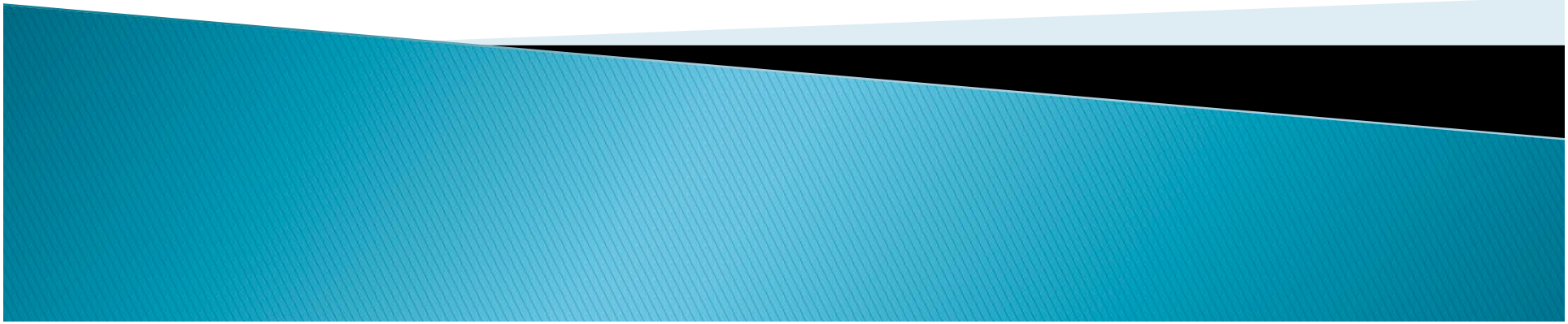
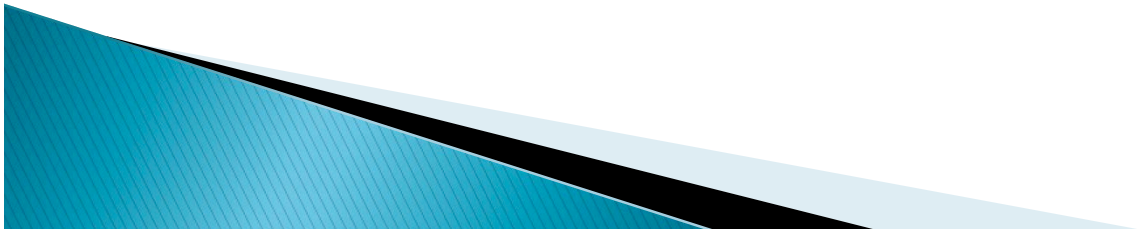


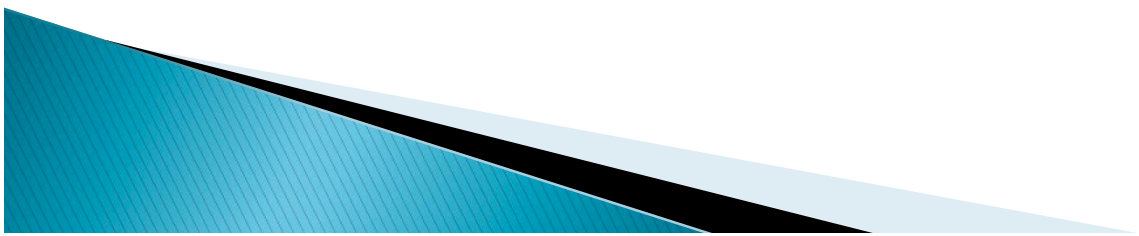
What we will cover.

- Why
- What
- The Connection
- Getting Started (The Internet)
- Configuration Settings
- Information & Status of Network
- Samples / Questions



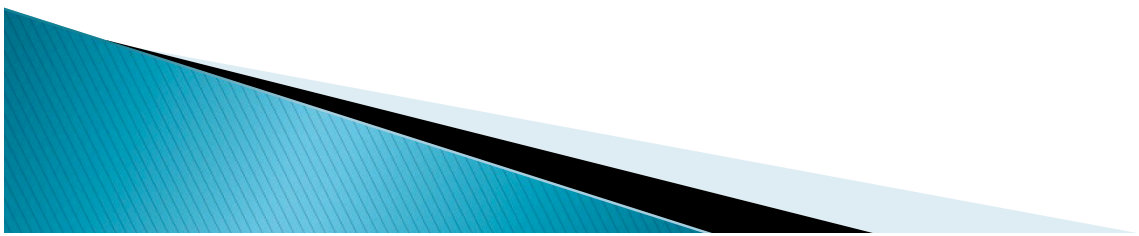
Why?

- Makes you money (Pays for self)
- Eliminate need for physical base/radio.
- No setup. Radio Conflicts.
- No risk of theft or cost of guard.
- Known coordinate point.



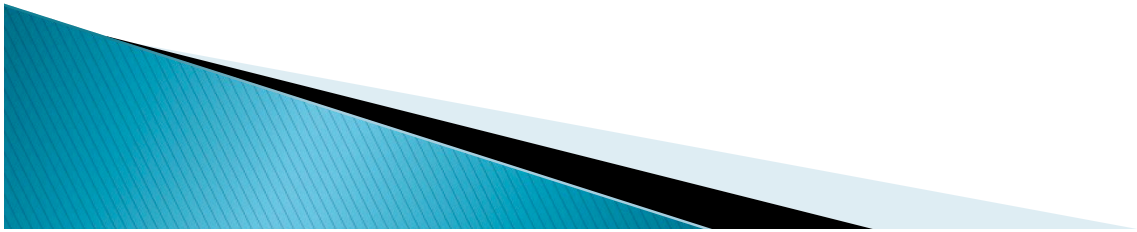
What are we doing?

- CRTN –is– RTK (Single Base Solution)
- Basic RTK Principles
- Positioning Performance 95% (Trimble R8)
  - 15km 1 Reading Horiz: 0.12’ +/–
  - 15km 2 Readings Horiz: 0.09’ +/–
  - 15km 3 Readings Horiz: 0.07’ +/–
  - 15km 4 Readings Horiz: 0.06’ +/–



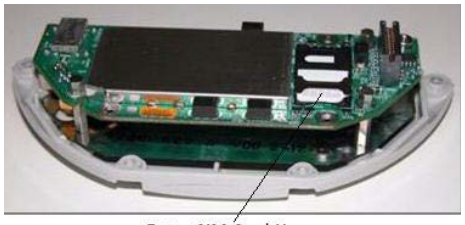
The Connection

- NTRIP: (Networked Transport of RTCM via Internet Protocol)
- Infrastructure: Server / Caster / Client
- Data: RTCM stream (Radio Technical Commission for Maritime Services)
- Coordinates



Getting Started (The Internet)

- Data Collector vs. Receiver
- Getting hooked up:
  - Serial Modem
  - Bluetooth DUN
  - Tethering by Bluetooth/WiFi (Cell Phone)
  - WiFi Device
  - Built in Cell (usually SIM)



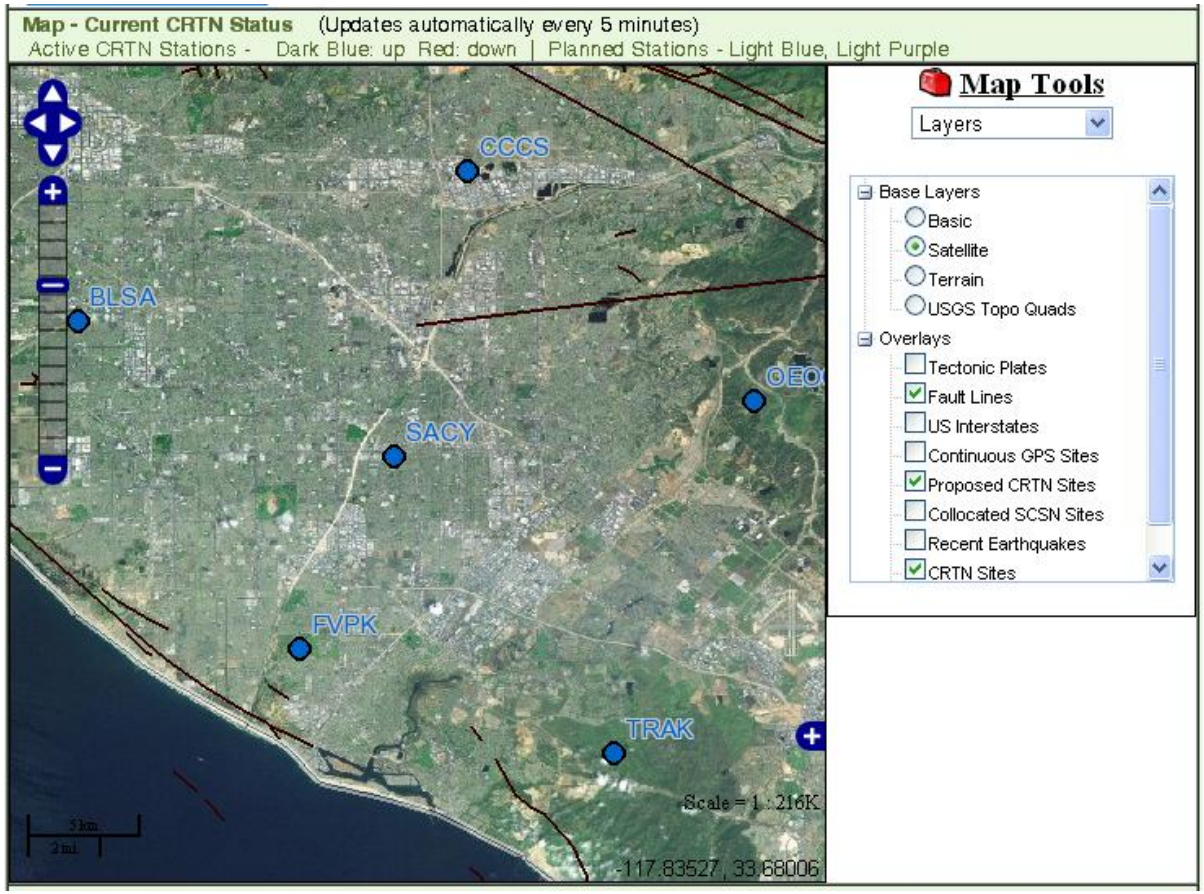
Configuration Settings

- NTRIP Access:
  - Northern California
    - IP: 132.239.154.101
    - Port: 2103
  - Southern California
    - IP: 132.239.152.74
    - Port: 2103
- RTCM v3.0
- Broadcast Coordinates CSRC 2011.00 Epoch – NAD83 (NSRS2007)
- Account Setup: ybock@ucsd.edu

- Website: csrc.ucsd.edu
- Forums: CRTN

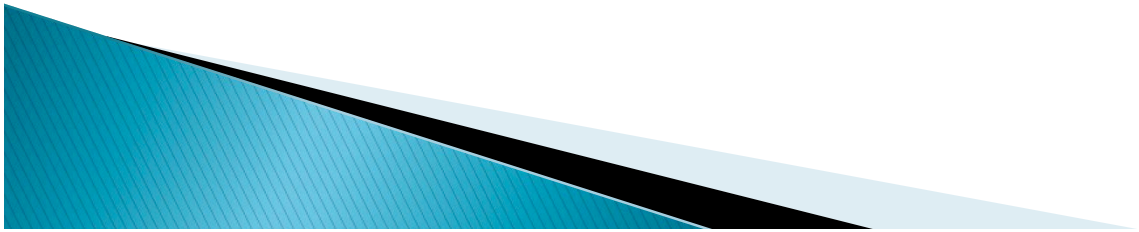
Status

- CRTN Current Status Map:



Samples / Questions

- Connection Configuration Database
- Samples
  - GeoXH
  - TSC2 (Access) R8
- Questions?

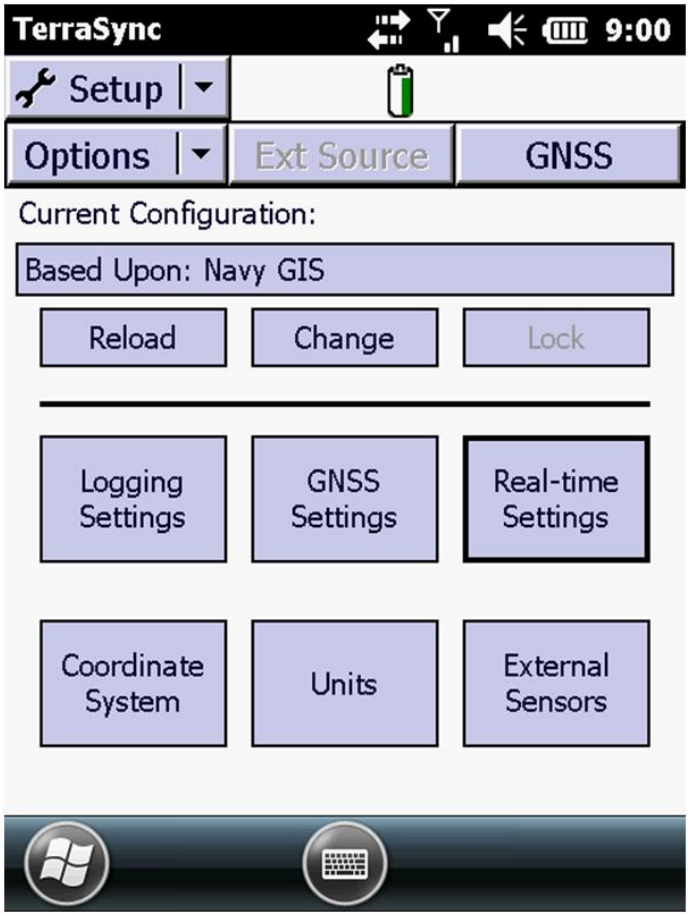


Mapping Unit (GeoXH 6000)

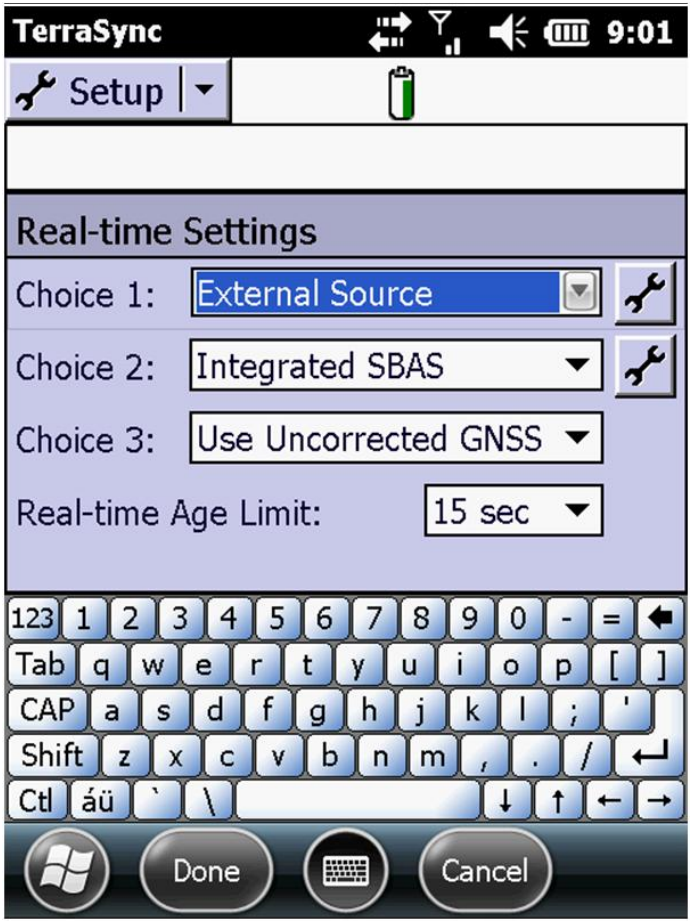
- 10cm and 1cm versions
- GIS Mapping
- SIM Chip Cell Phone Internal

GEOXH 6000

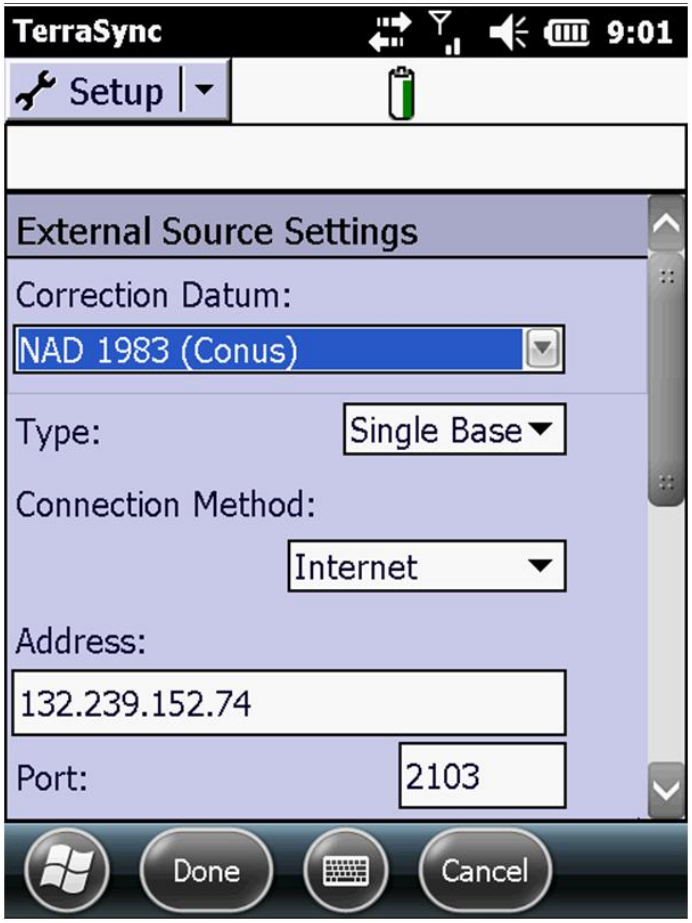

Wireless Manager
8:58
All
Wi-Fi
Off
Bluetooth
Off
Phone
On
Menu

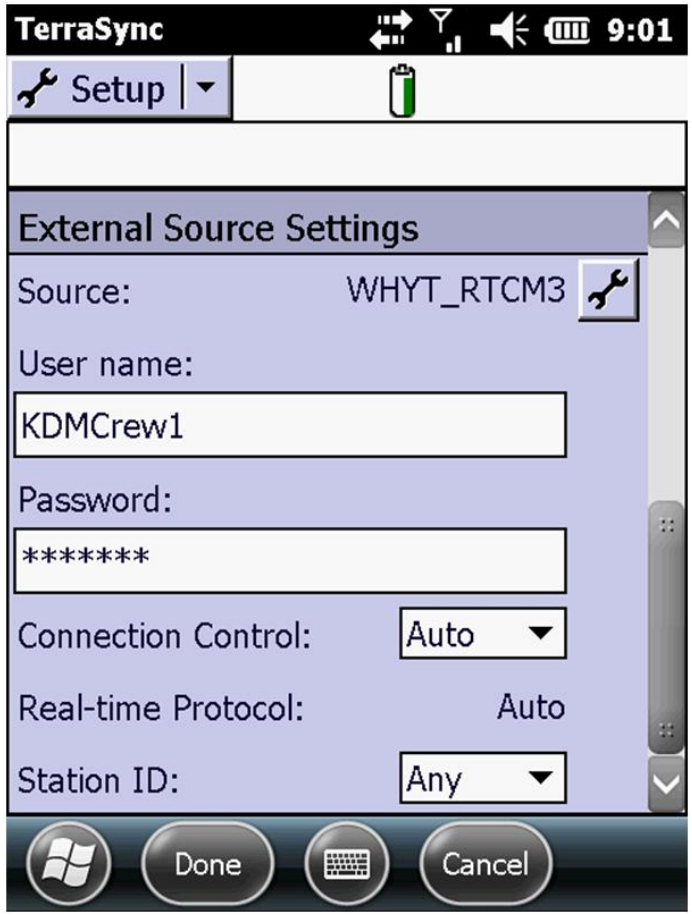

TerraSync
9:00
Setup
Options
Ext Source
GNSS
Current Configuration:
Based Upon: Navy GIS
Reload
Change
Lock
Logging Settings
GNSS Settings
Real-time Settings
Coordinate System
Units
External Sensors

GEOXH 6000


TerraSync
9:01
Setup
Real-time Settings
Choice 1:
External Source
Choice 2:
Integrated SBAS
Choice 3:
Use Uncorrected GNSS
Real-time Age Limit:
15 sec
Done
Cancel

GEOXH 6000

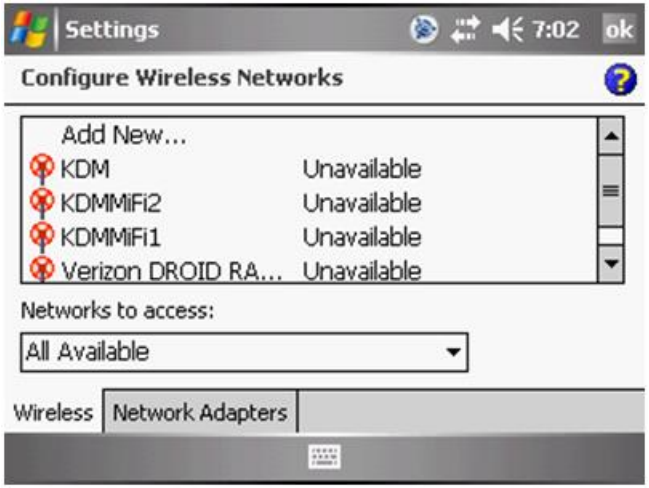

TerraSync
9:01
Setup
External Source Settings
Correction Datum:
NAD 1983 (Conus)
Type:
Single Base
Connection Method:
Internet
Address:
132.239.152.74
Port:
2103
Done
Cancel


TerraSync
9:01
Setup
External Source Settings
Source:
WHYT_RTCM3
User name:
KDMCrew1
Password:
****
Connection Control:
Auto
Real-time Protocol:
Auto
Station ID:
Any
Done
Cancel

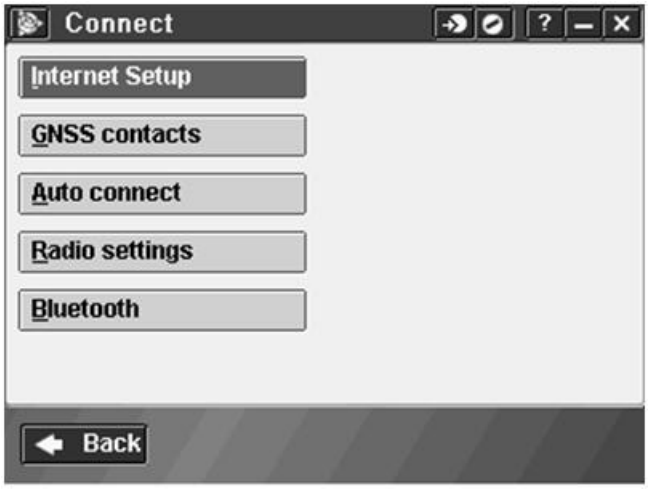
Survey Unit (TSC2 Access/R8)

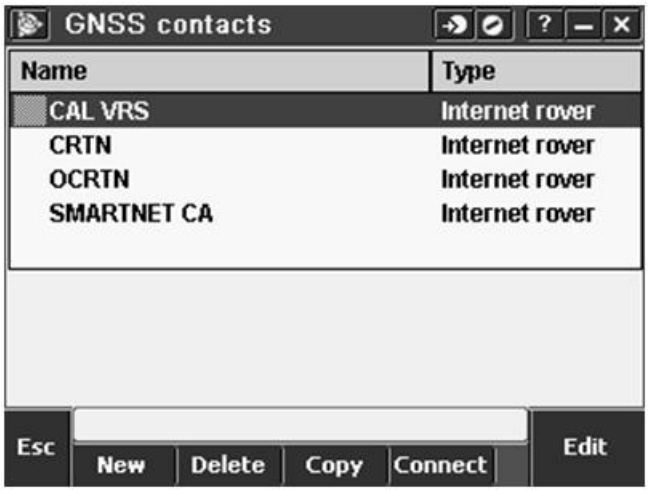
- Survey Grade Receiver
- WiFi Data Collector
- WiFi Cell Device

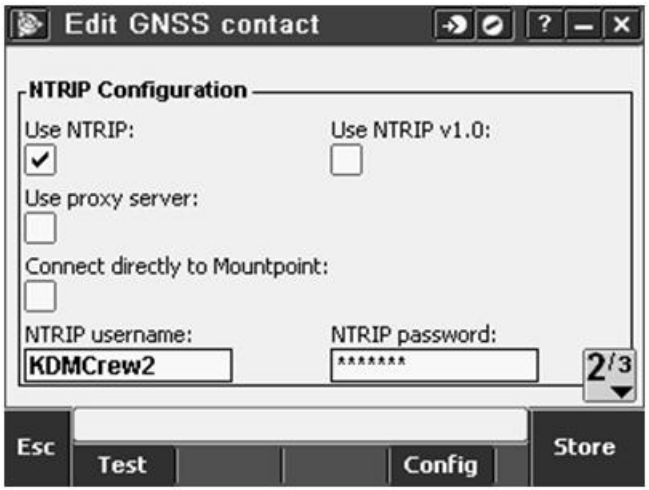
TSC2 Access WiFi



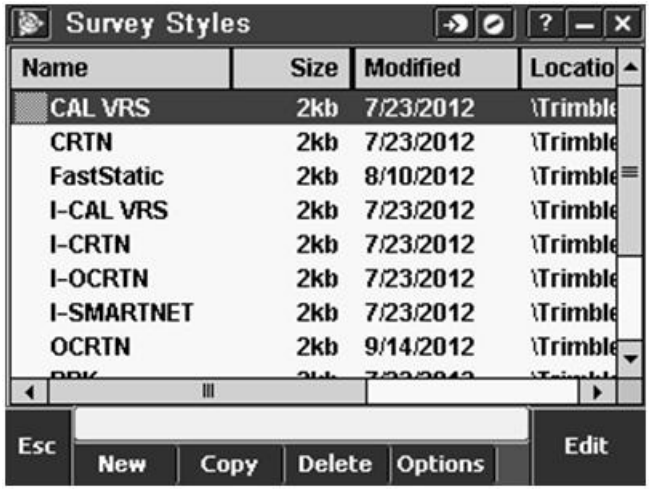
TSC2 Access WiFi

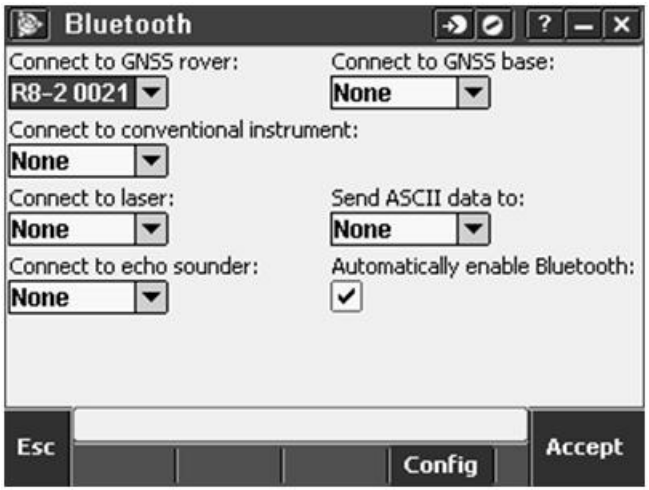




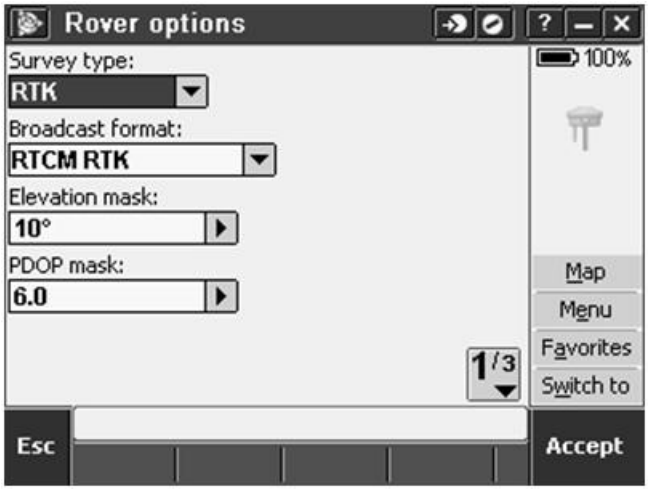


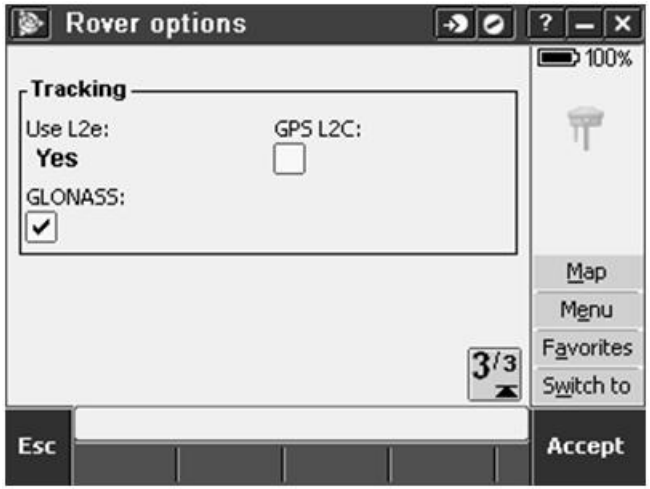
TSC2 Access WiFi

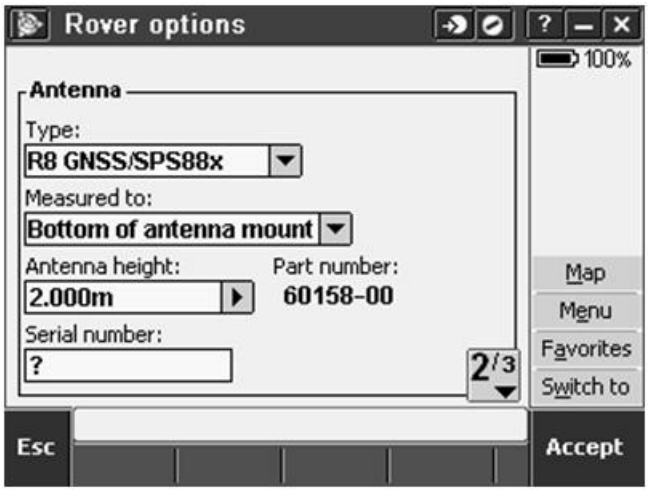


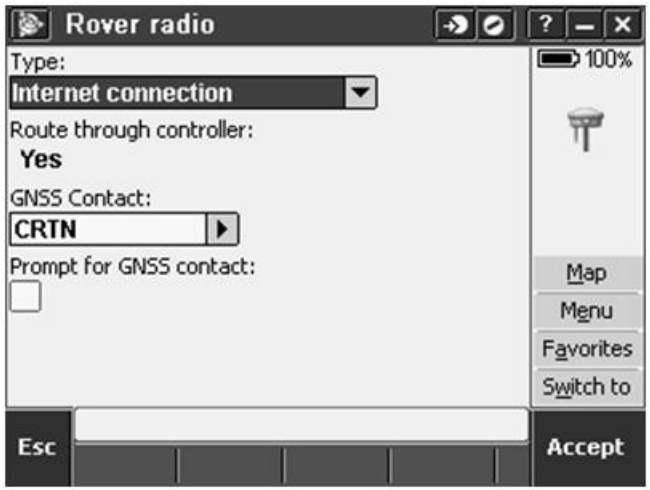


TSC2 Access WiFi

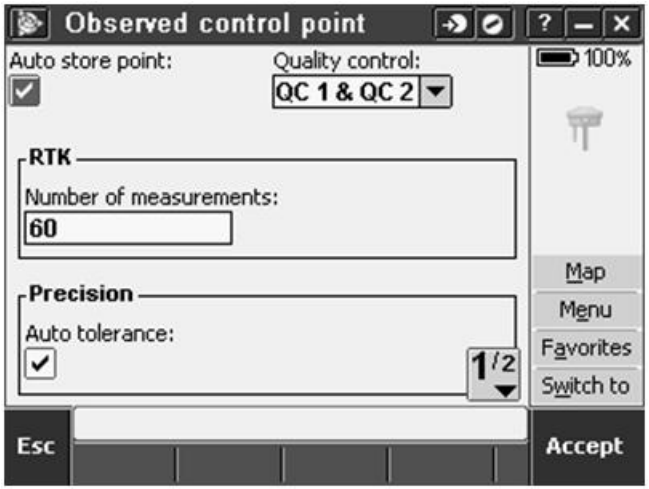


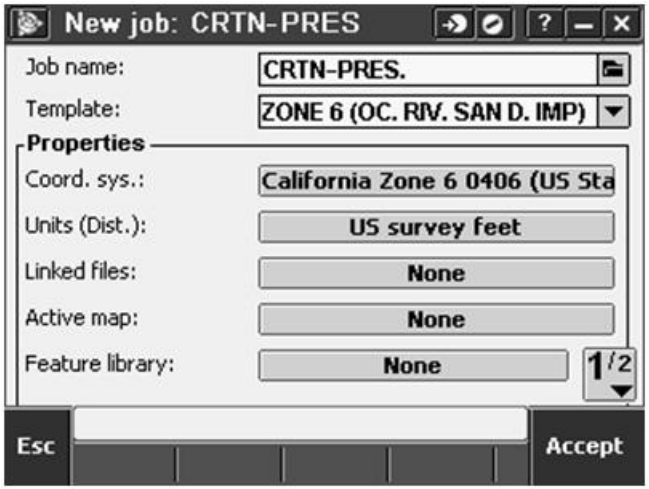


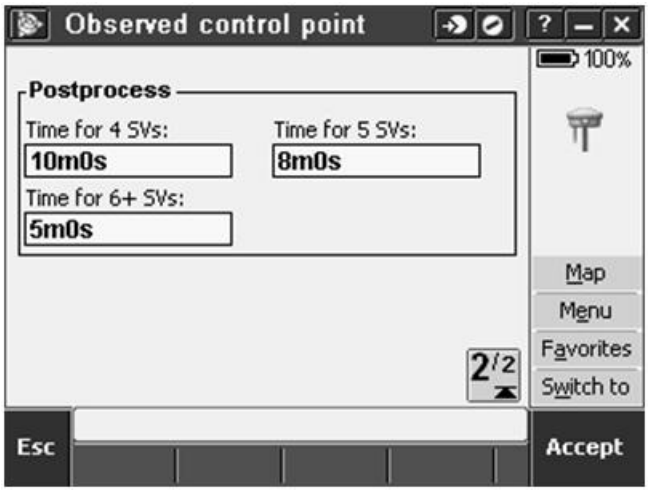


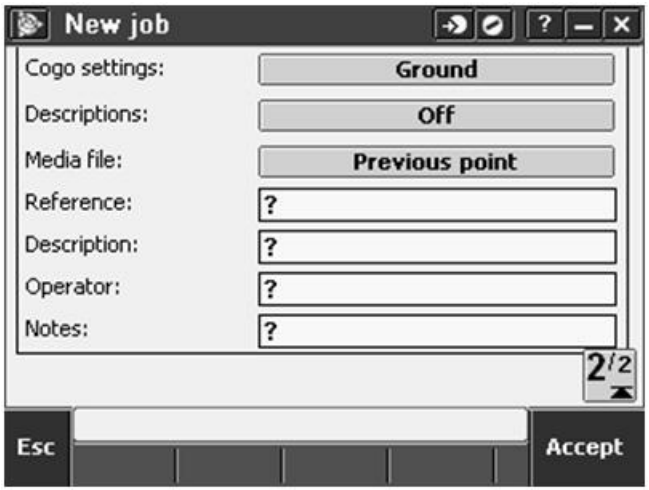


TSC2 Access WiFi

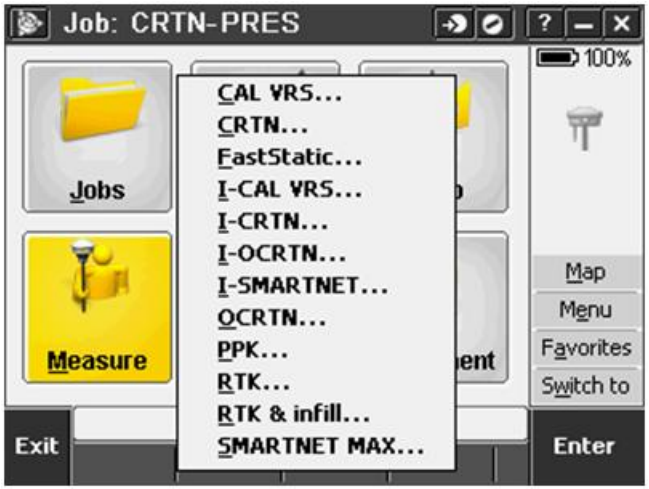


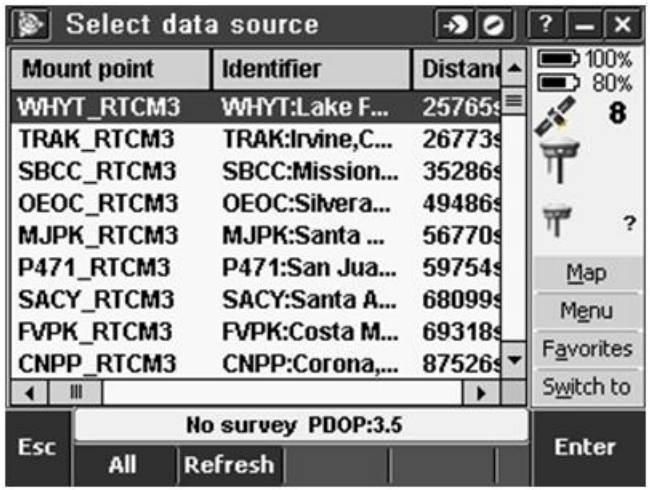






TSC2 Access WiFi





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