### Trimble 4700/5700/R7 - RTK Cheatsheet

619 Beth Bartel January 29, 2010 Application Notes, Application Notes 3265

### Trimble 4700/5700/R7 - RTK Cheatsheet

The following are suggested settings for most UNAVCO-supported RTK surveys. For a detailed how-to on RTK surveys, see **Trimble 4700/5700/R7 - How to execute a real-time kinematic (RTK) survey from start to finish** (/questions/617/).

## Things to know before and during the survey:

Base GPS antenna type:	(usually Zephyr Geode	etic)
over GPS antenna type: (usually Zephyr or Zephyr Geodetic)		
Base GPS antenna height measurement r "Bottom of antenna mount")	method:	_ (usually "Bottom (or Top) of notch" or
Rover GPS antenna height measurement	method:	(usally "Bottom of antenna mount")
Base station coordinates:height (meters)	_ N/S latitude,	E/W longitude,
In the job:		
Coordinate system: Yes choose one, e.g. the appropriate UTM zone: [link]. Datum: WGS 1984, Use geoid model: No, Use datum grid: No, Project height [enter approximate average survey elevation], Coordinates: Grid.		

# In the survey style:

Select "RTK" if you don't need raw data or "RTK & infill" if you do.

## Rover options

- Logging device (RTK & infill only): Controller
- Auto file names ("RTK & infill" only): Yes
- Logging interval ("RTK & infill" only): depends on survey goals; usually 1-15 seconds
- Broadcast format: CMR+ [MUST be the same as the Broadcast format in Base options]

- WAAS: Off
- INS position: RTK only (TSC1)
- Use station index: Any
- Prompt for station index: Yes
- Satellite differential: Off (TSCe)
- Elevation mask: 13 00'00"
- PDOP mask: 6 (but can be more, e.g. 20)
- Antenna height, Type, and Meas. to can be modified during the survey

#### Rover radio

- Type: Trimble internal, Trimble 450/900 if using the UNAVCO EAR RTK set
- Route through controller: Leave blank (TSCe)
- Receiver port: Port 3

### Base options

- Logging device (RTK & infill only): Receiver
- Auto file names (RTK & infill only): Yes
- Logging interval (RTK & infill only): Must be at least as frequent as rover, e.g. 1-15 seconds
- Broadcast format: CMR+ [MUST be the same as the Broadcast format in Rover options]
- Output additional code RTCM: No/blank
- Station index: 29
- Elevation mask: 13 00'00"
- Antenna height, Type, and Meas. to can be modified at survey start

#### Base radio

- Type: TRIMMARK 3 if using the UNAVCO EAR RTK set. Pacific Crest if using the UNAVCO OPP equipment
- Controller port: COM1
- Receiver port: Port 3

## Topo point

•

Auto point step size: 1

•

Quality control: QC1&QC2

•

Auto store point: Yes

•

Occupation time: 0m 5s

•

Number of measurements: 3

•

Horizontal precision: 0.015m

• Vertical precision: 0.020m

# On the base radio, if a Trimble TRIMTALK III

- Channel: 3, 461.1000Mhz
- Mode: Base w/No Rpt (unless you are using a repeater)

• Transmit Power: depends on survey

• Channel Sharing: Off

• Wireless Mode: TM3 19200 bps

• Port 1 Cfg: 38400-8-None-1

• Device Status: Call Sign OFF

Online URL: <a href="https://kb.unavco.org/article/trimble-4700-5700-r7-rtk-cheatsheet-619.html">https://kb.unavco.org/article/trimble-4700-5700-r7-rtk-cheatsheet-619.html</a>