**RTK Surveys**

RTK surveys provide centimeter level precision coordinates without post-processing. Surveys must be conducted within a 5 km range of a RTK correction broadcasting base station. If you think you may travel more than 5 km away from such a base or lose line of sight communication with it, choose RTK and infill. When using RTK and infill the base broadcasts 1 sec corrections, and logs data at 5 sec intervals (see manuals for details).

1. Insert memory card in slot in the TSC1 controller.
2. Connect the controller to the receiver (Port 1) and set it up on the range-pole, or in the backpack.
3. Turn on the controller, which also powers up the receiver.
4. Select "Files/Job Management" on the controller display main menu.
5. Create "New" or select an existing job. To create a new job, enter a job name and set “File Location” to "PC card". Select "No projection/no datum" as the coordinate system, and set reference elevation to the local average.
6. Choose survey ➔ TRIMBLE RTK.
7. Choose edit (F5) ➔ Rover Options.
8. Set up should look like this (modify if needed)
   
   Survey type: RTK  
   Broadcast format: CMR+  
   WAAS: off  
   INS positions: RTK only  
   Use station index: any  
   Prompt for station index: no  
   Elevation Mask: 13 degrees  
   PDOP Mask: 10  
   Antenna height: ?  
   Type: Zephyr

9. Choose Topo Point and configure
   a. You choose step size (usually 1)
   b. Quality control: QC1&QC2
   c. Auto store: yes
   d. Occupation time: 5s
   e. Measurements: 5
   f. Choose precisions for auto store (e.g. 0.015 m horizontal 0.02 m vertical).
10. Choose precisions continuous points if you like.
    a. Continuous data is logged as long as precisions are met.
12. Choose Start Survey ➔ Choose Measure Points.
13. When you encounter a point of interest-
    a. Enter a point name or number and antenna height- then push Measure (F1) to enter static mode.

**14. WAIT- DO NOT MOVE!!** It is critical to that the antenna does not move while in static mode - from the time you press "Measure" until you receive the "Point stored" confirmation.

**15. Continue to measure points as appropriate throughout survey.**
16. Do not end the survey until the survey has initialized, indicated by "RTK=Fixed" on the survey status screen.
17. Press "Esc", then "End Survey" to end the survey. If an “Abandon Changes” warning is encountered, choose NO.