

# Precision Geomatics

## SETTING OUT FUNCTION ON SET 10 AND 30 SERIES

Set up and level the instrument over ground mark in the normal way, switch on, the circles are initialised automatically.

Or set up and roughly centre, switch on, then centre and level using the electronic bubble.

In Measure Mode, FUNC, TILT, bring bubble to centre of circle or use the X,Y tilt values to zero the bubble.

1. If the setting out co-ordinates are to be entered by hand into the memory or input from a PC it is necessary to set up a job before proceeding.

Main Screen, MEM

Job, Job Selection, Enter, List, scroll to next available job.

Enter, leave S.F.= 1.0000. S.F. to edit if required. Enter.

Cursor jumps to Coord search JOB.

ESC, then scroll to JOB name edit, Enter, and give name,

Enter. ESC. Scroll down to Known data, Enter.

Key in coord, Enter, enter coordinates by hand, or Comms input, connect to PC to upload coordinates through Mapsuite+ or ProLINK. ESC to Memory menu.

Scroll up to JOB, Enter, JOB selection, Enter.

Scroll down to Coord search JOB, List, select job for recall of coordinates. Enter.

ESC to Main Screen. MEAS.

2. Select Setting Out function, FUNC, S-O.

3. Stn. Orientation -- Enter

Stn Coordinates – Enter, enter the co-ordinates of the instrument station.

Edit to enter by hand, selecting the values from the bottom of the screen, FUNC key switches values.

Or Read the required point number from the Memory.

Enter Instrument and Target height if required for 3-D coordinates setting out. OK.

4. Scroll to Set H angle, Enter, and then Back sight. Enter co-ordinates of Back Sight point / RO point, by EDIT and enter by hand or READ from the job memory. OK, this then displays Stn co-ordinates. OK. Set H angle -- Take BS – YES. This automatically calculates back bearing. ESC.
5. Scroll to EDM to set measuring mode, i.e. Rapid “s”, Prism and PC - 30, scroll down to check ppm = 0. ESC.
6. Scroll up to S-O data. Either enter the setting out data; SO dist and SO hang using Edit. [scroll using  $\Delta$ S-O (F2) to select setting out mode ie Hdist and H ang]. Or, if using co-ordinates, READ. Scroll or Search for required point. Enter. OK.
7. Setting out can be undertaken in different ways, dHA, with H, S, V, Ht distances, or by E,N,Z co-ordinates, this allows entry of coords by hand. Select by scrolling using  $\Delta$ S-O (F2) key. Normal mode is S-O, Hdist: & H ang:
8. Then press  $\Leftarrow \Rightarrow$  (F3) key. This displays the direction to turn the total station to the correct line (countdown to zero), then when prism is on line at approximate position press the OBS (F1) key. The distance to move back or forward will be displayed. REC will allow saving of coordinates set out, ensure the Job is not the setting out data job.
9. When point positioned, ESC and select the next point.
10. To enter points by hand, F2, scroll to S-O Coord, EDIT, enter coordinates, scroll back to S-O H. OK