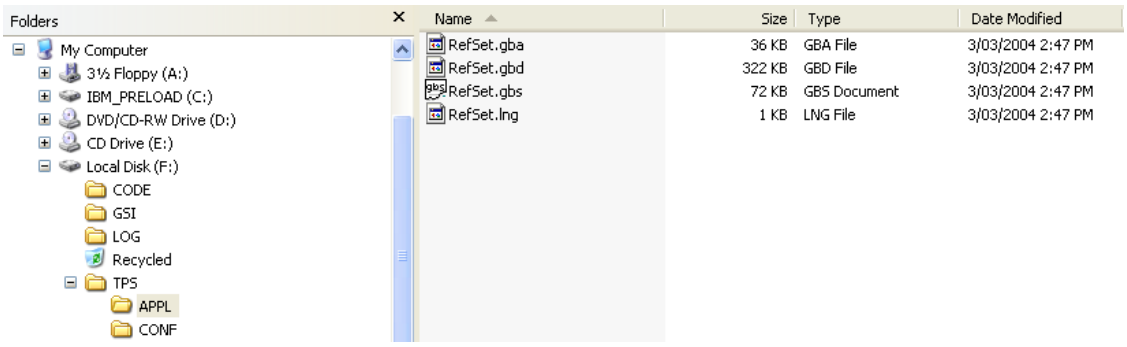
Refset – Refline & Setout Program

To Upload Program to the Instrument

1) Create a directory on the card called \TPS\APPL



2) Copy the program files (Refset.***) to this directory

3) On the instrument Main Menu press 5 (Configuration)

4) Then press 4 (Load…)

5) Then press 3 (Load Application)

6) Make sure RefSet is selected in the New appl. Menu

7) Press F1 (Load)

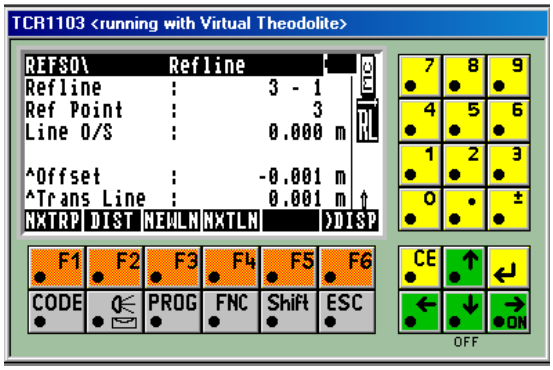
8) To run program Press PROG and arrow down to Refline & Setout

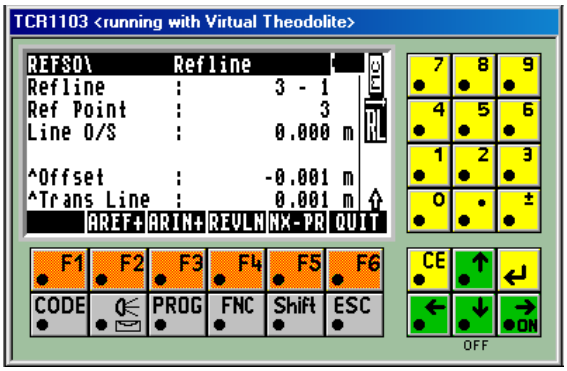
Refline

Keys:

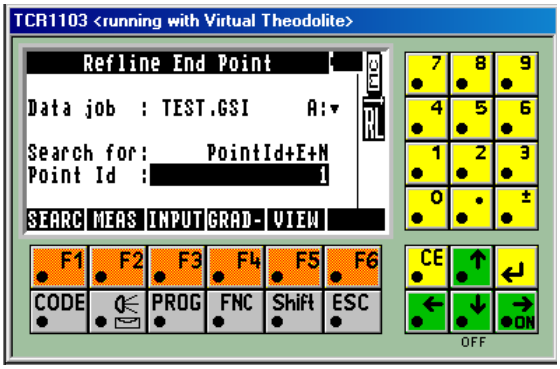
>DISP	Change display screen
NEWLN	Enter new refline points
NXTLN/PRVLN	Go to next/previous refline (eg: First refline is from 1 to 2 – next refline will be 3-4)
NXTRP/PRVRP	Go to next/previous reference point – in ring setout screen
CODE	Display refline info

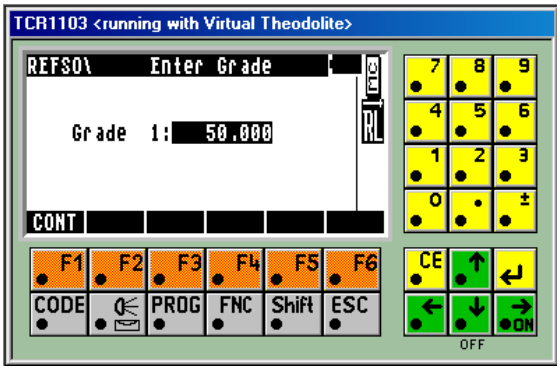
Shift + NX-PR	Toggles NXTLN/PRVLN and NXTRP/PRVRP keys
Shift + REVLN	Reverses refline
Shift + AREF+/-	Turns on/off auto refline setout
Shift + ARIN+/-	Turns on/off auto ring setout – in ring setout (first) display screen
Shift + AGRD+/-	Turns on/off auto grade line setout – in second display screen
Shift + AHOL+/-	Turns on/off auto hole setout – in third display screen



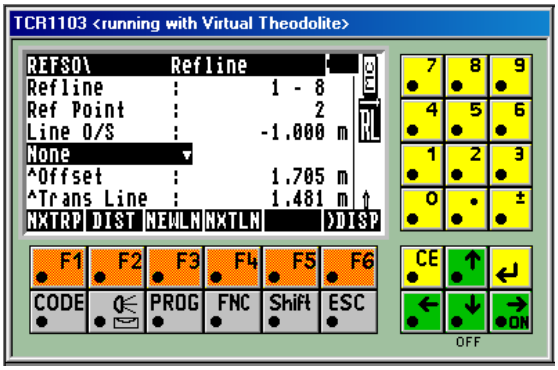


GRAD+/- In refline end point screen - Toggles input of refline grade
If turned on the next screen will ask for a grade to be entered
The refline will then go from the first point towards the second point at the entered grade

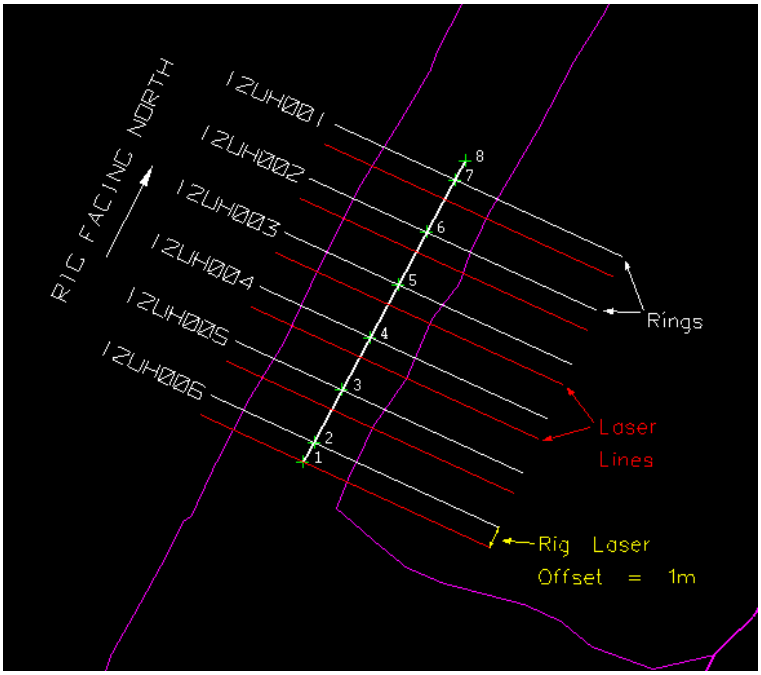




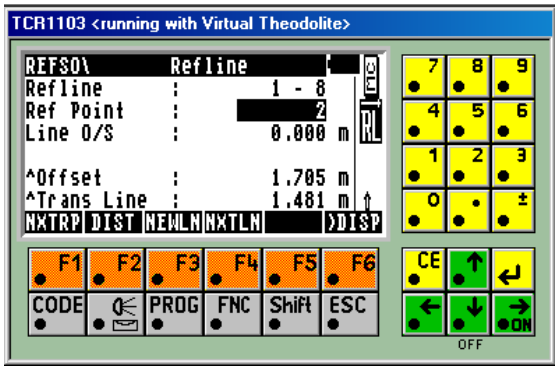
In ring setout display screen (first screen) – Arrow Left & then up/down to choose displayed info



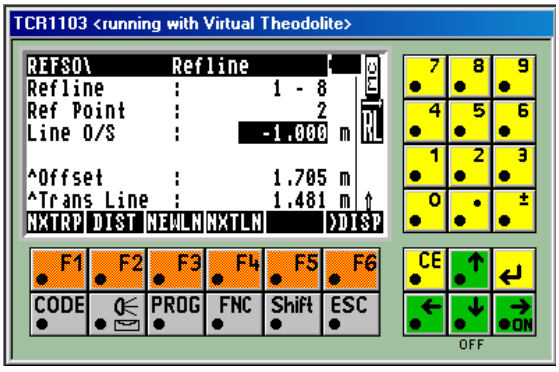
Ring Setout:



1. Refline start & end points will be 1 and 8
2. Arrow up/down and set Ref Point to point 2 to setout ring 12UH006



3. Arrow up/down and set Line O/S to –1.000 for the rig laser offset of the drill rig which in this case is back 1m (+ve for forward)



4. Point jigger at wall and get ^Trans Line to zero to setout the laser line of ring 12UH006
   (^Trans Line is the refline ^Line adjusted by the Line O/S)
5. Arrow up/down to enter a new Ref Point or press NXTRP/PRVRP to go to the next or previous reference point to setout the next ring

Auto Refline Setout:

1. Press Shift + AREF+ to turn auto refline setout on
2. Point jigger at backs at roughly the start of refline and start distance measuring
3. The jigger will setout the refline (ie: gets the ^Offset to zero) to the set accuracy (set in refline config) near the initial point
4. When the refline is setout the jigger will beep & either flash the guide light or the laser (set in refline config)
5. The jigger will then move along the refline (in the direction of the refline) at the set interval (set in refline config) setting out points until it reaches the end of the refline

Auto Ring Setout:

1. Setup refline as in Ring Setout example above
2. Press Shift + ARIN+ to turn auto ring setout on
3. Point jigger at wall roughly near the laser line location and start distance measuring
4. The jigger will setout the laser line (ie: gets ^Trans Line to zero) to the set accuracy (set in refline config)
5. When the laser line is setout the jigger will beep & either flash the guide light or the laser (set in refline config)
6. The jigger will then change the Ref Point depending on the status of the NXTRP/PRVRP key (ie: if key is set to PRVRP the jigger will go to the previous Ref Point)
7. The jigger will then continue to setout the laser lines for the rings

Auto Grade Line Setout:

1. In the second display screen
2. Press Shift + AGRD+ to turn auto grade line setout on
3. Point jigger at wall at the start of the grade line and start distance measuring
4. The jigger will measure the initial point
5. The jigger will then move in the direction of the refline at the set interval (set in refline config) and setout a point to the set accuracy (set in refline config) which is at the same ^Height as the initial point
6. When the grade line is setout the jigger will beep & either flash the guide light or the laser (set in refline config)
7. The jigger will then continue along the wall and setout the grade line at the set interval

Auto Hole Setout:

1. Used to setout drill holes where the hole start and end points are the refline
2. In the third display screen
3. Press Shift + AHOL+ to turn auto hole setout on
4. Point jigger at the backs or wall roughly near the hole location and start distance measuring
5. The jigger will then setout the hole (ie: will get the ^Offset and the ^Perp Height to zero) to the set accuracy (set in refline config)
6. When the hole is setout the jigger will beep & either flash the guide light or the laser (set in refline config)
7. The jigger will then change the refline start and end points depending on the status of the NXTLN/PRVLN key (ie: if key is set to PRVLN the jigger will go to the previous refline)
8. The jigger will then continue to setout the holes

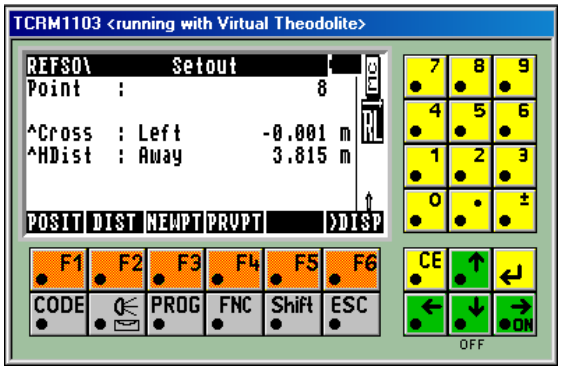
Refline Configuration:

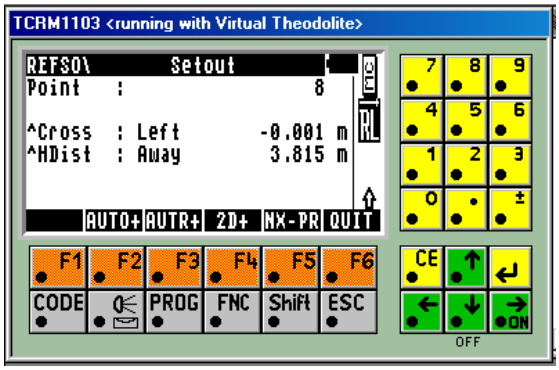
Auto-Accuracy	Sets the accuracy at which points are setout in auto modes (eg: if set to 0.025 the jigger will get the points to within 25mm before moving to the next point)
ARin-Height Acc	Sets the accuracy at which the ^Height is setout in the ARIN mode (eg: if set to 0.200 the jigger will setout the laser lines to within 200mm of the ^Height of the first laser line setout)
AGrd-Height Acc	Sets the accuracy at which the ^Height is setout in the AGRD mode
Auto-Wait	Sets the time the jigger will stop on an auto setout point (eg: if set to 7 the jigger will wait 7 seconds after it sets out a point before it moves on to the next point)
Auto-Interval	Sets the interval between points in the AREF and AGRD modes
Auto-Ind Point	Sets the method the jigger uses to show when a point has been successfully set out (ie: either flashes guide light or laser)
Toggle Laser	Whether to turn laser on at start of refline program
Start Measuring	Whether to start measurng at start of refline program
EDM Program	Which EDM program to start refline in

Setout

Keys:

>DISP	Change display screen
POSIT	Turns jigger to setout point position
NEWPT	Enter new point to setout
NXTPT/PRVPT	Setout next/previous point
Shift + NX-PR	Toggles NXTPT/PRVPT key
Shift + AUTO+/-	Turns auto setout on/off
Shift + AUTR+/-	Turns auto running setout on/off
Shift + 2D+/3D+/PP3D+	Changes setout mode: 2D = setout horizontal coords only 3D = setout both horizontal & vertical coords PP3D = setout horizontal coords and vertical coord of previous point





Auto Point Setout:

1. Setout a point
2. Press Shift + AUTO+ to turn auto setout on
3. Point jigger at the backs or floor and start distance measuring
4. The jigger will then setout the point (ie: get the ^Hdist to zero) to the set accuracy (set in refline config)

Auto Running Setout:

1. Press Shift + AUTR+ to turn auto running setout on
2. Point jigger at the backs or floor and start distance measuring
3. The jigger will then setout the point (ie: get the ^HDist to zero) to the set accuracy (set in setout config)
4. When the point is setout the jigger will beep & either flash the guide light or the laser (set in setout config)
5. The jigger will then change the setout point depending on the status of the NXTPT/PRVPT key (ie: if key is set to PRVPT the jigger will setout the previous point)
6. The jigger will then continue setting out the points

Setout Configuration:

Auto-Dist Acc	Sets the accuracy at which points are setout in auto mode (eg: if set to 0.025 the jigger will get the points to within 25mm)
Auto-Wait	Sets the time the jigger will stop on an auto setout point (eg: if set to 7 the jigger will wait 7 seconds after it sets out a point before it moves on to the next point)
Auto-Ind Point	Sets the method the jigger uses to show when a point has been successfully set out (ie: either flashes guide light or laser)
Toggle Laser	Whether to turn laser on at start of setout program
Start Measuring	Whether to start measurng at start of setout program
EDM Program	Which EDM program to start setout in
Default Posit	Which position mode to start setout program in