

How to Stake-Out Lines and Offsets in MAGNET Field

The **Stake Offsets** function allows the user to **determine** and set-out positions offset either **above, below, parallel or skewed** from a **line** fixed between **recorded points** or via a set **azimuth**.

If using a robotic instrument, carry out an **Instrument Setup** and ensure **Occupation** and **Backsight** points have been established and that all necessary **design points** are present within the job.

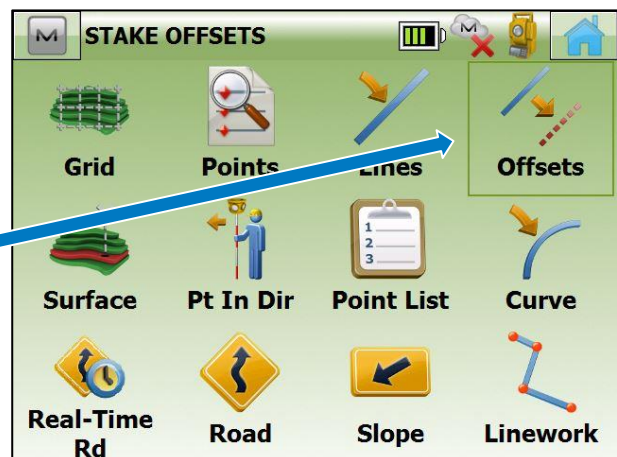


(1)

From the main MAGNET home screen, select the **Stake** menu button.

(2)

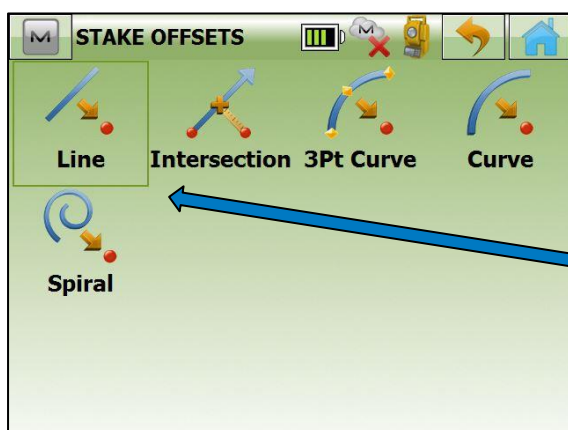
From here, select the **Offsets** button.

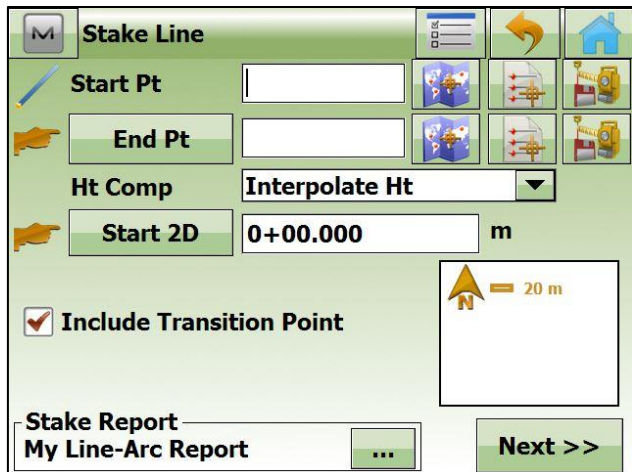


(3)

In this example we will stake-out offsets from a **Line**.

Press the **Line** option.





(4)

Enter the desired **Start** and **End Points** of the line via the **Map** or **List** icons.

Pressing the **End Point** button allows the user to define the line via **Azimuth** once the **Start Point** has been selected.

Alternatively lines can be determined on-the-go by pressing the **Record** buttons.

(5)

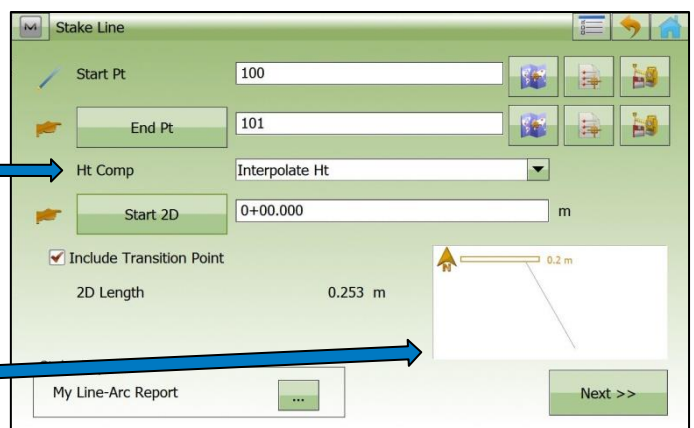
Interpolate Ht computes the height of points to be staked with respect to the grade between the selected Start and End points.

Ht of Start Pt computes each staked position with the same height as the selected Start Point.

In all cases be sure to enter the correct **Rod Height**.

Once a line has been determined, a plan will appear at the bottom right.

Press **Next**.



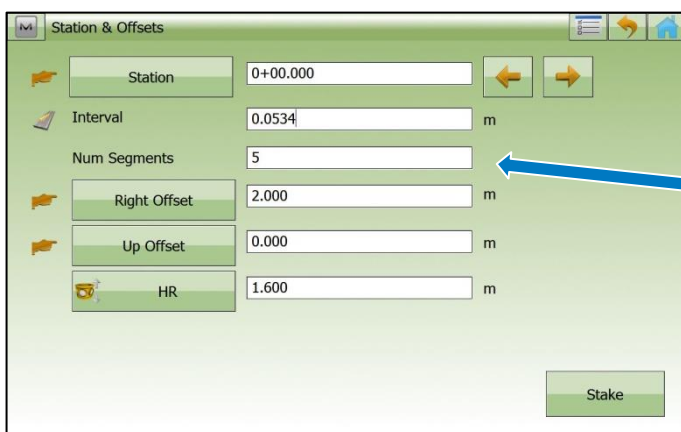
(6)

Here we define the offsets required.

Station/Chainage relative to the start point of the line is displayed in the top box.

If a particular **Number** of points are to be staked or are required at a particular **Interval**, enter the value here. This will automatically update if any changes are made to either box.

Any required offsets relative to the selected line can be entered here. Switch the direction by pressing

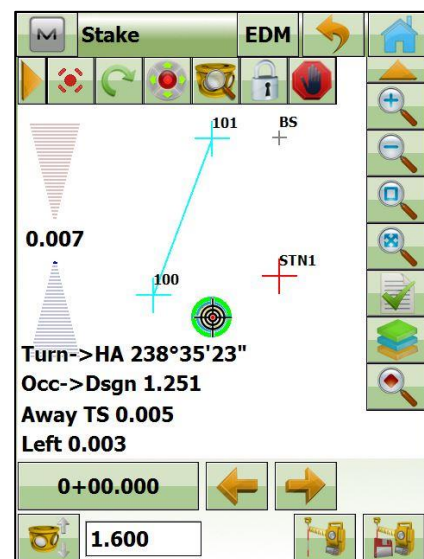
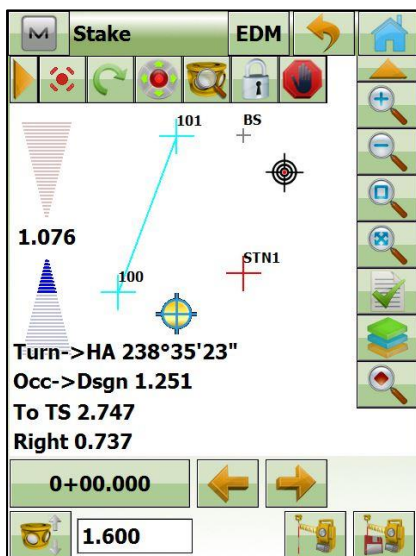





(7)

By pressing the **Station** button we can choose between parallel **Station** offsets, **Real-Time** offsets and **Skewed** angular offsets.

Again any required offsets can be entered in the bottom three boxes.



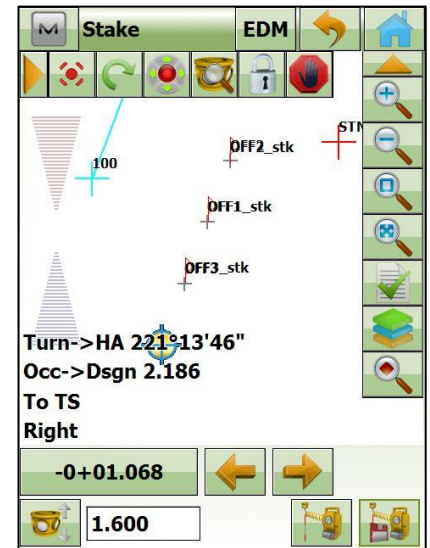
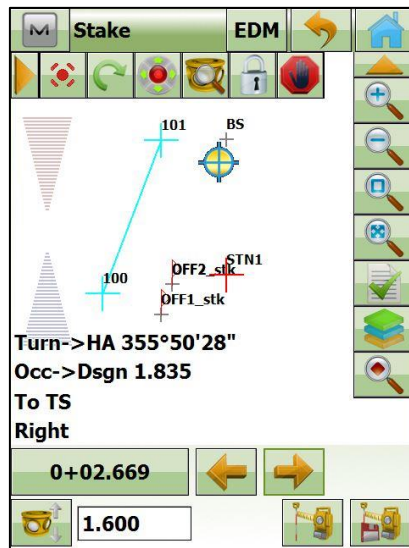
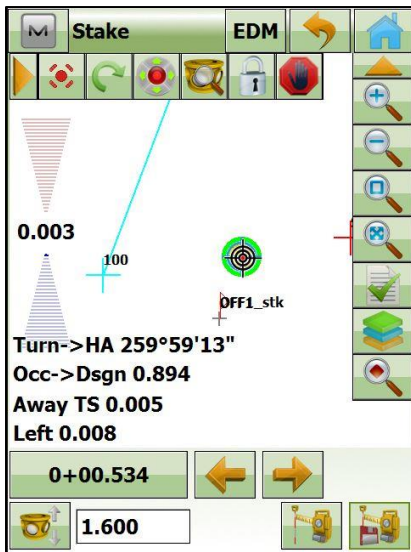
(8)

Press **Stake** to begin.

In **Map** view, the line created in point (5) will be displayed and the **blue and yellow** crosshair denotes the offset point to be staked.

The **black** crosshair shows the position of the user.

Station/Chainage and position relative to the start point of the line is displayed in the box at the bottom left.



(9)

A **green circle** denotes that the prism position is within tolerance and the point can be set-out.
Press the **measure** or **record** buttons to stake the point.

Any offset position at any chainage along the bearing of the line can be set-out, regardless of whether the user is between the start and end points. In this example we are moving in increments of 0.534 m from the start point.

A **flag** icon will denote a saved and recorded Staked point within the Map



Store Point	
Design	Codes
Name	Value
Design Refere...	Line 100->101
Design Pt.	OFF1
Design Note	
Design Code	
Design N	199.348 m
Design E	98.933 m
Design Elev	10.669 m
Stake Pt.	OFF1_stk
Stake Note	OFF1
Stake Code	
Stake N	199.351 m
<input checked="" type="checkbox"/> Advance	

Points: Grou...		
Point	East(m)	North
100	97.997	199.7
101	98.931	202.1
BS	100.000	202.2
OFF1	98.933	199.3
OFF1_stk	98.941	199.3
OFF2	99.120	199.8
OFF2_stk	99.118	199.8
Find		
Find Next		
Delete		
Edit		
Add		

(10)

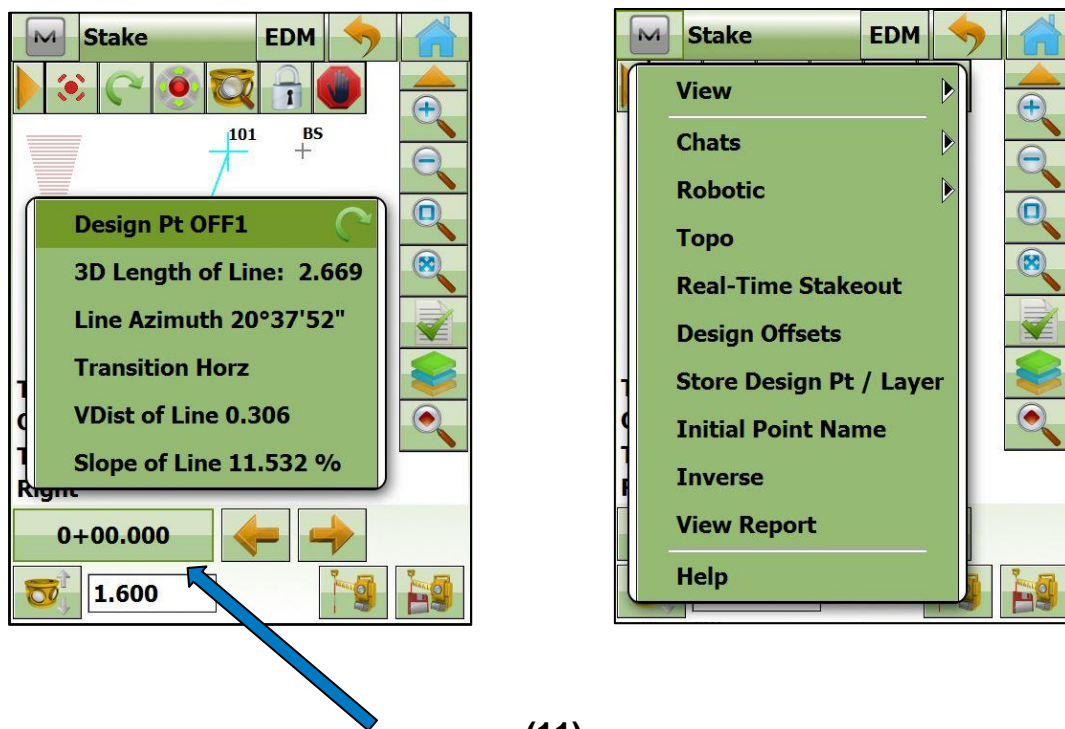
After recording the point, the Store Point tabs (displayed above left) show information about the staked point.

Here the user can **edit** the Name, Code and Layer or add notes and photographs if necessary.

Press the **Green Tick** to Store. This will then return the user to the **Stake** screen.

Design point offsets and staked offsets are represented by different icons.

These can be observed under the **Edit Points** menu (see screenshot above right).

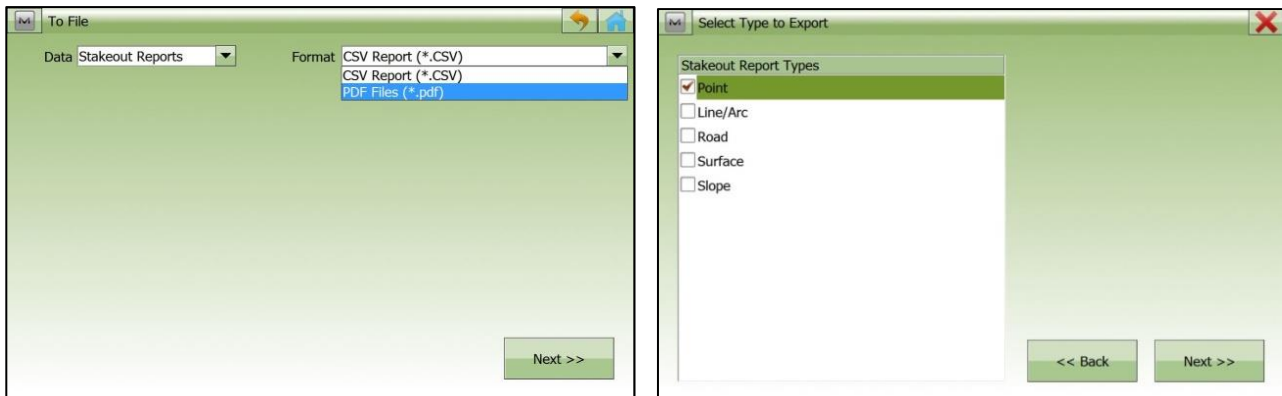


(11)

Pressing the chainage button displays information about the current offset point. The user can also automatically turn the total station to the point if using a robotic instrument by pressing the **Green arrow**.



The **MAGNET** icon at the top left of the screen gives the user useful options without having to leave the Stake screen.



(12)

To export a **Stakeout Report**, access the **Exchange** menu from the home screen and select **To File**.

Select **Stakeout Reports** from the left-hand drop-down menu. Choose between **CSV** or **PDF** formats.

Select the type of report required and press **Next**.



(13)

Check the correct report name. Press **Next** and type a filename when prompted.

Press the **Green Tick** to save the report.