DPpoints menu items	**The following are step by step instructions for each item in the order that they appear on the menu**
Create Key Desciptions	Selecting this command will display a dialog box. Enter a description into the box and select "Add description". To remove a description select it and press "Remove description". To learn how to use key descriptions see the online user's manual.
Create Line Desciptions	Selecting this command will display a dialog box. Enter a line name into the box and select "Add line". To remove a line select it and press "Remove line". To learn how to use line descriptions see the online user's manual.
Point utilities (submenu)	
Point display on	Select this option to turn the point display on (displayed as an X). The point display mode will be set to 3 and the point display size will be set to 0.3
Point display off	Select this option to turn the point display off. The point display mode will be set to 1.
Point display select	Select this option to manually set the point display mode and point display size.
Move Points	Select the points that you wish to move. Select a base point. Select a point to move to.
Rotate points	Select the points that you wish to rotate. Select a base point. Type in the angle to rotate the points.
Reassociate points	Select this option to move the 2d nodes to their correct position with the 3d nodes. This is used to correct accidental moving of the 2d nodes.
Resize points	Use this option to change the size of points in the drawing. Select the points that you wish to change then enter a scale factor. Example a scale factor of 2 will double the size of the points and a scale factor of 0.5 will change the points to half their size.
Twist Points	Select this option to twist the points around their insertion points. Select the points and enter an angle to twist.

Change elevation	Select the points that you wish to change. Enter a number to add to the point elevation.
Convert elevation	Select the points that you wish to change. Enter a number that you would like to multiply the point elevation by.
Zoom to points by number	Select this option and enter a point number. The display will change to place the desired point in the center of the screen.
Renumber points	Enter a number that you would like to add to the point numbers. Select the points that you would like to change.
Select points by number	Enter a starting number then enter an ending number. All points in this range will be selected and placed in the "previous" selection set. To perform another command on these points use the "previous" option when ask to select objects. Please note that the previous option does not work correctly in IntelliCAD 2001.
Select points by description	Enter a description. All points with this description will be selected and placed in the "previous" selection set. To perform another command on these points use the "previous" option when ask to select objects. Please note that the previous option does not work correctly in IntelliCAD 2001.
Change point layer by number	Enter a starting number then enter an ending number. Enter an existing layer name. All points in this range will be moved to this layer.
Change point layer by description	Enter a description. Enter an existing layer name. All points with this description will be moved to this layer.
Add text to elevation by decription	Enter a description to find. Enter text to add to the beginning of the elevation or press "enter" for none. Enter text to add to the end of the elevation or press "enter" for none.
Add text to elevation by select	Enter text to add to the beginning of the elevation or press "enter" for none. Enter text to add to the end of the elevation or press "enter" for none. Select the points to change.
Reset elevation by decription	Enter a description to find. All points with this description will have their elevation reset to the actual elevation.
Reset elevation by select	Select points and their elevation will be reset to their actual elevation.

Set points by coords
Enter point number or press "enter" to accept the default. At the prompt enter the northing. At the prompt enter the easting. At the prompt enter the elevation. At the prompt enter the description or press the space bar for none. Press "esc" to end.

Set points by select
Enter a point number or press "enter" to accept the default. With the mouse or cursor manually pick the insertion point of the point. At the prompt enter a description. Press "enter" to end the command.

Set points by station
Select an alignment (a line or polyline). Enter the starting station of the alignment. Enter a point number or press "enter" to accept the default. Enter the station to set the point at. Enter the offset to set the point (- for left). At the prompt enter an elevation. At the prompt enter a description or press the sace bar for none. Press "esc" to end.

Sideshot/Traverse

Turned angle Difference in elevation
Enter point number to set on: Type in the number of the point to occupy or press "enter" to pick a random point.
Enter point number to backsite: Type in the number of the point to back sight or press "enter" to pick a random point.
Enter occupied point elevation: Type in an elevation.
Enter instrument height above point: Type in the distance from the occupied point to the instrument.
Total HI is (the total instrument height will be displayed here).
Enter horizontal angle: Type in the horizontal angle (angle right) in the format of dd.mmss.
Enter horizontal distance: Type in the horizontal distance.
Enter rod height: Type in the rod height or press "enter" to accept the default.
Enter difference in elevation: Type in the difference in elevation or press "enter" to accept the default.
Point number: Type in a point number or press "enter" to accept the default.
Description: Type in a description or press "enter" to accept the default or press the space bar to clear the description.
A point will now be placed in the drawing. You may continue placing more points (sideshots) till done. When finished just press enter when prompted for the next horizontal angle.
The program will now move you forward to occupy the last point that you set and will back sight the point that you were previously occupying. The point number and coordinates for the new occupied point and the new backsight will be displayed. You will now be asked if you wish to continue: Answer "Y" or "N". If you select "Y" you may continue to enter more sideshots or press enter to move ahead (traverse).

Turned angle
Vertical angle

Enter point number to set on: Type in the number of the point to occupy or press "enter" to pick a random point.
Enter point number to backsite: Type in the number of the point to back sight or press "enter" to pick a random point.
Enter occupied point elevation: Type in an elevation.
Enter instrument height above point: Type in the distance from the occupied point to the instrument.
Total HI is (the total instrument height will be displayed here).
Enter horizontal angle: Type in the horizontal angle (angle right) in the format of dd.mmss.
Enter vertcal angle: Type in the vertical angle in the format of dd.mmss or press "enter" to accept the default. Note that a level angle is 90.
Enter horizontal distance: Type in the horizontal distance.
Enter rod height: Type in the rod height or press "enter" to accept the default.
Point number: Type in a point number or press "enter" to accept the default.
Description: Type in a description or press "enter" to accept the default or press the space bar to clear the description.
A point will now be placed in the drawing. You may continue placing more points (sideshots) till done. When finished just press enter when prompted for the next horizontal angle.
The program will now move you forward to occupy the last point that you set and will back sight the point that you were previously occupying. The point number and coordinates for the new occupied point and the new backsight will be displayed. You will now be asked if you wish to continue: Answer "Y" or "N". If you select "Y" you may continue to enter more sideshots or press enter to move ahead (traverse).

Turned angle
Radial stakeout

Enter point number to occupy for radial stakeout: Type in a point number.
Enter point number to backsite: Type in a point number.
Pick points or select by point number: If you select "P" you will be asked to select the points that you wish. If you select "N" you will be asked for a starting point number and then an ending point number. All point within this range will be selected.
You will be prompted for a file name for the radial stakeout. If the file exists the new data will be appended to the file.

North Azimuth Difference in elevation

Enter point number to set on: Type in the number of the point to occupy or press "enter" to pick a random point.
Enter occupied point elevation: Type in an elevation.
Enter instrument height above point: Type in the distance from the occupied point to the instrument.
Total HI is (the total instrument height will be displayed here).
Enter horizontal angle: Type in the horizontal angle (angle right) in the format of dd.mmss.
Enter horizontal distance: Type in the horizontal distance.
Enter rod height: Type in the rod height or press "enter" to accept the default.
Enter difference in elevation: Type in the difference in elevation or press "enter" to accept the default.
Point number: Type in a point number or press "enter" to accept the default.
Description: Type in a description or press "enter" to accept the default or press the space bar to clear the description.
A point will now be placed in the drawing. You may continue placing more points (sideshots) till done. When finished just press enter when prompted for the next horizontal angle.
The program will now move you forward to occupy the last point that you set. The point number and coordinates for the new occupied point will be displayed. You will now be asked if you wish to continue: Answer "Y" or "N". If you select "Y" you may continue to enter more sideshots or press enter to move ahead (traverse).

North Azimuth Vertical angle

Enter point number to set on: Type in the number of the point to occupy or press "enter" to pick a random point.
Enter occupied point elevation: Type in an elevation.
Enter instrument height above point: Type in the distance from the occupied point to the instrument.
Total HI is (the total instrument height will be displayed here).
Enter horizontal angle: Type in the horizontal angle (angle right) in the format of dd.mmss.
Enter vertcal angle: Type in the vertical angle in the format of dd.mmss or press "enter" to accept the default. Note that a level angle is 90.
Enter horizontal distance: Type in the horizontal distance.
Enter rod height: Type in the rod height or press "enter" to accept the default.
Point number: Type in a point number or press "enter" to accept the default.
Description: Type in a description or press "enter" to accept the default or press the space bar to clear the description.
A point will now be placed in the drawing. You may continue placing more points (sideshots) till done. When finished just press enter when prompted for the next horizontal angle.
The program will now move you forward to occupy the last point that you set. The point number and coordinates for the new occupied point will be displayed. You will now be asked if you wish to continue: Answer "Y" or "N". If you select "Y" you may continue to enter more sideshots or press enter to move ahead (traverse).

North Azimuth Radial stakeout

Enter point number to occupy for radial stakeout: Type in a point number.

Pick points or select by point number: If you select "P" you will be asked to select the points that you wish. If you select "N" you will be asked for a starting point number and then an ending point number. All point within this range will be selected.

You will be prompted for a file name for the radial stakeout. If the file exists the new data will be appended to the file.

South Azimuth Difference in elevation

Enter point number to set on: Type in the number of the point to occupy or press "enter" to pick a random point.

Enter occupied point elevation: Type in an elevation.

Enter instrument height above point: Type in the distance from the occupied point to the instrument.

Total HI is (the total instrument height will be displayed here).

Enter horizontal angle: Type in the horizontal angle (angle right) in the format of dd.mmss.

Enter horizontal distance: Type in the horizontal distance.

Enter rod height: Type in the rod height or press "enter" to accept the default.

Enter difference in elevation: Type in the difference in elevation or press "enter" to accept the default.

Point number: Type in a point number or press "enter" to accept the default.

Description: Type in a description or press "enter" to accept the default or press the space bar to clear the description.

A point will now be placed in the drawing. You may continue placing more points (sideshots) till done. When finished just press enter when prompted for the next horizontal angle.

The program will now move you forward to occupy the last point that you set. The point number and coordinates for the new occupied point will be displayed. You will now be asked if you wish to continue: Answer "Y" or "N". If you select "Y" you may continue to enter more sideshots or press enter to move ahead (traverse).

**South Azimuth
Vertical angle**

Enter point number to set on: Type in the number of the point to occupy or press "enter" to pick a random point.
Enter occupied point elevation: Type in an elevation.
Enter instrument height above point: Type in the distance from the occupied point to the instrument.
Total HI is (the total instrument NE height will be displayed here).
Enter horizontal angle: Type in the horizontal angle (angle right) in the format of dd.mmss.
Enter vertcal angle: Type in the vertical angle in the format of dd.mmss or press "enter" to accept the default. Note that a level angle is 90.
Enter horizontal distance: Type in the horizontal distance.
Enter rod height: Type in the rod height or press "enter" to accept the default.
Point number: Type in a point number or press "enter" to accept the default.
Description: Type in a description or press "enter" to accept the default or press the space bar to clear the description.
A point will now be placed in the drawing. You may continue placing more points (sideshots) till done. When finished just press enter when prompted for the next horizontal angle.
The program will now move you forward to occupy the last point that you set. The point number and coordinates for the new occupied point will be displayed. You will now be asked if you wish to continue: Answer "Y" or "N". If you select "Y" you may continue to enter more sideshots or press enter to move ahead (traverse).

**South Azimuth
Radial stakeout**

Enter point number to occupy for radial stakeout: Type in a point number.
Pick points or select by point number: If you select "P" you will be asked to select the points that you wish. If you select "N" you will be asked for a starting point number and then an ending point number. All point within this range will be selected.
You will be prompted for a file name for the radial stakeout. If the file exists the new data will be appended to the file.

Draw Traverse

Enter starting point: Pick a point
Enter Azimuth or quadrant or C for curve or Q to quit: (AZN AZS NW NE SE SW C Q) NE
Selection options are: North Azimuth, South Azimuth, North West, North East, South East, South West, Curve or Quit. (We decided to go NE)
Enter bearing in the following format: DD.MMSS 45.2315 (We entered the angle)
Enter distance: 50 (We entered the distance)
Enter Azimuth or quadrant or C for curve or Q to quit: (NW NE SE SW C Q) C
This time we are drawing a curve (Note: you cannot draw a curve without first drawing the tangent)
Curve to the Left or Right? (L or R): R
Enter radius: 50
Enter arc length: 32.56
Now lets curve the other direction.
Curve to the Left or Right? (L or R): L
Enter radius: 50
Enter arc length: 27.32
Continue drawing Curves and Lines or type "Q" to quit.
Enter Azimuth or quadrant or C for curve or Q to quit: (AZN AZS NW NE SE SW C Q) Q

Inverse

Enter point number to start: 699
Enter point number to end: 711
The following results are displayed at the command prompt:
S 63d59'14" E 116.93'
Enter point number to start: Press "Enter" to end.

Intersections Brg Brg

Enter first point number: 3
Enter first bearing: example: (N45d30'15"E) n50d30'15"e
Enter second point number: 711
Enter second bearing: example: (N45d30'15"E) n45d26'32"w
The following results are displayed at the command prompt:
From point no. 3 N 50d30'15" E 46.39'
From point no. 711 N 45d26'32" W 70.50'
New point: N= 11430.57, E= 10084.90
Do you wish to set a point here? (Y or N): y
If you choose to set a point you will be prompted for a point
number and a decription.
Point number for new point:
Description: new
Enter first point number: Press "Enter" to end.

Intersections Brg Dist

Enter point number for bearing: 712
Enter bearing: (example: N45d30'15"E) n55d12'26"e
Enter second point number: 711
Enter distance: 30
Do you wish to set a point here? (Y or N): n
If you choose to set a point you will be asked which point do
you want to set 1 or 2.
The following results are displayed at the command prompt:
There are two intersections.
New point 1: N= 11398.50, E= 10110.69
New point 2: N= 11410.08, E= 10127.36
Enter point number for bearing: Press "Enter" to end.

Intersections Dist Dist

Enter first point number: 859
Enter distance: 100
Enter second point number: 711
Enter distance: 50
Do you wish to set a point here? (Y or N): n
The following results are displayed at the command prompt:
There are two intersections.
New point 1: N= 11426.99, E= 10115.28
New point 2: N= 11336.83, E= 10111.90
Enter first point number: Press "Enter" to end.

Intersections Line Arc

Enter first point number on line: 3
Enter second point number on line: 700
Enter point number of center of arc: 711
Enter radius: 100
Do you wish to set a point here? (Y or N): n
The following results are displayed at the command prompt:
There are two intersections.
New point 1: N= 11393.07, E= 10035.86
New point 2: N= 11474.50, E= 10170.87
Enter first point number on line:
Enter second point number on line: Press "Enter" to end.

Point offset to line

Enter beginning of line point number: 1
Enter end of line point number: 2
Enter a point number to compute offset: 3
The following results are displayed at the command prompt:
N 45d W 1.3302'
Enter a point number to compute offset: Press "Enter" to end.

Draw by point number

Enter point number to start: Type in a point number.
Enter next point number: Type in a point number.
Continue till finished.
Press "enter" to end.

Point List

Select the format PNEZD or PENZD.
You will be asked to select the points.
The points will be saved in a file called c:\nodelist.txt
You may use notepad to view this file.

Import Points

Select the format PNEZD , PNED, PENZD, ENZD, NEZD, XYZ.
You will be asked to select a file to import.

Import Linework

Select the format PNEZD, or PENZD.
You will be asked to select a file to import.
For information on coding linework in your point file see the online user's manual.

Export Points

Select the format PNEZD, PENZD, XYZ.
You will be asked to select the points.
You will be asked to select or create a file to place the information.

Resize blocks

Use this option to change the size of blocks in the drawing. Select the blocks that you wish to change then enter a scale factor. Example a scale factor of 2 will double the size of the blocks and a scale factor of 0.5 will change the blocks to half their size. If you need to resize points, use the resize points command.