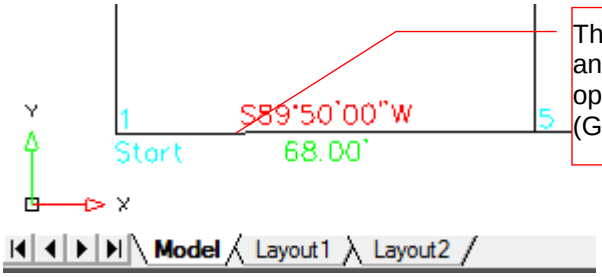
CAD_Lines_and_CAD_Curves_Dialogue

A feature that allows you some powerful methods of inputting line data without having to coordinate points on the ends of all the lines, as you do in COGO. If you do wish to have the new points added to the database then this option is available. It is also a powerful and easy way to list information about any line on screen. You do not have to pick from the menu or type a command to start this routine – simply pick a line, while no command is running. (Does not work on Polylines, they would need to be exploded and then each segment could be queried)

CAD_Lines_Dialogue

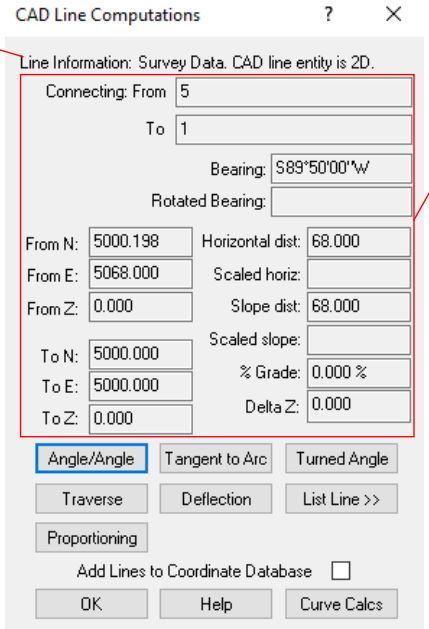
Ribbon: COGO
Menu: MsCogo
Icon: 
Command: _CAD_Lines



The user left clicks on the line and the CAD Lines dialog will open as shown below. (GRIPS must be OFF)

When the user left clicks on any line in the current drawing the user will see the CAD Lines Dialogue as shown below.

This area will tell you if you the line you clicked on is a 2D or 3D line. Furthermore if the line is in the database you will see the word "Survey Data" and if it isn't you will see the word "Drawing Data".



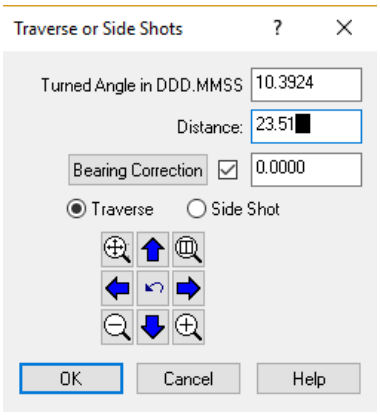
This area displays information about the line.

CAD Line Dialogue

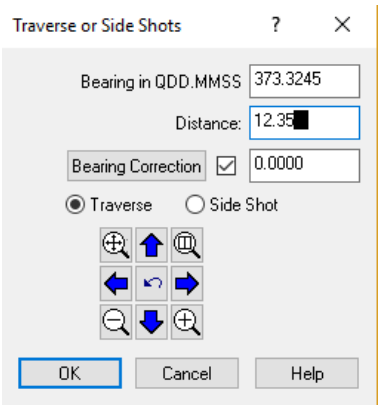
Angle / Angle: This command allows you to do a bearing / bearing intersection by picking the ends of a line and entering two directions to make the intersection.

Tangent to Arc: This allows you to draw a line at the end of a curve and force it to be tangential and at the length you specify. It will be prompted with a dialogue asking you for the length of the tangent.

Turned Angle: This allows you to duplicate the actions of setting an instrument up on a point and turning angles from a backsight (prompts for the Starting Point and Backsight Point will appear on the command line). You will then be prompted with a dialogue, shown below, asking for an angle and distance and to select traverse mode or side shot mode.



Traverse: This routine allows you to specify a starting point via the command line and to enter a direction and distance via the dialogue shown below.



Deflection: A deflection line is created by setting up at a point, backsighting another point and then flipping the scope over 180 degrees and measuring the angle to the left or right from there.

List Lines: This allows you to pick on a different line to get it's line information without have to exit out of the dialogue.

Proportioning:
Step 1
The first prompt you will see looks like this:
How do you want to define the line/arc?: (2pts/Cad) <2pts> :

Step 2
You are being asked to decide between entering 2 point numbers which will define a line, or, picking on a CAD line with your mouse. If you want to enter 2 point numbers, then there does not need to be an existing line between these two points already.
Type "2Pts" or "CAD".
Now go to Step 2.1.1 (line, 2Pts) or Step 2.1.2 (line, CAD) depending on what you entered here.

Step 2.1 (2Pts)
If you typed in "2Pts" then you will see this prompt:
Enter 2 points (example, 34..35):
If you have selected 2Pts then you next need to tell the program the 2 point numbers. Enter the numbers in a string with 2 dots between the numbers, for example type "1..5" to do the line proportioning between points 1 and 5. A temporary line will be drawn between these 2 points.
Type in something like "1..5"

Step 2.2 (CAD)
If you typed "CAD" then you will see this prompt:
Select a line:
Use your mouse to select a line in your drawing.
Now go to step 3 below.

Step 3.
Next you will be asked:
Choose either Equal Division or Distance Proportion: [Equal/Distance]:
You need to decide between Equal Division and Distance Proportion.

The *Equal Division* method will ask you;
Starting from this end? [Yes/No] <Yes> :

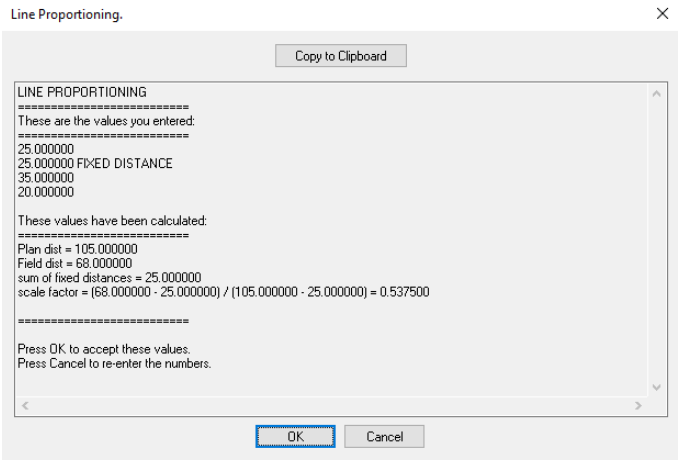
You then need to decide which end of the line or arc is the starting end. You will see an arrow pointing to one of the ends. You must type Yes or No to indicate that this is the correct end. If you type No then the pointer will move to the other end, at which time you need to type Yes to confirm that this is the correct end to start at.

Then it will ask for a number of divisions. Then it will take the selected line and simply divide it into that many equal length segments. Lines will be drawn if the 'Draw lines/curves' toggle is ON. At this point the proportioning program will calculate new points along the line.

The *Distance Proportion* method will prompt you for a series of distances that you enter which will be used to proportion the line into segments.
Segment #1. Enter the distance, negative to indicate fixed distance, enter 0 to end <0.000>:
The Program knows that you are done when you enter the number 0. If you want any segment to be fixed in length, and not have any proportioning done to it, then enter it as a negative number.

A typical series of input values here will be something like this:

Segment #1. Enter the distance, negative to indicate fixed distance, enter 0 to end <0.000>:**25**
Segment #2. Enter the distance, negative to indicate fixed distance, enter 0 to end <0.000>:**-25**
Segment #3. Enter the distance, negative to indicate fixed distance, enter 0 to end <0.000>:**35**
Segment #4. Enter the distance, negative to indicate fixed distance, enter 0 to end <0.000>:**20**
Segment #5. Enter the distance, negative to indicate fixed distance, enter 0 to end <0.000>:**0**



After you have entered a 0 value, you will see this dialogue:
Notice that the second value entered was a negative number and it shows up in the list as being a FIXED DISTANCE.

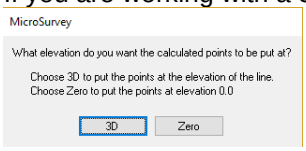
If you are satisfied with the values you entered, then press the OK button.

If you want to edit one or more of the values you entered, then press the Cancel button. Canceling will take you back to the first value you entered, and you can step through them until you get to the one you want to edit.

Press the **OK** in the above dialogue.
New Points will be added to the drawing and if the toggle to draw lines is on, then the new lines are drawn between the points. If the toggle is also on for labeling line then you will be asked to place the bearing above or below

Pick the side you want the bearing placed/Above/Below:

Step 4
If you are working with a 3D line then this dialogue will pop up:



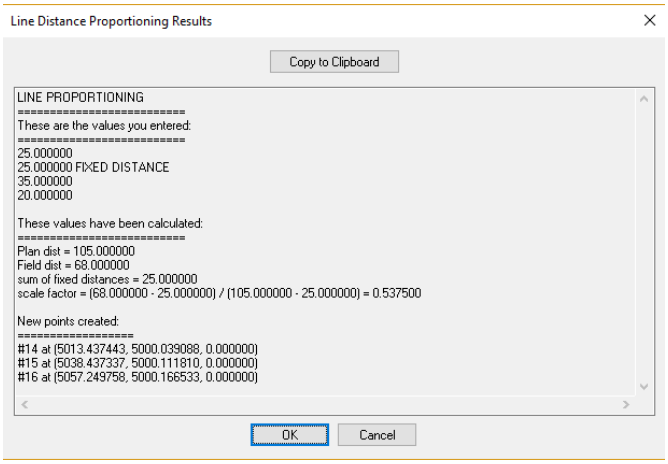
You must decide what elevation you want the newly created points to be at.

Pick either "3D" or "Zero"

New Points will be added to the drawing and if the toggle to draw lines is on, then the new lines are drawn between the points. If the toggle is also on for labeling line then you will be asked to place the bearing above or below

Pick the side you want the bearing placed/Above/Below:

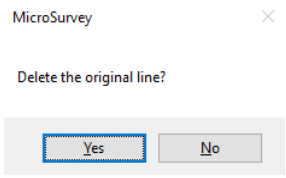
Then you will see this dialogue showing the 3D points created:



Press OK

At this point the contents of the above Results dialogue box will be put into the log file if the Log File Output toggle is turned ON.

Step 5.
The final step is where you are asked if you want to delete the original line. But you will only see this dialogue if you are NOT working with a line that was defined by entering 2 point numbers in Step. 2.1.



Remember that if the 'Draw lines/curves' toggle is OFF then no new lines or arcs will have been drawn.

Click on Yes or No.

Add Lines to coordinate database: You have the option of drawing lines in the drawing with coordinate points. If toggled on, coordinate points for the end points of lines will be stored in the database. If toggled off, no coordinates will be calculated and just the lines will appear in the drawing.

Curve Calcs: Will open the CAD Curve Dialogue to aid in calculating curves.