

# Metes and Bounds Help

v3.7.0



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## Drawing Wizard



The Drawing Wizard is an optional way to start a new drawing and can be found under the File menu. It will ask you several questions about what type of drawing you plan on creating. Based on your answers to these questions, the wizard will preset some of the drawing values to help you accomplish your goals. Using the wizard does not lock you into a particular workflow; it only presets a few options. You can always change any of the drawing options to better suit your needs.

- Simple
  - This option is optimized for working with a single layer. It will keep the drawing centered in the middle of your screen. It is very similar to the blank drawing that you get when you do not use the wizard.

## **Drawing Wizard (Continued)**

- **Complex**
  - This option is optimized for working with multiple layers/plots/tracts in a single drawing. It also provides the option of using a scaled background image, such as a section or topographical map.
  
- **Section Based**
  - This option will start your drawing using the Section Finder. It allows for easy entry of section calls such as "The northwest quarter of the southeast quarter".
  
- **Lat / Long**
  - This option will start your drawing using the Lat/Long to Layer tool. Use this option to turn a list of Lat/Long coordinates into a series of metes and bounds calls.

If the Show New Drawing Wizard at Startup checkbox is checked, the wizard will appear each time you start Metes and Bounds. If you uncheck this box, you can still access the wizard from the File menu.

## Entering Data

Data can be entered either manually or by using the Data Entry form.

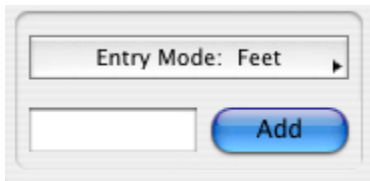
To enter data manually, enter the call into the entry field and press the Add button.

A screenshot of a manual data entry form. It consists of a rectangular text input field on the left and a rounded rectangular button labeled "Add" on the right.

The data should be entered as {N/S} {DD:MM:SS} {E/W} {Distance}. Example: N 44:30:25 E 100. You can also enter "due" north/south/east/west by entering just the direction and the distance. Example: N 100 would be due north 100 feet.

Line calls can also be entered in the following format: {N/S} {DD.MMSS} {E/W} {Distance}. Example: n33.3333e 100. Calls entered in this format will be converted to the format described above.

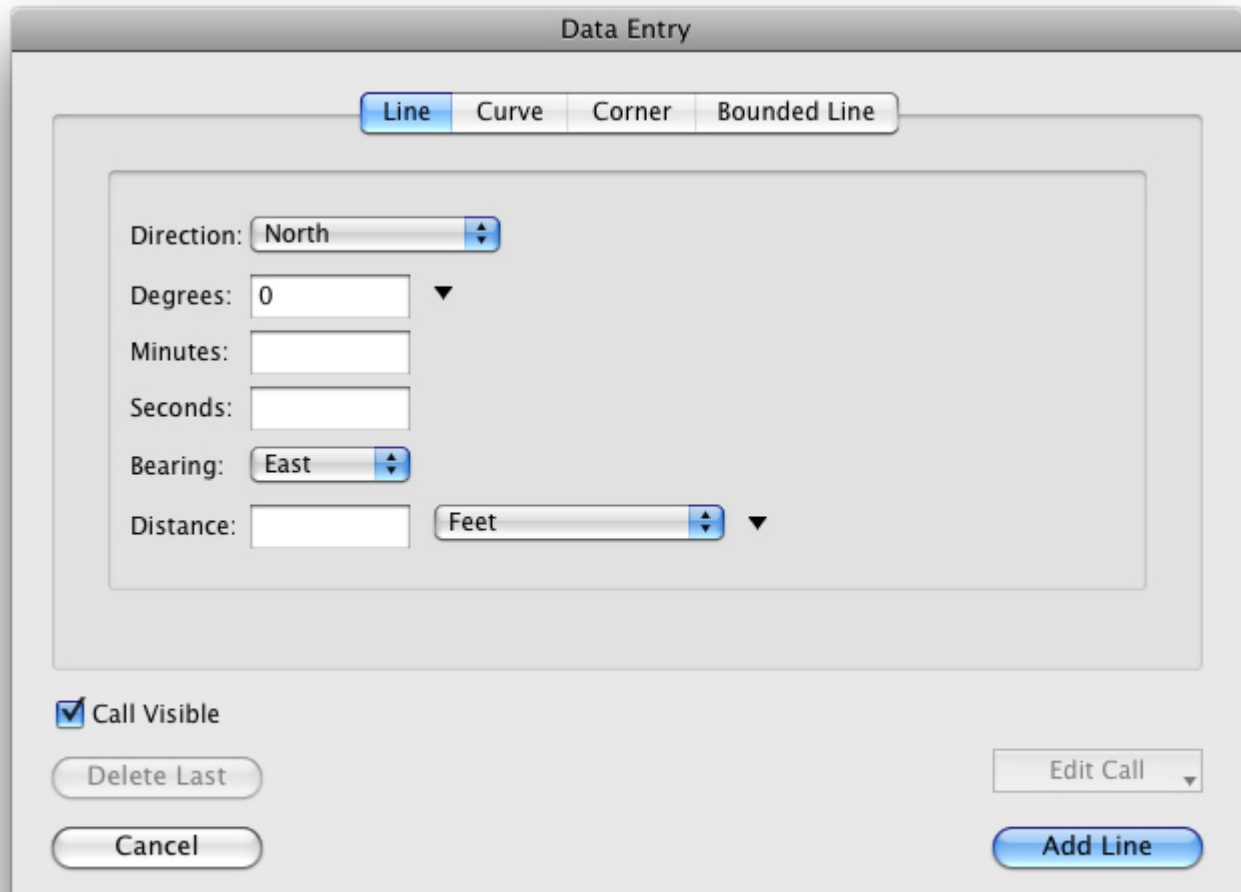
Distances entered manually are assumed to be feet. To have the software assume a unit of measurement other than feet choose Data Entry Mode from the Tools menu. This will activate a menu button that can be used to change the unit of measurement to that which is being entered. Values entered in this way will be converted to feet. This menu button can be seen below.

A screenshot of a data entry form with a unit mode selector. At the top, there is a dropdown menu labeled "Entry Mode: Feet" with a small arrow pointing to the right. Below the dropdown is a rectangular text input field. To the right of the input field is a blue rounded rectangular button labeled "Add".

In most cases, a "v" or "m" can be added to the distance to indicate that the value being entered is either a vara or meter. Example: N 45 E 100v would indicate 100 varas. Values entered in this way will be converted to feet.

## Data Entry Form

To enter data using the Data Entry form, press the Enter Data button. This will bring up the Data Entry form. You can also bring up this form by right-clicking in the main drawing area or the call list and choosing Enter Data from the popup menu.



The image shows a 'Data Entry' dialog box with a title bar. Inside, there are four tabs: 'Line' (selected), 'Curve', 'Corner', and 'Bounded Line'. The 'Line' tab contains the following fields: 'Direction' (a dropdown menu showing 'North'), 'Degrees' (a text input field with '0'), 'Minutes' (a text input field), 'Seconds' (a text input field), 'Bearing' (a dropdown menu showing 'East'), and 'Distance' (a text input field). To the right of the 'Distance' field is a unit dropdown menu showing 'Feet'. Below these fields, there is a checkbox labeled 'Call Visible' which is checked. At the bottom of the dialog, there are four buttons: 'Delete Last', 'Cancel', 'Edit Call' (with a small downward arrow), and 'Add Line'.

**Data Entry**

Line Curve Corner Bounded Line

Direction: North

Degrees: 0

Minutes:

Seconds:

Bearing: East

Distance: Feet

☒ Call Visible

Delete Last Edit Call

Cancel Add Line

## Entering Line Data:

To add a line to the drawing, make sure that the Line tab is selected. Then, enter the call data and press the Add Line button.

If the Call Visible box is unchecked, then the call will not be drawn on the screen, nor will it be used in calculations such as area. An invisible call will be shaded in red in the call list. Calls can be made visible/invisible by right-clicking on the call in the main window.



To delete the last line of the drawing, press the Delete Last button.

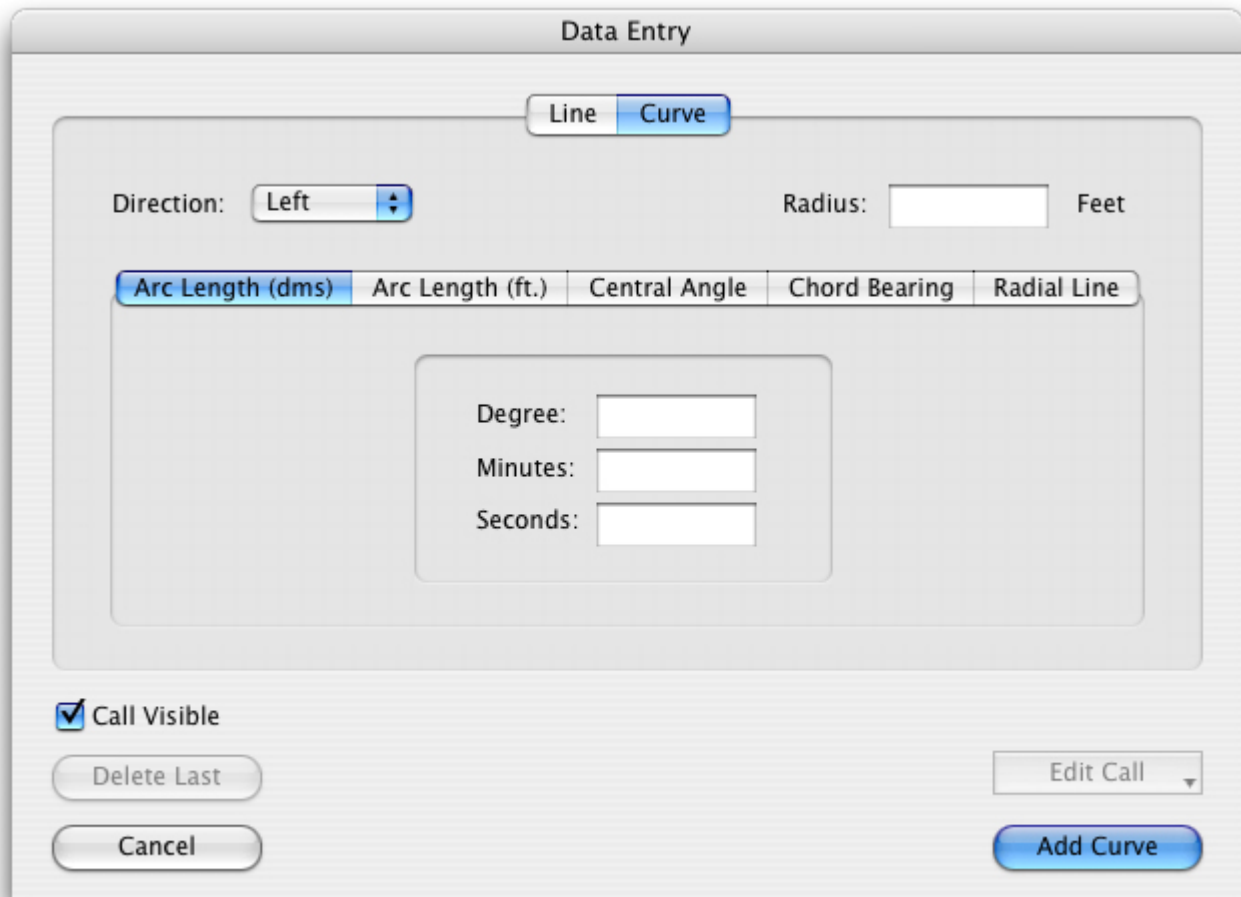
You can edit any line by choosing it from the Edit Line menu button.

You can bring up a [unit conversion calculator](#) by pressing the ▼ popup menu arrow next to the distance unit popup menu.

If the call's angle is expressed as a decimal or compass direction, you can press the ▼ popup menu arrow next to the degree box to bring up one of the angle converters.

## Entering Curve Data:

To enter a curve, select the Curve tab.



The image shows a software dialog box titled "Data Entry". It has two tabs: "Line" and "Curve", with "Curve" currently selected. The "Curve" tab contains the following elements:

- Direction:** A dropdown menu set to "Left".
- Radius:** A text input field followed by the unit "Feet".
- Angle Selection:** A row of five buttons: "Arc Length (dms)" (selected), "Arc Length (ft.)", "Central Angle", "Chord Bearing", and "Radial Line".
- Angle Input:** A sub-container with three stacked text input fields labeled "Degree:", "Minutes:", and "Seconds:".
- Call Visible:** A checked checkbox.
- Buttons:** "Delete Last", "Cancel", "Edit Call" (with a dropdown arrow), and "Add Curve" (highlighted in blue).

Choose which direction the curve is facing, either Left or Right.  
Enter the Radius of the curve.

Choose the correct tab to enter the curve data in the format that you are using.

Data Entry

LineCurveCornerBounded Line

Direction:Left

Radius:Feet

Arc Length (dms)Arc Length (ft.)Central AngleChord BearingRadial Line

Arc Len:ft.

☒ Call Visible

Delete Last

Cancel

Edit Call

Add Curve

Arc Length (ft)



Data Entry

Line

Curve

Direction: Left

Radius:  Feet

Arc Length (dms)

Arc Length (ft.)

Central Angle

Chord Bearing

Radial Line

Degree:

Minutes:

Seconds:

☒ Call Visible

Delete Last

Cancel

Edit Call

Add Curve

Central Angle

Data Entry

Line Curve Corner Bounded Line

Direction: Left Radius: Feet

Arc Length (dms) Arc Length (ft.) Central Angle Chord Bearing Radial Line

Chord Bearing: Ex: N 36:45:12 W

Chord Length: feet ▼

☒ Call Visible

Delete Last Edit Call ▼

Cancel Add Curve

Chord Bearing

Data Entry

Line Curve Corner Bounded Line

Direction: Left Radius: Feet

Arc Length (dms) Arc Length (ft.) Central Angle Chord Bearing Radial Line

Radial Bearing: Ex: N 36:45:12 W

Arc Length: feet ▼

☒ Call Visible

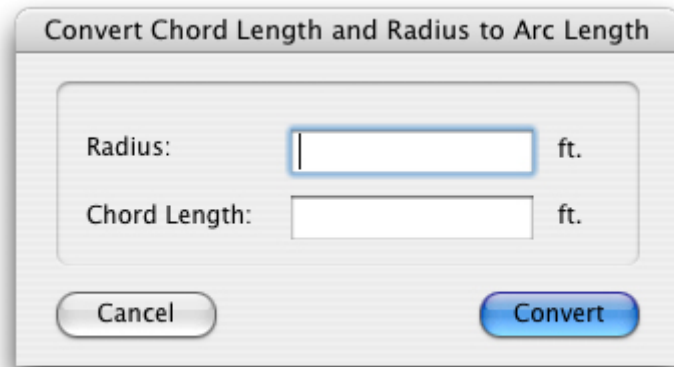
Delete Last Edit Call

Cancel Add Curve

### Radial Line

Press the Add Curve button to add the curve.

You can convert a Chord Length and Radius to Arc Length by pressing the ▼ popup menu arrow next to the Arc Length field. This the button will bring up the conversion form:

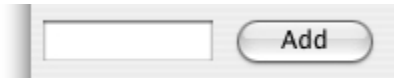


A dialog box titled "Convert Chord Length and Radius to Arc Length". It contains two input fields: "Radius:" followed by a text box and "ft.", and "Chord Length:" followed by a text box and "ft.". At the bottom, there are two buttons: "Cancel" and "Convert".

Enter the Radius and Chord Length. Pressing the Convert button will enter the Arc Length into the appropriate field on the main data entry form.

To enter non-tangent curves, enter the deflection as a line with a length of 0 feet, then enter the curve call.

To enter curve data manually:



A form element consisting of a text input box followed by an "Add" button.

On the main window, enter Right or Left, space, Radius, space, arc length in degree. For example, to enter a left facing curve, with a radius of 50 feet and an arc length of 30 degrees, 25 minutes enter "L 50 30:25". Then press the Add button.

## Entering Corner Call Data

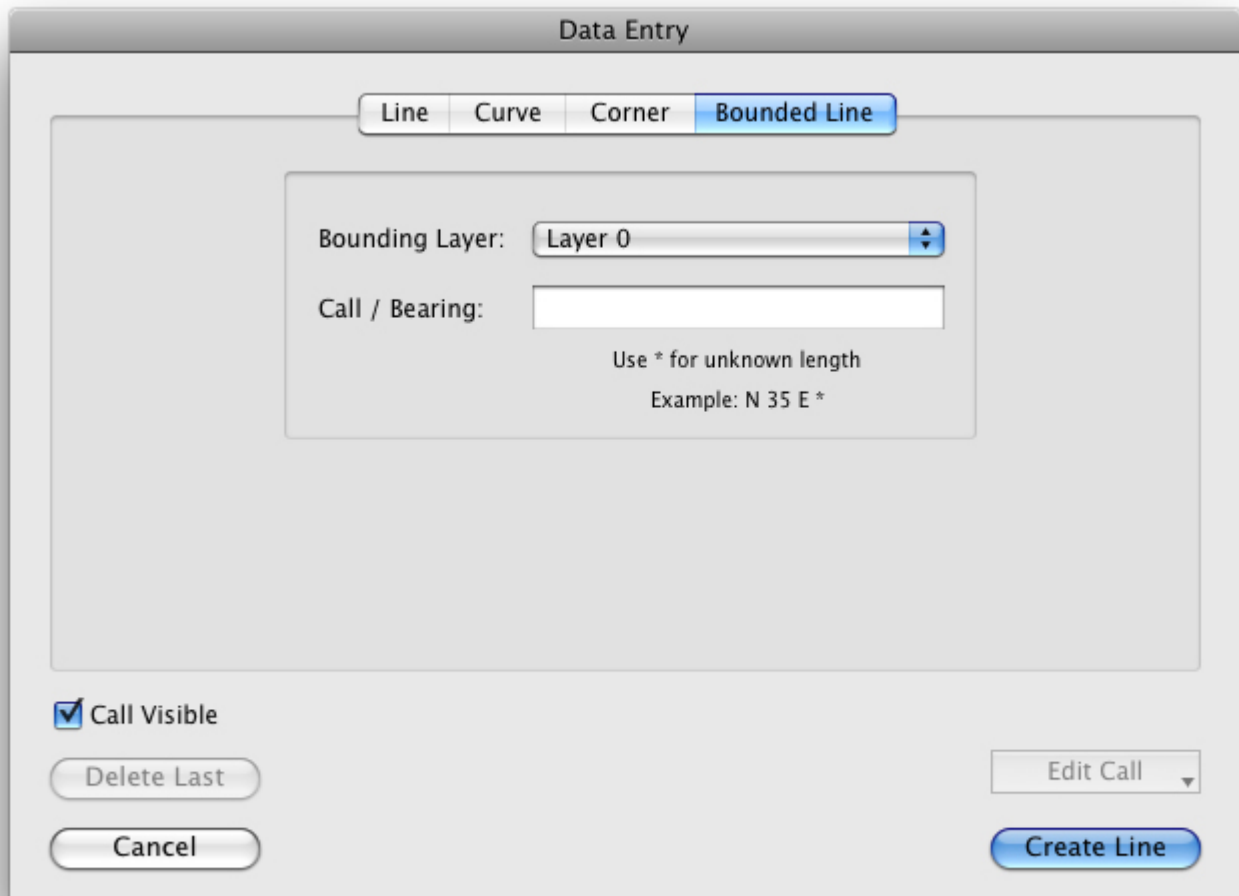
The image shows a 'Data Entry' dialog box with three tabs: 'Line', 'Curve', and 'Corner'. The 'Corner' tab is selected. Inside the dialog, there are three input fields: 'Quarter Call' with the value 'NE/4' and an example 'Ex: NW/4 SE/4' below it; 'Corner' with the value 'NW'; and 'Choose Section Corner to Calculate From' with the value 'Top Left'. At the bottom left, there is a checkbox for 'Call Visible' which is unchecked, and two buttons: 'Delete Last' and 'Cancel'. At the bottom right, there are two buttons: 'Edit Call' and 'Add Corner'.

Entering a Corner Call simplifies the process of setting layers to use the same starting point. The Corner Call line is an invisible line from the drawing's origin to a section corner. For example, if your layer's description starts something like *"Beginning at a point South 300.00 feet from the northwest corner of the northeast quarter of Section 19"*, you could create an invisible call from the drawing's origin to the section corner as described. Then you would create another invisible line call for *South 300 feet*. This allows all of the layers to share the same origin, thus facilitating the automatic scaling and placement of each layer within a section.

If the drawing's origin is not one of the corners, you will have to choose a corner to calculate the Corner Call from. Use this same corner for any additional layers.

This call should be the first call in the call list. If not, you can move it to the top of the call list using the Moving Calls feature outline below.

## Bounded Line:



The image shows a 'Data Entry' dialog box with four tabs: 'Line', 'Curve', 'Corner', and 'Bounded Line'. The 'Bounded Line' tab is selected. Inside the dialog, there is a 'Bounding Layer' dropdown menu set to 'Layer 0'. Below it is a 'Call / Bearing' text input field. Underneath the input field, there is a note: 'Use \* for unknown length' and an example: 'Example: N 35 E \*'. At the bottom left, there is a checked checkbox labeled 'Call Visible'. Below the checkbox are two buttons: 'Delete Last' and 'Cancel'. At the bottom right, there is a button labeled 'Edit Call' with a dropdown arrow, and a blue button labeled 'Create Line'.

Data Entry

Line Curve Corner **Bounded Line**

Bounding Layer: Layer 0

Call / Bearing:

Use \* for unknown length  
Example: N 35 E \*

☒ Call Visible

Delete Last

Cancel

Edit Call

Create Line

This tab allows you to enter a call that will be cropped at the boundary of another layer. Or it allows you to enter a bearing with an unknown length that will be cropped at the boundary of another layer. First choose the bounding layer, then enter either the call or bearing. If entering a bearing with an unknown length, use an \* asterisks for the length.

Note: This option cannot be used if the drawing's origin is set to Auto-Center. It also requires that the drawing contain at least two layers - one for the bounding layer and the layer for which the call is being entered.

### Entering Missing, Incomplete or Vague Calls:

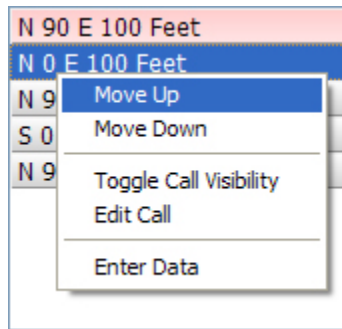
An incomplete or poorly written description may be missing part or all of a call. The software can help solve for these bad calls with several caveats.

- There can only be one bad call per layer.
- The layer will now close completely, even if it wouldn't have otherwise.
- The resulting call will be a line and not a curve.

To use this feature, enter a question mark (?) in place of the call. The question mark can only be entered using the manual entry field.

### Moving Calls:

You can move calls up or down in the call list by right-clicking on the call and choosing Move Up or Move Down from the popup menu.

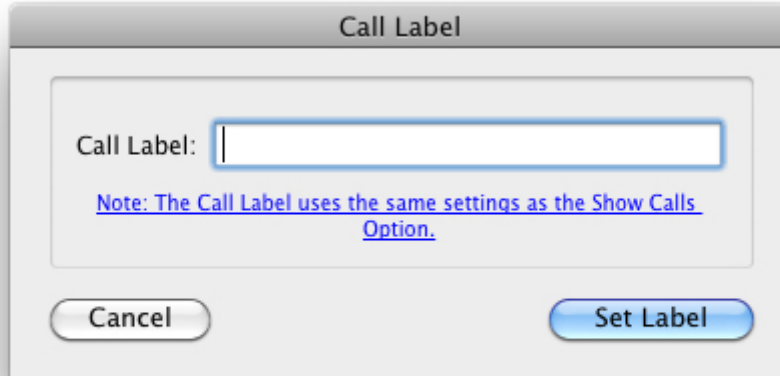


### Return to Call:

You can return to the endpoint of a previous call by right-clicking on the call that you want to return to in the call list and choosing Return to Call. This will create an invisible call that returns to the endpoint of the chosen call. The recommended way to return to a call is to create a new layer using the Return to Call custom layer. Using this method of Return to Call can cause some functions to act unexpectedly, such as the Split Layer function and area calculations. However, depending on how you intended to use the software, this option may be the easiest way to accomplish your goals.

**Set Call Label:**

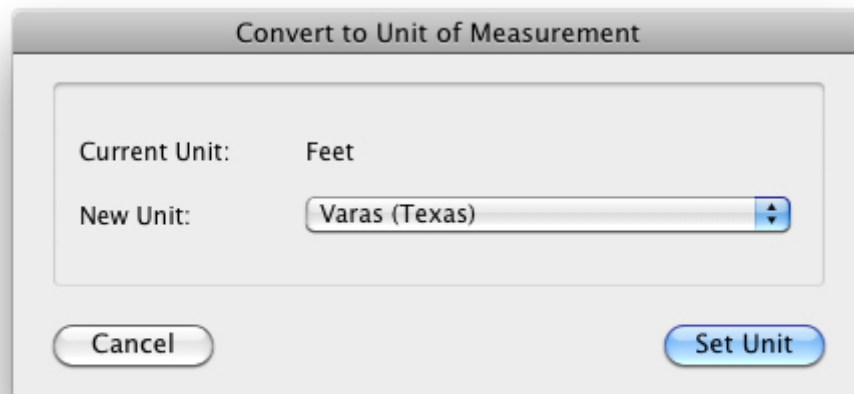
You can set a custom label for an individual call by right-clicking on the call in the call list and choosing Set Call Label from the popup menu. This will bring a the Set Call Label form. Enter the call's label and press the Set Label button. The call label uses the same settings as the layer [Show Call](#) feature.



A dialog box titled "Call Label" with a light gray background. It contains a text input field labeled "Call Label:" with a blue border. Below the input field is a blue hyperlink that reads "Note: The Call Label uses the same settings as the Show Calls Option." At the bottom of the dialog are two buttons: "Cancel" on the left and "Set Label" on the right, both with rounded corners and a slight shadow.

**Convert Unit of Measurement:**

You can convert the unit of measurement for a line call by right-clicking on the call and choosing Convert Unit of Measurement from the popup menu.



A dialog box titled "Convert to Unit of Measurement" with a light gray background. It contains two rows of labels and values. The first row is "Current Unit:" followed by the text "Feet". The second row is "New Unit:" followed by a dropdown menu showing "Varas (Texas)" with a blue arrow icon on the right. At the bottom of the dialog are two buttons: "Cancel" on the left and "Set Unit" on the right, both with rounded corners and a slight shadow.



## Section Finder

This feature will show a graphical representation of a section description. For example:

Section Finder

NE/4

Call:  Ex: E600 N/2 SE/4

Fill Color:

Fill Transparency:

Style: Solid

Remove Add

Remove All Apply

TWN:  RNG:  SEC: Unused

1/4 Grid ☒ Show Area

6,969,600 square feet.  
160 acres.

Close

To enter a section call, enter it into the Call text box and then press the Add button.

- To enter a quarter, enter NW/4, NE/4, SW/4 or SE/4
- To enter a half, enter N/2, S/2, E/2 or W/2
- To enter in feet, enter N, S, E or W, followed by the distance in feet. For example, "the north 600 feet" would be: N600
- To enter exceptions in feet, enter -N, -S, -E or -W, followed by the distance in feet. For example, "EXC N 300 feet" would be -N300
- To enter exceptions in acres, enter ~N, ~S, ~E or ~W, followed by the acreage. For example, "EXC N 27 AC" would be ~N27

Click on the Fill Color to change the color used to draw the next added call.

Slide the transparency slider to adjust the calls transparency. The far left is fully transparent.

Choose the fill style to be used for the next added call by choosing the desired style from the Style popup menu.

To edit a call, choose the call from the call list. Make the desired changes and then press the Edit button.

To delete a call, choose the call from the call list and press the Remove button.

To delete all calls for a section, press the Remove All button.

Entering the Township, Range and Section is optional.

You can enter data for up to 36 sections. To view all 36 sections at once, choose View All from the section popup menu.

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

When viewing all sections, click on the desired section to edit it.

### Grid Overlay

This popup menu will allow you to choose a grid to draw for the sections. Options are No Grid, 1/4, 1/16 and 1/64 sections.

### Show Area

Checking this checkbox will draw area of the entered calls in the lower left hand corner of the drawing.

## Section Finder Options Menu

*Save Picture as File:* This menu option allows you to save the section drawing as a picture.

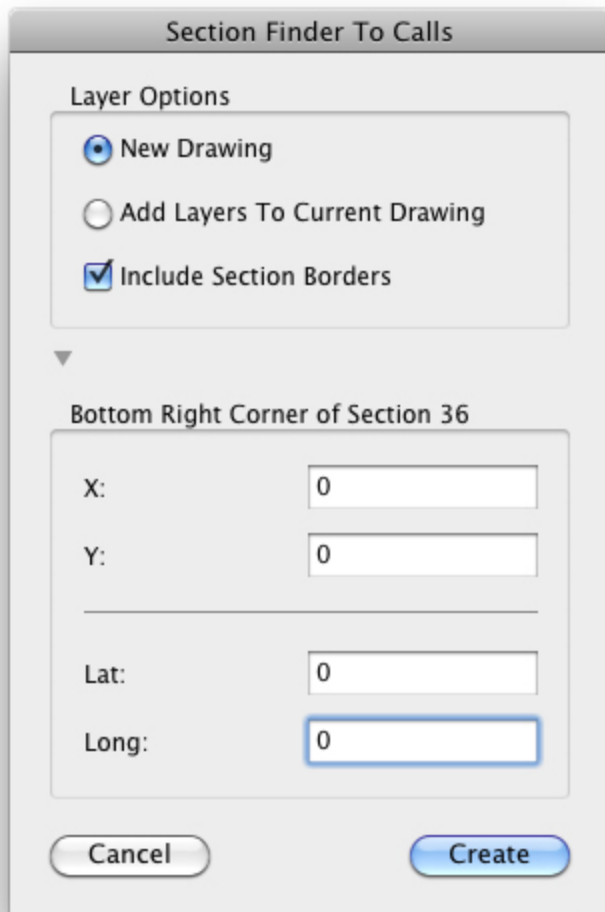
*Save Picture as Background:* This menu option allows you to set the current drawing's background picture to the current section drawing.

*Print:* This menu option will print the current section.

*Create New Layer From Selected Aliquot Part:* This menu option will create a series of calls in the current drawing that represent the selected section call.

*New Drawing from Current Section:* This menu option will create a new drawing containing calls for each section part. It will also use the section picture for the drawing's background.

*Calls from Sections 1-36:* This menu option will create metes and bounds calls for all 36 sections. The "unused" section will not be included.



The dialog box is titled "Section Finder To Calls". It contains a "Layer Options" section with three radio buttons: "New Drawing" (selected), "Add Layers To Current Drawing", and a checked checkbox "Include Section Borders". Below this is a section titled "Bottom Right Corner of Section 36" with four input fields: "X:" (0), "Y:" (0), "Lat:" (0), and "Long:" (0). The "Long:" field is currently selected with a blue border. At the bottom are "Cancel" and "Create" buttons.

Layer Options	
<input checked="" type="radio"/>	New Drawing
<input type="radio"/>	Add Layers To Current Drawing
<input checked="" type="checkbox"/>	Include Section Borders

▼

Bottom Right Corner of Section 36	
X:	0
Y:	0
<hr/>	
Lat:	0
Long:	0

Cancel Create

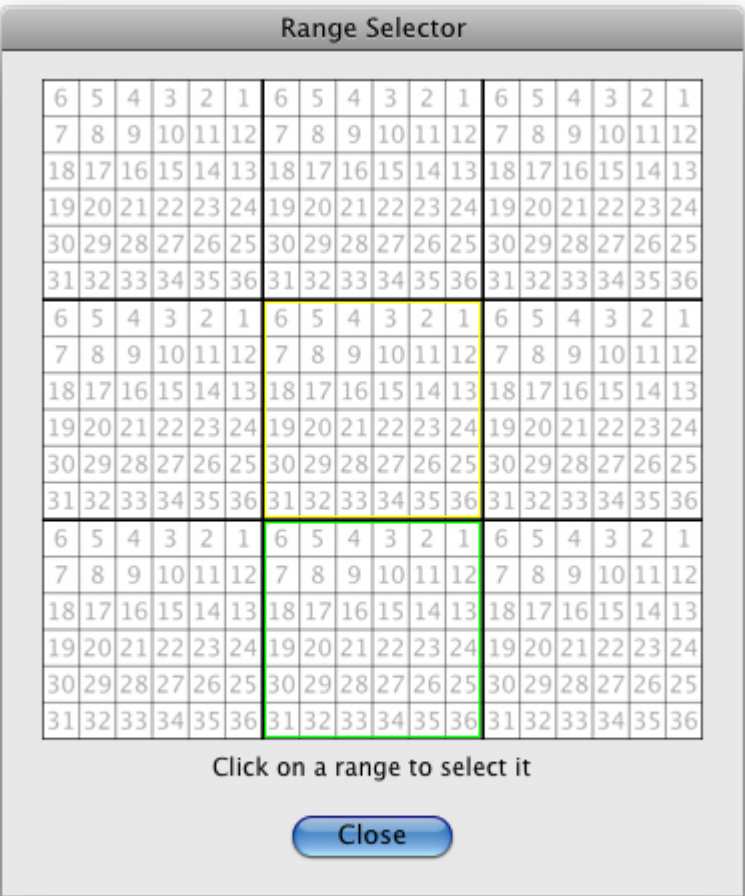
Calculate

*Area of Section:* This menu will calculate the area of the drawn section.

*Area From All Sections:* This menu will calculate the drawn area of all of the sections in the selected range.

View

*View Ranges:* The software supports up to 9 ranges. Choosing this option allows you to select which range to work with.



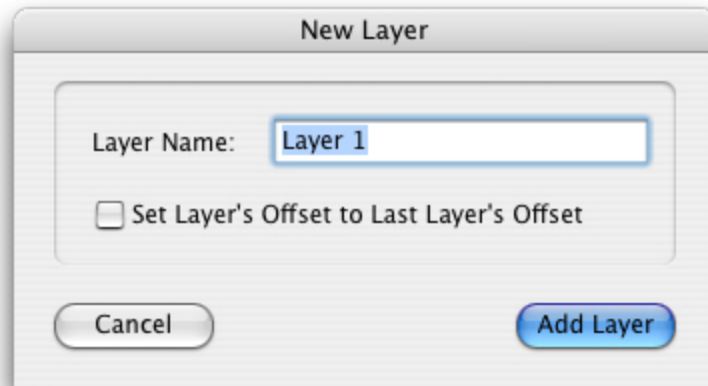
*View Current Range Sections:* This option shows you all of the selections in the currently selected range. This is the same as choosing View All from the section popup menu.

## Layers

### Layers Menu:

#### Add New Layer:

Use this menu to create a new layer. You will be presented with a form allowing you to name the new layer. The new layer will become the drawings current layer.

A screenshot of a 'New Layer' dialog box. The dialog has a title bar that says 'New Layer'. Inside, there is a text input field labeled 'Layer Name:' with the text 'Layer 1' entered. Below the input field is a checkbox labeled 'Set Layer's Offset to Last Layer's Offset', which is currently unchecked. At the bottom of the dialog, there are two buttons: 'Cancel' on the left and 'Add Layer' on the right. The 'Add Layer' button is highlighted with a blue gradient.

New Layer

Layer Name:

☐ Set Layer's Offset to Last Layer's Offset

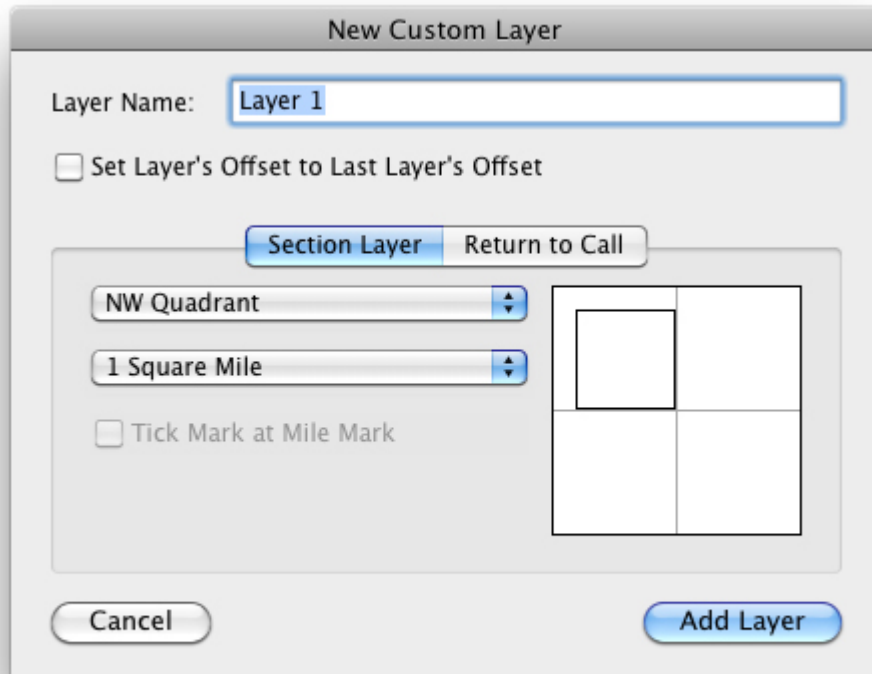
Cancel Add Layer

Checking the "Set Layer's Offset to Last Layer's Offset" checkbox will cause the new layer to have the same offset as the last layer in the layer list.

## Add New Custom Layer:

### *Section Layer*

This option is a quick way to create a 1 to 5 mile square section. If you pick a size larger than 1 mile, you'll be given the option to include tick marks at the mile marks. You can also choose which quadrant to create the section in. This allows you to choose if the section is drawn north/south and east/west of the drawing's origin. Creating a Section Layer requires that the drawing's origin be set to something other than Auto-Center. The recommended origin setting is Center of Screen.



The dialog box is titled "New Custom Layer". It contains a text field for "Layer Name" with the value "Layer 1". Below this is a checkbox labeled "Set Layer's Offset to Last Layer's Offset". There are two tabs: "Section Layer" (selected) and "Return to Call". Under the "Section Layer" tab, there is a dropdown menu for "NW Quadrant", a dropdown menu for "1 Square Mile", and a checkbox labeled "Tick Mark at Mile Mark". To the right of these controls is a diagram of a square divided into four quadrants, with the top-left quadrant highlighted. At the bottom are "Cancel" and "Add Layer" buttons.

Layer Name:

☐ Set Layer's Offset to Last Layer's Offset

**Section Layer** Return to Call

NW Quadrant

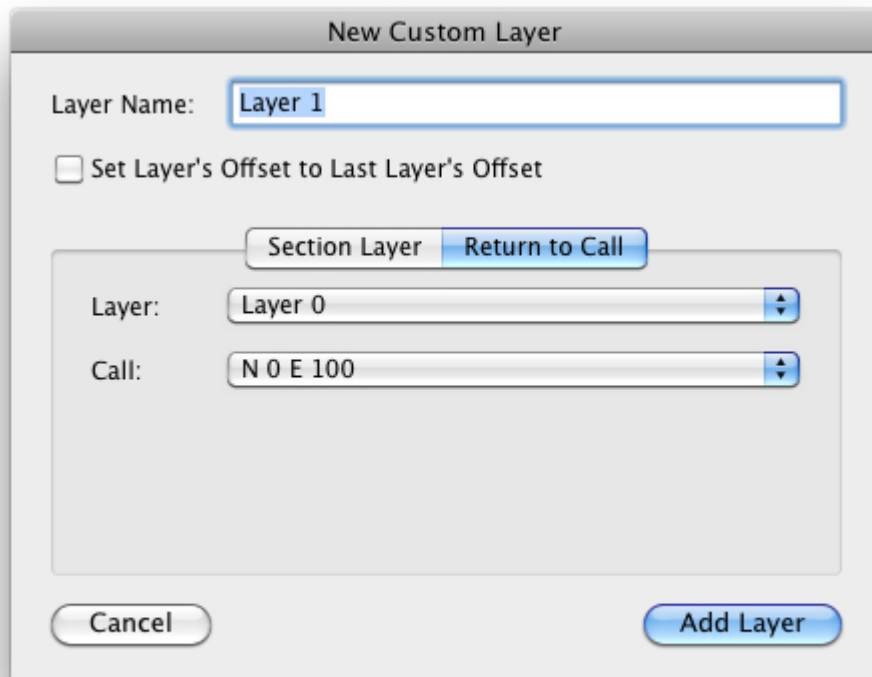
1 Square Mile

☐ Tick Mark at Mile Mark

Cancel Add Layer

### ***Return to Call***

Creating a Return to Call layer will create a new layer that starts at the endpoint of the layer and call that is chosen. It will automatically create a series of invisible calls, from the drawing's origin, to the chosen call's endpoint. This makes it easy to return to a common point when multiple tracts start at the same reference point. Creating a Return to Call layer requires that the drawing's origin be set to something other than Auto-Center. The recommended origin setting is Center of Screen. This method is the recommended way to return to a call, however, in some cases the "[Return to Call](#)" call option may also be viable.

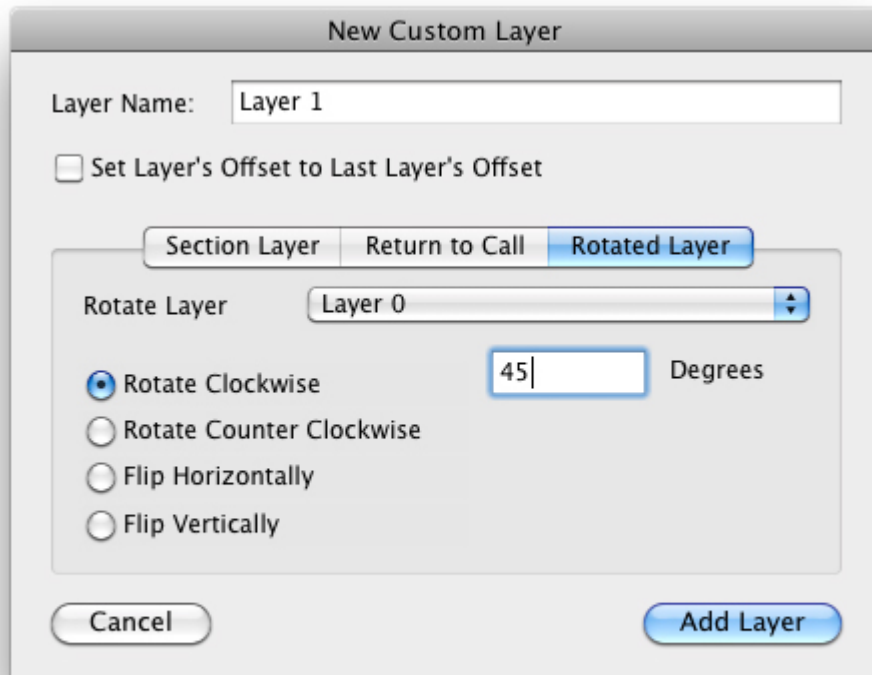


The image shows a software dialog box titled "New Custom Layer". It contains the following elements:

- Layer Name:** A text input field containing "Layer 1".
- Offset Option:** A checkbox labeled "Set Layer's Offset to Last Layer's Offset" which is currently unchecked.
- Mode Selection:** Two buttons, "Section Layer" and "Return to Call". The "Return to Call" button is highlighted with a blue background.
- Layer Selection:** A dropdown menu labeled "Layer:" showing "Layer 0".
- Call Selection:** A dropdown menu labeled "Call:" showing "N 0 E 100".
- Buttons:** "Cancel" and "Add Layer" buttons at the bottom.

### ***Section Layer***

This option will create a new layer by rotating or flipping the selected layer. This will create a new set of calls for the new layer. The recommended origin setting is Center of Screen.



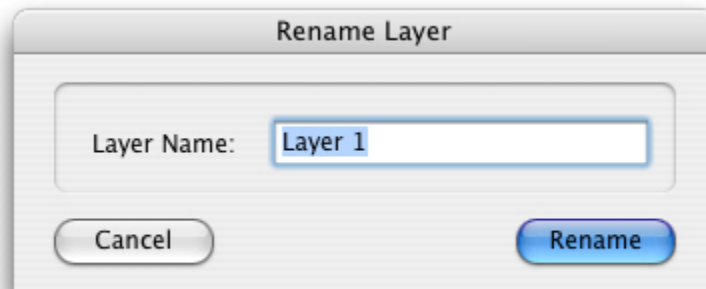
The 'New Custom Layer' dialog box features a title bar and a 'Layer Name' field containing 'Layer 1'. Below this is an unchecked checkbox labeled 'Set Layer's Offset to Last Layer's Offset'. A tabbed interface contains three tabs: 'Section Layer', 'Return to Call', and 'Rotated Layer', with the latter being selected. Under the 'Rotated Layer' tab, there is a 'Rotate Layer' dropdown menu showing 'Layer 0'. To the right of this menu is a text input field with '45' and the label 'Degrees'. Four radio buttons are listed: 'Rotate Clockwise' (selected), 'Rotate Counter Clockwise', 'Flip Horizontally', and 'Flip Vertically'. At the bottom are 'Cancel' and 'Add Layer' buttons.

### **Delete Current Layer:**

This menu will prompt you to delete the current layer.

### **Rename Current Layer:**

This menu will bring up a form that will let you rename the current layer. Enter a new name and press the Rename button.



The 'Rename Layer' dialog box has a title bar and a 'Layer Name' field containing 'Layer 1'. At the bottom are 'Cancel' and 'Rename' buttons.

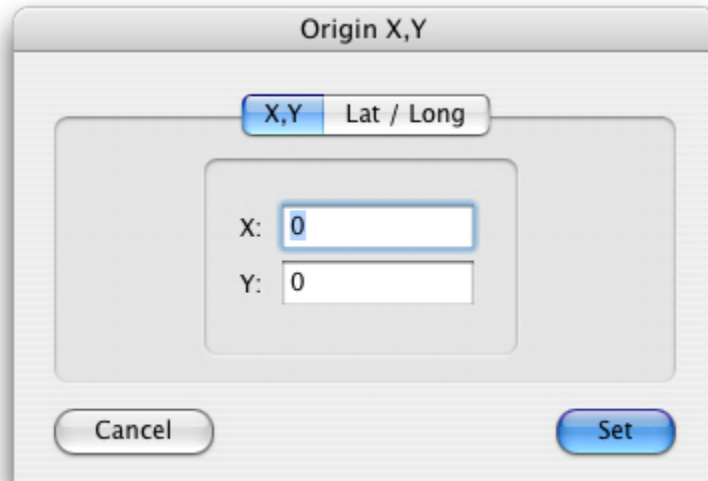
### **Duplicate Current Layer:**

This menu will duplicate the current layer. The new layer will be placed in the center of the drawing window. The new layer will become the current layer.



**Set Current Layer Origin X,Y:**

Choosing this option will bring up the following form. It can be used to set the X,Y coordinates for the layer's origin. This has no visual effect on the drawing, but will be used when showing/saving the point coordinates, exporting the current layer as a DXF file and when viewing the endpoint X,Y. This setting also has no effect on the Offset or Origin functions.

A dialog box titled "Origin X,Y" with a light gray background. At the top, there are two tabs: "X,Y" (which is selected and highlighted in blue) and "Lat / Long". Below the tabs is a large, light gray rectangular area. Inside this area, there are two input fields. The first is labeled "X:" and contains the number "0". The second is labeled "Y:" and also contains the number "0". At the bottom of the dialog box, there are two buttons: "Cancel" on the left and "Set" on the right. The "Set" button is highlighted in blue.

Enter the X and Y coordinates and press the Set button.

You can also view origin X,Y for all layers at once by selecting View All Layers from the Options menu. Doing so will bring up the following form:

View All Layers POB X,Y

Layer	X	Y
Our Plot	0	0
Road #1	0	0
Road #1 to Point A	0	0
Road #1 to Point B	0	0
Road #1 to Point C	0	0
Road #1 to Point D	0	0

Cancel

Save and Close

The X, Y values can be edited on this form by clicking in any X, Y cell and entering a new value.

**Set Current Layer POB Lat/Long:**

Choosing this option will bring up the following form. It can be used to set the latitude and longitude coordinates for the POB. This has no visual effect on the drawing, but will be used by the various other Lat/Long functions as a starting point offset.

POB Lat/Long

X,Y

Lat / Long

Lat:

0

0 N

Long:

0

0 E

Cancel

Save and Close

Enter the latitude and longitude coordinates and press the Set button.

You can also set the POB's lat/long based on another endpoint's lat/long. To do so, click on the menu popup triangle and choose Find POB Lat/Long From Endpoint Lat/Long from the popup menu. This will bring up the Endpoint Lat/Long to POB Lat/Long from.

Endpoint Lat/Long to POB Lat/Long

Endpoint:

1

Lat:

Long:

Cancel

Find POB Lat/Long

Choose the endpoint that you know the lat/long for from the endpoint menu and enter its lat/long. Press the Find POB Lat/Long button. This will close the current form and populate the POB Lat/Long form with the POB's lat/long values.

You can also view origin Lat/Long for all layers at once by selecting View All Layers from the Options menu. Doing so will bring up the following form:

View All Layers POB Lat / Long

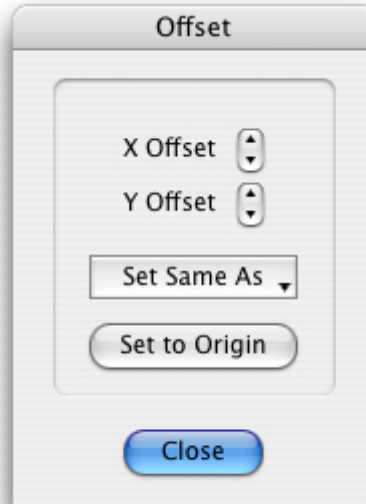
Layer	X	Y
Layer 0	45.	-85.
Layer 0 copy	45.	-85.

Cancel

Save and Close

### Offset Current Layer

- \* Each layer can be moved around by using the mouse.
- \* Holding down the shift key while dragging a layer allows you to drag all of the unlocked layers at once.
- \* Holding down the shift and control keys will bring up scrollbars that can be used to move all layers, including locked layers, at the same time. This allows you to move all of the layers even if there is no layer visible to grab. This can be useful for "scrolling" around the drawing while the scale setting is zoomed in.



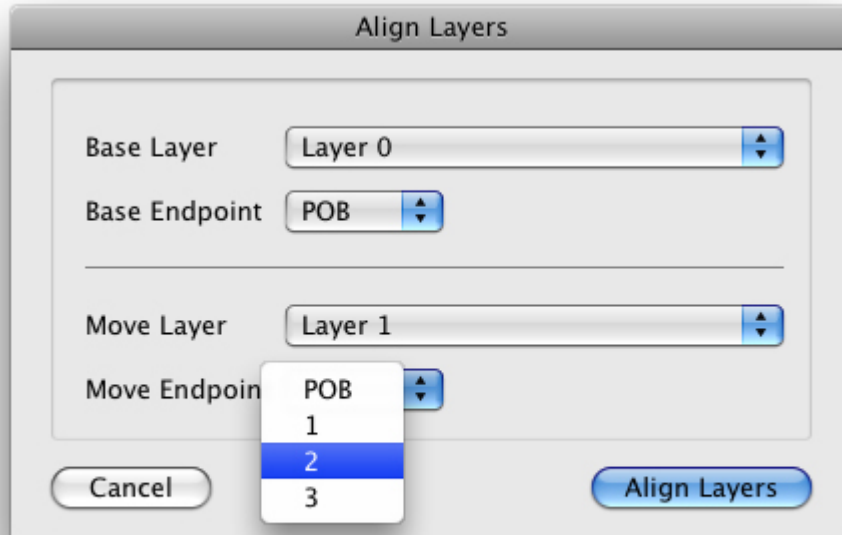
The Offset window can be used to nudge a layer 1 pixel at a time or it can set a layers offset to the same offset as another layer. It can also return a layer to its point of origin. The origin setting can be set in the Drawing Options.

### Set All Layers to Origin:

This menu option will return all of the unlocked layers offsets back to zero.

### Align Layers by Endpoints:

This form will allow you to align layers via their endpoints. Note: This option is not available for drawing's with their origin set to Auto-Center.



The image shows a dialog box titled "Align Layers". It contains four dropdown menus arranged in two rows. The first row has "Base Layer" set to "Layer 0" and "Base Endpoint" set to "POB". The second row has "Move Layer" set to "Layer 1" and "Move Endpoint" set to "POB". A dropdown menu is open for "Move Endpoint", showing options "POB", "1", "2", and "3", with "2" selected. At the bottom left is a "Cancel" button and at the bottom right is an "Align Layers" button.

Field	Value
Base Layer	Layer 0
Base Endpoint	POB
Move Layer	Layer 1
Move Endpoint	POB (dropdown open: 1, 2, 3)

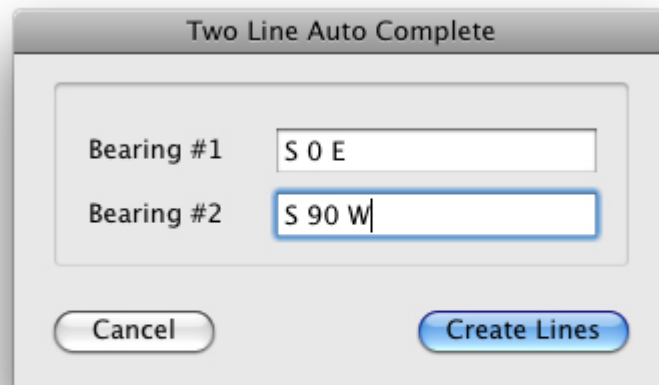
Select a base layer. This layer will not move. When you select a layer, it's endpoints will be numbered on the main drawing. Select a base endpoint. This is the endpoint that the 'move layer' will move to. Select a move layer. This is the layer that will move to the selected base endpoint. Select the move endpoint that you want to line up with the base endpoint. Press the Align Layers button.

### Current Layer Closure Tools:

#### Convert Auto Completion to Call

This command is similar to the Auto Complete layer option. But instead of just drawing the completing line, this option will create a new call that will close the plot and append it to the call list.

#### Auto Complete Two Calls



A dialog box titled "Two Line Auto Complete" with a light gray background and a dark gray title bar. It contains two text input fields. The first field is labeled "Bearing #1" and contains the text "S 0 E". The second field is labeled "Bearing #2" and contains the text "S 90 W". Below the input fields are two buttons: "Cancel" on the left and "Create Lines" on the right. The "Create Lines" button is highlighted with a blue border and a blue gradient.

Label	Value
Bearing #1	S 0 E
Bearing #2	S 90 W

Buttons: Cancel, Create Lines

This form allows you to enter in bearings for the last two lines, even if the lengths of the last two lines are unknown. This can be useful when dividing up a plot.

## Adjust Closing Error

Minimize Closure Gap

This survey closes within 11.18034 feet with an angle of 63.434949 degrees.  
Closing Call: S 63:26:6 W 11.18  
Closure/Perimeter Ratio: 1/34

Minimize Gap by Adjusting Length of Call:

N 0 E 100

N 90 E 100

S 0 E 95

N 90 W 90

Interval:

1 Foot

Close

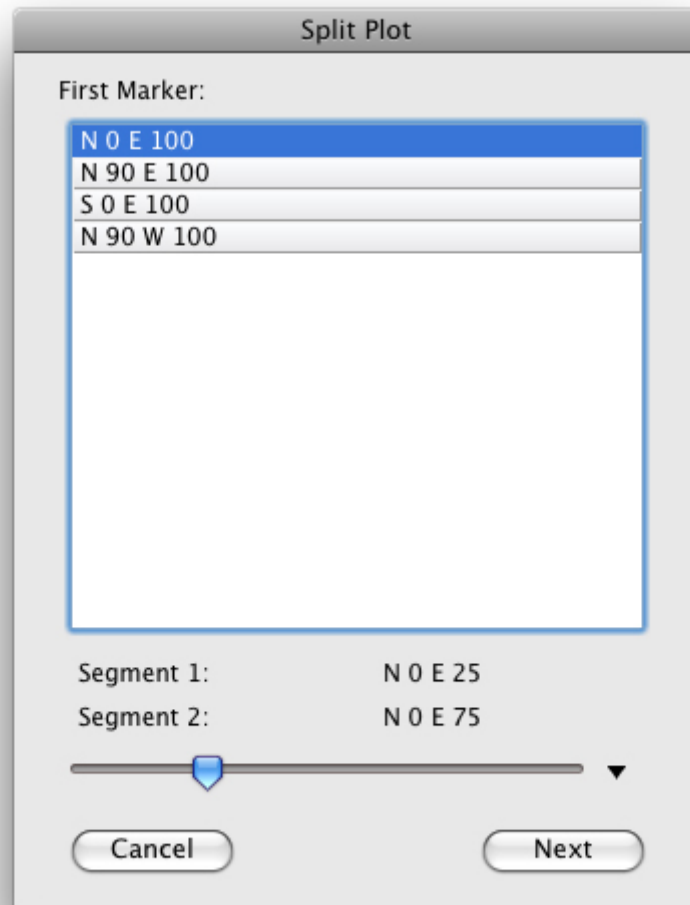
Adjust Line

This form allows you to minimize a closure error by adjust the length of a line until the closure gap is at its smallest.

Select the line that you want to adjust. Select an interval. The interval is how large or small of increments the software will use to close the gap. Then press the Adjust Line button.

## Split Current Layer

You can use this feature to turn a single layer into two plots.  
First, choose the call where you want to start the split.



The dialog box is titled "Split Plot". It contains a section labeled "First Marker:" with a list box containing four items: "N 0 E 100", "N 90 E 100", "S 0 E 100", and "N 90 W 100". The first item is selected. Below the list box, there are two labels: "Segment 1:" and "Segment 2:". To the right of "Segment 1:" is the text "N 0 E 25". To the right of "Segment 2:" is the text "N 0 E 75". Below these labels is a horizontal slider with a blue shield-shaped handle. To the right of the slider is a small black triangle pointing downwards. At the bottom of the dialog box are two buttons: "Cancel" on the left and "Next" on the right.

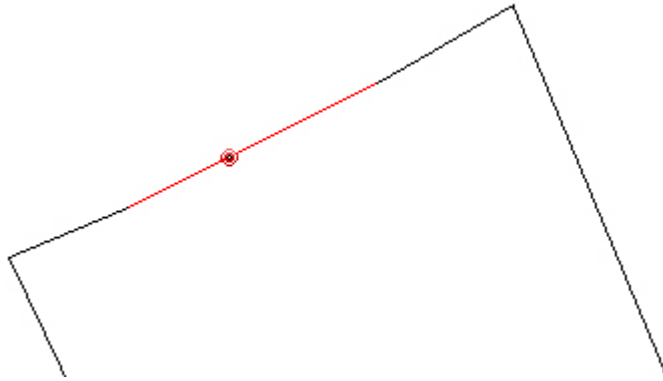
First Marker:	
N 0 E 100	
N 90 E 100	
S 0 E 100	
N 90 W 100	

Segment 1: N 0 E 25  
Segment 2: N 0 E 75

Cancel Next

Next, move the slider to the desired point in the line where you would like the split to occur. A red bull's-eye will appear on the main drawing to show you where the line will be split. You can also use the ▼popup menu arrow to set the line lengths to the desired values. Press the Next button to choose the ending marker for the split.





Now choose the call for the other end of the split.

Split Plot

Last Marker:

N 0 E 100
N 90 E 100
S 0 E 100
N 90 W 100

☐ Find Nearest Half

Slider: [ ] ▼

Square Feet [ ]

Plot #1: 2,500. sq. ft.  
Plot #2: 7,500. sq. ft.

---

Segment 1: S 0 E 75  
Segment 2: S 0 E 25  
Split Line: N 90 W 100.0

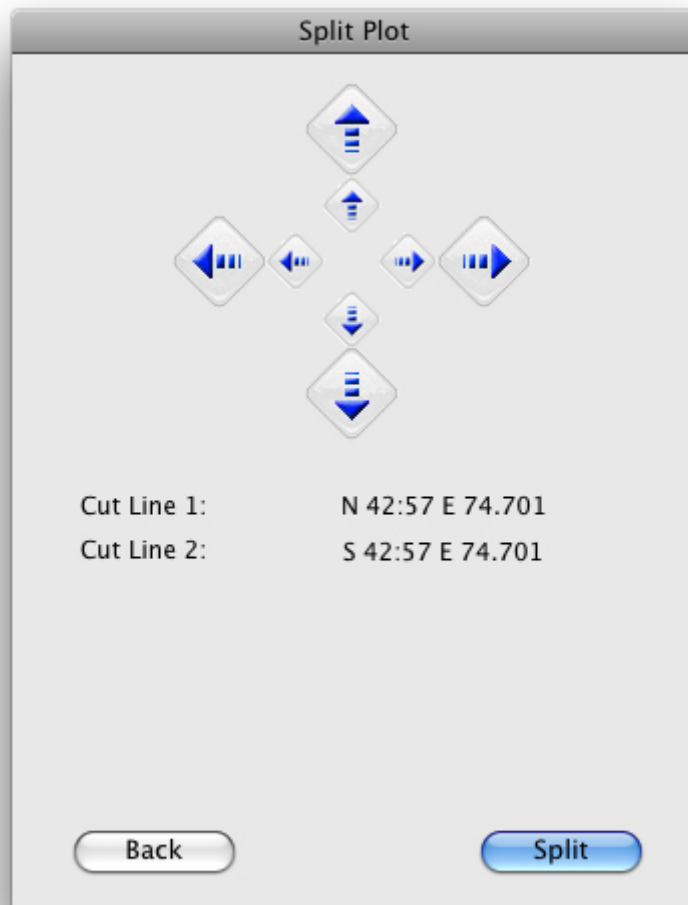
Back 3rd Point Split

Move the slider to choose the second split point. Or, if you select the Find Nearest Half checkbox, the program will find the point on the 2nd line where the two new plots are closest to having the same area. You can also use the ▼popup menu arrow to enter in precise values.

You can view the new plots area either in square feet or in acres.

Press the Split button to create your two new plots. The two new layers will be added to your drawing if you have the Pro version, or two new windows will be created if you have the Basic version.

If you press the 3rd Point button instead of pressing the Split button, the software will create a 3rd point at the center point of the new cut line. You can then create 2 lines for the cut line instead of just one line.



Use the large arrows to move the 3rd point in 1 foot increments and the small arrows to move the point in 1 inch increments. The 3rd point will not be allowed to move outside of the plot's boundary.

**Set Non-Current Layers Invisible** will uncheck each layer's visibility checkbox except for the current layer. This will cause all of the layers, other than the current layer to become invisible.

**Set All Layers Visible** will check each layer's visibility checkbox. This will cause all of the layers to become visible.

**Manage Layer Visibility.** Choosing this menu will bring up the Layer Visibility form where you can set all of the layers visibility in one place.

Layer Visibility

	Layer Name
<input checked="" type="checkbox"/>	Lot A
<input checked="" type="checkbox"/>	Lot B
<input checked="" type="checkbox"/>	Lot C
<input checked="" type="checkbox"/>	Lot E
<input checked="" type="checkbox"/>	Lot D
<input checked="" type="checkbox"/>	Lot F

Check All

Clear All

Save and Close

Check or clear each checkbox to set that layer's visibility.

Press the Check All button to make all layers visible.

Press the Clear All button to make all layers invisible.

**Lock Non-Current Layers.** Choosing this option will mark all of the layers, other than the current layer, as locked.

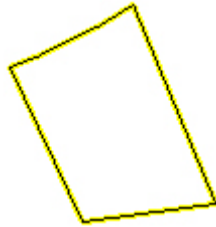
**Unlock All Layers.** Choosing this option will mark all of the layers, including the current layer, as unlocked.

**Hide Non-Current Layers.** When this menu option is checked, selecting a layer from the layer popup menu will cause all of the other layers to be hidden. This makes it so that only one layer is visible at a time. The other layer's visibility setting is not effected.

**Hide Non-Current Layer Endpoints.** When this menu option is checked, only the current layer's endpoint data is shown. This checkbox does not affect the other layer's endpoint settings.

**Highlight Current Layer:**

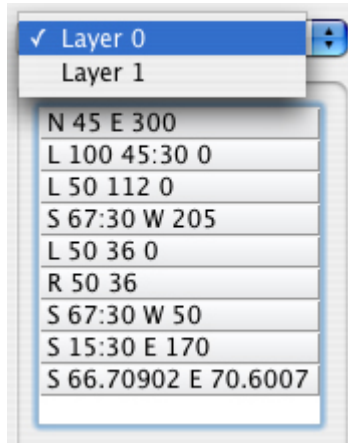
This option will cause the current layer to be drawn with a yellow highlight around it.



You can also temporarily enable layer highlighting by holding down the shift key.

### Selecting the Current Layer:

To select a layer, choose it from the layer selection menu on the main window.



When you select a new layer, it will become the current layer. All of the layer's calls will be shown in the call list and all of the layer's options will be set in the layer options area.

You can also select a current layer by right clicking on the layer itself or the layers floating call list (if visible) in the drawing and choosing the Make Current Layer option.

### Edit Menu Layer Options:

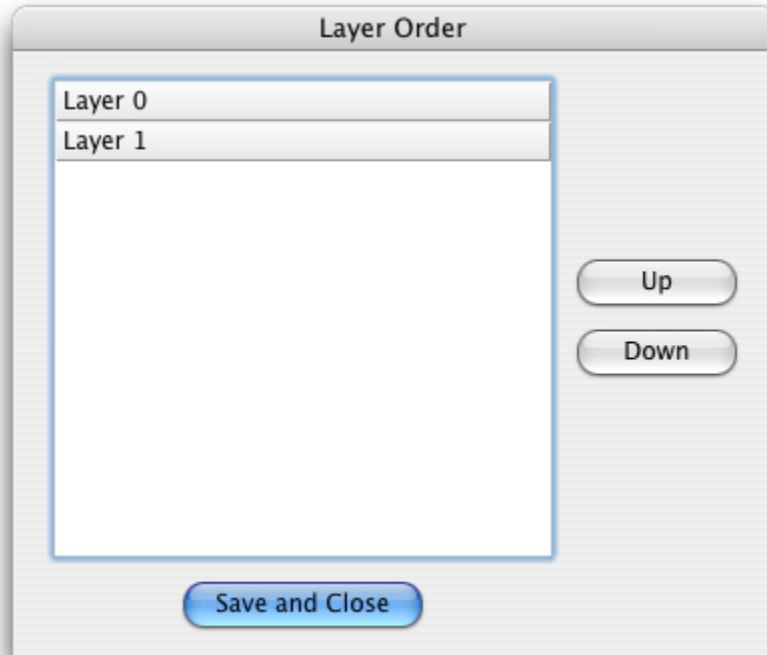
- **Copy Drawing as Picture** - This will place a copy of the current screen picture onto the clipboard.
- **Copy Current Layer's Description as Text** - This will create a plot description for the current layer. It will show the description on the screen in a popup window as well as placing the description text onto the clipboard.
- **Copy Current Calls** - This will copy the calls of the current layer onto the clipboard.
- **Paste Calls as New Layer** - This will allow you to create a new layer and paste the copied calls into that new layer.
- **Paste Calls into Current Layer** - This will paste a set of copied calls into the current layer. The calls will be added at the insertion point.

Holding down the Shift key while selecting the Edit menu will change this option to Paste Clipboard Text as Call List. This will take the text on the clipboard and paste it as a list of calls. Each call must already be formatted as a valid call. This is a quick way to paste calls from another text document that had been previously copied and pasted from Metes and Bounds.

- **Clear Current Calls** - This will clear the current layer's call list. This is the equivalent of selecting each call and pressing the Remove button.

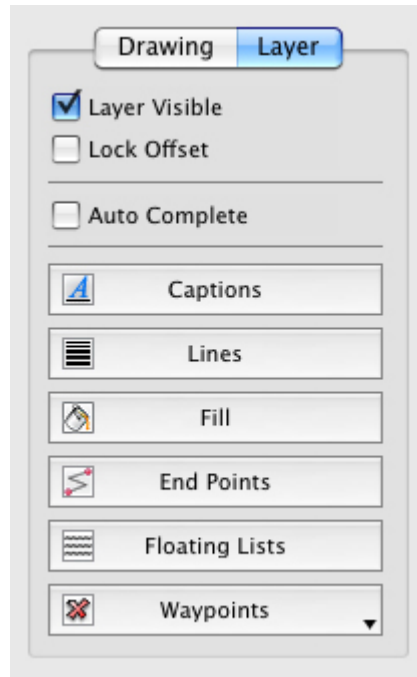
**Layer Order:**

You can change the order of the layers in the layer popup menu by right-clicking on the layer popup menu and choosing Change Layer Order. Changing the order will change the order in which the layers are rendered on the screen. The first layer in the list will be drawn first and the last layer in the list will be drawn last.



To change a layer's order, select the layer in the list and press either the Up button or the Down button. Press the Save and Close button to commit any changes and to close the form.

## ***Layer Options***



The Layer Options dialog box is shown with the 'Layer' tab selected. It contains several checkboxes and a list of layer types. The 'Layer Visible' checkbox is checked, while 'Lock Offset' and 'Auto Complete' are unchecked. Below these are buttons for 'Captions', 'Lines', 'Fill', 'End Points', 'Floating Lists', and 'Waypoints'.

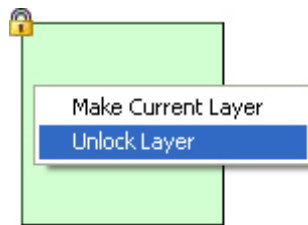
Option	Status
Layer Visible	Checked
Lock Offset	Unchecked
Auto Complete	Unchecked
Captions	Button
Lines	Button
Fill	Button
End Points	Button
Floating Lists	Button
Waypoints	Button with dropdown arrow

### **Layer Visible**

This will toggle the layer's visibility.

### **Lock Offset**

When this box is checked, the layer's offset will be locked. This means that it cannot be moved, either by the mouse or by the offset form. If a layer is locked, it will be shown with a lock icon in the main drawing. This setting can also be set/cleared by right clicking on a layer and choosing Lock/Unlock Layer from the popup menu.

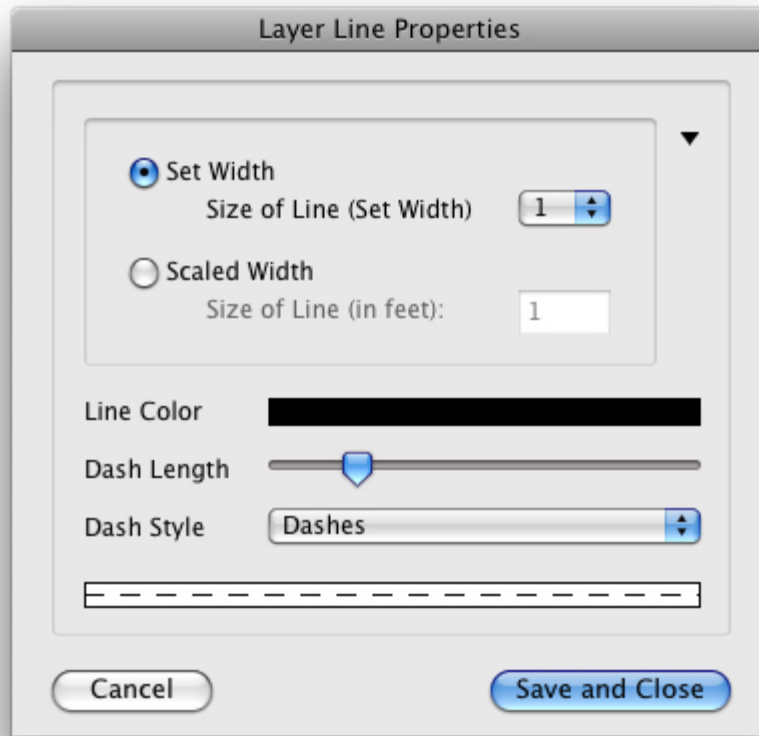


### **Auto Complete**

If a plot's description does not contain a closing line, checking this box will draw the completing line.

## Lines

Pressing the Lines button will bring up the Layer Line Properties form.



The image shows a 'Layer Line Properties' dialog box. It has a title bar at the top. Inside, there are two radio buttons: 'Set Width' (selected) and 'Scaled Width'. The 'Set Width' option has a 'Size of Line (Set Width)' spinner set to 1. The 'Scaled Width' option has a 'Size of Line (in feet):' text box set to 1. Below these are three controls: 'Line Color' with a black color bar, 'Dash Length' with a slider, and 'Dash Style' with a dropdown menu set to 'Dashes'. At the bottom are 'Cancel' and 'Save and Close' buttons. A preview of a dashed line is shown at the bottom of the main content area.

### Set Width:

This option will always draw the layer lines with a pen width of 1, 2 or 3.

### Scaled Width:

This option will draw the layer lines with a pen width that is scaled at the selected feet.

### Line Color:

Clicking on the colored bar will let you choose the color used to draw the layer's lines with.

### Dash Length:

Move the slider to change the dash length that the layer's calls will be drawn with.

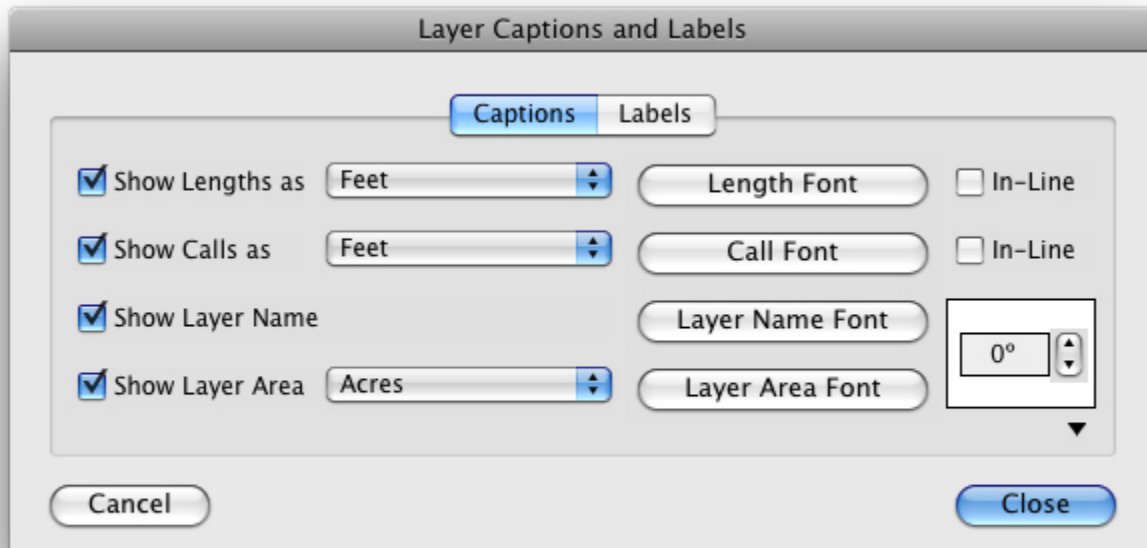
### Dash Style:

Choose an option from the popup menu to change the dash style. Style options are: Dashes, Dash Dash Dot, Dash Dot, Dot Dot Dash and Dots.



## Captions and Labels

Pressing this button will bring up the Layer Captions and Labels form.



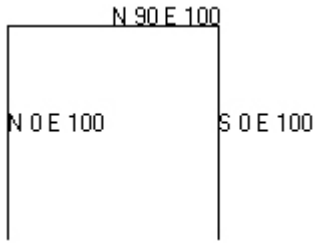
The dialog box is titled "Layer Captions and Labels" and has two tabs: "Captions" (selected) and "Labels". It contains four rows of settings, each with a checked checkbox, a unit dropdown menu, a font button, and an "In-Line" checkbox. The first row is for "Show Lengths as" with "Feet" selected, "Length Font" button, and "In-Line" unchecked. The second row is for "Show Calls as" with "Feet" selected, "Call Font" button, and "In-Line" unchecked. The third row is for "Show Layer Name" with "Layer Name Font" button and a rotation spinner set to 0°. The fourth row is for "Show Layer Area" with "Acres" selected, "Layer Area Font" button, and a rotation spinner. At the bottom are "Cancel" and "Close" buttons.

Option	Unit	Font Button	In-Line	Rotation
<input checked="" type="checkbox"/> Show Lengths as	Feet	Length Font	<input type="checkbox"/>	
<input checked="" type="checkbox"/> Show Calls as	Feet	Call Font	<input type="checkbox"/>	
<input checked="" type="checkbox"/> Show Layer Name		Layer Name Font		0°
<input checked="" type="checkbox"/> Show Layer Area	Acres	Layer Area Font		

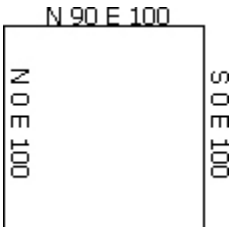
The **Show Lengths** option will draw the line lengths on the drawing. You can choose the unit of measurement from the measurement menu. If the In-Line checkbox is checked, then the lengths will be drawn in-line with the lines.

Pressing any of the Font buttons will bring up a font dialog that will allow you to choose the font style used for the chosen caption.

If the **Show Calls** checkbox is selected, the calls will be drawn on the lines. You can choose the unit of measurement from the measurement menu.



If the In-Line checkbox is checked, then the calls will be drawn in-line with the lines.



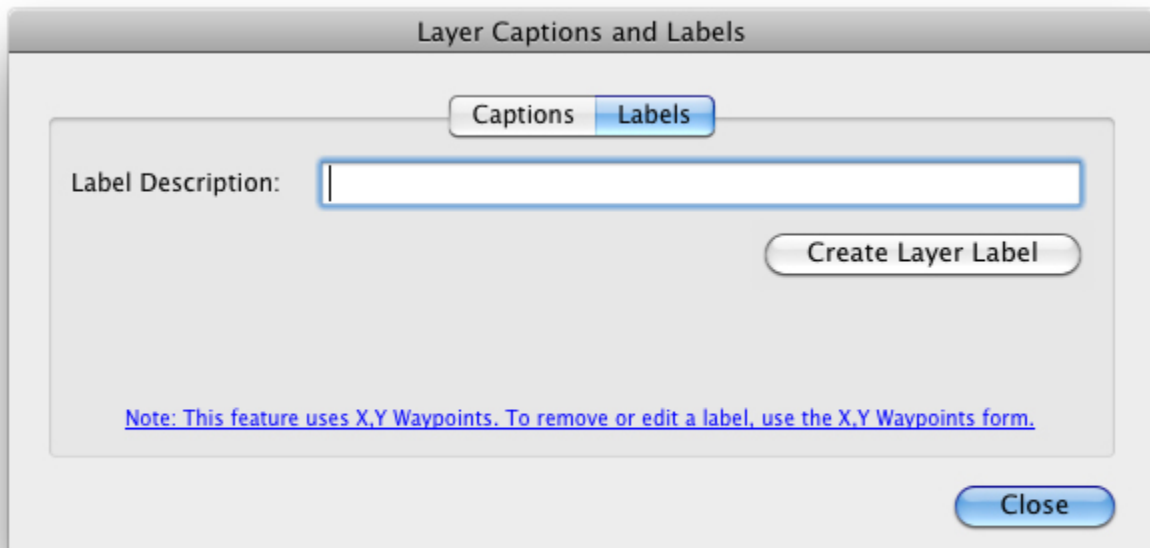
### Show Layer Name

This option will have the layer draw it's caption in the center of the plot. The angle of the layer name can be adjusted using the angle up/down buttons. The angle setting is shared with the Layer Area.

### Show Layer Area

This option will have the layer draw it's area in the center of the plot. It will be drawn below the layer's name if visible. You can choose to show the area in acres or square feet. The angle of the layer area can be adjusted using the angle up/down buttons. The angle setting is shared with the Layer Name.

## Labels



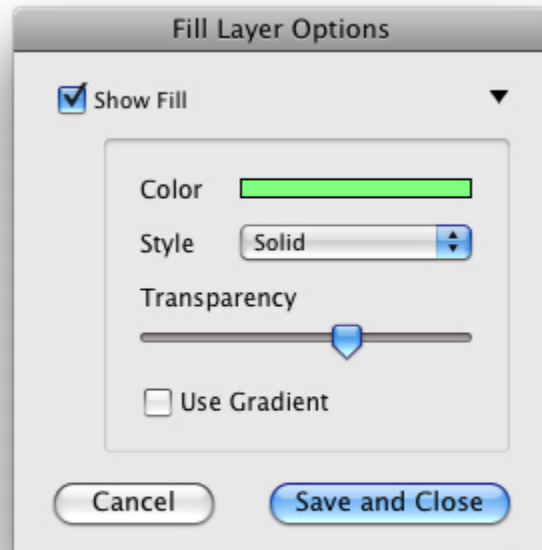
The screenshot shows a dialog box titled "Layer Captions and Labels". It has two tabs: "Captions" and "Labels", with "Labels" currently selected. Inside the dialog, there is a text input field labeled "Label Description:". To the right of the input field is a button labeled "Create Layer Label". Below the input field, there is a note: "Note: This feature uses X,Y Waypoints. To remove or edit a label, use the X,Y Waypoints form." At the bottom right of the dialog is a "Close" button.

The labels tab is a secondary interface to adding X,Y Waypoints. It is designed to make adding layer based labels easier than using the X,Y Waypoints form directly.

To add a label, enter the label's caption in the text box and press the Create Layer Label button. This will create an X,Y Waypoint with no icon and set the description field to show. All labels created this way will have their X,Y points set to 0,0.

## Fill Color

Pressing this button will bring up the Fill Layer Form.



When Show Fill is checked, the plot area will be filled with the selected color.

To select a different color, click on the color rectangle. A color selection window will appear. Choose the desired color.

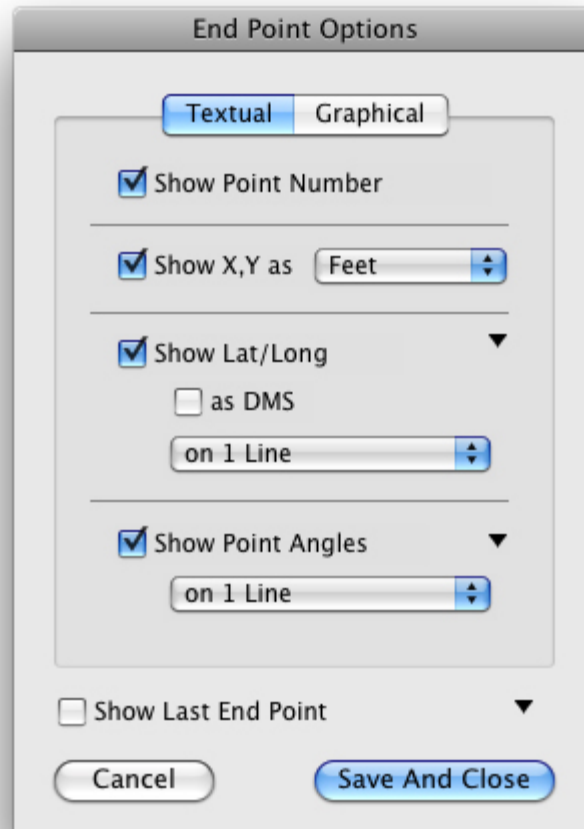
To change the fill pattern, choose a new pattern from the fill pattern popup menu.

The transparency of each layer's fill can be set using the Fill Transparency slider.

Checking the Use Gradient checkbox will cause the layer to be filled with a slight gradient instead a plain, solid color.

## End Points

Pressing this button will bring up the following form:



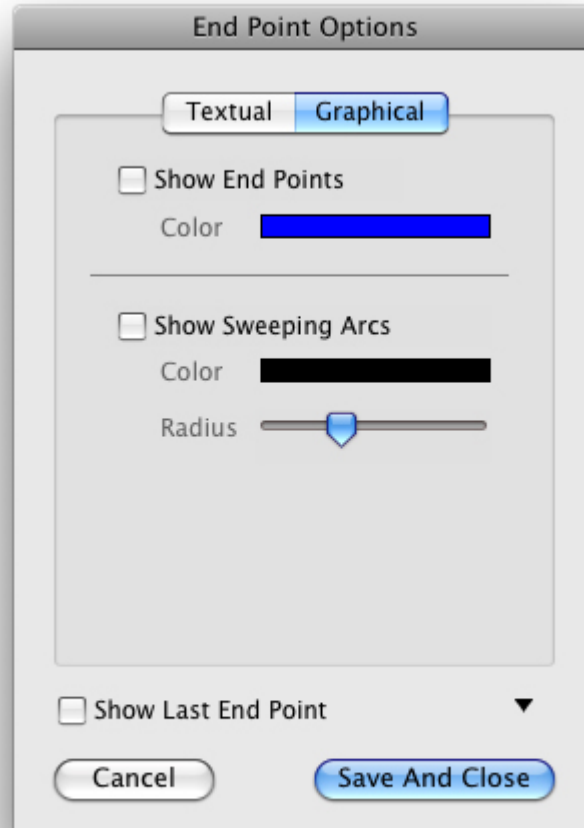
The image shows a dialog box titled "End Point Options". It has two tabs: "Textual" (selected) and "Graphical". Inside the dialog, there are four checked options, each with a horizontal line separator below it: "Show Point Number", "Show X,Y as" (with a dropdown menu set to "Feet"), "Show Lat/Long" (with a dropdown arrow), and "Show Point Angles" (with a dropdown arrow). Below "Show Lat/Long" is an unchecked checkbox labeled "as DMS" and a dropdown menu set to "on 1 Line". Below "Show Point Angles" is another dropdown menu set to "on 1 Line". At the bottom, there is an unchecked checkbox labeled "Show Last End Point" with a dropdown arrow. At the very bottom are two buttons: "Cancel" and "Save And Close".

Checking Show Point Number will draw the point number next to each end point.

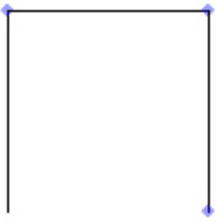
Checking Show X,Y will show the X,Y coordinates next to each end point. You can choose to show the X,Y coordinates in any of the supported units.

Checking Show Lat/Long will show the Lat/Long coordinates next to each end point. Checking as DMS will show the Lat/Long coordinates as Degrees/Minutes/Seconds instead of in decimal. The line popup menu allows you to choose if the lat/long values are on the same line or separate lines. You can create new X,Y Points that contain the Lat/Long values by choosing an option from the ▼ popup menu arrow.

Checking Show Point Angles will show the interior and exterior angles of the end points. The line popup menu allows you to choose if the angles are on the same line or separate lines or to show internal angles only. You can create new X,Y Points that contain the angle values by choosing an option from the ▼ popup menu arrow.



Checking Show End Points will highlight the end points of each line on the layer.



Click the color bar to change the color of this layer's end points.

Checking the Show Sweeping Arcs checkbox will cause sweeping arcs to be drawn at each corner. The size and color of the arcs can be adjusted using the color and radius settings.

Checking the Show Last End Point checkbox will cause the last end point to draw its information as well. This option is helpful for drawing endpoints when a plot closes and when it doesn't.

## Floating Lists

Pressing this button will bring up the Floating Lists form.

### Call List:



The image shows a software dialog box titled "Floating Lists". It has two tabs: "Call List" (which is selected and highlighted in blue) and "Endpoints". Inside the "Call List" tab, there is a checkbox labeled "Show Floating Call List" which is checked. Below this, there is a sub-container with three checkboxes: "Include Layer Name" (checked), "Shaded" (checked), and "Use Fill Color" (checked). To the right of these checkboxes is a "Set Font" button. Below the checkboxes is a dropdown menu labeled "Include Invisible Calls" with a blue arrow pointing down. At the bottom of the sub-container is a checkbox labeled "Show Call Lengths As" which is unchecked, followed by a dropdown menu currently set to "Feet". At the bottom of the dialog box are two buttons: "Cancel" on the left and "Save And Close" on the right.

Checking the Show Floating Call List option will draw a call list on the drawing. You can move the call list by clicking on it and dragging it to a new location. You can also make this call list's layer the current layer by right-clicking on it and choosing Make Current Layer from the popup menu. The popup menu will also allow you to hide the call list.

Checking the Include Layer Name checkbox will include the layer's name at the top of the call list.

The call lists font can be set by pressing the Set Font button.

Checking the Shaded checkbox will cause the call list to be drawn shaded instead of with a plain black box.

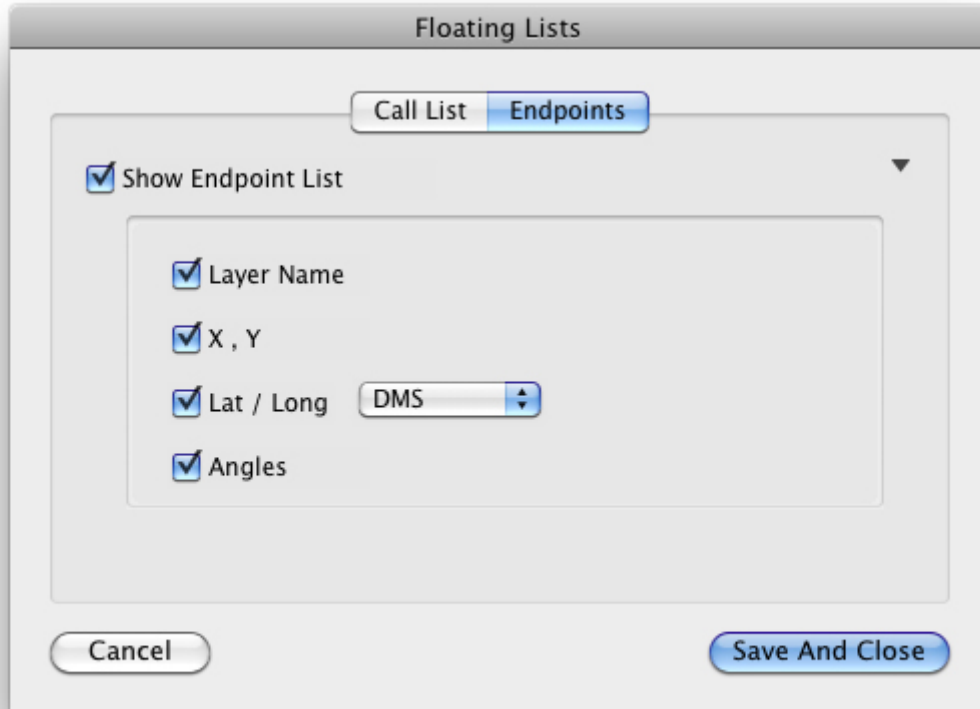
N 45 W 100
S 45 W 100
S 45 E 100
N 45 E 100

Checking the Use Fill Color checkbox will cause the call lists shading to be drawn in the same color as the layer's fill color. You can turn on layer's fill option by clicking on the ▼popup menu arrow.

You can control how invisible calls are displayed in the call list by choosing one of the options from the Invisible Calls popup menu.

Show Call Lengths As allows you to choose the unit of measurement used when showing the calls.

### Endpoint List:



Checking the Show Endpoint List box will draw a list of endpoints on the drawing. This list can include the layer's name as well as each endpoint's x,y, Lat/Long and angles. Lat/Long can be displayed as either DMS or decimals.

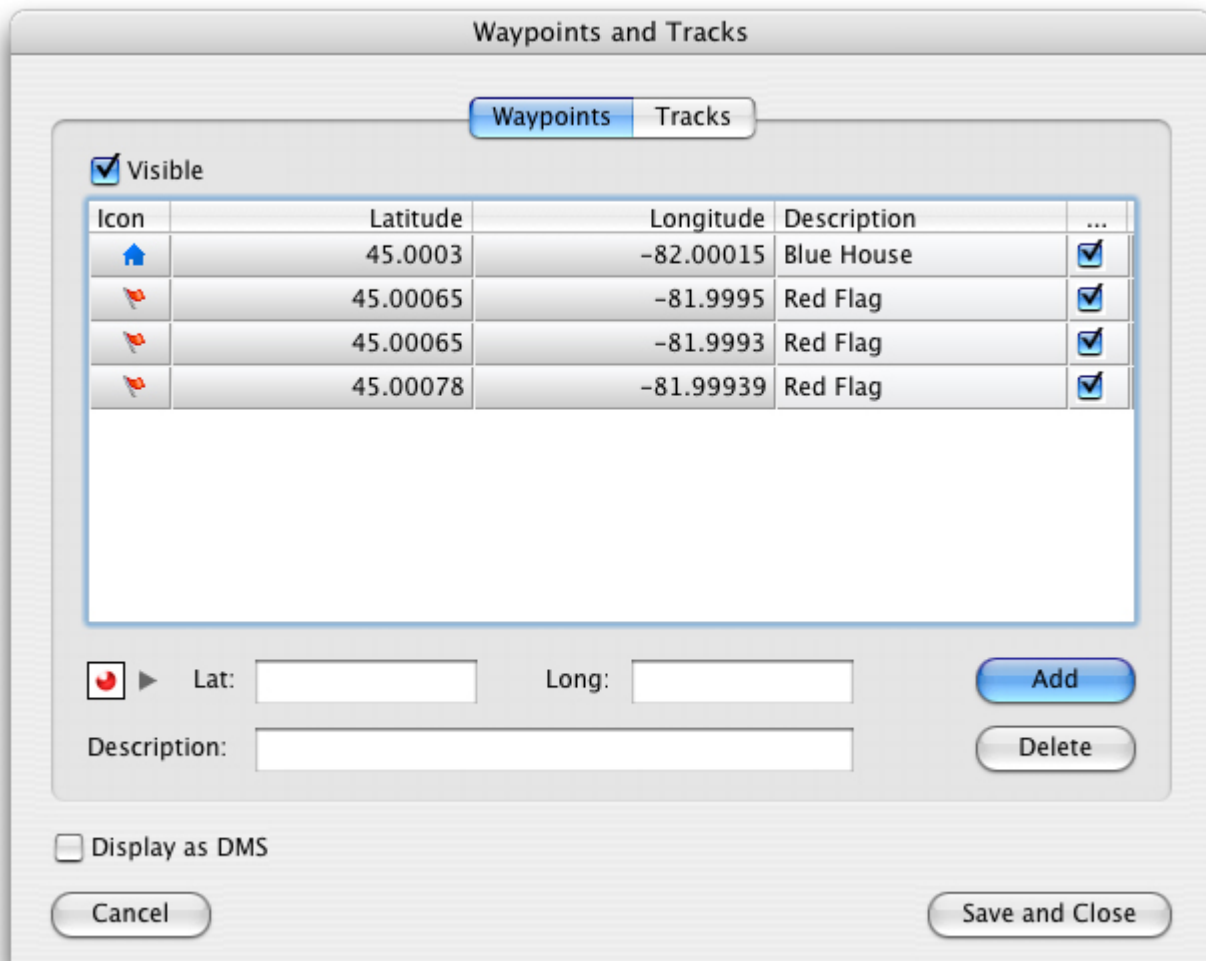


## Waypoints

Pressing this button will bring up a popup menu with the choice of entering Lat/Long based waypoints or X,Y based waypoints.





### Lat/ Long Waypoints

Choosing the Lat/Long popup menu will bring up the Waypoints and Tracks form. This form can be used to enter miscellaneous points and lines using latitude and longitude settings.



The dialog box titled "Waypoints and Tracks" has two tabs: "Waypoints" (selected) and "Tracks".

Under the "Waypoints" tab, there is a checkbox labeled "Visible" which is checked.

Icon	Latitude	Longitude	Description	...
	45.0003	-82.00015	Blue House	<input checked="" type="checkbox"/>
	45.00065	-81.9995	Red Flag	<input checked="" type="checkbox"/>
	45.00065	-81.9993	Red Flag	<input checked="" type="checkbox"/>
	45.00078	-81.99939	Red Flag	<input checked="" type="checkbox"/>

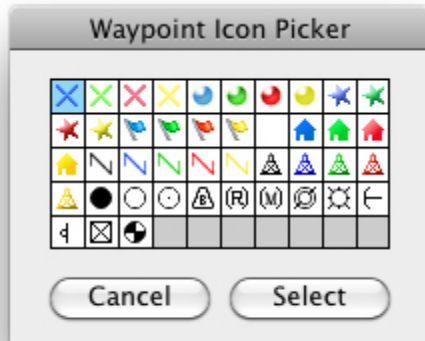
Below the table, there is a red flag icon with a right arrow, followed by input fields for "Lat:" and "Long:". To the right of these fields are two buttons: "Add" (blue) and "Delete" (grey). Below the "Lat:" and "Long:" fields is a "Description:" label followed by a text input field.

At the bottom left, there is a checkbox labeled "Display as DMS". At the bottom center are two buttons: "Cancel" and "Save and Close".

Enter the latitude and longitude coordinates into the appropriate fields. You can change the icon used by clicking on the icon and choosing a new icon from the icon picker form. You can enter an optional description as well (label placeholders are also supported). Press the Add button to add this point to the list. To edit a point, click on the appropriate cell and change the data accordingly. To delete a point, select it from the list and then press the Delete button. Checking the Display as DMS box will cause the coordinates to be displayed in Degree/Minute/Second form instead of decimal form. Latitude and Longitude values can be entered as either decimal or DMS values.

Right-Clicking on a line will present you with a menu for copying a point to either Point 1 or Point 2 of the line tab. You can also delete the point by selecting Delete Point from the menu.

Clicking on the icon column will bring up a form allowing you to change the icon used to mark the lat/long waypoint.



Checking the checkbox for a waypoint will show that waypoint's description on the drawing.

Use the Visible checkbox to turn on/off the visibility of all of the waypoints.

### **Importing Waypoints**

Waypoints can be imported from a GPX file by choosing Import GPX File as Waypoints from the File menu. Select your GPX file from the file dialog box. The latitude, longitude and description for each waypoint will be imported.

### **Exporting Waypoints**

Waypoints can be exported to a GPX file by choosing the Export Waypoints as GPX menu from the File menu.

### **Create Points From Endpoints**

This will create lat/long waypoints for each endpoint of the current layer.

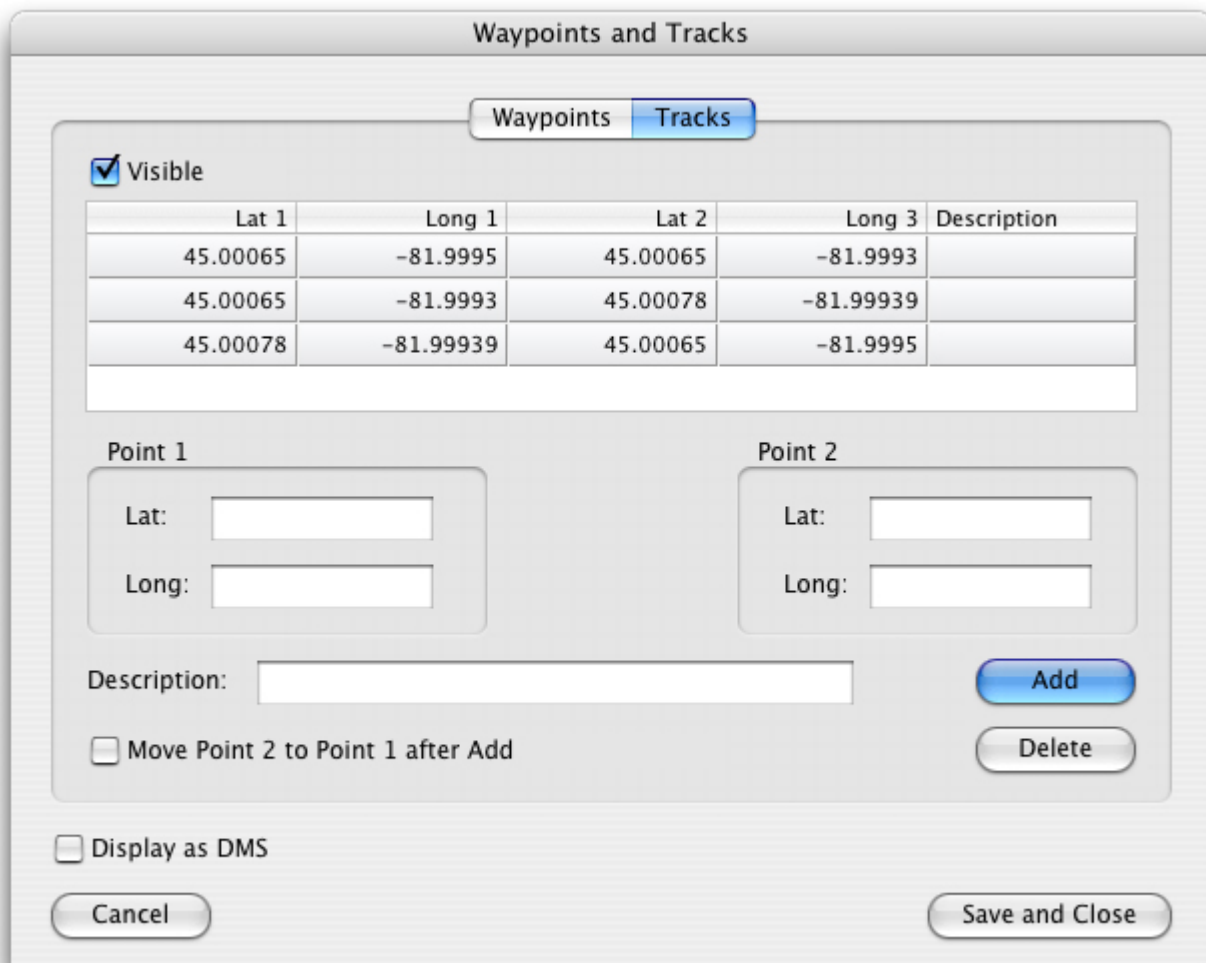
### **Project Waypoint**

You can choose this option from the Options menu. This will take the current value in the Lat/Long fields and prompt you for an angle and a distance (in feet). It will then create a new waypoint at that location.

### **Create Layer From Waypoints**

This feature is found under the Options menu. Choosing this will send all of the waypoints to the Lat/Long to Layer converter.

## Tracks



The dialog box is titled "Waypoints and Tracks". It has two tabs: "Waypoints" and "Tracks", with "Tracks" currently selected. Below the tabs is a checkbox labeled "Visible" which is checked. Underneath is a table with 5 columns: "Lat 1", "Long 1", "Lat 2", "Long 3", and "Description". The table contains three rows of data. Below the table are two sections for "Point 1" and "Point 2", each with "Lat:" and "Long:" input fields. To the right of these is a "Description:" input field. Below the description field is a checkbox labeled "Move Point 2 to Point 1 after Add". At the bottom left are "Cancel" and "Save and Close" buttons. At the bottom right are "Add" and "Delete" buttons.

Lat 1	Long 1	Lat 2	Long 3	Description
45.00065	-81.9995	45.00065	-81.9993	
45.00065	-81.9993	45.00078	-81.99939	
45.00078	-81.99939	45.00065	-81.9995	

Enter the two sets of latitude and longitude coordinates. You can enter an option description as well. Press the Add button to add the line. A black line will be drawn between the two points on the drawing after pressing the Save and Close button. Checking the "Move Point 2 to Point 1 after Add" checkbox will move the latitude and longitude values from the Point 2 fields into the Point 1 fields and then set the focus to the Point 2 fields. This is useful when entering data that produces a continuous line made up of multiple segments.

Pressing the Cancel button will close the form without saving any of the point or line changes.

You can delete all of the waypoints or tracks by choosing the appropriate menu from the File menu.

Use the Visible checkbox to turn on/off the visibility of all of the tracks.

## X,Y Waypoints

Choosing the X,Y popup menu will bring up the X,Y Points form. This form can be used to enter miscellaneous points using x,y settings. These points can be used similar to lat/long waypoints or they can be used as a labeling system for a given layer.

Icon	X	Y	Description	dx	dy	...	Font	Rot.
	0	50	Midpoint 1	-35	-10	<input checked="" type="checkbox"/>		0
	50	100	Midpoint 2	0	0	<input checked="" type="checkbox"/>		0
	100	50	Midpoint 3	35	-10	<input checked="" type="checkbox"/>		0
	50	0	Midpoint 4	0	0	<input checked="" type="checkbox"/>		0

If you know the specific x,y coordinates that you want to use for the waypoint:

- Choose Custom X,Y from the Placement popup menu.
- Enter in the x and y values.
- Choose the desired Icon.
- Make sure that the Show Description box is not checked.
- Press the Add button.

If you want to use the x,y waypoints as a layer labeling system:

- Description - Enter your label caption here. Label Placeholders are also supported.
- X,Y and Placement
  - You can enter in custom x,y values. You can later use the mouse to move the label.
  - If you choose one of the endpoints from the Placement popup, you can then choose an option from the popup menu triangle at the end of the description text field. Choosing an option from this menu will fill in the description field with the appropriate values.
- Icon - Picker the desired icon.
- Show Description - If this is meant to be a label, make sure that this box is checked.
- Press the Add button.

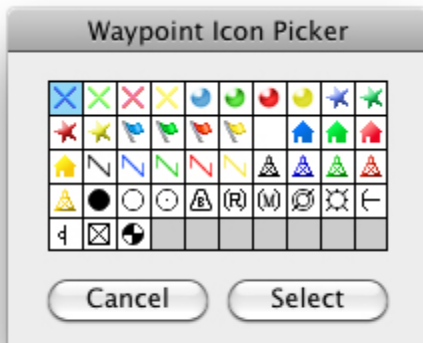
You can change any value by selecting it in the list and making the appropriate changes. The dx,dy fields are used to offset the description when it is displayed on the drawing. Alternately, you can use the mouse to move the icons and descriptions/labels on the drawing.

To delete a X,Y Waypoint, select it from the list and press the Delete button.

Click on the Font icon to change the font used for a particular waypoint description.

Changing the Rotation value will cause the text to be drawn at that degree of angle. *Note: This function is not available in the Linux version.*

Clicking on the icon column will produce the icon picker form, allowing you to change the icon used to mark the waypoint.



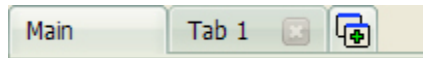
Checking the checkbox for a waypoint will show that waypoint's description on the drawing.

Use the Visible checkbox to turn on/off the visibility of all of the waypoints.

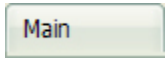
## Options

- **Delete All Point**  
Choosing this option will delete all x,y points.
- **Show All Descriptions**  
Choosing this option will check the Show Description checkbox for each point.
- **Hide All Descriptions**  
Choosing this option will uncheck the Show Description checkbox for each point.
- **Set All Icons to Currently Selected Icon**  
Choosing this option will set the icon for each x,y point to the currently selected icon.
- **Create Points From Endpoints**  
Choosing this menu option will create an x,y point based on the x,y of each end point on the current layer.
- **Create Points From Endpoints with Lat/Long**
  - **Decimal on 1 Line**  
Creates a point with the Lat/Long in decimal as the description.
  - **Decimal on 2 Lines**  
Creates two points for each endpoint. The Lat value in decimal for the 1st description and the Long value in decimal for the 2nd description.
  - **DMS on 1 Line**  
Creates a point with the Lat/Long in DMS as the description.
  - **DMS on 2 Lines**  
Creates two points for each endpoint. The Lat value in DMS for the 1st description and the Long value in DMS for the 2nd description.
- **Create Points From Endpoints with Angles**
  - **On 1 Line**  
Creates a point with the endpoint's angles as the description.
  - **On 2 Lines**  
Creates two points for each endpoint. One point contains the interior angle and the other point contains the exterior angle.
- **Create Points From Line Midpoints**  
Choosing this menu option will create an x,y point based on the x,y of the midpoint of each line in the current layer.
- **Create Points From Line Midpoints with Calls**  
Choosing this menu option will create an x,y point based on the x,y of the midpoint of each line in the current layer and pre-populate the description field with the line's call. It will also check the show description checkbox. If the layer's Show Calls In-line checkbox is checked, this option will set the waypoints rotation to match.
- **Create Layer From Points**  
Choosing this menu will take you to the X,Y to Layer form and pre-populate the form with the x,y waypoints.

## Tabs



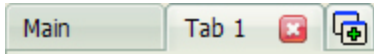
Tabs can be used to create additional views from the same layer and call data. Each tab is based on the same layer calls, but can have its own scale, background picture, fill options, etc. This allows for multiple views of the same data to be saved within a single file.



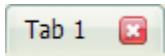
Every drawing has a main tab. The main tab cannot be deleted.



To create a new tab, press the New Tab button. The new tab will be a copy of the tab that was selected when the new tab button was pressed.



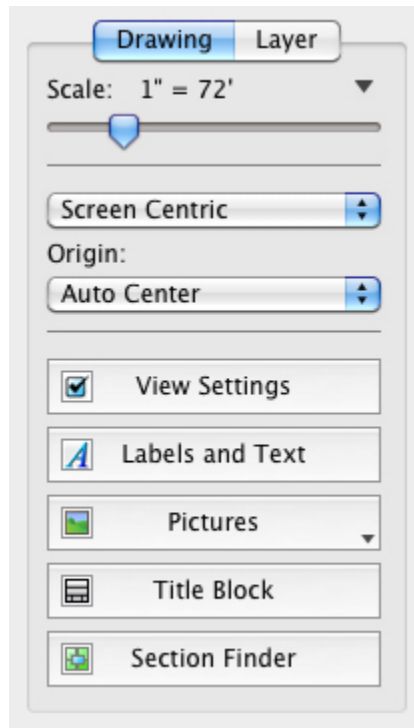
To switch between tabs, click on the desired tab in the tab bar.



To delete a tab press the red X button on the tab that you wish to delete. Deleting a tab deletes all of the view configurations associated with that tab. Deleting a tab cannot be undone. Deleting a tab will not remove any of the layers or call data, even if the calls or layers were added while viewing the deleted tab.

The tab bar can be hidden by un-checking the Show Tabs menu found under the Windows menu. The default for showing tabs can be set in the preferences.

## Drawing Options



### Scale

The scale can be adjusted by moving the slider control.

Clicking on the scale indicator will toggle it between 1"=X' and 1:X formats.

Clicking on the ▼popup menu arrow will present you with a popup menu of some common scale settings. You can also choose Custom from the popup menu to enter your own ratios. Choosing Scale Current Layer to Window will set the scale so that the current layer will fill the screen.

1" = 5280'	
1" = 3000'	
1" = 2000'	
1" = 1320'	
1" = 1000'	
1" = 660'	
1" = 330'	
8" = 660'	
Default	
Scale Current Layer to Window	
Custom	



## Screen Centric vs. Printer Centric

The drawing can be set to either Screen Centric or to Printer Centric. Screen Centric lets you use your entire screen for the drawing area. This gives you a larger drawing area, but makes printing to a single sheet of paper more difficult. Printer Centric limits your drawing area to the size of your printer's page setup, but printing to a single sheet of paper is easy. Printer Centric defaults to a 8"x10.5" paper size, but can be changed using the [Page Setup](#) menu option.

## Origin

The starting point for the drawing can also be set.

- **Auto Center** - Causes the plot to remain centered in the drawing unless you manually move it.
- **Top Left** - Causes the starting point of the first call to be drawn in the upper, left hand corner of the drawing.
- **Top Right** - Causes the starting point of the first call to be drawn in the upper, right hand corner of the drawing.
- **Bottom Left** - Causes the starting point of the first call to be drawn in the lower, left hand corner of the drawing.
- **Bottom Right** - Causes the starting point of the first call to be drawn in the lower, right hand corner of the drawing.
- **Center of Drawing** - Causes the starting point of the first call to be drawn in the center of the drawing. Unlike the Auto-Center option, this only keeps the starting point centered in the drawing and does not keep the entire plot centered in the drawing.

The Auto Center option is useful for single layer drawings. The other five options are useful when multiple layers share the same starting point.

## View Settings

The screenshot shows a 'View Settings' dialog box with the following configuration:

- ☒ Show Area: Area (ft) - Current Layer, 2 Dec. Points
- ☒ Show Scale: Top Left, Feet
- ☒ Show North Arrow: Top Left, Style 1
- ☒ Show Border
- ☒ Show Watermark: [Empty text field]

Buttons: Cancel, Close

### Show Area

Choosing this option will draw the selected area measurement in the upper left hand corner of the drawing. You can choose to show the area with 0 to 5 decimal places. The number of decimal points chosen here will also be used for other area displays such as label placeholders and layer area captions.

### Show Scale

This option toggles the visibility of the scale tape. If the scale is visible, you can also select which corner of the drawing that you want it to be drawn in. The scale defaults to feet, but the unit of measurement can be changed to any of the supported units of measurement using the unit's popup menu.

### Show North Arrow

This option toggles the visibility of the north arrow. If the arrow is visible, you can also select which corner of the drawing that you want it to be drawn in. There are also several different styles of arrow that can be chosen from the Style popup menu.

### Show Border

This option draws a thick border around the entire drawing. This can be useful for print outs.

### Show Watermark

This option will draw a watermark in the center of the drawing. The watermark will be the text entered in the watermark text field.

## Labels

The labels button will bring on the Label Manager form.

## Pictures

Clicking this button will bring up a popup menu. Choosing Background Picture from the popup menu will bring up the Background Picture form. Choosing Snapshots will bring up the Snapshots form.

## Title Block

This button will bring up the Title Block form. To make the title block visible, check the Show Title Block checkbox. You can choose to anchor the title block in the lower-left or the lower-right of the drawing. The title block fields can also use the % placeholders.

### *Style 1:*

The dialog box is titled "Title Block". It contains a checked checkbox labeled "Show Title Block". Below this is a dropdown menu set to "Bottom Right". Underneath is a preview of a title block layout, which consists of a table with four rows and three columns. The first row is "Sample Plot", the second is "by Sandy Knoll Software", the third is "Entered by John Doe", and the fourth row contains "1"=56'", an empty field, and "2/11/2007". This entire preview is enclosed in a black border. At the bottom right of the dialog is a "Close" button.

Sample Plot		
by Sandy Knoll Software		
Entered by John Doe		
1"=56'		2/11/2007

There are 6 fields that you can enter data into. Directly beneath the data fields is a preview of what the title block will look like.

## Style 2:

Title Block

☒ Show Title Block

Style Style 2

Location Bottom Right

Created by Sandy Knoll Software, LLC

Set Date

Created by Sandy Knoll Software, LLC	6/25/10
Scale: 1" = 10000'	
Layer 0 copy: 0.2296 Acres (10,000Sq. Ft.), Closure: S 0 E 0.0 (1/-2147483648), Perimeter: 400 ft.	
N 0 E 100 Feet	N 90 W 100 Feet
N 90 E 100 Feet	
S 0 E 100 Feet	

Close

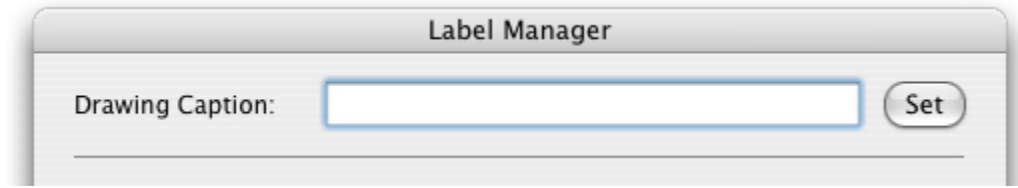
Style 2 of the Title Block will show a custom label, the set date, the drawing's scale, the file path, and information about the drawing such as the current layers area and call list.

### Section Finder

See Section Finder.

## ***Labels and Captioning***

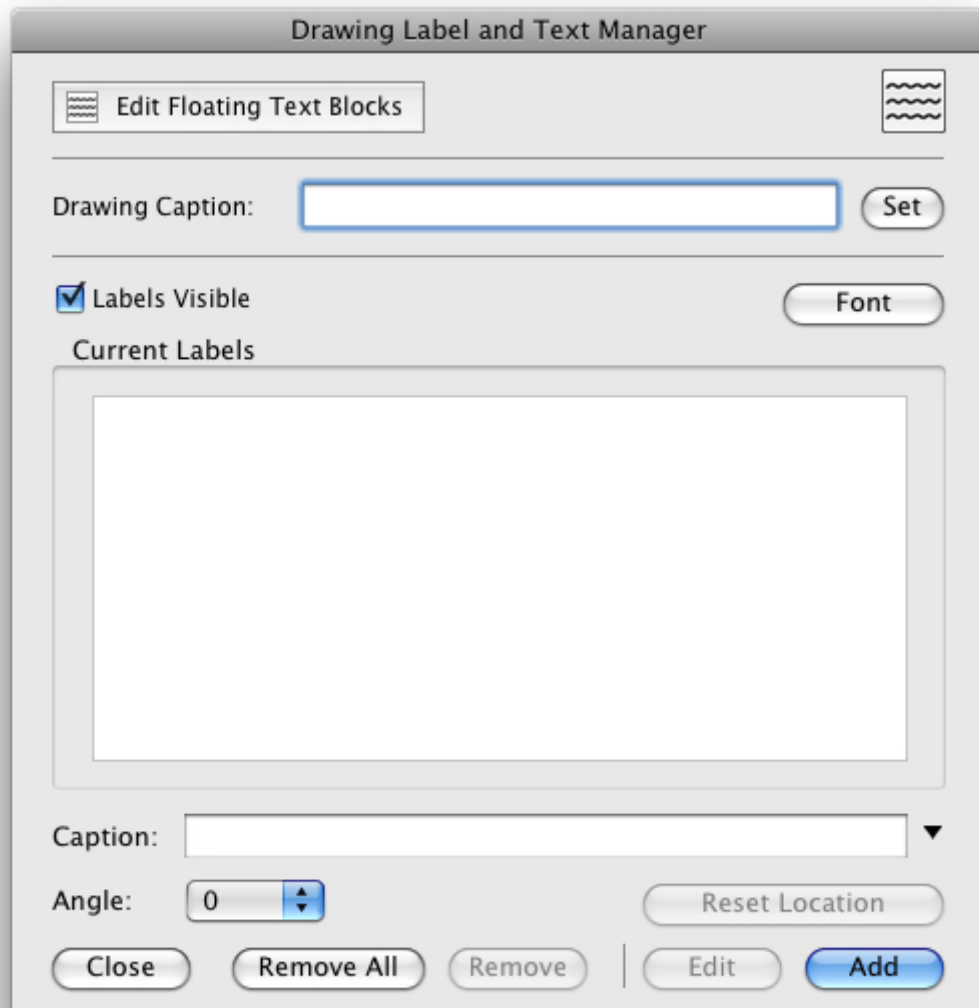
### **Captioning**

A screenshot of a software dialog box titled "Label Manager". Inside the dialog, there is a label "Drawing Caption:" followed by a text input field. To the right of the input field is a button labeled "Set". Below the input field, there is a horizontal line.

You can enter a single caption for the drawing by entering the caption in the Drawing Caption field. This caption will appear in the lower left hand corner of the drawing. Pressing the Set button will display the caption prior to closing the Label Manager form.

## Labels


You can add labels to the drawing by pressing the Labels button. This will bring up the labels manager form. Existing labels can be edited by right clicking on the label in the main drawing window.

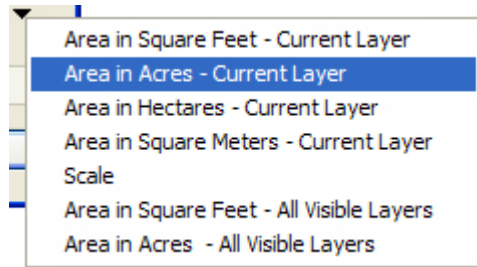


The image shows a software dialog box titled "Drawing Label and Text Manager". At the top left is a button labeled "Edit Floating Text Blocks" with a small icon. At the top right is a small icon of three wavy lines. Below these is a "Drawing Caption:" label followed by a text input field and a "Set" button. Underneath is a checked checkbox labeled "Labels Visible" and a "Font" button. A large empty rectangular area is labeled "Current Labels". At the bottom, there is a "Caption:" label with a text input field and a dropdown arrow, an "Angle:" label with a numeric input showing "0" and a spinner, a "Reset Location" button, and a row of five buttons: "Close", "Remove All", "Remove", "Edit", and "Add". The "Add" button is highlighted in blue.

The Labels Visible checkbox can be used to toggle the visibility of the layers.

To create a new label, enter the label's text in the caption field and press the Add button.

A label's caption can also automatically be filled with information about the plot. Click on the  button to get a menu of choices.



Each label can be rotated in 90-degree increments. Pick the label's angle by choosing the angle from the menu.

To edit a label, click on the label in the list. The caption and angle fields will populate with that label's information. Press the Edit button to save your changes to the label.

To remove a label, click on the label in the list and then press the Remove button. To remove all labels at once, press the Remove All button.

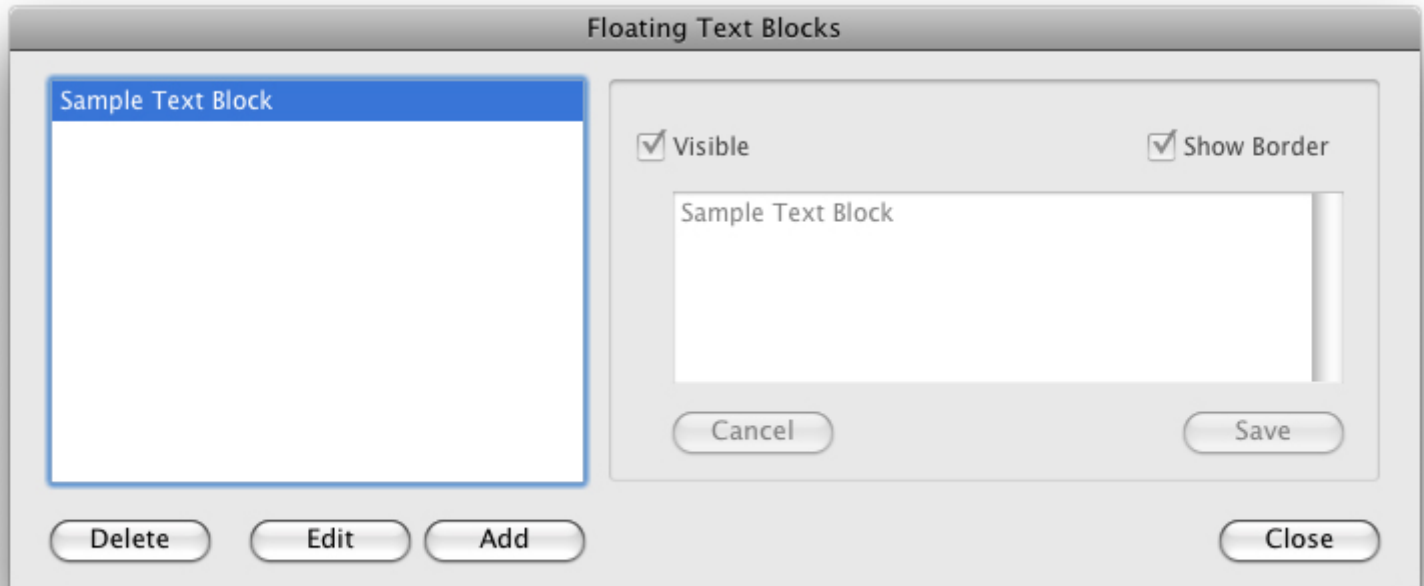
Press the Font button to choose the font style used for the labels.

### **Moving Labels**

The labels can be positioned on the main drawing by clicking on them and dragging them to the desired location. The labels will attempt to keep their position relative to the scale, when the scale is changed. You can also reset them back to the center by selecting the label in the Label Manager and pressing the Reset Location button.

## Floating Text Blocks

Pressing the Edit Floating Text Blocks button will bring up the Float Text editor.



Press the Add button to create a new floating text block. Enter your text into the text entry field. Press the Save button. You can make the text block invisible by un-checking the Visible checkbox. The text block's black border can be toggled using the Show Border checkbox.

To edit a floating text block, select it from the list and press the Edit button. Make your changes and press the Save button.

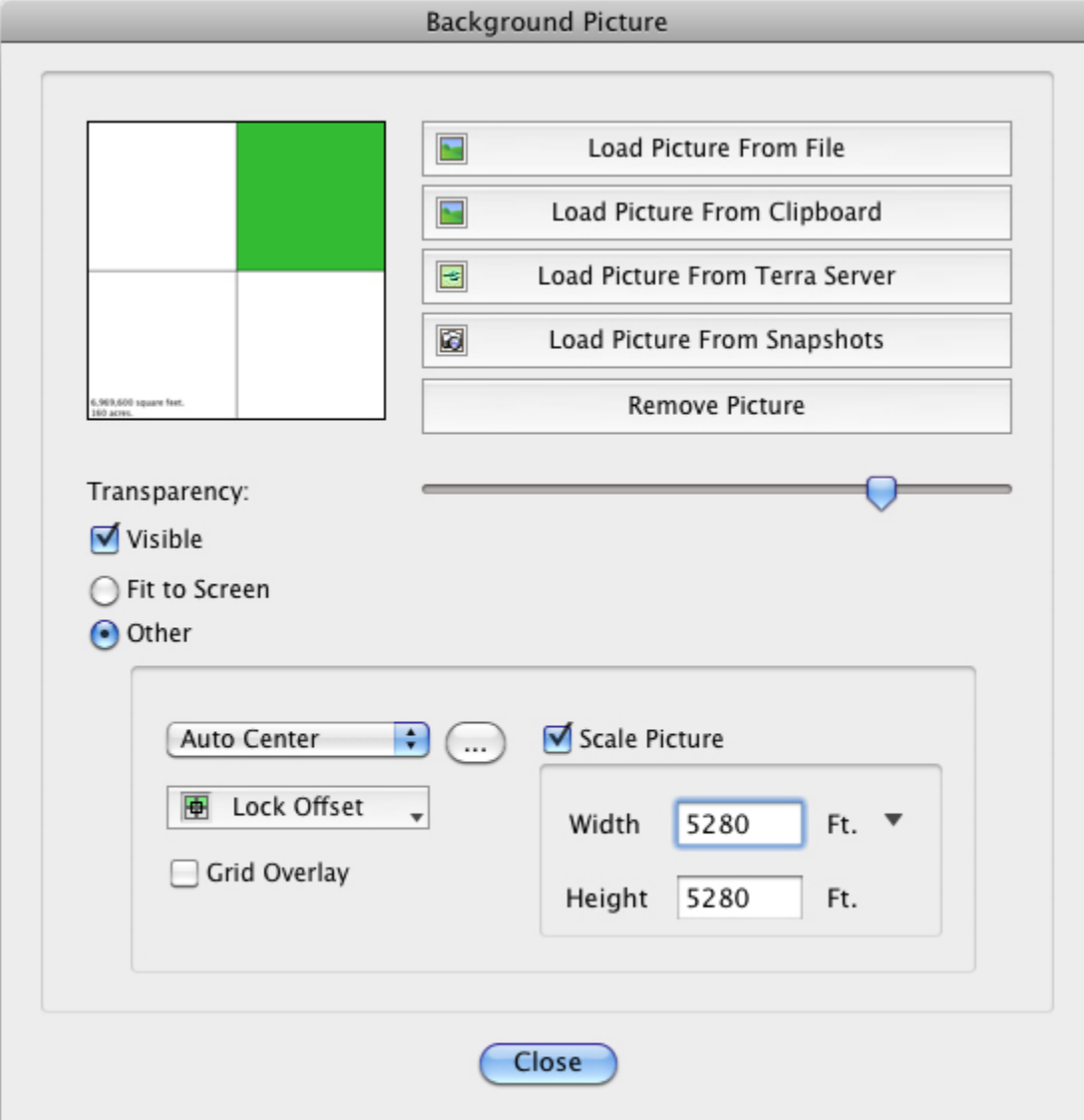
To delete a floating text block, select it from the list and press the Delete button.

### Moving Floating Text Blocks

Floating text blocks will start out at the top, left corner of the drawing. You can move them by clicking on them and dragging them. You can resize them by clicking on the resizing block in the bottom, right hand corner of the floating text block.



## Background Picture



The dialog box is titled "Background Picture". It features a 2x2 grid on the left where the top-right quadrant is green, with a small text label "6,969,600 square feet. 1200 acres." below it. To the right of the grid are four buttons: "Load Picture From File", "Load Picture From Clipboard", "Load Picture From Terra Server", and "Load Picture From Snapshots", each with a small icon. Below these is a "Remove Picture" button. A transparency slider is positioned below the buttons. Under the "Transparency:" label, there are three radio buttons: "Visible" (checked), "Fit to Screen", and "Other". A section containing a "Scale Picture" checkbox (checked) and a "Width" field with the value "5280" and a "Height" field with the value "5280", both followed by "Ft." and a dropdown arrow, is located to the right of the "Auto Center" button. The "Auto Center" button has a dropdown arrow and an ellipsis. Below it is a "Lock Offset" button with a small icon and a "Grid Overlay" checkbox. A "Close" button is at the bottom center.

Background Picture

6,969,600 square feet.  
1200 acres.

Load Picture From File

Load Picture From Clipboard

Load Picture From Terra Server

Load Picture From Snapshots

Remove Picture

Transparency:

☒ Visible

☐ Fit to Screen

☒ Other

Auto Center ...

☒ Scale Picture

Lock Offset

Grid Overlay

Width 5280 Ft.

Height 5280 Ft.

Close

You can add a background to the drawing by pressing the Pictures button and choosing Background Picture from the popup menu. This will bring up the Background Picture form. You can also bring up this form by right clicking in the main drawing window and choosing Change Background from the popup menu.

Click the Load Picture From File button to select a picture to use as the background.

Click the Load Picture From Clipboard to paste a picture from the clipboard for the background image.

Click the Load Picture from Terra Server button to bring up the Terra Server form.

Click the Load Picture from Snapshots button to bring up the Snapshots form.

The background picture can also be set from the Section Finder.

Click the Remove Picture button to remove the picture from the background.


You can use the Transparency slider to adjust the picture's level of transparency.

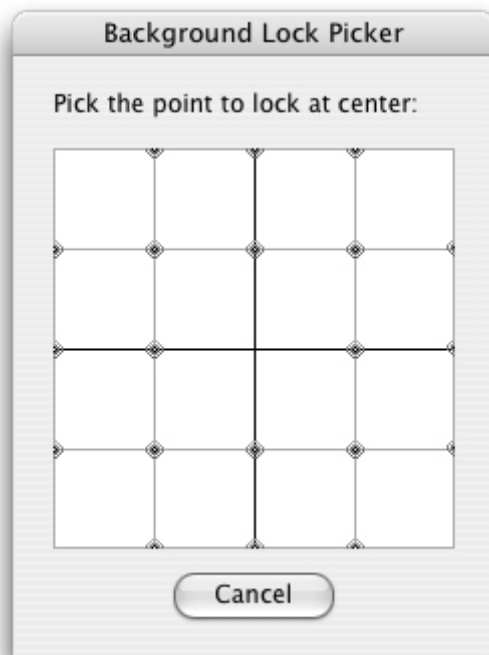
The visible checkbox can be used to make the background visible or invisible without having to load or remove the picture.

### **Fit to Screen**

This option will cause the background picture to stretch to the size of the drawing.

### **Other**

This option will allow you to choose where the background is drawn. You can either choose an option from the popup menu or press the  button to bring up a visual picker.



(Visual Picker)

- Section

- *Auto Center* - This will keep the background drawn in the center of the drawing.
- *Top Left* - This will keep the top left corner of the background picture pinned to the top left corner of the drawing.
- *Top Right* - This will keep the top right corner of the background picture pinned to the top right corner of the drawing.
- *Bottom Left* - This will keep the bottom left corner of the background picture pinned to the bottom left corner of the drawing.
- *Bottom Right* - This will keep the bottom right corner of the background picture pinned to the bottom right corner of the drawing.
- *Top Left at Center* - This will keep the top left corner of the background picture pinned to the center of the drawing.
- *Top Right at Center* - This will keep the top right corner of the background picture pinned to the center of the drawing.
- *Bottom Left at Center* - This will keep the bottom left corner of the background picture pinned to the center of the drawing.
- *Bottom Right at Center* - This will keep the bottom right corner of the background picture pinned to the center of the drawing.

- Quarter Section

- *Left Middle at Center* - This will keep the middle of the left hand side of the background picture pinned to the center of the drawing.
- *Right Middle at Center* - This will keep the middle of the right hand side of the background picture pinned to the center of the drawing.
- *Top Middle at Center* - This will keep the middle of the top edge of the background picture pinned to the center of the drawing.
- *Bottom Middle at Center* - This will keep the middle of the bottom edge of the background picture pinned to the center of the drawing.

- Quarter of Quarter Section
  - *NW/4 Top Middle at Center* - This will keep the middle of the top edge of the northwest quarter of the background picture pinned to the center of the drawing.
  - *NW/4 Left Middle at Center* - This will keep the middle of the left hand side of the north west quarter of the background picture pinned to the center of the drawing.
  - *NW/4 Right Middle at Center* - This will keep the middle of the right hand side of the north west quarter of the background picture pinned to the center of the drawing.
  - *NW/4 Bottom Middle at Center* - This will keep the middle of the bottom edge of the northwest quarter of the background picture pinned to the center of the drawing.
  - *NE/4 Top Middle at Center* - This will keep the middle of the top edge of the northeast quarter of the background picture pinned to the center of the drawing.
  - *NE/4 Left Middle at Center* - Same as NW/4 Right Middle at Center.
  - *NE/4 Right Middle at Center* - This will keep the middle of the right side of the north east quarter of the background picture pinned to the center of the drawing.
  - *NE/4 Bottom Middle at Center* - This will keep the middle of the bottom edge of the northeast quarter of the background picture pinned to the center of the drawing.
  - *SW/4 Top Middle at Center* - Same as NW/4 Bottom Middle at Center
  - *SW/4 Left Middle at Center* - This will keep the middle of the left hand side of the south west quarter of the background picture pinned to the center of the drawing.
  - *SW/4 Right Middle at Center* - This will keep the middle of the right hand side of the south west quarter of the background picture pinned to the center of the drawing.
  - *SW/4 Bottom Middle at Center* - This will keep the middle of the bottom edge of the south west quarter of the background picture pinned to the center of the drawing.
  - *SE/4 Top Middle at Center* - Same as NE/4 Bottom Middle at Center
  - *SE/4 Left Middle at Center* - Same as SW/4 Right Middle at Center
  - *SE/4 Right Middle at Center* - This will keep the middle of the right hand side of the south east quarter of the background picture pinned to the center of the drawing.
  - *SE/4 Bottom Middle at Center* - This will keep the bottom edge of the south east quarter of the background picture pinned to the center of the drawing.
  - *NW/4 Center at Center* - This will keep the center of the north west quarter of the background picture pinned to the center of the drawing.
  - *NE/4 Center at Center* - This will keep the center of the north east quarter of the background picture pinned to the center of the drawing.
  - *SW/4 Center at Center* - This will keep the center of the south west quarter of the background picture pinned to the center of the drawing.
  - *SE/4 Center at Center* - This will keep the center of the south east quarter of the background picture pinned to the center of the drawing.

**Scale as 1 Mile**

When this option is selected, the background will be scaled as if it represented 1 square mile. This option will be automatically checked when the background picture is set from the Section Finder.

**Scale as 4 Miles**

When this option is selected, the background will be scaled as if it represented 4 square miles.

**Scale Picture**

Check this box to have the background draw to scale. Enter the number of feet that the width of the background picture represents and the number of feet that the height of the background picture represents. Common scales, such as 1 square mile, are available from the ▼ popup menu arrow.

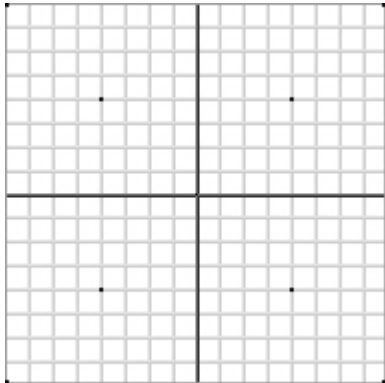
**Lock Offset**

This option allows you to keep the background's offset locked to its origin, or its offset can be locked to a layer's offset. If the background is locked to layer's offset, then the background will move with the layer if the layer is moved by hand.

**Gird Overlay**

This option will draw a grid over the background image. This option is best suited for square background images.

If no background picture is selected, the grid will still be displayed.

**Save Picture**

You can export the background picture to a regular picture file by choosing Save Picture from the File menu.

### **Edit Picture**

Choosing this menu option will open the currently selected background image in a new window. This window will allow you to crop and rotate the background image.



Click and drag on the picture to make a selection.

### **Set Picture as Background**

Choosing this menu will set the current picture as the background picture.

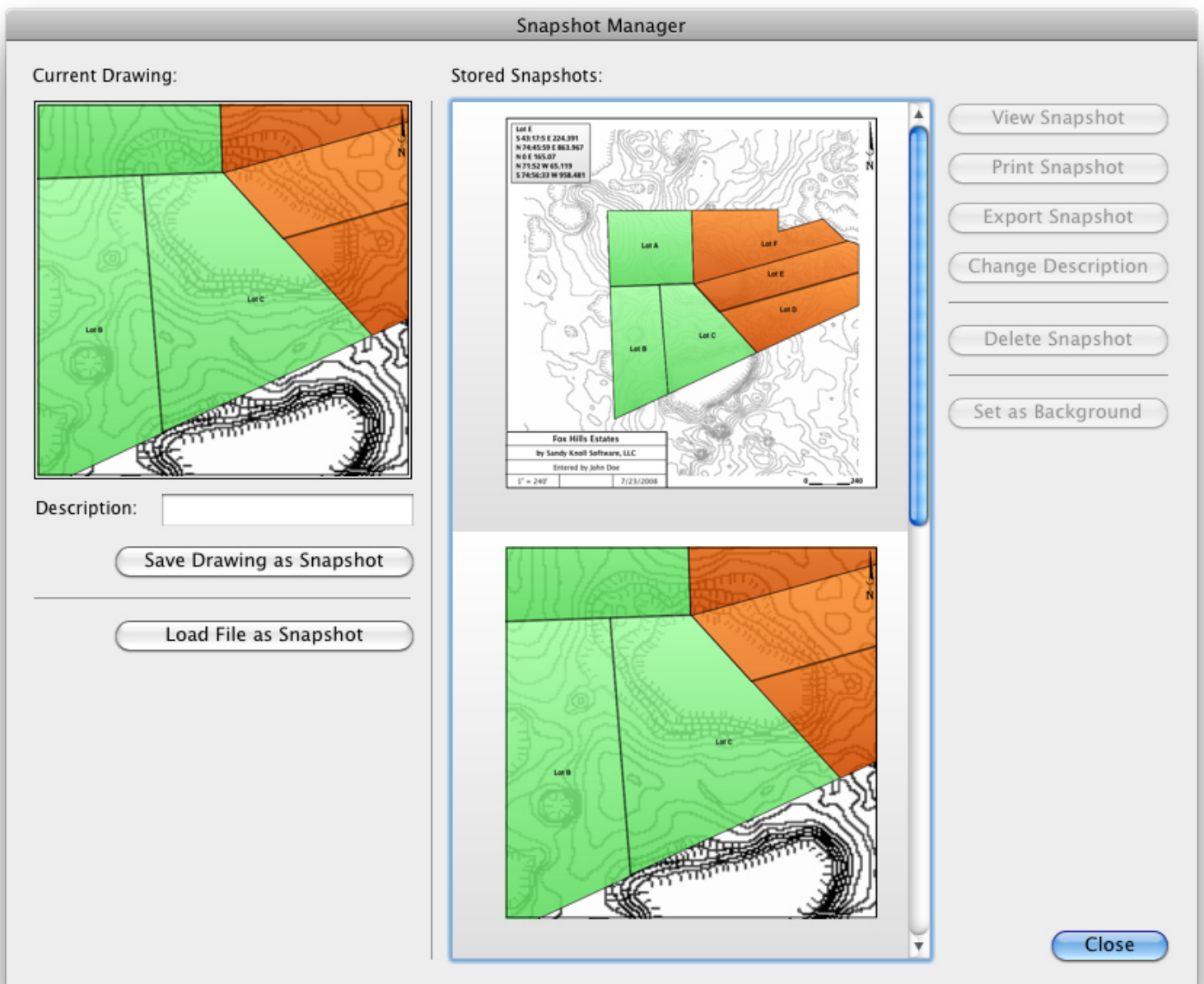
### **Keep Selection Square**

When this menu is checked, when making a selection, the selection will constrain itself to a square. Press the shift key while making a selection will also constrain the selection to a square.

### **Rotate**

Choosing either of the Rotate menus will cause the picture to rotate 1/10th of a degree either clockwise or counter-clockwise.

# Snapshots



The Snapshots feature is a repository for images. The images stored as snapshots can come from external sources or they can be created from within the software. Snapshots can be used to store images such as different views of the drawing or different pictures to use as background pictures.

## **Adding Snapshots:**

To save the current drawing as a snapshot, press the Save Drawing as Snapshot button. You can optionally enter in a description for the snapshot prior to pressing the save button.

To load an external image as a snapshot, press the Load File as Snapshot button.

## **Managing Snapshots:**

To manage a snapshot, select it from the Stored Snapshots list. Once selected, the following options will become available:

*View Snapshot*: Press this button to view the snapshot in a full screen viewer. Press the Close button to close the full screen viewer.

*Print Snapshot*: Press this button to print the selected snapshot.

*Export Snapshot*: Press this button to save the snapshot as a external picture file.

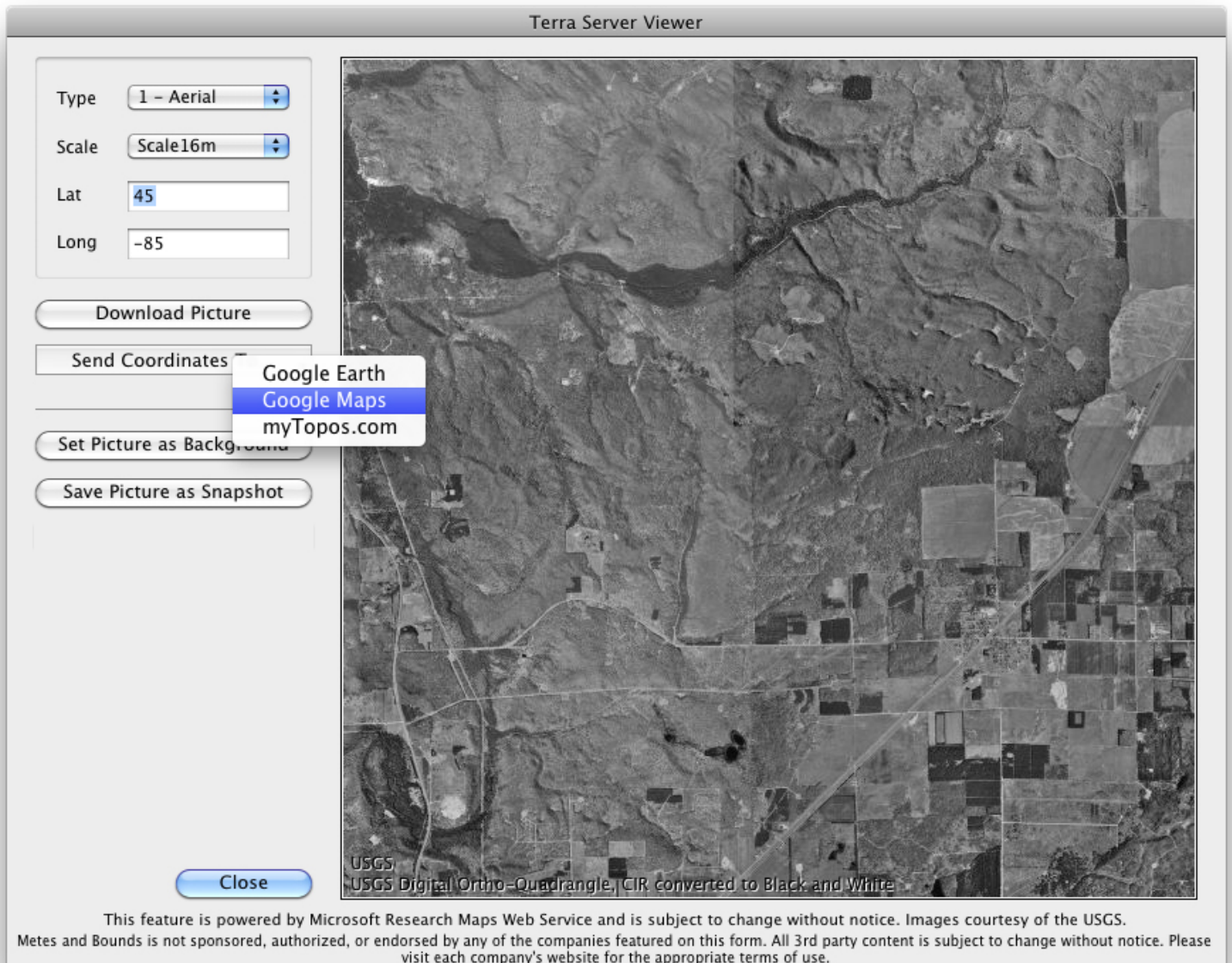
*Change Description*: Press this button to change the snapshots description. This will bring a a form where you can enter in a new description. Press the Save button to close the Change Description form.

*Delete Snapshot*: Press this button to delete the selected snapshot.

*Set as Background*: Press this button to set the selected snapshot as the background picture for the drawing.



## Terra Server Viewer



The Terra Server Viewer allows you to download either an aerial view or a topographical map for a given set of lat/long coordinates.

Choose which type of picture you want to download. Choose either aerial or topographical.

1. Pick your desired scale.
2. Enter in your lat/long coordinates.
3. Press the Download Picture button.

Once the picture as finished downloading you have the following options:

*Set Picture as Background*: Pressing this button will set the pictures as the drawing's background picture. The background picture will be set to scale and the values for the scaling will be set based on the scale setting of the downloaded picture.

*Save Picture as Snapshot*: Pressing this button will save the image as a Snapshot.

**Send Coordinates To...** This will bring up a menu that will allow you to send the lat/long coordinates to a 3rd party website or external program.

The Terra Server feature uses the Microsoft(r) TerraServer-USA .NET Web Service. This service uses public domain images from the US Geological Survey. Because this feature relies on 3rd services, the functionality is subject to change without notice. Metes and Bounds is not sponsored, authorized, or endorsed by any of the companies featured on this form. All 3rd party content is subject to change without notice. Please visit each company's website for the appropriate terms of use.

## Opening, Saving, Printing and Exporting

### New Drawing

To create a new drawing, choose New Drawing from the File menu. This will open a new, blank window.

### Open

To open a saved drawing, choose Open from the File menu. The last 5 opened or saved files can be chosen from the Open Recent file menu. You can also use Open to open files sent by the iPhone version of Metes and Bounds.

### Open As Layer

An existing saved file can be opened as a new layer in the current drawing by choosing Open As Layer from the File menu.

### Saving

To save your drawing, choose Save from the File menu.

To save a copy of your drawing, choose Save As from the File menu.

### Pictures

The drawing can also be saved as a picture. To save a picture of the drawing exactly as it appears on screen, choose Save as Picture (Screen) from the File menu. To save a full size picture of the drawing, choose Save as Picture (Full) from the File menu. This option is helpful for pictures that are scaled larger than the screen.

A picture of the current drawing can also be copied to the clipboard. To copy the drawing to the clipboard choose Copy Drawing as Picture from the Edit menu.

### Import

*Import Call List:* This option will allow you to choosing between importing a call list in the Metes and Bounds style (N 12:34:56 E 100) or the Alternate style (n12.3456e 100). The Alternate style can be used to import call lists from other 3rd party programs.



## Export

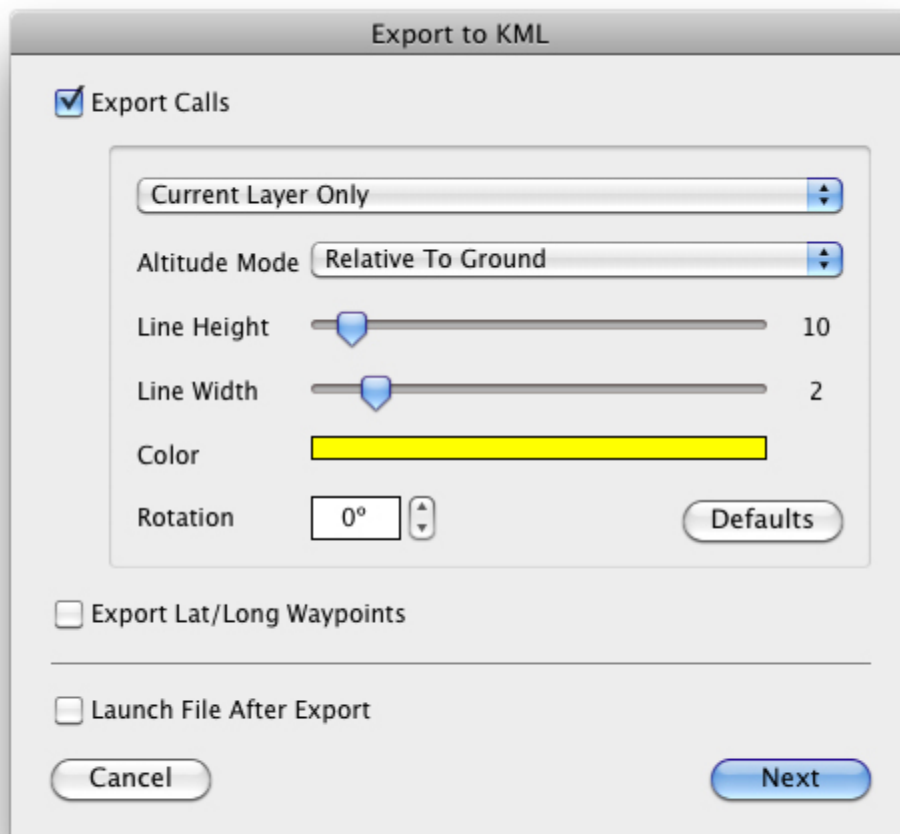
**DXF:** The drawing data can be exported as a DXF file. To export just the current layer as DXF, choose Export as DXF from the File menu. To export all of the visible layers as DXF, choose Export All Layers as DXF from the File menu. Exporting a single layer will use the POB X,Y settings (if any) for the coordinates. Exporting all of the layers will use its own coordinates so that the DXF will look identical to the layers drawn on the screen.

**Point Coordinates:** This will allow you to save the point coordinates, as shown using the Show Layer Point Coordinates menu under the Tools menu, as a delimited text file. The points will be saved using the POB X,Y settings (if any). Choosing this menu option will bring up the following window:



Choose either comma, tab or space from the popup menu to pick which character will be used to delimit the file. Check the Include Layer # checkbox if you want include a layer number as an additional field in the file. Choose the unit of measurement so save the coordinates in. Check the Round to Nearest Unit checkbox to round the exported values to the nearest unit.

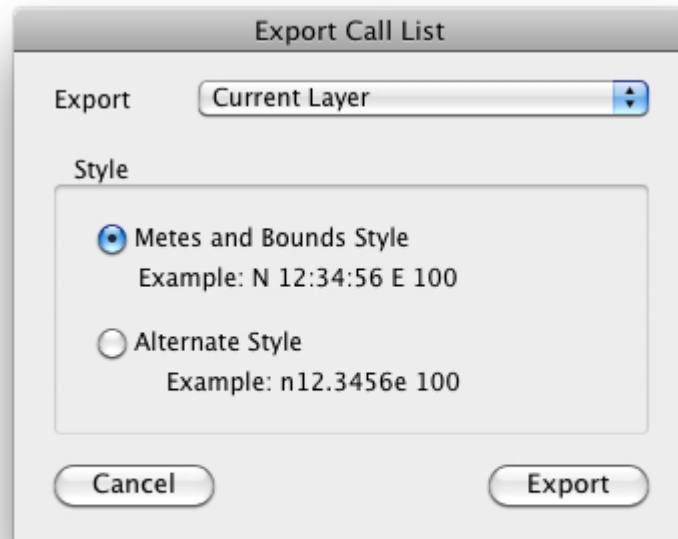
**KML Format:** This will save the current layer in the KML file format. Choosing this menu will bring up the following dialog box that will allow you to modify some of the KML settings.



The dialog box is titled "Export to KML". It contains the following elements:

- ☒ **Export Calls**
- A dropdown menu set to "Current Layer Only".
- Altitude Mode** dropdown menu set to "Relative To Ground".
- Line Height** slider set to 10.
- Line Width** slider set to 2.
- Color** color picker showing yellow.
- Rotation** input field showing "0°" with up/down arrows.
- Defaults** button.
- ☐ **Export Lat/Long Waypoints**
- ☐ **Launch File After Export**
- Cancel** button.
- Next** button.

**Call List:** This will allow you to export the call list to a text file. The call list can be exported as either the Metes and Bounds style (N 12:34:56 E 100) or an Alternate style (n12.3456e 100). The Alternate style can be used to export call lists for importing into other 3rd party programs. The current layer can be exported in both styles. Exporting all layers can only be done in the alternate style.



***Lat/Long Waypoints as GPX:*** This will allow you to export any layer's lat/long waypoints as a GPX file.



## **Printing**

- Page Setup

This will preset you with the page setup dialog for your printer. These setting will be used by the Size Window to Printer and Show Printer Watermark features listed below. This also allows you to set the drawing size for Printer Centric drawings.

## **Screen Centric Printing**

These features help you setup a Screen Centric drawing for printing.

- Size Window to Printer

This will resize the drawing window so that the drawing area will represent a single piece of paper. Printing with the drawing window sized to the same size as the printer settings will produce the highest quality printing.

- Show Printer Watermark

This will cause a watermark to be drawn that represents a single piece of paper.

- Print

This will present you with a print option form. This form allows you to preview how the drawing will print using several different printing options.

- Print as Printer Centric. This will print the drawing as if drawing was set as Printer Centric. It is also the same as choosing the Size Window to Printer option.
- Printer Watermark. This will print the area of the drawing that is shown under the Show Printer Water overlay.
- Print Scaled. This will scale the drawing to fit on a single sheet of paper.

## **Printer Centric Printing**

Printing a Printer Centric drawing is automatic as the drawing has already been configured for the printer. So features such as Size Window to Printer and Show Printer Watermark are not needed.

- Print

This will print the current drawing.

## **Print Picture**

- (Screen) will resize the visible drawing to fit on a single sheet of paper and then print the drawing as a picture.
- (Full) will print the drawing at the full-scale size and will print on as many sheets of paper as needed.



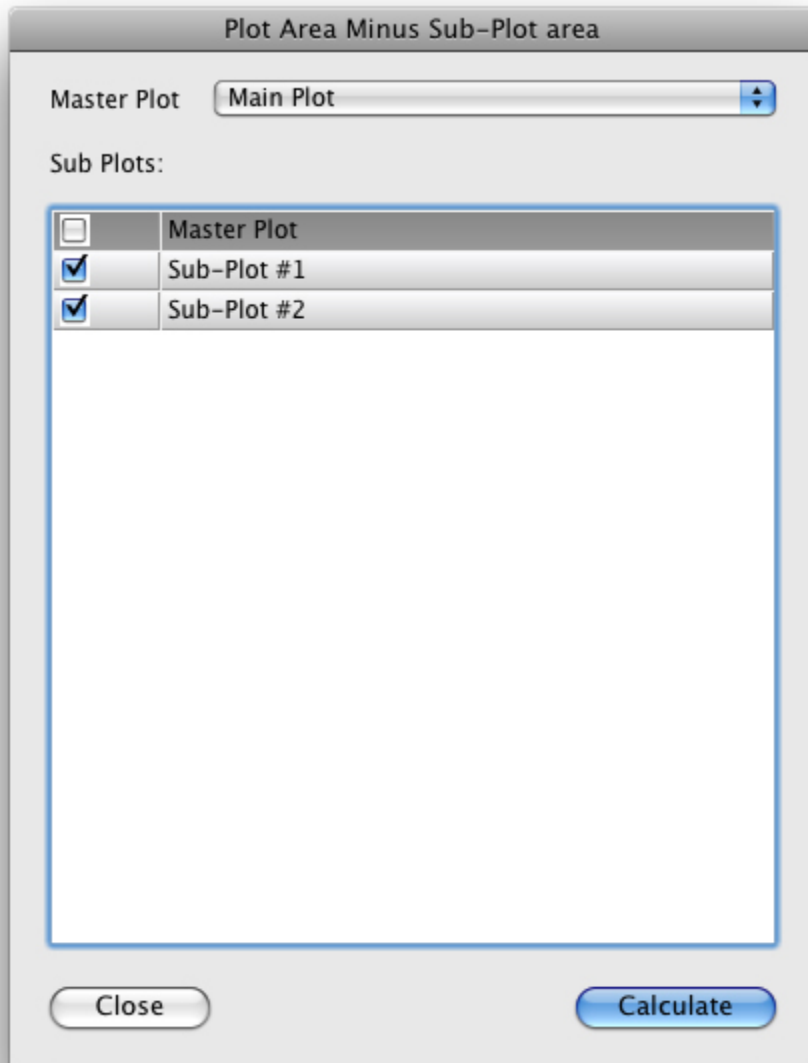
## Calculate Menu

### Find Area

You can find the area of a plot by choosing one of the Find options from the Calculate menu. You can find the area in feet, meters, acres and hectares.

### Area of Layer Minus Sub-Plots

This function allows you to find the area of a master plot, minus the area of multiple sub-plots.

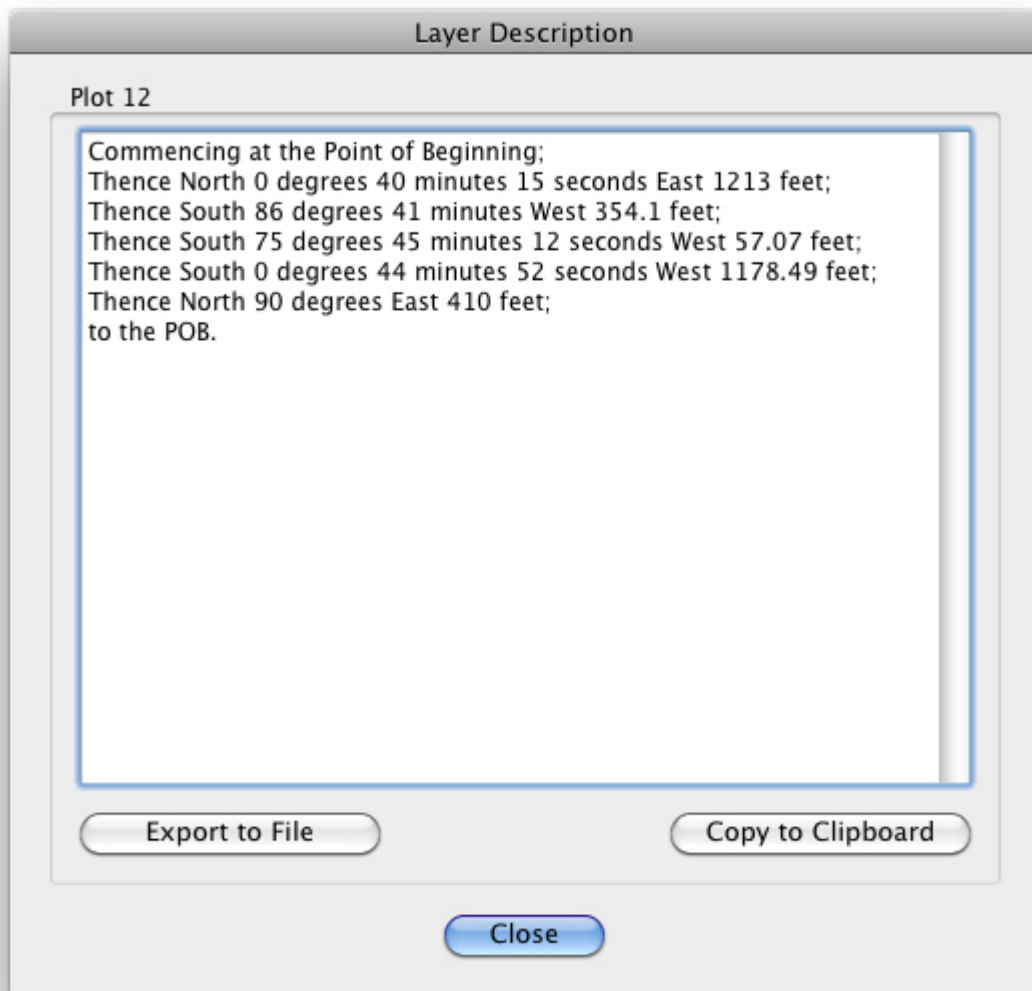


The dialog box is titled "Plot Area Minus Sub-Plot area". It features a "Master Plot" dropdown menu currently set to "Main Plot". Below this, the "Sub Plots:" section contains a list with three items: "Master Plot" (unchecked), "Sub-Plot #1" (checked), and "Sub-Plot #2" (checked). At the bottom, there are "Close" and "Calculate" buttons.

Sub Plots:
<input type="checkbox"/> Master Plot
<input checked="" type="checkbox"/> Sub-Plot #1
<input checked="" type="checkbox"/> Sub-Plot #2

Choose a master plot from the layer list. Check all of the layers that are considered a sub-plot of the master plot. Press the Calculate button. You will be presented with the area of the master plot, the area of each selected sub-plot, and the area remaining after the sub-plots' area is subtracted from the master plot's area.

## Show Current Layer's Description



This menu will create a description from the current layer's calls. This description can be saved to a text file or copied to the clipboard.

**Show Layer X,Y Point Coordinates**

You can find the X, Y points of a drawing by choosing Show Point Coordinates from the Calculate menu. These values will use the POB X,Y settings if available. You can choose the number of decimal places to show the list as well as the type of units to use. The list can be exported as a text file or copied to the clipboard.

X,Y Coordinates

X Origin: 0

Y Origin: 0

0 Decimal Places

Units: Feet

POB (0,0)

0,100

100,100

100,0

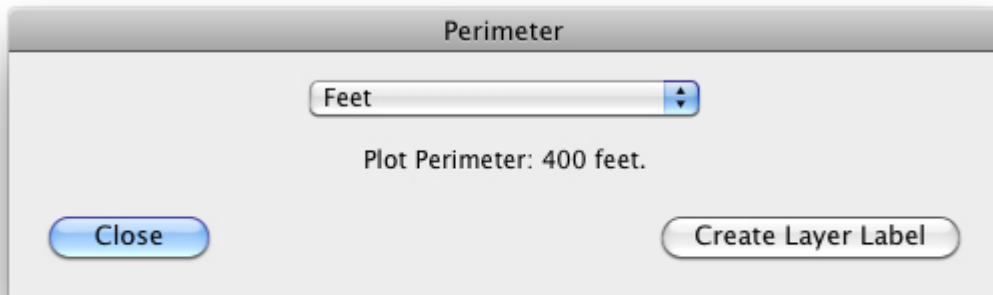
0,0

Export to File

Copy to Clipboard

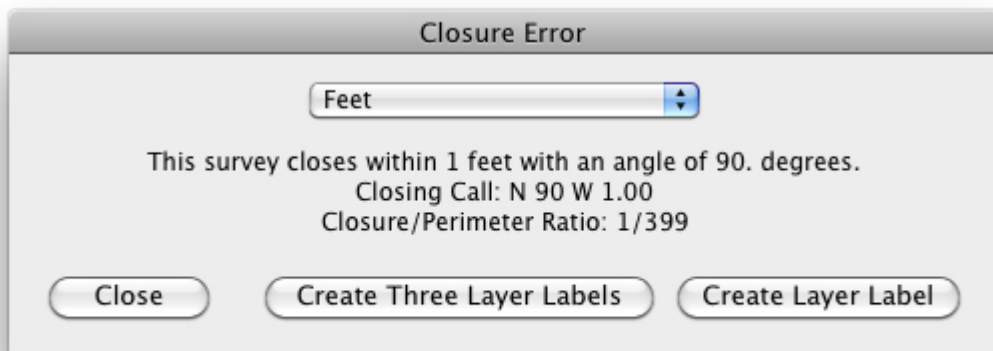
Close

## Calculate Perimeter



To find the perimeter distance of a plot, choose Calculate Perimeter from the Calculate menu. You can choose which unit of measurement this calculation is made in. You can also create a new [layer label](#) from this calculation.

## Check for Closure



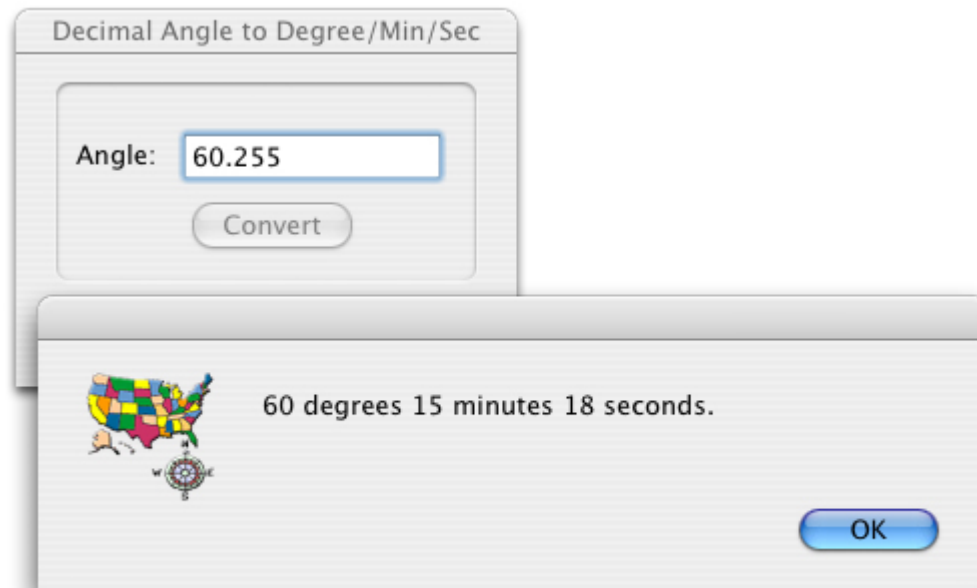
You can check to see if a plot description closes completely by choosing Check for Closure from the Calculate menu. If the plot description does not close, this will show you how far off the description is. You can also create a new [layer label](#) from this data. You can also choose which unit of measurement this information is presented in.

## Unit Conversion Calculator

Choose this menu option to bring up the conversion calculator form.

### Decimal Angle to Degrees

This will bring up a form that will allow you to convert an angle that is expressed as a decimal into an angle that is expressed in degrees, minutes and seconds.



Decimal Angle to Degree/Min/Sec

Angle: 60.255

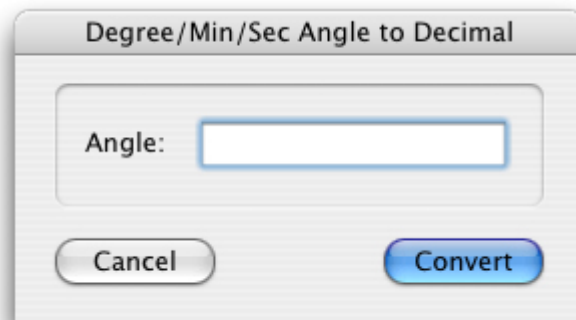
Convert

60 degrees 15 minutes 18 seconds.

OK

### Degree Angle to Decimal

This will bring up a form that will allow you to enter an angle that is in Degree/Minute/Second format and convert it into a decimal angle.



Degree/Min/Sec Angle to Decimal

Angle:

Cancel Convert

### Azimuth to Bounds

This feature can be used to change compass style calls into bounds data.

Convert Azimuth to Bearing

Azimuth:  Ex: 215 degrees

Cancel

Convert



Bearing: S 35 W

OK

### Angle Calculator

This feature can be used to convert a plot description that is written using interior and exterior angles into a plot description that is written using metes and bounds.

Angle Calculator

+88:15:07  
+81:42:41  
-6:1:47

Minus

Degree

Minute

Second

Remove

Add

Final Angle: 163.9336 163d 56' 0"

## Latitude / Longitude Calculator

Latitude / Longitude Calculator

Point 1

Lat

Long

Distance

Angle

Bearing

Project Point

Point 2

Lat

Long

Our Plot

Decimal Places

Point	Latitude	Longitude
POB	46 40 50.016 N	85 13 02.2468 W
Point 1	46 41 01.652 N	85 13 02.0254 W
Point 2	46 41 00.7023 N	85 13 07.4771 W
Point 3	46 41 00.6881 N	85 13 07.6064 W
Point 4	46 40 50.0019 N	85 13 07.8094 W
Point 5	46 40 50.0019 N	85 13 02.2537 W

☒ Display as DMS

To calculate the distance, angle or bearing between any two latitude/longitude points enter the data into points 1 and 2 and then press the appropriate calculation button.

To project a waypoint enter the starting point into Point #1 and press the Project Point button. This will bring up the Project Waypoint form. Enter in the angle and distance to the new waypoint. The new waypoint's lat/long will be placed in Point #2.

## **Latitude / Longitude Calculator (Continued)**

The latitude/longitude of each end point for a given layer can be calculated by choosing the appropriate layer from the layer popup menu and pressing the Get Coordinates button. If the latitude and longitude for the POB has not yet been set, you will be prompted to enter this value. You can choose how many decimal places the coordinates are calculated to by choosing the number from the Decimal Places popup menu.

Once the end point lat/long has been calculated, you can easily enter the point data into the calculator above by selecting the point and pressing either the Set Point 1 or the Set Point 2 button.

A layer's end point lat/long coordinates can be saved as a GPX file from by choosing Export Lat/Long as GPX from the File menu.

A layer's end point lat/long coordinates can be saved as a text file by choosing Export Lat/Long as Text File from the File menu.

A layer's end point lat/long coordinates can be saved as a comma delimited text file by choosing Export Lat/Long as Comma Delimited from the File menu.

A layer's end point lat/long coordinates can be sent to the Lat/Long to Layer tool by choosing Send Coordinates to Layer Converter from the Options menu.

A layer's end point lat/long coordinates can be set as waypoints by choosing the Create Waypoints From Lat/Long from the Options menu. The waypoints will be added to the main window's currently selected layer.

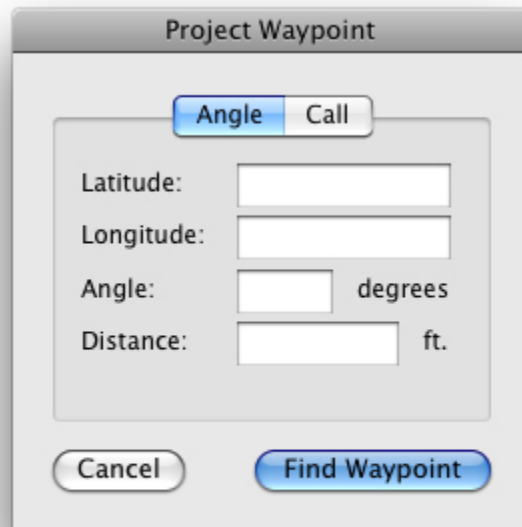
Point #2 can be used to set the current layer's POB by selecting Set Current Layer POB to Point 2 Lat/Long from the Options Menu.

Checking the Display as DMS box will cause the lat/long coordinates to be displayed as Degree/Minute/Second instead of as decimal values.



## Project Waypoint

Project Waypoint takes the Lat/Long of an existing waypoint, an angle and a distance and calculates a new waypoint.



The dialog box titled "Project Waypoint" features two tabs: "Angle" (selected) and "Call". The "Angle" tab contains four input fields: "Latitude:", "Longitude:", "Angle:", and "Distance:". The "Angle:" field is followed by the text "degrees", and the "Distance:" field is followed by "ft.". At the bottom, there are two buttons: "Cancel" and "Find Waypoint".

Or, you can use the Lat/Long of an existing waypoint and a metes and bounds call to calculate a new waypoint.



The dialog box titled "Project Waypoint" features two tabs: "Angle" and "Call" (selected). The "Call" tab contains three input fields: "Latitude:", "Longitude:", and "Call:". Below the "Call:" field is an example text "Ex: N 45 E 100". At the bottom, there are two buttons: "Cancel" and "Find Waypoint".

## Tools Menu

### Set Scale

This option allows you to set the drawing's scale numerically. This is the same as Right-Clicking on the scale in the drawing options and choosing Custom.

### Measurement Tool

Checking this menu will put the software in measurement mode. This mode allows you to see the distance between any two points on the screen. It will also show you the call represented by the line between those two points.

When first activated, there will be a message in the upper left hand corner of the drawing prompting you to pick the first point. Click anywhere on the drawing to set the first point. If you hold down the shift key while selecting a point, the endpoints will be marked with easy to hit targets. Then, click anywhere else on the drawing to set the second point. The message will now change to the distance between those two points. Click anywhere on the drawing to reset the measurement tool. The measurement mode can be turned off by pressing the escape key, clicking on the measurement message or by un-checking this menu.

After the second point has been selected, you can turn the line into a call by selecting Measurement Tool - Add Call from the Tools menu.

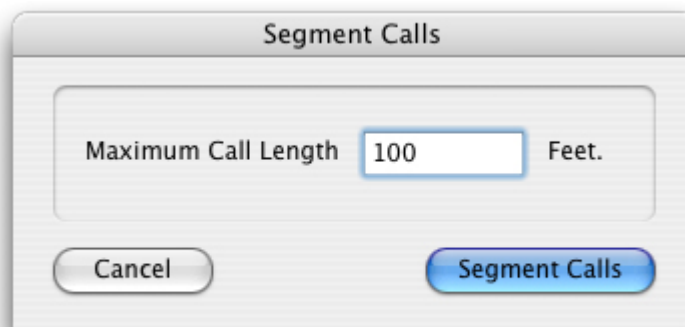
### Alignment Tool

Checking this menu will put the software in layer alignment mode. This mode allows for point-and-click positioning of layers.

While in this mode each layer will be drawn with its endpoints on. Click on the first endpoint and then click on an endpoint of a second layer. The first endpoint will align itself to the second endpoint.

### Segment Calls

Segment Calls allows you to break calls into lengths that are no longer than N feet. Doing this will create a new layer with the calls broken into lengths no greater than N feet. This only effects lines and will not make any changes to curves.



### Data Entry Mode

See Entering Data.

**Set Views to Data Entry Mode**

While in Data Entry Mode, choosing this menu option will set the "view as" options for the call list, line lengths and floating call list to match that of the current data entry mode.

Convert Lat/Long to Layer

Convert Lat/Long to Layer

Layer Name: Layer From Lat/Long

Latitude	Longitude	Description
45.	-85.	POB
45.0033265996	-84.9999449126	Point 1
45.0032704056	-85.0013161327	Point 2
45.0032318831	-85.0015306927	Point 3
44.9999999786	-85.0015902615	Point 4
44.9999999896	-85.0000000007	Point 5

Latitude: Longitude: Add

Description: Delete

☐ Display as DMS Project Point

Cancel

Convert to Layer

To convert a set of latitude, longitude coordinates into a set of metes and bounds calls, enter the points into the above form and press the Convert to Layer button. This will create a new layer and populate it with the data represented by the latitude and longitude points. You can set the layer's name by entering it in the Layer Name field.

Pressing the Project Point button will take the current value in the Lat/Long fields and prompt you for an angle and a distance (in feet). It will then create a new point at that location.

### **Convert Lat/Long to Layer (continued)**

Choosing Import GPX File from the File menu will import a list a waypoints or tracks to be converted to a new layer.

Choosing Import Delimited Text File from the File menu will import a list of lat/long coordinates to be converted to a new layer.

Choosing Import KML File from the File menu will import a layer from a KML file. If the KML file includes more than one layer you will be prompted to select which layer to import. Note: Importing KML files only works on text based KML files. Binary KML files cannot be imported.

## Convert X,Y to Layer

X,Y to Layer

Name: Layer From X,Y Points

Unit: Feet

0,0

100,0

100,100

0,100

0,100

Example: 100,100

Delete Add

Cancel Convert to Layer

This form will convert a set of X,Y coordinates into a set of Metes and Bounds calls.

Enter the data as X,Y and press the Add button.

Pressing the Delete button will delete the selected X,Y coordinate.

Pressing the Convert to Layer button will create the Metes and Bounds calls.

Press the Cancel button to close the form without creating any Metes and Bounds calls.

You can choose a name for the layer by entering it into the Name field.

You can choose the unit of measurement that the units are in from the unit popup menu.

**Import Comma Separated Values:** Choosing this option from the File menu will allow you to import a comma delimited text file of X,Y points.

## **Window Menu**

This menu will allow you to open any of the data entry and drawing/layer settings forms.

### **Show Status Bar**

Checking this menu will cause the status bar to be visible for this window. The status bar will show information for which drawing item is currently under the mouse cursor.

### **Show Toolbar**

Checking this menu will cause the toolbar to be visible for this window.

### **Show Tab Bar**

Checking this menu will cause the tab bar to be visible for this window.

The bottom of the Window menu will show all open files. Selecting one of these menu items will bring that window to the foreground.

## Conversion Table

### Conversion Table

3 hands = 1 foot  
1 span = 9 inches  
1 rod, pole or perch = 16.5 feet  
40 poles = 1 furlong  
8 furlongs = 1 mile  
320 rods = 1 mile  
3 miles = 1 league  
1 vara = 33 1/3 inches  
1 square foot = 144 sq. in.  
1 square yard = 9 sq. ft  
1 acre = 4,840 sq. yd  
1 square mile = 640 acres

### To Convert:

Feet to Meters: Multiply Feet by 0.3048  
Meters to Feet: Multiply Meters by 3.281  
Yards to Meters: Multiply Yards by 0.9144  
Meters to Yards: Multiply Meters by 1.094  
Miles to Kilometers: Multiply Miles by 1.609  
Kilometers to Miles: Multiply Kilometers by 0.6214  
Sq. Feet to Sq. Meters: Multiply Sq. Feet by .0929  
Sq. Meters to Sq. Feet: Multiply Sq. Meters by 10.76  
Acres to Hectares: Multiply Acres by 0.4047  
Hectares to Acres: Multiply Hectares by 2.471

Also see the conversion calculator.



## Conversion Calculator

You can use the conversion calculator to convert between any two units of measurement.

Conversion Calculator

Distance:


Chains

to

Feet

Close

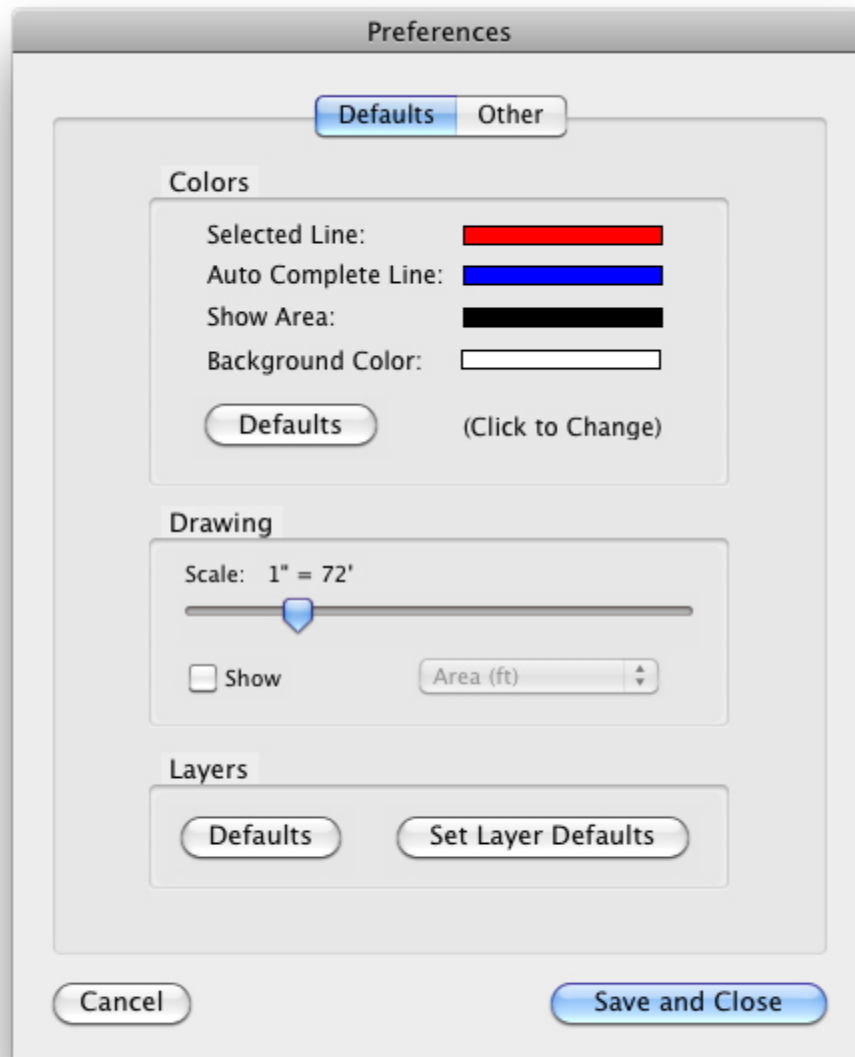
Convert



100 Chains equals 6600 Feet

OK

## Preferences



### Defaults Tab

#### *Colors:*

To change the various colors that Metes and Bounds uses to draw the different [components](#), click on the associated colored rectangle. Press the Defaults button to return the colors back to their original settings.

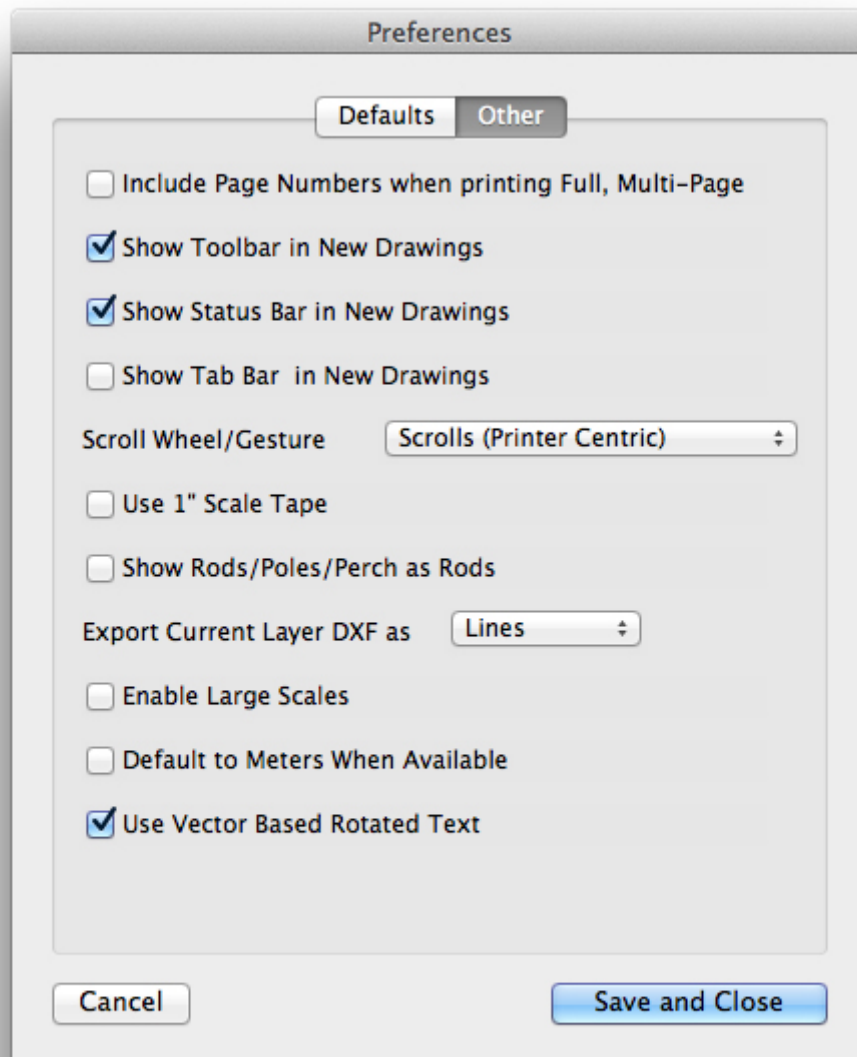
#### *Drawing:*

Use this section to set the default scale and other options for new drawings.

#### *Layers:*

Press the Set Layer Defaults button to set the current layer's configuration to be used for all new layers. This can be cleared by pressing the Defaults button.

## Other Tab



### **Include Page Numbers**

This option allows you to print the page numbers when printing a full/multi-page drawing.

### **Show Toolbar in New Drawings**

Checking this will cause the toolbar to be visible when a new drawing window opens.

### **Show Status Bar in New Drawings**

Checking this will cause the status bar to be visible when a new drawing window opens.

**Show Tab Bar in New Drawings**

Checking this will cause the tab bar to be visible when a new drawing window opens.

**Scroll Wheel / Gesture**

This popup menu allows you to choose how the scroll wheel, or other gestures, will function.

**Use 1" Scale Type**

Checking this box will cause the scale tape to always draw as 1" instead of the auto-adjusting its size.

**Show Rods/Poles/Perch as Rods**

When this is checked, the software will show Rods instead of Rods/Poles/Perch in places such as the floating call list and line labels.

**Export Current Layer**

Often 3rd party applications require the DXF file to be in a specific format in order to import properly. Choose the DXF format that best works with your 3rd party application.

- as Lines
- as Polygon
- as Polylines

**Enable Large Scales**

Checking this option will increase the size the amount by which the drawing can be zoomed out. However, some features may not respond as expected while this option is turned on.

**Default to Meters When Available**

When this option is checked, the software will default to meters instead of feet when choosing meters is available. For example, if calls are entered on the main screen, the lengths will be considered to be meters instead of feet. And other forms, such as the floating call list, will default to showing meters instead of feet.

## **How to Register, Upgrade or Renew Metes and Bounds**

### **How to Register:**

To register Metes and Bounds choose Register... from the File menu. Enter your serial number into the serial number box and press the Register button. If you need to purchase a serial number you can press the Purchase Basic button to purchase the Basic version or Purchase Professional to purchase the Pro version.

### **Upgrading from Basic to Pro:**

If you wish to upgrade your Basic version to the Pro version you can do so by selecting Upgrade... from the File menu. Enter your upgrade serial number into the serial number box and press the Register button. If you need to purchase an upgrade serial number you can do so by pressing the Upgrade to Professional button.

### **Renewing an update subscription:**

If your update subscription has expired or is about to expire, you can renew your subscription for another year by choosing Renew Update Subscription... from the File menu. Enter your renewal code (serial number) in the renewal code box and press the Renew button. If you need to purchase a renewal code you can do so by pressing the Purchase Renewal Code button.

You can view how long your current update subscription is good for by opening the About Box. A new renewal code will add 1 year from the date that the renewal code was purchased.

Please Note: Renewing is optional. If you are happy with your current version, then there is no need to renew. You only need to renew if you want to keep up with all of the latest updates.

Note #2: If you currently own the Basic version and the update subscription has expired and you have been considering upgrading to the Pro version, now may be a good time to do so. The Basic to Pro Upgrade will also renew your update subscription for another year.

### **Registering Metes and Bounds on a new computer:**

If you have purchased a new computer, or are recovering from a hard drive failure, you can use these steps to re-register Metes and Bounds:

1. Enter your Basic or Pro serial number. If you purchased the Basic version and then upgraded to the Pro version, you will need to enter in your Basic serial number first and then enter your Basic to Pro Upgrade serial number.
2. If your Basic or Pro serial number has expired, you will be prompted to enter in your renewal code. Enter in your most recent renewal code.

**Expired Serial Numbers/Renewal Codes:**

If the software tells you that your serial number has expired, that means that your serial number is too old to use the latest version of the software. There are two options available to address this.

1. Purchase an [Update Subscription Renewal](#). This will allow you to use the latest version of the software. It will also allow you to use any new updates that are released in the next year.
2. Install an older version of the software that will work with your serial number. To find the last version of the software to support your serial number, open the About Box and click on the Advanced tab. Note the Subscription Renewal Code. Then go to the [older versions](#) website and download the version that matches your code.

**Lost Serial Numbers:**

If you have lost your serial number(s), you can find them by going to our [support web page](#) and clicking on the [find serial number link](#).