

# MTPLOT User's Manual



Phoenix Geophysics Limited  
3781 Victoria Park Ave., Unit #3  
Toronto, Ontario, Canada  
M1W 3K5

Tel: 1 416 491 7340  
Fax: 1 416 491 7378

Web: [Phoenix-Geophysics.com](http://Phoenix-Geophysics.com)  
E-mail: [mail@phoenix-geophysics.com](mailto:mail@phoenix-geophysics.com)



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**Phoenix Geophysics Limited**, 3781 Victoria Park Avenue, Unit 3, Toronto, ON Canada M1W 3K5.

Tel: +1 416 491 7340

Fax +1 416 491 7378

[mail@phoenix-geophysics.com](mailto:mail@phoenix-geophysics.com)

[www.phoenix-geophysics.com](http://www.phoenix-geophysics.com)

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## 1. System Requirements

In order to run MTPlot, you will need a PC-compatible computer with a minimum of a Pentium 133 MHz processor and 16 MB of RAM. A Pentium 200 MHz machine with 32 MB of RAM or better is recommended. You will also need a mouse to operate MTPlot.

## 2. Installing MTPlot

Installation of MTPlot is as follows:

- 1) From the **Start** menu, choose **Settings** and then **Control Panel**.
- 2) Double-click the **Add / Remove** programs icon..
- 3) Click the **Install** button. At the prompt, insert the disk labeled "MTPlot - Disk #1 of 5" into the floppy drive.
4. Click the **Next** button, and another form will appear with a text box containing the command line instruction "a:\setup.exe". Click the **Finish** button to begin installing MTPlot.
- 5) A dialog box will be displayed with the message "Copying initialization files ...". After a short time you will be prompted for disk #2. Insert the disk labeled "MTPlot - Disk #2 of 5" into the floppy drive and click the OK button.
- 6) A form will appear welcoming you to the installation process. Click the **OK** button and follow the remaining instructions. You will be asked to specify a directory into which MTPlot will be installed. It is recommended that you accept the default setting.

## 3. Overview

When MTPlot begins, the screen will be divided into two regions. The left region is a dark gray blank area, while the right contains several controls. The left area is the plot region, in which all plots will appear. The controls at the right allow you select which plots you wish to see and to customize the arrangement and appearance of those plots.

## 4. Choosing a Plot Arrangement (Layout)

Begin by dividing the plot area in the way that best suits your needs. Do this by using the controls in the upper right corner of the MTPlot window, labeled **Number of Plots** and **Layout**. When you change the first setting, the plot area divides into the specified number of cells, or boxes, separated by a white line. Changing the layout setting causes the arrangement of the boxes to change, but the *number* of boxes remains the same until the **Number of Plots** control is changed.

## 5. Placing a Plot in the Plot Area

To produce a plot, you must first move to a directory with MT data in a suitable format (.EDI, .MT files). Do this by changing the text in the text box labeled Dir (short for directory). Text may be entered manually, or the text box may be double-clicked and a directory browse box will appear.

Once a directory has been chosen (hit the enter key if entering the directory manually), the file list box immediately below the directory list box will list all valid .MT or .EDI site files. You may scroll through these files by using the vertical scroll bar at the right of the list box. Left clicking on a site causes the text to become highlighted, and the site is now selected.

Now that you have chosen both a directory and a site file, all that remains is to choose the type of plot you wish to create. Scrolling the various plot types in the drop down list box labeled simply Plot can do this. Again, click on one these options to select it.

At this point, the Phoenix logo should change to display a small data plot. Drop the plot you have just selected into the plot area by dragging from this small plot into the main plot area. The plot will appear in the box in which you drop it and will be sized and scaled to fit this box exactly.

## 6. Plotting Calibration Files

In the Plot list box, there are two items corresponding to calibration amplitude and phase plots. Select a directory containing valid calibration data in an .MTC file. After selecting either the MTU Cal Amplitude or MTU Cal Phase item from the Plot list box, the contents of the file list box will change to list only those files having a .MTC extension. Plots can now be dragged to the plot area in the way described above.

## 7. Viewing Data for the Plots In the Plot Area

You may view the data for any plot in the plot area by right clicking on it and selecting the **View Data** option from the drop-down menu. This causes a form to appear in the center of the screen listing the data in a tabular format. There is

also a button at the bottom of this form which allows you to save this table into an ASCII file. This file will have the same name as the site file with an .asc extension. Note that if you repeat this action for two different plots for the same site, the second table will be appended to the first file.

## 8. Selecting a Custom Layout

If you find that the supplied box arrangements do not suit your needs, you may specify a custom layout by selecting the Layout Entry option from the File menu. A form will appear which will allow you to modify the data in the layout.dat file, which specifies these arrangements.

On the form you will see a grid with ten rows, labeled boxes 1 through to 10. The grid will be filled with numbers describing the way in which the plot area is subdivided for a particular layout. In the upper right, you will see two controls allowing you to specify the number of plots and the layout number for the arrangement of plots you wish to create or edit. In the upper left, you will see a scale representation of the plot area, which will allow you to see what your box arrangement looks like as you enter it.

To illustrate how to create a new box layout, let's start with an example. Supposing we want to create an arrangement with 4 boxes, each of equal width, occupying the whole of the plot area space. The height of each box will be the height of the plot area, while the width of each box will be 1/4 of the plot area width.

To do this, set the **Number of Plots** control to 4, and the layout number to 1. Now move upwards through the layout numbers to find the first empty layout. (When you have selected an empty layout, the grid will be filled with the number - 1 and the plot area sample will turn a dark blue). Now enter the following numbers for each box. (Select a box by clicking on the corresponding row; enter new data by editing the numbers in the text boxes labeled Left, Top, Width and Height to the right of the grid).

	Left	Top	Width	Height
Box #1:	0	0	25	100
Box #2:	25	0	25	100
Box #3:	50	0	25	100
Box #4:	75	0	25	100

The numbers you have just entered represent the left, top, width and height coordinates for each of the four boxes as percentages of the entire plot area. The left parameters specify an offset from the left edge of the plot area, while the top

parameter specifies an offset from the top edge of the plot area. These two numbers together specify the location of the upper left corner of a box.

The width and height parameters are self-explanatory. Remember that they are percentage values, and they must not specify an area, which extends beyond the plot area itself. For example, supposing we had a box with its upper left corner located at Left 50 and Top 50 (the center of the plot area). If we then specified that the width of the box was to be 75, the box would extend 25 percent over the right edge of the plot area, an unacceptable value.

Note that in this simple arrangement above, three of the four parameters stay constant for each box. Each box has a top of zero, a width of 25% of the plot area, and a height of 100% of the plot area. Only the left edge of the boxes differ, with the first box starting at 0% of the plot area width (the left edge), the second at 25%, the third at 50%, and the fourth at 75%.