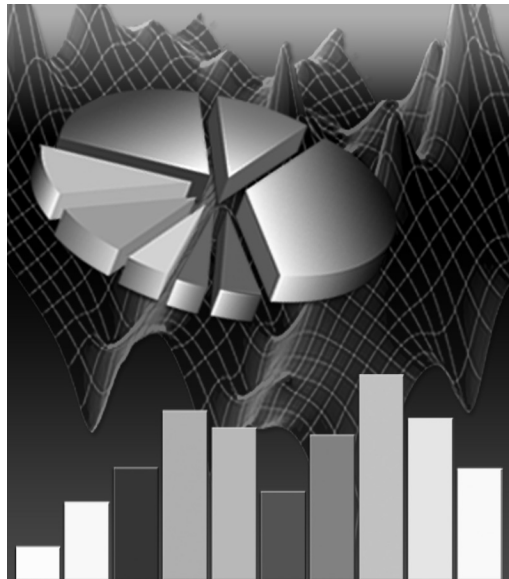


Grapher™

Getting Started Guide

2D and 3D Graphing Software for
Scientists, Engineers, & Business Professionals



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January 2007

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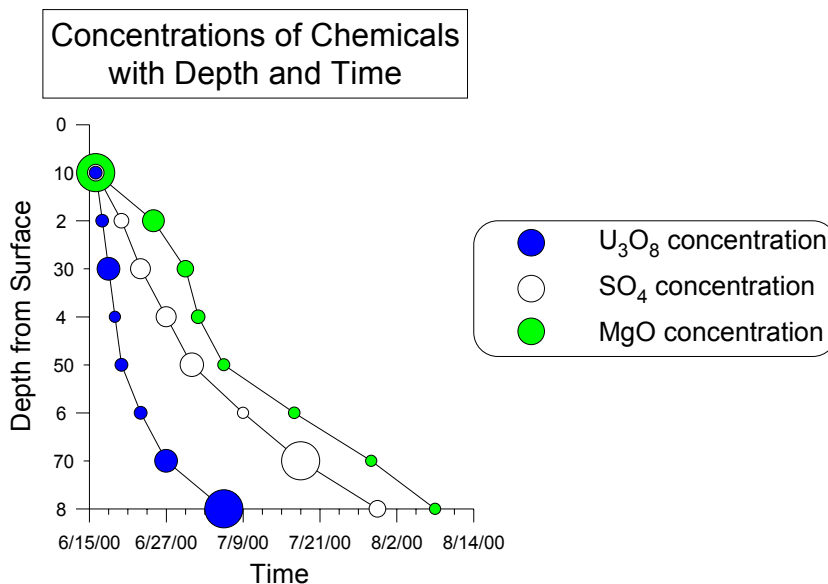
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Introduction to Grapher

Welcome to **Grapher**, the easy-to-use technical graphing package for scientists, engineers, business professionals, or anyone who needs to generate graphs quickly and easily.

With **Grapher**, creating a graph is as easy as choosing the graph type, selecting the data file, and clicking the *Open* button. **Grapher** automatically selects reasonable default settings for each new graph, though all of the graph settings can be modified. For example, you can change tick mark spacing, tick labels, axis labels, axis length, grid lines, line colors, symbol styles, and more. You can add legends, bitmaps, fit curves, and drawing objects to the graph. To apply the same custom settings to several graphs, you can create a **Grapher** template containing the preferred styles. Advanced automation is incorporated using Golden Software's **Scripter**[™] program or any Active X automation program. Once the graph is complete, you can export it in a variety of formats for use in presentations and publications.



Grapher is extremely flexible. For example, you can combine multiple plot types, display graph titles, customize axis settings, and display legends for graphs.

System Requirements

The minimum system requirements for **Grapher** are:

- Windows 2000, XP, or higher
- 800 x 600 or higher monitor resolution with support for at least 256 colors
- 60 MB of free disk space in the target installation drive
- At least 128 MB RAM above the Windows requirement for simple data sets

Installation Directions

To install **Grapher** from a CD:

1. Insert the **Grapher** CD into the CD-ROM drive. The install program automatically begins on most computers. If the installation does not begin automatically, double-click on the AUTORUN.EXE file located in the **Grapher** CD files.
2. Choose *Install Grapher* from the **Grapher Auto Setup** dialog to begin the installation.

To install **Grapher** from a download:

1. Download **Grapher** according to the directions you received.
2. Double-click on the downloaded file to begin the installation process.

You need to have administrator rights to install and run **Grapher**. For detailed installation directions, including client/server installations, see the README.RTF file and the FAQs at www.goldensoftware.com.

Updating Grapher

To update **Grapher**, open the program and select **Help | Check for Update**.

Uninstalling Grapher

To uninstall **Grapher**, use Add/Remove Programs in the Windows Control Panel.

A Note about the Documentation

The **Grapher** documentation includes this getting started guide and online help. General information is included in the getting started guide. Detailed information about each command and feature of **Grapher** is included in the online help. In the event the information you need cannot be located in the online help, other sources of **Grapher** help include our support forum, FAQs, and technical support.

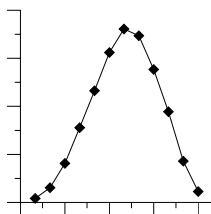
Various font styles are used throughout the **Grapher** documentation. **Bold** text indicates menu commands, dialog names, window names, and page names. *Italic* text indicates items within a dialog such as group names, options, and field names. For

example, the **Save As** dialog contains a *Save as type* drop-down list. Bold and italic text may occasionally be used for emphasis.

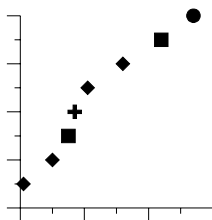
In addition, menu commands appear as **File | New**. This means, "click on the **File** menu at the top of the **Grapher** window, then click on **New** within the **File** menu list." The first word is always the menu name, followed by the commands within the menu list.

Plot Types

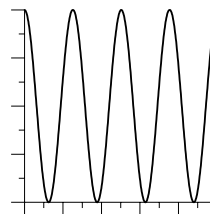
Several different plot types can be created with **Grapher**. Detailed information about each plot type is located in the online help. An example of each plot type is shown below.



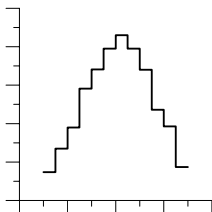
2D Line/Scatter



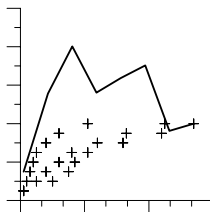
2D Class
Scatter Plot



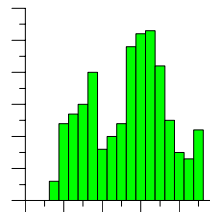
2D Function



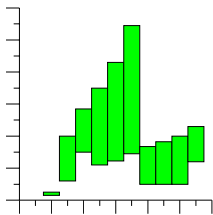
2D Step Plot



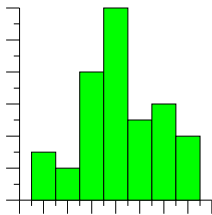
Summation Plot



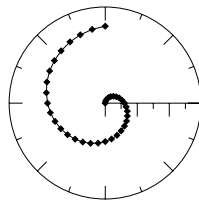
2D Bar Chart



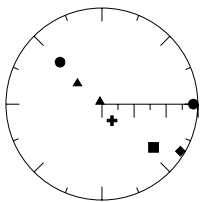
2D Floating Bar Chart



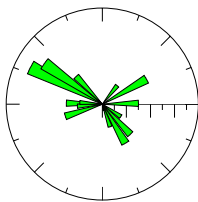
2D Histogram



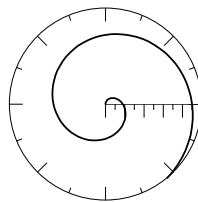
2D Polar



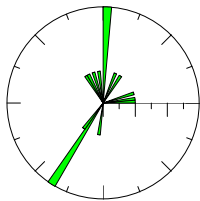
2D Polar Class



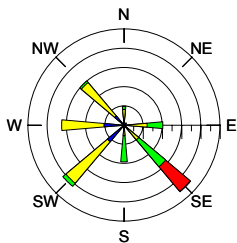
2D Polar Bar Chart



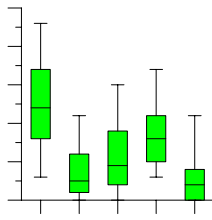
2D Polar Function



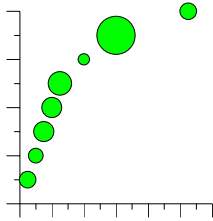
2D Rose Diagram



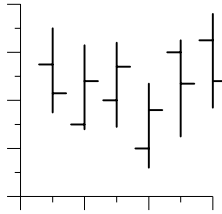
2D Wind Chart



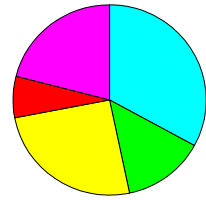
2D Box-Whisker Plot



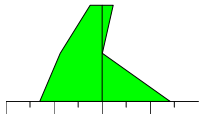
2D Bubble Plot



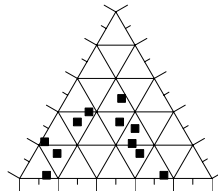
2D Hi-Low-Close



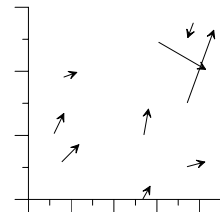
2D Pie Chart



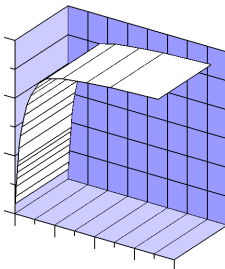
2D Stiff Plot



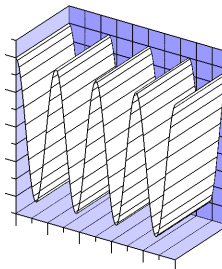
2D Ternary Diagram



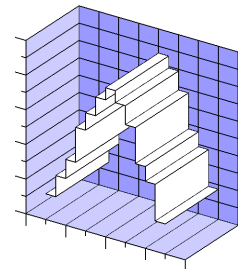
2D Vector Plot



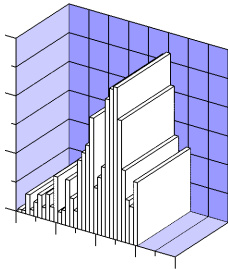
3D XYY Ribbon/Wall



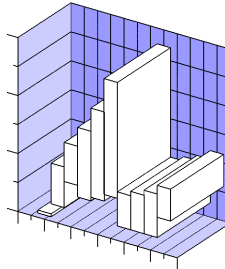
3D XYY Function



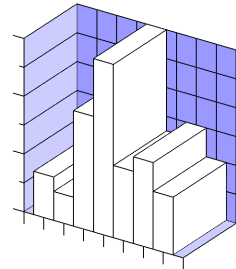
3D XYY Step Plot



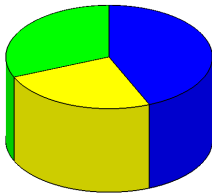
3D XYZ Bar Chart



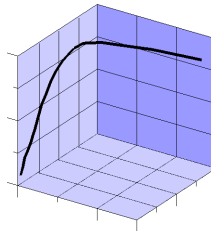
3D XYZ Floating Bar Chart



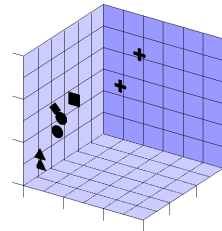
3D XYZ Histogram



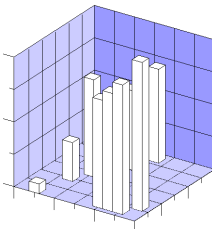
3D XYZ Pie Chart



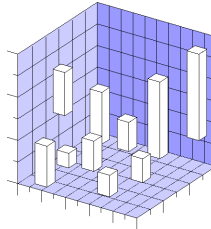
3D XYZ Line/Scatter Plot



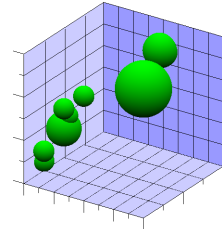
3D XYZ Class Scatter Plot



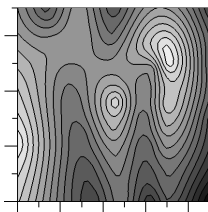
3D XYZ Bar Chart



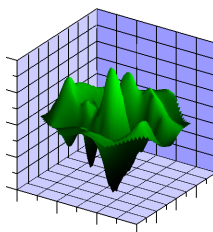
3D XYZ Floating Bar Chart



3D XYZ Bubble Plot



Contour Map



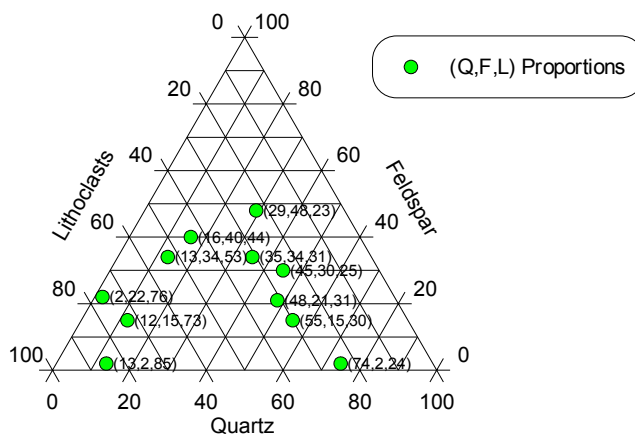
Surface Map

Three-Minute Tour

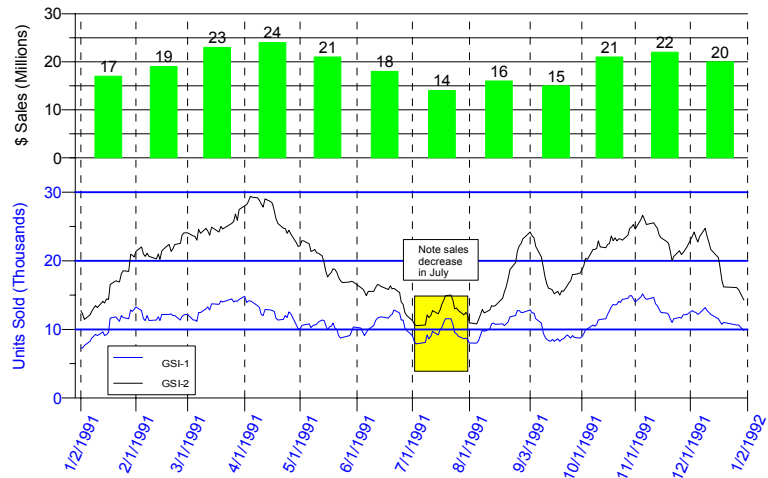
We have included several example files with **Grapher** so that you can quickly see some of **Grapher's** capabilities. The following files are similar to those installed with the program. Only a few files are discussed here, and these examples do not include **Grapher's** many plot types and features. The **Object Manager** is a good source of information as to what is included in each file.

To view the sample files:

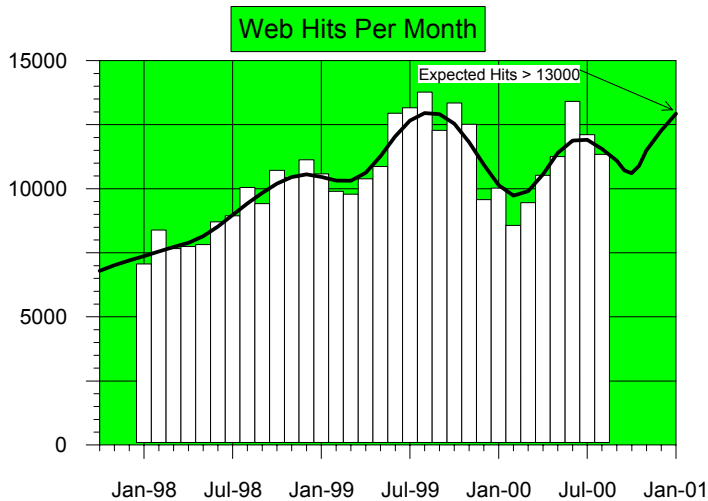
1. Open **Grapher**.
2. Click **File | Open** and click on a [*.GRF] or [*.GPJ] file located in the Samples folder and then click the *Open* button. By default, the Samples folder is located in C:\Program Files\Golden Software\Grapher 7\. If your version of **Grapher** was installed elsewhere, look in that installation folder.



This is a ternary diagram similar to TERNARY.GRF, and it displays plot labels in the XYZ format. The plot labels can be displayed in six different ways. The diagram is displayed with an optional, customizable legend.



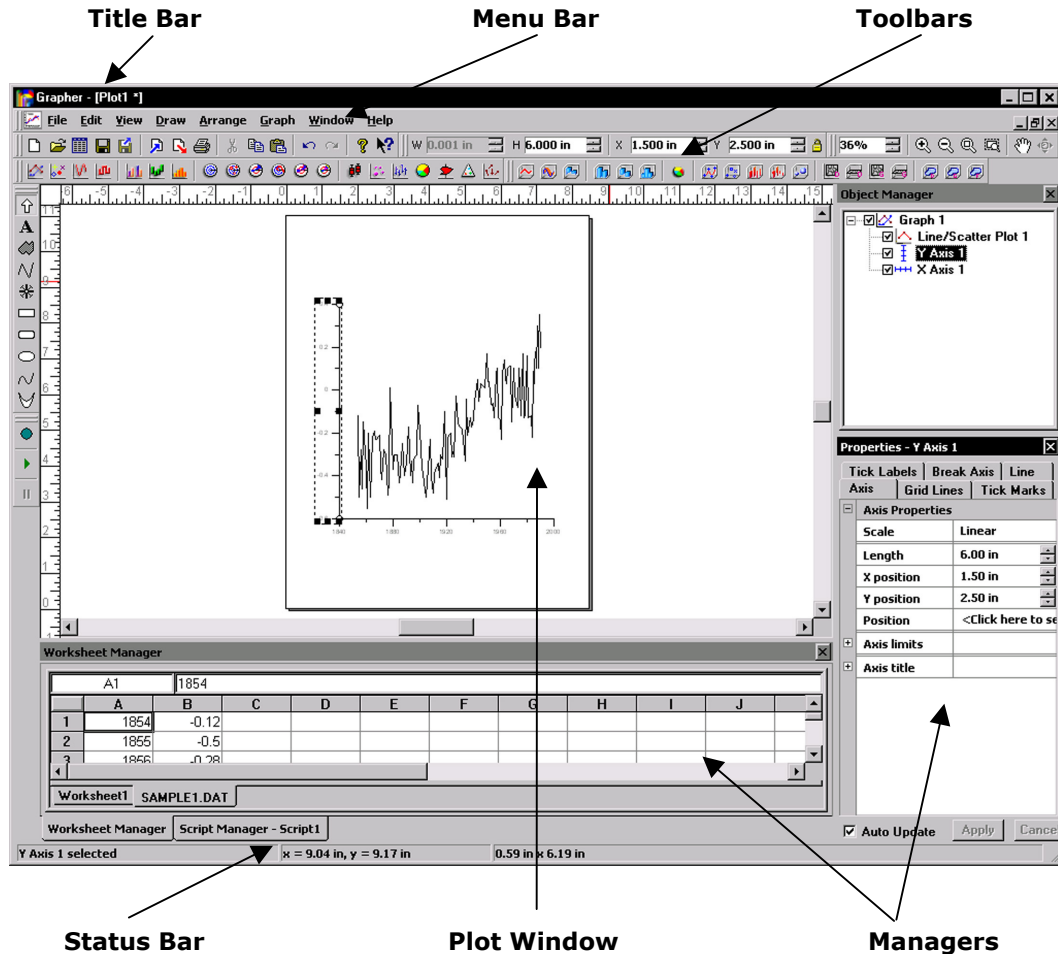
SAMPLE2.GRF contains a bar chart, fit curves, angled labels, annotation (text), "drawing objects" (rectangles), and multiple axes.



BARChart.GRF contains a graph title, bar chart, fit curve, text, line (arrow), and graph fill. The graph title and background fill are properties of Graph 1.

Grapher User Interface

The **Grapher** user interface layout consists of the title bar, menu bar, toolbars, plot windows, worksheet windows, managers, and status bar.



The **Grapher** user interface includes several toolbars and managers.


The following table summarizes the function of each component of the **Grapher** layout.

| Component Name | Component Function |
|------------------|--|
| Title Bar | The title bar lists the program name plus the saved Grapher file name, if any. An asterisk after the file name indicates the file has been modified. |
| Toolbars | The toolbars contain Grapher tool buttons, which are usually shortcuts to menu commands. Move the cursor over each button to display a ToolTip describing the command. |
| Menu Bar | The menu bar contains the commands used to run Grapher . |
| Status Bar | The status bar shows information about the activity in Grapher . The status bar is divided into three sections. The left section displays the selected object name or a brief description of areas under the cursor. The middle section shows the pointer coordinates in inches or centimeters. This area also displays the graph's XY coordinates when using Graph Digitizing Digitize , Graph Digitizing Digitize Fixed , or when <i>Display value on click</i> is enabled. The right section displays the dimensions of the selected object or the Property Inspector option name and value. |
| Plot Window | The plot window contains the graphs and other graphics. |
| Worksheet Window | The worksheet window (not shown) is used to create or import data. |
| Managers | Grapher contains several managers including an Object Manager , Property Inspector , Worksheet Manager , and Script Manager . The Object Manager contains a hierarchical list of the objects in a Grapher plot window; these objects can be selected, arranged, and renamed in the Object Manager . The Property Inspector allows you to edit the properties of a selected object. The Worksheet Manager contains a view of all data loaded into Grapher . The Script Manager controls scripts that are recorded and run within Grapher . |



Changing the Window Layout

The plot window, worksheet window, toolbars, managers, and menu bar display in a docked view by default; however, they can also be displayed as floating windows. The visibility, size, and position of each item may also be changed.

Visibility

Use **View | Toolbars/Managers** to toggle the display of the toolbars and managers. In addition, you can open the **Property Inspector** by pressing the ALT+ENTER keys or double-clicking on an object. Alternatively, you can click the  button in the title bar of the manager to close it.

Size

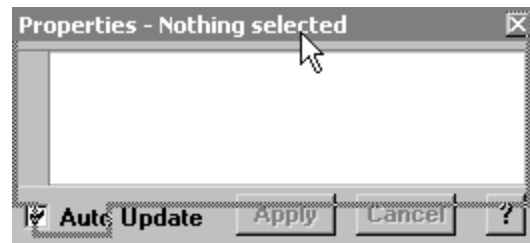
You can drag the sides of a floating plot window, worksheet window, manager, toolbar, or menu bar to change its size. If a window or manager is docked, its upper and lower bounds are indicated by a  or  cursor. Move the cursor to change the size.

Position

To change the position of a docked manager, click the title bar and drag it to a new location. A thin solid black rectangle indicates that the manager is docked in the new location when the **File | Preferences/Defaults Visual look** is set to *Default*, *XP*, or *Office 2003*. A thick light gray rectangle indicates that the manager is floating. You can also double-click the manager's title bar to toggle between floating and docked modes. A tabbed manager view is also an option.

To create tabbed managers:

1. Drag one manager on top of another window.
2. Position the cursor within the title bar. You will see an outline with a tab at the bottom if you have positioned the cursor correctly.
3. Release the mouse button.




If there is a tab outline, such as the one near the word Auto, the managers are tabbed rather than stacked.

To return to individual managers from the tabbed view:

1. Click on the manager's name on the tab.
2. Drag the tab to a new position.

The toolbars and menu bar can also be moved or displayed in floating windows. To

dock the toolbar or menu bar in a new location, click the "grip" bar  along the toolbar or menu bar edge, hold the left mouse button, and then drag the toolbar or menu bar to a new location. Drag the toolbar or menu bar away from a window edge to display the toolbar as a floating window.

Restoring the Managers and Windows to Their Original Locations

If the plot windows, worksheet windows, or managers have moved or become invisible, or if they are in undesired locations, you can use the **View | Reset Windows** command to move them back to their original locations. Note that you must restart **Grapher** for the changes to take effect.

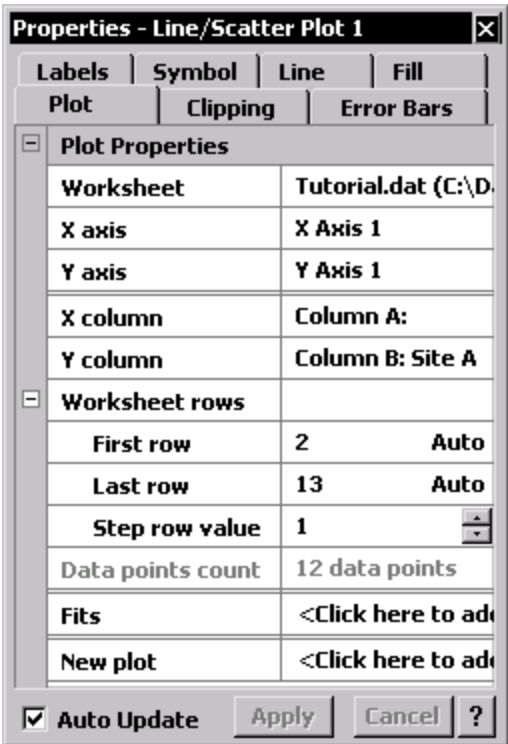
Customizing the Toolbars and Menu Bar

You may customize **Grapher's** toolbars and menus through **View | Toolbars/Managers | Customize**, or right-click on a toolbar and select **Customize** from the context menu.

Property Inspector


The **Property Inspector** allows you to edit the properties of an object, such as a line or axis. The **Property Inspector** contains a list of all properties for a selected object. The **Property Inspector** can be left open so that the properties of selected objects are always visible. Information about the object properties is located in the online help.

Features with multiple options appear with a plus (+) or minus (-) to the left of the name. To expand a group, click on the + icon. To collapse the group, click on the - icon. For example, the expanded **Worksheet rows** feature contains three options, *First row*, *Last row*, and *Step row value*.



The **Property Inspector** is used to change properties such as the worksheet rows used in the plot.

Changing Properties

The **Property Inspector** displays the properties for selected objects. To change a property, click on the property's value and select a new property from the pop up box, scroll to a new number using the  buttons, select a new value from the drop-down list or palette, or type a new value and press ENTER on your keyboard. The property access depends on the property type. For example, a polyline has *Style*, *Color*, *Width*, *Start style*, *End style*, and *Scale* properties. Changing the *Color* requires clicking on the current color and selecting a new color from the color palette, changing the *Width* requires typing a new number or scrolling to a new number, and changing the *End style* requires clicking on the existing style and clicking on a new style in the list.

You can also modify more than one object at a time. For example, if you click on *X Axis* in the **Object Manager** and then hold the CTRL key and click on *Y Axis*, you can change the properties of each axis simultaneously in the **Property Inspector**.

Occasionally, some properties are dependent on your other selections. For example, there is a *Scale* option in fill properties. This option is disabled (grayed out) unless you have selected a vector fill type as the *Pattern*.

Applying Property Inspector Changes


By default, the object properties automatically update after you select an item from a palette, press ENTER, or click somewhere else in the **Property Inspector**. Uncheck the *Auto Update* box at the bottom of the **Property Inspector** to disable this feature and make multiple changes without updating the plot window. Click the *Apply* button to update object properties in the plot window once all changes have been made.

Canceling Property Inspector Changes

When the *Auto Update* box is not checked, click *Cancel* to cancel any changes made in the **Property Inspector**. Note: changes can be canceled in this manner only if the *Apply* button has not been clicked. If *Auto Update* is checked, use **Edit | Undo**.

Changing the Property Inspector's Appearance

Use **File | Preferences/Defaults** or right-click on the **Property Inspector** to access appearance-changing options including the following:

- Check *Display info area* to see a short description of a selected item in the **Property Inspector**.
- Check the *Display spinners* box to display spinner controls  in both active and inactive properties. Remove the check mark to display spinners only when you click the item's edit box.
- Check the *Display tabs* box to display the section dividers as tabs. When tabs are not displayed, all of the options are displayed in one collapsible list. Note that all

directions in the documentation refer to the tabbed **Property Inspector**. If tabs are not displayed, then you should "expand the list" rather than "click on a tab." For example, for a tabbed view the directions would be "click on the **Symbol** tab" and for a non-tabbed view the directions would be "expand the *Symbol Properties* section."

- Select *Left* or *Top* as the tab position from the *Tabs side* option.
- Click *Font* to set the **Property Inspector** font properties.

Keyboard Commands

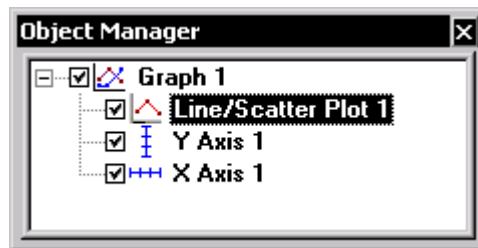
When working with the **Property Inspector**, the up and down arrow keys move up and down in the **Property Inspector** list. The ENTER key activates the highlighted property. The right arrow key expands collapsed sections, e.g., *Plot Properties*, and the left arrow collapses the section.

Property Defaults

Use **File | Preferences/Defaults** to change the default line, fill, symbol, or text properties

Object Manager

The **Object Manager** contains a hierarchical list of the objects in a **Grapher** plot window. The objects can be selected, arranged, and renamed in the **Object Manager** or through the plot window menu commands. Changes made in the **Object Manager** are reflected in the plot window, and vice versa.



*The **Object Manager** contains a list of all objects in a plot window. The **Object Manager** can be used to select objects, arrange objects, and control object visibility.*

Object Visibility

Each item in the list consists of an icon indicating the object type, a text label for the object, and a check box. A checked box indicates that the object is visible; an empty box indicates that the object is not visible. Click the check box to the left of an object icon to change its visibility status. Invisible objects do not appear in the plot window and do not appear on printed output.

Object Manager Tree

If an object contains sub-objects, a plus (+) or minus (-) displays to the left of the object name. Click on the + or - icon to expand or collapse the list. For example, a graph object contains a plot, e.g., line/scatter, plus at least two axes. To expand the tree, click on the + icon, select the item and press the plus key (+) on the numeric keypad, or press the right arrow key on your keyboard. To collapse a branch of the tree, click on the - icon, select the item and press the minus key (-) on the numeric keypad, or press the left arrow key.

Selecting Objects

Click on the object name to select an object. The selection handles in the plot window change to indicate the selected item and the status bar displays the name of the selected object.

To select multiple objects, hold down the CTRL key and click on each object. To select multiple contiguous objects at the same level in the tree, click on the first object's name, hold down the SHIFT key, and then click on the last object's name.

Opening Object Properties

Click on the object name to display its properties in the **Property Inspector**.

It is not possible to edit the sub-objects within a composite object. Composite objects are created with **Arrange | Combine** or when some files, such as metafiles, are imported. Break apart the composite object with **Arrange | Break Apart** first, then select and edit individual objects.

Editing Object IDs

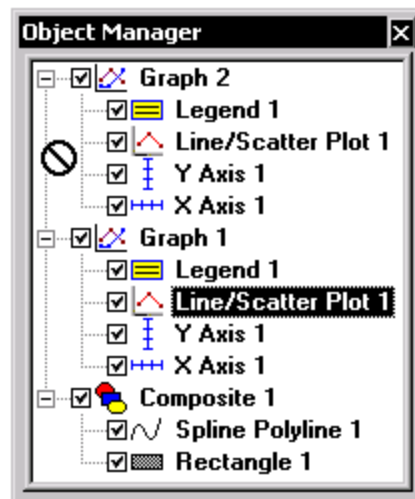
Select the object and then click again on the selected item (two slow clicks) to edit the text ID associated with an object. You must allow enough time between the two clicks so it is not interpreted as a double-click. Enter the new name into the box.

Alternatively, you can right-click on an object name and choose **Rename Object**.

Arranging Objects

To change the display order of the objects with the mouse, select an object and drag it to a new position in the list above or below an object at the same level in the tree. The pointer changes to a black right arrow if the object can be moved to the pointer location or a black circle with a diagonal line if the object cannot be moved to the indicated location. For example, a line/scatter plot can be moved anywhere within its graph object, but not into a composite object or into another graph object.

Objects can also be arranged using the **Arrange | Move to Front**, **Arrange | Move to Back**, **Arrange | Move Forward**, and **Arrange | Move Backward** commands.



The pointer changes to a circle with a diagonal line if an object cannot be moved to a location.

Deleting Objects

To delete an object, select the object and press the DELETE key. Some objects cannot be deleted. For example, you cannot delete an axis used by a plot in a graph.

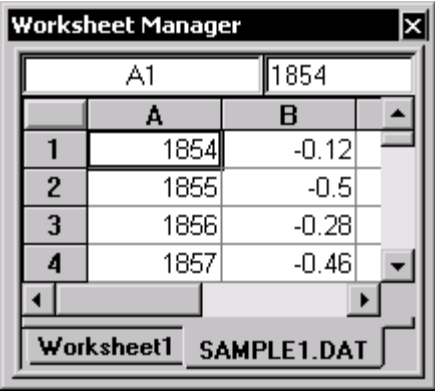
Worksheet Windows

You can enter data into the worksheet by using **File | Open** to open a data file into the worksheet window, by typing data directly into the worksheet, or by copying your data from another application and pasting it into the worksheet. Use the **Data** menu commands to sort data, view statistics, or to transform data using mathematical functions. Use **File | New** to open new worksheets. Data used to create plots can be opened in the worksheet window with **Graph | Display Worksheet**.

Worksheet Manager

The **Worksheet Manager** contains a view of all data loaded into **Grapher**. Multiple data files are displayed in a tabbed format.

Right-click inside the **Worksheet Manager** to open the worksheet menu commands. Use the **New Graph** command to create a graph in the current plot window.



| | A | B |
|---|------|-------|
| 1 | 1854 | -0.12 |
| 2 | 1855 | -0.5 |
| 3 | 1856 | -0.28 |
| 4 | 1857 | -0.46 |

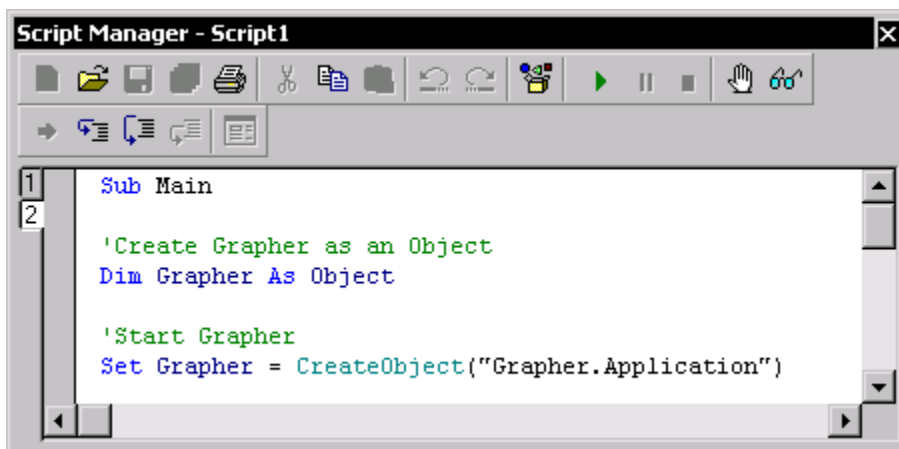
*You can see all data used in all open plot windows in the **Worksheet Manager**.*

Script Manager

The **Script Manager** allows you to work with automation within **Grapher** rather than opening Golden Software's automation program,

Scripter, separately. All of **Scripter's** toolbars, menus, etc. are available within the **Script Manager**. You need to right-click in the **Script Manager** to access **Scripter's** menu

commands. Detailed information about **Scripter**, plus details **Grapher's** automation objects, methods, and properties are located in the online help.



*You can use the **Script Manager** to view, edit, and run scripts.*

Scripter

Grapher operations can be controlled through automation scripts. You can do practically everything with a script that you can do manually with the mouse or from the keyboard. Scripts are used to automate repetitive tasks, consolidate a complicated sequence of steps, or act as a "front end" to help novice users access **Grapher's** capabilities without having to become familiar with **Grapher**.

Golden Software's **Scripter** is a program for developing and running scripts. A script is a text file containing a series of instructions carried out when the script is run. Instructions are written in a Visual BASIC-like programming language.


Scripter offers many features to help you write, edit, and debug scripts. Its features include language syntax coloring, a list of the procedures defined in the script, an object browser for examining procedures available in external objects, a visual dialog editor, break points, single-step execution (including options to step over and to step out of procedures), a watch window for displaying the values of script variables, and more.

To start the **Scripter** program, select it from the Windows Start menu. **Scripter** is installed in the same program group as **Grapher**. To open **Scripter**, click the Windows Start button and locate **Golden Software Grapher 7 | Scripter**. If **Scripter** is not present, the installation of **Scripter** may have been skipped when **Grapher** was installed. See the README.RTF file for information about the installation process.

Since **Grapher** exposes its services through automation, you can use any programming tool that accesses automation objects. Such tools include Visual BASIC, Windows Scripting Host, and many of the Microsoft Office applications, among others.

Script Recorder

In addition, **Grapher 7** also includes a **Script Recorder**, accessed through **Edit |**

Script Recorder or the  toolbar. The **Script Recorder** records all commands as you make them in **Grapher**. When the script is run, **Grapher** performs all the steps for you. This is ideal for users that need to perform repetitive tasks but are unfamiliar with automation, for advanced users who do not want to manually enter all of the syntax, or for average users having difficulties with syntax. Open the **Script Manager** if you would like to view a script while it is recording. Note that recording must be stopped before editing scripts within the **Script Manager**.

Plot Windows

A plot window is the area used for creating and modifying graphs. You are presented with an empty plot window when **Grapher** is first started. Multiple plot windows can be open at one time. The plot window behavior is controlled by settings in the **View** menu. You may rotate, zoom, pan, etc. in the plot window.

Fit to Window

Once new graphs or other objects have been added or the existing graphs and objects are modified, it is possible that objects are no longer fully visible in the plot window. Use **View | Fit to Window** to fit all existing objects into the window.

Page

Use **View | Page** to view the entire page. The page outline is visible if the *Display page outline* option is checked in the *General Options* section in **File | Preferences/Defaults**.

Actual Size

Use **View | Actual Size** to scale the drawing to the approximate size when printed.

Full Screen

Use **View | Full Screen** to scale the image to fit the monitor. The command menus and toolbars are not accessible when viewing **Full Screen**. Press the ESC key or click on the screen with the mouse to return to the **Grapher** window.


Zoom

Sometimes it is useful to zoom in or out in the plot window. Use the **View | Zoom**

commands or the  tools to change the object magnification.

Pan

The plot window can be panned. This is useful when the scene is magnified and you would like to look at a different portion of the object. To use this feature, select **View**

| Pan or click the  button. Click and hold the left mouse button and drag the cursor around the window to pan.


Auto Redraw and Redraw

Auto Redraw is used to automatically redraw the image each time the window contents are changed. **Auto Redraw** is on by default, as indicated by a check mark next to the command. Use **View | Auto Redraw** to toggle the command on and off. If **Auto Redraw** is disabled, use **View | Redraw** or press the F5 key to redraw the image.

3D Rotation

The **Graph | 3D Trackball** command allows you to rotate 3D XYY graphs, 3D XYZ graphs, contour maps, and surface maps.

To use **3D Trackball**:

1. Select any part of a graph or map (axis, plot, fit...).
2. Select **Graph | 3D Trackball** or click the  button.
3. Click and drag the mouse to rotate the graph or map.

Select part of the graph or map and then use the **Graph | Reset Rotation to Default** command to reset the rotation. Alternatively, you can select the entire graph or map and click the words *<click here to reset defaults>* on the **3D Settings** page in the **Property Inspector**.

2D Rotation

Use **Arrange | Rotate** or **Arrange | Free Rotate** to set the rotation of a 2D graph.

Select the entire graph and then use the **Graph | Clear Rotation** command to reset the rotation of a 2D graph.

Data

In most cases, there is a prompt for a data file when you create a graph in **Grapher**. Data files can be imported from a variety of sources, such as ASCII text files, Excel files, and databases. Data can be entered directly into **Grapher's** worksheet if the files do not already exist.

The data to be represented on a plot needs to be in column and row format. Each row is assigned to a single point on the plot. The columns contain the different variables, or data values, to be represented on the plot.

Some of the most commonly use data types are described in the following sections.

ASCII Data

ASCII files are generic format files that can be read or produced by most applications. There are three common ASCII data formats: [.DAT], [.CSV], and [.TXT]. These files can also be imported into most applications, including word processors, spreadsheets, and ASCII editors. The files differ in the types of delimiters, or separators, between the data.

ASCII files do not contain any worksheet formatting information such as row height, column width, or cell formatting. This format does not have a limitation on the number of rows or columns.

Excel Files

Microsoft Excel [.XLS] files contain data and retain some cell formatting in **Grapher**. Some information, such as formulas, is ignored.

Excel files can preserve all formatting information available in the Golden Software worksheet. This format has a 65,536-row limit and a 256-column limit; therefore, this format cannot be used to store very large data sets.

Use Caution when Saving Excel Files!

A file can be saved in an Excel format from **Grapher**, **but only one worksheet can be saved**. **Grapher** does not allow for saving multiple worksheets in a single Excel document. If a multi-worksheet Excel file is opened and saved as an [.XLS] file from the **Grapher** worksheet, be aware that only the single worksheet is saved in the document. If the existing file is overwritten, all the unused worksheets are destroyed. In this case, a warning message is issued. The message reads: *Saving this worksheet will destroy all but one of the sheets in the existing *.xls file. To overwrite the file, click OK. To choose a different file name, click Cancel.*

Retaining Excel Information

To save all the formatting, formulas, and worksheets in an [.XLS] file, you can use Excel directly in **Grapher**. Use **File | Open Excel** to utilize all of Excel's features, save multi-sheet files, and create graphs in **Grapher**.

Database Files

There are several types of database files that can be imported into **Grapher**. When you import these files, **Grapher** converts the data into a worksheet format. These files cannot be saved in their native formats, but you can save the files in any of the available worksheet **Save As** formats.

Tutorial

This tutorial is designed to introduce you to some of **Grapher's** basic features. After you have completed the tutorial, you should be able to begin creating your own graphs.

The following is an overview of lessons included in the tutorial.

Lesson 1 - Starting Grapher shows you how to start **Grapher** or open a new plot window if **Grapher** is already open.

Lesson 2 - Creating a Graph shows you one way to create a graph.

Lesson 3 - Viewing and Editing Data shows you how to view and edit the data file used in the graph.

Lesson 4 - Modifying Graph Properties shows you how to open the graph properties and edit the plot characteristics.

Lesson 5 - Editing Axes shows you how to add an axis title and how to change the tick mark spacing.

Lesson 6 - Adding Another Plot to the Graph shows you how to add a second plot to an existing graph.


Lesson 7 - Adding and Editing a Legend shows you how to create and edit a legend.

Lesson 8 - Saving Graphs shows you how to save a graph.

Lesson 9 - Working with the Script Recorder shows you how to use the **Script Recorder** with the techniques in the previous lessons and adds a few new items.

The lessons should be completed in order; however, they do not need to be completed in one session.

In the online help tutorial, each topic contains several links to other topics. Click on

the link for an in-depth discussion on the subject. Use the  button to return to the tutorial topic. Use **Help | Tutorial** to open the online help version of the tutorial.

Lesson 1 - Starting Grapher

To begin a **Grapher** session:

1. Click on the Windows Start button.
2. Locate the computer's program list, click on **Golden Software Grapher 7**, and then click **Grapher 7**.
3. **Grapher** starts with a new empty plot window. This is the work area for producing graphs. The first time you open **Grapher** you are prompted for your serial number. Your serial number is located on the inside front cover of this getting started guide. The serial number was emailed to you with the download directions if you purchased **Grapher** with the download only option.

If you already have already been working with **Grapher**, open a new plot window.

To open a new plot window:

1. Click **File | New**.
2. In the **New** dialog, select *Plot*, and then click the *OK* button.


Lesson 2 - Creating a Graph

You can create graphs in several ways in **Grapher**. Graphs can be created:

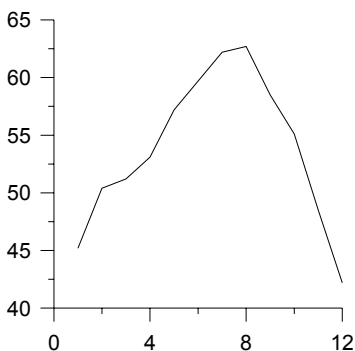
- from the plot window **Graph** menu,
- with the graph wizard,
- from the worksheet,
- and from templates.

All of these methods are discussed in the *Creating Graphs* topic in the online help. In the tutorial, we use the most common method, creating a graph through the **Graph** menu, to create a line/scatter plot from an existing data set.

To create a line/scatter graph:

1. Click the **Graph | 2D Graphs | Line/Scatter** command or click the  button.
2. The **Open Worksheet** dialog appears. Browse to **Grapher's** Samples folder using the *Look in* list. The location of this folder varies depending on where the software was installed. If the software was installed in the default folder, the path is `\Program Files\Golden Software\Grapher 7\Samples`.
3. Double-click on the TUTORIAL.DAT file to open it. Alternatively, you can click on the TUTORIAL.DAT file once and then click the *Open* button.

A line/scatter graph is created using the default properties.



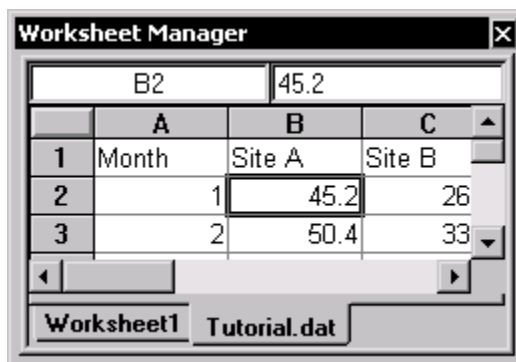
Your line/scatter graph should look similar to this graph.

By default, **Grapher** uses the first two columns containing numeric or date/time data in the data file. With this data file, X is equal to column A and Y is equal to column B.

Lesson 3 - Viewing and Editing Data

If you would like to view or edit data, you can open the data file in **Grapher**. There are several ways to view a data file. The most common method is to use the **Worksheet Manager**. The other methods are described in the *Data in the Plot* topic in the online help.

The **Worksheet Manager** should be visible at the bottom of the **Grapher** window by default. If you do not see the manager, click **View | Toolbars/Managers | Worksheet Manager**. Click the **Tutorial.dat** tab at the bottom of the **Worksheet Manager** to view the data used in the line/scatter plot. Note that you may not see the [.DAT] file extension, as its visibility is dependent on your computer setup.



*Click the **Tutorial.dat** tab to view the data used in the plot.*

The **Worksheet Manager** is a convenient way to review, enter, and revise data. Right-click in the **Worksheet Manager** to access all menu commands available in the worksheet. The **Worksheet Manager** is a good tool to use if a plot

does not appear as you expect. For example, if a typographical error is present in the data, you can edit it in the **Worksheet Manager**.

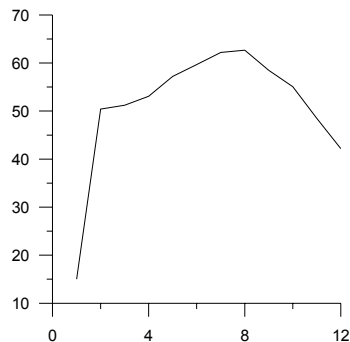
To revise data used in the plot:

1. Double-click in cell B2.
2. Type 15 and press ENTER on your keyboard.

Notice that the data in cell B2 has updated. Also, notice that the plot has changed to reflect the data change.

Lesson 4 - Modifying Graph Properties

You can edit the default graph properties after the graph has been created. You can edit the axis size, tick mark spacing, plot line color, and just about anything you see on the graph.

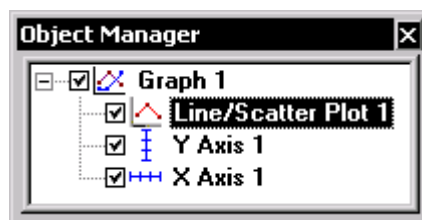


*Changing the data in the
Worksheet Manager
changes the line/scatter plot.*

In this example, let's change the line plot created in *Creating a Graph* to a scatter plot. The graph from *Lesson 2 - Creating a Graph* should already exist in the plot window before you proceed with this lesson.

Selecting the Line/Scatter Plot

The **Object Manager** is the easiest way to select the exact object you want, so this method is used throughout the rest of the tutorial. Methods for selecting objects are discussed in detail in the online help topic, *Selecting Objects*. Once an object is selected, its properties are available for editing in the **Property Inspector**.



Click on the object title, Line/Scatter Plot 1, to select the plot.

To select the line/scatter plot:

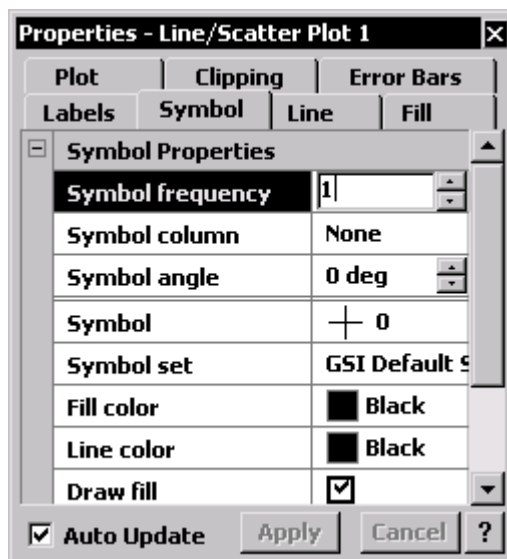
1. Make sure the **Object Manager** is open.
If you do not see the **Object Manager**, click **View | Toolbars/Managers | Object Manager**. A check mark is displayed next to the visible managers.
2. Click the name *Line/Scatter Plot 1*. This selects the line/scatter plot and opens the line/scatter plot properties in the **Property Inspector**.

Changing the Line/Scatter Plot Properties

The **Property Inspector** contains all of the properties for the selected object. The **Property Inspector** contains multiple pages with similar properties on each page. A line/scatter plot contains **Plot**, **Clipping**, **Error Bars**, **Labels**, **Symbol**, **Line**, and **Fill** pages. Click the tab name to open a property page. Note that you may need to click on the plus or minus signs next to section names to access the properties as discussed in the *Property Inspector* section.

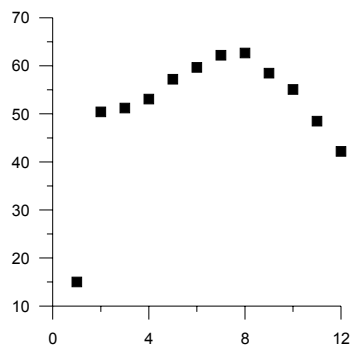
To change the line plot into a scatter plot:

1. In the **Property Inspector**, click the **Symbol** tab to open the symbol properties.
2. Next to the words *Symbol frequency*, highlight the number 0, type the number 1, and then press ENTER on your keyboard. Alternatively, you can click the up arrow once and then press ENTER.



Type the number "1" into the Symbol frequency box to add symbols to the plot.

3. The current symbol is located next to *Symbol*. Click the current symbol, which should be a cross. Clicking on the current symbol opens the symbol palette. Click on the filled square two rows down from the cross. Once you click on the filled square, the symbol palette closes and the plot changes to the new symbol.
4. Click on the **Line** tab to open the line properties.
5. Click on the current line style next to *Style*, which should be a solid line. Click on the invisible line style, which is the second entry in the line palette list. Once you click on the invisible line style, the line style palette closes and the plot changes to a scatter plot.



A scatter plot is created by using an invisible line style.

Lesson 5 - Editing Axes

Grapher's axes can be modified to fit any design needs. The axis scale, axis length, tick mark spacing, tick mark labels, axis titles, colors, etc. can all be customized.

Selecting the Axis

The graph from *Creating a Graph* should already exist in the plot window before proceeding with this lesson. Select the axis to open the axis properties.

To select the axis:

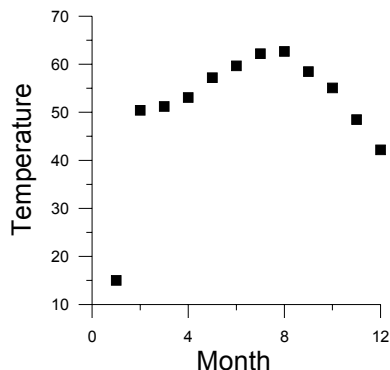
1. Make sure the **Object Manager** is open. If you do not see the **Object Manager**, click **View | Toolbars/Managers | Object Manager**. A check mark is displayed next to the visible managers.
2. Click the name **Y Axis 1**. This selects the axis and opens the axis properties in the **Property Inspector**.

Adding an Axis Title

Once the axis is selected, all of the axis properties are displayed in the **Property Inspector**. Standard axes have **Axis**, **Grid Lines**, **Tick Marks**, **Tick Labels**, **Break Axis**, and **Line** pages. The axis title options are on the **Axis** property page.

To add an axis title:

1. Click the **Axis** tab to open the axis properties.
2. In the *Axis title* section, click the words *<Click here to edit text>* next to *Title*. This opens the **Text Editor**. Remember that features with multiple options have collapsible lists. If you do not see the *Title* option, the list is collapsed. Click the + next to *Axis title* to expand the section.
3. In the **Text Editor**, type the word "Temperature" (without quotes).
4. Next, let's change the properties of the axis title. In the **Text Editor** dialog, highlight the word "Temperature" and change the font size to 20 points. The font size is located to the right of the font name in the upper left corner of the dialog. To change the font size, highlight the existing number and type 20 or use the up arrow to scroll to the new font size. Note: only the highlighted text changes size.
5. Click the **OK** button to close the **Text Editor** dialog and save the font size change.



*Axis titles are added by selecting the axis and then adding the title in the **Property Inspector**.*

The word "Temperature" now appears along the Y axis. Use this same procedure to add the title "Month" to the X axis.

Changing the Tick Mark Spacing

Tick marks are a means of indicating units of measure and are typically equally spaced like the lines on a ruler. Tick marks are the lines that protrude perpendicularly from an axis. Longer tick marks are typically the major tick marks while the shorter tick marks between them are the minor tick marks. In the graph created in *Creating a Graph*, the major tick mark spacing on the Y axis is ten units, i.e., 10, 20, 30, 40, 50, 60, and 70. In the following exercise, the tick spacing is changed to five units.

To change the tick mark spacing:

1. Click on the name *Y Axis 1* in the **Object Manager**.
2. In the **Property Inspector**, click the **Tick Marks** tab to open the tick mark properties.

3. There is a *Spacing* option in the *Major ticks* section. Highlight the number 10, type the number 5, and then press ENTER on your keyboard.

The Y axis tick mark spacing changes to five on the graph. Apply this procedure to edit the X axis and change the tick mark spacing from four to one.

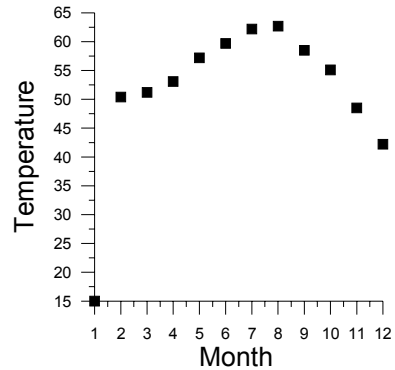
Adding Grid Lines

Grid lines make it easier to see how the data relate to the axes. You can add grid lines at major tick marks, minor tick marks, or even at intervals specified in a data file. All of the line properties such as color, width, and style can be edited as well.

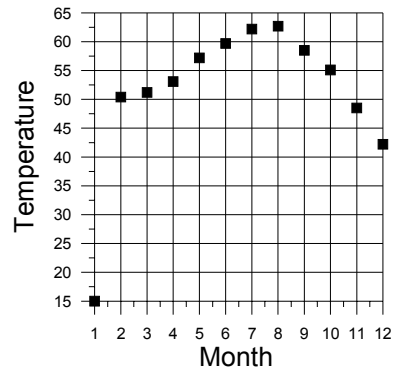
If you are making the same change to multiple objects, all of the items can be selected and edited simultaneously. Therefore, we can select both axes and add grid lines to them both at the same time.

To add grid lines to both axes:

1. In the **Object Manager**, click on *X Axis 1*, hold down the CTRL key on your keyboard, and then click on *Y Axis 1*. This selects both axes.
2. Note the **Property Inspector** title bar contains **Multiple Objects Selected**. Only properties common to all selected objects appear in the **Property Inspector** when multiple objects are selected. Since both objects are axes, all of the axis properties are displayed. Click on the **Grid Lines** tab to open the grid line properties.
3. Click in the box next to *At major ticks*. A check mark should be displayed in the box and grid lines appear on the graph.



You can customize the axis properties, including changing the tick mark spacing.



Select both axes to add grid lines to both axes at one time.

Lesson 6 - Adding Another Plot to the Graph

You can add several plots to one graph in **Grapher**. In TUTORIAL.DAT, columns B through I all contain Y data, making it simple to add additional plots to the graph.

To add a plot to the graph created in *Creating a Graph*:

1. In the **Object Manager**, click *Line/Scatter Plot 1*. This opens the line/scatter plot properties in the **Property Inspector**.
2. Click the **Plot** tab in the **Property Inspector** and click the words *<Click here to add a new plot>* next to *New plot*.

Once *<Click here to add a new plot>* is clicked, the **Property Inspector** title changes to **Properties - Line/Scatter Plot 2** and the Y column changes to *Column C: Site B*. Notice there are now two plots on the graph. The new plot uses the same axes and properties as the first plot.

All of the data must be contained in one data file to use the *New plot* feature. In addition, not all plot types have this option, so see the online help for more information about adding additional plots to a graph.

Editing the New Plot Properties

When creating additional plots with the *New plot* command, the plot increments the Y column and it uses the same properties as the existing plot.

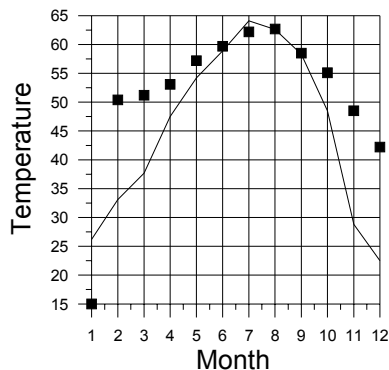
Let's change the scatter plot into a line plot to help differentiate between the two plots.

Previously, we changed from a line plot to a scatter plot by editing the line/scatter plot properties. There is a shortcut to changing between plot types, however.

To change scatter plot into a line plot:

1. If the new plot is not already selected, click on *Line/Scatter Plot 2* in the **Object Manager**.
2. Select **Graph | Change Plot To | Line**.

The scatter plot changes into a line plot. Note that **Change Plot To** is not available for all plot types. See the online help for additional information on **Change Plot To**.



You can change the properties in the new plot to distinguish it from the first plot.

Lesson 7 - Adding and Editing a Legend

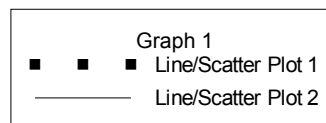
Legends provide information for interpreting a graph. You can add a legend for most plot types. Typically, legends are linked to the graph so that any changes made to the graph are automatically updated in the legend. The legend features, such as font and legend placement, can be customized.

Adding a Legend

To add a legend:

1. In the **Object Manager**, select any part of the graph by clicking on an object in the graph, such as *Y Axis 1*, *Line/Scatter Plot 2*, etc.
2. Click **Graph | Add to Graph | Legend**.

A legend is created for the graph using the default properties. These default legend properties can be changed. Currently, the legend should display "Graph 1" for the title and "Line/Scatter Plot 1" and "Line/Scatter Plot 2" for the plot titles. Let's change these titles to reflect the data.



*When a legend is first created, it contains the graph and plot names listed in the **Object Manager**.*

Moving the Legend

You can move the legend by clicking on *Legend 1* in the **Object Manager**, positioning the cursor over the legend in the plot window, holding down the left mouse button, and then dragging the legend to a new location.

Editing the Legend Title

To change the legend title:

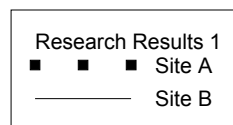
1. Click *Legend 1* in the **Object Manager**. This opens the legend properties in the **Property Inspector**.
2. On the **Legend** page, click the words *<Click here to edit text>* next to *Title*. This opens the **Text Editor** and allows you to edit the legend title.
3. In the **Text Editor**, highlight *Graph 1* and type the title "Research Results 1" (without quotes), and then click the *OK* button.

Editing the Plot Titles

To change the plot titles:

1. On the **Legend** page in the **Property Inspector**, click the words *<Click here to edit entries>* next to *Entries*. This opens the **Legend Entries** dialog.
2. In the **Legend Entries** dialog, click *Line/Scatter Plot 1* under the *Name* column and then click the *Rename* button. This opens the **Text Editor** so you can change the name.

3. In this example, *Line/Scatter Plot 1* used a column labeled Site A, so change the name to Site A by highlighting *Line/Scatter Plot 1* in the **Text Editor** and then typing "Site A" (without quotes). Click the **OK** button to close the **Text Editor**.
4. Follow the steps above and change "Line/Scatter Plot 2" to "Site B."
5. Click the **OK** button to close the **Legend Entries** dialog and draw the legend with the modified titles.



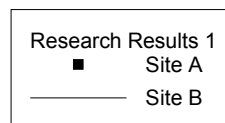
The updated legend should appear similar to this legend.

Changing the Number of Symbols

The number of symbols in a legend can be set from 0 to 3.

To change the number of symbols:

1. If the legend is not selected already, click on *Legend 1* in the **Object Manager**.
2. In the **Property Inspector**, click on the **Legend** tab to open the legend properties.
3. Click on the number 3 in the *Number of symbols* box and select 1 from the list.



The displayed number of symbols in a legend can be 0, 1, 2, or 3.

Changing the Line Length

In addition to changing the number of symbols, the line length can be changed.

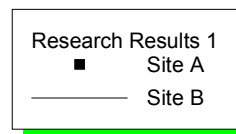
To change the line length:

1. If the legend is not already selected, click on *Legend 1* in the **Object Manager** to open the legend properties in the **Property Inspector**.
2. There is a *Line length* option on the **Legend** page. Highlight this number and type 0.5.

Adding a Drop Shadow

To add a drop shadow:

1. Click on *Legend 1* in the **Object Manager** to open the legend properties in the **Property Inspector**.
2. On the **Legend** page in the **Property Inspector**, click the box next to *Display shadow* to add a shadow behind the legend. Click the color next to *Shadow color* to open the color palette and change the shadow color if desired.




A drop shadow can be added to the legend.

Lesson 8 - Saving Graphs

When you have completed the graph in the plot window, you can save the graph to a **Grapher** file [.GRF] or a **Grapher** project file [.GPJ]. These files contain all the information necessary to reproduce the graph. When you save a graph, all the scaling, formatting, and parameters for the graph are preserved in the file.

The difference between a [.GRF] file and a [.GPJ] file is that [.GPJ] files store data within the file and [.GRF] files save a link to the data but it does not store the data internally in the file. If a [.GRF] file needs to be sent to a colleague, for example, you would need to send the data file along with the [.GRF] file.

To save a graph:

1. Choose the **File | Save** command, or click the  button. The **Save As** dialog is displayed because the graph has not been previously saved.
2. Type TUTOR into the *File name* box.
3. In the *Save as type* list, select *Grapher File (*.grf)* or *Grapher Project (*.gpj)*.
4. Click the *Save* button to save the file to the current folder. The saved graph remains open and the **Grapher** title bar changes to reflect the changed name.

Lesson 9 - Working with the Script Recorder

Scripter is Golden Software's automation program. In **Grapher 7**, you may record your actions in **Grapher** with the **Script Recorder** rather than writing the scripts manually in **Scripter**. See the *Script Manager*, *Scripter*, and *Script Recorder* sections for more information about automation. Detailed information about automation is located in the online help. The online help's table of contents includes a *Grapher Automation* book which contains all the help topics related to automation.

New **Grapher** users should go through the steps in this lesson to learn a bit more about **Grapher** - even if you do not intend to use automation.

The **Script Recorder** can be used for many tasks. We will provide one example scenario to demonstrate the **Script Recorder**. For example, let's say you receive a data file once a month. The file has the same file name each month and the same number of columns, but the information contained in the file updates each time. Each month you need to create multiple graphs, save the graphs, and then export the graphs for reports. You could automate this process with the **Script Recorder**.


These graphs are fairly simple for time's sake, but keep in mind that complex graphs are very well suited to automation. We will record the process of creating some graphs, changing some features of a graph, saving the graphs, and exporting the graphs. These graphs use the features included in the previous lessons and include a

few new items. If you do not understand part of the directions, review the material in the previous lessons or consult the online help.

Opening the Script Manager

The **Script Manager** can be used to view scripts as they record. Select **View | Toolbars/Managers | Script Manager** to open the **Script Manager**. The **Script Manager** is already open if a check mark appears next to the name. Typically, the **Script Manager** is located at the bottom of the **Grapher** window. Click the **Script Manager** tab to view the **Script Manager** if it is located behind the **Worksheet Manager**.

Start Recording


To start recording, select **Edit | Script Recorder | Record** or click the  button. The button changes color from bluish green to red to indicate that the script is recording. Information appears in the **Script Manager** as soon as recording begins. This code starts **Grapher** when the script is run later.

Opening a New Plot Window

Let's open a new plot window to start. Click **File | New** and select *Plot* in the **New** dialog. Click the *OK* button to create a new plot window.

Creating a Line/Scatter Plot

To create the line/scatter plot:

1. Click the **Graph | 2D Graphs | Line/Scatter** command or click the  button.
2. The **Open Worksheet** dialog appears. Browse to **Grapher's** Samples folder using the *Look in* list. The location of this folder varies depending on where the software was installed. If the software was installed in the default folder, the path is `\Program Files\Golden Software\Grapher 7\Samples`.
3. Double-click on the TUTORIAL-SR.XLS file to open it. Alternatively, you can click on the TUTORIAL-SR.XLS file once and then click the *Open* button.

A line/scatter plot is created with the first two available columns using the default properties. Note: **Grapher** can create graphs from data containing date/time information. In this example, column A contains dates plotted on the X axis.

Changing the Line/Scatter Plot Properties

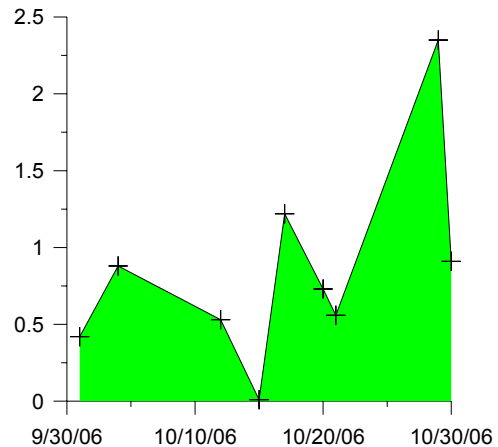
Let's add some symbols and fill to the line/scatter plot. The line/scatter plot should be selected. If not, click on the words *Line/Scatter Plot 1* in the **Object Manager**. Note that you do not want to excessively select or deselect objects since this procedure is being recorded.

To add symbols:

1. Click the **Symbol** tab in the **Property Inspector** to open the symbol properties.
2. Change the *Symbol frequency* to one by typing the number 1 or clicking the up arrow once. Then, press the ENTER key on your keyboard to make the change.

To add fill:

1. Click the **Fill** tab in the **Property Inspector** to open the fill properties.
2. Click on the box adjacent to *Pattern* to open the pattern palette.
3. Select *Solid* in the pattern palette.
4. Click the box adjacent to *Foreground* color to open the color palette.
5. Select a new color from the color palette.



When a script is run, the graph is recreated from the script recording.

The graph is drawn with symbols and fill.

Changing the Y Axis Limits

Since multiple graphs are created, the tick mark range should accommodate all possible data so the graphs can be visually compared. By default, **Grapher** sets the tick range close to the minimum and maximum data values. The Y axis data are never less than zero or greater than 10, so we can set the Y axis minimum and maximum to remain at this range no matter what data are plotted.

To change the Y axis tick range:

1. Click on *Y Axis 1* in the **Object Manager**.
2. Click on the **Axis** tab in the **Property Inspector** to open the axis properties.
3. There is an *Axis limits* group on the **Axis** page. Click on the word *Auto* in the *Minimum* box so it changes to *Custom*. This sets the axis minimum to 0 no matter what data are used in future plots. Change the *Maximum* value, by highlighting the number 2.5, typing 10, and pressing ENTER on your keyboard.

Changing the Tick Mark Spacing

Next, let's change the tick mark spacing. The Y axis should still be selected.

To change the tick mark spacing:


1. Click on the **Tick Marks** tab in the **Property Inspector** to open the tick mark properties.
2. Highlight the number 2 in the *Spacing* box, type 1, and then press the ENTER key on your keyboard.

Adding Text

It would be a good idea to add text explaining the information contained in the graphs. Cell A1 in all the data files contains the data's month and year, in this file, October 2006. The next month's data file will contain November 2006. With linked text, the information is updated on the graph any time the information changes in the cell. Therefore, when the script is run with the October data, October 2006 appears on the three graphs. When the script is run with November data, November 2006 appears on the three graphs.

The columns containing the data are labeled Area 1, Area 2, and Area 3. This information can be included as well.

To add text information:

1. Select **Draw | Text** or click the  button.
2. Click on the page where you would like the text to appear.
3. Click the *Worksheet* button in the **Text Editor**, select TUTORIAL-SR.XLS, and then click the *Open* button.
4. Click the *Insert Cell* button in the **Text Editor**. Type a1 into the **Enter Cell** dialog and then click the *OK* button.
5. <<@a1>> appears in the **Text Editor**. Click to the right of the last > in the editor window, press the SPACEBAR on your keyboard, type a hyphen (-), press the SPACEBAR again, and then type "Area 1" (without quotes).
6. Highlight all of the text in the editor window; change the font size to 24 by typing 24 or scrolling to 24. Change any other properties, such as text color, if desired.
7. Click the *OK* button in the **Text Editor**.
8. Click the ESC button on your keyboard to stop entering text.

<<@a1>> - Area 1


*The **Text Editor** contents should be similar to this.*

You can move the text by clicking on it and dragging it to a new location.

Saving the Graph

Although we could add many more features to the graph, we will stop here so that there is time to create three graphs. Additional features may be added now if you like.


To save the graph:

1. Click **File | Save As** or click the  button.
2. In the **Save As** dialog, type TUTORIAL-AREA1 into the *File name* field.
3. Select *Grapher Project (*.gpj)* from the *Save as type* list. Saving as a **Grapher** project file stores the data with the file in the event there is any question about the data used in the graph.
4. Click the *Save* button.

Exporting the Graph

Since the graphs are used to create a report, each graph must be exported for use in another program.

To export the graph:

1. Click **File | Export** or click the  button.
2. Type AREA1 into the *File name* field in the **Export Plot** dialog.
3. Select *EMF - Windows Picture (Enhanced) (*.emf)* from the *Save as type* list.
4. Click the *Save* button.

Creating the Next Graph

Once the graph is created, the columns used to create the plot can be changed to create a new graph. The text containing information about the graph can be updated as well.

To change the plot data:

1. Click on *Line/Scatter Plot 1* in the **Object Manager**.
2. Change the Y axis data by clicking on *Column B: Area 1* next to *Y column* and selecting *Column C: Area 2*.

The graph changes to reflect the new data.

To change the text:

1. We can access the text properties through the **Object Manager** and **Property Inspector**, but there is a quicker method: double-clicking on the existing text in the plot to open the **Text Editor**.
2. Change the text Area 1 to Area 2 by highlighting the number 1 and typing the number 2.
3. Click the **OK** button to create the updated text.

Saving the New Graph

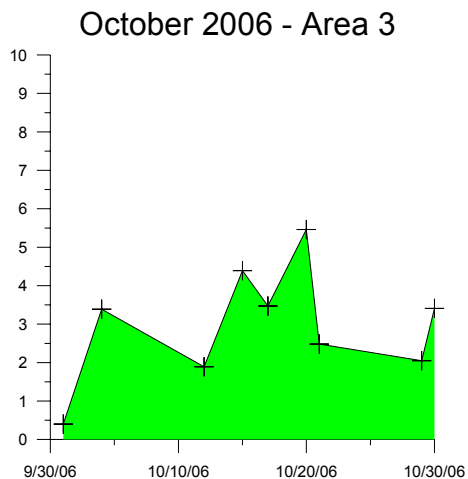
Save the new graph with the file name TUTORIAL-AREA2.GPJ following the steps in the *Saving the Graph* section. You must use **File | Save As**, not **File | Save**; otherwise, the first graph is overwritten.

Exporting the New Graph

Export the new graph with the file name AREA2.EMF following the steps in the *Exporting the Graph* section.

Creating the Final Graph

There is one more column of data in the example data file. To create the final graph, change *Column C: Area 2* to *Column D: Area 3* in the line/scatter plot properties and change the area name from 2 to 3. Save the graph with the file name TUTORIAL-AREA3.GPJ. Export the graph with the file name AREA3.EMF. Close all open plot windows when you are done by selecting **File | Close All**.




The additional graphs are created by changing the Y axis data and updating the text label area number.

Stopping and Saving the Script

Now that the graphs have been created, it is time to stop recording and save the script.

To stop and save the script:


1. Select **Edit | Script Recorder | Stop** or click the  button.
2. A **Save As** dialog appears. Type TUTORIAL-SR into the *File name* box.
3. Click the **Save** button.

The recording is stopped and the script is saved for future use.

Running Scripts within Grapher

Assuming the file name is the same each month, the graphs are automatically created and updated each time the script is run. The script can be run from **Scripter** or from **Grapher**.


To run the script within **Grapher**:

1. Select **Edit | Script Recorder | Run** or click the  button.
2. Click on TUTORIAL-SR.BAS in the **Open** dialog, and then click the *Open* button. Watch the graphs as they are created.

Running Scripts from Scripter

Scripts can also be run from **Scripter**.

To run the script from **Scripter**:

1. Click on the Windows Start button.
2. Open the program list, select **Golden Software Grapher 7**, and then click **Scripter**.
3. Select **File | Open** in **Scripter** and locate the TUTORIAL-SR.BAS file.
4. Select **Script | Run** or click the  button to start the script.

Automation Help

Advanced users needing help in **Scripter** can use **Help | Contents** for general information about **Scripter**; **Help | Grapher Automation Help** for information about objects, methods, and properties; and **Help | BASIC Language Help** for information about BASIC.

Getting Help

The getting started guide is a quick way to learn about the basics in **Grapher**. There are also other sources of help with **Grapher**.



Online Help



Extensive information about **Grapher** is located in the online help. Use **Help | Contents** to access online help. You can navigate help using the **Contents**, **Index**, **Search**, and **Favorites** pages in the navigation pane to the left of the topic window.

Context-Sensitive Help

Grapher also contains context-sensitive help. Highlight a menu command, window region, or dialog and then press the F1 key to display help for the highlighted item. You may also access context-sensitive help by pressing SHIFT+F1 or clicking on the



button. After clicking the  button, the pointer appears like this . Simply click the item for which help is required and its help topic appears.

In addition, the dialogs and **Properties** window contain a help button. Click the  button in the dialog title bar to obtain help for that dialog. Click the  button in the **Properties** window to open the help topic for the displayed properties.

Internet

There are several Internet help resources.

- Click the *Forums* button in online help to research a **Grapher** question or to post a question.
- Use the **Help | Feedback** commands to send a problem report, suggestion, or information request by email.
- Search the FAQs on our web page at www.goldensoftware.com.
- Direct links to the FAQs, the main **Grapher** product page, and the Golden Software main web site are available by selecting **Help | Golden Software on the Web**.

Technical Support

Golden Software's technical support is free to registered users of Golden Software products. Our technical support staff is trained to help you find answers to your questions quickly and accurately. We are happy to answer all of your questions about any of our products, both before and after your purchase. We also welcome suggestions for improvements to our software and encourage you to contact us with any ideas you may have for adding new features and capabilities to our programs.

Technical support is available Monday through Friday 8:00 AM to 5:00 PM Mountain Time, excluding major United States holidays. We respond to email and fax technical questions within one business day. When contacting us with your question, have the following information available:

- Your **Grapher** serial number (located in the front cover of the getting started guide or in **Help | About Grapher**)
- Your **Grapher** version number, found in **Help | About Grapher**
- The operating system you are using (Windows 2000, XP, or higher)

If you encounter problems with **Grapher**, you are welcome to send an email message to Golden Software using **Help | Feedback | Problem Report** (graphersupport@goldensoftware.com). Report the steps you perform when the problem occurs and include the full text of any error messages that are displayed. You are welcome to attach a [.ZIP] file (4 MB maximum) containing files that illustrate the problem. Larger files may be uploaded to our FTP site at <ftp://ftp.goldensoftware.ws/incoming/grapher/>.

Contact Information

Telephone: 303-279-1021

Fax: 303-279-0909

Email: graphersupport@goldensoftware.com

Web: www.goldensoftware.com (includes FAQs and support forum)

Mail: Golden Software, Inc., 809 14th Street, Golden, Colorado 80401-1866, USA

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