MODIFYING, SAVING AND ANALYZING EXPERIMENTAL DESIGNS WITH STATGRAPHICS PLUS

Modifying Designs

If you need to select a different design, redefine the factors or response variables, or make any other changes, you can quickly modify the experimental design without starting over.

Note: Once you enter response data into the DataSheet, the modifications you can make are limited to that particular experimental design.

To Modify An Existing Design

1. Click the right mouse button in the Design Summary pane, then choose Analysis Options... to display the Design Options dialog box.

2. Click the Back... button to redisplay the Design Selection dialog box. You can then select a different design from the list.

3. Continue clicking Back... until you reach the Create Design Options dialog box where you can either create a completely new design or modify the design you are currently working on.

A quick way to return to the Create Design Options dialog box is to click the Return to Input Dialog Box button (the first button on the Attributes window toolbar).

Saving Designs

After you create a design, you must name and save it permanently to the hard disk or to a diskette. STATGRAPHICS *Plus* saves experimental design files as *.sfx files.

To Save Experimental Designs

1. Choose FILE... SAVE AS... SAVE DESIGN FILE AS... from the Menu bar to display the Save Design As dialog box shown in Figure 1-2.

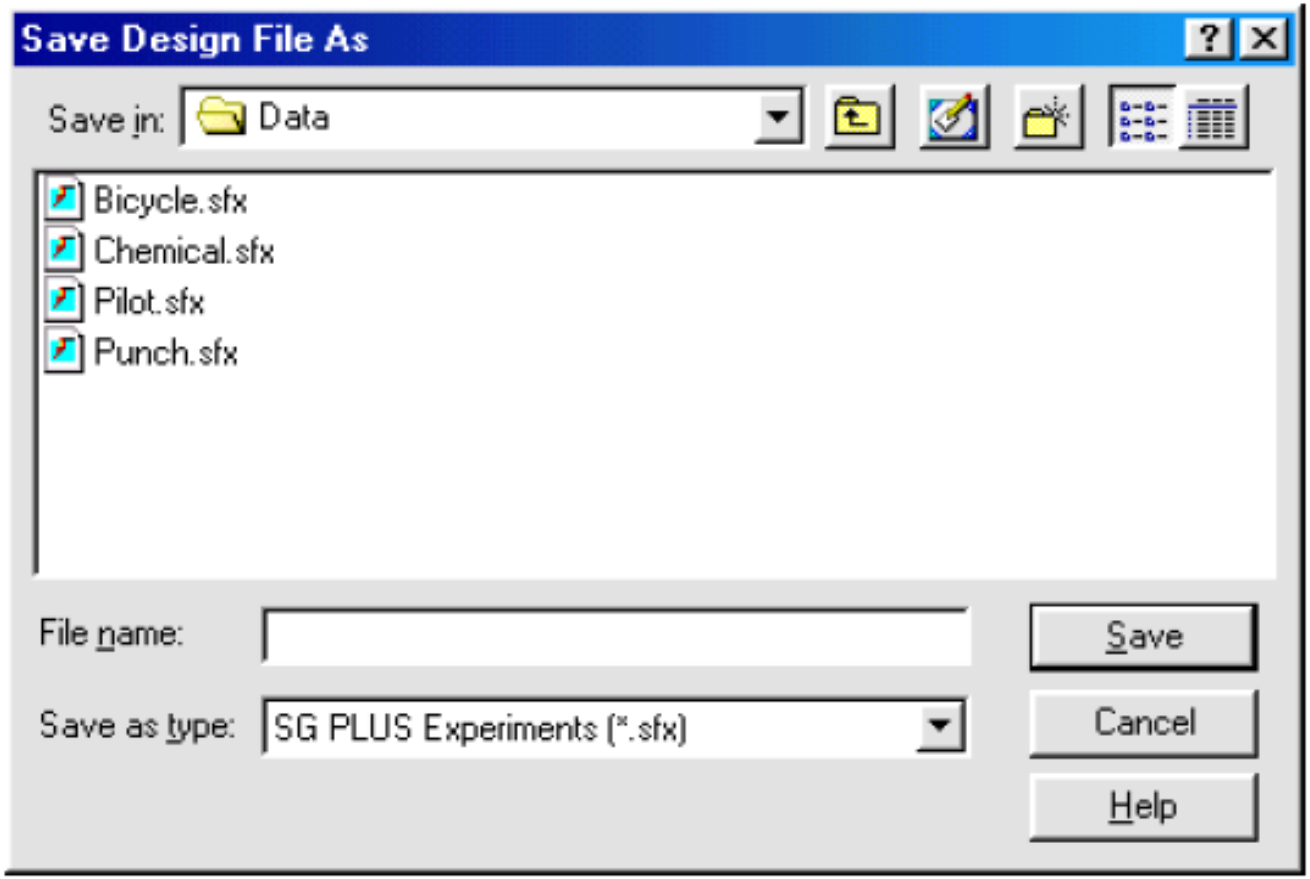

Figure 1-2. Save Design As Dialog Box

2. Type the name for the title of the experimental design and click OK. The program adds the *.sfx extension, saves the file, and displays the Data icon in a Taskbar at the bottom of the Application window.

After the file is saved, the design remains open so you can continue working; the new file name appears on the title bar.

Analyzing Experimental Designs

A primary advantage in using statistical methods to analyze experimental responses is to add objectivity to the decision-making process, which ensures that the results and conclusions will be objective rather than judgmental. Statistical methodologies allow you to measure the likelihood of error in a conclusion or to attach a level of credibility to a statement.

STATGRAPHICS *Plus* contains important statistical methodologies for proving reliability and validity in tabular results. Its graphical capabilities are useful for visualizing the results and presenting them to others.

Before you can analyze a design, you must open the design file.

To Open a Design File

1. Choose SPECIAL... EXPERIMENTAL DESIGN... OPEN DESIGN... from the Menu bar to display the Open Design dialog box shown in Figure 1-3.

2. Choose the design file you want to open, then click Open.

   Note: If you created design files in DOS, before you can use them, you must rename them using the file extension .sfx, then bring them into STATGRAPHICS *Plus* for Windows.

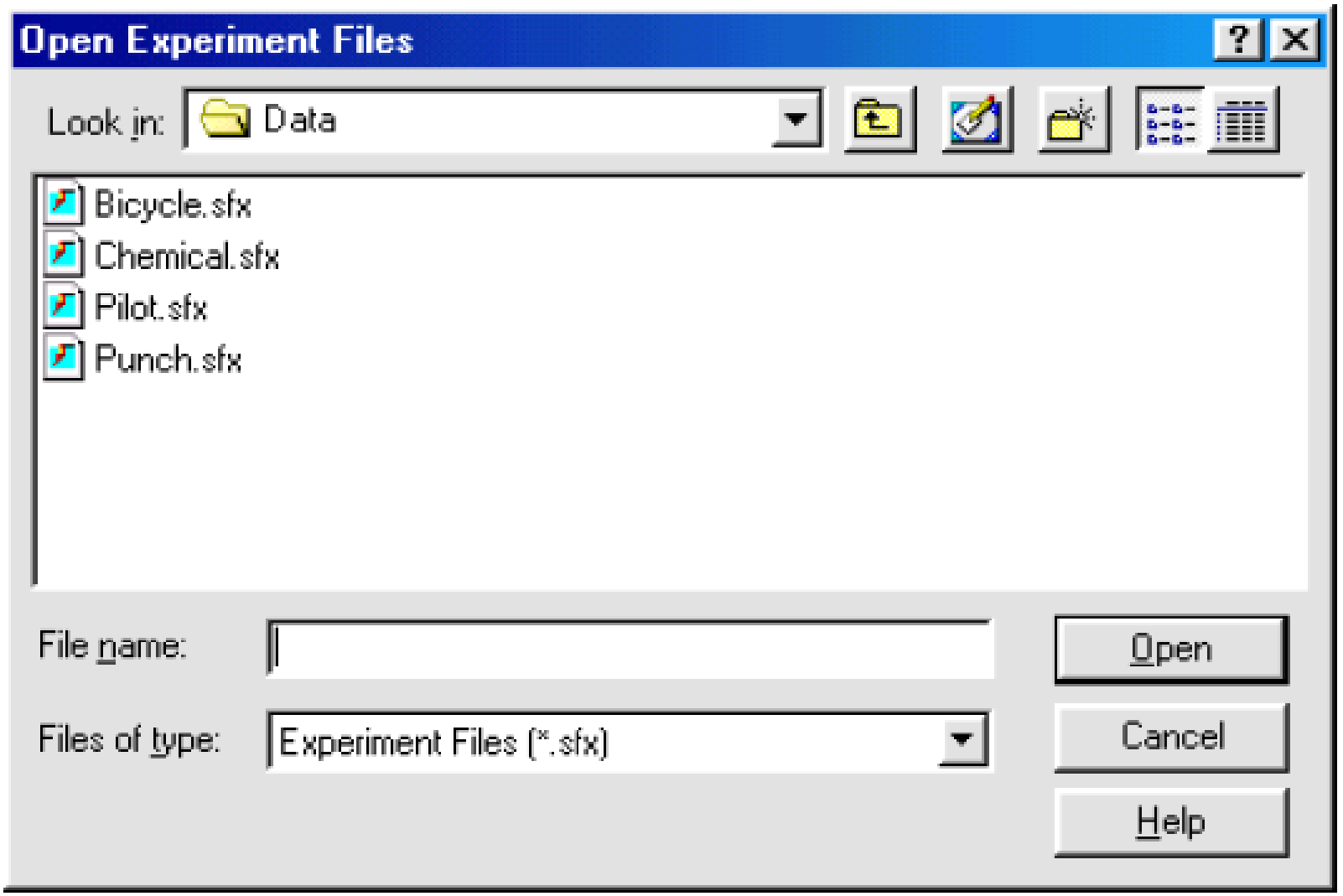

Figure 1-3. Open Design Dialog Box

To Analyze an Experimental Design

1. Choose SPECIAL... EXPERIMENTAL DESIGN... ANALYZE DESIGN... from the Menu bar to display the Analyze Design dialog box shown in Figure 1-4.

2. Complete the dialog box by entering the name of the variable that contains the experiment results you want to analyze.

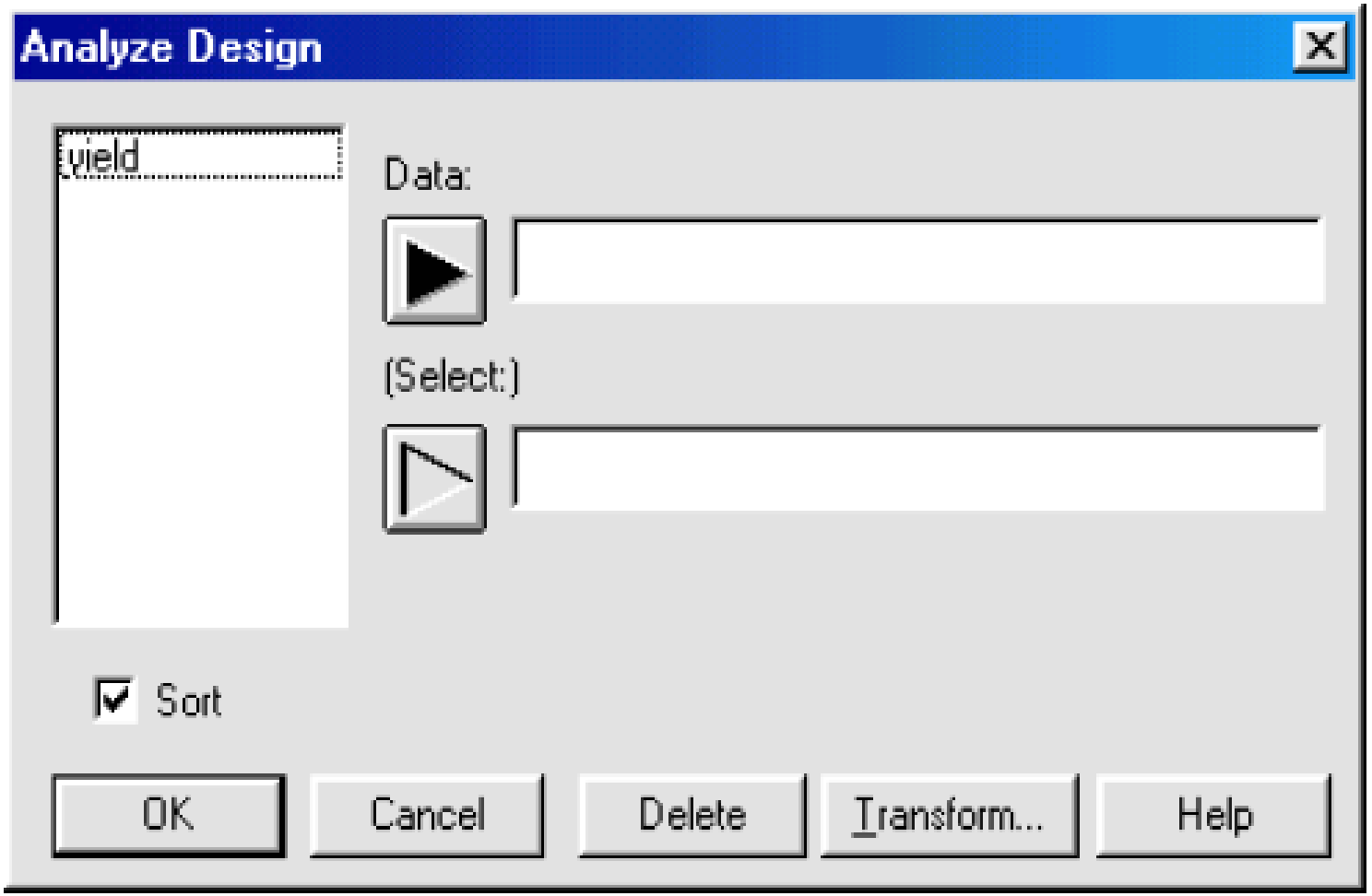

Figure 1-4. Analyze Design Dialog Box

When you click OK, the first tabular option, Analysis Summary, and the first graphical option, which will vary depending on the design, will display in the Analysis window. You can interpret the results, then select other tabular and graphical options.

Because the options are so numerous, depending on the design class and its parameters, it is impossible to document them here. *See Online Help for information about the options.*