# Chapter 29 Configuring SAS/INSIGHT Software

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Part 2. Introduction

# Chapter 29 Configuring SAS/INSIGHT Software

You can configure SAS/INSIGHT software in two ways. You can tailor SAS/INSIGHT software to the way you work by saving option settings for future use. You can also set host resources to improve SAS/INSIGHT software's performance on your host.

SAS: Distribution ( Y )	
BASEBALL	
name team no_atbat no_hits no_home no_runs no_rbi no_bb yr_major y	req Height
0K Cancel Method Out	put Remove
Descriptive Statistic Moments Quantiles Basic Confidence Int Tests for Location Frequency Counts Robust Measures of S Tests for Normality Trimmed/Hinsorized Ma Density Estimation Cumulative Distribut;	cs: Graphs: Box Plot/Mosaic Plot Histogram/Bar Chart Normal QQ Plot icale Parameters: eans Alpha: <u>0.05</u> n Hu0: <u>0</u> Theta: <u>0</u>
	SAS: Density Estimation
<u>0</u> K	Parametric Estimation: Kernel Estimation (AMISE): Normal Lognormal Exponential Uk OK Cancel

Figure 29.1. Setting Output Options

# **Setting Options**

With SAS/INSIGHT software, you can set options in two ways. You can set options in an analysis window that affect the calculations and output displayed only in that window. Alternatively, you can set options that affect the display of all windows.

## **Setting Method and Output Options**

*Method options* and *output options* affect only the individual analysis window for which they are set. You can set *method options* to determine how SAS/INSIGHT software performs calculations for a particular analysis. You can set *output options* to control the output produced in a graph or analysis. To modify method and output options for a box plot, follow these steps.

 $\implies$  Open the BASEBALL data set.

### $\implies$ Choose Analyze:Box Plot/Mosaic Plot ( Y ).



Figure 29.2. Analyze Menu

This displays the box plot variables dialog, as shown in Figure 29.3. Note that both a **Method** and an **Output** button are displayed in this dialog. You can set **Output** options for each of the choices in the **Analyze** menu in Figure 29.2. You can set **Method** options for each of these choices except for line plots, scatter plots, and rotating plots. You can find details on options for each analysis in the reference chapters.

 $\implies$  Assign NO\_RBI the Y role by clicking on NO\_RBI, then on Y.



Figure 29.3. Box Plot Variables Dialog

 $\Longrightarrow$  Click the OK button to create the box plot.





 $\implies$  Choose Edit:Windows:Renew in the box plot window. This redisplays the box plot variables dialog.

<u>F</u> ile	ile <u>Edit Analyze Tables G</u> raphs <u>Curves Vars H</u> elp				
	<u>W</u> indows ► <u>V</u> ariables ►	<u>R</u> enew <u>C</u> opy Window			
	$\underline{O}$ bservations >	<u>A</u> lign			
	<u>F</u> ormats ►	A <u>n</u> imate			
	<u>С</u> ору	Free <u>z</u> e			
	<u>D</u> elete	<u>S</u> elect All			
l		<u>T</u> ools			
		<u>F</u> onts			
		Display Options			
		Window Options			
		Graph Options			

Figure 29.5. Edit:Windows Menu

 $\implies$  Click on the Method button to display the box plot method dialog.

	SAS: Box Plot/Mosaic Plot ( Y )	
BASEBALL	¥ X	SAS: Box Plot/Mosaic Plot ( Y )
NAME TEAM No_Atbat No_Hits		Whisker Length: <u>].5</u> "Other" Threshold (%): <u>4</u>
NO_HOME NO_RUNS NO_RBI NO_BB YR MAJOR	Group Label Freq	Sort X Formatted
	Cancel Method Output Remove	

Figure 29.6. Variables and Method Dialogs

- $\implies$  Change the whisker length to 1.0 and click the OK button in the method dialog.
- $\implies$  Click the **Output** button to display the box plot output dialog.
- $\implies$  Click the Means, Labels, and Y Axis Vertical buttons.

The **Means** and **Y Axis Vertical** buttons are toggles. The display of a means diamond is now on, and the **Y** axis is set to be displayed horizontally instead of vertically. The **Labels** button is a state indicator showing that variable labels are set to be displayed.



Figure 29.7. Box Plot Output Dialog

### $\Longrightarrow$ Click OK in both the output dialog and the variables dialog.

This displays the new box plot in Figure 29.8. Note that the box plot is displayed horizontally with a mean diamond. The upper whisker is now only the same length as the box, showing more points as individual outliers. Also, the RBI axis shows the variable label instead of the variable name.



Figure 29.8. Modified Box Plot

## Setting Display, Window, and Graph Options

*Display options, window options,* and *graph options* modify aspects of the software that affect every analysis. To set *display options,* choose **Edit:Windows:Display Options**. Note that you also set *window options* and *graph options* from the **Edit:Windows** menu.

<u>F</u> ile	<u>Edit</u> <u>Analyze</u> <u>Tables</u> <u>G</u> raphs <u>C</u> urves <u>V</u> ars <u>H</u> elp				
L	Windows>Variables>Observations>Formats>CopyDelete	<u>R</u> enew <u>C</u> opy Window <u>A</u> lign A <u>n</u> imate Free <u>z</u> e <u>S</u> elect All			
		<u>T</u> ools <u>F</u> onts <u>D</u> isplay Options <u>W</u> indow Options <u>G</u> raph Options			

Figure 29.9. Edit:Windows Menu

This displays the display options dialog, as shown in Figure 29.10.

SAS: Display Options		
Background: ◇Black ◆White	Foreground: Color Monochrome	<ul> <li>Show Menu Buttons</li> <li>Show Buttons and Sliders</li> <li>Fill Bars and Boxes</li> <li>Show Graph Frames</li> </ul>
Curve Width (pix Border Width (pix	els): <u>1</u> [] els): <u>1</u> []	Interior Lines:
OK Cancel		

Figure 29.10. Display Options Dialog

The dialog contains the following options:

Background	specifies either <b>Black</b> or <b>White</b> background.	
Foreground	specifies either <b>Color</b> or <b>Monochrome</b> foreground. <b>Monochrome</b> display improves printed output by remov- ing shades of gray used to approximate color.	
Show Menu Buttons	governs the display of pop-up menu buttons in all windows. Turn this option off to remove menu buttons.	
Show But- tons and Sliders Fill Bars and Boxes	governs the display of all buttons and sliders except menu buttons. Turn this option off to remove buttons and sliders. specifies the use of pattern fill in bar charts, box plots, and mosaic plots. Turn this option off to display empty bars and boxes. On slower hosts, turning this option off improves display speed as well as printed output.	
Show Graph Frames	In nonrotating plots, this option specifies whether the two axes are displayed as two disjoint line segments or are joined together as part of a frame.	
Curve Width	sets the default width of curves in pixels. On most hosts, a width of 1 pixel maximizes display speed.	
Border Width	sets the default width of graph and table borders in pixels. When you are printing with a black background, increasing border width improves the display of graphs and tables.	
Interior Lines	sets the display of lines within the data window and analysis tables. <b>Solid</b> produces solid lines; <b>Halftone</b> produces a dimmer line; <b>None</b> removes interior lines. <b>Solid</b> and <b>None</b> settings improve display speed on personal computers.	

The figures in this book are produced with **Foreground** set to **Monochrome** and **Curve Width** set to **2** pixels. Most figures have **Show Graph Frames** turned off.

To set *window options*, choose **Edit:Windows:Window Options**. This displays the window options dialog.

SAS: Window Options				
Layout: Zoom/Scroll Speed (%): _25				
💠 Spread Default Margin (mm.):5 🗐 🕞				
♦ Cascade Number of Groups: <u>32</u>				
Show Tools at Startup				
OK Cancel				

Figure 29.11. Window Options

The dialog contains the following options:

Layout	sets the algorithm for positioning windows. <b>Spread</b> spreads the windows so that the maximum number of tables and graphs are visible. <b>Cascade</b> causes each window to be offset a small distance from the previous window. On some hosts, the effect of this option is overridden by the host window manager.	
Show Tools at Startup	• causes the Tools window to display automatically when you invoke SAS/INSIGHT software.	
<b>Zoom/Scroll Speed (%)</b> sets the speed of the zoom tool and the speed of auto- matic scrolling when you drag a selection past the window border. The speed is a percentage value between 0 and 100. Some hosts override this option.		
Default Margin (mm.)	sets the spacing in millimeters between graphs and tables in analysis windows. If your display is small, reduce this value to maximize the display of information.	
Number of Groups	sets the number of groups you can use in an analysis with- out getting a request for confirmation.	

**Zoom/Scroll Speed**, **Default Margin**, and **Number of Groups** can be controlled by sliders to the right of the option. To set these options, either click or drag on the sliders or type in the entry field.

To set graph options, choose **Edit:Windows:Graph Options**. This displays the graph options dialog.

	SAS: Graph Options			
Default Marker:	Excluded Marker:			
<ul> <li>◆ Square</li> <li>◆ Diamond</li> <li>◆ Star</li> <li>◆ Circle</li> </ul>		🛄 Fast Draw		
↓ Up ↓ Down ↓ Plus ↓ X	<ul> <li>↓ Up</li> <li>↓ Down</li> <li>↓ Plus</li> <li>↓ X</li> <li>↓ None</li> </ul>	Marker Size (%): <u>50</u> SID		
	ОК	Cancel		

Figure 29.12. Graph Options

The dialog contains the following options:

- **Default Marker** sets the default marker shape. On personal computers, **Square** and **Plus** are the best choices; these markers are the fastest to display. On fast workstations, **Circle** is preferable to minimize interference between plotted observations.
- **Excluded Marker** sets the marker shape for observations that are excluded from calculations. **X** is the default. If you choose **None**, marker shape is not affected by exclusion.
- **Fast Draw** sets display algorithms for rotation, brushing, manipulation of histograms, and dynamic curve fitting. By default, this option is off, which produces slower but smoother dynamic effects. If this option is on, speed is improved but, on some hosts, the display may flicker. The better choice of algorithms depends on your host, the size of your graphs, and the number of observations.
- Marker Size (%) sets the default size of markers in plots. This is the marker size used when you choose Marker Sizes:Size to Fit. This is a percentage value between 0 and 100.
- **Graph Size (%)** sets the default size of windows and graphs. This is a percentage value between 0 and 100. If your display is small, reduce this value to display more graphs.

To see the effects of various display, window, and graph options, follow these steps.

#### ⇒ Create a fit analysis for the model NO\_RBI = NO\_HITS. Use the techniques described in Chapter 13 "Fitting Curves" This c

Use the techniques described in Chapter 13, "Fitting Curves." This creates the fit analysis shown in Figure 29.13.



Figure 29.13. Fit Analysis

- $\implies$  Choose Edit:Windows:Display Options to display the display options dialog.
- ⇒ Click on the toggle button for Show Menu Buttons. Recall that the figures here already have Foreground set to Monochrome and Curve Width set to 2 pixels.

SAS: Display Options		
Background: ◇ Black ◆ White	Foreground: ◇ Color ◆ Monochrome	☐ Show Menu Buttons ■ Show Buttons and Sliders ■ Fill Bars and Boxes ■ Show Graph Frames
Curve Width (pix Border Width (pix	els):2 🗐 🗍	Interior Lines:
OK Cancel		

Figure 29.14. Setting Display Options

 $\implies$  Click OK to set the display options and close the dialog.

- $\implies$  Choose Edit:Windows:Window Options to display the window options dialog.
- $\implies$  Set the Default Margin to 1 mm.

SAS: Window Options				
Layout:	Zoom/Scroll Speed (%):	_25 🗔 🖵 🕽	3	
Spread	Default Margin (mm.):		N	
Vescaue	Number of Groups:		2	
🔟 Show Tools at Startup				
	OK Cancel			

Figure 29.15. Setting Window Options

- $\implies$  Click OK to set the window options and close the dialog.
- $\implies$  Choose Edit:Windows:Graph Options to display the graph options dialog.
- $\implies$  Set the Marker Size to 100%.

SAS: Graph Options					
Default Marker:	Excluded Marker:				
◆ Square ◆ Diamond ◆ Star ◆ Circle	<ul> <li>✓ Square</li> <li>✓ Diamond</li> <li>✓ Star</li> <li>✓ Circle</li> </ul>	🔄 Fast Draw			
🕹 Up 🕹 Down	Vp Down	Marker Size (%): <u>100</u>			
	◆ Plus ◆ X ◆ None	Graph Size (%): <u>50</u> 🔽 🚺 🗲			
	OK	Cancel			

Figure 29.16. Setting Graph Options

- $\Longrightarrow$  Click OK to set the graph options and close the dialog.
- $\implies$  Choose Edit:Windows:Renew in the fit analysis window. This displays the fit analysis variables dialog.

### $\implies$ Click **OK** in the variables dialog.

This redisplays the fit analysis with the modified option settings. Contrast Figure 29.17 with Figure 39. Note that the menu buttons are no longer displayed, the space between the tables and graphs is reduced, and the marker size is increased.



Figure 29.17. Modified Fit Analysis

# **Saving Options**

Once you set any option, it remains in effect for the rest of your SAS/INSIGHT session. You can also save options so they become the default for future SAS/INSIGHT sessions by choosing **File:Save:Options**.

<u>File Edit Analyze Tables Graphs Curves Vars Help</u>			
<u>N</u> ew <u>O</u> pen			
<u>Save</u> Print Prin <u>t</u> setup Print pre⊻iew End	<u>D</u> ata <u>G</u> raphics Catalog Graphics <u>F</u> ile <u>T</u> ables <u>I</u> nitial Tables		
	<u>S</u> tatements Options		

### Figure 29.18. File:Save Menu

This saves options for all graphs and analyses, as well as display, window, and graph options, and stores these options in your SASUSER.PROFILE catalog. Option settings are read from SASUSER.PROFILE.INSIGHT and used as default settings the next time you invoke SAS/INSIGHT software. This enables you to tailor SAS/INSIGHT software to the way you work.

# **Setting Host Resources**

You can modify the operation and appearance of SAS/INSIGHT software in ways that are specific to your host by setting *host resources*. For details on host resources, refer to the SAS companion for your host.

If you are on a UNIX host running X Windows, the behavior of the SAS System is determined by X resources. The following X resources improve the performance of SAS/INSIGHT software.

# SAS resources		
SAS.windowUnitType:	percentage	
SAS.windowHeight:	90	
SAS.windowWidth:	100	
SAS.maxWindowHeight:	90	
SAS.maxWindowWidth:	100	
SAS.sessionGravity:	NorthWestGravity	
# Motif resources		
Mwm*IconPlacement:	right bottom	
Mwm*InteractivePlacement:	false	
Mwm*ClientAutoPlace:	false	
Mwm*KeyboardFocusPolicy:	pointer	

These SAS resources and Motif resources enable the SAS System to use 90% of the display and enable SAS/INSIGHT software to place windows efficiently when you set the **Window Layout:Spread** option. If your host does not use the Motif window manager, it may use another window manager with similarly named resources.

Resource names are case-sensitive. You can load X resources at system initialization or use the UNIX **xrdb** command. For more information on X resources, refer to the SAS companion for the UNIX environment or your host documentation.

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