

CHAPTER

2

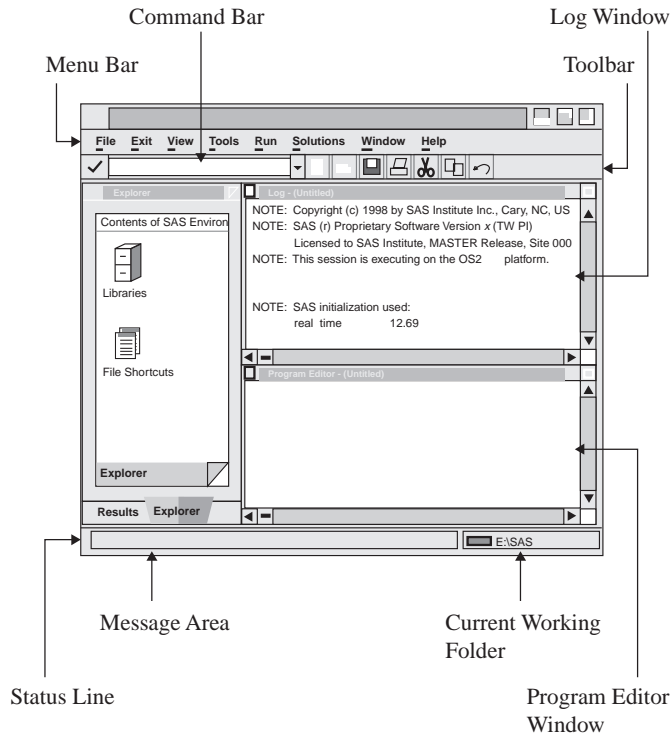
Interacting with the SAS System under OS/2

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Overview of the SAS System Interface

The main SAS window contains all other SAS application windows. The main SAS window is completely configurable, enabling you to use its features in a way that is productive for you. Display 2.1 on page 27 shows the main SAS window as it appears when you first start the SAS System. This section briefly describes the features of the window.

Display 2.1 The Main SAS Window

Here are the primary components of the main SAS window:

menu bar

presents the menus that are available for the active SAS application window. As you switch between application windows, the menu bar changes. Similarly, the pop-up menus that appear when you click on the right mouse button inside a window are specific for that window.

command bar

provides a way to quickly enter any SAS command. The command bar retains a list of the commands that you enter. To repeat a command that you issued previously, either type until the command appears in the command bar or select the command from the drop-down list and click on the check mark button or press ENTER. To switch the keyboard focus to the command bar, press F11 (the key that is defined as COMMAND BAR).

toolbar

provides quick access to the commands that you issue most often. The toolbar is completely configurable and can contain up to 30 tools. You can associate different sets of tools with different SAS application windows. When you create a tool, you specify the tool icon, the commands that are associated with the tool, the Help text that is displayed on the status line, and the tip text. The bitmap browser provides hundreds of images that you can use to represent your commands on the toolbar.

windowing environment

contains a workspace to open windows within the main SAS window. Certain windows, such as windows that are used for navigation, can dock to left side of the main SAS window when **Docking View** is enabled from the Preferences dialog box. Windows that cannot dock to the main SAS window open to the right of the docking area. For more information about using dockable windows, see "Using the Docking View" on page 28.

status line

contains a message area and the current folder for the SAS System. The message area displays Help text for menus and tools, as well as messages that are specific to SAS application windows. The current folder area displays the name of the current working folder. To change the current folder, double-click on the current folder area. For more information about changing the current folder, see “Changing the SAS Current Folder” on page 42.

The status line can be enabled and disabled from the Preferences dialog box. The message line and the current folder can be enabled and disabled from either the Preferences dialog box or the status line pop-up menu.

Accessing SAS Commands, Tools, and Options from Menus

You can access SAS commands, tools, and options by selecting them from the menus at the top of the main SAS window or by using pop-up menus within application windows. The menus display options that are available in the active window. To access a pop-up menu for a particular window, click the *right* mouse button anywhere within a window. The pop-up menu that appears contains the menu items that are available in that particular window.

Some SAS windows (such as the Explorer window) along with the main SAS window can contain objects that have their own pop-up menus when you click on an object by using the right mouse button. For example, the command bar, the toolbar, and the status line each have a pop-up menu. In these windows, the pop-up menu that appears is specific to the selected object.

Using the Docking View

The SAS System for OS/2 makes it easier for you to access files by using docking view. When the docking view is enabled, certain windows are docked to the left side of the main SAS window. These windows are typically used for navigation. When you double click on an object in a docked window, a window that contains the object opens in the right side of the main SAS window.

The docking view is enabled or disabled

- from the Preferences dialog box **View** page
- by entering the WDOCKVIEW command in the command bar.

Issuing the WDOCKVIEW command without any arguments toggles the docking view.

Each docked window has a tab at the bottom of the docking area for easy access to the window. When the number of dockable windows is large enough so that you cannot identify the tabs, a left and right arrow are displayed for you to navigate through the docked windows.

Docked windows cannot be individually moved or resized. To enlarge or contract the docking area, place the cursor over the split bar between the docking area and the remaining portion of the main SAS window. Then click and hold down the left mouse button. Move the mouse to the left or right to resize the docking area.

If you prefer to dock or undock individual windows, you can toggle the **Docked** menu item by selecting



For more information about docking or undocking all windows, see “View Preferences” on page 45 and “WDOCKVIEW” on page 222.

Learning about the Main SAS Window

To help you learn about the different parts of the main SAS window, the SAS System provides different types of screen Help. The screen Help is either a message that displays in the message area of the status line or a one- or two-word screen tip. The message area descriptions are available for menus, the command bar, and items in the toolbar. Screen tips are available for the command bar, toolbar buttons, the docking area tabs, and the status line.

If you would like a description of a menu or a menu item, select the menu or menu item, and hold down the mouse button. As the mouse pointer passes over the menu or menu item, a description of the item displays in the message area of the status line. For example, when you select the **File** pull-down menu, the status line displays the words **Perform file-related operations**. As you drag the mouse to highlight the items under the **File** menu, the message area displays a short description of each item.

When you place the cursor over a toolbar button, a screen tip displays by the icon and a longer description displays in the message area.

For information about other parts of the main SAS window, such as the docking area tabs and the status line, place the cursor over the item and hold it there for a second. A one- or two-word screen tip will pop up.

If you customize the commands that are available from the toolbar, you can also specify the descriptions (**Tip Text** and **Help Text**) that appear as screen tip Help and the message in the message area. To learn more about changing the toolbar, see “Customizing the Toolbar” on page 50.

To enable or disable command bar or toolbar screen tips, you can use either the **Show ScreenTips on toolbars** option in the Customize dialog box **Toolbars** page or issue the **TOOLTIP** command in the command bar. All other screen tips can be enabled or disabled by using the **ScreenTip** option in the Preferences dialog box **View** page or by using the **WSCREENTIPS** command. For more information on enabling and disabling screen tips, see “Setting Session Preferences” on page 43, “Customizing the Toolbar” on page 50, “WSCREENTIPS” on page 229, and “TOOLTIPS” on page 218.

Opening and Saving Files

You can open and save external files from any text editor window, such as the Program Editor window. Some SAS windows, such as Log and Output, do not allow file input; you cannot open files from these windows, but you can save the window contents to external files. If you would like the default folder for the Open and Save As dialog boxes to be the current working folder and not the SASUSER folder, you can use the **SASINITIALFOLDER** system option when you start the SAS System. For more information, see “**SASINITIALFOLDER**” on page 370

Opening Files

To open a file from the Program Editor,

- 1 With the Program Editor window active, either click on the Open toolbar button (the opened file folder), type **dlgopen** in the command bar, or select the **File** menu and select **Open**. SAS displays the Open dialog box.
- 2 Use the Open dialog box to select the file that you want to open. By default, SAS looks for files with the **.SAS** file extension (which contain SAS code, by convention).
- 3 If the file that you are opening contains SAS code that you want to submit, check the **Submit** box before clicking on **OK**.

Note: If you check **Submit**, it remains checked and in effect each time you use the Open dialog box to open a file. You must uncheck it if you do not want to submit the contents of the file that you want to open. \triangle

You can also drag and drop a file into the Program Editor from the My Favorite Folders window. To do this,

- 1 Open the My Favorites Folder window by selecting



- 2 Position the My Favorite Folders window and the Program Editor window so that both are visible.
- 3 In the My Favorite Folders window, find and select the file that you want to open; click and hold down the right mouse button.
- 4 Drag the file over the Program Editor window and release the right mouse button.

Note: The Program Editor window can hold up to 256 characters on a single line. If you open a file with lines longer than 256 characters in the Program Editor window, the lines are truncated unless you issue the INCLUDE command with an LRECL= value equal to the number of characters in the longest line, and you set either the AUTOWRAP or AUTOFLOW command to ON. If you want to use the Open dialog box to open a file with lines that are longer than 256 characters, use the FILENAME statement to set up a fileref with the appropriate options and then include the fileref, enclosed in double quotes, in the **File Name** field in the Open dialog box. \triangle

Saving Window Contents to a File

To save the contents of the active window to a file,

- 1 Either click on the Save toolbar button (the diskette) or select **Save** from the **File** menu. If you have previously saved the contents of this window to a file (and the filename is part of the window title), SAS simply saves the window to the file that you specified previously. If you have not saved the document during this session (and the window title bar displays the name "Untitled"), then SAS displays the Save As dialog box.

If you have previously saved the editor contents but now want to save it to a different file, select **Save As** instead of **Save** in the **File** menu or issue the DLGSAVE command.

CAUTION:

Always use Save As when you want to save the contents of the editor window to a new file. If you open a text file in the editor window, whether you use the Open dialog box or the INCLUDE command, the editor title bar displays the name of the file that you opened. When you select



SAS overwrites or appends the file of that name with the current contents of the editor. \triangle

- 2 Select **Save As** from the **File** menu and select or name the file where you want to store the window contents.

Clearing the Window and Filename

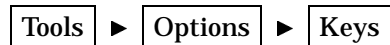
To clear a SAS window of its contents and its saved filename (if it has one), do one of the following:

- press CTRL + E
- select **Clear All** from the **Edit** menu
- click on the New (the blank page) toolbar button
- select the **File** pull-down menu and select **New**
- type **clear** in the command bar and press ENTER.

If the contents of the window have not been saved, SAS prompts you to save them before it clears the window.

Defining Keys

To display the key definitions that are active for the SAS session (that is, the DMKEYS entry in your SASUSER.PROFILE catalog), either type **keys** in the command bar or select



These key definitions apply to the basic SAS windows, such as the Program Editor, Output, and Log windows. “Default Key Definitions under OS/2” on page 409 contains a list of the default key definitions.

Other SAS products have their own key definitions. Use the menus in the specific product window to access key definitions for specific products.

Although the SAS System lets you define any key that is listed in the KEYS window, OS/2 reserves some keys for itself to maintain conformity among OS/2 applications. These reserved keys are not shown in the KEYS window.

To define or redefine a key within the SAS System, place the cursor in the **Definition** column across from the key or mouse button that you want to define and type the command or commands that you want to associate with that key or button. The definition must be a valid SAS command or sequence of commands. When you specify a sequence of commands, separate the commands with a semi-colon (;). For example, if you want to define the CTRL+H key sequence to maximize a window and recall the last submitted program, specify the following commands in the **Definitions** column next to **CTL H**:

```
zoom; recall
```

The SAS System does not check the syntax of a command until it is used (that is, when the key is pressed). If you misspell a command or type an incorrect command, you do not discover your error until you use the key and receive an error message that indicates that the command was unrecognized.

Your key definitions are stored in your SAS user profile catalog. SAS creates a new profile catalog each time you invoke the SAS System with a different value for the SASUSER option. Changes that you make to one profile catalog are not reflected in any other. However, you can use the COPY command from the KEYS window or the CATALOG procedure to copy key definition members to other profile catalogs. (For more information, see the CATALOG procedure in *SAS Procedures Guide*.)

Accessing Online Help and Documentation

The SAS System for OS/2 provides comprehensive HTML-based online documentation. You can access several different levels of Help information, depending on the context and the type of information that you need. Help information appears in the Web browser that is specified in the Preferences dialog box Web page. For information about defining a preferred browser, see “Web Preferences” on page 46.

Getting Help from the Command Bar

You can get help for SAS language elements and SAS products by using the HELP command in the command bar. When you issue the HELP command, the SAS System Help displays Help for either the active window or for the type of Help that you specify in the HELP command argument. Table 2.1 on page 32 lists the HELP command arguments and the resulting display in the SAS online Help.

Table 2.1 Types of Help Available by Using the Command Bar

Help Argument	The SAS System Help Display	Example
none	Help for the active window	HELP
language element	Help on the specified language element	HELP FILENAME
language element type	a list of links to all language elements within the language element type	HELP DSOPTIONS
product name	product Help	HELP SAS/CONNECT
HELP	how to use the HELP command	HELP HELP

The HELP arguments for language element types include these strings:

commands	lists SAS commands
dsoptions or datasetoptions	lists SAS data set options
formats	lists SAS formats
functions	lists SAS functions
informats	lists SAS informats
procedures	lists SAS procedures
statements	lists SAS statements
systemoptions	lists SAS system options

Getting Help in the Dialog Boxes

To access Help in a dialog box, click on the **Help** button in the dialog box or press F1. A Help window opens that describes each item in the dialog box.

Getting Help for a SAS Product

To access Help information about the SAS product that is associated with the currently active window, click on the Help toolbar button (the book with the question mark), press the F1 function key, or select **Using This Window** from the **Help** menu. (For example, if you click on the Help toolbar button and the active window is a SAS/GRAPH window, the SAS online Help displays information about SAS/GRAPH software.)

You can also get Help for a SAS product by issuing using the HELP command in the command bar. When you use the product name as an argument to the HELP command, the SAS Online Help displays the product help. For example, if you typed **help SAS/GRAPH** in the command bar, the SAS System Help will open to the SAS/GRAPH help.

Getting Help from the Help Menu

The **Help** menu is always available within your SAS session. Here are descriptions of the topics that are available from the **Help** menu:

SAS System Help

comprehensive SAS language and option information, including information that is specific to OS/2.

Using This Window

information that is relevant to the currently active window. This is the same as clicking on the **Help** toolbar button or pressing the F1 key.

Books and Training

can provide access to SAS HTML-based books and tutorials that are available on CD-ROM. The SAS Online Tutor is a separately licensed SAS product. In order to use this menu selection to access the SAS online documentation and SAS OnlineTutor, modify the DOCLOC and TRAINLOC system options in the SAS configuration file to reflect the location of their respective folders.

Getting Started with SAS Software

provides a link to a tutorial on the SAS Web site that will help you get started with SAS.

SAS on the Web

provides links to useful areas on the SAS Web site, including technical support, frequently asked questions, sending feedback to SAS, and sample code.

Getting to the SAS Web Pages (and Others) from within the SAS System

The SAS System is configured to launch your local Web browser to view HTML files. You can invoke your Web browser in either of the following ways:

- Type a URL (uniform resource locator) in the command bar. The SAS System will launch the browser that you specified in the Preferences dialog box Web page.
- Issue the WBROWSE command, which will launch the browser with the SAS Web site or another default URL that you can specify in the Preferences dialog box Web page. For more information, see “WBROWSE” on page 220.

Note that you can access Web pages on the Internet (such as the SAS Web site) only if your workstation is connected to a network that allows such access.

Working within Your SAS Session

Using the SAS Text Editor Windows

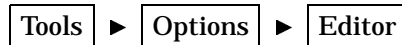
The SAS text editor windows (including Program Editor and NOTEPAD) work similarly to other OS/2 editors. Thus, you can edit your SAS code without learning how to use a new text editor.

Using Line Numbers

If you are familiar with the SAS Program Editor window under other operating environments such as OS/390 (formerly MVS), notice that under OS/2 line numbers are turned off by default. You can issue the NUMBERS ON command from the command bar to display line numbers in the Program Editor window.

You can also control line numbers by using the Editor Options dialog box when the Program Editor or NOTEPAD is the active window. To open the Editor Options dialog box:

- 1 Type EDOP in the command bar or select



- 2 Click on the down-arrow in the drop-down list box and select **Text Editing Options**.
- 3 Select **Nums**, click the right mouse button, and select **Modify**.
- 4 In the **value** combo box, select either **Yes** or **No** and click on **OK**.

Moving the Cursor

The cursor movement keys (arrow keys, PgUp, PgDn, and so on) function the same way in SAS text windows as they do in other OS/2 applications.

Pressing the CTRL key with the left arrow key (word left) or right arrow key (word right) causes the cursor to move one word at a time. When you advance through text, the word-left and word-right commands stop at the end of the text on a line and at the beginning of the first word on a new line. You can move to the top of a file by pressing CTRL+PgUp or to the bottom of a file by pressing CTRL+PgDn.

Pressing the Home key causes the cursor to move to the beginning of the current line unless the command line is active. Pressing the Home key when the command line is active causes the cursor to toggle between the current cursor position in the text and the command line. The F11 key moves the cursor to the command line. You can toggle the command line on and off by using the COMMAND command or by selecting **Command line** in the Preferences dialog box **General** page.

Using Tabs

Many text editors retain tab characters, while others expand tabs into space characters. The SAS Program Editor window expands tabs into space characters. Pressing the TAB key inserts spaces and moves any text to the right of the cursor.

Understanding Line Breaks

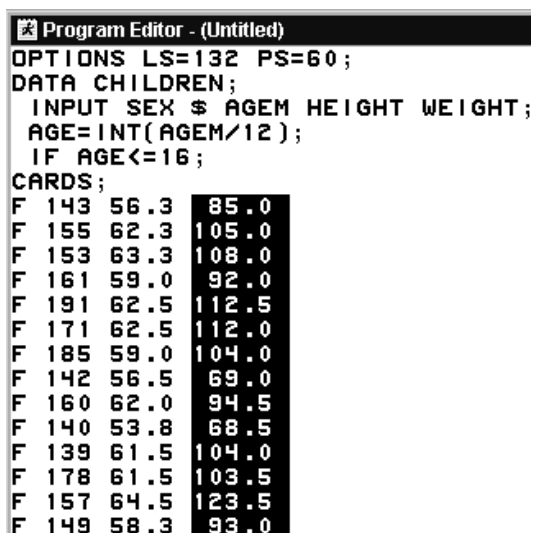
Conceptually, line breaks are at the end of the line rather than at the beginning. Pressing ENTER creates a line break. To delete a line break, press the Backspace key at the beginning of a line or press the Delete key at the end of the line.

Selecting Text

You can use the mouse or the Shift key in combination with the cursor movement keys to select text. The marking of an area of text continues until you release the mouse button or release the Shift key. To select all of the text in the active window, select **Select All** from the **Edit** menu. The following are several advanced text selection methods:

- Double-click on a single word to select it. To select an entire line, hold down the CTRL key as you double-click on the line you want to select.

- Press and hold the ALT key while you click and hold the left mouse button and drag the mouse to select a rectangular block (or column) of text (as shown).



The screenshot shows a window titled "Program Editor - (Untitled)". The text inside is as follows:

```

OPTIONS LS=132 PS=60;
DATA CHILDREN;
  INPUT SEX $ AGEM HEIGHT WEIGHT;
  AGE=INT(AGEM/12);
  IF AGE<=16;
CARDS;
F 143 56.3 85.0
F 155 62.3 105.0
F 153 63.3 108.0
F 161 59.0 92.0
F 191 62.5 112.5
F 171 62.5 112.0
F 185 59.0 104.0
F 142 56.5 69.0
F 160 62.0 94.5
F 140 53.8 68.5
F 139 61.5 104.0
F 178 61.5 103.5
F 157 64.5 123.5
F 149 58.3 93.0

```

A vertical rectangular selection box is drawn over the column of text containing the values: 85.0, 105.0, 108.0, 92.0, 112.5, 112.0, 104.0, 69.0, 94.5, 68.5, 104.0, 103.5, 123.5, and 93.0.

- Use the Shift key in combination with the mouse button to select the text between the current text cursor and the position in the text where you click. You can also use this technique to extend a text selection. (You can use this feature only within the current page.)

If characters are selected and you start typing text, the marked area is replaced with the new text. This occurs even if you have moved the cursor away from the marked area. For information about marking and copying text with a mouse, see “Using the Clipboard” on page 37.

To unmark text, click the left mouse button in the window. Alternatively, you can unmark text by selecting **Deselect** from the **Edit** menu, or you can press the ESC key. You can also unmark text using the up, down, left, and right arrow navigation keys if **Enable unmarking with navigation keys** is selected in the Preferences dialog box **Edit** page. Entering the WNAVKEYUNMARK ON in the command bar also enables unmarking with the arrow navigational keys.

Deleting Text

The Delete key deletes the currently selected text; otherwise, it deletes the character to the right of the cursor. To delete from the cursor to the end of the current line, press ALT+DELETE. To delete from the cursor to the end of the current word, press CTRL+DELETE. To delete from the cursor to the start of the current word, press CTRL+BACKSPACE.

You can also use the **Edit** menu to delete text. To delete all text in the window, select **Clear All**. To delete only selected text, select **Clear**. To delete selected text and copy that text to the OS/2 clipboard, select **Cut**.

Dragging and Dropping Text

You can drag and drop selected text between the following locations:

Drag text from	And drop it to
any SAS text window	another SAS window that supports text editing (such as Program Editor)
any SAS text window	another OS/2 application that supports dragging and dropping of text
an OS/2 application that supports text drag and drop	any SAS window that supports editing
OS/2 Drives View (text file item)	any SAS window that supports editing

To drag and drop text from one window to another:

- 1 Arrange your windows, if necessary, so that both the source and target windows are visible on the display.
- 2 Select text from the source window.
- 3 Click and hold the right mouse button with the pointer on the selected text.
- 4 With the mouse button still pressed, drag the text to the target window.
- 5 Move the mouse pointer to the position where you want to insert the text. (If you plan to just submit the text as SAS code for processing, position the mouse pointer anywhere in the window.)
- 6 Release the mouse button. The text is either included at the point where you positioned the cursor, or it is submitted to the SAS System for processing. (The default action depends on the type of the target window.)

Here is a summary of drag-and-drop actions that are available for the possible target windows in SAS:

Data	Target	Default Action
text	SAS text editor	move
text from Log, Output	Program Editor, SAS text editor	copy
file	Program Editor	copy
file	Other SAS text editor windows	not applicable
file	Log, Output windows	submit

The actions that occur when you drag text out of a SAS window into another OS/2 application depend on the target application. In most cases, dragging and dropping text between SAS and other applications actually moves the text from one window to another (that is, the text is cut from one window and placed in the other).

You can change that behavior by applying a *drag-modifier*—a key that you press while you drag and drop. To copy text from one window to another (instead of moving it), press and hold the CTRL key before and during the drag-and-drop action. When you release the mouse button to drop the text, release the CTRL key as well.

Using Rich Text Format (RTF) Text

When you copy text out of a SAS window to the clipboard and paste it into the window of another application, the text retains all of the format information that it had in SAS (except for color) if the target window accepts RTF formatting. For example, the

OS/2 System Editor does not preserve formatting, but the OS/2 Enhanced Editor and many other word processors do. The same is true when you drag text out of a SAS window and drop it in another application window.

Saving Program Editor Files Using Autosave

To be sure that you do not lose any of your work in the Program Editor, the SAS System can automatically save your files at an interval that you specify. The interval can range from 0 (Autosave off) to 480 minutes. The default interval is 10 minutes. To enable or disable Autosave and set the interval, select

Tools ► Options ► Preferences... ► Edit page

You can also use the WAUTOSAVE command to enable, disable, and set the interval. WAUTOSAVE INTERVAL=*minutes* will turn on Autosave using *minutes* as the interval.

For more information about the Autosave feature, see “Edit Preferences” on page 45 and “WAUTOSAVE” on page 220.

Understanding Unique Features of the Editor

The following features of the SAS text editor window are different from the standard features of other editors that are commonly used in the OS/2 operating environment:

- The SAS text editor window allows you to move the cursor past the last character that is entered on a line or past the last line of text entered.
- You can unmark text by pressing the ESC key.
- You can use the SHIFT+TAB key combination to delete blank-space characters back to the last tab stop.

Using the Clipboard

The OS/2 clipboard enables you to exchange text and graphics between applications. You can also submit SAS code that is stored on the clipboard. The clipboard uses operating environment memory as an intermediate storage buffer for exchanging text and graphics. With the clipboard, you can move text between

- windows within the SAS System
- the SAS System and other OS/2 applications
- two SAS sessions
- two SAS processes.

The SAS System under OS/2 communicates with the clipboard by using these formats:

SAS text format

preserves the text and color attributes between SAS sessions. This format is understood by the SAS System, but not by other OS/2 applications.

OS/2 text format

is understood by most OS/2 applications.

RTF text format

encapsulates text font and highlighting attributes when you are copying text between applications that both support RTF format. SAS can cut and copy text only in RTF format; you cannot paste RTF text into a SAS window.

bitmap format

is for graphics and for windows in SAS/ASSIST software. This format is understood by most OS/2 applications.

metafile format

is used in many SAS applications that support the GSTORE command, such as the Graphics Editor in SAS/GRAPH software, the SAS/QC ISHIKAWA procedure, and SAS/INSIGHT software. The metafile format that is supported for clipboard operations has a file extension of MET and provides more information about the image than about the bitmap format.

DIB (device independent bitmap) format

is used with color bitmap files. When a bitmap is stored in the DIB format, colors map correctly from one device to another.

These formats enable you to copy text and SAS bitmapped information (for example, from a graphic) to another application. You can also use the Print Screen and ALT+PRINT SCREEN keys to copy information from your SAS session to the clipboard. Pressing PRINT SCREEN places the entire display in bitmap form on the clipboard.

You can use the clipboard only if both the source and destination applications provide support for the clipboard facility and for the format that you are using. Note that whereas some operating environments allow multiple paste buffers, the SAS System under OS/2 uses the OS/2 clipboard, which is a single buffer.

Selecting and Copying Text

For windows that contain text, such as the Program Editor, NOTEPAD, Log, Output, and KEYS windows, you can hold down either the left mouse button or ALT + the left mouse button and drag the mouse to mark the area that you want to cut or copy. Holding down the left mouse button when you are selecting multiple lines selects whole lines of text. Holding down ALT + the left mouse button lets you select a rectangular block or column of text. The text area is immediately marked in reverse video while you are dragging the mouse. To extend the selection of text area, use SHIFT + left mouse button. Release the mouse button when you have included all the text you want to copy.

To copy marked text to the clipboard, do one of the following:

- click on the Copy toolbar button (the double document)
- select **C**opy from the **E**dit pull-down menu
- press CTRL + INS.

To paste text that is stored on the clipboard, position the cursor in a text area in a window and do one of the following:

- click on the Paste toolbar button (the clipboard and document)
- select **P**aste from the **E**dit pull-down menu
- press SHIFT + INS.

The text from the clipboard is pasted to the area that you indicate. If there is already an area of selected text within the target window, the selected text is replaced with contents of the clipboard. You can paste text only into SAS windows that accept text input, such as the Program Editor or the NOTEPAD.

Selecting and Copying in Nontext Windows

For windows such as the GRAPH and SAS/ASSIST windows, an area is marked by a box, not by reverse video. The box indicates that the area that you are marking is in bitmap format. You cannot scroll in these windows while you are marking text. After you finish marking an area, you can copy it to the clipboard. If the window that you are working in has no **E**dit pop-up menu, you can use the following keys to perform the copy and paste functions:

CTRL+INS copies the selection to the clipboard.

SHIFT + INS pastes the contents of the clipboard.

Using the GSTORE Command

Both the SAS/QC ISHIKAWA procedure and the Graphics Editor support the storing of metafile graphics format as well as bitmap formats on the clipboard. In the Graphics Editor, the area that you mark is enclosed in a box, and you cannot scroll as you mark. Use the GSTORE command to store the currently marked area (the entire screen when used with the ISHIKAWA procedure) on the OS/2 clipboard in device-dependent bitmap (BMP) graphical data formats. You can also select **Copy** from the **Edit** menu to store the marked area on the clipboard.

Pasting Bitmapped Information into Your SAS Session

You can paste bitmaps into the Graphics Editor and Image Editor to import graphics. For more information, see “Importing Graphics from Other Applications” on page 115.

Submitting SAS Code from the Clipboard

The SAS System under OS/2 enables you to use the OS/2 clipboard to submit SAS code. This feature can be used to copy or cut SAS code from another application, such as the OS/2 Enhanced Editor or another text editor, and submit it to the SAS System for execution. This is also convenient for submitting the sample programs that are available in the SAS System Help.

To submit SAS code stored on the clipboard, select **Submit Clipboard** from the **Run** menu with the Program Editor window active. Alternatively, you can issue the GSUBMIT command from the command bar as follows:

```
gsubmit buf=default
```

The GSUBMIT command can be used to submit SAS code that is stored on the clipboard even if the Program Editor window is not the active window (or if it is closed). If you use the GSUBMIT command often, you may want to define an icon for it in the toolbar, or assign the GSUBMIT command to a function key. For more information about how to define toolbar buttons, see “Customizing the Toolbar” on page 50.

Creating Text Highlighting and Special Characters

Special Character Attributes

Both SAS NOTEPAD and SAS/AF allow you to use extended color and highlight attributes for text. To access these attributes, press the ESC key and the appropriate letter or number to turn a color or attribute on and off. With this feature, you can alter the color or attributes of entire lines or individual words or letters. Valid colors and attributes, as well as the keys you use to implement them, are listed in Table 2.2 on page 40 and Table 2.3 on page 40. Color names are not case-sensitive.

Table 2.2 Extended Color Key Sequences

Key Sequence	Color	Key Sequence	Color
ESC+A	Gray	ESC+N	Brown
ESC+B	Blue	ESC+O	Orange
ESC+C	Cyan	ESC+P	Pink
ESC+G	Green	ESC+R	Red
ESC+K	Black	ESC+W	White
ESC+M	Magenta	ESC+Y	Yellow

Table 2.3 Extended Attribute Key Sequences

Key Sequence	Description
ESC+0	Turns off all highlighting attributes
ESC+2	Turns on the underline attribute
ESC+3	Turns on the reverse-video attribute

Alternate ASCII Characters

If you want to create alternate ASCII characters such as foreign language characters, you can use the ALT key in combination with the ASCII character code. Use the numeric keypad with NumLock on to enter the character code. For a list of ASCII character codes and instructions about how to use the ALT key sequences, see your OS/2 documentation.

Issuing SAS Commands

Using Menus to Issue Commands

Many commands are already assigned to menu items for the windows in which they apply. For example, selecting **Submit** from the **Run** menu for the Program Editor window has the same effect as typing **submit** at the Program Editor command line. The items in the menu bar and pop-up window vary depending on the active window.

Using the Command Line to Issue Commands

If you want to use the command line to issue commands, select **Command line** from the Preferences dialog box **view** page. (For more information, see “Setting Session Preferences” on page 43.) This action places a command line in each SAS window. You can then type commands on the command line in the window in which the commands apply. (For example, the INCLUDE command is valid in the Program Editor window, but not in the Log window.)

Using the Command Bar or the Command Box to Issue Commands

The command bar and the command box offer a central location from which you can submit any SAS command, as long as the command is valid for the active window. If you enter a command that is not valid for the active window, SAS issues an error message.

By default, SAS displays a command bar at the top of the main SAS window. You can also undock the command bar and use it in a separate window. To undock the command bar:

- 1 Position the cursor over the command bar (not in the text field)
- 2 Click the right mouse button and select **Docked**.

To dock the command bar again:

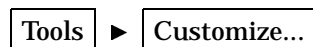
- 1 Position the cursor over the command box (not in the text field)
- 2 Click the right mouse button, and select **Docked**, or double-click the left mouse button in the command box title bar.

To move your cursor to the command bar, press the F11 key. Pressing F11 when you are using the command box docks the command box and places the cursor in the command bar.

The SAS System stores the commands that you enter in the command bar from session to session, and you can easily retrieve previously entered commands by selecting them from the drop-down list. The default number of commands to save is 15, but you can save from zero to 50 commands. SAS can store the commands either in order of the most recently used or in order of the most frequently used. To store the commands by the most recently used, select **Sort commands by most recently used** in the Customize Tools **Toolbar** page. When this option is not selected, the commands are sorted by the most frequently used.

You can also retrieve previously entered commands by starting to type them in the command bar. If **Use AutoComplete** is selected in the Customized Tools **Toolbar** page, the SAS System completes the command that best matches the command that you are typing.

You can select your preferences for the command bar by using the Customize Tools dialog box (described in “Setting General Toolbar Preferences” on page 50). To open the Customize Tool dialog box, issue the **TOOLEEDIT** command (described in “TOOLEEDIT” on page 216) or select



Using the Toolbar to Issue Commands

The toolbar provides a convenient way to issue commands that you use often. To issue a command by using the toolbar, simply click on the icon that represents the command that you need. To learn which tools perform what commands, position the mouse pointer over a tool briefly to display the screen tip for that tool.

When you start the SAS System, the toolbar displays at the top of the main SAS windows. You can detach the toolbar and use it in a separate window by

- 1 positioning the cursor over the toolbar (not over a tool)
- 2 clicking the right mouse button and selecting **Docked**.

You can dock the toolbar again by

- 1 positioning the cursor over the toolbar (not over a tool)
- 2 clicking the right mouse button and selecting **Docked** or double-clicking the left mouse button in the toolbar title bar.

You can add or change the tools that are defined in the toolbar. For more information, see “Customizing the Toolbar” on page 50.

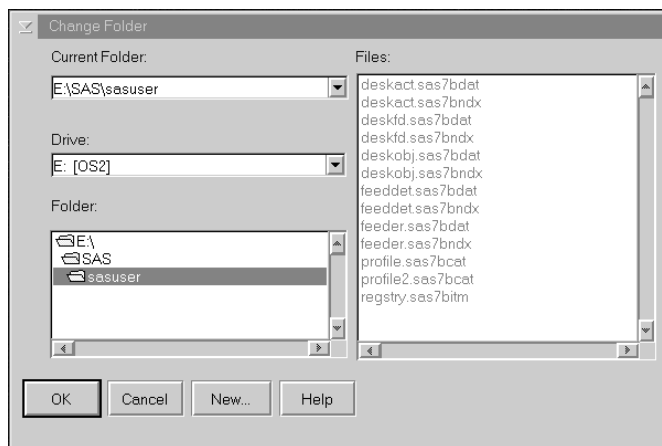
Changing the SAS Current Folder

The current folder is the operating environment folder in which many SAS commands and actions are valid. The path to the SAS current folder is displayed in the status line at the bottom of the main SAS window. By default, the SAS System uses the folder that is designated by the SASUSER system option in the SAS configuration file as the current folder when you begin your SAS session. You can specify a different default current folder by changing the **working directory** field in the Properties Program page for the SAS program or by specifying the SASINITIALFOLDER system option during SAS invocation. For more information on the SASINITIALFOLDER, see “SASINITIALFOLDER” on page 370.

Interactively Selecting a New Current Folder

To change the SAS current folder during your SAS session, double-click on the current folder in the status line. Then use the Change Folder dialog box (shown in Display 2.2 on page 42) to select a new working folder.

Display 2.2 Change Folder Dialog Box



If you organize your files so that each project has its own folder, then the Change Folder dialog box allows you to quickly switch between projects. As you select different projects, the dialog box retains the directories that you select in the **Fo**lder list box.

Using SAS Statements to Change the Working Folder

You can change the working drive and folder by submitting the change directory (CD or CHDIR) command with the X statement in SAS. The SAS System intercepts the change directory command and then changes drive commands and changes its working folder.

For example, the following statements change the working folder for your SAS session to the MYDATA folder and G:\SALES\JUNE folder, respectively:

```
x 'cd \mydata';
x 'cd g:\sales\june';
```

To simply change the working drive, you can submit a change drive command (the drive letter followed by a colon and enclosed in single quotes) such as the following:

```
x 'a:';
```

Customizing Your SAS Session

The SAS windowing environment can be customized in several ways by using commands, dialog boxes, and SAS system options.

Selecting Fonts

To choose a different font or point size for text in SAS windows, open the Fonts dialog box by selecting

Tools ► Options ► Fonts

The fonts that are available depend on which monospace fonts you have installed under OS/2. For example, you might have the Courier font available. When you select a font or point size, the **Font Sample** field displays a sample of the font that you have selected.

Note: You cannot use **Fonts** to select SAS/GRAPH fonts. △

CAUTION:

Beware of changing certain display characteristics on low-resolution displays. If you select large font sizes on some monitors, you may not be able to see all the text in your SAS windows at one time. In some windows, such as the SAS/ASSIST window where there are no scroll bars, large font sizes can cause some choices to be invisible. For these types of displays, large font sizes are not recommended. This same problem can occur if you change the OS/2 Appearance properties and select a thick window border. On low-resolution displays, you should not use thick window borders. △

Setting Session Preferences

You can configure your SAS session to accommodate the way that you like to work. For example:

- You can use a movable command window instead of the command bar.
- You can set preferences for scrolling behavior and window appearance.
- You can set a preferred Web browser to use when viewing Internet Web pages or HTML output.

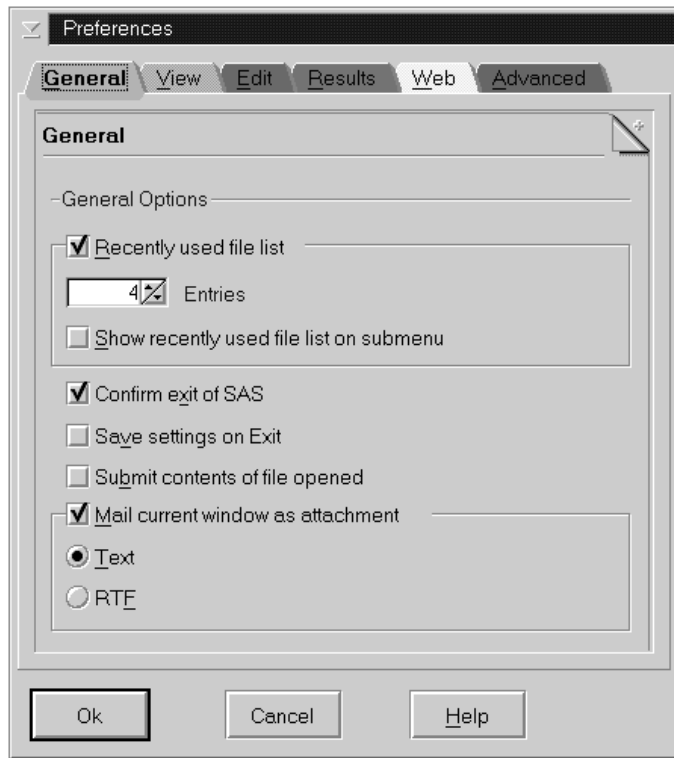
To set your preferences, type **d1gpref** in the command bar or select

Tools ► Options ► Preferences...

The Preferences dialog box (shown in Display 2.3 on page 44) contains different pages that separate the session settings into different categories. Click on the tabs for each page that are located along the top of the dialog box to navigate to the settings that you want to change, and then select the options that you want. When you are finished, click **OK**. The settings that you select are saved from session to session in the SASUSER.PROFILE catalog by their respective pages except for the **Results** page. The entries in the SASUSER.PROFILE are GENWSAVE, VIEWWSAVE, EDITWSAVE, WEBWSAVE, and ADVWSAVE. The **Results** page settings are saved in the SAS

Registry so they are not moved to another machine when the SASUSER.PROFILE catalog is copied.

Display 2.3 Preferences Dialog Box (Showing the General Tab)



The following sections describe each page of the Preferences dialog box and how to use these settings to control your SAS session.

General Preferences

The General Preferences page lets you specify the general options that control how your SAS session works. These are the general options:

Recently used file list

specifies whether SAS retains a list of the files that you have accessed. If this option is selected, you can specify in the **Entries** field up to 30 files that you want to retain. **Show recently used file list on submenu** specifies whether the files will be displayed from the **Recent Files** submenu that you access from the **File** menu. If **Show recently used file list on submenu** is not selected, the files are displayed in the **File** menu. Each time that you access a file from a text editor window, the filename is added to the list. You can then reopen the file quickly by selecting the filename from the list.

Confirm exit of SAS

specifies whether you want the SAS System to prompt you for confirmation before you end your SAS session.

Save settings on Exit

specifies whether SAS should automatically save your settings when you exit your SAS session.

Submit contents of file opened

specifies whether you want to submit the contents of all files that you open to the SAS System.

Mail current window as attachment

specifies whether the active window should be automatically included as an e-mail attachment when you initiate electronic mail from within SAS. If you select this option, then you can also specify whether the attachment should be formatted as plain text or as RTF (rich text format, which retains font and color information).

View Preferences

The View page allows you to specify the options that control the appearance of your SAS session. The view options include the following:

Window

specifies whether your SAS windows contain scroll bars and a command line. You can also enable or disable a **ScreenTip** (the helpful hints that appear when you position your mouse pointer over window controls).

Show

specifies whether to show certain aspects of the SAS interface, including these options:

Docking View

specifies whether to display the docking area on the left side of the main SAS window.

Status line

specifies which aspects of the status line you want to have visible in your session. **Display message lines** specifies whether to display the message area of the status line. **Display current folder** specifies whether to display the SAS current folder area.

Edit Preferences

The Edit page controls options that affect the SAS text editor include the following:

Overtyping mode

specifies whether to insert text or overwrite on existing text when you type text in a SAS application window. You can also toggle the overtype mode by pressing the INSERT key on your keyboard.

Enable unmarking with navigation keys

enables unmarking of text using the up, down, left, and right navigation keys.

Autosave every n minutes

specifies whether to automatically save the contents of the Program Editor, and how often to save it. The contents are saved to PGM.ASV in the current active folder so that you can recover your work if your SAS session ends before you save the contents of the editor window.

Results Preferences

The Results page allows you to configure how you would like to view your program output results. The Results page options include the following:

Create listing

specifies that the program output is to be displayed in the Output window.

Create HTML

specifies that the program output is to be displayed in HTML format.

Style:

allows you to choose the appearance of the program output. For more information, see the topic on customizing the styles used in HTML output in the SAS online Help.

Folder:

specifies a folder to store HTML output files. You can either type a folder name or click on **Browse** to search for a folder.

Use WORK folder

specifies to store HTML program output files in the WORK folder. The WORK folder is a temporary folder that is deleted when the SAS session ends.

View results as they are generated

specifies whether to update the browser with the latest generated HTML output.

Web Preferences

The Web Preferences page allows you to specify the preferred Web browser for your SAS session. These preferences are used whenever you issue the WBROWSE command (either directly or by selecting a **Help** menu item or toolbar button that issues the command). For more information about WBROWSE, see “WBROWSE” on page 220. The Web options that you can specify are

Preferred browser

specifies the preferred Web browser to use when accessing Web information from within the SAS System. Type a path to the Web browser or click on **Browse** to search for the path to the Web browser.

Start page

specifies the default Web page to which to navigate when you invoke the Web browser within the SAS System. By default, the browser navigates to **http://www.sas.com** (the SAS Institute home page on the World Wide Web).

Advanced Preferences

The Advanced Preferences page allows you to specify options that can affect your SAS session, including scrolling policy and other miscellaneous behavior. The advanced options include

Scrolling Options

For the Output window, if **Scroll lines** is selected and the window is full, the window will scroll the number of lines that are specified in the spin box. The default value is 0 (meaning that no output is written to that window while statements are executing, providing the best performance). When you select **Scroll page**, the Output window will not display any lines until an entire page is

written. When **Scroll max** is selected, no output will be written to the window until the procedure is complete.

The default **Scroll lines** value for the Log window is 1. The advantage of keeping the scrolling setting of the Log window at 1 is that the SAS System uses the Log window to notify you of the status of the running program.

Scrolling can increase the length of time that the SAS System takes to run your program. The less scrolling that is required, the faster your program will run.

You can also set these values by using the Editor Options window or the AUTOSCROLL command (described in the SAS online Help).

Hide cursor in non-input windows

specifies that the cursor will not appear in windows that do not require text input (such as some SAS/AF programs and SAS/ASSIST software).

Disable scroll bar focus

specifies that the scroll bar does not receive window focus when you click on it. This eliminates flashing problems that can occur in some SAS applications.

Customizing Your Windowing Environment

You can use several commands to customize your SAS windowing environment. This section illustrates how to use some of these commands.

Customizing Window Positions

In the default display configuration of an interactive session (shown in Display 2.1 on page 27) the main SAS window displays the Explorer and Results windows as docked windows, and the Log, Program Editor, and Output windows in the remaining SAS workspace.

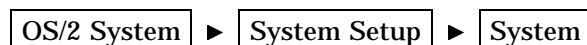
Using the **Window** menu, you can position SAS windows in the same manner as other OS/2 applications: **Minimize (Restore) All Windows, Cascade, Tile, and Resize**. While the default display configuration is sufficient for efficient SAS System use, you may want to open a few more windows for easy access and rearrange the windows on your display. For example, you may want the My Favorite Folders window open, but minimized, with the windows arranged in a mosaic pattern so you can see all of them at once. To accomplish this, you click on the minimize button in the window title bar for the My Favorite Folders window and then select **Tile** from the **Window** menu.

For more information about SAS commands that have OS/2 dependencies, see “SAS Commands under OS/2” on page 196.

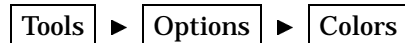
Changing the Window Colors

Changing the color of window components is a shared responsibility of OS/2 and the SAS System. You change the color of most standard window parts by changing the Properties of the OS/2 desktop.

Note: For optimal color resolution when running OS/2 in 256 colors, check the “Workplace shell palette aware” check box in the System Properties notebook 256 Colors tab. To open the System Properties notebook from the desktop, double-click on the following icons:



Several window element colors are controlled by the SAS System (such as the color of error message text in the Log window). To change a window component that is controlled by the SAS System, either type `SASCOLOR` in the command bar or select



The `SASCOLOR` window allows you to choose the colors for specific elements. For more information about the `SASCOLOR` window, see the SAS System Help for the window.

Customizing Your Windowing Environment with System Options

Several SAS system options are available to control the default windowing environment within the SAS System. The most commonly used options are the following:

`AWSDEF`

specifies the location and dimensions of the main SAS window when the SAS System initializes.

`AWSTITLE`

specifies the text for the main SAS window title bar.

`FONT`

specifies a font name and point size to use as the default SAS session font.

`ICON`

minimizes the SAS window when the SAS System initializes.

`REGISTER`

enables you to add applications to the SAS **Tools** menu so that you can execute them by clicking on their names.

`SPLASHLOC` and `NOSPLASH`

specifies the location of the logo screen (`SPLASHLOC`) to display at the start of a SAS session, or suppresses the logo screen (`NOSPLASH`).

`USERICON`

specifies user-defined icons to be incorporated into SAS/AF applications.

These options can be specified in your SAS configuration file or in the SAS command when you start the SAS System from an OS/2 window. Some are also valid in an `OPTIONS` statement. For details about the syntax of these options and about where you can specify them, see “SAS System Options under OS/2” on page 313.

Changing the Size and Placement of the Main SAS Window

The `AWSDEF` system option enables you to control the placement and size of the main SAS window when the SAS System initializes. Suppose you want your SAS session always to occupy the upper-left quadrant of your display. To accomplish this, specify the following `AWSDEF` system option in your SAS configuration file:

```
-awsdef 0 0 50 50
```

For more information about the `AWSDEF` system option, see “`AWSDEF`” on page 327.

Changing the Title of Your SAS Session

By default, the main SAS title bar contains the text **SAS**. If you want a different title, you can use the `AWSTITLE` option. To set the title to **My SAS Session**, specify the following option in your SAS configuration file:


```
-awstitle "My SAS Session"
```

Minimizing Your SAS Session

The **ICON** system option causes the SAS System to be minimized at invocation. If you are running a batch job, you might want to use this option to save space on your display.

Adding Applications to the Tools Menu

The **REGISTER** system option enables you to add names of applications to the **Tools** menu of the main SAS window. You can execute one of these applications by clicking on its name. The **REGISTER** option takes as arguments a menu name and an operating environment command or a path specification for an executable file. You can also specify a working folder. For complete information about the **REGISTER** system option, see “**REGISTER**” on page 363.

Here is an example that adds a command to print the contents of the **SASUSER** folder:

```
-register "Contents of SAS"
      "dir c:\sas"
```

When you select **Contents of SASUSER** from the **Tools** menu, the output from issuing the **OS/2 DIR** command is displayed in an **OS/2** window.

Here is an example of adding an **.EXE** file to the menu along with a specification of a working folder of **C:\NOTEDATA**:

```
-register "Notes" "notes.exe" "c:\notedata"
```

This adds **Notes** to the menu. When you select **Notes**, the file **NOTES.EXE** is opened.

Note: The **REGISTER** system option is valid only as an invocation option (that is, in a SAS configuration file and in the SAS invocation command). Δ

Displaying a Custom Logo Screen during SAS System Invocation

To display your own logo when the SAS System starts

- 1 Create the logo that you want to display and either save it as a bitmap (which has a **.BMP** file extension), or compile it as a resource and build it into a dynamic link library (DLL).
- 2 When you invoke SAS, specify the **SPLASHLOC** option with the full pathname of the file that contains your bitmap. If the bitmap is in a DLL, specify the resource number as well. The default resource number is 1.

For example, suppose your logo screen is stored in **C:\MYBMPS\SPLASH.BMP**. You specify the **SPLASHLOC** option like this:

```
-splashloc c:\mybmps\splash.bmp
```

If your logo were stored in **C:\MYDLLS\OPENING.DLL** as resource 101, you would specify the **SPLASHLOC** option like this:

```
-splashloc c:\mydlls\opening.dll 101
```

For more information about the **SPLASHLOC** system option, see “**SPLASHLOC**” on page 375.

Adding User-Defined Icons to the SAS System

The **USERICON** option enables you to add your own icons to the SAS System. These icons can be used in **SAS/AF** and **SAS/EIS** software. The syntax for the **USERICON** option is as follows:

`-USERICON icon-resource-file number-of-icons`

The *icon-resource-file* argument specifies the full path to a dynamic link library (DLL) file that contains the user icons. The *number-of-icons* argument specifies the number of icons that are found in the resource file. For example, the following option specifies that there are four icons located in an icon resource file named ICONS.DLL found in the C:\JUNK folder:

```
-usericon c:\junk\icons.dll 4
```

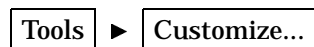
The DLL that is used as the icon resource file must be created using the OS/2 Software Development Kit (and must therefore be 32-bit). For more information about how to build a resource file, see the documentation for the OS/2 Software Development Kit.

You can incorporate icons into your SAS/AF and SAS/EIS applications by using a FRAME entry. For more information, see the SAS online Help for SAS/AF and SAS/EIS software.

Customizing the Toolbar

SAS assigns several commonly used commands to the toolbar buttons for your convenience. You might find that the commands that you use most often are different from those that are assigned to the toolbar by default. Or, you might want to create a toolbar to use with a specific application window or SAS/AF program. This section describes how to customize the toolbar settings.

You customize all toolbar settings using the Customize Tools dialog box. To open the Customize Tools dialog box, either type `tooledit` in the command bar or select



You use the **Toolbars** page for general toolbar settings and the **Customize** page to define tools on the toolbar.

Setting General Toolbar Preferences

The **Toolbars** page has settings that control the behavior and appearance of the toolbar. Tools options include

General

specifies toolbar button appearance and Help options. These options include

Large icons

specifies whether to use the set of large buttons on the toolbar. This is especially useful for high-resolution displays.

Show ScreenTips on toolbars

specifies whether to display a short button description when you place the cursor over the toolbar button.

Toolbars

specifies whether to display the toolbar and command bar. These options include

Application Toolbar

specifies whether to display the toolbar for the active application. When this option is enabled, you can select **Display as box** for the toolbar to display in a separate window. Otherwise, the toolbar is docked to the main SAS window.

Command Bar

specifies that the command bar is to be displayed and the options be enabled in order to use the command bar.

When **Display as box** is enabled, the command bar displays as a separate window.

When **Use AutoComplete** is enabled, SAS remembers previously entered commands and completes the command once you start typing the command.

Select **Sort commands by most recently used** to display commands in the command bar drop-down list in the order of the most recently typed command. If this setting is not selected, the drop-down list commands are ordered by the most frequently used.

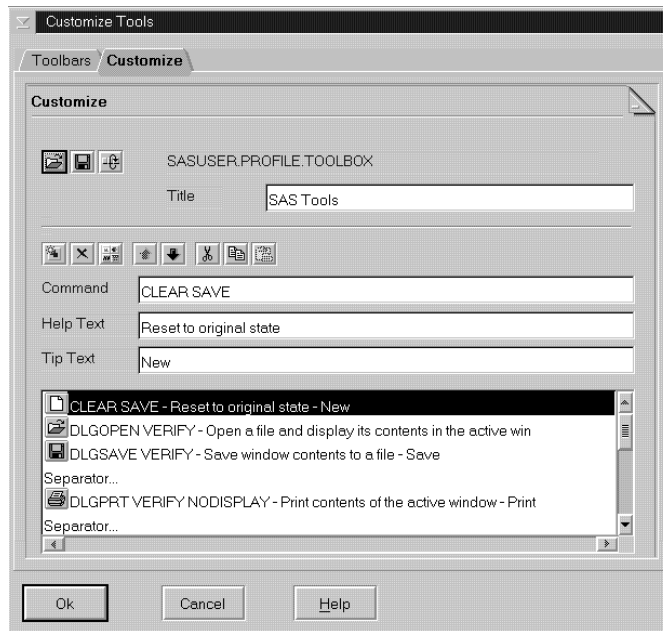
In the **Number of commands saved box**, type the number of commands to save to display in the command bar list box. Valid values range from 0 and 50. The default is 15.

When you have configured the Toolbars page, either click on **Customize** to complete your customization or click on **OK** to close the dialog box.

Customizing a Toolbar

The Customize page allows you to add, delete, and modify commands on the toolbar. Display 2.4 on page 51 shows the Customize page of the Customize Tools dialog box.

Display 2.4 Customize Page of the Customize Tools Dialog Box



You may recognize some buttons as standard OS/2 commands, such as OPEN and SAVE. The following section explains each of the buttons (commands) and fields.

The three toolbar buttons that act on the file that contains the toolbar definition are, from left to right:

- the open button opens a toolbar file.
- the save button saves a toolbar file.
- the restore button restores a toolbar to the default settings.

Title

displays the title text that appears in the title bar when the toolbar is undocked.

Commands to define a toolbar, a series of eight buttons from left to right:

Add a tool

adds a tool or a separator space to the toolbar. To add a tool or a separator, click on the button and select either **Blank tool** or **Separator**. Windows that already define an action set will have a selection for **Action**.

Remove tool

deletes a highlighted tool in the list box from the toolbar.

Change button

opens the Bitmap Browser to select a new icon for a tool button.

Move tool up

moves a tool up one position in the list box.

Move tool down

moves a tool down one position in the list box.

Cut

deletes the currently selected button from the list box and places it on the clipboard.

Copy

places a copy of the selected button on the clipboard.

Paste

copies a button from the clipboard to the highlighted command in the list box.

Command

displays the command for the highlighted tool in the list box. You can then either add or modify the command in the text box.

Help Text

displays the Help text that appears in the message area of the status bar when the cursor is placed over the button in the toolbar. You can add to or modify the Help text in the text box.

Tip Text

displays the tip text that appears under the button when the cursor is placed over the button in the toolbar. You can add to or modify the tip text in the text box.

Toolbar list box

lists the buttons, commands, Help text and separators that are defined in the toolbar.

To close the dialog box, click on **OK**.

Adding a Tool to the Toolbar

To add a tool to the toolbar, follow these steps:

- 1 Do one of the following:

- Click on the Add tool button and select **Blank Tool** to add a blank tool to the toolbar list box. Type a SAS command in the **Command** field.
- For windows that have a predefined set of tools, such as the SAS Explorer window or the My Favorite Folders window, click on the Add tool button and select **Action**. From the Add Action dialog box, select an action. This adds a new action to the toolbar. You can type multiple commands separated by semicolons.

- Click on the Add tool button and select **Separator** to add a separator to the toolbar.
- 2 Click on the Bitmap Browser button. Select a button in the Bitmap Browser dialog box and click on **OK**.
- 3 Type text in the **Help Text** field that will appear in the message area of the status line when you select the tool from the toolbar.
- 4 Type text in the **Tip Text** field that will appear under the button when you place the cursor over the button.
- 5 Position the tool in the list box by clicking on the Move Up and Move Down buttons.
- 6 When you are finished, click on the Save button. In the Save Tools dialog box, type the library, catalog, and toolbox names. Then click on **OK**.

Removing a Tool from the Toolbar

To remove a tool from the toolbar, select the tool in the list box that you want to remove and click on the Remove Tool button. When you are finished, save the toolbar by clicking on the Save button.

Customizing and Saving a Toolbar for Use with a Particular Application or Window

Follow these steps to customize a toolbar for use with a particular application or window:

- 1 Click in the application or window to make it the active window.
- 2 Customize the toolbar by adding and removing tools as described in previous sections.
- 3 When you have finished customizing the toolbar, click on the Save button. The Save Tools dialog box appears.
- 4 The SAS System completes the **LIBREF**, **CATALOG**, and **ENTRY** fields. Select the **Save tools for window** check box, where *window* is the active window, and then click on **OK**.

When you select the **Save tools for window** check box, the toolbar is associated with the particular application or window by using the same library, catalog, and entry name as the PMENU entry for the application or window. The SAS System first looks for toolbox entries in SASUSER.PROFILE before searching the application catalog.

If you save the toolbar so that it is associated with a particular application, SAS automatically loads the tools when that application's window is active.

You can use the TOOLLOAD command to load your custom toolbar manually. For more information, see "TOOLLOAD" on page 217.

Resetting the Tools to the Default Settings

To reset the tools to the default settings, click on the Restore Defaults button. The SAS System asks you to confirm that you want to reset the tool settings. When you click on **Yes**, the tools are reset to their original settings (the settings that are in place when the SAS System was installed).

If a SAS System application defines a default toolbar for its application window, clicking on the Restore Defaults button restores the settings for that toolbar.

Examples of Useful Tools You Can Create

To create a tool that opens the SAS online documentation (SAS OnlineDoc) follow these steps:

- 1 In the Tool Editor dialog box, click on the Add tool button. This creates a template for a new tool in the list box.
- 2 In the **Command** field, type **sasdoc onlinedoc**, which invokes the SAS OnlineDoc product. For more information about SAS commands that are specific to OS/2 and their options, see “SAS Commands under OS/2” on page 196. For information about portable SAS commands, see the SAS online Help.
In the **Help Text** field, type **Open the SAS OnlineDoc**. In the **Tip Text** field, type **SAS OnlineDoc**.
- 3 Click on the Bitmap Browser button. From the Bitmap Browser dialog box, select a bitmap that is appropriate for the Help action (such as PC with text bitmap) and click on **OK**.
- 4 Use the Move Up and Move Down buttons to move the tool to the location that you want on the toolbar.
- 5 Click on the Save button to save the tool with your default tool configuration.

The following are some other tools that you might find useful to create.

PGM; CLEAR; INCLUDE C:\SAS\MYPROGRAM.SAS

includes into the Program Editor window for editing a program that you use often.

PGM; FILE C:\SAS\MYPROGRAM.SAS; CLEAR

saves a SAS program after you finish editing it and clears the Program Editor window.

PGM; CLEAR; INCLUDE C:\SAS\MYPROGRAM.SAS; SUBMIT

includes and submits a SAS program that you use often.

PGM; CLEAR; INCLUDE C:\SAS\SIGNON.SAS; SUBMIT

includes and submits a SAS program to sign on to a remote system. For example, to sign on to a remote MVS session, the SIGNON.SAS program might contain the following statements:

```
options comamid=ehllapi remote=mytso;
libname remtdata 'mylib.mydata.monthly';
signon;
```

For more information about signing on to remote sessions, see *SAS/CONNECT User's Guide*.

PGM; CLEAR; INCLUDE C:\SAS\DOWNLOAD.SAS; SUBMIT

includes and submits a SAS program to download a data set from a remote session. Assuming that you have already signed on to the remote session, DOWNLOAD.SAS might contain the following statements:

```
proc download data=remtdata.june;
  /* where libname 'remtdata' is */
  /* already defined          */
run;
```

For more information about signing on to remote sessions, see *SAS/CONNECT User's Guide*.

TOOLLOAD BAR SASUSER.PROFILE.MORTOOLS

loads a different toolbar (that you created) that contains another collection of tools.

The correct bibliographic citation for this manual is as follows: SAS Institute Inc., *SAS® Companion for the OS/2® Environment, Version 8*, Cary, NC: SAS Institute Inc., 1999. 448 pp.

SAS® Companion for the OS/2® Environment, Version 8

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ISBN 1-58025-521-3

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SAS Institute Inc., SAS Campus Drive, Cary, North Carolina 27513.

1st printing, October 1999

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