

Section 4

USER INTERFACE

4.1 WINDOWS TERMINOLOGY

This section discusses much of the terminology used in describing a Windows-based environment. An understanding of this terminology will make the remaining portions of this manual easier to follow. Additionally, since all Microsoft Windows-based applications follow the same format, Sections 4.1, 4.2, and 4.6 are applicable to other programs as well.

The Windows environment is comprised of windows, dialog boxes, and various types of bars. The following sub-sections explain these features. See Section 6.4 for instructions on starting ASSET from the Windows environment.

4.1.1 Windows

The working platform within a Windows-based application consists of one or more windows. These windows contain all other features of the program. Within the windows, menu choices are made, dialog boxes appear, text is entered, program features are run, etc. The following figure contains the main window of ASSET. Within this main window, all of ASSET's features can be accessed.

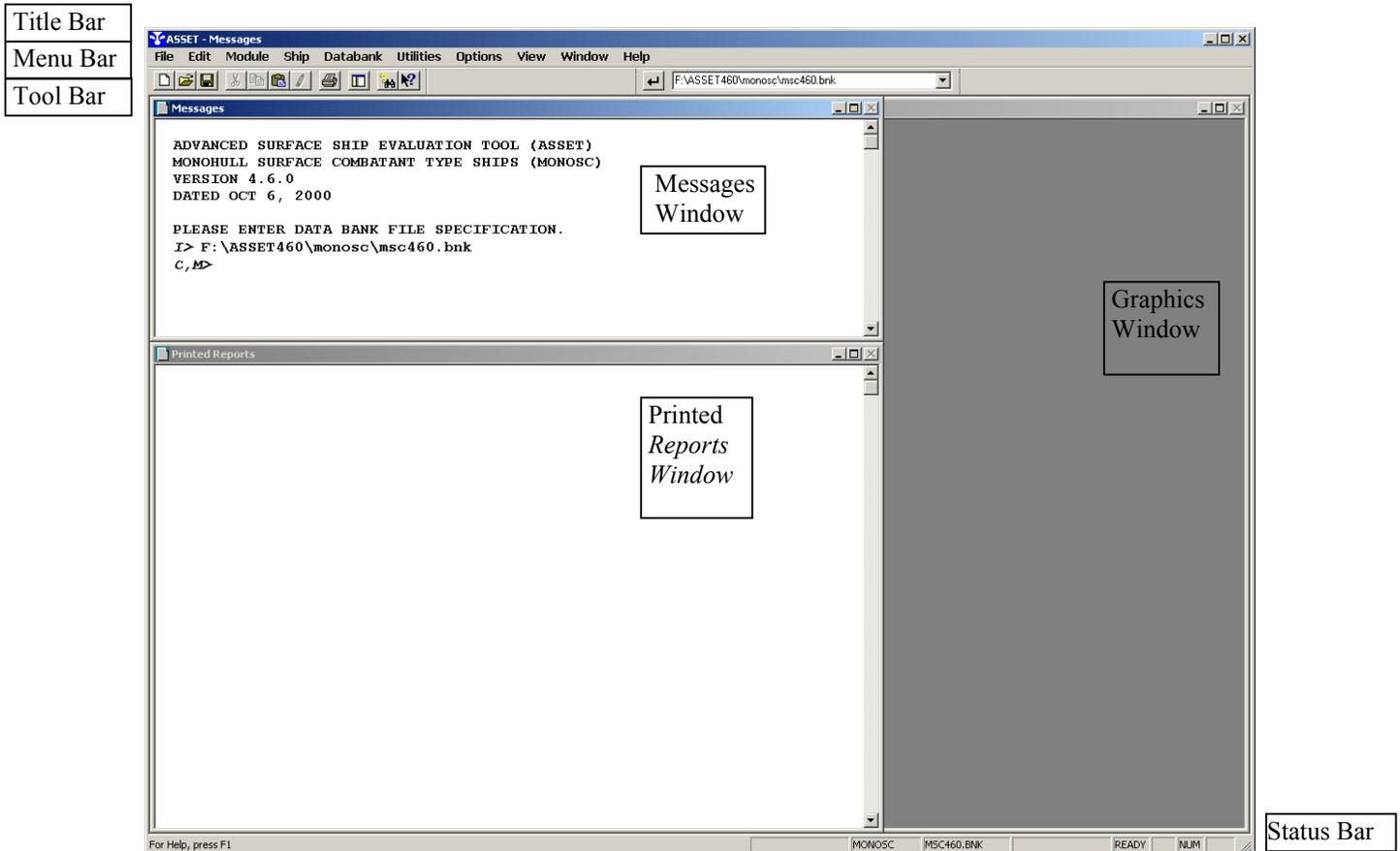


Figure 4.1 ASSET's Main Window

Figure 4.1 is ASSET's main window. Located inside this window are three additional windows arranged in an overlapping, cascade-formation. Each window serves a specific function. Windows can be moved and resized to the preference of the user. For more information on windows, refer to Section 4.2.2.

4.1.2 Bars

Bars are objects located within the main window that contain information and tools that can be readily accessed by the user. ASSET's main window (Figure 4.1) has four bars, three situated at the top of the window, and one at the bottom. The first bar is the title bar. Every window, whether a main window or an auxiliary window, has a title bar. The title bar contains the name of the program or the name of the window, with the highlighted title bars indicating what windows are active. Additionally, a title bar may

include information pertaining to a current file name, etc. In Figure 4.1, since there are four windows, there are four title bars: ASSET, Graphic Reports, Printed Reports, and Messages.

The second type of bar is the menu bar. This bar contains pull or drop-down menu choices. With a pull-down menu bar, clicking on a menu bar label (a word) will pull down a sub-menu of additional choices germane to the menu bar label. ASSET uses pull-down menus. Drop-down menus function like a pull-down menu except that the sub-menus will automatically drop down without the need of clicking; just pointing the mouse arrow at a menu option will activate a sub-menu. In Figure 4.1, the main window has a menu bar- across, it reads: *File, Edit, Module, Ship, Databank, Utilities, Options, View, Window, and Help*. Pointing the mouse arrow and clicking on any one of these words will pull down a sub-menu.

The third type of bar is the tool bar. In Figure 4.1 the tool bar is directly below the menu bar. A tool bar contains buttons that perform various commonly used program functions. Leaving the mouse's indicator over a tool will allow for the tool icon's functional description to appear. Clicking on a tool bar button will perform its programmed function.

The fourth type of bar is the status bar. The status bar is located across the bottom of the window. In this bar is a listing of information about the status of the program. Number and capital lock key status is shown, messages describing the selected menu and tool bar buttons are displayed on the left. The ASSET status bar also shows which program is running (MONOSC, etc.), the name of the current model, and the status of the program (i.e. READY, GRAPH, BUSY). GRAPH indicates that the program is in the graphics mode and is waiting to display the next graphic. READY and BUSY indicate the status of the program to accept new commands.

4.1.3 Dialog Boxes

Whenever ASSET requires additional information to carry out a command chosen from the drop-down menus, a dialog box will appear. Depending on the information needed, a dialog box will contain various types of controls used for input of the data. Figures 4.2a and 4.2b show a sample of ASSET's dialog boxes. Their major components have been labeled.

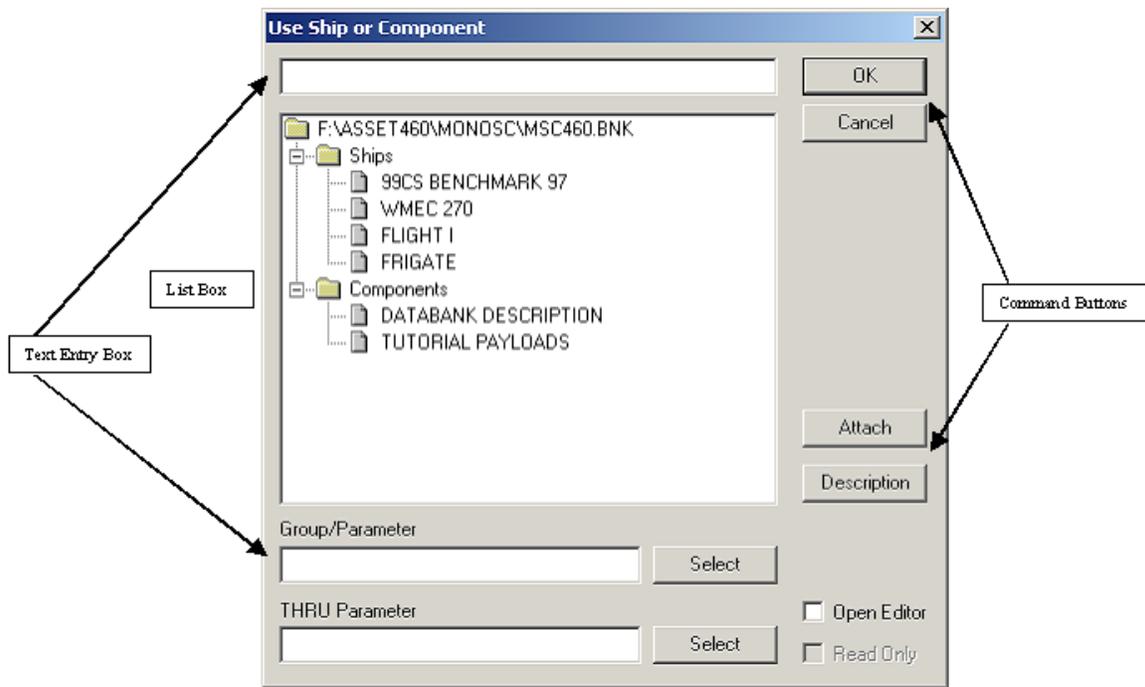


Figure 4.2a Sample Dialog Box

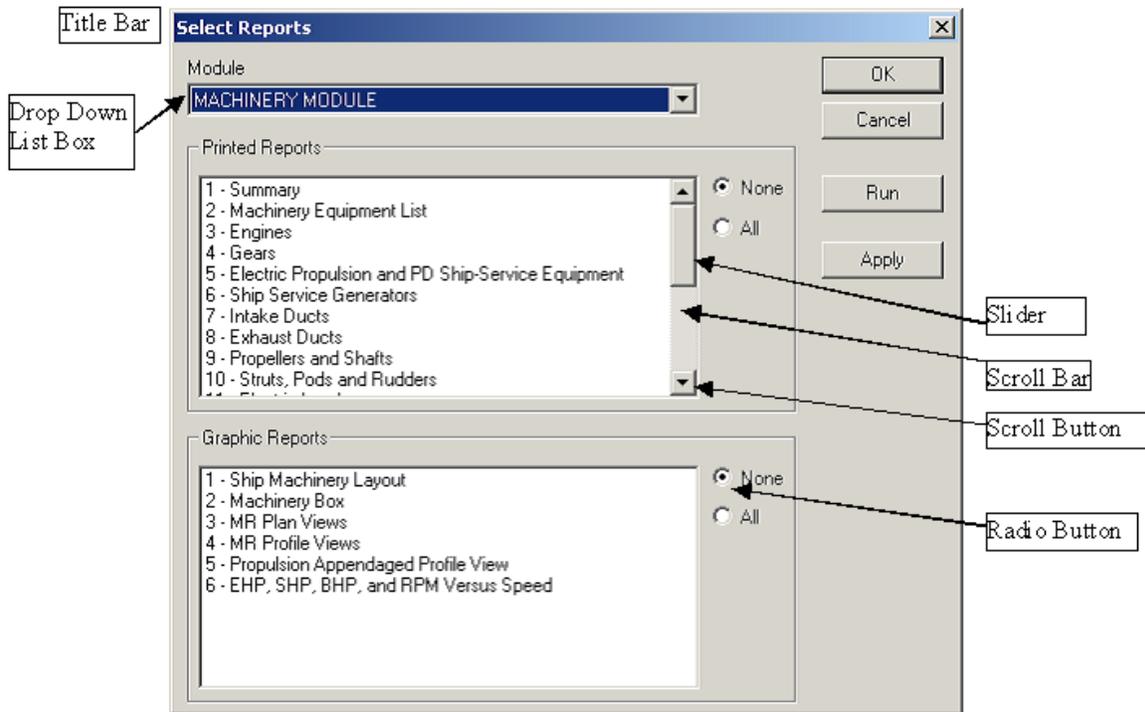


Figure 4.2b Sample Dialog Box

Radio Buttons - Radio buttons are used to present two or more mutually exclusive choices. To activate a radio button, click on the desired choice's circle. A black dot will appear in the circle when it is activated.

List Box - List boxes allow the user to select from a list of options (such as a list of files, etc.). If the list is long enough, a scroll bar will be located to the right of the box, enabling the user to scroll through the choices. (See scroll bar definition.) To select a choice, either double-click the entry or click once to highlight it, then choose the appropriate command button (e.g. OK).

Text Entry Box - Some options require the user to type information. If the box is empty, click inside the box to obtain a cursor, then begin typing. If the box already contains text, clicking inside the box will highlight the text. Typing text will replace the pre-existing

text. To delete the text, press the backspace button on the keyboard. To accept the pre-existing text, simply click on the appropriate command button.

Check Box - Check Boxes are used to enable and disable an option. The option is enabled when an X appears in the box and disabled when the box is empty. Clicking on the box will enable/disable the option.

Drop Down List Box - These boxes present a list of choices when the user clicks on the arrow to the right of the box. After clicking the arrow, a list box appears and the user can select an option in the same fashion as a list box. See Figure 4.9 for an additional example.

Title Bar - Like windows, dialog boxes are labeled with a title bar. The title bar usually lists the menu choice from which the dialog box was activated.

Command Button - Command buttons cause a specific action to occur. The action is labeled on the button. Some command buttons, when pressed, will bring the user to another dialog box.

Scroll Bar/Slider/Arrows - This structure appears when the information to be contained in a list box consumes more space than the list box can display. Clicking the scroll arrows will move the list up or down, showing additional options not originally displayed. The scroll bar indicates where the user is in relation to the entire list. By clicking on the scroll box and keeping the left mouse button depressed, the user can dynamically scroll through the list by sliding the scroll box up or down. By clicking on the scroll bar (instead of clicking on the arrows or scroll box), the user can automatically scroll the list one incremental step, showing the next block of options in sequence.

Numeric Entry Boxes - These boxes are used to enter numeric values. The user can either type the number after clicking in the box, or the user can scroll through the values in numeric order by clicking the up or down arrow buttons.

OK/ Cancel Buttons - The OK button is used to carry out a specified action. The Cancel button closes the dialog box without performing any options that might have been chosen by the user.

4.2 USING WINDOWS

This sections deals with techniques that will enable the user to work with Windows applications (specifically ASSET) as efficiently as possible. For a full description of the Windows environment and its characteristics, refer to an MS-Windows User Guide.

4.2.1 Help Files

Like any Windows application, ASSET has a menu option labeled "Help." Within the Help menu, the user can find on-line documentation pertaining to the User Interface, ASSET Parameter Definitions, ASSET Commands and User Manuals on each ASSET module. Specific help topics can be accessed using the standard Windows Contents, Index and Find dialogs. Pressing the  button and then highlighting a command from the menu bar will provide help on the topic.

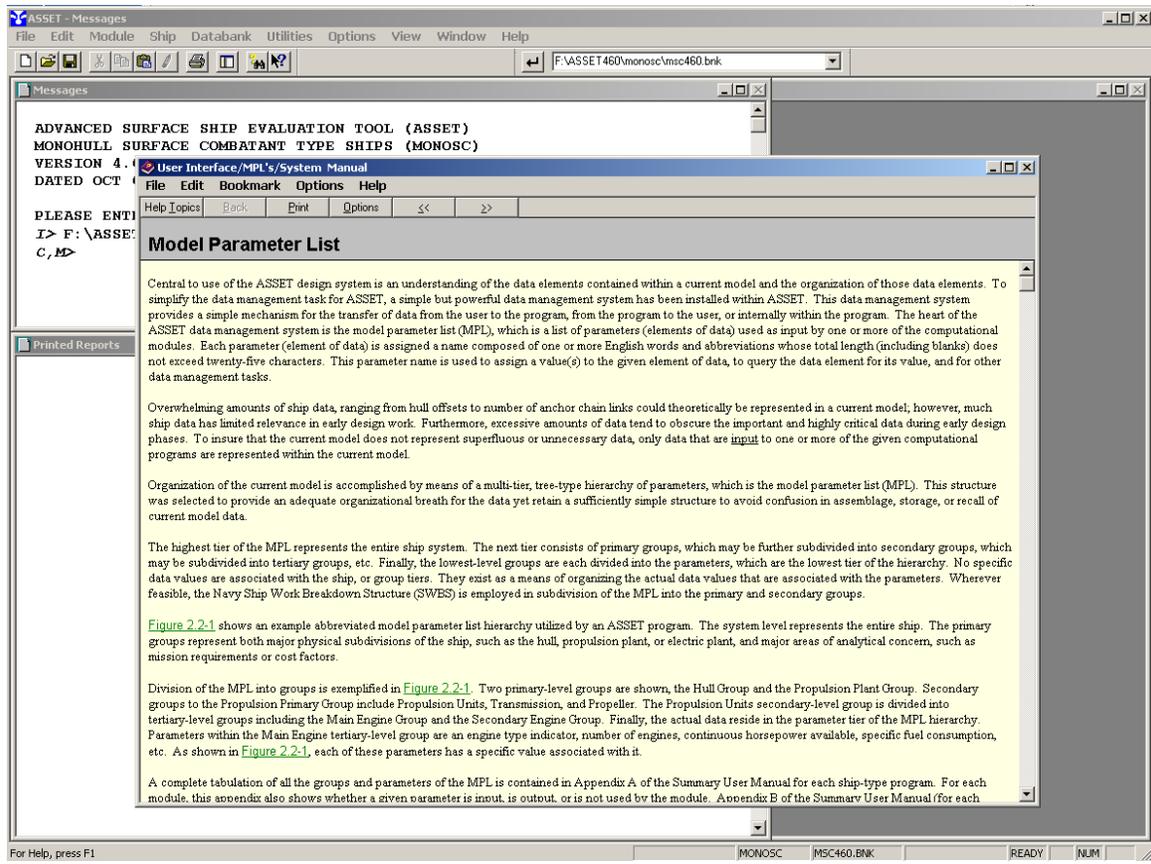


Figure 4.3 Running ASSET with a Help File

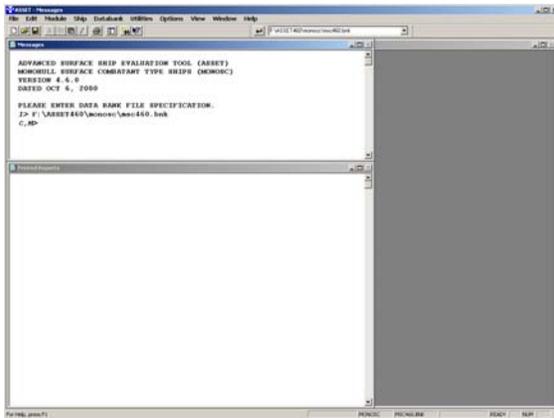
4.2.2 Manipulating Windows

ASSET has three output windows: Messages, *Printed Reports*, and *Graphic Reports* (see section 4.4 for a description of these windows). Depending on the type of data to be output, data will be sent to these windows during an ASSET session. When ASSET is first started, these three windows are arranged in an overlapping cascade-fashion. The user can change this configuration. Each window can be moved and/or resized.

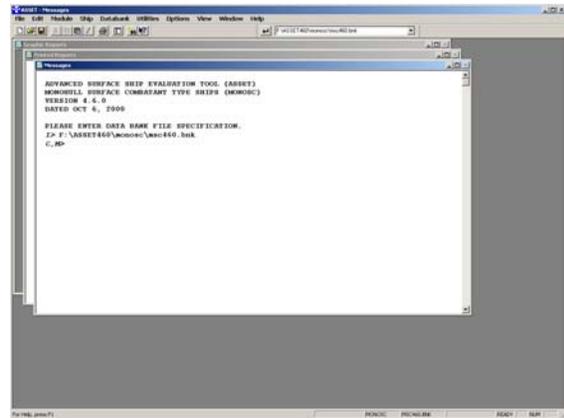
To move a window, click on the window's title bar and keep the left mouse button depressed. The window can now be moved around the screen. To resize a window, move the mouse arrow to the edge of the window. The mouse arrow will turn into a double arrow, showing the directions in which the window's edge can be moved. To

resize the window, when the double arrow is activated, click and hold down the left mouse button. Move the window's edge to the desired location, and then release the mouse button. If the mouse arrow is positioned in the corner of a window, a double arrow will appear indicating that the both the horizontal and vertical edges can be moved simultaneously. This method is faster than resizing a window in the horizontal and then in the vertical.

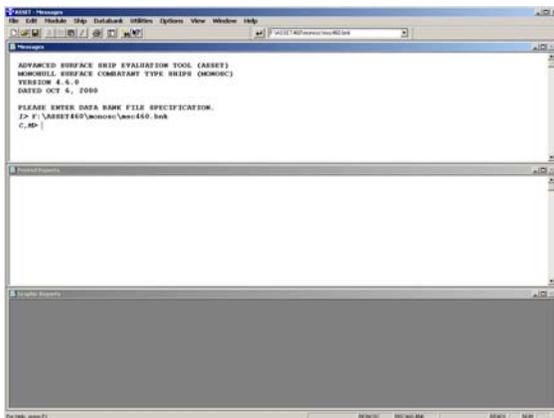
In addition to moving and resizing windows, ASSET will allow the user to automatically arrange, cascade or tile the three output windows. When ASSET is first run, the output windows are cascaded. Each window can be brought to the front by clicking the mouse in the desired window. From “Window “ Command in the Menu Bar an additional option is available to tile the windows. This option takes the three output windows and arranges them so they all have equal space within the main window. Figure 4.4 shows all four options. With any arrangement, the windows can be moved and resized by the user. To retain a customized window arrangement for following ASSET sessions, select *Save Window Positions* from the *Options* menu located in the menu bar.



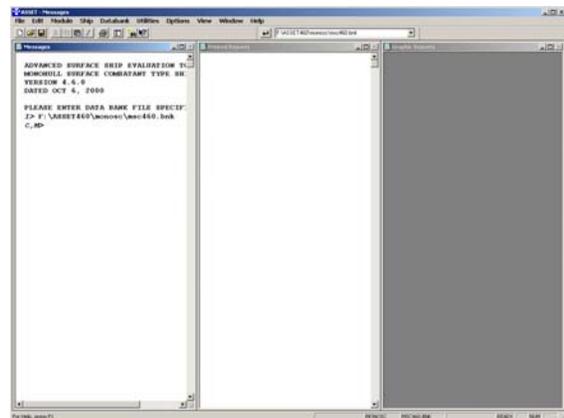
Automatic Arrangement



Cascade (default)



Horizontal Tiling



Vertical Tiling

Figure 4.4 Window Arrangement Options

4.2.3 Application Switching & Copying

During an ASSET session, Windows will allow the user to run additional applications, such as a word processor, spreadsheet, etc. This option allows the user to use ASSET output in an application without exiting from ASSET. All currently executing applications are visible in the Task Bar (Fig 4.5), usually located at the bottom of the screen. Selecting one of the applications will switch the context to that program.



Figure 4.5 Task Bar

4.2.4 Desktop Publishing

Windows features a network of applications that aid in the transfer of screen-displayed-information. For example, if an ASSET user wants to include an ASSET-generated graphic in a word processing document, the user can copy the ASSET graphic to the clipboard, edit it in a drawing program, then paste it into the word processing document. This capability makes the presentation of ASSET output particularly flexible.

Two options exist for transferring information from ASSET to other applications. The user can either highlight the text or graphics with the mouse and COPY (located in the EDIT menu of any Windows Application) the block to the Windows Clipboard, or the user can depress the PRINT SCREEN key located on the keyboard. COPYING highlighted text to the clipboard can be used in conjunction with the *Messages* and *Printed Reports* output windows. Here, highlighting text and issuing the COPY menu-command (EDIT, COPY or CNTL C) will send the text to the Windows Clipboard. Upon entering any Windows application that supports edit commands, the text can be pasted (click the Clipboard/Paste icon) to the application data.

If the user wants to send a graphic from the *Graphic Reports* window to the clipboard, the same methods as for *Messages* and *Printed Reports* windows can be used. From the clipboard, the user can PASTE (located in the EDIT menu of Any Windows application) the clipboard contents to a drawing program for image editing or PASTE the image directly into the target program (Word, PowerPoint, etc.).

Refer to an MS-Windows Users Manual for additional information on Windows' desktop publishing features. Another good source of information is the Windows Help included with Windows 95 or Windows NT.

4.3 ASSET'S MAIN WINDOW

ASSET's main window is the working platform for the executive program. Within the main window, the following items are present: title bar, menu bar, tool bar, three output windows, and a status bar. From this main window, any portion of ASSET's capabilities can be accessed. Figure 4.8 shows ASSET's main window. A discussion of its components follows.

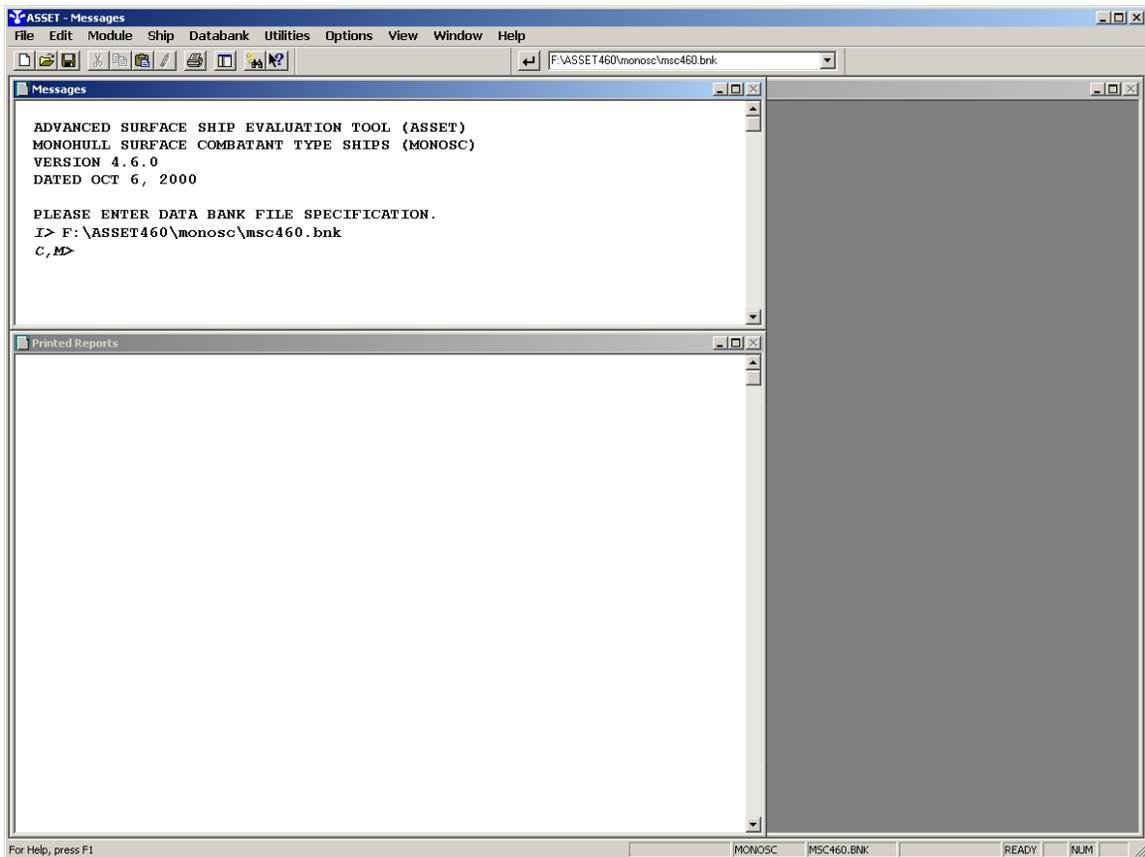


Figure 4.8 ASSET's Main Window

4.3.1 Title Bar

The uppermost portion of ASSET's main window is the title bar. The main window is labeled with the word *ASSET* and the name of the active output window. The title bar is highlighted because the main window is active (the window is ready to accept user input).

4.3.2 Menu Bar

Just below the title bar is the menu bar. Under each of the menu headings is a sub-menu, each filled with commands used to send commands to ASSET. Clicking on a menu heading with the left mouse button will drop down the associated sub-menu. See Section 4.5, *Tour of the Menus*, for additional information.

4.3.3 Tool Bar

Below the menu bar is the tool bar. The tool bar contains buttons programmed to perform important and commonly used ASSET commands and functions. Following is a description of the tool bar's features.



Reinitialize Reinitialize the Current Model, Log File or Settings

Menu Equivalent: *File*⇒*New*

Command String Equivalent: REINITIALIZE, {ALL, CURRENT MODEL, LOG FILE, SETTINGS}



Use Use a Ship or Component

Menu equivalent: *File*⇒*Open* or *Ship*⇒*Use*

Command String Equivalent: USE, *ship name* or USE, *component name*



Modify Modify a Ship or Component in the Databank

Menu Equivalent: *File*⇒*Save* or *Ship*⇒*Modify*

Command String Equivalent: *MODIFY, ship name* or *MODIFY, component name*

Note: This button can be used to store a ship to the data bank for the first time or modify an existing ship in the databank.



Cut Cut the selection and put it on the Clipboard

Menu Equivalent: *Edit*⇒*Cut*



Copy Copy the selection and put it on the Clipboard

Menu Equivalent: *Edit*⇒*Copy*



Paste Insert Clipboard contents

Menu Equivalent: *Edit*⇒*Paste*



Erase Erase the selection

Menu Equivalent: *Edit*⇒*Clear*



Print Print the active document

Menu Equivalent: *File*⇒*Print*



About Display program information, version number and copyright

Menu Equivalent: *Help*⇒*About ASSET/Win*



Help Display Help for clicked on button, menu and window

4.3.4 Command Text Box



This is the Command Text Box. It is located in the tool bar, to the right of the command buttons. This box is where the user issues all ASSET commands when entering them in command-string-format (instead of menu-commands). The user clicks the left mouse button in the box to bring up the cursor, then types the command string. To the right of the Command Text Box is an arrow. The Command Text Box is a drop-down list box. Clicking on the arrow will drop down the Command Buffer, which stores previously issued commands. Highlighting a command from the list and pressing the issue command button (to the left of the command text box) will issue that command. Figure 4.9 shows an example of a buffer displayed from the Command Text Box.

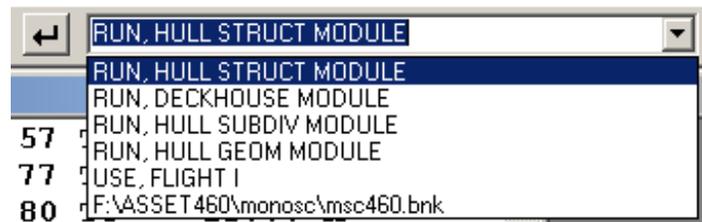


Figure 4.9 Command Text Box with Buffer

All commands issued from the Menu or Tool Bar are recorded in the Command Buffer. The Command Buffer is particularly useful when issuing repetitious commands.

4.3.5 Output Windows

When starting an ASSET session, three output windows will appear: *Messages*, *Printed Reports*, and *Graphic Reports*. Each window displays a different type of ASSET output. The contents of any output window can be cut or copied to the Windows Clipboard, erased during a session, or sent to a printer. The user can scroll through the window by using the scroll bar/box/arrows structure located on the right portion of the window.

The *Messages* window displays messages sent from the executive program to the user. Typical output are program error messages, menu choices after the user has entered query (or prompt) mode, command confirmations, and echoes of the commands entered by the user. Figure 4.10 shows the *Messages* window.

```

ASSET - [Messages]
File Edit Module Ship Databank Utilities Options View Window Help
RUN, HULL STRUCT MODULE
TRANSVERSE METACENTRIC HEIGHT (GMT) IS INADEQUATE.
GMT/B REQ = 0.098
GMT/B AVAIL = 0.090
C, M> RUN, HULL SUBDIV MODULE
** WARNING - HULL SUBDIV MODULE ** (W-INSUFFMRLGTH-TBHPOS)
REQUIRED LENGTH EXCEEDS AVAILABLE LENGTH FOR MACHINERY ROOM NO. 5.
C, M> RUN, DECKHOUSE MODULE
** WARNING - DECKHOUSE MODULE ** (W-TEMPVALUES-DHGMPL)
THE FOLLOWING PARAMETERS WERE PROVIDED TEMPORARY VALUES:
SSCS AREA KEY TBL          SSCS AREA ARRAY
C, M> RUN, HULL STRUCT MODULE
SECTION 14/14 AT 139.14 M COVERING FROM 136.25 TO 142.04 M
SECTION 13/14 AT 130.61 M COVERING FROM 124.97 TO 136.25 M
SECTION 12/14 AT 119.28 M COVERING FROM 113.60 TO 124.97 M
SECTION 11/14 AT 108.31 M COVERING FROM 103.02 TO 113.60 M
SECTION 10/14 AT 97.23 M COVERING FROM 91.44 TO 103.02 M
SECTION 9/14 AT 84.43 M COVERING FROM 77.42 TO 91.44 M
** WARNING - HULL STRUCT MODULE ** (W-HEADROOMSHORT-HEADCK)
THE DISTANCE FROM THE FLANGE OF DECK GIRDER TO THE NEXT DECK
BETWEEN THE FOLLOWING DECKS IS LESS THEN 1.8 M
BETWEEN DECK LOC NO. 4 AND DECK LOC NO. 5
SECTION 8/14 AT 72.24 M COVERING FROM 67.06 TO 77.42 M
** WARNING - HULL STRUCT MODULE ** (W-HEADROOMSHORT-HEADCK)
THE DISTANCE FROM THE FLANGE OF DECK GIRDER TO THE NEXT DECK
BETWEEN THE FOLLOWING DECKS IS LESS THEN 1.8 M
BETWEEN DECK LOC NO. 4 AND DECK LOC NO. 5
SECTION 7/14 AT 60.05 M COVERING FROM 53.04 TO 67.06 M
** WARNING - HULL STRUCT MODULE ** (W-HEADROOMSHORT-HEADCK)
THE DISTANCE FROM THE FLANGE OF DECK GIRDER TO THE NEXT DECK
BETWEEN THE FOLLOWING DECKS IS LESS THEN 1.8 M
BETWEEN DECK LOC NO. 4 AND DECK LOC NO. 5
SECTION 6/14 AT 45.72 M COVERING FROM 38.40 TO 53.04 M
SECTION 5/14 AT 33.99 M COVERING FROM 29.57 TO 38.40 M
SECTION 4/14 AT 26.67 M COVERING FROM 23.77 TO 29.57 M
SECTION 3/14 AT 18.29 M COVERING FROM 12.80 TO 23.77 M
SECTION 2/14 AT 9.14 M COVERING FROM 5.49 TO 12.80 M
SECTION 1/14 AT 2.74 M COVERING FROM -7.94 TO 5.49 M
SECTION 0/14 AT 72.24 M COVERING FROM -7.94 TO 142.04 M
** WARNING - HULL STRUCT MODULE ** (W-HEADROOMSHORT-HEADCK)
THE DISTANCE FROM THE FLANGE OF DECK GIRDER TO THE NEXT DECK
BETWEEN THE FOLLOWING DECKS IS LESS THEN 1.8 M
BETWEEN DECK LOC NO. 4 AND DECK LOC NO. 5
C, M> |
For Help, press F1
MONOSC MSC460.BNK FLIGHT 1 READY NUM

```

Figure 4.10 *Messages* Output Window

The *Printed Reports* window displays textual information generated by ASSET's modules. The information is sent to the window in the form of *Reports*. The user can select which reports are sent to the *Printed Reports* window by issuing the following menu command, *Module*⇒*Select Reports*, then choosing the desired reports from the *Select Output Reports* dialog box (shown in Figure 4.11). Figure 4.12a shows the *Printed Reports* window.

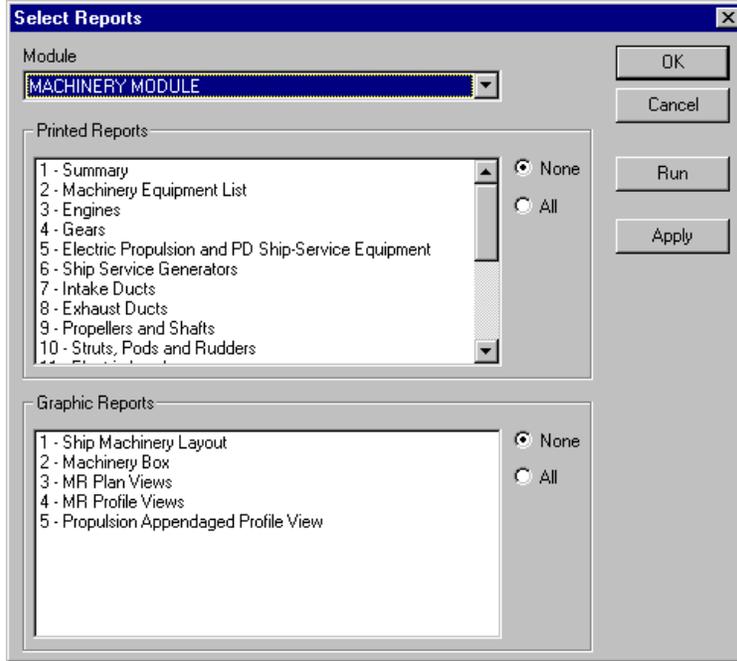


Figure 4.11 Select Output Reports Dialog Box

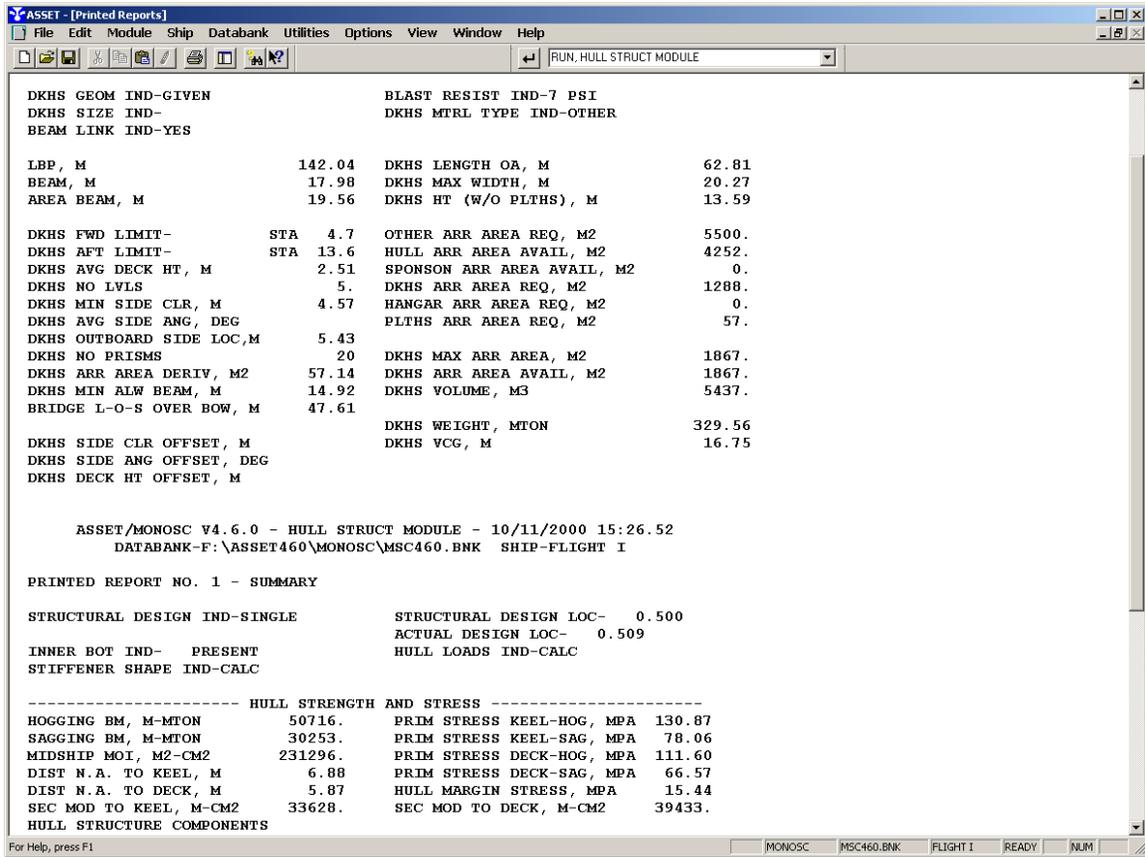


Figure 4.12a Printed Reports Output Window

The *Graphic Reports* window serves the same purpose as the *Printed Reports* window, but displays graphical output. The user can specify reports to be sent to the window using the same means described for the *Printed Reports* window. Note: If the user has requested more than one graphical report, only one graphic is displayed at a time. Clicking the left mouse button will cause the next graphic report to be displayed, overwriting the previous one. Additionally, each report must be viewed before continuing the ASSET session. Figure 4.12b shows the *Graphic Reports* window.

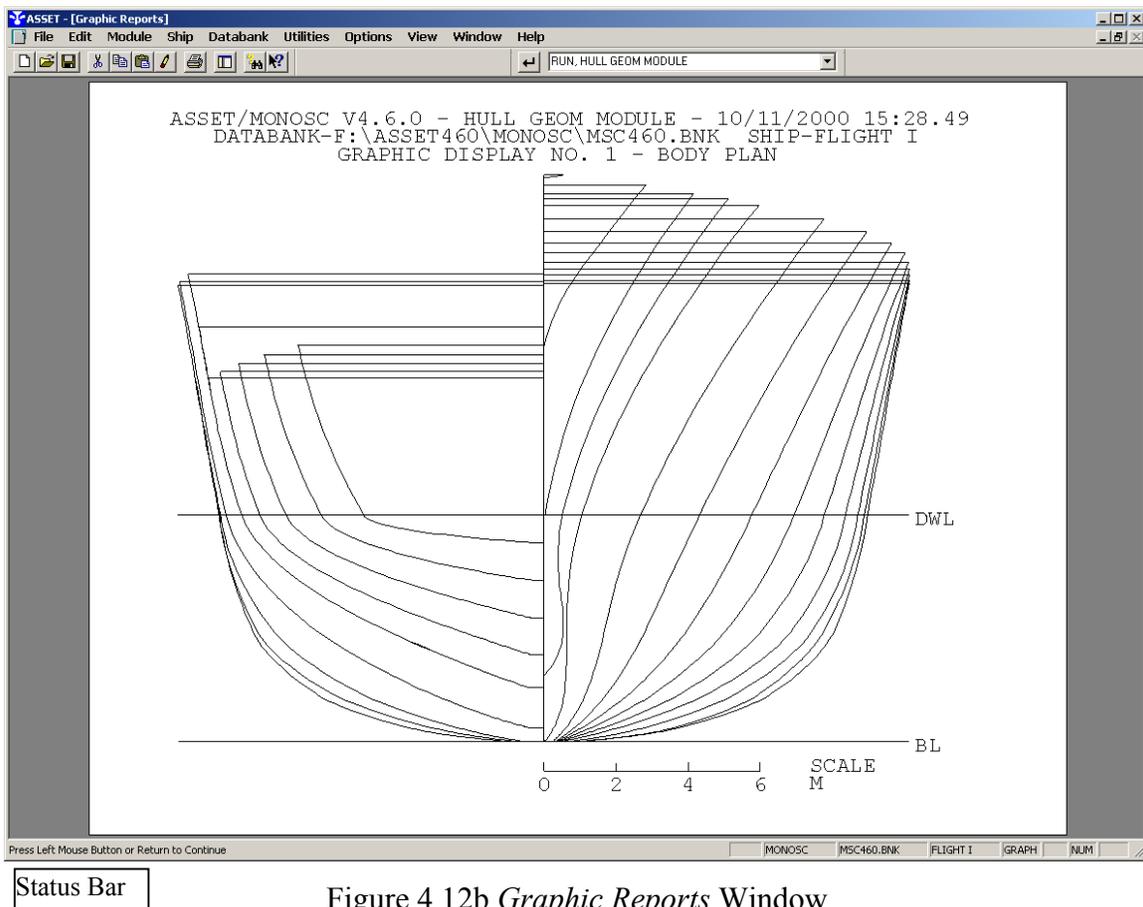


Figure 4.12b *Graphic Reports* Window

4.3.6 Status Bar

The status bar is located at the bottom of ASSET's main window. Figure 4.12 shows an example of typical information displayed in the bar. On the left is ASSET's status

message, telling the user that it is waiting for the user to press a key to continue. This portion of the bar also tells the user when ASSET is busy. Other messages are displayed here as well. For example, when the user clicks on a tool bar button, a description of the button's function is displayed.

To the right of ASSET's status message is the program indicator. This box displays the user's program choice. In Figure 4.12b, the user is running MONOSC.

The next box is the current databank indicator. This box displays the name of the currently attached databank. In Figure 4.12b, the current databank is msc460.bnk.

Next is the current model indicator. This box displays the name of the current model. In figure 4.12b, the current model's name is FLIGHT I.

The next box displays the program mode. The program mode can be READY, BUSY, EDIT or GRAPH. READY means ASSET is ready for a new command. BUSY indicates ASSET is executing a command. EDIT signals ASSET is in the Editor. GRAPH indicates a Graphic Report is displayed and ASSET is waiting to go to the next graphic.

The last boxes display the status of the Caps Lock, Num Lock and Scroll Lock keys. If NUM appears in the status bar, the Number Lock key is activated. If CAP appears in the status window, the Caps Lock key is activated. If SCRL appears in the status window, the Scroll Lock key is activated.

4.4 TOUR OF THE MENUS

This section describes ASSET's menu bar and all the commands contained within the pull-down menu. Each sub-menu is examined in the order in which they appear on the screen, from left to right. Where applicable, the ASSET command string corresponding to the menu-command is given. The user should watch the command text box while

issuing menu-commands since the ASSET-command-string-equivalent appears in the text box after the menu-command has been issued. This practice will help the user understand both forms of command input.

4.4.1 File Menu

The file menu, which is common to all Windows applications, is first on the menu bar. Figure 4.13 shows the contents of the *File* menu. This menu is used to perform file manipulation and associated tasks. In the ASSET context, a "file" is related to a ship or ship component.

Note: In certain instances, the *File* menu does not pertain to ships/ship components. On the initial start-up of ASSET, a file dialog box is displayed to prompt the user to select a data bank. If a data bank is not selected and the CANCEL button is pressed (to close the dialog box), the *File* menu will be related to data bank "files." From this menu, the user can create a new data bank.

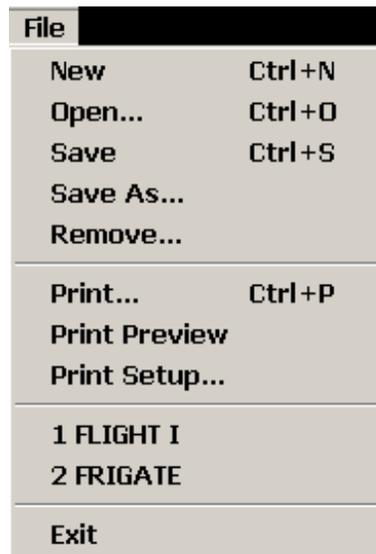


Figure 4.13 *File* Menu

NEW- this command is used to reinitialize the current model, ASSET settings, and/or log file. After clicking on NEW, a dialog box asks the user, via check boxes, to select portions to reinitialize. This command can be used to clear the workspace and start with a new current model. ASSET command: REINITIALIZE

OPEN- this command is used to include a ship or a ship component as part of the current model. A dialog box appears, asking the user to select a ship or ship component from the attached data bank. The data stored in the data bank corresponding to the user's selection will be added to the current model. The user can also use this command to use a single parameter or group of parameters. ASSET command: USE

SAVE/SAVE AS- these commands save the current model or a component to the attached data bank. A dialog box appears, prompting the user to indicate whether the item to be saved is an entire ship or a ship component. If it is a component, the user can pick from the Model Parameter List, indicating what parameter or group of parameters is to be saved. ASSET command: STORE

REMOVE- this command deletes a ship or ship component from the attached data bank. ASSET command: REMOVE

PRINT- this command prints the active output window.

PRINT PREVIEW- this command show how the active window will be printed. Two pages can be displayed at one time. Zoom In, Zoom Out, and Print command buttons are located in the print preview screen.

PRINT SETUP- this command generates a dialog box that contains the available printer options.

4.4.2 Edit Menu

This menu, like the *File* menu, is common to all Windows applications. Figure 4.14 shows the *Edit* menu. This menu is used for desktop publishing purposes and window editing. Additionally, the ASSET editor is accessed through this menu.

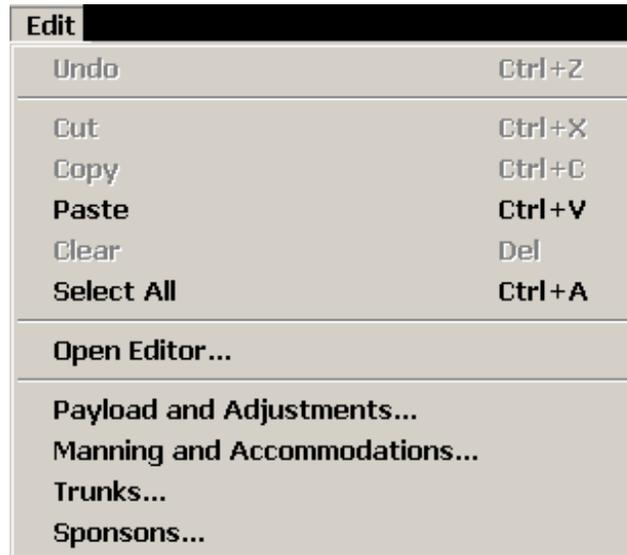


Figure 4.14 *Edit* Menu

UNDO- this command allows the user to undo the previous command.

CUT- this command takes a selected portion of an output window and sends it to the Windows clipboard. From the clipboard, the user can direct the text and/or graphics to other Windows applications.

COPY- this command performs the same function of the CUT command, except the highlighted portion of the window is copied to the clipboard instead of being removed from the output Window and sent to the clipboard.

PASTE- this command allows the user to paste clipboard data into the active window.

CLEAR- this command allows the user to clear the current selection.

SELECT ALL- this command allows the user to select everything in the active window.

OPEN EDITOR- the options allows the user to enter model data via the spreadsheet editor. (See Section 4.5) Section 4.5.1 shows the menu that appears after the user has chosen OPEN EDITOR. The user may enter/edit data for the entire ship, a particular group of parameters, or a single parameter.

PAYLOAD AND ADJUSTMENTS- this command takes the user to the Payload and Adjustments edit window.

MANNING AND ACCOMONDATIONS- this command takes the user to the Manning and Accommodations edit window.

TRUNKS – this command takes the user to the Trunks edit window.

SPONSONS – this command takes the user to the Sponsons edit window.

4.4.3 **Module Menu**

Figure 4.16 shows the *Module* menu. From this menu the user can run any or all I/O, synthesis, and analysis modules. The user can also select which output reports are sent to the output windows.

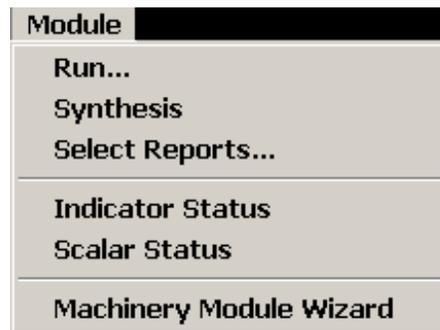


Figure 4.16 *Module* Menu

RUN- selecting this command will call up a dialog box that allows the user to choose from the entire list of modules (Figure 4.17). From this box, the user can run any module, including the synthesis loop. By using the INCLUDE command buttons, the user has the option of excluding and including any synthesis modules from the loop, prior to running synthesis. By highlighting a selection with the mouse, the user selects the desired module. Clicking on OK runs the module. It is possible to toggle the Include box such that a module is “on” with an “γ” in the box and the module is “off” with a blank box. The REPORTS button brings the user to the dialog box where output reports

are selected to be sent to the output windows. This is the same dialog box as the one generated using the SELECT REPORTS menu-command in the *File* menu. See section 4.5.1.

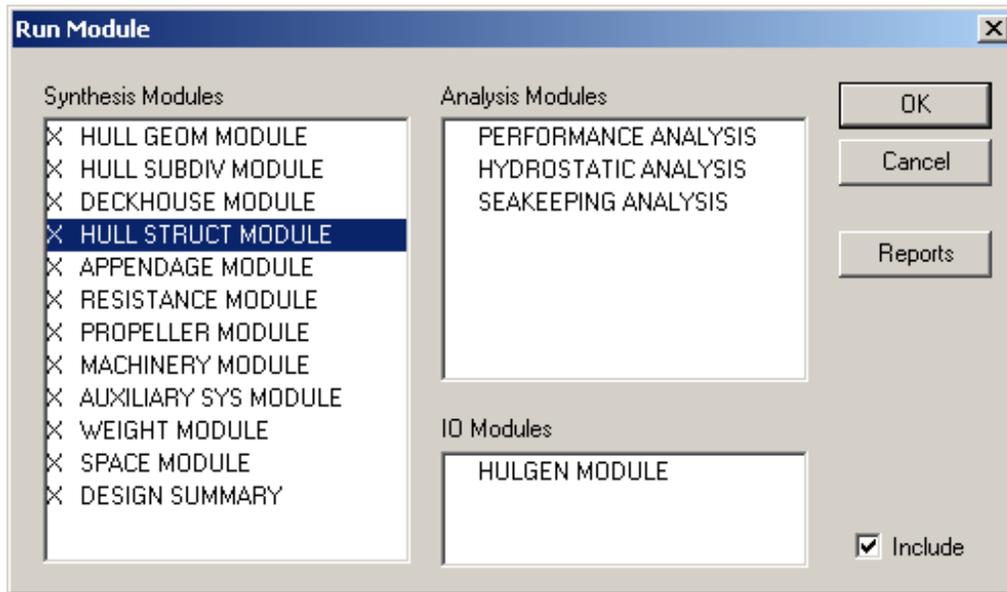


Figure 4.17 *Run Module* Dialog Box

SYNTHESIS- this command runs ASSET's synthesis loop. Any modules that have been excluded from the loop are not run.

SELECT REPORTS- this command is used in conjunction with running one or more modules. By selecting reports, the user tells ASSET what printed and graphic reports to generate when running the selected modules. After running the modules, the selected reports are located in their corresponding output windows. ASSET commands: SET, ONLINE (printed reports) and SET, GRAPHICS (graphic reports)

INDICATOR STATUS- this command is used to show the values of all indicators used by the selected module.

SCALAR STATUS- this command is used to show which scalar parameters used in the selected module or 0.0 or “no data”.

MACHINERY MODULE WIZARD- this is an interactive module that is used to create machinery components.

4.4.4 Ship Menu

The *Ship* menu allows the user to manipulate model data. Figure 4.18 shows the *Ship* menu.



Figure 4.18 *Ship* Menu

USE- this command brings up a dialog box that enables the user to load a ship or component into the current model. First selecting a ship, then pressing the GROUP or PARAMETER command buttons may use a particular parameter or group. ASSET command: USE

MODIFY- this command allows the user, via a dialog box, to modify a ship or component in the data bank with current model data. ASSET command: MODIFY

STORE- this command allows the user, via a dialog box, to store the current model or a portion of the current model as a ship or component, respectively. A particular parameter or group may be stored by first selecting a ship, then pressing the GROUP or PARAMETER command buttons. ASSET command: STORE

REMOVE- this command is used to delete a ship or component from the data bank. ASSET command: REMOVE

4.4.5 Databank Menu

The *Databank* menu is shown in Figure 4.19. Following is a description of each menu-command.



Figure 4.19 *Databank* Menu

ATTACH- this command attaches a data bank to the user's current session of ASSET. The previously attached data bank is closed, but the current model is unchanged.

DESCRIPTION- this command allows the user to view/edit the Databank Description.

UPDATE- this command will update the current databank to the current version of ASSET.

GENERATE- this command will generate a new databank.

STATISTICS- this command displays the contents of the attached data bank and shows the amount of utilized space in the data bank.

READ- this command allows the user to load a command file. A command file is a file that contains ASSET commands. The commands are executed as the file is read.

WRITE- this command allows the user to write a command file, which contains the entire ASSET commands required to create a ship or component.

4.4.6 Utilities Menu

The *Utilities* menu is shown in Figure 4.20. Following is a description of each menu-command.



Figure 4.20 *Utilities* Menu

EXPORT- this command runs the Export Utility. This utility allows ASSET to export its data to various formats for use by external programs. See Section 3.5.3 for a description of Export capabilities.

CONFIGURE- this command allows the user to configure add-on utilities. These utilities can be executables or specially designed modules that can interface directly with ASSET, or a set of commands that will start another Windows based program from within ASSET. Figure 4.21 shows the Configure Utilities Dialog.

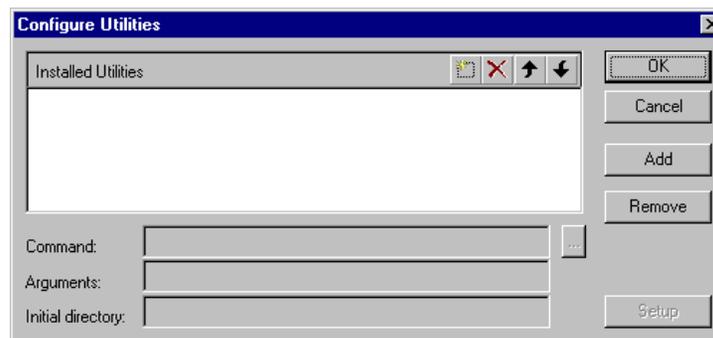


Figure 4.21 Configure Utilities Dialog

4.4.7 Options Menu

The *Options* menu contains many of ASSET's program options that the user can set to his preference. Figure 4.22 shows the *Options* menu.

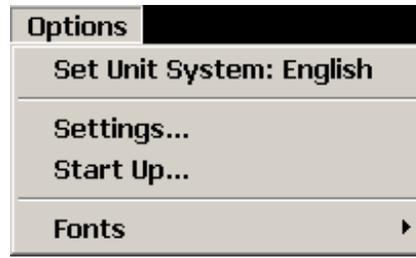


Figure 4.22 *Options* Menu

SET UNIT SYSTEM: ENGLISH or METRIC- this menu choice will change the unit system to the one shown in the menu.

SETTINGS- this menu choice brings up the *Settings* dialog box as shown in Figure 4.23. The user can specify the various directories, files and Fast Ship information that ASSET requires to execute.

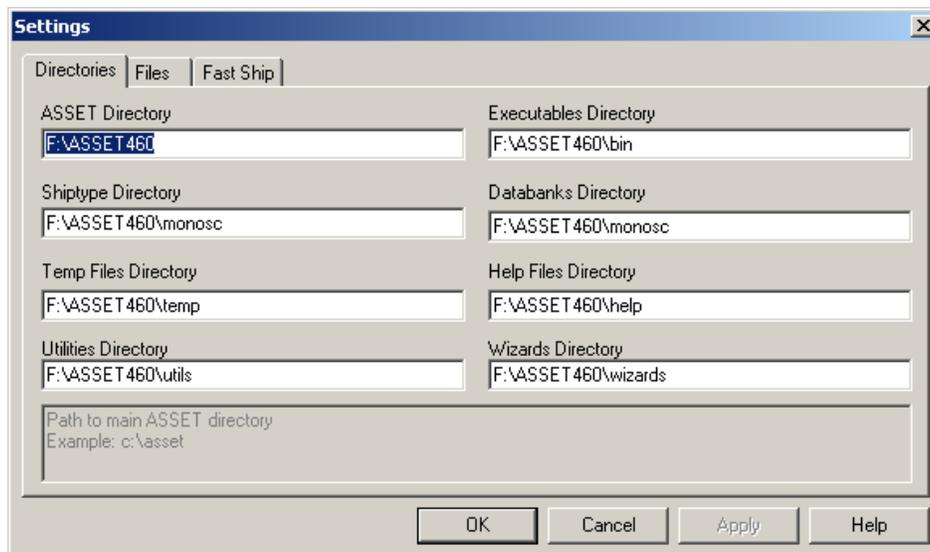


Figure 4.23 *Settings* Dialog Box

START UP- this options brings up the dialog box shown in Figure 4.24. In this box, the user can include commands that the user wishes to execute at the beginning of every ASSET session.

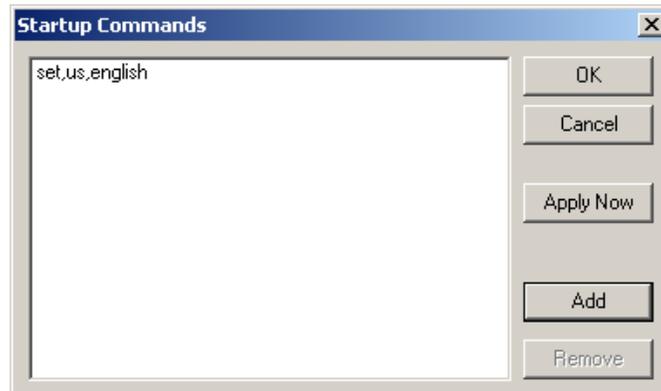


Figure 4.24 *Start Up Commands* Dialog Box

FONTS- Under this menu item are items that allow the user to set and save the fonts used for the active window.

4.4.8 **View Menu**

The *View* menu, shown in Figure 4.25, enables the user to hide the tool bar, command line, status bar, and the classification marking. Clicking on the command will toggle the bars on and off.

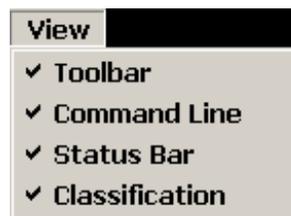


Figure 4.25 *View* Menu

4.4.9 Window Menu

The *Window* menu, shown in Figure 4.26, allows the user to arrange the output windows in the default cascaded or tiled arrangement. The *Window* menu also allows the user to activate and bring any output window to the forefront (the same commands as found in the *View* menu).



Figure 4.26 *Window* Menu

4.4.10 Help Menu

The *Help* menu, shown in figure 4.27, is the user's avenue by which to obtain on-line help and documentation. Information can be obtained on specific parameters and commands. ASSET's user's manuals are also on-line. An index has been included for easy navigation. Located on the tool bar is a command button which, when selected, will open up the help on a chosen command.



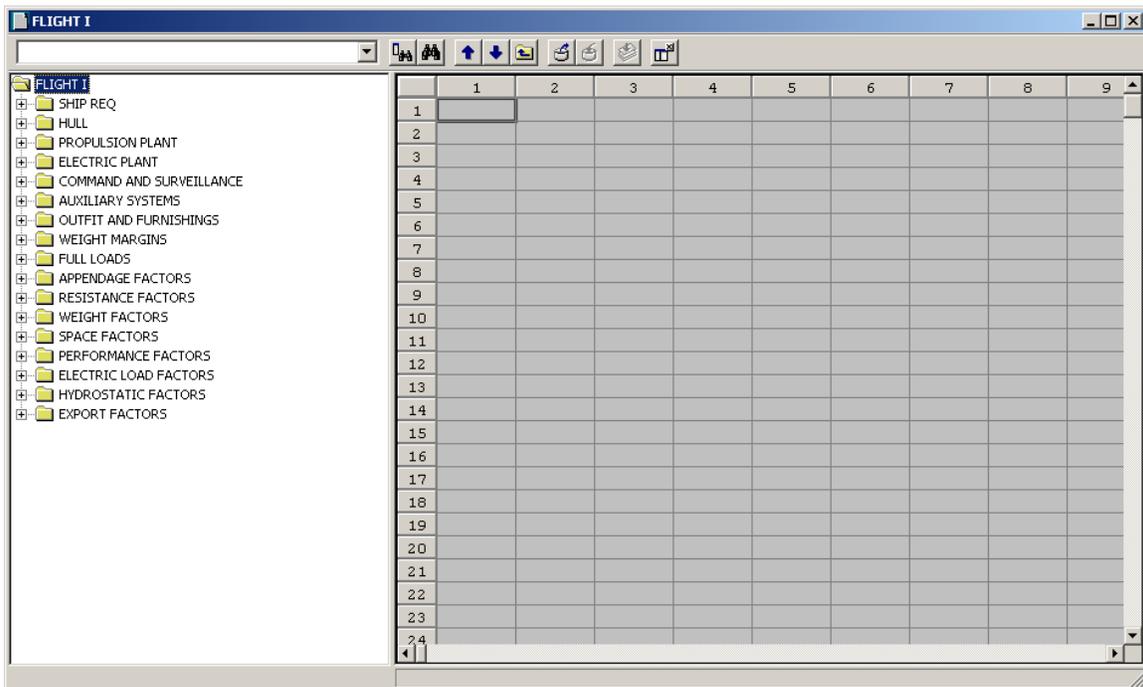
Figure 4.27 *Help* Menu

4.5 EDITOR

This section discusses how to input and manage current model data through the ASSET Editor. Included in the discussion are descriptions of the editing functions available as well as some examples of how to use the Editor effectively in the ASSET ship design environment.

4.5.1 Editor Overview

The Editor is the primary method for entering and editing data in the current model. As shown below, there are three sections within the ASSET Editor window, the Command Area along the top, the Parameter Tree-View on the left, and the spreadsheet style Data Area on the right.



The Command Area has a text entry field for parameter name searches, and several tools for implementing Editor commands.

The Name Area section displays the Model Parameter List (MPL) in a tree structure similar to the directory tree shown in the Windows Explorer.

The Data Area spreadsheet is very similar to an Excel® spreadsheet, but with functionality designed specifically to edit the ASSET Current Model data.

4.5.2 Starting the *Editor*

There are several ways to start the Editor and load data from the current model. The easiest is to use the Editor start button in the Main window tool bar that looks like the picture below.



It is also possible to start the Editor using the Edit, Open Editor menu option on the Main window. Finally, the Editor can still be started using the old EDIT command, as described in Section 3.5, within the Main window tool bar command field.

When started, the Editor will respond by loading the current model into its working storage. To avoid inadvertent destruction of the current model, changes made during an editing session will not be written to the current model until the user issues a save command. This feature makes it possible for the user to exit an editing session and leave the current model unmodified. The user may also reinitialize the Editor with unmodified current model as long as a save operation has not been performed since the start of the editor session.

The name of the ship loaded into the Editor will be indicated in the title area at the top of the Editor window. If more than one Editor window has been opened on the same ship, a 'copy' number will be appended to the ship name, such as 'Frigate: 2'.

When an Editor window is the active window (title bar highlighted) the program is in the Editor-Mode of operation.

No matter which way the Editor is started, when an Editor window is open, the Editor button in the Main window tool bar looks as if it is depressed as shown below.



Please note that if the locations of the three primary working windows (Messages, Printed Reports, and Graphic Reports) are set using the Window, Arrange Windows option, it is very easy to have an Editor window open and not actually be able to see it. The fastest way to determine if an Editor window is already open is to check the status of the Editor start button on the Main window tool bar. If the button is depressed as shown above, then an Editor window is already open.



The standard Window menu option will also show any activated Editor windows by their ship name within the listing of the existing windows.

4.5.3 Editor-Mode Program Operation

When an Editor window is open and it is the active window, ASSET is running in the Editor-Mode. In this mode, the menu options at the top of the Main ASSET window are slightly different. Many of the ASSET normal-mode menu options still exist and perform the same functions. Some existing menu options now perform different Editor

related functions. Finally, there are a few new ones that activate special functions only available in the Editor-Mode.

Editor-Mode Menus



Normal-Mode Menus



The Help, Window, View, and Options menus are unchanged between the Normal-Mode and the Editor-Mode. The new Edit-Mode Run menu contains some of the functions from the Normal-Mode Module and Utilities menus.

Under the Edit menu, the Cut, Copy, Paste and Clear options now operate on data cells of the Data Area when in the Editor-Mode. A new option is added for the Editor-Mode, Import From, whose function is described in the Data Area help

Under the File menu, the Close option works only on the active Editor window when in the Editor-Mode. Three additional menu options exist under File when in the Editor-Mode: Reload from Current Model, Store to Current Model and Properties. The functions of the Reload and Store options are explained in the Data Area help section. The Properties option will display the data properties of a parameter that is selected in the Name Area.

Finally there is a new main menu item called Format. This menu provides access to display options controls for the spreadsheet Data Area. With these options provide the user control similar to those available in Excel®. The user can set the width of columns,

the height of rows, hide/unhide columns/rows, and select from two cell display (view) options.

It is possible to enter and execute commands while an editor window is open. When a command is executed and if the editor model has been changed, a prompt dialog will be displayed asking to save the editor model to the current model. The editor does not detect changes in the current model. Care should be taken when executing commands while an editor window is open. Use the Reload button as described in the Command Area help section to reload the editor from the current model.

4.5.4 Command Area

The Command Area runs along the top of the Editor window and contains the elements shown below.



The field on the far left and the JumpTo button to the immediate right of it are used to 'jump' down into the tree structure of the Name Area. In order to 'jump to' a specific parameter or group, entered its name into the field and click the JumpTo button. The Editor will then expand the name tree to show that parameter as the selected name. When this is done, the value(s) of the selected parameter or group will be displayed in the Data Area where it (they) may be edited.

The second button from the left is the Find button and is used for searching the data values displayed in the Data Area for a number or string. These buttons will pop-up a standard Find dialog box.

The up and down arrow buttons to the right of the Find button are the Previous and Next buttons. These will select the previous or next respectively group or parameter for editing. Selecting the Previous button while editing the first parameter in a group causes the group to be selecting for editing. Selecting the Next button while editing the last parameter in a group has no effect.

The Up button causes the parent group of the current group or parameter to be selected for editing. This moves the selection focus up one level in the tree and displays the data associated with that name in the Data Area.

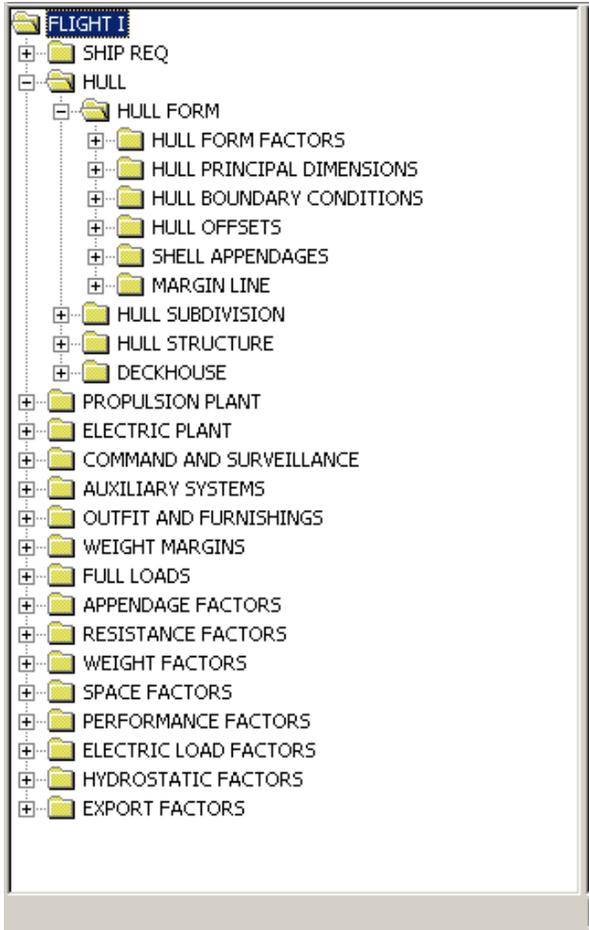
The next button group contains the Restore and the Store buttons. The Restore button is used to reload the unmodified current model data into the Editor. The user will be prompted to confirm this operation which will overwrite any changes that had been made to the Editor's copy of the data. The Store button is used to save the modifications that have been made in the Editor up to that point to the current model without closing the Editor window. . The Restore and Store functions are also available under the File menu when in the Editor-Mode.

The Run button, second from the right, is only active when the Editor is operating in the Prompt Mode. When this button is clicked, it will first ask if the changes to the data should be saved and then will rerun the ASSET design/analysis module that had triggered the Editor to start up in the Prompt Mode.

The button on the far right hand side is the Close button. When used, it will first prompt the user to save their work and then will stop the Editor and close the window.

4.5.5 Name Area

The Name Area section is left hand windowpane of the Editor window. Within this pane, the Model Parameter List (MPL) is displayed using the Windows standard tree view.



The primary function of this area is to select the parameter (or group of parameters) to be displayed in the Data Area where it (they) can be viewed and edited. Pointing at the parameter (or group) name with the mouse and single clicking with the left mouse button selects the parameter (group). The value(s) of the selected parameter (parameters in the group) will then be shown in the spreadsheet view on the right.

The listing within the Name Area shows a hierarchical view of the loaded ship and its Model Parameter List. When the Editor is started, the ship name is at the top of the list and each of the first level groups is displayed below it in a 'tree view'.

The plus (+) symbols to the left of the group names are used to expand the group to display its sub-groups and/or parameters. Conversely, the minus (-) symbols to the left of the group names are used to collapse the sub-groups and/or parameters and display only the group name. The group 'tree' can also be expanded/compressed by double clicking

the left mouse button while pointing to the group name. Parameter names will not have the (+) or (-) symbols because they are on the lowest level of the 'tree' structure. If the Editor window is sized too small to display the entire tree, a scroll bar will appear along the right side of the Name Area windowpane.

Help on any group or parameter can be obtained by first selecting (single left mouse click) the name and then by pressing the F1 key. This will open the help topic for the highlighted group or parameter name.

The separator line between the Name Area and the Data Area can be moved to adjust the relative width of each windowpane within the Editor window.

4.5.6 Data Area

This section of the Editor window is where the actual editing of the parameter data is done on the parameters that are selected in the Name Area to the left. The Data Area is configured like a spreadsheet with cells that contain data, text, connective, or units.

	1	2	3
1	HULL FORM		
2	HULL FORM FACTORS		
3	HULL OFFSETS IND	GENERATE	
4	HULL DIM IND	NONE	
5	MIN BEAM	9.144	m
6	MAX BEAM	33.528	m
7	AREA BEAM	19.559	m
8	GMT	1.62162	m
9	GMT/B REQ	0.098	
10	FREE SURF COR	0.067056	m
11	FAST SHIP PARENT IND		
12	FS DEF FILE NAME TBL	(1, 1)	
13	FAST SHIP ADJUST ARRAY	(3, 1)	
14	SERV LIFE KG ALW	0.1524	m
15	STABILITY IND	2/3	
16	BULWARK HT	0	m
17	HULL FLARE ANGLE	10	deg
18	HULL PRINCIPAL DIMENSIONS		
19	LBP	142.037	m
20	BEAM	17.9832	m
21	DRAFT	6.30631	m
22	DEPTH STA 0	15.868	m
23	DEPTH STA 3	14.1234	m
24	DEPTH STA 10	12.7498	m

The data cells contain the actual parameter values and are the only cells that can be edited by the user using the methods described below. The remaining cell types have a gray background to indicate that the user can not modify them. The text cells contain the parameter names that match the data cells or the connective cells to their immediate right in the spreadsheet. The connective cells are used to switch the display to the next lower level within the data structure by displaying the full parameter array or table. The connective cells have a raised 3-D appearance to them (see below) and contain the dimensions of the array or table that they are associated with. The units' cells display the units (feet/meters etc.) in the currently selected unit system of the scalar parameter value to the left of it. Only scalar and array type parameters will display their units in the units column.

If there are more rows and/or columns within the selected parameter or group of parameters than can be displayed within the available size of the Data Area windowpane, appropriate scroll bars will appear. These scroll bars can be used to scroll (up/down or

left/right) within the spreadsheet thus allowing access to all of the selected-parameter data cells.

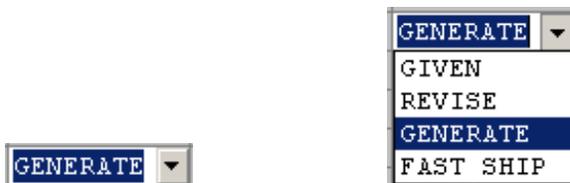
The separator line between the Name Area and the Data Area can be moved to adjust the relative width of each windowpane within the Editor window.

Editing Data

To edit the value in a given cell, the cell is first selected by pointing at it with the mouse and clicking the left mouse button once. This puts the user into the cell-editing mode and the desired value may be typed into the cell using the keyboard. For scalar and array parameters, the values must be numbers, for indicator and table parameters; the values are considered characters and must be one of the valid options for that parameter. See the Displaying Parameter Options section below to determine what option values are valid. After entering the desired value, the Enter key is pressed to end the cell-editing mode. If the value entered is invalid, the Editor will blank out the cell shortly after the Enter key is pressed.

Displaying Parameter Options

The indicator and table parameters within ASSET have a fixed set of option values that can be used for them. When a indicator or table parameter is displayed in the spreadsheet, double clicking with the left mouse button on the data cell will display a pull-down menu button (see below left) on the right side of the cell. Clicking on this pull-down menu button will open a list (see below right) of the valid options. An option can be selected from this list by clicking on it with the left mouse button, followed by pressing the Enter key.



Copying, Cutting, and Pasting

The copying, cutting, and pasting functions within the Data Area are used much they are used in Excel. Cells are selected by pointing at them and single clicking the left mouse button. Once selected, the cell or cells can be operated on using the pop-up menu opened by pointing at a selected cell and clicking the right mouse button once. The pop-up menu list contains the standard Windows Copy, Cut, and Paste. These functions operate just like they do in other Windows programs. The Copy function will copy the selected values to the Windows Clipboard but does not change the cell value(s). The Cut function copies the values to the Clipboard and then clears the cell(s) as described in the Clearing a Cell section. The Paste function will copy the values stored in the Clipboard into the selected cell or cells. The Copy, Cut, and Paste functions are also available under the Edit menu when in the Editor-Mode.

Just like in Excel, an entire row/column may be selected by clicking on the row/column number cell located along the left/top edge of the Data Area windowpane.

Clearing (Reinitializing) a Cell

The Clear is another operation available from the pop-up right mouse-button menu for a selected cell(s). For scalar or array data cells, the Clear operation will set the cell to the NO DATA value of 1.0E36. For indicator and table parameters, the value of the cell is set to blank, no characters. . The Clear function is also available under the Edit menu when in the Editor-Mode.

Additional Right Mouse Button Controls

There are a few special controls and functions that can be reached by using right mouse button menu. These functions are specially designed to complete operations within the Data Area.

The Insert menu options will insert a row into all of the associate arrays that are displayed. To use this option, first select a row by clicking on the row number on the left-hand side of the spreadsheet. While pointing at the selected row, press the right mouse button, and select the Insert option. A blank row will be inserted above the

selected row and the rows below will be shifted down. WARNING: If the array(s) are already filled with data, inserting a blank row will cause the last row of data to be lost.

The Delete function will delete one or more rows from all of the associate arrays that are displayed. First select the row(s) to be deleted, point at it and press the right mouse button and select the Delete option from the menu. The selected row(s) will be deleted and the rows below it (them) will be shifted up to fill in the rows that where deleted.

Import From:

This option will copy another ship's value(s) for one or more selected parameters into the current model data. First select a single parameter or group name, or select their associated data field(s). While pointing at the select area, press the right mouse button and select the Import From menu option. A dialog box will appear to allow the user to select a ship from the Databank from which to copy the select parameter or group. When the dialog box is closed using the OK button, the selected part of that ship will be copied into the Editor's copy of the current model. This function is similar to the Main menu, Ship, Use option for using part of a ship. This function is also available under the Edit menu when in the Editor-Mode.

New Window:

This option opens a new Editor window copy of the current ship. Use this with caution because data saving conflicts can occur when more than one Editor window has a copy of the current model data.

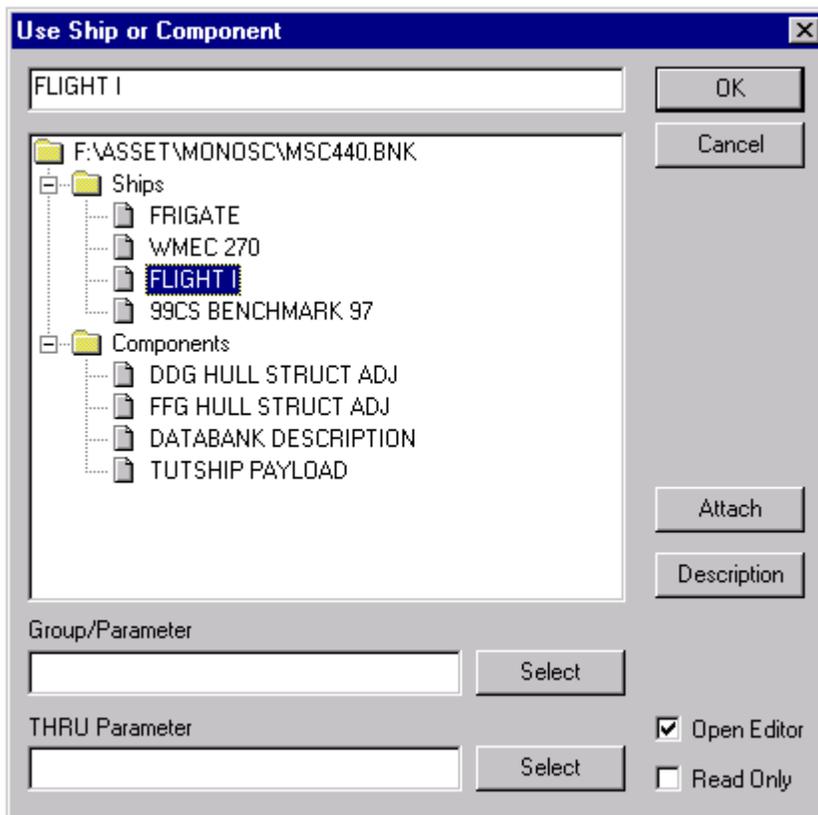
4.5.7 Prompt Mode Operation

When a synthesis or analysis computational module is run and there is missing or invalid data, the Editor is started up in the Prompt Mode of operation. The invalid or missing parameter names is the only ones available in the Name Area and the Data Area will be displaying the top most parameter of this invalid data list. The user then fills in or corrects the data for the displayed parameter and presses the Enter key to move to the

next item on the list. Once all of the listed parameters have been edited, or the Run button is pressed (see the Command Area topic), the Editor prompts the user to save the changes and the computational module that started the Editor Prompt Mode will be rerun.

4.5.8 Multiple Editor Window Operations

It is possible to have multiple Editor windows activated, each with a different ship loaded. Note that only Editor window(s) of the current model will allow changes to be made to the data, all other windows are opened in a Read Only mode. To open an Editor window (Read Only) of a ship in the databank, use the File, Open menu or the Ship, Show menu. A dialog box like below will be displayed to allow the user to select the desired ship. Note that a check box in the lower right corner of the dialog box indicates that the Editor copy will be read only



Once a copy of a ship is loaded into an Editor window, data may be copied from this read only window and be pasted into the current model Editor window. This can be very

useful for transferring portions of one ship into another or for reviewing the values in other ships while editing the current model data.

It is also possible to have multiple Editor windows open for the same ship. The 'copy' number will be appended to the ship name, such as 'Frigate: 2', in the title bar of the Editor window.

4.5.9 Advanced Operations

Column and Row Hiding

It is possible to temporarily 'hide' a row or column from view within the Data Area. The process is to first select the row(s) or column(s) to be hidden, and then use the Hide option located under the Format menu of the Main window when in the Editor-Mode of program operation. This feature can be useful to display two columns or two rows of a set of associated arrays at the same time within the Data Area.