E A S Y H O S T ™

U S E R ' S   G U I D E

AMSIG®

AMERICAN SIGNAL COMPANY

MAN00000016

0305

Installing EasyHost™ from a Floppy Disk to Windows95®

Mouse Notes: a. Click – to press and release a button

b. Double Click – do "a" twice, quickly

c. Click/Hold – press a button and hold it down

1. Double click on "***My Computer***".

2. Double click on the destination drive, probably C:

3. Click ***File***, highlight ***New***, and then click ***Folder***.

4. Type – **EasyHost** – and press Enter to name the folder.

5. Double click on the "3 ½ Floppy (A:)" containing the EasyHost™ install program.

6. Left Click/Hold on the top colored band on the Windows to move them around so both A:\EasyInst and the EasyHost folder on the destination drive is visible.

7. Right Click/Hold EasyInst and move it over to the EasyHost folder. Release the button.

8. Left Click "Copy Here".

9. Double Click the EasyHost folder.

10. Double Click EasyInst on the "Finished" bar, click the X.

11. Click "View" under the EasyHost bar, "Arrange Icons", and "By Type".

12. Right Click/Hold the WCMSHost icon (trailer sign icon). Move the icon over a blank area on the desktop and release the button. Click "Create ShortCut here".

13. Close all open windows.

14. Left Click the WCMSHost shortcut icon on the desktop. Wait one second and Left Click the name area of the icon. Type EasyHost and then press Enter to rename the icon.

15. Double Click the EasyHost icon on the desktop to start the program.

16. Left Click in the USER ID dialogue.

17. At the "About AmSig EasyHost" dialogue, insert "OWNER" for the USER ID, and "OWNER" for the password. Note, you will see a small task bar at the top of your screen indicating EasyHost™ is running.

AMSIG® EasyHost™ User's Guide
Software Release 2.2.15 for use with Microsoft Windows, Windows NT, Windows 95 and Windows 98

American Signal Company, Inc., Atlanta, GA

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Chapter 1
INTRODUCING EASYHOST

WHAT IS EASYHOST?

EasyHost is a Windows-based software program that allows you to easily communicate with and operate American Signal Company changeable message signs, both standard portable and stationary models. The program can be run under Windows 3.1, Windows 95®, or Windows NT®. EasyHost enables you to manage many geographically distributed signs from one remote computer, from multiple remote computers, or even from a laptop computer that is temporarily physically connected to one sign at a time. The program may reside on multiple computers in multiple locations, but an individual sign can communicate with only one computer at a time. A computer that is properly equipped and configured can communicate with several signs simultaneously.

Some examples of what EasyHost can do:

- Call a sign and gather information from the sign. For example, you can find out what messages a sign is currently displaying, retrieve a list of all messages that are contained in the sign, check the time and date on the sign's clock, and obtain operational parameters, such as the battery voltage and the ambient light level.

- Call a sign and reprogram the sign. For example, transmit an updated list of messages, a new schedule for displaying messages, a different setting for the brightness level, or a different message sequence to override the current message sequence when the sign is triggered by an override condition.

- Receive a call from a sign that is experiencing a problem.

- Perform scheduled functions with signs at the appropriate dates and times.

To summarize, EasyHost allows you to perform almost all of the monitoring and programming functions that are available through local access to a sign, but enables you to do so remotely.

In addition, EasyHost's interface with the signs is convenient because the program is:

- Easier to use than either the LCD/keyboard combination at the sign or the touch-tone activated remote control available through a telephone keypad

- Able to display much more information on the screen, including a realistic and accurate visual representation of the sign

- Not limited by conditions affecting physical access to the sign

- Able to monitor multiple signs simultaneously

STARTING THE EASYHOST PROGRAM

Once the EasyHost program has been installed, start the program as outlined below for Windows 3.1, Windows NT, or Windows 95. (If you are responsible for installing the EasyHost program, see Appendix A, Program Installation.) This manual assumes that the reader has a basic working knowledge of the Windows operating system, but attempts to be as clear and detailed as possible in the event that you do not. If you are not comfortable with Windows, it is recommended that you review the documentation for Windows 3.1, Windows 95, or Windows NT, depending on which version you are using.

Notes on using the mouse and Windows follow:

- *Click* means to press and release the mouse button
- *Double-click* means to click the mouse button twice, quickly
- *Drag* means to press and hold down the mouse button while moving the mouse
- To *select* something usually involves clicking once on the object to be selected
- Unless otherwise stated, mouse operations are done using the *left* mouse button. If the right mouse button is to be used, the instructions will say *right-click*
- A *dialog* is a window that appears when you need to supply additional information to complete a task

IF YOU ARE RUNNING WINDOWS 3.1 OR WINDOWS NT® 3.51

1. If the computer system that has been designated to have EasyHost installed is connected to a network or has multiple ports, it is recommended that you check with your network or Windows administrator before loading.

2. If Program Manager is not open (if it looks like an icon, or small picture, rather than a window), double-click on the Program Manager icon to open the Program Manager window.

3. If the AMSIG Host Programs program group is not open, double-click on the AMSIG Host Programs program group icon.

4. Once the AMSIG Host Programs program group window is open, double-click on the icon or the word "EasyHost."

IF YOU ARE RUNNING WINDOWS 95® OR WINDOWS NT® 4.0

Double-click on the Shortcut to EasyHost on the desktop, or:

1. Click on the **Start** button
2. Highlight the **Programs** folder
3. Highlight the **AMSIG Host Programs** folder
4. Click on **EasyHost**

If the EasyHost program has previously been run on your computer, you may see a variety of windows appear on the screen, but at the very least, the following login dialog window will appear.

The blinking cursor should be in the field labeled **User ID**. If it is not, use the mouse to position the mouse pointer over the User ID field and click the left mouse button.

LOGGING IN

The fields on the login dialog include:

User ID. Type your user ID into this field. The User ID is a unique name assigned to you by the system administrator. If you are uncertain of your user ID, see your system administrator.

Password. Once you have typed in your user ID, either press the [Tab] key to move the blinking cursor to the Password field, or move the mouse pointer over the Password field, and click the left mouse button. Now type in your password. If you do not know your password, see your system administrator.

Note: When you type in your password, you will not be able to see the word you typed. Instead, you will see one asterisk (the * symbol) for each letter or number you typed, so that no one will be able to see your password as you type it.

Once you have finished typing your user ID and password, either click on the OK button using the mouse or press the [Enter] key to submit your user ID and password for verification. Both the User ID and password are required fields. If either is omitted when you click OK or press [Enter], the cursor will automatically go to the empty field, and the program will wait for you to enter the missing data.

Note: Do not be alarmed if the login dialog (and any other windows) close at this point. This means that your user ID and password could not be validated, and the program exited. This could be due to a typographical error. To try again, re-launch the program as described above for your version of Windows. If you continue to have trouble logging in, consult someone with administrative privileges who can verify your correct User ID and password.

ABOUT THE EASYHOST INTERFACE

Once you have successfully logged in, you will see a window similar to the following:

This is EasyHost's **Main Window**, which will always be available when the EasyHost program is running. The text in the title bar will depend on the name of your organization, but the menu bar is standard and will always contain File, View, Configuration, and Help.

👉 *Note:* If your computer is running Windows 3.1 or Windows NT 3.51, all windows (including the main window above) will have the Windows 3.1 style, which is slightly different from that pictured here and throughout this manual.

If the EasyHost program has been previously run on your computer, other windows displaying sign contents may appear as well, such as the following:
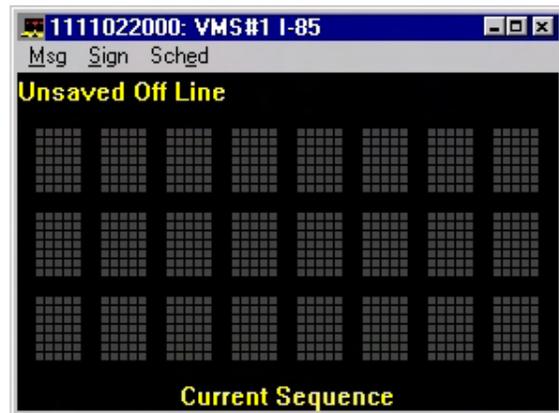
SELECTING A WINDOW

Although many windows can be displayed at one time, only one window is selected at any given time. When EasyHost is first launched, the main window will be selected, as pictured above. The selected window is indicated by its title bar having a different color than the title bars on the rest of the open windows.

To make another window the selected window, move the mouse pointer to the window you want to select and click. If the window on which you click is displaying a sign face, you will notice a menu bar (and possibly "speed buttons") appear when you click on the window. Click on one window at a time to see how each window in turn becomes the selected window. A window displaying a sign face will only display its menu bar and speed buttons when it is selected: as soon as you click on a different sign window, the previously selected window's menu bar becomes hidden from view.

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If the Main Window is the only window currently displayed, you will not be able to see the effect described above until a sign window is opened using the Open Sign command in the View menu.

THE MAIN MENU BAR FUNCTIONS

Anytime that the EasyHost program is running, the main menu bar and its functions will be available. The functions provided in the main menu bar apply to the entire program, meaning that they can affect any and all signs. The main window's menu bar provides the menus and functions shown below:
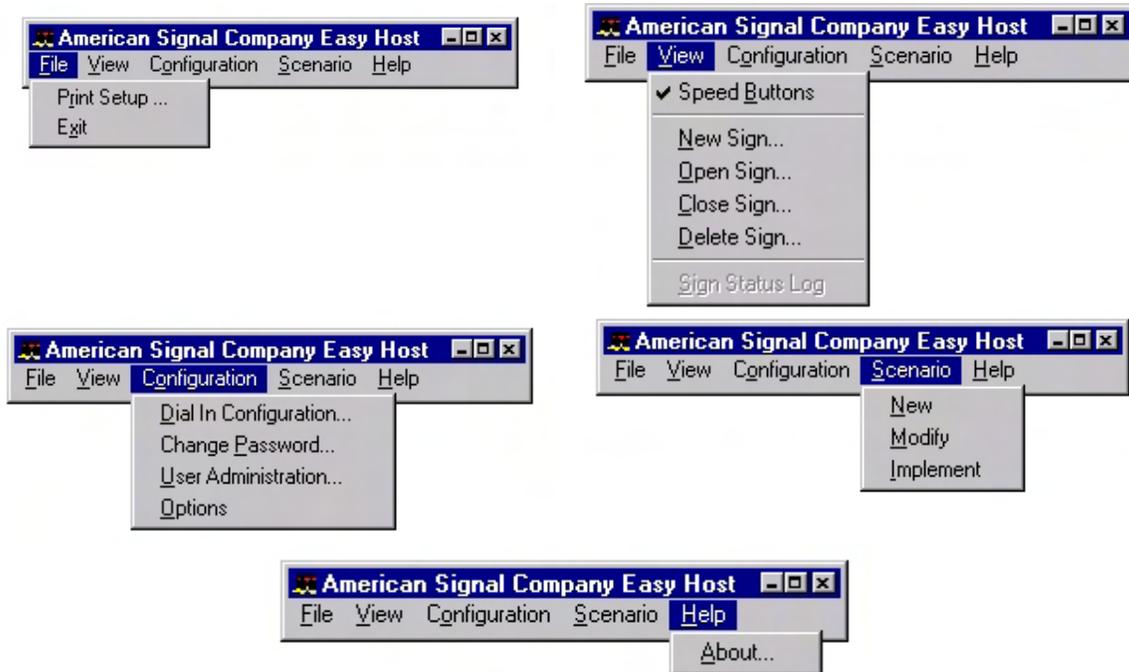
For detailed descriptions of the functions provided in the main menu bar, see Chapter 4, Main Menu Bar Functions.

SIGN WINDOW FUNCTIONS

When a sign window is open and selected, it will display its menu bar (and possibly speed buttons) in addition to its title bar. An example of an open sign that is also the selected window is shown below:

The functions provided in the menu bar of a sign window apply *only to that sign*. For example, if you select Edit Message from the Msg menu, and create some new messages to use in a message sequence, the new messages pertain only to the sign in the selected window. In this way, each sign can have its own customized set of messages, schedules, and other parameters. The menu bar for a sign window provides the following menus and functions:
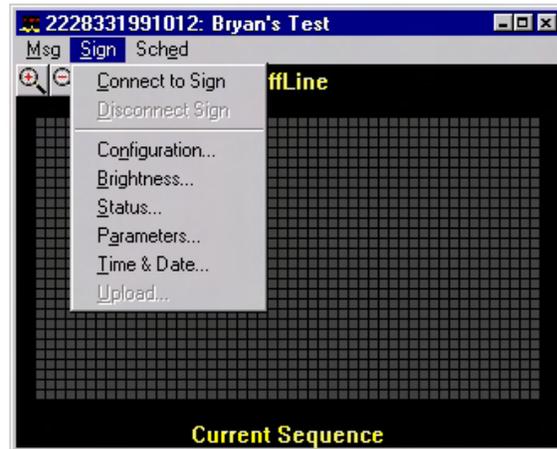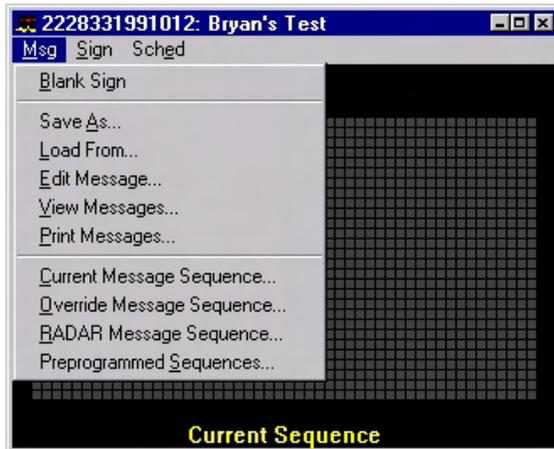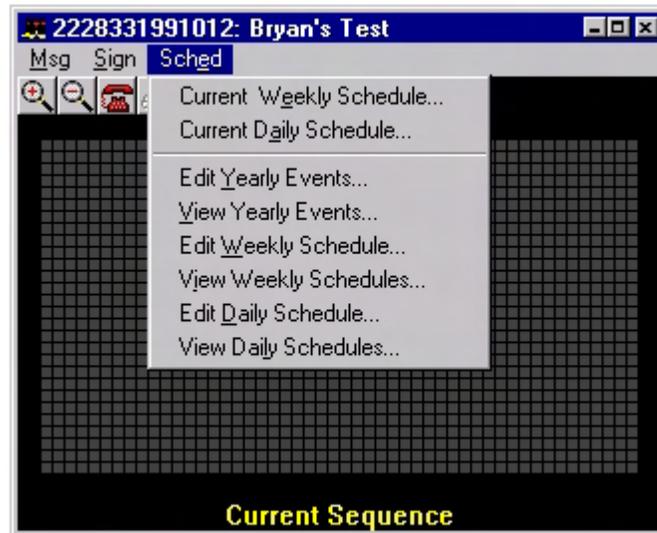
For detailed descriptions of the functions provided in the menus of a sign window, see Chapter 5, Sign Window Functions.

SIGN WINDOW SPEED BUTTONS

The Speed Buttons on a sign window provide shortcuts to frequently used functions and are listed below:

Magnify button. Clicking on the Magnify button enlarges the selected open sign window. You can keep clicking on this button repeatedly until the sign reaches the edges of the display area on your computer monitor.

Reduce button. Clicking on the Reduce button shrinks the selected open sign window. You can keep clicking on this button repeatedly until the sign reaches the minimum size that it can be and still display all its elements.

Contact Sign button. Clicking on the Contact Sign button initiates a call to the sign. This function is exactly the same as selecting Connect to Sign from the Sign menu of a sign window.

Disconnect button. Clicking on the Disconnect button terminates an active connection with a sign. This function is exactly the same as selecting Disconnect Sign from the Sign menu of a sign window.

SIGN WINDOW STATUS INDICATORS

In addition to menus and speed buttons, a sign window also displays status information. At the top of each sign window is status about connection and synchronization, and at the bottom of each sign window is status about the message sequence being displayed:
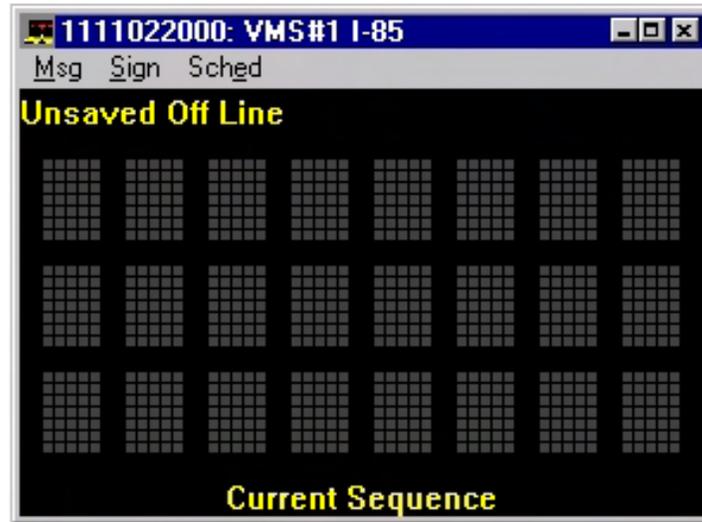
Synchronization and Connection Status

At the top of each sign window, next to the speed buttons, is an indicator giving status about connection and synchronization. When the EasyHost program has a sign window corresponding to a physical sign, a communication session between the EasyHost software and the physical sign will cause the data in the sign to be transmitted to the EasyHost computer so that you will have an accurate representation of the sign in the computer. When EasyHost is not currently connected to the sign, the program retains a copy of all last known information about that sign. The information is a snapshot of the sign's memory when the sign was last contacted, but it does not necessarily reflect what is currently going on at the sign. The information could be different by two means:

1   Changes can be made in EasyHost's copy of a sign. Off line editing can be done in the EasyHost Software so as not to waste costly connection time: messages, sequences, and schedules can be added when not physically connected to a sign in preparation for uploading to the sign during a communication session.

2   Changes can be made to the actual sign that the EasyHost program doesn't know about yet.

The synchronization/connection status helps to identify when there are differences between EasyHost's copy of a sign's information and the actual sign information. Possible Values for the synchronization/connection status follow:

- **Offline.** When the status is Offline, EasyHost is not currently communicating with the sign. EasyHost's information about the sign's contents and message display may or may not be current.

- **Unsaved OffLine.** A status of Unsaved Offline indicates that changes have been made to EasyHost's copy of the sign since the last connection with the physical sign, so it is likely that there are differences between the two. Furthermore, the changes done in the EasyHost software have not been saved to a file, so if a connection were made to the sign, the contents of the actual sign would overwrite the changes made to the EasyHost computer, and there would be no way to retrieve those changes.

- **Modified OffLine.** A status of Modified OffLine indicates that changes have been made to EasyHost's copy of the sign since the last connection with the physical sign, so it is likely that there are differences between the two. However, the changes *have* been saved to a file, so a connection can be made to the sign without concern about losing changes.

- **Updating.** Updating means that a connection has been established between the EasyHost software and the sign, and crucial information is being exchanged between them. Until the status changes from Updating, the representation of the sign in the EasyHost software has not been verified as being accurate. At the beginning of each connection to a sign, Updating means that the sign is sending EasyHost updated information about itself. The information being exchanged during Updating includes messages currently in use at the sign, whether the sign is blanked or not, and current schedules.

- **Interrogating.** During a connection, when Updating has completed, the connection status will change to Interrogating, which means that information is still being synchronized between EasyHost and the sign, but it is less crucial information, such as messages and sequences that are not in current use. Once the status changes from Updating to Interrogating, you can be sure that the sign face in the EasyHost program is an accurate representation of the sign display.

- **Connected.** Once Updating and Interrogating have completed, the connection status changes to Connected. At this point, the entire contents of the EasyHost copy of the sign is synchronized with the real sign, and the communication session is still active. While connected, EasyHost continues to compare information between itself and the sign and verify that the two are synchronized. Changes at the sign are automatically reflected in the software, and changes made in the EasyHost software are automatically sent to the sign.

Note: While EasyHost is connected to a sign (whether the status is Updating, Interrogating, or Connected), any changes you make to the sign through EasyHost will automatically update the real sign. Caution should be used when making changes that could affect the current display of messages on the sign face (such as editing messages or schedules currently in use.)

Message Sequence Status

At the bottom of each sign window is an indicator giving status about the message sequence currently in effect (and being displayed on the sign face if the sign is not "blanked.") Possible values for the message sequence status follow:

- **Current Sequence.** Current Sequence means that the Current Message Sequence is in effect. Normally it will be dynamically displayed on the sign face in the EasyHost program. If the sign has been "blanked," you will not see the contents of the Current Message Sequence being displayed on the sign face, but the status will still indicate that the Current Message Sequence is in effect, and it will resume display when the sign is "un-blanked."

- **Override Sequence.** Override Sequence indicates that the Override Message Sequence is in effect. An Override condition can be triggered by an external device such as a queue detector. To see how

much longer the Override Sequence will be in effect, select Override Message Sequence from the Msg menu of the Sign window and look at the Override Time Remaining, which is specified in minutes.

- **RADAR Sequence.** RADAR Sequence indicates that the RADAR message sequence is in effect. Signs equipped with a RADAR detector can be triggered by a specified speed to temporarily display a special message, such as "Slow Down" or "Your Speed is" with the actual speed of the vehicles. Normally, the RADAR message sequence is triggered for a very short period of time, so this status would most likely be quickly replaced with "Current Sequence." To see the trigger speed being used to display this sequence, select RADAR Message Sequence from the Msg menu of the sign window. Normally, the RADAR message sequence is triggered for a very short period of time, so this status would most likely be quickly replaced with "Current Sequence."

Note: When EasyHost is actively connected to a sign and Updating has completed, the Message Sequence Status will indicate the message sequence that is actually in effect at the physical sign. If, however, you are working off line, the Message Sequence Status does not necessarily reflect what is going on at the sign.

Chapter 2

GETTING STARTED
WITH EASYHOST

This Chapter first walks you through the basics of controlling a sign remotely so that you can quickly do the following:

- Define a sign in the EasyHost software
- Connect to the sign
- Select messages for current display on a sign
- Set the sign brightness
- Set the time and date on the sign's internal clock

The software walk-through is followed by brief discussions about:

- Data synchronization between EasyHost and the signs
- Online editing
- Off-line editing
- Copying information from one sign to another

DEFINE A SIGN IN THE EASYHOST SOFTWARE

1   Start the EasyHost program as described in Chapter 1 and log in.

2   From the main menu bar, open the View menu and select New Sign. The following dialog will be displayed:

3   In the Sign ID field, type an ID to uniquely identify the sign. An ID can consist of numbers and letters (up to 17 characters in length) and is usually taken from the Vehicle Identification Number for trailer-mounted signs. If you are unsure of the VIN or if the sign is not trailer-mounted, just type in anything to identify the sign, for example "TestID1".

4   If you know the model number of the sign to which you will be connecting, click on button with the down arrow on it to the right of the Sign Model field, and pick the model number from the list. If you are unsure of the model number, ignore this field – once you connect to the sign, the sign itself will notify the EasyHost software of its correct model number.

5   Click in the Sign Description field and type a description for the sign, for example, "New Sign for testing basic functions".

6   Click in the Project field and type a description to indicate a specific project, state, and /or city. (This field can be left blank if so desired).

7   Click in the Latitude field and type a description to indicate a specific highway, road name, or state road. (This field can be left blank if so desired).

8   Click in the Meridian field and type a description to indicate a specific landmark or mile marker. (This field can be left blank if so desired).

9	Click in the Orientation field and type a description to indicate a specific lane direction. (This field can be left blank if so desired).

10	Now click on the white index tab labeled "Communication" at the bottom of the dialog. The next page of the sign configuration will be displayed:
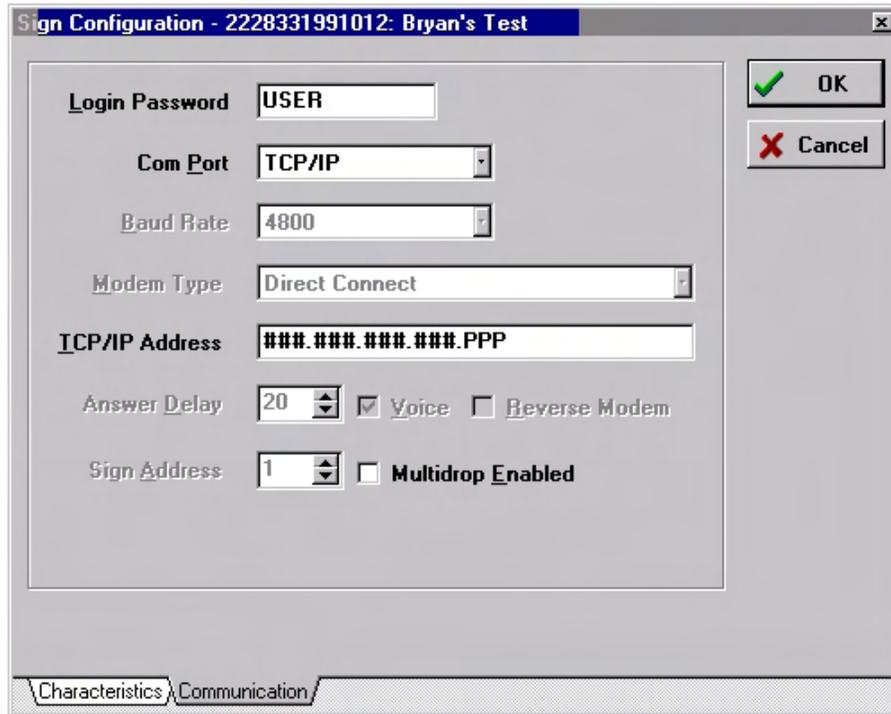
11	If you are going to attempt to communicate with the sign, you must specify some parameters on this page. If, on the other hand, you are just exploring the EasyHost software program and not presently attempting to connect to the physical sign, you can just click OK here and proceed to the section entitled Select Messages for Current Display on a Sign.

12	If you know which Com Port your modem or direct connect cable is plugged into, click on the button with the down arrow on it in the Com Port field to display a drop-down list of Com Port numbers. Select the correct Com Port number from the list. If you are not sure of the correct Com Port number, you can just leave the default value of "Com1" (or you can contact your system administrator for help). As you will note, in the drop-down list, you have the option of the selection of COM1, COM2, and TCP/IP. The TCP/IP option is intended for signs connected through the Internet. See item 15 for specific connection information (numbers).

13	If the value in the Baud Rate field is not 4800, click on the button with the down arrow on it in the Baud Rate field to display a drop-down list of baud rate choices. Select 4800 from the list as the baud rate. Although your modem is probably capable of a faster baud rate, 4800 corresponds to the terminal port baud rate on most signs and therefore is a speed giving a high likelihood of successful connection.

14	Click on the button with the down arrow on it in the Modem Type field to select the type of modem that most closely matches your modem. Select the entry for your modem type that says "@ Fastest." If you are unsure of the brand of the modem you are using or if you cannot find your modem in the list, you can try "Hayes Modem @ Fastest" (or contact your system administrator for help). If you are using a direct-connect cable rather than a modem to connect to the sign, select "Direct Connect" from the drop-down list.

15   If you are using a modem to call the sign, type the phone number of the cellular phone in the sign or the phone number of the land line that is connected to the sign into the Phone number field. If you selected the TCP/IP option, instead of using a standard type telephone number, the following is an example of the numeric input that is required in this field with the symbol "#" indicating a number or character. (###.###.###.###.PPP). PPP refers to the port number on the modem used to access the sign's CPU, usually 2000. Refer to the page of the sign configuration shown below.

16   Click OK to save the Sign Configuration parameters you have selected. The Sign Configuration dialog will close, and the newly created sign will be displayed in a sign window:

CONNECT TO THE SIGN

Now that you have created a sign in the EasyHost software, you can attempt to connect to the corresponding physical sign. If you are not prepared to connect to a physical sign, you can proceed to the next section, Select Messages for Current Display on a Sign, and do some offline editing to get familiar with editing the Current Message Sequence.

1   To try connecting to the sign, click on the Contact Sign button on the speed button bar of the sign window:

2   If there is a problem contacting the sign, you will be notified with an error message. For example:

3   If you get an error message, make a note of the error, click OK, and the Modem Commands and
         Responses dialog will also be displayed:

Calling Bryan's Test

Modem Commands And Responses

UNABLE TO CONTACT SIGN
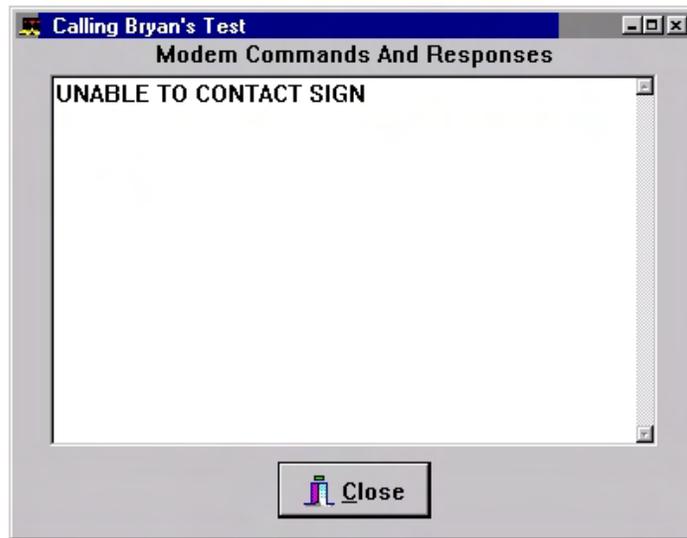
[Close]

4   If you get errors in the Modem Commands and Responses dialog, make a note of the error(s), and
         click on the Close button. To change sign configuration parameters and try again, select
         Configuration from the Sign menu on the sign window menu bar, and click on the Communication
         tab again. Try changing a parameter (for the specific error above, change the value in the Com
         Port field, for example, try "Com2" instead of "Com1"), click OK to save the change, and attempt
         to connect again by clicking on the Contact Sign button. You can repeat this process as often as
         necessary to correct the problem, but it is recommended that you make only one change to the
         sign's configuration and then retry connecting. When troubleshooting problems, multiple changes
         at one time make it harder to isolate the problem.

5   When the sign configuration parameters are correct and you click on the Contact Sign button, you
         will see the Modem Commands and Responses dialog displayed temporarily, for example:

Calling New sign for testing basic functions

Modem Commands And Responses

Requesting Password Prompt
Sending Password
SUCCESS

[X Cancel]

EasyHost User's Guide
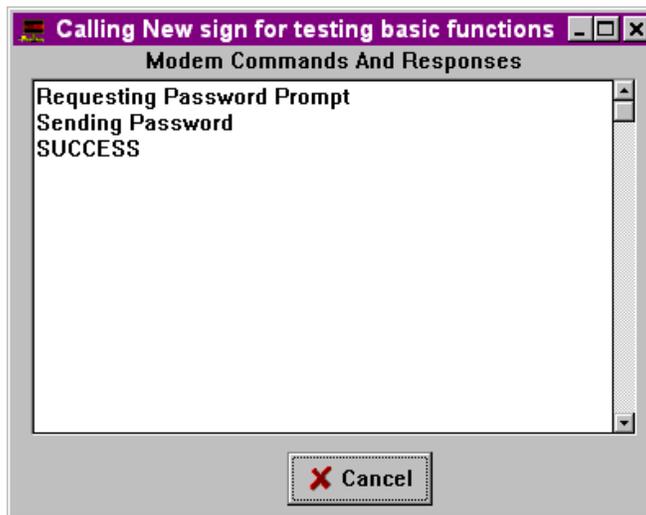
6   Next, you will see the status at the top of the sign window change from "Off Line" to "Updating":
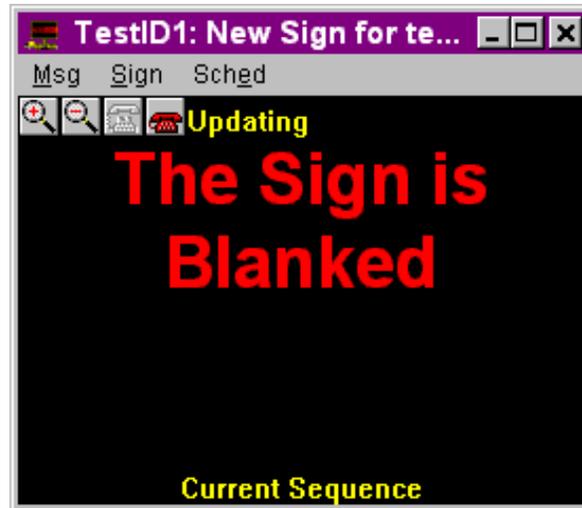
7   A status of "Updating", "Interrogating", or "Connected" means that you have successfully connected to the sign, and information is either being requested of the sign by the EasyHost program or being transmitted between the sign and the EasyHost program. Updating, the sign face not known yet. Changes you have made are not yet verified as received by the sign yet. Interrogating, retrieving information, not affecting the current sign face. Connected, all sign information retrieved from the sign. The flashing "R" and "T" in the upper right corner indicates the communication activity between EasyHost and the sign.

SELECT MESSAGES FOR CURRENT DISPLAY

1   From the Msg menu of the sign window, select Current Message Sequence. The Edit Current
         Message Sequence dialog is displayed and will look very similar to the following, although details
         will vary slightly depending on sign model:
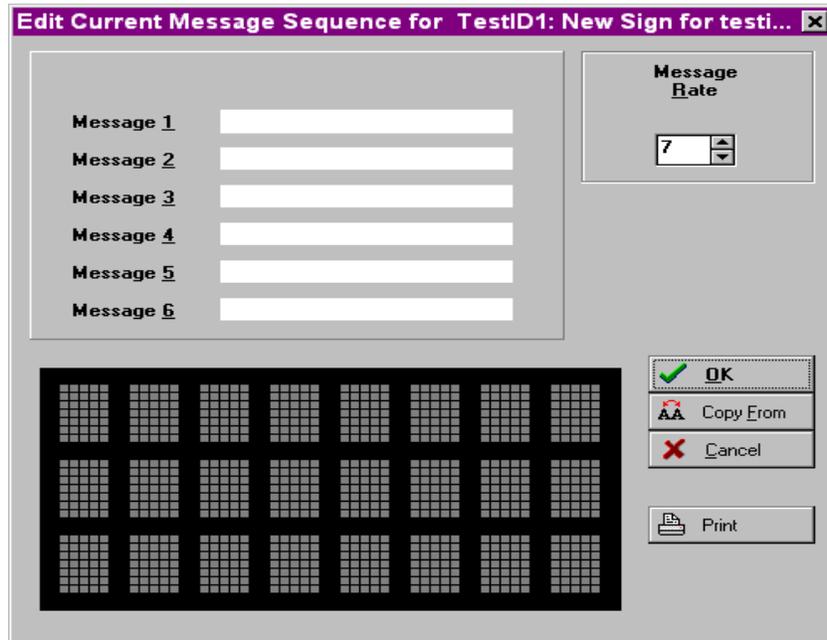
2   Select a message for the Message 1 slot by clicking on the Message 1 field itself (the blank white
         space), and the Select Message for Position dialog will be displayed:
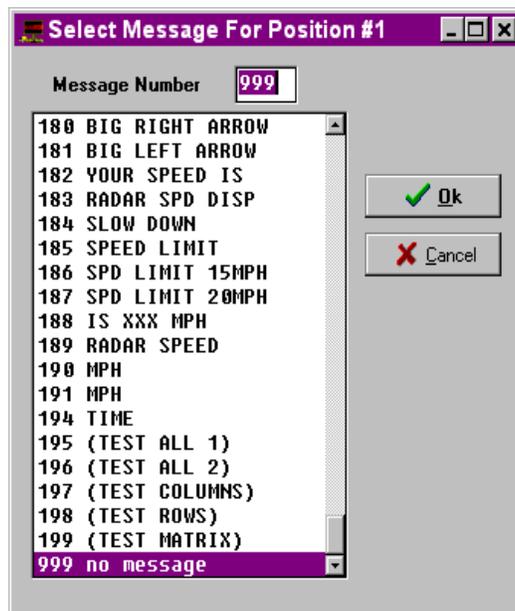
> ☞*Note:* If you have not connected to the physical sign, this list will not necessarily reflect the actual list of built-in messages in the sign. Until the EasyHost program connects to the sign, it can only make an educated guess about the contents of the sign's memory. Once a connection is made, however, the messages will be transmitted from the sign and you will see an accurate list.

3   Select a message from the list by clicking on it using the mouse and then click OK. The Verify Msg (Message) in Position dialog will be displayed:
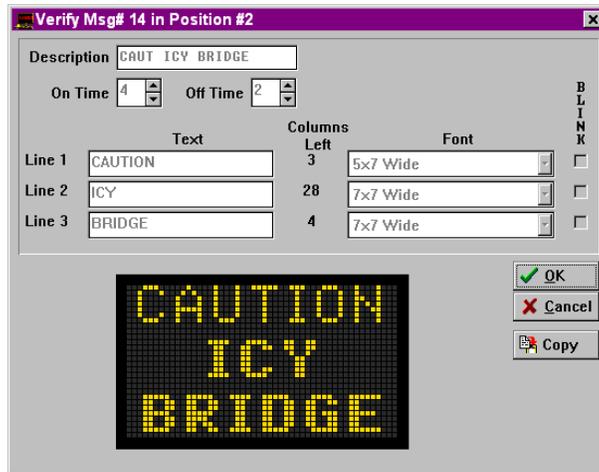
4   Click OK. The Verify Msg in Position dialog will close, and the Edit Current Message Sequence dialog will be displayed again. The description of the message you chose will appear in the Message 1 field, and the sample sign face will display the message contents.

5   If you want to change the rate at which the message flashes, click on the up and down arrow buttons ("spin" buttons) below the Message Rate field. A lower number will cause the message to flash slower, and a higher number will cause the message to flash faster.

6   Click OK. The message you selected will be saved in the Current Message Sequence, and the Edit Current Message Sequence dialog will close. If the sign window still says "The Sign Is Blanked", you must "un-blank" the sign in order to see the Current Message Sequence in the sign window.

7   To "un-blank" the sign, select Blank Sign from the Msg menu of the sign window. You will notice that there is a check mark next to the menu item, indicating that the sign is already blanked. The Blank Sign function toggles between blanking the sign and resuming the display of messages, so by selecting it, you will cause the display of the Current Message Sequence to begin. If the sign is still connected (from following the instructions in the previous section), the message will be displayed not only in the sign window of the EasyHost software, but also on the actual sign face.

8   If you want to add more messages to the Current Message Sequence, select Current Message Sequence again from the Msg menu of the sign window, and follow steps 2 - 6 again for other Message fields.

SET THE SIGN BRIGHTNESS

If the EasyHost software is currently connected to the sign, you can change the sign's brightness setting in the program and then see the resultant change in the illumination of the sign itself. If you are not connected to the sign, you can change the brightness setting, but you will not see any effect on the sign itself.

1   From the Sign menu of the sign window, select Brightness. The Brightness dialog will be displayed:
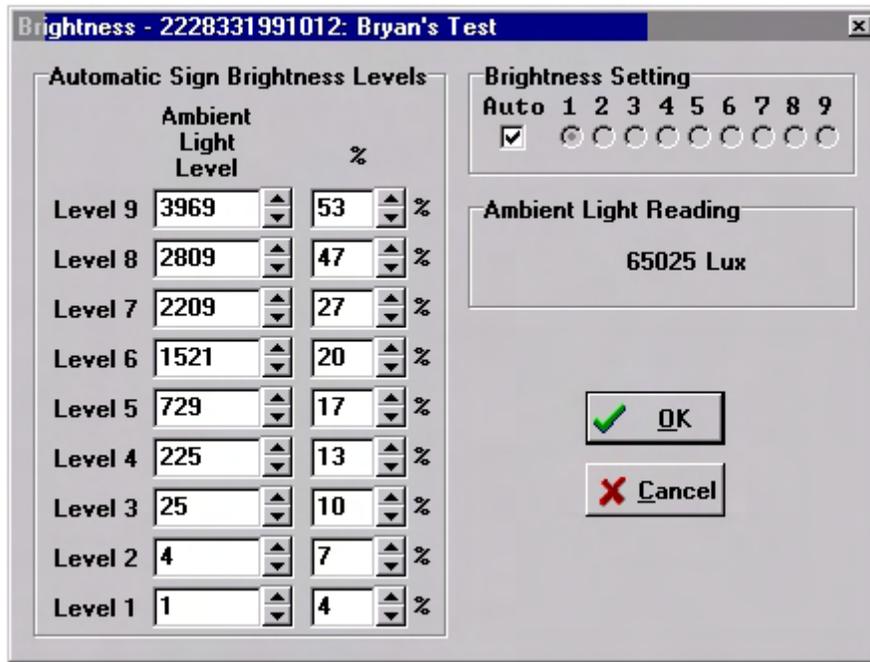
2   Under Brightness Setting, uncheck "Auto" by clicking in the check box, and then click on the option button under the highest number available (the highest number available will most likely be a "9" or a "7.")

> *Note:* If you are working with a 300 series sign, the Brightness dialog will look different from that pictured above. Instead of "Brightness Setting", you will see "Light Mode" choices of "Auto", "Off", or "On." Select "On" instead of "Auto."

3   Click OK. Within a few seconds, you will see the change reflected at the sign.

4   Select Brightness from the Sign menu again. Now click on the lowest brightness setting ("1" or "Off"), and within a few seconds, you will see the brightness change reflected at the sign.

SET THE TIME AND DATE ON THE SIGN'S CLOCK

If there is a live connection between the EasyHost software and the sign, you can change the time and date on the sign's internal clock as follows:

1. From the Sign menu of the sign window, select Time & Date. The Sign Time and Date dialog will be displayed:
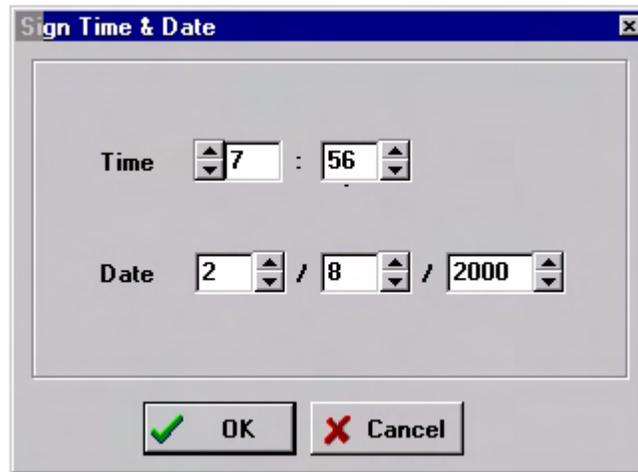
2. In the first field next to "Time," set the hour by clicking on the buttons with the up and down arrows on them (these are called "spin buttons.") The hour is specified in military time, so if it is after noon, add 12 to the current hour. For example, if you are setting the time to 9:08 a.m., use the spin buttons to select a "9" for the hour; if you are setting the time to 3:08 p.m., use the spin buttons to select a "15" for the hour.

3. In the next field to the right, set the minutes after the hour by clicking on the spin buttons and selecting a value between 0 and 59.

4. In the first field next to "Date," select the month by clicking on the spin buttons and selecting a number between 1 and 12, 1 representing January, and 12 representing December.

5. In the next field to the right, select the day of the month by clicking on the spin buttons and selecting a number between 1 and 31.

6. In the last field, select the year by clicking on the spin buttons for that field.

7. Click OK. Although you cannot see the time change on the sign, you should see the status in the sign window change momentarily to "Updating" and then back again to "Connected" or "Interrogating."

8. To verify that the time was changed on the sign, you can disconnect from the sign, and either check the time on the terminal LCD at the sign or reconnect to the sign through EasyHost, wait for updating to complete, and then select Time and Date from the Sign menu of the sign window. The time and date displayed should reflect the time and date that you entered.

UNDERSTANDING HOW SIGN DATA IS SYNCHRONIZED

Once you have defined a sign in the EasyHost software and successfully connected to the actual sign, it should be easier to understand how information is transferred between the two. The EasyHost software is "sign-centric" – whenever it contacts a physical sign, if there is any discrepancy between the information in the sign and the information in EasyHost about that sign, "the sign is always right." EasyHost updates its version of the sign to match the actual sign.

ONLINE EDITING

While EasyHost is updating its copy of a sign, the connection status will be either "Updating" or "Interrogating." Once the status changes to "Connected," you can be sure that the way the sign appears in the EasyHost software is accurate.

Likewise, anytime that EasyHost is connected with a sign, you have the ability to make immediate changes to the actual sign. If you edit any messages, sequences of messages, or other sign parameters, the changes will occur at the sign in real-time. It is very important, therefore, that you exercise caution when making changes while online with the sign.

OFF-LINE EDITING

Off-line editing allows you to edit messages and plan other changes to a sign when not connected to the sign. Many changes can be sent to the sign quickly during a subsequent connection, thereby reducing connection costs. Since connecting to a sign wipes out EasyHost's copy of that sign, any changes made while offline must be backed up before connecting to the sign. This is done through the **Save As** command on the Msg menu in the sign window. The Save As command saves all of the sign information to a filename that you specify. When you are ready to send the changes to the sign, connect to the sign and use the **Upload** command in the Sign menu. Upload allows you to send as much or as little of the saved information as you want. As with online editing, It is important to exercise caution when using Upload, since messages and sequences you send may be currently in use at the sign, and the effects will be immediate.

COPYING INFORMATION FROM ONE SIGN TO ANOTHER

A third way to change a sign's data is to get the data from a different sign. For example, you may be using a group of signs for one project, and all of the signs need a common list of customized messages for display. Once you have created the list of messages for one sign, you can connect to a different sign and **Upload** the messages to it. In addition to being able to upload from a file as described above, you can upload from a sign defined in the EasyHost software.

Note: You do not need to be connected to the actual sign that is the source of the new messages. As long as the new information is contained in EasyHost's copy of the sign, you can send it to another sign. You must, however, be connected to the sign which is the destination for the new information. The Upload command always sends information *from* EasyHost *to* a sign, and the Upload menu item does not become available until EasyHost is communicating with the sign.

A NOTE FOR USERS OF FLIP-DOT SIGNS

Signs that utilize flip-dot technology (model CMST300 and hybrid models CMST320, and CMST321) are able to store a list of messages, a current message sequence, a default message, and a RADAR message. They are *not* able to internally store a list of preprogrammed sequences like LED-only signs. However, the EasyHost software can store and manage preprogrammed sequences for them.

The only time that a difference is noticeable is when you are managing the signs from more than one computer running EasyHost. If an *LED-only* sign were to connect with two different EasyHost computers, it would send both of them its list of preprogrammed sequences along with all of its other information, and the two EasyHost computers would have identical copies of the sign. But a flip-dot sign does not store preprogrammed sequences, so it cannot send them to an EasyHost computer. So two different EasyHost computers accessing the same *flip-dot* sign will have identical copies of the flip-dot sign, *except for their lists of preprogrammed sequences.* Each EasyHost computer will have its own set of preprogrammed sequences for that sign.

C h a p t e r 3
T H E E A S Y H O S T
S C H E D U L E R

This chapter describes EasyHost's scheduler, which manages scheduled sign changes. Scheduling functions are accessible through the Sched menu on any open sign window. For detailed instructions on how to define and use schedules, see the Sched Menu section in Chapter 5, Sign Window Menu Functions.

INTRODUCTION

Scheduling functions work together to provide a way to schedule events.

WHAT IS AN EVENT?

An event is:

- A change in the messages displayed
- A change to the sign brightness
- A change to the generator mode
- A call to the EasyHost computer from the sign
- Any combination of the above

An event is defined by:

1. An activation time specified by the hour and minute
2. An indication to call the EasyHost computer when the event is triggered (optional)
3. A new brightness level for the sign (optional)
4. A new message sequence for the sign (optional)
5. A new generator mode for the sign (optional)

An event has no duration. In other words, if you wanted to display a particular set of messages for 1 hour, you would create two events: the first to begin the message sequence and the second to end the message sequence.

WHEN TO USE SCHEDULING

Scheduling is useful when conditions are predictable based on time. Some examples follow:

- Since ambient light levels change dramatically at sunrise and sundown, you could schedule an event every morning to increase the sign brightness and an event every evening to decrease the sign brightness (if you didn't want to use the Automatic setting for brightness).

- If patterns are very predictable, you can set up events to automatically change the messages displayed on a regular basis. For example, suppose that a paving project will be taking place every night between 9:00 p.m. and 5:00 a.m. on a particular highway. One event can be defined to change a sign's message sequence to "Caution; Road Work Ahead", at 9:00 p.m., and another event can be defined for 5:00 a.m. to change the message sequence to "Uneven Pavement; Loose Gravel." These events can be used each day for the duration of the project.

- Patterns may also be predictable at some point during the year. For example, suppose that every year on a particular date, a road is closed for an annual parade. One week prior to the day of the parade, an event can be triggered to display a message on a sign on that road warning drivers that the road will be closed on the upcoming date between certain hours. Then, on the day of the parade, other signs in the vicinity of that road can be triggered to display a warning to drivers who are headed toward the road.

HOW SCHEDULES ARE ORGANIZED

Scheduled events are organized as follows:

- A **daily schedule** contains up to 8 events

- A **weekly schedule** is composed of daily schedules, one for each day of the week

- A specified date can trigger changing the daily schedule and/or changing the weekly schedule - this is called a **yearly event**. Yearly events can also be used to adjust the sign's clock for daylight savings time.

You can define many daily schedules and many weekly schedules, but at any given time, there is only one Current Daily Schedule and one Current Weekly Schedule. Usually, the Current Daily Schedule is determined by the Current Weekly Schedule, but an alternate daily schedule can be set up for a special day and triggered by the arrival of that date. Once that day is over, the Current Weekly Schedule resumes, changing the Current Daily Schedule back to normal for that day of the week.

> *Note:* An exception to this rule of thumb is when the Current Weekly Schedule contains days where no daily schedule was specified. In this case, the special daily schedule may continue until a day of the week when an explicit daily schedule *was* specified. See "Blank Slots in a Weekly Schedule" later in this chapter.

HOW SCHEDULING WORKS: AN ANALOGY

To help clarify how scheduling works, an analogy follows. If the scheduler were scheduling events for a person rather than for a sign, it might look like the following:

DAILY SCHEDULES

Daily Schedule #1, or "Work":

6:00 a.m.	get up
8:00 a.m.	go to work
5:00 p.m.	go home
10:00 p.m.	go to bed

Daily Schedule #2, or "Play":

7:00 a.m.	get up
9:00 a.m.	play golf
11:00 p.m.	go to bed

WEEKLY SCHEDULE

Weekly Schedule #1, or "Regular"

Monday	Work
Tuesday	Work
Wednesday	Work
Thursday	Work
Friday:	Work
Saturday	Play
Sunday	Play

YEARLY EVENT: A SPECIAL DAY

Now suppose this person always takes his birthday off to play golf. A yearly event can be set up to be triggered by the arrival of that date.

Yearly Event #1: On September 7, change daily schedule to Daily Schedule #2, "Play"

If September 7 arrived on a Wednesday, the daily schedule *for that day* would switch to Daily Schedule #2 (play golf), and the following day (Thursday), the Current Weekly Schedule would resume, which would change the Current Daily Schedule back to Daily Schedule #1 (work). So, for this week, the schedule would look like this:

Monday	Work
Tuesday	Work
Wednesday	Play
Thursday	Work
Friday:	Work
Saturday	Play
Sunday	Play

In addition, this event can be marked as a regular yearly occurrence, so in subsequent years, it will automatically be scheduled regardless of which day of the week it is.

YEARLY EVENT: A CHANGE TO THE CURRENT WEEKLY SCHEDULE

Now suppose our golfer also has a penchant for drag racing and takes a few days off in August to attend the NHRA races in Brainerd, Minnesota. Changing the Current Daily Schedule is not enough, because after that one day, the Regular weekly schedule would resume. So an alternate weekly schedule is necessary, and a yearly event can be set up to change the Current Weekly Schedule to the different weekly schedule. An additional daily schedule (or schedules) will also be necessary since the events of his days will be different from work and golf.

Daily Schedule #3, or "Race day"

10:00 a.m.	get up
12:00 a.m.	go to the races
8:00 p.m.	leave the racetrack
1:00 a.m.	go to bed

Daily Schedule #4, or "Travel"

10:00 a.m.	get up
12:00 a.m.	start driving
9:00 p.m.	arrive
1:00 a.m.	go to bed

The golfer/racing fan will start the new schedule on Wednesday, August 19, 1998. Wednesday will be spent traveling, Thursday through Sunday at the races, Monday traveling home, and then Tuesday he'll return to work. The alternate weekly schedule follows:

Weekly Schedule #2, or "Vacation"

Monday	Travel
Tuesday	Work
Wednesday	Travel
Thursday	Race day
Friday:	Race day
Saturday	Race day
Sunday	Race day

The yearly event follows:

Yearly Event #2: On August 19, 1998, change the weekly schedule to Weekly Schedule #2, "Vacation"

Unlike the Current Daily Schedule, which gets changed by the Current Weekly Schedule, the Current Weekly Schedule keeps repeating, so unless the racing fan intends to work just one day per week and go back and forth to Brainerd every week for the rest of his life, the Current Weekly Schedule will need to be changed back. This could be done by setting up another yearly event to be triggered one week after Yearly Event #2, or someone could manually change the Current Weekly Schedule through the Sched menu.

YEARLY EVENT: A CHANGE TO BOTH THE CURRENT DAILY AND WEEKLY SCHEDULES

Continuing the above analogy, suppose the racing enthusiast decides to take off the remaining day in his almost-week-long vacation, but use the extra day for his favorite pastime, golf. He can schedule one special day golfing, and then switch to his Vacation weekly schedule. This dual event will be a modification of Yearly Event #2:

Yearly Event #2: On August 18, 1998, change the Current Daily Schedule to Daily Schedule #2, "Play," and change the Current Weekly Schedule to Weekly Schedule #2, "Vacation".

Now the event will happen on Tuesday, August 18, and the Current Daily Schedule will be "Play" for one day. Then the "Vacation" weekly schedule will start on Wednesday, changing the Current Daily Schedule each day.

THE SCHEDULER PROCESS

The Scheduler is the process that manages all scheduled events. The process is always running and is regularly checking the Current Daily Schedule, Current Weekly Schedule, and Calendar of Yearly Events to see if any scheduled events need to be kicked off.

MIDNIGHT CHECKS

At midnight every night, the Scheduler:

1   Checks the Calendar of Yearly Events to see if the new date should trigger any changes. Changes are done in the following order:

   1.1   Current Weekly Schedule
   1.2   Current Daily Schedule
   1.3   Clock Adjustment

2   Checks the Current Weekly Schedule to see if the Current Daily Schedule should be changed

   Note: Step 2 is done only if a yearly event did *not* already change the Current Daily Schedule. This condition is what allows for a special day to have a different schedule than would be normal for that day of the week.

CHECKS EVERY MINUTE

Every minute, the Scheduler checks the Current Daily Schedule to see if an event should start. When an event involves changing both the sign's brightness and the message display, the brightness is adjusted first and then the messages are changed.

BLANK SLOTS IN A WEEKLY SCHEDULE (DAILY SCHEDULE #99)

In a weekly schedule, there is a slot for each day of the week to contain a daily schedule. If there are days when no daily schedule was selected or the value "99 no change" was selected, then the daily schedule slot for that day remains blank. Blank slots have no effect on the Current Daily Schedule; the daily schedule that is already in effect will continue through those days that are left blank. To illustrate, the following two weekly schedules would operate identically (provided that the Current Daily Schedule is not changed by some other means, such as a yearly event or a person manually changing the Current Daily Schedule through the Sched menu):
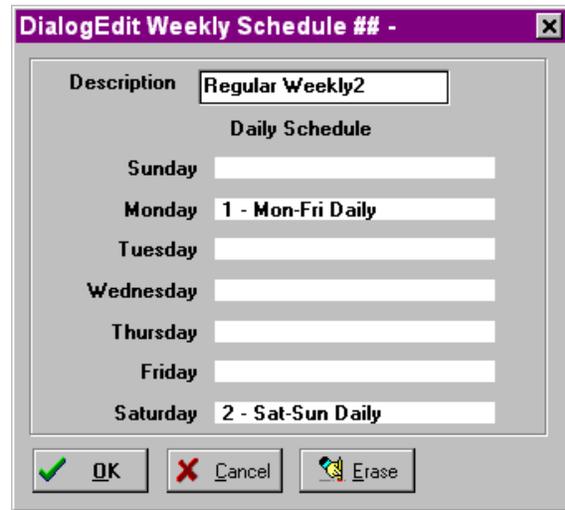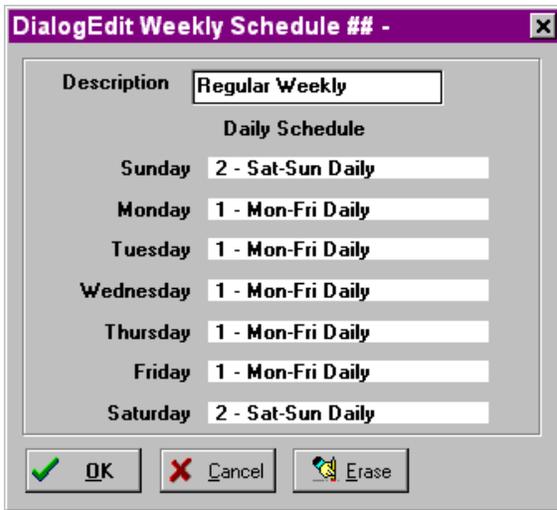
If this schedule, "Regular Weekly," was made the Current Weekly Schedule on Sunday, then daily schedule #1, "Mon-Fri Daily" would become the Current Daily Schedule on Monday. On Tuesday (actually midnight Monday), the Current Daily Schedule would be "changed" again to "Mon-Fri Daily," and so on for each day of the week. This method of scheduling is good for ensuring that this weekly schedule will resume immediately after a special day where the Current Daily Schedule was changed for just one day.

If this schedule, "Regular Weekly2," was made the Current Weekly Schedule on Sunday, then daily schedule #1, "Mon-Fri Daily" would become the Current Daily Schedule on Monday. The Current Daily Schedule would not be changed again until Saturday, when it would be changed to daily schedule #2, "Sat-Sun Daily." Suppose, however, that on Wednesday, the Current Daily Schedule was changed manually through the Sched menu to daily schedule #3, "Thanksgiving." In that case, daily schedule "Thanksgiving" would continue uninterrupted through Friday, since no changes are made to the Current Daily schedule on Thursday or Friday. Then on Saturday, the Current Daily Schedule would be changed to daily schedule #2, "Sat-Sun" Daily."

THE BLANK WEEKLY SCHEDULE (WEEKLY SCHEDULE #0)

As illustrated on the previous page, blank slots in a weekly schedule have no effect on the Current Daily Schedule. Weekly Schedule #0 is a predefined weekly schedule that has blank slots for every day of the week:

```
┌──────────────────────────────────────────────────┐
│ EDIT WEEKLY SCHEDULE #  0                      [×] │
│                                                    │
│       Description   [WEEKLY SCHED# 0]              │
│                  Daily Schedule                    │
│        Sunday   [                              ]   │
│        Monday   [                              ]   │
│       Tuesday   [                              ]   │
│     Wednesday   [                              ]   │
│      Thursday   [                              ]   │
│        Friday   [                              ]   │
│      Saturday   [                              ]   │
│                                                    │
│    [ ✓  OK ]   [ ✗  Cancel ]   [ 🎨 Erase ]        │
└──────────────────────────────────────────────────┘
```
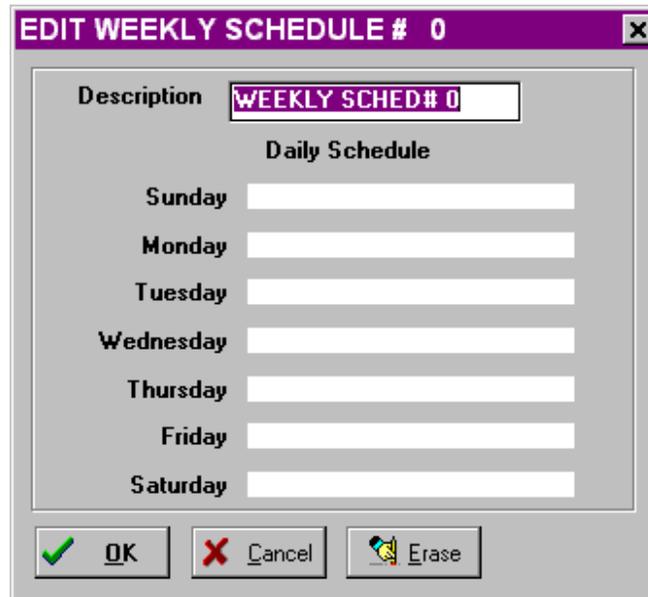
The effect of choosing Weekly Schedule #0 for the Current Weekly Schedule is that the Current Daily Schedule will never get changed (by this weekly schedule, at any rate). Weekly Schedule #0 is useful if the sign should follow the same daily schedule regardless of the day of week, and also for when there are special conditions for an extended period of time and you want to be certain that the Current Daily Schedule does not get changed.

> 👉 *Note:* If you create a custom weekly schedule that has all blank slots in it, it will behave in the same manner as Weekly Schedule #0.

THE EMPTY DAILY SCHEDULE (DAILY SCHEDULE #0)

One of your choices when filling the slots of a weekly schedule is Daily Schedule #0, the "Empty Daily" schedule. This is a daily schedule that contains no events so no changes are made to the sign, neither to the brightness nor to the message display, all day. The effect of using this daily schedule is different from that of having a blank slot in the weekly schedule. Whereas the blank slot results in no change to the Current Daily Schedule, the Empty Daily schedule is an explicit schedule, so the Current Daily schedule can get changed to it. When Daily Schedule #0 is the Current Daily Schedule, the sign will continue to do exactly what it was doing at the end of the previous day.

For example, suppose the following schedule was running as the Current Weekly Schedule:
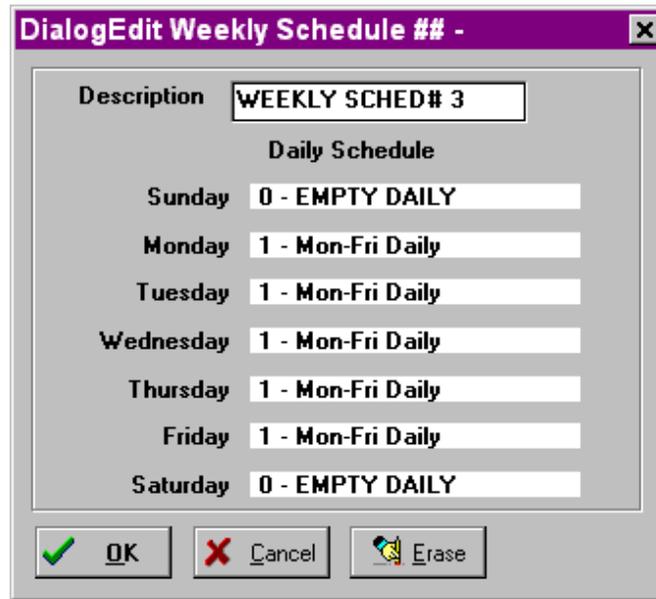
Daily schedule #1, "Mon-Fri Daily" will run each day of the week through Friday. Suppose that the last event in "Mon-Fri Daily" is an event at 11:00 p.m. that sets the display of sign #3 to "Open", "Open", "Open", "Open", and sets the Event Brightness to "A" (automatic). On Saturday (midnight Friday), the Current Daily Schedule will get changed to daily schedule #0, "EMPTY DAILY", which will do nothing all day Saturday and again do nothing all day Sunday. So the sign will continue to display "Open", "Open", "Open", "Open" at whatever bulb brightness is automatically determined appropriate for the ambient lighting conditions.

Note: If you create a custom daily schedule that contains no events, it will behave in the same manner as Daily Schedule #0.

Chapter 4
MAIN MENU BAR FUNCTIONS

This chapter describes each of EasyHost's Main Menu Bar's functions in detail. The menus are covered in the order they appear on the screen from left to right, and the menu items are covered from top to bottom.

The menus on the main menu bar are File, View, Configuration, and Help:


FILE MENU

The File menu, pictured below, contains the functions Print Setup and Exit.

PRINT SETUP…

This function displays the Print Setup dialog, as follows:
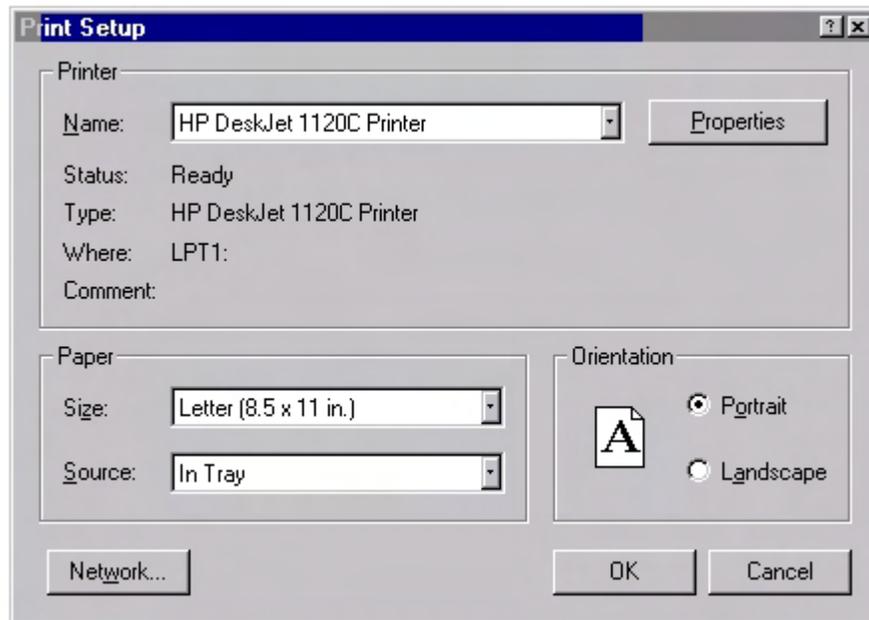
The settings that you choose in this dialog will apply to all printing that you do from the EasyHost program, regardless of which sign you are working with.

Fields and buttons on this dialog are as follows:

Printer. The Printer option button may be set to either the Default Printer or to a specific printer, if your computer has access to more than one printer. To use the default printer, leave the option button as is. To use a different printer, click on the button that has the down arrow on it to the right of the Specific Printer field. You will see a drop-down list of available printers, and you can select one from the list.

Orientation. The orientation option button refers to the direction that printing will be done on the paper. The options are Portrait or Landscape. Portrait is longer top to bottom (as shown above), and Landscape is longer left to right.

Paper Size. This field allows you to tell EasyHost what size paper you are using for printing. The default is Letter size (8-1/2" by 11"). If you are using paper of a different size, click on the button with the down arrow on it to the right of the Paper Size field to see a drop-down list of available paper sizes. Note that paper sizes may be listed that are not actually physically available in your printer.

Paper Source. This field allows you to tell EasyHost which paper source in the printer to use, for example, whether to use the upper or lower paper tray in the printer. If you do not want to use the default paper source that is displayed in this field, click on the button with the down arrow to the right of the Paper Source field and select the desired paper source from the drop-down list.

OK button. Click on the OK button to save the selected Print Setup choices currently displayed in the dialog.

Cancel button. Click on the Cancel button to discard any changes you have made to the Print Setup, and the Print Setup choices will revert to their former values.

Options… button. Click on the Options button to display the printer-specific options for the printer model selected with the Printer option button.

Network… button. Click on the Network button to get the standard Windows dialog for connecting to a printer on your local area network.

EXIT

Selecting this File menu function will cause you to exit the entire EasyHost program. If any signs are open, the size and position of their windows will be saved so that the next time EasyHost is run, they will automatically be opened and displayed just as they were.

VIEW MENU

The View menu is pictured below. In addition to a list of functions that can be applied to any and all signs, it also contains a list of the "Open" signs (signs that are currently being displayed in sign windows). Selecting one of the signs listed in the View menu will cause that sign window to become selected.
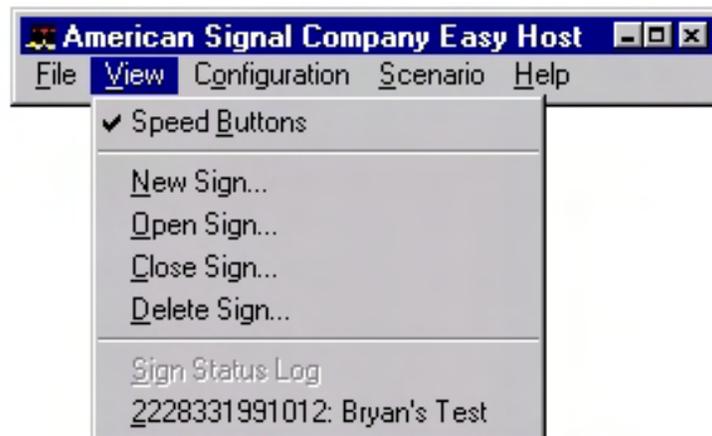

SPEED BUTTONS

The Speed Buttons menu function will either enable or disable the speed buttons which appear when an open sign is selected. If the speed buttons are enabled, they are enabled for *all* of the open signs (although you will only see them on one sign at a time); likewise if the speed buttons are disabled, they are disabled for all open signs.

If there is:

- A check mark (✓) to the left of **Speed Buttons**, then the Speed Buttons are already enabled and selecting the menu item will cause the Speed Buttons to be disabled.

- No check mark next to **Speed Buttons**, then the Speed Buttons are currently disabled and selecting the menu item will enable the Speed Buttons.

The following window is an example of the selected open sign window when Speed Buttons are enabled:

Following is the same selected window when Speed Buttons are disabled:
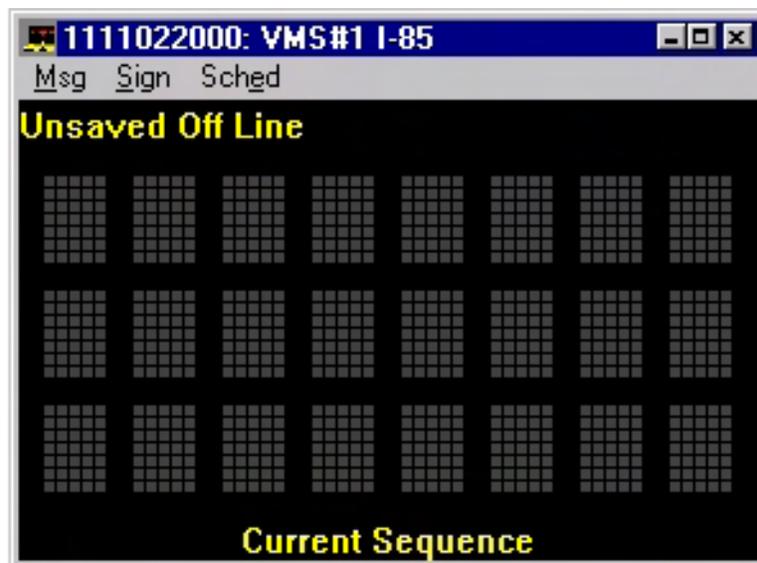
How the Speed Buttons Work

The Speed Buttons on a sign window provide a quick and convenient way to resize the sign window, keeping its proportions intact.

Magnify button. Clicking on the Magnify button enlarges the selected open sign window. You can keep clicking on this button repeatedly until the sign reaches the edges of the display area on your computer monitor. At that point the button will become dimmed (gray) and disabled, as shown below:

Reduce button. Clicking on the Reduce button shrinks the selected open sign window. You can keep clicking on this button repeatedly until the sign reaches the minimum size that it can be and still display all its elements. At that point the button will become dimmed (gray) and disabled, as shown here:

NEW SIGN…

Select this function to define a new sign to correspond to a physical sign.

Note: You will not be able to see this menu option unless you have Owner or Administrative privileges.

When selected, this menu function will display the Characteristics page of the Sign Configuration dialog:
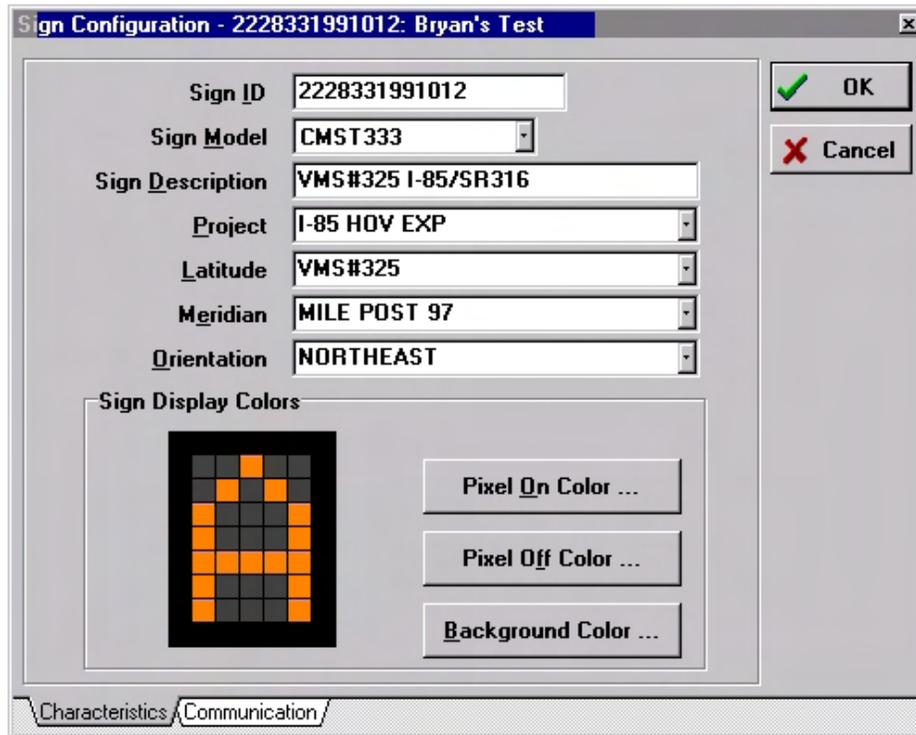
Fields on this page of the dialog are as follows:

Sign ID.   Type a string of numbers and letters (up to 17) in this field to uniquely identify the sign. The Sign ID is usually taken from the Vehicle Identification Number of the sign.

Sign Model.   The sign model field is used to identify the sign's type. Click on the button with the down arrow on it to the right of the Sign Model field to see a drop-down list of possible sign models and select the appropriate model.

Sign Description.   The sign description field is used for giving the sign a meaningful description. For example, a sign's description might be "75 South entrance ramp from 285 East." Type a description into this field that is meaningful for the sign that you are defining.

Project. This sign project field can be used for giving the sign a meaningful project name or defining a State or City location. For example, a sign's project might be Ga DOT, or a sign's State or City, Georgia or Atlanta. Type a description into this field that is meaningful for the sign that you are defining.

Latitude. This sign latitude field can be used for giving the sign a meaningful latitude or highway where the sign may be located. For example, the sign's latitude might be I-85. Type a description into this field that is meaningful for the sign that you are defining.

Meridian. This sign meridian field can be used for giving the sign a meaningful meridian, such as a landmark or highway marker. For example, a sign's meridian might be "Mile Post #13". Type a description into this field that is meaningful for the sign that you are defining.

Orientation. This sign orientation can be used for giving the sign a meaningful orientation, such as the road direction. For example, a sign's orientation might be "Northbound". Type a description into this field that is meaningful for the sign that you are defining.

Pixel On Color… button. Click on the Pixel On Color button if you want to change the color that is displayed to represent "on" pixels (illuminated LEDs or dots) in the sign window.

Pixel Off Color… button. Click on the Pixel Off Color button if you want to change the color that is displayed to represent "off" pixels (darkened LEDs or dots) in the sign window.

Background Color… button. Click on the Background Color button if you want to change the color that is displayed to represent the background of the sign (the area between the LEDs or dots) in the sign window.

At this point, you may choose to define the parameters for communicating with the sign by continuing on to the Communication page of the Sign Configuration dialog. To proceed to this step, click on the tab at the bottom of the dialog that is labeled **Communication**:

If you would prefer to set up the communication parameters later, you can just click on the **OK** button to save the information you have defined so far.

If you are proceeding to the Communication page of the Sign Configuration dialog, you will see the following page:
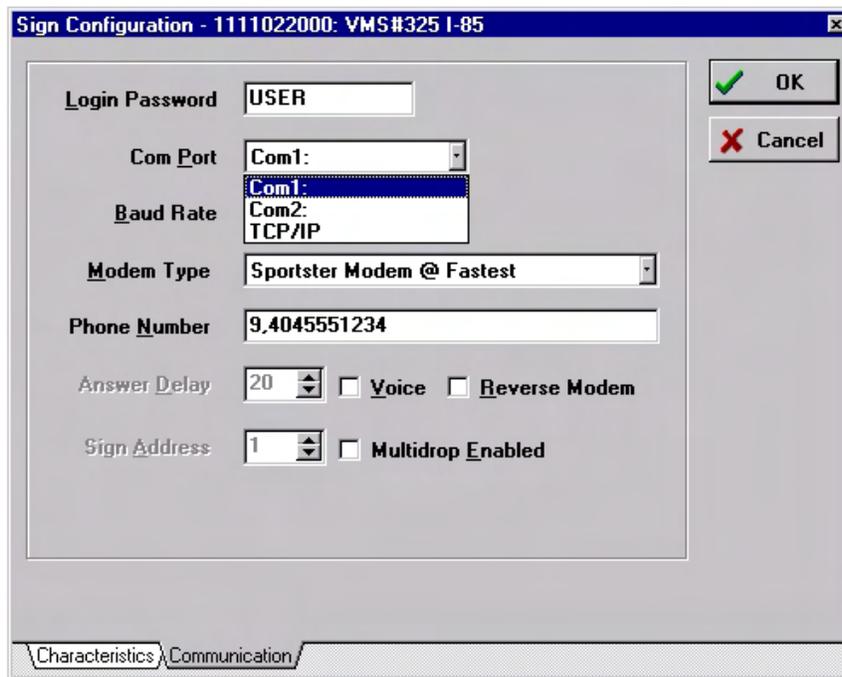
The fields on this page of the dialog are as follows:

Login Password. This field is for the password that you want to use to log into the sign when a connection is made.

Com Port. This field identifies which serial port to use when communicating with this sign. The Com Port field defaults to COM1. If you want to use a different serial port, click on the button with the down arrow on it to the right of the field to get a drop-down list of serial port numbers. In addition, in the drop-down list in this category, a selection is available for TCP/IP. If this selection is made for the Com Port, then a different type of entry needs to be made for such connections. See the section below pertaining to the Phone Number.

Baud Rate. The baud rate field specifies what speed should be used in attempting to communicate with this sign. Generally, you want to use the highest baud rate that the modem is capable of in order to minimize communication time and cost, especially when using a cellular connection. If you want to specify a different baud rate than the default, click on the button with the down arrow on it to the right of the Baud rate field to get a drop-down list of standard baud rates from which to choose. If you are using a direct connect cable rather than a modem, select the baud rate that corresponds to the terminal port baud rate for the sign (4800 for most sign models – see your sign manual).

Modem Type. This field is used to identify the type of modem being used to communicate with the sign. If you are going to directly connect to a sign through a laptop (or in a test environment), select "Direct Connect." Otherwise, select a modem type from the drop-down list by clicking on the button with the down arrow on it to the right of the Modem type field.

Phone Number. This field will only become enabled if the Modem Type is something other than "Direct Connect." Type in the phone number of the phone line or cellular modem at the sign. This phone number will be used when attempting to call the sign. If a selection was made in the Com Port field for the TCP/IP, a specific set of numeric indicators must be used in this field. Refer to the sign configuration view depicting the numeric sequence required for this connection.
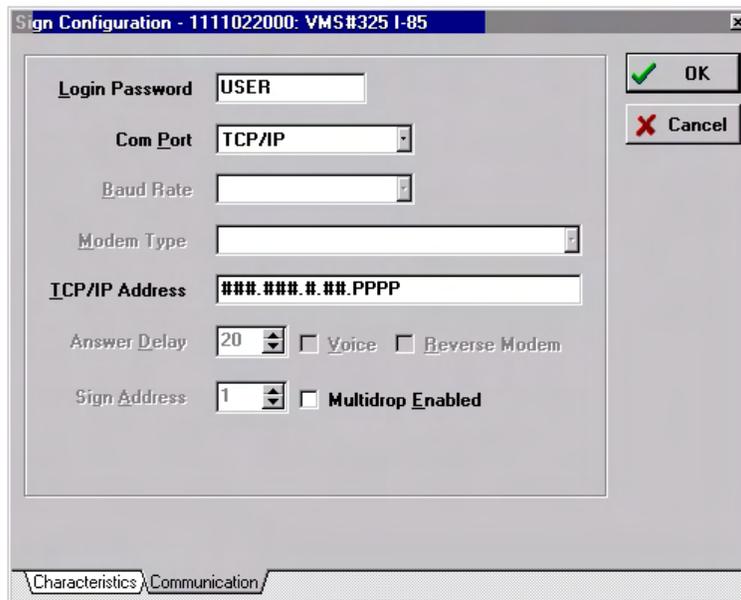
If after entering the TCP/IP address in the appropriate field and clicking the OK button, if the information entered is not in the correct format, the following dialogue box will appear on the screen:
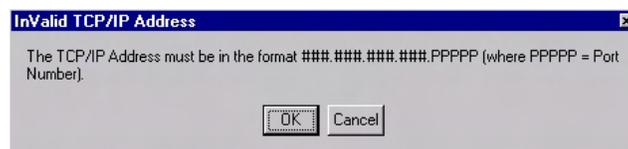
Answer Delay. This field will only become enabled if the Modem Type is something other than "Direct Connect." The Answer Delay field is used to specify how long a sign should wait before answering a call.

Voice. This field will only become enabled if the Modem Type is something other than "Direct Connect." This checkbox indicates whether or not the sign is equipped with a voice synthesizer.

Reverse Modem. This field will only become enabled if the Modem Type is something other than "Direct Connect". This checkbox is only for signs that answer the telephone in Originate Mode as a Hacker defense. It is only applicable to signs with firmware dated before 12/01/95.

Sign Address. This field will only become enabled if the Multidrop Enabled checkbox is checked. This field must contain a unique address for the sign. A valid address consists of a number between 1 and 255. You can type in a number using the keyboard, or you can select a number by using the mouse to click on the up or down spin buttons.

Multidrop Enabled checkbox. This checkbox is used to indicate that this sign will be sharing a communications port on the host computer with 1 or more other signs. This capability requires a special hardware option from the manufacturer. Since multiple signs will be communicating through the same port, they must be uniquely identified in the Sign Address field.

OK button. Click on the OK button to save all the selected Sign Configuration choices and to close the dialog. Clicking OK on either the Communication page or the Characteristics page will save the information from both.

Cancel button. Click on the Cancel button to discard the information you have selected in the Sign Configuration dialog pages and to close the dialog.

If you clicked on the OK button, a window similar to the following should appear:

OPEN SIGN...

Select this function from the Main Tool Bar, Click on View, Open Sign, to open a sign(s) that has already been defined with the New function, but is not currently being displayed in a window. When you select Open Sign, you will see the following dialog, which contains a list of all the defined signs that are not already open:
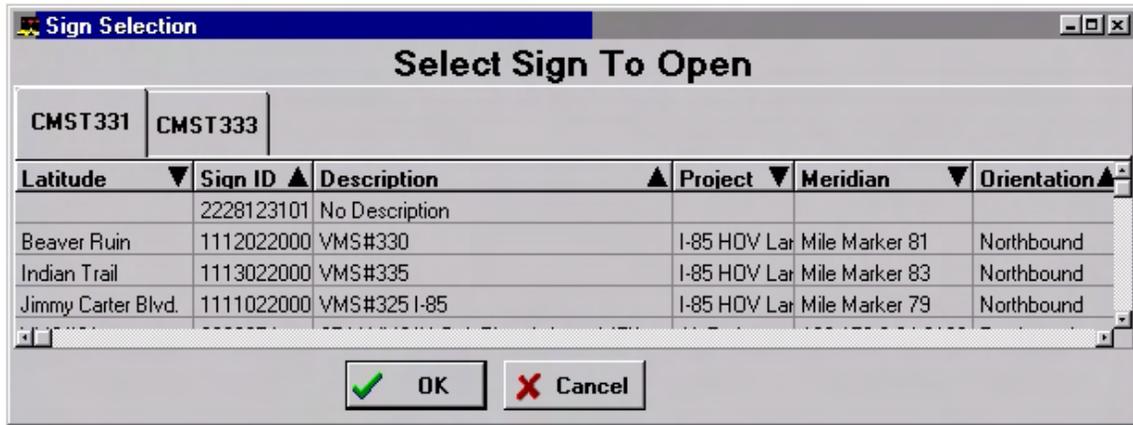
When the above dialogue box has appeared on the screen, you have the option to select from specific "tabbed" lists.

Locate the type of sign (CMST321,CMST331…) you desire to open. Click on the tab for that particular sign. A complete list of previously created signs will appear as indicated in the main picture above. You can open one sign at a time or you can open a group. If only sign is to be opened, then click on that sign, then press the OK button, the sign will appear on the screen.
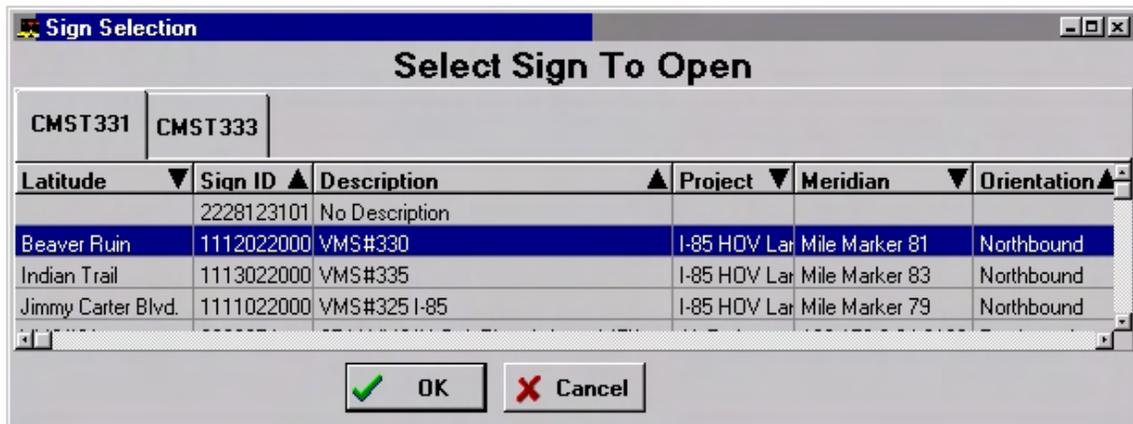
If you desire to open more than one sign, the list that appears can be sorted in various ways before making your selections. In the dialogue box, each category can be sorted by simply clicking the box of the

category. For example, if you want to open all the signs for a specific project, then click on the project header, and the signs will be sorted by project.

Click on Arrow –
Ascending or Descending
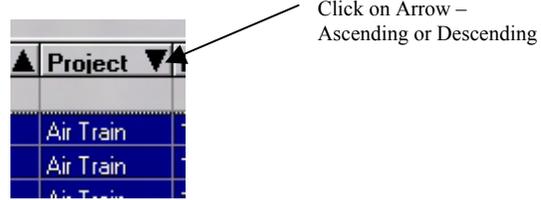
After sorting the list showing, there are two methods of opening a series of signs. The first, opening a group of signs that are in succession, click on the first sign in the list, then holding down the left mouse button, drag down through the list all the signs to be opened. After making the selection of signs, release the mouse button, then click the OK button.
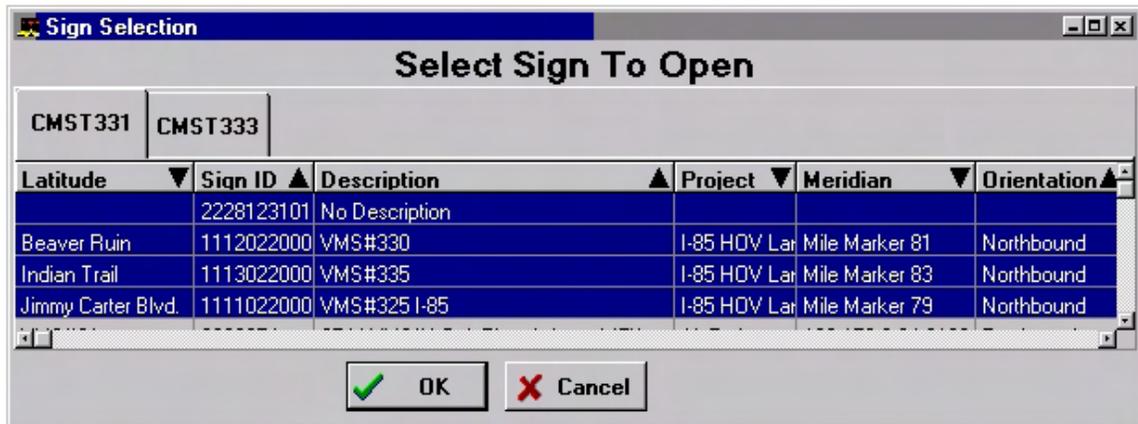
The second method, to open a group of signs that are spread throughout the list. Click on the first sign, then holding down the **"Ctrl"** button, click on the other signs that you wish to open. Click the OK button. All of the signs selected will appear on the screen.
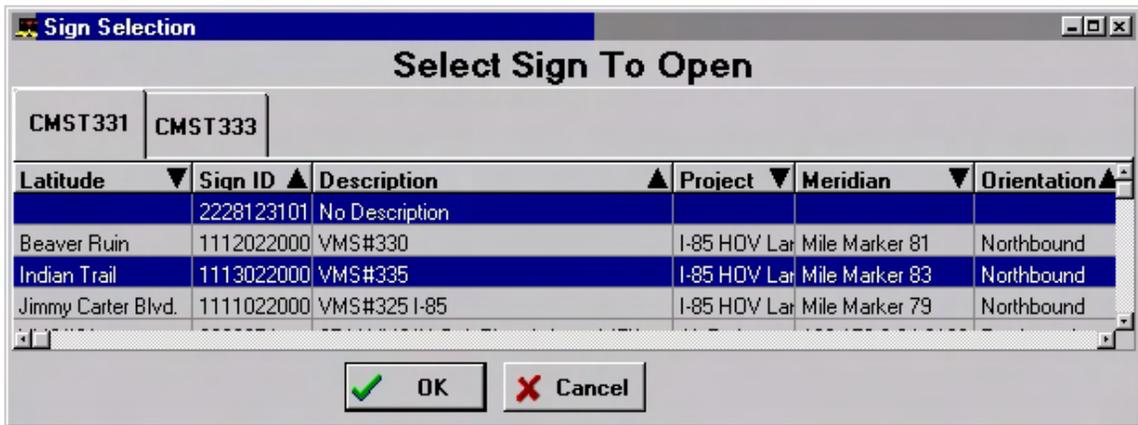
If you inadvertently click on the Cancel button instead of the OK button, no sign(s) will be opened.

CLOSE SIGN...

Select this function from the Main Tool Bar, View, Close Sign, to close a sign(s) that is/are currently open. When Close Sign is selected, a sign selection dialog very similar to the one used for Open Sign is displayed, except that it contains a list of signs that *are* currently open:
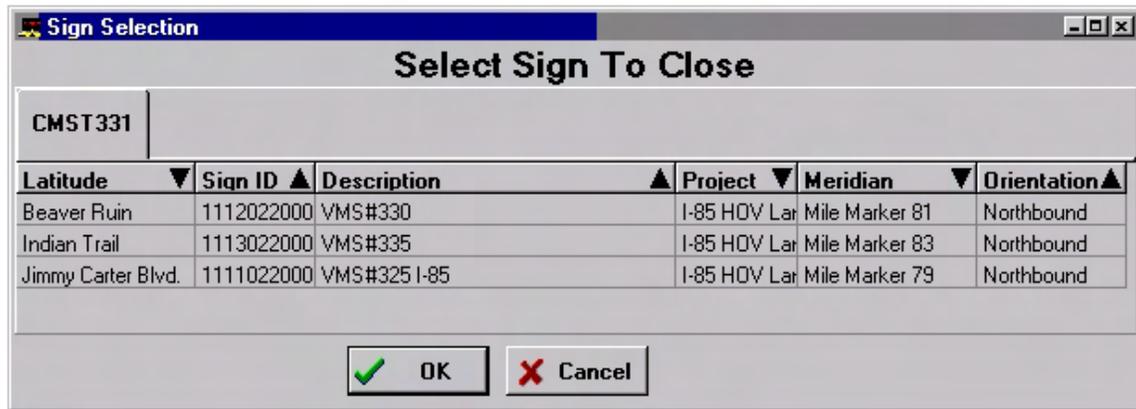
There are a couple of ways to close a sign or a series of signs that are open.

a. With the signs opened on the screen, you can click on the small box with the "x" in the upper right hand corner of the sign. Clicking on this will allow the sign to close. If changes have been made to the sign while open, a dialogue box may appear indicating that changes have been made to the sign and if the changes should be saved. Follow the appropriate dialogue screens if you answer "Yes".

b. If there are a group of signs opened, you can elect to close them one by one by the method described above. The other option is to click in View from the Main Tool Bar, click on Close Signs. A list will appear indicating the signs that are opened. As with Open Signs, there are two methods of closing a series of signs. The first, closing a group of signs that are in succession, click on the first sign in the list, then holding down the left mouse button, drag down through the list all the signs to be closed. After making the selection of signs, release the mouse button, then click the OK button. The second method, to close a group of signs that are spread throughout the list. Click on the first sign, then holding down the **"Ctrl"** button, click on the other signs that you wish to close. Click the OK button. All of the signs selected will disappear from the screen.
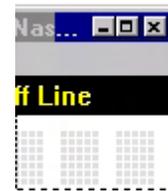
Clicking **Cancel** will cause the dialog to close without closing any signs.

DELETE SIGN...

Select this function from the Main Tool Bar, View, Delete Sign, to delete the definition of a sign.

👉 *Note:* You will not be able to see this menu option if you do not have Owner or Administrative privileges.

When selected, this menu function will display a sign selection dialog containing a list of the currently open signs:
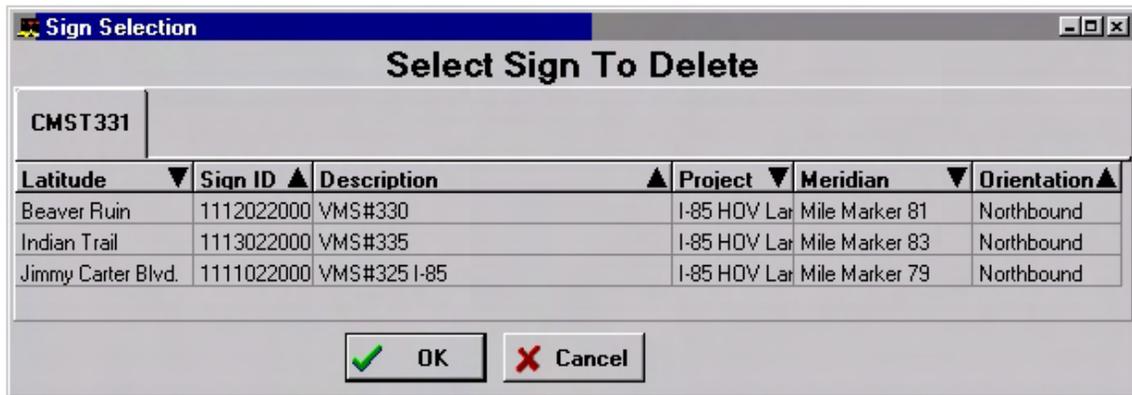
If the sign you want to delete is not in the list, it is probably not currently open. **A sign must be opened before deleting; this requirement is intended to help insure that the correct sign gets deleted.** To open a sign before deleting, see the Open Sign section.

With the sign or signs opened on the screen, select from the Main Tool Bar, View, Delete Sign. A list similar to Open Sign and Close Sign will appear. If only one sign is open, highlight the opened sign, then click the OK button. A confirmation box will appear before the selected sign can be deleted.
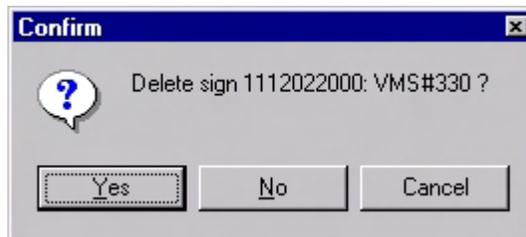
 If you are sure if the sign is to be deleted, then answer "Yes". If you are not quite sure, then select "No". Clicking **Cancel** will cause the dialogue to close without deleting any signs. If you want to delete a group of signs, sort them by clicking on the specific category as described in the Open Sign section. A list will appear indicating the signs that are opened. As with Open Signs and Close Signs, there are two methods of deleting a series of signs. The first, deleting a group of signs that are in succession, click on the first sign in the list, then holding down the left mouse button, drag down through the list all the signs to be closed. After making the selection of signs, release the mouse button, then click the OK button. The second method, to delete a group of signs that are spread throughout the list. Click on the first sign, then holding down the **"Ctrl"** button, click on the other signs that you wish to delete. Click the OK button. All of the signs selected will disappear from the screen. Clicking **Cancel** will cause the dialogue to close without deleting any signs.

SIGN STATUS LOG

This function will only be available if the Sign Status Log window has already been opened through the Dial In Configuration command in the Configuration menu (see the following section). Selecting this function will cause the Sign Status Log window to be selected. If the Sign Status Log window was formerly minimized, selecting Sign Status Log will maximize the window and bring it to the front.

When you are finished viewing the Sign Status Log, you can minimize it to get it out of the way or just select a different window to bring to the front. You cannot close the window using the close button, however, because closing this window will prevent the logging of sign status reports. To close the window (and to disable the capability of receiving incoming calls), you must un-check Receive Sign Status Reports in the Dial In Communication Configuration dialog.

CONFIGURATION MENU

The Configuration menu is pictured below and contains system-wide configuration functions.

DIAL IN CONFIGURATION…

Select this function to configure EasyHost to receive incoming calls from signs and keep a log of the last known status of each sign that calls in. When you select Dial In Configuration from the Configuration Menu, the following dialog is displayed:
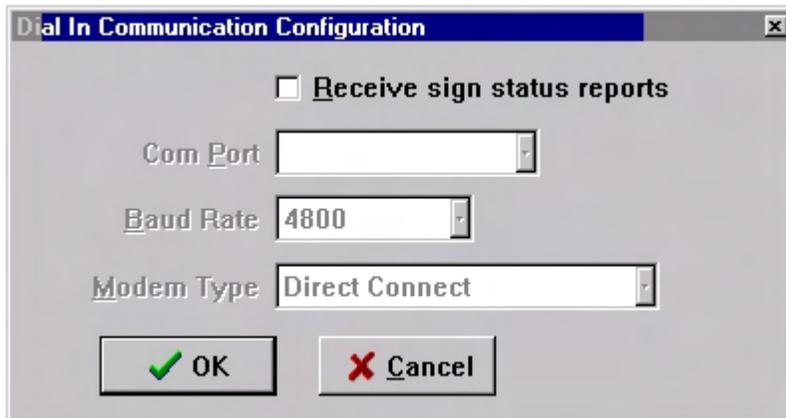
The fields and objects on this dialog are as follows:
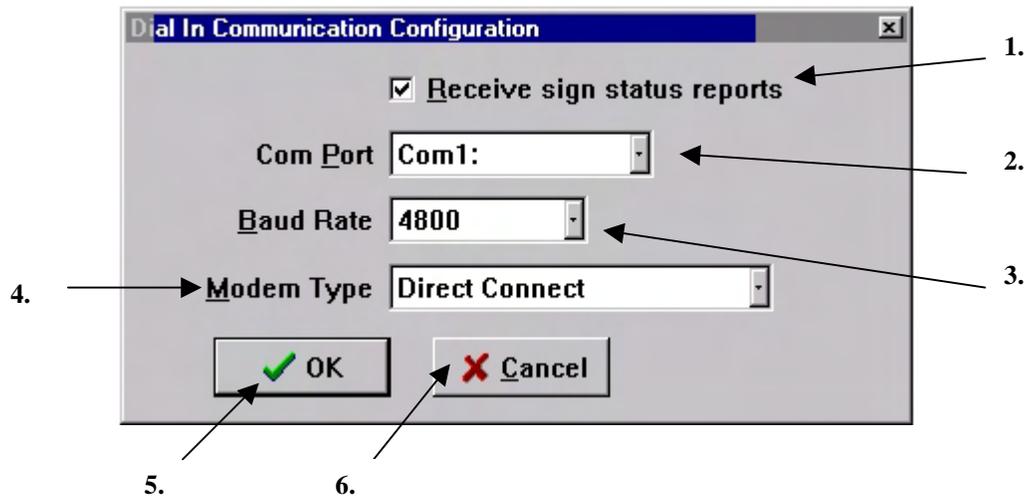
1. Receive Sign Status Reports check box. Click in this check box to enable logging of incoming calls from the signs.

2. Com Port. This field identifies which serial port on the computer is to be used for receiving incoming calls. A Com Port must be selected in order for logging to occur. If you do not specify a Com Port, the Sign Status Log will not be displayed. Click on the button with the down arrow on it in the Com Port field to get a drop-down list of serial port numbers.

3. Baud Rate. The baud rate field specifies what speed should be set for the modem being used to receive incoming calls. Generally, you want to use the highest baud rate that the modem is capable of in order to minimize communication time and cost, especially when using a cellular connection. However, if you are having trouble establishing connections with the signs, you may want to lower the baud rate to improve the chances of a successful connection. If you want to specify a different baud rate, click on the button with the down arrow on it in the Baud Rate field to get a drop-down list of standard baud rates from which to choose. If you are using a direct connect cable rather than a modem, select the baud rate that corresponds to the terminal port baud rate for the sign (4800 for most sign models – see your sign manual).

4. Modem Type. This field is used to identify the type of modem being used to receive incoming calls at the EasyHost computer. If you are connecting directly to the sign with a cable instead of using a modem, select "Direct Connect." Otherwise, select a modem type from the drop-down list by clicking on the button with the down arrow on it in the Modem type field.

5. OK button. Click on the OK button to save the parameters you have selected for the Dial In Communication Configuration. If you have checked the Receive Sign Status Reports check box and have selected a com port number in the Com Port field, clicking OK will result in the display of the Sign Status Log window. The Sign Status Log window will be empty until incoming calls with sign status are received. A sample Sign Status Log window is shown below.

6. Cancel button. Click on the Cancel button to discard any changes you have made to the Dial In Communication configuration.

The Sign Status Log window

A sample Sign Status Log window is depicted below:

Sign Number	Description	Last Call	Status	Light	Gen	Fuel
1A9BS3314U2228123	PROPER VEHICLE IDEN	12/05/97 17:01	Default Lockout	auto		
1A9BD3314U2228123	PROPER VEHICLE IDEN	12/05/97 17:01	Engine Won't Start	Auto	Auto	Low
1A9BD3314U2228267	Unlisted Sign	2/19/93 4:43	Fuel Level Low	Auto	Auto	Low
1A9BD3314U2228000	Unlisted Sign	2/19/93 0:56	Default Lockout	Auto	Off	Low
1A9BD3314U2228268	Unlisted Sign	2/19/93 5:02	Fuel Level Low	Auto	Off	Low
1A9BD3314U7033002	Akron Stationary2	2/17/93 5:37	Lost Date and Time	Off		
1A9BD3314U7033004	Akron Stationary Sign#4	2/16/93 19:48	Lost Date and Time	Auto		
1A9BD3334U2228001	Unknown Sign	2/19/93 7:01	Engine Won't Start	Auto	Auto	Low
1A9BD3314U2228901	test1	2/10/93 20:02	Errors Cleared			
1A9BD3314U2228238	Akron #4	2/05/93 16:26	Errors Cleared			
1A9BD3314U2228111	71st Street Landline	2/05/93 16:26	Errors Cleared			
1A9BD3314U2228110	71st Street Cellular	2/05/93 16:26	Errors Cleared			
1A9BD3314U0000000	American Signal Test	2/05/93 16:26	Errors Cleared			
1A9BD3314U9210001	Toledo East Side Sign	2/05/93 16:26	Errors Cleared			
1A9BD3314U9200000	Toledo West Side Sign	2/05/93 16:26	Errors Cleared			
1A9BD3314U2228235	Akron #1	2/05/93 16:26	Errors Cleared			
1A9BD3314U2228236	Akron #2	2/05/93 16:26	Errors Cleared			
1A9BD3314U2228237	Akron #3	2/05/93 16:25	Errors Cleared			

The Sign Status Log window will always be displayed if Receive Sign Status Reports has been checked in the Dial In Communication Configuration. To close the window (and to disable the capability of receiving incoming calls), un-check Receive Sign Status Reports in the Dial In Communication Configuration dialog. To continue receiving incoming calls, but get the status window out of the way, click on the minimize button (the left-most button in the upper right-hand corner of the Sign Status Log window). To resume display of the status window, use the View menu of the main menu bar to select Sign Status Log.

CHANGE PASSWORD…

Select this function to change the password for your own Login ID. A dialog similar to the following will appear, except that your Login ID will be displayed instead of "USER."

Login ID: USER
User

New Password: _____

ReEntry for Verification: _____

✓ OK   ✗ Cancel

The fields on this dialog are as follows:

New Password. This field is for the new password that you want to start using. It must be at least four characters long and can contain letters, numbers, or special characters, including spaces. When you type in your password, you will not be able to see the word you typed. Instead, you will see one asterisk (the * symbol) for each letter or number you typed. This is for security purposes -- so that no one will be able to see your password as you type it.

ReEntry for Verification. In order to verify that you typed in the password exactly as you wanted, you must re-type the password here. The two passwords must match exactly in order for the change to be accepted.

OK button. Click on the OK button to prompt EasyHost to compare the passwords. If the two fields do not match exactly, you will get the following error:

If this happens, just click on the Abort button and try again, typing in your new password twice.

Cancel button. If you change your mind and do not want to change your password, click on the Cancel button. Your old password will be retained, and the dialog will close.

USER ADMINISTRATION …

Selecting this function allows the system administrator to setup individuals for different levels of authority and accessibility to the system. **See Appendix B of this manual for detailed information of this feature.**
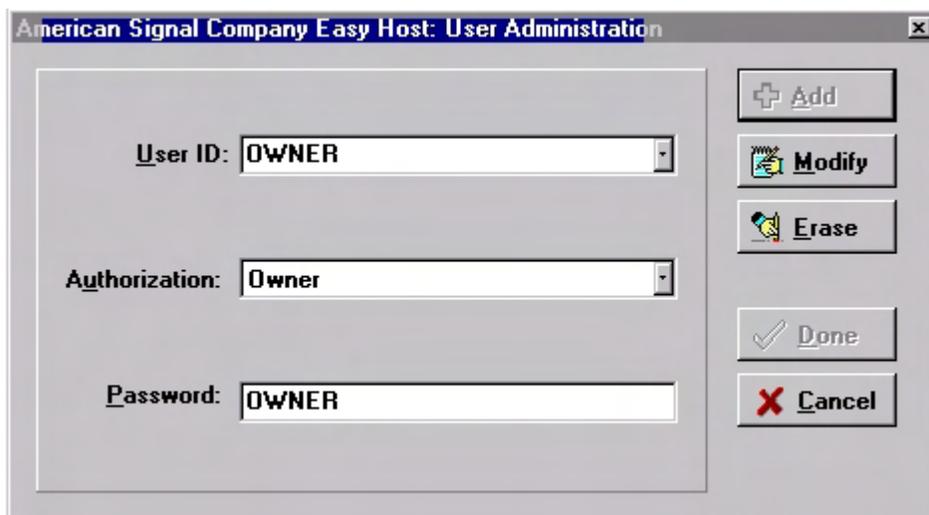
OPTIONS ....

Selecting this function from the Configuration section of the Main Tool Bar allows for the activation or deactivation of the Administration Options Dialog Box. Activating this feature allows the system to write errors to files for review. Reviewing this data may help personnel in pinpointing and diagnosing problems being experienced by the sign(s). When you select Options from the Configuration Menu, the following dialog is displayed:
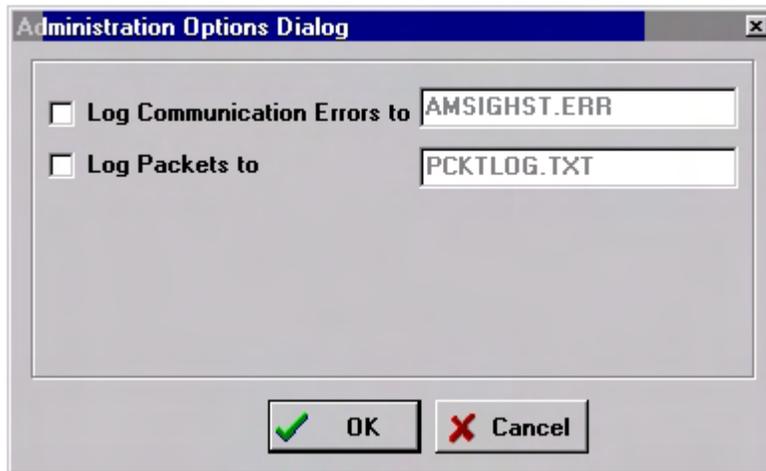
You have the option of selecting Log Communications Errors to alone, Log Packets to alone, or you can select both to work concurrently and write data to their specific files.
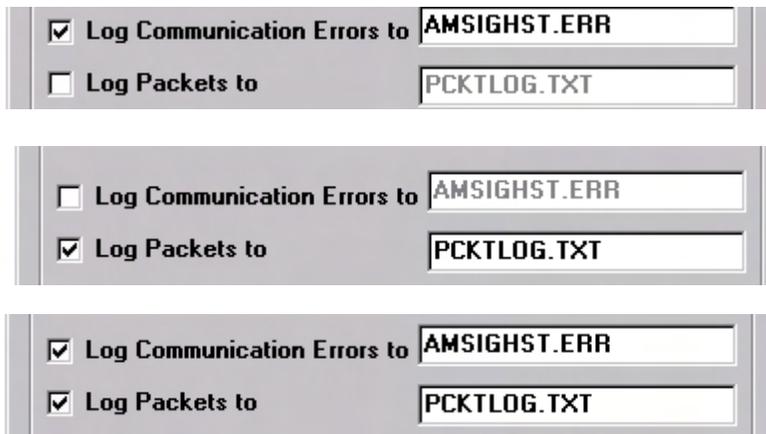
SCENARIO

The Scenario menu is pictured below and contains sub-menus to allow users to create , modify existing, and implement scenarios using groups of signs to place the same message on multiple signs using a "broadcasting" method.

NEW ….

Select this function to create new scenarios to transmit messages, sequences, and/or schedules from one sign or file to a group of selected signs. What follows is a detailed explanation as how to create a scenario.

1. From the Main Tool Bar, click on Scenario. Then click on New as shown below.

2. After clicking on the New button, the following screen will appear. After this screen appears, using your mouse, position the cursor in the description box, click. Enter in a description for the scenario being created to define its purpose, for Accidents, Snow, Winds….. After entering in the description, Do Not press the OK button, proceed to Step 3. After entering the appropriate description for the Scenario, move the cursor to the [✚ Add…] button and click.
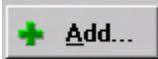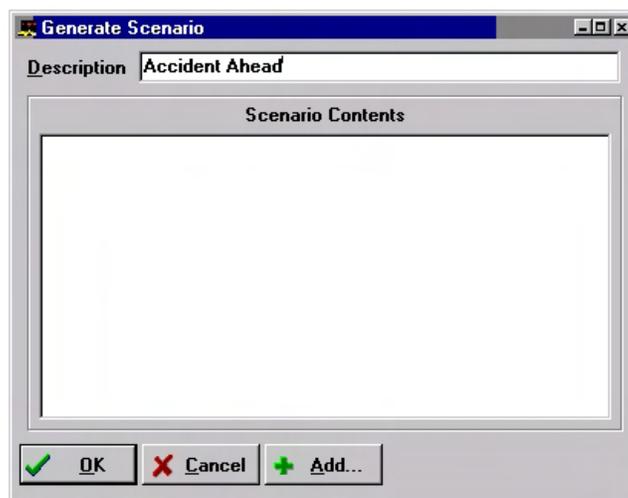
3. After clicking the Add button, the following screen will appear showing all of the signs available to be used for the Scenario.
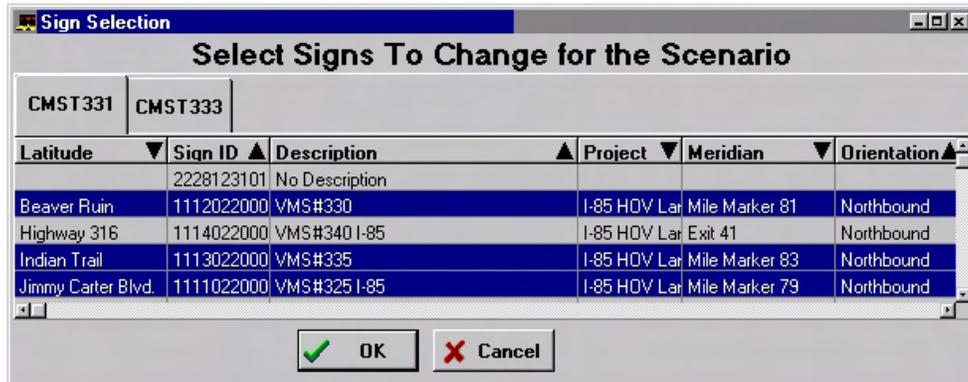
As with the standard functions of opening, closing, and deleting existing signs, select the signs that are desired to be included in the update. Do not include the sign you may use to supply the information to the others, as indicated above (the sign for Highway 316 is not highlighted because it is being used in this instruction as the supply unit). After selecting the signs to be transmitted to, click on the OK button.

4. After making the sign selections, the following screen will appear. As shown below, there are two available options for obtaining the information to be used to transmit to the signs included in the Scenario. The first is to use information already stored in another sign. The other option is to use information saved in a file on the computer (a .mbs file)

OPTION 1: Select a sign as source of the settings
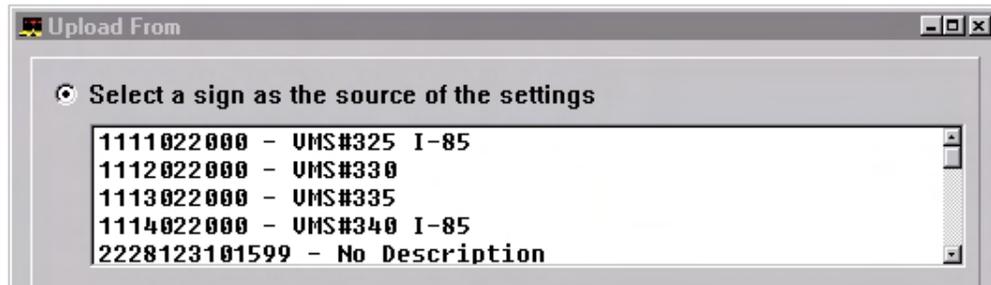
OPTION 2: Select File as the source of the settings

5. If you desire to use an existing sign as the supplier of the data, make sure that the "Select a sign as the source of the settings" button is filled as shown below. As shown below, use the mouse to highlight the sign to be used as the source. Then click the OK button at the bottom.
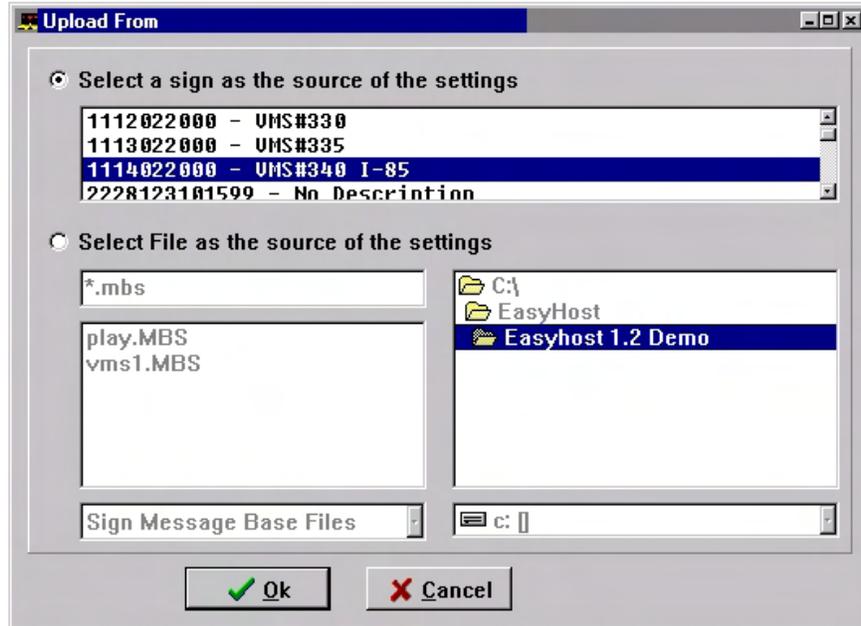
6. If you desire to use the second option of using a saved message base file stored in the computer as the source, instead of clicking and filling the sign source button, click and fill the "Select File as the source of the settings as shown below.
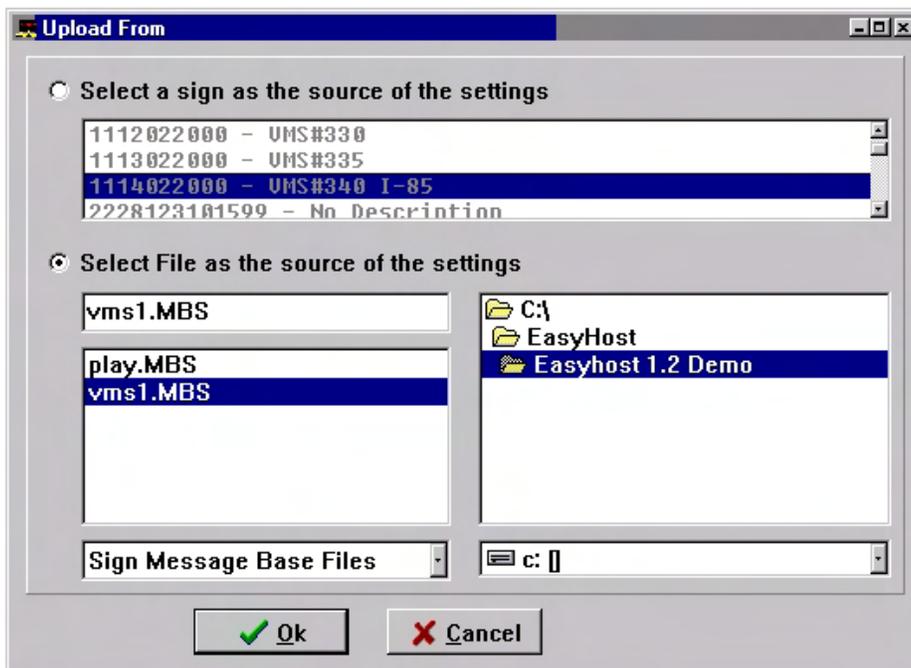
Highlight the file desired to be used as the source. As shown in the above dialogue, there are two files to choose from, play.mbs and vms1.mbs (these are only examples). After making your selection, click the OK button.

The fields and other items on this dialog are as follows:

Select sign from which to upload option button. If you want to upload information to a sign from EasyHost's copy of another sign, click on this option button.

Sign list. The list of signs defined in the EasyHost software will become enabled if you click on the **Select sign from which to upload** option button above. Click on the description of the sign in the list that has the information you want.

Select file from which to upload option button. If you want to upload information to a sign from a file saved on the EasyHost computer (through the Save As function of the Msg menu), click on this option button.

File list. The list of files on the EasyHost computer will become enabled if you click on the **Select file from which to upload** option button above. Click on the name of the file in which you saved the information you want.

File filter. The file filter field will become enabled if you click on the **Select file from which to upload** option button above. Below the list of files is a filtering mechanism to select which kind of files you want to view and choose from. Normally you will not need to use this, unless off line edits were saved to a file without the standard **.mbs** extension. If you saved changes to a file with a non-standard extension, click on the button with the down arrow and select "All Files."

Directory list. The directory list will become enabled if you click on the **Select file from which to upload** option button above. If the file you want to upload from is not in the current directory, you can use this directory list to find the directory in which your saved file resides. Double-click on a folder to see its contents. Only files with the **.mbs** extension will be shown, unless you use the File Filter to enable viewing of all file types.

Drive selector. The drive selector will become enabled if you click on the **Select file from which to upload** option button above. If the file that you want to load from resides on a different drive than that displayed, click on the button with the down arrow to see a drop-down list of the other drives on your system.

OK button. Once you have selected either a sign or a file from which to upload, click OK to proceed with choosing the specific items to be uploaded.

Cancel button. If you do not want to upload information to a sign, click on the Cancel button to close this dialog.

7. With either option selected as the source of the settings, after clicking the OK button, you will be presented with a screen as shown below.
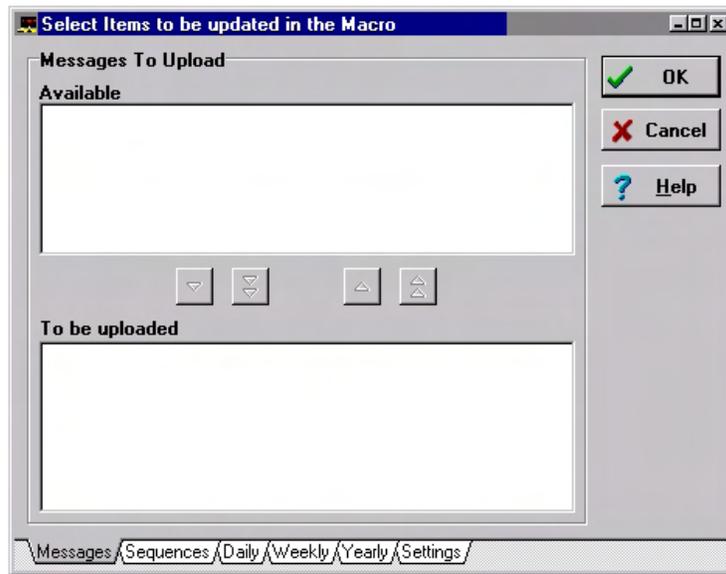
As with the Upload feature described in Chapter 5, you are given various options using the tabs to select specific messages, sequences, Schedules (Daily, Weekly, Yearly), and Settings to be used as the source data to be used to transmit.

8. As shown below, the Sequence Tab was selected. With that selection, the Available Preprogrammed Sequences To Upload are shown. The sequences shown within the list are those already preprogrammed in the sign selected as your source sign.
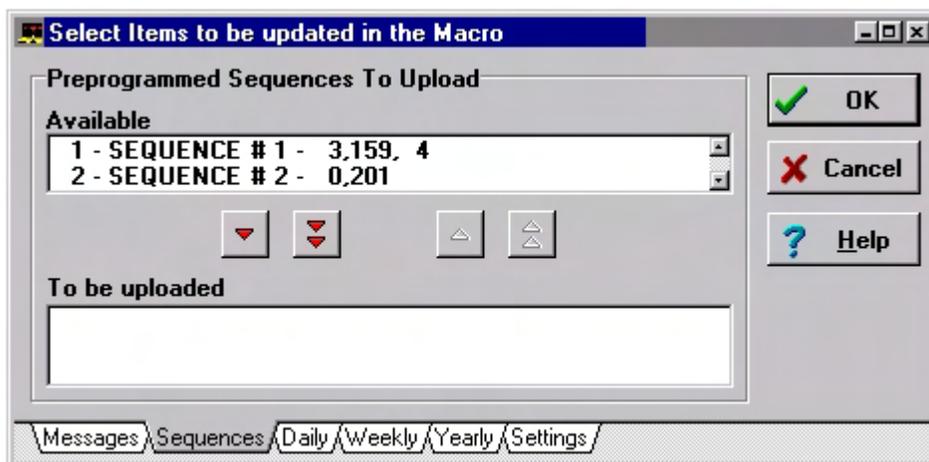
Highlight the Sequence(s) (or Messages, Schedules, or Settings) desired.
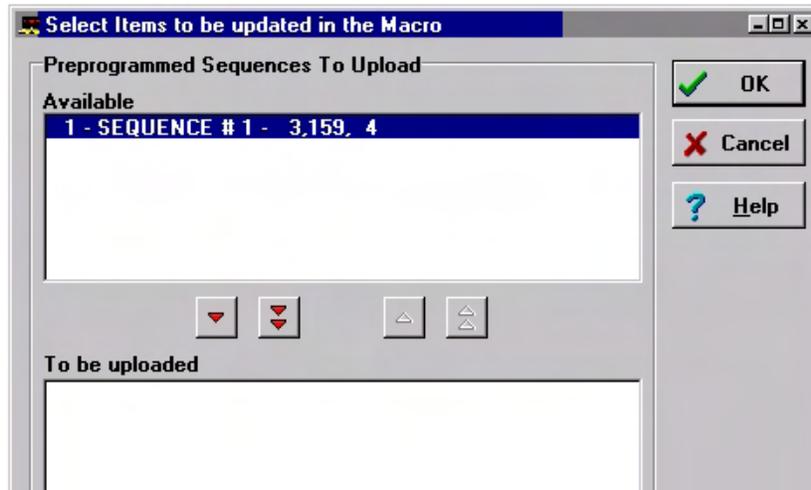
9. After making your selection(s), there are a series of buttons below the available box to be used in moving the information from Available to the Upload Section.

Move Selected Items button. This button is used to move those items you have selected in the "Available" list to the "To Be Uploaded" list. You can select one item at a time in the Available list, and click on the Move Selected Items button each time, or you can select multiple items in the Available list by holding down the [Ctrl] key each time you click on a desired item and then click on the Move Selected Items button to move the whole batch.

Move All Items button. This button is used to move the entire contents of the "Available" list to the "To Be Uploaded" list without having to select the individual items.

Return Selected Items button. This button is used to remove items from the "To Be Uploaded" list that you decide you don't want to upload after all. Select any items in the "To Be Uploaded" list that you *do not* want to upload, and then click on this button to return them to the Available list.

Return All Items button. This button is used to move the entire contents of the "To Be Uploaded" list back to the "Available" list without having to select the individual items.

10. As shown in the previous instruction, there is only one sequence to be used. Click on the single down button to move the data from available to the Upload section, as shown below. After making your selections and have clicked the buttons, the data to be used as the source is moved to the upload section and the down buttons become inactive, while the up buttons become active. After making the selections, click the OK button
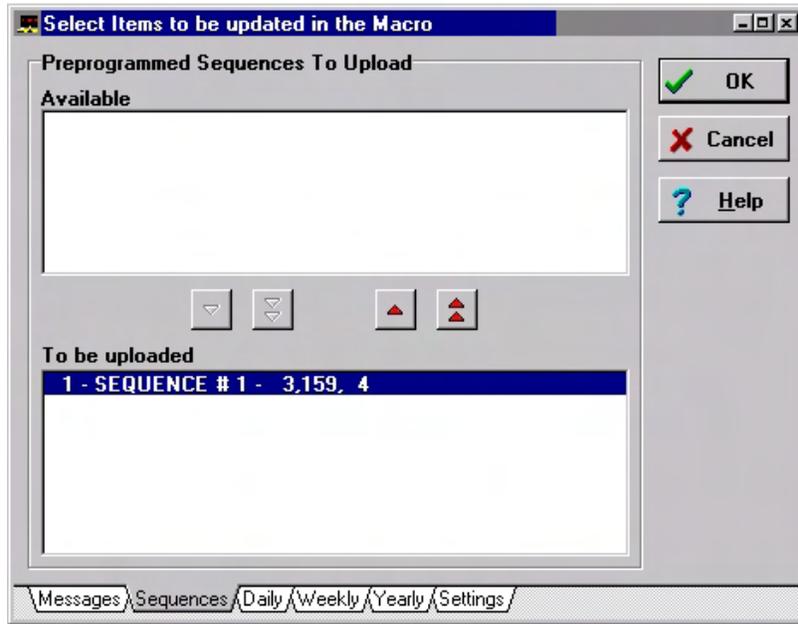
11. The following screen will appear, showing the signs selected and the data to be uploaded to them when the Scenario is implemented. If all the information is correct, click the OK button.
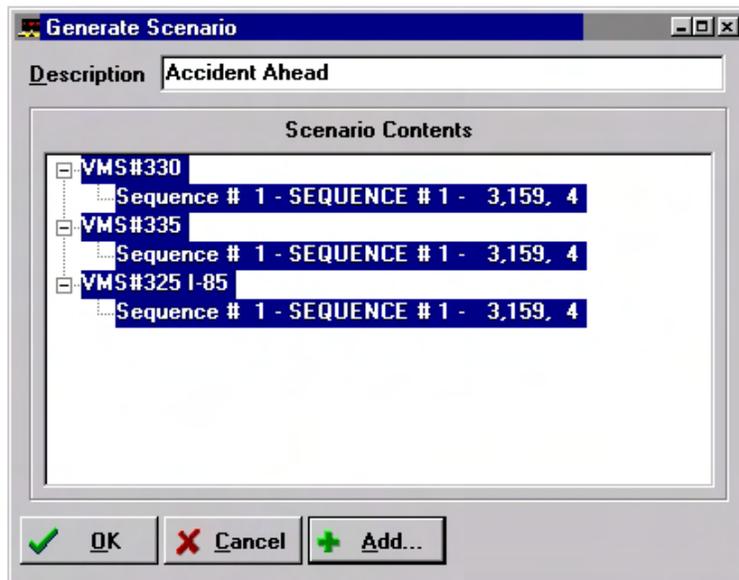
12. After clicking the OK button in the previous step, the following screen will appear to save.
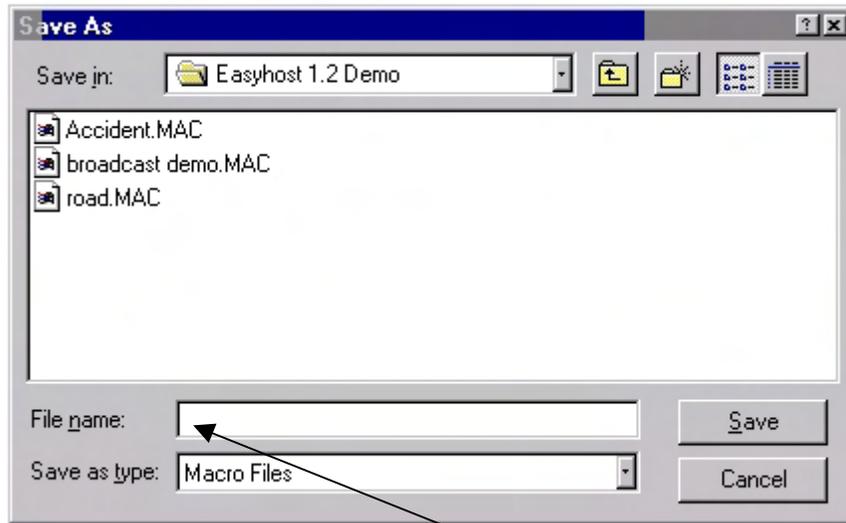
13. In the box, File Name, the cursor will appear flashing. Type in a name for the file that resembles the Scenario. After entering the file name, click on the Save button.
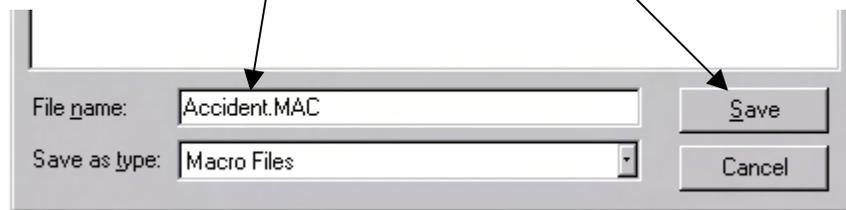
MODIFY ….

Selecting this function allows for the modification of existing scenarios created. Modifications to Scenarios include only the addition or deletion of signs from the Scenario.

1. From the Main Tool Bar, click on Scenario. Then click on Modify as shown below.

2.   The following screen appears to select the Scenario file requiring some modification. Locate the file from the list that you desire to modify. Highlight the Scenario file name (files with a .mac extension). You can either double click on the file name to open, or you can click the Open button.
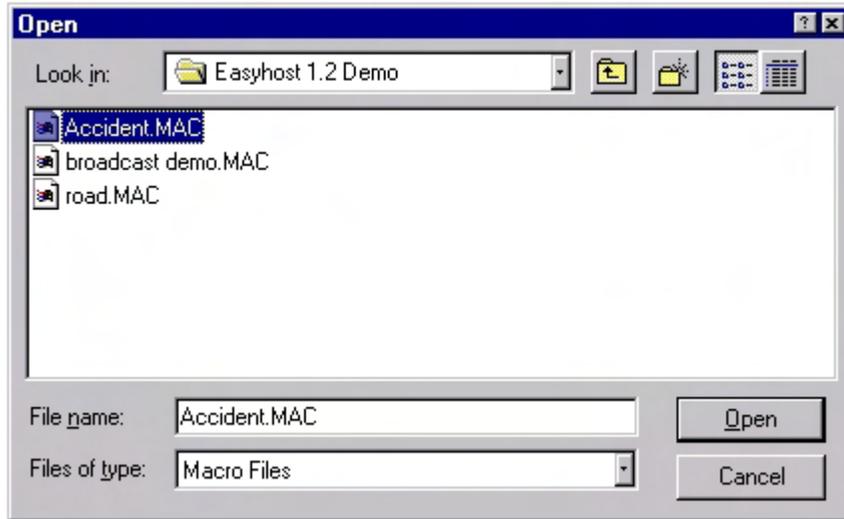
3.   The following screen appears.
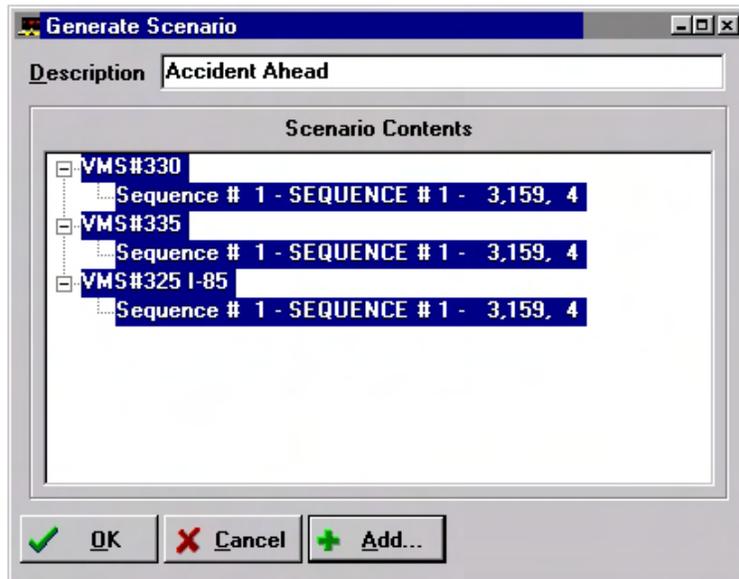
4. At this point, you can either add or delete sign(s) from the Scenario. If you desire to delete, highlight the sign to be deleted, then press the delete key. The sign selected will disappear from the list as shown in the dialogues below.
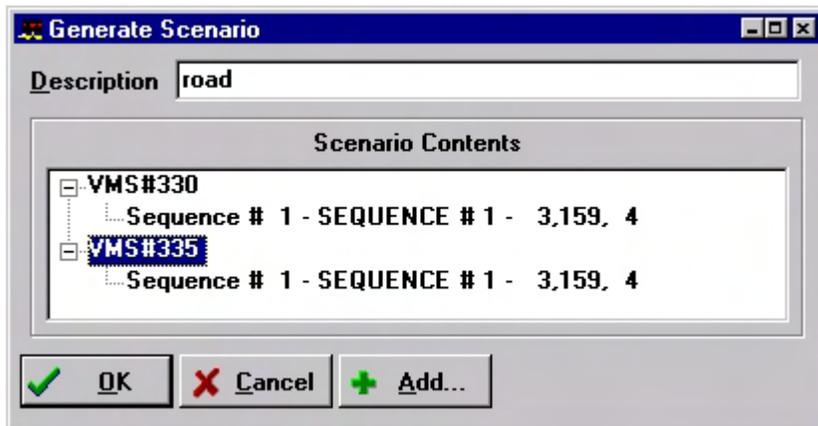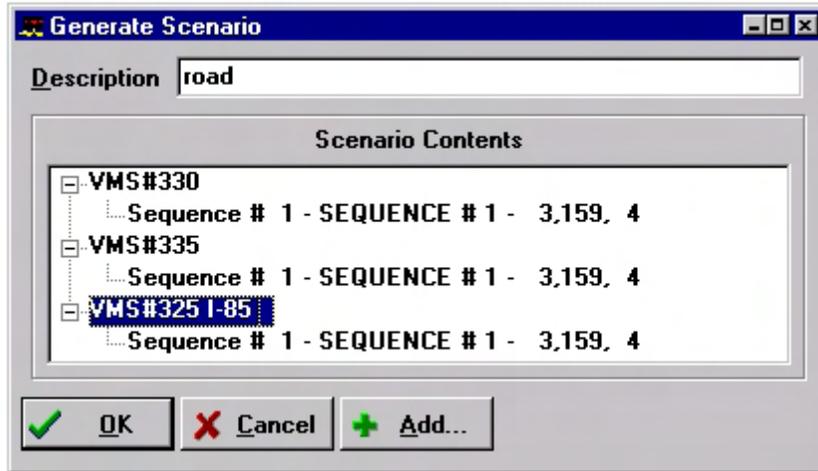
5. If after deleting a sign or signs from the Scenario, you elect that your choice was incorrect, then you can click the Cancel button. You will receive the following message.
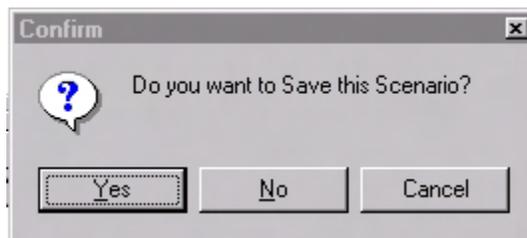
6. If you chose to Cancel the delete, then click on the No button.
7. If you click on the OK button to delete the sign from the Scenario, the following screen will appear. If you desire to leave the file name the same (example: accident.mac) , then press the Save button. Be aware that the original file will be overwritten. In the File Name box, the file name of the file originally opened to modify will be highlighted. At this point, if you desire to assign a new name to the modified file, highlight the current file name (accident.mac as shown) in the File Name box, type in new file name, then click on the Save button. Doing it this way will keep the original file intact.
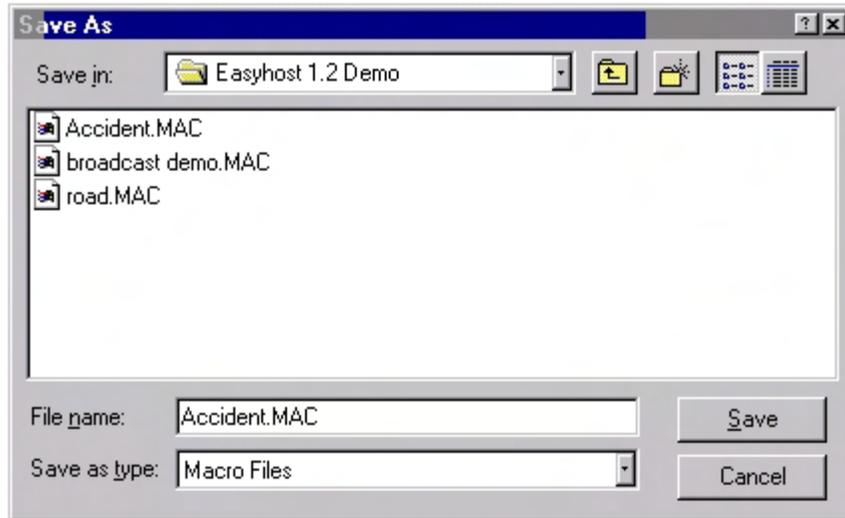
IMPLEMENT ….

Selecting this function allows users to contact a group of selected signs through created Scenarios to change their current information supplied from a source file or sign.

1. From the Main Tool Bar, click on Scenario. Then click on Implement as shown below.

2. The following screen appears to select the Implementation Scenario file to be used to transmit the information to the group of signs.
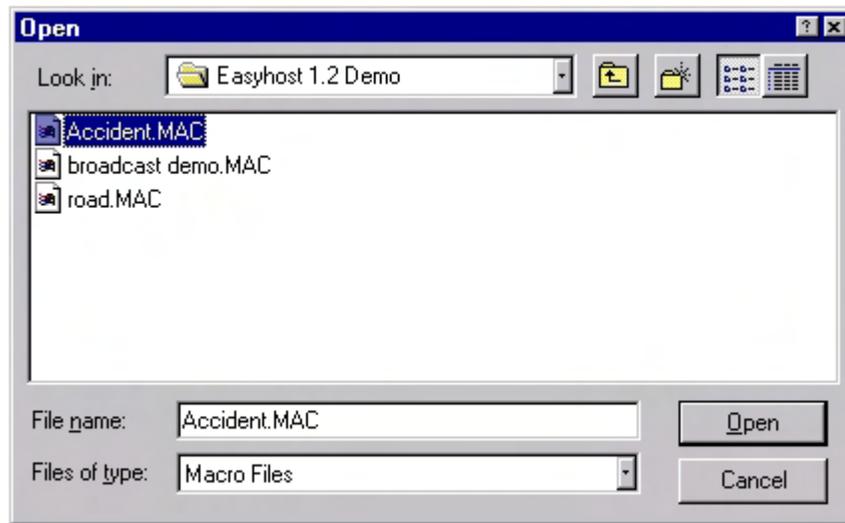
    You can open the Scenario file either by double clicking on the highlighted file name or by highlighting the file name, then clicking the Open button.

3. After selecting the Scenario to open, the following screen appears.
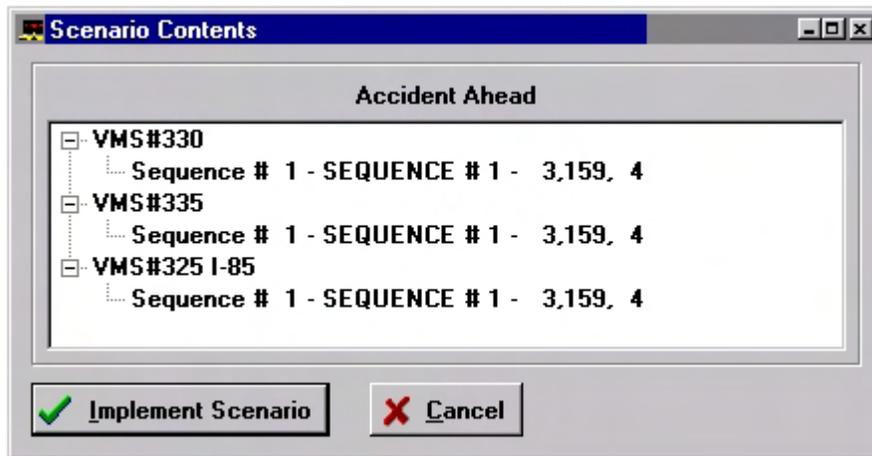
4. By clicking on the Implement Scenario Button , this will activate the Scenario to begin calling the first sign in the group. Once it makes contact, it will upload the information. The first sign in the group will then be tagged with a green checkmark to the left of the sign. The system will then go to the second sign of the group. It will make the same effort to make contact. If for some reason it can not make contact as per the parameters, it will pass over that sign and go to the next sign in the group. The sign passed over will be tagged with a red X. As with the first sign, it make contact with the third sign in the group and tags it with the green check, it will then go back to the sign passed over.

    The above described process will continue until all signs in the Scenario group have been contacted and updated. There is no limit to the amount of signs in a Scenario group.

HELP MENU

The Help menu is pictured below and contains the About function.

ABOUT…

Select this menu function to get version information about EasyHost:

C h a p t e r 5

SIGN WINDOW MENU FUNCTIONS

The menus of the active open sign window are **Msg**, **Sign**, and **Sched**.

MSG MENU

The Msg (Message) Menu contains the following functions.
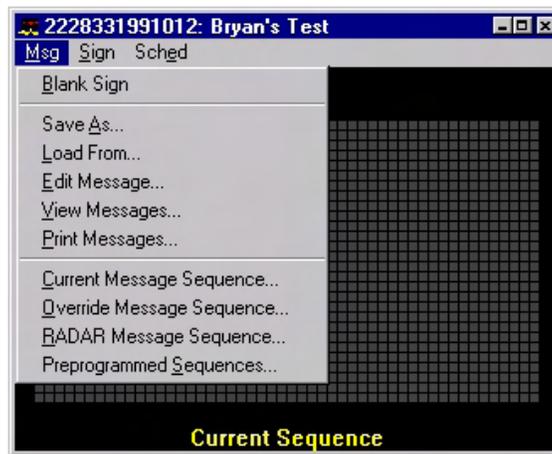
BLANK SIGN

The Blank Sign menu function will toggle (switch) between "blanking" the sign and resuming the message sequence. If there is:

- A check mark (✓) to the left of **Blank Sign**, then the sign is already blanked, and selecting the menu item will cause the message sequence to resume.

- No check mark next to **Blank Sign**, then a message sequence is being displayed, and selecting the menu item will cause the sign to be blanked.

SAVE AS...

The Save As function allows you save all the information about a sign to a file. Once the sign information is saved to a file, it can be loaded into another sign definition in the EasyHost software or it can be used to Upload directly to a physical sign. Having backups also helps to minimize the chances of data loss should a sign overwrite data in the EasyHost software that was not intended to be discarded.

Selecting Save As from the Msg menu displays the Save As file selection dialog:
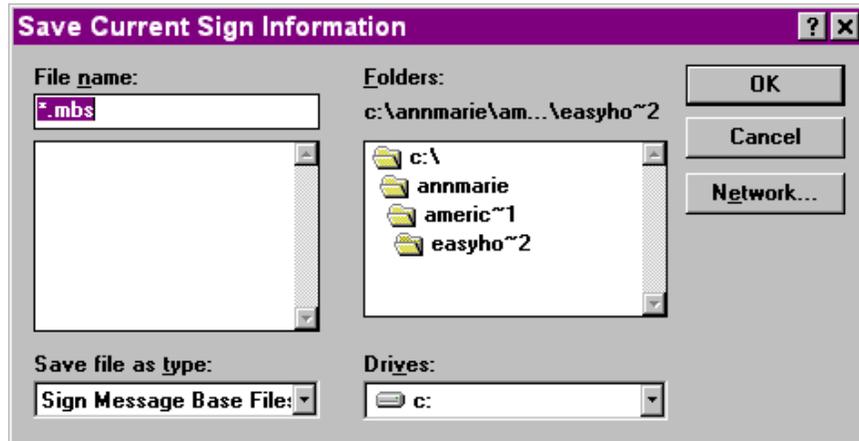
You can type in any filename to Save the sign information, but it is recommended that you use the standard **mbs** file extension and use a filename that ca be easily associated with the sign it represents.

LOAD FROM...

The Load From function allows you to read previously saved sign information (using the Save As function) into the open selected sign. This function gives you the ability to restore a sign in the EasyHost software to its previous contents should they get overwritten or lost. Load From also allows you to essentially transfer sign information from one sign in the EasyHost software to another. Selecting Load From from the Msg menu displays the Load From file selection dialog:
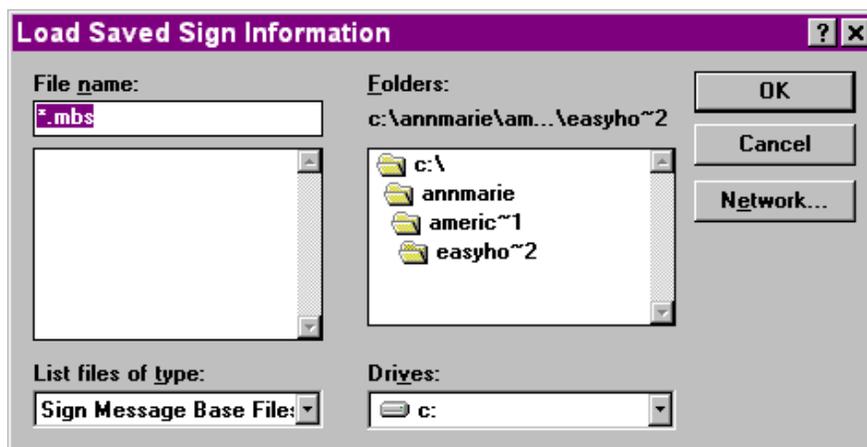
Find and select the previously saved file from which you want to load sign information.

EDIT MESSAGE...

This function allows you to create and edit individual messages to be displayed on the sign. When you select Edit Message, the following dialog will be displayed:
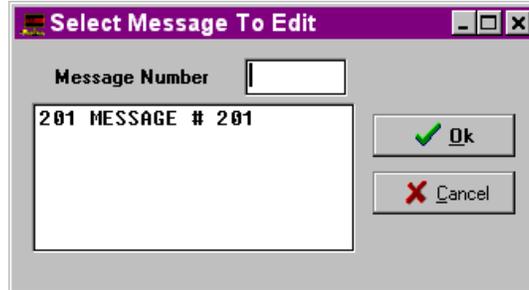
The fields and buttons on the Select Message to Edit dialog are as follows:

Message Number. This field can be used to identify which message you want to edit. You can type in a number in the following ranges:

- **201** to **400:** Use these Numbers to edit text messages
- **501** to **600:** Use these Numbers to edit graphic messages

Note: The numbers 0-200, 401-500, and 601-650 are reserved for messages preprogrammed into the signs during manufacture. To see a comprehensive list of the messages built into a sign, see the manual for that sign type, for example, the GP-432 Series manual, or connect to the sign from the EasyHost software, and the complete list of messages in the sign will be transmitted to your computer. You can then view them through any of the sequence-related menu items in the Msg menu for that sign, for example, through Current Message Sequence, Override Message Sequence, or RADAR Message Sequence.

Alternatively, you can select a message from the list by clicking on the desired message using the mouse.

OK button. Click on the OK button to edit the message whose number is displayed in the Message Number field.

Cancel button. Click on the Cancel button if you do not want to edit or create a message. Clicking Cancel will cause the Select Message to Edit dialog to close.

If you typed in a message number that does not yet exist but does fall into one of the above valid ranges, and you click OK, you will be prompted to create a message with that number, for example:

Clicking on the Yes button will bring up either the Edit Message dialog or the Edit Graphic Message dialog, depending on which range the message number is in.

Edit Message Dialog

The Edit Message Dialog is used to edit text messages, and will look similar to the following. Details will vary slightly depending on the sign model.
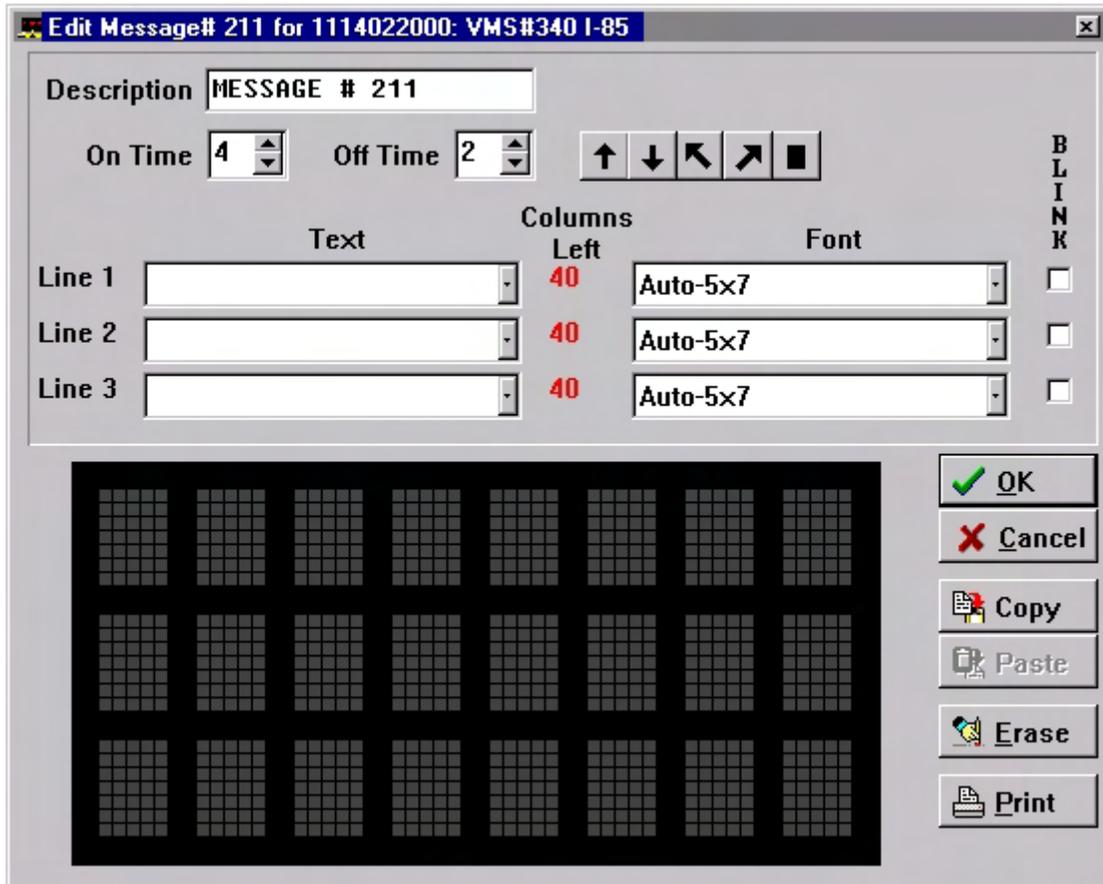
The fields, buttons, and other items on the Edit Message dialog are as follows:

Description. This field contains the description of the message. When you first create a message, a default description of "MESSAGE # number" is generated, and the text is highlighted. To create a more meaningful description, start typing, and the highlighted text will be replaced. The description can be composed of letters, numbers, and special characters, including spaces, and it has a maximum length of 15 characters.

On Time. The number in this field indicates the length of time that the LEDs should be illuminated (or that the dots should be flipped so that the yellow side is visible) when this particular message is displayed. Together, the values for On Time and Off time determine how fast the message flashes. On Time must be a number between 1 and 7.

Note: Once a message is in a sequence, the sequence's Message Rate also affects the speed at which the messages flash.

Off Time. The number in this field indicates the length of time that the LEDs should be off (or that the dots should be flipped so that the black side is showing) between the times the message is displayed. Together, the values for On Time and Off time determine how fast the message flashes. Off Time must be a number between 0 and 7. If the Off Time is zero, then the message will not flash but will be displayed continuously.

Arrow Speed Buttons. Adjacent to the On Time and Off Time fields, speed buttons for directional arrows and full display panels (as you would find in a checkerboard pattern). The speed buttons allow users to insert specific arrows or blocks within a message.

Text fields. These fields hold the text that makes up the message to be displayed on the sign. Text fields can each contain up to a maximum of 12 characters (letters, numbers, or symbols), but the maximum number of characters varies depending on sign model and the font being used. In the Text Fields, if you click on the box to the far right side of each text line, a drop-down list containing a blank, a left moving arrow, a right moving arrow, MPH radar reading, current date, and current time. These drop-down items allows the user to place commonly used pre-programmed messages on each of the lines without having to go through a long list.

Columns Left indicator. This display-only item indicates, for each line of text, how many dots are still available to the right of the text you have typed so far. When this number gets close to zero, there is no more room across the sign for any more text. The sample sign face, which changes dynamically as you type, also gives a visual indication of how much space you have remaining.

Font fields. These fields indicate, for each line of text, how big a typical character will be. For example, 4x7 means 4 dots across and 7 dots high. Some characters are naturally a little wider or narrower (for example, a "W" in 4x7 font will actually require 5 dots across, and an "I" will actually take up only 3 dots across), but the font size indicates the size of most characters.

Font choices available will vary from one sign type to another, but they will have the following formats:

- **Number1 x number2**: Most characters will be number1 across by number2 high, and there will be one column of space between characters.

- **Number1 x number2 Wide**: This font takes up the same amount of space as number1 x number2, but the characters are further apart – there are 2 columns separating adjacent characters.

- **Auto number1 x number2:** This font will attempt to be number1 across by number2 high, but will change dynamically as you type to accommodate all the characters you enter. The font and spacing will be chosen automatically for optimal readability and will also be affected by the number of lines being used.

- **Auto number1 x number2 Wide**: This font will attempt to be number1 across by number2 high and have 2 columns of space between characters, but will change dynamically as you type to accommodate all the characters you enter. The font and spacing will be chosen automatically for optimal readability and will also be affected by the number of lines being used.

Blink check boxes. Use these check boxes to emphasize individual lines of text within a message. If Blink is checked for a given line, then that line will blink more rapidly than the rest of the message (provided that the On Time is long enough for the difference to be detected).

Sample sign face. This area of the dialog shows a sample of what the message will look like with the options you have selected. The sample display changes dynamically as you type characters and choose different settings, but is only a sample. The changes you make will not be saved unless you click on the OK button.

OK button. Click on the OK button to save all the selected parameters for this message.

Cancel button. Click on the Cancel button to discard any changes you have made to the parameters of this message. If you click Cancel, the message will retain its former parameters. If this message has never been saved by clicking OK, then clicking Cancel will cause the whole message to be discarded.

Copy button. Click on the Copy button to save the contents of this message into memory. This function, combined with the Paste function, is useful for copying messages from one sign into another or for using an existing message as a starting point for creating another message with a similar format.

Paste button. Click on the Paste button to bring the message contents from memory into the message number you are editing. The existing contents of the message (if any) will be overwritten by the message that was stored into memory using the Copy button.

Erase button. Click on the Erase button to delete this message from the list of available messages.

Print button. Click on the Print button to print this individual message.

Edit Graphic Message Dialog

The Edit Graphic Message Dialog is used to edit graphic messages for full matrix signs, and will look similar to the following. The sample display will vary slightly depending on the sign model.

The fields, buttons, and other items on the Edit Graphic Message dialog are as follows:

Description. This field contains the description of the message. When you first create a message, a default description of "MESSAGE # number" is generated, and the text is highlighted. To create a more meaningful description, start typing, and the highlighted text will be replaced. The description can be composed of letters, numbers, and special characters, including spaces, and it has a maximum length of 15 characters.

On Time. The number in this field indicates the length of time that the LEDs should be illuminated when this particular message is displayed. Together, the values for On Time and Off time determine how fast the message flashes. On Time must be a number between 1 and 7.

Note: Once a message is in a sequence, the sequence's Message Rate also affects the speed at which the messages flash.

Off Time. The number in this field indicates the length of time that the LEDs should be off between the times the message is displayed. Together, the values for On Time and Off time determine how fast the message flashes. Off Time must be a number between 0 and 7. If the Off Time is zero, then the message will not flash but will be displayed continuously.

Rows. This field indicates the number of rows of dots being displayed. The default value for Rows is the height of the sign in dots. This number usually does not need to be changed.

Columns. This field indicates the number of columns of dots being displayed. The default value for Columns is the width of the sign in dots. This number usually does not need to be changed.

Clear Image button. This button is used to clear the entire existing graphic but keep editing the graphic message. This function essentially allows you to start over with a "blank slate" when you make a mistake.

X: horizontal position indicator. This value represents the number of dots from the left edge of the graphic display to where the mouse pointer is positioned. The X value and the Y value together indicate the exact location of the dot that you are pointing at with the mouse.

Y: vertical position indicator. This value represents the number of dots from the top edge of the graphic display to where the mouse pointer is positioned. The X value and the Y value together indicate the exact location of the dot that you are pointing at with the mouse.

Sample display and edit area. This area of the dialog allows you to draw a graphic message using the mouse. To turn a dot on, click one with the mouse and release the button. The dot under the mouse pointer will be turned on. Alternatively, you can click and hold the button down and drag the mouse to draw a line of "on" dots.

OK button. Click on the OK button to save the graphic message as displayed in the Sample display and edit area.

Cancel button. Click on the Cancel button to discard any changes you have made to this graphic message. If you click Cancel, the message will retain its former parameters. If this message has never been saved by clicking OK, then clicking Cancel will actually cause the whole message to be discarded.

Copy button. Click on the Copy button to save the contents of this message into memory. This function, combined with the Paste function, is useful for copying messages from one sign into another or for using an existing message as a starting point for creating another message with a similar format.

Paste button. Click on the Paste button to bring the message contents from memory into the message number you are editing. The existing contents of the message (if any) will be overwritten by the message that was stored into memory using the Copy button.

Erase button. Click on the Erase button to delete this message from the list of available messages.

Print button. Click on the Print button to print this individual message.

VIEW MESSAGES

This function allows users to view selected messages as they would appear on the sign before placing them in a specific sequence. When you select this feature, a dialogue box will appear with a complete list of all the message stored. Highlight the message desired or type in the correct number, then click on OK. A dialogue box will appear with a sample view of the message selected.

PRINT MESSAGES…

This function allows you to print all the messages contained in a sign (both built-in messages and custom messages) or a subset that you specify. When you select Print Messages, the following dialog will be displayed:
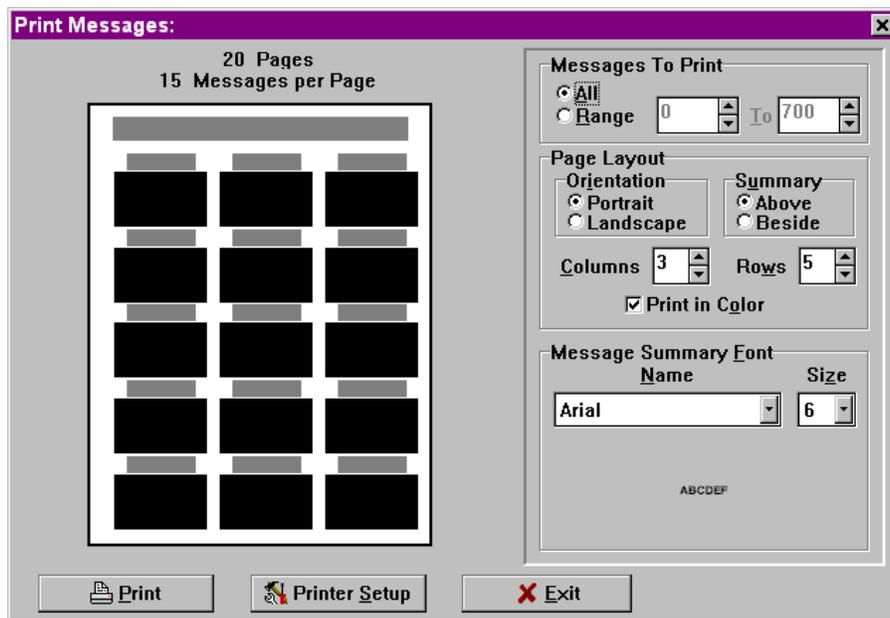
The fields, buttons, and other items on the Print Messages dialog are as follows:

Print Preview display area. The Print Preview display area shows a sample page representative of the selected print layout choices.

Messages to Print. This field is used to indicate which messages you want to print. The choices are All or a specified range of message numbers. Message numbers can range from 0 to 700.

Orientation. The orientation refers to the direction that printing will be done on the paper. The options are Portrait or Landscape. Portrait is longer top to bottom (as shown above), and Landscape is longer left to right.

Columns. This field indicates the number of messages to display horizontally across the page. As you change this value, the Print Preview display will change dynamically to reflect the result.

Rows. This field indicates the number of messages to display vertically down the page. As you change this value, the Print Preview display will change dynamically to reflect the result.

Summary.   This field allows you to specify whether to put summary information about each message above or beside the image of the message. Summary information consists of the message number and description, On and Off Times, the lines of text as they look in the Text fields of the Edit Message dialog, and fonts for each line.

Print in Color.   This checkbox allows you to select color printing. Uncheck the checkbox to print in black and white.

Message Summary Font Name. This field is used for selecting the font for printing the message summaries.

Message Summary Font Size. This field is used for selecting the size of the font for printing the message summaries.

Print button. Click on the Print button to begin printing the messages you have selected with the layout options you have specified.

Printer Setup button. Click on the Printer Setup button to display the Print Setup dialog described in the File Menu section of the Main Window Menu Functions covered at the beginning of this chapter.

Exit button. Use this button to exit the Print Messages dialog.

CURRENT MESSAGE SEQUENCE…

This function allows you to create, edit, or choose the sequence of messages to be displayed on the sign at the present time. When you select Current Message Sequence from the Msg menu of a sign window, the Edit Current Message Sequence dialog will be displayed:

The fields, buttons, and other items on the Edit Current Message Sequence dialog are as follows:

Message 1 through **Message 6** fields. These fields contain the descriptions of the individual messages in the sequence. Message 1 is displayed first, Message 2 second, and so on, until all non-empty message fields have been processed, and then the process begins again with Message 1. The messages cycle smoothly -- Message 1 is displayed immediately after the last message in the sequence. Empty message fields are ignored, so leaving empty message fields between utilized message fields will not cause a delay between their display. If you want to slow the rate at which messages are displayed, use the Message Rate field instead. To select a message for the current sequence, click on the message field itself (the blank white field or the description of the message you want to replace). The process for selecting messages for a sequence is covered below under the heading Selecting Messages for a Sequence.

Message Rate. This field determines how quickly the sequence of messages will be flashed. The message rate can be a number from 1 to 7, with 1 being the slowest and 7 being the fastest. You can either type in the rate number you want, or you can use the spin buttons to the right of the message rate field. To use the spin buttons, click on the up arrow to increase the rate number, and click on the down arrow to decrease the rate number.

Sample sign face display area. A representation of the Current Message Sequence is continuously displayed on a sample sign face in the lower left portion of the dialog. The messages are displayed at the rate specified in the Message Rate field.

OK button. To save the Current Message Sequence as it is being displayed on the sample sign face, click OK.

Copy From button.   This button allows you to pick an entire sequence of messages at once instead of picking each message individually. The list of sequences from which you can choose are those that you or other users have created and saved with the Preprogrammed Sequences function on the Msg menu.

Cancel button. The Cancel button allows you to exit the Edit Current Message Sequence dialog and discard any changes you have made to the Current Message Sequence during this editing session.

Print button.   Clicking the print button will initiate the printing of all the messages in the Current Message Sequence in the order that they appear.

Selecting messages for a sequence

To select a message for a message sequence, click on the message field itself (the blank white field or the description of the message you want to replace).

The following dialog will be displayed, but the title of the dialog will vary depending on which position (1 through 6) you are working with.


If you clicked on an empty message field, then the highlighted Message Number will be 999, which is used to represent no message. If you clicked on a message field containing a message, then the highlighted number will be that of the existing message in this position, and its description will be highlighted in the list. To select a different message, you can:

Type the number of the message you want to put in this position.

- Use the scroll bar to scroll down the list and look for the message you want to use. This message list will usually be longer than the message list you see when you select Edit Message from the Msg menu because it contains factory preprogrammed messages in addition to custom (user-defined) messages. Message numbers can range from 0 to 700, and are categorized as follows:

    - **0** to **200:** Factory preprogrammed text messages
    - **201** to **400:** Custom text messages
    - **401** to **500:** Factory preprogrammed graphic messages (Full Matrix Signs only)
    - **501** to **600:** Custom graphic messages (Full Matrix Signs only)
    - **601** to **650:** Factory preprogrammed animated messages (Full Matrix Signs only)
    - **651** to **700:** *Reserved for future use (Full Matrix Signs only)*

Once you have selected the message you want to insert into the sequence, click OK. If you selected 999, the following confirmation dialog will be displayed:
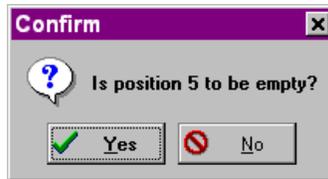
Selecting Yes will take you back to the appropriate Edit Message Sequence dialog, and the Message field for the position you were editing will be empty.

If you selected a valid message number, the Verify Message in Position dialog will be displayed, which will vary in appearance depending on whether you selected a text, graphic, or animated message.

Verify Message in Position dialog - text messages

The following is the text version of the dialog, which will be displayed if you selected a message number between 0 and 400:
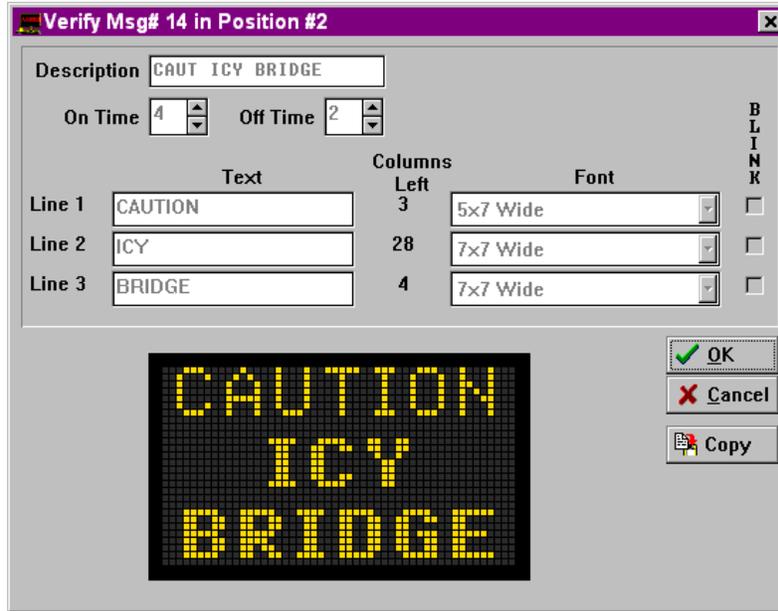
Although this dialog looks almost identical to the Edit Message dialog, it is read-only – you cannot edit the individual message from this dialog. The Verify Message in Position dialog is strictly for verifying that you are choosing the correct message for the message sequence you are currently editing. Clicking OK will select this text message for insertion into this position in the message sequence. Clicking Cancel will take you back to the appropriate Edit Message Sequence dialog without changing the sequence.

Verify Message in Position dialog - graphic messages

If, in the Select Message for Position # dialog, you selected a valid graphic message number (401 to 600), the dialog will look very similar to the Edit Graphic Message dialog, but will be read-only:
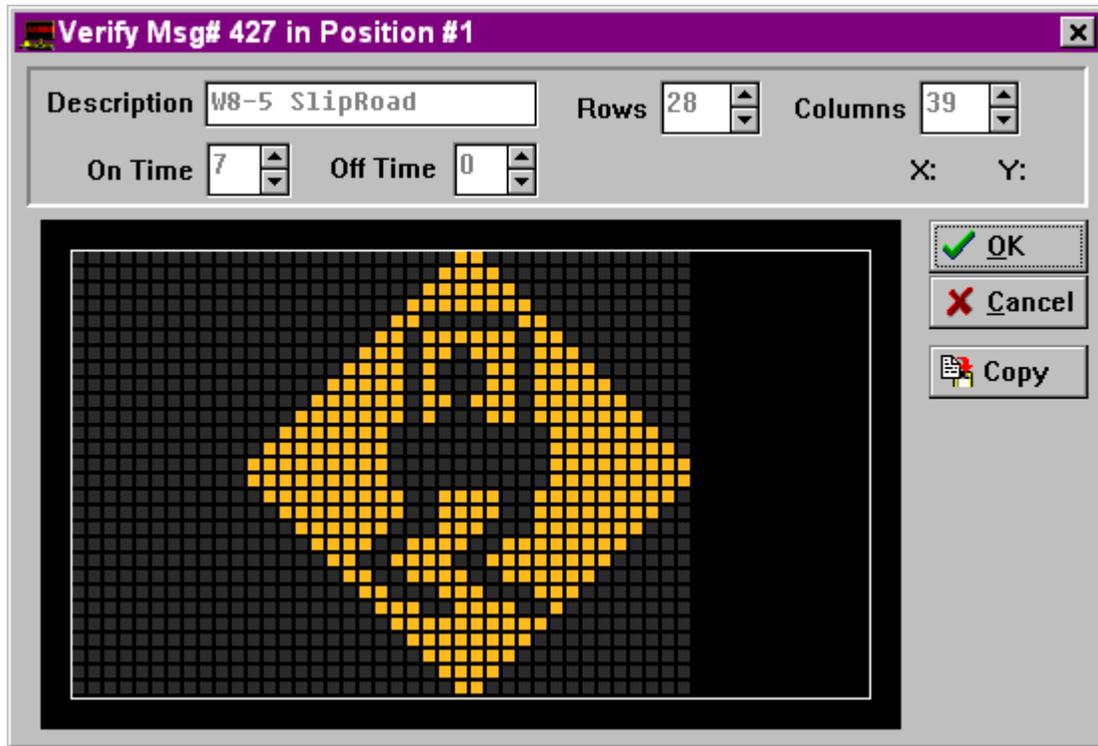
Since this dialog is for viewing purposes only, the Clear Image, Erase, and Print buttons are not included, as well as the X and Y values for the location of the mouse pointer. Clicking OK will select this graphic message for insertion into this position in the message sequence. Clicking Cancel will take you back to the appropriate Edit Message Sequence dialog without changing the sequence. A Copy button is also provided in the event that you want to put the contents of this graphic message into memory for later use in another message.

Verify Message in Position dialog - animated messages

If you selected a valid message number for an animated message (601-650), the Verify Message in Position dialog will look like the following:
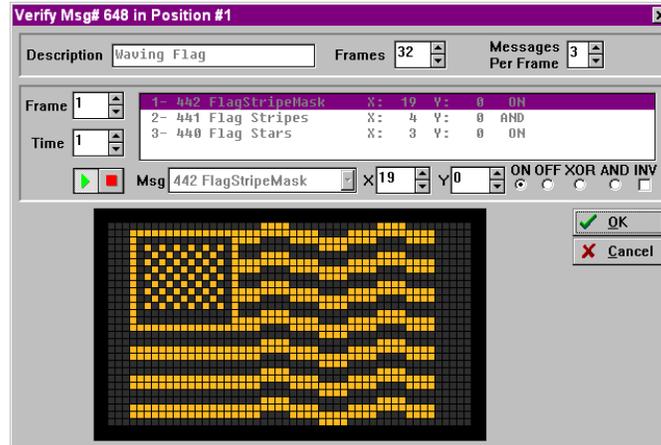
This dialog is read-only, but you can start and stop the animation using the buttons that resemble those on a cassette player:

Stop button. Click this button to stop playing the animation at the current frame.

Play button. Click this button to resume playing the animation from the current frame.

Clicking OK will select this animated message for insertion into this position in the message sequence. Clicking Cancel will take you back to the appropriate Edit Message Sequence dialog without changing the sequence.

OVERRIDE MESSAGE SEQUENCE...

This function allows you to create, edit, or choose the sequence of messages to be displayed on the sign in the event of an override condition. An override condition can be triggered by a device external to the sign such as a queue detector.

Note: This menu function will be available for sign models that utilize LED technology only. This menu function will *not* be available for the CMST300, CMST320 and CMST321 sign models (those utilizing flip-dot technology).

When you select Override Message Sequence from the Msg menu of a sign window, the Edit Override Message Sequence dialog will be displayed:

The fields, buttons, and other items on the Edit Override Message Sequence dialog are as follows:

Message 1 through **Message 6** fields. These fields contain the descriptions of the individual messages in the sequence. Message 1 is displayed first, Message 2 second, and so on, until all non-empty message fields have been processed, and then the process begins again with Message 1. The messages cycle smoothly -- Message 1 is displayed immediately after the last message in the sequence. Empty message fields are ignored, so leaving empty message fields between utilized message fields will not cause a delay between their display. To select a message for the override sequence, click on the message field itself (the blank white field or the description of the message you want to replace). The process for selecting messages for a sequence is covered in the previous section under the heading Selecting Messages for a Sequence.

Override Time Remaining. Use this field to specify the length of time to display the Override Message Sequence when the an override condition is in effect. The Override Time Remaining is specified in minutes, and can be as short as 1 minute or as long as 999999 minutes.

Sample sign face display area. A representation of the Override Message Sequence is continuously displayed on a sample sign face in the lower left portion of the dialog.

OK button. To save the Override Message Sequence as it is being displayed on the sample sign face, click OK.

Copy From button. This button allows you to pick an entire sequence of messages at once instead of picking each message individually. The list of sequences from which you can choose are those that you or other users have created and saved with the Preprogrammed Sequences function on the Msg menu.

Cancel button. The Cancel button allows you to exit the Edit Override Message Sequence dialog and discard any changes you have made to the Override Message Sequence during this editing session.

Print button. Clicking the print button will initiate the printing of all the messages in the Override Message Sequence in the order that they appear.

DEFAULT MESSAGE...

This function allows you to select a message to be the default message displayed on the sign when a problem at the sign prevents the display of the Current Message Sequence.

👉*Note:* This menu function will be available only for the CMST300, CMST320 and CMST321 sign models (those utilizing flip-dot technology).

Selecting Default Message from the Msg menu will bring up the Select Default Message dialog:
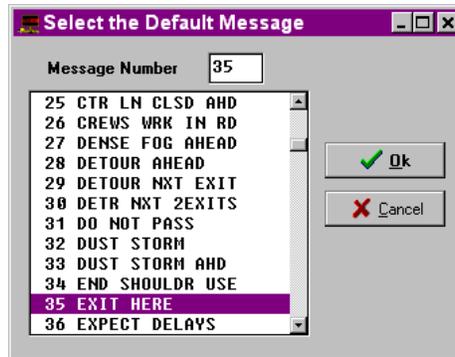
You can either type the desired message number using the keyboard, or you can select one from the list using the mouse. When you click OK, the Verify Default Message dialog is displayed:

The Verify Default Message dialog is almost identical to the Edit Message dialog but is read-only – you cannot edit the message from this dialog. This dialog is strictly for verifying that you are choosing the correct message as the default. Clicking OK will select this message as the default and close the dialog. Clicking Cancel will not select this message, but will close the dialog. A Copy button is also provided in the event that you want to put the contents of this message into memory for later use in another message.

RADAR MESSAGE SEQUENCE…

This function allows you to create, edit, or choose the sequence of messages to be displayed on the sign in the event that a RADAR transducer is connected to the sign and detects a speed over a specified trigger speed. The actual speed of an approaching vehicle can be displayed within the message sequence to show drivers how fast they are going.

Note: This menu function will be available for sign models that utilize only LED technology. This menu function will *not* be available for the CMST300, CMST320 and CMST321 sign models (those utilizing flip-dot technology).

When you select RADAR Message Sequence from the Msg menu of a sign window, the Edit RADAR Message Sequence dialog will be displayed:
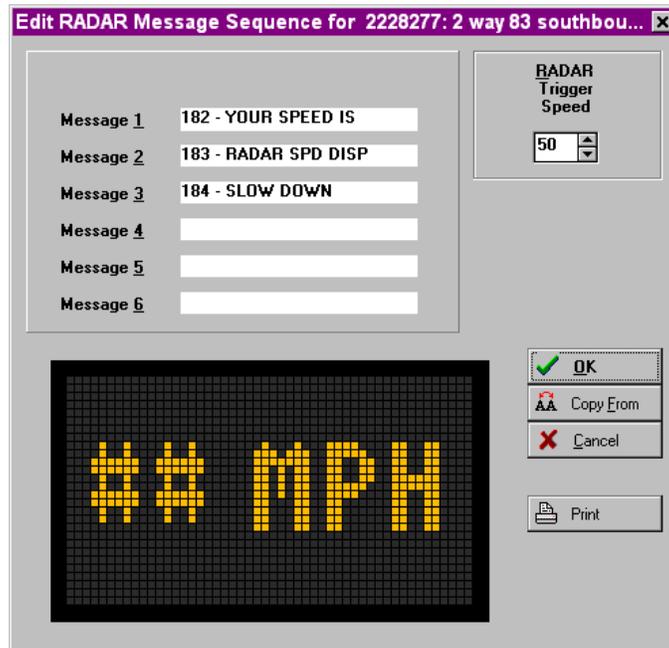
The fields, buttons, and other items on the Edit RADAR Message dialog are as follows:

Message 1 through **Message 6** fields. These fields contain the descriptions of the individual messages in the sequence. Message 1 is displayed first, Message 2 second, and so on, until all non-empty message fields have been processed, and then the process begins again with Message 1. The messages cycle smoothly -- Message 1 is displayed immediately after the last message in the sequence. Empty message fields are ignored, so leaving empty message fields between utilized message fields will not cause a delay between their display. To select a message for the RADAR sequence, click on the message field itself (the blank white field or the description of the message you want to replace). The process for selecting messages for a sequence is covered earlier in this chapter under the heading Selecting Messages for a Sequence.

Note: There are special factory preprogrammed messages that automatically incorporate the RADAR detected speed. Look for these in the 0-200 message number range. For example, for the CMST333 model, the following dialog lists some of the messages incorporating the RADAR reading.
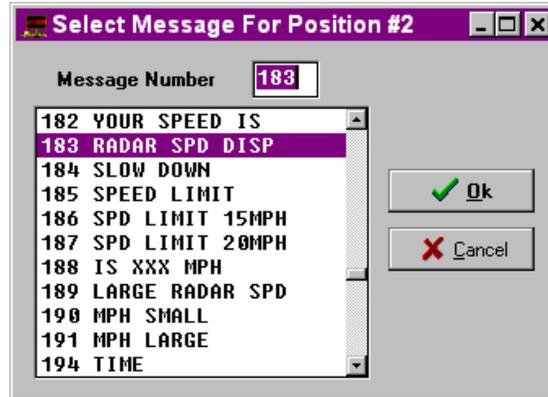
RADAR Trigger Speed. Use this field to specify the speed at which to trigger the RADAR Message Sequence. The RADAR Message Sequence will be displayed as long as the target vehicle is within the detection cone, and then the Current Message Sequence will resume.

Sample sign face display area. A representation of the RADAR Message Sequence is continuously displayed on a sample sign face in the lower left portion of the dialog.

OK button. To save the RADAR Message Sequence as it is being displayed on the sample sign face, click OK.

Copy From button. This button allows you to pick an entire sequence of messages at once instead of picking each message individually. The list of sequences from which you can choose are those that you or other users have created and saved with the Preprogrammed Sequences function on the Msg menu.

Cancel button. The Cancel button allows you to exit the Edit RADAR Message Sequence dialog and discard any changes you have made to the RADAR Message Sequence during this editing session.

Print button. Clicking the print button will initiate the printing of all the messages in the RADAR Message Sequence in the order that they appear.

RADAR MESSAGE…

This function allows you to select a single message (as opposed to a sequence of messages) to be displayed when a sign is triggered by RADAR.

Note: This menu function will be available only for the CMST300, CMST320 and CMST321 sign models (those utilizing flip-dot technology).

Signs that utilize flip-dot technology can display only one message (either built-in or custom) when triggered by RADAR, so the actual speed of an approaching vehicle cannot be displayed on a flip-dot sign, but a message such as "Maximum Speed 35 MPH" can be displayed instead.

When you select RADAR Message from the Msg menu of a sign window, the Select the RADAR Message dialog will be displayed:
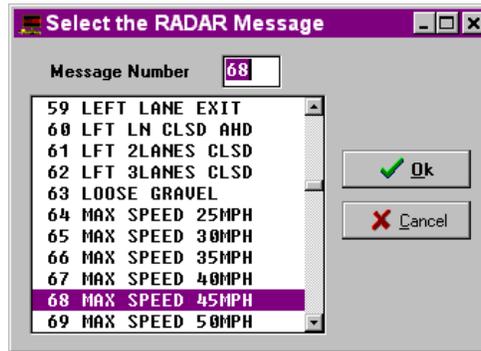
You can either type the desired message number using the keyboard, or you can select one from the list using the mouse. When you click OK, the Verify RADAR Message dialog is displayed:
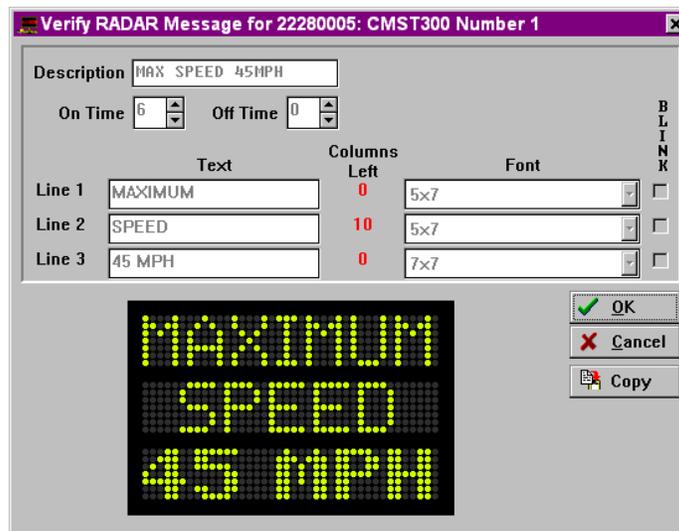
The Verify RADAR Message dialog is almost identical to the Edit Message dialog but is read-only – you cannot edit the message from this dialog. This dialog is strictly for verifying that you are choosing the correct message for RADAR triggering. Clicking OK will select this message as the RADAR message and close the dialog. Clicking Cancel will not select this message, but will close the dialog. A Copy button is also provided in the event that you want to put the contents of this message into memory for later use in another message.

PREPROGRAMMED SEQUENCES...

This function allows you to create and edit sequences of messages to be stored for future use as the Current Message Sequence, Override Message Sequence or RADAR Message Sequence. (The list of preprogrammed sequences comes up anytime you click on a **Copy From** button.)

When you select Preprogrammed Sequences from the Msg menu of a sign window, the Select Sequence dialog will be displayed:
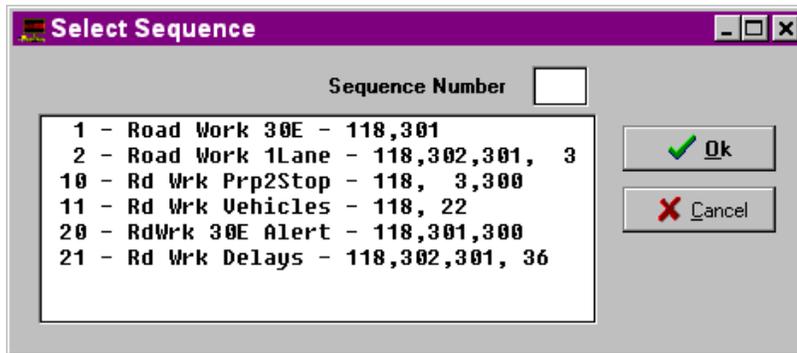
From this dialog, you can select a sequence to edit by clicking on it with the mouse or by typing the sequence number. To create a new sequence, type a number between 0 and 250 that is not already in use.

After clicking OK, the Edit Preprogrammed Sequence dialog is displayed:
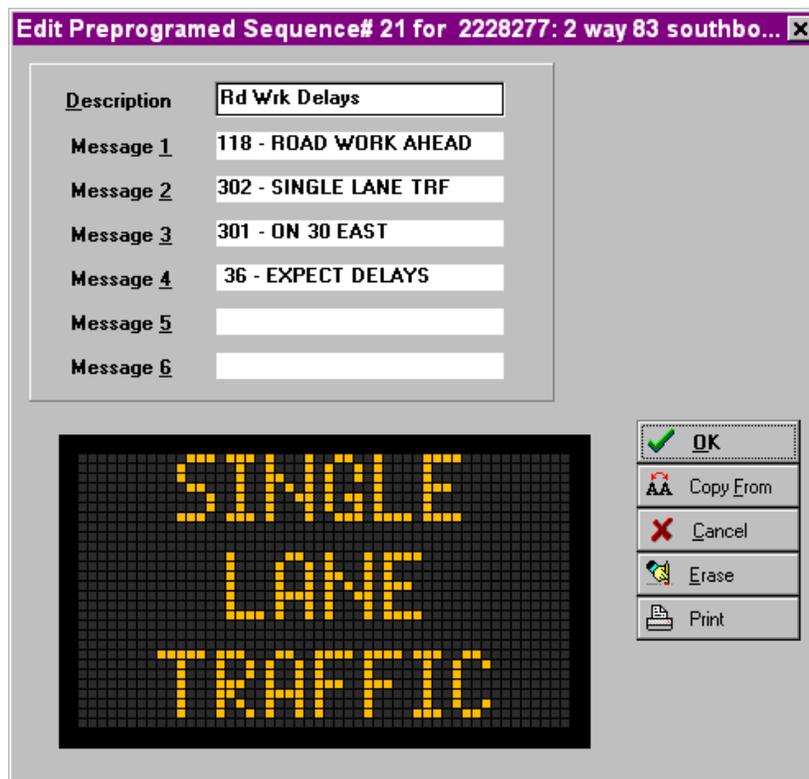
The fields, buttons, and other items on the Edit Preprogrammed Sequence dialog are as follows:

Message 1 through **Message 6** fields. These fields contain the descriptions of the individual messages in the sequence. Message 1 is displayed first, Message 2 second, and so on, until all non-empty message fields have been processed, and then the process begins again with Message 1. The messages cycle smoothly -- Message 1 is displayed immediately after the last message in the sequence. Empty message fields are ignored, so leaving empty message fields between utilized message fields will not cause a delay between their display. To select a message for this preprogrammed sequence, click on the message field itself (the blank white field or the description of the message you want to replace). The process for selecting messages for a sequence is covered earlier in this chapter under the heading Selecting Messages for a Sequence.

Sample sign face display area. A representation of this preprogrammed message sequence is continuously displayed on a sample sign face in the lower left portion of the dialog.

OK button. To save this preprogrammed message sequence as it is being displayed on the sample sign face, click OK.

Copy From button.   This button allows you to pick another preprogrammed message sequence from which to start editing. This is helpful if a preprogrammed message sequence already exists that is similar to the one you want to create.

Cancel button. The Cancel button allows you to exit the Edit Preprogrammed Sequence dialog and discard any changes you have made to this preprogrammed message sequence during this editing session. If you are creating a new preprogrammed message sequence and have never saved it by clicking OK, then Cancel will discard the entire sequence.

Erase button. The Erase button allows you to delete this preprogrammed message sequence and close the Edit Preprogrammed Sequence dialog.

Print button.   Clicking the Print button will initiate the printing of all the messages in this preprogrammed message sequence in the order that they appear.

SIGN MENU

The Sign Menu is displayed below and contains the following functions:
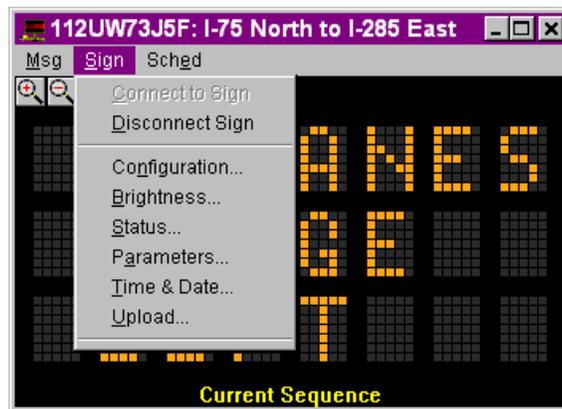
CONNECT TO SIGN

This function initiates a call to the sign. The result of selecting this function is exactly the same as that of clicking on the Contact Sign button on the speed button bar.

DISCONNECT SIGN...

This function terminates an active connection with a sign. The result of selecting this function is exactly the same as that of clicking on the Disconnect button on the speed button bar.

CONFIGURATION...

This function allows you to edit the sign configuration parameters you chose when creating a new sign in the EasyHost software.

☞ *Note:* You will not be able to see this menu option if you do not have Owner or Administrative privileges.

Selecting this function will cause the Characteristics page of the Sign Configuration dialog to be displayed:
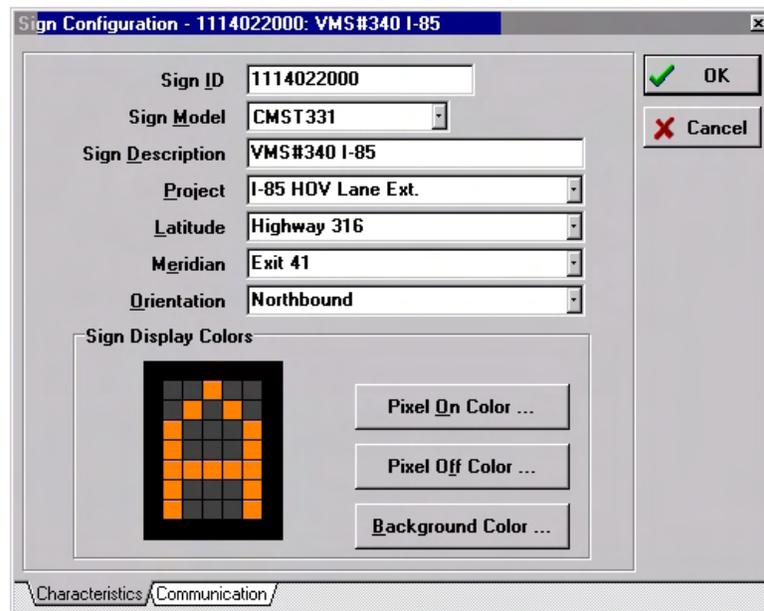
Characteristics page

Fields on the Characteristics page of the Sign Configuration dialog are as follows:

Sign ID. The Sign ID is a string of numbers and letters (up to 17) used to uniquely identify the sign. For portable signs, the Sign ID is usually taken from the Vehicle Identification Number. If the Sign ID is different from that which you specified when creating the sign window, this may be due to the fact that the Sign ID gets automatically corrected in the EasyHost software during a connection to the sign itself.

Sign Model. The sign model field is used to identify the sign's type. If, during a connection to the sign, EasyHost detects that the actual sign model is different from the model number in this field, EasyHost will automatically correct the Sign Model field value so that it corresponds to the real sign.

Sign Description.   The sign description field is used for giving the sign a meaningful description. For example, a sign's description might be "75 South entrance ramp from 285 East." Use a description that is meaningful for the sign that you are working with.

Project. The sign project field is used to indicate a specific project, state, and /or city. (This field can be left blank if so desired).

Latitude. The sign latitude field is used to indicate a specific highway, road name, or state road. (This field can be left blank if so desired).

Meridian. The sign meridian field is used to indicate a specific landmark or mile marker. (This field can be left blank if so desired).

Orientation. The sign orientation field is used to indicate a specific lane direction. (This field can be left blank if so desired).

Pixel On Color… button. Click on the Pixel On Color button if you want to change the color that is displayed to represent "on" pixels (illuminated LEDs or dots) in the sign window. The standard Windows Color dialog will be displayed from which you can select an alternate color.

Pixel Off Color… button. Click on the Pixel Off Color button if you want to change the color that is displayed to represent "off" pixels (darkened LEDs or dots) in the sign window. The standard Windows Color dialog will be displayed from which you can select an alternate color.

Background Color… button. Click on the Background Color button if you want to change the color that is displayed to represent the background of the sign (the area between the LEDs or dots) in the sign window. The standard Windows Color dialog will be displayed from which you can select an alternate color.

Communication page

To edit communication parameters in the sign's configuration, proceed to the Communication page of the Sign Configuration dialog by clicking on the tab at the bottom of the dialog that is labeled **Communication**:

The Communication page of the Sign Configuration dialog will be presented:
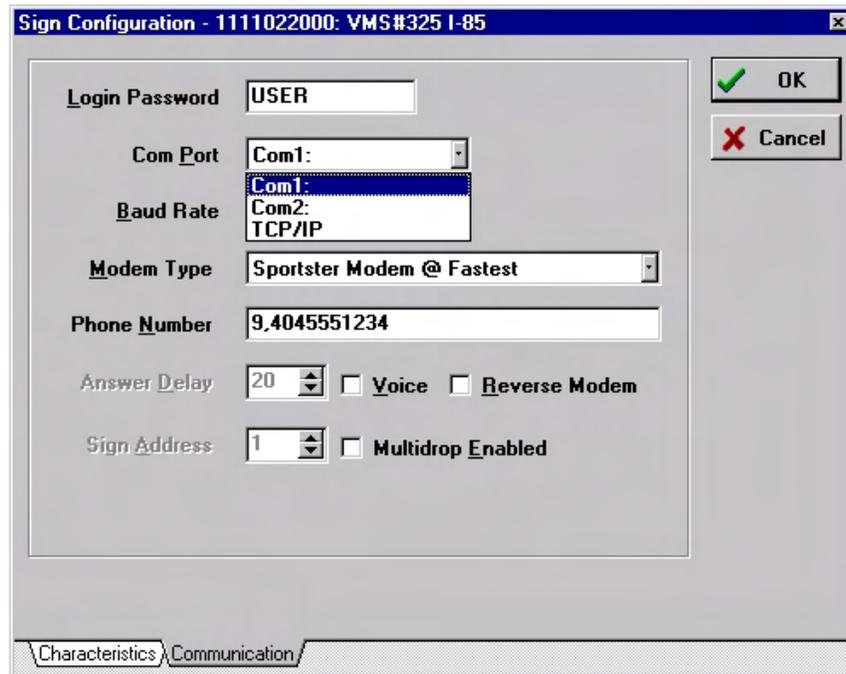
Fields on the Communication page of the Sign Configuration dialog are as follows:

Login Password. This field specifies the password to use to log into the sign when a connection is made.

Com Port. This field identifies which serial port to use when communicating with this sign. The Com Port field defaults to COM1. If you want to use a different serial port, click on the button with the down arrow on it to get a drop-down list of serial port numbers. As you will note, in the drop-down list, you have the option of the selection of COM1, COM2, and TCP/IP. The TCP/IP option is intended for signs connected through the Internet.

Baud Rate. The baud rate field specifies what speed should be used in attempting to communicate with this sign. Generally, you want to use the highest baud rate that the modem is capable of in order to minimize communication time and cost, especially when using a cellular connection. However, if you are having trouble communicating with a sign, you may want to lower the baud rate to improve the chances of a successful connection. If you want to specify a different baud rate, click on the button with the down arrow on it in the Baud rate field to get a drop-down list of standard baud rates from which to choose. If you are using a direct connect cable rather than a modem, select the baud rate that corresponds to the terminal port baud rate for the sign (4800 for most sign models – see your sign manual).

Modem Type. This field is used to identify the type of modem being used to communicate at the sign. If you are connecting directly to the sign with a cable instead of using a modem, select "Direct Connect." Otherwise, select a modem type from the drop-down list by clicking on the button with the down arrow on it in the Modem type field.

Phone Number. This field will only become enabled if the Modem Type is something other than "Direct Connect." Type in the phone number of the phone line or cellular modem at the sign. This phone number will be used when attempting to call the sign. If you selected the TCP/IP option, instead of using a standard type telephone number, the following is an example of the numeric input that is required in this field with the symbol "#" indicating a number or character (###.###.###.###.PPP). PPP refers to the port number on the modem used to access the CPU, usually 2000. Refer to the page of the sign configuration shown below.
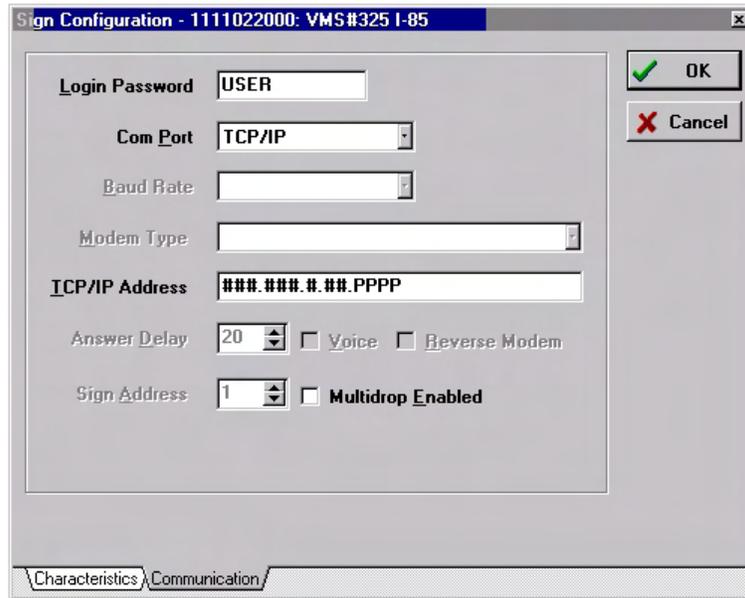
Answer Delay. This field will only become enabled if the Modem Type is something other than "Direct Connect." The Answer Delay field is used to specify how long a sign should wait before answering a call.

Voice. This field will only become enabled if the Modem Type is something other than "Direct Connect." This checkbox indicates whether or not the modem is voice-enabled.

Reverse Modem. This field will only become enabled if the Modem Type is something other than "Direct Connect."

Sign Address. This field will only become enabled if the Multidrop Enabled checkbox is checked. This field must contain a unique address for the sign. A valid address consists of a number between 1 and 255. You can type in a number using the keyboard, or you can select a number by using the mouse to click on the up or down spin buttons.

Multidrop Enabled checkbox. This checkbox is used to indicate that this sign will be sharing a communications port on the host computer with 1 or more other signs. This capability requires a special hardware option from the manufacturer. Since multiple signs will be communicating through the same port, they must be uniquely identified in the Sign Address field.
<u>NOTE</u>: When using a non-telephone dial-up communications system (e.g., radio, fiber optic, or hardware system) in a field device such as a portable message sign, the Multidrop <u>E</u>nable box should be checked. If only one sign is being used, the default sign address, '1', can be used for communication between the central host and the field device. When there is more than one field device, each device must have its own unique address. The field device will execute the commands set as it was received from the latest commander (Local keyboard terminal or remote central host computer).

OK button. Click on the OK button to save all the selected Sign Configuration choices and to close the dialog. Clicking OK on either the Communication page or the Characteristics page will save the information from both.

Cancel button. Click on the Cancel button to discard any changes you have made to the Sign Configuration dialog pages and to close the dialog.

BRIGHTNESS…

This function allows you to set the brightness level for the lights in a sign. When you select Brightness from the Sign menu of a sign window, the Brightness dialog is displayed as shown below. The first display shown is for LED signs with 9 brightness levels, and the second is for Hybrid (flip-dot) signs with 7 brightness levels.
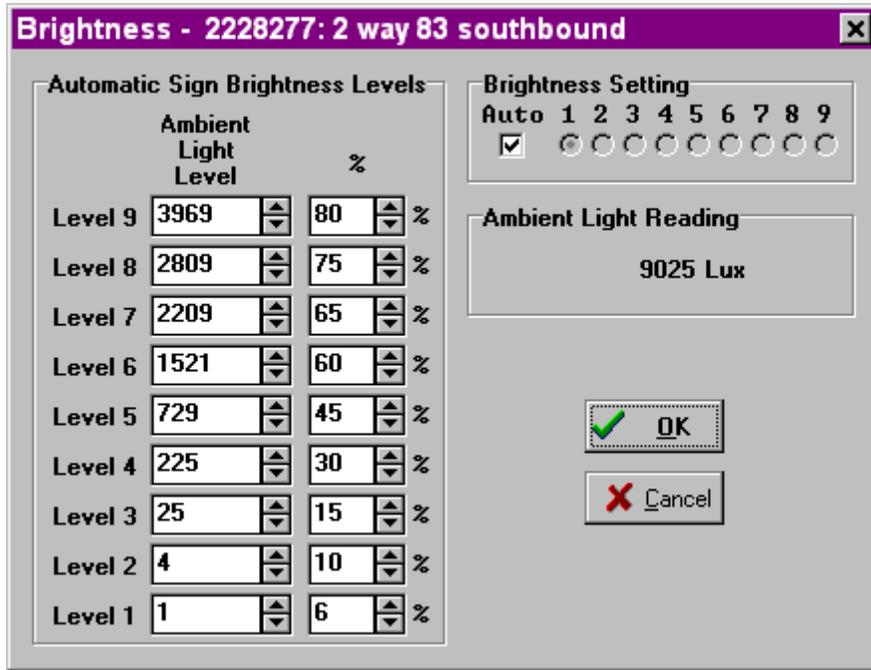
The fields, buttons, and other items on the Brightness dialog are as follows:

Automatic Sign Brightness Levels. This area of the dialog allows you to specify the percentage of total bulb brightness to use based on ambient light level readings when the Brightness Setting is set to "Auto". If the ambient light is very bright, the bulbs also need to be bright in order to be seen, whereas if there is very little ambient light, a low percentage of bulb brightness is sufficient.

Ambient Light Level fields. Use these fields to specify the ambient light levels to trigger bulb brightness changes. Ambient Light Levels are numbers measured in Lux, and they can either be typed in using the keyboard or selected using the up and down spin buttons.

Note: Because the human eye detects changes in brightness in a non-linear fashion, the spin buttons are preprogrammed to change the ambient light level values in more useful non-linear increments. If you type in a value that falls between two of the predetermined values, the field will be automatically adjusted to the closest of the two numbers.

Level 9 is used to for the brightest setting on Led signs, Level 7 for Hybrid signs, and level 1 is used for the least bright setting.

% fields. Use these fields to specify the percentage of total bulb brightness to use when the corresponding ambient light level is detected and the Brightness Setting is set to "Auto". Level 9 (7 for Hybrids) is used to for the highest percentage, and level 1 is used for the lowest percentage.

Brightness Setting option. The Brightness Setting option can either be set to "Auto" or to a fixed number. If Auto is selected, the Ambient Light Level trigger values are used to determine what percentage of bulb brightness to use. If a fixed number is selected, then the sign will be set to that predetermined brightness level regardless of how light or dark the environment is.

Ambient Light Reading. This field reflects the actual ambient light level detected at the sign in Lux. When the Brightness Setting is "Auto", the ambient light reading is used with the Automatic Sign Brightness Levels table (sometimes called the "dim table") to set bulb illumination percentage.

OK button. To save the any changes you have made to the brightness parameters and options, click OK.

Cancel button. The Cancel button allows you to exit the Brightness dialog and discard any changes you have made since opening the dialog.

STATUS...

This function allows you to look at status information about a sign's internal control systems and about the communication session during a live connection to a sign. When you select Status from the Sign menu of a sign window, the Live Sign Status dialog is displayed, which varies in appearance from one sign model to another. The following example is for a CMS-331 model.
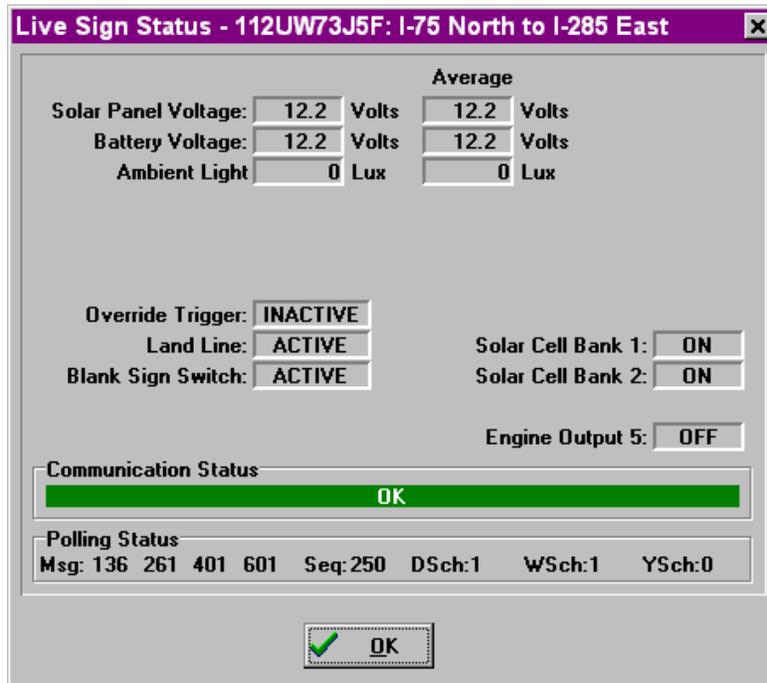
The fields and other items on the Live Sign Status dialog are as follows:

Communication Status

The communication status indicates the state of the communication link to the sign. It may contain any of the following values:

- **OK.** EasyHost is connected to the sign and no errors have occurred.

- **NOT CONNECTED TO THE SIGN.** EasyHost is off-line with this sign so the information shown for this sign may not reflect the actual condition of the sign.

- **TIME OUT.** EasyHost is connected to the sign, but there was no response to the last transmission to the sign.

- **CRC ERROR.** EasyHost is connected to the sign, but the last response from the sign was garbled.

- **RETRANSMISSION REQUESTED.** The sign requested that EasyHost repeat the last transmission because it was garbled.

Polling Status

The Polling Status area shows you the information that EasyHost is requesting from the sign. EasyHost polls the Messages, Sequences, and Schedules in the sign so that the local copy of the sign on your computer will be accurate. The polling information is broken down as follows:

Msg numbers. These numbers indicate the progress in polling the messages in the sign. The polling of messages is done in four groups simultaneously:

- **Factory Text Messages**. This field will range from 0 to 200. It will normally only change while the communication status is "Connected". This field may be active when the status is "Interrogating" if any of the factory text messages are customized from the factory. Once these changes are interrogated, this field will return to 0 until the other changes are interrogated.

- **User Text Messages**. This field will range from 201 to 400. If the interrogation of the changes to the User Text Messages completes before the other changes in the sign are interrogated, this field will return to 201 until the other changes are interrogated.

- **Graphic Messages**. This Field will range from 401 to 600. These messages will only be interrogated if the sign supports graphics. If the interrogation of the changes to the Graphic Messages completes before the other changes in the sign are interrogated, this field will return to 401 until the other changes are interrogated.

- **Animated Messages**. This Field will range from 601 to 700. These messages will only be interrogated if the sign supports graphics. If the interrogation of the changes to the Animated Messages completes before the other changes in the sign are interrogated, this field will return to 401 until the other changes are interrogated.

Seq Number. This number indicates the progress in polling the preprogrammed sequences in the sign. This Field will range from 0 to 250. The sequences will only be interrogated if the sign stores preprogrammed sequences locally. If the interrogation completes before the other changes in the sign are interrogated, this field will return to 0 until the other changes are interrogated.

DSch Number. This number indicates the progress in polling the daily schedules in the sign. This Field will range from 0 to 29. If the interrogation completes before the other changes in the sign are interrogated, this field will return to 0 until the other changes are interrogated.

WSch Number. This number indicates the progress in polling the weekly schedules in the sign. This Field will range from 0 to 19. If the interrogation completes before the other changes in the sign are interrogated, this field will return to 0 until the other changes are interrogated.

YSch Number. This number indicates the progress in polling the yearly schedule events in the sign. This Field will range from 0 to 19. If the interrogation completes before the other changes in the sign are interrogated, this field will return to 0 until the other changes are interrogated.

Sign Status

The rest of the screen shows the actual operating condition of the sign's systems. The systems that are displayed for a sign are dependent on the model of the sign and the optional equipment that may or may not be installed on the sign. The voltages and light readings that are monitored are displayed in two columns, one for the unfiltered instantaneous reading, another for a filtered average over the last few minutes. The filtered average values are used by the sign for control of its on-board systems. The unfiltered readings are useful in determining transient conditions such as headlights and cloud cover.

GP432 and GP232 models

LED Supply Voltage. These fields show the regulated voltage to the LEDs.

Battery Voltage.   In a trailer-mounted application these fields show the voltage of the battery pack. In stationary or truck-mounted applications these are the voltage of the 12V DC supply to the sign electronics.

Ambient Light. These fields show the measurement of overall brightness of the area surrounding the sign. The values are used to determine how bright to make the LEDs so as to be readable but not waste battery power or cause motorist discomfort or distraction.

Override Trigger. This field indicates the status of an **optional** dry contact input. When the Override Trigger is active, the Override Message Sequence will be displayed instead of the Current Message Sequence. This allows third party equipment to interface with the sign and modify which messages are displayed.

Blank Sign Switch. This field indicates the state of a switch on the pedestal at the sign which allows the local operator to blank the sign display without a local keyboard. This switch is **optional** on a GP432/GP232. Switching from inactive to active causes the sign to blank its display. Switching from active to inactive causes the sign to resume displaying messages. This functionality is identical to the Blank Sign function in the EasyHost Msg menu for a sign. Either method (the switch on the sign pedestal or the Blank Sign function in the EasyHost software) may be used to override the other.

CMST331, CMST332, and CST333 Models

Solar Panel Voltage. These fields show the voltage available at the panel of solar cells which are used to generate electricity to charge the batteries and operate the sign. The sign will connect and disconnect the Solar Panel to and from the battery pack in order to avoid overcharging the batteries and to avoid discharging the batteries into the solar cell during darkness. When the sign is not actively charging the batteries, this voltage may reach as high as 22 volts.

Battery Voltage. These fields show the voltage of the battery pack.

Ambient Light. These fields show the measurement of overall brightness of the area surrounding the sign. The values are used to determine how bright to make the LEDs so as to be readable but not waste battery power or cause motorist discomfort or distraction.

Override Trigger. This field indicates the status of an **optional** dry contact input. When the Override Trigger is active, the Override Message Sequence will be displayed instead of the Current Message Sequence. This allows third party equipment to interface with the sign and modify which messages are displayed.

Land Line. This field shows the status of the 120 volt input used to charge the batteries.

Blank Sign Switch. This field indicates the state of a switch on the pedestal at the sign which allows the local operator to blank the sign display without a local keyboard. Switching from inactive to active causes the sign to blank its display. Switching from active to inactive causes the sign to resume displaying messages. This functionality is identical to the Blank Sign function in the EasyHost Msg menu for a sign. Either method (the switch on the sign pedestal or the Blank Sign function in the EasyHost software) may be used to override the other.

Solar Cell Bank 1 / Solar Cell Bank 2. These fields indicate whether the sign is charging the battery pack from either half of the Solar Panel Array. A value of "ON" indicates that the sign has connected those Solar Cells to the battery pack.

Engine Output 5. This field…

CMST320 and CMST321 models

Dot Supply Voltage.   These fields show the regulated voltage to the flip dots.

Battery Voltage. These fields show the voltage of the battery pack.

Ambient Light. These fields show the measurement of overall brightness of the area surrounding the sign. The values are used to determine how bright to make the LEDs so as to be readable but not waste battery power or cause motorist discomfort or distraction.

Override Trigger. This field indicates the status of an **optional** dry contact input. When the Override Trigger is active, the current message sequence will be replaced by a single static Override Message. This allows third party equipment to interface with the sign and modify which messages are displayed.

Land Line. This field shows the status of the 120 volt input used to charge the batteries.

CMST300 model

Dot Supply Voltage.   These fields show the regulated voltage to the Flip dots.

Battery Voltage. These fields show the voltage of the battery pack.

Ambient Light. These fields show the measurement of the overall brightness of the area surrounding the sign and are used to determine if the sign should illuminate the flip dots with the fluorescent lights.

Override Trigger. This field indicates the status of an **optional** dry contact input. When the Override Trigger is active, the current message sequence will be replaced by a single static Override Message. This allows third party equipment to interface with the sign and modify which message is displayed.

Land Line. This field shows the status of the 120 volt input used to charge the batteries.

PARAMETERS…

When you select Parameters from the Sign menu of a sign window, the following dialog is displayed:
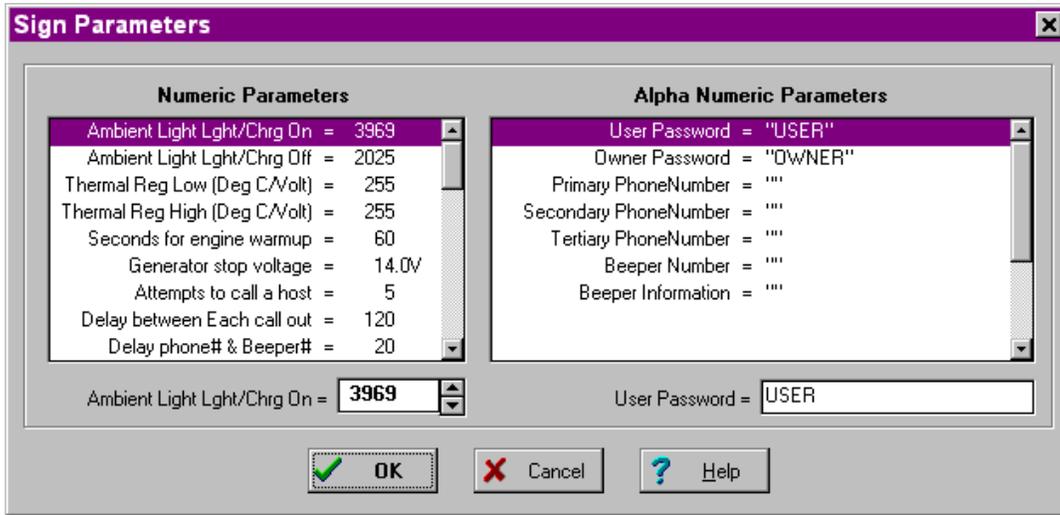
👉 *Note:* You will not have access to this menu item unless you have a user access level of "Owner" or higher.

Alpha Numeric Parameters

The alphanumeric sign parameters are the passwords and phone numbers utilized by the sign. Modification of these settings must be done carefully and must be coordinated throughout your operation. Otherwise, users may not be able to connect to the sign, or a sign may repeatedly call a wrong number in the middle of the night. To make a change in an alphanumeric parameter, select the parameter in the list. The selected parameter will be displayed in the field below the parameter list where you can make changes to it.

User Password. This parameter is the low-level access password for the sign. Users logging in with this password at a local terminal or using EasyHost with the Sign Login Password set to this password will be able to change messages, sequences, and schedules, but will not be able to change any sign operating parameters, passwords, and phone numbers.

Owner Password. This parameter is the high-level access password for the sign. Users logging in with this password at a local terminal or using EasyHost with the Sign Login Password set to this password will be able to change messages, sequences, schedules, and will also be able to change the sign operating parameters, passwords, and phone numbers.

Primary Phone Number/Secondary Phone Number/Tertiary Phone Number. These parameters are the phone numbers of up to three host computer systems the sign will call if it encounters a problem in operation (such as running out of fuel or battery power) or is instructed to call its host computers by the Current Daily Schedule.

Beeper Number. This parameter is the phone number of a pager the sign will call if it encounters a problem in operation (such as running out of fuel or battery power).

Beeper Information. This parameter is a list of digits the sign will place on the pager display before the error codes in order to allow service personnel to identify the sign reporting the problems.

Numeric Parameters

The numeric sign parameters are settings which govern how the sign controls its internal operations. Great care must be taken when modifying the sign parameters. Please contact American Signal Company if you are uncertain about a parameter setting and you wish to make a change. To make a change in a numeric parameter, select the parameter in the list. The selected parameter will be displayed in the field below the parameter list where you can make changes to it.

GP432 and GP232 Models

Ambient Light Lght/Chrg On. Not Applicable.

Ambient Light Lght/Chrg Off. Not Applicable.

Thermal Regulation Low (Deg C/Volt). Not Applicable.

Thermal Regulation High (Deg C/Volt). Not Applicable.

Seconds for engine warmup. Not Applicable.

Generator stop voltage. Not Applicable.

Attempts to call a host. This parameter controls the number of times the sign will attempt to establish communications with each host computer.

Delay between each call out. This parameter controls the time in seconds the sign will wait between attempts to establish communications with each host computer.

Delay between phone# & Beeper#. This parameter controls the time in seconds the sign will wait between dialing the pager access number and dialing the information to be displayed on the pager. This must be set long enough to allow the paging service to answer but not so long as to have them abort the call.

Seconds for password. This parameter controls the time in seconds the sign will wait for the user to enter a password during a voice synthesizer prompted telephone keypad controlled call. If the user does not enter a proper password in the time allotted the sign will terminate the call.

CMST331, CMST332, and CST333 Models

Ambient Light Lght/Chrg On. For signs equipped with a solar panel array this parameter determines the minimum ambient light level for which charging will be allowed.

Ambient Light Lght/Chrg Off. For signs equipped with a Solar Panel this parameter determines the minimum ambient light level for which charging will be allowed. This setting guarantees that the battery pack will not discharge into the solar panel array during darkness.

Thermal Regulation Low (Deg C/Volt). For signs equipped with thermal regulation of battery charging, this parameter determines the slope of the curve used for adjustment to the battery pack voltage for the start of charging and for the low battery shutdown.

Thermal Regulation High (Deg C/Volt). For signs equipped with thermal regulation of battery charging, this parameter determines the slope of the of the curve used for adjustment to the battery pack voltage for the end of charge.

Seconds for engine warm-up. For signs equipped with diesel engines, this parameter determines the time in seconds which the sign will wait for the engine to warm up before applying the full charging load.

Generator stop voltage. This parameter determines the battery pack voltage at which to stop charging.

Attempts to call a host. This parameter controls the number of times the sign will attempt to establish communications with each host computer.

Delay between each call out. This parameter controls the time in seconds the sign will wait between attempts to establish communications with each host computer.

Delay between phone# & Beeper#. This parameter controls the time in seconds the sign will wait between dialing the pager access number and dialing the information to be displayed on the pager. This value must be set long enough to allow the paging service to answer but not so long as to have them abort the call.

Seconds for password. This parameter controls the time in seconds the sign will wait for the user to enter a password during a voice synthesizer prompted telephone keypad controlled call. If the user does not enter a proper password in the time allotted the sign will terminate the call.

CMST320 and CMST321 Models

Ambient Light Lght/Chrg On. Not Applicable.

Ambient Light Lght/Chrg Off. Not Applicable.

Thermal Regulation Low (Deg C/Volt). Not Applicable.

Thermal Regulation High (Deg C/Volt). Not Applicable.

Seconds for engine warmup. Not Applicable.

Generator stop voltage. Not Applicable.

Attempts to call a host. This parameter controls the number of times the sign will attempt to establish communications with each host computer.

Delay between each call out. This parameter controls the time in seconds the sign will wait between attempts to establish communications with each host computer.

Delay between phone# & Beeper#. This parameter controls the time in seconds the sign will wait between dialing the pager access number and dialing the information to be displayed on the pager. This value must be set long enough to allow the paging service to answer but not so long as to have them abort the call.

Seconds for password.   Not Applicable.

CMST300 Model

Ambient Light Lght/Chrg On. This parameter determines the ambient light level at which to turn on the fluorescent lights to illuminate the flip dots.

Ambient Light Lght/Chrg Off.   This parameter determines the ambient light level at which to turn off the fluorescent lights that illuminate the flip dots.

Thermal Regulation Low (Deg C/Volt). Not Applicable.

Thermal Regulation High (Deg C/Volt). Not Applicable.

Seconds for engine warm-up. This parameter determines the time in seconds which the sign will wait for the engine to warm up before applying the full charging load.

Generator stop voltage. This parameter determines the battery pack voltage at which to stop charging.

Attempts to call a host. This parameter controls the number of times the sign will attempt to establish communications with each host computer.

Delay between each call out. This parameter controls the time in seconds the sign will wait between attempts to establish communications with each host computer.

Delay between phone# & Beeper#. This parameter controls the time in seconds the sign will wait between dialing the pager access number and dialing the information to be displayed on the pager. This must be set long enough to allow the paging service to answer but not so long as to have them abort the call.

Seconds for password.   Not Applicable.

TIME & DATE…

Each sign has an internal clock to keep track of the date and time. This function allows you to set the time and date on a sign's clock. When you select Time & Date from the Sign menu, the following dialog will be displayed:
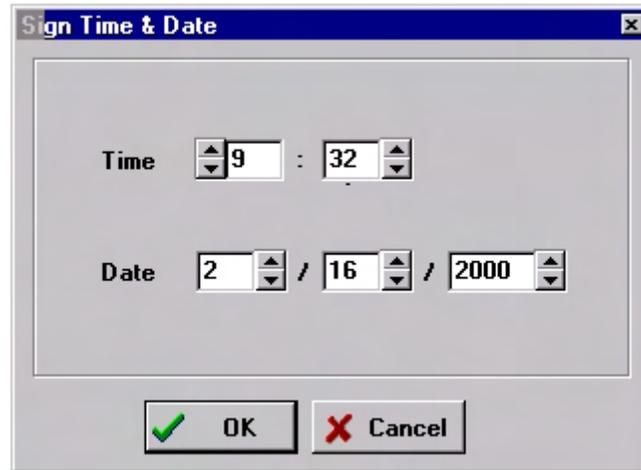
The fields, buttons, and other items on the Sign Time & Date are as follows:

Time fields. The Time consists of an hour field and a minute field. The hour value is specified in military time, so 0 means midnight, 1 means 1:00 a.m., 12 means noon, 18 means 6:00 p.m., 23 means 11:00 p.m., etc. The minute value is a number between 0 and 59. You can either type in the values for hour and minute or use the up and down spin buttons to select the correct values.

Date fields. The date fields consist of a month, day, and year, from left to right. The month is a number between 1 and 12, the day is a number between 1 and 31 (valid days vary based on the month), and the year is a number between 1988 and 2099. You can either type in the values for month, day, and year or use the up and down spin buttons to select the correct values.

OK button. To save any changes you have made to the sign's time and date, click OK.

Cancel button. Click on the Cancel button to discard any changes you have made to the time and date. The time and the date on the sign's clock will remain unchanged.

UPLOAD…

When a connection is active between EasyHost and a sign, the Upload function becomes available in the Sign menu of the sign's window. The Upload function provides a way to send changes made off line in the EasyHost program to a sign during a connection. Normal operation during a connection is for the real sign to update EasyHost's copy of the sign so that it exactly matches the real sign (but thereby wiping out any changes made in EasyHost while off line.) By saving off line edits to a file (through the Save As function in the Msg menu) you have them available for Uploading to the sign during a subsequent connection.

Upload also allows you to send information from one sign to another. For example, suppose you typed one hundred custom messages into a sign, but there are several other signs being used on the same project, and you would like to have the same messages available to those signs as well. Once you have a copy of the sign with the messages on your EasyHost computer, you can connect to the other signs and upload the same messages to them.

☞ *Note:* In order to successfully upload information from one sign to another sign, the two signs must have the same layout of pixels and panels. Otherwise, messages designed for one will not fit properly on the other. As a rule of thumb, *the two signs should be the same model*. There is currently one exception: 333 series signs and the 432 series signs have the same pixel layout, so messages designed for one can be used with the other.

When you select Upload from the Sign menu, the following dialog is displayed:

The fields and other items on this dialog are as follows:

Select sign from which to upload option button. If you want to upload information to a sign from EasyHost's copy of another sign, click on this option button.

Sign list. The list of signs defined in the EasyHost software will become enabled if you click on the **Select sign from which to upload** option button above. Click on the description of the sign in the list that has the information you want.

Select file from which to upload option button. If you want to upload information to a sign from a file saved on the EasyHost computer (through the Save As function of the Msg menu), click on this option button.

File list. The list of files on the EasyHost computer will become enabled if you click on the **Select file from which to upload** option button above. Click on the name of the file in which you saved the information you want.

File filter. The file filter field will become enabled if you click on the **Select file from which to upload** option button above. Below the list of files is a filtering mechanism to select which kind of files you want to view and choose from. Normally you will not need to use this, unless off line edits were saved to a file without the standard **.mbs** extension. If you saved changes to a file with a non-standard extension, click on the button with the down arrow and select "All Files."

Directory list. The directory list will become enabled if you click on the **Select file from which to upload** option button above. If the file you want to upload from is not in the current directory, you can use this directory list to find the directory in which your saved file resides. Double-click on a folder to see its contents. Only files with the **.mbs** extension will be shown, unless you use the File Filter to enable viewing of all file types.

Drive selector. The drive selector will become enabled if you click on the **Select file from which to upload** option button above. If the file that you want to load from resides on a different drive than that displayed, click on the button with the down arrow to see a drop-down list of the other drives on your system.

OK button. Once you have selected either a sign or a file from which to upload, click OK to proceed with choosing the specific items to be uploaded.

Cancel button. If you do not want to upload information to a sign, click on the Cancel button to close this dialog.

If you clicked OK, the Select Items To Upload dialog is displayed:
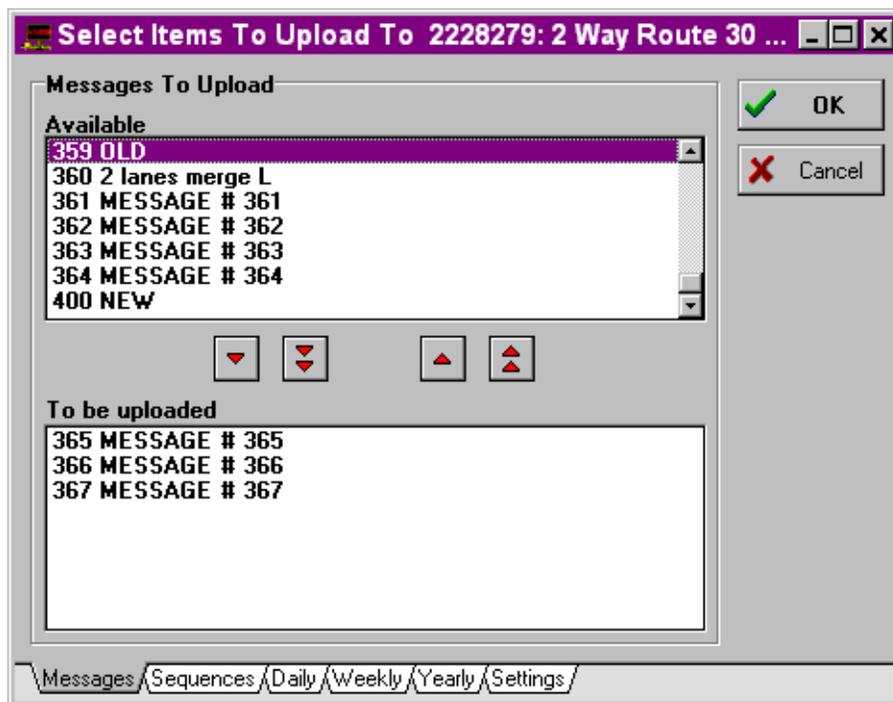
Like the Sign Configuration dialog, this dialog contains several pages, each accessible by a labeled tab at the bottom of the dialog. Initially, the Messages page is displayed, but regardless of which page is selected, the same format is used (which is detailed below for the Messages page.)

Messages Available To Upload list. This list shows all custom messages that were saved in the mbs file (or in EasyHost's copy of the source sign.) You can select a subset of the messages for uploading or you can select all of the messages for uploading.

Messages To Be Uploaded list. This list shows the messages that you have selected for uploading. Initially, it is empty, but once you specify the messages you want to upload to the sign, it will contain those you have selected.

Move Selected Items button. This button is used to move those items you have selected in the "Available" list to the "To Be Uploaded" list. You can select one item at a time in the Available list, and click on the Move Selected Items button each time, or you can select multiple items in the Available list by holding down the [Ctrl] key each time you click on a desired item and then click on the Move Selected Items button to move the whole batch.

Move All Items button. This button is used to move the entire contents of the "Available" list to the "To Be Uploaded" list without having to select the individual items.

Return Selected Items button. This button is used to remove items from the "To Be Uploaded" list that you decide you don't want to upload after all. Select any items in the "To Be Uploaded" list that you *do not* want to upload, and then click on this button to return them to the Available list.

Return All Items button. This button is used to move the entire contents of the "To Be Uploaded" list back to the "Available" list without having to select the individual items.

OK button. Click on the OK button to initiate the uploading of the items you have selected.

**Cancel** button. Click on the Cancel button in order not to upload anything.

In order to upload sequences, daily schedules, weekly schedules, yearly schedules, or general settings (such as current message rate, the brightness table values, or the RADAR Overspeed Trigger), click on the appropriate tab to go to that page of the Select Items to Upload dialog:

Each subsequent page (Sequences to Upload, Daily Schedules to Upload, etc.) works just as described above for Messages to Upload.

SCHED MENU

The Sched (Schedule) Menu is displayed below and contains the following functions:
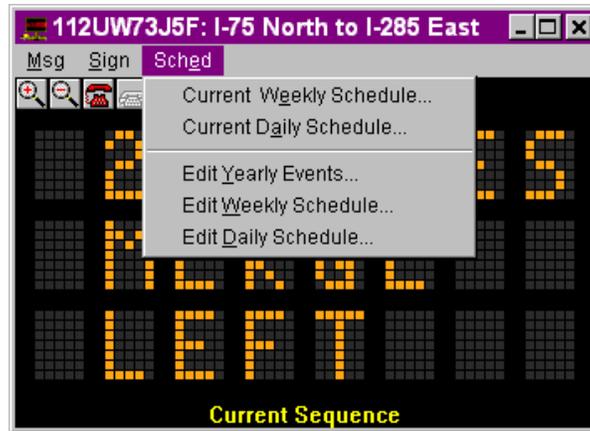
For a discussion of how scheduling works, see Chapter 3, The EasyHost Scheduler.

CURRENT WEEKLY SCHEDULE...

This function allows you to explicitly select which weekly schedule you want to run as the Current Weekly Schedule. See the Edit Weekly Schedule section for instructions on how to create weekly schedules from which to choose. Selecting Current Weekly Schedule from the Sched Menu brings up the following dialog:
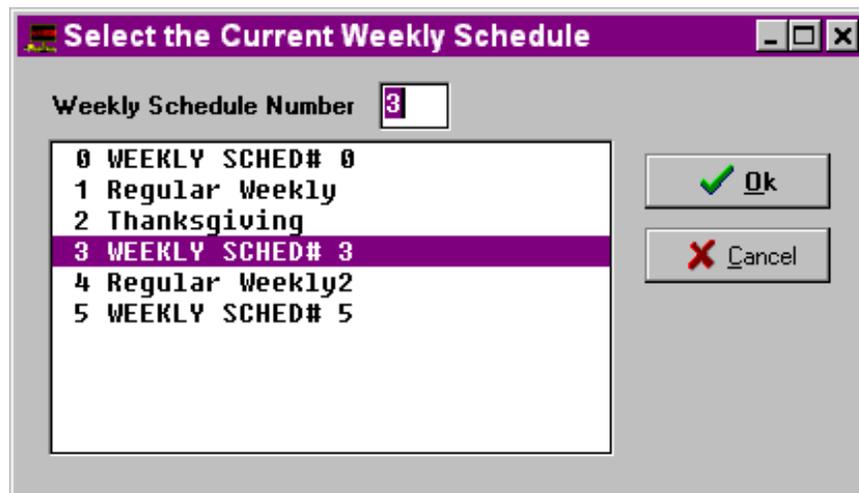
The fields and buttons on the Select Current Weekly Schedule dialog are as follows:

Weekly Schedule Number. This field indicates which weekly schedule is now the Current Weekly Schedule, and is also used to specify which weekly schedule you want to be the Current Weekly Schedule. You can either click OK to see the contents of the Current Weekly Schedule, or you can select a new weekly schedule to replace the one that is selected. To change the Current Weekly Schedule, either type in the number of the schedule you want to make current, or you can select a schedule from the list by clicking on the desired schedule using the mouse. If you type a number that does not correspond to an existing schedule, the Select Current Weekly Schedule dialog will close without changing the Current Weekly Schedule. For a discussion of Weekly Schedule #0, see Chapter 3, The EasyHost Scheduler.

OK button. Click on the OK button to view the weekly schedule whose number is displayed in the Weekly Schedule Number field.

Cancel button. Click on the Cancel button if you do not want to change the Current Weekly Schedule. Clicking Cancel will cause the Select Current Weekly Schedule dialog to close.

If you selected a valid weekly schedule number and clicked OK, the contents of the weekly schedule will be displayed for you to verify that this weekly schedule is the one you want to activate:

Weekly Schedule # 1	✕
Description	Regular Weekly
Daily Schedule	
Sunday	2 - Sat-Sun Daily
Monday	1 - Mon-Fri Daily
Tuesday	1 - Mon-Fri Daily
Wednesday	1 - Mon-Fri Daily
Thursday	1 - Mon-Fri Daily
Friday	1 - Mon-Fri Daily
Saturday	2 - Sat-Sun Daily
✓ OK	✗ Cancel
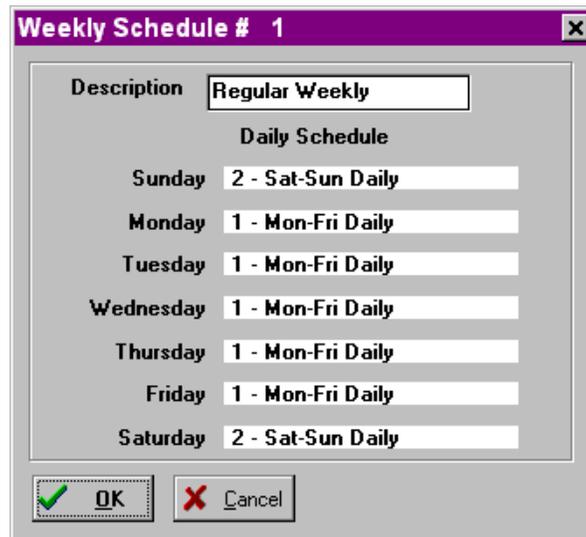
You can click on the Daily Schedule fields to see the contents of each daily schedule included in this weekly schedule. For a description of daily schedules, see the Edit Daily Schedule section later in this chapter.

Click OK to make this weekly schedule the Current Weekly Schedule, or click Cancel to reject this weekly schedule and leave the Current Weekly Schedule unchanged. To verify which weekly schedule is Current, you can select Current Weekly Schedule from the Sched menu again.

CURRENT DAILY SCHEDULE…

This function allows you to explicitly select which daily schedule you want to run as the Current Daily Schedule. See the Edit Daily Schedule section for instructions on how to create daily schedules from which to choose. Selecting Current Daily Schedule from the Sched Menu brings up the following dialog:
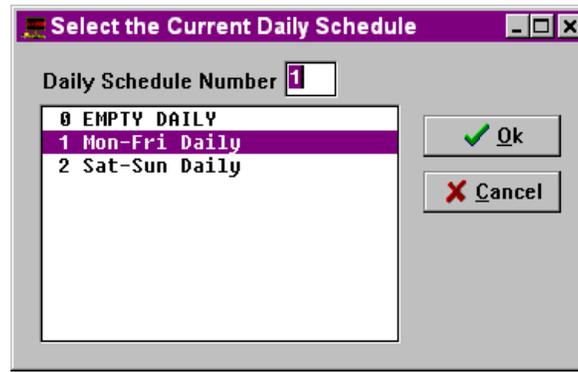

The fields and buttons on the Select Current Daily Schedule dialog are as follows:

Daily Schedule Number. This field indicates which daily schedule is now the Current Daily Schedule, and is also used to specify which daily schedule you want to be the Current Daily Schedule. You can either click OK to see the contents of the Current Daily Schedule, or you can select a new daily schedule to replace the one that is selected. To change the Current Daily Schedule, either type in the number of the schedule you want to make current, or you can select a schedule from the list by clicking on the desired schedule using the mouse. If you type a number that does not correspond to an existing schedule, the Select Current Daily Schedule dialog will close without changing the Current Daily Schedule. For a discussion of Daily Schedule #0, the Empty Daily schedule, see Chapter 3, The EasyHost Scheduler.

OK button. Click on the OK button to view the daily schedule whose number is displayed in the Daily Schedule Number field.

Cancel button. Click on the Cancel button if you do not want to change the Current Daily Schedule. Clicking Cancel will cause the Select Current Daily Schedule dialog to close.

If you selected a valid daily schedule number and clicked OK, the contents of the daily schedule will be displayed for you to verify that this daily schedule is the one you want to activate:
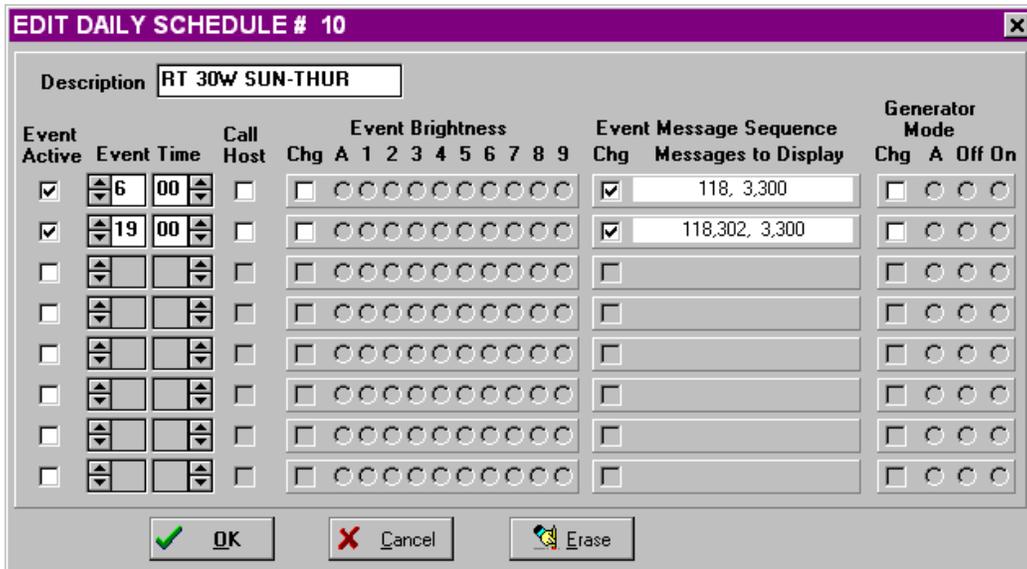
Click OK to make this daily schedule the Current Daily Schedule, or click Cancel to reject this daily schedule and leave the Current Daily Schedule unchanged. To verify which daily schedule is Current, you can select Current Daily Schedule from the Sched menu again.

EDIT YEARLY EVENTS...

This function allows you to create and edit events that are to happen once (on a specific date) or once a year. When you select Edit Yearly Events from the Sched menu, you will be prompted for a Yearly Event Number with the following dialog:
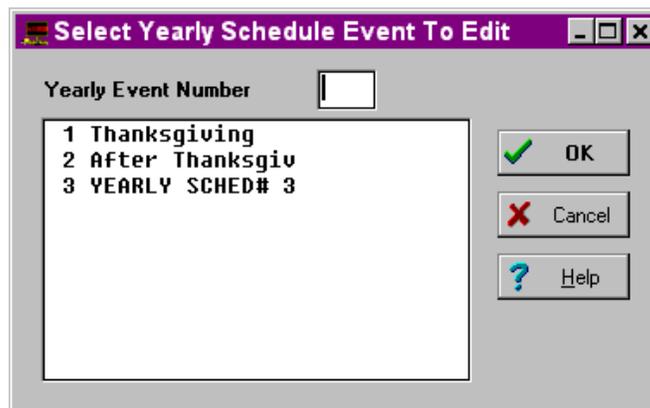
You can either pick an existing event from the list, or if there are no yearly events listed, you can type in a number from 1 to 20 to create a new yearly event with that number. The following dialog will be displayed:
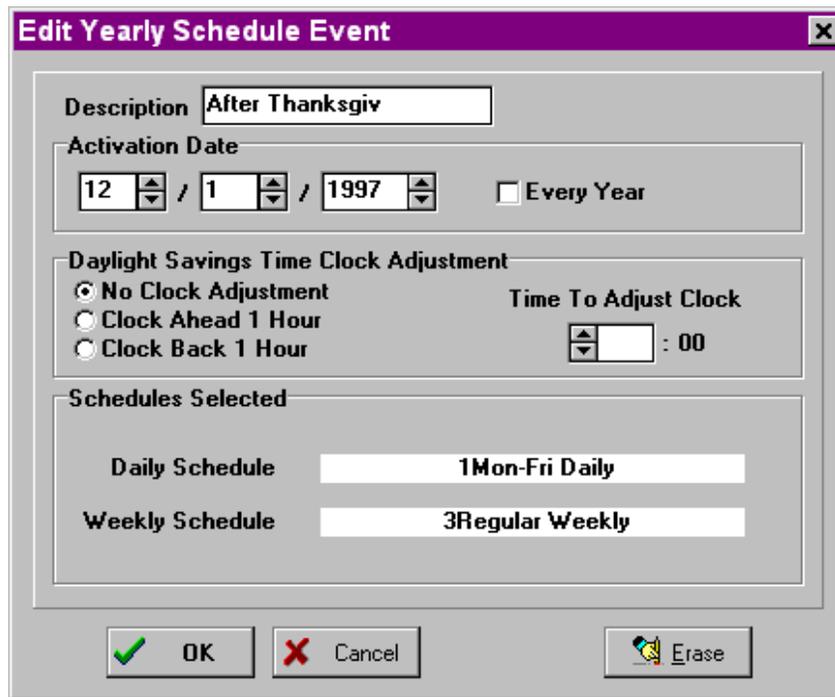
The fields, buttons, and other items on the Edit Yearly Schedule Event dialog are as follows:

Description. This field contains the description of the yearly scheduled event. When you first create a yearly scheduled event, a default description of "YEARLY SCHED# number" is generated, and the text is highlighted. To create a more meaningful description, start typing and the highlighted text will be replaced. The description can be composed of letters, numbers, and special characters, and it has a maximum length of 15.

Activation Date. The activation date is the date on which to start executing this event. The activation date is actually composed of four fields. From left to right, they are:

- **Month.** The month field contains a number from 1 to 12. You can type in the month using the keyboard, or you can select it by using the mouse to click on the up or down spin buttons.

- **Day.** The Day field contains a number from 1 to 31, depending on the month selected. You can type in the day using the keyboard, or you can select it by using the mouse to click on the up or down spin buttons.

- **Year.** The year field contains a number from 1988 to 2099. You can type in the year using the keyboard, or you can select it by using the mouse to click on the up or down spin buttons. This field will be disabled if the Every Year check box is checked: the year field will be blank, and you cannot enter any numbers into it.

- **Every Year** check box. Click on this check box if you want this event to occur every year on the specified month and day. When this box is checked, the Year field will become disabled and blank.

The activation date on a new yearly event will default to 2-1-1996. Since this date is in the past, the event will not be triggered unless you change the date or check the Every Year check box.

Daylight Savings Time Clock Adjustment option button. This option button indicates whether the yearly event is intended to adjust the time on the sign's clock for Daylight Savings. The values for this option button are:

- **No Clock Adjustment.** This option is selected by default. The clock at the sign will not be affected by this yearly event.

- **Clock Ahead 1 Hour.** Select this option if you want to change the time on the sign's clock to begin Daylight Savings Time in the spring. If this option is selected and the Time to Adjust Clock is 2:00, then the clock at the sign will change from 2:00 a.m. to 3:00 a.m. on the specified date.

- **Clock Back 1 Hour.** Select this option if you want to change the time on the sign's clock to end Daylight Savings Time in the fall. If this option is selected and the Time to Adjust Clock is 2:00, then the clock at the sign will change from 2:00 a.m. to 1:00 a.m. on the specified date.

Time To Adjust Clock. This field indicates the time at which to change the clock at the sign. If No Clock Adjustment is selected, then this field will be blank and disabled. If either Clock Ahead 1 Hour or Clock Back 1 hour is selected, then this field is set to 2:00, which represents 2:00 a.m., the time at which Daylight Savings Time adjustments are usually made. If you wish to change the time at which to adjust the clock, you can enter a number between 1 and 23, where 1 represents 1:00 a.m., and 23 represents 11:00 p.m.

Schedules Selected. This area specifies whether or not to change the Current Daily Schedule and/or the Current Weekly Schedule on the Activation Date.

- **Daily Schedule**. This field contains the description of the daily schedule you want to start using as the Current Daily Schedule on the Activation Date. To select a daily schedule, click on the Daily Schedule field itself (the blank white field or the description of the daily schedule you want to replace). The following dialog is displayed:
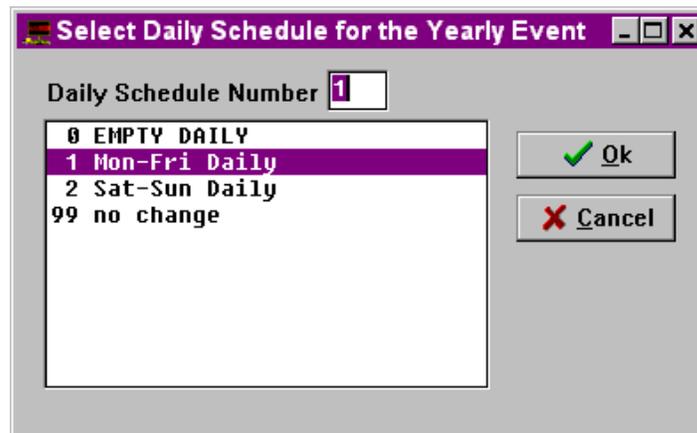
To select a daily schedule, you can either type in the number of the schedule you want or you can click on the description using the mouse. Click OK to verify that this schedule is the one you want. A read-only version of the Daily Schedule dialog will be displayed. To make no change to the Current Daily Schedule, you can use "99 no change," and the Daily Schedule field will be left blank. For a discussion of Daily Schedule #0 and "99 no change," see Chapter 3, The EasyHost Scheduler.

- **Weekly Schedule**. This field contains the description of the weekly schedule you want to start using as the Current Weekly Schedule on the Activation Date. To select a weekly schedule, click on the Weekly Schedule field itself (the blank white field or the description of the weekly schedule you want to replace). The following dialog is displayed:
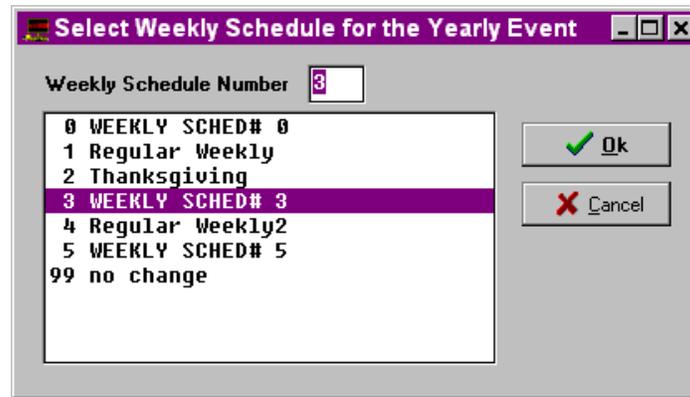
To select a weekly schedule, you can either type in the number of the schedule you want or you can click on the description using the mouse. Click OK to verify that this schedule is the one you want. The Weekly Schedule dialog will be displayed. To make no change to the Current Weekly Schedule, you can use "99 no change," and the Weekly Schedule field will be left blank. For a discussion of Weekly Schedule #0 and "99 no change," see Chapter 3, The EasyHost Scheduler.

EDIT WEEKLY SCHEDULE...

This function allows you to create and edit weekly schedules for eventual use as the Current Weekly Schedule. When you select Edit Weekly Schedule, the following dialog will be displayed:

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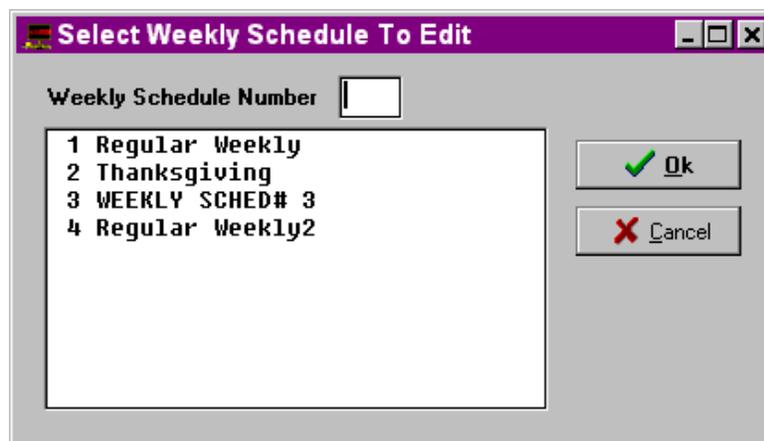
The fields and buttons on the Select Weekly Schedule to Edit dialog are as follows:

Weekly Schedule Number. This field is used to identify which schedule you want to edit. You can type in the number of an existing schedule, or you can type in an unused number between 1 and 29 to create a new weekly schedule. Alternatively, you can select a schedule from the list by clicking on the desired schedule using the mouse.

OK button. Click on the OK button to edit the weekly schedule whose number is displayed in the Weekly Schedule Number field.

Cancel button. Click on the Cancel button if you do not want to edit or create a weekly schedule. Clicking Cancel will cause the Select Weekly Schedule to Edit dialog to close.

If you typed in a weekly schedule number that does not yet exist but does fall within the range of valid numbers, and you click OK, you will be prompted to create a weekly schedule with that number, for example:
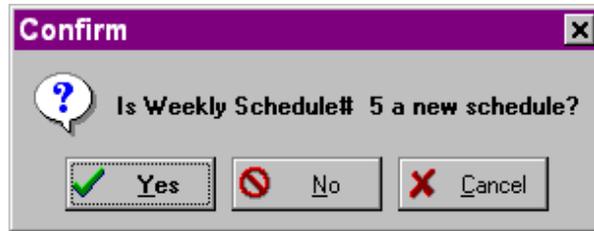
Clicking on the Yes button (or the OK button for a schedule in the previous dialog) brings up the Edit Weekly Schedule dialog:
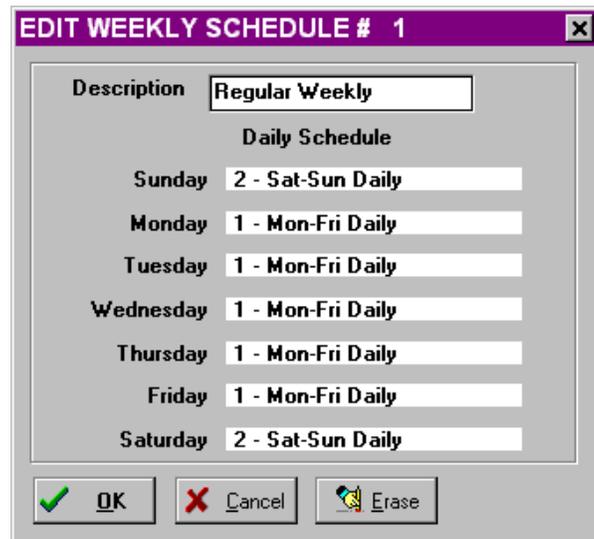
The fields, buttons, and other items on the Edit Weekly Schedule dialog are as follows:

Description. This field contains the description of the weekly schedule. When you first create a weekly schedule, a default description of "WEEKLY SCHED # number" is generated, and the text is highlighted. To create a more meaningful description, start typing and the highlighted text will be replaced. The description can be composed of letters, numbers, and special characters, and it has a maximum length of 15.

Daily Schedule (Sunday through **Saturday)** fields. These fields contain the descriptions of the individual daily schedules that comprise this weekly schedule. To select a daily schedule for a given day of the week, click on the Daily Schedule field itself (the blank white field or the description of the daily schedule you want to replace). See the next section, Edit Daily Schedule, for a description of daily schedules.

OK button. Click on the OK button to save this weekly schedule with the daily schedules you have selected for each day of the week.

Cancel button. Click on the Cancel button to discard any changes you have made to this weekly schedule. If you click Cancel, the weekly schedule will retain its former contents, and the Edit Weekly Schedule Dialog will close. If this weekly schedule has never been saved by clicking OK, then clicking Cancel will actually cause the whole weekly schedule to be discarded.

Erase button. Click on the Erase button to delete this weekly schedule from the list of available weekly schedules.

EDIT DAILY SCHEDULE…

This function allows you to create and edit daily schedules for eventual use as the Current Daily Schedule. When you select Edit Daily Schedule, the following dialog will be displayed:
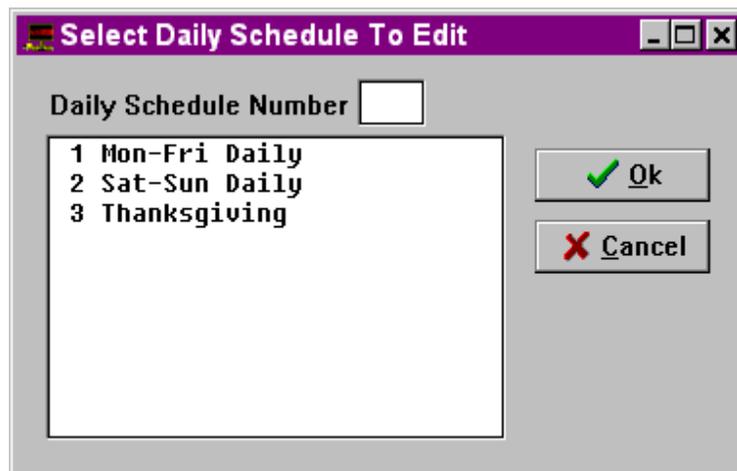
The fields and buttons on the Select Daily Schedule to Edit dialog are as follows:

Daily Schedule Number. This field is used to identify which schedule you want to edit. You can type in the number of an existing schedule, or you can type in an unused number between 1 and 29 to create a new daily schedule. Alternatively, you can select a schedule from the list by clicking on the desired schedule using the mouse.

OK button. Click on the OK button to edit the daily schedule whose number is displayed in the Daily Schedule Number field.

Cancel button. Click on the Cancel button if you do not want to edit or create a daily schedule. Clicking Cancel will cause the Select Daily Schedule to Edit dialog to close.

If you typed in a daily schedule number that does not yet exist but does fall within the range of valid numbers, and you click OK, you will be prompted to create a daily schedule with that number, for example:
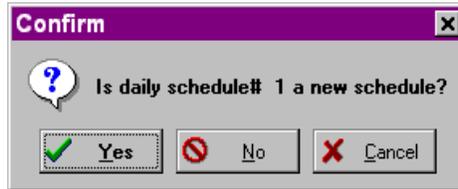
Clicking on the Yes button (or the OK button for a schedule in the previous dialog) will bring up the Edit Daily Schedule dialog:
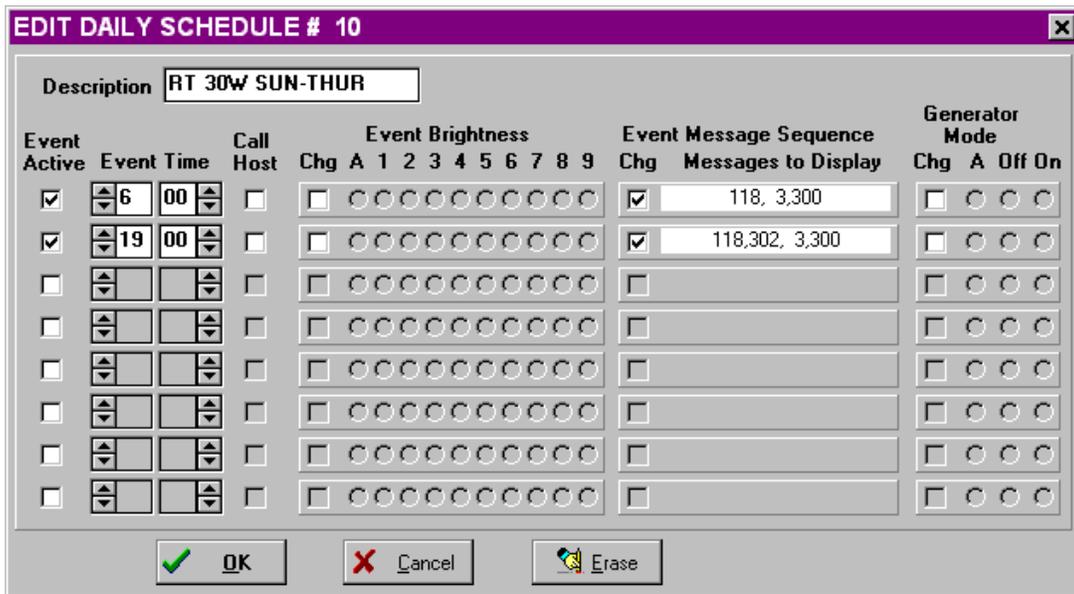
The fields, buttons, and other items on the Edit Daily Schedule Dialog are as follows:

Description. This field contains the description of the daily schedule. When you first create a daily schedule, a default description of "DAILY SCHEDULE # number" is generated, and the text is highlighted. To create a more meaningful description, start typing and the highlighted text will be replaced. The description can be composed of letters, numbers, and special characters, and it has a maximum length of 15.

Event Active. This check box is used to enable or disable an entire event. If Event Active is not checked for a given line in the daily schedule, then other items in that line will be dimmed (grayed) and disabled.

Event Time. These fields indicate at what time to initiate the event. Event time includes both an hour of the day and minutes after the hour. If the Event Active check box is not checked, both the hour and minute fields will be blank and disabled.

- **Hour of day.** Event Time is specified in military time; you can enter a number between 1 and 23, where 1 represents 1:00 a.m., and 23 represents 11:00 p.m., or you can use the up and down spin buttons to select an hour.

- **Minutes after the hour.** Minutes after the hour will be a number between 0 and 59. You can type in the minutes or you can use the up and down spin buttons to select a value for minutes after the hour.

Call Host check box. This field is used to indicate whether the sign should initiate a call to the computer running the EasyHost software when this event is activated. When a sign calls the host computer, the status of the sign can be logged in the Sign Status Log. In order for a sign to successfully call the EasyHost program, the host computer, must be configured to receive incoming calls. See the Dial In Configuration section of Chapter 4, Main Menu Bar Functions, for details on configuring EasyHost to receive incoming calls and log sign status.

Event Brightness. These fields are used to specify a change to the sign's brightness when the event is initiated.

- **Chg (Change) check box.** This check box is used to indicate whether or not the sign's brightness should be changed by this event. If Chg is not checked, then the Brightness level option buttons are disabled.

- **Brightness level** option buttons. Use these fields to indicate the new brightness level that the sign should be given by this event.

  - **A** option. The "A" option stands for Automatic. The brightness levels will change based on the ambient lighting. The specific ambient light levels that trigger changes are specified through the Brightness function on the Sign menu of each sign window.

  - **1** through **9 (7 for Hybrids)** options. Use these values if you want the new sign brightness to be a fixed level. "9"("7" for Hybrids) is the brightest level, and "1" is the least bright level.

Event Message sequence. These fields specify a change to the sign's message sequence when the event is initiated.

- **Chg (Change) check box.** This check box is used to indicate whether or not the sign's message sequence should be changed by this event. If Chg is not checked, then the Messages to Display field is disabled.

- **Messages to Display** field. Use this field to specify the new messages to display on the sign. Clicking on this field will bring up the Edit Event Message Sequence dialog, which is very similar to the other Edit Message Sequence dialogs. The Edit Event Message Sequence dialog is covered in the following section.

Generator Mode. These fields are used to specify a change to the mode of generator operation.

- **Chg (Change) check box.** This check box is used to indicate whether or not the sign's generator mode should be changed by this event. If Chg is not checked, then the Generator Mode option buttons are disabled.

- **Generator Mode** option buttons. Use these fields to indicate the new mode of generator operation that the sign should use when this event is triggered.

  - **A** option. The "A" option stands for Automatic. In Automatic mode, the sign is powered by the battery pack until the batteries need to be recharged. Only then is the generator started. Once the engine is warmed up, it will begin to recharge the batteries and will run as long as necessary to recharge the battery pack. Once the batteries are recharged, the engine will shut off.

  - **Off** option. Selecting the Off option will cause the generator to be turned off with this event.

  - **On** option. Selecting the On option will cause the generator to be turned on with this event.

Edit Event Message Sequence dialog

If you are editing a daily schedule and click on a Messages to Display field within an event, the Edit Event Message Sequence dialog will be presented:
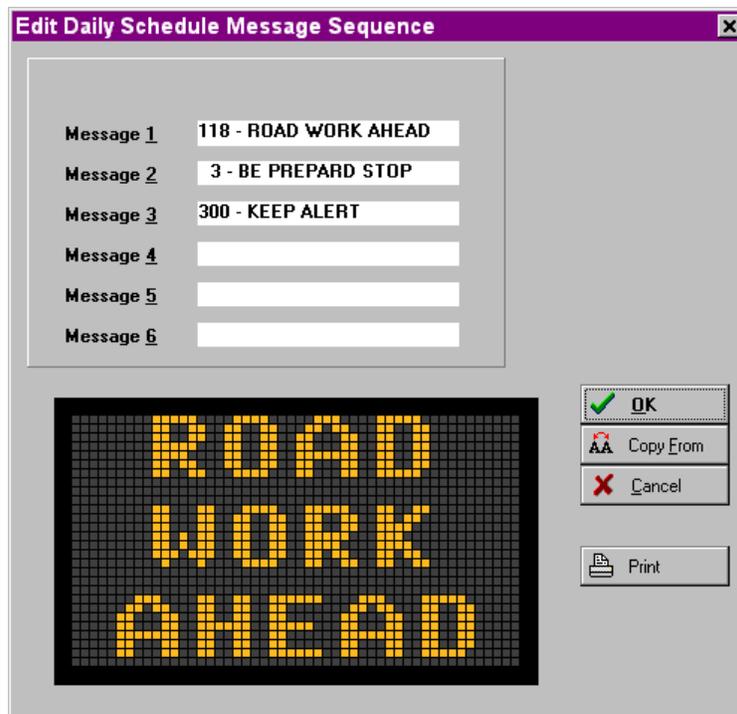
The fields, buttons, and other items on the Edit Event Message Sequence dialog are as follows:

Message 1 through **Message 6** fields. These fields contain the descriptions of the individual messages in the sequence. Message 1 is displayed first, Message 2 second, and so on, until all non-empty message fields have been processed, and then the process begins again with Message 1. The messages cycle smoothly -- Message 1 is displayed immediately after the last message in the sequence. Empty message fields are ignored, so leaving empty message fields between utilized message fields will not cause a delay between their display. To select a message for the current sequence, click on the message field itself (the blank white field or the description of the message you want to replace). The process of selecting messages for a sequence is covered earlier in this chapter in the Current Message Sequence section of the Msg menu under the heading Selecting Messages for a Sequence.

Sample sign face display area. A representation of the Event Message Sequence is continuously displayed on a sample sign face in the lower left portion of the dialog.

OK button. To save the Event Message Sequence as it is being displayed on the sample sign face, click OK.

Copy From button.   This button allows you to pick an entire message sequence at one time instead of picking each message individually. The message sequences from which you can pick are those that you or other users have created and saved from the Preprogrammed Sequences function on the Msg menu.

Cancel button. The Cancel button allows you to exit the Edit Event Message Sequence dialog and discard any changes you have made to the Event Message Sequence during this editing session.

PRINT button.   Clicking the print button will initiate the printing of all the messages in this Event Message Sequence.

A P P E N D I X   A

P ROGRAM I NSTALLATION
I NSTRUCTION S

If you are responsible for installing the EasyHost program, follow the instructions below for your particular operating system (Windows 3.1, Windows NT 3.51, Windows NT 4.0, or Windows 95).

This manual assumes that you have a basic working knowledge of the Windows operating system, but attempts to be as clear and detailed as possible in the event that you do not. If you are not comfortable with Windows, it is recommended that you review the documentation for your version of the Windows operating system.

Notes on using the mouse and Windows follow:

- *Click* means to press and release the mouse button
- *Double-click* means to click the mouse button twice, quickly
- *Drag* means to press and hold down the mouse button while moving the mouse
- To *select* something usually involves clicking once on the object to be selected
- Unless otherwise stated, mouse operations are done using the *left* mouse button. If the right mouse button is to be used, the instructions will say *right-click*
- A *dialog* is a window that appears when you need to supply additional information to complete a task

IF YOU ARE RUNNING WINDOWS 3.1 OR WINDOWS NT 3.51

Set up the install destination on the hard disk as follows:

1   If Program Manager is not open (if it looks like an icon, or small picture, rather than a window), double-click on the Program Manager icon to open the Program Manager window.

2   If the Main program group is not open, (if it looks like an icon, or small picture, rather than a window), double-click on the Main icon to open the Main window.

3   Double-click on File Manager (either the icon or the name label beneath it) to open the File Manager window.

4   From the list of drives across the top of the File Manager window, click on the destination drive for the installation (the drive on which you want to install EasyHost). Usually, EasyHost is installed on drive "c".

5   If the EasyHost folder is to be at the top level of the directory structure (recommended), click on the "c:\" folder (or the folder with the drive letter you chose in the previous step.) If the EasyHost folder is to reside in a subfolder (subdirectory), double-click on the appropriate folders until you reach the one in which you want to put the EasyHost folder.

6   Select the File menu and select the Create Directory command.

7   Type in the name "EasyHost" and click OK to create the EasyHost folder.

Copy the self-extracting installation program from the diskette to the hard drive as follows:

1   Click on the EasyHost directory you just created.

2   Click on the floppy diskette drive at the top of the window (usually "a", possibly "b.")

3   Drag the "EasyInst.exe" file onto the destination drive at the top of the window (probably "c.")

4   Click on Yes when you get the "Do you want to copy?" message.

Run the self-extracting installation program as follows:

1   Click on the destination drive at the top of the window ("c")

2   Double-click on EasyInst.exe. You may see messages briefly flash on the screen as the files are extracted.

3   Click on the destination drive at the top of the window again. You will see that there are now more files in the EasyHost directory.

Exit File Manager and create a program group as follows:

1   Select the File menu and select the Exit command.

2   If Program Manager is not open (if it looks like an icon rather than a window), double-click on the Program Manager icon to open the Program Manager window.

3   Select the File menu and select the New command. The New Program Object dialog is displayed.

4   Click on the Program Group option button and then click on OK. The Program Group Properties dialog is displayed.

5   Type "AMSIG Host Programs" for the description, leave Group File empty, and click OK.

Now create a program item as follows:

1   Make sure that the "AMSIG Host Programs" program group window is open.

2   From the Program Manager window, select the File menu and select the New command. The New Program Object dialog is displayed.

3   Click on the Program Item option button and then click on OK. The Program Item Properties dialog is displayed.

4   Type "EasyHost" for the Description.

5   Click on the Browse button.

6   Find and open the folder for EasyHost using the right half of the window (double-click on "C:\" and then double-click on each folder necessary to get to the EasyHost folder and open it.)

7   Find WCMSHOST.EXE in the EasyHost folder an double-click on it.

8   Click on the Change Icon button, and then click OK.

You should now see an EasyHost program icon within the AMSIG Host Programs program group window. To run EasyHost at any time, double-click on this EasyHost program icon.

IF YOU ARE RUNNING WINDOWS 95 OR WINDOWS NT 4.0

Set up the install destination on the hard disk as follows:

1   Double-click on "My Computer" on the Windows desktop.

2   Double-click on the destination drive, usually (C:).

3   If the EasyHost folder is to be at the top level of the directory structure (recommended), select the File menu, select New, and then Folder. If the EasyHost folder is to reside in a subfolder (subdirectory), double-click on the appropriate folders until you reach the one in which you want to put the EasyHost folder. Then select the File menu, select New, and then Folder.

4   The new folder will have the name "New Folder," which will be highlighted. Type "EasyHost" and press the Enter key to rename the folder. If the name is still "New Folder," click once on the name to highlight it, wait a second, and then click once again on the name. "New Folder" should be highlighted, and you can type in "EasyHost."

Copy the self-extracting installation program from the diskette to the hard drive as follows:

1   In the window "My Computer," double-click on the floppy diskette drive letter in which you have the EasyHost installation diskette, usually "3 ½ Floppy (A:)", but possibly "3 ½ Floppy (B:)"

2   Click on the title bar (the colored bar at the top) of the A:\ window and drag it so that you can also see the contents of the C:\ window. Drag the C:\ window if necessary, so that you can see EasyInst.exe in the A:\ window and you can see the EasyHost folder in the C:\ window.

3   Click on EasyInst.exe and drag it to the EasyHost folder. When you release the mouse button, the EasyInst.exe file will be copied to the EasyHost folder.

Run the self-extracting installation program as follows:

1   Double-click on the EasyHost folder.

2   Double-click on EasyInst.exe. As the EasyInst.exe self-extracts, you will see other files appear in the EasyHost directory.

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Create a shortcut to the EasyHost program as follows:

1   In the C:\EasyHost window, click on the View menu, click on the Arrange Icons command, and
        click on by Type.

2   Click on the Wcmshost.exe icon and drag it over an empty area of the desktop. When you release
        the mouse button, you will see a shortcut to Wcmshost.exe (the EasyHost program) created on the
        desktop.

3   Close all open windows by clicking on the X in the upper right-hand corner of each window.

4   Click on the Wcmshost.exe shortcut on the desktop. Wait one second, and then click on the name
        label of the shortcut. It will become highlighted. Type EasyHost and press the Enter key to
        rename the shortcut.

You should now see an EasyHost program icon labeled "EasyHost" on the desktop. To run EasyHost at
any time, double-click on this EasyHost icon.

To add EasyHost to the Start Menu programs, do the following:

1   Right-click on a blank part of the task bar to the right of the Start button at the bottom of the
        desktop.

2   Select Properties from the pop-up menu.

3   Click on the Start Menu Programs tab and then click on the Add button.

4   The Create Shortcut dialog is displayed. Click on the Browse button.

5   In the Browse dialog, double-click on the EasyHost folder, and click on Wcmshost.exe. Then
        click on the Open button. The path to the EasyHost program is displayed in the Create Shortcut
        dialog.

6   Click on the Next button to go to the Select Program Folder dialog. Click on the New Folder
        button. A new program group will be highlighted. Type "AMSIG Host Programs" and press the
        Enter key.

7   The Select a Title for the Program dialog is displayed. Type "EasyHost" and click on the Finish
        button.

8   In the Taskbar Properties dialog, click on the OK button.

To see the Start menu shortcut you just created, do the following:

1   Click on the Start button
2   Highlight the Programs folder
3   Highlight the AMSIG Host Programs folder
4   Highlight EasyHost
5   If you wan to run the EasyHost program now, click on EasyHost

A P P E N D I X B
U S E R A D M I N I S T R A T I O N

If your User ID has administrative privileges, you will be able to access the User Administration function from the Configuration menu of the main menu bar. When you select the User Administration function, the following dialog will appear:
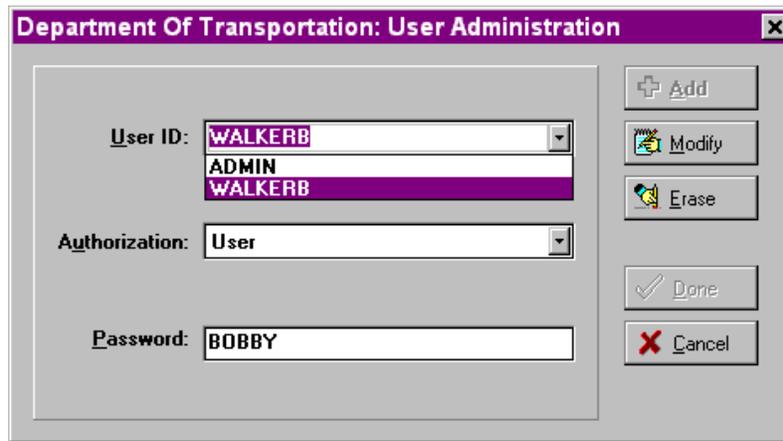
Fields and buttons on this dialog are as follows:

User ID. The User ID field can be used to:

- Type in a new user ID to add. The User ID can consist of letters, numbers, and special characters (including spaces) and can be up to 20 characters in length.

- Select an existing user to modify or erase. To select an existing user ID, you can either start typing the ID until a match is found, or you can click on the button with the down arrow on it to the right of the field to display a drop-down list from which you can pick the desired ID.

Authorization. The Authorization field indicates the level of functionality that will be available to the user. The Authorization field can be used to:

- Select an Authorization level for the User ID displayed in the User ID field by picking one from the drop-down list.

- Display the existing authorization level for the User ID displayed in the User ID field.

Possible values for Authorization are:

- **User.** This is the default level of authorization. A user can do everything except create a new sign, delete a sign, and manage other user IDs.

- **Owner.** An owner can do everything that a user can, but can also create new signs and delete signs.

- **Administration.** An administrator can do everything that a User and an Owner can, but in addition, can manage other user IDs.

- **Disabled.** A disabled user is still defined in the EasyHost software, but if someone tries to log in using that ID, they will be prevented from starting the program, just as though their ID had been deleted.

Password. The Password field can be used to:

- Type in a new password for a user. A password can consist of letters, numbers, and special characters (including spaces) and can be up to 20 characters in length. It must be at least 4 characters long.

- Display the existing password for the user ID displayed in the User ID field. This is useful if a user forgets their password and needs help logging into the program.

Add button. Click on the Add button to add a new user ID to the EasyHost system once you have specified a User ID, Authorization level, and password.

Modify button. Once you have changed the either the Authorization level or the password for the User ID currently displayed in the User ID field, click on the Modify button to update the User ID information.

Erase button. Click on the Erase button to erase the user ID currently displayed in the User ID field.

Done button. Once you have made all the desired changes to User IDs, click on the Done button to make the changes permanent. Until you have clicked on the Done button, you can still undo the changes you have made.

Cancel button. Click on the Cancel button to discard all the changes you have made to User IDs, Authorization levels, and passwords. All user information will revert to its former values, and the User Administration dialog will close.