



**STEP 1:** These instructions apply to the following signs:

- AlphaEclipse 2500 series
- AlphaEclipse 2600 series
- AlphaEclipse 3500 series

These instructions are *not* for Alpha or Betabrite signs. For these signs, see “How to use the IR Message Loader to Display Messages on Alpha Signs” (pn 9707-1003F).

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**STEP 3:** Set the AlphaEclipse sign to the correct baud rate (page 8).

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**STEP 7:** Store the messages in the IR Message Loader (page 14).

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Due to continuing product innovation, specifications in this manual are subject to change without notice.

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# Introduction

## Overview

These instructions explain how to use an IR Message Loader to display messages on the following signs:

- AlphaEclipse 2500 series
- AlphaEclipse 2600 series
- AlphaEclipse 3500 series

These instructions are *not* for Alpha or Betabrite signs. For these signs, see “How to use the IR Message Loader to Display Messages on Alpha Signs” (pn 9707-1003F).

## IR Message Loader description



Item	Name	Description
A	MEMORY LOCATION switch	Selects into which memory location (1, 2, or 3) messages will be stored. Each memory location can store up to 10,000 bytes.
B	DATA VALID light	Solid — messages successfully sent or received Blinking — messages being transferred.
C	Infrared transmitter	not used
D	DATA light	Blinks when data is sent to or received from the IR Message Loader.
E	BAT. LOW light	When lit, indicates that the unit's 9V battery should be replaced.
F	TRANSMIT button	Sends or receives messages.
G	Serial port	Connects to a computer to receive messages, or to a sign to send or receive messages.

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## Revision history

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Part number	Date	Notes
9707-1004	November 4, 2003	First release.

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## Related documentation

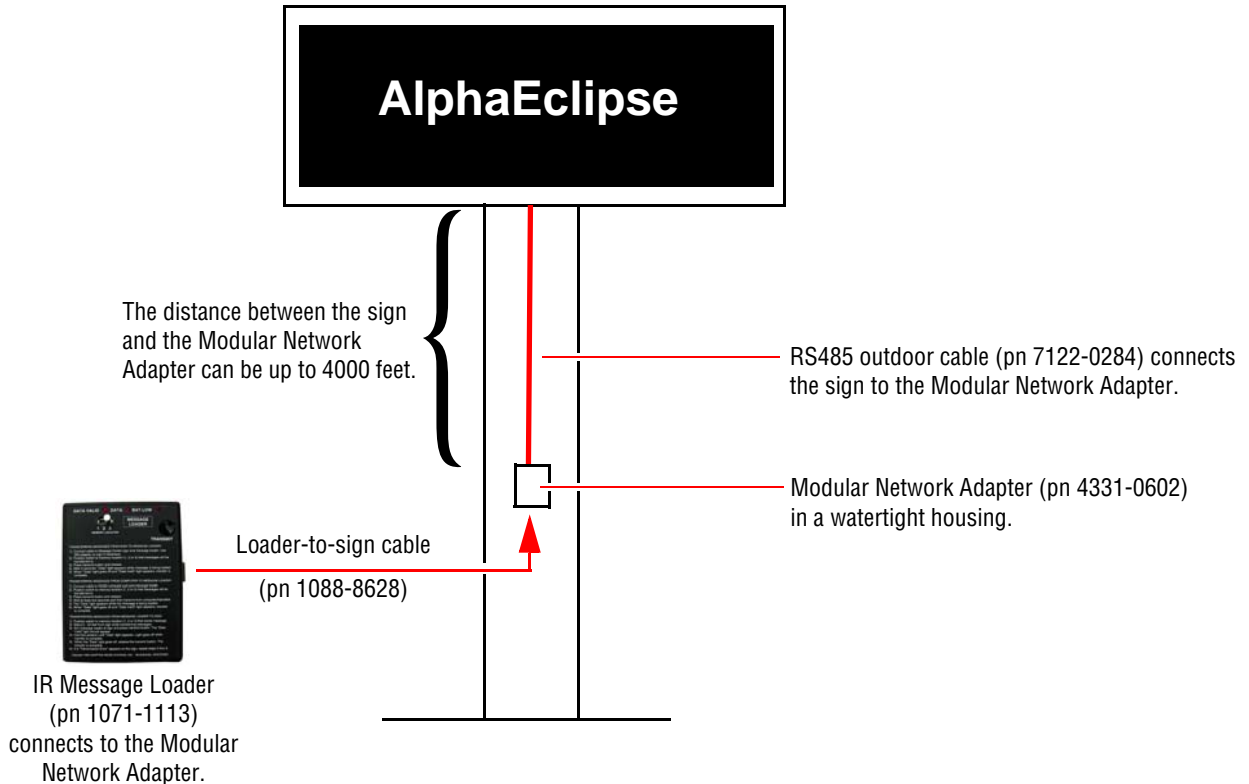
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Document name	Part #	Description
AlphaNET User Manual	9708-8081	Explains how to use this software to create sign messages.
How to use the IR Message Loader to Display Messages on Alpha Signs	9707-1003F	Explains how to use the IR Message Loader with Alpha and Betabrite signs.
AlphaEclipse 3500 Series A Sign Service Manual	9711-6009B	Explains how to maintain, troubleshoot, and repair AlphaEclipse 3500 Series A signs.
AlphaEclipse 3500 Series B Sign Service Manual	9711-6019	Explains how to maintain, troubleshoot, and repair AlphaEclipse 3500 Series B signs.

## Wire a Modular Network Adapter to an AlphaEclipse sign

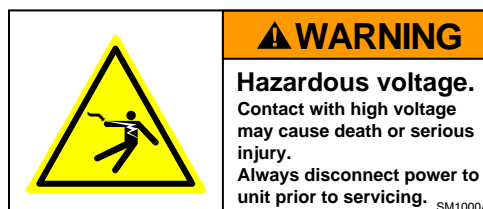
### Overview

In order to use an IR Message Loader with an AlphaEclipse sign, the sign must be connected to a Modular Network Adapter, usually located near the base of the sign:



### Open the sign

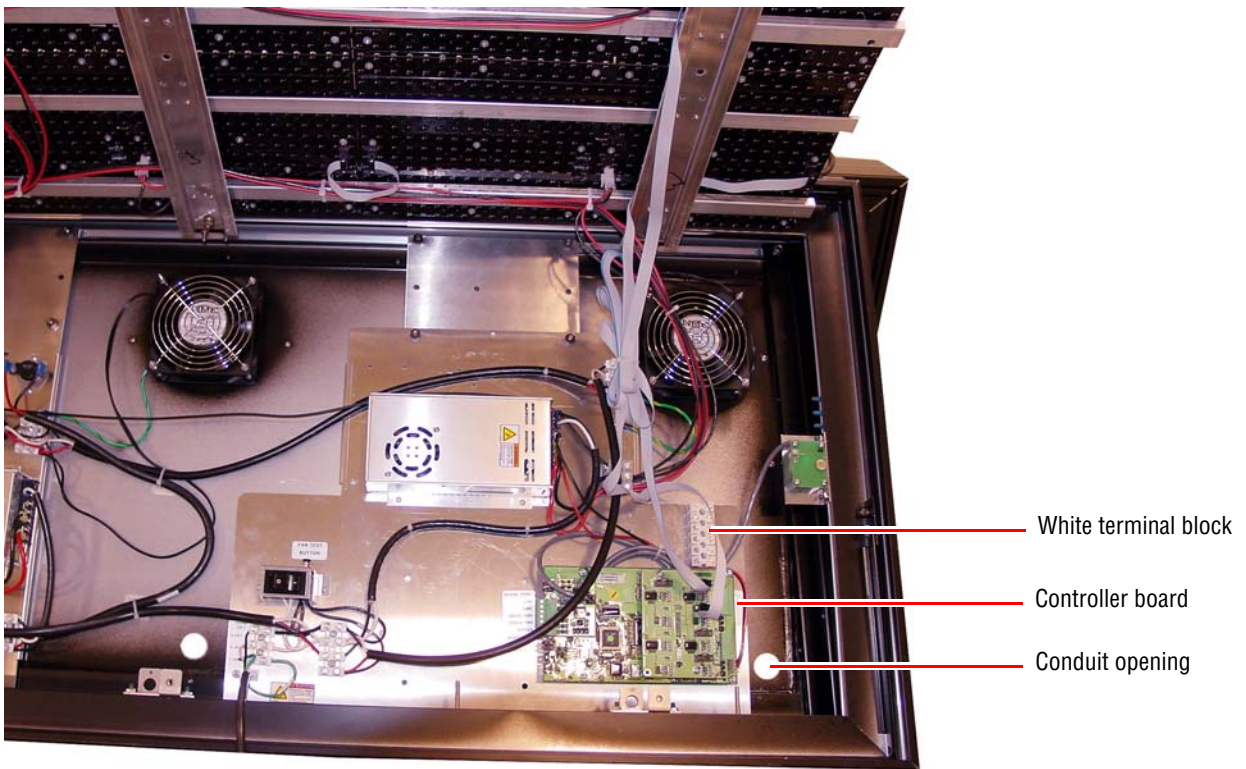
1. Remove power from the AlphaEclipse sign.



2. Open the sign door.
3. Fasten the safety bar on one or both sides of the sign door.  
 NOTE: On some signs, the safety bar automatically fastens when the sign door is raised.
4. Remove the screws from each of the sign's vertical rails.
5. Placing your hands underneath the metal rails, lift the LED boards up. Lower each red prop rod from underneath the LED boards. Then place each prop rod in the sign case hole nearest to the prop rod.
6. Put the internal power switch in the OFF (0) position.

## Connect RS485 outdoor cable to the sign

7. Locate the sign's controller board. It is usually located in the front right side of the sign as in the AlphaEclipse 2600 sign shown below:

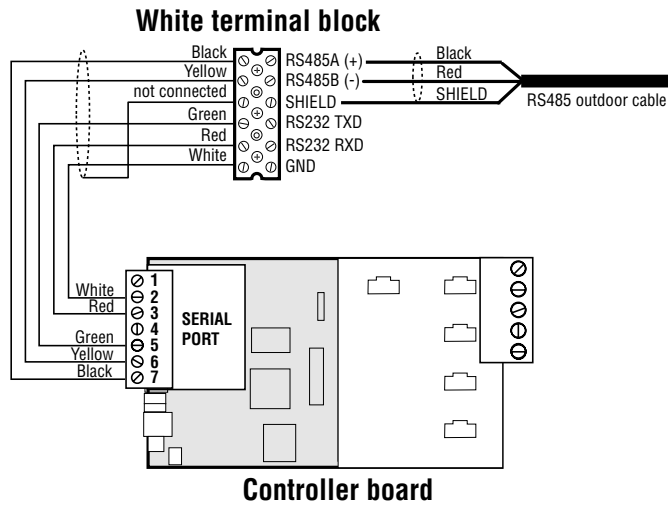


8. Run RS485 outdoor cable from the base of the sign into the back of the sign through the conduit opening nearest the sign's controller board. *The RS485 wire should not be run through the same conduit with the wires supplying power to the sign.*

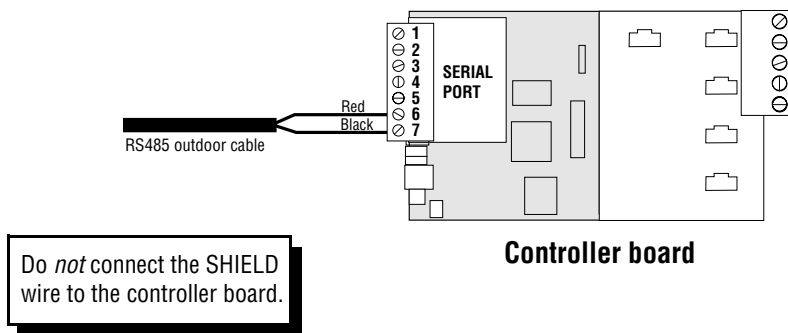
NOTE: If you have two signs connected as a Master/Slave pair, run the RS485 wire to the *Master* sign.

9. Connect the RS485 wires to the sign in one of two ways:

- If there is a white terminal block in the sign, connect the RS485 wire to this block:



- If there is *no* white terminal block in the sign, then connect the RS485 wire to the controller board:

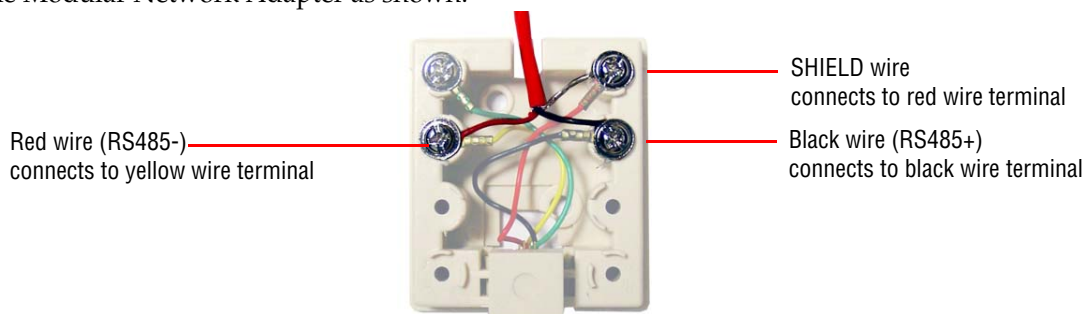


10. Put the internal power switch in the ON (1) position.

11. Before you close the sign, see if the sign's baud rate is correct (see "Set the AlphaEclipse sign to the correct baud rate" on page 8).

**Connect the RS485 outdoor cable to the Modular Network Adapter**

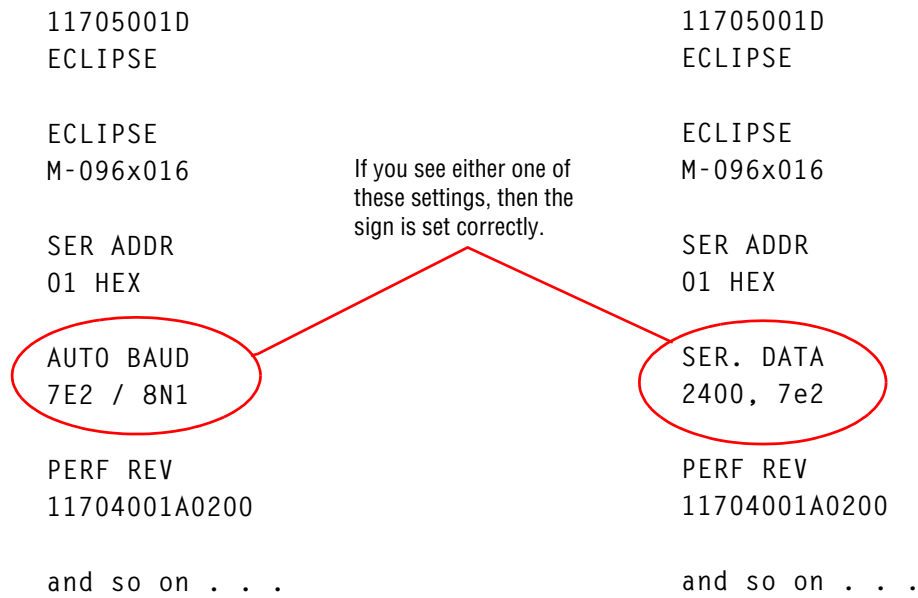
12. Wire the Modular Network Adapter as shown:



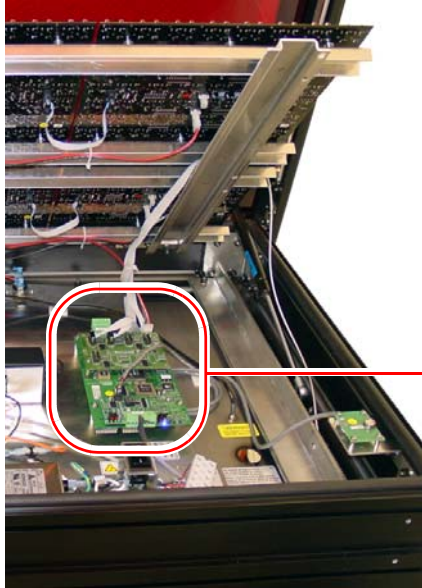
13. Apply power to the sign.


## Set the AlphaEclipse sign to the correct baud rate

14. To see if the sign is set correctly, turn power to the sign off and then on again. Messages similar to the following will appear on the sign:



15. If the sign is *not* set to either of the above (“AUTO BAUD” or “2400, 7e2”), then turn off power to the sign, open the sign door, and set the controller board DIP switches to AUTO BAUD as shown below:

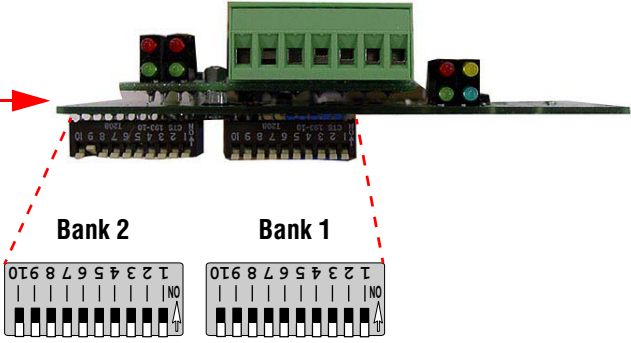




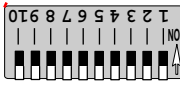
**⚠ WARNING**

**Hazardous voltage.**  
Contact with high voltage may cause death or serious injury.  
Always disconnect power to unit prior to servicing. SM1000A

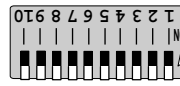
Controller board



**Bank 2**



**Bank 1**



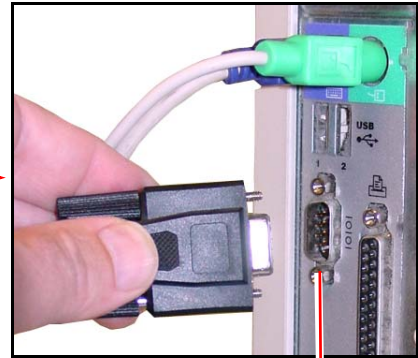
Only set these DIP switches (off = down).  
*Leave the other switches alone!*

- Bank 1 — DIP switches #3, 4, and 5 off.
- Bank 2 — DIP switch #8 off.



## Connect the IR Message Loader to a computer

Turn off your computer before connecting the IR Message Loader.



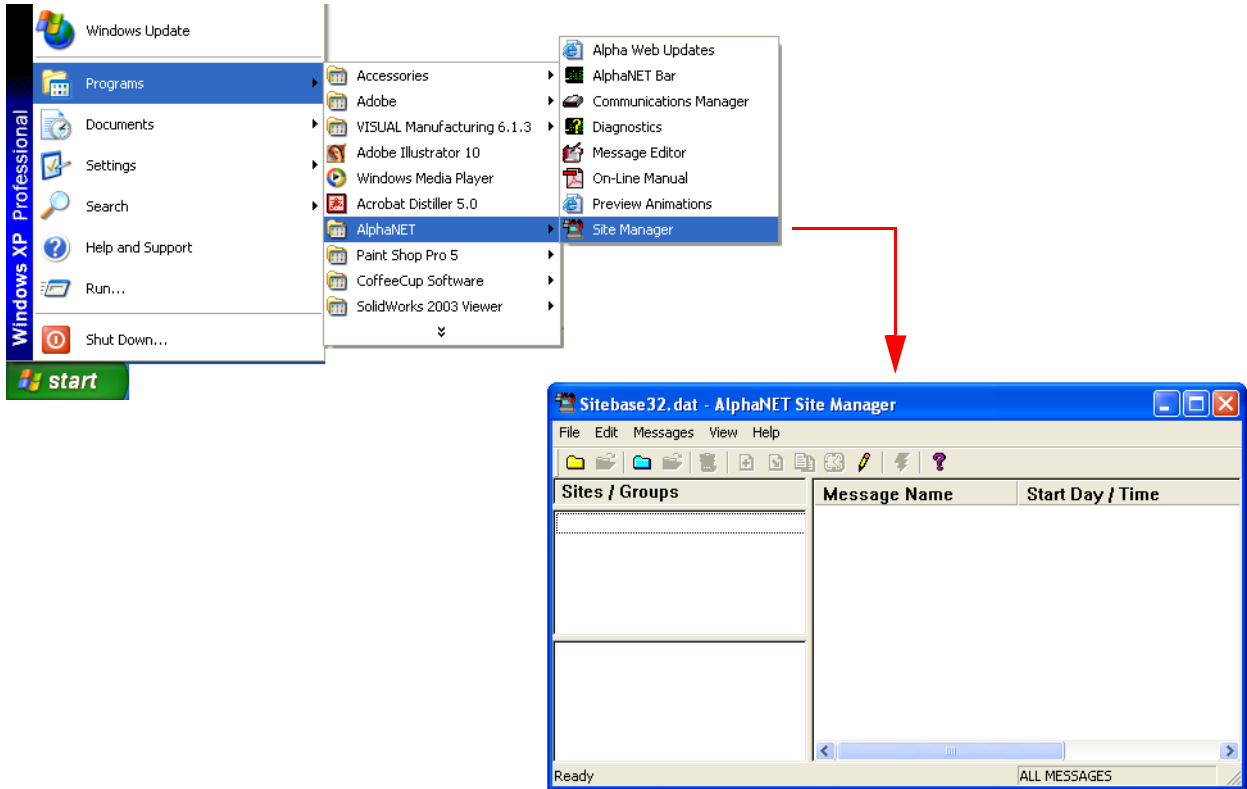
Computer COM port

IR Message Loader  
(pn 1071-1113)

Loader-to-PC cable  
(pn 1036-9010)

## Create a site using AlphaNET Site Manager

1. Open the AlphaNET Site Manager software:



2. Click *Edit > Connection Device*. Then click *Local Wired Com 1 > Edit*:



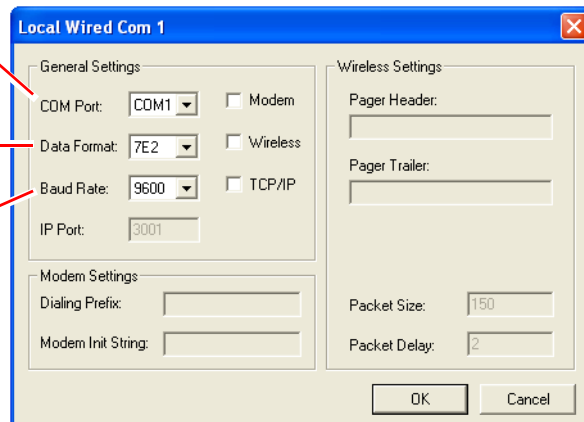
- If you don't see *Local Wired Com 1*, then click *Add* and select the appropriate *Local Wired* device.
- If you connected the IR Message Loader to another COM port, then click *Add* and select the appropriate *Local Wired* device.

3. Set the *COM Port*, *Data Format*, and *Baud Rate* as shown below. Then click *OK*:

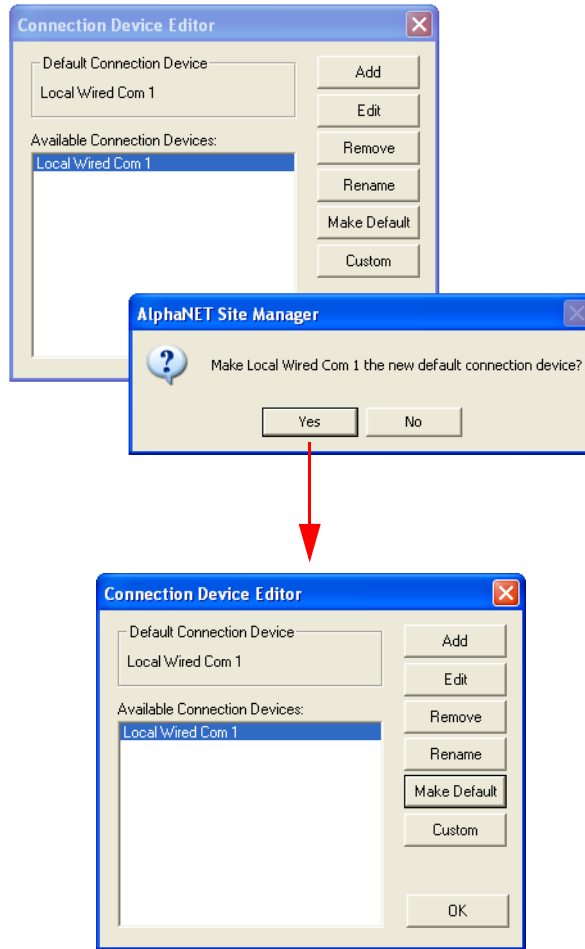
**COM Port**  
Set this to the computer COM port that is connected to the IR Message Loader.

**Data Format**  
Set to 7E2.

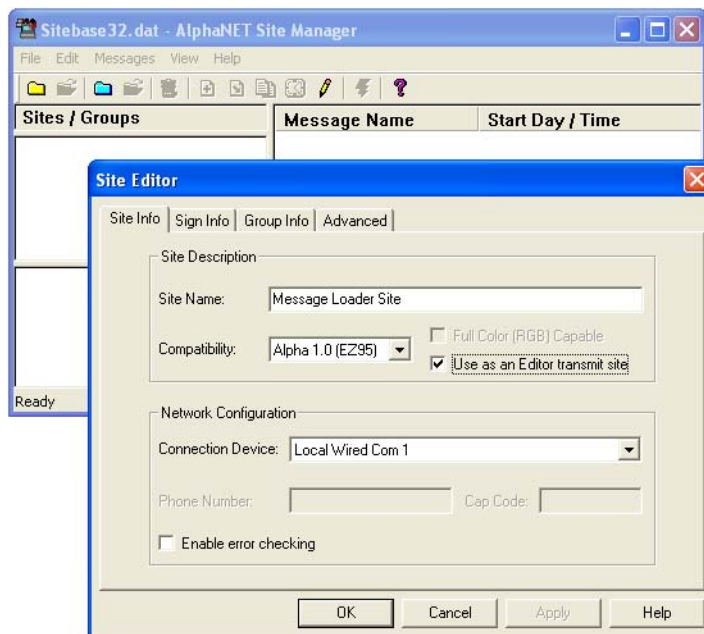
**Baud Rate**  
Set to 9600. (This is the speed that your computer sends messages to the IR Message Loader.)




- 4. Click *Make Default* > *Yes* > *OK*:

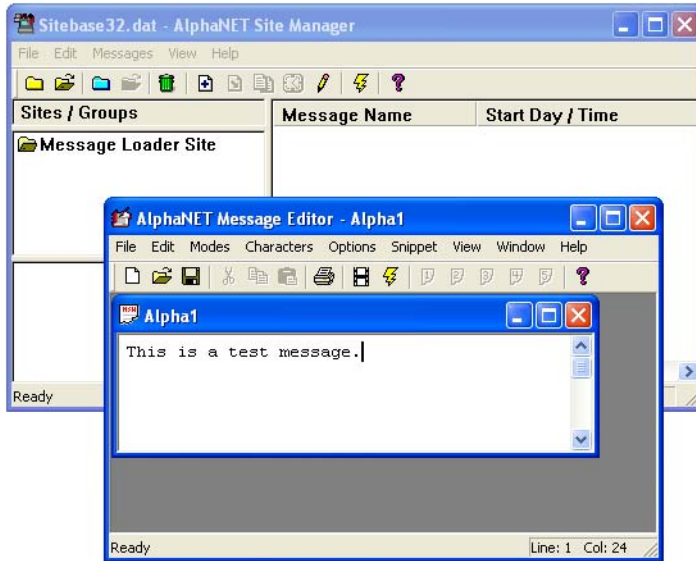


- 5. From the AlphaNET Site Manager screen, click *File > New Site*. Enter the information as shown below. Then click *OK*.



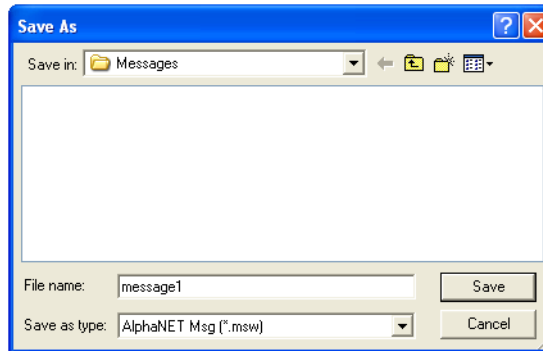
## Create messages for the sign using AlphaNET Message Editor

1. From the AlphaNET Site Manager screen, click the Message Editor icon . Then enter a message:

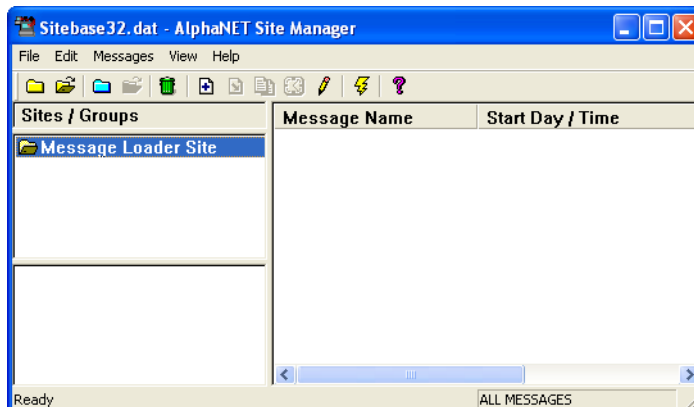


A sign's time and date can *not* be updated using the IR Message Loader.  
To change the time and date on a sign, see "Troubleshooting" on page 16.

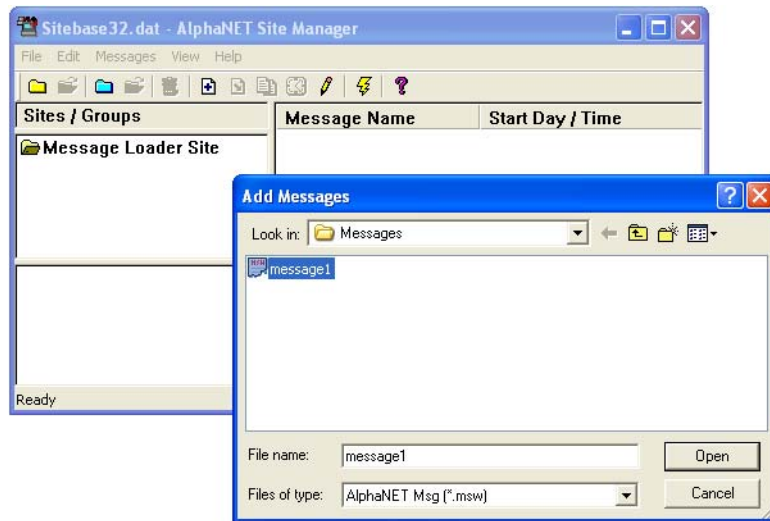
2. Click *File > Save As*. Name this message "message1". Then click *Save*:



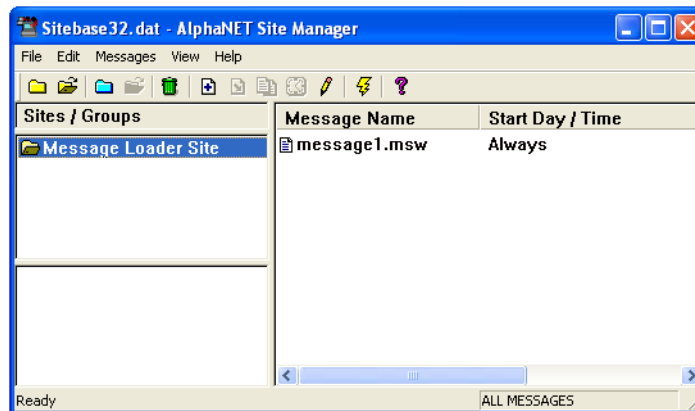
3. Click *File > Close* to close the *message1* window.
4. From the AlphaNET Site Manager screen, click *Message Loader Site*:




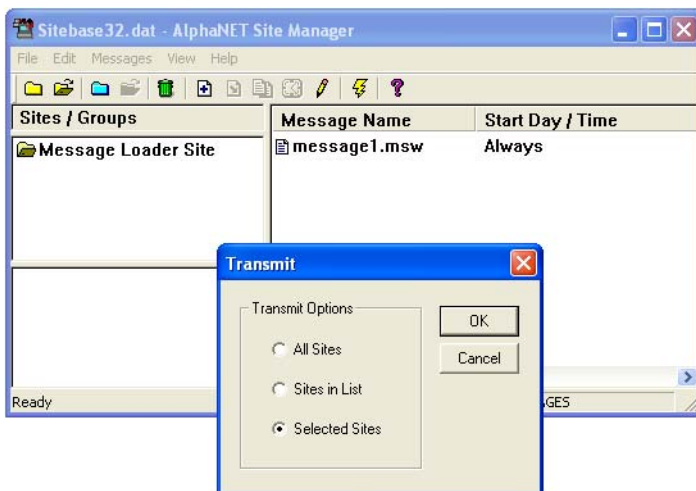
- Click the add message icon . Then select *message1*:



- Click *Open*. This adds *message1* to the *Message Loader Site*:



- Select *Message Loader Site*. Click the transmit icon  :



One or more messages can be “attached” to a site.

All the messages that are attached to a site will be sent to the IR Message Loader.

Because IR Message Loader memory is limited, be careful of attaching too many messages to the Message Loader Site.

**Do NOT click *OK* yet!**

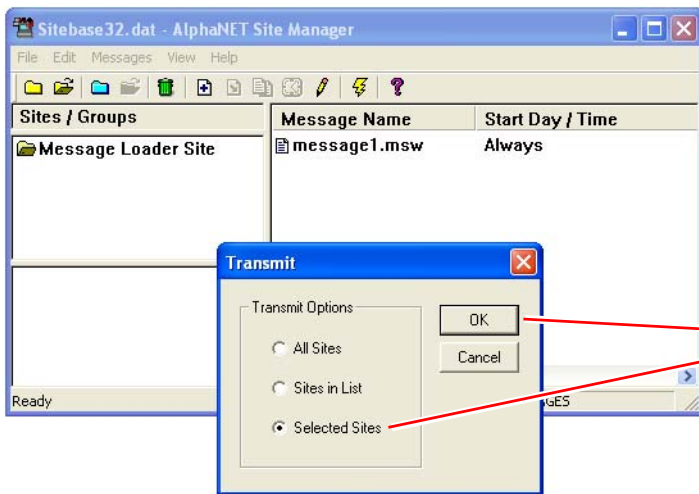
## Store the messages in the IR Message Loader

1. On the IR Message Loader, move the *MEMORY LOCATION* switch to 1, 2, or 3 to select where to store your messages:

In this picture, *MEMORY LOCATION* has been set to 3.



2. Press and release *TRANSMIT* on the IR Message Loader. When *DATA* blinks once, go to the next step. *You only have 10 seconds.*
3. From the AlphaNET Site Manager screen, click *Selected Sites* > *OK*:

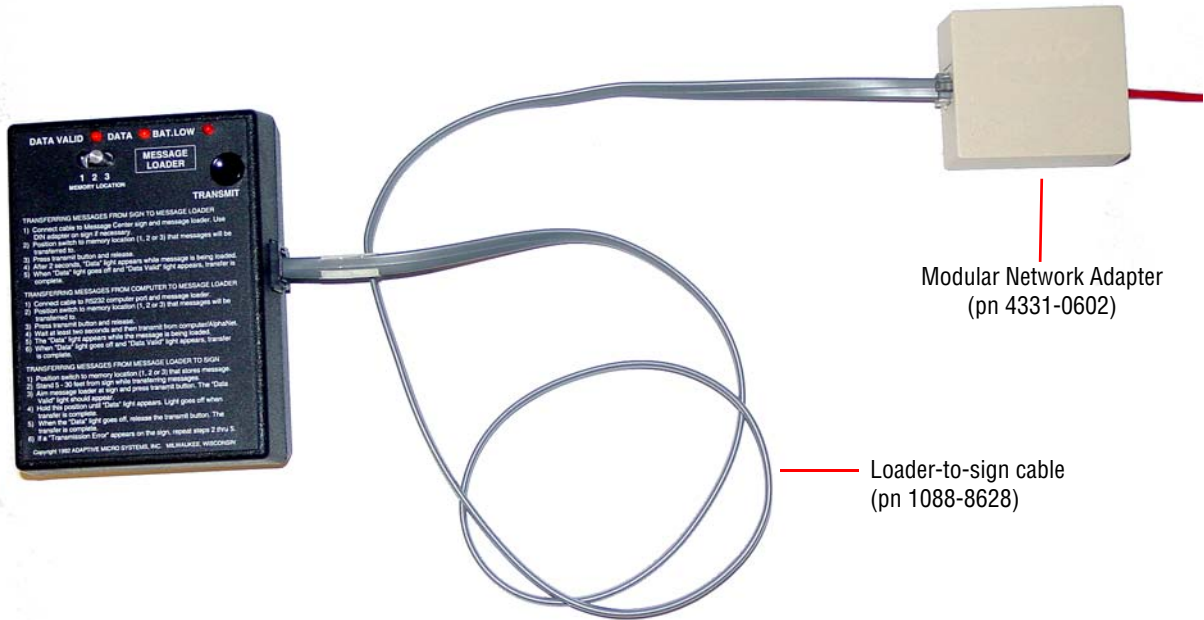


Click *Selected Sites*. Then click *OK*.

4. *DATA* will blink as messages are sent from the computer to the IR Message Loader.
5. When all messages have been sent to the IR Message Loader, both *DATA VALID* and *DATA* will go off.

## Send the messages from the IR Message Loader to the sign

- Using a Loader-to-sign cable, connect the IR Message Loader to the Modular Network Adapter that is connected to the AlphaEclipse sign:



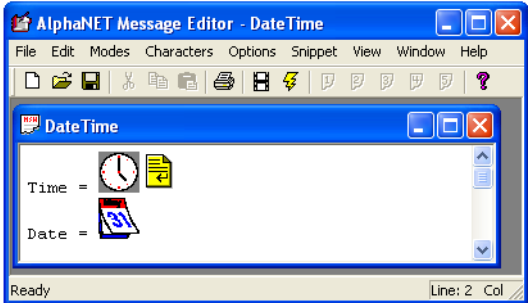
- On the IR Message Loader, move the *MEMORY LOCATION* switch to 1, 2, or 3 to select where your message are stored:

In this picture, *MEMORY LOCATION* has been set to 3.



- On the IR Message Loader, press and hold *TRANSMIT*. Watch the *DATA* light. When it goes off, stop pressing *TRANSMIT*.
- If *RECEIVED OK* appears on the sign, then the transfer was successful and your message should appear on the sign. However, if an error message appears, then repeat from step 4.

## Troubleshooting

Problem	Solution																																	
<p>No messages appear on sign</p>	<ul style="list-style-type: none"> <li>• Make sure the sign has power.</li> <li>• Turn the sign off then on again. Watch for the baud rate message:                     <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: left;">11705001D</td> <td style="width: 33%;"></td> <td style="width: 33%; text-align: right;">11705001D</td> </tr> <tr> <td>ECLIPSE</td> <td></td> <td>ECLIPSE</td> </tr> <tr> <td>ECLIPSE</td> <td style="text-align: center;">If you see either one of these settings, then the sign is set correctly.</td> <td>ECLIPSE</td> </tr> <tr> <td>M-096x016</td> <td></td> <td>M-096x016</td> </tr> <tr> <td>SER ADDR</td> <td></td> <td>SER ADDR</td> </tr> <tr> <td>01 HEX</td> <td></td> <td>01 HEX</td> </tr> <tr> <td>AUTO BAUD</td> <td></td> <td>SER. DATA</td> </tr> <tr> <td>7E2 / 8N1</td> <td></td> <td>2400, 7e2</td> </tr> <tr> <td>PERF REV</td> <td></td> <td>PERF REV</td> </tr> <tr> <td>11704001A0200</td> <td></td> <td>11704001A0200</td> </tr> <tr> <td>and so on . . .</td> <td></td> <td>and so on . . .</td> </tr> </table> </li> <li>• Move the <i>MEMORY LOCATION</i> switch to a different number (1, 2, or 3). Then try sending messages to the sign again.</li> <li>• Try storing messages in the IR Message Loader again. Then send these messages to the sign. Use the same <i>MEMORY LOCATION</i> number for storing and sending messages.</li> <li>• Your message(s) may be too large. Create a short text message using AlphaNET software. Then try sending this message to the IR Message Loader and then to the sign.</li> <li>• Try using a different Loader-to-PC cable.</li> <li>• Replace the battery in IR Message Loader.</li> </ul>	11705001D		11705001D	ECLIPSE		ECLIPSE	ECLIPSE	If you see either one of these settings, then the sign is set correctly.	ECLIPSE	M-096x016		M-096x016	SER ADDR		SER ADDR	01 HEX		01 HEX	AUTO BAUD		SER. DATA	7E2 / 8N1		2400, 7e2	PERF REV		PERF REV	11704001A0200		11704001A0200	and so on . . .		and so on . . .
11705001D		11705001D																																
ECLIPSE		ECLIPSE																																
ECLIPSE	If you see either one of these settings, then the sign is set correctly.	ECLIPSE																																
M-096x016		M-096x016																																
SER ADDR		SER ADDR																																
01 HEX		01 HEX																																
AUTO BAUD		SER. DATA																																
7E2 / 8N1		2400, 7e2																																
PERF REV		PERF REV																																
11704001A0200		11704001A0200																																
and so on . . .		and so on . . .																																
<p>Time and date not correct on sign</p>	<ul style="list-style-type: none"> <li>• To change the time and date on an AlphaEclipse sign, connect a computer running AlphaNET software to the sign. Connect the computer RS232 port to the sign's controller board. See the "Networking signs" section in either the AlphaEclipse Series A or Series B service manual for wiring details.</li> </ul> <p>NOTE: If you have an AlphaEclipse 2500 or 2600 sign, use the AlphaEclipse Series B service manual.</p> <ul style="list-style-type: none"> <li>• Send a message to the sign with the correct time and date:</li> </ul> <p>AlphaNET uses your <i>computer's</i> time and date, so make sure these are correct.</p> 																																	



## Appendix

### Replacing the battery in an IR Message Loader



The IR Message Loader is powered by a 9-volt alkaline battery which should be replaced when

- *BAT. LOW* light remains on
- after repeated attempts, the IR Message Loader is unable to either receive or transmit messages

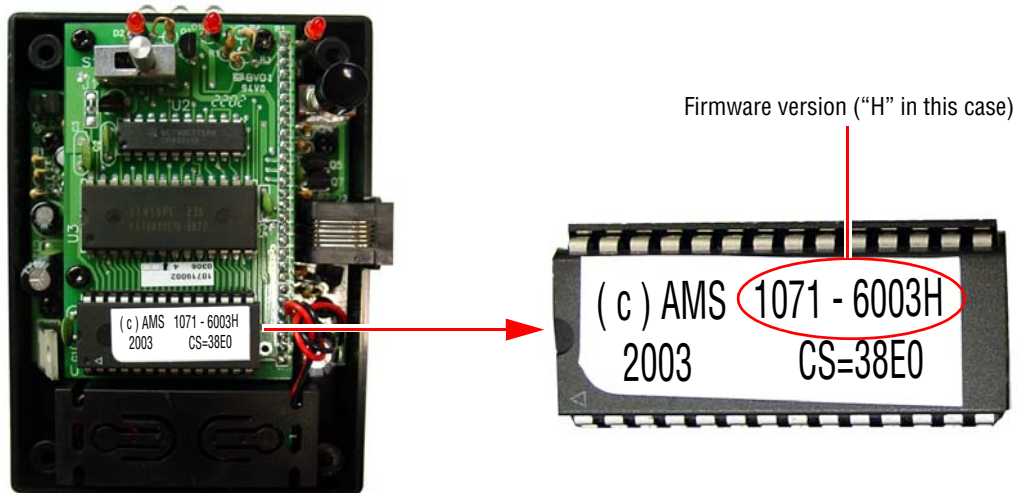
To replace the battery, slip off the battery cover on the back on the unit. Then replace the battery with a new one (as shown on the right).

### Updating the firmware in an IR Message Loader

Firmware is the operating system for the IR Message Loader and is contained in a small chip inside the unit. From time to time, it may be necessary to update the firmware by replacing this chip.

To update the firmware, follow these steps:

1. Disconnect the battery from the IR Message Loader.
2. Remove the four screws from the back of the unit. Then pull the back off of the unit to expose the firmware chip:



3. Place the tip of a small screwdriver under the firmware chip. Then gently pry the chip out of its socket.
4. Place the new firmware chip in the socket and press it into place.
5. Reattach the unit's cover.
6. Reconnect the unit's battery.

