POWERMARQUEE

Programming Software
User Manual

(Manual P/N MAN-P3000-002)

WARNING!

Programmable control devices such as the UTICOR's PowerMarquee must not be used as stand-alone protection in any application. Unless proper safeguards are used, unwanted start-ups could result in equipment damage or personal injury. The operator must be made aware of this hazard and appropriate precautions must be taken.

In addition, consideration must be given to the use of an emergency stop function that is independent of the programmable controller.

The diagrams and examples in this user manual are included for illustrative purposes only. The manufacturer cannot assume responsibility or liability for actual use based on the diagrams and examples.

WARNING: If the PowerMarqueel is used in a CLASS I, DIV. 2 environment, the following conditions must be met: Class I, Div. 2 methods; AND — must conform to all rules and requirements of applicable jurisdictions regarding Class I, Div. 2 installations; ALSO — peripheral equipment controlling this device or being controlled by it shall be suitable for service in the location in which they are used. ***Failure to comply with any of the above installation requirements will invalidate the device's qualifications for service in CLASS I, DIV. 2 hazardous locations.***

WARNING: EXPLOSION HAZARD — SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2.

WARNING: EXPLOSION HAZARD — DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR THE AREA IS KNOWN TO BE NON-HAZARDOUS.

Manual Part No. MAN-P3000-002 (06/03/03)

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Introduction

Welcome to UTICOR's PowerMarquee Programming Software, P/N ACC-P3000-EDIT. This software is used to configure a Message Project for PowerMarquees. You will install this software to run from an IBM or compatible computer.

The PowerMarquee can be configured on-line or off-line. You can add or edit messages, embed up to 4 data values, and set the triggers for each message.

Technical Support

Although most questions can be answered with PowerMarquee HELP or the manuals, you may find answers to your questions in the operator interface section of our web site @ www.uticor.net. If you still need assistance, please call our technical support at **1-800-832-3647 or FAX us at 1-563-359-9094.**

P3000 PowerMarquee Master — Models and Features

The P3000 PowerMarquee Master is a cost-efficient, alphanumeric display. It is the newest of UTICOR's line of Programmable Message Displays (PMD).

The PowerMarquee is a large LED display available in 2 widths and 1 height for a total of 2 different sizes. The PowerMarquee is a red LED (also available in High-Bright Red LED display) display that displays messages in 2", 4", 6", and 8" characters. The PowerMarquee uses suspended mounting: the unit is suspended using a hole in the top of each end plate.

Physical Characteristics

The PowerMarquee is housed in an anodized aluminum case. Two capped holes are provided for routing wires through the back access plate. The fuse, connectors, and switches can be accessed by removing the back access plate.

The front panel of the PowerMarquee contains a lens that covers the LED field and protects the inside of the unit. The LED field is offered in 2 sizes. The display area is 9.6" high. Field width sizes are 36" or 72" wide.

The P3000 PowerMarquee Master Hardware Manual that was shipped with your unit, provides hardware information such as wiring requirements, switch settings, fuse locations and outline dimensions. Refer to the hardware manual, P/N MAN-P3000-003 for information about PowerMarquee installation.

Messages

How messages look depend on the way they were programmed. Messages programmed into the PowerMarquee Master have message options that determine message outputs and visual appearance. One of the master message output options is sending messages to slaves. When the message contains this option, the message can be displayed on one, some, or all slaves.

The behavior of the message is determined by selected message options and/or embedded codes. Messages can be stationary, flashing, or scrolling. Scrolled messages scroll up or left. Other options determine if message text is centered on lines, if previous text remains on the display or is removed, etc. Embedded codes place time, date, and variable data locations in the message. These locations display the continuously-updated information it receives from the controller or computer.

The PowerMarquee displays also feature international character sets. This option is switch-selectable to allow message display in the following character sets America (U.S.) (default), England, France, Denmark, Sweden, Germany, Cyrillic, or Japan (Kana). (See Appendix A)

The PowerMarquee has a large, LED field on which to display messages. The size of this field varies (see part numbers) and provides a variety of ways to display messages. 2", 4", 6", 8", and 8" compressed characters can be displayed simultaneously, even within the same message. Because of this, programmed embedded codes are used to change character size. Another code, a frame definition code, can be used to determine which lines of the display are used by a particular message.

Left-scroll messages feature "smooth scrolling", that is, letters move one LED at a time. Each portion of a letter will illuminate every dot in that row when it scrolls across the display. Upward-scrolling messages actually do not scroll at all. Rather, they "wipe on" to the display in an upward fashion. The first section of message lines appear, then the display pauses, clears, and displays the next section of text.

Conclusion

Application of the PowerMarquee display is as diverse as individual business needs. Think of it, if you will, as a mailbox into which messages addressed to that location are delivered (and subsequently displayed).

Now consider several mailboxes in various locations within your company. Delivery of these messages takes a matter of milliseconds and can provide vital information to all employees -- from machine operators to the CEO.

PLCs Compatible with PowerMarquee

The table to the right lists the PLCs, by manufacturer, that PowerMarquee is compatible with. We are always updating PLC compatibility, if you don't see your type PLC in this table, visit our web site at www.UTICOR.net or call **UTICOR Technology, L.P. technical support** at **1-800-832-3647** or **FAX** us at **1-563-359-9094.**

PLC Brand	Model		Protocols Supported
Allen-Bradley	Micrologix 1000/1200/1500, SLC500, 5/01,/02,/03		DH485/AIC/AIC+
	SLC5/04, PLC5		DH+ (Option Card)
	Micrologix 1000, 1200 and 1500 SLC5/03, /04, /05 (with DF1)		DF1 Half Duplex; DF1 Full Duplex
	PLC5		DF1
	PLC 2, 3, and 5		Remote I/O (DH+ Option Card)
Control Techniques	Unidrive 2-wire, 4-wire		Binary
Control Technology Corporation (CTC)	CTC 2600, 2700, and 5100		CTC Binary
DeviceNet	DeviceNet I/O		Generic DeviceNet I/O (Option Card)
Ethernet	Ethernet/IP		Generic Ethernet/IP (Option Card)
General Electric	90/30 and 90/70 Versamax		SNPX SNP
Mitsubishi	FX Series (all) CC-LINK		Direct
Modicon	984 CPU, Quantum 113 CPU AEG Modicon Micro Series 110 CPU: 311-xx, 411-xx, 512-xx, 612-xx		Modbus RTU
	984 Series, Quantum Series		Modbus Plus (Option Card)
Omron	C200, C500, CQM1, CPM1, & CPM2		Host Link
Profibus	Profibus-DP		Generic Profibus-DP (Option Card)
DirectLogic	DL05		K-Sequence; DirectNet; ModBus (Koyo addressing)
	DL105		K-Sequence
	DL205	D2-230	K-Sequence
		D2-240	K-Sequence; DirectNet
		D2-250	K-Sequence; DirectNet; ModBus (Koyo addressing)
		D2-240/250 DCM	DirectNet
	DL305	D3-330/330P	DirectNet
		D3-340	DirectNet
		D3-350	K-Sequence; DirectNet; ModBus (Koyo addressing)
		D3-350 DCM	DirectNet
	DL405	D4-430	K-Sequence; DirectNet
		D4-440	K-Sequence; DirectNet
		D4-450	K-Sequence; DirectNet; ModBus (Koyo addressing)
		All with DCM	DirectNet
Siemens	Siemens S7 MPI Adapter		3964R
Square D Symax	300 Series CPU, 400 Series CPU		Symax
Texas Instruments	TI5X5 Series— TI 505, TI545-1102, TI545-1104		TBP (Transparent Byte Protocol) or NITP (Non-Intelligent Terminal Protocol)
Uni-Telway	Telemecanique TSX 37 Micro		UNI-TE (Version 1.1)
Other	H2- WinPLC (Think & Do V6.3, Think & Do Studio,check for version compatibility)		Modbus RTU (serial port)

Installing the Software

PowerMarquees are configured with software running on an IBM or compatible personal computer. This software is available through Uticor Technology, L. P., part number ACC-P3000-EDIT. The PowerMarquee can be configured on-line or off-line.

Perform the following steps to install the PowerMarquee Programming Software onto your PC.

- Place the CD into your **CD ROM drive.**

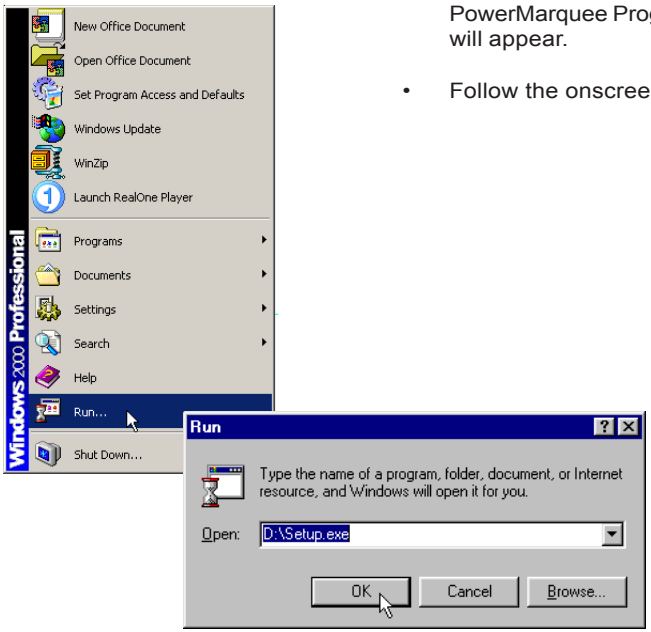
- The CD should automatically start the install program, if it does not, perform the following 2 steps:

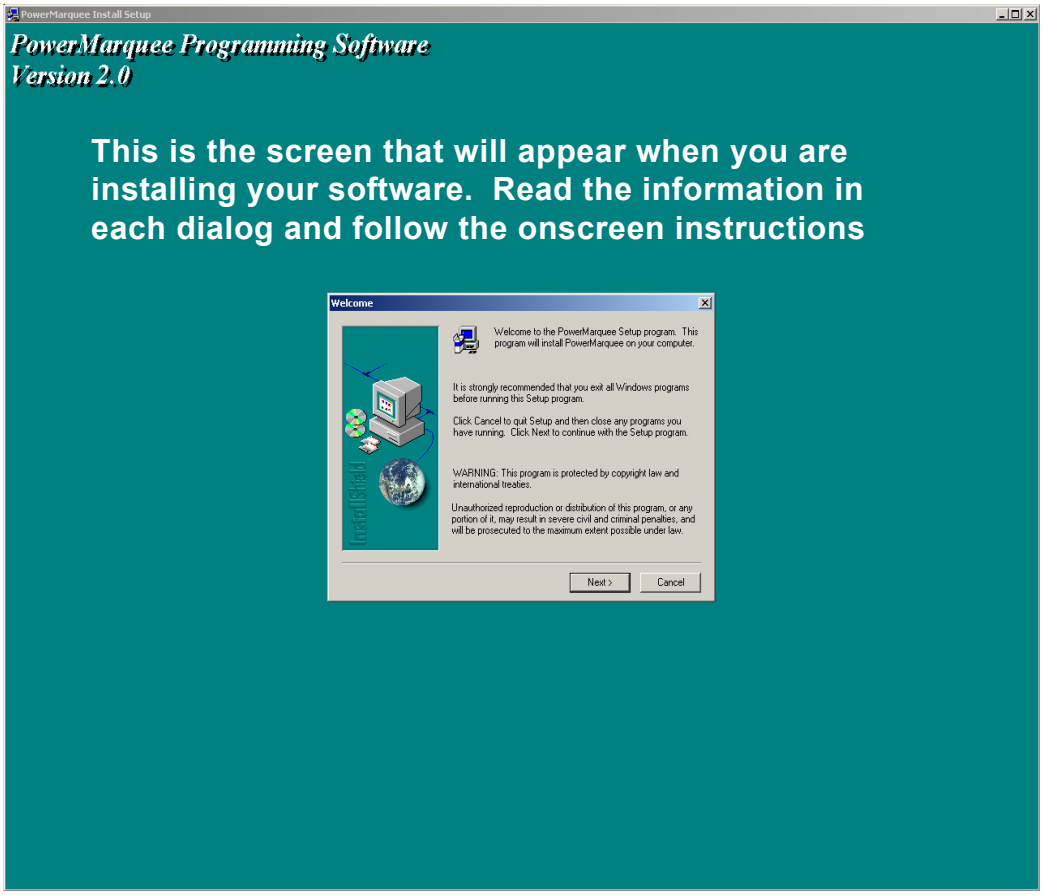
  1. From Windows click on the **Start** Button, and then click on **Run** from the menu. The **Run** dialog box will pop up.

  2. At the prompt type D:\ (or your CD ROM drive) setup.exe or click on the **Browse** Button and find the **Setup.exe** file for PowerMarquee Programming Software.

- Click on the **OK** button to begin the installation. The PowerMarquee Programming Software Installation Screen will appear.

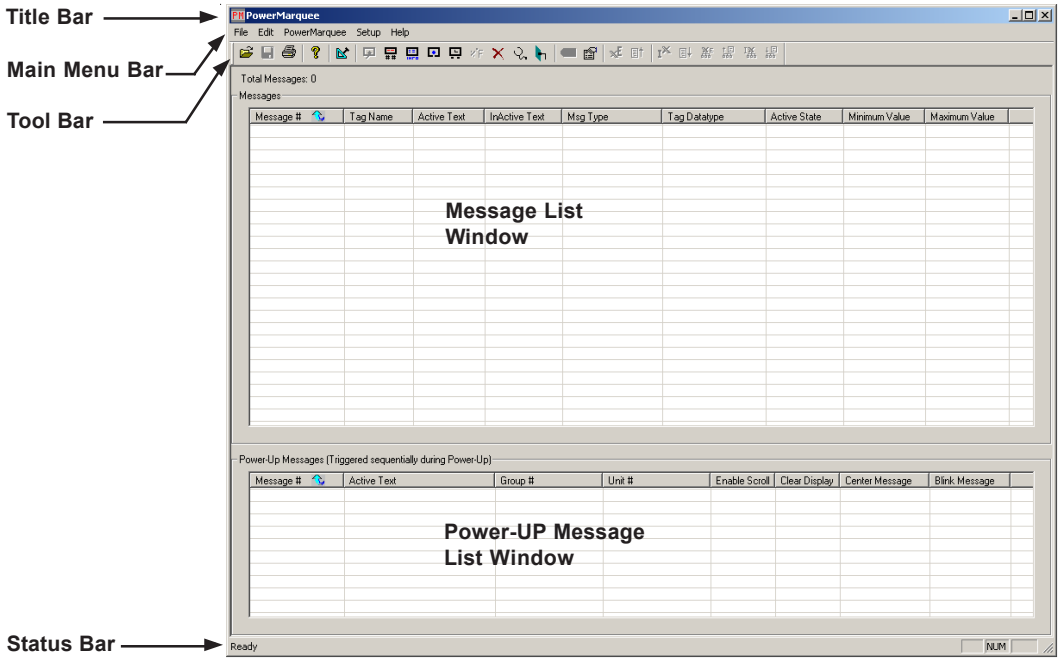
- Follow the onscreen prompts to load the software.





This icon will appear on your desktop after the software has been installed. The next time you want to run the PowerMarquee Programming Software, just double-click on the icon

Main Programming Window



Title Bar

The **Title Bar** tells you the name of the project and name and number of the screen that you currently have open.

Main Menu Bar

This is the **Main Menu Bar**. PowerMarquee Programming Software menus are represented by the names listed across the top of the Main Programming Screen and directly under the Title Bar.

Tool Bar

The Toolbar consists of icons for frequently used commands. These commands are also found in, and accessible from the Main Menu Bar. Click on an icon in the graphic below to go to the help topic for that item.

Message List

The Message list provides you with a list of programmed messages. From this list you can enter a new message or edit an existing message. You can delete messages, copy one or more and paste them into the list, and sort them by different variables. You can also search for a character string in the entire message list to find each instance where it appears. It provides you with a quick view

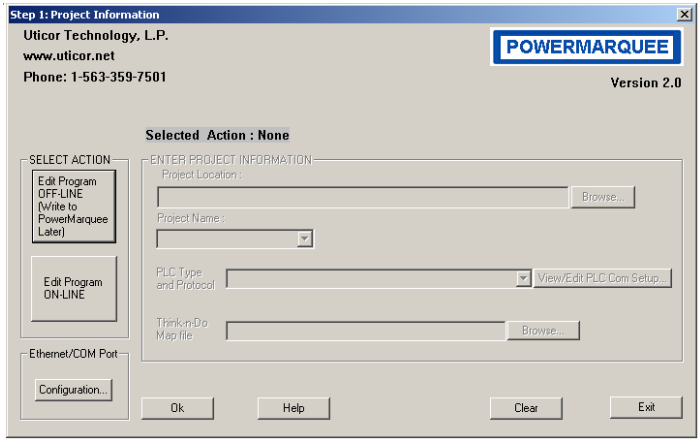
of the primary attributes of each message you have programmed, making it easy to track, and update messages as your program grows. You can see what messages you've programmed, where they are being sent and the controls that trigger them.

Power-Up Message List
Power-Up Messages are messages that will display upon power-up. They can be programmed to display on the PowerMarquee Master or a slave message display.

Status Bar
The Status Bar is located at the bottom of the Programming Screen and shows the status of the current screen. It provides information about a tool bar or menu item on the main programming screen that the pointer passes over and the current programming mode (ONLINE or OFFLINE).

Create a Project

Once your PowerMarquee Programming Software is installed you are ready to begin configuring a project. The first screen to appear is the Project Information Screen (shown below). From here you will enter information about a new program you are creating, or you will select an existing program to edit.



The top of the Project Information screen shows you the manufacturer and contact information for the PowerMarquee Programming Software. It also provides you with the software version. If you contact technical support, make sure you know the version number of the software.

Under **SELECT ACTION**, click on one of the "working mode buttons." If you want to work offline (not connected to a PowerMarquee), click on the button labeled **Edit Program OFF-LINE (Write to PowerMarquee Later)**. You will use this mode when creating a new project. If you want to edit an exiting project that is online (make sure your PC is connected to the PowerMarquee where the program resides that you want to edit), click on the **Edit Program ON-LINE button**.

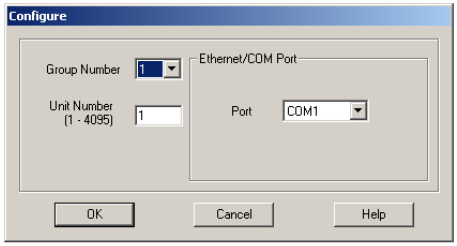
Under **ENTER PROJECT INFORMATION**, perform the following steps:

1. First select the **Project Location**. Click on the **Browse** button if you want to navigate to another Directory or Folder where you will store your project. If you want to accept the default folder (where PowerMarquee Programming Software resides), just enter the name of your new project in the empty field under **Project Name**. For an existing project, click on the **Browse** button to go to the location of the project you wish to edit.

2. Click on the DOWN arrow to the right of **PLC Type and Protocol** to view the list. Select the PLC Type and Protocol you are using.

3. Click on the **View/Edit PLC COM Setup** to edit the PLC Attributes. A dialog box will appear that is particular to the type of PLC you have selected in the previous step. Set the attributes to match your PLC. Click **OK**. (If you have selected Think & Do as your PLC Type, the Thnk-n-Do Map File field will become available allowing you to navigate to the map file and bring it into the project.)

4. Under **Ethernet/COM Port**, click on the **Configuration** Button. The following dialog box will appear.

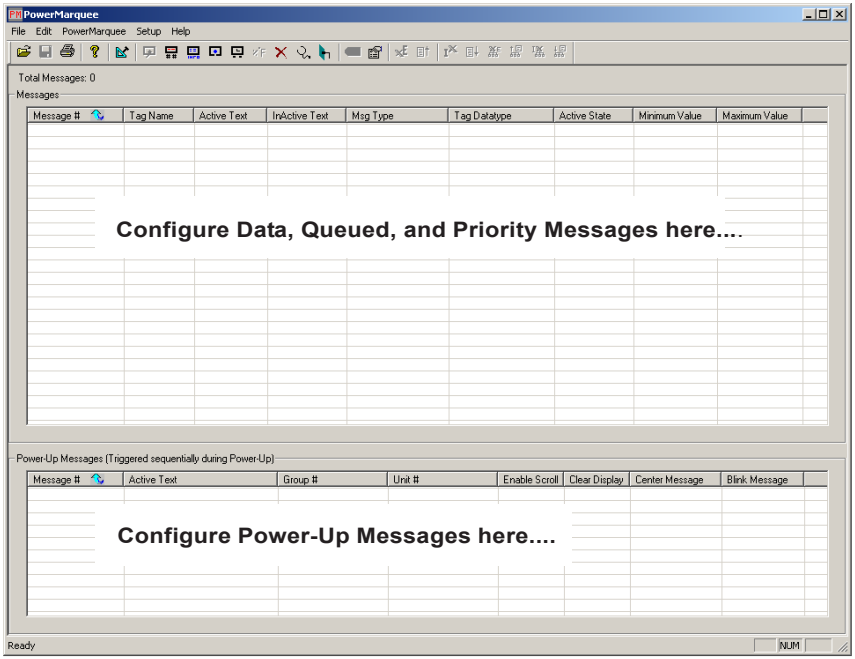


5. Click on the down arrow to view the choices for the **Ethernet/ COM Port**. Click on **COM1, COM2, COM3, COM4, COM5, COM6, COM7,** or **COM8**. (Ethernet is not available in this release.) Select the **Group Number** (1 through 15) and **Unit Number** (1 through 4095) of the PowerMarquee. Select the one that matches the port on your programming PC and is connected to the PowerMarquee.

6. Do one of the following:
   - Click on **OK** button to save your selections and exit the dialog box.
   - Click on **Clear** to clear all entries or selections in the dialog box.
   - Click on **Cancel** button to exit the dialog box without saving your selections.
   - Click on **Help** button to go to the Help Topic for that dialog box.

Once you have clicked on OK and saved your selections you will begin configuring messages on the Main Programming Screen.

PowerMarquee Main Programming Screen



Message Types

- **Data Messages:** These are messages with embedded data values. They are typically used for displaying information such as production data, temperature, etc.

  Data Messages are written over with the next triggered Message. It remains on the marquee until it is overwritten. It does not re-display. Be aware that when the trigger is no longer active, the message **does not clear automatically**. You must overwrite it or use some method to clear it, or the Data Message will remain on the display.

  If you send a command to the PowerMarquee telling it to erase Message No. 1 from Line 1, it will erase the Line regardless of the message being displayed. In otherwords, the Marquee will receive the command to erase line 1 and cannot differentiate if line 1 contains Message No. 1, 2, or 3, etc. Data Messages are triggered by a change in a variable in a PLC register.

- **Queued Messages:** These messages will be redisplayed on the Marquee (after the Message Display time is met) as long as the trigger is active. Each queued message will continue to display in the order in which it was triggered and for as long as the trigger is active. (Message

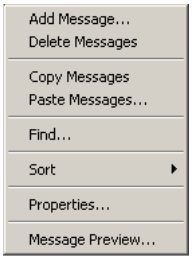
display time is set in System Attributes.) Up to 99 Messages can be stored in the Queue. When the queue is full (99), the 100th message will write over the first message in queue.

- **Priority Messages:** Priority Messages are also queued messages, but when the message trigger is active *no other messages will be updated or processed*. Priority Messages might be used to display critical information. For example, if a Marquee is routinely displaying Data Messages that provide pressure readings for Valve #1, you may want to program a Priority Message to display if Valve #1 pressure exceeds a maximum point. Priority Message could read **"WARNING: Valve #1 pressure exceeds maximum. Shut down System XYZ."**

- **Power-Up Messages:** Power-Up Messages are unique messages that are displayed on the PowerMarquee when the system is turned on.

Creating Messages

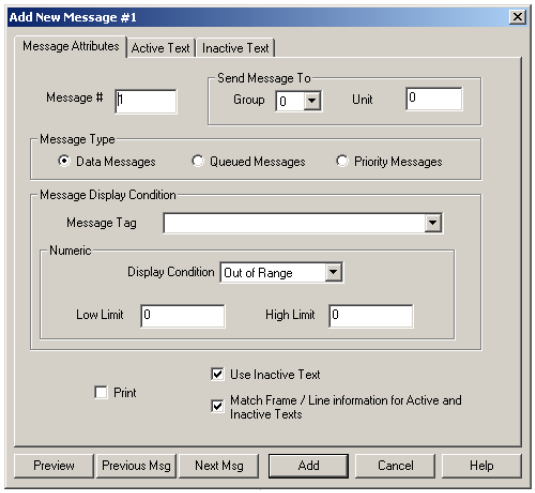
Right Click Message Menu appears when you right click your mouse button anywhere in the Message Window or Power-Up Message ... or



you can double click anywhere in the message window to open the Add Message dialog (Make sure the space is blank, if you double click on an existing message, you will open that message's attribtes.)

1. Right click anywhere in the **Message List Window** to access the Right Click Messages Menu shown to the left. For more information on this menu, go to *Chapter 6, Reference, Right Click Message Menu.*

2. Click on **Add Message….** and the following window will appear.



3. Under the **Message Attributes** tab, you will enter the following information.

   a. Enter the number of the message you want to create in the **Message #** field. The message numbers must be entered sequentially—in other words, you cannot enter Message #5 if you haven't already programmed message numbers 1, 2, 3, and 4.

   b. Choose where you want the message to be sent (displayed). Under **Send Message To**, you must select the **Group** number (0 through 15) and **Unit** number (0 through 4095). If you choose Group 0, the message will be sent to all Groups. If you choose a Group number and leave the Unit number set to 0, the message will be sent to all units in the Group.

   c. Next select the **Message Type** (for information on the Message Types, see previous page. Choose from **Data Messages**, **Queued Messages** or **Priority Messages**.

IMPORTANT!
The PowerMarquee Master contains a subordinate marquee and its location is factory set to Group 1, Unit 1.

d. Now select the **Message Display Condition**. Select or enter the **Message Tag**. The message will be triggered by a value that resides in this tag (PLC register).

If the Tag Data Type is **Discrete**, the options will change in the field immediately below to the following.

Select whether to trigger the message when the tag is **On** or **Off**.

For all other tag data types the field below will stay as **Numeric**. Under **Numeric**, choose the **Display Condition** for the Message. You may choose **In the Range**, **Out of Range**, **Equal**, **Not Equal**, **Less Than**, or **Greater Than**.

Out of Range or **In the Range** will leave both the **Low Limit** and **High Limit** fields available (see note in left margin). Enter a range in the fields. Make sure that the Low Limit is less than the High Limit or you will receive an error message. If the value of the tag falls in or out of the range you have entered, the message will be triggered based on the condition.

For **Equal**, **Not Equal**, **Less Than**, or **Greater Than**, you will only need to enter the **Low Limit**. This is the value that will trigger the message based on the condition you have selected.

e. Choose whether or not to **Print** the Message when it is triggered.

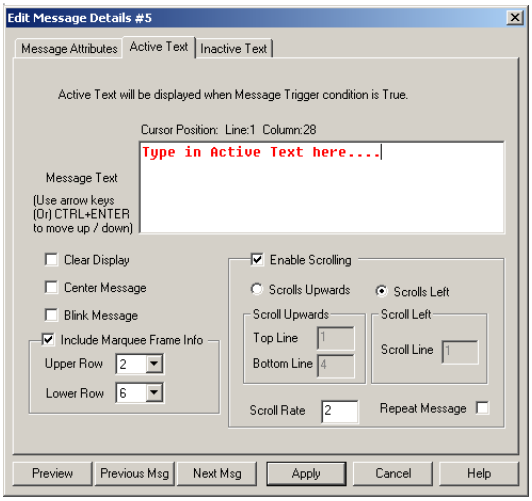
f. You may also select whether or not to **Use Inactive Text**. If you choose to use inactive text, you can enter message text that will be displayed when the message is inactive (has not been triggered) under the Inactive Text tab. If you deselect it here, the Inactive Text dialog will be unavailable (grayed out). When Inactive Text is not available in a message, NO ACTION takes place. If a message has already been displayed, it will remain on the display'

g. Select **Match Frame/Line Information for Active and Inactive Texts** if you want the inactive and active messages to display in the same frame and on the same line.

Please Note:

The Message will activate when the tag value goes outside the set point limits. The available ranges for the Low and High Limits will be displayed in these fields and are particular to the data type. The limits you place here must be within these ranges. (If the data type of tag is Discrete then data boxes for Low Limit and High Limit will not be available.)

4. Click on the **Active Text** tab, and choose from the following options.



Please Note:

Scrolling Messages and Blinking Characters will NOT appear on the display simultaneoulsy.

a. Type in the **Message Text** that you want to display when the Message Trigger Condition is TRUE (message is active). Place your cursor anywhere in the Message Text field and right click your mouse button to access a menu that will allow you to change the color or size of the text, or change it to blinking text. Highlight the text you want to change, right click, and select the color, character size, or blink attribute for that text. If you want to **Embed a Data Value**, right click in the position you want the data value to appear and select Embed Tags… from the popup menu. For more information on changing the color, character size, or the blink option available from the right click menu in the text field, go to *Chapter 6, Reference, Right Click Message Text Menu.*

About CHARACTER SIZE:
The PowerMarquee display area is composed of up to 8 LED “sticks”. These sticks are denoted in your display size by the W and H numbers, that is, a 2W4H display is 2 sticks wide and 4 sticks high. When formatting your message for your particular size display, keep in mind the display’s stick-height. For instance, a 4H unit can display:

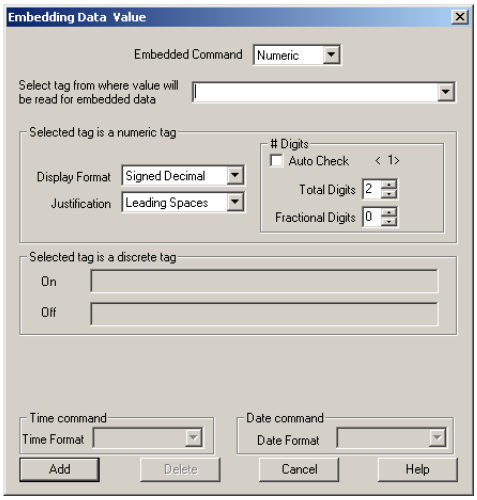
4 lines of 2-inch characters
2 lines of 4-inch characters
1 line of 4-inch characters and 2 lines of 2-inch characters
1 line of 6-inch characters and 1 line of 2-inch characters
1 line of 8-inch characters

Each stick-height represents a 2-inch high character. Two stick-heights represents a 4-inch tall character or two 2-inch characters. One stick-width supports 20 2-inch characters. Two stick-widths support 40 2-inch characters or 20 4-inch characters, etc.

Each stick is 8 LEDs high and 120 LEDs wide. Together, these LED sticks form the LED display "field". Character size and field definitions can change continuously and can be hardware and/or software defined.

About EMBEDDED DATA VALUES:

1) The following dialog box will appear when you select Embed Tags value within a message.



Special characters in the message determine where the embedded data from the registers should go. Up to four data values may be embedded in a single message. Program how the data value will be displayed as follows:

2) Select the **Embedded Command** that determines the type of value to embed. Available choices are **Discrete**, **Numeric**, **String, Time** and **Date**. Depending on what type command you choose, certain areas of the dialog box become available or unavailable (grayed out) for selection or data entry.

3) If you choose **Discrete**, **Numeric**, or **String**, select or enter the Tag name where the data value will be read by clicking in the field or on the down arrow next to **Select tag from where value will be read for embedded data**.

4) If you have selected **Numeric**, the options under **"Selected tag is a numeric tag"** will be enabled.

5) Select the **Display Format** from the available choices.

6) Select **Justification** from **Leading Zeroes**, **Leading Spaces**, or **Trailing Spaces.**

7) Under **# Digits**, click on the box in front of **Auto Check** if you want to have the panel automatically determine the number of digits to be placed for the embedded value. **Total Digits** and **Fractional Digits** will be disabled if you choose **Auto Size**.

8) Also, under **# Digits**, you may enter the **Total Digits** that you want to display, and enter the **Fractional Digits** you want to display (leave at default, 0, if you do not want fractional digits).

9) If you have selected Discrete, the fields under **"Selected tag is a discrete tag"** will be available. Enter the text that you want to appear within the message when the Discrete register is **ON** and when the Discrete register is **OFF**.

10) If you have selected **Time** under **Embedded Command**, the field "**Time Command**," will be available.

11) Select the **Time Format** from the available choices: HH_MM_SS_24, HH_MM_24, HH_MM_SS_12, or HH_MM_12.

12) If you have selected **Date** under **Embedded Command**, the field, "**Date Command**," will be available.

13) Select **Date Format** from the available choices: DD_MMM_YY, DD_MM_YY, MM_DD_YY, YY_MM_DD.

14) Press the **Add** button to add the embedded data to the message. (When inserted in a message a numeric command will be represented in the Active Text or Inactive Text message field as <___#>: Discrete is represented as <DISCRETE>; String is represented as <STRING>; Time as <Time>; and Date as <Date>.) You will return to the **Add/Edit Message** details dialog.

b. Next you will decide how you want your message to appear on the marquee. Click in the box in front of **Clear Display** if you want the previous message to be erased from the display. If left unchecked, The previously displayed characters will remain on the display where this message does not overlay them. For example:

	Previous Message	***New Message***	***Result***
Checked	1234567890 2nd LINE	ABC	ABC
Not Checked	1234567890 2nd LINE	ABC	ABC4567890 2nd LINE

c. Click in the box in front of **Center Message** if you want the message to be centered on all lines of the display. If left unchecked, the text will be displayed as entered in the message. ***Please note that left-scrolling messages cannot be centered***.

d. Click in the box in front of the **Blink Message** option to "blink" the message. The entire message (including time, date and variable data) will blink ON and OFF when displayed. (If you just want to blink certain characters in the text, see step a., above.) Characters that remain on the display from the previous message will also blink.

e. Click in the box in front of **Include Marquee Frame Info** to set the default state for the PowerMarquee Frame Upper Row (or top) and Lower Row (or bottom) attributes on this message. The **Upper Row** attribute sets the top stick that will be used to display as a message. The **Lower Row** sets the bottom stick that will be used to display a message. Enter a number between 0 and 8 for the Upper Row and the Lower Row.

f. Click in the box in front of **Enable Scrolling** if you want the message to scroll on the display. Please be aware that If you have selected to **Include Marquee Frame Info**, you **will not** be able to select the lines that where you want the message to scroll (they will be grayed out), it will scroll on the lines selected under Include Marquee Frame Info.

g. Click on the box in front of **Scroll Upwards** to enable it with a check mark and the message lines will scroll up from a lower line of the display to the next line up of the display.

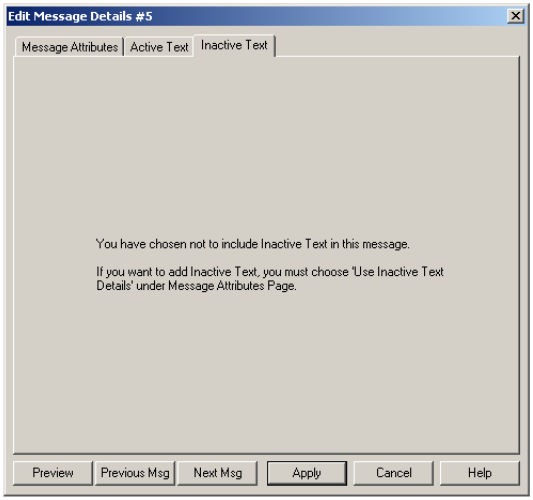
h. If you have selected **Scroll Upwards**, select the **Top Line** (from 1 to 8) and the **Bottom Li**ne (from 1 to 8) where you want the message to scroll. The bottom line value must be equal to or greater than the top line value.

i. If you select **Scroll Left**, the message will scroll from right to left on any one line of the display. Select the **Scroll Line** (from 1 to 8) where you want your message to scroll.

j. Enter a **Scroll Rate** for the message. The value you enter here will determine the rate at which this particular message will scroll. The range for the Scroll Rate is 1 to 99 (0.1 to 9.9 seconds and the default is set at 1 second). Click in the box to enter a value for this option.

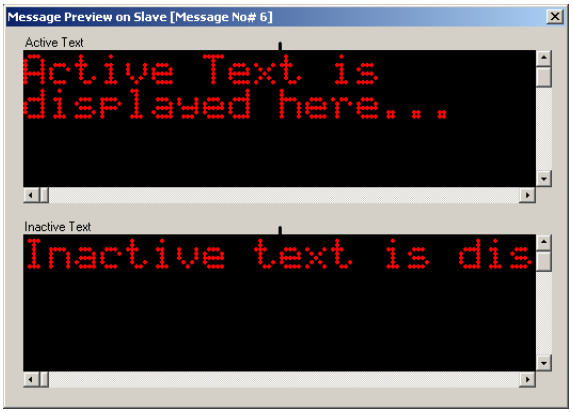
k. Select **Repeat Message** if you want the scrolling message to keep repeating until a new message is selected. If you leave this check box empty, the scrolling message will be displayed only once.

5. Click on the **Inactive Text** tag to program the inactive text message. Inactive text will be displayed when the Message Trigger condition is False. Inactive Text is programmed with the same options as Active Text. Refer to step 4., above. If you did not select the **Use Inactive Text** option under the **Message Attributes** tab, you will see the following dialog when you click on the Inactive Text. You will need to go back to the **Message Attributes** tab and select **Use Inactive Text** if you want access to the inactive text options.



6. When finished you may click the **Add** (or **Apply**, if editing a message) button to make the changes.

7. If you want to see how the message will look on the display, click on the **Preview** button at the bottom of the Add (or Edit) Message Details window. A message preview window similar to the following example will appear.

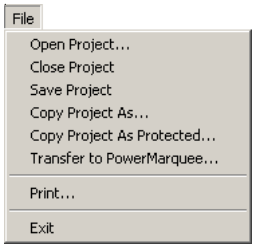


8. To go to the Previous Message or the Next Message (if programmed), click on the **Previous Msg** or **Next Msg** buttons at the bottom of the window.

9. Click on **Cancel** to quit without saving the current message changes.

Reference

The Reference chapter provides more details on Menu commands. It takes you through the Main Menu Bar item by item, command by command, with instructions. It also contains information about the tool bar, and popup menus, referred to as Right Click Menus, that are available when working in the Tag Database, Message List, and Active/Inactive Text fields.



File Menu

Open Project

Click on **File > Open Project...** to open an existing or create a new project. The **Step 1: Project** Information screen will open. If you want to open an existing project, click on the **Browse** button and the following window will open allowing you to navigate to the folder where the project is stored. The primary PowerMarquee program file has ".pmq" suffix.

Close Project

Click on **File > Close Project** to exit the current open project.

Save Project

Click on **File > Save Project** to save the current, open project and any changes or additions to the project's attributes, databases, messages, etc.

Copy Project As

Click on **File > Copy Project As....** to save the open project under another name. The following dialog will open allowing you to enter a name for the copied project.

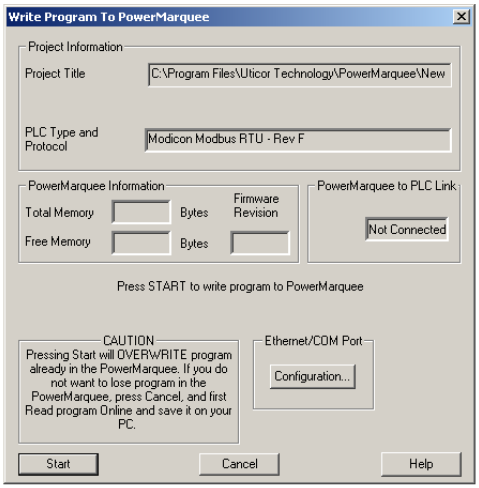
Copy Project As Protected

If you click on **File > Copy Project As Protected...**, you will only be able to transfer the project to and from the marquee, as is. The project that you have copied as protected will no longer open in PowerMarquee Programming Software to allow editing. This protects the project from unauthorized changes after it has been distributed. Make sure you have another copy saved (as unprotected) if it will require changes or updates.

Transfer to PowerMarquee...

DON'T LOSE AN EXISTING PROGRAM! When you write the program to the marquee, it will write over any program already loaded into marquee. Save the existing program before you click on the Start button to transfer your new program. To do this, exit project to the Step 1, Project Information screen and click on the Edit Program ON-LINE button. Save this project to your computer.

This allows you to transfer the current (open) project to the PowerMarquee. Click on **Transfer to PowerMaruqee** and the following dialog box will open.



This dialog box provides information about the current project and the PowerMarquee memory available. Under **Project Information**, the screen provides you with the **Project Title** you are about to transfer and the **PLC Type and Protocol** that you have selected as used by your application. (Press **Start** to begin the transfer or **Cancel** to abort.)

If you receive an error message, check to ensure your marquee to PC connections are correct. Under **Ethernet/COM Port**, click on the **Configuration...** button.

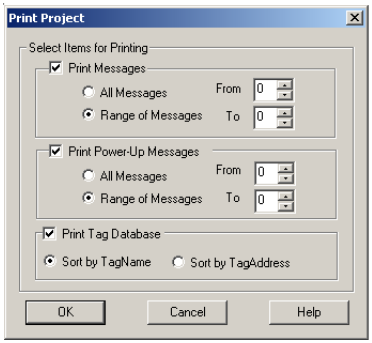
Click on the down arrow under **Ethernet/COM Port** to select the correct PC Port — **COM1** through **COM8**, or **Ethernet. Group Number** and **Unit Number** must match that of the marquee you are trying to communicate with. (Ethernet is not available in this first release.) Click **OK**. When ready click on the **Start** button to begin the transfer.

The Progress Bar indicates that the transfer is in process and then when the process is complete.

After the transfer is complete, **PowerMarquee Information** gathered during transfer communication is displayed. It will tell you the **Total Memory** installed in your PowerMarquee (in bytes) and the **Free Memory** available after the project upload. The PowerMarquee **Firmware Revision** (internal software) number is displayed and whether or not a **PowerMarquee to PLC Link** is established.

Print

1. Click on **Print** to print the current (open) project. The dialog shown below will open. From here you will **Select Items for Printing**.



2. Click in the box in front of **Print Messages** and then choose either **All Messages** or a **Range of Messages** from the project to print. If you choose Range, enter the **From**, **To** message numbers in the appropriate field.

3. Click in the box in front of **Print Power-Up Messages** and then choose either **All Messages** or a **Range of Messages** from the project to print. If you choose Range, enter the **From**, **To** message numbers in the appropriate field.

4. Click in the box in front of **Print Tag Database** if you want to print the tags from your project. You must then select whether you want the tags listed alpha-numerically by name or by address — click in front of **Sort by Tag Name** or **Sort by Tag Address**.

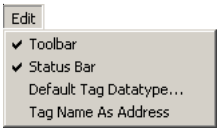
5. Click on **OK** to print your selections or click on **Cancel** to quit without printing.

Please Note: The project will print from the System Printer.

To print a message when it is triggered you must set this option when configuring the message and then print from a serial printer attached to the marquee. You will set the serial printer parameters, see Project Attributes, Printer tab.

Exit

Click on **Exit** to quit PowerMarquee Programming Software.



Edit Menu

Toolbar

The **Toolbar** consists of icons for frequently used commands. These commands are also found in, and accessible from, the Main Menu Bar. The toolbar is selected to "show" by default. To hide the Toolbar, click on it in the menu to remove the check mark (deselect). The icons, from left to right, represent the following commands:

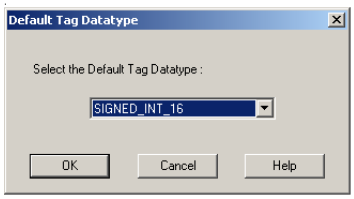
- Opens a Project
- Saves a Project
- Print Project
- About
- Default Tag Data Type
- Transfer to PowerMarquee
- Set Group and Unit Numbers
- PowerMarquee Information
- Marquee Warmstart
- Set Marquee Time and Date
- Monitor Tags
- Clear Memory
- Diagnostics
- Communication Settings
- Tag Database
- Project Attributes
- Export Tags to Excel
- Export Tags in CSV Format
- Import Tags from Excel
- Import Tags from CSV Format File
- Export Messages to Excel
- Export Messages in CSV Format
- Import Messages from Excel FIle
- Import Messages from CSV Format

Status Bar

The Status Bar is located at the bottom of the Programming Screen and shows the status of the current screen. It provides information about a tool bar or menu item on the main programming screen that the pointer passes over.

Default Tag Data Type

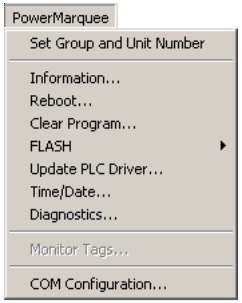
Click on this menu item to set the **Default Tag Data Type**. Click on the down arrow to view the list of data types.



The Default Data Type automatically switches to the last data type used. For example, if you set UNSIGNED_INT_16 as default and create a Message (DISCRETE), the default will switch to DISCRETE.

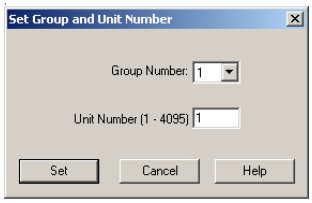
Tag Name as Address

Click on this to use the **Tag Name** that you type in as the **Tag Address**. The Address must be in the correct Data Format. For example, if using an Allen-Bradley SLC 500, you might name the tag N7:2, which is the address format of the PLC register.



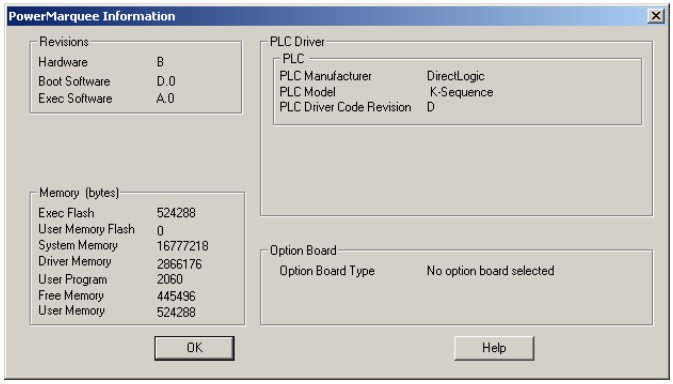
PowerMarquee Menu

Set Group and Unit Number



Click here to set the **Group Number (0-15)** and **Unit Number (1-4095)** of the PowerMarquee that you want to program. Enter numbers or click on the down arrow to select and then click **Set** to save or **Cancel** to quit without saving.

Information



Click for important information about the PowerMarquee you are using and your PLC. Information includes:

Revisions:

Hardware: This is the revision of the PowerMarquee unit.
Boot Software: This is internal PowerMarquee firmware used to power-up the marquee.
Exec Software: This is also internal firmware, used to display marquee information and allow panel adjustments to the internal clock.

Memory (bytes):

Exec Flash: Amount of memory available to hold the boot and exec firmware.

User Memory Flash: This will let you know if the PowerMarquee has a Flash Memory card installed. (It will say 0 if not installed.) This feature allows you to back up your program from the marquee itself. There are three available memory sizes — 512K, 1 MEG, and 2 MEG. Once the program is backed up onto the card, you can use it to load the program into different units — no programming computer is necessary.
System Memory: This tells you how much RAM memory is used by the firmware.
Driver Memory: This is the memory used by the PLC Driver.
User Program: This is the size of the program that you currently have loaded into your marquee.
Free Memory: This is the RAM memory that you have left to use in the PowerMarquee.
User Memory: This is the total RAM Memory available for use in the PowerMarquee.

PLC Driver:

PLC Manufacturer, PLC Model, PLC Driver Code Revision: This provides information about the type of PLC you are using.

Option Board:

Option Board Type: This tells you if you have an option board installed and the type.

Reboot

Click here to **Reboot** the PowerMarquee.

Clear Program

Click here to **Clear** the current user program from the PowerMarquee's RAM (only).

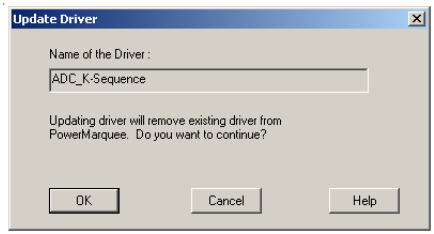
FLASH (You must be online to use these options)

Click on **RAM to Flash** to copy RAM memory to Flash card. This will transfer the user program loaded on your PowerMarquee to the Flash Card. Flash card may then be removed and installed into another Powermarquee to transfer to the RAM. You may also backup your user program to save it before shutting off power to the Marquee. You may then reinstall the program later.

Click on **Flash to RAM** to copy the contents of the Flash card to the PowerMarquee RAM memory. This is used to copy the user program from one PowerMarquee to another or to reinstall a program to the PowerMarquee.

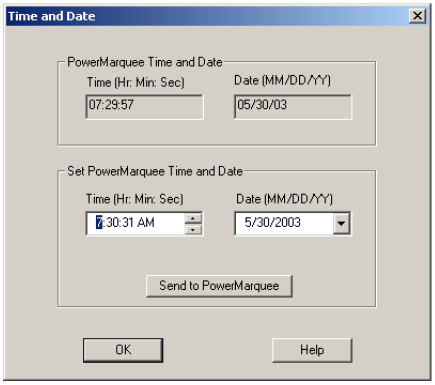
Update PLC Driver....

Click on this to update your PLC Driver. This will send the current PLC Driver code to your PowerMarquee (other project information is not sent.)



Time/Date

Here you may view and set the **PowerMarquee Time and Date** and then send it to the marquee. The current PowerMarquee Time and Date will display in the window.

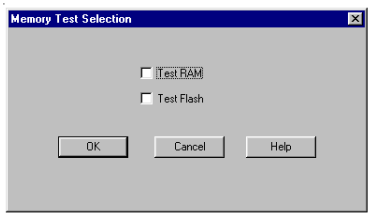


Under **Set PowerMarquee Time and Date**, your PC time will display. To change the **Time**, click on the hour, minutes or seconds and type in the appropriate numbers or use the UP/DOWN arrows to change the time.

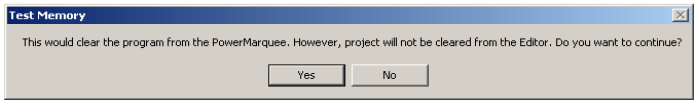
To change the **Date**, click the DOWN arrow next to the date field. A calendar, shown to the right, will appear. Use the arrows to search for date. (The current PC date will be circled.) Click on the **Send to PowerMarquee** button to send your changes to the PowerMarquee clock.

Diagnostics

To run a diagnostic test on the PowerMarquee, click here. The screen shown below will appear, letting you choose from **Test RAM** and **Test Flash**. Click **OK** to begin diagnostic.

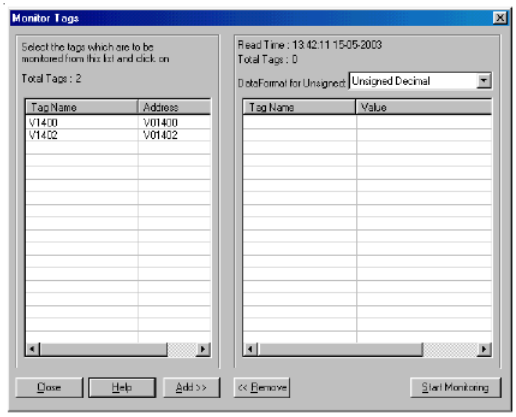


When you click on OK, you will receive the "warning" message shown below. Save program to disk before testing the marquee memory!



Monitor Tags (must be ONLINE)

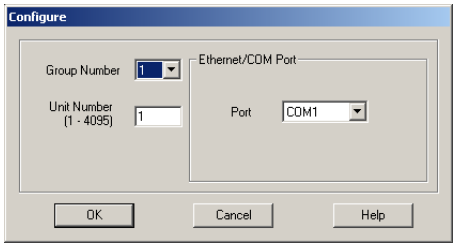
Click on **Monitor Tags** if you want to monitor tag values from the PowerMarquee. You may select up to 100 tags to monitor at one time.



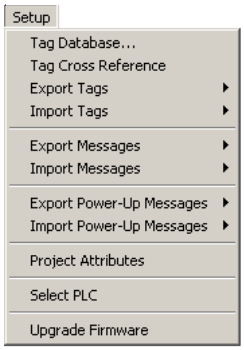
Click on the **Tag Names** (in the first column/list) that you want to monitor. Press the Shift key and then click to highlight more than one tag name. Then click on the **Add >>** button. To remove tag names from the list to be monitored, click on them to highlight and then click on the **<<Remove** button. They will be added to the list (on the right hand side) to be monitored. Select the **Data Format** for the value. Click on the **Start Monitoring** button to begin the monitoring process. The tag values from the PowerMarquee will display in the **Value** column.

COM Configuration

If you will be programming on-line, ensure that you have selected the COM Port/Ethernet connection you are using. Click on **COM Configuration**. The following window will appear.



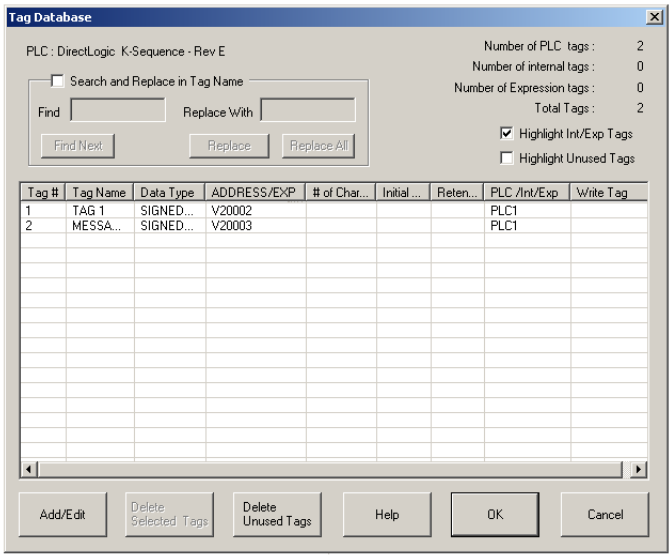
Select the appropriate **Ethernet/COM Port** from the available choices (**COM1** through **COM8**.) Select the **Group Number** (1 through 15) and **Unit Number** (1 through 4095) of the PowerMarquee. (Ethernet is not available in this release.)



Setup Menu

Tag Database

The **Tag Database** is where you define the Tags for your project. A Tag can be a discrete (single bit) location or word location within the PowerMarquee. Tags may be **Internal** (no address), **External** (PLC Address) or **Expression** (math or logic function). In other words, a Tag is an alias for a PLC address or an Internal PowerMarquee location that a message is communicating with.



PLC:
The model and manufacturer of the PLC used in the project are provided at the top of this dialog box.

Search and Replace in Tag Name
This feature allows you to search for a character string (up to 40 characters) in the Tag Database, specifically, the Tag Name, and replace each instance of the character string with another character string. To use this feature, perform the following steps:

1. Click in the box in front of **Search and Replace in Tag Name**.
2. Enter the characters (up to 40) in the text field next to **Find** that you want to search for in the **Tag Name**.
3. Enter the characters (up to 40) in the text field next to **Replace With** that you want to replace in the **Tag Name**.

4. Click on the **Find Next** button. The program loader will find the character string in applicable **Tag Names** and highlight the line(s) where it appears.

5. Click on **Replace** if you want to approve/check each item before replacing. Click on the **Replace All** button if you want to replace all instances of the character string without checking.

Number of PLC Tags, Number of internal tags, Number of Expression tags, and Total Tags
The number of PLC tags that are programmed in the project are listed here. Also, the number of internal tags and Expression tags that are currently programmed in the project are provided. Total Tags is the combined total of all kinds of tags.

Highlight Internal/Expression Tags
This is enabled by default. Click on the box with the check mark to deselect this option. When selected, the internal tags in the list will be displayed in blue and the expression tags will be displayed in red.

Highlight Unused Tags
Click in the box in front of Highlight Unused Tags to enable this option. The tags that are not currently linked to a message or attribute are highlighted in the list. Unused tags are highlighted in yellow. If you want to delete the unused Tags, click on the **Delete Unused Tags** button at the bottom of the screen.

Columns Headings in Tag List:
Tag #
This is the number of the Tag in the list.

Tag Name
You may enter a descriptive Tag Name of up to 40 characters.

Data Type
This is the format of the data. Select the Data Type that is appropriate for your PLC. Choose from DISCRETE, SIGNED_INT_16, SIGNED_INT_32, UNSIGNED_INT_16, UNSIGNED_INT_32, BCD_INT_16, BCD_INT_32, FLOATING_PT_32, and ASCII_STRING.

ADDRESS/EXP
The syntax for entering PLC addresses depends on the type of PLC. A message will display letting you know if the PLC Address Type and Tag Data Type don't match or if the Address is invalid. If you are configuring an Expression tag, the expression will appear in this column.

Number of Characters
If the Tag will read a character (ASCII) string from the PLC or write a character string to the PLC, you will need to enter the

number of characters here. Each PLC register can contain 2 characters. You may enter up to 40 characters. The PLC will assign the correct number of sequential registers needed for the string. The address you have entered for the tag is the starting address. For a list of ASCII characters supported by the PowerMarquee see Appendix A.

Initial Value
This option affects the values of the tags when the program is loaded into the marquee and when the marquee is reset. If you enter a value in the Initial Value field, when the program is loaded into the marquee or reset, the tag will be set to this value and sent to the PLC. If not selected, the values are set to zero (numeric), off (discrete), or "" (text) when program is loaded into the marquee or reset.

Retentive
This appears if you have selected Retentive when configuring the tag Initial Value. Select this option if you want the initial value to be used ONLY when the program is loaded into the marquee. When the marquee is reset, the tag values will be retained. In other words, it will not cause the tag values to change. The values will be sent to the PLC.

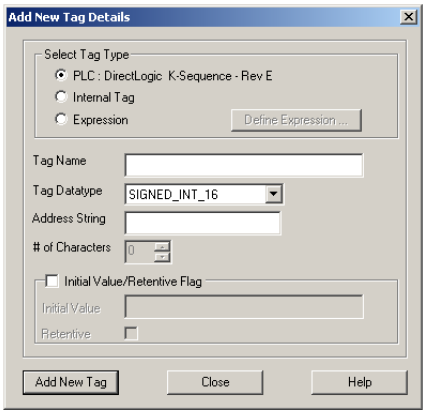
PLC/Int/Exp
This column tells you whether the tag is a PLC, Internal, or Expression tag.

Write Tag
This column will display the name of the destination or Write tag. A value from an expression will be written to this tag.

Add/Edit Button
Click on this button to **Add** a new tag, or **Edit** an existing tag.

To Add a New Tag:

1. Click on **Add/Edit** button. (If you have existing tags, ensure that none are highlighted or you will go to the edit tag window.) The screen shown below will appear.



2. Under **Select Tag Type**, select from PLC, Internal Tag, or Expression. Select **Internal Tag** if the tag you are adding does not use a PLC address. The **Address String** will be grayed out (unavailable). Select **Expression** if the tag you are adding is comprised of a constant and/or operands and/or predefined tags. To **Define Expression**, click on the button so named. For information on how to program Expression tags, see page 36.

3. After you have selected the type of tag, click in the field next to **Tag Name** and enter a name for the tag.

4. Click on the DOWN arrow next to the **Tag Data Type** field and select the data type from the list.

5. If you have selected **Internal Tag**, the **Address String** field will not be available. If you have selected **Expression**, the **Address String** field will contain the expression. If you have selected PLC, enter a PLC Address String that is appropriate for your type PLC.

6. If you have selected **ASCII String** as your **Data Type**, the **# of Characters** field will become available. Enter or select the number of characters (up to 40) for the **ASCII String**.

7. Select **Initial Value/Retentive Flag**. This option affects the values of the tags when the program is loaded into the marquee and when the marquee panel is reset. If you enter a value in the Initial Value field, when the program is loaded into the panel

or reset, the tag will be set to this value and sent to the PLC. If not selected, the values are set to zero (numeric), off (discrete), or "" (text) when the program is loaded into the marquee or the marquee is reset. If you have entered a value into the Initial Value field, the Retentive option becomes available. Click in the box in front of Retentive if you want the initial value to be used ONLY when the program is loaded into the marquee. When the marquee is reset, the tag values will be retained. In other words, it will not cause the tag values to change. The values will be sent to the PLC.

8. Click on the **Add New Tag** button. The new tag will appear in the Tag Database list.

To Edit an Existing Tag:

1. Highlight the tag in the list that you wish to edit.

2. Click on the **Add/Edit** button. The **Edit Tag Details** window will appear.

3. Make any changes and then click on the **Apply Tag Changes** button. The changes will be made to the tag and are reflected in the Tag Database list.

To Sort the Tag Database list:

1. With the Tag Database open, right click your mouse while your cursor resides anywhere in the Tag Database list. A menu will appear. This "right click" menu (shown to the left) is available when you have the Tag Database window open open. Just right click your mouse button while your cursor resides anywhere in the window, and you can select from this popup menu.

2. From here you may **Add/ Edit**, **Delete**, or **Duplicate** a tag. You may also choose to sort the list by Address, Tag Name, or Data Type.

   If you click on **Sort on Address**, the list will be sorted alphanumerically by the PLC address. If you click on **Sort on Tag Name**, the list will be sorted alphabetically (A to Z) by the name of the tag. If you click on **Sort on Data Type,** the tag list will be sorted by Data Type. For tags with same data type, it will perform a second sort by the address.

To Duplicate a Tag:

1. Highlight the tag you want to duplicate in the Tag Database list.

PLEASE NOTE:
This "right click" menu (shown below) is available when you have the Tag Database window open. Just right click your mouse button while your cursor resides anywhere in the window, and you can select from this popup menu.

2. Right click your mouse, and then click on Duplicate Tag in the popup menu that appears.

3. Simply enter the number of the tags that you want created in the field provided and then click on the **Duplicate** button.

4. The duplicates will appear in the Tag Database list.

About EXPRESSION TAGS

Display expression tags are expressions that send the result (value) to the message display. These tags are read-only and can only be used where read-only tags are permitted. These tags are updated when the operand values change.

Conditional Expressions: The format for the conditional is:
IF <expression> THEN <expression> ELSE <expression> ENDIF
The ELSE and ENDIF are required. All expressions require at least one operand. The conditional can be used as an operand. For example:

tag1 * IF tag2 THEN tag3 + 10 ELSE 5 ENDIF

The following table provides a list of the Operators, their Symbol, order of Precedence and Direction

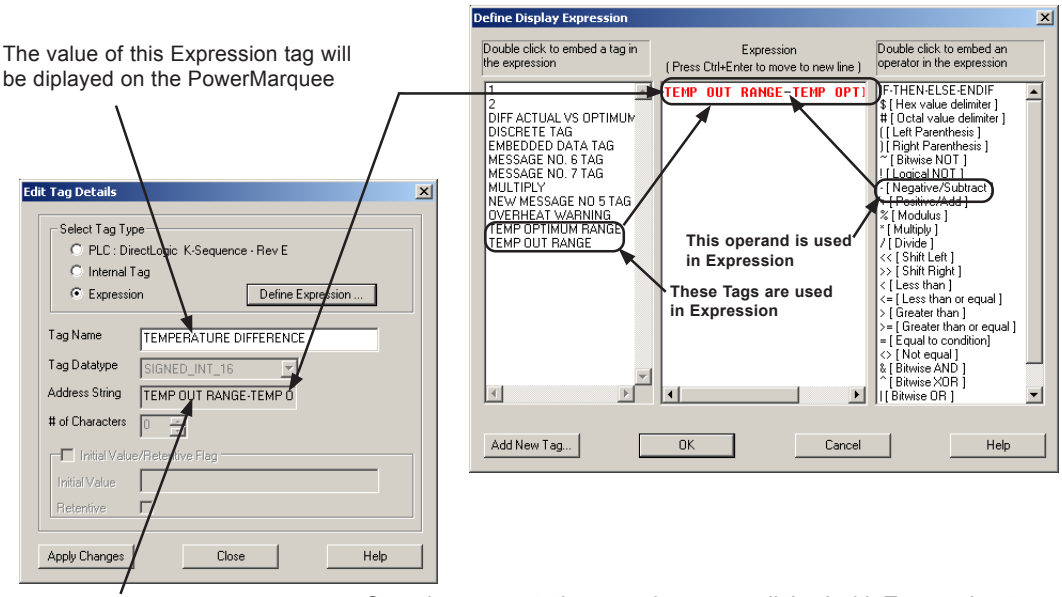
Operators	Symbol	Precedence	Direction
End of expression	none	13	Left to right
Left parenthesis	(	13	Left to right
Right parenthesis	)	13	Left to right
Bitwise NOT	~	12	Right to left
Logical NOT	!	12	Right to left
Negative	-	12	Right to left
Positive	+	12	Right to left
Modulus	%	11	Left to right
Multiply	*	11	Left to right
Divide	/	11	Left to right
Add	+	10	Left to right
Subtract	-	10	Left to right
Shift left	<<	9	Left to right
Shift right	>>	9	Left to right
Less than	<	8	Left to right
Less than or equal	<=	8	Left to right
Greater than	>	8	Left to right
Greater than or equal	>=	8	Left to right
Equal	=	7	Left to right
Not equal	<>	7	Left to right
Bitwise AND	&	6	Left to right
Bitwise XOR	^	5	Left to right
Bitwise OR	|	4	Left to right
Logical AND	&&	3	Left to right
Logical OR	||	2	Left to right
Assignment		1	Right to left

Special Symbols

Hex constant	$	Used to indicate a hexadecimal constant i.e. $3F
Octal constant	#	Used to indicate a octal constant i.e. #377

Click in the middle column (Expression) to type in a Constant. Press CTRL + ENTER to move to a new line within the expression. Double click on a Tag in the list on the left hand column to embed it into the Expression. The tag will appear in the center column. Select (double click) an Operator in the right hand column to embed it into the Expression. Insert another tag into the Expression.

The value of this Expression tag will be diplayed on the PowerMarquee



The Expression is shown here

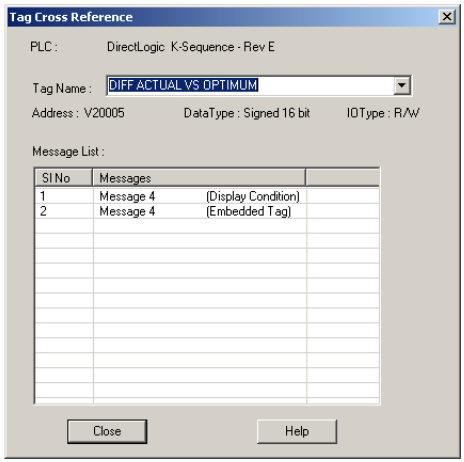
Complex computations can be accomplished with Expression tags. However, please be aware that Expression Tags are limited to a maximum of 40 operands per tag. Complex operands may use more memory and may further limit the number of operands per expression. In order to avoid errors when trying to use the tag, avoid using too many operands per expression.

When the Expression Tag is triggered, the operation that is expressed in the tag will be performed and the result will be displayed on the marquee.

Click on **OK** to save.

Tag Cross Reference

The **Tag Cross Reference** screen provides you with a list of the programmed tags and a cross reference to the messages that use them.



Information is provided on the PLC type and protocol next to **PLC:** at the top of the screen.

Tag Names are listed alphabetically. Click on the arrow to scroll to a particular tag name. Information on the **Address**, **Data Type**, and **I/O Type** for the selected tag is provided.

In the **Message List** you are provided with the Message numbers that use the selected Tag. If the message has a **Display Condition** or an **Embedded Tag** is shown in parenthesis after the message number. To view specifics for each Tag, go to the **Tag Name** field, click on the DOWN arrow, and select one from the drop down list.

Export Tags

Click on the Export Tags menu item to write the tags from your current (open) project to an Excel file or a CSV file.

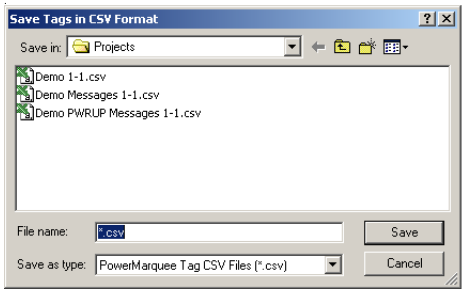
Comma Delimited...

The CSV (Comma delimited or Comma-separated values) file format saves only the text and values as they are displayed in cells of the Tag Database. All rows and all characters in each cell are saved. Columns of data are separated by commas and each row of data ends in a carriage return. If a cell contains a comma, the cell contents are enclosed in double quotation marks.

Example of what a CSV file looks like opened in Notepad:

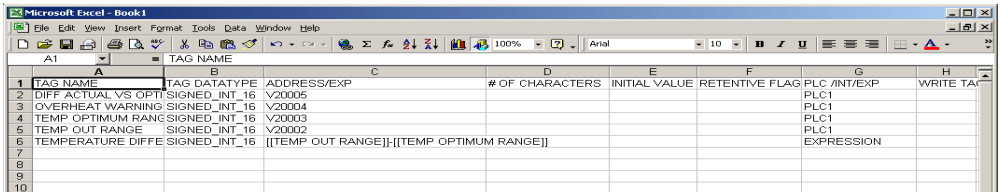
```
TAG NAME,TAG DATATYPE,ADDRESS/EXP,# OF CHARACTERS,INITIAL
VALUE,RETENTIVE FLAG,PLC /INT/EXP,WRITE TAG
DIFF ACTUAL VS OPTIMUM,SIGNED_INT_16,V20005,,,,PLC1,
OVERHEAT WARNING,SIGNED_INT_16,V20004,,,,PLC1,
TEMP OPTIMUM RANGE,SIGNED_INT_16,V20003,,,,PLC1,
TEMP OUT RANGE,SIGNED_INT_16,V20002,,,,PLC1,
TEMPERATURE DIFFERENCE,SIGNED_INT_16,[[TEMP OUT RANGE]]-
[[TEMP OPTIMUM RANGE]],,,,EXPRESSION,
```

Click on Comma Delimited... if you want to save the tag database as a .CSV file. The following window will appear allowing you to name the file and navigate to the directory and folder where you want to save it.



Excel Format...

Click on the **Excel Format...** menu item to write the tags from your current (open) project to a Microsoft Excel® file. The PowerMarquee Programming Software will open Microsoft Excel and write the tags to an Excel book as shown below.



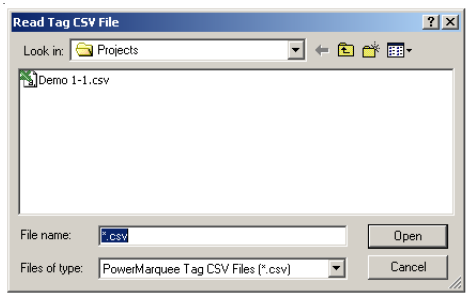
Click on ***File >Save As*** in the Excel program and enter a name for the file. Click on the ***Save*** button to save the file under the name you have entered. Close Excel to return to PowerMarquee Programming Software. Column Headers in the Excel file will be: TAG NAME, TAG DATA TYPE, ADDRESS/EXP (an Expression will appear within double brackets [[ ]]), # OF CHARACTERS, INITIAL VALUE, RETENTIVE FLAG (if applicable), PLC/INT/EXP (will list if the tag is a PLC tag, and Internal tag or a Expression tag), WRITE TAG. These attributes are listed for each tag in the project database.

Import Tags

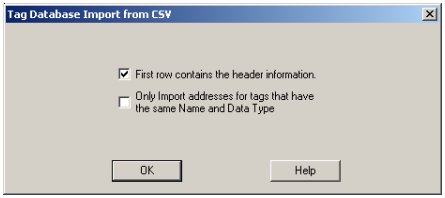
Click on the **Import Tags** menu item to import the tags into your current (open) project from a Microsoft Excel® (.xls) file or a CSV (Comma delimited or Comma-separated values) file format.

Comma Delimited...

1. Click on **Import Tags > Comma Delimited...** to import tags from a .CSV file. The following window will appear. Navigate to the folder where the file is stored.



2. Click on the .csv file you want to import to highlight it and then click on the **Open** button. The file will be written to the Tag Database. You will be prompted to choose whether the import .csv file's first row contains header information, and whether or not you only want to import addresses for tags with the same Name and Data Type.

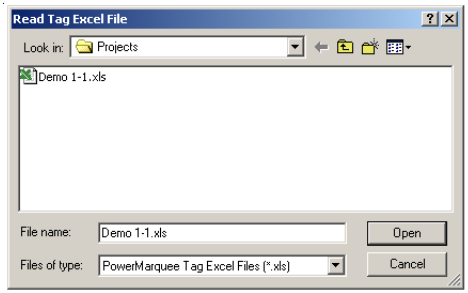


An "Errors Log View" will display letting you know if there were any problems importing the file into your current project.

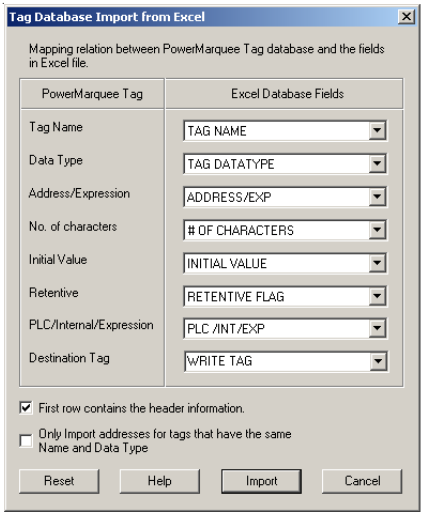
3. Click on **Setup>Tag Database** to view the database and make any corrections or changes.

Excel Format...

1. Click on the **Import Tags > Excel Format...**menu item to select the Microsoft Excel® file where the tag database resides. Navigate to the file you want, click on it to highlight it and then click on the **Open** button.



2. The Tag Database Import from Excel window will appear (shown below).



3. PowerMarquee Programming Software will read the Excel Database Fields and allow you to choose the field name that correlates with the PowerMarquee Tag Database field in your project.

4. Click on the down arrow to view the **Excel Database Fields** and select the Excel field that corresponds to the **PowerMarquee Tag Database** field (**TAG NAME**, **TAG DATA TYPE**, **ADDRESS/EXP**, **# OF CHARACTERS, INITIAL VALUE, RETENTIVE FLAG, PLC/INT/EXP, WRITE TAG**). (See **Tag Database Import from Excel** dialog, below, right.) Click on **First row contains the header information** if the first row in the Excel file is a header row. Click on **Only Import addresses for Tags that have the same Name and**

Data Type if you want to import new addresses for tags that already exist in your project.

5. Each column heading in the Excel file you have imported will display when you click on the down arrow next to each field. (You may have other information in the Excel file that you cannot import into the Tag Database. The Tag Database only allows the types of information shown in the dialog box.) Select the heading of the Excel column that corresponds to the column headings in the Tag Database.

6. Click on the **Import** button to import tags. The tags will be written to your project. Tags that already exist will not be overwritten. A message will appear letting you know if the **Excel** file was successfully imported into the **Tag Database.** The **Error Log View** will appear to let you know if there were problems in the import process or if the tags already exist in the project. Open the Tag Database to make changes.

Export Messages

Click on the Export Messages menu item to write the messages from your current (open) project to an Excel file or a CSV file.

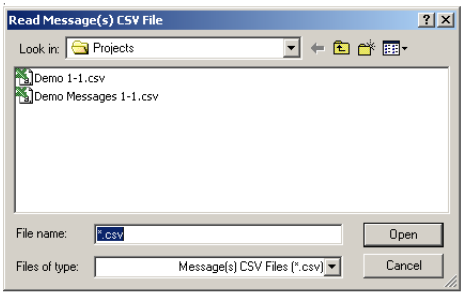
Comma Delimited...

The CSV (Comma delimited or Comma-separated values) file format saves only the text and values as they are displayed in cells of the Message Database. All rows and all characters in each cell are saved. Columns of data are separated by commas, and each row of data ends in a carriage return. If a cell contains a comma, the cell contents are enclosed in double quotation marks.

Example of what a CSV file looks like opened in Notepad:

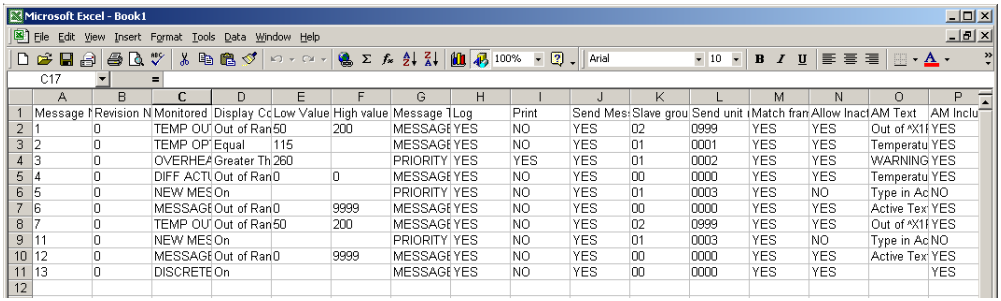
```
Message Number,Revision Number,Monitored Tagname,Display Condition,Low Value,High value,Message Type,Log,Pr
1,0,TEMP OUT RANGE,Out of Range,50,200,MESSAGE,YES,NO,YES,02,0999,YES,YES,Out of ^X1Range,YES,1,4,NO,NO,NO,
2,0,TEMP OPTIMUM RANGE,Equal,115,,MESSAGE,YES,NO,YES,01,0001,YES,YES,Temperature is at optimum 115 degrees
3,0,OVERHEAT WARNING,Greater Than,260,,PRIORITY MESSAGE,YES,YES,YES,01,0002,YES,YES,WARNING -- MACHINE OVER
4,0,DIFF ACTUAL VS OPTIMUM,Out of Range,0,0,MESSAGE,YES,NO,YES,00,0000,YES,YES,Temperature is ^<DIFF ACTUAL
5,0,NEW MESSAGE NO 5 TAG,On,,,PRIORITY MESSAGE,YES,NO,YES,01,0003,YES,NO,Type in Active Text here....,NO,1,
6,0,MESSAGE NO. 7 TAG,Out of Range,0,9999,MESSAGE,YES,NO,YES,00,0000,YES,YES,Active Text is <EOL>displayed
7,0,TEMP OUT RANGE,Out of Range,50,200,MESSAGE,YES,NO,YES,02,0999,YES,YES,Out of ^X1Range,YES,1,4,NO,NO,NO,
11,0,NEW MESSAGE NO 5 TAG,On,,,PRIORITY MESSAGE,YES,NO,YES,01,0003,YES,NO,Type in Active Text here....^<DIF
12,0,MESSAGE NO. 7 TAG,Out of Range,0,9999,MESSAGE,YES,NO,YES,00,0000,YES,YES,Active Text is <EOL>displayed
13,0,DISCRETE TAG,On,,,MESSAGE,YES,NO,YES,00,0000,YES,YES,,YES,1,4,NO,NO,NO,NO,YES,1,4,NO,1,1,NO,,YES,1,4,N
```

Click on Comma Delimited... if you want to save the Message Database as a .CSV file. The following window will appear allowing you to name the file and navigate to the directory and folder where you want to save it.



Excel Format...

Click on the Excel Format... menu item to write the messages from your current (open) project to a Microsoft Excel® file. The PowerMarquee Programming Software will open Microsoft Excel and write the messages to an Excel book as shown below. Click on *File >Save As* in the Excel program and enter a name for the file. Click on the *Save* button to save the file under the name you have entered. Close Excel to return to PowerMarquee Programming Software.



Please Note: Always import tags used by messages into the project's tag database before you import the Messages into the project. If the Message tags are not already in the tag database, they will not be imported into the project.

TIPs on Editing Excel/CSV Message files before importing:

1. **Ensure that tag name is spelled properly (if it is available in tag database)**
2. **^C indicates color, ^S indicates size, and ^B indicates blink.**
3. **Embedded tag nkames are in [TAGNAME] and details of this tag are specified in different columns (AM_EMBED/ TOTAL CHARACTER, etc.)**
4. **Ensure that you have used YES/NO properly in the various fields.**
5. **We suggest that you make a copy of a previous record and edit it for subsequent messages.**

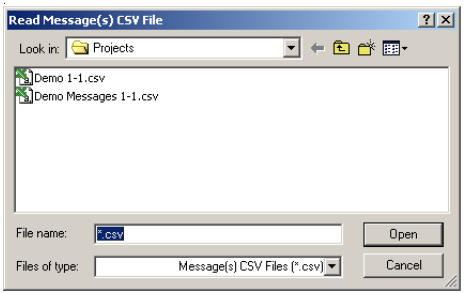
Import Messages

Click on the Import Messages menu item to import Messages into your current (open) project from a Microsoft Excel® (.xls) file or a CSV (Comma delimited or Comma-separated values) file format.

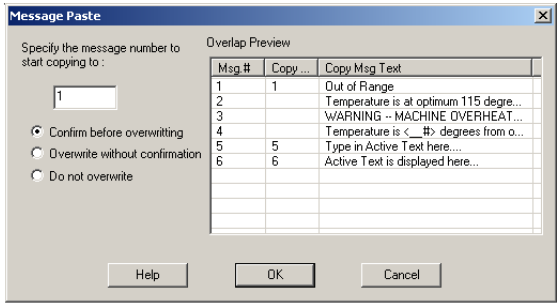
Comma Delimited...

1. Click on **Import Messages> Comma delimited...** to import messages from a .CSV file. The following message will appear. Make sure you have the tags associated messages already in your project. Click **Yes** if you want to continue with the import. Click **No** if you need to import or configure the tags into the tag database first.

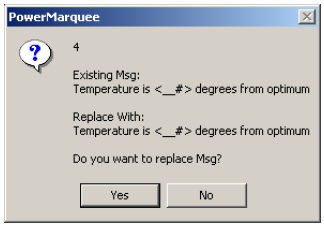
2. When you click Yes the following window will appear. Navigate to the folder where the file is stored.



3. The file will be written to the Message Database. To avoid overwriting or replacing an existing message(s), the Message Paste dialog box (shown below) will appear providing you with import options.



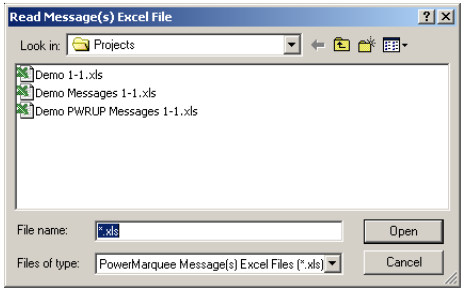
4. Enter the Message No. 1 where you want to begin importing. **Confirm before overwriting** is selected by default. If you leave this selected, you will be prompted with each imported message that has the same Message No. of an existing message to confirm each overwrite. Click **Yes** or **No**. You can also select **Overwrite without confirmation** or **Do not overwrite.**



5. Click OK when done and the imported Messages are now listed in the Messages list.

Excel Format...

1. Click on the **Import Messages> Excel Format...** menu item to select the Microsoft Excel® file where the Message database resides. The following **Read Message Excel File** window will appear. Navigate to the file you want, click on it to highlight it and then click on the **Open** button.



2. The file will be written to the Message Database. To avoid overwriting or replacing an existing message(s), the Message Paste dialog box will appear providing you with import options (the same as for the .csv file shown on previous page.)

3. Enter the Message No. 1 where you want to begin importing. **Confirm before overwriting** is selected by default. If you leave this selected, you will be prompted with each imported message that has the same Message No. of an existing message to confirm each overwrite. Click **Yes** or **No**. You can also select **Overwrite without confirmation** or **Do not overwrite.** Click OK when finished.

4. The imported Messages are now listed in the Messages list.

Export Power-Up Messages

Click on the Export Power-Up Messages menu item to write the messages (power-up messages only) from your current (open) project to an Excel file or a CSV file. This is accomplished in the same way as for the regular messags. See the previous section, Export Messages, for step-by-step instructions.

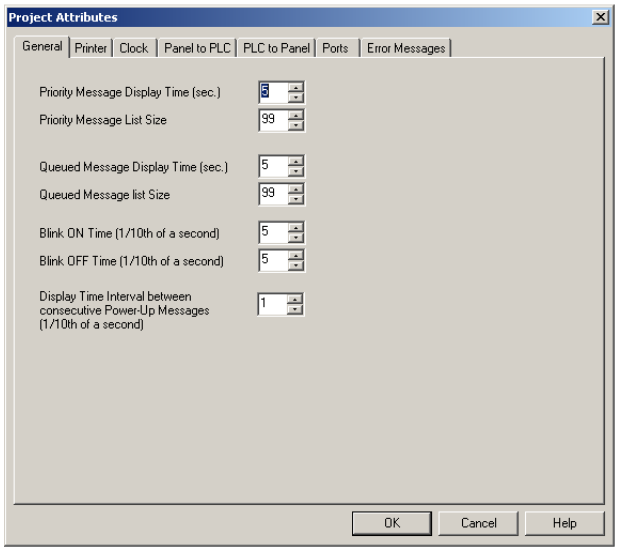
Import Power-Up Messages

Click on the Import Power-Up Messages menu item to import messages stored in an Excel file or a CSV file into your current (open) project. This is accomplished in the same way as importing regular messages, See the previous section, Import Messages, for step-by-step instructions.

Project Attributes

GENERAL

Under the General tab in Project Attributes you will make the following selections.



Please Note: When Priority Messages are displayed, no other messages will update or be processed until the Priority Message is removed.

Priority Message Display Time (sec.)
This is the amount of time in seconds that the Priority Message will display on the marquee. Enter a number between 1 and 60 seconds (default is 5). After the display time has been reached, the next active Priority Message will display. If there is no other active Priority Message in the queue, the same Priority Message will re-display.

Priority Message List Size
This is the maximum number of Priority Messages that can be stored in the list. Enter a number between 1 and 99 (default is the maximum 99). After the maximum is reached, no other Priority Messages can be stored in the queue. Once a Priority Message in the queue list becomes inactive and the list is no longer at maximum capacity, the next Priority Message will be added to the list.

Queued Message Display Time (sec.)
This is the amount of time in seconds that the Queued Message will display on the marquee. Enter a number between 1 and 60 seconds (default is 5). After the display time has been reached, the next active Queued Message in the list will display. If there is no other active Queued Message in the queue, the same Queued Message will re-display. (Please note that active Priority Messages are displayed in place of Queued Messages. A Priority Message must become inactive before Queued Messages will be displayed.

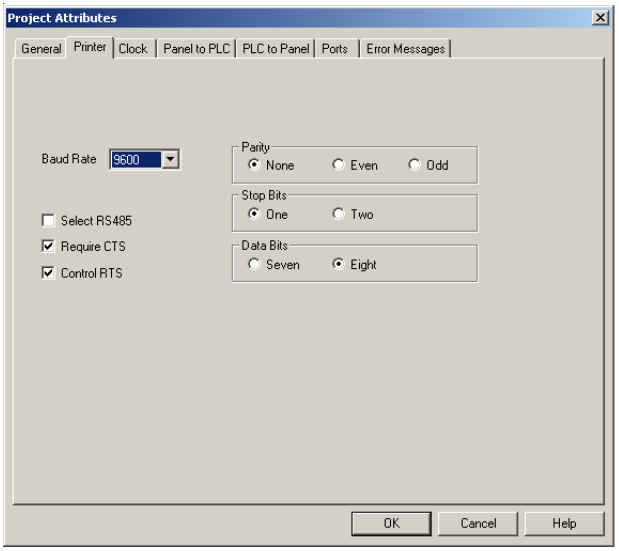
Queued Message List Size
This is the maximum number of Queued Messages that can be stored in the list. Enter a number between 1 and 99 (default is the maximum 99). After the maximum is reached, no other Queued Messages can be stored in the queue list.

Blink ON Time (1/10th of a second)
Enter a number between 1 and 99 (tenths of a second) for the time the message will remain ON during the blink sequence. (Used if the blink option is selected as a message attribute.) The default is 5 tenths of a second.

Blink OFF Time (1/10th of a second)
Enter a number between 1 and 99 (tenths of a second) for the time the message will remain OFF during the blink sequence. (Used if the blink option is selected as a message attribute.) The default is 5 tenths of a second.

Display Time Interval between consecutive Power-Up Messages (1/10th of a second)
Enter a number between 1 and 255 (tenths of a second) for the time that each consecutive Power-Up Message will display. The default time is 16 tenths of a second.

PRINTER



Baud Rate
Select baud rate to match Printer. Select from 1200, 2400, 4800, 9600, 19200, or 38400. Default is 9600.

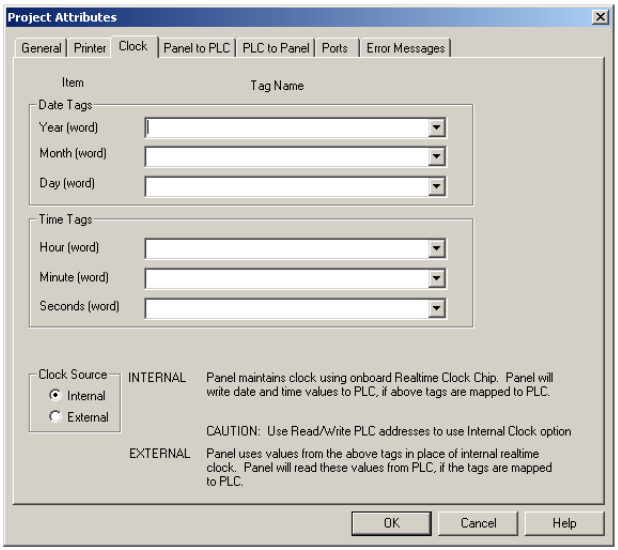
Parity, Stop Bits, Data Bits
Select the corresponding attributes of the printer.

Select RS485
This allows you to select RS-485 as the communication protocol. If you are connecting RS-232 or RS-422, do NOT select this feature. Click on the box to place a check mark, if you want to enable RS-485.

Require CTS
Select this to match the printer.

Control RTS
Select this to match the printer.

CLOCK



Date Tags:

Year (word): Tag for the location that the marquee sets with the year (0–99).
Month (word): Tag for the location that the marquee sets with the month (1–12).
Day (word): Tag for location that the marquee sets with the day (1–31)

.

Time Tags

Hour (word): Tag for internal location that the marquee sets with the hour (1–12).
Minute (word): Tag for internal location that the marquee sets with the minute (00–59).
Second (word): Tag for internal location that the marquee sets with the second (00–59).

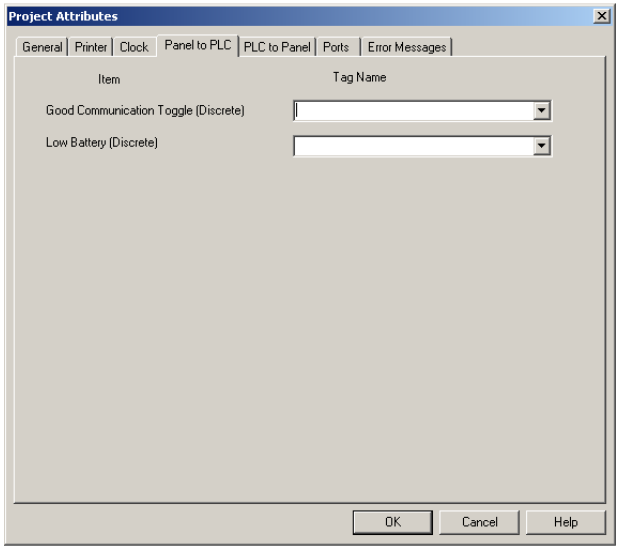
NOTE: If using Internal, the tag address string must use a READ/WRITE register in the PLC. The PLCs use READ ONLY registers for their internal clock/ calendars and cannot be written to. If using External, be sure to use the correct PLC addresses!

Clock Source

If you select **Internal**, the marquee maintains the clock using the onboard Real-Time Clock chip. The marquee will write data and time values to the PLC if the tags are mapped to the PLC.

If you select **External**, the marquee uses values from the tags in place of internal Real-Time Clock. The marquee will read these values from the PLC if the tags are mapped to the PLC.

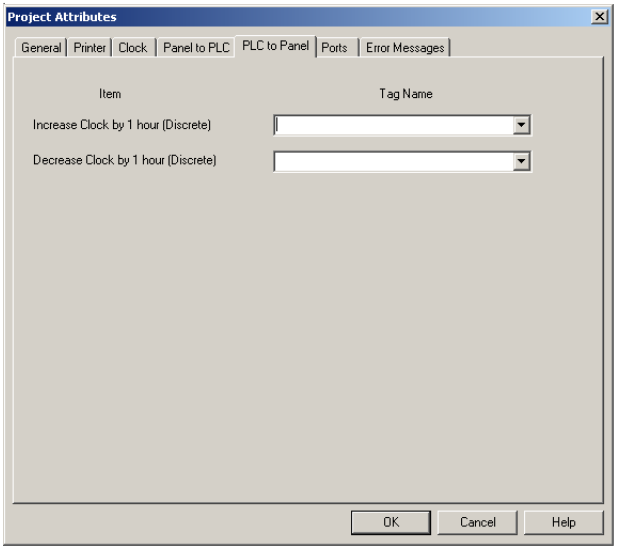
PANEL TO PLC



Good Communication Toggle (Discrete)
Watchdog — this bit is toggled every 5 seconds allowing the PLC to determine if the marquee is communicating.

Low Battery (Discrete)
Indicates battery for system RAM needs to be replaced. Cleared on power-up, set when low battery is detected.

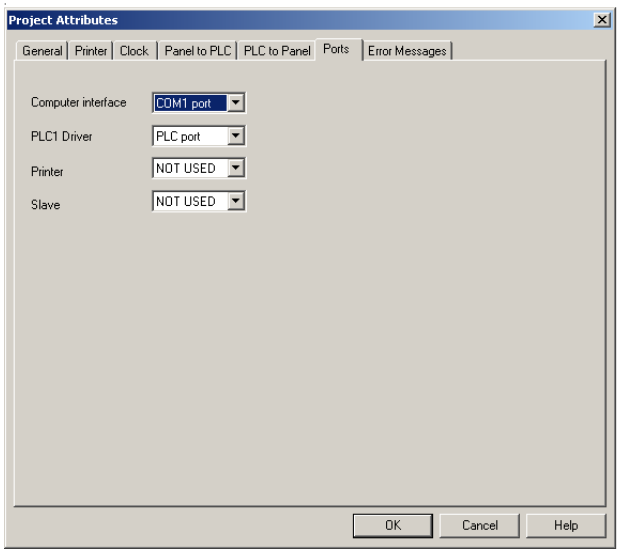
PLC TO PANEL



Increase Clock by 1 hour (Discrete)
This allows the PLC to increment the marquee system clock by 1 hour.

Decrease Clock by 1 hour (Discrete)
This allows the PLC to decrement the system clock by 1 hour.

PORTS



Computer Interface
Select the PowerMarquee port that you will use to connect to a programming computer when you create a PowerMarquee Project and load it into a marquee.

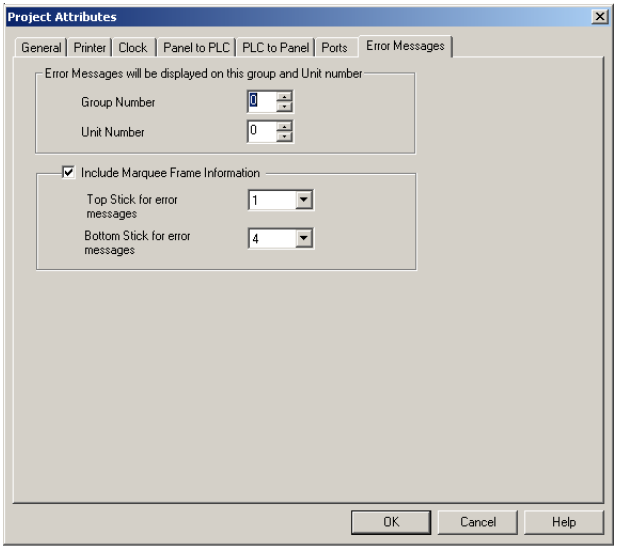
PLC Driver
Select the marquee port that you will use to connect to a PLC.

Printer
Select the PowerMarquee port that you will use to connect to a serial. Select NOT USED if not connecting to a Printer.

Slave
Select the PowerMarquee port that you will use to connect to a slave device. Select NOT USED if not connecting to a slave.

NOTE: Please be aware that any given port can be used only once. If you attempt to duplicate the COM1 (e.g.) port assignment, you will receive a warning message.

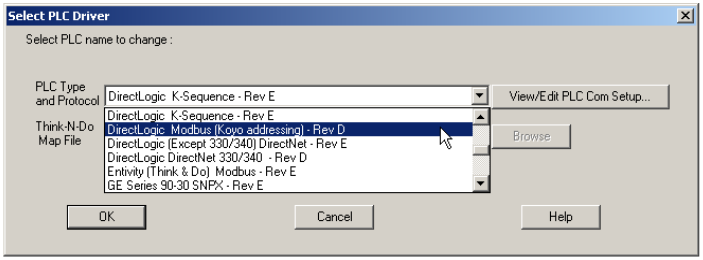
ERROR MESSAGES



Error Messages will be displayed on this Group and Unit number
Select the **Group Number** (0–15) and **Unit Number** (1–4095) of the message display that will display system error messages. Please remember that the display of the PowerMarquee Master Unit is always Group 1, Unit 1.

Include Marquee Frame Information
Click here if you want to include the Marquee Frame information and then select the Top Stick for Error Messages to appear and the Bottom Stick for Error Messages to appear.

Select PLC



Click on the down arrow to view the available PLCs. Select the **PLC Type and Protocol** for the PLC you are using. If your PLC Type and Protocol is Entivity's (Think & Do) Modbus, the Think N Do Map File field will become available, allowing you to select a map file to import into the project.

If you want to view or edit the PLC Attributes, click on the **View/ Edit PLC Com Setup** button. The PLC Attributes dialog box applicable to the type PLC you have previously selected will be shown. Here you can make changes to the PLC communication setup. Click on **OK** to save your changes or **Help** to view the help topics available for that particular PLC.

Upgrade Firmware

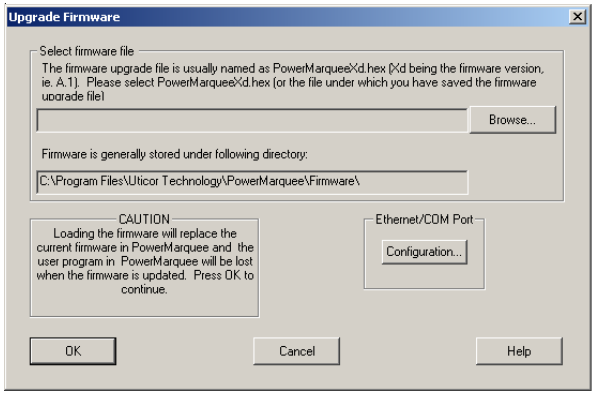
There may be occasional upgrades to the PowerMarquee internal software, also referred to as the Exec or Firmware. (Check the www.uticor.net website periodically for information about software and firmware upgrades.)

CAUTION: Existing Programs that are saved to FLASH Memory must be resaved to FLASH after the upgrade. When upgrading firmware, YOU MUST write the program to the panel and save the program to FLASH using Panel > Flash > RAM to Flash.

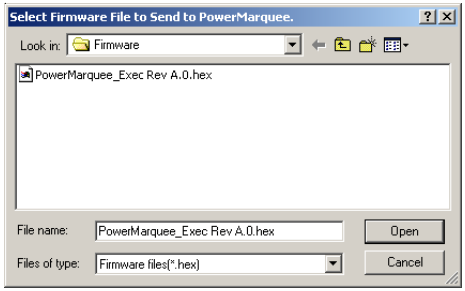
To Upgrade Firmware:

1. Back up the user program currently stored in the PowerMarquee and save to disk or Flash option card.

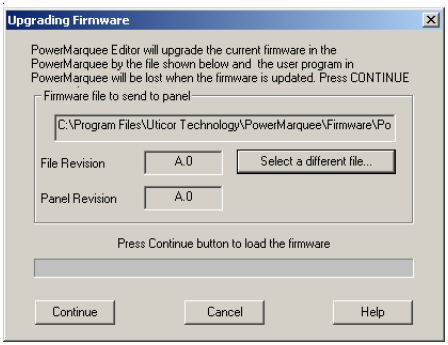
2. Click on **Upgrade Firmware**, the following window will appear.



3. Click on **Browse** button and navigate to the new firmware file (.hex file). Firmware is generally stored in the PowerMarquee Program file, in the "Firmware" folder. Click on the .hex file that you want to import and click on the **Open** button.



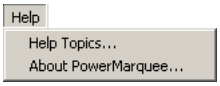
4. Select the appropriate COM port under **Ethernet/COM Port** (click on the **Configuration...** button) and click on the **OK** button to begin the upgrade. A status bar will let you know when the upgrade is complete.



5. The dialog box will show the File Revision number of the firmware and the Panel Revision of the Firmware.

   Check these revision numbers. If they are the same (no upgrade is needed), you may click on the **Cancel** button to exit. If the file you have selected is not the right one, click on the **Select a different file...** button.

6. Click on **Continue** to write the new firmware to the PowerMarquee.



Help Menu

Help Topics

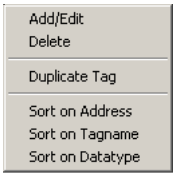
Click on **Help Topics** to view the help topics for PowerMarquee Programming Software. The help window is in Windows 2000 format. Use the **Contents** tab to view help topics by category. Click on the **Index** tab to view an alphabetical list of all help topics. Click on the **Search** tab and enter a word or words to find them where used in the help topics.

About PowerMarquee

Click on **About PowerMarquee** for copyright, manufacturer, and version number of the PowerMarquee Programming Software.

Right Click Menus

These menus are availabe when working with message database, message text field and in the tag database.



Tag Database Right Click Menu

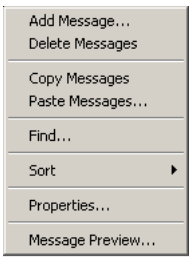
Add/Edit
Click on this menu item to Add or Edit a Tag. For more information, go to the Add Tag Details topic.

Delete Tag
Highlight Tag(s) in the Tag Database that you want to delete. Right click the mouse and choose Delete to remove the tag(s) from the database.

Sort Tags in Tag Database
With the Tag Database open, right click your mouse while your cursor resides anywhere in the Tag Database list. A menu will appear.

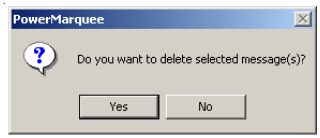
You may also choose to sort the list by Address, Tag Name, or Data Type.

If you click on **Sort on Address**, the list will be sorted alphanumerically by the PLC address. If you click on **Sort on Tag Name**, the list will be sorted alphabetically (A to Z) by the name of the tag. If you click on **Sort on Data Type,** the tag list will be sorted by Data Type. For tags with same data type, it will perform a second sort by the address.



Message Database Right Click Menu

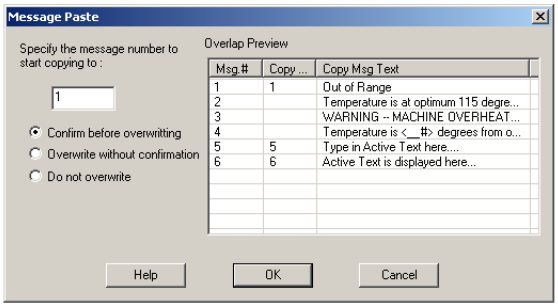
Delete Messages
Highlight the message(s) in the Message List that you want to delete and right click your mouse button to view the menu. Click on **Delete Messages**. The message to the right will appear asking you to confirm the deletion. Click on **Yes** to delete, **No** to cancel the command.



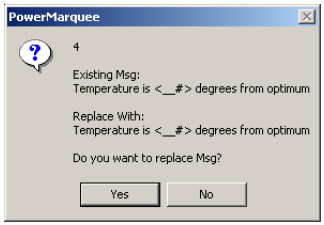
Copy Messages
Highlight the message(s) in the Message List that you want to copy and right click your mouse button to view the menu. Click on **Copy Messages**.

Paste Messages

Once you have copied the messages from the list, right click your mouse button, and then click on Paste Messages in the popup menu. The following dialog will appear showing the message list and the messages that you have selected to copy.



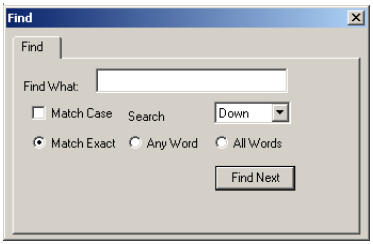
Next you will want to **Specify the messages number to start copying to.** For example, if you select 7, messages 1, 5 and 6 will be copying to new message number 7, 11, and 12. The program loader will leave blank messages (8, 9, and 10) in the place of the sequential messages that you skipped (2, 3, and 4) over for copying and pasting. **Confirm before overwriting** is selected by default. If this is checked, the following dialog will appear asking you to confirm each Message overwrite.



You can also select **Overwrite without confirmation** if you do not want to receive the message above, or **Do not overwrite** if you do not want to overwrite existing messages with pasted messages with the same message number.

To edit a message after pasting, double click on the message you want to edit and the **Edit Message details** dialog will appear (or click on the message to highlight, right click the mouse button for the popup menu and click on **Properties**). Click **OK** when finished or **Cancel** to quit without pasting.

Find . . .
Click on Find to search for character strings in the Message List, the following dialog box will appear:



1. Enter the text string into the **Find What:** field.

2. Select **Match Case** if you want the upper and lower case characters found to match exactly what you typed in, otherwise it will match your word “MONITOR” to “Monitor”, for example.

3. Select **Match Exact** if you only want the search to find and display exactly what you have typed in, otherwise it may find the characters as part of a larger word/text string.

4. Select **Any Word** if you have typed in a phrase and want the search to find any word in the phrase.

5. Select **All Words** if you want the search to find only instances where all of the words in the character string appear.

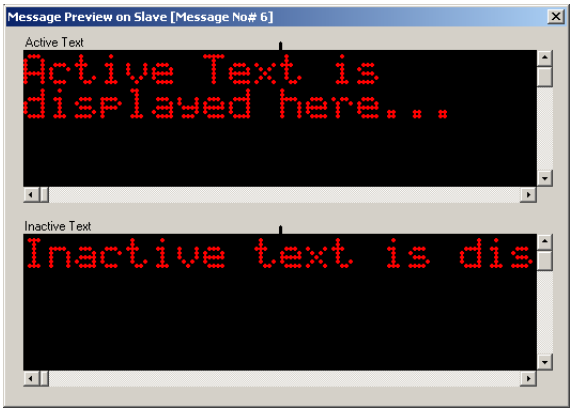
6. Click on the **Find Next** button to go to the next match.

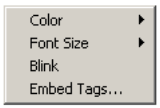
Sort
Click on **Sort** in the right click menu to sort (alphanumerically) by **Msg #** (Message Number), **Msg Name** (Active Text in Message), or by **Group Number** (where messages are sent for display). You can also click on a column heading in the Message List window or the Power-Up Message list window to sort alphanumerically).

Properties
Click on a message in the Message list to highlight it and then right click your mouse button to bring up the popup menu. Click on **Properties** to bring up the **Edit Message details** dialog for that message.

Message Preview

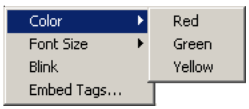
Click on a message in the Message list to highlight it and then right click your mouse button to bring up the popup menu. Click on **Message Preview** to bring up the **Message Preview** window for that message. This window will show you how the message will display on the marquee.





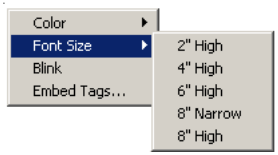
Message Text Right Click Menu

Color



Highlight the text that you want to change the color of in the message's active text or inactive text field and then right click your mouse button. Move your cursor to the arrow next to **Color** and you will see the options of **Red** (default), **Green**, or **Yellow**. Choose the color you want for the highlighted text. It will change in the Active Text or Inactive Text window* PowerMarquee is currently only available in Red or High Brite Red, but it can drive other UTICOR marquees that have multi-color displays.

Font Size



Highlight the text that you want to change the font size of in the message's active text or inactive text field and then right click your mouse button. Move your cursor to the arrow next to **Font Size** and you will see the options of **2" High**, **4" High**, **6" High**, **8" Narrow**, or **8" High**. Choose the size you want for the highlighted text. It will change in the Active Text or Inactive Text window.

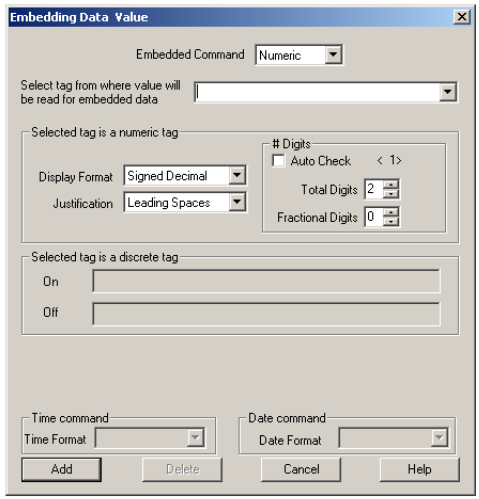
Blink Text

Highlight the text that you want to blink in the message's active text or inactive text field and then right click your mouse button. Click on **Blink**. The text that you have selected to blink will be underlined in the Active Text or Inactive Text window to indicate that the blink option has been enabled.

Embed Tags...

Special characters in the message determine where the embedded data from the registers should go. Up to four data values may be embedded in a single message. Program how the data value will be displayed as follows:

1. The following dialog box will appear when you select Embed Tags value within a message.



2. Select the **Embedded Command** that determines the type of value to embed. Available choices are **Discrete**, **Numeric**, **String, Time** and **Date**. Depending on what type command you choose, certain areas of the dialog box become available or unavailable (grayed out) for selection or data entry.

3. If you choose **Discrete**, **Numeric**, or **String**, select or enter the Tag name where the data value will be read by clicking in the field or on the down arrow next to **Select tag from where value will be read for embedded data**.

4. If you have selected **Numeric**, the options under **"Selected tag is a numeric tag"** will be enabled.

5. Select the **Display Format** from the available choices.

6. Select **Justification** from **Leading Zeroes**, **Leading Spaces**, or **Trailing Spaces.**

7. Under **# Digits**, click on the box in front of **Auto Check** if you want to have the panel automatically determine the number of digits to be placed for the embedded value. **Total Digits** and **Fractional Digits** will be disabled if you choose **Auto Size**.

8. Also, under **# Digits**, you may enter the **Total Digits** that you want to display, and enter the **Fractional Digits** you want to display (leave at default, 0, if you do not want fractional digits).

9. If you have selected Discrete, the fields under **"Selected tag is a discrete tag"** will be available. Enter the text that you want to appear within the message when the Discrete register is **ON** and when the Discrete register is **OFF**.

10. If you have selected **Time** under **Embedded Command**, the field "**Time Command**," will be available.

11. Select the **Time Format** from the available choices: HH_MM_SS_24, HH_MM_24, HH_MM_SS_12, or HH_MM_12.

12. If you have selected **Date** under **Embedded Command**, the field, "**Date Command**," will be available.

13. Select **Date Format** from the available choices: DD_MMM_YY, DD_MM_YY, MM_DD_YY, YY_MM_DD.

14. Press the **Add** button to add the embedded data to the message. (When inserted in a message a numeric command will be represented in the Active Text or Inactive Text message field as <___#>: Discrete is represented as <DISCRETE>; String is represented as <STRING>; Time as <Time>; and Date as <Date>.) You will return to the **Add/Edit Message** details dialog.

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Appendix A

ASCII Characters

Error Messages

International Character Sets

ASCII Characters

Name	Octal	Dec	Hex	Description
SP	040	32	20	Space
!	041	33	21	Exclamation point
“	042	34	22	Double quote
#	043	35	23	Pound sign
$	044	36	24	Dollar sign
%	045	37	25	Percent sign
&	046	38	26	Ampersand
‘	047	39	27	Apostrophe (single quote)
(	050	40	28	Left parenthesis
)	051	41	29	Right parenthesis
*	052	42	2A	Asterisk
+	053	43	2B	Plus
,	054	44	2C	Comma
-	055	45	2D	Hyphen (minus)
.	056	46	2E	Period (decimal point)/dot
/	057	47	2F	Slant (slash)
0	060	48	30	Zero
1	061	49	31	One
2	062	50	32	Two
3	063	51	33	Three
4	064	52	34	Four
5	065	53	35	Five
6	066	54	36	Six
7	067	55	37	Seven
8	070	56	38	Eight
9	071	57	39	Nine
:	072	58	3A	Colon
;	073	59	3B	Semicolon
<	074	60	3C	Less than / Left angle bracket
=	075	61	3D	Equals sign
>	076	62	3E	Greater than / Right angle bracket
?	077	63	3F	Question mark
@	0100	64	40	“At” sign
A	0101	65	41	Uppercase A
B	0102	66	42	Uppercase B
C	0103	67	43	Uppercase C
D	0104	68	44	Uppercase D
E	0105	69	45	Uppercase E
F	0106	70	46	Uppercase F
G	0107	71	47	Uppercase G
H	0110	72	48	Uppercase H
I	0111	73	49	Uppercase I
J	0112	74	4A	Uppercase J
K	0113	75	4B	Uppercase K
L	0114	76	4C	Uppercase L
M	0115	77	4D	Uppercase M

N	0116	78	4E	Uppercase N
O	0117	79	4F	Uppercase O
P	0120	80	50	Uppercase P
Q	0121	81	51	Uppercase Q
R	0122	82	52	Uppercase R
S	0123	83	53	Uppercase S
T	0124	84	54	Uppercase T
U	0125	85	55	Uppercase U
V	0126	86	56	Uppercase V
W	0127	87	57	Uppercase W
X	0130	88	58	Uppercase X
Y	0131	89	59	Uppercase Y
Z	0132	90	5A	Uppercase Z
[	0133	91	5B	Left square bracket
\	0134	92	5C	Back slash
]	0135	93	5D	Right square bracket
^	0136	94	5E	Caret
_	0137	95	5F	Underscore
`	0140	96	60	Back quote
a	0141	97	61	Lowercase a
b	0142	98	62	Lowercase b
c	0143	99	63	Lowercase c
d	0144	100	64	Lowercase d
e	0145	101	65	Lowercase e
f	0146	102	66	Lowercase f
g	0147	103	67	Lowercase g
h	0150	104	68	Lowercase h
i	0151	105	69	Lowercase i
j	0152	106	6A	Lowercase j
k	0153	107	6B	Lowercase k
l	0154	108	6C	Lowercase l
m	0155	109	6D	Lowercase m
n	0156	110	6E	Lowercase n
o	0157	111	6F	Lowercase o
p	0160	112	70	Lowercase p
q	0161	113	71	Lowercase q
r	0162	114	72	Lowercase r
s	0163	115	73	Lowercase s
t	0164	116	74	Lowercase t
u	0165	117	75	Lowercase u
v	0166	118	76	Lowercase v
w	0167	119	77	Lowercase w
x	0170	120	78	Lowercase x
y	0171	121	79	Lowercase y
z	0172	122	7A	Lowercase z
{	0173	123	7B	Left curly brace
|	0174	124	7C	Vertical bar
}	0175	125	7D	Right curly brace
~	0176	126	7E	Tilde

PowerMarquee Programming Software Error Messages

"Error M01: Unable to open the project file (*.prp)."
"Error M02: Unable to open Message database file."
"Error M03: Unable to open PLC attributes file (*.atr)."
"Error M04: Unable to open project options file (*.ppo)."
"Error M05: Unable to create project file (*.pmq)."
"Error M06: Unable to create PLC attributes file (*.atr)."
"Error M07: Unable to create message database file (*.mmd)."
"Error M08: Unable to create project options file (*.ppo)."
"Error M09: Unable to create project options file (*.opt)."
"Error M18: File %s not found."

Solution: If you have inadvertently renamed your project while open in PowerMarquee Programming Software, close and then reopen the project.

"Error M10: Unable to create temporary PLC attributes file."

Reason: You might receive this error message if you are running two instances of the PowerMarquee Programming Software, opened a project in one and then gave the same project name in another to be downloaded from marquee.
Solution: Give a valid project file name that is not open in any application. If the problem persists, close all your applications, run only one instance of PowerMarquee, and try again.

"Error M13: Problems in project file while verifying checksum."

Reason: Project file is corrupted.
Solution: If you have a backup of your project files, use them to open the project. You may have to recreate the project. If this problem persists, call technical support.

"Error M14: There are no PLC dlls available in this execution directory."
"Error M15: PLC Dll file being used by this project is not found."

Reason: If you have moved all the PLC dlls from the directory where PowerMarquee.exe resides, you will receive this error message.
Solution: Reinstall the software

"Error M16: Downloaded project is a protected project. This cannot be edited/viewed in the editor."

Reason: Project is write protected.
Solution: You will not be able to open this project for viewing/editing purpose. Consult with project's creators.

"Error M18: File xxxx not found."
"Error M19: Unable to open xxxx file."

Solution: If you have inadvertantly renamed your project while open in PowerMarquee Programming Software, close and then reopen the project.

"Error M20: Unable to start Excel application. Do you want to import from *.csv format?"
Reason: PowerMarquee Editor is not able to start Excel. It is possible that Excel is not installed in the system or the system has insufficient memory.
Solution: Install Excel, or restart the system and try again. If the problem persists, contact technical support.

"Error M21: Unable to find details in Excel file."
Reason: This Excel file does not have details (no fields and records).

"Error M22: Unable to import data."
Reason: PowerMarquee Editor is not able to import the data from Excel file/CSV file. Reason could be that either the file has invalid data or the data is improperly ordered.

"Error M23: Unit Number is out of range."
Solution: Enter a valid unit number. Valid range is 1–4095.

"Error M24: Invalid file name or path."
Reason: You have specified an invalid file name.
Solution: You have to specify a valid file name. Do not include any special characters (\, /,.,*,?,<,>,|,etc.) while naming your files. First character should be alphanumeric.

"Error M25: Invalid file name. Do not use symbols."
Reason: You have specified an invalid file name.
Solution: To avoid getting both these messages, when creating a project do not use character symbols (/,{,},[,],<,>,…etc.) in the project name. Only use letters A-Z and/or numbers 0-9 for a unique project name.

"Error M26: Invalid Think and Do map file."
Reason: When working with Think and Do PLC type, this program will map the PowerMarquee project to an existing Think and Do map file. If you try to map the PowerMarquee project to a map file generated by any program other than Think and Do, this message will appear and prevent you from continuing with the project.
Solution: Select a valid Think and Do map file.

"Error M27: Cannot edit ON-LINE unless the PowerMarquee has a program. Edit OFF-LINE first and write a program to the PowerMarquee."
Reason: If no project has been loaded into the PowerMarquee, the program loader will not allow you to enter the ON-LINE Edit mode. Also, if the map file has been altered, you will receive this message.
Solution: Get into OFF-LINE Edit mode and upload a project. Exit to the "Step 1: Project Information" screen, click on the ON-LINE Edit mode button, and select "OK". If that doesn't work, you may need to make a new project with a new map file.

"Error M28: Invalid project name."
Reason: You have specified an invalid file name.
Solution: Specify a valid file name.Do not include any special characters (\, / ,.,*,?,<,>,|,etc.) while naming your files. First character should be alphanumeric.

"Error M29: Not a valid project file (xxxx)."
Reason: If you have chosen a non-PowerMarquee project file, you will get this error.

"Error M30: Unable to find PLC dll with manufacturer id : xxxx and model id : xxxx."
Reason: If you have moved the PLC dlls from the directory where PowerMarquee.exe resides, you will receive this error message.
Solution: Reinstall the software

"Error M32: OLE libraries initialization failed."
Solution: Restart the system. If the problem persists, OLE related Windows system files are not installed properly.

"Error M34: Wrong Embedded Data Format."
Solution: If you are getting this error while opening a project, the project file is corrupt. Recreate the project. If the problem persists, contact technical support.

"Error C01: Unable to open communication port."
Solution: Select another COM port.

"Error C02: Communication port is being used by some other application. Access denied."
Solution: Close the other application and try to communicate, or, if you have an extra serial port, connect the cable to that port and select that extra port for communication from PowerMarquee.

"Error C05: Unable to update PLC driver."
Reason: You will receive this error message if communication is not established between the programming software and the marquee, or if the marquee is still trying to communicate with the old driver and you are attempting to update the driver.
Solution: Restart the marquee and try communicating with the marquee. If you still face this problem, clear memory from Marquee (using PowerMarquee > Clear Memory) and update the PLC driver and then, save your project. ***Ensure that you have the project saved to disk before you clear memory.***

"Error C07: PLC Attributes could not be written to the PowerMarquee."
"Error C09: Tags could not be written to the PowerMarquee."
"Error C10: Error in sending Project attributes to PowerMarquee."
Solution: Check the connections between the marquee and computer. Restart the panel and try communicating again.

"Error C12: Unable to delete message from PowerMarquee."
Reason: If Delete Message is selected while there is a disruption in the communication between the panel and computer, this error message is displayed.
Solution: Check the COM line, power to the marquee, and COM port used for correct setting and function.

"Error C13: Memory diagnostics failed."
Solution: Check connections and COM port settings. Ensure the proper function and power distribution of marquee (no system faults). If all checks out OK and you are still receiving this error message, there maybe a physical problem with the marquee's memory.

"Error C14: Errors in WarmBoot."

Reason: Marquee is not warm booting.

Solution: This could indicate that the marquee is not active and/or communication is not established between the PC and the marquee. Please check the connection between the marquee and the PC. If the problem persists, restart the marquee.

"Error C15: Errors in reading Flash card."
"Error C16: Unable to program User Flash."

Reason: If the Flash card is not set properly, communication cannot be established between the marquee and the programming software.

Solution: Check whether the Flash card is set properly in the slot / restart the marquee. Check the cable for communication.

"Error C17: Unable to read PLC Attributes from PowerMarquee."
"Error C18: Unable to read PLC 1 Attributes from PowerMarquee."
"Error C19: Unable to read PLC 2 Attributes from PowerMarquee
"Error C20: Unable to delete message %s # %d from the PowerMarquee."
"Error C21: Unable to get Information from PowerMarquee. \nPlease checkup the connection between PowerMarquee and computer."
"Error C22: Unable to read System Attributes from PowerMarquee."
"Error C23: Unable to read tags from the PowerMarquee."

Solution: Check the connection between marquee and computer. Restart the marquee and try communicating again.

"Error C24: Testing RAM - failed."

Solution: If you have a RAM Card installed in the marquee, remove this RAM card and redo the test. If the test passes, replace the RAM card with a new RAM card. It the test fails, there is a problem with the marquee. Please contact technical support.

"Error C25: Testing Flash - failed."

Solution: Replace the Flash card.

"Error C26: Error in Setting Group and Unit Number on PowerMarquee."
"Error C27: Incorrect Communication Packet (Checksum Error)."
"Error C28: Incorrect Communication Packet (Time Out Error). \nCheck cable, communication port and ports assignment on PowerMarquee."
"Error C29: PowerMarquee is out of memory; \nPlease delete few messages and try again."
"Error C30: Incorrect Communication Packet (Incorrect message code)."
"Error C31: Incorrect Communication Packet (Incorrect message number)."
"Error C32: Incorrect Communication Packet (Incorrect message length)."
"Error C33: Incorrect Communication Packet (Error in EEPROM program)."
"Error C34: Incorrect Communication Packet (Incorrect message load)."
"Error C35: Incorrect Communication Packet (Incorrect Format)."
"Error C36: Incorrect Communication Packet (Image not found)."
"Error C37: Incorrect Communication Packet (Incorrect password)."
"Error C38: Incorrect Communication Packet (Error in INIT)."
"Error C39: Incorrect Communication Packet (ERR MSG ECHOED)."
"Error C42: Incorrect Communication Packet (Protection error)."
"Error C43: Incorrect Communication Packet (Program read only error)."
"Error C44: Incorrect Communication Packet (Incorrect type)."

Solution: Check the connection between marquee and computer. Restart the marquee and try communicating again.

"Error C50: The starting address does not match."
Reason: Driver file (or) firmware file is not valid (may be corrupt).
Solution: Reinstall the software.

"Error C51: Error reading driver or hex file."
Solution: You will receive this error message if two different applications are trying to access the same driver / firmware file. Close one application and try again. If you are using only one application, try restarting the system.

"Error C52: Error in transmitting data."
"Error C53: Error while sending Messages to Marquee."
"Error C54: Error in Execute Boot!"
"Error C55: Error in writing firmware to PowerMarquee!"
"Error C56: Error reading project from PowerMarquee."
"Error C57: Error while sending Power-Up Messages to PowerMarquee."
"Error C58: Communications Error: Operation can not be performed !"
Solution: Check the cable and communication. If required, restart your system.

"Error C60: Unable to set the Group and Unit number on the Power Marquee."
Solution: Try again to set the group and unit number. If the problem persists, contact technical support.

"Error T01: Tag name already exists."
Reason: The tag name that was entered is a name that already has a data type and/or PLC address assigned to it in the tag database.
Solution: Change the tag name entered to a name that is unique when compared to the other tags in the Tag Database.

"Error T02: Tag category does not match."
Reason: This error occurs when a Tag Name of an incorrect data type is typed into the Tag Name field of an object.
Solution: Select a valid Tag Name from the pull-down list, or create a new valid Tag Name.

"Error T04:
"Error T05:
Not used by PowerMarquee.

"Error T06: Number of Characters must be even and valid range is 2 to 40."
Reason: In the process of making an ASCII tag, the number of characters must remain between 2 and 40. If you enter a number outside of this range, this error message will display.
Solution: Either re-enter a number within the specified range or use the wheel to the right edge of that field.

"Error T07: IO Type is not valid forxxxx. Unable to convert"
Reason: If you specify a discrete address to an object requiring a word address or vice versa, you will receive this error message.
Solution: Specify a valid PLC address.

"Error T08: Unable to get the datatype."
"Error T09: Tag index not found. Creating tag with default name and making it as internal."
"Error T10: Unable to open tag database file (*.ptd)."

Reason: The Tag Database is corrupt.

Solution: Try the following:

1) Go to Tag Database (Setup > Tag Database) and select a tag not associated with any objects.
2) Delete the tag by pressing the Delete button or by using the delete key on keyboard.
3) Save the project.
4) Close and then restart PowerMarquee software.
5) Open the project and check for the error again.

"Error T11: Tag index limit reached; unable to create a new tag."

Reason: You've reached the tag maximum. Maximum number of tags that can be entered is 32,000.

"Error T12: Tag expected but not found. Creating it as an internal tag."

Solution: Try the following:

1) Accept defaults
2) Open Tag Database and check to see if all tags are there.
3) Some Tags will be UNKNOWN, modify to your requirements.

"Error T16: No map data found in tag database file named xxxx. Unable to read MapData."

Solution: Try the following:

1) Accept defaults
2) Open Tag Database and check to see if all tags are there.
3) Some Tags will be UNKNOWN, modify to your requirements.

"Error T19: Unable to add Tag. Maximum tag index limit reached."

Solution: Try the following:

1) Accept defaults
2) Open Tag Database and check to see if all tags are there.
3) Some Tags will be UNKNOWN, modify to your requirements.

"Error E01: Illegal Token xxxx is found"
"Error E02: Illegal Token: Token xxxx value exceeds max allowed value"
"Error E03: Unknown token found"

Solution: Delete the expression and enter it again. If problems persist, please call technical support.

PLC Driver Error Messages

For a list of PLC Driver Error Messages that you may encounter when using the PowerMarquee, consult the PowerMarquee Programming Software online help.

International Character Sets

The PowerMarquee display messages in 7 international character sets in addition to the U.S. character set. The marquee is set to the specific character set on positions 2, 3, and 4 on Switch Two (see PowerMarquee Hardware Manual, P/N MAN-P3000-003). The marquee will display messages according to the ASCII conversion chart on the following pages. To program messages (into a master display or the computer) in a non-U.S. character set, refer to the ASCII conversion chart. Enter the ASCII character or code equivalent to the non-U.S. character desired. Blank areas on the chart indicate no change from the American set. If no character is shown for the character set in use, the American character is displayed. For example, when using the English character set, enter the "#" character (Program Mode) or HEX 23 (Computer Interface Mode) to program and display the "£" character. All international character sets use the standard ASCII codes. The programming terminal always shows only the American character set.

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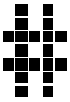
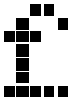
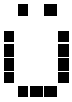
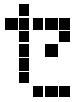
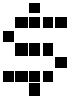
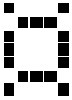
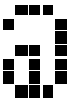
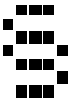
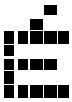
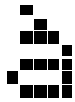
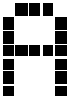
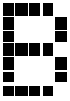
#								
$ 36								
@ 64								<SPACE>
A 65								
B 66								
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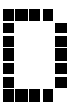
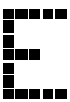
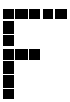
D 68								
E 69								
F 70								

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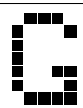
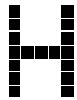
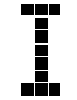
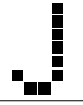
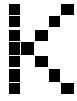
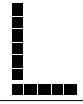
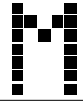
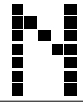
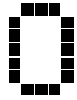
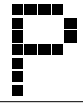
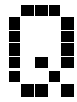
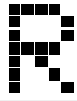
G 71								
H 72								
I 73								
J 74								
K 75								
L 76								
M 77								
N 78								
O 79								
P 80								
Q 81								
R 82								

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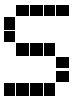
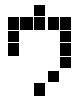
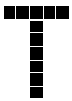
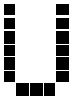
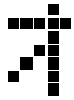
S 83								
T 84								
U 85								
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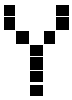
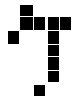
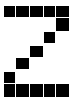
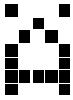
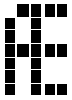
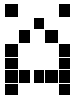
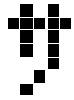
Y 89								
Z 90								
[91								
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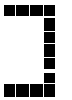
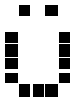
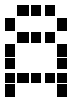
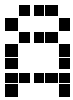
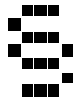
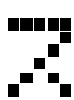
] 93								
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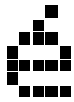
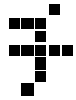
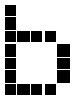
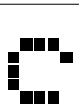
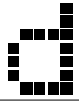
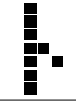
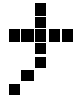
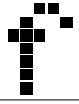
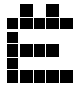
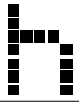
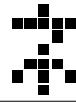
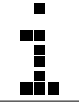
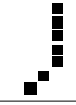
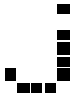
` 96								
a 97								
b 98								
c 99								
d [00								
e 101								
f [02								
g [03								
h 104								
i 105								
j 106								

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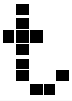
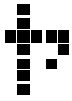
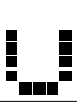
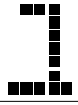
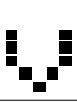
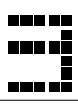
t 116								
u 117								
v 118								

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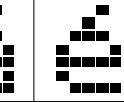
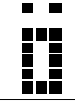
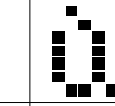
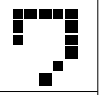
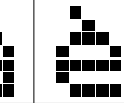
{ 123								
| 124								
} 125								
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