Quick Designer

User Guide

Doc No. MAN-4170C

The information in this document is subject to change without notice. The software described in this document is provided under license agreement and may be used or copied only in accordance with the terms of the license agreement.

The information, drawings, and illustrations contained herein are the property of the Control Technology Corporation. No part of this manual may be reproduced or distributed by any means, electronic or mechanical, for any purpose other than the purchaser's personal use, without the express written consent of the Control Technology Corporation:

The following are trademarks of Control Technology Corporation:

- Quickstep
- CTC Monitor
- CTC Utilities

MS-DOS and Windows are trademarks of Microsoft Corporation.

Contents

Contents

2 Quick Designer Editor Basics

3 Library Browser

4 Alarms

Contents

8 Compiling and Downloading Panels

Appendix A Installing Quick Designer and Connecting a Quick Panel Display

Appendix B Using System Variables

Appendix C Compiler INI File Settings

Appendix D Quick Panel Error Messages

Appendix E Quick Panel Character Map

Index

Notes To Readers

The *Quick Designer User Guide* provides the following information:

- Setting up a project in Quick Manager

- Using Quick Designer to create panels for a Quick Panel display

- Creating library functions for use with multiple projects

- Setting up alarms and alarm reports for use with a Quick Panel display and a controller

- Connecting a Quick Panel display to a Computer to download panels

- Connecting a Quick Panel display to a controller

Related Documents

The following documents contain additional information:

- For information on Quickstep, refer to the *Quickstep™ Language and Programming Guide* or the *Quickstep™ User Guide*.

- For information on the registers in your controller, refer to the *Register Reference Guide* (available at www.ctc-control.com).

- For information on Microsoft Windows or your PC, refer to the manuals provided by the vendor or help files.

Book Conventions

The following conventions are used in this book:

ALL CAPS BOLDFACE	Identifies DOS, Windows, installation program file names.
Boldface	Indicates information you must enter, an action you must perform, or a selection you can make on a dialog box or menu.
Italics	Indicates a word requiring an appropriate substitution. For example, replace *filename* with an actual file name.
Text_Connected_With_Underlines	Indicates symbolic names used in Quickstep programs. Step Names are ALL_CAPITALS. Other symbolic names can be Initial_Capitals or lower_case.
SMALL CAPS	Identifies the names of Quickstep instructions in text.

Book Conventions (Continued)

Courier font	Identifies step names, comments, output changes, and Quickstep instructions appearing in the Quickstep editor.
Art Code - DN-24	Identifies the file name of a particular graphic image.

How to Contact Control Technology Corporation

Control Technology Corporation is located in Massachusetts, and we are open from 8:30 a.m. to 5:00 p.m. eastern time. Contact us at 508 435-9595 and 800 282-5008 or Fax 508 435-2373

See us on the World Wide Web: www.ctc-control.com.

Your Comments

We welcome your suggestions and comments about this or any other Control Tech document. Comment forms are in the file called BUGRPT.WRI, which was installed in your QSWIN directory during your Quickstep installation. you can also email comments to techpubs@control.com.

Quick Designer Overview

Contents

Quick Manager Window

Quick Manager is the name of the first window you see when you activate the Quick Designer program. From Quick Manager you set up a project file and specify the serial communications attributes and other information required for a project. From the manager window you access:

- The panel editor, which is used to design panels
- The tag editor to add or modify the tag list
- The alarm manager to setup the alarm processor
- The download button which sends a completed project to a display

The Quick Manager window is shown below.

QT_1
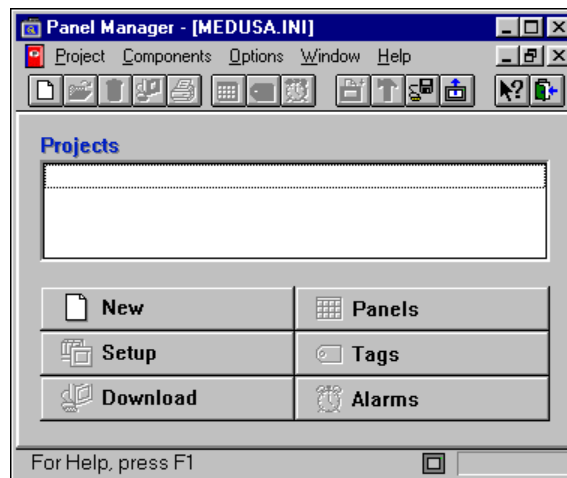
Toobar

The tool bar contains icons relating to frequently used commands found in the menu bar. By clicking an icon, you gain instant access to commands. The Quick Manager tool bar is shown below.

QD_1

The Quick Manager tools are as follows:

📄	New project	📂	Open project setup dialog box
🗑	Delete project	📟	Compile and download project
🖨	Print Project	🖩	Panel editor
🏷	Tag editor	⏰	Edit and create alarms

🖥	Store project in panel	🏗	Compile project
🖫	Download project	📤	Upload project
▶?	Display help file	📲	Exit Quick Manager

Menu Buttons

The large menu buttons perform the same functions as the icons in the toolbar. The menu buttons also resize when the window is resized. The Quick Designer menu buttons are shown below.

🗎 New	▦ Panels
🖥 Setup	🔲 Tags
🖨 Download	⏰ Alarms

QD_16

Project File List

The Project File List contains all the projects available to Quick Manager. You can create multiple projects, each with a different target display. You can copy and paste panels from one project to another.

Status Bar

The status bar displays operator prompts to aid you in using the manager and designer tools.

Starting a Project and Specifying Options

Naming a Project

When you create a new project, you must give the project a name and select a target display device. To start Quick Designer and create a new project:

1. From the **Start** menu, select **Quick Designer** from the **Quick Designer** Product group on the Programs menu.

    The **Quick Manager** dialog box appears.
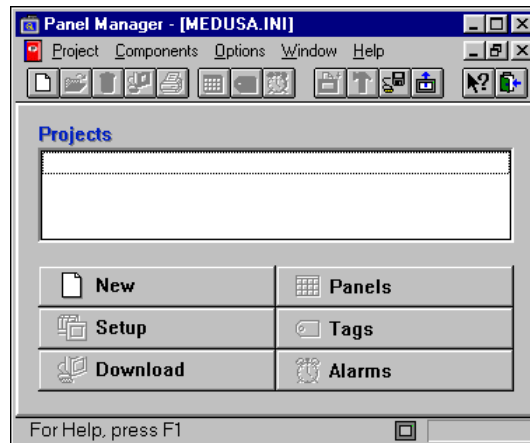
QT_1

2. Click the **New** button to display the **New Project** dialog box.
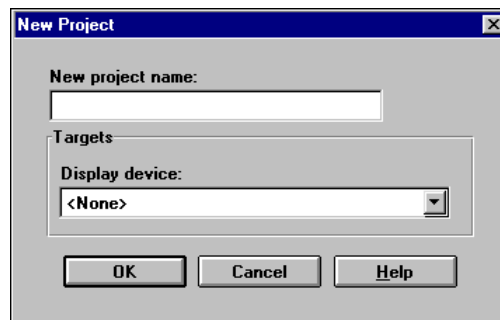
QT_2

3. Enter the project name and press the **TAB** key to move the cursor to the Display device pull-down selector (the down arrow to the right of the text field).

4. Select your target device from the display device list.

5. Click OK.

Specifying Project Options

After you have given your project a name, the Project Setup dialog box appears. The **PLC & Protocols** section of the Project Setup dialog box already lists the correct protocol and communications setup for the display. They are SIO/CN1 and the CTC Binary Protocol.

1. Selecting the **More** button displays the **Additional Project Setup** dialog box. Use the Additional Project Setup dialog box to enter the Author name and project notes.
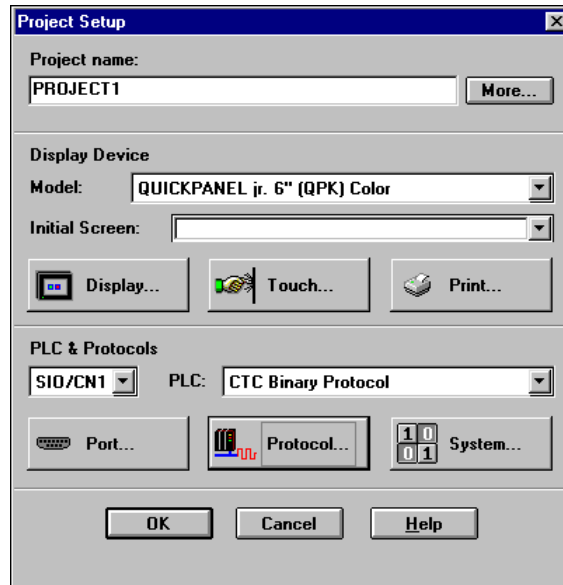
QT_3

2. Enter the panel developers name and any notes.

Selecting a Display Device

The next section of the Project Setup dialog box is labeled **Display Device**.

1. Click the down arrow button on the **Model** list and pick a target display. The model selected is shown in the Model list box.

2. Click the **Display** button to bring up the **Display Configuration** dialog box, which is used to select the initial screen and the screen saver time-out.
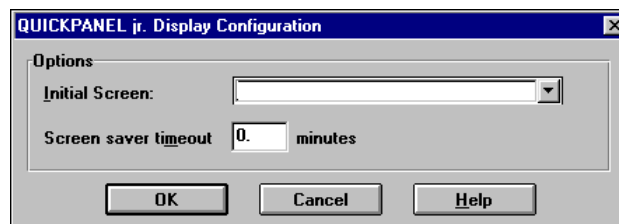
QD_17

3. In the **Initial Screen** field enter the name of the first panel you want the Quick Panel to display.

   This is the first panel displayed when the power is cycled. You can re-display the Project setup dialog box and change the first panel. If you leave the **Initial Screen** entry blank, the target display prompts the operator to choose a panel when the power is cycled. You do not have to specify the initial screen when you start a project. You can specify it at a later time.

NOTE: If the Initial Screen name does not match a name in the drop-down list box, the display screen goes black after the panels are downloaded. Choose the initial screen name from the list box to insure you have the correct name. Panel names are case sensitive.

4. Enter a time out value in the **Screen Saver Timeout** field. The timer starts after someone touches the screen. If the screen is not touched again before the timeout period, the screen goes blank. A setting of 0 will keep the display on constantly.

Specify Touch Screen Configuration

1. Select the **Touch** button to bring up the Touch Screen Configuration dialog box
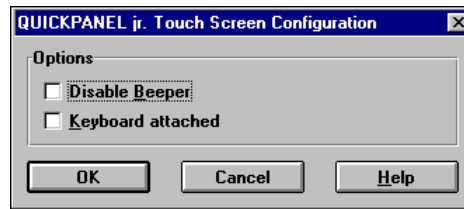
QT_4

2. Click the **Disable Beeper** check box with the mouse to turn off the beeper. The beeper sounds each time an active screen operator is touched. If you are developing a project in a crowded environment, we suggest you turn the beeper off as a courtesy to your neighbors.

3. If you have installed an optional keypad, click the **Keyboard Attached** check box. If the display type does not have the keypad option, this option is grayed out.

Selecting Communications Parameters

The **Port** button displays **Serial Parameters** dialog box. Use it to setup the main serial port. This dialog box is one of the most important, because it defines the communication settings between the display and your controller.

1. Select the **Port** button to display **Serial Parameters** dialog box.
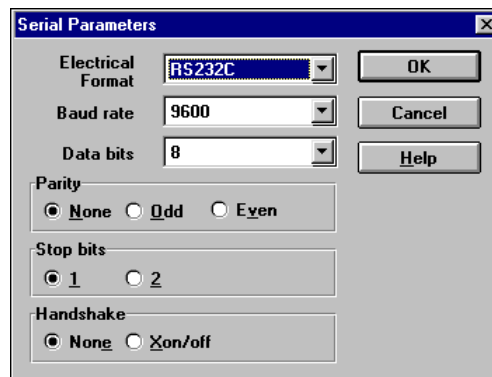
QT_6

The settings **MUST** match those of your controller and should be set as follows:

2. Use the Select button to choose RS232C in the **Electrical Format** field, then press TAB to move to the **Baud Rate** parameter.

3. Set the **Baud Rate** at the 9600 (default) then press TAB to move to the **Data Bits** parameter.

4. Set the **Data Bits** at 8 (default) then press TAB to move to the **Parity** selection.

5. Set the **Parity** at None (default), **Stop Bits** at 1 (default) and **Handshake** at None (default) and click on the **OK** button.

Setting the Time-out Duration

The **Protocol** dialog box is used to select the timeout duration (in seconds). The **CTC Binary Protocol** was previously selected from the **Project Setup** dialog box. You can return to this dialog box to adjust the configuration as you proceed through the project.

1. Select the **Protocol** button to display the **Protocol** dialog box.
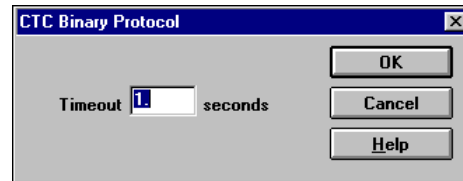
QT_5

2. Enter the timeout duration (in seconds). You can return to this dialog box to adjust the timeout duration as you proceed through a project.

Specifying System Configuration Options

The **System Configuration** dialog box is used to select the panel trigger tag, watchdog timer tag and duration as well as the compilation method. You can return to this dialog box to adjust the configuration as you proceed through the project.

1. Select the **System** button displays the **System Configuration** dialog box.
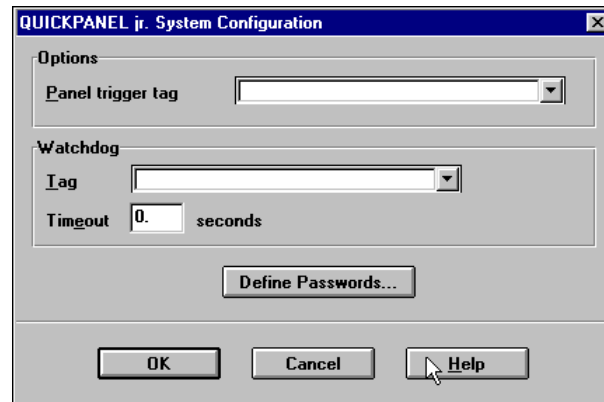
QT_7

2. You can enter a register number in the **Panel Trigger Tag** field. The panel trigger tag allows a register in your controller to control the selection of panels. You can allow the operator to select panels, the controller to select panels, or a combination of the two.

   Each panel has a unique Panel ID number which is displayed when you save or open a panel.

   When the panel ID number is put in the controllers trigger register, the Quick Panel displays the selected panel. The panel change occurs only when the value in the register changes and the change overrides anything else being displayed. If you leave **Panel Trigger Tag** field blank, an operator can select panels using the GOTO PANEL button.

IMPORTANT!   Do not use block transfer tag variables for the Panel trigger tag.

You can use a combination of panel trigger tag and GOTO PANEL buttons. The operator can select different panels by pressing a GOTO PANEL button, and the controller can select a panel by changing the panel ID number in the Panel trigger register. In this situation, the GOTO PANEL button writes the panel ID number to the Panel trigger register to initiate the panel change. The important point to remember is that a new panel is displayed when a change occurs in the trigger register.

If you use a panel trigger tag, you should also select a Default Panel. If the panel trigger tag in your controller is equal to 0 or an unused panel ID number, and you don't use a Default Panel, the target display screen will be blank.

3. Enter a register to serve at the watchdog register.

   The watchdog is a register in your controller that is periodically checked to determine if the communication link is still operational. Each timeout period, the display sends a value to the watchdog register. The controller waits for a specified period, then checks the contents of the register. If there is a value in the register, the link is working. The controller then clears the register and begins waiting again.

4. Selecting the **Define Passwords** button displays the **Password Setting** dialog box. Use it to password protect one or more panels in a project.
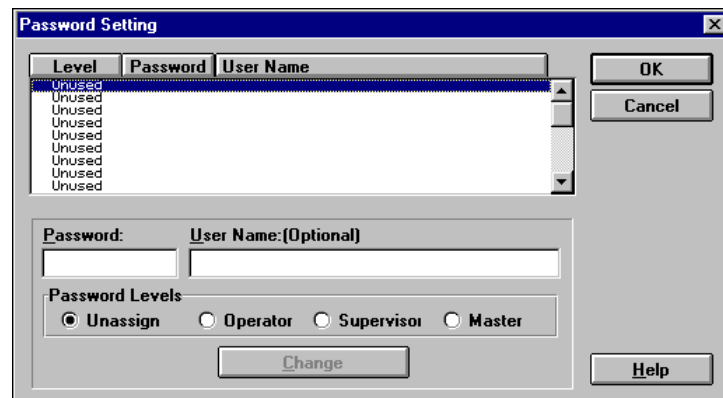
QD_163

   You can setup passwords for up to 16 users. The password is a numeric value from 0 to 65535 with up to three levels of security. For each protected panel in a project, a security level of Operator, Supervisor, or Master is selected. During run time when a protected panel is selected, a numeric data entry panel is displayed prior to accessing the panel. A proper numeric password must be entered which is equal to or greater than the assigned security level, otherwise access is denied. The Master level can access all panels.

5. From the **Password Setting** dialog box you can perform any of the following actions:

   • Assign a password by selecting an unused line, enter the password and optional user name, select a password level, then click the Change button.

   • Edit the password by selecting the line, making required changes and clicking the Change button.

   • Remove password assignments by selecting a line, select Unassign and click the Change button.

NOTE: Set the password for a single panel by opening the panel then go to the **Settings** menu and select **Panel**. The **Panel Settings** dialog box appears. From the password level list box, select No Password, Operator, Supervisor, or Master.

6. You are now done with the **Project Setup** dialog box, click the OK button to return to the Quick Manager dialog box.

Designing a Panel: Quick Designer Window

Quick Designer Window

The Quick Designer window is used to create and edit panels for each project. To open the Quick Designer window:

- Select Panels from the Components menu

- Click the Panels button in the Quick Manager window or click the Panels icon on the toolbar

 QT_41
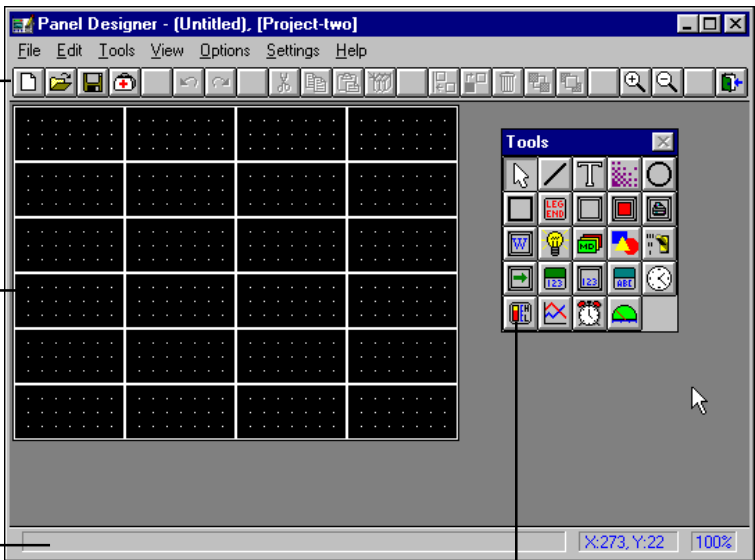
Title Bar - displays the application, the panel name, and project name.

Menu Bar - contains menus that give you access to all the Quick Designer window functions

Menu Button Toolbar - contains icons relating to commands found in the menu bar. By clicking an icon, you gain instant access to frequently used commands. You can turn off the Button Bar by unchecking the selection in the Options menu.

Panel Display - displays the panel elements as you design and edit them. The panels are then downloaded to the Quick Panel display.

Status Bar - contains context sensitive status information. The information changes are based on the location of the mouse and mouse selections. You can turn off the Status Bar by unchecking the selection in the Options menu. The center field of the status bar shows the coordinates of the mouse as it is moved around the panel. The right field shows the view percentage. A 1:1 view is 100%.

Tool Box - contains the design tools used to create a panel.

QD_24

Using the Right Mouse Button

If you click the right mouse button while the cursor is in the grid area, it displays a combination menu. The options in this menu include: Undo, Redo, Paste, View, Panel, Grid and Preferences.

Menu Button Toolbar

This toolbar contains icons relating to commands found in the menu bar. By clicking an icon, you gain instant access to frequently used commands. You can turn off the Button Bar by unchecking the selection in the Options menu.

	Creates new panel		Opens existing Panel
	Saves active panel		Checks active panel for errors
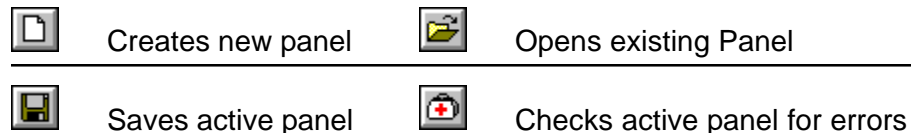
	Undo last operation		Redo the last undo
	Cuts an item and places it on the clipboard		
	Copies an item and places it on the clipboard		
	Pastes an item from the clipboard		
	Creates or updates a library object		
	Aligns the selection with an object or position		
	Changes the attributes of a object		
	Deletes selected object		
	Moves object to background		
	Brings object to foreground		
	Zoom in		Zoom out
	Quits Quick Designer and prompts for save		

Toolbox Design Tools

The editor presents you with a box of panel operator design tools. You select one of the operators from the tool box and place it on the screen. Some operators require the number of a register or flag to make them active. Some operators are for internal use, such as the GOTO panel, which is used to move from one panel to another. The pointer is a special tool, used to select objects already on the screen.

	Pointer		Polyline
	Text tool		Bitmap tool
	Circle		Rectangle
	Legend plate		Push button
	Illuminated push button		Print button

	Word button		Pilot light
	Message display		Image display
	Selector Switch		Goto panel
	Numeric display		Numeric entry
	Time display		Bar graph
	Trend display		Analog meter
	Alarms		Video display

Designing a Panel: Basic Panel Objects

Basic Panel Operators

A basic panel operator can be a push button, pilot light, illuminated push button, selector switch, or any type of operator control mechanism typically found on a control panel. The Quick Designer editor allows Windows user to easily create basic panel operators and group them in panels. When the design project is completed in Windows, you can transfer the project file to a Quick Panel display. Using the editor and display combination, you can quickly create and modify a custom control panel for your controller.

The 5 inch and 6 inch Quick Panel displays are 320 x 240 pixels, which is divided into 24 cells of 80 x 40 pixels.

240 Pixels

40 Pixels

320 Pixels

80 pixels

QT_9
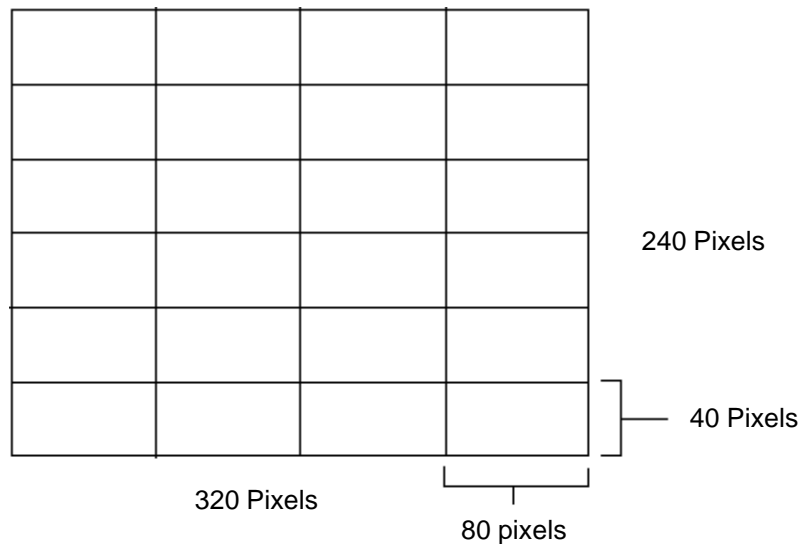
The pixel arrangement for other size displays are as follows:

- 9 inch display is 640 x 400 pixels divided into 80 cells
- 10.5 inch display is 640 x 480 pixels divided into 96 cells
- 12.1 inch display is 800 x 600 divided into 150 cells

For beginners, the editor draws a panel operator in a two cell field. The operators can be resized to a single 80 x 40 cell or the entire screen. In the drawing on the next page, a pilot light operator has been placed on the screen.

```
                    ┌──────┬──────┬──────┬──────┐
                    │      │      │ Light│      │
                    │      │      │ Off  │      │
                    │      │      │      │      │
                    ├──────┼──────┼──────┼──────┤
                    │      │      │      │      │
                    ├──────┼──────┼──────┼──────┤
                    │      │      │      │      │
                    ├──────┼──────┼──────┼──────┤
                    │      │      │      │      │
                    ├──────┼──────┼──────┼──────┤
                    │      │      │      │      │
                    ├──────┼──────┼──────┼──────┤
                    │      │      │      │      │
                    └──────┴──────┴──────┴──────┘
```
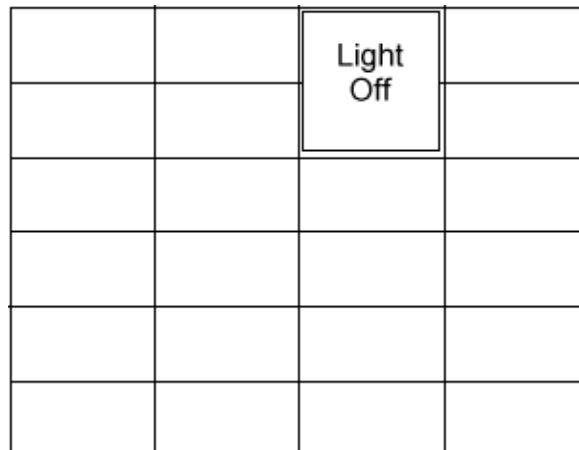
QT_36

Once the operator appears on the screen, an edit dialog box appears. In the case of the pilot light, you can change the text size and color, change background and outline color, and assign a register or flag to control the light.

Each type of operator can be customized to fit a wide range of applications. It therefore becomes very easy to place an operator on the screen, modify it for your application and load the project into a Quick Panel display.

Core Components

Core components are the basic building blocks that will allow you to configure the Quick Panel operators. These core components will be used in the creation of the basic operators like push buttons, pilot lights, illuminated push buttons, and selector switches.

Bezel
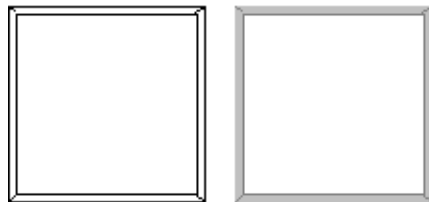
QT_37

The bezel presents a visual indication to the operator that the button has been pressed. The bezel, bezel outline, and touch color can be changed to suit your application. The example shows the bezel in two colors. A bezel is used with a touch button such as Push Button, Illuminated Push Button, Goto Panel Button and Numeric Data Entry Button.

Legend plate

FAN

STOP

QT_38

The legend plate is used to provide text information to the operator. The text size can be changed, and the text automatically centers itself both vertically and horizontally. The text color, background color and outline color can be modified for your application. Legend plate information is static. Legend plates are used with Legend Plates, Push Buttons, Goto Panel Buttons, Numeric Data Display Buttons and Numeric Data Entry Buttons.

Lens

POWER

OFF
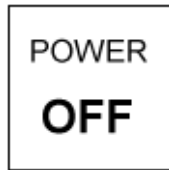
QT_39

The lens presents a visual indication to the operator of the current status of one of the controllers flags. The lens is typically presented as a pair of functions, usually an OFF lens and an ON lens. Text in the lens is used to describe to the operator what the status of the flag means. Text size is variable and automatically centers itself both vertically and horizontally. The text color, lens color, and outline color can be changed to suit your application.

Readout

1234

QT_40

A numeric readout provides a mechanism to display the contents of numeric registers.

Designing a Panel: Using External Tags

Introduction to Tags

A tag is the name Quick Designer uses for the flags, registers and data table entries, in your controller. Using the special registers in your controller, you can access the other resources in your controller. For example, to turn a pilot light off and on using an output, you can access registers 1001 through 1999 which give you access to the controller's outputs. For more information on controller registers, see the *Register Reference Guide*, available from the customer area of Control Tech's web site.

Tag names are as follows:

- Registers are R or r and the register number. R100 refers to register 100.

- Flags are F or f and the flag number. F17 refers to flag 17.

- Data table row and column are D or d and row,column. D7,15 refers to row 7 column 15.

NOTE: Tag names are case sensitive. R100 and r100 read the same data from register 100 in the controller but each is considered a separate and distinct variable in the Quick Panel display. Tag names for flags can begin with F or f, and data table row and column can begin with D or d. You must be consistent when using tag names.

Every panel operator that is active requires at least one external tag. The display reads the tag information from the controller. You can also create internal tags, which are variables that are controlled and contained within the display. Internal tags are also explained in the this chapter.

Displaying the Tags Window

To display the Tags window:

- Select Tags from the Components menu.
- Select the Tag icon from the toolbar or the Tags menu button.

QD_8
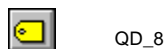
The Tags window appears. From this window you can add new tags, view tag attributes, import and export tag files, and delete tags.
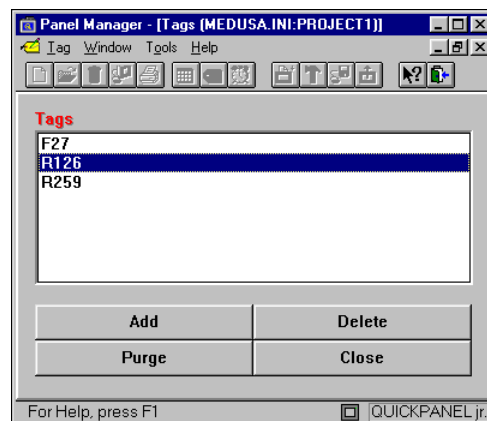
QD_19

Adding Tags

1. To create a new tag, select **Add** from the **Tag** menu or select the **ADD** button.

   The **Tag Create** dialog box appears
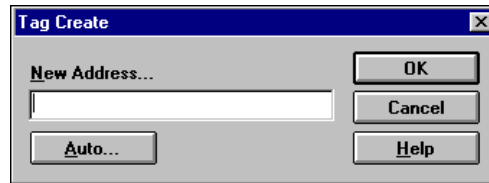
   QD_20

2. Enter the tag name. Tag names are tested to insure they are valid.

   To create a contiguous group of tags by use the Auto button to generate a list of tags that have a common name and span a given range. Instead of typing a long list of tag names that all appear the same except for the last numbers, you can automatically generate the list.

3. Enter the common tag name in the **Tag Create** dialog box and click the Auto button.

   The **Automatic Tag Create** dialog box appears.
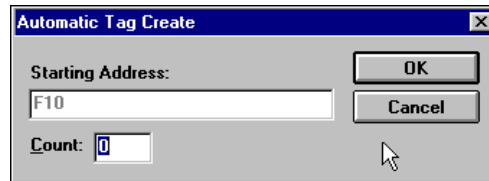
   QD_21

4. Enter the count and press **OK** to automatically generate the list. For ex-ample, if the starting address was F10 and the final address is F14, you would enter the count as 5.

5. When the **Tag Create** dialog box appears, select OK to create the tags.
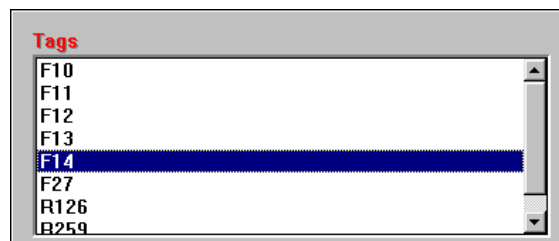
   QD_22

Editing the Tag List

Deleting and Un-deleting Tags

1. To delete a tag from the list

   a. Click the tag to highlight it
   b. Select the Delete button.

2. To un-delete the tag, select Undelete from the Tag menu.

To purge all tags from the project list, click the Purge button. Use caution with this button since the operation removes all tags.

IMPORTANT!   Purging ALL tags from a project removes all tags!

Specifying Tag Attributes

Tags can have attributes, such as type and range. Assigning attributes to a tag allows you to customize the tag to a particular application. For example, you can scale a tag so that when the data is displayed, a scaled range is displayed. You can view the attributes of a tag by selecting Attributes from the Tag menu or by double-clicking the tag name. The three sections of the tag attributes menu are Names, Type and Ranges.

Names - shows the name of the Tag. The Var name is for internal use and cannot be changed.

Type - indicates the type setting and other attributes of the tag variable. The default setting for tags is Integer.

Set the type to String when reading ASCII characters. Specify the length of the string in the size entry box.

This part of the screen is inactive and intended for a future option.

Range - specifies the allowable the range of the variable. The ranges are automatically set for each tag type. By changing the scale ranges, you change the ratio of the input value to the displayed value. In the following example, if you changed the Scale low to 0 and the Scale high to 100, when the Input value is -32768 the displayed value would be 0, and when the Input value is 32767, the displayed value would be 100.

QD_23

Importing and exporting Tag Files

You can save the information in a Tag file by exporting it using the *.tag format. You can also import tags saved in *.tag format. Do not use a word processor to create or modify *.tag files.

Tag Validation

You can validate the entire tag list by selecting Validate Tags from the Tools menu. The process is displayed in the **Tag Validation Progress** dialog box. Internal tags are displayed in a list box.

Designing a Panel: Using Internal Tags

Using internal tags, you may have an internal storage register, to store some values or act as a temporary counter. You can create an internal tag by entering a tag name that is not valid for your controller. For example, if you entered the name COUNT1 as a tag name, the tag editor asks if you want to create the tag as an internal tag. Answering yes, creates an internal tag that you can read and write to in the same manner as an external controller tag.

System Tags

Your Quick Panel display has several support functions designed into the hardware that use internal tags, such as the clock. The names of the tags that are designated system tags all begin with a tilde (~) and the word **System**. There is also an underscore symbol between the word System and the name of the tag. You must always specify the name of the tag exactly as it appears below. For example, when displaying system seconds, the tag name is ~System_Second. If you enter a tag name as Second, the target display creates an internal variable called Second, but it is not connected to the internal clock.

Current supported system tags are as follows:

- ~System_Second   Internal clock seconds
- ~System_Minute   Internal clock minutes
- ~System_Hour   Internal clock hours
- ~System_Day   Internal clock day
- ~System_Month   Internal clock month
- ~System_Year   Internal clock year
- ~System_Contrast   LCD panel contrast setting
- ~System_Comm_Status Communication Status

Using system variables you can perform the following functions:

- Display the system time
- Display the date or use the variables for a date stamp
- Adjust the contrast of your screen
- Display the status of the communication protocol

Clock Operator Variables

One of the tools available to the panel designer is a Clock operator. The method used to connect the Clock operator to the hardware clock is a series of internal tags called system tags. The Clock operator is connected to three system tags, which supply the data for seconds, minutes and hours. The tags are called ~System_Second, ~System_ Minute, and ~System_Hour. See Chapter 6, *Creating Panel Objects*, for information on setting the internal clock.

Date System Variables

The Quick Designer software includes a tool for creating an alarm display. One of the options in the alarm message is the display of a date stamp. The tags are called ~System_Day, ~System_Month, and ~System_Year. The method for setting the correct date is similar to setting the time. See Appendix B, *Using System Variables*, for more information.

Contrast System Variable

Using the system variables and internal tags, you can change the contrast of the target display to suit different viewing conditions. To adjust the contrast, the system variable ~System_Contrast must be set to a value from 1 to 7. This can easily be done by using two Word Buttons: one to increase and one to decrease the value of ~System_Contrast. You can see the contrast change as the value is increased or decreased. See Appendix B, *Using System Variables*, for more information.

Communication Status

The communication status is a bit that can be used to turn a pilot light on or off to indicate the status of the communication protocol. When the bit is equal to 0, the communication protocol is normal. The tag variable is ~System_Comm_Status. See Appendix B, *Using System Variables*, for more information.

NOTE: ~System_Comm_Status is an internal tag that is available only on QPJ-1 and QPI-1 models.

Quick Designer Editor Basics

Contents

Editor Basics

Creating Panel Objects

To create a panel object:

1. Point with the arrow cursor to the desired icon in the Tool box and click the mouse. When the cursor is moved into the screen area, a cross hair appears with a small image identifying the type of tool selected. Shown below is the Legend Plate tool. The status bar on the bottom of the window indicates which tool you selected.
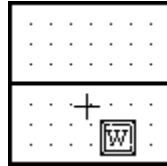
QD_43

2. Move the cross hair to the desired cell and click the mouse. Most objects will appear across two cells.

3. If you want to size the object immediately, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the object. Release the mouse button and the object is sized.

    A dialog box for the selected object appears.
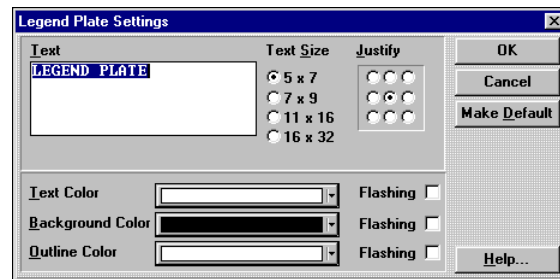
QD_44

The object can be placed on the panel in several different modes, based on the selections in the Settings/Preferences dialog box. The dialog box that appears depends on the type of object selected. When the dialog box for a selected object is active, a dashed box appears around the object. The example shows a legend plate object placed on the screen. The dialog box for the legend plate allows you to select the legend plate text, text size and color, background color and outline color. Dialog boxes may contain buttons that open additional dialog boxes.

4. When the dialog box selections are completed, click the OK button.
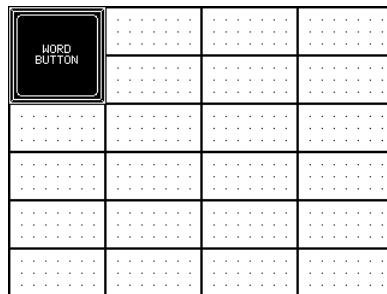
QD_45

Editing a Panel Object

When you create a panel object, the dialog box for that object appears. To change the attributes of the object, double-click the object to display the dialog box. You can also display the dialog box by selecting the Change option in the Edit menu.

You can delete the object by selecting it, then pressing the Delete key or selecting the Delete option in the Edit menu. You can delete a group of objects by pressing and holding the left mouse button and drawing a box around the objects to be deleted.

When you are done designing a panel, use Save in the File menu to save the panel. Select New to start a new panel. Continue building and saving panels until your project is complete. When you have completed designing all panels, exit Quick Designer and return to Quick Manager to download the project to the target display.

Grouping objects

Two or more objects on the panel can be grouped together so that they will act as a single object. Use the Select All option on the Edit menu to select all objects for grouping. You can select several objects by clicking them or drawing a box around them while holding the left mouse button. You can select multiple objects by holding down the Shift key and clicking the objects you want grouped.

Select **Group Objects** from the **Edit** menu (shortcut **CTRL+G**) to maintain the grouping.

Once you have grouped objects, you can use commands such as move, delete, library file, copy as if they were one object. When objects are grouped using the Group Objects selection, they remain grouped until you ungroup them using Ungroup Objects.

Sizing an Object

You can make panel objects larger or smaller. When sizing objects, the selections you make in the Grid Settings and Preferences dialog boxes affect how you can size objects. All objects (except draw objects) have outlines for resizing. When you select an object, the outline first changes to a dashed outline and sizing handles appear. When you touch one of the sizing handles, the object outline changes to solid lines. The solid outlines aid in sizing the object exactly the way you want it.

To make a small pilot light, turn off the **snap size to grid** option in the **Grid Settings** dialog box.

To size panel objects:

1. Move the cursor over an object and click the left mouse button. Dashed lines around the object indicate it is selected. Moving the cursor inside the dashed lines will change the cursor into a move symbol. Press and hold the left mouse button to move the object.

2. Move the cursor to one of the sizing handles (small boxes on corners and centers of edges). Sizing handles in the centers of the edges allow sizing vertically or horizontally, while corner handles allow diagonal sizing. The cursor will change to a double ended arrow when you are on top of a sizing handle.
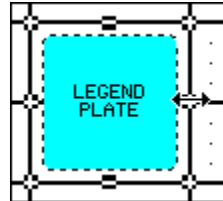
QD_46

3. Click and hold the left mouse button and drag the sizing handle in the direction selected. Click the mouse outside the dashed lines to deselect the object.
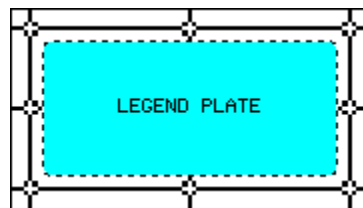
QD_47

Object Tag Display

You can view the object tag by enabling the option in the View menu. The illustration shows the tag names displayed in the upper left corner.
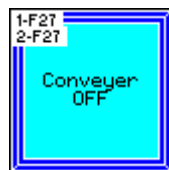
QD_48

Keypad Tag Display

The keypad tag display is similar to the object tag display. The keypad tag operates independently of the object tag display. The keypad tag is displayed in the bottom left corner of the operator and provides a quick visual check to see which panel operators have keypads assigned. The keypad tag appears with a panel print. You can view the keypad tag by enabling the option from the View menu.
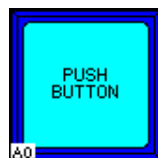
QD_49

Changing the Window View

You can change the view in the window from a zoomed out view of 50% to a zoomed in view of 800%. Select Zoom options from the View menu. Zoom buttons are provided for fast view changes.

Previewing Panels

You can see what the panel will look like on the target display by selecting **Preview** from the **View** menu. A 1:1 full screen view is displayed.

Importing and Exporting Panels

If you create a custom panel for Project X and you want to use the identical panel for Project Z, the panel can be exported to an external file format and later imported to a new project. The exported panel objects have tag variables that were assigned in Project X. When you are working on a different project, the custom panel is first imported. The tag variables for each object can then be changed, if necessary, to match the new project. The panel is then saved with the modified custom panel.

1. Open the Quick Designer program and then open the panel you want to export.

2. Select **Export** from the **File** menu and export the panel using a DOS filename. The file will be given the *.pnl extension.

3. Exit Quick Designer and return to Quick Manager.

4. Create a new project or select an existing project.

5. Activate Quick Designer and select **Import** from the file menu.

6. Import the desired panel.

7. Save the panel using a new panel name.

8. Change the tag variables for each object if necessary.

9. Save the panel for the new project.

10. Continue to import or design other panels until the project is complete.

Saving a Panel

Save As saves the current panel using a new file name. When saving a panel under a new name, you can specify a panel ID. The panel ID is the identification number that can be used by a controller to select a panel. When the panel ID number is written to the panel trigger tag register in the controller, the Quick Panel displays the associated panel. The panel trigger tag is selected in the Quick Panel Configuration dialog box. Quick Designer automatically assigns the panel ID when the panel is created. You can change it to any number up to 8999. Panel ID numbers must be unique within a project.

Checking a Panel for Errors

Check the panel design for potential errors. Errors are reported in a dialog box, and you will have the option of ignoring one or all errors. Error checking is automatic each time you save a panel.

Aligning Objects

Align object option aligns the selected object to a vertical or horizontal coordinate. To align panel objects:

1. Select the object, then select **Align** from the **Edit** menu (Shortcut **Ctrl + A**).

    A cross hair cursor appears on the screen. The cursor position information box is located in the bottom, right corner of the screen.

2. Move the cursor to the desired position and click the left mouse button.

    The **Align Object** dialog box appears.
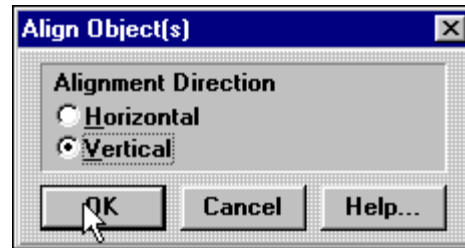
QD_55

3. Select Horizontal or Vertical alignment.

4. Click OK and the object will be aligned to the selected coordinates.

Grouping and Ungrouping Panel Objects

Two or more objects on the panel can be grouped together so that they will act as a single object. You can use **Select All** option on the **Edit** menu to select all objects for grouping. You can select several objects by clicking and holding the left mouse button as you draw a box around the objects or select multiple objects by holding down the SHIFT key and clicking the objects you want grouped.

Once you have chosen the panel objects you want grouped, select **Group Object** from the **Edit** menu (Shortcut CTRL+G) to maintain the grouping.

Once you have grouped objects, you can use commands such as move, delete, library file, copy on the grouping.

Objects remain grouped until they are ungrouped by selecting **Ungroup Objects** from the **Edit** menu (Shortcut CTRL+U).

Changing Panel Object Tags

Change Object Tags (shortcut Ctrl+T) modifies the tag attributes of a selected object or group of objects. The Modify Tag Attributes dialog box appears.
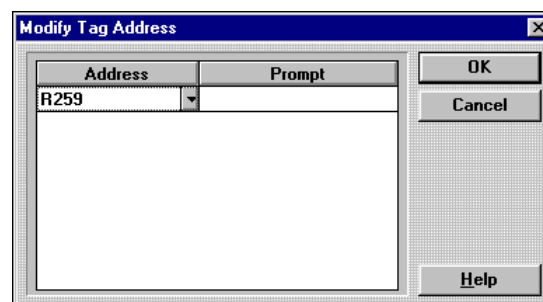
QD_56

You can edit the address by clicking the name and typing a new name. To enter edit mode, double click he name. To leave edit mode, press the ESC to undo the edit mode. Select a different address by clicking the down arrow to display a list box.

The prompt field is used to enter a description of the tag. The prompt will appear in any settings dialog box where the tag is used. You can edit the prompt text the same way you edit the Address text. The example shows the prompt text in the **Pilot Light Settings** dialog box.

You can also enter a new tag prompt by double clicking in the area above the tag field. Enter the prompt and press return.

Preferences

Quick Designer is set up to allow the novice user to quickly design panels. Some of the operations appear automatically, such as deselecting a tool after using it and automatically checking the panel when the file is saved. Some of the automatic operations can be turned off. If you are a beginner, most of the automatic operations are turned on. The intermediate level turns off a few of the automatic operations. The Advanced level allows you to pick the automatic operations you prefer.
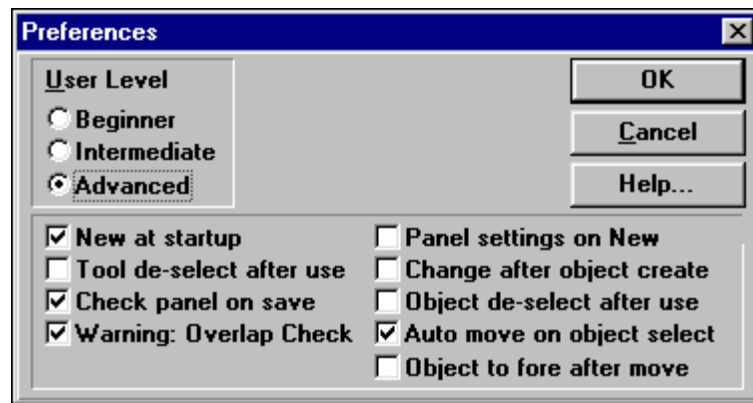
QD_61

- **New at startup:** Opens a new panel when Quick Designer starts.

- **Tool de-select after use:** When you are done using an object, the cursor will change to a pointer. If this box is not checked, the cursor remains the same as the last object selected.

- **Check panel on save:** The panel design is checked for errors when SAVE is selected.

- **Warning: Overlap Check:** Warns that objects are overlapped on the panel.

- **Panel settings on New:** Displays the Panel Settings menu when a New file is started. Allows selection of black or white panels.

- **Change after object create:** When an object is placed on the panel, a dialog box will appear. The dialog box is used to change settings for the object. If the box is not checked, the object is placed on the panel without the dialog box.

- **Object de-select after use:** When you are done working with an object, it remains selected, indicated by a dashed line around it. Checking this box will de-select the object after using it.

- **Auto move on object select:** You can select and move an object by clicking it and holding down the mouse button as you move it.

- **Object to fore after move:** Places the object in the foreground after it is moved.

Dimming Flashing Colors

When you are creating panels, you have the option of selecting flashing colors. Flashing occurs only when the panel has been downloaded to a target display. To see which colors have been selected as flashing, check the Dim Flashing Colors option in the View menu. Flashing colors then appear as a different shade, or a dimmed version of the corresponding color.

Changing Panel Settings

You can change the background color of the Quick Designer panel. The default setting is black. The following dialog box is for color units.
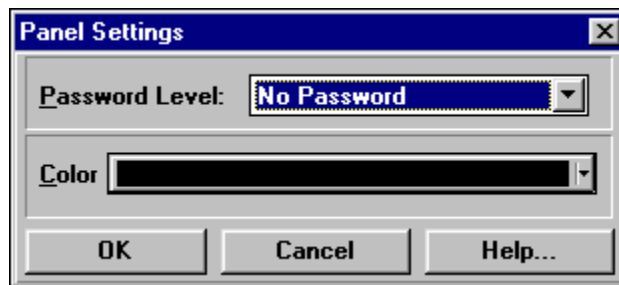
QD_60

Keypad Assignments

When you create a panel, you also have the option of assigning keys on the keypad to simulate panel buttons. You assign keys at the same time you create a panel. The **Keypad Assignment** dialog box has a list box for displaying the keypad assignments and a series of buttons for creating simulated operators, such as a simulated push button. See Chapter 7, *Keypads*, for more information on keypads and keypad assignments.

You can assign a keypad to simulate a panel object, even though there is no panel object visible on the screen. You can assign one of the keypads to simulate the following panel operators:

- Push Button
- Goto Panel Button
- Print Button
- Word Button
- Selector Switch
- Numeric Data Entry

You can view all the keypad assignments by clicking the down arrow in the Key list box. A keypad assignment list appears. You can change the attributes of any simulated operator by selecting the keypad from the list, then clicking the Attributes button. Simulated operators are marked as *Simulated*. To change the attributes of normal operators assigned to keypads, you must use the panel editor and double-click the operator.

1. To assign a keypad operator, select **Keypad Assignments** from the **Tools** menu.

   The **Keypad - Key Assignments** dialog box appears.
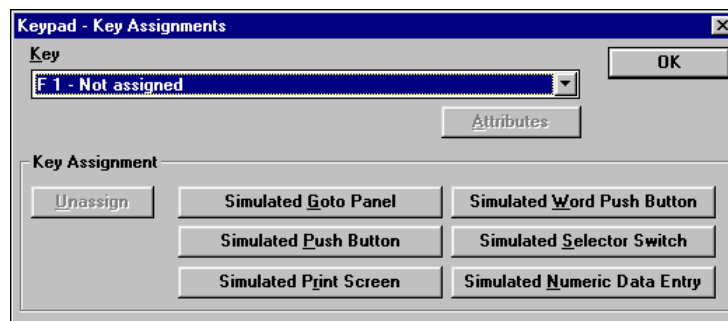
QD_57

2. To select which keypad is assigned to the simulated panel operator, click the down arrow in the **Key** list box and select an unassigned key.

3. Select one of the operators to simulate by clicking a button in the **Key Assignment** area.

   When you click one of the simulate keys, the rest of the buttons are grayed out.

Quick Designer Editor Basics 2-9

4. Select the Attributes button to display the setup dialog. A Goto Panel dialog box is shown below.
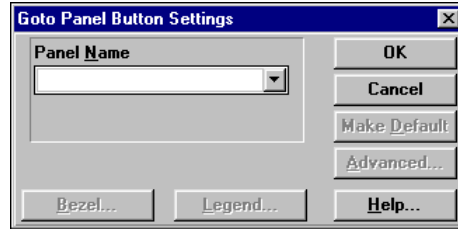
QD_59

The Bezel, Legend, Make Default and Advanced options are disabled (grayed out).

5. Enter the panel name and click **OK**.

When you download the project file to a Quick Panel (with the Keypads option) the keypads can simulate a panel operator. For example, if you press the A0 keypad, which was selected to simulate a Goto Panel, the panel name you selected will be displayed. This is the same operation as the goto panel button, but without the panel operator taking up screen space.

Tiling and Drawing Grids

The Quick Panel Jr. display is approximately 4 inches wide by 3 inches high. A pixel is a dot of light on the display panel. The Quick Panel Jr. display is made up of 320 horizontal by 240 vertical pixels. Each dot has a unique address, specified by a horizontal and vertical coordinate. The origin is located in the upper left corner of the display and is designated (0,0). The opposite corner is the maximum pixel position, designated (319,239).

This drawing shows the two corners of the display with the pixels greatly enlarged.
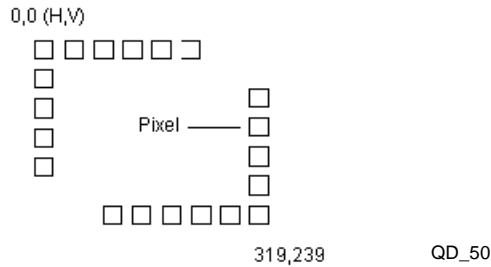
Touch Grid

The touch screen is made up of cells that are 20 pixels on a side. The touch cells share the same coordinate system as the display. The first touch cell uses the pixels from coordinate (0,0) to (19,19). There is no physical display of the touch grid. You cannot change the number of pixels in a touch cell. The drawing shows the first touch grid with only the outline pixels.
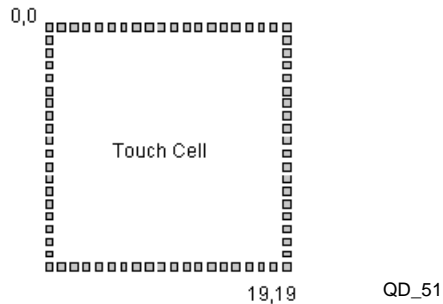
Part Objects

There are two types of part objects: those associated with touch regions and those not associated with touch regions. A push button is an example of an object associated with a touch region. A pilot light is an example of an object not associated with a touch region. Part objects associated with touch regions always occupy a complete touch cell. All touch objects must occupy a minimum of four touch cells.

Tiling Grid for Objects

The tiling grid is a series of cells used to assist the designer in placing objects on the display. The tiling grid can appear as dots, lines or boxes. The cells appear only in the editor and not on the target display. Objects can occupy more than one cell since the cells are only a layout guide. The default size of each cell is 80 pixels wide by 40 pixels high. The first cell origin point is located at (0,0) and the opposite corner is located at (79,39).

A cell size of 80 x 40 pixels corresponds to 8 touch cells. The drawing shows a tile cell of 80 x 40 pixels and 8 touch cells.

0,0

Tilling cell with touch cells   79,39
80 x 40 tiling cell (default size)   QD_52
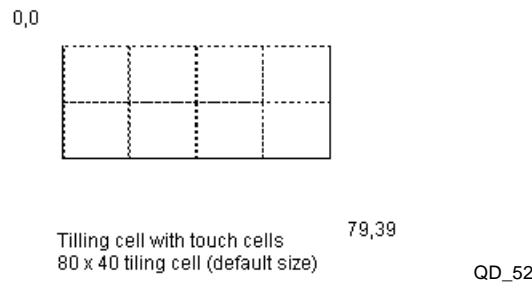
The following drawing shows the tile grid for a Quick Panel Jr. display.

0,0

Default grid setting   319,239   QD_53
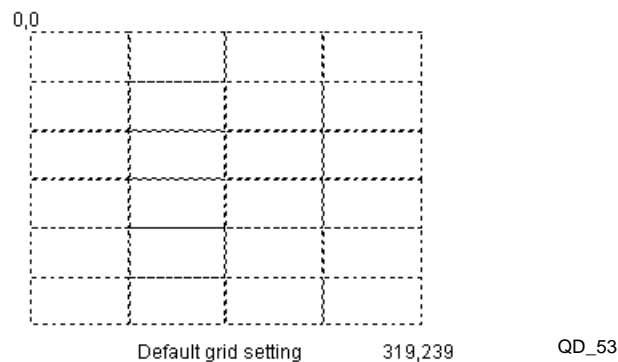
Tiling Snap System

Another aid for placing objects on the panel is the snap feature. When placing an object on the tiling grid, the upper left corner of the object will snap to the upper left corner of a tiling cell. The remaining corners of the object attempt to come as close as possible to the snap points of the other cells. The object is restrained from snapping to the other cells in order to remain within the cells they occupy.

Snapping to grid points forces the object to be sized to the dimension of the cell. In some cases, the object may cover up the tiling grid. Objects that are associated with touch areas will first attempt to size themselves to complete touch regions. If the tiling grid is not an even multiple of the touch grid, part objects associated with touch areas will size differently than other part objects. Remember that touch areas are 20 x 20 pixels and touch objects must occupy a minimum of four touch areas (40 x 40).

Objects on the panel can be aligned to the grid using the snap feature. When moving an object, the nearest grid line will be the snap point. If you turn off the snap position option, objects can be placed close together and in some cases overlap.

Default Settings

The default settings for the tiling grid and snap are selected with the novice user in mind. These settings make it easy to quickly design a panel. The user selects a part object from the tool box and places it on the panel. The part snaps to a cell location and is drawn automatically. One mouse click for a part object to be created, sized and placed on the panel. The grid and snap system allows the user to create objects whose edges align and vertices intersect.

Drawing Grid

The drawing grid is a series of equally spaced horizontal and vertical dots used to assist the user in placement of objects on the display. Each grid point is a single pixel. The default setting is 10 x 10, which is a dot every ten pixels in both directions. The grid appears only in the editor but not on the target display. Object can overlap the points as they are only a drawing aid.

Drawing Snap System

The drawing snap system uses the drawing grid for locating snap points. When creating a draw object, a grid point nearest the mouse becomes the snap point. For example, if the grid is set to 5 x 5, and the mouse is located at position (4,4), the nearest snap point is (5,5). The snap feature and drawing grid can be turned off.

Grid Settings Dialog Box

You can change the size and style of the tiling grid in the Grid Settings dialog box. The tiling grid can be dots, lines, or boxes, and can be turned off. The drawing grid is always dots. The drawing grid can also be turned off. The snap option can be turned off for both the tiling and drawing grids.
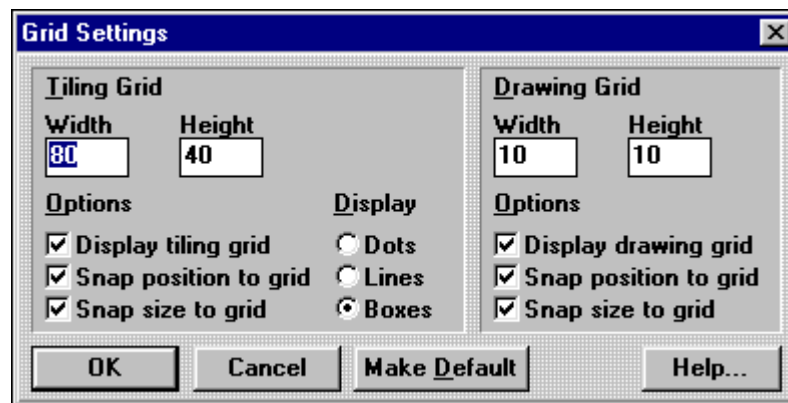
QD_54

Printing Project Information

You can print out the summary information and panel images for all or part of a project. Selecting **Print** from the **File** menu displays the **Report Setup** dialog box. From this dialog box you can select the reports you want to print.
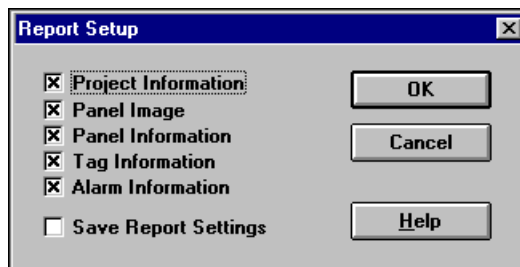
QD_169

Project Information

The following pages show a sample project information report.

PROJECT1
PROJECT INFORMATION

PROJECT: PROJECT1

```
Author: name
Created: 08 April 1999
Last Modified: 25 June 1999
```

TARGET DEVICE : QUICK PANEL Jr. Color

```
Default Panel Name: Panel 1
Screen Saver Timeout: 1.00 minute(s)
Printer Type: NEC PR201 24 DOT
Printer Color Mode: Gray Scale
Black/White Reversed: Yes
Save to FLASH ROM: Yes
Beeper: Off
Watchdog Tag: None
Watchdog Timeout: 0.00 second(s)
Communication Setting: RS232C
Baud Rate: 9600
Data Bits: 8
Parity: None
Stop Bits: 1
Handshake: None
```

PROTOCOL: CTC Binary Protocol

```
Timeout(sec): 1.00
```

Panel Information

> The panel information report lists the name of the panel, the panel ID and all panel objects along with their attributes. The following list is a sample panel information page.

PROJECT1
PANEL: PANEL1

A bitmap image of the panel is printed at the top of each panel information sheet.

PANEL: PANEL1

```
Panel ID: 1
Panel Size: 320 x 240
Grid Size: 80 x 40
Grid Display: Boxes
```

Illuminated Push Button

Position Size	Button/Light Tag	Action	Bez	Botl	Tch	Sixt	Slen	Sotl	SFont	Sjustify	State Text
KeyPad	Touch	Simulated									
240,160, 80,80	F27	Toggle	blu	wht	wht	wht	blk	wht	5x7	cc	Conveyer OFF
	F27					blk	wht	blk	5x7	cc	Conveyer ON
None	Yes	No									

180 Meter

Position Size	Tag	Bclr	Fbkr	Fotl	Sclr	Sfont	Scale Text	Scale Range	NFont	Dig,Dec	Ticks
0,160, 80,80	R259	blu	wht	blk	vlk	5x7	Pressure	0,212	5x7	4,1	11

Time Display

Position Size	Hours	Minutes	Seconds	Military	Txt	Len	Otl	Font	Justify	Format
0,120, 80,80	On	On	On	Off	bluf	wht	blk	5x7	cl	12:00:00 AM

Tag Information

> The tag information report lists all of the tags used for the project sorted and printed by tag name. The following list is a sample tag information page.

PROJECT1
TAG INFORMATION

Tag Information Sorted by Tag Name

Name	I/O	Elements	Type	Size	Scale Range Low	Scale Range High
F10	F10	1	integer	1	0.000000	1.000000
F11	F11	1	integer	1	0.000000	1.000000
F27	F27	1	integer	1	0.000000	1.000000
R126	R126	1	integer	1	-2,147,483,648	2,147,483,647
R200	R200	1	integer	1	-2,147,483,648	2,147,483,647
R259	R259	1	integer	1	-2,147,483,648	2,147,483,647
~System_Hour	~System_Hour	1	integer	1	0.000000	23.000000
~System_Minute	~System_Minute	1	integer	1	0.000000	59.000000
~System_Second	~System_Second	1	integer	1	0.000000	59.000000

Alarm Information

The alarm information report lists all of the information for the alarm configuration, queue setup and alarm file. The following list is a sample alarm information page.

PROJECT1
Alarm INFORMATION

ALARM CONFIGURATION

```
Message Column: 16
Trigger Date Stamp Column:  1
Trigger Time Stamp Column:  10
Acknowledge Time Stamp Column:  37
Clear Time Stamp Column:  44
Date Format:  MM/DD/YY
Time Format:  24 Hour
Assume Initial State:  Same
Printer:  None
```

Active Queue: On

```
Size:  10
Font:  7x9
Trigger Text - Text Color: blk, Background Color: wht
Acknowledge Text - Text Color: wht, Background Color: blk
Cleared Text - Text Color: wht, Background Color: blk
```

Historic Queue: On

```
Size:  10
Font:  7x9
Trigger Text - Text Color: blk, Background Color: wht
Acknowledge Text - Text Color: wht, Background Color: blk
Cleared Text - Text Color: wht, Background Color: blk
```

Logged Queue: On

```
Size:  10
Font:  7x9
Trigger Text - Text Color: blk, Background Color: wht
Acknowledge Text - Text Color: wht, Background Color: blk
Cleared Text - Text Color: wht, Background Color: blk
```

Banner Queue: On

```
Size:  10
Font:  7x9
Trigger Text - Text Color: blk, Background Color: wht
Acknowledge Text - Text Color: wht, Background Color: blk
Cleared Text - Text Color: wht, Background Color: blk
```

SYSTEM TAGS

```
Individual Acknowledge: None
Global Acknowledge: None
Individual Erase:  None
Global Erase:  None
```

Library Browser

Contents

Quick Designer Library Window

The Quick Designer library allows you to create an object, like a pilot light, bitmap, or selector switch and save the object in a library folder. Later, when you want to make a copy of the object, the library feature allows for fast and easy selection and transfer of the object to your panel. You can create templates for panels and store all the objects as one file in a folder. You can design a complete panel and store it in a folder in the library. The library has the following features:

- Objects and groups of objects can be stored in folders in multiple libraries

- A Drag 'n Drop feature for fast panel design

Selecting Library Browser from the Options menu will display the **Quick-Designer Library** window. The tool bar contains icons for creating new libraries and opening an existing library. There are icons for cut, copy and paste. The window displays the contents of the current folder. You can select a different folder and any item within the folder using the drop down list boxes.
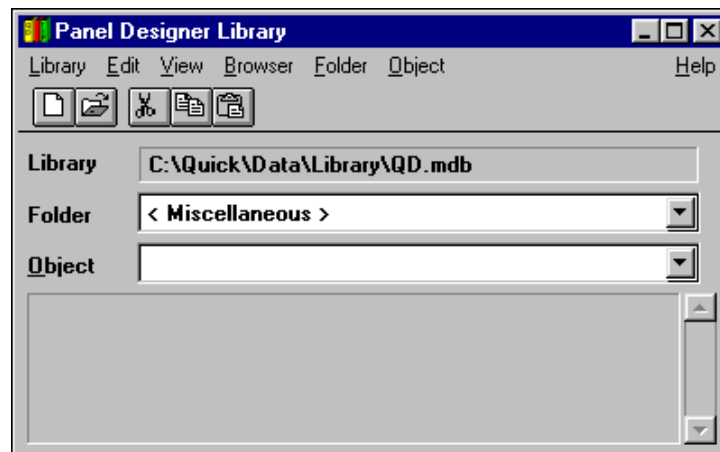
QD_62

- **Library:** Creates a new library, opens an existing library, or exits the Library Browser
- **Edit:** Cuts, copies, and pastes the contents of a library.
- **View:** Displays the Toolbar
- **Browser:** Allows you to change the properties of the Library Browser
- **Folder:** Creates folder to store library objects.
- **Objects:** Allows you to transfer library objects from one folder to another, delete library object from a folder and change their properties.

Browser Properties

The **Browser Properties** dialog box allows you to change the properties of the Library Browser. The properties are arranged in a file box format. The tabs are as follows:

- **Drag 'n Drop:** You can disable the drag 'n drop feature by unchecking the box. When an object is dragged from the library to a panel, the Quick Designer editor floats to the top. You can disable this feature by clicking No.

- **Appearance:** You can change the spacing of objects by entering a new value in the selection box. The default setting is 3.

- **Text Colors:** Select the text color and background color for the library objects name.
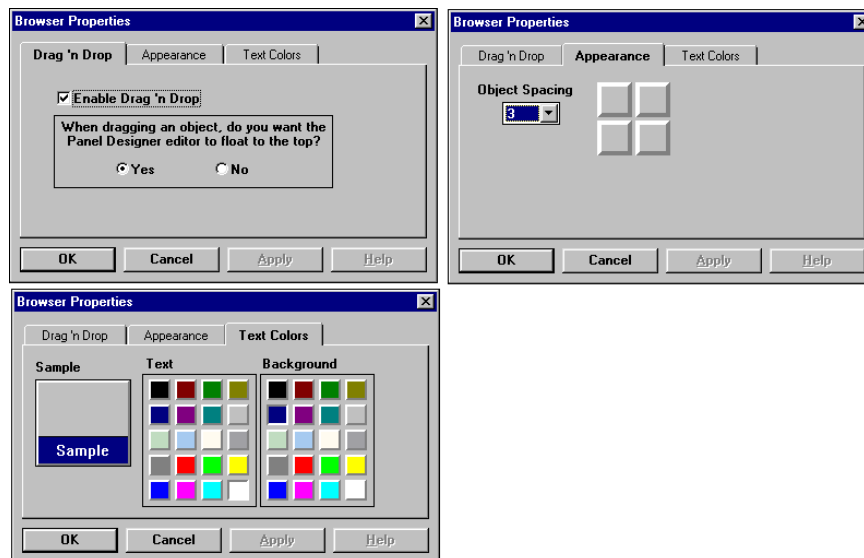
QD_63

Folders

Folders provide a convenient way of storing objects that are related in some way. You may want to store all push buttons in a folder, or panels from a project. You can copy objects from one folder to another and copy the entire contents of one folder to another.

- **Adding Folders:** Enter the name of the new folder in the Add Folder dialog box.
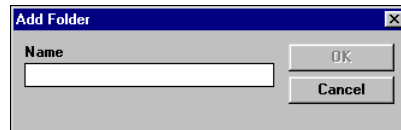
QD_64

- **Transferring Library Objects:** Transfer is used to move the contents of the current folder to another. Select the library destination and the folder name and click OK.

QD_65

- **Deleting Folders:** Deletes the selected folder. A confirmation dialog is presented. Click Yes to delete the folder.

- **Folder Properties:** The properties are arranged in a file box format. The name tab allows changing the name of the folder.
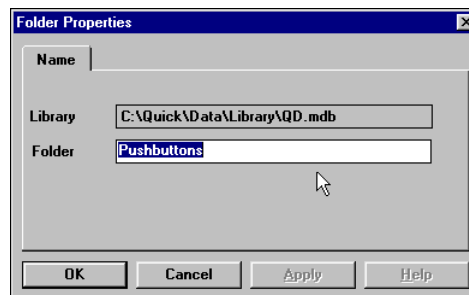
QD_66

Library Objects

You can move, delete, and specify the properties of library objects.

- **Transfer Object:** Moves the selected object to a new destination. Select the destination library and folder, enter the name of the object and a description and click OK to complete the transfer. This is the same operation as copying and pasting an object.
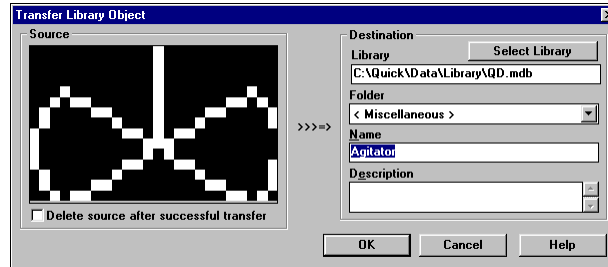
QD_67

- **Delete Object:** Deletes the selected item from the library. A delete confirmation dialog box appears. Click Yes to delete the object or No to abort the delete operation. There is no UNDO.
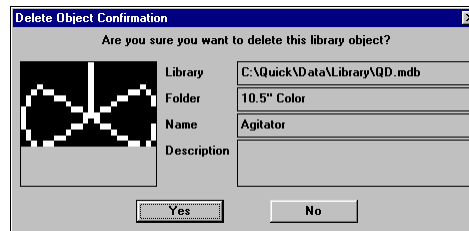
QD_68

- **Object Properties:** The properties are arranged in a file box format. The Name tab allows you to change the name and description of the object.
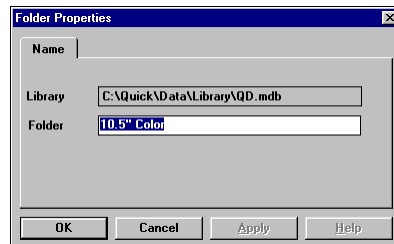
QD_69

Creating and Using Library Objects

To create a library object, you must have Quick Designer open and be in the process of creating a panel. In this example we will create an legend plate.

1. To open Quick Designer Library select **Library Browser** from the **Options** menu.
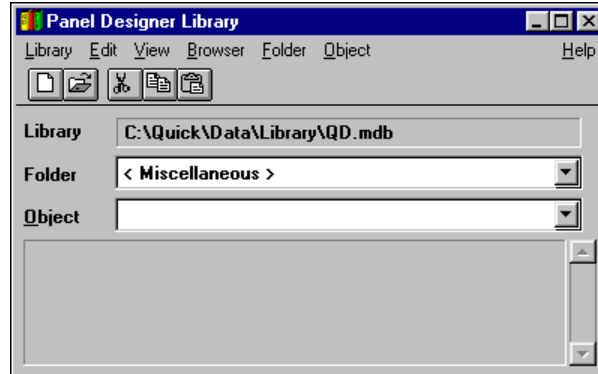
QD_62

2. When the **Library Browser window** appears, select **New** from the **Folder** menu.

3. Enter the name of the new folder in the **Add Folder** dialog box and select OK.
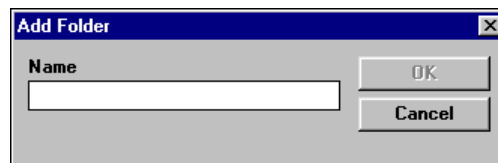
QD_64

4. Select **Exit** from the **Library** menu to exit the Quick Designer Library.

5. To save the legend plate in a library, click the legend plate to select it

QD_70

6. Select **Store Library Object** from the **Edit** menu.

    The **Transfer Library Object** dialog box appears. It displays the selected object in the source box. The right side of the dialog box determines the destination.
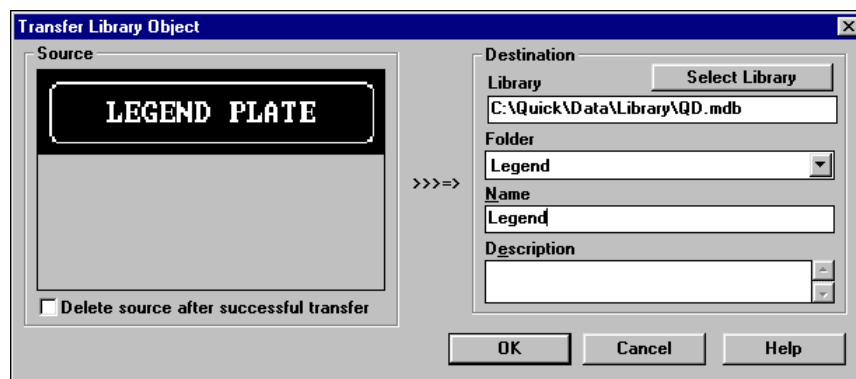
QD_71

7. Select a folder (You need to have created this folder earlier.) and type in the name of the object. There is an additional text input box for a description of the object.

8. Select OK when done.

    The **Transfer Library Object** dialog box closes and the Quick Designer Library window stays open. Select the Legends folder and the legend plate with a description should appear.

The Library function supports drag-and-drop, so that you can just select the object in the library by clicking and holding down the mouse button, then drag the object from the library to the panel. Once the object is on the panel, the setting dialog for that object appears. The custom legend plate can be placed on any panel by opening the Library Browser, selecting the folder, then dragging and dropping the desired object.

Quick Designer also supports grouping objects. You can select multiple objects that will act as a single object for moving, sizing, and other editing operations. The grouping can be temporary, as when you select multiple objects with the SHIFT key or by drawing a box around objects with the mouse. Objects that are temporarily grouped can be made permanently grouped by selecting Group Objects from the Edit menu. Grouped objects can also be stored and retrieved in the Library.

Alarms

Contents

Introduction

Alarms are messages that appear on the display in response to a specific condition in the host control system. The alarm message informs the operator of a condition that requires immediate attention. A typical alarm message is shown below.

```
DATE  TIME  MESSAGE                    ACK    CLEAR
09/18 22:48 HIGH TEMPERATURE ALARM
```

When creating an alarm display, the first procedure is to configure the alarm manager. You create a table of controller addresses and enter the alarm text for each table entry. The alarm manager reads data from the host and determines if an alarm condition exists.

You select the format for the alarm message, date stamp and time stamp. You can change the size and format of the queues (buffer area) where the alarm messages are stored. When alarm messages exceed the size of the queue, the oldest alarm messages are deleted. You can select a register or flag that will be set when the alarm acknowledge and delete buttons are used. The alarm table and configuration information are saved in an alarm file.

For each alarm condition, the alarm manager creates an alarm message string. The alarm manager adds date and time stamps and the alarm text from the alarm table It also formats the entire alarm message and stores the alarm message in the active alarm queue (buffer area). The alarm manager keeps track of when the alarm was acknowledged and cleared and stores this information in the historic queue. The alarm manager also tracks every alarm activity in a logged alarm queue.

Once you have configured the alarm, the second procedure required to view alarms is creating an alarm window. The alarm window is a tool, similar to other tools, like pilot lights and push buttons. The alarm window is placed on a panel and is used to view alarm information from a selected alarm buffer. If the operator touches the alarm window, the alarm manager screen is displayed. This screen allows the operator to acknowledge one or all alarms, clear one or all alarms, or view any alarm message stored in the alarm buffer.

The maximum number of alarms for a project depends on the display model. For QPJ models, the maximum is 512 alarms, consisting of two files of 256 alarms. For QPI models, the maximum is 768 alarms, consisting of three files of 256 alarms. When you first create an alarm, the first file of 256 is allocated. When you exceed 256, the next file is opened.

The Alarms Window

The alarms window is used to create and edit alarm files and configure the alarm message and buffers. To configure alarms, select the alarms button or alarms from the components menu on the Panel Manager. This opens the alarms window and the New Bit Alarms dialog box. The alarms window appears on the next page.

The large buttons at the bottom of the window allow rapid access to menu selections. **Config** displays Alarm Configuration dialog box, **Close** exits the Alarm window, **Add** adds a new alarm, and **Delete** deletes an alarm.
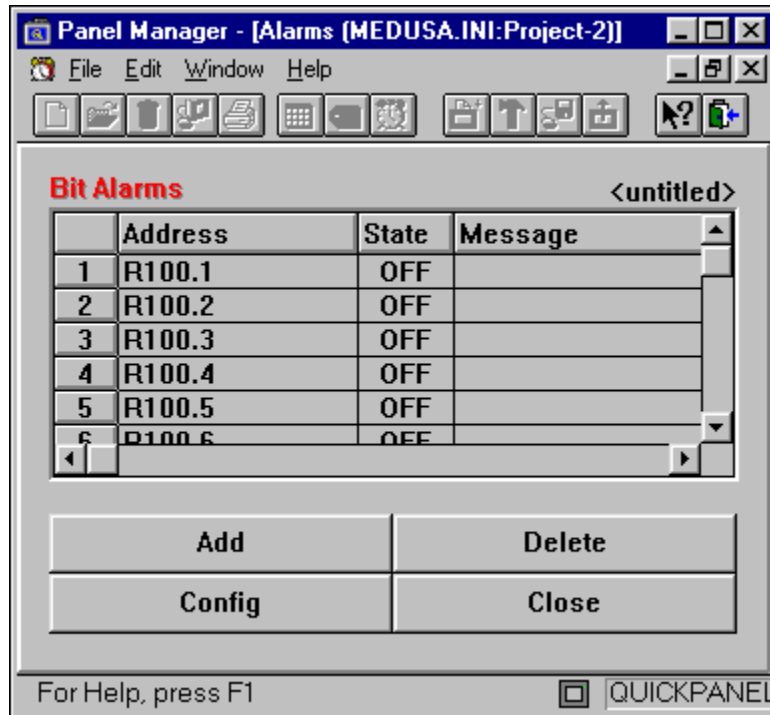
QD_178

Bit and Word Address Tags

The alarm manager is the control center for alarm operations. The default setting for the window is Bit Alarms. See *Creating an Alarm Table* in this chapter for more information. When you first create an alarm table, you select a starting address and then enter the number of consecutive bits or values. The alarm table is built automatically. You can create a word alarm file by selecting New-Word from the File menu. Word alarms are based on the value of a register.

Alarm Window Basics

Once you have opened the Alarm Window, you can perform basic editing operations, such as saving or exporting an alarm file from the File Menu.

- **Open:** Opens an existing alarm file.

- **Save:** Saves the current alarm file with all the option settings. You must have saved an alarm file for alarms to work.

- **Save As:** Saves the current alarm file using the specified file name.

- **Delete:** Deletes an existing alarm file. Once you delete the file, it cannot be recovered.

- **Import:** Imports an existing alarm file. Alarm files have the file extension *.alm. After you import the file, use Open to view the alarm table.

- **Export:** Exports the current alarm file using the *.alm file extension. When using the export file feature, all alarm files are included in the export file.

Congfiguring Alarms

When you create alarm messages, you determine both the format of the alarm message on the Quick Panel display and the format of the message in the alarm queue. The configuration options determine how the alarm message is displayed in the alarm window as well as specifying what information appears in the alarm queue.

Formatting Alarm Messages

The Alarm Configuration dialog box is used to format the alarm message by indicating the starting column number of each portion of the alarm message.
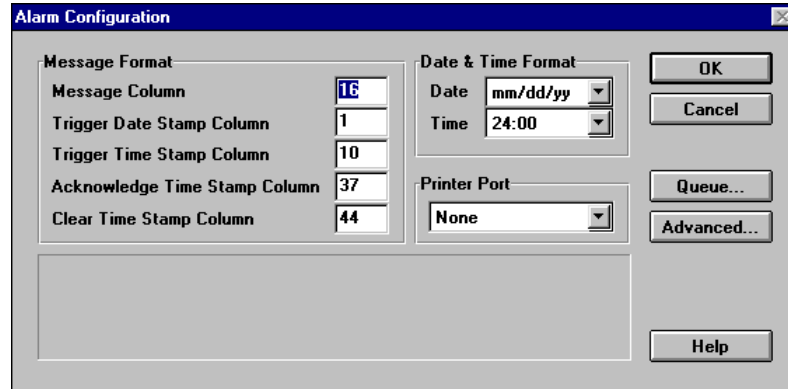
QD_173

The size of the alarm message depends on the Quick Panel display you are using. For example, the Quick Panel Jr. Color display can show 49 5x7 characters in one line of the alarm window. The alarm message, date stamp and time stamps must fit in the forty-nine character space. The following drawing shows how a forty-nine character alarm window message is formatted using the default settings.
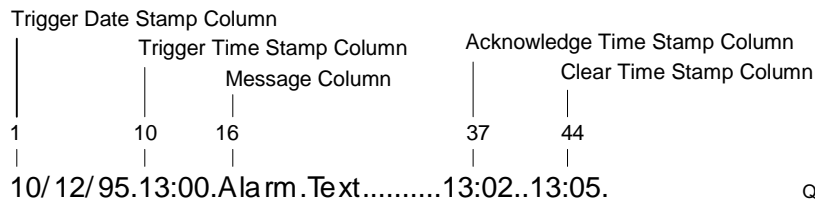
QD_220

Setting Up System Queues

The system queues are internal storage buffers for alarm messages. The queues hold the active, historic and logged alarm messages and make them available to the alarm window. The default size of each queue is ten messages. From the Alarm Queue Settings dialog box you select the length of the system alarm queues. If you do not need one or more of the alarm types, you can uncheck the boxes next to the queue name. When the number of messages exceeds the size of the buffer, the oldest message is deleted.
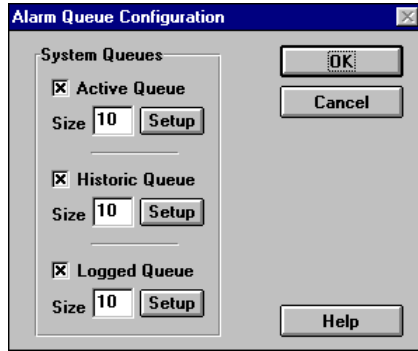
QD_174

When an alarm occurs, the message appears in the alarm window. When the operator touches the display, the alarm management page appears. In addition to specify the length of the alarm queues, by using the setup option on the Alarm Queue Configuration dialog box you can select the colors and size of the text displayed on the alarm management page.

The buttons on the bottom of the alarm management page are activated by pressing the MODE button. Pressing the MODE button also displays the two horizontal lines that are used as a cursor. The DONE button is always active.

ACTIVE ALARMS

09/19/99 13:28 ALARM TEXT MESSAGE #1
09/19/99 13:40 ALARM TEXT MESSAGE #2

Up	Down	Ack	Del	Ack All	Del All	MODE	DONE
A 0	A 1	A 2	A 3	A 4	A 5	A 6	A 7

QD_172

CAUTION: Press the MODE button once. Do not press it a second time. Pressing MODE a second time causes the panel to freeze. Press DONE to exit.

Once the buttons are activated, they can be used to view and modify the contents of the alarm queue. The **Up** and **Down** buttons move the cursor. Remember that the alarm management page may only show a portion of the messages in the queue. The Up and Down buttons allow scrolling the alarm queue messages to the alarm page. Move the cursor to a message line and use the **Ack** button to Acknowledge the alarm, or use the **Del** button to delete the message. Use **Ack All** to Acknowledge all messages or **Del All** to delete all messages in the associated queue. Return to the panel where the alarm window is located by pressing the **DONE** button.

You can also use the Ack, Ack All, Del, and Del All buttons on the bottom of the alarm management page set a flag or write a value to a register in the controller, so the controller is notified when an operator acknowledges or erases an alarm. You specify the flags and registers in the Advanced Alarm Settings dialog box.

Setting Up Initial Alarm States and Notification Tags

When configuring an alarm, you can also specify the initial condition of the alarm processor and notification tags that tell the controller when an alarm has been acknowledged or erased. To access the Advanced Alarm Settings dialog box select the Advanced button on the Alarm Configuration dialog box.
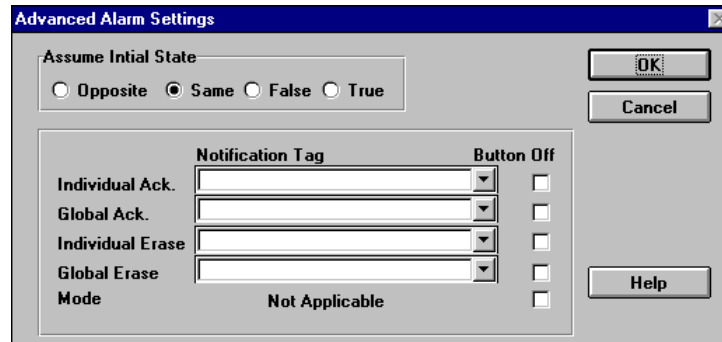
QD_176

Setting Up the Initial State

When the power is turned on, the alarm processor does not know the state of the alarm bits or words. By assuming an initial state, the alarm processor can deal with the alarm states until the true states are read from the controller. The default setting is Same, which assumes no alarm transitions have occurred.

- **Opposite:** Assume an alarm transition has occurred.

- **Same:** Assume no alarm transition has occurred.

- **False:** Test for true alarm state and process the alarm if true. No action if false.

- **True:** Test for false alarm state and process the alarm if false. No action if true.

Setting Up Notification Tags

From the Advanced Alarm Settings dialog box, you can also use set up the Ack, Ack All, Del and Del All buttons on the bottom of the alarm management page to set a flag in your controller. Setting the flag can notify the controller when an alarm is acknowledged or erased. To activate the buttons, assign a flag tag variable to the button function.

The notification tag buttons are as follows:

- **Ack:** Individual Acknowledge
- **Ack All:** Global Acknowledge
- **Del:** Individual Erase
- **Del All:** Global Erase

You assign a notification tag the same way you assign other tags. For example, if you assign Individual Acknowledge (Ack) to flag 20, the flag is set when the a technical presses the Ack button and cleared when the button is released.

You can also deactivate the buttons on the bottom of the alarm management page by selecting the associated Button Off checkbox on the Advanced Alarm Settings dialog box.

Creating an Alarm Table and Configuring Alarms

Setting Up Bit Alarms

To create a new bit alarm file:

1. Select **Alarms** from the **Components** menu or select the **Alarms** button.

QD_171

The **New Bit Alarms** dialog box appears.

QD_221

4. Enter the Bit address (register), the number of bits, and the default state of the alarms and select **OK**.

Quick Manager creates the alarm table.

QD_222

Setting Up Word Alarms

To create a new alarm file:

1. Select **Alarms** from the **Components** menu or select the **Alarms** button.

QD_171

2. When the **New Bit Alarms** dialog box appears, select **Cancel**.

3. To display the **New Word Alarms** dialog box, select **New** then **Word** from the **File** menu.

The **New Word Alarms** dialog box appears.

QD_177

4. Enter the Word address (register), the number of words, and the starting and ending values for the alarms and select **OK**.

Quick Manager creates the alarm table.
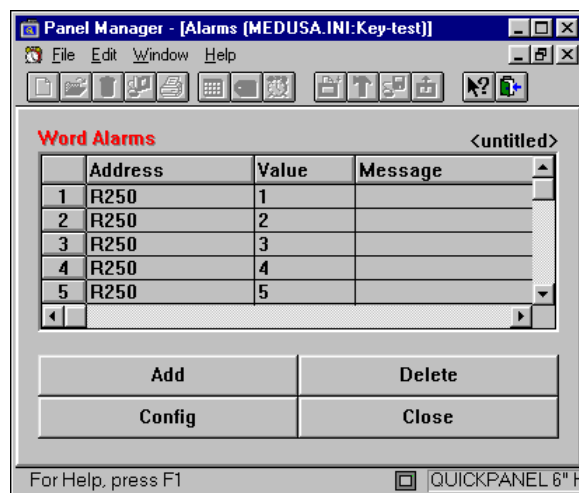
QD_178

Selecting Configuration Options

The next step is to select the configuration options determine how the alarm message is displayed in the alarm window.

To configure an alarm message:

1. Select **Configuration** from the **File** menu or select the **Config** button.

The **Alarm Configuration** dialog box appears.
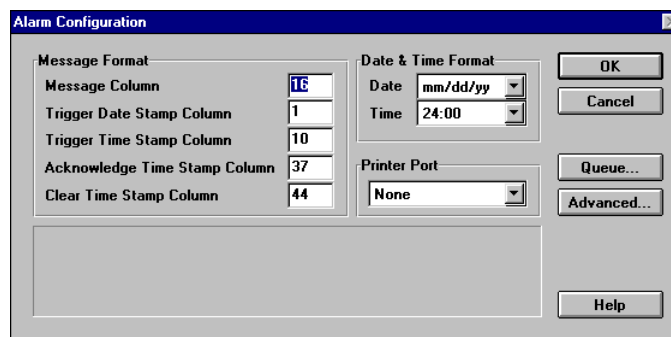
QD_173

NOTE: Control Tech recommends that you leave the Date format selection as mm/dd/yy. Leave the Time format set to 24:00. See appendix C, *Date Stamp System Variable* and Chapter 6, *Creating a Clock Display* for information on setting the system date and time.

---

2. Specify the starting column number for each portion of the alarm message.

3. Select the **Queue...** button to display the **Alarm Queue Configuration** dialog box.
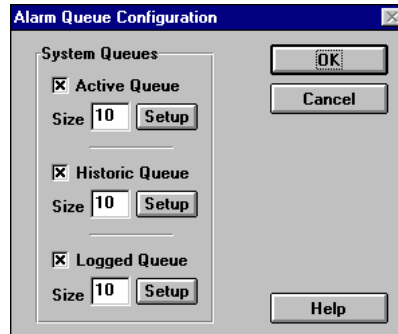
QD_174

4. Specify the size for the **Active**, **Historic** and **Logged Alarm** queues.

5. To choose appearance of the text on the alarm management page, select the setup button.

    The **Alarm Queue Settings** dialog box appears.
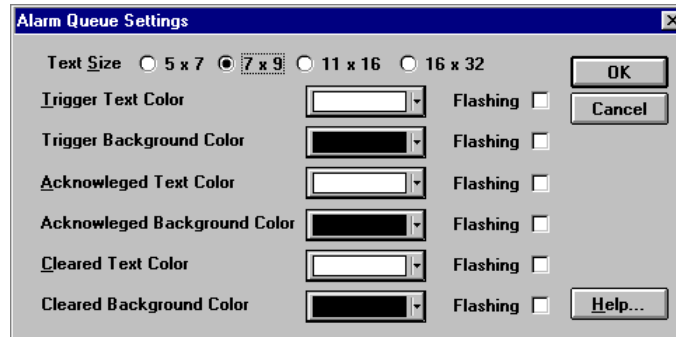
QD_175

6. Select the text color and size and the background color for the alarm triggered text, the alarm acknowledged text and alarm cleared text.

7. Select **OK** to return to the **Alarm Queue Configuration** dialog box. You can specify the appearance of text for all three alarm queues.

8. When you are finished specifying the alarm queue configuration, select **OK** to return to the **Alarm Configuration** dialog box.

9. Select the **Advanced...** button to display the **Advanced Alarm Settings** dialog box.
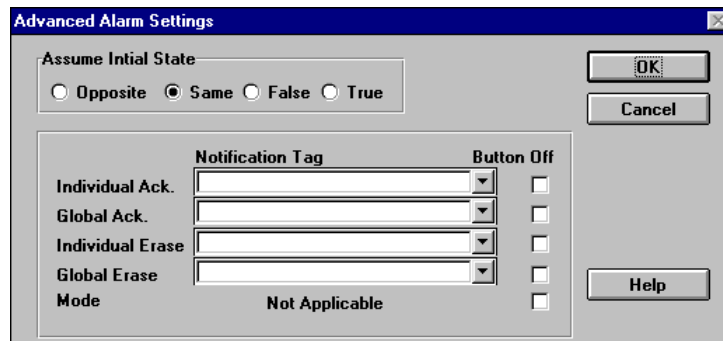
QD_176

Alarms   **4-9**

10. Select **Opposite**, **Same**, **False** or **True** for initial state of the alarms when the Quick Panel is turned on. The default selection is **Same** and is the correct setting for most applications.

11. Specify the tags used as notification tags for the **Individual Ack**nowledge, **Global Ack**nowledge, **Individual Erase** and **Global Erase**.

12. If you want to deactivate any of the buttons on the alarm management page, select the appropriate **Button Off** box.

13. Select **OK** to return to the **Alarm Configuration** dialog box.

14. Select **OK** to save the alarm configuration you have set up and return to the **Alarms Window**.

15. At this point, you can either enter the text for your alarm messages or exit the **Alarms Window** and create the alarm messages later.

15. When you are ready to exit the **Alarms Window**, select the **Close** button to return to the **Quick Manager Window**. If you have not saved your alarm file, Quick Manger asks if you want to save the file.

Entering Alarm Messages

Once you have determined the configuration of an alarm table, you can enter alarm messages in it.

1. Select the message field with the mouse pointer.

QD_179

2. Type the alarm message and press Enter.

   The message area will appear as shown below. The next time you open the Alarms window, the value field will reappear.

QD_180

Using Alarms in a Quickstep Program

To use the alarms, you need to add some instructions to your Quickstep program. In the following example, when the error for servo 1 is greater than 1000, the program stops the servo and stores 1 the alarm register in the controller. Storing 1 to register 250, displays an alarm message on the Quick Panel screen.

```
[245] CHECK_SERVO_1_ERROR
    ;;; This step monitors the error value for
    ;;; servo 1. If the error is greater than 1000,
    ;;; The program goes to task which stops the
    ;;; servo and sets the alarm register.
        ;;;
    ————————————————————————————————
    <NO CHANGE IN DIGITAL OUTPUTS>
    ————————————————————————————————
    if Servo1Error_R14101 >= 1000 goto SET_ALARM
    goto CHECK_SERVO_1_ERROR

[246] SET_ALARM
    ;;;
    ————————————————————————————————
    <NO CHANGE IN DIGITAL OUTPUTS>
    ————————————————————————————————
    stop (hard) Servo_1
    store 1 to Alarm_register_R250
    goto Next
```

Your alarm table can be set up to display a different alarm depending on the value in a register. For example, you could set the alarm table up as follows:

Value in register	Alarm message
1	Servo 1 stopped error over 1000
2	Servo 2 stopped error over 1250
3	Check pressure gauge 1

Creating and Testing Alarm Message Window

Creating an Alarm Message Window

The alarm message window displays the formatted alarm message on a panel. You use the Panel editor to create a panel with an alarm window. When you are creating a message display, you must set the queue to active for the panel to display new alarm messages. As new messages are triggered, they scroll into the alarm window either from the top or the bottom. The default setting is **Scroll Up** and shows the latest alarm message on the bottom of the alarm message window. When the scroll direction is **Scroll Down**, the latest alarm message appears at the top of the alarm message window.

To create an alarm window:

1. Select the alarm button icon on the **Tools** menu.

    QD_9

2. Move the cross hair to the position where you want the alarm message button to appear and click the mouse.

   The Quick Designer creates the alarm button and displays the **Alarm Window Settings** dialog box.

    QD_181
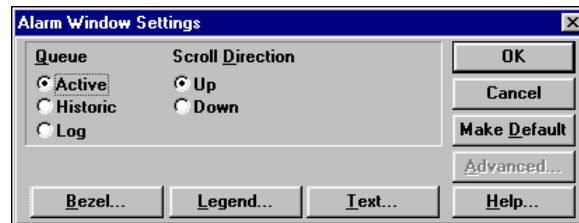
    QD_182

3. Click one of the **Queue** radio buttons to select the alarm queue.

4. Select **Scroll Up** or **Scroll Down**.

5. Select **Bezel... to** display the **Bezel Settings** dialog box.
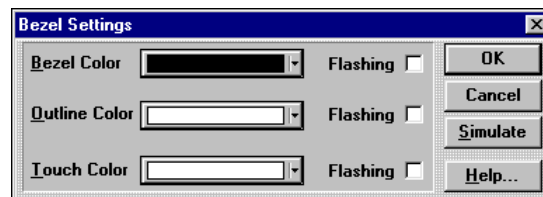
    QD_81

6. Change the **Bezel**, **Outline**, and/or **Touch Color**(s) if necessary; select **Flashing** if desired.

7. Select the **Simulate** button to check your changes.

8. Select **OK** to save your changes and return to the **Alarm Window Settings** dialog box or select **Cancel** to exit without saving your changes.

9. Select **Legend...** to display the **Legend Plate Settings** dialog box.
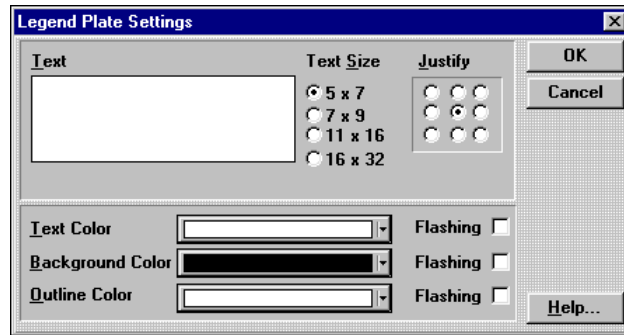
QD_85

10. Enter the **Text** for the push button and change the **Text Size** if necessary.

11. Change the **Text**, **Background**, and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

12. Select **OK** to save your changes and return to the **Alarm Window Settings** dialog box or select **Cancel** to exit without saving your changes.

13. Select **Text...** to display the **Text Settings** dialog box.
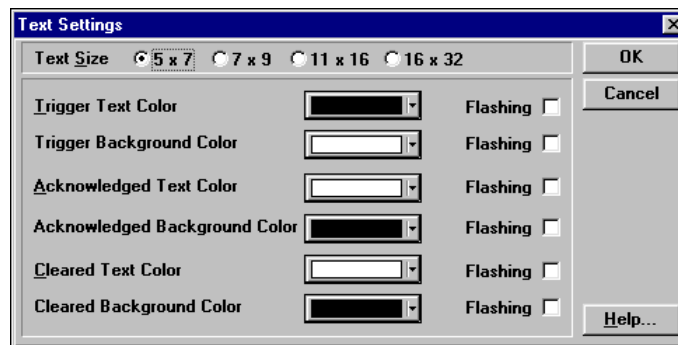
QD_183

14. Change the text and background color for the triggered, acknowledged and cleared messages if necessary.

15. Change the **Text Size** if necessary.

16. Select **OK** to save your changes and return to the **Alarm Window Settings** dialog box or select **Cancel** to exit without saving your changes.

17. Select **OK** to save your changes and return to the **Alarm Window Settings** dialog box or select **Cancel** to exit without saving your changes.

If you decide that you want to have all alarm message window buttons appear the same, select **Make Default** on the **Alarm Window Settings** dialog box to save the current settings. The next alarm window you create automatically uses the saved settings.

18. Until you resize it, the alarm message window on your panel is too small to read. Select the alarm message window with the mouse and use the sizing handles to enlarge the window over four cells.

QD_184

19. Repeat steps 1 - 18 to create alarm message windows for the historic and logged alarm queues

Checking and Testing an Alarm Panel

To see what your alarm panel looks like, download the panel to your Quick Panel display. When the download is complete, select the alarm panel.

1. Using the CTC Monitor program, enter a value in your alarm register on your controller that will display an alarm message.

2. When the alarm message appears, touch the window to bring up the alarm manager page and the Active Alarm queue.

QD_172

NOTE: The alarm manager page looks different when you use a keypad. See Chapter 7, *Keypads*, for additional information.

3. To activate the small buttons on the bottom of the panel, touch the MODE button. The **DONE** button is always active.

CAUTION: Do NOT press the MODE button more than once. If you do, the panel will freeze and no further operations will be displayed. Press DONE to exit.

4. To test the acknowledge button, press it. The acknowledge time stamp should appear.

5. You can delete individual or all of the alarms in the queue by using the **Del** or **Del All** buttons.

6. Use the **Up** and **Down** keys to move the cursor to different alarms.

7. Press the **DONE** button to return to the alarm panel.

8. The alarm window should show that the alarm has been acknowledged. If you cleared or deleted the alarm, the Active Alarm window does not show the alarm. Cleared or deleted alarm message are stored in the Historic and Logged alarm queues.

Using Panel Tools

Contents

Using the Polyline Tool

The polyline tool is used to draw single line segments, multiple line segments, and filled/unfilled polygons.

Creating a Polyline Drawing

1. Select the polyline icon on the **Tools** menu.

 QT_13

2. To create a line segment, move the cross hair to the point where you want to begin drawing a line.

3. Click and HOLD the left mouse button.

4. Move the mouse so that the cross hair is now at the second point of the line.

5. Release the left mouse button to complete the line. A small box appears on each end of the line. This small box is called a node.

 — node   QD_127
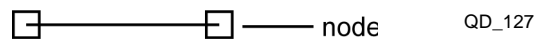
   The polyline tool is still active and you can continue to draw additional line segments or add segments to existing lines. You can add segments to existing lines only when the nodes are visible. To add additional segments to the line shown above, move the cross hair over a node, click and hold the left mouse button, move the cursor to a new point and release the mouse button.

 QD_128
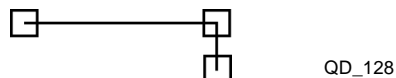
6. You can continue to add line segments to create a polygon. A true polygon is a closed figure bounded by three or more sides.

   The last leg of a polygon must connect to the node of the first leg so that the figure is closed. The drawing shows the sequence of adding segments to create a filled polygon.

 QD_129
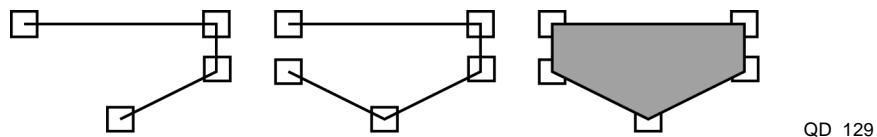
7. To exit the polyline drawing mode, click on the pointer tool.

NOTE: When creating a polygon, be careful drawing when the grid is set to snap. The cursor will attempt to snap to the nearest grid point on the drawing grid. The mouse cursor may be in a different location when you start to create the next line. This causes problems if you attempt to make a polygon. Make sure you draw lines from grid point to grid point, or turn off the snap to grid feature.

Moving a Polyline Object

1. To move a polyline object, point to the object, then click and hold the left mouse button. The object nodes will appear.

2. Move the object to a new location and release the mouse button. This method of moving polyline objects is the same for all objects. You can also move an object when the sizing handles are visible by moving the cursor inside the object so that crossed arrows appear. Click and hold the left mouse button, then move the object to a new location and release the mouse button.

Editing Nodes

1. When you click on a polyline object, the object nodes will appear. To move a node, move the cross hair over a node, then click and hold the left mouse button.

2. Move the node to a new location and release the mouse button.

3. To display the node edit menu, move the cross hair over a node, then and click and hold the RIGHT mouse button.

4. Click a menu item to execute the function.
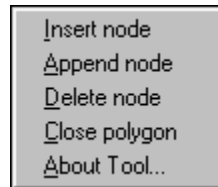
```
Insert node
Append node
Delete node
Close polygon
About Tool...
```
QD_130

– **Insert mode** adds a node between the current node and the next node in a counter clockwise direction.

– **Append mode** adds a node between the current node and the next node in a clockwise direction.

– **Delete mode** removes the selected node.

– **Open polygon** removes the line segment between the current node and the next node in a clockwise direction. Removing a segment from a polygon converts it to a polyline. This menu option appears when you select a polygon and changes to Close polygon when you are working with a polyline.

– **Close polygon** adds a line segment between the ends of a continuous polyline to form a polygon. This menu option appears when you select a polyline and changes to Open polygon when you are working with a polygon.

– **About Tool** displays the copyright information for the polyline tool.

Sizing a Polyline Object

1. To select the entire object for sizing, click on the object to select it

2. Click on it again to change from the editing mode to the sizing mode.

   The sizing handles appear around the object. If you click too fast, you will get the **Line/Polyline/Polygon** Settings dialog box.

3. To size an object, select one of the sizing handles and observe the pointer changes into a double end arrow.

4. Press and hold the left mouse button and adjust the size.

Sizing handles on the corners are for diagonal sizing. Handles between the corners are for horizontal and vertical sizing. The drawing shows an object resized in the horizontal direction.

QD_131
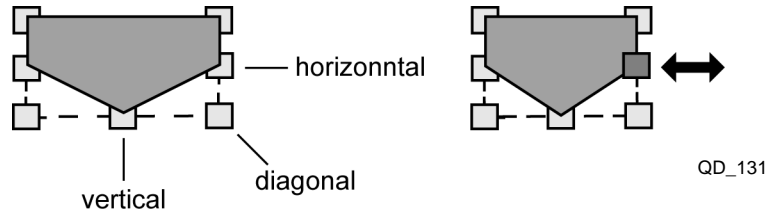
Polyline Settings

The **Line/Polyline/Polygon Settings** dialog box allows you to change the polygon. To display the settings dialog, double click on the polyline object. If you double click too slow, you will only display the sizing handles.

QD_132
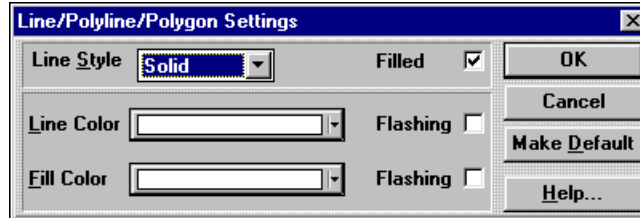
- **Line Style:** Solid, dashed, dotted, dash-dot, dash-dot-dot, none.

- **Filled/Unfilled:** Check the Filled box to fill the polygon with color.

- **Line Color:** Select the color of the polyline and polygon outline.

- **Fill Color:** Select the color for the inside of the polygon.

- **Make Default:** If you decide that you want to have all line, polyline, and polygon objects appear the same way, select **Make Default** button on the **Line/Polyline/Polygon Settings** dialog box to save the current settings. The next line, polyline, and polygon you create automatically uses the saved settings.

Using the Text Tool

The text tool is used to add text to a panel.

1. Select the text icon on the tool bar.

        QT_14

2. To add text, move the cross hair cursor to the desired cell and click the left mouse button.

    The **Text Settings** dialog box appears.
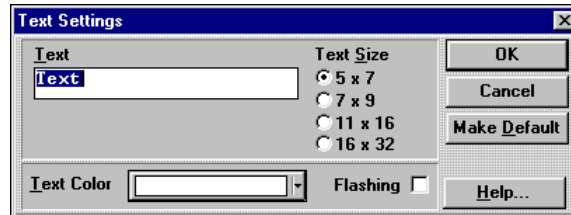
        QD_133

3. Type the text you want in the **Text** box.

4. Specify the **Text Size** and/or **Color** if necessary; select **Flashing** if desired.

5. Select **OK** to save the settings and close the dialog box or select **Cancel** to exit without saving your changes.

    If you decide that you want to have all text appear the same way, select **Make Default** button on the **Text Settings** dialog box to save the current settings. The next text you enter automatically uses the saved settings.

NOTES:

1. The Text Settings dialog box can also be displayed by double clicking a circle.
2. Text characters cannot be sized like other objects.

Moving Text

1. Place the cursor over the text, click and hold the left mouse button

2. Move the text to the desired location.

    Text snaps to grid positions like other objects. For fine placement of text, turn of the tiling snap to grid option.

Using the Bitmap Tool

The bitmap tool is used to place a bitmap image on a panel. The bitmap can be created using Windows™ Paintbrush or imported from another bitmap source. The bitmap becomes a static image on the panel. The statistics for each bitmap are presented in the **Bitmap Settings** dialog box. The statistics include the width, height, colors, and size. Quick Designer supports monochrome or 16 color bitmaps. Each object on a panel requires a small amount of memory. The panel can contain any combination of panel objects. Bitmaps that take a lot of memory will limit the number of objects you can place on a panel.

You can import a bitmap image from any program that generates bitmap images. These sources include paint, icon editors, and capture programs. You can import bitmap images from any directory or drive. You can also export a bitmap image from a panel to any directory or drive.

Bitmap Size

Before you attempt to place a bitmap on a panel, use the following approximations to determine the size of the bitmap.

- Monochrome Bitmap: (Width / 8) x Height

  Example: 80 x 80 mono bitmap = (80 / 8) x 80 = 800 bytes.

- 16 Color Bitmap: (Width / 2) x Height

  Example: 80 x 80 16 color bitmap = (80 / 2) x 80 = 3200 bytes.

To determine the size of your bitmap use one of the following methods:

- Open Paintbrush and select **View/Cursor Position**. Move the cursor to the corner of the bitmap and note the coordinates, for example, 80, 80. Use the equations above to calculate the approximate size of the bitmap.

- To determine the actual image size of a bit map, load the file into Paintbrush and select the **File /Save As** option. Select the **Info...** button. It will display the width and height of the bit map.

The disadvantage to using bitmap pictures in your Quick Panel application is that they may require a lot of memory. As the number and size of bitmap graphics increase in your application, the amount of memory left for other objects quickly disappears. The amount of memory that a bitmap requires is dependent on its size and type. For example, a monochrome bitmap will require 1/4 the memory of the same sized 16 color bitmap. Another disadvantage is that the draw time of the panel increases.

Creating a bitmap:

1. Select the bitmap icon on the tool bar.

   QT_15

2. Move the cross hair to the cell where you want the bitmap to appear and click the mouse.

   Quick Designer creates an empty bitmap frame and displays the **Bitmap Settings** dialog box.

   QD_135

3. The initial size of the bitmap is one cell. When the Bitmap Settings dialog box appears, select the Cancel button.

4. Size the bitmap object to the estimated final size for the panel.

5. Double click on the bitmap to reopen the **Bitmap Settings** dialog box.

QD_134

The selections on the **Bitmap Settings** dialog box allow you to determine how the bitmap is placed in the empty frame. The default settings place the bitmap at the top, left corner of the frame. Selecting the **Stretch fit** option automatically sizes the bitmap to the empty frame.

6. Select **Import...** to import a bitmap from another source.

NOTE: **Edit...** does not work in Windows 95, Windows 98 or Windows NT.

7. To stretch the bitmap to fit the frame size, click the **Stretch fit** check box.

The screen size is 320 x 240 for five inch displays and 640 x 400 for nine inch displays. Bitmaps that exceed the screen size can be displayed by clicking the Stretch fit check box.

8. Specify the **Horizontal Justify** and/or **Vertical Justify** if necessary.

9. Select **OK** to save the bitmap and close the dialog box or select **Cancel** to exit without saving your changes.

If you decide that you want to have all bitmaps appear the same way, you can click the **Make Default** button in the **Bitmap Settings** dialog box. The current settings in the **Bitmap Settings** dialog box will be saved. The next time you create a bitmap, the saved settings are automatically applied.

Using the Circle Tool

The circle tool is used to draw filled or unfilled circles. You can select the line style, line color, and the circle fill color. The line style can be solid, dashed, dotted, dash-dot, dash-dot-dot, and none.

To create a circle:

1. Select the circle icon on the **Tools** menu.

 QT_16

2. Move the cross hair cursor to the desired cells and click the left mouse button.

    Quick Designer creates an circle and displays the **Circle Settings** dialog box.
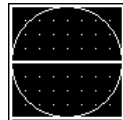
 QD_136
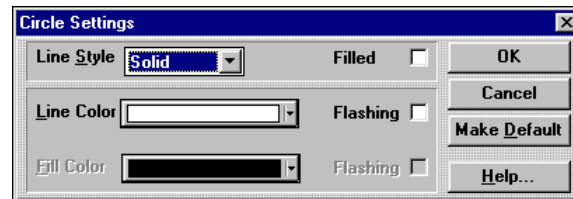
 QD_137

3. Specify the line style and color, filled or unfilled circles, and the circle fill color, if necessary; select flashing if desired.

4. Select **OK** to save the circle and close the dialog box or select **Cancel** to exit without saving your changes.

    If you decide that you want to have all circles appear the same way, you can click the **Make Default** button in the **Circle Settings** dialog box. The current settings in the **Circle Settings** dialog box will be saved. The next time you create a circle, the saved settings are automatically applied.

Moving a Circle

To move a circle:

1. Place the cursor over the object, click and hold the left mouse button

2. Move the object to the desired location and release the mouse button.

Sizing a Circle

Once you have created a circle you can change its size by selecting it and using the sizing handles.

To select a circle for sizing:

1. Select the circle using the mouse.

    Sizing handles appear on the corners.

2. To size an object, move the cursor over one of the sizing handles.

    The pointer changes into a double end arrow.

QD_138
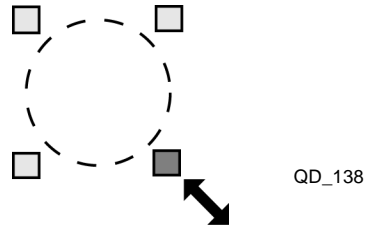
3. Click and hold the left mouse button and adjust the size.

Using the Rectangle Tool

The rectangle tool is used to draw filled or unfilled rectangles. You can select the line style, line color, and the rectangle fill color. The line style can be solid, dashed, dotted, dash-dot, dash-dot-dot, and none.

To create a rectangle:

1. Select the rectangle icon on the **Tools** menu.

 QT_17

2. Move the cross hair cursor to the desired cells and click the left mouse button.

    Quick Designer creates an rectangle and displays the **Rectangle Settings** dialog box.

 QD_139

 QD_140
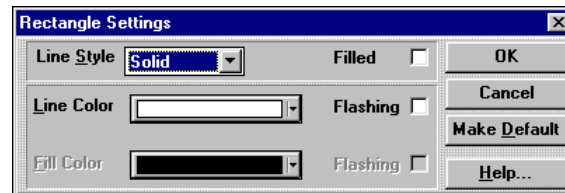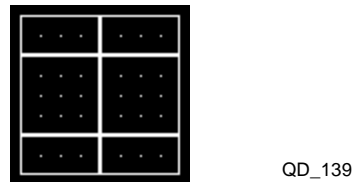
3. Specify the line style and color, filled or unfilled rectangles, and the rectangle fill color, if necessary; select flashing if desired.

4. Select **OK** to save the rectangle and close the dialog box or select **Cancel** to exit without saving your changes.

    If you decide that you want to have all rectangles appear the same way, you can click the **Make Default** button in the **Rectangle Settings** dialog box. The current settings in the **Rectangle Settings** dialog box will be saved. The next time you create a rectangle, the saved settings are automatically applied.

Moving a Rectangle

To move a rectangle:

1. Place the cursor over the object, click and hold the left mouse button

2. Move the object to the desired location and release the mouse button.

Sizing a Rectangle

Once you have created a rectangle you can change its size by selecting it and using the sizing handles.

To select a rectangle for sizing:

1. Select the rectangle using the mouse.

    Sizing handles appear on the corners.

2. To size an object, move the cursor over one of the sizing handles.

    The pointer changes into a double end arrow.

    horizonntal

    vertical   diagonal   QD_141
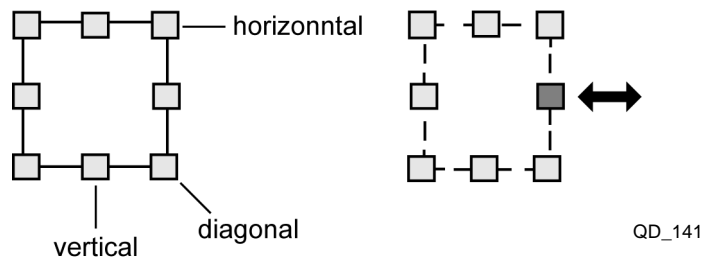
3. Click and hold the left mouse button and adjust the size.

Creating Panel Objects

Contents

Creating an Illuminated Push Button

An illuminated push button consists of a bezel, an OFF lens, and an ON lens. The illuminated push button requires two controller variables; one for the lens (pilot light) and one for the push button.

When creating an illuminated push button you specify the following items:

- **Push Button Tag Variable:** You assign tag variable name to the push button. The tag is a flag on a register in the controller that the Quick Panel can control, by setting or clearing the flag or by storing a 1 or 0 in the register.

- **Action:** The push button action can be selected as momentary, on, off, or toggle.

  — **Momentary**, where the flag or register is turned on when the push button is pressed and turned off when the push button is released.

  — **On** turns the flag or register on when the push button is pressed and no action is taken when the push button is released.

  — **Off** turns the flag or register off when the push button is pressed and no action is taken when the push button is released.

  — **Toggle** changes the state of the flag or register to the opposite state when the push button is pressed and no action is taken when the push button is released.

- **Lens Tag Variable:** You must also assign a tag variable name to the lens (pilot light). The tag should be a flag or register in the controller that the Quick Panel can read. The state of the flag (set or clear) determines whether the on or off state is displayed. This is usually the same flag assigned to the push button tag variable.

- **Bezel:** The Bezel portion of the push button is used to give a visual indication to the operator that the button was pressed. The bezel, outline, and touch color can be modified to enhance the visual impact of the push button. When the push button is not pressed the bezel color is displayed, but when the push button is pressed the touch color will be displayed. The outline color remains constant whether the push button is pressed or not pressed. The default settings are: bezel color = white, outline color = black, touch color = white.

- **State:** An illuminated push button has two states, on and off. You can change the text and appearance of each state.

To create an illuminated push button:

1. Select the push button icon on the **Tools** menu.

    QT_20

2. Move the cross hair to the position where you want the illuminated push button to appear and click the mouse.

The Quick Designer creates the illuminated push button and displays the **Illuminated Push Button Settings** dialog box.

QD_79
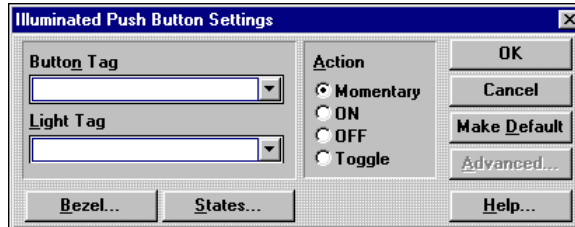
QD_80

3. Enter F and the number of the flag or R and the number of a register in the **Button Tag** and **Light Tag** fields.

4. Specify an **Action**; select one of the following:

   • Momentary
   • ON
   • OFF
   • Toggle

5. Select **Bezel...** to display the **Bezel Settings** dialog box.
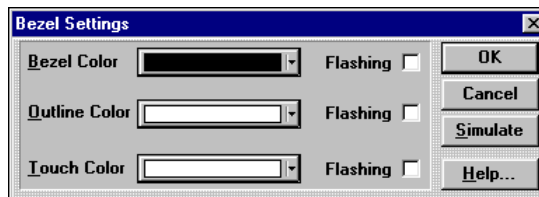
QD_81

6. Change the **Bezel**, **Outline**, and/or **Touch Color**(s) if necessary; select **Flashing** if desired.

7. Select the **Simulate** button to check your changes.

8. Select **OK** to save your changes and return to the **Illuminated Push Button Settings** dialog box or select **Cancel** to exit without saving your changes.

9. Select **States...** to display the **State Settings** dialog box.
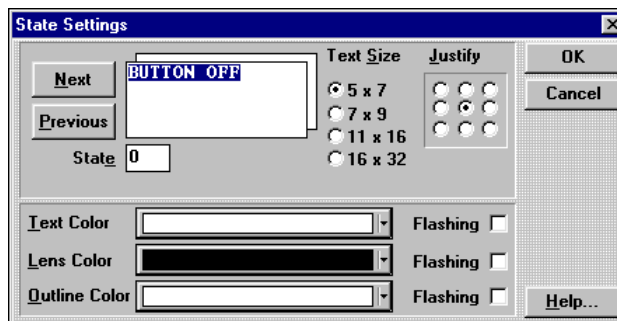
QD_82

10. Enter the text for the state and change the **Text Size** if necessary

11. Change the **Text**, **Lens**, and/or **Outline Color**(s) if necessary; select **Flash-ing** if desired.

12. Select **Next** to display the next state options.

13. Enter the text for the for the 1 state.

14. Change the **Text Size** if necessary

15. Change the **Text**, **Lens**, and/or **Outline Color**(s) if necessary; select **Flash-ing** if desired.

16. If desired, select **Previous** or **Next** to return to the other state settings; continuously selecting **Previous** or **Next** allows you to toggle between states.

17. Select **OK** to save your changes and return to the **Push Button Settings** dialog box or select **Cancel** to exit without saving your changes.

    If you decide that you want to have all illuminated push buttons appear the same, select **Make Default** on the **Illuminated Push Button Settings** dialog box to save the current settings. The next illuminated push button you create automatically uses the saved settings.

18. Select **OK** to save the push button settings and close the dialog box.

Creating a Push Button

A push button consists of a bezel and a legend plate. Pressing a push button sets or clears (1 or 0) a flag or a register. The bezel changes color to indicate the button has been pressed.

When creating an illuminated push button you specify the following items:

- **Push Button Tag Variable:** You assign tag name to the push button. The tag is a flag or register in the controller that the Quick Panel can control.

- **Action:** The push button action can be selected as momentary, on, off, or toggle.

  — **Momentary**, where the flag or register is turned on when the push button is pressed and turned off when the push button is released.

  — **On** turns the flag or register on when the push button is pressed and no action is taken when the push button is released.

  — **Off** turns the flag or register off when the push button is pressed and no action is taken when the push button is released.

  — **Toggle** changes the state of the flag or register to the opposite state when the push button is pressed and no action is taken when the push button is released.

- **Bezel:** The Bezel portion of the push button is used to give a visual indication to the operator that the button was pressed. The bezel, outline, and touch color can be modified to enhance the visual impact of the push button. When the push button is not pressed the bezel color is displayed, but when the push button is pressed the touch color will be displayed. The outline color remains constant whether the push button is pressed or not pressed. The default settings are: bezel color = white, outline color = black, touch color = white.

- **Legend:** The legend plate allows you to provide text information to the operator on the action that will occur when the push button is pressed . This text is constant and will not change when the push button is pressed. The text size can be changed , and the text will automatically center itself both vertically and horizontally. The text color, background color, and outline color can be modified in appearance to enhance the application. The default settings are: text color = white, background color = black and outline color = white.

To create a push button:

1. Select the push button icon on the **Tools** menu.

   QT_19

2. Move the cross hair to the position where you want the push button to appear and click the mouse.

   The Quick Designer creates the push button and displays the **Push Button Settings** dialog box.

   PUSH BUTTON

   QD_87
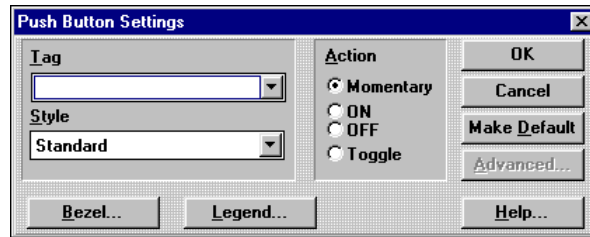
QD_88

3. Enter F and the number of the flag or R and the number of a register in the **Tag** field.

4. Choose the **Style** of the push button using the select button; the styles are Standard, Circular and Simple. Standard (selected for this example) is shown on the preceding page. Circular and simple push buttons are shown below.
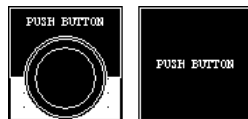
QD_89

5. Specify an **Action**.

6. Select **Bezel...** to display the **Bezel Settings** dialog box.
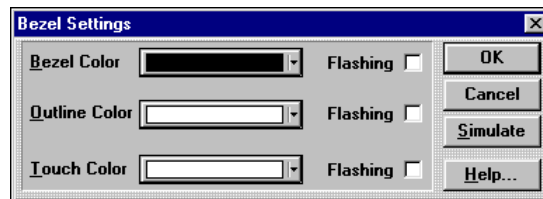
QD_81

7. Change the **Bezel**, **Outline**, and/or **Touch Color**(s) if necessary; select **Flashing** if desired.

8. Select the **Simulate** button to check your changes.

9. Select **OK** to save your changes and return to the **Push Button Settings** dialog box or select **Cancel** to exit without saving your changes.

10. Select **Legend...** to display the **Legend Plate Settings** dialog box.
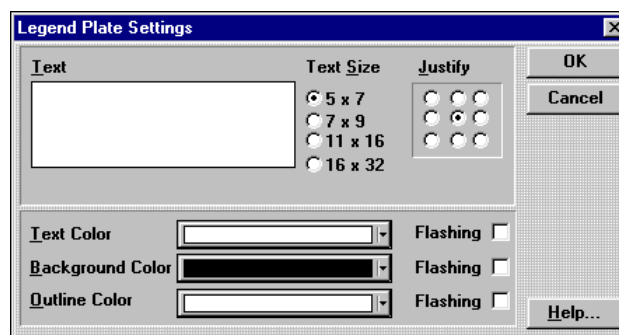
QD_85

11. Enter the **Text** for the push button and change the **Text Size** if necessary

12. Change the **Text**, **Background**, and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

13. Select **OK** to save your changes and return to the **Push Button Settings** dialog box or select **Cancel** to exit without saving your changes.

    If you decide that you want to have all push buttons appear the same way, you select **Make Default** on the **Push Button Settings** dialog box to save the current settings. The next push button you create automatically uses the saved settings.

14. Select **OK** to save the push button settings and close the dialog box.

Creating a Numeric Data Display

A numeric data display consists of a numeric readout and a legend plate. The data display requires a tag variable for the numeric data.

When creating a data display, you specify the following items:

- **Tag Variable:** A tag variable is a numeric register and must be assigned to the numeric Data Display. The Quick Panel reads the value in the register.

- **Legend Plate:** The legend plate allows you to provide text information to the operator about the meaning of the current value being displayed. The text size can be changed , and the text automatically centers itself both vertically and horizontally. The text color, background color, and outline color can be modified. The default settings are: text color = white, background color = black and outline color = white.

- **Data Format Settings:** The data format window allows setting up the display information. The data size selected determines the maximum number of digits available for viewing. The number of digits displayed can be selected and is equal to, or less than, the maximum allowed because of the text size selected. The display can show a +/- sign. A decimal point can be displayed, and it uses one of the digit positions. The data can be displayed in a variety of formats including decimal, binary, hexadecimal, octal, and floating point. The data color and background can be modified to enhance the appearance.

  The default text size is set to 7 x 9, justification is set to Right, Decimal format, 4 digits and 0 decimal places.

To create a numeric display:

1. Select the Numeric Display icon on the **Tools** menu.

    QT_28

2. Move the cross hair to the position where you want the numeric display to appear and click the mouse.

   The Quick Designer creates the numeric display button and displays the **Numeric Data Display Settings** dialog box.
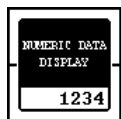
    QD_83
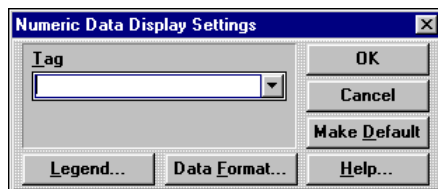
    QD_84

3. Enter R and the number of a numeric register in the **Tag** field.

Quick Designer User Guide

4. Select **Legend...** to display the **Legend Plate Settings** dialog box.
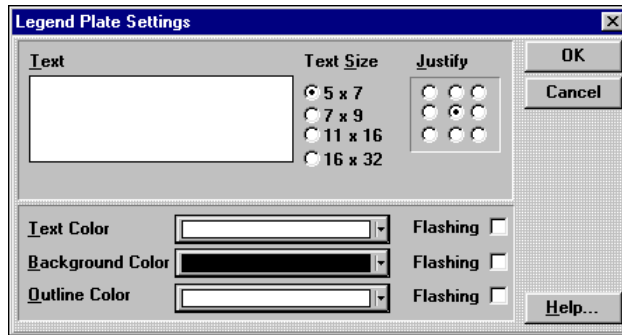
QD_85

5. Enter the **Text** for the numeric data display.

6. Change the **Text Size** if necessary

7. Change the **Text**, **Background**, and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

8. Select **OK** to save your changes and return to the **Numeric Data Display Settings** dialog box or select **Cancel** to exit without saving your changes.

9. Select **Data Format...** to display the **Data Format Settings** dialog box.
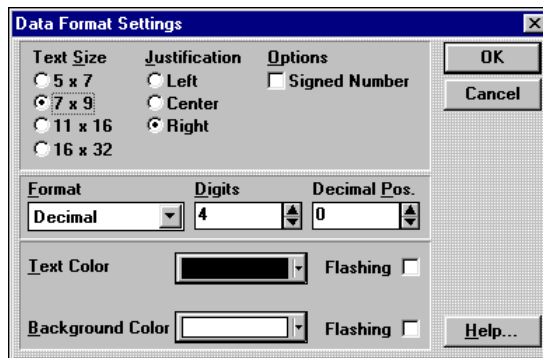
QD_86

10. Change the **Text Size** if necessary.

11. Change the **Justification** of the data if necessary.

12. Select the **Signed Number** field if necessary.

13. Specify the **Format** of the data and the number of **Digits**

14. Specify the **Decimal Position** if necessary.

15. Change **Text** and/or **Background Color**(s) if necessary; select **Flashing** if desired.

16. Select **OK** to save your changes and return to the **Numeric Data Display Settings** dialog box or select **Cancel** to exit without saving your changes.

    If you decide that you want to have all numeric data displays appear the same way, select **Make Default** button on the **Numeric Data Display Settings** dialog box to save the current settings. The next numeric data display you create automatically uses the saved settings.

17. Select **OK** to save the settings and close the dialog box.

Creating a Numeric Data Entry Button

A numeric data entry button with data entry consists of a bezel, numeric readout and a legend plate. The data entry also requires a variable that it will read and display the current value. When the bezel is touched, the screen will display a data entry panel.

When creating a numeric data entry, you specify the following items:

- **Tag Variable:** A tag variable name is a numeric register and must be assigned to the numeric data entry. The register must be one that the Quick Panel display can both read and write to. This is the register the Quick Panel sends new data to.

- **Trigger Tag:** Enter the tag name of a flag or register. The trigger tag tells the controller when the operator is entering a new value in the register specified in the tag variable field. You can program an instruction in your Quickstep program that uses the setting and clearing of the flag or the value in the register.

  Using a flag: When the operator presses the ENTER key on the numeric data entry panel, the Quick Panel sends the value 1 to the controller to set the flag. When the operator releases the ENTER key, the Quick Panel sends the value 0 to the controller, which clears the flag.

  Using a register: When the operator presses the ENTER key on the numeric data entry panel, the Quick Panel sends the value 0000 0000 0001 to the register. When the operator releases the ENTER key, the Quick Panel sends the value 0000 0000 0000 to the register.

- **Bezel:** The Bezel portion of the numeric data entry is used to give a visual indication to the operator that the button was pressed. The bezel, outline, and touch color can be modified to enhance the visual impact of the numeric data entry button. When the push button is not pressed the bezel color is displayed, but when the push button is pressed the touch color is displayed. The outline color remains constant whether the push button is pressed or not pressed. The default settings are: bezel color = white, outline color = black, touch color = white. Press the Simulate button to observe the action of the bezel color change.

- **Legend Plate:** The legend plate allows you to provide text information to the operator about the meaning of the current value being displayed. The text size can be changed , and the text automatically centers itself both vertically and horizontally. The text color, background color, and outline color can be modified in appearance to enhance the application. The default settings are: text color, white, background color, black and outline color, white.

- **Data Format Settings:** The data format window allows you to customize the display information for your application. The data size selected determines the maximum number of digits available for viewing. You can specify the number of digits displayed. The number of digits displayed can be equal to, or less than, the maximum allowed, depending on the text size selected. The maximum number of digits for Hex is eight, and the maximum number of digits for all other data displays is nine. The display can show a +/- sign, which uses one of the digit positions. A decimal point can be displayed and uses one of the digit positions. The data can be displayed in a variety of formats including decimal, binary, hexadecimal, octal, and floating point. The data color and background can be modified to enhance the appearance.

The default text size is set to 7 x 9, justification is set to Right, data format is decimal using 4 digits and 0 decimal places.

- **Input Range:** The input range establishes the minimum and maximum values that the operator is allowed to enter and send to the tag variable.

- **Data Entry Screen:** When the numeric data entry push button is pressed, the Quick Panel displays a data entry panel. The current variable value is displayed in the center area. The minimum and maximum entry values are displayed. Press the numeric keys to enter a new value. Press the enter key to send the data to the controller. If the data is out of range, no data is sent and a warning message appears. The INC or DEC arrows are used to increment or decrement the current value. The new value is sent to the controller when the arrow is released. Press the done button to return to the panel display.

To create a data entry display:

1. Select the numeric data entry icon on the **Tools** menu.

 QT_29

2. Move the cross hair to the position where you want the numeric display to appear and click the mouse.

   The Quick Designer creates the numeric display button and displays the **Numeric Data Entry Settings** dialog box.

 QD_90

 QD_91
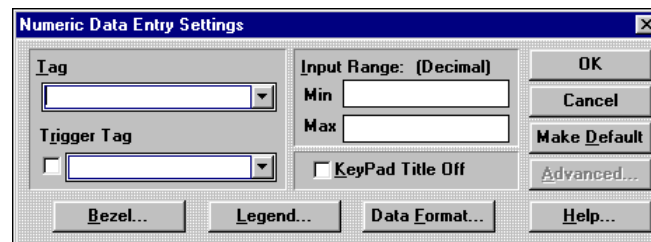
3. Enter **R** and the number of a register in the **Tag** field and enter **R** or **F** and the number of a flag or register in the **Trigger Tag** field.

4. Specify the **Minimum** and **Maximum** values for the **Input Range**.

5. Select **Bezel...** to display the **Bezel Settings** dialog box.

 QD_81
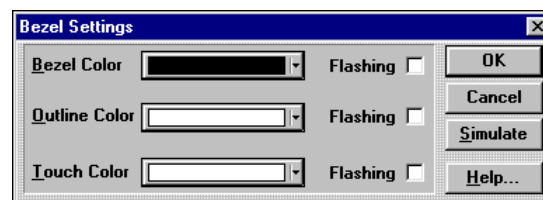
6. Change the **Bezel**, **Outline**, and/or **Touch Color**(s) if necessary, select **Flashing** if desired and click the **Simulate** button to check your changes.

7.   Select **OK** to save your changes and return to the **Numeric Data Entry Settings** dialog box or select **Cancel** to exit without saving your changes.

8.   Select **Legend...** to display the **Legend Plate Settings** dialog box.
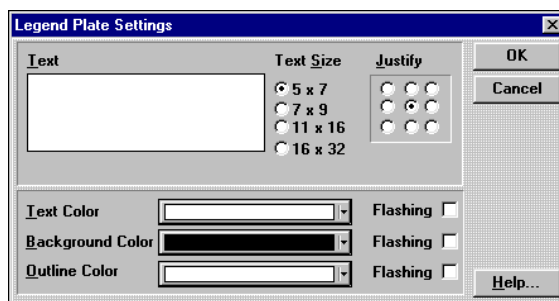
QD_85

9.   Enter the **Text** for the numeric data entry and change the **Text Size** if necessary

10. Change the **Text**, **Background**, and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

11. Select **OK** to save your changes and return to the **Numeric Data Entry Settings** dialog box or select **Cancel** to exit without saving your changes.

12. Select **Data Format...** to display the **Data Format Settings** dialog box.

QD_86

13. Change the **Text Size** if necessary.

14. Change the **Justification** of the data if necessary.

15. Select the **Signed Number** field if necessary.

16. Specify the **Format** of the data, the number of **Digits**, and **Decimal Pos**ition if necessary.

17. Change **Text** and/or **Background Color**(s) if necessary; select **Flashing** if desired.

18. Select **OK** to save your changes and return to the **Numeric Data Entry Settings** dialog box or select **Cancel** to exit without saving your changes.

     If you decide that you want to have all numeric data entry buttons appear the same way, select **Make Default** button on the **Numeric Data Entry Settings** dialog box to save the current settings. The next numeric data entry button you create automatically uses the saved settings.

19. Select **OK** to save the data entry settings and close the dialog box.

Creating a Goto Panel Push Button

A goto panel push button consists of a panel name, bezel and a legend plate. When the button is touched, the screen will change to display the designated panel.

Creating a Goto panel button when the panel you intend to go to has not been created yet, requires some planning. For example, if you are working on your very first panel and you create a Goto push button to go to the next panel, you need to enter a panel name in the Panel Name field. The name you pick must be exactly the same as the panel you intend to go to. To go to the panel called MAIN, you must enter the panel name as MAIN. You cannot use main in lower case letters.

Modes of Operation

The goto panel button has two modes of operation, local mode and controller mode. In the local mode, pressing the goto Panel button displays the designated panel. No connection to a controller is required. In the controller mode, a register is used to trigger the desired panel. The mode is determined by the panel trigger tag option in the display device **Configuration** dialog box.

If the panel trigger tag is left blank, then the goto button works in the local mode. When you press the goto button, the Quick Panel displays the selected panel. You do not have to be connected to a controller for the goto button to work properly.

Creating a Goto Button

To create a goto panel push button:

1. Select the goto panel push button icon on the **Tools** menu.

        QT_27

2. Move the cross hair to the position where you want the Goto panel push button to appear and click the mouse.

    The Quick Designer creates the goto panel push button and displays the **Goto Panel Button Settings** dialog box.

        QD_92
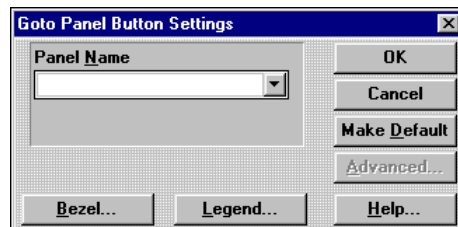
        QD_93

3. Enter (type in) or select the **Panel Name** for the panel to go to.

4. Select **Bezel...** to display the **Bezel Settings** dialog box.
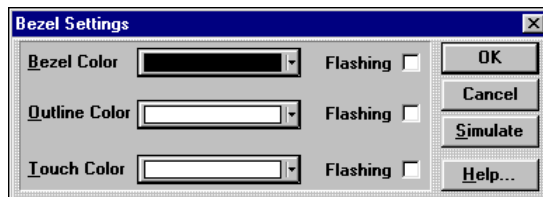
QD_81

5. Change the **Bezel**, **Outline**, and/or **Touch Color**(s) if necessary; select **Flashing** if desired.

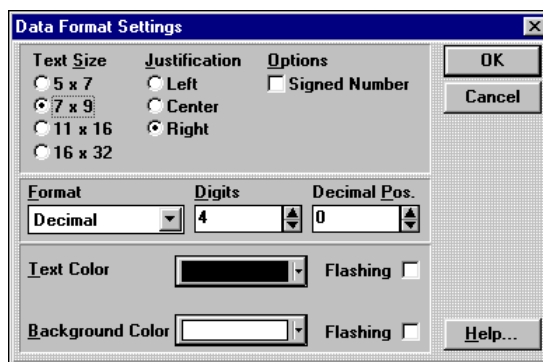6. Select the **Simulate** button to check your changes.

7. Select **OK** to save your changes and return to the **Goto Panel Button Settings** dialog box or select **Cancel** to exit without saving your changes.

8. Select **Legend...** to display the **Legend Plate Settings** dialog box.
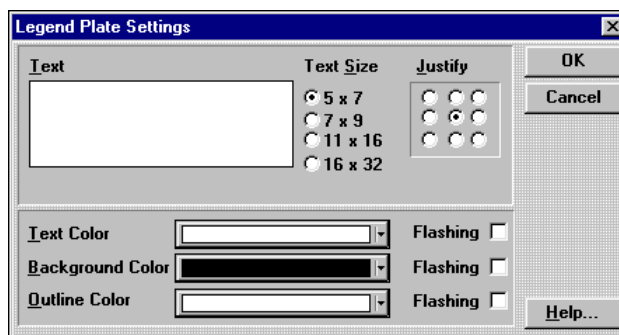
QD_85

9. Enter the **Text** for the panel.

10. Change the **Text Size** if necessary

11. Change the **Text**, **Background**, and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

12. Select **OK** to save your changes and return to the **Goto Panel Button Settings** dialog box or select **Cancel** to exit without saving your changes.

    If you decide that you want to have all goto buttons appear the same way, select **Make Default** button on the **Goto Panel Button Settings** dialog box to save the current settings. The next goto button you create automatically uses the saved settings.

13. Select **OK** to save the Goto Panel push button settings and close the dialog box.

Creating a Selector Switch

A selector switch consists of a bezel, a legend plate and initially two off lenses and two on lenses. The selector switch requires multiple variables, one for each selector switch position. These variables are interlocked so that only one of them can be turned on. Each time the selector switch is pressed the position that is currently on is turned off and the next position is turned on. The number of positions can be two, three, or four. The following drawing shows the three options.
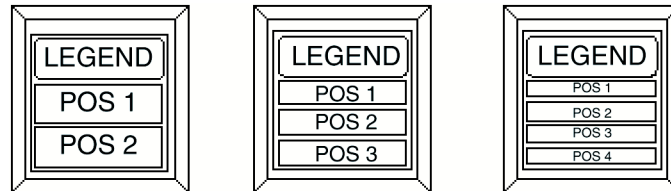
QD_100

A Selector Switch includes a bezel and can have up to four positions with associated legends.

To create a Selector Switch:

1. Select the selector switch icon on the **Tools** menu.

QT_26

2. Move the cross hair to the position where you want the selector switch to appear and click the mouse.

   The Quick Designer creates the selector switch and displays the **Selector Switch Settings** dialog box.

QD_101
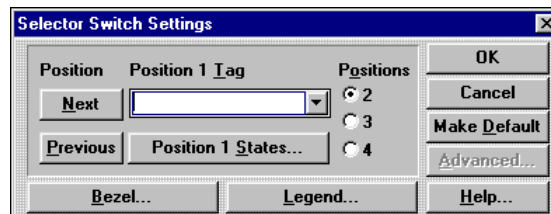
QD_102

3. Specify the number of **Positions** for the switch.

4. Enter R and the number of a register in the **Position 1 Tag** field.

Creating Panel Objects   **6-15**

5. Select **Position 1 States...** to display the **State Settings** dialog box.
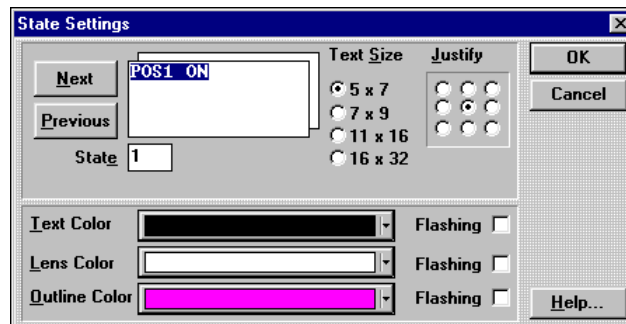
QD_103

6. Enter the text for the state.

7. Change the **Text Size** if necessary

8. Change the **Text**, **Lens**, and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

9. Select **Next** to display the options for the next state.

10. Enter the text for the next state.

11. Change the **Text Size** if necessary

12. Change the **Text**, **Lens**, and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

13. If desired, select **Previous** to return to the other state settings; continuously selecting **Previous** allows you to toggle between states.

14. Select **OK** to save your changes and return to the **Selector Switch Settings** dialog box or select **Cancel** to exit without saving your changes.

15. Select **Next...**.

    QUICK DESIGNER displays the **Selector Switch Settings** dialog box for Position 2.

16. Enter R and the number of a register in the **Position 2 Tag** field.

17. Select **Position 2 States...** to display the **State Settings** dialog box.

18. Follow the instructions in steps 6 through 14 to specify the information of Position 2.

    If you have chosen more than two positions for your selector switch, Quick Designer displays the Selector Switch Settings dialog box for each selector switch position in turn.

19. Select **Bezel...** to display the **Bezel Settings** dialog box.

QD_81

20. Change the **Bezel**, **Outline**, and/or **Touch Color**(s) if necessary; select **Flashing** if desired.

21. Select the **Simulate** button to check your changes.

22. Select **OK** to save your changes and return to the **Selector Switch Settings** dialog box or select **Cancel** to exit without saving your changes.

23. Select **Legend...** to display the **Legend Plate Settings** dialog box.
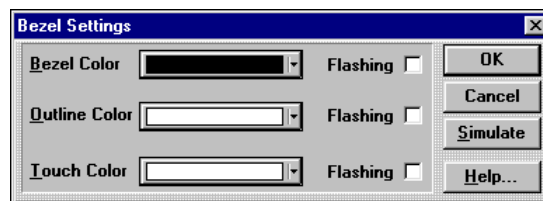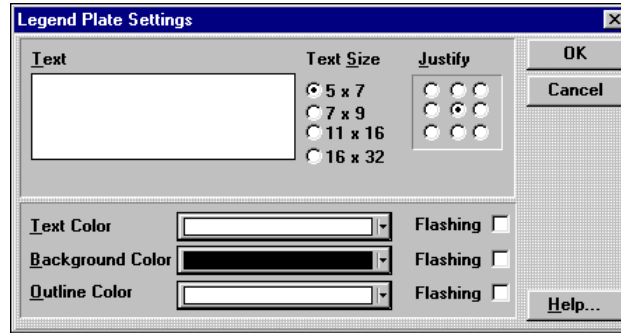

QD_85

24. Enter the **Text** for the panel.

25. Change the **Text Size** if necessary

26. Change the **Text**, **Background**, and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

27. Select **OK** to save your changes and return to the **Selector Switch Settings** dialog box or select **Cancel** to exit without saving your changes.

   If you decide that you want to have all selector switches appear the same way, select **Make Default** button on the **Selector Switch Settings** dialog box to save the current settings. The next selector switch you create automatically uses the saved settings.

28. Select **OK** to save the Selector Switch settings and close the dialog box.

Creating a Word Button

A word button is a multifunction object that performs Set, Add, Subtract, AND, OR, XOR on a register or data table value. For example, if the selected value is 5, then the word button can set a register to the value 5, or add 5 to a register, or subtract 5 from a register. The logical functions of AND, OR and XOR can also be performed using a value and a register or data table.

Selecting Button Style

When creating a word button you can specify three different styles as shown below.

QD_110
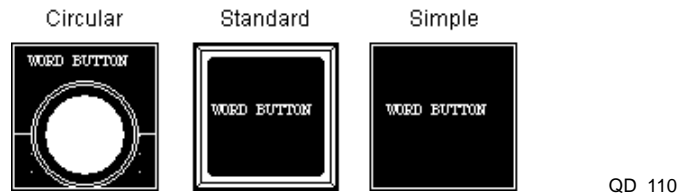
Setting Button Action

The **Word Button Settings** dialog box contains a pull-down list box that sets the action to be performed on the register. The available action options are:

- **Set:** Sets the register value equal to the number in the Value field.

- **Add:** Adds the number in the Value field to the register value.

- **Subtract:** Subtracts the number in the Value field from the register value.

- **AND:** Performs a logical AND operation between the number in the Value field and the register value.

- **OR:** Performs a logical OR operation between the number in the Value field and the register value.

- **XOR:** Performs a logical XOR operation between the number in the Value field and the register value.

Specifying Mode

The **Word Button Settings** dialog box contains a pull-down list box that selects the number base for the Value field. The default setting is Decimal. The available options are

- Decimal
- Signed (not currently available)
- Octal
- Hex
- Binary

Creating a Word Button

To create a Word Button:

1. Select the Word Button icon on the **Tools** menu.

   QT_22

2. Move the cross hair to the position where you want the plate to appear and click the mouse.

   The Quick Designer creates the Word Button and displays the **Word Button Settings** dialog box.

QD_111
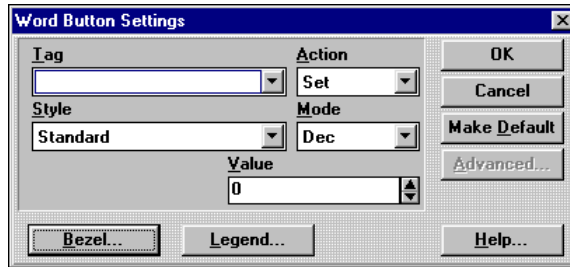
QD_112

3. Enter R or D and the number of a register or data table row and column in the **Tag** field.

4. Choose the **Action** to be performed using the **Select** button; this example uses the default selection **Set**.

5. Choose the **Style** using the **Select** button; this example uses the default selection **Standard**.

6. Choose the **Mode** to determine the number base for the value field using the Select button.

7. Choose the number **Value** to be used in the mode of operation using the Select button; this example uses the default selection **0**.

8. Select **Bezel...** to display the **Bezel Settings** dialog box.
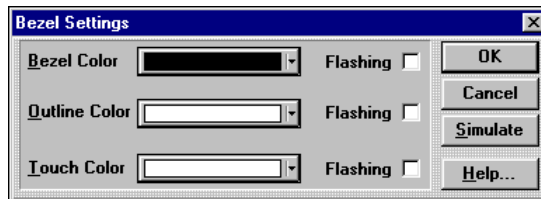
QD_81

9. Change the **Bezel**, **Outline**, and/or **Touch Color**(s) if necessary; select **Flashing** if desired.

10. Select the **Simulate** button to check your changes.

11. Select **OK** to save your changes and return to the **Word Button Settings** dialog box or select **Cancel** to exit without saving your changes.

12. Select **Legend...** to display the **Legend Plate Settings** dialog box.
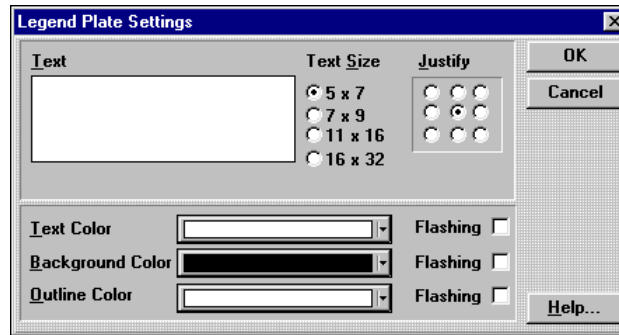
QD_85

13. Enter the **Text** for the panel.

14. Change the **Text Size** if necessary

15. Change the **Text**, **Background**, and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

16. Select **OK** to save your changes and return to the **Word Button Settings** dialog box or select **Cancel** to exit without saving your changes.

    If you decide that you want to have all word buttons appear the same way, select **Make Default** button on the **Word Button** dialog box to save the current settings. The next message display you create automatically uses the saved settings.

17. Select **OK** to save the Word Button settings and close the dialog box.

Creating a Pilot Light

A pilot light is an indicator that shows the on or off condition of a variable. The pilot light tool allows you to create a square (Standard) or circular pilot light. The standard pilot light consists of two square lenses, each with its own color and text options. Each lens can have a different text message.

The circular pilot light consists of two round lenses and a legend plate. The legend plate contains a fixed text message.

The pilot light requires a register or flag variable that will be monitored to determine when to display the off state and when to display the on state.

Pilot Light Style

Pilot lights can be either standard or circular style pilot light. If you select the standard pilot light, the legend button is inactive (grayed out) and you cannot assign it a legend. If you select the circular pilot light, you may assign it a legend.

Standard Pilot Light

The elements of the standard pilot light are shown below. The standard pilot light is a square lens with text inside. The lens has two states, either on or off. You can select the lens color, outline color, text color and text size for each state. If you load a color project into a monochrome unit, red, green and blue are converted to black, and yellow, magenta, and cyan are converted to white.

QD_120
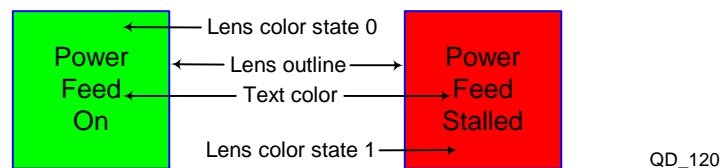
Standard Pilot Light States

A standard pilot light has two states, on and off. You can change the text size and appearance of each state and choose how the justify the text. The last state selected is the one displayed on the panel when you click the OK button. Each state can display differently formatted text.

Circular Pilot Light

The elements of the circular pilot light are shown below. The circular pilot light is a round lens and a legend plate. The lens has two states, either on or off. For each state, you can select the lens color and the lens outline color. Although the lens can change color, the legend plate and text remain constant. You can select the legend plate text color and size, legend plate outline color and legend plate background color. If you load a color project into a monochrome unit, red, green and blue are converted to black, and yellow, magenta, and cyan are converted to white.
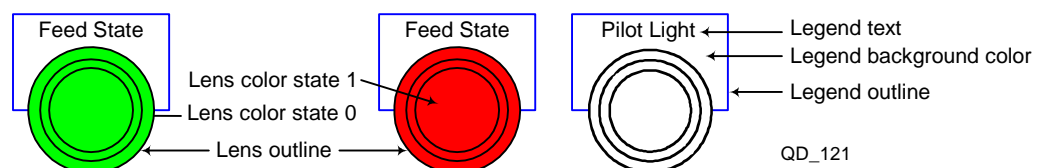

QD_121

Circular Pilot Light States

A circular pilot light has two states, on and off. You can change the lens color and lens outline color of each state. Use the Light Off and Light On buttons to select a different state. The last state selected is the one displayed when you click the OK button.

Legend Plate

The legend plate describes the operation of the pilot light. This text is constant and does not change when the pilot light changes states. From the Legend dialog box, you can change the text color and size, the legend plate background color, the legend plate outline color and choose how the justify the text.

Creating a Pilot Light

To create a pilot light:

1. Select the Pilot Light icon on the **Tools** menu.

QT_23

2. Move the cross hair to the position where you want the pilot light to appear and click the mouse.

   The Quick Designer creates the pilot light button and displays the **Pilot Light Settings** dialog box.

QD_114
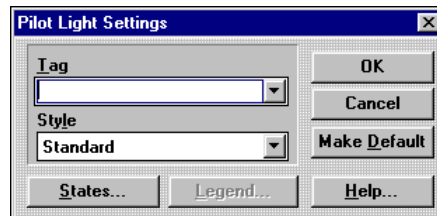
QD_118

3. Enter R and the number of a register or F and the number of the flag in the **Tag** field.

4. To specify the type of pilot light, select Standard or Circular.

For standard pilot lights do the following:
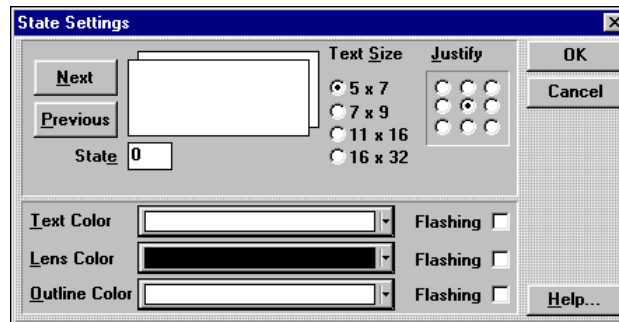
5. Select **States...** to display the **State Settings** dialog box.

QD_109

6. Enter the text for the state.

7. Change the **Text Size** if necessary

8. Change the **Text**, **Lens**, and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

9. Select **Next** to display the next state options.

10. Enter the text for the state.

11. Change the **Text Size** if necessary

12. Change the **Text**, **Lens**, and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

13. Select **OK** to save your changes and return to the **Pilot Light Settings** dialog box or select **Cancel** to exit without saving your changes.

14. Select **OK** to save the pilot light settings and close the dialog box.

    If you decide that you want to have all pilot lights appear the same way, select **Make Default** button on the **Pilot Light Settings** dialog box to save the current settings. The next pilot light you create automatically uses the saved settings.

15. If you want to size the Pilot Light, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the Pilot Light. Release the mouse button and the Pilot Light is sized.

For circular pilot lights do the following:

5. Select **States...** to display the **State Settings** dialog box.

QD_119

6. Select the **Lens** and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

7. Select **Light On** to display the next state options.

8. Select the **Lens** and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

9. Select **OK** to save your changes and return to the **Pilot Light Settings** dialog box or select **Cancel** to exit without saving your changes.

10. Select **Legend...** to display the **Legend Plate Settings** dialog box.
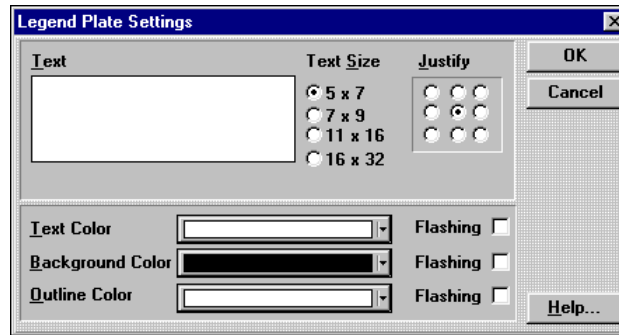
QD_85

11. Enter the **Text** for the pilot light.

12. Change the **Text Size** if necessary

13. Change the **Text**, **Background**, and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

14. Select **OK** to save your changes and return to the **Pilot Light Settings** dialog box or select **Cancel** to exit without saving your changes.

15. Select **OK** to save the pilot light settings and close the dialog box.

    If you decide that you want to have all pilot lights appear the same way, select **Make Default** button on the **Pilot Light Settings** dialog box to save the current settings. The next pilot light you create automatically uses the saved settings.

16. If you want to size the Pilot Light, move the cross hair to the desired cell, click and hold the mouse button and drag the mouse to size the Pilot Light. Release the mouse button and the Pilot Light is sized.

Creating a Local Message Display

A local message display consists of a two or more stacked lenses. Each lens display is a different message. Only one message is visible at a given time. The local message display requires a single controller variable. The messages can be controlled by a flag or register variable.

The local message display can be used to show multiple messages or conditions by assigning each message to a register, a bit in a register or a flag. The local message display can be expanded to cover several cells so that the local message display becomes a simple alarm message center.

A Local Message Display is used to present the status of selected registers.

To create a local message display:

1. Select the Local Message Display icon on the **Tools** menu.

   QT_24

2. Move the cross hair to the position where you want the message to appear and click the mouse.

   The Quick Designer creates the Local Message Display and displays the **Local Message Display** dialog box.

   QD_104

NOTE: Message display box size changed in this example
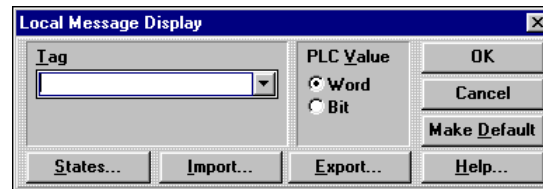
QD_105

3. Enter R and the number of a register in the **Tag** field.

4. Select the **PLC Value**.

5. Select **States...** to display the **State Settings** dialog box.

QD_109

6. Enter the text for the state.

7. Change the **Text Size** if necessary

8. Change the **Text**, **Lens**, and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

9. Select **Next** to display the next state options.

10. Enter the text for the state.

11. Change the **Text Size** if necessary

12. Change the **Text**, **Lens**, and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

13. If necessary, select **Next** to display the next state options and repeat Steps 10 through 13. This process can be repeated as required for additional states.
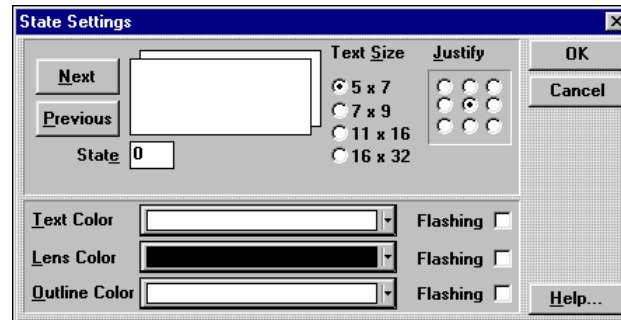
14. Select **OK** to save your changes and return to the **Local Messages Display** dialog box or select **Cancel** to exit without saving your changes.

15. Select **OK** to save the Local Messages Display settings and close the dialog box.

    If you decide that you want to have all message displays appear the same way, select **Make Default** button on the **Local Messages Display** dialog box to save the current settings. The next message display you create automatically uses the saved settings.

NOTES: 1   The State Settings dialog box appears different when you select Bit for the PLC value.

2.   The message displayed is determined by the actual number in the applicable register.

Importing Local Message Display Files

Local message display files (*.lmd) are text files saved with the *.lmd extension. To import a file select **Import...** from the **Local Message Display** dialog box. After you select a file to import, the **Import File Layout Setting** dialog box appears. Using this dialog box, you can define the format and layout of the import files.
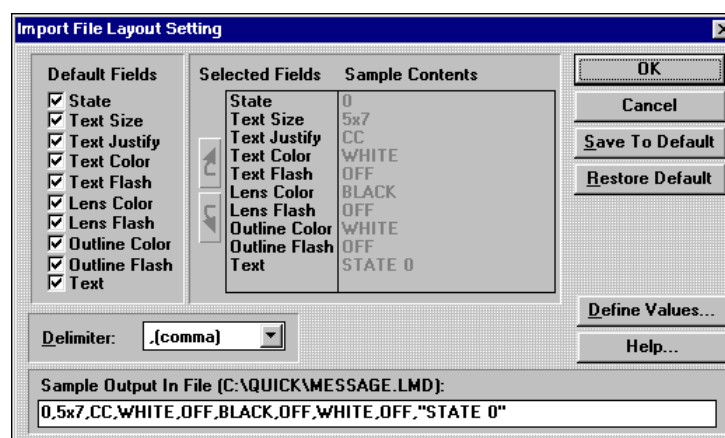
QD_106

- **Selected Fields:** Each field in the Default Fields section that is checked appears in the Selected Fields section. You can change the sequence of the fields by clicking a field name, then use the up and down arrows to change its position in the list.

- **Current Contents:** The Current Contents section contains the first group of selected fields. Once you have selected a layout format for the text file, click the Save to Default button. This will save the format for the next time you import a *.lmd file.

- **Delimiter:** A delimiter is a character that separates items in a file. The most common is a comma separated file, similar to the following example.

      Bears,dogs,cats,lions,sheep,whales,elephants

  Items can also be separated by Tabs, periods, exclamations, pound, dollar, percent, etc. Items can also be listed in one column with no separators. Design the format of the text file so that it is easy to read and edit.

- **Sample Output in File:** The first line of the imported file is shown in this section. You can use this line to check the layout settings for proper format. The path and file name are listed next to the section title.

- **Define Values:** You can further define the attribute values of the text file by clicking the **Define Values** button. In the Color section, all the colors have their common default names. You can change BLACK to BK or any other attribute. The 5x7 Text Size can be changed from 5x7 to SMALL. Any attribute changed in this dialog box must match attributes in the text file. That is, you cannot use 5x7 in the text file if you change the attribute to SMALL. The dialog box shows the default settings for the Color, Color Flashing, Text Justification and Text Size attribute values.

Sample Text File

The following text file contains all of the default fields. The file is comma separated into fields which correspond to the fields shown in the Import File Layout Settings dialog box. A comma separated file is easy to create, and you can use any of the delimiters shown in the Delimiter list box.

```
0,7x9,UL,RED,OFF,CYAN,OFF,RED,OFF,"State 0"
1,7x9,UL,GREEN,OFF,CYAN,OFF,RED,OFF,"State 1"
2,7x9,UL,BLUE,OFF,CYAN,OFF,RED,OFF,"State 2"
```

You can select which fields will be specified in the import file format. Fields not specified are set to the default values shown in the following list:

- Text Size, 5x7
- Text Justify, Center
- Text Color, White
- Text Flash, Off
- Lens Color, Black
- Lens Flash, Off
- Outline Color, White
- Outline Flash, Off

You can change the default values by using the Save to Default button. Use the Restore Default button to reset the default values to the original settings.

In the following text file, only the STATE and TEXT fields are used. The default values are used where no field is specified.

```
0,"State 0"
1,"State 1"
2,"State 2"
```

Exporting Local Message Display Files

You can also export local message display files (*.lmd). They are saved as text files saved with the *.lmd extension. To export a file select **Export...** from the **Local Message Display** dialog box. After you export a file, the **Export File Layout Setting** dialog box appears. Using this dialog box, you can define the format and layout of the exported files.
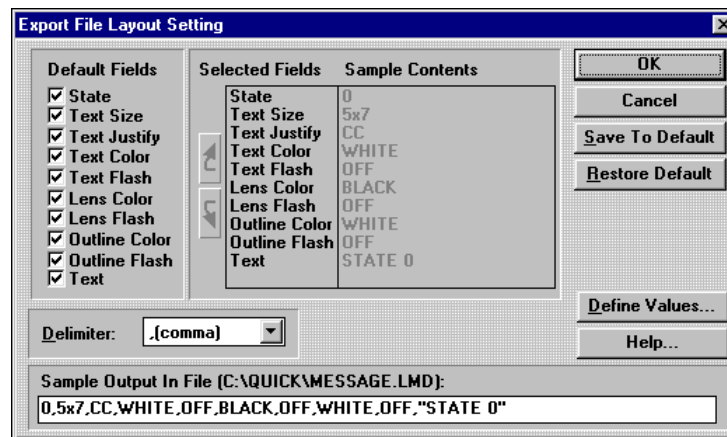
QD_108

From this dialog box you can select which fields you want as defaults and which ones you want to use the previously specify attributes. For a description of the fields on this dialog box, refer to the description of the fields for the **Import File Layout Setting** dialog box.

Creating a Local Image Display

A Local Image Display consists of a two or more states. Each state can contain graphic elements such as polylines or rectangles, a bitmap, text, or combinations of graphics and text. Only one state is visible at a given time. The local image display can be used to show a single state from a group of states by assigning each state to a bit in a register. The following drawing shows some examples of states.

State 0   State 1   State 2

Text and more Text

QD_126
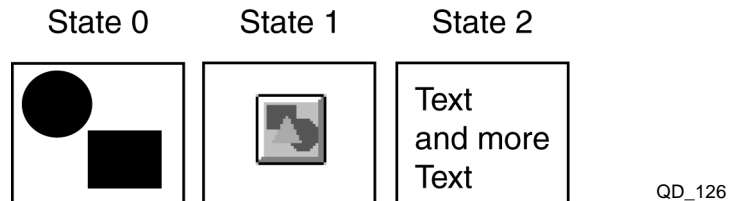
You can think of states as a stack of pictures. States can be created by designing the elements for each state on an unused area of a panel, copying the elements to the clipboard, then pasting the grouped elements to the desired state. Once the elements are pasted, they cannot be edited. If you want to change the state, you must recreate the picture elements. This process works well for a small number of states.

Another method of creating states is to design the elements for each state and save the design in a library. The library feature allows you to view all the designs and make changes before creating the local image display. This method is recommended for a local image display with many states. The **States** dialog box has a Library button for easy access to your designs.

A major design consideration for the local image display is the final size of the display. Once you create all the states, you can size the local image display like other panel objects. When sizing the local image display down, the minimum size is determined by the largest object or group of objects on any one state. For example, if you paste a large bitmap to one of the states, then you cannot size the local image display any smaller than the size of the bitmap. So you must consider the size of objects before you begin creating states.

Local Image Display Design Strategies

To ensure all states are the same size, you may want to consider using a common graphic element for each state. First, create an unfilled rectangle. Place all elements within the rectangle. Copy the rectangle and all elements to the clipboard or library, then paste them to a state. Do the same procedure for each state. When you size the local image display, the smallest size will be the size of the rectangle, and all states will be exactly the same.

When creating images for the local image display, it is important to remember that the local image display tool draws the graphic associated with each state whenever the variable it is linked to changes. The graphics from the previous states are not erased when the new graphic is drawn. So it is important that the new graphic overwrites the old one entirely.

To make a moving image or multiple images, create a background for every state, such as a black box. Copy the background for each new state. Add images to each background for each new state. Now when a new state is triggered, the background will erase all the previous image.

QD_122

Specifying Register Values or Register Bits

When you specify the tag, you can select whether the register is read as a numeric value (Word) or as discrete bits (Bit). If you read the variable as a word value, then there will be 256 possible states. When the variable is read as discrete bits, then there are 17 possible states (16 bit positions and 0).

After the panel is downloaded to the Quick Panel display the value in the register determines which image is displayed. If the value of the register is 0, then state 0 will be displayed. When the value changes to 10, then state 10 is displayed.

To control the selection of the state by the bit in a register, select bit. If no bits are set then state 0 is displayed. If bit 4 is set then state 4 is displayed. When multiple bits are on, the highest order bit in the on condition determines the selected state. (There are 17 states using Bit).

Specifying Image States

After you have designed your images, you specify what order they will appear in and their appearance using the States dialog box. The selections on the dialog box are as follows:

- **Justify** specifies the location of the image in the image window: If the image you paste to the current state does not fill the entire window, selecting justify forces it to the position you want.

- **Cut** removes the contents of the current state.

- **Copy** duplicates the contents of the state to the clipboard.

- **Paste** copies the contents of the clipboard to the current state.

- **Remove** removes the selected state.

- The **Library** button opens the library browser. You can select an object from the library and copy it to the clipboard or drag it to the current state. Use the library to store state images prior to creating the Local Image Display.
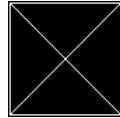
Creating a Local Image Display

To create a local image display:

1. Select the local image display icon on the **Tools** menu.
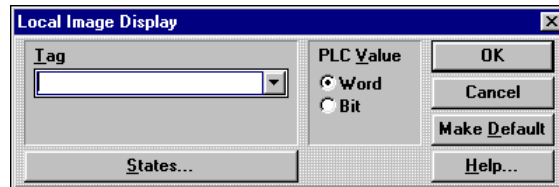

QT_25

2. Move the cross hair to the position where you want the image window to appear and click the mouse.

   The Quick Designer creates the local image display button and displays the **Local Image Display** dialog box.
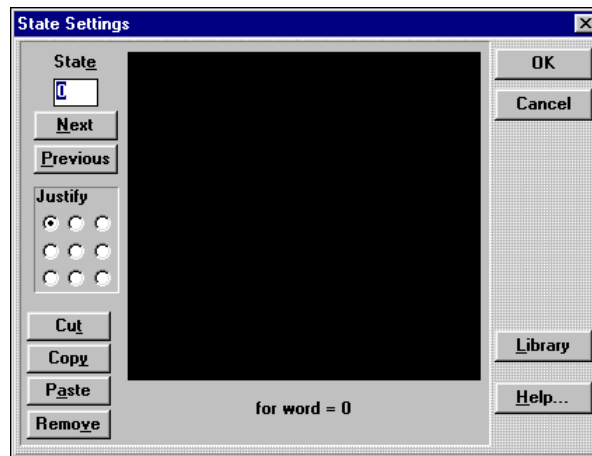

QD_125

QD_123

3. Enter R and the number of a register in the **Tag** field and the **PLC Value**.

4. Select **States...** to display the **State Settings** dialog box.

for word = 0

QD_124

5. Select the image for the state, by pasting in a image you have created or selecting one saved to a Library.

6. Specify how the image is justified in the image window.

7. Select **Next** to display the next state options.

8. Repeat Steps 5 and 13. This process can be repeated as required for additional states.

9. Select **OK** to save your changes and return to the **Local Image Display** dialog box or select **Cancel** to exit without saving your changes.

10. Select **OK** to save the Local Image Display settings and close the dialog box.

    If you decide that you want to have all image displays appear the same way, select **Make Default** button on the **Local Image Display** dialog box to save the current settings. The next image display you create automatically uses the saved settings.

NOTE: The image displayed is determined by the actual number in the applicable register.

Creating a Clock Display

A clock display consists of a bezel and numeric readout. The default settings for time are hours and minutes, in 12 hour format. You can add a setting for seconds to the clock display. Military time is displayed in 24 hour format. For example, 2:30 p.m. would be 1430 hours or 14:30.

The Quick Designer software includes a tool for displaying the system time. The tool currently does not include a dialog box for setting the time. To set the time, you use the numeric data entry tool. To set up the clock you must create three numeric data entry objects on a panel. Then to set the time you use the numeric data entry tool to set the hour, minutes and seconds. For information on internal tags used in the clock display, see *Designing a Panel, Using Internal Tags* in Chapter 1.

NOTE: Use the numeric data entry tool to modify the internal clock. Do not use any other tool.

To set up the numeric data entry objects for the clock:

1. Create a new panel and use any name you like for the panel. The panel will consist of three numeric data entry objects and one numeric data display. The three data entry objects are used for setting the hours, minutes and seconds. The data display is used to verify the clock setting.

2. Select the numeric data entry icon on the **Tools** menu.

   QT_29

3. Move the cross hair to the position where you want the numeric display to appear and click the mouse.

   The Quick Designer creates the numeric display button and displays the **Numeric Data Entry Settings** dialog box.

4. When the **Numeric Data Entry Settings** dialog box appears, enter the tag name as **~System_Hour**. You must type the tag name exactly as shown, including the tilde at the beginning.

5. Select **Legend...** to display the **Legend Plate Settings** dialog box.

6. Enter the **Text** for text in the legend plates to identify system hour.

7. Change the **Text Size** if necessary

8. Select **OK** to save your changes and return to the **Numeric Data Entry Settings** dialog box.

9. Select **Data Format...** to display the **Data Format Settings** dialog box.

10. Change the **Text Size**, **Justification**, and any other attribute if necessary.

11. Specify the **Format** of the data and the number of **Digits**.

12. Select **OK** to save your changes and return to the **Numeric Data Entry Settings** dialog box.

13. Select **OK** to save the numeric data entry settings and close the dialog box.

14. Follow steps 2 through 13 to create two more Numeric Data Entry objects, using the tag names **~System_Minute** and **~System_Second**. Remember to enter the desired text in the legend plates to identify system minute and system second.

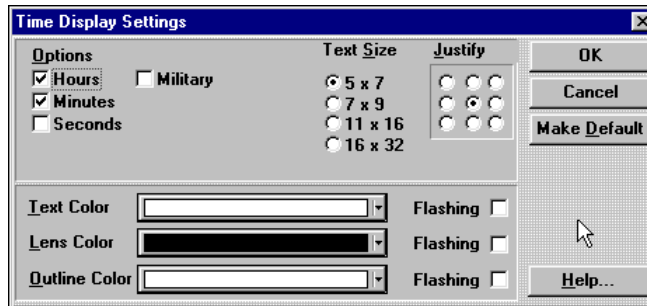15. Select the clock icon on the **Tools** menu.

QT_35

16. Move the cross hair to the position where you want the clock display to appear and click the mouse.

    The Quick Designer creates the clock and displays the **Time Display Settings** dialog box.

QD_147

QD_146

17. If you want, click the seconds box so the clock displays hours, minutes and seconds. Military time refers to the 24 hour format.

18. Select **OK** to save the clock settings and close the dialog box.

QD_148

19. Save the panel and download it to the target display. Use the data entry operators to set the clock for your display. The display maintains the system time between power cycles.

20. To create a clock operator on any other panel to display the time, follow steps 15 through 18.

Creating a Bar Graph

A bar graph consists of a legend plate and a special display that shows data in a bar graph format. You can specify the orientation of the data displayed and the appearance of the face plate.

Orientation

There are four ways to orient the bar graph:

- Bottom to top: as the value is increased from minimum to maximum, the graph will grow from the bottom to the top.

- Top to bottom: as the value is increased from minimum to maximum, the graph will grow from the top to the bottom.

- Left to right: as the value is increased from minimum to maximum, the graph will grow from the left to the right.

- Right to left: as the value is increased from minimum to maximum, the graph will grow from the right to the left.

Face Plate

The face plate settings allow you to select different background and outline colors for the bar graph. A sample is shown below. Text color must be set separately. If you load a color project into a monochrome unit, Red, Green and Blue will be converted to Black, and Yellow, Magenta, and Cyan will be converted to white.

Setting Alarms

Clicking the Advanced button brings up the Alarm Settings dialog box. The bar graph can be divided into different sections, based on the range value and color. Using color, the bar graph can show different colors for different alarm variable values. The following dialog shows a single color for a range of 0 to 20.
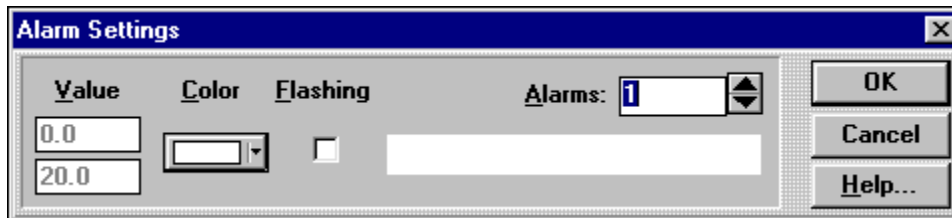
QD_94

To add more alarm ranges, click the up arrow button to the right of the Alarms number box. Each increase adds another value box and color selection button. If you have four ranges selected, each range can have a different color and value setting. For example, if the ranges are: 0 to 5, 5 to 10, 10 to 15, and 15 to 20. The minimum and maximum range values cannot be changed in this dialog box. You can change them in the **Scale Settings** dialog box.

Use caution when selecting the value for the alarm range.

Bar Graph Settings

When creating a bar graph, you can set the minimum and maximum scale values to show the full value of the tag variable or some portion of it. For example, if the tag variable has an actual value of 0 to 65535, you can set the minimum to 0 and the maximum to 65535 to display the full variable range.

If you set the minimum to 0 and the maximum to 200, then the bar graph will display only the range of the variable from 0 to 200.

The bar graph is divided into 100 segments which represent one percent of the range value. For example, if the minimum and maximum scale range is 0 to 200, then each increment of the bar graph is one percent, or two. Each time the variable increases by 2, the bar graph shows a change. The alarm values operate by changing colors at the percentage points.

If you set the value for changing colors to 5, it will not work since the changes can only occur at the percentage increment points. The bar can change color at 4 and 6, but not at 5. You must divide the range value by 100 to arrive at the true change points. For example, if the minimum is set to 0 and the maximum is set to 500, then 1 percent of the range is 5. The alarm values in this case can be set to change at increments of 5.

Creating a Bar Graph Display

A bar graph display consists of a face plate and a scale.

To create a bar graph display:

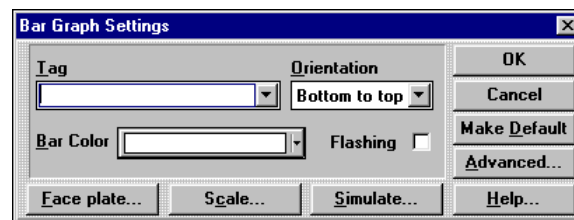1. Select the Bar Graph Display icon on the **Tools** menu.

QT_32

2. Move the cross hair to the position where you want the bar graph to appear and click the mouse.

   The Quick Designer creates the Bar Graph Display and displays the **Bar Graph Settings** dialog box.
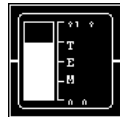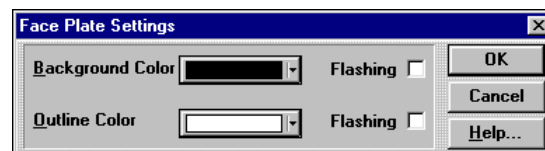

QD_95

QD_96

3. Enter R and the number of a register in the **Tag** field.

4. Choose the **Orientation** for the bar graph

5. Change the **Bar Color** if necessary.

6. Change the **Outline Color** if necessary.

7. If desired, select **Flashing** for the bar and/or outline colors.

8. Select **Face plate...** to display **Face Plate Settings** dialog box.

QD_98

9. Change the **Background** and/or **Outline Color**(s) if necessary.

10. If desired, select **Flashing** for the background and/or outline colors.

11. Select **OK** to save your changes and return to the **Bar Graph Settings** dialog box or select **Cancel** to exit without saving your changes.

12. Select **Scale...** to display the **Scale Settings** dialog box.
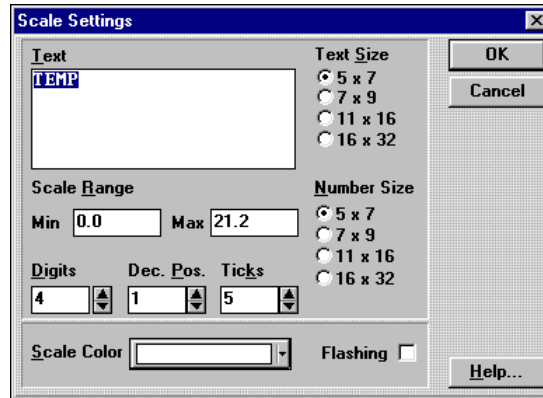
QD_97

13. Enter the **Text** for the scale.

14. Select the **Text** and **Number Size**.

15. Enter **Minimum** and **Maximum** values for the **Scale Range**.

16. Specify the **Digits** and the **Decimal Position** and specify the number of **Ticks**.

17. Select the **Scale Color** and, if desired, select **Flashing**.

18. Select **OK** to save your changes and return to the **Bar Graph Settings** dialog box or select **Cancel** to exit without saving your changes.

19. Select **Simulate...** to display the **Simulate** dialog box.
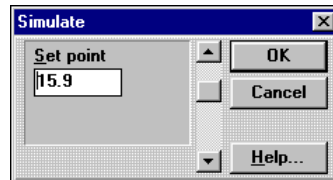
QD_99

20. Enter the **Set Point** for the scale by sliding the elevator to the desired position.

21. Select **OK** to save your changes and return to the **Bar Graph Settings** dialog box or select **Cancel** to exit without saving your changes.

22. Select **Advanced...** to display the **Alarm Settings** dialog box.
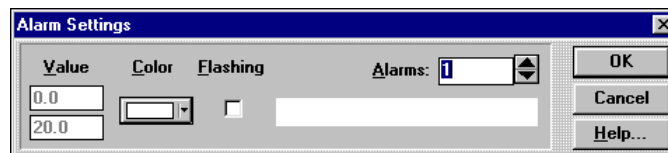
QD_94

23. Select the **Color** for the alarm and, if desired, select **Flashing**.

24. If you have more than one alarm, select the number of the alarm from the **Alarms** field, and then specify its properties.

25. Select **OK** to save your changes and return to the **Bar Graph Settings** dialog box or select **Cancel** to exit without saving your changes.

    If you decide that you want to have all bar graphs appear the same way, select **Make Default** button on the **Bar Graph Settings** dialog box to save the current settings. The next bar graph you create automatically uses the saved settings.

26. Select **OK** to save the Bar Graph Display settings and close the dialog box.

Creating a Trend Display

When you read a variable from a control device, you have a single item of data that can be displayed in a panel operator, such as a numeric display. When you read the same variable over a period of time and save the data, you have collected a data set. Showing all the points in the data set creates a trend display. You can collect data on a particular variable over a period of time, save the data set in a buffer and display the data in a Quick Panel trend display. You can also collect and display data from multiple data sets.

When creating a trend display you can specify the following parameters:

- **Orientation:** the direction the trend is displayed. You can choose right to left, top to bottom, left to right, and bottom to top.

- **Number of samples:** determines how many data points will appear on the screen.

- **Sample rate:** determines how often a new sample is taken.

- **Time Axis:** displays the trend samples as a function of time. If the display is left-to-right, the time axis will be on the bottom of the display. You can display tick marks to show time marks. For example, you can display a tick mark every 20 samples so the operator can clearly see that 20 samples have been taken.

- **Scale Settings and Range:** In a left-to-right display, the scale is located on the left side of the trend display. The scale range indicates the minimum and maximum values. The minimum and maximum values are for the display only and does not automatically scale the input variable.

- **Number size:** refers to the numbers on the scale. You specify the number of digits and decimal positions.

- **Tick marks:** delineate the graph into equal segments.

- **Pens:** are the plots of the data set samples. The plots produce a trace in the display. Each pen is tied to a single variable so the pen shows the data set for the variable.

NOTE: Any variable assigned to a Trend must be a 16 bit integer type variable.

To create a trend display:
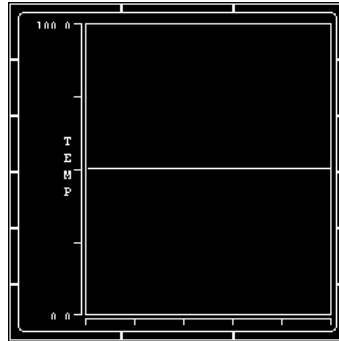
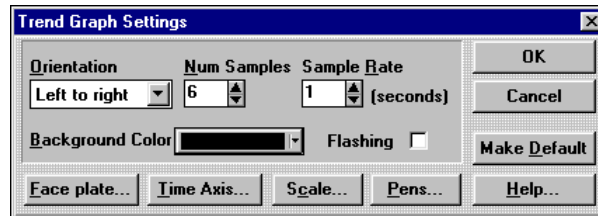1. Select the Trend Display icon on the **Tools** menu.

    QT_32

2. Move the cross hair to the position where you want the bar graph to appear and click the mouse.

The Quick Designer creates the trend Display and displays the **Trend Graph Settings** dialog box.

QD_149

QD_150

IMPORTANT! There have been some problems reported when using large trend displays on a 10.5" color and 9" Mono displays. In some cases, a trend display 8 cells wide by 12 cells high, with a sample rate of 1 second, would appear to lockup a panel. When the trend display was reduced to 8 cells wide by 8 cells high, the panel updated normally. If you experience this problem, reduce the sample rate from 1 second to 2 seconds or more, or reduce the size of the trend display.

3. Select the **Orientation** of the trend display.

4. Chose the number of samples to appear on the screen in the **Num Samples** field..

5. Specify how frequently new samples are taken in the **Sample Rate** field.

6. Change the **Background Color** if necessary.

7. If desired, select **Flashing** for the bar and/or outline colors.

8. Select **Face plate...** to display **Face Plate Settings** dialog box. The face plate is the area around the trend display.
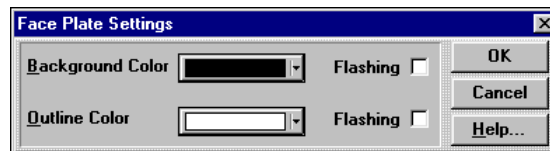

QD_151

9. Select the background and outline color for the face plate.

10. Select **OK** to save your changes and return to the **Trend Graph Settings** dialog box or select **Cancel** to exit without saving your changes.

11. Select **Time Axis...** to display the **Time Axis Setup** dialog box.
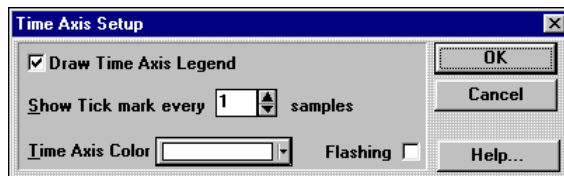
QD_152

12. Choose Draw Time Axis Legend, if desired.

13. Enter the number of tick marks per sample, if necessary.

14. Select the time axis color.

15. Select **OK** to save your changes and return to the **Trend Graph Settings** dialog box or select **Cancel** to exit without saving your changes.

16. Select **Scale...** to display the **Scale Settings** dialog box.
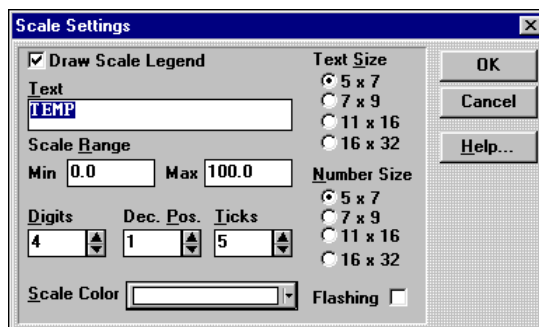
QD_153

17. Choose **Draw Scale Legend**, if desired.

18. Enter the text and change the text size, if necessary. Text is vertical for left-to-right and right-to-left trends, and horizontal for top-to-bottom and bottom-to-top graphs. Blank spaces are ignored.

19. Enter the minimum and maximum values for the scale range.

20. Enter Select the number of digits and decimal positions. A decimal position is the number of digits to the right of the decimal point. The decimal point counts as a digit.

21. Select the number of tick marks for the display. Tick marks are placed next to the trend to delineate the graph into equal segments.

22. Change the number size, if necessary. Number size refers to the numbers on the scale.

23. Select the scale color and, if desired, select **Flashing**.

24. Select **OK** to save your changes and return to the **Trend Graph Settings** dialog box or select **Cancel** to exit without saving your changes.

25. Select **Pens...** to display the **Pen Setup** dialog box.
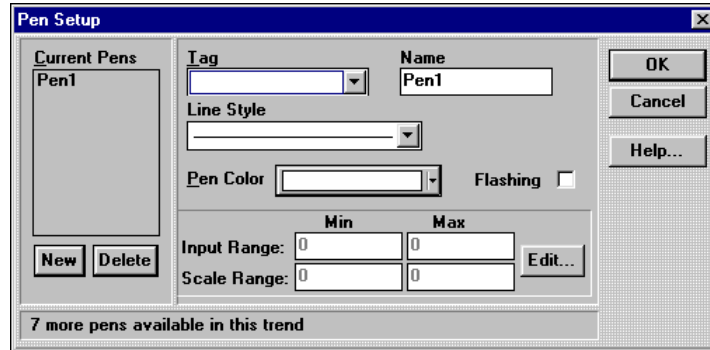
QD_154

26. Change the default name for the pen, if desired.

27. Enter the **Tag** name for the pen.

    The values for the input range and the scale range appear.

NOTE: You cannot edit the values for range or scale. They are fixed at -32768 to +32767.

---

28. Select the line style and pen color. Select **Flashing**, if desired.

29. To add a new pen, click **New**

30. Choose the parameters for the pen.

31. Select **OK** to save your changes and return to the **Trend Graph Settings** dialog box or select **Cancel** to exit without saving your changes.

    If you decide that you want to have all trend graphs appear the same way, select **Make Default** button on the **Trend Graph Settings** dialog box to save the current settings. The next trend graph you create automatically uses the saved settings.

32. Select **OK** to save the Trend Graph Display settings and close the dialog box.

Creating a Analog Meter Display

You can create a analog meter for display on your touch screen. You can choose an analog meter that goes from the minimum value to 180 degrees or one that goes from the minimum value to 360 degrees, you can also choose to fill the area from the minimum value to the current value. The following illustration shows the 180 degree meter.
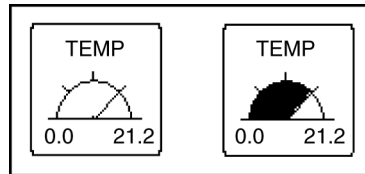
QD_157

The following illustration shows the 360 degree meter.
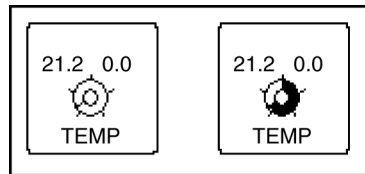
QD_155

When you select the 360 meter, you can also choose its orientation. The 360 degree meter can have the starting point (minimum setting) at the top of the meter or the bottom. The bar on the meter face moves clockwise from the minimum value to the maximum value.

To create an analog meter:

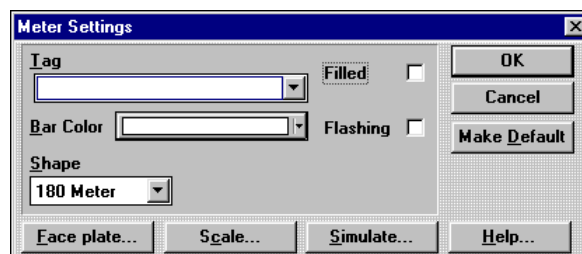1. Select the **Meter** icon on the **Tools** menu.

   QT_34

2. Move the cross hair to the position where you want the meter to appear and click the mouse.

   The Quick Designer creates the meter and displays the **Meter Settings** dialog box.
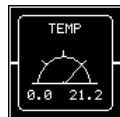

   QD_159

   QD_160

3. Enter R and the number of a register in the **Tag** field.

NOTE: Any variable assigned to a Meter must be a 16 bit integer type variable.
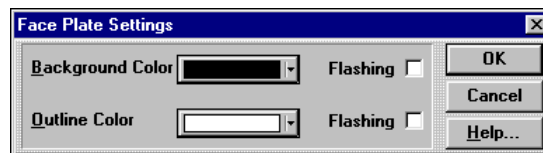
---

4. Change the **Bar Color** and select **Flashing** if desired. The bar color is the movable portion of the meter, similar to a bar graph.

5. Select **Filled** if desired. The movable portion of the meter is set to be a single line, similar to the needle on a pressure gauge. Selecting Filled will fill the area from the minimum value to the current value. The fill color is same as the bar color.

6. Select the shape of the analog meter (180 or the 360 degrees).

   If you select the 360 meter, the **Orientation** list box appears on the **Meter Settings** dialog box.
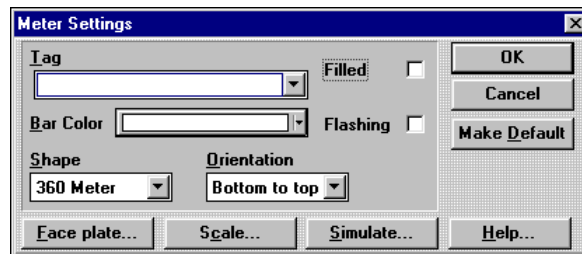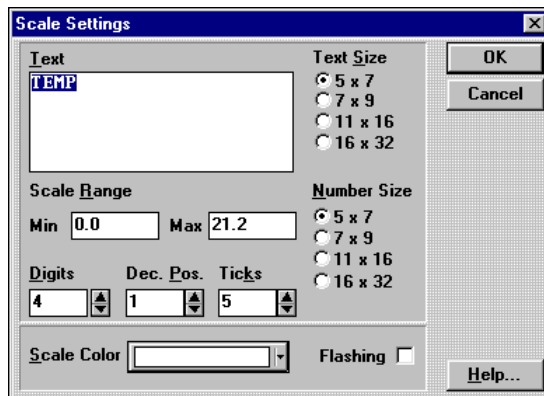

QD_161

7. In the **Orientation** list box , select the location of the starting point, either top of the meter or the bottom. The bar on the meter face moves clockwise from the minimum value to the maximum value. Use Simulate to see the action.

8. Select **Face plate...** to display the **Face Plate Settings** dialog box.

QD_98

9. Change the **Background** and/or **Outline Color**(s) if necessary.

10. If desired, select **Flashing** for the background and/or outline colors.

11. Select **OK** to save your changes and return to the **Meter Settings** dialog box or select **Cancel** to exit without saving your changes.


Creating Panel Objects **6-43**

12. Select **Scale...** to display the **Scale Settings** dialog box.

QD_97

13. Enter the **Text** for the scale.

14. Select the **Text** and **Number Size**.

15. Enter **Min**imum and **Max**imum values for the **Scale Range**.

16. Specify the **Digits** and the **Dec**imal **Pos**ition and specify the number of **Ticks**.

17. Select the **Scale Color** and, if desired, select **Flashing**.

18. Select **OK** to save your changes and return to the **Meter Settings** dialog box or select **Cancel** to exit without saving your changes.

19. Select **Simulate...**

    The Quick Designer displays the **Simulate** dialog box.
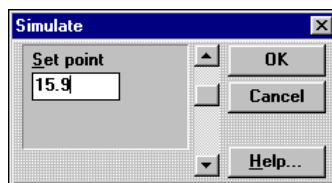
QD_162

20. To view the meter as the data value is changes between the minimum and maximum values, use the scroll bar to change the value.

21. Select **OK** to save your changes and return to the **Meter Settings** dialog box or select **Cancel** to exit without saving your changes.

    If you decide that you want to have all meters appear the same way, select **Make Default** button on the **Meter Settings** dialog box to save the current settings. The next meter display you create automatically uses the saved settings.

22. Select **OK** to save the meter settings and close the dialog box.

Creating a Print Button

The print button prints the current panel to a printer attached to the serial (download) or parallel port. For information about hardware connections, see Appendix B, *Communications Reference*, and the section on the printer port in the Chapter 4, *Alarms*. The Print button is similar to a push button, except you do not need to set a tag variable. The button is permanently assigned an internal variable that controls printing. Print button can be one of three styles, standard, simple or circular.
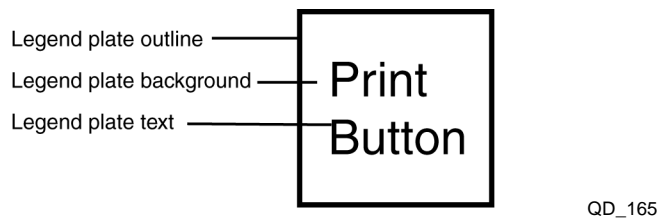
Standard Print Button

The standard print button consists of a bezel and legend plate. The bezel is the frame around the legend plate. The bezel can be one color when the button is idle and a different color when the button is touched. You can change the bezel color, the touch color and the bezel outline color. The legend plate contains the text and the background. You can also change the text color, legend plate background color and legend plate outline colors.

```
Legend plate outline ─────────        ───────── Bezel outline
Legend plate background ───┐   Print    ─── Bezel
Legend plate text ─────────    Button
```
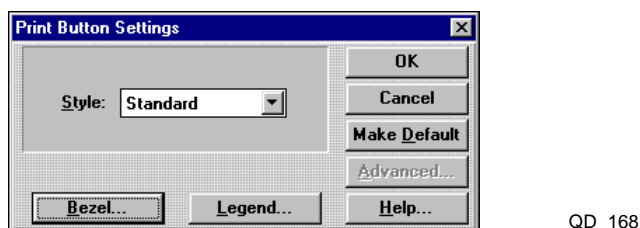
QD_164
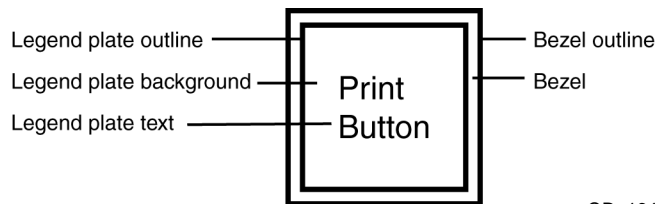
Simple Print Button

The simple button is similar to the standard button except it has no bezel. The simple button is a legend plate and text and has more room for text characters than the standard button. You can change the text color, legend plate background color and legend plate outline colors.

```
Legend plate outline ─────────
Legend plate background ───┤   Print
Legend plate text ─────────    Button
```

QD_165

Circular Print Button

The circular button consists of a bezel and legend plate. The bezel is the circular section in the center of the button. The ring around the bezel is the touch indicator. The touch indicator can be one color when the button is idle and a different color when the button is touched. You can change the bezel color, the touch color and the bezel outline color. The legend plate contains the text and the background. You can also change the text color, legend plate background color and legend plate outline colors.

Legend plate text ———— Print Button

Legend plate outline ————

Legend plate background ————

Bezel outline ———— Bezel

Bezel touch

QD_166
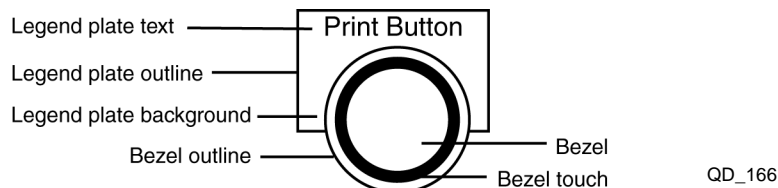
Creating a Print Button

To create an analog meter:

1. Select the **Print** icon on the **Tools** menu.
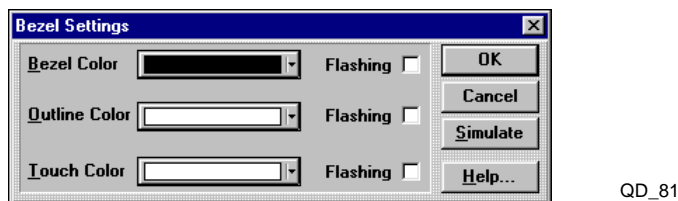
   QT_21

2. Move the cross hair to the position where you want the meter to appear and click the mouse.

   The Quick Designer creates the meter and displays the **Print Button Settings** dialog box.

   PRINT SCREEN

   QD_167

   Print Button Settings

   Style: Standard

   OK
   Cancel
   Make Default
   Advanced...

   Bezel... Legend... Help...

   QD_168

3. Select **Bezel...** to display the **Bezel Settings** dialog box.

   Bezel Settings

   Bezel Color   Flashing ☐   OK
   Outline Color   Flashing ☐   Cancel
                                  Simulate
   Touch Color   Flashing ☐   Help...

   QD_81

4. Change the **Bezel**, **Outline**, and/or **Touch Color**(s) if necessary; select **Flashing** if desired.

5. Select the **Simulate** button to check your changes.

6. Select **OK** to save your changes and return to the **Print Button Settings** dialog box or select **Cancel** to exit without saving your changes.

7. Select **Legend...**.

Quick Designer displays the **Legend Plate Settings** dialog box.
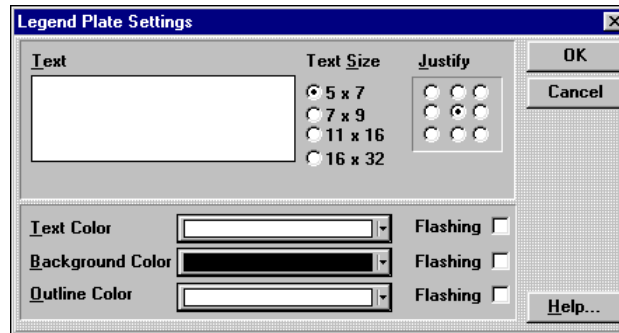
QD_85

8. Enter the **Text** for the button.

9. Change the **Text Size** if necessary

10. Change the **Text**, **Background**, and/or **Outline Color**(s) if necessary; select **Flashing** if desired.

11. Select **OK** to save your changes and return to the **Print Button Settings** dialog box or select **Cancel** to exit without saving your changes.

If you decide that you want to have all print buttons appear the same way, select **Make Default** button on the **Print Button Settings** dialog box to save the current settings. The next print button you create automatically uses the saved settings.

12. Select **OK** to save the Print Button settings and close the dialog box.

Creating a Video Display

The video display icon only appears when you select the 10.5" Color Video as the display type during Setup. Once you have selected the color video display, you can use the video tool.

- **Transparency Modes:** There are three modes to choose from when displaying video on the Quick Panel display. The options allow for a wide range of display options and panel design functionality.

  Video covers all objects mode: The video appears over all objects. You can hide a button behind the display.

  When you select **Video shows only in objects of this color** or **Objects of this color appear through video**, the Video Display Settings dialog box changes to show a color selection option.

  Video shows only in objects of this color: The panel only displays the video when an object of the selected color is in front of the video display. The object must be placed in the foreground. For example, if you create a push button with a red legend plate and the selected color is red, then the video will only be shown on the legend plate. The video does not appear on parts of the push button that have a different color.

  Objects of this color appear through video: Any object of the selected color will appear on the video display. For example, if you create a push button with a green bezel, and the selected color is green, then the bezel part of the button will appear on the video display.

NOTE: In order for objects to work with transparency, you must place them in the foreground or in front of the video display.

- **Button Options:** Use the **# of Buttons** radio buttons on the Video Display Settings dialog box to select the number of buttons that appear in the video display. The buttons are located below the video display and size as the legend plate is sized. The video display is always 300 x 200 pixels. From the Button Control Settings dialog box, you can specify which of the three video sources the buttons select. Each button also has its own title.

- **Touch Input Off:** Turns off the touch screen in front of the video display. This does not effect objects around the video display window.

## Video Display Channel Selection and Color Options

The Control Button Settings dialog box is used to setup the buttons that appear on the video display. The buttons select which video source channel is being displayed. You can customize the buttons for your application. The **Button No** information box displays the assigned button number. The **Channel No** list box selects the video source for the button. Each button can select from CH0, CH1, or CH2. CH3 is not used in this product. See Appendix A for information about hooking up video inputs to a Quick Panel display

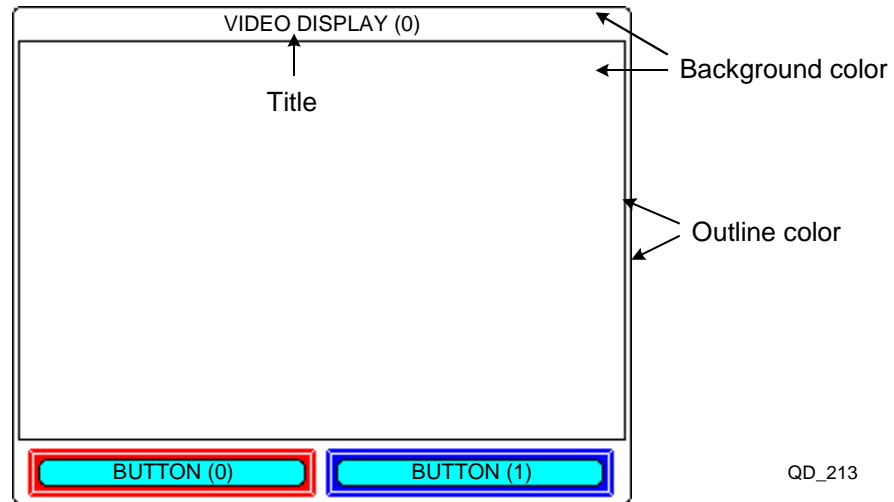The text, lens, outline, bezel and bezel touch colors appear on the buttons as shown below:

QD_212
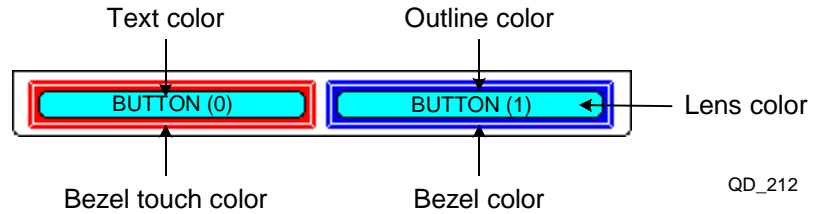
You can change the background and outline colors of the video display using the Legend Plate Settings dialog box. These colors are constant and do not change. The background and outline sections are shown in the following drawing.
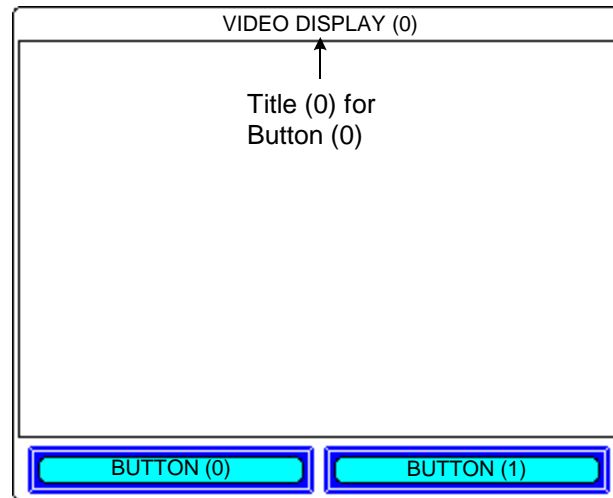

QD_213

A video display can be set up to display different titles, depending on which button on the bottom of the video display the operator pushes. The number of buttons selected determines the number of titles. You specify the titles using the Title Settings dialog box.

In the drawing below, pressing button 0 displays title 0, and pressing button 1 displays title 1.

QD_214

Creating a Video Operator

To add a video operator to a panel:

1. Select the video icon from the tools menu.

        QT_55

2. Move the cursor to the panel area where you want the video display to appear and click the mouse.

    The video display appears in a 300 pixel wide x 200 pixel high area, along with operator buttons and legend data. The **Video Display Settings** dialog also appears.
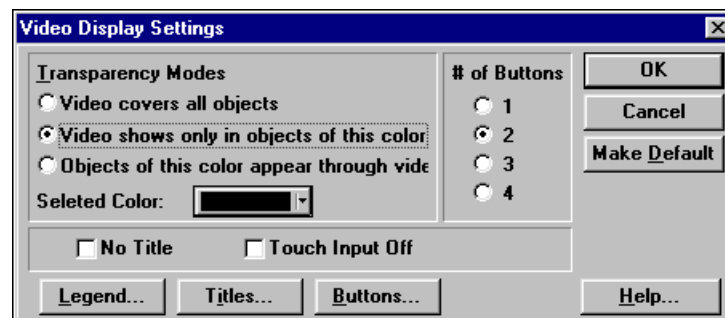

    QD_215

3. Select the **Transparency Mode** for the video display.

4. If you selected **Video shows only in objects of this color** or **Objects of this color appear through video modes**, click the list box next to **Selected Color** and choose the color you want.

5. Click one of the **# of Buttons** radio buttons to select the number of buttons on the video display.

6. Click **No Title** checkbox to remove the title from the video display.

7. Click the **Touch Input Off** check box to turn off the touch screen in front of the video display.

8. Click **Legend...** to display the **Legend Plate Settings** dialog box.
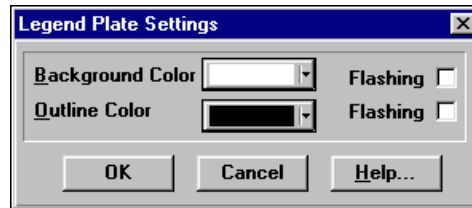

QD_216

9. Click the list boxes next to the **Background** and/or **Outline Color** and choose the color you want.

10. Select **OK** to save your changes and return to the Video Display Settings dialog box.

11. Click **Titles...** to display the **Title Settings** dialog box.
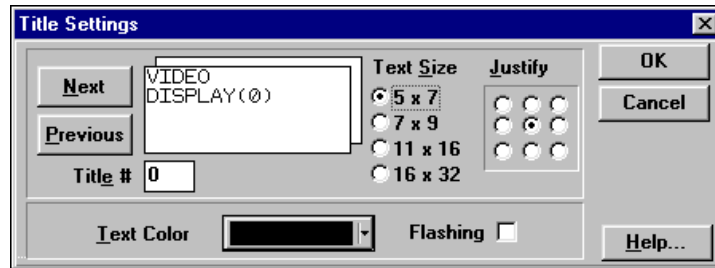
QD_217

12. Enter the title text in the **Video Display (n)** box.

13. Click one of the **Text Size** radio buttons to change the font size for the text if necessary.

14. Change the text justification by clicking one of the **Justify** buttons.

15. Click the list box next to the **Text Color** and choose the color you want.

16. Select **Flashing** if desired.

17. Use the **Next** and/or **Previous** buttons to select different titles.

18. Follow steps two through six to specify the video display text.

19. Continue clicking the **Next** and/or **Previous** buttons to finish entering title text.

20. Select **OK** to save your changes and return to the Video Display Settings dialog box.

21. Click **Buttons...** to display the **Control Button Settings** dialog box.
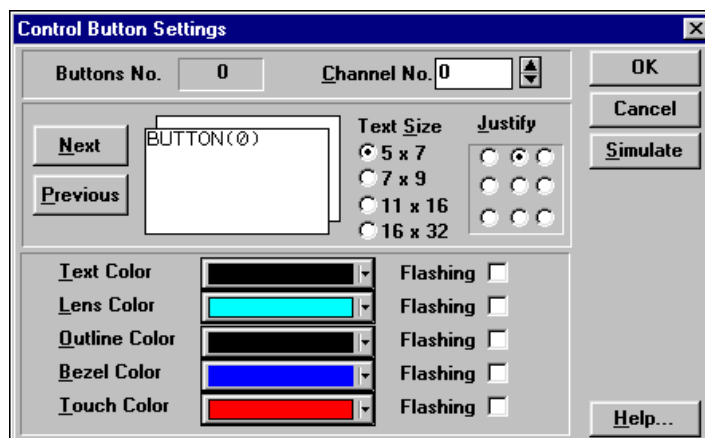
QD_218

22. Enter the title text in the **BUTTON(n)** box.

23. Click one of the **Text Size** radio buttons to change the font size for the text if necessary.

24. Change the text justification by clicking one of the **Justify** buttons.

25. Click the list box next to the **Text**, **Lens**, **Outline**, **Bezel**, and **Touch Color(s)** and choose the color you want.

26. Select **Flashing** if desired.

27. Use the **Next** and/or **Previous** buttons to select different buttons.

28. Follow steps two through six to specify the button text and appearance.

29. Continue clicking the **Next** and/or **Previous** buttons to finish entering button text and appearance.

30. Select **OK** to save your changes and return to the Video Display Settings dialog box.

    If you decide that you want to have all print buttons appear the same way, select **Make Default** button on the **Print Button Settings** dialog box to save the current settings. The next print button you create automatically uses the saved settings.

31. Select **OK** to save the video display settings and close the dialog box.

Keypads

Contents

Introduction

The keypad option adds external keypads that surround the touch screen. The keypads are used in place of the touch screen or along with the touch screen. For example, instead of touching the Quick Panel screen to activate a Push Button, you can press an external keypad. You can also assign an external keypad to simulate a push button, selector switch, goto panel button, numeric data entry, print button or word button. Simulating operators saves screen space. Any panel operator with a bezel can be assigned to an external keypad.

The addition of external keypads to the standard touch screen allows several options. For example, a Push Button can:

- Work normally without using an external keypad.
- Be assigned to an external keypad.
- Work normally and with an external keypad.
- Be simulated by a keypad and not appear on the touch screen.

Keypad Layout

Keypad designations are permanently assigned, but the physical legends can be changed to suit your application. That is, L3 will always be in the same location, but the legend for L3 can be changed. Some of the keypad designations do not appear on the keypads. They are included in the drawing for reference. The unmarked keypads are T0, B0, T5, B5, and A0 through A7.

QD_186
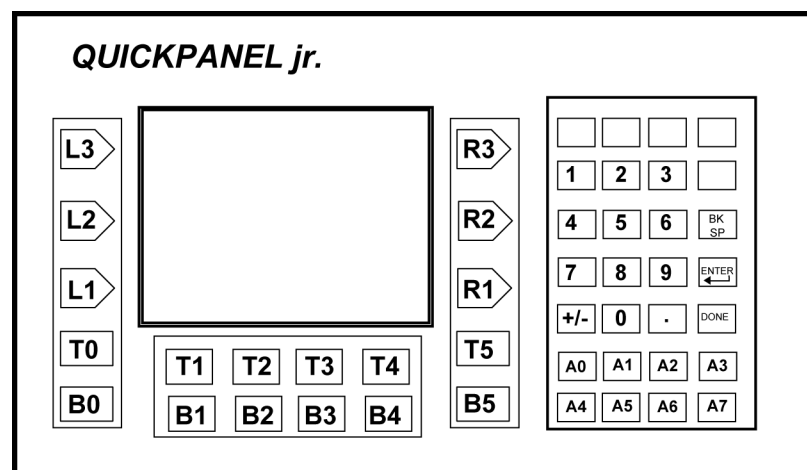
Reserved and Programmable Keys

The keypads are divided into reserved keys and programmable keys. The numeric keys, including the blank keys above the numeric keys, cannot be assigned and are the reserved keys. The programmable keys are as follows:

- The first series of keys are the ones on the left and right sides of the display. The keys are designated L1 for left 1, R2 for right 2, and so on.

- The next series of keys are the two rows below the display. The top row is designated T0 for top 0, T1 for top 1, and so on. The bottom row is designated B0 for bottom 0 like the ones above.

- The final group of programmable keys are located below the numeric keypads and are designated A0 through A7.

You can assign a keypad to a button from the Advanced dialog box The Advanced dialog box is accessible from in the any of the settings dialog boxes, such as the Push Button Settings dialog box.

Once a button is given a key assignment, it can be connected to the touch screen and the keypad simultaneously. If you check the **Touch disabled** checkbox, the button is disabled on the touch screen and it only work with the assigned external keypad. You can display a list of all keypad assignments by selecting **Keypad Assignments** on the **Tools** menu.
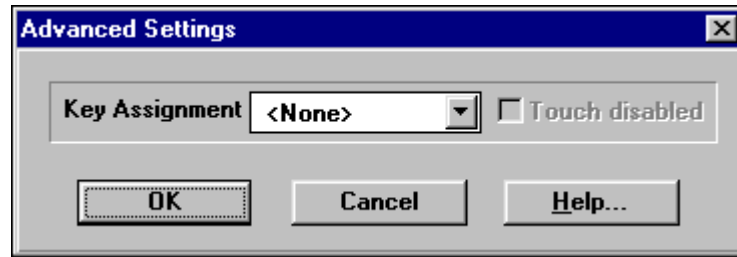
QD_187

Keypads and Numeric Data Entry

When a keypad is assigned to a numeric data entry button, the data entry keypad on the touch screen and the external numeric keypad operate the same. If you disable the touch screen, the data entry keypad no longer appears on the touch screen. Only the legend text and data entry fields appear. You must use the external numeric keypad to enter data.

If you disable the touch screen for the numeric data entry operator, you cannot activate the numeric data entry button by touching the screen. The only way to activate the button is by pressing the assigned keypad and use the external numeric keypads to enter data.

Keypads and Alarms

When an alarm is triggered, the alarm message appears on the panel in an alarm window. The operator touches the MODE button to activate the alarm management page. If you assign a keypad to an Alarm window, the alarm management page has an additional row showing keypad assignments.

The alarm management page function keys (Up, Down, Ack, etc.) have permanent keypad assignments. Up is A0, Del is A3 and so on. The touch screen and the keypads work in parallel. If the touch screen is disabled, only the keypads operate the alarm page functions.

QD_185

Assigning Keypads

Simulating Panel Objects with Keypads

You can assign a keypad to simulate any of the following panel operators, even though there is no panel object visible on the screen:

- Push Button
- Goto Panel Button
- Print Button
- Word Button
- Selector Switch
- Numeric Data Entry

To create a simulated panel object:

1. Select **Keypad Assignments** from the **Tools** menu.

   The **keypad - key assignments** dialog box appears.
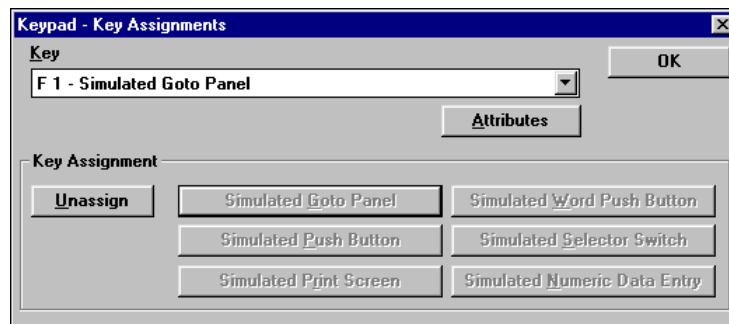
QD_189

2. Select a key to assigned to the simulated panel operator from the **Key** list box.

3. Select an operators to simulate by clicking the appropriate key assignment button. When you click one of the simulate keys, the rest of the buttons are grayed out.

4. Select the **Attributes** button to open the **Settings** dialog box.
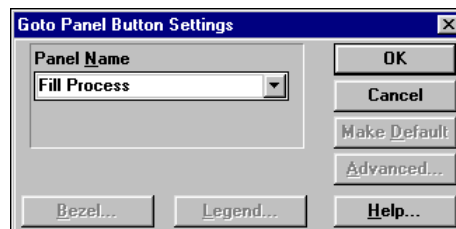
QD_188

   In this example, clicking the Attributes button opens the **Goto Panel Settings** dialog box.

5. Enter the panel name and select the **OK** button.

   When you press the A0 key, the panel name you selected will be displayed. This is the same operation as the Goto Panel Button, but without the panel operator taking up screen space.

Keypad Assignments

You can view all the keypad assignments by going to the Tools menu, selecting Keypad assignments, then selecting the Key list box. You can change the attributes of any simulated operator by selecting the keypad from the list, then clicking the Attributes button.

NOTE: Simulated operators are marked as *Simulated*.
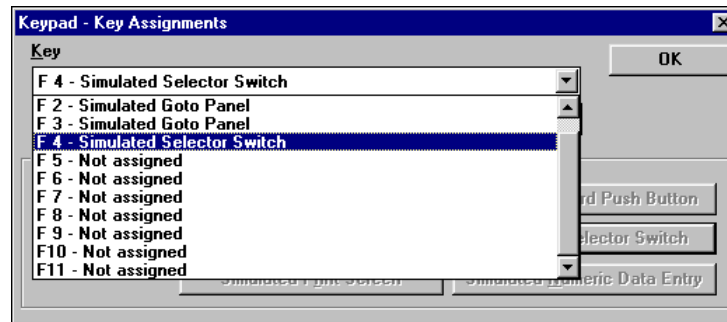
QD_190

Viewing Keypad Assignments

To view the keypad assignments, go to the View menu and click the Object Key Display. The keypad tag display is similar to the object tag display.

QD_191

The keypad tag is displayed in the bottom left corner of the operator and provides a quick visual check to see which panel operators have keypads assigned.

Compiling and Downloading Panels

Contents

Introduction

When you compile and download a project, Quick Courier is the program that downloads the new panels to your Quick Panel display. Quick Courier can both send or receive data between your computer and a Quick Panel display. A download sends a file from the computer to the display. When compiling a project to download, the compile and download operation should continue without manual intervention. At the start of a download procedure , Quick Courier tests all panels for proper format. Any errors in the panels must be corrected before a download operation can begin. Quick-Courier detects the end of a successful download and automatically terminates.

The following files are compiled and are included as part of the download:

- **Configuration file:** The configuration file configures a target display for operation with your Controller. The configuration information includes the name of the panel that appears after a power cycle, screen saver time-out, the serial port parameters, and other option settings. Without the proper configuration information, the target display cannot communicate with your Controller.

- **Panels:** The panels to be displayed on the target display.

- **Protocol driver file:** You must have the correct protocol driver loaded into the target display in order to communicate with your Controller. During the download operation, the target display is tested to determine if a new display device executable file is needed.

- **Additional files:** Other files, such as, alarm files, may also be included in the compiled download file.

You also have the option of downloading the project file. The project file is not part of the compiled download file, but it can be downloaded to the Quick Panel display. It contains all the project information in raw format and is similar to an exported project file. This file can later be uploaded and used like an imported project file.

The Quick Manager tools used to compile and download files are as follows:

QD_5	**Compile and download project:** Compiles the current project and downloads it to the computer. When you compile and download a file for the first time, you need to choose an unused communications port.
QD_11	**Compile project:** Compiles the current project and allows you to save it to a selected directory. Using the compile only option you can compile a file without having to download it to a connected Quick Panel display. You can download the file to one or more Quick Panel displays. To add the current project file to the file you are compiling, click the download project button before you compile.
QD_12	**Download project:** Creates a project file and downloads it to the Quick Panel display. Press this button then the standard download button and the current project will be compiled along with the project file and sent to a Quick Panel. Press this button then the new Compile File button, and the current project will be compiled and saved with a project file. The button is reset after a compile is completed.

QD_13

Upload project: Uploads a project file from a Quick Panel display. To upload a project file, it must be saved with the downloaded file. An uploaded project file is saved the same way as an imported project. The project can then be edited using Quick Designer software, compiled and downloaded back to a Quick Panel display, or saved for other purposes.

QD_12

Download from File: Downloads the compiled file (*.cmp) you select to a Quick Panel display.

Compiling and Downloading

Target Display Condition

Quick Courier (version 1.06 or later) software has the ability to read the display device status and determine which protocol has been loaded. Once Quick Courier reads the status, it can automatically download a new application, including a new display device executable file if necessary. To enable this feature in Quick Courier, you MUST have a version 1.06 (or later) device executable driver loaded in the target display.

If you are upgrading to a new version software, you must download a new display device executable file. New factory units do not have a display device driver installed. When you apply power to a new unit, it displays a message indicating it is ready to receive a display device executable file.

You can force Quick Courier to download a display device executable file by checking the Update display device executable box. Downloading a new display device executable file is generally handled by Quick-Courier, because it can determine the state of the display and load any necessary files.

Download Operation

Before you download a file to a Quick Panel display, do the following tasks:

- Install power to the target display device. See the Hardware Reference manual for details.

- Connect the CTC 4171 cable from your computer port to the target display. The following drawing shows a Quick Panel Jr. and a CTC 4171 cable connected to the download port.

SIO/CN3

To serial port

CTC 4171

QD_192
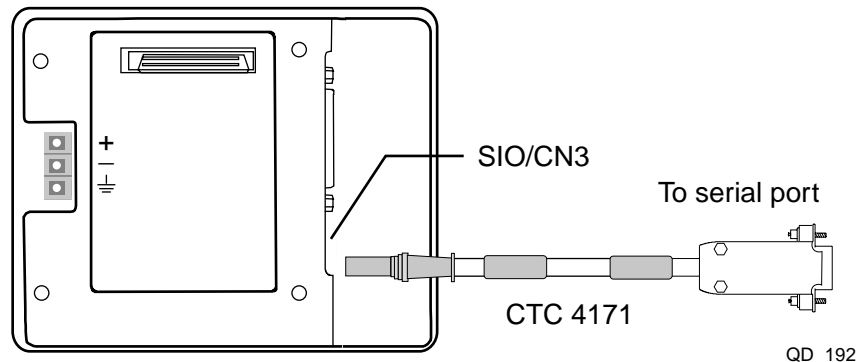
IMPORTANT!   Do not use a HMI-CAB-C50 cable.

- Make sure the settings in the Setup dialog boxes are correct for your serial port. Make sure you have at least one panel with valid operators.

- Turn on the power to the display. Click the download button and note the operator prompt messages. If you run into problems, see the *Communication* and *Download Trouble Shooting* in this chapter.

Compiler

When you select the download icon or the Download option from the File menu the compiler program starts automatically. The compiler program checks the panel designs for possible errors and assembles the panel information for the download operation. All of the other files required for a download, except a project file, are included in the compile. A sample compile operation information box is shown below.
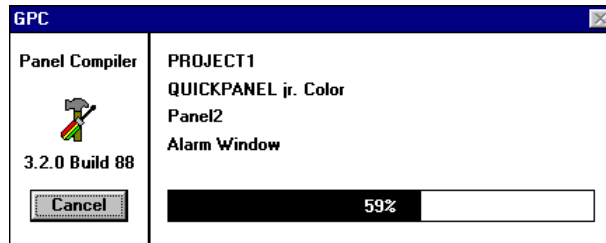
QD_193

If the compiler finds an error, it stops and displays the name of the panel and the error condition. Select the Cancel button to exit the compiler program and fix the panel.

Quick Courier

When the compiler completes assembling the files, it hands the compiled file over to Quick Courier, which sends all files to the target display. Quick Courier can read the display device status and determine which model have been specified during project setup. If you have selected a different display model, Quick Courier displays an error message and cancels the download. If all the project setup information is correct, Quick Courier reads the status and automatically downloads a new application, including a new display device executable file if necessary.

Project information: Lists the name of the project and the location of the download file. Checking the **Update display device executable** box forces Quick Courier to download a display device executable file.

Progress Bar: Shows the progress of the download operation.

Event log: Keeps track of all operator prompt messages and allows you to view them in a scrollable window.
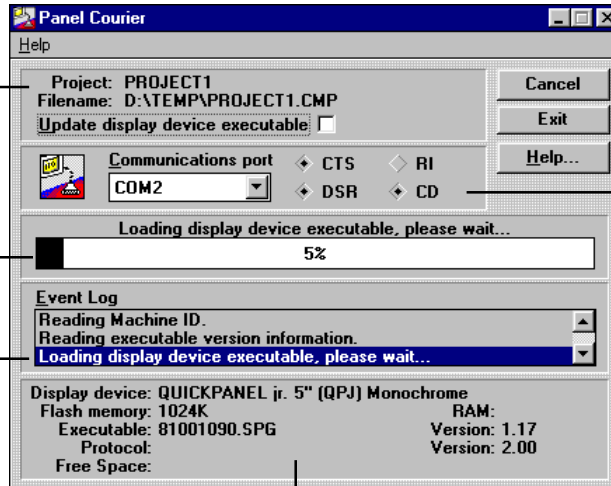
Communications Port: The first time you download a file, you must select an unused communication port on your computer. Quick Courier looks for and displays a list of unused ports and you must select a port. Once you select the port, Quick Courier uses the port to connect to the target display. The status of some of the signal lines from the target display are shown next to the comm port list box.

QD_195

Display information: Once a download begins the dialog box expands to show additional information about the target display.

When the application download is complete, Quick Courier closes and the Quick Manager program returns. If you have selected a default panel, Quick Panel displays it when the download is done. If no default panel is selected, the Quick Panel display shows the following prompt:

Press To	Press For
Run	Next
Screen	Screen
filename	

Communications and Download Trouble Shooting

Communication Problems

If you experience problems running Quick Courier on systems with a Fax/Modem card, it may be due to the corruption of the Windows 3.1 COMM.DRV driver. The software for your Fax/Modem card may have replaced the original communication driver with a nonstandard driver. To install the correct Windows communications driver:

1. Edit the SYSTEM.INI file and comment out the existing COMM.DRV line by placing a semicolon at the beginning of the line.

2. Add the following line:

    ```
    COMM.DRV = COMM.DRV
    ```

Troubleshooting Guide

1. **Are you using a CTC 4171 cable?** The CTC 4171 cable converts RS-232 from your computer to TTL levels that the Quick Panel can accept through the download port. Other cables do *not* work.

    Solution: Acquire a CTC 4171 cable.

2. **Is your PC at least a 386DX/25 with 4M of RAM?** If you are using anything less it is possible that it is taking too long for your PC to respond to the Quick Panel when downloading the executable. The executable download is very timing dependent.

    Solution: Try a faster computer.

3. **Are you using the Standard Windows communication driver?** Open your C:\WINDOWS\SYSTEMI.INI file. Look for a line that starts out "comm.drv =". If you are using the standard Windows comm driver the line will say comm.drv = comm.drv. If this line says anything else, you are not using the standard Windows comm driver and this driver may not be directly compatible with all windows applications.

    Solution: Comment out this line with a semicolon and insert another line that reads "comm.drv = comm.drv". Now restart windows and try the download again.

4. **Are your Comm ports OK?** Exit windows and at the DOS Prompt in the Windows directory, type MSD<Return>. Once MSD examines your system, zoom into the report on comm ports and note the following.

    a. You must have only 2 comm ports available. If you have more than 2 comm ports, you may have an IRQ conflict.

        Solution: Reconfigure your PC until this condition goes away.

    b. Is the UART Chip for these comm ports a 16550? If your PC uses this chip, there is a bug in Microsoft windows V3.1 and V3.11 that may not allow you to run communication programs correctly.

        Solution: The fix for this bug is available from Microsoft or from TCP's BBS (708-345-5880 -get file W31COM.EXE if using Windows V3.1 or WG1001.EXE if using V3.11. These files are self extracting and includes instructions on installation).

5. **Are you using a lap top?** If you are using a lap top it is possible that power management is probably shutting down certain devices in your PC during a download.

    Solution: Turn off all power management and try again. Consult your PC manufacturer for details.

6. **Has your hard disk been damaged?** At DOS Prompt run chkdsk.exe. If it reports any problems, areas of your disk may have been damaged. These may include the Quick Panel Editor.

    Solution: Run chkdisk with /f option or scandisk to repair, then reinstall the Quick Panel Editor, try again. If still unable to down load reinstall Windows then try again.

Other recommended troubleshooting procedures include:

- Try downloading from another comm port on your PC.

- Try downloading from another PC.

- Try a different CTC 4171 cable.

Installing Quick Designer and Connecting a Quick Panel Display

Contents

Installing Quick Designer

To install Quick Designer follow these procedures:

1. Exit all Windows programs before installing Quick Designer.

2. Insert CD into CD-ROM drive.

3. Click the **Start** menu with the mouse and select **Run**.

4. When the Run dialog box appears, select **Browse...**.

5. When the Browse dialog box appears, select your CD-ROM drive.

6. Select **Setup.exe** and then select **Open**.

7. When the Installation program starts, read each screen carefully and follow its instructions.

8. We recommend you install Quick Designer in its default directory (C:\Quick). If you change from the default, ensure all directories in the new path conform to MS-DOS conventions.

9. Choose one of the following installation types:

   • Typical installs the software and its most popular extras.
   • Compact installs the minimum software with no extras.
   • Custom allows you to choose components to install.

   The Installer shows the space required for the options you want above the space available on your hard drive.

10. When the installation is complete, The installation program prompts you to restart your computer or continue. After you restart your computer, you can begin using Quick Designer.

Connecting a Quick Panel Display

Serial Interface Port

The serial interface port connects the Quick Panel to your controller. Factory cables are cut to approximately 12', which is suitable for most applications. If you need a longer cable, you can order one. RS-232 cables are reliable up to approximately 50 feet. The serial interface pin assignments are shown in the following table.

PIN #	NAME	PIN #	NAME
1	FG Frame Ground	14	Reserved
2	TXD Transmit Data	15	TXB Sending Data -
3	RXD Receive Data	16	RXB Receiving Data -
4	RTS Request to Send	17	No connection
5	CTS Clear to Send	18	CTSB Clear to Send -
6	Reserved	19	DTRB Request to Send -
7	GND Signal Ground	20	DTR Data Terminal Ready
8	CD Carrier Detect	21	CTSA Clear to Send +
9	TRMX Terminator RXA	22	DTRA Request to Send +
10	RXA Receiving Data +	23	Reserved (BUZZGND)
11	TXA Sending Data +	24	Reserved
12	No connection	25	Reserved (BUZZOC)
13	No connection		

Download Port

The download port, also known as the Tool/CN3 port, has two functions. Its primary uses is to download application files from a computer to the target display. The secondary use is to print alarm messages to a serial printer. Use the printer option in the configuration menu to enable the download port (Port 1) as a printer port. The download port uses TTL signal levels and requires conversion to RS-232. The CTC 4171 cable, which is used for downloading files, converts the TTL signals to RS-232. Use the printer cable to connect a printer to the download port. Both cables are equipped with a 9-pin D connector that is AT compatible. The download port connector is an 8-pin mini-DIN style. The port settings are fixed at 9600 Baud, 8 bits, no parity. The pin assignments for the CTC 4171 cable are shown in the drawing on the next page.

CTC 4171

QD_198
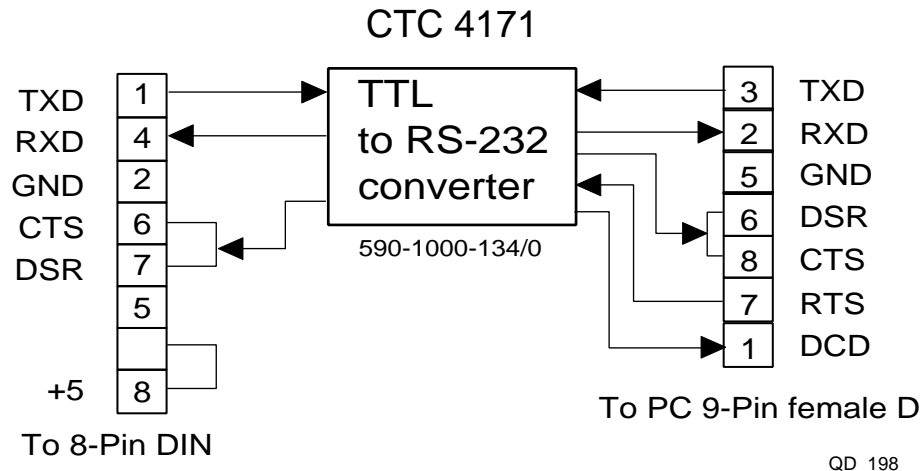
IMPORTANT!   The information in the illustration above, is considered proprietary. This information is provided as a convenience to our customers. You are not authorized to construct this cable. Unauthorized cables are not supported.

Download

The download process involves connecting your computer to a target display and transferring communication and panel information to the target display. The download operation is done after you have selected the controller protocol, setup the communication options, and designed at least one panel. Once the download operation is complete, the display is connected to your controller and the display becomes the operator interface.

CTC 4171 Cable

The CTC 4171 cable connects your computer to the circular DIN connector on the target display. This cable is used to download files created by Quick Designer software in your computer to the target display.

The 9-pin AT connector housing contains an electronic circuit that makes the signals from both devices compatible. This cable also includes custom electronics.

8-Pin circular DIN

CTC 4171
to QUICKPANEL display

To IBM AT 9-Pin

9-Pin female D-sub
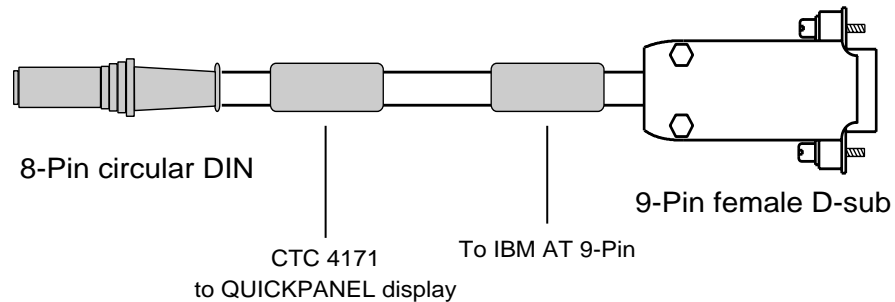
CTC 4171   QD_199

CTC 4171 Cable Connection

The CTC 4171 cable is connected to the circular DIN connector port on the target display as shown below. The 9-pin connector is attached to a serial port on your AT compatible computer.

SIO/CN3

To serial port

CTC 4171
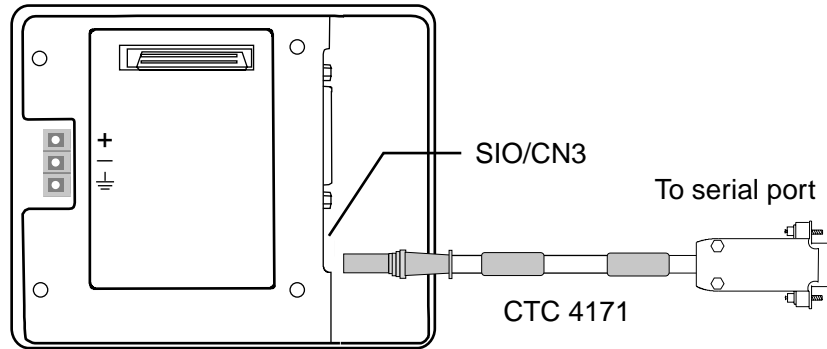
QD_192

Connecting Video Inputs and Adjusting Color

Connecting Video inputs

The Video Quick Panel has the standard serial, printer and tool ports. It also has three NTSC BNC video inputs. The following drawing shows the location of the ports and input connectors.
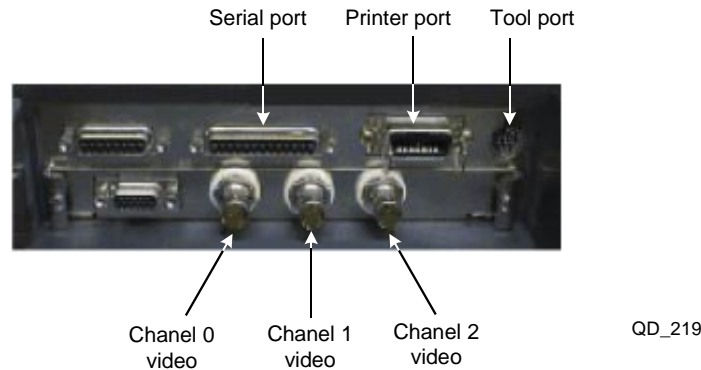
The video source must be NTSC. The video output from a camcorder or VCR is usually an RCA phono plug type connector. One method of connecting these video sources is adding an RF adapter to the Video Quick Panel. A typical phono plug to BNC connector can be found at a local Radio Shack under the part number 278-254. Many computer stores sell BNC cables for use in networks. These cables can be used to connect video signals that require BNC style connectors.

Color Adjustments

You can adjust the contrast, brightness, and color balance on a Quick Panel display by going into setup mode. You can enter setup mode during power-up or when the unit is in run mode.

Color Adjustments during Power Up

To enter SETUP mode during power up:

1. Power up the unit and press and hold the upper corners of the display.

    The display enters setup mode and displays the main menu.

2. Press button 1, INITIALIZE

3. Press button 1, SYSTEM ENVIRONMENT SETUP

4. Select button 6, VIDEO DISPLAY ADJUSTMENT.

5. Select the INPUT CHANNEL at the bottom of the screen by pressing one of the channel numbers.

    The video panel appears on the left side of the screen.

6. Set the brightness, contrast, and color or press the default button.

7. When you are finished, press the SET button to exit the adjustment setup.

8. Press MAIN MENU, then press RUN.

    The display enters run mode.

Color Adjustments when in Run Mode

To enter SETUP mode during run mode:

1. While the unit is in run mode, press the bottom corners and the upper right corner at the same time.

2. Press the OFFLINE button on the bottom of the screen.

   The unit enters setup mode and displays the main menu.

3. Press button 1, INITIALIZE

4. Press button 1, SYSTEM ENVIRONMENT SETUP

5. Select button 6, VIDEO DISPLAY ADJUSTMENT.

6. Select the INPUT CHANNEL at the bottom of the screen by pressing one of the channel numbers.

   The video panel appears on the left side of the screen.

7. Set the brightness, contrast, and color or press the default button.

8. When you are finished, press the SET button to exit the adjustment setup.

9. Press MAIN MENU, then press RUN.

   The display enters run mode.

Important!   Do not change any other settings when in setup mode.

Using System Variables

Contents

Date Stamp System Variable

The Quick Designer software includes a tool for creating an alarm display. One of the options in the alarm message is the display of a date stamp. The method for setting the correct date is similar to setting the time. (Described in Chapter 6.)

To use the date stamp system variable:

1. Select the numeric data entry icon on the **Tools** menu and create a data entry object on the panel.

2. When the **Numeric Data Entry Settings** dialog box appears, enter the tag name as **~System_Day**. You must type the tag name exactly as shown, including the tilde (~) at the beginning.

3. Specify the **Minimum** and **Maximum** values for the **Input Range**.

4. Select **Bezel...**.

5. When the **Bezel Settings** dialog box appears, specify the bezel settings.

6. Select **OK** to save your changes and return to the **Numeric Data Entry Settings** dialog box.

7. Select **Legend...**.

8. When the **Legend Plate Settings** dialog box appears, enter the **Text** for the numeric data entry and change any other parameters as necessary.

9. Select **OK** to save your changes and return to the **Numeric Data Entry Settings** dialog box.

10. Select **Data Format...**.

11. When the **Data Format Settings** dialog box appears, specify the **Format** of the data and the number of **Digits**.

12. Specify and/or change any other parameters as necessary.

13. Select **OK** to save your changes and return to the **Numeric Data Entry Settings** dialog box.

14. Select **OK** to save the data entry settings and close the dialog box.

15. Repeat the procedure for **~System_Month** and **~System_Year**.

Display Contrast System Variable

Using the system variables and internal tags, you can change the contrast of the target display to suit different viewing conditions. To adjust the contrast, the system variable **~System_Contrast** must be set to a value from 1 to 7. This can easily be done by using two Word Buttons: one to increase and one to decrease the value of **~System_Contrast**. You can see the contrast change as the value is increased or decreased.

To use the display contrast system variable:

1. Select the Word Button icon on the **Tools** menu and create a word button on the panel.

2. When the **Word Button Settings** dialog box appears, enter the tag name as **~System_Contrast**. You must type the tag name exactly as shown, including the tilde (~) at the beginning.

4. Specify the **Action** as Add and set the **Value** to **1**.

5. Specify the **Style** and **Mode**.

6. Select **Bezel...**.

7. When the **Bezel Settings** dialog box appears, specify the bezel settings.

8. Select **OK** to save your changes and return to the **Word Button Settings** dialog box.

7. Select **Legend...**.

8. When the **Legend Plate Settings** dialog box appears, enter the **Text** for the numeric data entry and change any other parameters as necessary.

9. Select **OK** to save your changes and return to the **Word Button Settings** dialog box.

10. Select **OK** to save the Word Button settings and close the dialog box.

11. Place a second Word Button on the panel using **~System_Contrast** as the tag name and specify the **Action** as **Subtract** and the **Value** as **1**.

12. Follow step 5 through 10 to set up the decrease contrast button.

Communication Status System Variable

The communication status is a bit that can be used to turn a pilot light on or off to indicate the status of the communication protocol. When the bit is equal to 0, the communication protocol is normal. The tag variable is **~System_Comm_Status**.

NOTE: System Comm Status is an internal tag that is available only on QPJ-1 and QPI-1 models.

To use the communication status system variable:

1. Select the Pilot Light icon on the **Tools** menu and create a pilot light button on the panel.

2. When the **Pilot Light Settings** dialog box appears, enter the tag name as **~System_Comm_Status**. You must type the tag name exactly as shown, including the tilde (~) at the beginning.

3. Select **States...**.

4. When the **State Settings** dialog box appears, enter the text for the **ON** and **OFF** states.

5. Specify and/or change the other parameters, such as **Text Size** if necessary

6. Select **OK** to save your changes and return to the **Pilot Light Settings** dialog box.

7. Select **OK** to save the pilot light settings and close the dialog box.

Compiler INI File Settings

Contents

Introduction

The Quick Panel Compiler, SSC, provides a number of generation options. These options allow you to change the run-time appearance of some of the Quick Panel objects as they are generated. Some of these options also control the execution of the compiler. To change or use these options, you must create an file called SSC.INI that specifies the settings for each option. It must be located in the directory where the Quick Designer applications are installed.

Format of the SSC.INI File

The SSC.INI file contains several sections, each of which consists of a group of related settings. The sections and settings are listed in the SSC.INI file in the following format:

> [*section name*]
> *keyname=value*

- In this example, [*section name*] is the name of a section. The enclosing brackets, [ ], are required, and the left bracket must be in the left most column on the screen.

- The *keyname=value* statement defines the value of each setting. A keyname is the name of a setting. It can consist of any combination of letters and digits in uppercase or lowercase, and it must be followed immediately by an equal sign (=). The value can be an integer, a string, or a quoted string, depending on the setting.

To include comments, begin each line of a comment with a semicolon (;).

How to Read the SSC.INI File Listings

The SSC.INI file settings are listed alphabetically within each section. The settings do not appear alphabetically in the SSC.INI file. To change a setting, you need to search for it within the appropriate section of the SSC.INI file. The file settings list the syntax, default value, purpose, and recommended method for changing each setting, using the following format:

> *SettingName=<value-type>*

- **Default:** The default value for this setting.

- **Purpose:** The function of the setting and its default value (if applicable).

- **To change:** The recommended method for changing the value of this setting.

- ***<value-type>*:** Indicates whether the value should be an integer, a letter, a range of numbers, or something else.

Changing Settings

When the Setup program creates the SSC.INI file, it assigns default values to the settings. Some settings that are listed in this document may not appear in your SSC.INI file. You can use a text editor, such as Notepad, to edit the SSC.INI file directly.

NOTE: Do not use a formatting editor, such as Write; it can corrupt your SSC.INI file.

You must use this method to change the settings that you cannot change by using Control Panel. After you have edited the SSC.INI file, you must restart Quick Designer for the settings to take effect. Be careful when using a text editor to edit the SSC.INI file. Incorrect changes to the SSC.INI file can cause unexpected results when you run the compiler.

CAUTION: Always back up your SSC.INI file before you make changes, so that you can restore the original file in case you accidentally damage the SSC.INI file or make changes that cause problems when the compiler is executing.

[ssc-option] Section Settings

The [ssc-option] section contains settings that affect general operation of the compiler, such as sound and error file formats. The [ssc-option] section can contain the following settings:

Sound=<*0*> or <*1*>

Default: 0

Purpose: Specifies if the compiler uses sound to flag specific events during the compilation cycle. You must have sound support enabled in Windows for this feature to work. The following entries must be specified in the [sounds] section of WIN.INI:

SSCPrimoFinis=<*filename*>	Smart Screen Compiler Completion (used when the compiler finishes correctly)
SSCError=<*filename*>	Smart Screen Compiler Error (used when the compiler finds an error)
SSCSnafuFinis=<*filename*>	Smart Screen Compiler Failure (used when the compiler finishes with errors)
SSCBegin=<*filename*>	Smart Screen Compiler Start (used when the compiler starts)

Filename is the complete path and file specification for the *.WAV file to be played for the specific event.

TDFormat=<*format string*>

Default: %y-%m-%d %H:%M %Z

Purpose: Controls the format of the time and date string used in the error and log files. A percent symbol specifies the start of a code for displaying a specific value. All other characters used in the format string specify the time and date string.

Format	Description
%a	Abbreviated weekday name
%A	Full weekday name
%b	Abbreviated month name
%B	Full month name
%c	Date and time representation appropriate for the locale
%d	Day of the month as a decimal number (01-31)
%H	Hour in 24-hour format (00-23)
%I	Hour in 12-hour format (01-12)
%j	Day of the year as a decimal number (001-366)
%m	Month as a decimal number (01-12)
%M	Minute as a decimal number (00-59)

%p	Current locale's AM/PM indicator for a 12-hour clock
%S	Second as a decimal number (00-59)
%w	Weekday as a decimal number (0-6; Sunday is 0)
%x	Date representation for current locale
%X	Time representation for current locale
%y	Year without the century as a decimal number (00-99)
%Y	Year with the century as a decimal number
%Z	Time zone name or abbreviation
%%	Percent sign

[ssc-logger] Section Settings

The [ssc-logger] section contains settings that specify how the compiler notify you of errors. It can contain the following settings:

SpawnDisplay=<*0*> or <*1*> or <*2*>

Default: 0

Purpose: Specifies what to do with the error file when the compiler is finished. A zero means do nothing. A value of one starts up the application specified in DisplayTool to show the error file at the end of the compilation, if there are errors in the compilation. A value of two always starts up the application specified in DisplayTool at the end of a compilation to show the error file.

DisplayTool=<*application name*>

Default: NOTEPAD.EXE
Indicates the application used to display the error file at the end of a compilation. The compiler uses a command line in the following the form:
Application ErrorFile

Level=<*0*> or <*1*>

Default: 0

Purpose: Specifies the level of logging. Zero specifies error logging. Only errors are written to the error file. A value of one specifies full logging. In addition to errors, each tool encountered is written to the error file.

[ssc-generate] Section Settings

The [ssc-generate] section contains settings that affect how the compiler generates certain aspects of Quick Panel objects. These changes are mostly cosmetic, a few settings can impact run-time performance. The [ssc-generate] section can contain the following settings:

LegendGeneration=<*0*> or <*1*>

Default: 0

Purpose: When the value is zero, legend plates are generated as chamfered rectangles. Although they can be distinguished easily, they tend to draw more slowly than normal rectangles, and slow panel changes. When set to one, legend plates are drawn as simple rectangles, improving the draw speed and the panel change times.

NumericDataGeneration=<*0*> or<*2*> or <*3*>

Default: 0

Purpose: Changes the appearance of the dynamic data portion of objects containing dynamic data. When the value is zero, the number of digits in the dynamic data field is extended so that the field covers the entire width of the Quick Panel object. When the value is two or three, the number of digits is held to the value specified in the panel object's dialog box.

Since this value may be less than the actual width of the panel object, two options exist for presentation. When the value is two, the dynamic data field is always centered within the panel object. When the value is three, the dynamic data field is justified within the panel object using the justification specified in the dialog box.

TextDataGeneration=<*0*> or <*2*> or <*3*>

Default: 0

Purpose: Changes the appearance of the dynamic text portion of objects containing dynamic text. When the value is zero, the number of characters in the dynamic text field is extended so that the field covers the entire width of the Quick Panel object. When the value is two or three, the number of characters is held to the value specified by the user in the panel object's dialog box.

Since this value may be less than the actual width of the panel object, two options exist for presentation. When the value is two, the dynamic text field is always centered within the panel object. When the value is three, the dynamic text field is justified within the panel object using the justification specified in the dialog box.

Sample SSC.INI File

A sample SSC.INI file is shown below.

```
[ssc-option]
Sound=1
TDFormat=%y-%m-%d %H:%M %Z
[ssc-logger]
DisplayTool=notepad
SpawnDisplay=1
Level=1
[ssc-generate]
LegendGeneration=1
NumericDataGeneration=2
TextDataGeneration=3
```

The sample does the following:

- Turns on the sound so that the compiler provides audible indication of it's current progress.

- Formats the time and date string in the error/log file to produce strings formatted as follows: 94-05-04 08:21 cdt.

- Displays the error/log file at the end of a compile in notepad only if there are errors.

- Notifies you each time the compiler encounters an error, halting compilation till you acknowledge the error.

- Generates legend plates as simple rectangles.

- Specifies that Quick Panel objects that contain numeric data fields more narrow than the object maintain the user specified size of the data fields. All such fields are centered horizontally in the Quick Panel object.

- Specifies that Quick Panel objects that contain text data fields more narrow than the object maintain the user specified size of the data fields. All such fields are justified horizontally within the Quick Panel object according to the justification specified for the text.

Quick Panel Error Messages

Quick Panel Error Messages

When an error occurs in the Quick Panel display during run mode, it displays an error message. The following list explains the origin of the problem behind each error message along with appropriate ways of correcting it. After a problem has been solved, turn the power off, then on, and restart the Quick Panel display.

There is a priority system in displaying error messages. When a system error occurs, the message System Error displays before any other messages. For errors other than system error, Quick Panel displays the message for the most recent error. After resolving the error, the error message remains on the screen until you choose another panel or reset the unit.

The error messages listed below may appear on the Quick Panel unit. Instructions on how to find and solve error messages are explained on the following pages.

SYSTEM ERROR
Indicates a fault in the basic operations of the Quick Panel. Following the error message, an error code, as shown, will appear.

SYSTEM ERROR (03: x x)
Displays when a PC transferred file cannot be rebuilt. The x x portion of the message indicates the error number.

SYSTEM ERROR (x x x : x x x : x x x)
Displays in RUN mode when a file cannot be rebuilt. The message shows the error numbers in sequence.

ILLEGAL ADDRESS IN SCREEN DATA
Caused by an overlap of addresses. Following the error message, error codes, as listed below, appear. If the error cannot be fixed, please report the error code and details on how the error developed to the Quick Panel technical support team.

ILLEGAL ADDRESS IN SCREEN DATA (0 0 B: x x x : x x x)
Overlapping Addresses

Error 1	Error 2	Contents
OC1	191 192 193	All or part of the T-File or S-tag address range overlap the addresses of System Data Area.
0C2	194 195 196	All or part of the System Data Area address, A-File, or S-tag address range overlap the addresses setup in a
0C3	197 198 199	All or part of the T-File, or the S-tag or K-tag address range overlap the address range set in an A-file.

UNSUPPORTED TAG IN SCREEN DATA
Lists tag(s) in use that are unsupported by the current Quick Panel version appear. Change the tags to ones that are supported.

PLC NOT CONNECTED
There is a transmission time-out error. Check the cable wiring and connect correctly.

PLC NOT RESPONDING
There is a Reply Time-out Error. The origin of the problem and the solutions are listed below.

1. The power for the controller host is not activated. Turn on the controller.

2. Quick Panel unit INITIALIZE setup (Setup l/O) is incorrect. Setup the unit correctly and match up with the current host and Communication Cable.

3. The controller and Quick Panel power up process was incorrect. Turn the controller's power on first, wait 2-3 seconds, then power up the Quick Panel display.

4. The Communication Cable was not connected properly. Check the Communication Cable wiring and connect it up properly.

RECEIVE DATA ERROR

The Quick Panel display is not receiving data. This error occurs when the communication cable is pulled out when the Quick Panel display is on. Or when normal communication operations are being run, but the Quick Panel display has been powered off, then back on. Begin running transmissions again.

PLC COM. ERROR (02: X X)

•   The address setup for tags exceeds the address range on the host side. Check the error number that appears and use the following table to eradicate the problem. The XX portion of the message is the error code.

• Error FC: The communication settings for this unit and the host do not match. Fix the SI0 communication settings to match the host.

• Error 66: The address set on a tag, or the address set by an alarm message is out of a set range. (address range error).

SCREEN MEMORY CHECKSUM ERROR

The checksum of the screen memory data does not match because of a corruption in the screen files. Error codes follow the error message, SCREEN MEMORY DATA IS CORRUPT (x x x x : x x x x). By referring to the error code, check the screens that have errors. When a screen file has been corrupted, delete that file, and make a new one or recall a backup copy if available.

SCREEN MEMORY DATA IS CORRUPT (x x x x : x x x x)

The first error code is the Screen Number that has an error (displays only one Screen Number). The second code is the number of screens that have errors (Decimal).

CLOCK SET UP ERROR

The backup battery for the internal clock is dead. The battery needs to be replaced. Please contact technical support for service. After changing the backup battery, set up the internal clock.

The life span of the backup battery depends on the ambient temperature and the amount of current being charged and used. The table below gives a general indication of how long the battery will last.

Battery Temperature	under 40 C	40~ 50 C	50~ 60 C
Expected Life Span	over 10 yrs.	over 4.1 yrs.	over 1.5 yrs.

SCREEN TRANSFER ERROR

An error occurred in the data transmission from the screen editor to the Quick Panel. Try retransmitting the screen data.

Quick Panel Character Map

Quick Panel Character Map

The Quick Panel has a built-in character set. Many of the special characters available in the character set cannot be entered directly from the keyboard. An easy way to enter the special characters is to open the Windows program Character Map. Select **Terminal** for the Font. Select a character and the associated Keystroke code is shown in the lower right corner of the dialog box.

NOTE: The characters shown in the terminal character map may not be the same as those in the Quick Panel. In most cases, the characters are the same. The correct characters and codes are shown in the table below. Where no codes are shown, the character is a standard keyboard character.

To enter a special character

1. Locate the character and the associated code in the table.

2. Find the character in the terminal character map that has the same code and highlight it with the mouse.

3. Click the Select button then the Copy button. The character code is now on your clipboard.

4. Paste the character into a text field in Quick Designer.

   The character will not appear the same as the one in the table, but it will appear correctly when the code is downloaded to the Quick Panel.

To create words:

1. Highlight a character then click the **Select** button.

2. Continue choosing characters until you have selected all the characters.

3. Click the **Copy** button to copy all codes to the clipboard.

The following table shows the character map.

Char	Code	Char	Code	Char	Code
!	Keyboard	"	Keyboard	#	Keyboard
$	Keyboard	%	Keyboard	&	Keyboard
'	Keyboard	(	Keyboard	)	Keyboard
*	Keyboard	+	Keyboard	,	Keyboard
-	Keyboard	.	Keyboard	/	Keyboard
0	Keyboard	1	Keyboard	2	Keyboard
3	Keyboard	4	Keyboard	5	Keyboard
6	Keyboard	7	Keyboard	8	Keyboard
9	Keyboard	:	Keyboard	;	Keyboard
<	Keyboard	=	Keyboard	>	Keyboard
?	Keyboard	@	Keyboard	A	Keyboard
B	Keyboard	C	Keyboard	D	Keyboard
E	Keyboard	F	Keyboard	G	Keyboard
H	Keyboard	I	Keyboard	J	Keyboard
K	Keyboard	L	Keyboard	M	Keyboard
N	Keyboard	O	Keyboard	P	Keyboard
Q	Keyboard	R	Keyboard	S	Keyboard
T	Keyboard	U	Keyboard	V	Keyboard
W	Keyboard	X	Keyboard	Y	Keyboard
Z	Keyboard	[	Keyboard	\	Keyboard
]	Keyboard	^	Keyboard	_	Keyboard
'	Keyboard	a	Keyboard	b	Keyboard
c	Keyboard	d	Keyboard	e	Keyboard
f	Keyboard	g	Keyboard	h	Keyboard
i	Keyboard	j	Keyboard	k	Keyboard
l	Keyboard	m	Keyboard	n	Keyboard
o	Keyboard	p	Keyboard	q	Keyboard
r	Keyboard	s	Keyboard	t	Keyboard
u	Keyboard	v	Keyboard	w	Keyboard
x	Keyboard	y	Keyboard	z	Keyboard
{	Keyboard	|	Keyboard	}	Keyboard

Char	Code	Char	Code	Char	Code
~	Keyboard	♄	Ctrl+|	◎	Ctrl+2
①	Alt+0129	②	Alt+0130	③	Alt+0131
④	Alt+0132	⑤	Alt+0133	⑥	Alt+0134
⑦	Alt+0135	⑧	Alt+0136	⑨	Alt+0137
⑩	Alt+0138	❶	Alt+0139	❶	Alt+0140
❷	Alt+0141	❸	Alt+0142	❹	Alt+0143
❺	Alt+0144	❻	Alt+0145	❼	Alt+0146
❽	Alt+0147	❾	Alt+0148	❿	Alt+0149
ೞ	Alt+0150	ೞ	Alt+0151	ೞ	Alt+0152
ೞ	Alt+0153	ೞ	Alt+0154	ø	Alt+0155
ೞ	Alt+0156	Ø	Alt+0157	x	Alt+0158
ƒ	Alt+0159	á	Alt+0160	¶	Alt+0161
❢	Alt+0162	●	Alt+0163	⊙	Alt+0164
◎	Alt+0165	▤	Alt+0166	♀	Alt+0167
□	Alt+0168	®	Alt+0169	❖	Alt+0170
★	Alt+0171	✳	Alt+0172	✳	Alt+0173
❋	Alt+0174	❦	Alt+0175	⊕	Alt+0176
⊕	Alt+0177	✧	Alt+0178	¤	Alt+0179
◈	Alt+0180	Á	Alt+0181	Â	Alt+0182
À	Alt+0183	©	Alt+0184	◷	Alt+0185
◷	Alt+0186	◷	Alt+0187	◷	Alt+0188
¢	Alt+0189	¥	Alt+0190	◷	Alt+0191
◷	Alt+0192	◷	Alt+0193	◷	Alt+0194
♄	Alt+0195	♄	Alt+0196	♄	Alt+0197
ã	Alt+0198	Ã	Alt+0199	♄	Alt+0200
♄	Alt+0201	♄	Alt+0202	✄	Alt+0203
❇	Alt+0204	♄	Alt+0205	♄	Alt+0206
¤	Alt+0207	ó (2)	Alt+0208	Đ	Alt+0209
Ê	Alt+0210	Ë	Alt+0211	È	Alt+0212
"	Alt+0213	Í	Alt+0214	Î	Alt+0215
Ï	Alt+0216	♦	Alt+0217	♦	Alt+0218
☏	Alt+0219	☏	Alt+0220	¦	Alt+0221

Char	Code	Char	Code	Char	Code
Ì	Alt+0222	←	Alt+0223	Ó	Alt+0224
↑	Alt+0225	Ô	Alt+0226	Ò	Alt+0227
õ	Alt+0228	Õ	Alt+0229	µ	Alt+0230
Þ	Alt+0231	þ	Alt+0232	ú	Alt+0233
û	Alt+0234	ù	Alt+0235	ý	Alt+0236
Ý	Alt+0237	¯	Alt+0238	'	Alt+0239
¯	Alt+0240	±	Alt+0241	=	Alt+0242
¾	Alt+0243	¶	Alt+0244	§	Alt+0245
↗	Alt+0246	~	Alt+0247	↘	Alt+0248
¨	Alt+0249	▫	Alt+0250	¹	Alt+0251
³	Alt+0252	²	Alt+0253	☑	Alt+0254

Index

Index