

**Orenco Controls**

A Division of Orenco Systems®, Inc.

*We speak the language of controls.*

# TCOM Viewer User's Manual

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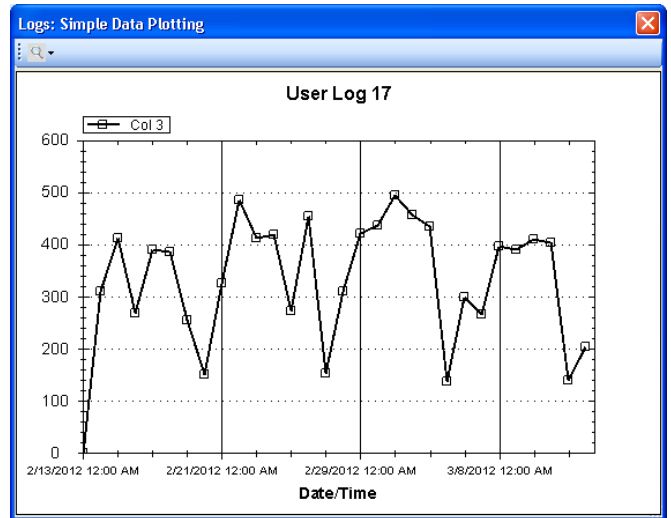
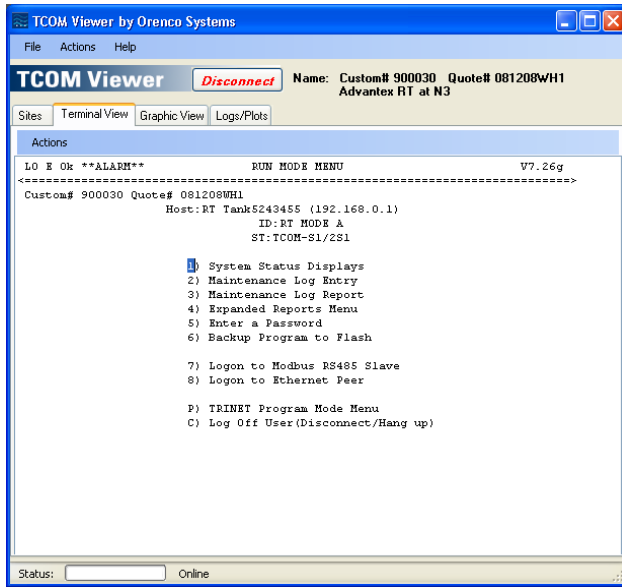
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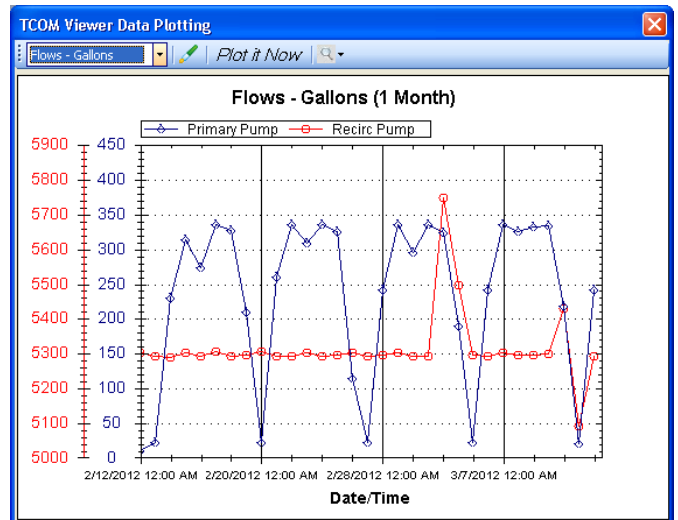
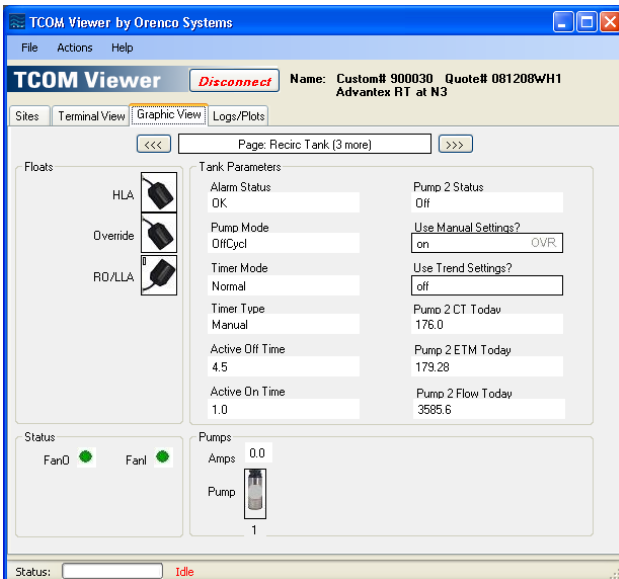
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# TCOM Viewer Overview

TCOM Viewer software is designed to provide System Operators a tool to communicate with TCOM panels locally or remotely (depending on system configuration). The built-in Terminal View allows monitoring or adjusting of the operating settings through a text driven series of menus, similar to other programs that may have been used in the past. As a standard offering, TCOM Viewer also offers improvements in the ability to view, plot, and export historical log data.



As an optional add-on purchase for each site, TCOM Viewer can be enhanced to support graphical views and defined plots. The required programming by Orenco's design staff is stored in a configuration file that can be imported into TCOM Viewer. A quote for a configuration file for a given site can be requested from Orenco. A configuration file can be designed for new or existing panels.



# TCOM Viewer Requirements

## Computer Requirements:

TCOM Viewer is designed to run on computers running Windows XP® or newer. Depending on the computer and the method of communication used to connect to the panel, additional accessories for the computer may be required. In most cases, adaptors using the computer's USB ports are available to add any desired connectivity options that may not be already built into the computer. The most commonly needed accessories are a modem and/or a 9-pin serial adaptor. Another accessory that is available from Orenco is a Bluetooth adaptor that can be plugged into the TCOM panel to allow a wireless connection to a nearby computer with Bluetooth capabilities. Some recommended products that have been tested with TCOM Viewer are listed below:

Description: USB external modem for communication over a phone line

Manufacturer: Zoom®

Model: 3095

Website: [http://www.zoomtel.com/products/dial\\_up\\_external\\_usb.html](http://www.zoomtel.com/products/dial_up_external_usb.html)

Description: USB to 9-pin serial adaptor for a direct connection to the panel using a null modem cable

Manufacturer: Tripp-Lite/KeySpan®

Model: USA-19HS

Website: <http://www.tripplite.com/en/products/model.cfm?txtModelID=3914>

## TCOM Viewer Installation:

Prior to installing TCOM Viewer, it is recommended that any Windows® service packs or security updates from Microsoft® are installed. Internet access is required during the TCOM Viewer install process as the .NET framework and SQL Server Compact prerequisites from Microsoft® will be downloaded and installed if they are not already on the computer.

TCOM Viewer can be downloaded from our website from the following location:

[http://www.orenco.com/controls/tcom\\_viewer.cfm](http://www.orenco.com/controls/tcom_viewer.cfm)

Once the TCOM Viewer software is downloaded, the installer can be unzipped and run. The installer program will prompt the user for input at various steps during the process. Once the installation has completed, the installer and downloaded zip file can be deleted.

## Communication Requirements:

To establish a connection with the TCOM panel controller, several options are possible.

- Connection via direct connection to the TCOM Panel controller. This connection may be via an RS232 serial port connection or through USB to Serial converter device, or through the use of a Bluetooth™ wireless receiver mounted inside the TCOM Panel. Any of these options are considered a “direct” connection to TCOM Viewer. Obviously, the User must be physically at the Site to make a direct connection to a TCOM Panel controller.

- Connection remotely via Telephone Modem. This method can be used if the TCOM Panel has a telephone line connected to it for remote monitoring. The User's computer must also have a Telephone Modem device. The TCOM Viewer software will dial the phone number of the TCOM Panel and make a connection.
- Connection via local Ethernet Network (LAN, Local Area Network). This method requires the User's computer to be connected to the same 10/100BaseT Ethernet network as the TCOM Panel.
- Connection remotely over the Internet (WAN, Wide Area Network). This method requires that the TCOM Panel is installed with access to the Internet and with the capability to be accessed from a remote computer.

Using any of the options above requires that the TCOM Viewer software is aware of the capabilities of the user's computer and what site communications settings are required to access the TCOM Panel (i.e. phone number or network IP address, etc.).

## TCOM Viewer Setup

A recommended first step after opening TCOM Viewer for the first time is to configure the computer settings and user preferences found in the TCOM Viewer Setup dialog window. To open the TCOM Viewer Setup dialog window, select the FILE menu and pick the “TCOM Viewer Setup” choice. Much of the information entered here will be used as **Default** settings whenever a new site is added. Some settings can be uniquely overridden during the Site Setup for any sites where the default settings will not work. The TCOM Viewer Setup dialog window is shown in figure 1.

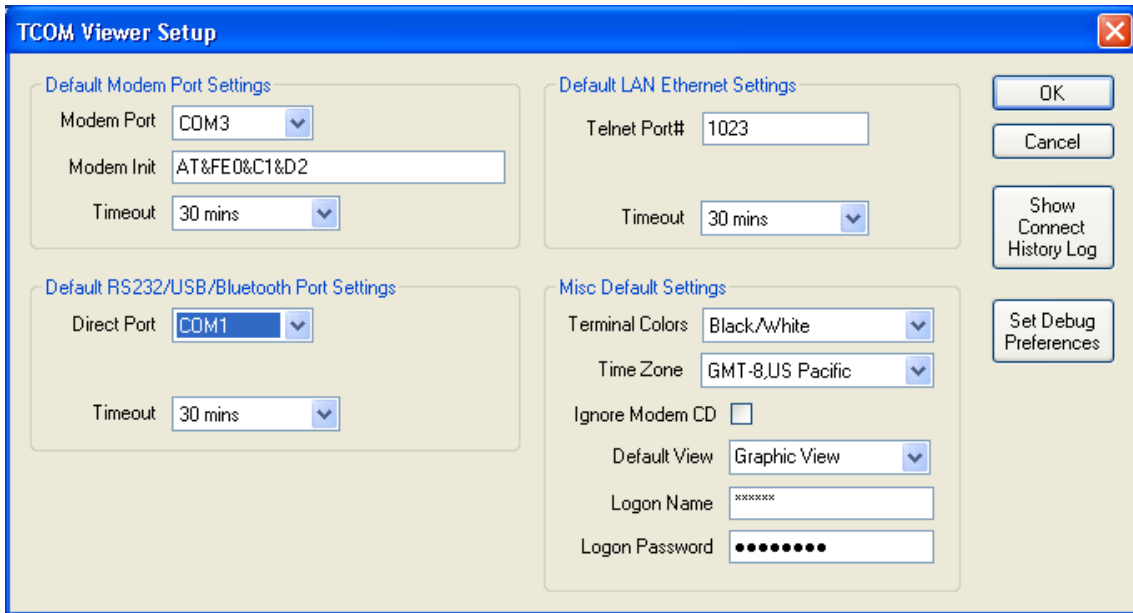


Figure 1 TCOM Viewer Setup window

The most commonly used connection types are the “Modem Port” and the “Direct Port”. The software will provide a drop down list with the “COMx” ports that are currently present on the user’s computer. Computers without RS232 ports (9-pin male connectors) may use USB to Serial adapters that will not appear in the list unless they are plugged into the computer at the time.

### Notes:

**Timeout** values specify the amount of dead/inactivity time that will be allowed before the software automatically disconnects from the TCOM Panel, while in the graphic view.

The **Modem Init** value is used to initialize the Modem device. Usually, the standard “AT&FE0&C1&D2” entry is sufficient.

The **Telnet Port#** settings are determined by the individual Site needs, but commonly used values are 23 and 1023.

The **Terminal Colors** (Text Color/Background Color) selected will be used as the initial color scheme for the terminal view for any new connection.

The **Ignore CD** (Carrier Detect) checkbox is a rarely needed option for modem use on some non-standard computer configurations, such as in a virtual machine environment. This should not be checked in most cases.

The **Default View** setting specifies the starting view, once a new connection is established with a panel. The choices are graphic view or terminal view. If a site does not have a configuration file with graphics, it will always start in the terminal view.

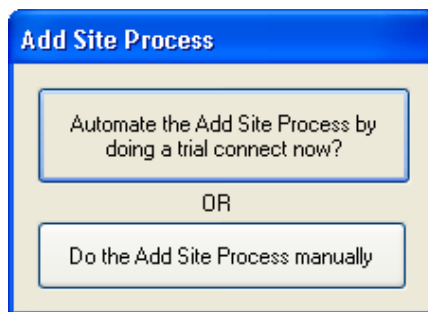
The **Logon Name** and **Logon Password** entries allow default logon information to be entered. Each time a new site is created, these default values will initially be presented in the Site Properties window, where they can be confirmed or changed as needed for each site.

## **Adding a New Site:**

Using the Main window Tab labeled **Sites**, a new Site Definition can be created and saved for future use. Clicking on the **Add Site** menu button will lead the User through a sequence of actions to define a Site. A completed site definition will consist of applicable communications settings for making a site connection as well as information used to uniquely identify a specific TCOM panel. Note that several types of communication parameters can be defined as the user may be on site for a direct connection and also access the site remotely at another time. If only one type of connection is defined to begin with, others can be added at a later time by editing the site.

### **Choosing a method for adding a New Site**

To begin the process of adding a new site, click the **Add Site** button in the Sites Tab section of the Main window. The User is offered a choice to automate the process or to enter the Site information manually (See figure 2 below). Typically, the Automated Add Site choice is recommended. The Manual process may be required if the automated process is attempted, but not successful. Some older TCOM panels may require the manual process.



**Figure 2 Add Site Choices**

### **Adding a Site using the Automated Process**

Using the automated process, TCOM Viewer will attempt to make a trial connection using the communications settings entered by the user (see figure 3). Many of the available settings will show default values based on the settings that were entered in the TCOM Viewer Setup screen (see page 4)



Figure 3 Site Properties window

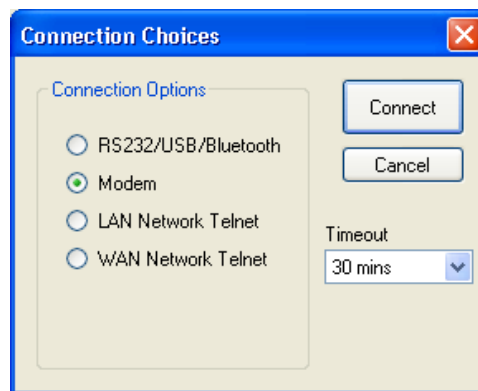
**Communication methods:** Four methods of communication can be defined, but only one defined type is required for the trial connection. The four connection types are:

1. **Modem:** The Modem option is used for connecting to a TCOM panel over a phone line from a remote location. The computer running TCOM Viewer must have a modem and access to a phone line. The phone number should be entered with any prefixes or area codes required to call from the user’s location to the panel’s location. For the modem port setting, select a specific COM port to use or select “AUTO” to use the setting that was defined in the TCOM Viewer Setup. The baud rate default of 38400 may need to be reduced if the phone connection is unstable. If adjustments are needed for the modem for a specific site, additional modem commands can be entered in the “Alt Modem Init Commands” area.
2. **Direct:** The Direct option is used for connecting to a TCOM panel while at a site. There are multiple options for connecting directly to the panel. The direct connection available on the board is a 9-pin RS-232 port. Depending on your computer, additional adaptors and software may need to be installed. Commonly, a wired cable (null-modem) or wireless Bluetooth connection kit is used. For the port settings, select a specific COM port to use for the device or select “AUTO” to use the setting that was defined in the TCOM Viewer Setup. As of the release date of this manual, all TCOM panels are set to use the default baud rate of 9600. Unlike the modem, the direct baud rate must match the setting of the panel or it will not be able to connect.
3. **LAN:** The LAN (Local Area Network) option is available for connecting to a TCOM panel that has been configured for, and connected to, a network via a CAT5 cable plugged into the TCOM board’s RJ45 connector. The user’s computer must also be configured for, and connected to, the

same network. This typically means the user would be at the site or using a VPN to gain remote access to the network the panel is connected to. In TCOM Viewer, the IP or Hostname and Telnet Port# setting must be set to match the settings of the TCOM panel, which would have been determined under the guidance of the local network administrator.

4. WAN: The WAN (Wide Area Network) option is similar to the LAN connection, but is used for connecting to a TCOM panel using the Internet from a remote location. Both the computer and the TCOM panel must have access to the Internet. Additionally, the network the TCOM panel resides in must be configured to allow a path for an outside connection to get through to the panel. Typically, this means the firewall/router for the network where the TCOM panel is located would need to be configured to allow port forwarding. In TCOM Viewer, the IP or Hostname and Telnet Port# setting is based on the configuration of the firewall and will most likely be different than the local network settings defined in the TCOM panel itself. For more information on configuring TCOM panels for remote access over the Internet, see Orenco document number: **EIN-CP-TCOM-19**

Once the connection information is entered for one or more methods, select the preferred “Default Connection Type”, and click “OK” to continue. The next screen will ask which connection method should be used to communicate with the panel (see figure 4). Once the proper option is selected, click “Connect” to initiate the connection to the panel.



**Figure 4 Connection Choices window**

If the trial connection is successful, TCOM Viewer will obtain the unique panel identification which is known as the Custom# and Quote# values from the actual field control panel and display a confirmation screen (see figure 5). Optionally, enter a description of the site for your own reference under the “Site Expanded Description” to complete the add site process. If the trial connection was not successful, the process can be cancelled or the site properties screen can be returned to, where adjustments can be made, followed by another attempt at a trial connection.

**Enter Required New Site Information**

To define a new Site, an Orenco Custom# and Quote# must be provided. Use alpha-numeric chars, some chars will be replaced by dashes. OK Cancel

Custom# and Quote# are Ok, check and then press the OK Button

Custom#/Quote# info obtained from the Site, if available:

Site Expanded Description (ie Sunrise School):

Edit the Custom# and Quote#

Custom#   
 ie "123456" (6 digit number)

Quote#   
 ie "012010MP1.0" (alph-numeric)

Preview of the final Custom#/Quote# Description:

**Figure 5 New Site Custom# and Quote# confirmation**

### **Adding a Site using the Manual Process**

If a Manual process is selected, the user will be required to enter a Custom# and a Quote# for the Site and optionally, to enter a description of the site for reference under the “Site Expanded Description” (see figure 6). The Custom# and Quote# information is needed to uniquely identify the Site and to create a properly named data folder to hold logs and reports obtained from the Site. These numbers are also used to link the site to any Orenco provided configuration files, including those with Graphic Views. All Custom panels produced by Orenco should have these numbers included on the wiring diagram and other paperwork sent with the panel. If none of the numbers are known, a **One-Time Connect** can be used to connect to the panel and look for the numbers in the Terminal view (see page 14). The Manual process is only recommended if the Automated process cannot be used.

**Enter Required New Site Information**

To define a new Site, an Orenco Custom# and Quote# must be provided. Use alpha-numeric chars, some chars will be replaced by dashes. OK Cancel

**Custom# is blank, Quote# is blank**

Custom#/Quote# info obtained from the Site, if available:

Site Expanded Description (ie Sunrise School):

Edit the Custom# and Quote#

Custom#   
 ie "123456" (6 digit number)

Quote#   
 ie "012010MP1.0" (alph-numeric)

Preview of the final Custom#/Quote# Description:

**Figure 6 New Site Custom# and Quote# entry**

After entering the required and optional information for the New Site Information screen, click “OK”. The site properties screen will be displayed next. The site properties screen is similar to the one used during the automated add site process and a description of it can be found there (see figure 3 and the applicable “Communication methods” notes beneath it). For the manual add site process, once the communication information is entered on the site properties screen, the process will be completed when “OK” is clicked.

## **Importing an Orenco provided Configuration File**




TCOM Viewer supports an optional “configuration file” that can be obtained from Orenco for each site. The configuration file contains site specific information to support enhanced features, such as graphical views, point and log names, and defined plots.

In most cases, it is recommended that the configuration file be imported after the site has been created through the “Add Site” process. If the site exists, TCOM Viewer will simply update the site with the new enhancements and no other action is required. If the Site Definition does not already exist (or does not match), TCOM Viewer will automatically create a new site. The new Site will appear on the list of Sites. If the site is new, the User must select that Site and perform an Edit Site process using the menu above the Site List. The User must define the communications settings for the new site (i.e. phone number, IP address etc.) before the first connection attempt.

To import a Configuration File, use the File menu and the “Import Site Config File” submenu item. When initiated, the program will prompt the User for the location of the Configuration File and will move the Configuration File into the existing, or newly created, site folder. Upon completion, the site list Status column should update to indicate the presence of the configuration file and whether it includes graphic views.

# Connecting and Logging on to a TCOM Panel

## Site List Information

The Main Window shown below displays a list of sites that have been added. The list can be sorted by “Name” or “Expanded Info” by clicking the column header at the top. In addition, the Status column indicates whether or not the site has a graphics configuration file, a non-graphics configuration file, or only a site definition file. A  symbol in the Status column indicates the site has only a site definition file. A  symbol in the Status column indicates the site has a non-graphics configuration file. This file will provide the user with the names of the log files and all the points in the TCOM panel. A  symbol in the Status column indicates the site has a graphics configuration file which give the user the names of the log files and points plus graphics screens built to show the status of the system.

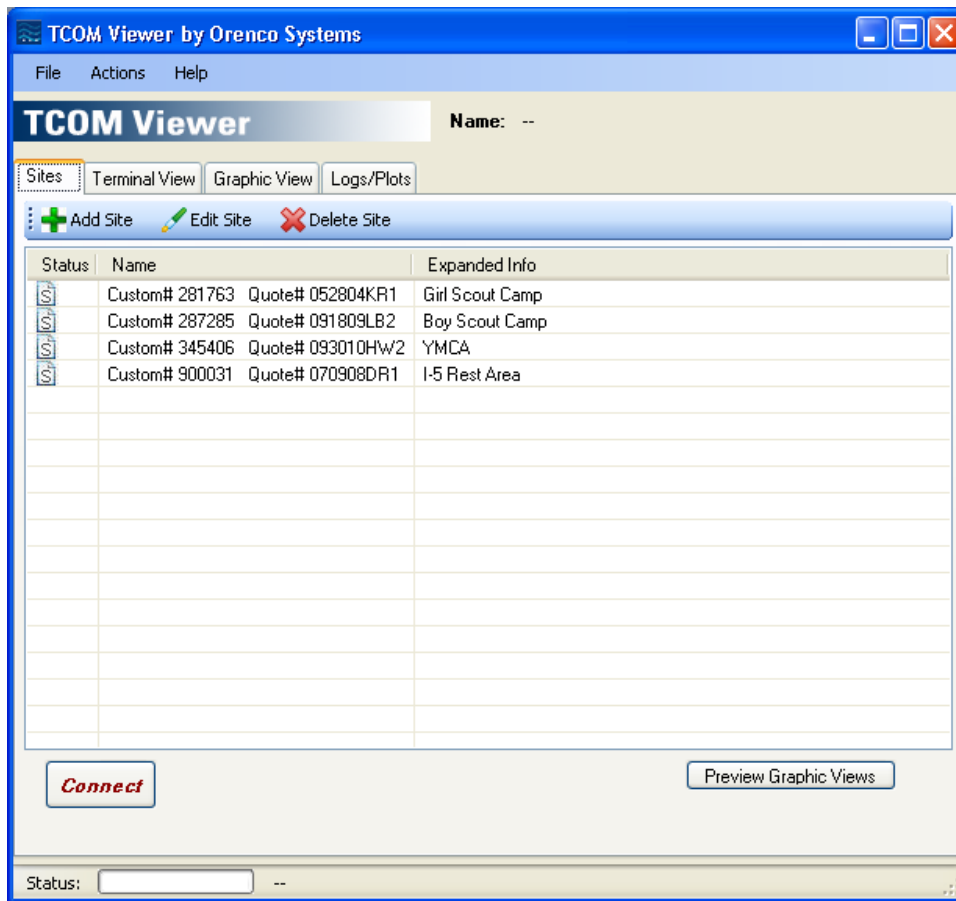


Figure 7 Main Window

## Selecting a Site for Viewing

Using the Main window Tab labeled **Sites**, select one of the existing Site Definitions and press the Connect Button at the bottom of the window area.

## Connection Choices Dialog Window

The software will display the Connection Choices dialog window (see figure 8). This window will give the User the ability to choose one of the possible connection methods. If a particular method is not defined, it will appear grayed out and not be selectable. The Timeout value may be overridden as well.

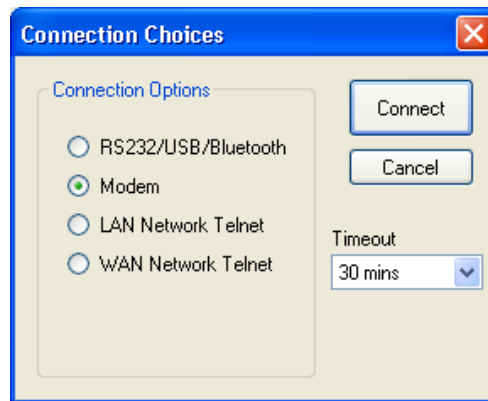


Figure 8 Connection Choices window

## While Connecting and Online

When a connection is in process, the status of the connection process is displayed at the bottom of the Main window along with a sliding bar to indicate that the software is working on the last command.

Normally the Status will progress through a sequence such as:

1. **Connecting** or **Dialing**, depending on the communications method chosen.
2. **Logon 1, 2, 3, 4**, as the connection is established and the proper authorization is submitted.
3. **Online** when the connection has been successfully established.
4. After disconnected or timed out, the status will return to the **Not Connected** status.

If an error occurs, an error code will be displayed and the Status will return to the **Not Connected** state.

Once a successful connection has been made, the live session will automatically move to either the Graphic View or the Terminal View. A preference for the starting view can be set in the TCOM Viewer Setup. If a site does not have a configuration file with graphics, it will always start in the terminal view.

When in **Online** status, operations such as updating the Graphic real-time data values or retrieving log data will cause the Status information to rapidly change which is normal.

While connected, the Tabs for “Terminal View”, “Logs/Plots”, and optionally “Graphic View”, can be selected to gain access for viewing panel status and downloading historical information. Each of these areas is described in this manual.

## Logging Off

To log off a connected Site, use the **Disconnect** button next to the TCOM Viewer logo at the top of the Main window. After a few seconds, the Status line at the bottom of the window will show **Not Connected**.

If TCOM Viewer is left in the Graphic View while Online, there is a timeout that will occur and cause the software to automatically disconnect. This timeout value may be set on the TCOM Viewer Setup window that can be accessed via the File menu on the Main window.

You must Disconnect prior to connecting to any other Site.

## Using One-Time Connect to make a temporary connection


**One-Time Connect** is meant for temporary access to a site and requires only the minimum necessary connection information. The **One-Time Connect** is chosen by clicking the Actions menu at the top of the main window and selecting the **One-Time Connect** item. When a **One-Time Connect** is used, nothing about the connection is saved.

Click the **Actions** menu at the top of the Main window and select the **One-Time Connect** item to begin the process. The Site Properties dialog window will appear. You only need to enter parameters that pertain to the specific communications method being used. Entering “AUTO” for Port numbers will just assume the Default COMx ports specified in the TCOM Viewer Setup dialog window described above. The Site Properties window using One-Time connect is similar the one used during the “Add Site Automatically” process and a description can be found there (see figure 3 and the applicable “Communication methods” notes beneath it)



## Graphic View

Graphic Views of the TCOM Panel's controlled equipment can be provided with a **Graphics Configuration File**, which is an optional data file that can be provided by Orenco Systems.

One or more custom Graphic Views may be available and provided within the **Graphics Configuration File**. A Site listed on the Main window, **Sites** Tab, that has Graphic Views available will show a small painter's pallet icon () in the Status column of the list. If this icon is not present then no graphics have been provided. A **Preview Graphic Views** icon can be selected to show a preview of the graphics views without being connected.

### Entering Graphic View

To make use of the Graphic Views, first connect and logon to the desired **Site**. Depending on the setting in the TCOM Viewer Setup, the Graphic View may come up by default. If a graphic view is available but does not come up after the Status line shows **Online**, click the **Graphic View** Tab. A window will pop up asking permission to switch to "Make Graphics View Active". Answer "Yes" to this window and the first Graphic View will be displayed. The data and animated objects on the Graphic View will update their values/appearance approximately every 5 seconds. Standard format views of Floats and Pumps will change appearance with the current state of those devices.

If there are multiple Graphic Views, the top center information pane will show "1 of 4" or however many views are defined. Clicking (left mouse button) in this information pane will allow a change of views. Each time the view changes, the Status line at the bottom of the Main window will show steps taken to fill the new graphic with real time data.

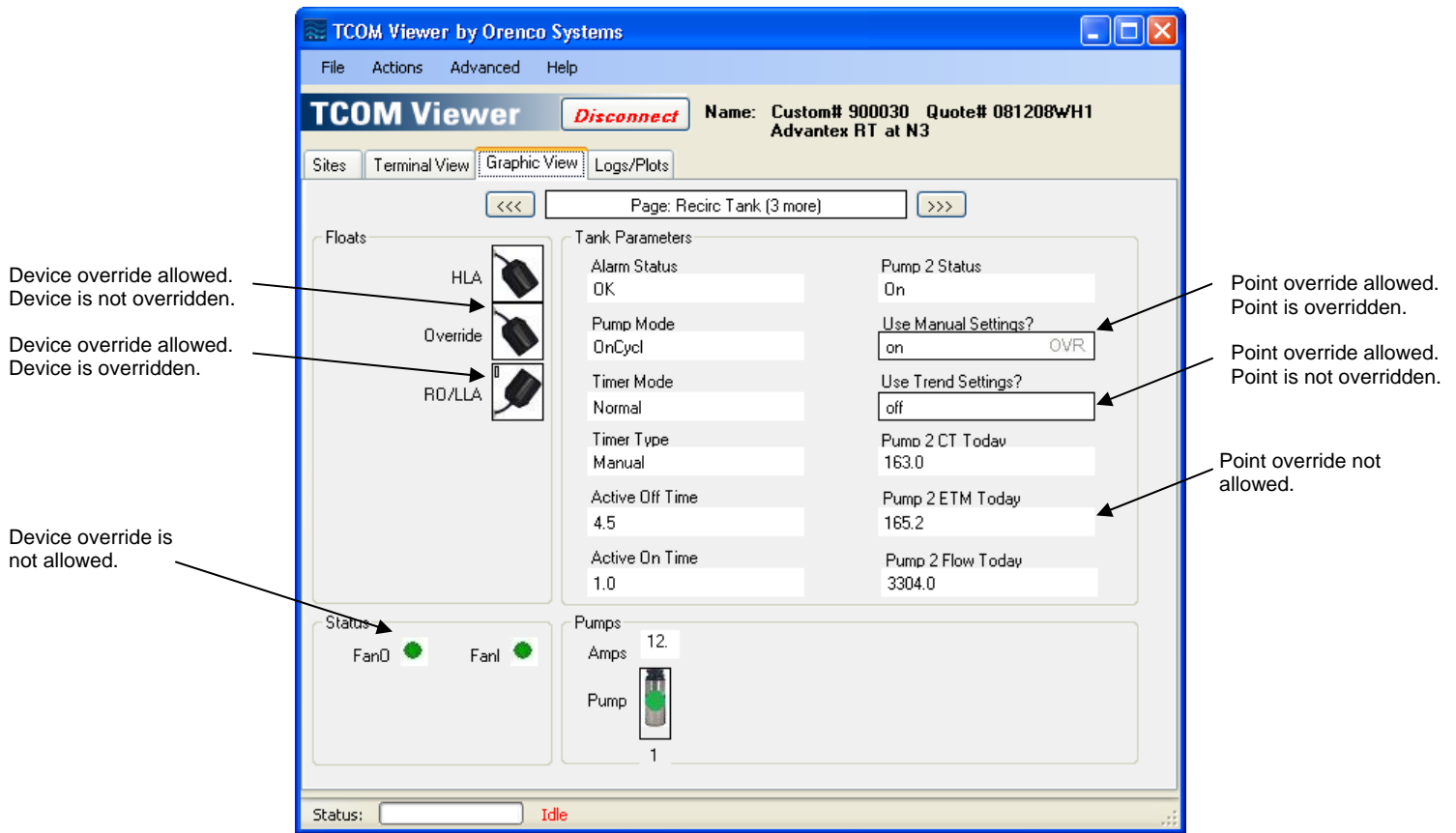
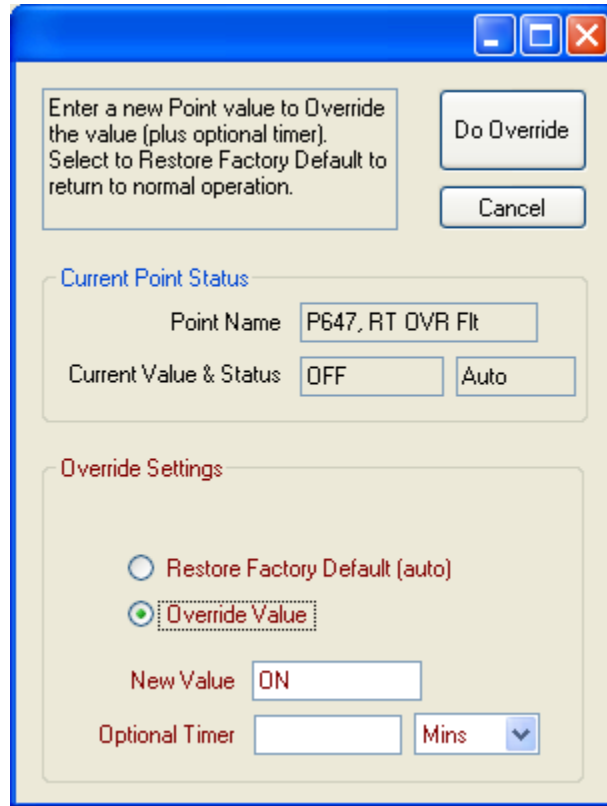


Figure 9 Graphic View Tab window

### Overriding Devices and Parameters in Graphic View

Devices and Parameters that permit the user to override them or modify their values will be shown with a black outline around them and will respond to being clicked with the mouse (left mouse click). Parameters that have been overridden will have the text “OVR” next to them. Devices that have been overridden will have an “O” next to them. When an object that can be overridden is clicked, an Override Dialog window will appear.



**Figure 10 Override Dialog window**

The top section of the Override Dialog window shows the current value/status of the TCOM control's Point value. The example shown is a digital, ON/OFF, type value, Point# 465, that is currently OFF and its Status is "Auto", meaning automatic. The status and override settings options are explained on the following page. Once the desired point adjustments have been entered, click "Do Override" to implement the changes or click "Cancel".

### **Current Point Status**

The "Current Point Status" may be any of the following:

- "Auto" means automatic. A Point in automatic mode will rely on the TCOM custom logic programming to determine the value of the Point.
- "Const" means Constant. A Point with a status of Constant is one that is currently set to a fixed value and is not influenced by the TCOM logic programming.
- "Ovr" means Overridden to ON or OFF. An Overridden Point is set to the current value (ON or OFF) and is not influenced by the TCOM logic programming.
- "Ovr/Timer" means Timed Override. A Timed Override status means that the current value has been overridden for a specified time interval. When the remaining time has expired, the Point value and status will return to a previous setting.

## Override Settings

The “Override Settings” area will display the available choices for overriding a given point.

The choices are used for the following purposes:

- “Restore Factory Default” can be used to return the Point to the factory default setting, which may result in a specific value being set or returning the Point to automatic status.
- “Override Value” can be used to specify a new value to be used for overriding the Point.
- “Timer” or “Optional Timer” is used to specify a time interval for an override to remain in force. After the time duration elapses, the Point value will revert back to the previous setting. Depending on the Point being adjusted, a “Timer” entry may be required, optional, or not available. When not available or the timer value is left blank, the new value specified for the point will be permanent\*.

**CAUTION:** Critical Points, such as the one shown in the example, control the ON/OFF cycling of a pump. Overriding this type of Point using an “Override Value” without an “Optional Timer” value will cause the equipment controlled to remain ON or OFF CONTINUOUSLY! It is generally safe to set any Point using the “Restore Factory Default” option as logic should ensure that the Point will be set to a reasonable value.

### **\*Note (Backup Programming):**

TCOM programming is stored in memory that is maintained with a battery if there is a power interruption. A second copy of the programming can be stored in non-volatile (flash) memory, and this copy of the programming will automatically be loaded if the other programming is lost due to a problem, such as a dead battery. The original factory programming in the TCOM panel is backed up to the non-volatile memory, prior to shipment of the panel. To ensure that parameter changes are permanently saved, the programming should be backed up to non-volatile memory after making the changes. This can be done using the “Backup Programming” option under the “Actions” menu. It is recommended that the panel be in a stable condition (i.e. free of alarms) prior to using the “Backup Programming” command. If there are several parameter adjustments to make, all of the changes can be completed first, followed by a single “Backup Programming” command at the end. Older TCOM panels may not be compatible with the “Backup Programming” command. If an error message is received after selecting “Backup Programming”, please contact Orenco for assistance.

## Logs/Plots

While online with the TCOM Panel, the history logs containing data can be downloaded and viewed by selecting the **Logs/Plots** Tab on the Main window.

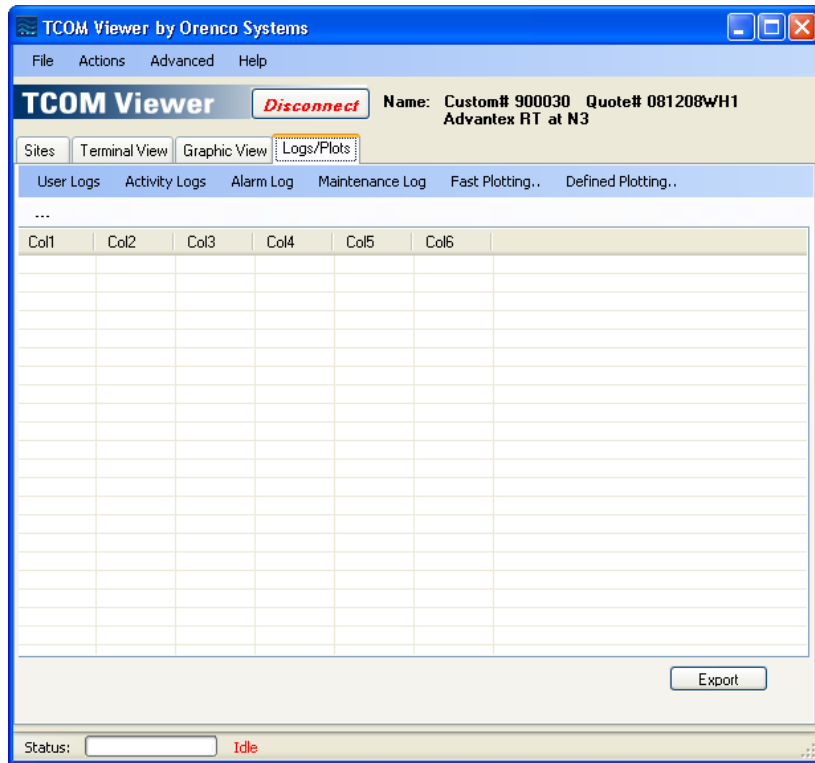


Figure 11 Logs/Plots Tab window

### Determining the Log Content Available for a Panel

A TCOM Panel is customized for each design and the log structure may vary from system to system. For sites that include a configuration file (with or without graphics), the name of the logs will be available when making a selection and the downloaded logs will include point descriptions. For sites without a configuration file, only the log number or point number will be displayed. To determine the structure of the logs when no configuration file exists, there are a couple of options. The first option is to review the documentation that shipped with the control panel for information about which of the possible Logs may be in use and what data values they will hold. A second option is to look up the log information using the terminal view first and then return to the **Logs/Plots** Tab when ready to download the log(s) (see page 40).

## Types of Logs

There are four types of logs and there may be more than one log available of each type.

- **User Log**, is a programmable data log that can save up to 4 data values along with a date/time stamp. User logs include site specific alarms and daily flow history. Most of the commonly needed information for reports and long-term performance tracking can be found in the User Logs. The logs may be viewed on the computer screen, exported to a CSV file, and the data can be plotted as a line plot versus time.
- **Activity Log**, is a programmable data log that can save a single data value, recording its transitions and duration. Activity logs are available for tracking the recent activity of a specific input (e.g. floats) or output (e.g. pumps). Activity logs are mainly used for troubleshooting. The logs may be viewed on the computer screen, exported to a CSV file, and the data can be plotted as a line plot versus time.
- **Alarm Log**, is designed to capture TCOM controller events such as power failures and callout activity. This log may be viewed on the computer screen, and exported to a CSV file.
- **Maintenance Log**, is used to allow operators and service personnel to record actions taken. This log may be viewed on the computer screen, and exported to a CSV file.

## Downloading and Viewing Logs

To view a log, click the menu on the **Logs/Plots** Tab window and select “Show..” from the secondary menu. The Log Retrieval Options dialog window is shown (see Figure 12) to allow the User to select the Log# or Point#, and the Date Span. The Date Span may be one of the suggested time periods or the user may select “Pick Oldest Date” to choose the oldest data date from the calendar control. Once the desired options are entered, click “OK” to start the log download. As the log is downloaded, the status bar at the bottom of the screen will update the progress until the download has completed. If necessary, an in progress log download can be cancelled using the “Abort Current Task” command found under the “Actions” menu.

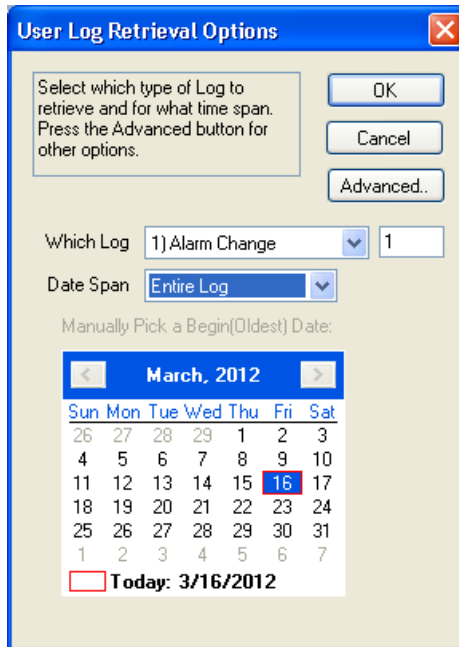


Figure 12 Log Retrieval Options window

Once the Log has been retrieved, it will be displayed on screen in a grid (see figure 13). The user may change the sort order of the data by clicking on the “Sort” column. The column widths can be adjusted, if necessary.

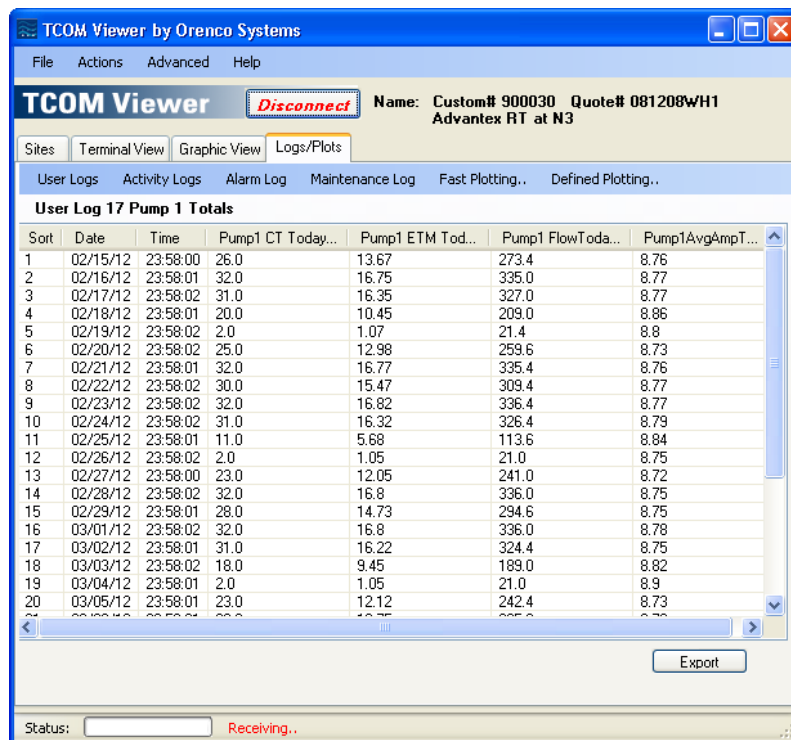


Figure 13 Retrieved Log Example

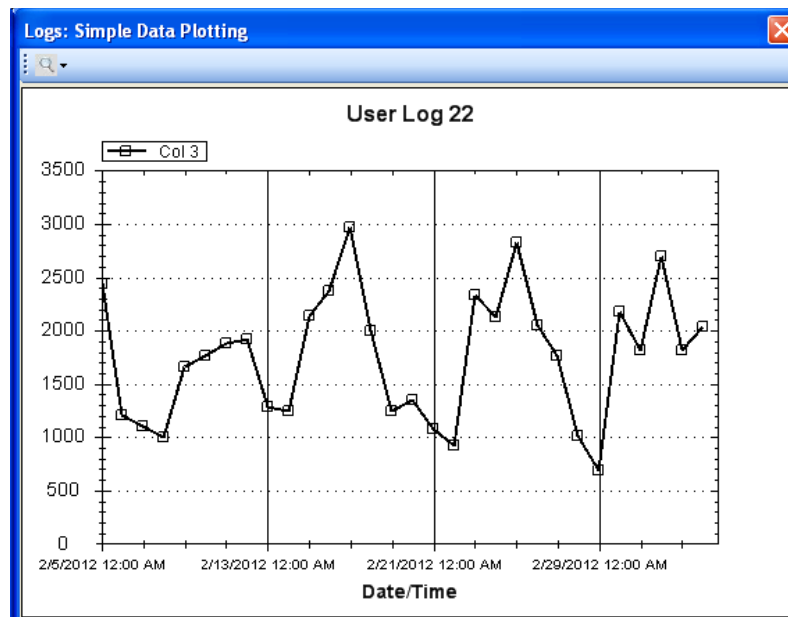
## Exporting Logs

The **Export** button can be clicked to save the log data currently displayed on the screen to a CSV (comma separated value) format file. The default location for saving the exported file is the site folder, but any location can be specified. The CSV file may be loaded into Microsoft Excel, Microsoft Internet Explorer and many other commercial applications for further use. To easily locate the folder for the current site (where the CSV files are saved by default), select “**Explore Site Files**” under the “**File**” menu.

## Fast Plotting

**Fast Plotting**, allows a simple plot to be generated automatically based on the data log currently displayed on the **Logs/Plots** Tab window. To create a fast plot, click the “Fast Plotting...” button. If a User Log is displayed, the User may select which or all of the data values to be plotted together on a single plot versus time. If an Activity Log is displayed, the single data item will be plotted with respect to the beginning and ending dates.

The **Fast Plotting** (Simple Data Plotting) dialog window is shown in figure 14.



**Figure 14 Fast Plot Example**



The Plot can be “Zoomed” by clicking and holding the left mouse button and dragging a box around an area of the plot of interest.

The Plot can be “Panned” by holding down the “Ctrl” key and clicking and holding the left mouse button while dragging the cursor left or right. The plot will be moved left or right accordingly.

Additionally, clicking the spyglass icon above the plot will open a submenu that can be used to undo any Zooming and Print or Save the Plot as a graphic object for future use.

## Defined Plotting

**Defined Plotting** can be obtained through the use of the optional **Site Configuration File**, either graphics or non-graphics. Enhanced log plots, called **Defined Plotting**, allow more complex (up to 8 values at once) plots to be pre-defined for analysis of system performance. An example plot is shown below.

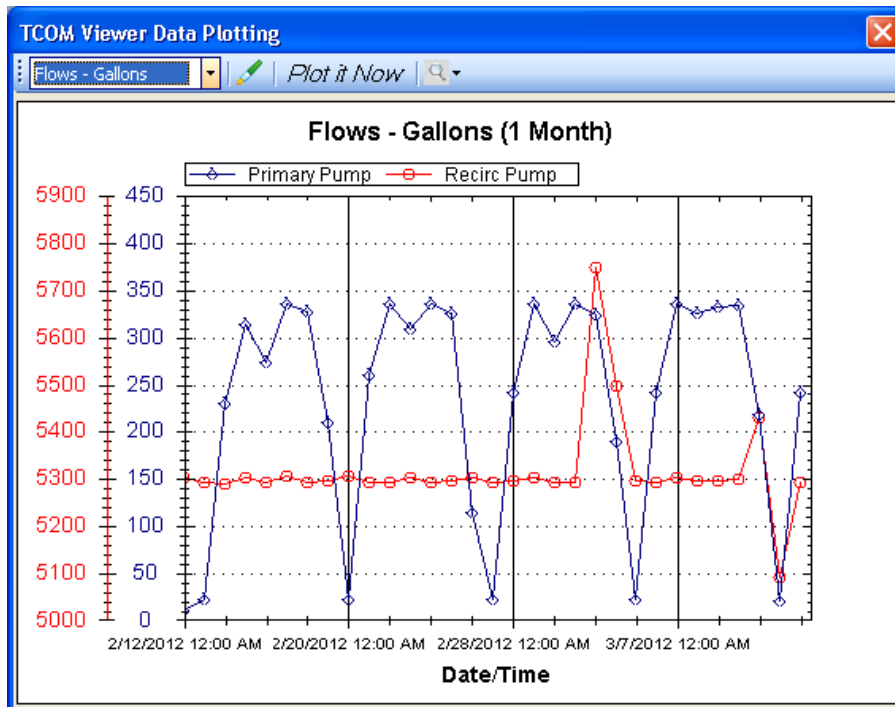



Figure 15 Defined Plot Example

## Selecting a Plot

The pull-down on the left contains the list of available plots for viewing. Select the plot of interest, or close the window to exit.

## Editing a Plot

The Date Range, Pen Color and Style for a defined plot can be edited. With the plot selected, click the  icon to open the edit window. After the desired changes have been made, click “Save” or “Cancel” to exit.

## Generating the Plot

After selecting the plot of interest, click the “Plot it Now” button to generate the plot. TCOM Viewer will then proceed to download the one or more log files required to build the plot. Depending on the required data to build the plot, this may take several minutes. Once all the data is collected, the plot will be drawn. At any time during the log download(s), the process be cancelled using the “Abort Current Task” command found under the “Actions” menu

## Viewing the Plot

The Plot can be “Zoomed” by clicking and holding the left mouse button and dragging a box around an area of the plot of interest.

The Plot can be “Panned” by holding down the “Ctrl” key and clicking and holding the left mouse button while dragging the cursor left or right. The plot will be moved left or right accordingly.

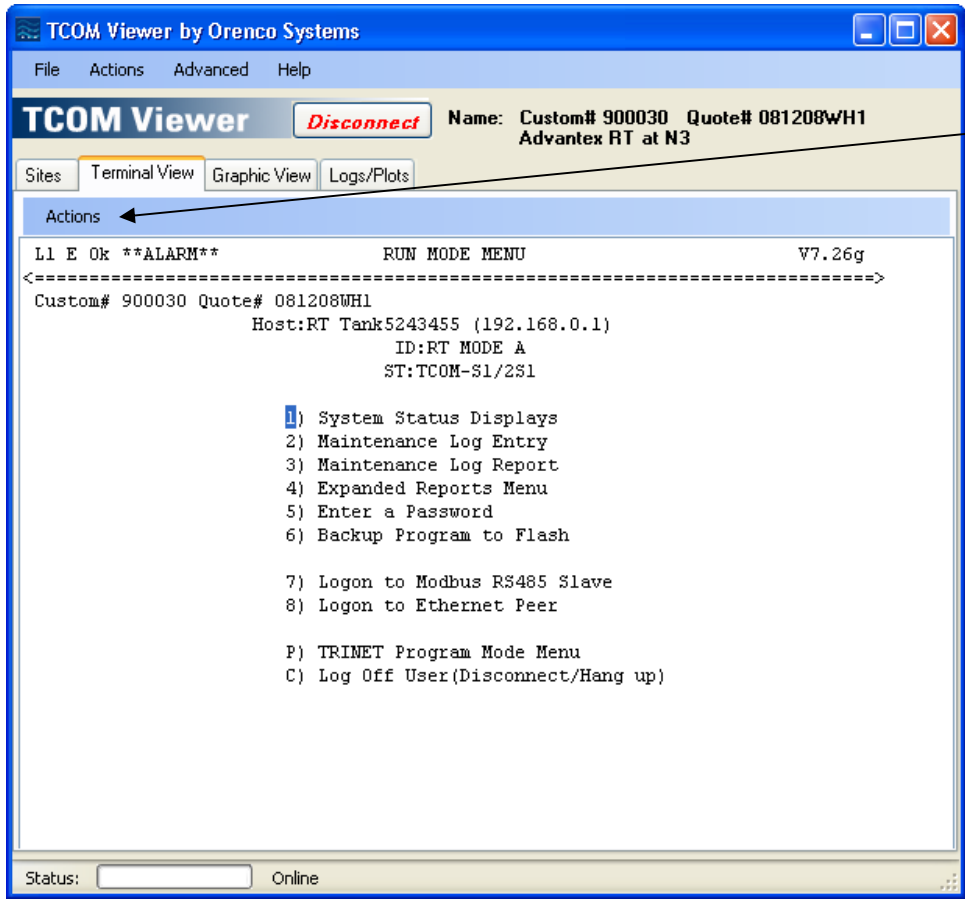
Additionally, clicking the spyglass icon above the plot will open a submenu that can be used to undo any Zooming and Print or Save the Plot as a graphic object for future use.

# Terminal View

The terminal view provides access to a menu driven text interface available on all TCOM panels. Historically, the terminal interface has been the primary means of communicating with a TCOM panel and it is still an important part of TCOM Viewer. The information generated on the terminal screens originates from the TCOM panel and whether TCOM Viewer or another terminal program is used to access a panel in this manner, the experience is similar.

## Entering Terminal View

Terminal View is available while connected to a panel (the status line at the bottom of the Main window shows **Online**). Depending on preferences set in the TCOM Viewer setup and the availability of a configuration file with graphic views, a newly established connection may automatically start in the terminal view. If not active, the terminal view can be selected by clicking on the “Terminal View” tab.



### Note

The following tips apply to all screens within the Terminal View Tab, Actions Menu.

**Clear Terminal Screen** option will clear/restore terminal screen. The last position in the menus, prior to the refresh, may be lost.

**Choose Terminal Colors** option allows you to select color scheme for the current terminal view session. Color scheme will return to the default specified under “TCOM Viewer Setup” for future sessions (Text Color/Background Color).

**Print Terminal Screen** option will print the information shown in the terminal view as text. Text will be printed as black, regardless of terminal color scheme.

Figure 16 Terminal View window

## **Terminal Screen Navigation**

### **Keyboard**

The keyboard is the primary means to move around in the terminal view. The choices may vary from one screen to another, but in general, the following applies:

1. “ESC” is used to cancel, or move back a screen
2. “Tab” can be used to move from one choice to another on a given screen
3. “Return” or “Enter” is used to accept a highlighted menu selection or typed in data
4. Menu items with single character choices such as “2” can be selected by just pressing the “2” key on the computer keyboard.

### **Mouse**

To enhance the use of the TCOM menu system, TCOM Viewer will detect a left mouse button double-click and automatically move the terminal block cursor to that field on the screen. The mouse pointer should be positioned over the first menu/field item character for this feature to work accurately. After the block cursor has been positioned at a menu bullet, press the “Enter” key to select that item and move into the next level of the menu.

### **Screen/Text Size**

The TCOM Viewer window can be resized by using the mouse to click and drag the corners or edges of the window, similar to most other programs. As the TCOM Viewer window is resized, the text size in the terminal view will adjust as well. The last location in the terminal view menus may be lost when the resizing is done. If the terminal screen does not refresh, try hitting the “ESC” key or use the “Clear Terminal Screen” from the “Actions” menu directly above the terminal area.

## Run Mode Menu

The Run Mode Menu is the top (main) screen. The following options are available by pressing the number or letter that corresponds to the desired mode.

```
L2 Ok                               RUN MODE MENU                               V7.26g
<=====
Custom#123456  Quote#012804Q3
=====
Host:PCMNET1370
ID:OSI PROJECT
ST:DDAX PTROCS

1) System Status Displays
2) Maintenance Log Entry
3) Maintenance Log Report
4) Expanded Reports Menu
5) Enter a Password
6) Backup Program to Flash

7) Logon to Modbus RS485 Slave
8) Logon to Ethernet Peer

P) TRINET Program Mode Menu
C) Log Off User (Disconnect/Hang up)
```

### Note

- To select a menu option, press the corresponding letter or number next to the desired page (e.g., press the **1** key for the System Status Displays page).
- Access to the Run Mode Menu options depends on the password level.
- Depending of the age of your panel, some of the menu options may not be available.

### **System Status Displays (1)**

Provides access to a series of screens showing the panel's current activity. Viewing and adjusting parameters can be done in these screens.

### **Maintenance Log Entry (2,3)**

Allows changes or adjustments to the system to be manually logged for future reference.

### **Expanded Reports Menu (4)**

Provides access for viewing Activity, Alarm, and User Logs. Downloading and saving of log files on the computer can only be done using the options found under the **Logs/Plots** tab, when using TCOM Viewer.

### **Enter a Password (5)**

This logs out of the current session, and allows a new User Name and Password to be entered.

### **Backup Program to Flash (6)**

Allows the program to be backed up to non-volatile memory. Backing up the program is recommended whenever permanent changes to operational set-points have been made.

### **Logon to Modbus RS485 Slave (7)**

When multiple panels are on a Modbus network, this option allows access to a Modbus slave.

### **Logon to Ethernet Peer (8)**

When multiple panels are on an Ethernet network, this option allows access to an Ethernet peer.

### **TRINET Program Mode Menu (P)**

TCOM programming logic is maintained in this area. The programming logic is maintained by Orenco.

### **Log Off User (Disconnect/Hang up) (C)**

Disconnects the current session with the controller. Also returns to the main panel if logged onto a networked board.

## Page Select Menu

The Page Select Menu will be displayed after the System Status Displays page has been selected from the Run Mode Menu. The Page Select Menu provides access to predefined pages within the custom application. The pages are grouped for various aspects of your system (e.g., inputs, outputs, system status, settings, flows, etc.) and are available for your viewing. The pages will vary from one panel to another, but will typically include one or more pages of the types described below.

L2 Ok Std	PAGE SELECT MENU
<----->	
a) System Status	A)
b) Recirc Tank Status	B)
c) Dose Tank Status	C)
d) Recirc Tank Settings	D)
e) Dose Tank Settings	E)
f) Recirc Tank Flow Data	F)
g) Dose Tank Flow Data	G)
h)	H)
i) Alarm Settings	I)
j) Log Parameters	J)
k) Misc	K)
l)	L)
m)	M)
n)	N)
o)	O)
p)	P)
q)	Q) Analog Inputs
r)	R) Digital Inputs
s)	S) Digital Outputs
t)	T)
u)	
v)	

### Note

- To select a page, press the corresponding letter next to the desired page (e.g., press the **A** key for the System Status page). When upper and lower case letters are listed, page selection is case sensitive.
- If a letter does not have a description, the page is not used.
- Pressing the **ESC** key will return to the previous page.
- Each page contains 16 points. For example, the System Status page will display points 1 through 16.

### **System Status Page**

The System Status page provides an overview of the the entire system, including current alarm status, pump status, etc.

### **Individual Status Page(s)**

Multiple status pages may be defined for your particular system. Individual status pages provide current information for major system components (e.g., recirc. tanks, dosing tanks, discharge tanks, final disposal, etc.).

### **Settings**

Multiple setting pages may be defined for your particular system. Individual setting pages provide for viewing and adjusting the parameters for each application (e.g., timers, pump flow rate, local alarm delay, pager delays, etc.).

### **Flow Data Page(s)**

Multiple flow data pages may exist for your system. These pages provide detailed flow data (e.g., pump cycles today, pump time today, flow today, etc.).

### **Log Parameters/Misc.**

These pages contain logic involving the user logs and other processes. The points contained on these pages are maintained by Orenco.

### **Inputs & Outputs**

Multiple input and output pages may exist for your system. These pages display the status of digital and/or analog inputs and outputs. Input signals come from devices that are being monitored and would typically include floats. Outputs are devices that are being controlled and would typically include pumps.

## Page Definition & Layout

All of the pages under System Status Display have the same appearance. Each of the pages contains the following nine fields:

The screenshot shows the 'SYSTEM STATUS DISPLAY' page for 'Recirc Tank Status'. The page header includes 'L2 Ok Std', 'SYSTEM STATUS DISPLAY', and 'TUE 2/21/12 11:51'. Below the header, there are fields for 'Custom#123456', 'Quote#012304Q3', and 'Recirc Tank Status'. The main data is presented in a table with columns: PT#, Description, Value, Sts, CurTm, PrevTm, and Why?. The table lists 16 programming points (PT# 17-32) with their respective descriptions, values, and statuses. At the bottom, there is a 'Choices' section with a legend: A(auto) O(on) F(off) C(const) P(point) T(timer) N(num) M(menu) S(setpt).

PT#	Description	Value	Sts	CurTm	PrevTm	Why?
17	RecAlarmStatus	OK	A	99:59:59	0:00:02	"OK"
18	RecPumpMode	OFFCYCL	A	0:01:00	0:01:36	Rule
19	RecLeadPosition	TWO	A	0:00:53	0:03:12	Rule
20						
21	RecTimerMode	NORMAL	A	99:59:59	0:00:00	Rule
22						
23	RecActivOffTime	1.5 Min	A			Rule
24	RecActiveOnTime	1.5 Min	A			Rule
25						
26	Pump#1Status	OFF		0:01:01	0:01:36	Rule
27	Pump#1Current	0.0 Amps				P209
28	Pump#2Status	OFF		0:04:13	0:01:36	Rule
29	Pump#2Current	0.0 Amps				P210
30						
31						
32						

Choices: A(auto) O(on) F(off) C(const) P(point) T(timer) N(num) M(menu) S(setpt)

### Note

- The point numbers can be toggled on/off by pressing the letter **N** and the **Enter** key.
- To see a specific point, press **P** and the **Enter** key. Then enter the point number and press the **Enter** key.

The following tips apply to all screens within the TCOM System.

- **ESC** key exits the current page.
- **PageUp** key scrolls 16 points backward.
- **PageDown** key scrolls 16 points forward.
- **Tab** moves cursor in sequence between control fields.
- **Enter** key executes desired command.

### Page Description (1)

Identifies which page is being viewed (e.g., Recirc. Tank Status).

### PT# (2)

Identifies the program point number. Each page includes sixteen programming points. If the point numbers are not displayed, see NOTE.

### Description (3)

Describes each program point used.

### Value (4)

Displays the current value of the point. This can be displayed as a label (e.g., OK, HiLevel, OFF, OnCycle, etc.), a unit of measurement (e.g., min, gal, amps, etc.), a digital value (e.g., on or off), a date, or time.

### Sts (5)

Indicates the operational status of a point (e.g. Automatic or Constant). If this column contains a letter, the point can be adjusted.

### CurTm (6)

Indicates the time that has elapsed since the point has been assigned the current value.

### PrevTime (7)

Indicates the time that elapsed while the point held a previous value.

### Why? (8)

Gives the reason for the value if available (e.g., rules, inputs, default value, etc.).

### Choices (9)

These options are available under the **Sts** column.



## Adjusting Point Settings

TCOM panels are shipped with default settings. Some parameters may need to be adjusted to make permanent or temporary changes to the operation of a panel. Parameter adjustments are initiated by using the Choice Menu located at the bottom of the System Status Display screens. A parameter can be adjusted if there is a letter listed under the **Sts** column. Depending of the type of point to be adjusted and some other factors, different choices may apply. The options for adjusting points are described on the following pages. To make sure the proper adjustment option is selected and that permanent changes are properly saved, please see the notes below regarding **Program Backup** and **Special Considerations for TCOM Panels with Touch Screens or those tied to a SCADA system**

### **Program Backup**

TCOM programming is stored in memory that is maintained with a battery if there is a power interruption. A second copy of the programming can be stored in non-volatile (flash) memory, and this copy of the programming will automatically be loaded if the other programming is lost due to a problem, such as a dead battery. The original factory programming in the TCOM panel is backed up to the non-volatile memory, prior to shipment of the panel. To ensure that parameter changes are permanently saved, the programming should be backed up to non-volatile memory after making the changes. This can be done by selecting the “**Backup Programming to Flash**” option from the main **Run Mode Menu**. It is recommended that the panel be in a stable condition (i.e. free of alarms) prior to using the “**Backup Programming to Flash**” command. If there are several point adjustments to make, all of the changes can be completed first, followed by a single “**Backup Programming to Flash**” command at the end. Older TCOM panels may not have a menu option for the “**Backup Programming to Flash**” command. If the “**Backup Programming to Flash**” option is not available in the **Run Mode Menu** for your panel, please contact Orenco for assistance.

### **Special Considerations for TCOM Panels with Touch Screens or those tied to a SCADA system**

In cases where a TCOM panel includes a touch screen or is part of a SCADA system, care must be taken when making adjustments to the parameters through the terminal view, in order to prevent locking out access to parameter changes through the touch screen or SCADA software. For these situations, the menu choices of **C(Const)**, **O(On)**, or **F(Off)** should be avoided as they will be treated with the highest priority and requests for parameter adjustments from elsewhere will be ignored. In most cases, the **S(setpt)** choice is recommended for adjustments. The **S(setpt)** choice will send the requested parameter change for a short duration and then release the point to automatic, so that the touch screen or SCADA can have access to make changes. Some older panels may not have a **S(setpt)** choice, but the same result can be obtained by using the **T(timer)** option and specifying 10 seconds for the time duration of the override. In some panels, there may be points that are subject to adjustments from outside sources and some that are not. If not sure, set the point to automatic first, using the **A(auto)** choice, after first recording the current value, and observe the value under the “Why?” column. Once the screen updates, if the value found there is a reference to the same point number on the far left, the **S(setpt)** choice should be used. Otherwise, it should not be used.

## Overriding a Digital Point to On

When a point is forced to ON, the logic for that point is overridden. The point will no longer use the internal programming to determine its state. The point will continue to stay on until it is returned to the Auto(A) state.

```
L2 Ok Std          SYSTEM STATUS DISPLAY          TUE 2/21/12  11:51
<=====
Custom#123456  Quote#012804Q3          Digital Outputs
Pt#  Description          Value      Sts  CurTm   PrevTm   Why?
641  RecircTankPump1      on         A    0:00:08  0:04:48  Rule
642  RecircTankPump2      off        A    0:01:45  0:01:36  OFF
643  DoseTankPump3        off        A    2:19:27  0:04:07  Rule
644  DoseTankPump4        off        A    0:47:20  0:03:49  Rule
645  AlarmLight           on         O    99:59:59  0:00:04  Ovr/Const
646  AudibleAlarm         on         A    0:02:31  0:00:00  Rule
647
648
649
650
651
652
653
654
655
656

Choices: A(auto) O(on) F(off) C(const) P(point) T(timer) N(num) M(menu) S(setpt)
```

### WARNING

- Changes to parameters must be made between screen updates or they will not be saved. (This can be avoided by pressing the **Enter** key immediately after a letter is entered in the **Sts** column.)
- Overriding point values can severely affect the operation of your system and will not allow the TriNet Logic to control a particular point.

### Note

- If a mistake is made while changing a parameter, press the **ESC** key.
- The point numbers can be toggled on/off by pressing the letter **N** and the **Enter** key.
- To see a specific point, press **P** and the **Enter** key. Then enter the point number and press the **Enter** key.

To force a digital point to ON, follow these steps:

1. Using the **Tab** key or Arrow keys, move the cursor in the **Sts** column to select the point to be overridden.
2. Type **O** and immediately press **Enter** key.

In this example, point #645, “AlarmLight”, has been manually override to ON. The alarm light on the panel will stay on until an “A” is entered at point #645.

## Overriding a Digital Point to Off

When a point is forced to OFF, the logic for that point is overridden. The point will no longer use the TriNet Logic to determine its state. The point will continue to stay off until it is returned to Auto(A) state.

```
L2 Ok Std          SYSTEM STATUS DISPLAY          TUE 2/21/12  11:51
<----->
Custom#123456  Quote#012804Q3          Digital Outputs
Pt#  Description          Value      Sts  CurTm   PrevTm   Why?
641  RecircTankPump1      on         A   0:00:08  0:04:48  Rule
642  RecircTankPump2      off        A   0:01:45  0:01:36  OFF
643  DoseTankPump3        off        A   2:19:27  0:04:07  Rule
644  DoseTankPump4        off        A   0:47:20  0:03:49  Rule
645  AlarmLight            off        A   99:59:59  0:00:04  OFF
646  AudibleAlarm         off        F   0:02:31  0:00:00  Ovr/Const
647
648
649
650
651
652
653
654
655
656

Choices: A(auto) O(on) F(off) C(const) P(point) T(timer) N(num) M(menu) S(setpt)
```

### WARNING

- Changes to parameters must be made between screen updates or they will not be saved. (This can be avoided by pressing the **Enter** key immediately after a letter is entered in the **Sts** column.)
- Overriding point values can severely effect the operation of your system and will not allow the TriNet Logic to control a particular point.

### Note

- If a mistake is made while changing a parameter, press the **ESC** key.
- The point numbers can be toggled on/off by pressing the letter **N** and the **Enter** key.
- To see a specific point, press **P** and the **Enter** key. Then enter the point number and press the **Enter** key.

To force a digital point to OFF, follow these steps:

1. Using the **Tab** key or Arrow keys, move the cursor in the **Sts** column to select the point to be overridden.
2. Type **F** and immediately press the **Enter** key.

In this example, point #646, “AudibleAlarm”, will be manually turned off. The audible alarm on the panel will stay off until an “**A**” is entered at point #646.

## Constant Override of a Numeric Point Value

Numeric points that can be overridden are usually found on the setting page(s) and contain a units label (e.g., mins, hrs, GPM, etc.). Overriding a numeric value will cause the logic to adjust and implement changes. For TCOM panels that include a touch-screen, point adjustments of this nature may need to be made using the **S(setpt)** choice, which is described on the next page.

```
L2 Ok Std          SYSTEM STATUS DISPLAY          TUE 2/21/12  11:51
<=====>
Custom#123456  Quote#012804Q3          Dose Tank Settings
Pt#  Description          Value          Sts CurTm    PrevTm    Why?
65
66 Pump3Flow              30.0 GPM      A
67 Pump4Flow              30.0 GPM      A
68
69
70
71
72 Pump3HiAmpLimit        12.0 Amps     C          Ovr/Const
73 Pump3LoAmpLimit        8.0 Amps      A          8.0
74 Pump4HiAmpLimit        12.0 Amps     A          12.0
75 Pump4LoAmpLimit        8.0 Amps      A          8.0
76
77
78
79
80

Enter constant value (+-xxx.x or Label): 14.0
Choices: A(auto) O(on) F(off) C(const) P(point) T(timer) N(num) M(menu) S(setpt)
```

### WARNING

- Changes to parameters must be made between screen updates or they will not be saved. (This can be avoided by pressing the **Enter** key immediately after a letter is entered in the **Sts** column.)

### Note

- If parameters have been adjusted, and the changes are intended to be permanent, the program should be backed up from the "Run Mode Menu". See page 31 for additional information.
- If a mistake is made while changing a parameter, press the **ESC** key.
- The point numbers can be toggled on/off by pressing the letter **N** and the **Enter** key.
- To see a specific point, press **P** and the **Enter** key. Then enter the point number and press the **Enter** key.

To force a numeric point to a constant value, follow these steps:

1. Using the **Tab** key, move the cursor in the **Sts** column to select the point to be overridden.
2. Type **C** and immediately press the **Enter** key.
3. Enter the new constant value, press the **Enter** key.

In this example, point #72, "Pump3HiAmpLimit", will be changed from 12.0 to 14.0 Amps.

## Set Point Adjustment of a Point Value

The **S(setpt)** option is recommended for adjusting points when a panel includes a touch screen or is part of a SCADA system. The Set Point function will change a point for a short interval and then release the point to automatic. Points that are suitable for using the **S(setpt)** option should appear similar to those shown in the example below, meaning that when the point has a status of “**A**”, the point number is listed under the “**Why?**” column. If the **S(setpt)** option is not available in the choices, the **T(timer)** option can be substituted and achieve the same result, by specifying a time value of 10 seconds for the duration of the timer.

```

L2 Ok Std          SYSTEM STATUS DISPLAY          TUE 2/21/12  11:51
<----->
Custom#123456  Quote#012804Q3          Dose Tank Settings
Pt#  Description          Value      Sts CurTm   PrevTm   Why?
65
66 Pump3Flow              30.0 GPM   A
67 Pump4Flow              30.0 GPM   A
68
69
70
71
72 Pump3HiAmpLimit        12.0 Amps  A          P72
73 Pump3LoAmpLimit        8.0 Amps   A          P73
74 Pump4HiAmpLimit        12.0 Amps  A          P74
75 Pump4LoAmpLimit        8.0 Amps   A          P75
76
77
78
79
80

Enter constant value (+-xxx.x or Label):  14.0
Choices: A(auto) O(on) F(off) C(const) P(point) T(timer) N(num) M(menu) S(setpt)

```

### WARNING

- Changes to parameters must be made between screen updates or they will not be saved. (This can be avoided by pressing the **Enter** key immediately after a letter is entered in the **Sts** column.)

### Note

- If parameters have been adjusted, and the changes are intended to be permanent, the program should be backed up from the "Run Mode Menu". See page 28 for additional information.
- If a mistake is made while changing a parameter, press the **ESC** key.
- The point numbers can be toggled on/off by pressing the letter **N** and the **Enter** key.
- To see a specific point, press **P** and the **Enter** key. Then enter the point number and press the **Enter** key.

To change a point value using the set point option, follow these steps:

1. Using the **Tab** key, move the cursor in the **Sts** column to select the point to be overridden.
2. Type **S** and immediately press the **Enter** key.
3. Enter the new value and press the **Enter** key.
4. The point will show that it has been overridden with a timer for about 10 seconds and will then return to automatic. The new value should hold after the timer expires.

In this example, point #72, “Pump3HiAmpLimit”, will be changed from 12.0 to 14.0 Amps.

## Adjustment of a Point Value with a Timer

The **T(timer)** option allows an adjustment to a point for a specified time period. Depending on the type of point and logic associated with it, the point may return to a previous value or continue to hold the new value once the timer has expired. The **T(timer)** option is a good choice in many cases, as the panel typically will be left in a stable state after the timer expires. This could be an important consideration when dealing with a remote connection to a panel that could be unexpectedly lost.

```
L2 Ok Std          SYSTEM STATUS DISPLAY          TUE 2/21/12  11:51
<=====
Custom#123456  Quote#012804Q3          Digital Outputs
Pt#  Description          Value      Sts CurTm   PrevTm   Why?
641  RecircTankPump1      on         T  0:01:03  0:00:38  Rule
642  RecircTankPump2      off        A  0:04:15  0:01:36  Rule
643  DoseTankPump3         off        A  2:41:10  0:04:07  Rule
644  DoseTankPump4         off        A  1:09:03  0:03:49  Rule
645  AlarmLight            off        A  0:21:25  0:00:11  OFF
646  AudibleAlarm         off        A  0:24:14  0:00:00  Rule
647
648
649
650
651
652
653
654
655
656

Enter Override Time (hh:mm or xxx secs): 120
Choices: A(auto) O(on) F(off) C(const) P(point) T(timer) N(num) M(menu) S(setpt)
```

### WARNING

- Changes to parameters must be made between screen updates or they will not be saved. (This can be avoided by pressing the **Enter** key immediately after a letter is entered in the **Sts** column.)

### Note

- If parameters have been adjusted, and the changes are intended to be permanent, the program should be backed up from the "Run Mode Menu". See page 31 for additional information.
- If a mistake is made while changing a parameter, press the **ESC** key.
- The point numbers can be toggled on/off by pressing the letter **N** and the **Enter** key.
- To see a specific point, press **P** and the **Enter** key. Then enter the point number and press the **Enter** key.

To change a point value using the timer option, follow these steps:

1. Using the **Tab** key or Arrow keys, move the cursor in the **Sts** column to select the point to be overridden.
2. Type **T** and immediately press the **Enter** key.
3. Type **O** (on), **F** (off), the desired numeric value or the label, and press the **Enter** key.
4. Enter the length of Time (if seconds are needed, enter the number of seconds, such as, 120); if hour or minutes are needed, enter value with a colon, (such as, HH:MM); then press the **Enter** key.

In this example, point #641, the "RecircTankPump1", will be turned on for 120 seconds; then it will return the previous status. As the timer counts down, the remaining time will be shown under the **Why?** column.

## Point Menu

A point can be evaluated in detail using the menu option in the choices. The type of information presented is useful for various troubleshooting procedures. The cursor must be placed in the **Sts** column of the point for evaluation. Common functions are as follows:

```

L2 Ok Std          SYSTEM STATUS DISPLAY          TUE 2/21/12  11:51
<----->
Custom#123456  Quote#012804Q3          System Status
Pt#  Description          Value          Sts CurTm          PrevTm          Why?
1 AlarmStatusRec          LwllLvl          M_ 99:59:59      0:00:04          P17
2 PumpModeRec              OFF              0:01:10          0:01:36          P18
3
4 RecFlowToday              14769 Gal          P91
5
6 AlarmStatusDose          OK              99:59:59          0:00:56          P33
7 PumpModeDose              PUMPOFF          0:42:28          0:03:53          P36
8
9 DoseFlowToday              1437.0 Gal          P107
10
11 AlarmStatGrease          OK              99:59:59          0:00:00          "OK
12
13 AlarmStatSeptic          OK              99:59:59          0:00:00          "OK
14
15
16

Choices: A(auto) O(on) F(off) C(const) P(point) T(timer) N(num) M(menu)

```

### Note

- If a mistake is made while entering a choice, press the **ESC** key.
- The point numbers can be toggled on/off by pressing the letter **N** and the **Enter** key.
- To see a specific point, press **P** and the **Enter** key. Then enter the point number and press the **Enter** key.

## To View Details of a Specified Point

1. Using the **Tab** key or Arrow keys, move the cursor in the **Sts** column to select the point to be evaluated.
2. Type **M** in the **Sts** Column and immediately press the **Enter** key.

The current value of the selected point is displayed.

```

L2 Ok Std          SYSTEM STATUS MENU
<----->
Custom#123456  Quote#012804Q3

Point# 1 (AlarmStatusRec) is now:          LowLvl

A) Explain the Point Value

B) Page Select Menu          K) Analog Input Display
C) Time Program Display      L) Analog Output Display
D) Holiday Display           M) Digital Input Display
E) Optimizer Display         N) Digital Output Display
F) Rule Display              O) Point Timer Display
G) Enter/Edit Time Program   Q) Alarm Log
H) Enter/Edit Holiday        S) Activity Log
I) Change Time/Date          U) User Log
J) PID Logic Display          T) Composite Time Prog Disp
W) Sequencer Display         V) RS485 Netwk Value Display
                              X) Peer Netwk Values Display

R) TRINET Run Mode Menu      P) TRINET Program Mode Menu

```

### WARNING

- The options on the System Status Menu not described in this manual are not for an operator's use.

### Note

- If a mistake is made while entering an option, press the **ESC** key.
- Pressing the **ESC** key at anytime will return to the previous screen.

## Explain the Point Value (A)

This option will describe the program logic that is currently responsible for the point's value. All other logic possibilities are listed.

```
POINT VALUE EXPLANATION
=====
TUE 2/21/12  11:34 Std
Point# 1 (AlarmStatusRec) is now:      LowLvl
DUE TO Rule 119

Logic that exists for this point:
      Rule Changes Point
      Used by Rule
      Point Definition Default

Press any key to continue
```

### Note

- Pressing the **ESC** key at anytime will return to the previous screen.

## Rule Display (F)

The rules for the point can be displayed. The rule controlling the point will be displayed first. The other rules that apply to the point can be displayed by repeatedly pressing the Enter key.

```
L2 Ok Std          CONTROL RULE SUMMARY
<=====>
POINT: 1 (AlarmStatusRec) {LowLvl }  RULE: 119 {true}
-- IS --
  "LowLvl
-- IF --
P35 (BottomFloat) {OK} = "OK
-- AND --
P179 (RO) {off} = OFF

LIST RULE # (1-256): 0
```

### Note

- If no rules are controlling a point, a message of "No Rule Applies!" will be displayed.
- Pressing the **ESC** key at anytime will return to the previous screen.



## Change Time/Date (I)

The time and date are used in the programming, so it is necessary for the TCOM panel to have the correct time and date. The clock is 24-hour and does not require AM or PM.

```
L2 Ok Std          SYSTEM DEFINITIONS
<----->

Current Date: 2/21/12
Current Time: 15:42
Standard/Daylight Time (S,D,N=n/u): S
Hours Offset from GMT (+-hours): 0
```

### Note

- TriNet's date format is mm/dd/yy.
- The clock must include the colon between the hour and minutes.
- Define whether the current setting is standard time (S) or daylight savings time (D).
- Press the **Tab** key to switch between fields.
- Press the **Enter** key to save the changes.

## Input & Output Displays (K-N)

These pages will display the current values for the analog/digital inputs or outputs.

```
TRINET V7.26g ANALOG INPUT REPORT          2/21/12 15:44
Custom#123456 Quote#012804Q3

#  Description      Status
1  Power Supply     23.98 Vdc
2  Pump1CS         11.3 Amps
3  Pump2CS         0.0 Amps
4  Pump3CS         0.0 Amps
5  Pump4CS         0.0 Amps
6
7
8

Press ESC to cancel, or any other key to continue
```

## Logs (Q,S,U)

These pages will display the activity log, alarm log, or a user log.

The activity log will report input or output activity with a date and time stamp. To view an activity log, the cursor must be on the digital input/output to be monitored before entering the System Status Menu.

The alarm log will report any PC board failures (e.g., low battery, power failures).

User logs include site specific alarms and daily flow history. Most of the commonly needed information for reports and long-term performance tracking can be found in the User Logs. The user logs will be listed with a brief description.

```
TRINET V7.26g ACTIVITY LOG REPORT                2/21/12 16:53
Custom#123456 Quote#012804Q3
                POINT 245 (AlarmLight) ACTIVITY DATA

ACTIVITY logged:
Cause of Activity  Item  Value  Start  Start  End  End
                ,AlarmLight 245   on   2/21/12 12:14:40 2/21/12 12:14:51

Press ESC to cancel, or any other key to continue
```

### Note

- If no data is available to report from the logs, a message of “No Data to Report” will be displayed.
- Pressing the **ESC** key at anytime will return to the previous screen.

To download a log and store it to a computer for future use, use the functions found under the **Logs/Plots** tab of TCOM Viewer. If there is not a configuration file available for the current site, the descriptions of the logs may only be available in the terminal view, so the log numbers and descriptions may need to be noted prior to leaving the terminal view.

## Maintenance Log

The maintenance log allows changes or adjustments to the system to be manually logged for future reference.

```
L2 Ok                      RUN MODE MENU                      V7.26g
<=====>
Custom#123456  Quote#012804Q3

Host:PCMNET1370
ID:OSI PROJECT
ST:DDAX PTROCS

1) System Status Displays
2) Maintenance Log Entry
3) Maintenance Log Report
4) Expanded Reports Menu
5) Enter a Password
6) Backup Program to Flash

7) Logon to Modbus RS485 Slave
8) Logon to Ethernet Peer

P) TRINET Program Mode Menu
C) Log Off User(Disconnect/Hang up)
```

## Entering Maintenance Notes

1. Press **2** from the Run Mode Menu.
2. Type the desired note.
3. Press the **Enter** key.

```
L2 Ok Std                  MAINTENANCE LOG
<=====>

User Name: sammyT
Date/Time: 2/8/12  1:26:18
Notes: everything looks OK
```

### Note

- Notes cannot be over 50 characters.

## Viewing the Maintenance Log Report

1. Press **3** from the Run Mode Menu.
2. Select **A** for Report Format.
3. Select **A** for Transmission Format.
4. Press the **Enter** key.
5. Type **Y** to pause after each screen.
6. Press the **Enter** key to generate report.

Date	Time	User name	Notes
2/1/12	12:47:36	OSI	Recirc OVRTimer on/off to 75min/60sec
2/8/12	11:26:18	sammyT	everything looks OK

Press ESC to cancel, or any other key to continue