# **Users Guide**

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# **OWMT-SOFT**

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WARNING: These products are not designed for use in, and should not be used for, human applications.

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# **Overview**

# **Description**

OWMT-SOFT is a data acquisition monitoring system for the personal computer.

It was designed and developed for use with the Microsoft® Windows® operating systems. This makes OWMT-SOFT easy to install, setup and, operate. This puts all the features you need within the familiar easy to use Windows® operating environment including complete online help for all functions.

All data collected may be viewed graphically in real time or as a historical display. OWMT-SOFT shows trends, minimum and maximum and indicates alarms. ASCII data logging to a file is also available to allow import into other programs such as spreadsheets and data base programs.

OWMT-SOFT can be used to collect data from a wireless network. Data from up to six sensors can be displayed. Currently supported sensors include:

OMWT-TEMP15 Temperature
OMWT-TEMPRH Humidity
OMWT-AIN5V Analog 5 Volt'
OMWT-AIN10V Analog 10 Volt
OMWT-AIN20MA Analog 20 MA
OMWT-VIB Vibration
OMWT-MOT Motion

OWMT-SOFT is actually a DDE client application that works in concert with a DDE server application called OWMT-SOFT-DDE. OWMT-SOFT-DDE handles the details of communicating or receiving data from the wireless sensors. OWMT-SOFT-DDE verifies that the communication is correct, processes the sensor samples and then forwards the data to the DDE client. OWMT-SOFT is responsible for the presentation and analysis of the collected data.

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### **Quick Start**

When OWMT-SOFT runs for the first time this help screen is displayed

You may access this screen again by clicking **Help** on OWMT-SOFT menu bar then select **Contents** then **Quick Start**. A shortcut icon will be created in the installation program group that points to the "OWMT-SOFT.HLP" file.

Make sure your receiver is plugged into your serial port and that no other application is using that port before you start OWMT-SOFT. OWMT-SOFT will try to find the receiver. If it cannot find the receiver, you may specify which receiver and COM port you are using.

OWMT-SOFT begins in **Numeric mode**. All **alarms** are disabled, data logging is disabled, and historical data accumulation is set Start/Stop. To enable or change any of these features you will need to click the Setup menu and select the OWMT-SOFT Setup or Device Setup menus.

To use the **Historical View** option you must let OWMT-SOFT run for a while to accumulate some data to be displayed. While in **Historical View** mode you can Zoom and **Analyze** the data. An example session is provided.

#### Wireless Setup

OWMT-SOFT automates the process of setting up your hardware. You have to select the sensors you want to use. Follow these steps to start.

- 1. Connect your receiver (OWMT-RS232-600) into your serial port. Verify that no other software is using this serial port.
- 2. Start OWMT-SOFT. OWMT-SOFT will display the Quick Start help the first time.
- 3. Once the Quick Start Help is exited, OWMT-SOFT will try to find a receiver. If it cannot find a receiver, OWMT-SOFT will prompt for a receiver type and port number. When OWMT-SOFT finds a receiver, it will display the "Add Wireless Device" window.
- 4. You will need to define what sensors, OWMT-SOFT will use. When OWMT-SOFT receives packets from wireless sensors, it will name them and display their name and serial numbers in the "New Device" listbox. You can speed up OWMT-SOFT-DDE's collection of sensors by un-checking "Service Mode Only" (which is checked by default). If "Service Mode Only" is checked, then OWMT-SOFT-DDE will only display sensors received by pressing the service button on the wireless sensor. This allows you greater control in selecting wireless sensors.
- 5. When the correct sensors are displayed, click on a sensor to highlight it and click on the "Edit" button. A setup screen will appear. Select the transmission rate for the sensor. The default is 60 seconds. OWMT-SOFT will use this transmission rate to determine if a device is offline. By default, a device is considered offline if OWMT-SOFT has not received a packet from the device in (3 \* the transmission rate) seconds. This interval can be changed.

- 6. When you have the sensors you want, click "OK" to start viewing their data.
- 7. OWMT-SOFT will now display the data received by the receiver.

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# Setup

# **General**

Setup enables you to customize the settings for OWMT-SOFT, such as enabling/disabling functions, setting alarm levels, and sound/image file selection. For ease of use setup has been broken into sections with functions grouped by type.

- **OWMT-SOFT SETUP:** Basic configuration options: default units, Labels, Etc.
- DEVICE SETUP: Sets labels, alarms, images, and sounds for each device.
- **RECONFIGURE:** Adds new devices, resets graphs, restarts historical and log files.
- CLEAR LOG FILES: Delete or empty log and historical files.
- **REMOVE DEVICE:** Remove unused devices.

# **OWMT-SOFT Setup**

# **Do Not Prompt For Temperature From Probe**

If this box is checked then OWMT-SOFT will not prompt you to create a temperature object from the temperature sensor contained inside some probes such as humidity.

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#### **Trend Sensitivity**

This field requires a number of seconds between 1 and 255, which sets the length of time for the running average used to calculate the trend sensitivity. The larger the number the slower the trend will respond to changes.

The default value is 20 seconds.

#### **Units**

The units field selects which scale OWMT-SOFT will use to display readings for devices that have more than one scale.

There are three temperature scales Fahrenheit, Celsius and, Kelvin.

There are seven pressure scales in of Hg, kiloPascal, milliBar, cm of H2O, mm of Hg, kg / cm2 and, atmos.

Analog devices can be set up for any units, but the default is %. Set up the units for analog in the "Device Setup" screen.

Changing any unit field will cause current graph(s) and display(s) using the changed unit to be recalculated and updated based on the new units setting.

The default value for temperature is Fahrenheit.

The default value for pressure is in of Hg.

Note: If the units are changed while OWMT-SOFT is logging ASCII data a new header record will be inserted into the file. However you may want to stop OWMT-SOFT first and rename your log file to prevent having two types of data in the same file. This can make the data confusing and difficult to analyze.

# **Graphing**

#### Display Grid

If this box is checked then vertical and horizontal grid lines will be displayed on both Real Time and Historical Graphs.

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#### Alarm Lines

If this box is checked then horizontal lines will be displayed on the Real Time graph to show where the current high/low alarm set points are.

# **Alarming**

#### Alarm Notification Window

If this box is checked then OWMT-SOFT will pop a notification window up on top of the current application when any alarm condition occurs.

This window will also display the nature of the alarm and start the Alarm Sound.

Clicking the **OK** button on the alarm notification window will close it and stop the alarm sound if it is set to Sound Continuously.

Default setting is on. (Checked.)

#### Sound Continuously

If this box is checked then the currently selected sound will be repeated until the user acknowledges the alarm condition by clicking the **OK** button on the alarm notification window.

The default setting for this is enabled. (Checked.)

# Logging

#### Log File Enable

If this box is checked then the log file "OWMT-SOFT.LOG" will be updated with readings based on the current Log File Rate. Each log files first record will be a header formatted as follows:

"DeviceA Serial Number,DeviceA Type,DeviceA Name,Current Units","DeviceB Serial Number,DeviceB Type,DeviceB Name,Current Units" and so on for each device.

Scale will be the current unit setting for the device.

Values logged will be in the current scale unit. Changing units with logging enabled will result in two or more different types of readings in the same file.

If devices are changed by adding, removing, or replacing, a new header record will be generated inside the file to separate the data.

If "OWMT-SOFT.LOG" does not exist then OWMT-SOFT will create this file in the same directory where OWMT-SOFT resides, typically C:\OWMT-SOFT.

The following format is used to log data readings:

Time, Date, Data A, Data B

Example: 13:44:30,3/22/96,54.70,70.34

#### Log File Rate

This field requires a number between 1 and 32,767, which will represent the number of seconds between readings being written to log file. The value of this field will have no effect unless Log File Enable has been checked.

The default value is 60.

**Caution:** Setting this value to a low number and allowing OWMT-SOFT to run for long periods of time will result in a very large log file.

#### **Historical**

#### Historic Session

A new session is created each time OWMT-SOFT is started or when the **Historic Period** has expired. The length of a Historic Session is selectable by the user in setup.

If historic data is enabled and the user changes session length i.e. from 4 hours to 8 hours, OWMT-SOFT will terminate the current session and start a new session based on the new session length.

#### Historic Period

This field displays a selection box for the user to choose how long a session will be. Choices are NONE, Start/Stop, 4, 8, 12 hours and 1, 2, 3, 5, 7 days. When NONE is selected no historical data is saved. The **Historic Rate** is changed automatically when Historic Period is changed. It will be from 1-42 seconds depending on the length of period selected. When Start/Stop is selected a button will appear on the

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toolbar to allow you to start and then stop a historical session. While in Start/Stop mode data is logged at once per second with a 10 second minimum.

The default value is Start/Stop.

#### Historic Rate

This field is display only, and displays the current rate of logging based on the session period selected. Rate is defined as number of updates per second and ranges from 1-42. The longer the **Historic Period** the more delay between updates. At 4 hours, 1 update per second will occur. At 7 days, 1 update per 42 seconds will occur.

# **Device Setup**

#### **Select Device**

All devices that are or have been active are displayed in the select device to edit window. The current online device(s) will have an \* in front of their name.

#### Add Difference Monitor Button

When selected, OWMT-SOFT adds a Difference Monitor device to the Select Device list. You then can setup the Difference Monitor as you would any other device, specifying a name, alarm points, etc. A Difference Monitor allows you to view the difference between two like devices, for instance, two temperature sensors or two analog sensors. When configuring a Difference Monitor for analog sensors, the analog sensors must have matching units, scale, and offset. If there are too many sensors on the Real-Time View, the Difference Monitor may not be displayed.

#### **Label Tab**

#### Serial Number

Displays currently selected device's serial number. Cannot be edited or changed.

#### Name

A 10 character alphanumeric field to allow the user to enter a unique name or ID for each device.

Default setting for each device is 10 characters derived from the device's serial number.

#### Description

A 60-character text field to allow the user to enter a unique device description into for reference.

#### **Type**

Displays the currently selected devices type. Cannot be edited or changed.

Current supported device types are Temperature, Analog, and Humidity/Temperature. The following sensors are supported:

Temperature

Temperature

Temperature Probe

Thermistor

Humidity/Temperature

Analog

Analog 5V

Analog 10V

Analog 20ma

Pressure

Vibration

# **Alarming Tab**

#### Alarm Levels

Checking the enable box will enable high/low alarming for selected device. High and low alarm points should then be entered for that device.

Default setting for device is disabled. (Not checked)

#### Alarm Rate of Change

Checking the enable box will enable rate of change alarming for selected device. A value in current units per minute should then be entered for that device. And check "+" or "-" slope to determine whether the alarm will occur when the rate of change is increasing "+" or decreasing "-". Both "+" and "-" slopes may be selected at once.

In order for the alarm to trigger again the slope has to be zero or change direction.

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Default setting for device is disabled. (Not checked)

#### **Alarm Sounds Tab**

If Alarm Notification is enabled for a device then sounds will be enabled for that device.

These sounds are played when the alarm notification window is displayed.

#### **Default Sounds**

If this box is checked then currently available Windows® sounds will be used for alarm notifications. Otherwise "WAV" file sound will be enabled. OWMT-SOFT has default "WAV" files for all alarms. These may be changed through setup.

The default setting for this is disabled. (Not Checked.)

#### WAV File Selection

If Alarm Notification is enabled for a device then sounds will be enabled for that device.

These sounds are played when the alarm notification window is displayed.

If default sounds are selected then "WAV" files cannot be played.

To have OWMT-SOFT play a "WAV" file for the alarm condition indicated, you can either type the name of the "WAV" file in the setup dialog box including the full path (if no path is entered OWMT-SOFT expects the file to be located in the OWMT-SOFT directory or in the Windows® directory), or click the browse button and use the Windows® file selection window to find and select the desired "WAV" file. You may use the same file for all alarms or you may have a different file for each alarm. Clicking the play button allows you to preview the sound.

# **Alarm Images Tab**

#### Bitmap (BMP) File Selection

You may select the images OWMT-SOFT displays for the alarm conditions. You can click the image you want to change or click the browse button and use the file selection window to find and select the desired "BMP" file.

OWMT-SOFT has a set of four images that are used as the default images for alarms.

The bitmap image is displayed as a 100 X 100 pixel image. If you select an image that is larger than this, it will be scaled to fit and may not appear as expected.

#### **Trend Images Tab**

#### Bitmap (BMP) File Selection

You may select the images OWMT-SOFT displays for trends. You can click the image you want to change or click the browse button and use the file selection window to find and select the desired "BMP" file.

OWMT-SOFT has a set of up, down, and sideways arrows that are used as the default images.

The bitmap image is displayed as a 100 X 100 pixel image. If you select an image that is larger than this, it will be scaled to fit and may not appear as expected.

#### **Scale Tab**

**Analog devices only**. This tab allows you to specify the scale and offset to be applied to the analog data. Analog data is usually displayed in percent (%) 0-100. If you wish to scale the data you may enter the information here. The scale and offset will be applied before the data is displayed. The formula is

displayed data = (Scale \* raw data) + Offset.

Also on this screen, you may select the decimal places (precision) shown when the data is displayed. The scale screen also has a place to enter units, in both a long string (displayed on the graph) and a short string (displayed in numeric view.)

#### Scale and Offset Calculator

This calculator will calculate scale and offset for you when you enter two points. Each point has a raw value and a scaled value. Enter these in the boxes and the scale and offset will be calculated.

# **Remove Device**

When you select this option a list of devices is shown. The list only includes devices that are not currently being displayed. Devices no longer being polled or Difference devices that don't fit on the screen may be shown here. You may double click to remove these devices from the device list.

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# Reconfigure

Selecting this option causes OWMT-SOFT to restart. This allows it to search and add new devices. In addition the real time graph will be restarted and a new historical session will begin if historical data logging is enabled and a new header will be inserted for ASCII data logging if it is enabled.

If a humidity sensor or other device containing a built in temperature sensor is found you will be asked if you want to create an object for temperature (unless you have disabled this feature in **OWMT-SOFT Setup**).

#### **Change Port**

You might want to change the receiver, or change the port that communicates with the receiver. If you decide to do this, you must do it from OWMT-SOFT-DDE. Bring up OWMT-SOFT-DDE and go to the "Setup" menu. Select the "Change Port" option from the Setup menu. OWMT-SOFT-DDE will display the "Select Communication Port" dialog box. Choose the port and receiver type that you want and click "OK" or "Cancel" if you decide not to change the port.

# **Clear Log Files**

#### **Clear Historical Session Files**

Selecting this button will cause all historical data sessions to be deleted.

Use caution here. Once deleted the data cannot be undeleted or recovered.

# Clear ASCII Log File.

Selecting this button will cause the log file to be emptied.

If you wish to save this data you can go to the installation directory typically "C:\OWMT-SOFT" and rename the "C:\OWMT-SOFT\OWMT-SOFT.LOG" file to something else. Insure OWMT-SOFT is not running when you do this.

Example "C:\OWMT-SOFT\MYDATA.LOG".

Use **caution** here. Once emptied the log file data cannot be recovered

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# **Toolbar**

# **Numeric Button**

This button switches the display to numeric mode.

# **Real Time Button**

This button switches the display to real time mode.

# **Historical Button**

This button switches the display to historical mode.

# **Undo Zoom Button**

In Historical Zoom View mode, if a view is zoomed this button will cause the historical view window to step back through each zoom view one at a time. This button is only available during Historical Zoom View mode.

# **Sessions Button**

In Historical mode, this button displays a list box of saved data collection sessions for view in historical mode. Selecting a saved session will cause the historical view window to switch to that data set.

# **Clear Real Time Button**

Clicking this button causes all real time traces to begin a redraw from the left side of the display. No historical data is lost when real time is reset.

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### **Start Button**

To enable the toolbar buttons for **Start** and **Stop** historical session feature you must go to Setup/**OWMT-SOFT/Historic Period**. Once enabled clicking this button causes a new historical session to begin; after 10 seconds of data or 10 points have been collected. You may click the **Stop Button** to end. The maximum time for a session in this mode is 4 hours; after that has elapsed, the session will automatically close. This data may then be viewed in the historical window and analyzed in detail.

# **Stop Button**

To enable the toolbar buttons for **Start** and **Stop** historical session feature you must go to Setup/**OWMT-SOFT/Historic Period**. Once enabled clicking this button causes the current historical session to end provided 10 seconds of data or 10 points have been collected. This data may then be viewed in the historical window and analyzed in detail.

# **Analyze Button**

Clicking the **Analyze Button** causes the Data Analysis Dialog to be displayed. This button is displayed only in Historical Zoom View. You may use the **Select Session** and **Zoom Function** in historical view to determine which data set you will analyze.

# **Data Analysis Dialog**

The following information is displayed in this dialog. Minimum and Maximum readings for displayed data, the Area Under the Curve in Units Seconds or (Kelvin Degree Seconds for all temperature scales), Average Slope in Units per Second, the amount of time and number of points for the selected data. You may also click **View Derivative** or **View Data** from this dialog.

#### **View Derivative**

When selected a first derivative graph is created and displayed. This graph may be printed by selecting **print** from the **View Derivative** menu bar. Right clicking with the mouse over a point on the graph trace will cause the date, time, and value of that point to be displayed at the right side of the toolbar. This allows you to accurately determine the time and value of a specific point on the graph. If you double right click and hold the right button down on the second click the toolbar readings will zero for time and value; if you then continue to hold the button down and move the mouse along the graph the offset will be displayed from where you started. You can then determine elapsed time and the difference in value between two points on the graph.

#### **View Data**

When selected all graphed data is displayed in a text format with date, time, and reading. Selecting **Interval** allows you to display only every *n*th reading to reduce the amount of displayed data. The total number of data points in the current view

will also be displayed. This data may be printed by selecting **print** from the **View Data** menu bar.

# **Time Button**

The time scale range is set by clicking on the **Time** button on the toolbar, and then selecting one of the time scales available. Ranges are 30 seconds, 1 minute, 15 minutes, 30 minutes, 1 hour, 2 hours and 4 hours. This sets the total time period displayed on the real time graph. OWMT-SOFT can maintain 4 hours of data points logged every second for all active channels. So selecting time scale ranges only changes the number of points displayed.

# **Calculator Button**

This button causes the Windows® default calculator to run.

# **Print Button**

This button causes the current view to print.

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# **Print**

# **Print Setup**

Brings up printer setup options window with the following options:

Select the default Windows® printer or select a specific printer for use with OWMT-SOFT.

Set paper orientation either portrait or landscape.

Select paper size and source.

#### **Options** Button

Brings up specific settings for selected printer.

Print quality, paper type, color options, advanced settings, etc.

# **Print**

Printing Numeric View has no dialog window; printout is formatted and sent to printer immediately.

Printing a Graph opens a dialog window with the following options:

**Graph Window Background** if checked will print the area around the graph with the window background color; unchecked is white.

**Plotting Area Background** if checked the graph background color will be printed; unchecked is white.

**Fill Whole Print Page** If checked the graph will be scaled to fill the page but the X or Y will be distorted depending on paper orientation. If not checked causes the X to Y ratio to be maintained. This will cause blank areas on the printed page. This applies to Real Time and Historical Graphs only.

# **Print Description**

Allows you to enter a 30-character reference field that will be printed on the real time, historical graph, Historical Zoom, or Derivative View printout. These descriptions are saved for each view type and can be changed each time a printout is made.

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# View

# **Numeric**

In this mode the following information will be displayed for each channel:

Current data in current scale units reading.

Minimum reading since last reset.

Maximum reading since last reset.

Current trend: up, down, or constant.

Alarm state: High, Low, or, None.

Current scale: units.

Labels for each device.

To reset minimum or maximum readings double clicking on **min**, **max** or the number on the screen.

Pausing the mouse over the min, max, or alarm icon on the display will show the date and time the condition occurred.

A large red "X" will appear over the data reading if OWMT-SOFT loses communication with the device.

# **Real Time**

Real Time mode displays a graph that is updated real time based on a one second update rate. The window then scrolls to the left with time as new points are added. A numeric display also shows the current temperature reading and sensor label. If **Display Grid** is enabled then an XY dotted grid will be displayed on the plot background. If **Alarming** is enabled and alarm points are within current **Units Scale** range, then alarm lines will also appear on plot background. Note only the alarm

lines for the first two devices will appear on each graph. **Units** and **Time Scale** changes occur dynamically with real time data updates to the graph. Right clicking with the mouse over a point on the graph trace will cause the date, time, and value of that point to be displayed at the right side of the toolbar. This allows you to accurately determine the time and value of a specific point on the graph. If you double right click and hold the right button down on the second click the toolbar readings will zero for time and value; if you then continue to hold the button down and move the mouse along the graph the offset will be displayed from where you started. You can then determine elapsed time and the difference in value between two points on the graph.

#### **Units Scale**

Clicking on the S button on the real time graph may set the units scale range. You may enter value(s) for maximum and minimum Y-axis scaling. Optionally, clicking the **Calculate Axis Minimum/Maximum** button will cause OWMT-SOFT to calculate values automatically based on the data collected to that point. To change the time scale press the **Time** button on the toolbar.

### **Historical**

Historical mode displays a graph that is created based on the data loaded from the **Select Session** window. After session is loaded, all points are displayed to view more detail. You can switch to historical zoom view with the **Zoom Function** and then **Zoom** in and stretch time. Analyze and Data Pan features are then made available while in historical zoom mode. If **Display Grid** is enabled then an XY dotted grid will be displayed on the plot background. Right clicking with the mouse over a point on the graph trace will cause the date, time, and value of that point to be displayed at the right side of the toolbar. This allows you to accurately determine the time and value of a specific point on the graph. If you double right click and hold the right button down on the second click the toolbar readings will zero for time and value; if you then continue to hold the button down and move the mouse along the graph the offset will be displayed from where you started. You can then determine elapsed time and the difference in value between two points on the graph.

#### **Zoom Function**

You can expand the historical graph time axis by placing the mouse on the graph, then press and hold the left mouse button and drag the mouse to draw a box around the area of the graph to be zoomed. The view will switch to historical view mode. The graph will be expanded to full window size and re-scaled to show the expanded time range. A scroll bar will appear below the graph for panning and an **Undo Zoom** button will appear. Now dragging the scroll bar will allow you to pan through the data with more resolution. This process of zooming may be repeated until the data can be viewed in suitable detail or for a total of 10 zooms. Clicking the **Undo Zoom** button will step back through each zoom until all points are again displayed. Only one historical data session may be zoomed and analyzed at one time.

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### **Select Session**

Clicking on the **Select Session** button opens a selection window of saved sessions showing starting and ending session date(s) and time(s). Clicking on desired session begins the historical graph.

### **Units Scale**

Clicking on the S button on the historical graph may set the units scale range. You may either enter value(s) for maximum and minimum Y-axis scaling. Clicking the **Calculate Axis Minimum/Maximum** will cause OWMT-SOFT to calculate values automatically based on the data in this session.

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# **Advanced Users**

# **OWMT-SOFT.INI Parameters**

There are some parameters in the OWMT-SOFT.INI file that cannot be changed through setup. However advanced users may want make adjustments to these parameters so they are being documented here.

[Setup]

Alarm Hysterisis

Controls when another alarm trigger will be recognized. Used for High and Low Alarm Levels as well as.

Defaults for each device type is:

Temperature TempAlarmHysterisis=0.28

Pressure PressAlarmHysterisis=0.28

[Setup]

HistMaxSession=

Specifies the total number of Historical Sessions that OWMT-SOFT will maintain. If more than this number of sessions exists, OWMT-SOFT will remove the oldest session when adding a new session.

The Default value is 20.

HistMaxSession=20

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[Setup]
Calculator=
Specifies the path and name of the program to run when the <b>Calculator</b> button on the toolbar is pressed.
The Default value is calc.exe.
Calculator=calc.exe

# **Error Messages**

# **Communications**

#### **Cannot Communicate With Device!**

Device may have become disconnected, or has not transmitted within its timeout time.

**Action:** Press the service button on the transmitter and see if the sensor data packet can be received. One of the following could be the reason for the problem:

- 1. Sensor is out of range of the receiver.
- 2. Sensor has malfunctioned and is not transmitting.
- 3. Receiver has been disconnected, moved or antenna has been removed.

OWMT-SOFT will also open a dialog window and ask if you want to **Reconfigure** now.

#### No Devices Attached!

No sensors have been setup. Add sensors to the system..

Select **Reconfigure** from the Setup menu.

# File I/O

# File Error With History File.

Error occurred while OWMT-SOFT was implementing a File I/O operation on the History file. To resolve this error try the following:

- 1) make sure another application does not have OWMT-SOFT.HST file opened.
- 2) make sure the file attribute to OWMT-SOFT.HST is not set to Read-Only.

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- 3) run ScanDisk to make sure there is no problem with the disk drive.
- 4) try exiting and then re-starting OWMT-SOFT.
- 5) on last resort delete the OWMT-SOFT.IDX and OWMT-SOFT.HST; you will lose your historical data.

### File Error With Appending To History File.

Error occurred while OWMT-SOFT was trying to write data to the History File. To resolve this error try the following:

- 1) make sure the disk drive that OWMT-SOFT resides on is not full.
- 2) make sure another application does not have OWMT-SOFT.HST file opened.
- 3) run ScanDisk to make sure there is no problem with the disk drive.
- 4) try exiting and then re-starting OWMT-SOFT.
- 5) on last resort delete the OWMT-SOFT.IDX and OWMT-SOFT.HST; you will lose your historical data.

# Cannot Create The History Index File.

Error occurred while OWMT-SOFT was trying to create the History Index file.

- 1) make sure the disk drive that OWMT-SOFT resides on is not full.
- 2) run ScanDisk to make sure there is no problem with the disk drive.
- 3) try exiting and then re-starting OWMT-SOFT.

# **Cannot Open The History Index File.**

Error occurred while OWMT-SOFT was trying to open the History Index file. To resolve this error try the following:

- 1) make sure another application does not have OWMT-SOFT.IDX file opened.
- 2) make sure the file attribute to OWMT-SOFT.IDX is not set to Read-Only.

- 3) run ScanDisk to make sure there is no problem with the disk drive.
- 4) try exiting and then re-starting OWMT-SOFT.
- 5) on last resort delete the OWMT-SOFT.IDX and OWMT-SOFT.HST; you will lose your historical data.

### **Cannot Create The History Log File.**

Error occurred while OWMT-SOFT was trying to create the History Log file \ (OWMT-SOFT.HST). To resolve this error try the following:

- 1) make sure the disk drive that OWMT-SOFT resides on is not full.
- 2) run ScanDisk to make sure there is no problem with the disk drive.
- 3) try exiting and then re-starting OWMT-SOFT.

### Cannot Open The History Log File.

Error occurred while OWMT-SOFT was trying to open the History Log file (OWMT-SOFT.IDX). To resolve this error try the following:

- 1) make sure another application does not have OWMT-SOFT.HST file opened.
- 2) make sure the file attribute to OWMT-SOFT.HST is not set to Read-Only.
- 3) run ScanDisk to make sure there is no problem with the disk drive.
- 4) try exiting and then re-starting OWMT-SOFT.
- 5) on last resort delete the OWMT-SOFT.IDX and OWMT-SOFT.HST; you will lose your historical data.

#### **Cannot Find BMP File For Trend Indication.**

Error occurred when OWMT-SOFT could not find the BMP file to display in the Numeric View or the Alarm Window. To resolve this error, go to the Setup screen and select the Trend Images. Verify that the name and path name are correct and that the BMP file exists.

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#### Cannot Find BMP File For Alarm Indication.

Error occurred when OWMT-SOFT could not find the BMP file to display in the Numeric View or the Alarm Window. To resolve this error, go to the Setup screen and select the Alarm Images. Verify that the name and path name are correct and that the BMP file exists.

### **Cannot Create The Log File**

Error occurred while OWMT-SOFT was trying to create the ASCII Log file (OWMT-SOFT.LOG). To resolve this error try the following:

- 1) make sure the disk drive that OWMT-SOFT resides on is not full.
- 2) run ScanDisk to make sure there is no problem with the disk drive.
- 3) try exiting and then re-starting OWMT-SOFT.

### Cannot Open The Log File

Error occurred while OWMT-SOFT was trying to open the ASCII Log file (OWMT-SOFT.LOG). To resolve this error try the following:

- 1) make sure another application does not have OWMT-SOFT.LOG file opened.
- 2) make sure the file attribute to OWMT-SOFT.LOG is not set to Read-Only.
- 3) run ScanDisk to make sure there is no problem with the disk drive.
- 4) try exiting and then re-starting OWMT-SOFT.

# **Error In Writing To The Log File**

Error occurred while OWMT-SOFT was trying to write data to the History File. To resolve this error try the following:

- 1) make sure the disk drive that OWMT-SOFT resides on is not full.
- 2) make sure another application does not have OWMT-SOFT.LOG file opened.
- 3) run ScanDisk to make sure there is no problem with the disk drive.
- 4) try exiting and then re-starting OWMT-SOFT.

#### Other

# Historical View: Not enough data to plot! Please wait for more data to be logged

This warning occurred when OWMT-SOFT was creating the Historical view and no other Session data was available and not enough data was available during the current session. Needs to log 10 samples from when the Session started before it can plot the current Session. If the Session Period is 4 hours, you will need to wait 10 seconds before viewing the plot.

# Historical View: Session Period = NONE. No data to plot

Error occurred when the Session Period was set to NONE and there was no Historical Session data to plot.

# Critical Error: Too much time has expired! Terminating OWMT-SOFT

Error occurred when OWMT-SOFT 'wakes up' after 5 minutes of not having control and tries to make up for lost time. This error typically occurs when a computer is put to sleep or in 'suspend mode' for more than five minutes. Also running Windows® 3.1, 3.11 with a DOS window open in **exclusive mode** for more than 5 minutes.

# Clock has been changed! OWMT-SOFT needs to be restarted to accommodate the new time!

Error occurred when a user or another application changed the time or date to the system clock. OWMT-SOFT uses the system clock for its own internal timing. If the clock is changed OWMT-SOFT needs to be restarted. After you click OK, OWMT-SOFT will quit.

# Cannot Link through DDE to the OWMT-SOFT-DDE! Terminating Program

The OWMT-SOFT-DDE program has been terminated. Quit and restart OWMT-SOFT. This message can appear at startup and during the **Reconfigure** operation.

# Lost DDE Links with Server! Should quit OWMT-SOFT!

The OWMT-SOFT-DDE program has been terminated or malfunctioned. Quit and restart OWMT-SOFT.

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# Cannot load OWMT-SOFT-DDE! Terminating Program!

OWMT-SOFT cannot find OWMT-SOFT-DDE program. **OWMT-SOFT-DDE.EXE** must reside in the same directory as **OWMT-SOFT.EXE**.

#### **Cannot load the Calculator!**

Check if the calculator program **CALC.EXE** has been moved or deleted. Check if the path has changed. Check the OWMT-SOFT.INI file variable called **Calculator=** under [Setup]. Set new path or program name if necessary. Check the amount of available memory.

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#### WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **nonths** from date of purchase. OMEGA's Warranty adds an additional one (1) month grace period to the normal **one** (1) **year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evide nce of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear are not warranted, includ ing but not limited to □contact points, fuses, and triacs

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Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

- Purchase Order number under which the product was PURCHASED,
- 2. Model and serial number of the product under warranty, and
- 3. Repair instructions and/or specific problem s relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

- Purchase Order number to cover the COST of the repair,
- 2. Model and serial number of the product, and
- 3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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