

WCC III

8. Trendlog.exe Program

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SECTION 8: TRENDLOG.EXE PROGRAM (SS5028)

The WCC3Trendlog.exe program is to be used if extensive logging of any point or multiple points within the WCC3 system is desired or required. Multiple Trend Log Programs can be set up to trend log virtually any point on the WCC3 system. It does require that the user or contractor has a working knowledge of WCC3 point addressing. The WCC3Trendlog.exe program requires that the end user or contractor set up the desired points. It must be stressed that the WCC3Trendlog.exe program does not do automatic logging of every point in the WCC3 system. It must be setup by the end user or contractor.

The WCC3Trendlog.exe program requires that the end user or contractor set up what is called "Trend Log Programs" from within the WCC3Trendlog.exe program. Each one of these "Trend Log Programs" can trend log up to a near infinite number of points on the WCC3 system. These "Trend Log Programs" are incrementally timed based and can be logged in intervals of 1 minute to hours, days, or even months.

Open Database Connectivity (ODBC)

Open Database Connectivity (ODBC) provides a standard software API method for using database management systems. The Data format is normally saved in data format that only the WattMaster trend log program can retrieve. But there is an option to save the data in an "ODBC" type of format so that Microsoft Access / SQL type programs can access, retrieve, and manipulate the data that is saved from the files that the WCC3Trendlog.exe program can create.

Limitations of the WCC3Trendlog.exe program.

This WCC3Trendlog.exe program must be running on a user computer at all times, as it does not save any trend log data within the WCC III - MCD device. The program relies on a permanent remote IP connection to the WCC III - MCD from an externally IP connected user computer to fetch the desired data from the WCC III - MCD device.

It is therefore recommended that the WCC3Trendlog.exe program be put in the Windows startup file, so that every time that the end user's computer that has the WCC3Trendlog.exe program installed on it is re-booted, this WCC3Trendlog.exe program is restarted automatically.

The WCC3Trendlog.exe program can be running in the minimized mode under Windows, but must always be kept running so that the desired data logging will still occur.

Trend logging multiple WCC III - MCD devices using the WCC3Trendlog.exe program.

If you are attempting to have trend logging on two or more separate WCC III - MCD computers, you do not have to have two or more WCC3Trendlog.exe programs running at the same time. The User programmable trend log programs have separate IP addresses that can be set up by the user to pull data from two or more WCC III - MCD computers.

How to Start or Run the WCC3Trendlog.exe Program (SS5028)



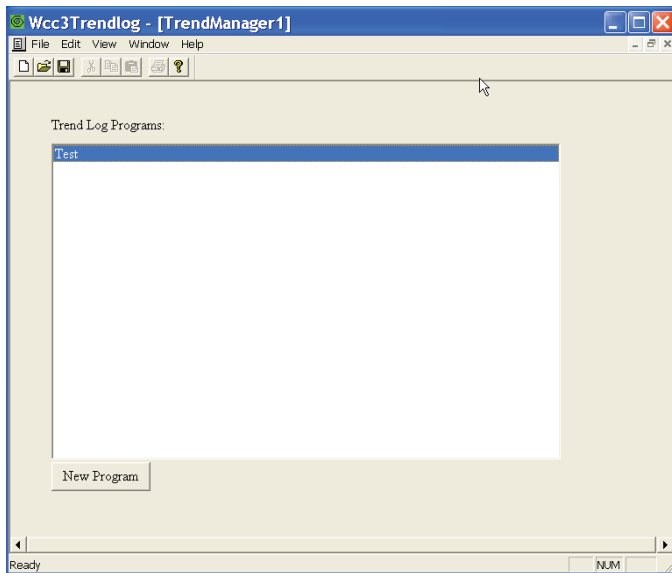
The WCC3Trendlog.exe shortcut icon should have been installed on your WCC III Front end computer desktop with the WCC III Installation Software CD.

This WCC III Installation Software CD is WattMaster Controls Part # DM1WC011-01X.

To start the WCC3Trendlog.exe program, *double-click* the left mouse button on the Shortcut Icon located on the Windows desktop. The *WCCIII Trendlog.exe Trend Manager Screen* will appear.

8. TRENDLOG.EXE PROGRAM

Running the Program



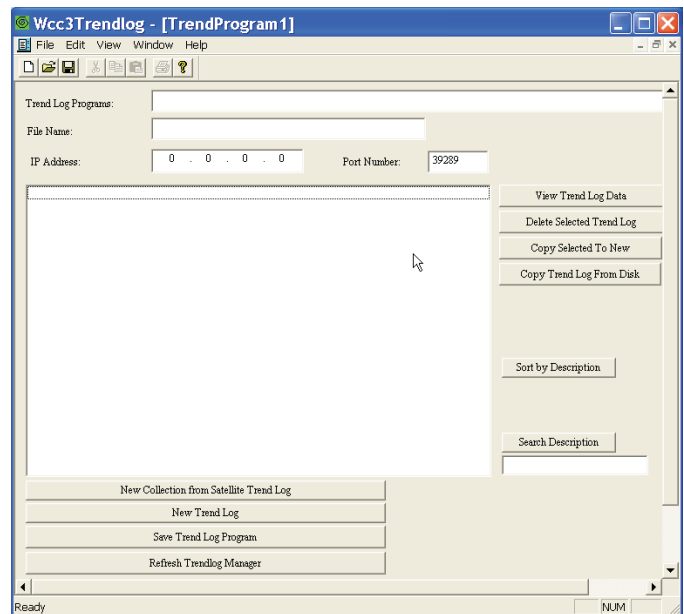
The *TrendManager1* Screen will list all of the various user-programmed trend log programs that have been programmed into the WCC3 system for trend logging.

If you wish to view or modify any of the user-programmed trend log programs, you must first highlight and then select the desired user program listing in the Trend log Program box with your left mouse button and then *click* to enter it.

Remember to never exit this program if you are trend logging points as this is the program that does the trend logging of points and must always be running.

New Program

The <New Program> button allows the end user or contractor to create a “new” trend log program. If you wish to create a new user-programmed trend log program, you must first select the <New Program> icon button with your left mouse button and then click to enter it. The *WCC3 Trendlog TrendProgram* Screen will appear.



Trend Log Programs:

This is the field that the end user or contractor can exactly “name” what the data is that they are going to trend log. This naming convention is very useful later when reviewing or trying to find out what and where specific WCC3 data points were logged. This may require careful thought before proceeding.

Remember that you can have hundreds if not thousands of user-programmed trend log programs, and this naming function will aid in the finding of the desired user-programmed trend log later on.

File Name:

This is the WCC3 native data file name that the WCC3Trendlog.exe program uses for storing the data that the end user or contractor would have programmed so the WCC3Trendlog.exe program can retrieve the data at a later point. This WCC3 native data format is not the same format as used in ODBC. There is an option later to save this data in ODBC format.

Remember that you can have hundreds if not thousands of user-programmed trend log programs, and this file naming convention will aid in the finding of the desired user programmed trend log at a later date.

NOTE: This file will have a .tpg file extension.

IP Address:

The IP Address field is the IP address of the WCC III - MCD that you wish to connect to for the trend log data that you wish to trend log. If you are trying to do trend logging on two or more separate WCC III - MCD computers, you do not have to have two or more WCC3Trendlog.exe programs running at the same time. A single WCC3Trendlog.exe program can access two or more WCC III - MCDs with different IP addresses.

Port Number:

The Port Number field is the Port Number of the WCC III - MCD that you wish to connect to for the trend log data that you wish to trend log. Typically, it should be set for 39289, unless it has been changed.

View Trend Log Data:

The <View Trend Log Data> button allows the end user or contractor to view a user-created trend log program. To enter the View Trend Log Data select (highlight) the desired user or contractor created program with one click of your mouse's left button and then click the <View Trend Log Data> icon button.

If there is no trend log data available, the following warning "There is no trendlog data." This generally means that the user or contractor has not had enough time to gather the required data from the data that is being trend logged.

**Delete Selected Trend Log:**

The <Delete Selected Trend Log> button allows the end user or contractor to delete a user-created trend log program. To delete the selected Trend Log Data, select (highlight) the desired user or contractor created program with one click of your mouse's left button and then click the <Delete Selected Trend Log> button.

Copy Selected to New:

The <Copy Selected To New> button allows the end user or contractor to copy an existing user-created trend log program from the user-created file. This selected user programmed trend log program was already created, but it can be further modified to suit the user's new preference for trend logging. To select the user-created trend log program for copying, select (highlight) the desired user or contractor created program with one click of your mouse's left button and then click the <Copy Selected To New> icon button.

See "Set Trend Log Program Dialog" for further programming selection options and instructions.

You will be prompted to enter in a new file name, because this newly created file will have the word "Copy" added to the end of the newly created file name.

Copy Trend Log From Disk:

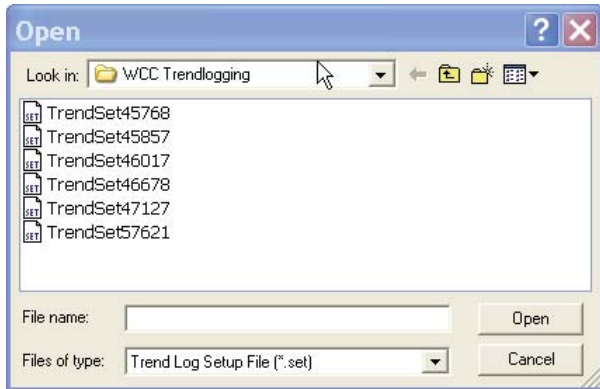
The <Copy Trend Log from Disk> button allows the end user or contractor to copy an existing user-created trend log program from the saved file that has already been saved on the user's computer hard disk drive. This trend log file was already created and saved, but it can be modified in the new copied trend log. To select "Copy Trend Log From Disk", click the <Copy Trend Log from Disk> icon button with your left mouse button.

See "Set Trend Log Program Dialog" for further programming selection options and instructions.

You will now be prompted to enter/select the desired file name of the existing user-created trend log program from the saved files listed in the Windows "Open" dialog box.

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Sort by Description:

The <Sort by Description> icon button will rearrange the way the user-programmed trend log programs will appear on the main user program menu by grouping the user programs alphabetically next to each other.

Remember, you can have hundreds if not thousands of user-programmed trend log programs, and this sort function will aid in the finding of the desired user-programmed trend log.

Search Description:

The <Search Description> icon button will allow you to search the user-programmed trend log program's field on the main user program menu by looking for the word match that is entered below in the search word field area.

Remember, you can have hundreds if not thousands of user-programmed trend log programs, and this search function will aid in the finding of the desired user-programmed trend log.

New Collection from Satellite Trend Log:

This <New Collection from Satellite Trend Log> button is like the "New Trend Log" button. This <New Collection from Satellite Trend Log> button allows the end user or contractor to create a "new" trend log program. If you wish to create a new user-programmed trend log program, you must first click the <New Collection from Satellite Trend Log> icon button.

See "Set Trend Log Program Dialog" for further programming selection options and instructions.

NOTE: This option will trend log the satellite(s)' internal trend logs, and only for the "Change of State" and "Analog Trend."

New Trend Log:

This <New Trend Log> button is like the "New Program" button that is located on the main screen of the WCC3Trendlog (TrendManager1). This <New Trend Log> button allows the end user or contractor to create a "new" trend log program. If you wish to create a new user-programmed trend log program, you must first click the <New Trend Log> icon button.

See "Set Trend Log Program Dialog" for further programming selection options and instructions.

Save Trend Log Program:

This <Save Trend Log Program> button will immediately save the user-programmed trend log program to the file that is named in the *Set Trend Log Program Dialog Window*.

See "Set Trend Log Program Dialog" for further programming selection options and instructions.

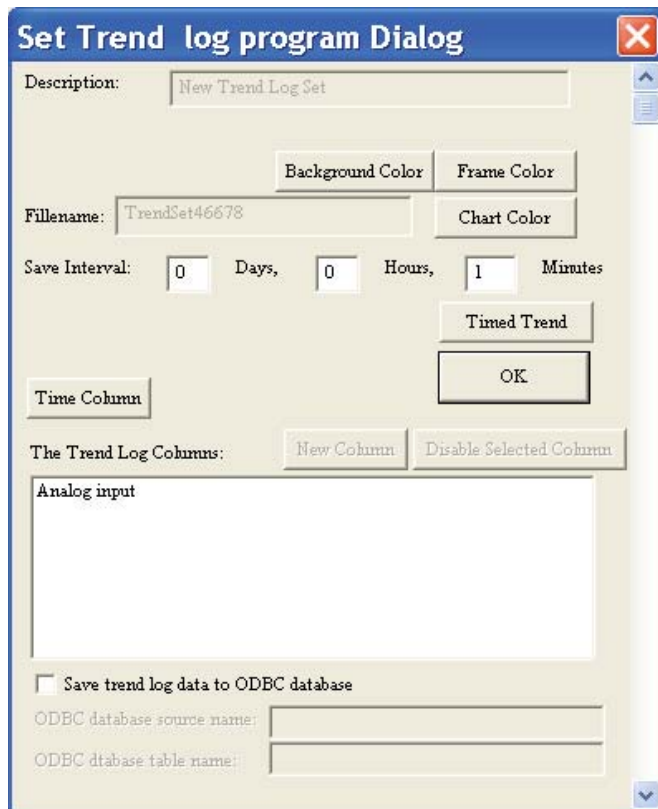
Refresh Trendlog Manager:

Occasionally you may want to "refresh" the main user program selection menu by clicking the <Refresh Trendlog Manager> button. When adding a lot of new user-programmed trend log programs, there may be a point when you may need to refresh the main user program selection menu.

Set Trend Log Program Dialog

The “Set Trend Log Program Dialog” is a user programming setup box that allows the end user or contractor to select the actual WCC3 point structures that they wish to trend log along with the following programming instructions:

Description Naming, File Naming, Saving interval of file time durations, Data base cell coloring, Data base file saving selection (ODBC)



Description:

When starting a “New Trend Log” you have at this point the option to name or further refine the naming of the user-programmed trend log with this “Description:” field. The default value for this “Description:” field is “New Trend Log Set”, and the end user or contractor really needs to change it or all of the user programmed trend logs will have the same name, and the “Search Description” or “Sort by Description” functions will be of no help to the end user later on.

Remember that you can have hundreds if not thousands of user-programmed trend log programs, and these “Sort by Description” and “Search Description” functions will aid in the future finding of the desired user-programmed trend log.

Data Base Cell Colors

You can select the colors of the database file that you are creating with the three “color” buttons that are available on this “Set Trend Log Program Dialog Screen.”

Background Color

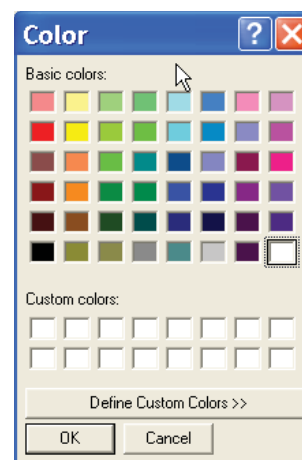
This is the background color for the specific “cell” in the database file that the end user or contractor can set. Please see the color selection menu below for actual color selection. NOTE: The default color for this field is “Olive Green.”

Frame Color

This is the color for the “frame” that surrounds the “cell” in the database file that the end user or contractor can set. Please see the color selection menu below for actual color selection. NOTE: The default color for this field is “White.”

Chart Color

This is the color for the “Chart” - for the “cells” in the database file that the end user or contractor can set. The Background color for the specific “cells” takes precedent over the overall “Chart” color. Please see the color selection menu below for actual color selection. NOTE: The default color for this field is “Black.”



Background, Frame, and Chart colors can be selected with the *Color Selection Menu*. You must first select the desired Background, Frame, or Chart “Color” button you wish to change with your left mouse button, then select the desired color and then click <OK>.

Please note that custom colors can be created with the <Define Custom Color> button at the bottom of the *Color Selection Menu*. These newly created user-defined “Custom colors” will be displayed in one of the 16 custom color boxes in the lower portion of the *Color Selection Menu*.

The <Cancel> button will cancel your color selection option.

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Filename:

The Filename is the actual file name on the end user's computer that the end user or contractor has selected for the data storage of the trend log data for this particular User programmed trend log.

The WCC3Trendlog.exe program will automatically select a file name for this field if the end user or contractor has not selected a file name.

NOTE: This file will have a .set file extension.

Save Interval: _____ Days _____ Hours _____ Minutes

There are three "Save Interval" selection boxes: Days, Hours, and Minutes. These three boxes will determine when the user-selected trend log data will be saved to the end user's computer hard drive. You can enter any value in these "Save Interval" selection boxes with the following limits: 0 to 99 Days, 0 to 99 hours, 0 to 999 minutes.

Examples: If you wish to trend log 1 value every 15 minutes, you would enter 15 into the "Minutes" selection box. If you wish to trend log 1 value every 2 hours, you would enter 2 into the "Hours" selection box. If you wish to trend log 1 value every week, you would enter 7 into the "Days" selection box.

NOTE: The default setting for the save interval is a timed interval trend log of 1 day.

Please note that there is not a set "starting time". The "starting time" is determined at the exact moment you have successfully filled out enough information on this screen to enable the trend logging to occur.

By toggling the <Timed Trend / Disable / Manual Trend> button, you can later change this "starting time" if you are there at the exact time you wish to set the starting time of the trend log. Each time you click on this button, it will toggle to the state.

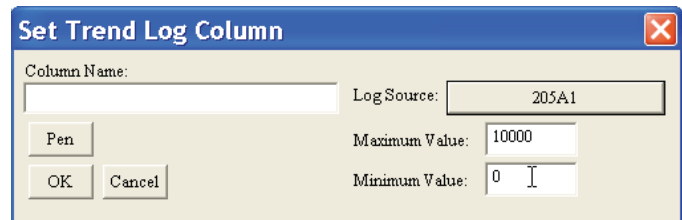
Time Column:

The <Time Column> button allows you assign a "name" to the Time Column. It also allows you to set the pen width, pen color, and pen style for this column.

The Trend Log Columns: New Column

In the large box below "Trend Log Columns" is a listing of user-generated and user-programmed trend log programs. With the <New Column> button, you can create new or add more columns to the user-created trend log program. This allows for a full implementation of a spreadsheet type format for your WCC3 trend log database.

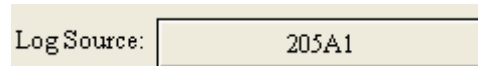
Set Trend Log Column:



The *Set Trend Log Column Dialog Box* allows you to create new or add more columns to the user-created trend log program.

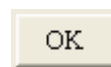


This column name selection box is the name that will appear at the top of the data column that you are trend logging.

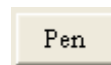


The <Log Source> button allows the user to select any WCC3 satellite or system point address for logging into the user-created trend log program. When selecting the <Log Source> button, a new *Logic Address Dialog Box* will appear. This *Logic Address Dialog Box* will allow the end user to select the exact WCC3 satellite or system point they wish to log. Also, this <Log Source> button has a quick view that is overlaid on top of the button. This overlaid text is the address point currently selected for trend logging.

Example: 205A1 is Satellite address # 205 – Analog Input # 1.



After selecting the WCC3 satellite or system point that you wish to trend log, you now must click <OK> to finish your selection of the WCC3 system point you wish to trend log.



The <Pen> button will allow you to set the pen width, pen color, and pen style for this column.

Maximum Value:

The “Maximum Value” box is the upper limit set point for this trend log source data. The default value is 10000.

Minimum Value:

The “Minimum Value” box is the lower limit set point for this trend log source data. The default value is 0.

The <Cancel> button cancels this operation and returns you to the previous screen.

All of the options on the left side of the *Logic Address Dialog Box* require that a valid “Satellite address Number” be entered in the box provided for proper operation.

The options on the middle and right side of the *Logic Address Dialog Box* are WCC3 system points that do not require a “Satellite Address Number” or “Point Number” for proper operation. These options must have a “Global Index” number entered in the box provided for proper operation.

Valid WCC3 point numbers

Satellite Address number – 1 to 239

Binary Input – 1 to 8 (Sat analog input used as Binary Input)

Analog Input – 1 to 8

Analog Output – 1 to 8

Control Output Heat – 1 to 8

Control Output Cool – 1 to 8

Data Register A – 1 to 8

Data Register B – 1 to 8

Runtime – 1 to 8

Logic Switch – 1 to 16

Binary Outputs – 1 to 16

Global Analog – 1 to 256

Global Binary – 1 to 512

Week Schedule – 1 to 128

Optimal Start – 1 to 128

Global Light – 1 to 500

Global Heat – 1 to 500

Global Cool – 1 to 500

After selecting the WCC3 system point that you wish to trend log, you now must click <OK> to finish your selection of the WCC3 system point you wish to trend log.

The <Cancel> button cancels this operation and returns you to the previous screen.

Save trend log data to ODBC database

The save trend log data to ODBC data base check box.

Open Database Connectivity (ODBC) provides a standard software API method for using database management systems. The Data format is normally saved in data format that only the WattMaster trend log program can retrieve. But there is an option to save the data in an “ODBC” type of format so that Microsoft Access / SQL type programs can access, retrieve, and manipulate the data that is saved from the files that the WCCTrendlog.exe program can create.

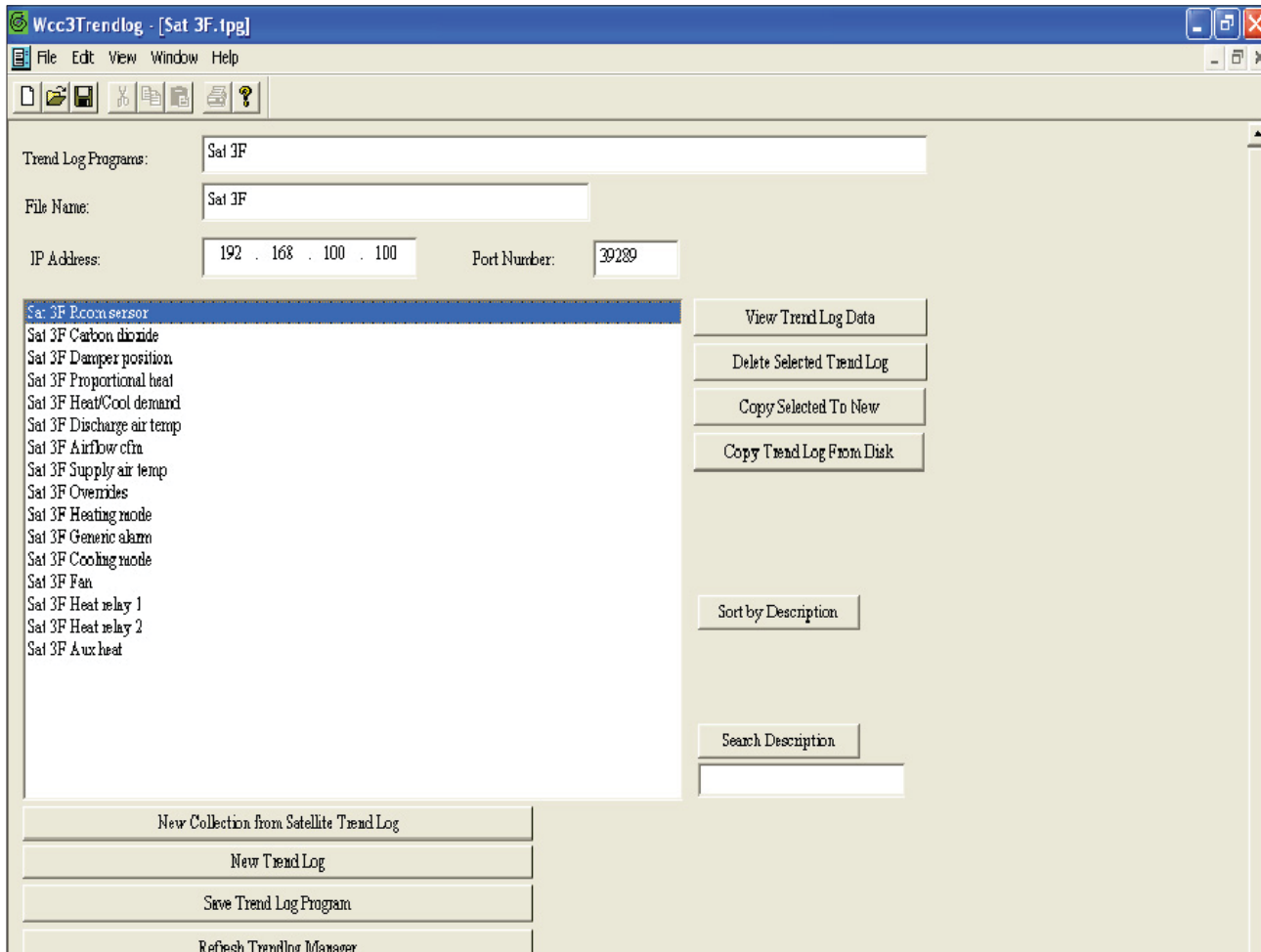
After selecting the “Save trend log data to ODBC database” check box, you will need to enter a logically named ODBC database source name and an ODBC database table name so that later you can retrieve the data from this ODBC named database file.

8. TRENDLOG.EXE PROGRAM

Viewing Trendlog Data

View Trendlog Data

Once data has started to collect from the points that were chosen to trend log, then this screen will display that data. The columns will have the names above each one that the programmer assigned to each column. This screen will not automatically update. To get the most recent data, this screen will need to be closed and then reopened.



Export:

The <Export> button will create an Excel file with the same name as the Trend Program. This file will be created in the "WCC Trendlogging" folder where the WCC Trendlog Program resides. This will usually be C:\Program Files\WCCIII Trendlogging. The Excel file will have an ".exe" extension. This Excel file will not automatically update itself. Each time the <Export> button is pressed, the data from the trend log is recorded in the Excel file.

View Chart:

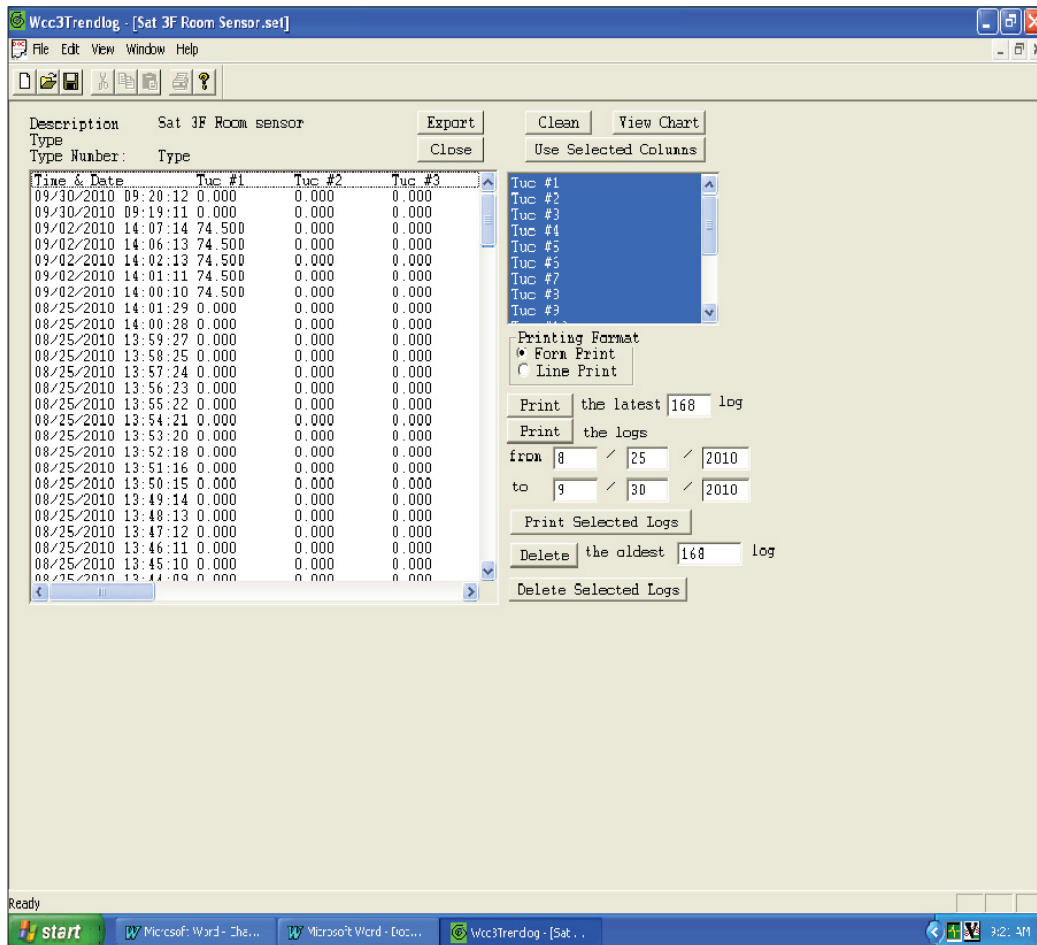
The <View Chart> button will open a window with a line chart in it. This will graphically display all the information for the Trend Log. The time and date will be displayed horizontally across the bottom of the chart. The values for the data will be displayed vertically on the sides of the graph with the "Minimum Value" for each column displayed at the bottom and the "Maximum Value" for each column displayed at the top. If there are multiple points being trended on this trend log, then you may want to change pen colors, pen style, or pen width so that the chart is easier to view for the different points.

Close:

The <Close> button will close the window and return to the list of trendlogs for the current Trendlog Program.

Use Selected Columns:

The <Use Selected Columns> button will display only the columns that are highlighted from the column list. To select or deselect columns to display, click on each one.



Printing:

You have the option to print out the data from this trend log to a local printer for a paper copy.

Delete:

The <Delete> button gives you the option to delete all current logs displayed. The <Delete Selected Logs> button will delete only highlighted logs.

8. TRENDLOG.EXE PROGRAM
