Exhibitor Software User's Manual

Exhibitor Software

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1. Exhibitor Software

The Exhibitor Software is a program for viewing and exporting both real-time and recorded data from the recorder.

2. Installation

This program will run on Windows XP/2000 and later. It is not compatible with earlier versions of Windows.

- 1. Insert the Exhibitor CD into the CD drive. The setup program should launch automatically if your system is set to auto play CDs. If not, select the CD directory and run the setup.exe file.
- 2. Exhibitor Software needs .NET Framework 2.0. If .NET Framework 2.0 is not installed on the PC, it will be installed first. This will take several minutes. Make sure you have network access.



- 3. After .NET Framework 2.0 is installed, the installation will launch "Welcome to Exhibitor Setup Wizard".
- 4. Accept the license agreement and the default install directory or modify as needed.
- 5. Decide whether you want a desktop icon and check the box if you do.
- 6. Accept the default install directory or modify as needed.

3. Using Exhibitor Program

3.1 Starting the Program

The Exhibitor software has the following main features:

- It can display information from existing data file in summarized, tabular and graphic formats.
- It is capable of monitoring an external device (through the OPC server). The user can manage different widgets.
- It can export the data to Excel.



To start the program, click the desktop icon if installed (shown left), or use the Window's Start menu. This will launch the main dialog.

If the master password is enabled, the main dialog starts in the Data, Graph page.



Otherwise, it starts in the Login page.

🗱 Exhibitor		
File View Setup Tool Help		
Login Data Remote Real Time View Config Display Config Log		
User:		
Password:		
Change Password		
OK Cancel		
·	 	
		Use memory: 57%
		I Synomonize

To enable the master password, please see Chapter 3.3 System Setup.

There are five major t	abs in the workspace:
Login	Login to the program
Data	Show data in a file
Remote	Show remote device values
Real Time View	Show all widgets in a project file
Config	FTP to the device and view Config file
The Data tab page has	six sub tag pages:
Detail	Shows each individual channel graph and summary of all channels
Graph	Shows a graphic representation of the data
DataTable	Shows all data points in a table
Alarm	Shows all alarm points in a table
Event	Shows all events in a table
Memo	Shows all memos in a table
Remote tab page has t	hree sub tab pages:

10	10
Device Manager	Connects to multiple OPC server and displays all selected items
Design Page	Creates different widgets and displays real time value
Real Time Record	Creates record widget and records data point to a file

The pull-down menu items are:FileAllows the user to open a data file or exit the programViewView the Exhibitor log in fileSetupAllows the user to customize the programToolConnects to one OPC server and displays all items on itHelpProvides help file or information about the software

The icons from left to right are: New, Open File, Search and Log Off.

🔀 Exhibi	tor		
File View	Setup	Tool	Help
			2

3.2 Logging in to the Program

The password option is disabled by default when the software is installed. The Login page is not enabled. This option can be modified in the password dialog, which is explained in the next section System Setup. The User can be added as well.

If the password option is enabled, the user has to login first. Otherwise, the program cannot do anything.

If you want to change the password, check the check box Change Password when logging in. The password change dialog will appear (as shown below).

🖶 Change Password		×
User:	rchen	
New Password:		
Confirm New Password:		
	OK Const	

When changing the password, the user id is grayed out. Type the new password and confirm it. If the two don't match, you will have to try again.

3.3 System Set-Up

There are a number of items that can be set up before using the program, although these default to useable options.

The Setup menu has the following options.

- **3.3.1 Language** The default is English. It is simple to add language files (see Appendix A). If there is a language file in the Exhibitor installation directory that contains languages besides English, these will be shown and the user can select the language.
- 3.3.2 Preferences
 - **3.3.2.1** Decimal Places Determines how numeric data will be displayed. Default is 3.
 - **3.3.2.2** Auto Scale Determines if all data points will fit Y-Axes for all channels.
 - **3.3.2.3 Remember Previous Directory** Determines if the program needs to remember the directory when opening the data file.
 - **3.3.2.4** Channel Label Determines if the program will display the channel number or channel engineering units for the buttons on the graph page.
- **3.3.3** Features Allows the user to upgrade from the free demo (default) version to the Lite or Full version. Select Update and enter your serial number in the spaces. Upgrades can be purchased from your distributor. Use the pull-down menu Help About to see what feature you have.
- **3.3.4 Password** Allows the program to enable the password option and add, update or delete users.

🖶 Password			
User:	Activ	ve Retries:	3 💌
Level:	Expires:	12/26/2007	•
Password:	Auto Lo	gout (Minutes):	10 💌
Old Password:			
Admin	Add	□ E	nable
rchen1	Update	(эк
	Delete	Ca	incel
			111

The user can enter the user name, check active or not, choose the user level, expiration date, and enter a password. Once all the options are selected/chosen, then click the Add button. This user will be added to the user list.

The options when adding a user are:

ActiveIf the user is active, their user name and password have to match when
logging in to the program. Otherwise, Exhibitor doesn't check them.RetriesThe number of times the user can try to login before the user login fails.

Level There are three User Levels: User, Manager and Administrator

Level:	
Password:	User Manager Administrator

User: Cannot access setup. Can access all tabs except OPC Client, Device Manager in Remote page. In the Design Page, the user can view real time display, but cannot change the widgets.

Manager:	Access to everything except Password and Language.
Admin:	Access everything.
The user wi	ll expire on this date.

ExpiresThe user will expire on this date.PasswordEnter the password to be used for this user.

Auto Logout The program will automatically logout the user after this amount of time.

Old Password	The user ne	eds to type	the corre	ct old pass	word i	n ord	er to cl	nang	e the	
	password.									

- Add Adds a user to the user list. The list box on the bottom left on the dialog shows all users.
- Update Modifies a user's password.
- Delete Choose one of the users in the list box and click delete. That user will be deleted from the list.
- Enable Enables the password option. The check box is disabled if there is no user in the list. After adding at least one user, the check box will be enabled.

After no mouse activity for 5 minutes, the user is automatically logged out.

If the user wants to login as a different user name, he/she can click the **Log Off** button. The program goes to the login page and the user can re-login.

The Log Off button looks like:

3.4 Loading Data File

To load a data file, click File->Open or click the file open icon

If the loading file is bigger than 100000 bytes, an endless progress bar dialog appears.

There are six tab pages for loading data files.

Detail	Graph	DataTable	Alarm	Event	Memo
--------	-------	-----------	-------	-------	------

Detail	Shows each channel in different tag page and a summary table
Graph	Shows all channels in one graph
DataTable	Shows all data points in a table
Alarm	Shows all alarm points in a table
Event	Shows all events in a table
Memo	Shows all memos in a table

3.4.1 Graph Window

In the example below, the file Sample.dat was loaded with the Auto Scale off.

Setup	Tool H	Help			
Lang	juage	►	1		_
Pref	erences	•	Decimal Places	₽	1
Feal	ures	Þ	Auto Scale	►	Yes
Pass	word		Remember Previous Directory	۲	🖌 No

There are eighteen channels (show below).



3.4.1.1 Graph Radio Buttons

There are a series of radio buttons along the left side of the Graph window. Each radio button represents a channel with the correct color of that channel. Each channel has its own Y-Axes. The maximum and minimum of the Y-Axes is defined in the configuration in the data file. The configuration also defines the channel color and engineering unit. In the above example, maximum of channel 1 is about 750 °F. Minimum is about -454 °F. Its color is white.

🕄 Exhibitor File View Setup Tool Help Sample.dat 🗃 🛛 🛤 🙎 Login Data Remote Real Time View Config Display Config Log Detail Graph DataTable Alarm Event Memo ⊕ ♀ ♀ ♀ ♀ ▶ ► ▶ ► ► 160.00 Chan 1 140.00 120.00 100.00 80.00 60.00 40.00 Chan 17 20.00 Chan 18 0.00 3/14/07) 16:24:22 (03/14/07) 16:24:24 (03/14/07) 16:24:26 (03/14/07) 16:24:28 (03/14/07) 16:24:30 (03/14/07) 16:24:32 (0 << 1 + >> Use memory: 56% Synchronize

If you click the Chan 2 radio button, the graph changes as seen in the below dialog.

The color of the Y-Axes changes to red. The Maximum of channel 2 is 160 Seconds. Minimum is 0 Seconds.

Each time a different radio button is selected, the graph will change accordingly.

3.4.1.2 Graph Buttons

The graphic area is fully interactive. Data can be zoomed and scrolled, the interaction controlled by the icons above the graph.

- Select

This is the default cursor. It is used to scroll the trends horizontally and vertically by simply right clicking in the graphics area. Traces can be scrolled individually by clicking and

dragging the individual vertical scales or together by clicking and dragging in the graphics area.



- Stretch

Click this button to stretch (zoom) or shrink the graph along the x-axes (time) and y-axis (scale). Traces can be zoomed individually by clicking and dragging the individual vertical scales or together by clicking and dragging in the graphics area.



- Zoom In Click this button to zoom in the graph.



- Zoom Out

Click this button to zoom out the graph.



- Zoom Window

Click this button to zoom to a user-defined window. When clicked, the cursor will turn into a draw window tool. Draw a window around the area of interest by holding the right mouse button and dragging the window. On release, the window area will fill the graphics screen.



- Zoom All

Click this button to fit all data into one screen.

•

- Cursor

Click this button to enable the cursor. Once enabled, right click anywhere on the graph and select a channel to lock the cursor to that trace.

Background Color Select Channel 1 Channel 2 Channel 3 Channel 4 Channel 5 Channel 6 Channel 7 Channel 8 Channel 9 Channel 10 Channel 11 Channel 12 Channel 13 Channel 14 Channel 15 Channel 16 (03/14/07) 16:24:26 Channel 17 Channel 18

As the cursor is dragged along the time base, the cross-hairs will track the trace and the popup box will show details about the point in the cross-hairs. The cursor will turn to the finger pointer whenever the cursor can be dragged.

	(0.2	44/07) 40.04.07 54.00	1
	(0.3/	14/07) 16:24:27, 54.00	
- (
	7		

- Scroll to End

Click either the left or right scroll button to jump to the start or end of the data.



- Original Scale

Click this button to make the X and Y-axes to the original scale from when the data file was loaded.

- Print

Click this button to show the print setup dialog.

🔜 Print	
Printer: ONARCH2000\HP	LaserJet 2100 Series PCL 5e 💌
Print Range	Orientation
 Current Page 	C Portrait
C AI	Elandscape
Total Pages: 1	
Margin 0	.5
0.5	0.5
0	.5
Print	Cancel

The user can choose the printer, change orientation and margins. The default print page is the current page. If the user wants to print all, he/she needs to input the total number of pages he/she wants. The program will divide the whole loaded data file to be equal to that range and print.

3.4.1.3 Channel Set Up

Right click the mouse anywhere on the graph to display a pop-up menu.



Select Setup from this menu and the Channel Setup dialog will appear.

🔒 Cha	nnel Setup						
Channe	el:	Channel 1	-				
Visible:		On	•				
Marker	Туре:	None	•				
Marker	Size:	3	•				
Line Ty	pe:	Solid	•				
Line Th	ickness:	1	•				
Data Ti	race Color:						
Alarm T	race Color:						
	Apply	Cance					

The Channel Setup dialog allows the user to modify the properties of each channel.

Channel	Selects a channel
Visible	Turns the trace on or off for the selected channel
Marker Type	Identifies the actual points recorded. The trace is extrapolated
	between these points. The points can be marked by a square, circle
	or diamond. The user can also select None for no marker.
Marker Size	Adjusts the size of the marker on the points.
Line Type	Identifies the trace type. It can be solid, dashed or dotted.
Line Thickness	Adjusts the thickness of the trace.
Data Trace Color	Changes the trace color for the selected channel.
Alarm Trace Color	Changes the alarm trace color for the selected channel.

3.4.1.4 Graph Background Color

Right click the mouse anywhere on the graph to display the pop-up menu. Highlight **Background Color** and there will be two menu items.



Choose "**Select**" to open the Color dialog, which allows the user to select a different background color.

Color 🛛 🛛 🔀
Basic colors:
Custom colors:
Define Custom Colors >>
UK Cancel Help

If **"Save as Default"** is selected, the selected background color will be saved to the registry. The next time Exhibitor is run, the graph will use that color as the default background.

3.4.1.5 X-Axes Color

Right click the mouse anywhere on the graph to display the pop-up menu and highlight **X**-**Axes Color**. Similar to **Background Color**, there are two menu options: **Select** and **Save as Default**. Choosing "**Select**" will open the color dialog to allow the user to change the X-Axes color. Choosing "**Save as Default**" will save the selected color to the registry to be used next time the software is run.

3.4.1.6 Other Information

There is a scroll bar and two buttons under the trend graph.

Scroll Bar Scrolling the scroll bar will move the trend to the correct position. For example, if the scroll bar is moved to 15% and the total data points for each channel are 1000, the 150th data point will be the 1st data on the screen.

- Discontinued Button



These will appear if there is a gap between the discontinued data points.

Click these two buttons to have the trend step over the time discontinuities.

Memory Use Information A text box indicates how much memory is used on the PC.

Use memory: 52%

If the used memory is over 70%, the data file will stop loading. There is a forward button to continue loading the file.

Forward Button

Clicking this button will enable the program to continue loading the data file. If the file was loaded all at once, this button will be disabled.

Synchronize - Synchronize Choice

Checking this option will synchronize the Graph page and the individual channel graph in Detail page. If the trend in the Graph page is moved, stretched or zoomed, the individual graph in Detail page will do the same.

Key Functions

Page Up	Moves the y-axes one page up
Page Down	Moves the y-axes one page down
Up Arrow	Moves the y-axes up
Down Arrow	Moves the y-axes down
Left Arrow	Moves the x-axes left
Right Arrow	Moves the x-axes right
Shift + Page Up	Moves the x-axes one page left
Shift + Page Down	Moves the x-axes one page right

3.4.2 Detail Window

🕄 Exhibitor File View Setup Tool Help Sample.dat **2 #** 2 Login Data Remote Real Time View Config Display Config Log Detail Graph DataTable Alarm Event Memo Chan 1 Chan 2 Chan 3 Chan 4 Chan 5 Chan 6 Chan 7 Chan 8 Chan 9 Chan 10 Chan 11 Chan 12 Chan 13 Chan 14 Cl 4 🕨 2 50.00 ÷ 40.00 9 Seconds 30.00 9 20.00 Q, 10.00 Q 0.00 **⊬**|4 (03/14/07) 16:24:30 (03/14/07) 16:25:00 (03/14/07) 16:25:30 (03/14/07) 16:26:00 (03/14/07) 16:26:30 (03/14/07) 00 I Time ► >> << 1 M Channge Tag: Chan 2 Engineer Unit: Seconds Maximum: 59.00 Miminum: 0.00 Average: 27.51 Use memory: 57% Synchronize

This page shows the individual channels and summary table.

Each channel graph has the same graph buttons as the trend graph in the Graph tab page. It also has the scrollbar and data discontinuity buttons. They function the same as in the Graph tab page.

On the bottom of the graph of each channel, there are additional text boxes that indicate information for that channel.

Channge Tag:	Chan 7
Engineer Unit:	Seconds
Maximum:	84.000
Miminum:	25.000
Average:	52.510

Beside these text boxes is a table that is empty after the file is loaded. To fill the table with data, click the search button on the top of the dialog.

A search dialog will appear with the start time and end time for that channel.

🖶 Search		
Catalog: Point		
- ,		
March, 2007		March, 2007
Sun Mon Tue Wed Thu Fri 25 26 27 28 1 2 4 5 6 7 8 9 11 12 13<	Sat 3 10 17 24 31 7	Sun Mon Tue Wed Thu Fri Sat 25 26 27 28 1 2 3 4 5 6 7 8 9 10 11 12 13 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 Today: 5/30/2007
16:24:22	÷	16:26:46
-		OK Cancel

Select a start date and end date and click OK. The table will be filled with all data points on that channel between the specified start time and end time. The trend will be highlighted for all the searched data points.





Clicking on any value cell will allow the user to add a message on that data point on the graph.

The summary table summarizes the information for all channels.

	-						0. T	_
	lag	Engineer Unit	Maximum	Minimum	Average	Start Time	Stop Time	
Chan 1	Chan 1	°F	75.119	74.604	74.835	03/14/2007 16:24:22:300	03/14/2007 16:26:46:200	
Chan 2	Chan 2	Seconds	59	0	27.51	03/14/2007 16:24:22:300	03/14/2007 16:26:46:200	
Chan 3	Chan 3	Seconds	64	5	32.51	03/14/2007 16:24:22:300	03/14/2007 16:26:46:200	
Chan 4	Chan 4	Seconds	69	10	37.51	03/14/2007 16:24:22:300	03/14/2007 16:26:46:200	
Chan 5	Chan 5	Seconds	74	15	42.51	03/14/2007 16:24:22:300	03/14/2007 16:26:46:200	
Chan 6	Chan 6	Seconds	79	20	47.51	03/14/2007 16:24:22:300	03/14/2007 16:26:46:200	
Chan 7	Chan 7	Seconds	84	25	52.51	03/14/2007 16:24:22:300	03/14/2007 16:26:46:200	
Chan 8	Chan 8	Seconds	89	30	57.51	03/14/2007 16:24:22:300	03/14/2007 16:26:46:200	
Chan 9	Chan 9	Seconds	94	35	62.51	03/14/2007 16:24:22:300	03/14/2007 16:26:46:200	
Chan 10	Chan 1	Seconds	99	40	67.51	03/14/2007 16:24:22:300	03/14/2007 16:26:46:200	
Chan 11	Chan 1	Seconds	104	45	72.51	03/14/2007 16:24:22:300	03/14/2007 16:26:46:200	
Chan 12	Chan 1	Seconds	109	50	77.51	03/14/2007 16:24:22:300	03/14/2007 16:26:46:200	
Chan 13	Chan 1	Seconds	114	55	82.51	03/14/2007 16:24:22:300	03/14/2007 16:26:46:200	
Chan 14	Chan 1	Seconds	119	60	87.51	03/14/2007 16:24:22:300	03/14/2007 16:26:46:200	
	CI 4	e 1	404	er.	00.54	03/44/2007 40 34 33 300	00/44/0007 40 00 40 000	

3.4.3 DataTable Window

The DataTable Window shows the time and value of every data sample on each channel. This window is also used to export data directly into an ExcelTM spreadsheet and save the table to a .csv file. It can also be used to highlight a specific point on the graph.

Deta	il Graph DataTable	Alarm E	ivent M	emo								
												Report
	Time	Chan1	Chan2	Chan3	Chan4	Chan5	Chan6	Chan7	Chan8	Chan9	Chan'	Include Columna
•	3/14/2007 16:24:22:300	74.8	48	53	58	63	68	73	78	83	88	
	3/14/2007 16:24:22:400	75	49	54	59	64	69	74	79	84	89	I lime ▲
	3/14/2007 16:24:22:600	74.8	49	54	59	64	69	74	79	84	89	Chan1
	3/14/2007 16:24:23:100	75	49	54	59	64	69	74	79	84	89	Chan3
	3/14/2007 16:24:23:200	74.8	49	54	59	64	69	74	79	84	89	Chan4
	3/14/2007 16:24:23:400	74.8	50	55	60	65	70	75	80	85	90	Chan5
	3/14/2007 16:24:23:600	75	50	55	60	65	70	75	80	85	90	Chan6
	3/14/2007 16:24:23:700	74.8	50	55	60	65	70	75	80	85	90	🗹 Chan7 🛛 🔽
	3/14/2007 16:24:24:400	74.8	51	56	61	66	71	76	81	86	91	
	3/14/2007 16:24:25:400	75	52	57	62	67	72	77	82	87	92	
	3/14/2007 16:24:25:500	74.8	52	57	62	67	72	77	82	87	92	
	3/14/2007 16:24:26:400	74.8	53	58	63	68	73	78	83	88	93	Date Time
	3/14/2007 16:24:27:400	74.8	54	59	64	69	74	79	84	89	94	F
	3/14/2007 16:24:28:400	74.8	55	60	65	70	75	80	85	90	95	From:
	3/14/2007 16:24:28:800	74.6	55	60	65	70	75	80	85	90	95	03/14/2007 16:24:7
	3/14/2007 16:24:28:900	74.8	55	60	65	70	75	80	85	90	95	To:
	3/14/2007 16:24:29:400	74.8	56	61	66	71	76	81	86	91	96	03/14/2007 16:26:
	3/14/2007 16:24:30:400	74.8	57	62	67	72	77	82	87	92	97	
	3/14/2007 16:24:31:400	74.8	58	63	68	73	78	83	88	93	98	
	3/14/2007 16:24:32:400	74.8	59	64	69	74	79	84	89	94	99 💌	
•	-										•	

3.4.3.1 Jumping to A Specific Point on The Graph

If you double click a value in any channel value column in the DataTable, the program will highlight that point on the graphic window. The graph will be automatically scaled to show the unique point highlighted by a rectangular box as shown below:



Move the cursor into the rectangle for precise information about the point.

The graph is synchronized with the DataTable as well. First, put the marker on a channel (For example, channel 2).



Move the cursor to the second marker. The cursor will become a hand. Double click the marker. The second row on the data table will be highlighted.

Deta	il Graph DataTable	Alarm	vent M	emo								
Col[1] Row[2]											Report
	Time	Chan1	Chan2	Chan3	Chan4	Chan5	Chan6	Chan7	Chan8	Chan9	Chan'	Include Columns
	3/14/2007 16:24:22:300	74.8	48	53	58	63	68	73	78	83	88	🔽 Time 🔼
•	3/14/2007 16:24:22:400	75	49	54	59	64	69	74	79	84	89	✓ Chan1
	3/14/2007 16:24:22:600	74.8	49	54	59	64	69	74	79	84	89	✓ Chan2
	3/14/2007 16:24:23:100	75	49	54	59	64	69	74	79	84	89	Chan4
	3/14/2007 16:24:23:200	74.8	49	54	59	64	69	74	79	84	89	🖌 Chan5
	3/14/2007 16:24:23:400	74.8	50	55	60	65	70	75	80	85	90	🖌 Chan6 🛛 💌
	3/14/2007 16:24:23:600	75	50	55	60	65	70	75	80	85	90	
	3/14/2007 16:24:23:700	74.8	50	55	60	65	70	75	80	85	90	
	3/14/2007 16:24:24:400	74.8	51	56	61	66	71	76	81	86	91	
	3/14/2007 16:24:25:400	75	52	57	62	67	72	77	82	87	92	From:
	3/14/2007 16:24:25:500	74.8	52	57	62	67	72	77	82	87	92	03/14/2007 16:24:22 🚔
	3/14/2007 16:24:26:400	74.8	53	58	63	68	73	78	83	88	93	To:
	3/14/2007 16:24:27:400	74.8	54	59	64	69	74	79	84	89	94	03/14/2007 16:26:46 🚔
	3/14/2007 16:24:28:400	74.8	55	60	65	70	75	80	85	90	95	
	3/14/2007 16:24:28:800	74.6	55	60	65	70	75	80	85	90	95	Export Time Format:
	3/14/2007 16:24:28:900	74.8	55	60	65	70	75	80	85	90	95	hh:mm:ss:ms
	3/14/2007 16:24:29:400	74.8	56	61	66	71	76	81	86	91	96	
	3/14/2007 16:24:30:400	74.8	57	62	67	72	77	82	87	92	97	
	3/14/2007 16:24:31:400	74.8	58	63	68	73	78	83	88	93	98	Minute O Day
	3/14/2007 16:24:32:400	74.8	59	64	69	74	79	84	89	94	99 👻	0 1/2 Hour
	·										•	O Hour

3.4.3.2 Creating Report

The Exhibitor has the ability to create custom reports to be exported to ExcelTM directly. The user can select the entire data set (beware of large files) or highlighted rows in the table or choose specific dates and times using the filter. Also, the user can select what columns from the table to export.

To export all data simply click the ExcelTM button or Export button **Description**. To select multiple rows from the DataTable, click the left edge of the starting row to export. This will highlight the row. Then scroll to the last row to export and hold down the shift key, and click the left edge of the last row. This will highlight all the rows between the start and the end. Then click the ExcelTM button or Export button. The spreadsheet will open automatically if using ExcelTM or you can open the exported file later if the Export button is click.

The report can be further customized by selecting which columns to include in the report. This is done via the Report dialog box.

Report	
Include Colu	mns
✓ Time	~
✓ Chan1	
✓ Chan2	
✓ Chan3	
🖌 Chan4	
🖌 Chan5	_
🖌 Chan6	
🖌 Chan7	
🖌 Chan8	
🖌 Chan9	×

The Include Columns check boxes determine which columns of the data table will be exported to the spreadsheet. Simply select the data you want.

Below the Include Columns window is the Filter. This is yet another easy way to limit what data is exported to the spreadsheet. You can filter data by Date or Time or Both simply by checking the relative boxes as shown below.

FILTER
🔽 Date 🔽 Time
From:
03/14/2007 16:24:22 🛨
To:
03/14/2007 16:26:46 🛨

The From: and To: data entry areas default to the start and end times of the data in the table to be exported and can be edited by the user to specify an exact time frame for export. Once all parameters are set, press the ExcelTM button and the data will open in an ExcelTM spreadsheet.

When exporting into ExcelTM, the user can select the desired Time Format in which the time will be displayed in Excel.

Export Time Format:
hh:mm:ss:ms 📃 💌
hh:mm:ss:ms
hh:mm:ss
hh:mm

There is also an option to view only an interval report. Select the desired interval.



Minute – View the first data point of every minute.

- $\frac{1}{2}$ Hour View the first data point of every half hour.
- Hour View the first data point of every hour.
- Day View the first data point of every day.
- NOTE: You will need to have a valid copy of Excel[™] on your PC. Otherwise use the Export button to name a .CSV file for later use.

3.4.4 Alarm Table Window

The Alarm Table is for alarm points. If there are no alarms, the window will be empty.

Alar	m	
	Time	AlarmString
•	06/05/2008 13:30:09:000	Chan 2: Alarm 1 High
	06/05/2008 13:30:37:000	Chan 2: Alarm 1 Reset
	06/05/2008 13:31:07:000	Chan 2: Alarm 1 High
	06/05/2008 13:31:37:000	Chan 2: Alarm 1 Reset
	06/05/2008 13:32:07:000	Chan 2: Alarm 1 High
	06/05/2008 13:32:37:000	Chan 2: Alarm 1 Reset
	06/05/2008 13:33:07:000	Chan 2: Alarm 1 High
	06/05/2008 13:33:37:000	Chan 2: Alarm 1 Reset
*		

3.4.5 Event Table Window

The Event Table is for events. If there are no events, the window will be empty.

Event			
Time EventString			

3.4.6 Memo Table Window

The Memo Table is for memos. It shows all memos in the data file.

Mem	D					
	Туре	ID	Time	Control	MemoString	Channel
•	4	1	1/1/2000 2:38:34:100	1	Memo:this is a memo	0
	4	1	1/1/2000 2:41:19:700	1	Memo:memo 2	0
*						
*						

Each memo is plotted on the graph as a yellow folder image. Double-click any cell in the memo row and a yellow rectangle will surround the correct yellow folder.



Double-click the yellow folder to see the content of the memo. If it is a message, a textbox will display the memo.



If it is an image, it will be displayed in a graph.



3.5 Real Time Display

Exhibitor can display data through OPC.

Microsoft's COM is the key for communication between OPC clients and OPC servers. DCOM permits OPC clients transparent access to OPC servers on remote computers. Default DCOM settings vary from system to system. Generally, default DCOM settings on the server machine restrict OPC client applications from accessing a remote OPC server.

If you have difficulty connecting the Exhibitor application to an OPC server, temporarily turn off your computer's firewall. To do so, click the Control Panel -> Security Center->Windows Firewall.



There are four ways to see real time data within the program: Device Manager Window, Design Page Window and Real Time View and OPC Client (under the Tools pull-down menu).

3.5.1 Device Manager Window

This window can show multiple servers (maximum 50). Each server can have multiple items (maximum 100).

OPC Device	: (Select A File)		Item List:	
Add OPC Server				
View All		<		
Save				
Delete		>		
Run				
Show Live				

3.5.1.1 Add Server

1. Click the Add OPC Server button. The OPCServerBrowser will appear.

🖶 OpcServerBrowser	
Computer List:	OPC Servers:
ROSALINDXPPRO SCHEE16744-1 SHIPPING SHIPPINGXPRO STEVEEXPRO STPRODUCTION-B STPRODUCTION-G STPRODUCTION-G STPRODUCTION-B	KEPware.KEPServerEx.V4 MIS.Dc6Server.1 NDI.SimulationSvr.1 OPCLabs.KitServer.2
IP Address:	
Description: Test1	
Update Rate (Sec.): 1	OK Cancel

2. Select a computer from the computer list (ROSALINDXPPRO for example) OR enter an IP Addresss (192.168.0.243 for example).

😸 OpcServerBrowser	
Computer List:	OPC Servers:
2ALANWOOLFSON 2KIMSMALL ADMINISTRATORCP BETTYXP BHILTON BLXPROAMD64 BMOODY BOB BRIANMXPRO	NDI.MiSvr.1
IP Address:	-
Description:	
Test2	
Update Rate (Sec.):	
1	OK Cancel

- 3. Enter a description (Test1 or Test2 for example).
- 4. Enter an Update Rate in seconds (Default is 1).
- 5. Then click the arrow button between Computer List and OPC Servers. If there is no connection between the local PC and the device, a message will pop up.

		×
No connectio	n. Please conne	ect the device.
	01/	1
	UK	

- 6. If connection is ok, the list box displays all OPC servers on the device. Select an OPC Server from the OPC Servers list (OPCLabs.KitServer2 or NDI.MiSvr.1 for example).
- 7. Click OK. The server name with the description is added to the OPC Device list in the Device Manager window.

OPC Device: (Select)	A File) 💌	Item List:	
OPCLab	s.KitServer.2 [Test1]		
Add ODC County			
View All		1	
Save			
Delete	->		
Run			
Show Live			

8. Double-click the server name or right click it and select Add Item from the menu to view all OPC items under this server.

OPCLabs.KitServ	Add Item	1
	Update Rate	
	Delete Server	

There are two other items in this menu.

Update Rate – Modifies the server update interval. The default is 1 second.

🖶 Update Rate	×
Update Rate (Sec.):	ок
0	Cancel

Delete Server – Deletes this server from the OPC Device list.

9. The Item List on the right side of the window will show all the items under this server. Click any server to expand child nodes.

— OPCLabs.KitServer.2 [Test1]	lect A File) Item List:
Add OPC Server View All Save Delete Run	CLabs.KitServer.2 [Test1]

10. Select an item from the Item List and click the left arrow button between OPC Device

and Item List to add the item to the server in OPC Device list. If the root node in the Item List tree is chosen, all children under the root are added to the server. Only the added items are displayed to the user.

OPC Device	: (Select A File) ▼		Item List:	
	 OPCLabs.KitServer.2 [Test1] Greenhouse.Sprinklers Greenhouse.Temperature Greenhouse.RoofOpen Greenhouse.Humidity 	-	Trends Simulation ServerControl Greenhouse	
Add OPC Server View All Save Delete Run		<		
₩ Show Live				

You can also right-click an item in the Item List and select Add All for a root node or Add for a child item.



To delete an item from OPC Device, right click it and choose Delete Item.



OR

Click the right arrow button between OPC Device and Item List.

If you want to rename to OPC item to make more sense to yourself, right click the item and choose Rename as show above. The item becomes editable. Then type the name.

-->



When adding another server, previously selected servers will disappear from the list, but they still exist. They are just hidden.

To view all added servers, click the View All button.

All added servers will be listed in the left window. Double-click any server to expand the tree and show all children.



3.5.1.2 Running the Servers

- 1. Click the **Run** button. A table with the server and its selected items replaces the Item List on the right side of the window.
- 2. Check the **Show Live** check box if it is unchecked. The default is unchecked. After checking it, the table shows the real time value.

OPC Device	e: (Select A File)				
	OPCLabs.KitServer.2 [Test1]	OPC	Labs.KitServer.2[Test1]		
			Tag	Time	Value
		•	Greenhouse.Sprinklers	12/26/2007 02:03:32:46	0
			Greenhouse. Temperature	12/26/2007 02:03:32:46	20.184
			Greenhouse.RoofOpen	12/26/2007 02:03:32:46	2
			Greenhouse.Humidity	12/26/2007 02:03:32:46	31
		▲			
Add UPC Server		NDI	.MiSvr.1 [Test2]		
View All			Tag	Time	Value
Save		•	Channel.Value_01	12/26/2007 02:03:32:437	-3599963.000
Buve			Channel.Value_02	12/26/2007 02:03:32:437	27.000
Delete			Channel.EngUnits_02	12/26/2007 02:03:32:437	Seconds
Stop			Channel.ChanTag_02	12/26/2007 02:03:32:437	Chan 2
			Channel.Value_03	12/26/2007 02:03:32:437	32.000
			Channel.Value_04	12/26/2007 02:03:32:437	6.300
		•			

If you want to modify the OPC Device list, you have to click Stop button. The table is gone and the Item List comes back.

3.5.1.3 Save OPC Device

The program can save all added OPC Device Servers and reload them. This saves time and you don't have to go to the OPC Server Browser window to add servers and reconnect.

- 1. Click the **Save** button.
- 2. Select a Save in location
- 3. Enter a File name (e.g. dev2). The extension of the file is .dev.
- 4. Click Save.



The File name (e.g. dev2.dev) will be added to the OPC Device combo box.

OPC Device:	dev2.dev	•

3.5.1.4 Reload Saved Device

1. Select blank.dev from the OPC Device combo box. All items in the left window will be gone.

OPC Device:	blank.dev 💌

2. Select the desired saved OPC Device (e.g. dev2.dev) from the OPC Device combo box. All Device Servers are added to the left window.

OPC Device: dev2.dev	Item List:
⊕ OPCLabs.KitServer.2 [Test1] ⊕ NDI.MiSvr.1 [Test2]	
Add OPC Server	
View All	<
Save	
Bun	
☑ Show Live	

3.5.1.5 Delete Saved Device

- 1. Click the **Delete** button.
- 2. Select a file to delete from the list and then click **OK**.

De	elete I	File				×
	Plea	sese	lecta	file to	delete.	
	blank	dev				
	dev1.	dev				
	dev2.	dev				
						1
			ОК		Cancel	

3.5.2 Design Page Window

The user can customize different widget and show different OPC items. All OPC items are based on Device Manager window.

Exhibitor	
File View Setup Tool Help	
	Sample.dat
Login Data Remote Real Time View Config Display Config Log	1
Device Manager Design Page Real Time Record	
Project: (Select A Project) 🔻 🔚 🐰 Run (Select a Control) 💌 Backgro	und Image Load Clear
	•
<u></u>	Use memory 59%
	Synchronize

3.5.2.1 Creating a Widget

1. Click the (Select a Control) combo box.

Project:	(Select A Project) 💌 🖬 🐰	Run	(Select a Control)	•
			(Select a Control)	~
			Small Thermometer	
			Large Thermometer	
			Small Digital 1	=
			Large Digital 1	
			Small Digital 2	_
			Large Digital 2	
			Small Bar	~

.

2. Select a widget type (Small Thermometer for example).

3. The Design Window appears.

🔜 Design		
OPC Items:	Labels Scale Alarms	Controls: (Select A Control)
 OPCLabs.KitServer.2 [Test1] Greenhouse.Sprinklers Greenhouse.Temperature Greenhouse.RoofOpen Greenhouse.Humidity NDI.MiSvr.1 [Test2] 	Label: [Select A Label] Create Delete Text: OPC Item: Clear Color: Black Font: Over Range: Precision: 1 ==	Alarm - 100.0 - 50.0 - 0.0
		OK Save Cancel

There are three major parts on this window:

OPC Items – OPC item tree is based on Device Manager window Widget Setup – Configure the Labels, Scale and Alarms on the widget Widget – Customize the widget

4. First set up your labels. Labels can be Text (e.g. Engineering Units) or an OPC Item.

With the Labels tab selected, click the Label combo box and select a label. Then click the **Create** button.

Label:	(Select A Label)	•	Create	Delete
Taul	(Select A Label)	^		
Texc	Label2			
OPC Item:	Label3 Label4	Ξ	(Clear
~ .	Label5	-		
Color:	Label5 Label7	~		

For example, create Label1.

The label can be deleted by clicking the **Delete** button.
All Labels are created on the top left corner on the widget.

Controls:	(Select A Control)	* *
	Alarm Label1 50.0	

If you put the mouse cursor over Label1 the cursor becomes a hand. Then you can drag the label to move it to where you want.

Controls:	(Select A Control) 💌 👗
	Alarm
	- 100.0 E
	0.0
	Label1

To make Label1 Text, type text into the Text box and you will see Label1 change to the text you typed in the widget on the right.

For more advanced details within a widget, you can add more Labels, which can indicate titles or values such as max and min.

For instance, you can follow the same steps to create Label2, but instead of making the label text, select an OPC Item from the list on the left to make the Label2 equal to that OPC Item.

The example below shows Label2 assigned to the OPC Item ChannelEngUnit_02. This label will continuously change as the value of ChannelEngUnit_02 changes.

🖶 Design			
Design OPC Items: OPCLabs.KitServer.2 [Test1] Greenhouse.Sprinklers Greenhouse.Temperature Greenhouse.Humidity NDI.MiSvr.1 [Test2] Channel.Value_01 Channel.Value_02 Channel.Value_02 Channel.ChanTag_02 Channel.Value_03 Channel.Value_04	Labels Scale Alarms Label: Label2 Creat Text: Label2 OPC Item: NDI.MiSvr.1 [Test2]\Channel.Eng Color: Black Font: Microsoft Sans Serif, 8.25pt, Regul Over Range: OverRange	Controls:	(Select A Control)
	Precision:	1 🔅	
	C Activate	0K	Save Cancel

5. Next select the Scale tab to configure the Scale, which actually assigns a value for the widget.

To assign OPC item to the scale, click the OPC Item text box so the cursor is in there. Then click any OPC item (ChannelValue_02 for example).

🔜 Design			
OPC Items: OPCLabs.KitServer.2 [Test1] Greenhouse.Sprinklers Greenhouse.RoofOpen Greenhouse.RoofOpen Greenhouse.Humidity Channel Value_01 Channel Value_01 Channel Value_02 Channel ChanTag_02 Channel Value_03 Channel Value_04	Labels Scale Ala Min & Max Use OPC Item Major Division: Scale Color: Minor Division: Point Color: Font: OPC Item:	mms Min: 0 Clear Max: 100 Clear Black Black Black Gold Microsoft Sans Serif, 6.75pt, Re NDI.MiSvr.1 [Test2]\Cha Clear	Controls: (Select A Control)
	C Activate		OK Save Cancel

You can configure Min and Max by assigning a number or an OPC item. By default, they are assigned by 0 and 100. To assign an OPC item, click the Use OPC Item check box. Click in the Min or Max text box, and then select an OPC item.

You can also change the color of different divisions, the scale and the point.

6. Next select the Alarms tab to configure the Alarms.

🔜 Design			
OPC Items: OPCLabs.KitServer.2 [Test1] Greenhouse.Sprinklers Greenhouse.Temperature Greenhouse.HoofOpen Greenhouse.Humidity NDLMISvr.1 [Test2] Channel.Value_01 Channel.Value_02 Channel.EngUnits_02 Channel.ChanTag_02 Channel.Value_03 Channel.Value_04	Labels Scale Alarms Alarm Set Point Image: Comparison of the set point of the set p	Controls:	(Select A Control)
	C Activate	0K	Save Cancel

There are two ways to configure alarm set points. By default, it is set by internal alarms. That means that the alarm set point is configured by the device. This only applies to the widget that its scale is assigned by ChannelCom* item. A red label **Alarm** appears on the top of the widget if there is an alarm.

If you want to configure the set point yourself, uncheck Internal Alarm check box and enter the numbers in the two Set Point text boxes.

- 7. Once you are done setting up the widget, check the Activate check box.
- 8. Click the **OK** button.

The configured widget is added to the main design page.



Double-click the widget to go back to the design window so you can change the configurations.

<u>Widget Types:</u> Thermometer (Small or Large) Digital (Small or Large, type 1 or 2) Bar (Small or Large) Trend



Digital widgets do not have Min and Max. These two areas are disabled. You can also choose Auto Precision for the scale value:

🔜 Design			
OPC Items:	Labels Scale Alarms	Controls:	(Select A Control) 💌 👗
OPCLabs.KitServer.2 [Test1] NDI.MiSvr.1 [Test2] Channel.Value_01 Channel.EngUnits_02 Channel.ChanTag_02 Channel.ChanTag_02 Channel.Value_03 Channel.Value_04	Min & Max Min: Clear Use OPC Item Max: Clear Background Color: Black Border Color: GrayText Minor Division: Black Point Color: Lime Font: Microsoft Sans Serif, 8.25pt, Re OPC Item: VDI.MiSvr.1 [Test2]\Cha Clear	Alarm	Label2
	Activate	OK	Save Cancel

Or customize the precision yourself.

🖶 Design			
OPC Items:	Labels Scale Alarms	Controls:	(Select A Control) 💌 👗
OPCLabs.KitServer.2 [Test1] NDI.MiSvr.1 [Test2] Channel.Value_01 Channel.Value_02	Min & Max Use OPC Item Max:	ar	
Channel.EngUnits_02	Background Color: Black		Alarm
Channel. Value_03	Border Color: GrayText		Alam Alam
Channel.Value_04	Minor Division: Black		
	Point Color:		Label1 Label2
	Font: Microsoft Sans Serif, 8.25pt, Re		
	OPC Item: NDI.MiSvr.1 [Test2]\Cha _Cle	ar	
	Auto Precision Precision: 4	=	
	✓ Activate	OK	Save Cancel

Bar widgets have scales with three value sections for alarms. They can be assigned different colors.

Value Section 1 👻	Red	
Value Section 1		
Value Section 2		

The Trend widget h	as additional tabs to configure	e Channels, the Display and UpdateRate
🖶 Design		
OPC Items:	Labels Channels Display UpdateRate	Controls: [Select A Control]
■ NDI.MiSvr.1 [Test2] OPCLabs.KitServer.2 [Test1]	Label: (Select A Label) Create Del	
	Text:	100.0
	OPC Item:	lear
	Color: Black	50.0
	Font:	
	Over Range:	(12/30/99) 00:00:00 (12/30/99) 00:00:10
	Precision: 1	Plot Plot
	T Activate	OK Save Cancel

1 • 1 a**4** 1. ما ما بند مر ما بده ام c: 1 Diant d Undat D, e.

The created labels are movable and assigned to OPC items like other widgets.

The trend widget has eighteen channels by default. Each channel needs to be configured separately.

Labels Channels	; I	Display UpdateRate	
Channel 1 Channel 2 Channel 3 Channel 4 Channel 5 Channel 6 Channel 7 Channel 8 Channel 9 Channel 10 Channel 10 Channel 11 Channel 12 Channel 13 Channel 14 Channel 15 Channel 16		Trace Alarm Enabled Marker Type:	▼ ▼ ▼ Clear
Add Delete	•	Max: 100	Clear

To configure Channels click on the Channels tab.

Delete any channels not wanted by clicking on the channel and then clicking the **Delete** button.

Labels Channels	Display UpdateRate	1		
Channel 1 Channel 2	Trace Alarm En	abled		
Channel 3	Marker Type:	None	-	
	Marker Size:	3	-	
	Line Type:	Solid	-	
	Line Thickness:	1	-	
	Color:	Lime		
	OPC Item:		Clear	
	Min & Max			
	Min: 0.00		Clear	
Add Delete	Max: 100.00		Clear	

To add channels, click the **Add** button and a list of the additional channels will appear. Select one to add.

Labels Channels	Display Opdatema	(e)
Channel 1 Channel 2	Trace Alarm B	Enabled
Channel 3	Marker Type:	None
	Marker Size:	3 🗸
	Line Type:	Solid 💌
	Line Thickness:	1 🔻
Channel 4 Channel 5 Channel 6 Channel 7 Channel 8 Channel 9 Channel 10 Channel 11 Add Channel 12	■ fax = fax = 0PC Ite 0.00 100.00	Lime Clear m Clear Clear
Channel 13	3 🖌 💳	

To configure a specific channel:

- Select the Channel from the list
- Select the Marker Type, Marker Size, Line Type and Line Thickness.
- Change the trace color if desired.
- Assign an OPC Item to the channel by clicking in the OPC Item text box and then clicking on an OPC Item from the OPC Item list.
- Set the Min and Max for the y-axes. You can enter specific numbers or assign an OPC item.

🖳 Design				\mathbf{X}
OPC Items: OPCLabs.KitServer.2 [rosa] Channel.Value_01 Channel.Value_02 Channel.EngUnits_02 Channel.ChanTag_02 Channel.Value_03 Channel.Value_04	Labels Channels Channel 1 Channel 2 Channel 3	Display UpdateRate Trace Alarm Enabled Marker Type: None Marker Size: 3 Line Type: Solid Line Thickness: 1	Controls: (Select A Controls)	
X. D	Add Delete	OPC Item: hannel.Value_01 Clear Min & Max Use OPC Item Min: 0.00 Clear Max: 100.00 Clear	0.0	(12/30/99) 00:00:10 Cancel

• Click on the Alarm tab. Configure the alarm set points and color. The alarm color is the same as the channel trace color by default.

🖶 Design					
OPC Items:	Labels Channels	Display UpdateRate	Controls:	Select A Control) 📃 👗	
OPCLabs.KitServer.2 [rosa] NDI.MiSvr.1 [Test2] Channel.Value_01 Channel.Value_02 Channel.EngUnits_02 Channel.ChanTag_02 Channel.Value_03 Channel.Value_04	Channel 1 Channel 2 Channel 3	Trace Alarm Enabled High Alarm Setpoint: 255.00 Low Alarm Setpoint: -255.00 Color: Image: Miffifeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeeee	▶ (銀) ♀ ♀ ♀ 100.0 50.0 (12/30/99) 00:00:00		
	Add Delete			r iot	
Activate OK Save Cancel					

• Click on the Enabled tab. Unchecking the Enable check box makes the trace invisible.

🖶 Design		
Pesign OPC Items: OPCLabs.KitServer.2 [rosa] NDI.MiSvr.1 [Test2] Channel.Value_01 Channel.Value_02 Channel.EngUnits_02 Channel.ChanTag_02 Channel.ChanTag_02 Channel.ChanTag_03	Labels Channels Display UpdateRate Channel 1 Trace Alarm Enabled Channel 2 Channel 3 Image: Enable	Controls: (Select A Control) V K
Channel Value_04	Add Delete	50.0 0.0 (12/30/99) 00:00:00 Plot
	C Activate	OK Save Cancel

Follow the same steps to configure additional channels.

-					<u> </u>				
10.0	onfiguro	tho	Trond	Dicula	w Sotting	oliolz c	n tha	Dicploy	toh
100	JIIIIZUIC	uic	LICHU	Dispic	iv Scime	, UIUN U	л шс		iav.
						/		I v	

Labels Channels [Display UpdateRate
Name:	Plot
Style:	Small Trend
-Y-Axes Scale	
Use Channel	Channel 1 📃
C Rotate every	10 seconds.

Enter a name that will be the name of the trend graph.

There are three trend styles. The only difference is trend size.

Style:	Small Trend 📃 💌
-Y-Axes Scale	Small Trend Medium Trend
Ise Channel	Large Trend

Each channel has its own y-axes. You can let the trend only show one specific channel y-axes:

Y-Axes Scale	
Use Channel	Channel 1 📃
C Rotate every	Channel 1 Channel 2 Channel 3

OR rotate all channel y-axes at a specific time interval (10 seconds for example).

Rotate every	10	seconds.
--------------	----	----------

To configure the Trace Update Rate, click on the UpdateRate tab.

The Update Rate is set to 1 second by default.

Labels Channels Display	UpdateRate
Update Rate (Sec.):	1.00

Once the trend is configured make sure to check the **Activate** check box and click the **OK** button. The trend will be added to the main Design Page window.

Device Ma	nager Design Page Real Time Record
Project:	(Select A Project) 🔽 📓 🐰 Run Trend 🔽 Background Image Load Clear
abel2 00.0	「「「「」」「「」」「」」「」」「」」「」」「」」「」」「」」「」」」「」」
0.0	
0.0	80.0 -
0.0	
0.0	60.0
.0	40.0
	20.0
	0.0 1
	(12/30/99) 00:00:00 (12/30/99) 00:00:02 (12/30/99) 00:00:04 (12/30/99) 00:00:06 (12/30/99) 00:00:08 (12/30/99) 00:00:10
•	

Once you have added all your widgets to the Design Page (an example with 6 widgets is shown below), you can move these widgets around by putting the mouse cursor over a widget and dragging the widget to a new location.



The main Design page has vertical and horizontal scroll bars, which can be used to see all widgets.

All the widgets don't show any real value yet. You must click on the **Run** button on the **Device Manager** or **Design Page** first. Once you hit **Run**, you will see real values in the **Design Page**.



If there is no connection, an error message will pop up similar to the following:



There are some graph buttons on the top of the trend widget. They have the same functionalities like the graph for the file open. To make these buttons work, click the red Pause button.



After that, the trend stops displaying data and the graph buttons become enabled. Now you can interact with the graph.

Click the green button to resume trending live data.

3.5.2.2 Save Widget Configuration

Exhibitor can save the widget configuration and reload it to save time.

- 1. Once a widget is created, click the **Save** button.
- 2. In the Save File dialog select a Save in location and File name (e.g. therm1).
- 3. Then click the Save button. The widget is saved with a .wgt extension.
- 4. The File name will then be listed in the Controls combo box.
 - Controls: therm1.wgt

To reload the saved File name, click in the Controls combo box and select .wgt file.

Controls:	(Select A Control) smallthermo.wgt therm1.wgt	•	¥
	Alarm - 100.0 - 50.0 - 0.0		

The widget will load into the Design Page like the following:

Controls:	therm1.wgt	
	Alarm	
	Label2	
	- 100.0	
	Label1	

Widgets are saved in the installation directory. You can open Windows Explorer and go to the directory to delete the file. Or you can select the file from the Controls combo box and click the cut button.

3.5.2.3 Save Created Widgets On Design Page

All created widgets on the Design Page can be saved to a project file and reloaded later. This saves a lot of time from having to recreate and reconfigure widgets.

1. Once you have created all your widgets and want to save the design, click the Save button on the Design page to save the page as a Project.



- 2. In the Save File dialog select a Save in location and File name.
- 3. Then click the Save button. The Project is saved with a .prj extension.

Save File			? 🗙
Save in:	🔁 Navigator6000 🗨	+ 🗈 📸 🎟 -	
My Recent Documents Desktop	TestData a) blank.prj a) prj1.prj a) prj2.prj		
My Documents			
My Computer			
My Network Places	File name: project1	_	Save
	Save as type: XML files (*.prj)	•	Cancel

4. The File name will then be added to the Project combo box. •



You can empty the Design Page by selecting blank.prj from the **Project** combo box.

Project:	X Run Small Thermometer	er 🚽 Background Image	Load Clear	r
(Select A File) Sec 243.prj ds 243trend.prj blank.prj dev2.prj project1.prj rosasteve.prj Chan 2 (Select A File) 243trend.prj dev2.prj rosasteve.prj 0.0 (Select A File) 243trend.prj dev2.prj rosasteve.prj 0.0	+ Chan 2 Seconds	+ Seconds	Seconds 100.0 50.0 0.0 Chan 2	Secon 100. 80.0 60.0 40.0 20.0 0.0
Chan 2		Chan 2 Seconds		

The Design Page will become the default empty page.

10100		Toject, selec	t a l'ioject non	i the i reject list.			
Project:		🕶 🔚 👗 🛛 Run	Small Thermometer	Background Image	Load	Clear	
	(Select A File) 243 pri						-
	243trend.prj						
	dev2.prj						
	project1.prj rosasteve.prj						
	steve.prj						
							-
4		1					

To reload a saved Project, select a Project from the Project list.

A Project dialog appears.

🔜 Project			×
Device IP in the project:			
192.168.0.243	-	Edit IP	
Test Connection		Edit Project	
Connect		Cancel	
			· //

It has IP address for all the devices that are in the project.

🔜 IP		X
Old IP:	192.168.0.243	
New IP:		
	OK Cancel	

The user can change the IP address by clicking the **Edit IP** button.

It is recommended that the user click the **Test Connection** button first before clicking **Connect**.

If there is no connection between the PC and the device, a message will be displayed.



The **Edit Project** button will create all widgets in the project but no connection to the device. The widgets will not show real time values.

Clicking the **Connect** button loads the project and connects to the devices in the project. All widgets in the Project are loaded to the Design Page.

Projects are saved under the installation directory. They can be deleted from that directory or by clicking the **Delete Project** button.



To delete a single widget from a Project, double-click it. The widget design dialog appears. Click the **Delete Control** button.

🔜 Design		
OPC Items:	Labels Scale Alarms	Controls: (Select A Control)
NDI.MiSvr.1 [Test2]	Label: [Select A Label] Create Delete Text: OPC Item: Color: Black Font: Over Range:	Alarm Seconds 100.0 50.0 0.0
	Precision: 1	
	Activate Delete Control	OK Save Cancel

This widget will be deleted from the Design Page.

3.5.2.4 Save Background Image

The user can add or delete a background image.

Load - Click this button to choose an image file. The background will change accordingly.



Click this button to delete the background image.

3.5.3 Real Time Record

The user can create record widgets and record data from different device.

Device Manager Design Page	Real Time Record	
		•
•		•

1. Click the **Record Widget** button to create a record widget. A Record Widget dialog appears.

😸 Record Widget		
DataChart:	(None)	
DataChart Description:	Channels	
DataChart Rate:		3 🔳
Record	□ 4 □ □ 5 □ □	6 🔳
💿 Manual	C Auto	9
Start Time:		12
Stop Time:	12/26/2007 15:52:02 🚔	
Record Rate:	1	
Inicude:	🔽 Alarms	
File Name:		
	OK Car	ncel

- Either choose the data device from the first combo box or enter the IP to the four text boxes on the top right.
- Enter the description.
- Enter the data chart update rate.
- Choose record status: Manual or Auto.
- Enter the record rate. It must be equal or greater than the data chart rate.
- Select the channels that are going to record. Clicking the little blue button beside each channel to change the channel color.
- Decide whether or not to include Alarms.
- To indicate the File Name to which to save, click the Browse button (...). Another window will appear allowing you to chose a File Name that already exists or type in a new File Name.

The following is a record widget example.

🔜 Record Widget		
DataChart:	(None)	OR 192 168 0 243
DataChart Description:	DC1	Channels
DataChart Rate:	1	🔽 1 🖬 🔽 🗖 🖉 3 🔳
Record		🗹 4 🝙 🔽 5 🖕 🗹 6 🖕
Manual	C Auto	
Start Time:	12/26/2007 15:52:02	
Stop Time:	12/26/2007 15:52:02	
Record Rate:	1	
Inloude:	🔽 Alarms	
File Name: C:\Prog	gram Files\Exhibitor\243.dat	
		OK Cancel

Click OK. This record widget is generated on the main dialog.

Device Manager Design Page	Real Time Record
DC1	-
IP: 192.168.0.243	
Channels Recording: 01	
Start: 12/26/2007 15:54:24	
Stop: 12/26/2007 15:54:24	
Setup Start Record	
Exit Stop Record	
•	

- 2. Clicking the Setup button will go back to the Record Widget setup dialog. You can modify the record widget setup.
- 3. Click the Start Record button to have the widget start recording.

Recor	d Widget	1
Ince	a mager	1
JDC1		
IP:	192.168.0.24	13
Channe	els Recording:	01 💌
Reco	ord Manual	Record On
Start:	12/26/2007	15:50:22 🚊
Stop:	12/26/2007	15:54:24 🚊
Activity	c 0	
S	etup St	art Record
E	Exit St	op Record

The red text Record On indicates it is recording. The number after Activity indicates how many times the data is written to the file. This number multiplied by 600 is the approximate number of data points on the file.

- 4. Click the **Exit** button and the widget will be deleted.
- 5. Click the **Stop Record** button and the widget will stop recording. The red text **Record On** will change to Record Off. The color also changes.

Device Manager Design Page Real Time Record	
Record Widget	
DC1	
IP: 192.168.0.243	
Channels Recording: 01 -	
Record Manual Record Off	
Start 12/26/2007 15:50:22 📫	
Stop: 12/26/2007 15:50:53 🛨	
Activity: 1	
Setup Start Becord	
Exit Stra Becard	
	•
4	•

6. Click the **Open** button on the top or click **File -> Open** to open the saved file.

🛃 Exhibitor							
File View Setup Tool Help							
	Open File				? 🛛	mple.dat	
Login Data Remote Re Device Manager Design P	Look in:	Exhibitor	×	← 🗈 📸 🖬 •			
Record Widget DC1 IP: 192.168.0.243 Channels Recording: 01 Record Manual Record Start: 12/26/2007 15:50:53 Stop: 12/26/2007 15:50:53 Activity: 1	My Recent Documents Desktop My Documents	243_1-1.dat 243_1-2.dat 243_1-3.dat 243_1.4.dat 243_1.4.dat 243_5.dat 243_5.dat 243_6.dat 243_7.dat 243_7.dat					•
Setup Start Reco	My Computer My Network Places	File name: Files of type:	243.dat Data files (*.DAT)	•	Open Cancel		
<u> </u>							•

All saved data is shown on the Data tab page.

Multi record widgets can be created to record data from different recorders.

3.5.4 Real Time View

The user can view project files on this page. It is almost the same as the Design Page except the widget cannot be modified.



The user can also change the background image.

3.5.5 Config

In this page, the user can do the following things:

- Download any files from the device
- Upload any files to the device
- Remotely view Config files on the device
- Modify a Config and save it to your local PC

Remote Read Config	g
Server IP	
User Name	Connect
Password	Disconnect
File View	
(Please double click or download file.)	the dirctory to see its subs
	Save As Cancel

Enter the **Device IP**, **User Name and Password**. The password is the web access password on the device. Then click the **Connect** button.

Remote Read Co	onfig				
Server IP 192.168.0.243					
User Name Admin	Con	inect			
Password	Disco	onnect			
File View (Please double of or download file.	slick the dirctory t)	to see its su	bs		
USB HE)				
	Save As	Cance	el		

The File View box shows the drives on the device. "Internal" is the "SD Card" drive on the device.

Double-click a drive and all files and directories under it will be displayed.



The yellow folder image indicates it is a folder. The text paper indicates it is a file.

3.5.5.1 Download File to Device

Right click any file to display a pop-up menu.



To download the file, click "Copy to Folder". A browse window will appear.

Browse For Folder	? 🗙
Copy the selected item(s) to the folder:	
Desktop Image: Computer Ima	
Make New Folder OK Car	icel

Choose the location that you want to download to. Then click OK.

NOTE: The other menu item from the pop-up menu is "**Property**". This will display a window with the properties of the file.

🔜 Properties	
File:	Internal/Cattery.dat
Start Compare	2638242 bytes
Print Report	02-20-08 10:14am
	ОК

3.5.5.2 Upload File to Device

Right click any directory in the File View box to display a pop-up menu with Upload.



Select **Upload** to display the Open dialog window. Choose a file.

Open		? 🛛
Look in:	🗁 Exhibitor	- 🛋 🚔 🎫
My Recent Documents Desktop My Documents	SampleData Windows 243.dev Activity.log Activity.log Admin-05010932-START-config.xml Admin-05010937-END-config.xml Admin-05010937-START-config.xml Admin-05051018-START-config.xml Admin-05051027-END-config.xml Admin-05051027-END-config.xml Admin-05051027-END-config.xml Dlank.dev blank.dev blank.prj ConfigDiffReport.txt Controls.dll Copy of END-config.xml	Copy of START-config.xml END-config1.xml END-config.xml END-config.xml Exhibitor.exe FolderBrowser.dll FolderBrowser.dll Interop.Excel.dll Interop.NDISLIKDAC.dll Interop.Office.dll Interop.VBIDE.dll Interop.VBIDE.dll Interop.Instrumentation.WF.Common.dll Iocomp.Instrumentation.WF.Plot.dll Iocomp.Instrumentation.WF.Std.dll Language.csv Language_new.csv
S		
My Network Places	File name: Files of type:	Open Cancel

The selected file will copy to the selected directory on the device.

3.5.5.3 Remote View Config File

Double click a config file (**.xml) and its contents will display in the page. Some information, like Display, View and Record will not display.

Remote Read Config	Channel System Alarm DigitallO	
Server IP 192.168.0.243	Channel 1 🔽 🔽 Enable 🗌 Alarms Enable	
User Name Connect	Point Tag Eng Units Dec Point Pen Color Ch 1 Puise 2	
Password Disconnect	Scale High Background Color 0 0.5 1	
File View (Please double click the dirctory to see its subs or download file.)	Channel Type Type Frequency Veg Edge Trig	
	Low -60 - Input - 209 High	
⊞ Config12.xml ⊞ data.DAT DC6000Language.csv	Low -60 - Output - 209 High	
ECHO.log	Span 1 Offset 0	
FINALB.DAT fun pic.bmp	Filter: AVG 1 Enable	
Save As Cancel		

Channel tab

To view the setup on each channel, select a different channel number from the list.

System tab

Displays the device system setup.

Unit Tag Language Burn.xml English Mouse Point Enable 50/60 Hz Reject Config Auto Save Enable Ambient Temp Compensation Offset	Date Format MM/dd/yyyy V 24 Hr Format Menu Timeout (sec) 120 V Time Server Enable	From: Myself@yahoo.com From: MyEmail@yahoo.co	SMTP ip address SMTP Userld SMTP Password	smtp.unlimitedmail.o datachart dc6000
0 Deg-F User: Level: Auto Logout (Minutes): 5/ 8	NTPip: 129.6.15.29 Active Expires: //2008	Password Back Light Enable	Sync Enable Confi Bacl	rm Password k Light Level High
Admin aa aaa Upda Dele Old Password:	te Enable Retries: 3 T	Back Light Timeout	Disp Low	· · · · ·

Alarm tab

Displays the alarm information.





Click the Setup button to display the individual alarm information.

Alarm	Туре	SetPoint	Enable	
1	none	0		2
1	none	0	Π	S
3	none	0		S
4	none	0	Π	S
5	none	0	Π	S
Channel	1 🔹	Γ	ChannelEnabl	le
🔽 Masteri	Enable 🖡	🗸 AlarmMute	🔲 NotifyE	nable
Channel				
1 -	Alarm	Alar	m Type	Enable
SetPoint	Alarm 1 Dead I	Alar none Band Dela	m Type v (sec)	Enable
SetPoint 0 Rate Of Ch 0.0	Alarm Dead I 0 ange (sec)	Alar none Band Dela 0 Audio None	m Type v (sec) File v	Enable Notify Record Contact None
Rate Of Ch	Alarm Dead I 0 ange (sec) t Msg	Alar none Band Dela 0 Audio None	m Type v (sec) File value	Enable Notify Record Contact None

Select a different channel to view that individual channel's alarm information.

Alarm	Туре	SetPoint	Enable					
1	none	0		2				
1	none	0		2	Enable	Manual	Relay Type	Fail S
3	none	0		2			Normal -	
4	none	0		2			Normal -	
5	none	0		2	4		Normal 👻	
Channel	1 💌	Г	ChannelEnab)le	5		Normal 💌	
🔽 Master	rEnable	AlarmMute	🔲 NotifyE	inable	6		Normal 💌	
Channel	Alarm) Alar	m Type		□ 7		Normal 💌	
1	1	none	-	Enable	□ 8		Normal 💌	
SetPoin	t Dead	Band Dela	y (sec)	Notify	Г 9		Normal	
0	0	0		Record	L 10		Normal 💌	
Data of Cl		0. selie	F ile		Π 11		Normal 👻	
	hange (sec)	None	riie ▼	Contact	□ 12	•	Normal 💌	[_
Ever	nt Msg				🗆 Master	Enable	Apply	Cancel
<u> </u>		I Ena	apie		•			•

There is **Setup** button on the bottom right. Click it to show **Contact Setup** information.

DigitalIO tab

Displays digital in and digital out information.

<i>🏅</i> 🕻	DIGITAL	INPUT SETUP	1001110 ^	<i>é</i> 🛊	DIGITAL	OUTPUT SETUP	₽ ₹
Enable	Input Function	Status	Event Message	Enable	Manual	Relay Type	Fail Safe
Π1	None 👻			L 1		Normai 💽	
	None 👻			 2	-	Normal 🗾	
	None -			Г 3		Normal 🗾	
	None	- 2.		F 4		Normal 🗾	
4	None 💽			5		Normal 🚽	
5	None			F 6		Normal 👻	Г
6	None	•	1	7		Normal 🗨	
						Normal 💌	
						blormel _	
				9		Normai	
				1 0	-	Normal 💌	
				Γ 11		Normal 💽	
				[12		Normal 🗾	
🗌 Master	Enable Rep	ort Apply	/ Cancel	🦳 MasterEi	nable	Apply	Cancel
•			Þ	•			•

<i>🁌</i> 🕻		IGITAL INF	PUT SET	UΡ	100	1110 1
Enable	Input Fu	nction	Statu	is E	ivent Me	ssage
Π1	None	•				
 2	None	-		I [
ГЗ	None	•		I [
F 4	None	•		I [
5	None	•		I [
- E e	None	-				
🔽 Chanr	nel 1 🔽	Channel	7 🗌	Channel	13	
🔽 Chanr	nel 2 🛛	Channel	8 🔽	Channel	14	
🔽 Chanr	nel 3 🛛 🗌	Channel	9 🔽	Channel	15	Арр
🔲 Chanr	nel 4 🛛 🗌	Channel	10 🗌	Channel	16	Cano
🔲 Chanr	nel 5 🛛 🗌	Channel	11 🗌	Channel	17	
Chanr	hel 6 🛛 🗌	Channel	12 🗌	Channel	18	
MasterE	inable	Report		Apply	Car	ncel

If the user clicks on the Report button, a Report On Cmd panel will appear.

3.5.5.4 Save Modified Config to Local PC

There is a SaveAs button on the bottom left. Clicking it will save all the changes in the displayed config to the local PC.

3.5.6 Display Window

The Display window shows live display from the connected device. Similar to the Config page, the Server IP, User Name and Password are required. Enter this information and press **Start**.



The user can change the size by selecting a different option from the **Picture Size** pull-down box.



Press the **Stop** button to stop the live display.

3.5.7 Config Log Window

After the user logs into the device, he/she can change the configuration. After logging out, the modified configuration is saved in the device. The user can use this page to view the changes.

The Server IP, User Name and Password are required. Press the **GetLog** button to get a listing of all the LogOn activities.



Select a different login activity from the Login Users pull-down box.

Login Users:	
05/05/2008 01:32:52 PM Admin LogOn	-
05/05/2008 01:32:52 PM Admin LogOn 05/05/2008 10:18:05 AM Admin LogOn 05/01/2008 09:38:08 AM Admin LogOn 05/01/2008 09:37:19 AM Admin LogOn 05/01/2008 09:36:29 AM Admin LogOn 05/01/2008 09:32:36 AM Admin LogOn 05/01/2008 09:28:33 AM Admin LogOn 05/01/2008 08:54:20 AM Admin LogOn	
<	>

If the config is changed, the activity box will list when the user logged in, when the config was started, when the config was ended and when the user logged out (shown from bottom to top).

	0
05/01/2008 09:17:38 / 05/01/2008 09:17:37 / 05/01/2008 08:54:20 / 05/01/2008 08:54:20 /	M Admin LogOff M Admin-05010917-EN M Admin-05010854-ST M Admin LogOn
<	>

Click the **Start Compare** button to show the changes made.

Unit ID: Default User Logged In: Admin Start Config File: Admin-05010854-START-config.xml Start Time: 05/01/2008 08:54:20 AM End Config File: Admin-05010917-END-config.xml End Time: 05/01/2008 09:17:37 AM BEFORE AFTER
User Logged In: Admin Start Config File: Admin-05010854-START-config.xml Start Time: 05/01/2008 08:54:20 AM End Config File: Admin-05010917-END-config.xml End Time: 05/01/2008 09:17:37 AM BEFORE AFTER System
Start Config File: Admin-05010854-START-config.xml Start Time: 05/01/2008 08:54:20 AM End Config File: Admin-05010917-END-config.xml End Time: 05/01/2008 09:17:37 AM BEFORE AFTER
Start Time: 05/01/2008 08:54:20 AM End Config File: Admin-05010917-END-config.xml End Time: 05/01/2008 09:17:37 AM BEFORE AFTER System System
End Config File: Admin-05010917-END-config.xml End Time: 05/01/2008 09:17:37 AM BEFORE AFTER
End Time: 05/01/2008 09:17:37 AM BEFORE AFTER
BEFORE AFTER
System
-1
RecorderUnitTag Burn.xml Default <<
Channels
Channel
Number 1 (Channel Missing) <-
Channel
Number 2 (Channel Missing) <-
Channel
Number 3 (Channel Missing) <-
Channel
Number 4 (Channel Missing) <-
Channel
Number 5 (Channel Missing) <-
Channel
Number 6 (Channel Missing) <-
Channel
Number 7 (Channel Missing) <-
Channel

There are three different symbols on the report.

- << = Before value and After value are changed.</p>
- <-- = After value is missing.
- <<+ = New added item in After value.

Press the **Print Report** button to print the report to the printer.

3.5.8 OPC Client Window

Go to the **Tool** drop down and select **OPC Client**. This window can connect to one OPC server and displays all items on it.

OPC Server Machine:	OPC Groups		-Namespac	;e		Browse End Bro	wse
OPC Servers: Browse Connect Disconnect Start Time:	Add Group Remove All OPC Group	Remove Grou # Of Groups: 0					
Current Time: Last Update Time: Server State: OPC Items	Active Subscribed Async Refresh Update Rate:	C Device C Cache Sync Read					
Add Item Remove Item		Get Se	t	[
Remove All # Of Items: 0	Item ID	Value	Quality	TimeStamp	Access Path		
OPC Item							
Access Rights: Data Type:							
Active							
C Cache Read							

The following are the steps to view the items on a server.

1. Connect to a server

There are three ways to connect to a server:

Enter the machine's IP address that the server is on, and then click the combo box under OPC Server. All OPC servers will be listed in the combo box. Then click the server that you want to connect to.

OPC Server
Machine:
192.168.0.148
OPC Servers:
•
NDI.MiSvr.1

If you only want to connect to the server that is on the local PC that is running this program, you can click the combo box under OPC Server. All OPC servers will be listed.

OPC Server
Machine:
OPC Servers:
•
KEPware.KEPServerEx.V4
MIS.Dc6Server.1
NDI.SimulationSvr.1
OPCLabs.KitServer.2

Click the Browse button beside the Connect button. The OpcServerBrowser dialog appears.

🖶 OpcServerBrowser			
Computer List:		OPC Servers:	
2ALANWOOLFSON 2KIMSMALL ADMINISTRATORCP BETTYXP BHILTON BLXPROAMD64 BMOODY BRIANMXPRO CS1	->		
IP Address:			
Description			
Description:			
Update Rate (Sec.):			
1		OK	Cancel

You can enter the IP address or choose one of the computers that list on the You can enter the IP address or choose one of the computers listed in the list box. Then click the right arrow key between Computer List and OPC Servers. All OPC servers on that machine will be listed in the OPC Server's list box to let the user choose. Before you click OK button, you must enter a description.

The update rate is the time interval that the server to update its items value. The default is 1 second.

After you choose a server, click the Connect button.

2. Browse Items

On the Namespace group, click the Browse button. All servers and all items will be listed. Click the server name to expand the tree.

Namespace		
	Browse	End Browse
		<u>^</u>
🖻 Channel		
Channel.Value_01		
Channel.Status_01		
Channel.Low_01		
Channel.Mid_01		
Channel.High_01		
Channel.EngUnits_01		
- Channel.ChanTag_01		
- Channel.Alarm_01		
Channel.CombA_01		
Channel.CombB_01		
Channel.CombC 01		×

3. Add Group

Add a group before subscribing. Click the Add Group button in OPC Groups.

OPC Groups	
_MI_Group_0	-
Add Group	Remove Group
Remove All	# Of Groups: 1

4. Add OPC Items

Double-click any OPC item in the browse window in Namespace group. That item will be added to the table below the browse window.

MI_Group_0 Browse End Browse Add Group Remove Group NDLMiSvr.1 Channel Channel.Value_01 Channel.Status_01 Channel.Low_01 Channel.Low_01 Channel.Ling_01 Channel.EngUnits_01 Channel.EngUnits_01 Channel.CombA_01 Channel.CombB_01 Channel.CombC 01 Image: Comparison of the status of t	OPC Groups	Namespace			
Add Group Remove Group Remove All # 0f Groups: 1 Image: Channel Channel Status_01 Image: Channel Status_01 Channel Status_01 Image: Channel Status_01 Channel Status_01 Image: Channel Status_01 Channel Mid_01 Image: Channel Status_01 Channel Mid_01 Image: Channel Status_01 Channel Mid_01 Image: Channel Status_01 Channel Status_01 Image: Channel Status_01 Channel Comb2_01 Item ID Value Quality Item ID Value Quality Item ID Value Quality Ichannel Status_01 Bad, Non-specific, Limit OK 12:00:00 AM Channel Status_01 Bad, Non-specific, Limit OK 12:00:00 AM Channel CombA_01 Bad, Non-specific, Limit OK 12:00:00 AM Channel CombA_01 Bad, Non-specific, Limit OK 12:00:00 AM Channel CombA_01 Bad, Non-specific, Limit OK 12:00:00 AM Channel CombB_01 Bad, Non-specific, Limit OK 12:00:00 AM Channel CombB_01 Bad, Non-specific, Limit OK 12:00:00 AM Channel CombB_01 Bad, Non-spe	_MI_Group_0		E	Irowse End	d Browse
Remove All # 0f Groups: 1	Add Group Remove Group	⊡- NDI.MiSvr.1			^
Update Rate: Async head 1000 Get Set Item ID Value Quality TimeStamp Access Path Item ID Value Quality TimeStamp Access Path Channel.Value_01 Bad, Non-specific, Limit 0K 12:00:00 AM Channel.Status_01 Channel.Low_01 Bad, Non-specific, Limit 0K 12:00:00 AM Channel.CombA_01 Channel.CombA_01 Bad, Non-specific, Limit 0K 12:00:00 AM Channel.CombA_01 Channel.CombB_01 Bad, Non-specific, Limit 0K 12:00:00 AM Channel.CombA_01 Channel.CombB_01 Bad, Non-specific, Limit 0K 12:00:00 AM Channel.CombB_01	Remove All # Of Groups: 1 _MI_Group_0 ✓ Active Subscribed Cache Async Refresh Sync Read	Channel.Value_01 Channel.Status_01 Channel.Low_01 Channel.High_01 Channel.EngUnits_01 Channel.ChanTag_01 Channel.ChanTag_01 Channel.Alarm_01	1		
Item ID Value Quality TimeStamp Access Path Item ID Value Quality TimeStamp Access Path Channel.Value_01 Bad, Non-specific, Limit 0K 12:00:00 AM Channel.Status_01 Channel.Low_01 Bad, Non-specific, Limit 0K 12:00:00 AM Channel.CombA_01 Channel.CombB_01 Bad, Non-specific, Limit 0K 12:00:00 AM Channel.CombB_01 Channel.CombB_01 Bad, Non-specific, Limit 0K 12:00:00 AM Channel.CombB_01	Update Rate: Abync Read	Channel.CombA_01			
Item ID Value Quality TimeStamp Access Path [Channel.Value_01 Bad, Non-specific, Limit 0K 12:00:00 AM Image: Channel.Status_01 Image: Channel	1000 Get Set	Channel.CombB_01			~
Item ID Value Quality TimeStamp Access Path [Channel.Value_01 Bad, Non-specific, Limit 0K 12:00:00 AM Imit 0K 12:00:00 AM [Channel.Status_01 Bad, Non-specific, Limit 0K 12:00:00 AM Imit 0K 12:00:00 AM [Channel.CombA_01 Bad, Non-specific, Limit 0K 12:00:00 AM Imit 0K 12:00:00 AM [Channel.CombB_01 Bad, Non-specific, Limit 0K 12:00:00 AM Imit 0K 12:00:00 AM					
Channel.Value_01 Bad, Non-specific, Limit 0K 12:00:00 AM Channel.Status_01 Bad, Non-specific, Limit 0K 12:00:00 AM Channel.Low_01 Bad, Non-specific, Limit 0K 12:00:00 AM Channel.CombA_01 Bad, Non-specific, Limit 0K 12:00:00 AM Channel.CombB_01 Bad, Non-specific, Limit 0K 12:00:00 AM	Item ID Value	Quality	TimeStamp	Access Path	
	[Channel.Value_01 Channel.Status_01 Channel.Low_01 Channel.CombA_01 Channel.CombB_01	Bad, Non-specific, Limit OK Bad, Non-specific, Limit OK Bad, Non-specific, Limit OK Bad, Non-specific, Limit OK Bad, Non-specific, Limit OK	12:00:00 AM 12:00:00 AM 12:00:00 AM 12:00:00 AM 12:00:00 AM		

5. Subscribe The Items

Check the Subscribed checkbox. The table will display the real time values.

or claroups	Namespace		
ML Group 0		Browse	End Browse
Add Group Remove Group	⊡ NDI.MiSvr.1		~
	🖻 Channel		
Remove All # Of Groups: 1	- Channel.Value_01		
	- Channel.Status_01		
MI_Group_0	Channel.Low_01		
Active	Channel.Mid_01		
Subscribed	Channel.High_01		
C Cache	Channel.EngUnits_01		
Async Refresh Sync Read	Channel.ChanTag_01		
	Channel.Alarm_01		
Update Bate: ASync Read	Channel.CombA_01		
	Channel.CombB_01		
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Now the OPC client is working. You can view the selected OPC server.

On the OPC Items, you can select individual items and see some information, like access rights, data type and activity. You can also remove the selected item or remove all items in the group.

OPC Items								
Channel.CombB_01	•							
Add Item	Remove Item							
Remove All	# Of Items: 5							
Channel.CombB_01								
Access Rights: Read/Write Data Type: VT_BSTR								
Active								
Device Read Cache								

Appendix A – Language File

Adding a language is a simple process. Exhibitor uses an ExcelTM compatible file (Language.csv), that resides in the Exhibitor program directory, to read all text that is displayed in the program. The first column is the English word. To add a language, simply add a column and make sure the first entry in the column is the language. When the **Setup – Language** option is chosen, the program reads the first row of this spreadsheet and displays the languages available. (Make sure the language.csv file is closed.)

The image below shows the format and an example of the hypothetical language file. It has English, German and Spanish. The letter 'G' is added in front of the text for German and 'S' is added for Spanish. Selecting either German or Spanish from the **Setup-Language** menu will replace the English text with the corresponding German or Spanish text. The edited file must reside in the program directory.

🛛 Microsoft Excel - Laneuage multian.csv															
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4	Open	Gopen	SOpen												
5	Exit	Gexit	Sexit												13
6	View	Gview	Sview												
7	Zoom In	Gzoom In	Szoom In												
8	Zoom Out	Gzoom Out	Szoom Out												
9	Zoom Window	Gzoom Window	Szoom Window												
10	Setup	Gsetup	Ssetup												
11	Language	Glanguage	Slanguage												
12	Preferences	GPreferences	SPreferences												
13	Decimal Places	GDecimal Places	SDecimal Places												
14	Auto Scale	GAuto Scale	SAuto Scale												
15	Yes	Gyes	Syes												
16	No	Gno	Sno												
17	Help	Ghelp	Shelp												_
18	About	Gabout	Sabout												
19	New	Gnew	Snew												
20	Save	Gsave	Ssave												
21	Print Table	Gprint Table	Sprint Table												
22	Search	Gsearch	Ssearch												_
23	OnLine	GOnLine	SOnLine												
24	Detail	Gdetail	Sdetail												
25	Graph	Ggraph	Sgraph												
26	DataTable	GDataTable	SDataTable												
27	Alarm	Galarm	Salarm												_
28	Event	Gevent	Sevent												
29	UPC Client	GUPC Client	SUPC Client												
30	Device Manager	Gdevice Manager	Sdevice Manager												
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RETURN REQUESTS / INQUIRIES

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.

PATENT NOTICE: U. S. Pat. No. 6,074,089; 5,465,838 / Canada 2,228,333; 2,116,055 / UK GB 2,321,712 / Holland 1008153 / Israel 123052 / France 2 762 908 / EPO 0614194. Other patents pending.

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

- 1. Purchase Order number under which the product was PURCHASED,
- 2. Model and serial number of the product under warranty, and
- Have the following information available BEFORE contacting OMEGA: 1. Purchase Order number to cover the COST of the repair,

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges.

- 2. Model and serial number of the product, and
- 3. Repair instructions and/or specific problems relative to the product. | 3. Repair instructions and/or specific problems relative to the product.

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