

SuperView for Micristar Frequency Asked Questions

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General Setup Questions

1) What operating systems does SuperView run on?

SuperView currently runs on Windows 98, ME, NT4, 2000, and XP. We suggest the following requirements to maximize performance:

- 300 MHZ Processor
- 128 MB RAM
- 1 or more Serial Ports
- 1 or more USB (1.1 or higher) Ports

2) How do I get support for SuperView ?

SuperView is designed and supported by:

- **Maschoff Design Engineering Inc. (MDE Inc).**
- web site: <http://www.micristar.com>
- e-mail: support@micristar.com
- phone: **651-578-3565**

3) I have the demo version. How can I buy it ?

Please call or email us at the above numbers to order SuperView for Micristar.

4) What options are available for SuperView ?

Current available option is: NetView add-on for web browser interface.

See our website for more information: <http://www.micristar.com>

5) Why doesn't SuperView find all my controllers ?

SuperView is licensed by the number of controllers connected to it. From the main screen, select 'About SuperView' and the current options (including number of controllers supported) are displayed. To increase the number of controllers call or email us to activate more controllers for you. Another possible reason that all controllers aren't found could be due to the setup of the controllers and/or SuperView. Check answer below for help.

6) How can I get a controller to communicate with SuperView via an RS-232 port ?

SuperView makes the connection to controllers as easy as possible. Each RS-232 serial port can connect to a single controller. Communicating with multiple controllers requires multiple RS-232 serial ports. On a PC these are named COM ports. (eg. COM1, COM2,etc.) which come standard on most PC's.

Go to the Controllers tab in SuperView wire up the controller as below, select the proper COM port and press the 'Find Controllers' button. SuperView will search all selected ports for controllers and add them to the list if the controller responds.

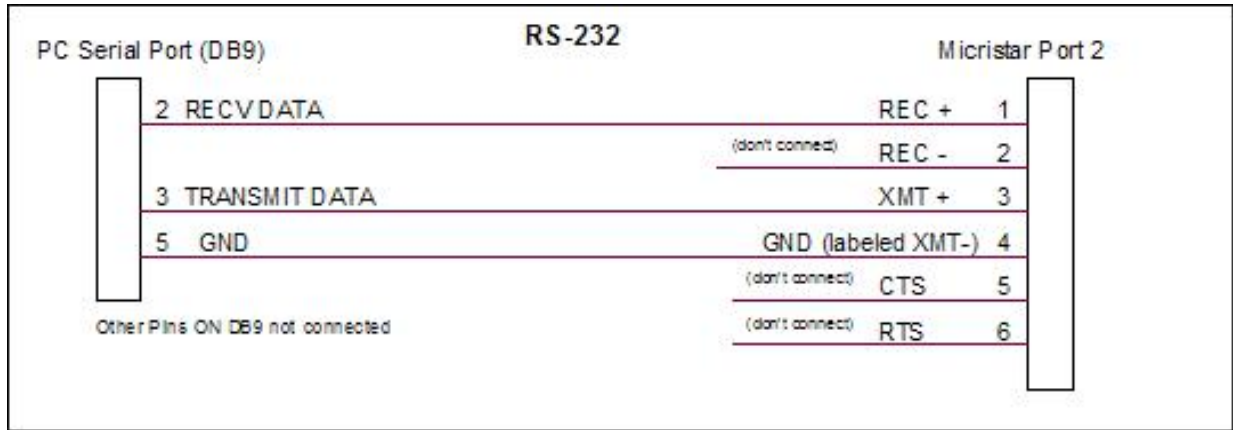
If it doesn't work, check all the CF parameters in the Micristar (see below) and the wiring. If that doesn't do it then look at the answer to Question 9 below. Consult the Micristar manual for details.

In brief do the following:

- Always use Port 2 on the Micristar (NOT Port 1)
- Set CF177 (baud rate) to 9600
- Set CF178 (parity) to 0

- Set CF179 (end of message) 0
- Set CF180 (Protocol) P
- Set CF182 (station address) to E 01

Remember: Only 1 controller per RS-232 port is possible



7) How can I get a controller(s) to communicate with SuperView with an RS-422 port ?

Most PC's do not come with RS-422 as a standard port. Typically a user must add either a converter or a 422 serial board (ISA or PCI board). 4-wire RS-422 allows a longer cable (nearly 1 mile)between controller and PC, while RS-232 is only useful for a few hundred feet. RS-422 also provides for multiple controllers on a single port.

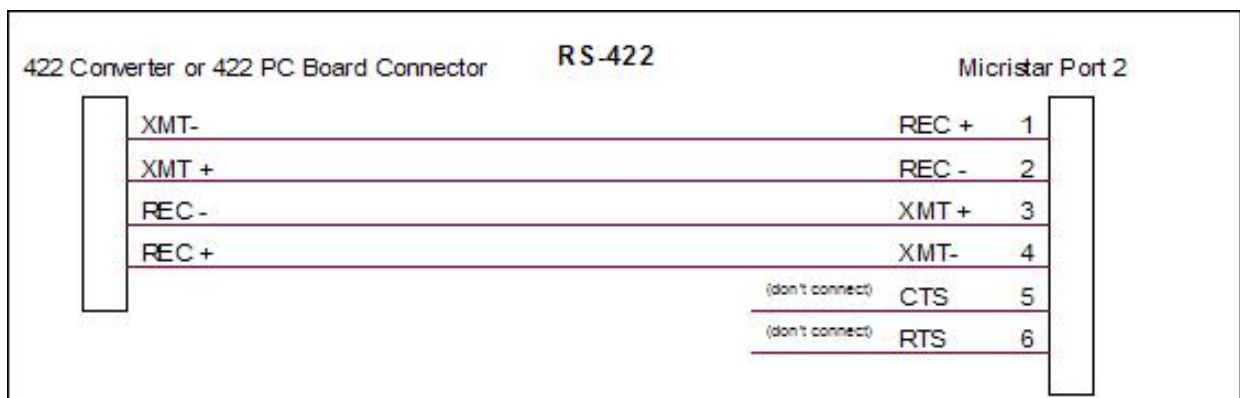
NOTE: Check Micristar Manual to validate all hardware configuration!

Micristar RS-422 setup:

With RS-422, multiple controllers can connect to the port. Each controller **MUST** have a unique station address (CF182) in order for the communications to work properly.

Hint: When first starting up a RS-422 network with multiple controllers, get just one controller to work properly before adding more.

- Always use Port 2 on the Micristar (NOT Port 1)
- Set CF177 (baud rate) to 9600
- Set CF178 (parity) to 0
- Set CF179 (end of message) 0
- Set CF180 (Protocol)P
- Set CF182 (station address) to E 01



8) How can I set up a network of controllers ?

Hint: Before attempting to wire up multiple controllers, it is HIGHLY recommended that you get a single controller communicating first.

Assuming that has been accomplished, here are some methods to network multiple controllers. The most common ways to get multiple controllers networked together are: Always use Port 2 on the Micristar (NOT Port 1)

- Use 1 PC serial port (RS-232) for each controller. This method requires 1 COM port for each controller. Therefore 5 controllers require 5 COM ports (eg. COM1,COM2,COM3,COM4 and COM5). PCI or ISA PC board with multiple COM ports are readily available at low cost. You can also use USB to Serial Port converters also available at low cost on the Internet.

Advantage: This network will result in the fastest possible communications speed between SuperView and the PC. (See answer 10 below)

Disadvantage: Must have a COM port for each controller

- Use a single RS-422 port and connect all controllers to it. Each controller MUST have a unique address. For example: A 3 Micristar controller network using a single RS-422 port: Notice the Station addresses (CF182) do not need to be in order, but it is highly suggested that they are in order. This will simplify maintenance of the network in the future.

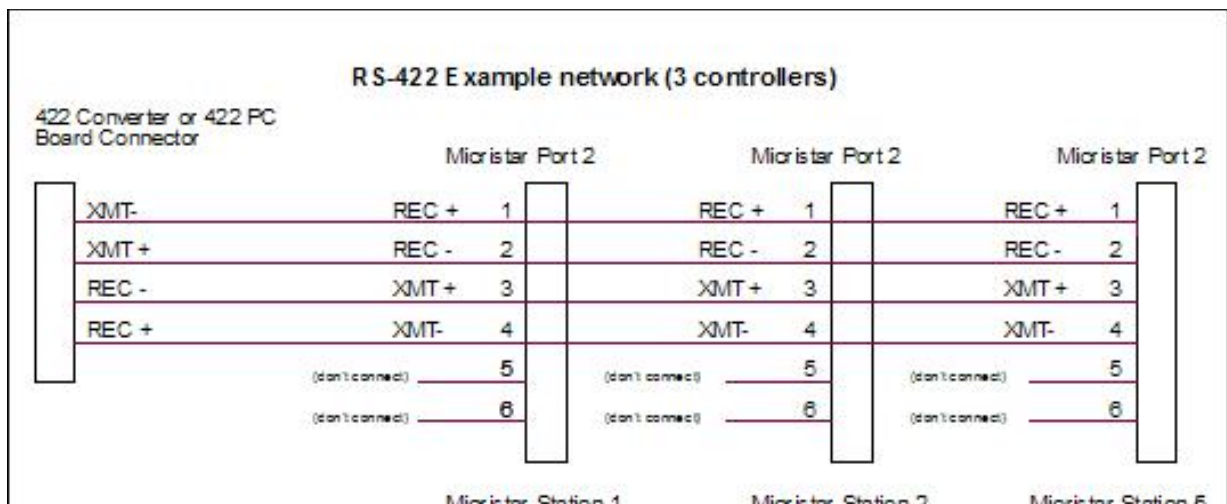
Advantage: This network uses only a single COM port (w/converter).

Disadvantage: Must use 232-422 converter or plug in circuit board. Slowest speed. Only 1 controller can be communicated to at a time. (See answer 10 below).

- Use multiple RS-422 ports. Divide up the total number of controllers, placing some on each of the RS-422 ports. The fewer controllers on a port, the faster the data will be to the PC.(See Answer 10). If each controller has its own 422 port (as above with RS-232), the speed is the maximum that can be achieved.

Advantage: Faster than a single 422 port.

Disadvantages: Must have multiple 422 ports available. (Many PCI/ISA boards have 1 to 4 or more, 422 ports) Not as fast as a single port/controller.



9) What is the COM port loopback button on the Controllers tab for ?

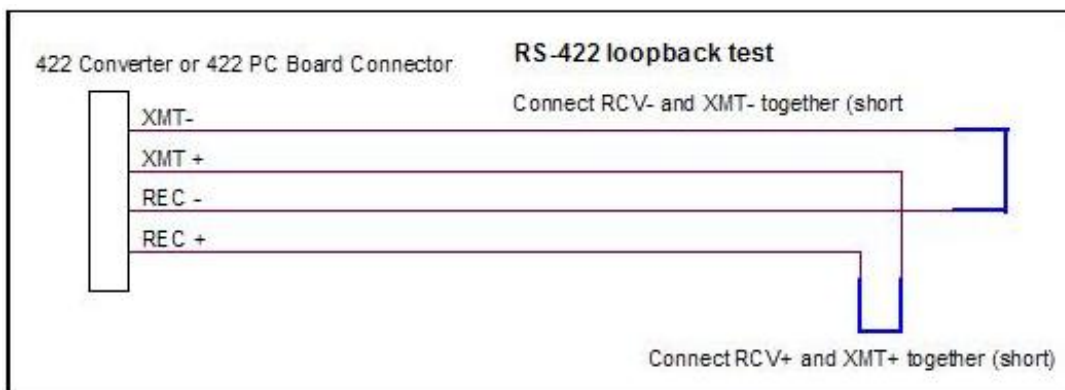
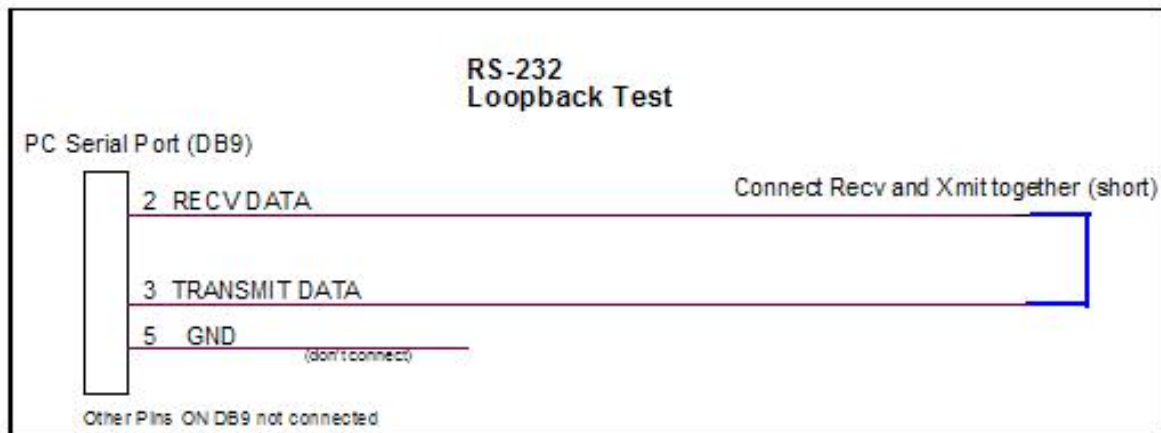
If you cannot get a single controller to communicate to SuperView and you've verified the CF parameters (in the case of the Micristar) and the wiring (according to the above diagrams) and you've consulted the Micristar manual, this button may help.

Use this test ONLY if all other methods fail.

The Loopback Test button on the Controllers tab is a way that the wiring can be verified without using a controller. This eliminates any potential problems with the controller or its configuration as possible reasons for the lack of communication. Many times when an external converter is used (ie. RS-422) a single wire may be at fault. This button test checks only the external wiring.

Each time the Test button is pressed, SuperView sends out 9 characters on the XMIT wire and attempts to receive those same 9 characters on the RECV wire. If the 9 characters match, the result displayed on the screen will be 'OK'. If the characters don't match or no characters are received, (indicating a wiring problem) the result will be 'Failed'.

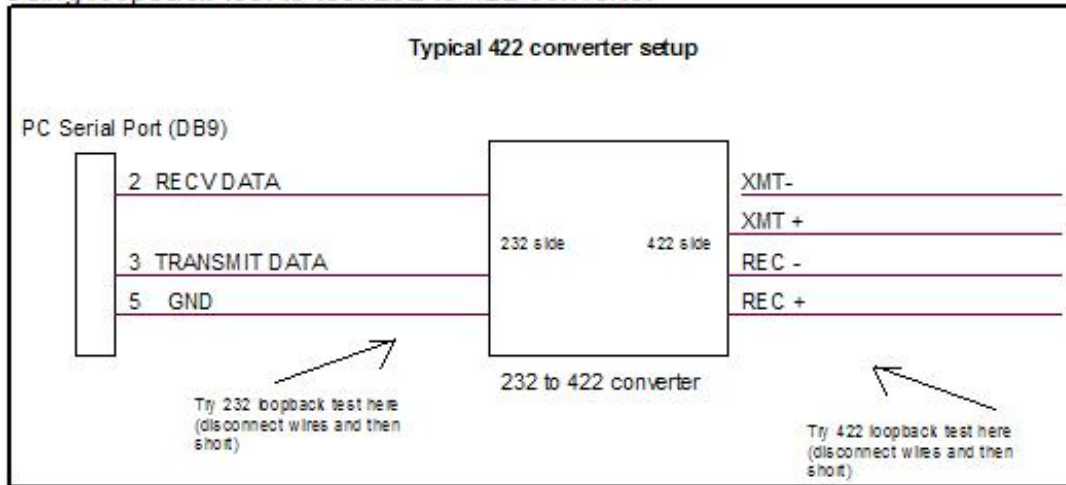
The idea is to have the PC communicate (either 232 or 422) with itself via the external wiring to validate the connections. No controller is used in this test. The diagram below shows a simple RS232 loopback. If the wiring is correct the result will be 'OK'. If 'FAILED' is displayed, check the DB9 connector and make sure that pins 2,3 and 5 are wired to the connector correctly.



By combining a simple 232 loopback test and a 422 loopback test you can verify the wiring on a complete RS-232 to RS-422 converter. (See below)

First try the simple RS-232 test (as shown above) by removing the RS-232 wiring to the converter and press the 'Test' button on the Controller tab. If everything is wired, 'OK' will be the result. Then, rewire the RS-232 side, and perform the RS-422 loopback test (as above).
Using loopback test to test 232 to 422 converter

Using loopback test to test 232 to 422 converter



If this doesn't pass, check the documentation for the RS-422 converter. Many times the labeling of the wires is confusing. Try exchanging XMT- and XMT+ around and retry the loop back test.

If that doesn't work, put the XMT- and XMT+ wires back to their original positions and exchanging RCV+ and RCV-. Eventually, if all hardware is working properly, the test will pass. Then wire up the controllers and attempt to communicate to them by pressing the 'Find Controllers' button. If you still can't make establish communications call or email us.

10) How can I speed up data transfer from controllers to SuperView?

First, an explanation how SuperView communicates with controllers. Let's suppose we have 2 controllers on a single RS-422 port (See FAQ 6 and 7 above for details). SuperView will get data from the first controller then data from the second controller. Then the cycle starts over again.

(Note: If an operator changes a data value via SuperView, that value is sent immediately to a controller. Likewise if a recipe is sent to a controller, the entire recipe is sent immediately after the operator presses 'Send'.)

Most of the communication time is spent gathering the real-time data from each controller on this periodic basis. SuperView is 'multi-tasking' software and does this communicating 'simultaneously' with other operations. This periodic gathering of data is called 'polling'. Each 'poll' of a single controller takes about 1 second. Therefore, in our example of 2 controllers sharing a 422 port, it takes about 2 seconds total to get the data from the 2 controllers.

Likewise, if we have 10 controllers on a single 422 port, it will take 10 seconds for a complete retrieval of controller data. Therefore each data point will be refreshed once every 10 seconds on the PC screen.

How can we increase the speed of this updating ?

- **Use a single COM port for each controller** (either 232 or 422). Since SuperView can communicate 'simultaneously' on each serial COM port, this effectively speeds up the data gathering significantly. For example, Let's have a 2 controller system again. It takes 1 second to gather data from a single controller. BUT, with 2 COM ports communicating simultaneously with each controller, the complete gathering of data (ie. polling) takes a total of 1 second. This is twice as fast as having 2 controllers on a single 422 COM port. Likewise, with 10 controllers, each with its own COM port, the total time to update all controller data is STILL about 1 second or so. Again this is because SuperView can gather data from each controller 'simultaneously'.
- **Use multiple 422 ports.** For example, If we have 10 controllers and 2 422 ports and we wire each 422 port to 5 controllers, the data update time will be decreased proportionately: 10 controllers on a single 422 port: 1 sec per controller = 10 sec update. 5 controllers on a single 422 port (5 total) : 1 sec per controller = 5 sec total update . 5 controllers on each of 2 422 ports (10 total) : 1 sec per controller = 5 sec total update. 5 controllers on each of 3 422 ports (15 total) : 1 sec per controller = 5 sec total update.

Conclusion: To speed up the gathering of data for data logging, graphs, etc. use as many COM ports as possible. COM ports are very inexpensive and easily installed. This will speed up the data gathering significantly.

11) What does the 'Remove All Config files' selection under Options menu do ?

All the configuration information about all the controllers found on the network is stored in the default directory /Program Files/SuperView/Config. This includes controller and parameter names entered by the user, all controller and COM ports found, etc. If you wish to completely restart the entire network from scratch, use this menu item. It will erase all files that identify which controllers and COM are being used.

To rebuild the network, go to the Controllers tab on the main screen and select the appropriate COM ports and press 'Find Controllers' button. This will search and find all controllers and rebuild the database of the network. NOTE: Selecting this option will NOT erase any recipes or data log files.

12) How can the names of the controllers be changed ?

Select the Controllers tab on the main screen. Navigate by mouse or arrow keys to a cell under the column header 'Controller Name'. Enter in a new name for the controller. This name will appear on SuperView screens, data log files, graphs etc. Every time SuperView is restarted, this name will be displayed and used.

General User Interface Questions

13) What does right-clicking the mouse do ?

Clicking the right mouse button brings up a different menu depending on which screen and which cell the cursor is on. Whenever the user wishes to do some task, the right mouse button will provide what is needed.

On the Control Loops and Programmer screens the user can bring up the 'Log to File' menu selection (discussed below) and a 'Parameter Info' menu item. Use the Parameter Info screen to change a parameters tagname (8 characters max). Select a cell, then right click and enter a new tag for that parameter. This name will appear in data logs and graphs .

14) How can I change parameter values ?

Some parameters (such as Programmer Status or Loop Mode) have small arrows which, when selected with the mouse reveal a list of choices. Select one of the choices with the mouse and the parameter is changed and sent to the controller.

Navigate to a parameter using the mouse or the keyboard arrow keys. Then simply type in a new value and press an arrow key or the Enter key. This will change the parameter and send it to the controller.

15) How can I hide rows or columns, resize the screens, or resize columns?

Select a column header (top most row, ie. the title of the row) or a row header (row or the left ie. row title), then right click and select Hide. This will hide the row or column. To unhide, select any row or column header and right-click followed by selection UnHide All. All hidden rows and columns will then reappear.

Almost every screen, including graphs, can be resized to fit the screen better and provide more room for additional screens.

To resize a screen grab the lower right corner (or any screen edge) of the screen with the mouse and, while holding the left mouse button down, make the screen larger or smaller as desired. Then release the left mouse button.

Most columns can be resized by grabbing the border between columns in the topmost (header) row and moving it while holding down the left mouse button.

16) What is a Detail View and how is it accessed ?

Select a left row (row title). Double click and a screen will appear with the data from that entire row. This is called a 'Detail' view.

Parameters can be changed just like on a main screen. Multiple detail screens can be viewed at the same time. Just double click the row header and another detail screen will appear.

Selecting a different tab will NOT erase the Detail screen. This is useful if, for example you're on the Graphs tab and wish to see control loop info. Just go to the Control Loops tab, select the row of the loop you're interested in and double click. Then navigate to the Graphs tab. The detail view screen and graphs will be viewable simultaneously.

17) What does the color of the data cells indicate ?

If a parameter (Process Variable, Deviation) is over the high alarm limit, the cell will turn red. If the value is under the low limit, the cell will turn blue. If the Programmer is in RUN mode, that cell will be green. If in HOLD, the cell is yellow. If at Program End, the cell is red. If the Control Loop is in MANUAL mode the cell is yellow. If its in AUTO, the cell is green.

18) Can I Cut/Copy/Paste cells ?

Yes. On some screens, (such as the Recipe Editor) a right mouse click will bring up a popup menu with cut/copy/paste selections.

On most other screens to Copy a cell value use the keyboard by pressing the CTRL and C key simultaneously. To paste the value copied into another cell press the CTRL and V keys.

19) What happens when there is an Alarm ?

When a controller alarm occurs, a small screen will appear in the upper right corner of the screen. This is the alarm indicator and will appear no matter what screen tab the user is using.

If the alarm is a Process Variable alarm a red PV will appear. If it is a Deviation alarm, a red DV will appear. If the alarm is a controller communication alarm a red COM will appear. Click on the red alarm indicator to be instantly be navigated to the Alarm Status parameter of the source of the alarm. Double click this cell to send an alarm acknowledge to the controller (if the alarm is PV or DV). A COM alarm cannot be acknowledged. If the COM alarm continues, check the wiring to the controller.

Recipe Questions

20) What is a recipe and how can I build one ?

A recipe is simply a setpoint program that can generate setpoints versus time, along with turning on discrete events in the controller. The recipe doesn't contain any alarm info, but later versions may add this capability.

To create a recipe, navigate to the Recipe Editor tab. Enter new recipe data into the grid. As you enter new data the graph, (if the graphics options is installed) will show you what the recipe setpoints look like graphically.

When the entry of the recipe is complete, save it by pressing the 'Save Recipe As' button. This will save the Recipe in disk file for subsequent downloading to a controller. You must give the recipe a name and starting segment, in order for it to be saved in the disk file. You can optionally enter a description of this recipe when you save it. This recipe, description and starting segment number are added to the list of recipes available for download to a controller. You can view this list by selecting the Select Recipe tab.

You can choose to edit a recipe in two ways. Press the 'Open Recipe' button in the Recipe editor to view or change an existing recipe file. Or you can select a recipe on the Select Recipe tab, right-click and choose edit.

21) How can I get all my current recipes into SuperView ?

To get controller recipes into SuperView navigate to the Recipe Editor tab. Press the 'Get Segments from Controller' button. Select the controller you wish to receive segments info from and press 'Begin'. All segments will be loaded into the Recipe editor grid. Press the 'Save Recipe As' button, create a recipe name, add the starting segment and description and save the recipe to a disk file. This recipe will now appear in the list of available recipes on the Select Recipe tab.

22) How can I send a recipe to a controller and start it ?

Navigate to the Select Recipe tab, then select the recipe you wish to start. Press the 'Send Selected Recipe to Controller' button. Select a controller, enter recipe info (if available) and press Begin. The recipe will be sent to the controller and started.

Shortcut: Double-clicking the recipe name will jump right to the Transfer recipe screen. This saves a step.

23) What is the 'Test Programmer' for in the Recipe Editor ?

The Test Programmer gives the use the ability to actually run the recipe currently being edited in the Recipe Editor. This allows the user to validate the correct operation of the recipe before saving it to a disk file.

Use the 'Fast Mode' or 'Super Fast Mode' to run through the recipe at fast speeds to save time.

Note: The Test Setpoint Programmer is NOT associated with any controller. It can be used without affecting any controller on the network.

If the graphics option is installed, the Test Programmer is behind the recipe graph. Close this window to use the Test Programmer.

24) How can I customize the header information the user enters when a recipe is started?

When a recipe is sent to a controller and started, the user can start data logging to a file at the same time, on the same screen. The user can also enter specific data that will appear on screens, data log files and graphs(if available) and identifies the recipe run that is starting. Up to 5 parameters can be entered by the user.

By default, the recipe info the user can enter is 'Job Number', 'Operator Name', and 'Serial Number' but these can be easily changed. To change them:

- Navigate to the Data Logger tab.
- Double-click on the far left column, and one of the 5 rows that has either one of the 3 defaults names, as defined above, or a row that has 'User Defined Data' in it. (You can also just right-click the mouse on any cell in the far left column and select 'Change User Headers' in the pop up menu.)
- Click on the pop screen, on the right column.
- The 5 descriptions (such as 'Job Number') can be overwritten, just by typing in new text. These are description (ie. labels) for the data that a user can enter whenever a recipe is started.
- To test it, navigate to the Select Recipe tab and double click any recipe.
- The 'Start Recipe' pop up window will appear, along with the descriptions you typed in above. Note If the description was entered as all spaces it will NOT appear.
- Now, a user can enter some actual data next to the descriptions that appears.
- These data descriptions and data itself will appear in data log files and graphs.

25) How can I abort a running recipe/program ?

Navigate to the Programmers tab and select one of the Programmer Status cells. Click on the small down arrow and select 'Abort' from the list. A small screen will pop up asking the user to confirm if an abort is desired. Press the Abort button to complete the abort.

NOTE: The abort will force the programmer to jump to segment 49. The recipe should be edited at this segment to perform the abort operation. This is typically setting the setpoints at ambient temperature and perhaps turning some Programmer Events either on or off and then ending the recipe.

26) How can I speed up the transfer of a recipe to a controller ?

Whenever a recipe is sent to a controller (downloaded), all the segments are typically sent (for the Micristar this is 50 segments). To speed up this sending process, edit the recipe so that any segments that are not used by the recipe, have a 'Next Segment' value of 0 (zero). When the sending starts, those segments will NOT be sent and the download will be faster than sending all segments.

27) How can I remove a recipe ?

To permanently remove a recipe, navigate to the Select Recipe tab and click the mouse on the recipe you wish to delete. Now, right click the mouse and from the pop up menu select

'Delete'. This will permanently remove this recipe.

Data Logging Questions

28) How can I log data to a file ?

SuperView can log user specified data at a user specified rate. There is a data logger associated with each controller found on the network. Each data logger runs separately from the others and has its own complete column on the Data Logger tab. Each data logger can be stopped or started manually with the button on the very top of its column. Also, the data logger can be automatically started and stopped when a recipe is started.

Other values can also be entered here:

- log rate
- log file name (double click this cell to change it, this is typically done automatically when a recipe is started)
- log sample count (set this to 0 to remove any data in the data log file)

There are also buttons to view the data log file data in text, graphical or in an Excel spreadsheet (if available).

13 typical parameters are logged by default, but this is easily changed by the user .

To add parameters to be logged:

- Navigate to the screen that is displaying the parameter you wish to log (for example, Process Variable is on the Control Loops tab).
- Select the parameter you wish to log with the mouse.
- Right click the mouse and select 'Log to File' on the pop up menu that appears.
- The menu will list a logging file for each of the controllers on the network.
- Select the logger file with the mouse that you wish to log the selected parameter to.
- The parameter will be added to the list of parameters that will be logged to this file.
- To validate: Navigate to the Data Logger tab and look at the column associated with the Data log file you chose . The controller and parameter name should be in the list of parameters to be logged.
- HINTs: You can select a whole row or column or multiple parameters at one time to be logged. Just click a column or row header to select an entire row/column, then follow the procedure above. To select multiple values, click on a parameter, hold the left mouse button down, and drag the mouse over all the parameters you want to log. Then right click and follow the procedure above.

To remove parameters from the data logger:

- Navigate to the Data Logger tab.
- Select one or more parameters with the mouse (hold left mouse button down and drag mouse over parameters you wish to remove).
- Right click and from the popup menu select 'Delete'.

To rearrange the logged parameters:

- Select one or more parameters and right click the mouse.
- From the popup menu select cut/copy/paste or delete.
- Arrange the parameters any way you wish.

NOTE 1: You can't change which parameters are logged while the logger is running (that is, Log Status is Green and says 'Press to Stop?'). To change parameters stop the logger first.

NOTE 2: If you attempt to change which parameters to log and the sample count is not zero (ie. some data has already been logged and saved to the file) , a pop up screen will appear when you attempt to cut/paste or add parameters to the log setup. This screen will prompt the user as to what to do about the existing data.

If the data in the log file is changed, a new file must be created OR all the existing data in the file must be erased. This is because a file cannot contain a mixed set of data log points.

29) Can I log data from multiple controllers into a single file ?

Yes.

Just select which parameters to log . However if a recipe is running and the data logger is set to stop when the recipe ends, the logger will stop logging ALL data in its file when the recipe stops (even data from another controller or recipe).

30) Please explain the data log file names that SuperView creates.

Whenever a recipe is started, the user is prompted and asked if the data logger should begin when the recipe starts. If the user chooses to have the logger start when the recipe starts, a data log file is automatically created and data is automatically placed into this file when the recipe starts. This saves the user from having to enter a new log file name every time a recipe is started.

The format of this file name is :

RECIPE_NAME_MM_DD_YY_HH_MM_SS

where

RECIPE_NAME

is the name of the recipe stated and running on this controller,

MM_DD_YY

is the date when the file was created,

HH_MM_SS

is the time (24 hour format) when the data log file was created.

Example:

SampleRecipe_09_07_02_14_10_05

This file contains data from running recipe SampleRecipe and was started on September 7, 2002 and 2:10:05 pm .

31) How can I customize the header information on the data logs and graphs?

The same information that was explained in Answer 24 above, appears on data logs and graphs. Use the same procedure as explained there to change it .

32) How can I view data saved (archived) in log files ?

Navigate to the Data Logger tab. Press the 'Archived Data Logs' button near the top. A list of all data log files appears in a list along with statistics about the file.

Click on a file name row to select it , then right click the mouse and select an option from the popup menu. (The buttons at the top of the screen do the same function).

You can view these files in variety of ways: text table graphically, or in an Excel spreadsheet.

33) I want to remove an old data log file. How do I do it ?

Navigate to the Data Logger tab. Press the 'Archived Data Logs' button near the top. A list of all data log files appears in a list along with statistics about the file. Select a file and then press the 'Permanently Delete File' button (or right click and select 'Delete Log File' to do the same function).

34) How can the names of the controller parameters be changed ?

See answer 12 and 13 above.

35) How can I change the rate at which the logger samples data ?

Navigate to the Data Logger tab. Find the logger you wish to change. Stop the data logger. Select the row labeled 'Log Rate' and enter in a new logging rate in Hours, Minutes and Seconds.

36) How can I change which parameters appear on the strip-chart graph ?

The strip-chart graphs are tied into the data logger. The data that feeds the strip-chart graphs comes directly from the parameters in the data log files.

If a data logger is set up to log data every 30 seconds, the strip-chart associated with this data logger (press the View Graph button on the Data Logger tab to view) will update every 30 seconds.

The strip-chart automatically will show the first 4 parameters found in the data log file. (that is entries labeled: Entry 1, Entry 2, Entry 3, Entry 4). Only numeric parameters will be graphed. If, for example, Loop Status is the first Entry in the data log, it won't be graphed, however Entry 5 (if numeric) will be graphed. (First 4 numeric parameters are graphed).

For example, the default log file logs the Setpoint and Process Variable from the 2 control loops. Therefore the strip-chart will show these 4 parameters by default. If you change which parameters occupy the first 4 entries in the log, those parameters will now be shown on the strip-chart graph. Therefore set up the logging file so that the first 4 parameters contain the parameters you wish to view on the strip-chart graph. If one of the first four parameters is empty, then the strip-chart graph will only show 3 plots. This can be useful if the user wishes to have fewer parameters on the strip-chart at once.

NOTE: The strip-chart graphs on the **Data Logger** tab and the **Strip-Chart** graphs on the Graphs tab will always show the same parameters (setup as described above), but the time windows and scaling can be different. See Graph FAQ for more info on graphs.

37) Why is the data log menu grayed out when I right click on the mouse ?

You can't change the data logger setup while it is running. Press the 'Press to Stop' button and then try again.

38) Why isn't the data in Excel changing dynamically?

When you press the 'Press to View in Excel' button on the Data Logger tab, Excel runs and the log file is shown in the spreadsheet, but the data doesn't dynamically change like it does on other views.

The Excel display of data is static. Data is not added to the Excel file while the logger is running. Typically this isn't a problem. Usually Excel is used after all the data has been saved and the recipe is finished. To see all the data in Excel, wait until the logging is complete and then view it.

Note: Every time you press the Excel View button, all the data in the data log file is shown in Excel. So by pressing the Button periodically, new data will appear.

Graphing Questions

39) What does the Graphs tab show ?

If you have the graphs option installed, a Graphs tab appears on the main screen. On this screen there is a row for each controller found on the network. Each row contains 2 graphs:

- Setpoint//Process Variable graph This graph shows the setpoint recipe for a recipe that has been sent to a controller. When the recipe is running, the Process Variable for the 1 or 2 control loops will be overlaid on this setpoint plot, showing the process status.
- Strip Chart Graph This graph shows data that is being logged in a graphical format. (See FAQ 36 for info on how to set up the logger).

40) How can I have graphical and text data at the same time ?

If you are on the Graphs tab and would like to see parameters as text:

- Double-click the mouse in the far left column and the Programmer Details screen will appear.
- (Note: the Programmer tab must be selected at least once before this screen will appear)
- Select the Control Loops tab. Double click a row to get a Detail view of that control loop. Then select the Graphs tab. Notice the Details view stays on screen, allowing the graphs and Loop Details to be viewed simultaneously.
- (Note: Any Detail view will remain on screen even when different tabs are selected).

41) What does double-clicking a graph do ?

Double clicking a graph will call up a small window that provides for changing the graph setup. A 'subset' is just a plot line on the graph. On the Setpoint/PV graph the subsets are the 2 setpoints (for a 2 control loop controller) and the corresponding 2 Process Variables for the loops.

If you wish to view only some of the subsets (plots) just uncheck the 'Subset Visible' box for that subset and it will disappear.

All graphs default to auto scaling on the Y (vertical) axis. This means that the scale for the vertical axis will change automatically depending on what the highest and lowest values on the graph are.

To manually change the scaling, uncheck the 'Y axis autoscale' and either enter in a new value OR double-click the cell and a small 'spin' button will appear, allow easy changes to the scale.

The 'Time Between Points' is a read only parameter on the **SP/PV graph** that indicates how often a new PV value will be plotted on the graph. If you wish to see a graph with a faster update, use the **strip-chart graph**. The 'Time (X) axis window' parameter appears if the graph is strip chart. Changing this parameter will change what the time frame is of the X

(horizontal) axis.

For example:

If the time window is set at 10 minutes. The last 10 minutes of data will appear on the strip-chart. The data will be updated at the same rate that the associated data logger updates. (See FAQ 36 above).

The most recent data points appear on the right edge of the strip-chart graph. As new points are added, the graph shifts to the left like a paper strip-chart recorder.

The oldest entries, then, are on the left of the graph. The Time Window value can be changed at anytime, even when the data logger is running and new data is being plotted. Data that is 'older' than the time window scrolls off the graph.

If you wish to see the entire data log as a graph, navigate to the **Data Logger** tab, press the 'View Archives' button and locate the file that is currently being logged.

Then press the 'View as Graph' button. The entire data log file will appear with all logged data points appearing on the graph.

42) What does right-clicking a graph do ?

Right clicking any graph brings up a popup menu that allows various attributes of the graph to be changed. These are self explanatory.

43) How can I zoom in on a graph ?

Zooming in on a graph allows more detail to be viewed.

To zoom in:

- Click and hold down the left mouse button on any graph.
- A rectangle will appear as you move the mouse. Draw this rectangle with the mouse around the area on the graph you wish to zoom in on. (This is typically an area where there are data points plotted).
- Release the mouse and the graph will zoom in on the area you selected. It is sometimes helpful to right click the graph first, then select 'Mark Data Points' before zooming. This shows each point more clearly on the graph.

44) How can I un-zoom a graph ?

This can be done in two different ways:

- Right click the mouse on a graph and select 'Undo Zoom' from the popup menu.
- Use the keyboard by pressing the SHIFT key and the Z key simultaneously. (The Z key can be either lower or upper case).

45) How can I turn on/off auto-scaling on a graph ?

See FAQ 41 above.

46) How can I change the size of the graphs on the Graphs tab ?

The graphs that can be viewed when pressing the 'View as Graph' on the Data Logger tab can be resized like any window to make it easier to view. It can also be maximized like any other window.

There are a number of different ways to manipulate the size and shape of the graphs found on the Graphs tab screen:

- Click the topmost header row ('Setpoints/Process Variables' or 'Strip-Chart'). Right click and select 'Hide' . This will hide that column and all graphs that appear in it. The other column of graphs that are still visible will automatically increase in size to fill up the screen. (Select UnHide All to see both graphs again).

- Press the 'Larger' and 'Smaller' buttons to increase the height of the graphs.
- Resize the rows or columns by holding down the left mouse button on the border between either a column or row header, and dragging it.

Example:

To get a big PV/SP graph for each controller and view them:

- Hide the Strip-chart column (see above)
- Press the 'Larger' button until the graph fills the entire screen.
- Use the 'Select Graph' list box on top of the screen to select the controller you're interested in. (You can also use the arrow keys to scroll up and down).

47) How can I hide graphs on the SuperView Graphs tab ?

See FAQ 46.

48) What does 'Data under the Mouse' mean ?

On a graph, right click and select 'Mark Data Points'. Now each data point is visible. Move the mouse (without clicking any buttons) over a data point. The value of that data point will appear in the 'Data Under Mouse' box. This provides for seeing what the exact value is of a plotted point.

49) How does the strip-chart work ?

See FAQ 36 and FAQ 41.

50) What is the best way to see the maximum amount of detail on a graph ?

After a data log is complete. Use the 'View Data Log Archive' feature and view the data as a graph. All data logged points will appear on the graph.

51) How can I print a graph ?

If you have a color printer, double-click any graph and press the 'Print this Graph' button .

If you have a monochrome (black/white) printer:

- Right click any graph.
- From the popup menu select 'Viewing Style'.
- Select 'Monochrome'.
- Now press the 'Print this Graph' button to print the graph.

Event Log Questions

52) What is the Event Log ?

The Event Log appears on the Event Log tab. Each event that occurs with SuperView is recorded and saved to a file. A user can use this to verify that certain recipes or parameters were correctly entered or started. If a problem occurs sometime during a run, consult this log to see if something was inadvertently changed.

Any parameter change that is made to a controller is recorded along with the time and date the change occurred.

After the Event Log file reaches approximately 1 megabytes, the software will prompt the user to archive the log. The log is saved to an archive file and a new event log is created. Any archive can be viewed by pressing the 'View Archived Event Log' button. Certain type of events can be selectively viewed and sorted.