OPERATORS MANUAL
FOR
MENTOR
&
WIZARD WORKSTATION

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Installation and setup Instructions.

Thank you for purchasing VirTis Software. The Mentor and Wizard software is Synoptic and Historical/Plotting software for VirTis Freeze Dryers with the Mentor, or Wizard controllers.

The following instructions apply to user-installations. If you have any problems, you can call the number below at any time for immediate, one-on-one technical assistance. The Minimum system requirements are outlined below.

System requirements:

PC with 100 MHz Pentium or better
Microsoft Windows 95
VGA Display (480 x 640 with 16 colors preferred)
Serial port (Settings: 9600 N 8 1; Xon/Xoff)
H-P Deskjet Printer with 550C drivers.
It is often possible to run with other configurations, contact VirTis or F-D.

Software installation:

From the windows desktop click on:

* Start....Shutdown.....Restart computer in MS DOS mode.

After the computer restarts and you will see a DOS prompt C:\Windows
Type: A:SETUP and press enter.

The installation program will start (You will be given an opportunity to exit.) It will copy the Synoptic, Plotting, and Visual Basic files to your hard drive. See the appendix for more information about the files. If you think you have made a mistake, or want to see it again, just repeat the process. If asked to overwrite a file, say no, but note the name of any files that were not copied.

When you are finished, remove the disk and type "Exit" and press enter. Windows 95 will now restart.

The above procedure installs all of the files necessary for monitoring and plotting.

Installed Configuration and Shortcut Keys:

Next, make shortcut keys to run the software for your particular configuration. Installations will vary depending on the plotting method and the type of controller hardware.

Two plotting options are available; direct from windows using GP_Plot.exe, and Plot.xls and Plot.xlm which use Microsoft Excel. GP_Plot, which is a special viewing and plotting program designed especially for freeze dryers, is preferred because it is more robust and less demanding of computer resources than Excel.

There are presently four types of controllers. The controllers and their monitoring programs are:

GPC	Synoptic.exe
Sentry	Synopsen.exe
Mentor	SynAdv.exe
Wizard	SynAdv.exe

From the windows desktop, press the right mouse button and click on
New....Shortcut...

When you get to a window for user input, type
C:\Virtis\SynAdv.exe

then click on "finish"

Plotting Shortcut Keys: You will be using the GP_Plot:
From the Windows desktop, again press the right mouse button and click on New…. Shortcut….

When user input screen prompts for value type:

C:\Virtis\GP_Plot.EXE

Testing:
Click on the Plot shortcut key and you should see a plotting screen. Click on the Synoptic, SynAdv key and you should see a replica of a freeze dryer.

After connecting a serial cable to the freeze dryer connection, data should appear on the screen after a minute or two. On some versions of the Mentor and Wizard, it is necessary to start a process to see data. If you have a picture of a freeze dryer but no data appears, click on port, and verify that your serial port selection is correct. Then exit and restart. If trouble persists see the trouble shooting section.

Customizing:
Customizing Synoptic to add a user name and password is done by editing the appropriate INI file. (Mentor.INI). The .INI files are found in the C:\Windows directory.

To access the INI file simply click on the “my computer” icon and then the “ C: ” icon and then the “Windows” icon and finally the Mentor.ini file.

Edit the CUSTOMER=" Customer Name" to the name of your organization.
If a password is desired change the password to something other than "none".
(Note: It is best to do this after everything else is working.)

Automating:
After Plot and SynAdv work you will probably want to put the icons in the startup group so they start automatically when you computer starts. Close all applications and do the following from the Windows desktop:

Click on the Plotting icon (GP_PLOT.EXE) icon and then click on Copy. Start the Windows Explorer from Start....Programs...Windows Explorer. In Explorer click on C: then scroll down to Windows and click on it, then Start Menu, then Programs, then Startup. Now click on Edit and then paste.

If all has gone well, you will have a replica of the Plot icon in your startup group. Repeat the process for the Monitoring Icon (Synadv). When you restart your computer, you should have both Plotting and monitoring applications running automatically.

Upgrades
To install software upgrades, it is not necessary to repeat the installation. Simply replace the monitoring or plotting files with the new ones. It is suggested that the old files be backed up first. Upgrades can generally be sent over the Internet.

Printer Drivers

The software works with Deskjet 550C printer drivers. These are included with Windows 95 distribution disks. Do not use or install other drivers.

The drivers are installed from:

Windows Desktop...My Computer...Printers...Add Printer..
....add Printer Wizard....Next....Manufacturers:HP... Deskjet 550C...finish.

Make the 550C the default Windows printer. If other printer drivers are present be sure they are not the default printer.

In many cases, when a new printer is connected, the Add New Hardware Wizard may prompt you for the printer driver disks. Do not install new drivers. There are many models of HP printers, all with different drivers and different bugs. The 550C driver has all of the features necessary to plot freeze dryer data, and has been shown to be robust and trouble free.

Other Instructions and Trouble shooting:

Serial Port Settings: From the Windows Desktop click on My Computer...Control Panel...System...Device Manager...Ports(COM& LPT)...Communications Port 2.. Port Settings

If you are using the GPC or the Wizard, and wish to download recipes, go to the advanced settings, and set for "no buffer".

Verify that you are set for 9600 Baud, 8 Data bits, None for parity, 1 Stop Bit, and Xon/Xoff flow control then press OK.

Alternate Serial Port test. You can observe the Serial data from the Sentry from Hyper terminal, which is included with Windows 95.

From Start...Programs.. Accessories....Hyperterm.
Make a new connection and choose "Direct to Comm 2."

Other problems: Feel free to contact Fairfield-Digivac at any time for assistance in installation or operation. Telephone: (732) 571-2300 (732) 571-04697 fax E-Mail: SteveColl@Compuserve.COM

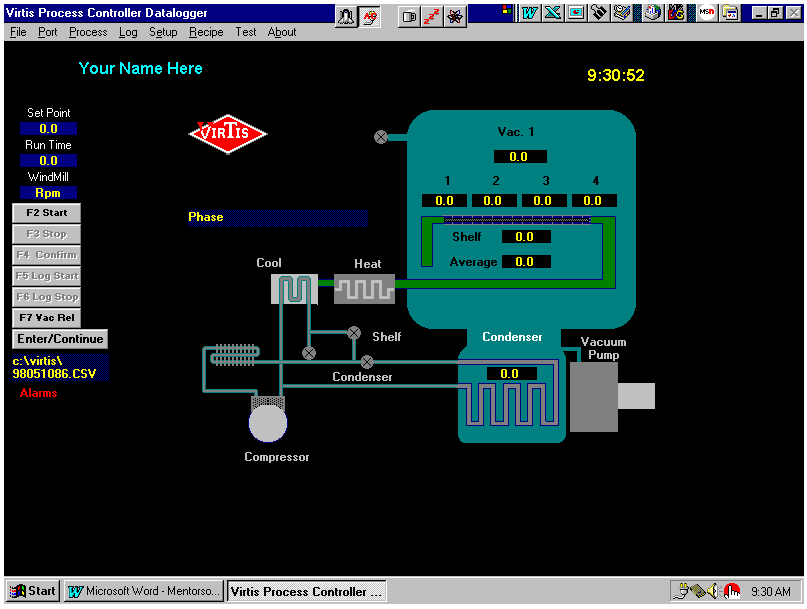
Factory Installation: For newly licensed users, Fairfield-Digivac will install and test the software at no charge. Simply contact us at the number above and obtain an RMA number. The software will be completely installed and the system will be run-tested on actual freeze dryer hardware.

Appendix Files to run VirTis Applications:

file name	Installed in	Description
Synoptic.exe	C:\Virtis	Visual Basic program for GPC
Synadv.exe	C:\Virtis	Visual Basic program for Mentor and Wizard
Synopsen.exe	C:\Virtis	Visual Basic program for Sentry Synoptic
Plot.XLS	C:\Virtis	The Microsoft Excel Plotting spreadsheet.
Plot.XLM	C:\Virtis	Microsoft Excel Plotting Macro Sheet.
GP_Plot.exe	C:\Virtis	Plotting program using VB; does not require Excel.
Mentor.ini	C:\Windows	Initialization files for Mentor and Wizard.
Sentry.ini	C:\Windows	Initialization files have your company name and
Synoptic.ini	C:\Windows	similar information specific to your installation.
Current.CSV	C:\Virtis	The current data file (CSV means Comma separated values)
980225AB.CSV	C:\Virtis	A data file from the 25 Feb 98
GPC2.CSV	C:\Virits	Sample .CSV files for testing plotting software
VBRUN300.DLL	C:\Windows\System	Visual Basic's run time module.
MSCOMM.VBX	C:\Windows\System	Visual Basic's communications device
APIGUIDE.DLL	C:\Windows\System	a Visual Basic extension
CMDIALOG.VBX	C:\Windows\System	a Visual Basic utility
CMDLG.DLL	C:\Windows\System	a Visual Basic utility
VER.DLL	C:\Windows\System	a Visual Basic utility

Synoptic Screens

The Synoptic screen displays the most recent conditions within the freeze dryer as well as the starting and stopping of automated freeze drying cycles. It also is the starting point for recipe editing.



Recipe:
By selecting the recipe header you will be given the option of edit. By clicking on edit with your mouse or by pressing enter while you have edit highlighted you will be brought to the Recipe Manager section.

Start:
Pressing start (F2 or Process, Start) will initiate the selected freeze drying cycle. You will hear the vacuum presealing on your freeze dryer and see “vacuum seal” in the phase display.

Stop:
To end you current cycle press the stop button (F3 or Process, Stop) this will require you to confirm that you wish to terminate your cycle. You can confirm termination by..

Confirm:
By pressing Confirm (F4 or Process, Confirm) you are verifying that the stop button was not accidentally pressed. This will result in the termination of your current cycle.

Log Start:
Log start (F5 or Log, Start) will start to log the conditions that you are currently freeze drying under as well as the product probe temperature and the windmill reading if it is present.

Log Stop:
Log Stop (F6 or Log, Stop) will stop logging data from your freeze dryer.

Process End:
When you are finished with your run you may end your cycle by using Process, End (F9).

Vacuum Release:
Vacuum release (F7 or Process, Release Vacuum) releases the vacuum within the chamber and allows you to open the door to your freeze dryer.

Test:
The test function allows you to check the displays on your synoptic screens to ensure they are functioning properly. If you press test, cdsr you will see the condenser section of the freeze dryer turn blue. You may continue to do this with each of the options.

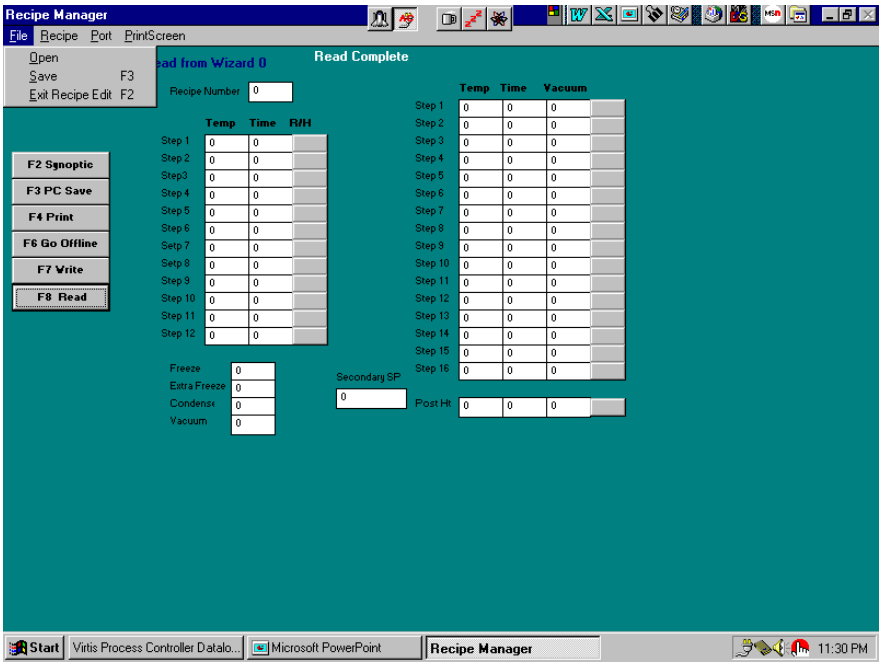
Set Point:
The Set point displays the current target temperature for the step you are currently in.

Run Time:
Run time displays the time that has elapsed since the start of your cycle.

Windmill:
The windmill display shows the velocity of vapor and/or air through the windmill.

Recipe Manager

The recipe manager screen allows for the modifying, reading and writing of recipes to and from the Wizard control board.



Synoptic:
By pressing the Synoptic Button (F2 or File, Exit Recipe Edit) you will return to the synoptic screen where you may start your cycle.

PC Save:
PC save (F3 or File, Save) allow you to save a recipe on the computer for future use. This allows for more recipes to be available for use than the standard 20 that are available within the Wizard.

Open:
File, open is used to retrieve recipes that are stored within the PC. They can then be manipulated resaved or downloaded to the Wizard controller for use.

Print:
Print (F4 or Recipe Print) sends the current recipe settings to your printer for documentation.

Go Off Line:

Go Off Line (F6) allows you to edit recipes and store them on you computer while you are in a freeze drying cycle.

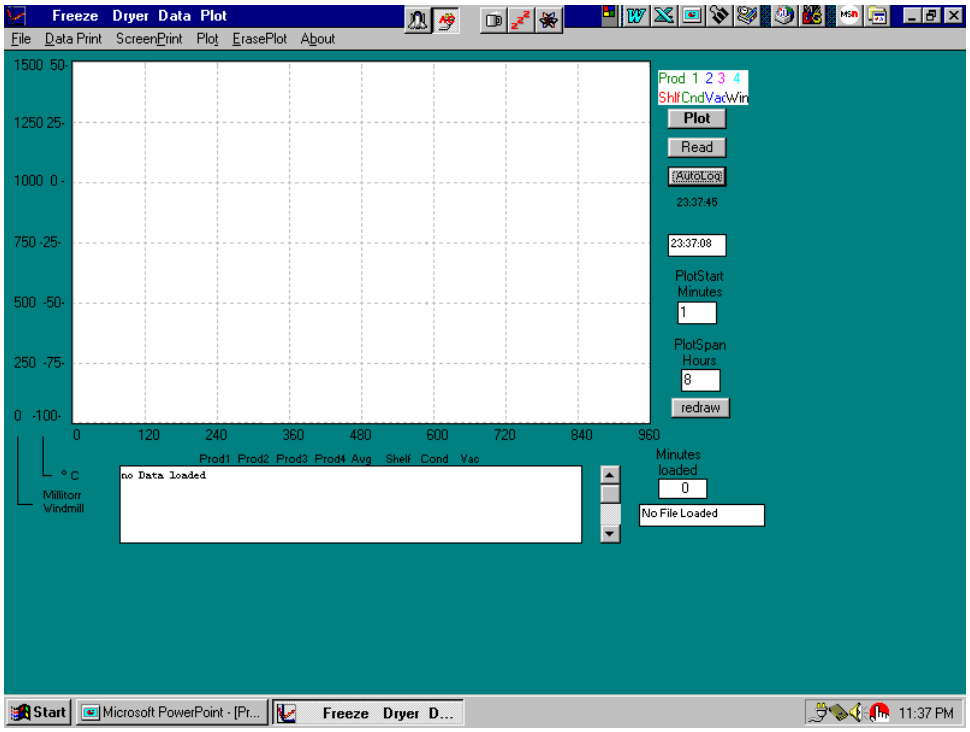
Write:
Write (F7 or Recipe, Write to Wizard) transfers the current values of the step set points to the current recipe in the Wizard.

Read:
Read (F8 or Recipe, Read from Wizard) transfers the current values of the step data from the Wizard. It is a good idea to read the values from the Wizard after you have saved a new recipe to the Wizard.

Editing:
To edit a recipe field simply click on the desired field and enter the new value. You may also scroll through the Fields by pressing the Tab key. To select a rate or hold click on the R/H field with the left mouse button, this will change the value from R (Rate) to H (Hold) or vice versa. You may also tab to that field and change the value by pressing enter.

Plotting Functions

The Plotting Function allows for graphical display of the freeze drying run for interpretation and validation.



File:
The file options allow for exiting the Plot function by selecting Exit. It also allows for opening previously run files by selecting the open file.

Data Print:
Data print prints the values of the freeze drying parameters that have been collected over the course of your freeze drying run. You may select the interval that your data will be printed in.

Screen Print:
Screen print will sent the current screen to the printer.

Plot:
Plot prints the graph of you data that was obtained while the freeze drying cycle was being run.

Erase Plot:

Erase plot will clear the current data graph from the screen.

Read:
The read function will force the computer to read the current values of the freeze drying parameters from the Wizard controller.

Auto Log:
Auto Log will activate or inactivate the auto logging of the data from the Wizard Control board.

Plot Start Minutes:
Plot Start Minutes sets the initial value that the graph will start from.

Plot Span Hour:
Plot span Hours will set the time axis to the set interval. By clicking redraw you will activate the new setting and change the time axis.