AVENUE

Avenue™ signal integration system

Avenue™ PC Control Application Software Data Pack

ENSEMBLE DESIGNS

Rev 6.0 SW v2.0.8

INTRODUCTION

This data pack describes installation and operation of the Avenue PC Control Application Software option. The Avenue PC remote control option allows remote control, configuration and monitoring of the frame modules from a PC.

The following sections are included in this data pack:

- Avenue PC Description
- Avenue PC Applications
- Avenue PC Installation
  - Connecting a PC to Avenue Frames
  - Installing the Avenue PC Application
  - Updating Avenue PC Software
- Avenue PC Operation
  - The Mainscreen
  - File Pulldown Menus
  - Option Pulldown Menus
  - Frame Pulldown Menus
  - Module Pulldown Menus
  - Creating and Using Virtual Modules
  - Help
- Avenue PC Troubleshooting

AVENUE PC DESCRIPTION

The Avenue PC Control Application Software option is a PC-based remote control application which allows you to completely control, configure and monitor the modules in each of your Avenue frames. Avenue PC can be installed on a PC running any Windows operating system.

Avenue PC functions are summarized below:

- Control and monitor all modules in your system from one or many locations using any number of Touch Screen or Avenue PC control points.
- Adjust video levels, timing audio delay and all other module parameters.
- Store module configuration to a file and download to another module of the same type.
- Download new module and Avenue PC software.
- Set user-defined alarms for alerting you at any time when a fault condition has occurs plus maintain logs.
- Customize module menus by creating “Virtual Modules” — custom groups of menus that combine functionality from any modules in the system.
- Define security User Levels protected by a four-digit pass code for locking out module changes on critical paths.
- Define each module parameter access based on User Levels.

PC interface to the Avenue frames can be made through an RS-232 serial connection or through Ethernet. Frames can be connected together through the AveNet intraframe LAN bus connecting between the Control module in each frame. Cable requirements and pinout descriptions are given in this data pack and in the Avenue System Overview included in your Avenue User Manual binder.

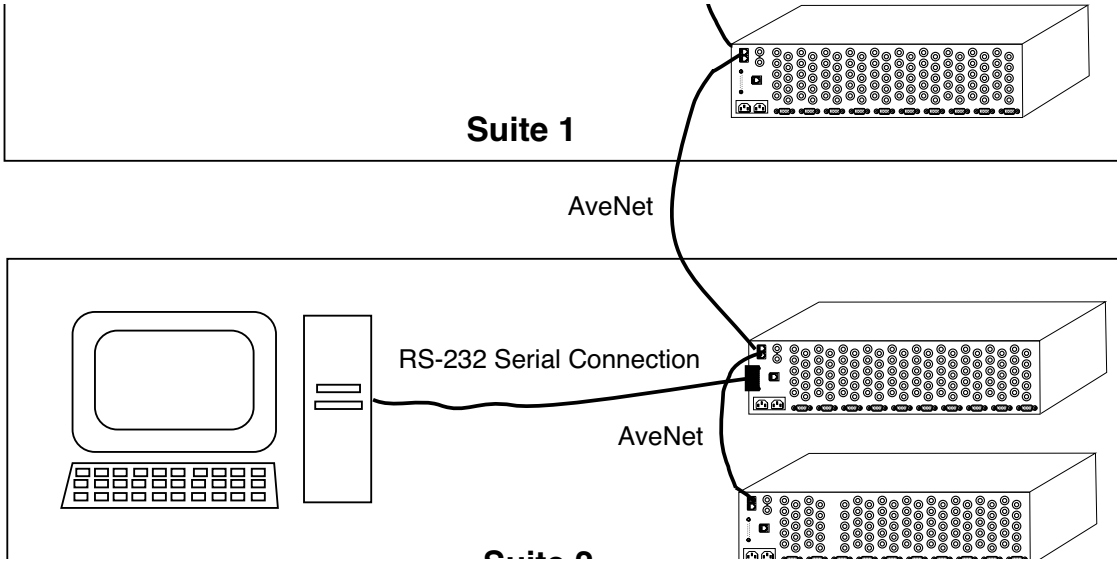
You may also use the Avenue Touch Screen Panel for remote control, along with the PC interface. Information on the Avenue Touch Screen is provided in the data pack that accompanies that option.

The Avenue PC application comes on a CD-ROM and is easy to install and configure. All menus and pulldown functions for setting up Avenue PC are explained and illustrated in this data pack. The individual menus for each module are explained and illustrated in the data pack you receive with each module.

AVENUE PC APPLICATIONS

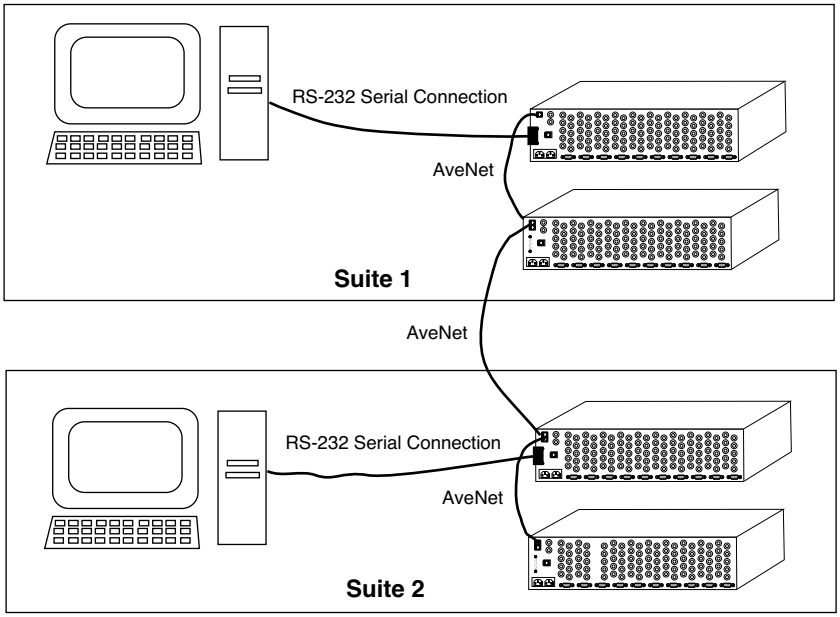
This section describes the most common applications for connecting a PC to the Avenue frames.

Your PC can be connected to one of the Avenue frames (1 RU or 3 RU) through a PC serial port to the Avenue serial port as shown below. Any number of frames can be controlled via the AveNet bus if a 5030/35 Control module is installed in each frame.



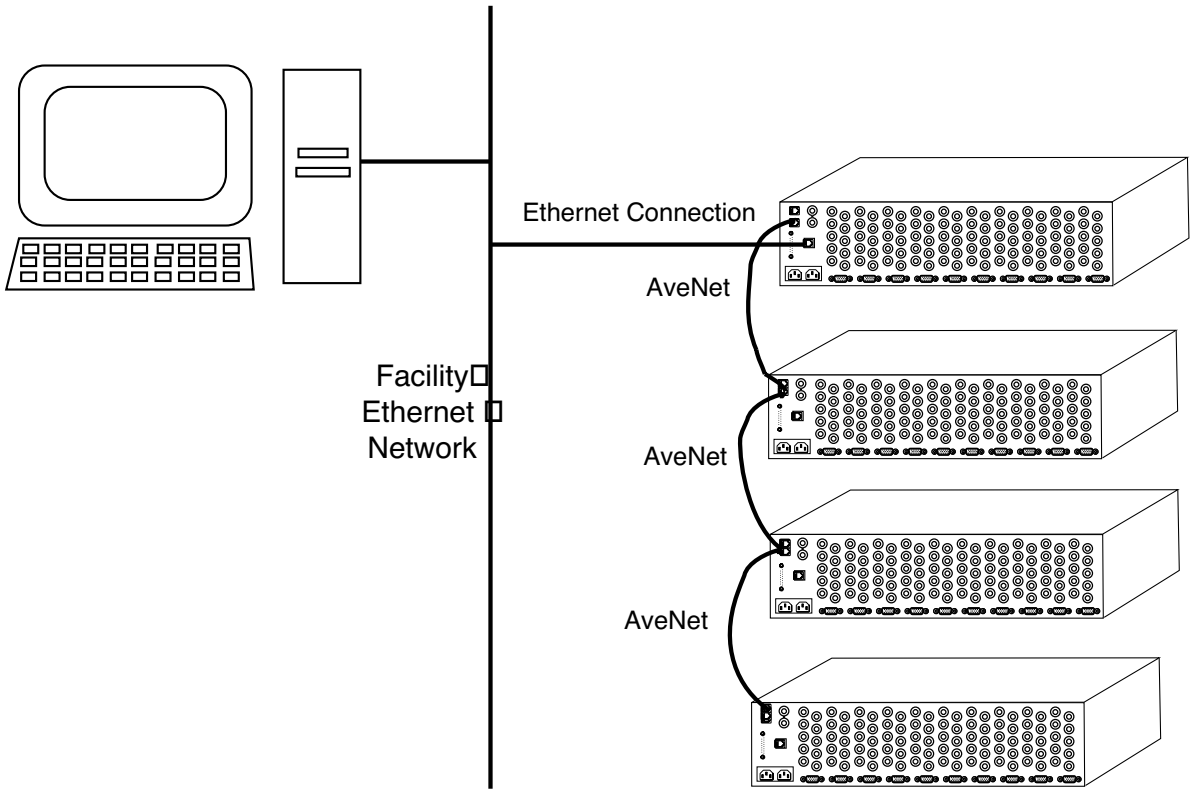
Single PC Controlling Multiple 3 RU Avenue Frames

Frames located in different rooms may be controlled or monitored serially by a PC in each room. All the frames on the AveNet network can controlled by either computer, as shown below.



Two PCs Controlling 3 RU Frames in Different Rooms

The PC Application may be run on a PC connected to a facility Ethernet network as shown in the figure below. In this case, the Avenue Ethernet connector on one frame is connected to the Ethernet hub and the frame is assigned an IP Address on its System Control module. The frame may then be networked to other frames via AveNet.



Avenue PC Control Through Ethernet

INSTALLATION

This section of the data pack explains connecting your PC to the Avenue frame and installing the software application onto your PC. Note that a 5030 (3 RU frame) or 5035 (1 RU frame) Control module is required in any frame being controlled with Avenue PC. The figures here are for a 3 RU frame. The 1 RU frame is connected in the same manner to the corresponding connectors.

Connecting a PC to Avenue Frame(s)

Serial Control:

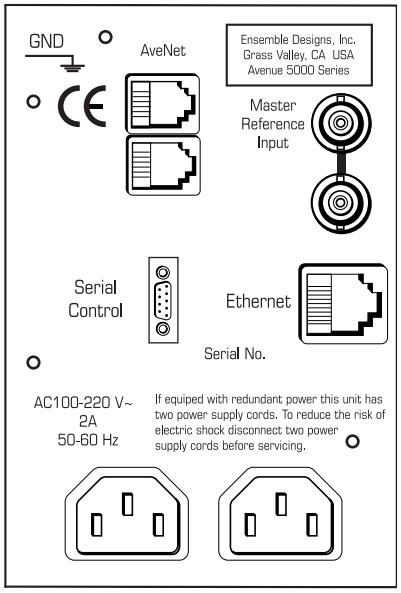
For serial control, connect a 9-pin D to 9-pin D serial cable (not provided) from the **Serial Control** port on the Avenue frame shown in the figure below to a valid unused serial (Comm) port on your PC. The Serial Port pinout is given in detail in the figure on the following page if you are building your own cable. As noted in the pinout details, you may use a simple pin-to-pin serial cable if you are not using the GPI functions. You will then need to specify the Serial Port you are using in the Avenue PC **Communications** menu.

Ethernet:

The Avenue frame(s) may be controlled by a PC running the Avenue PC software connected to a 10BaseT **Ethernet** network. The RJ-45 style Ethernet connector is shown in the figure below. The IP Address in the Avenue PC **Communications** menu must be set to match the IP address on the 5030/5035 System Control module in the frame connected directly to the Ethernet network. Refer to the 5030/5035 Control Module data pack or the System Overview section in the manual binder for more information on setting the IP Address on the Control module.

AveNet:

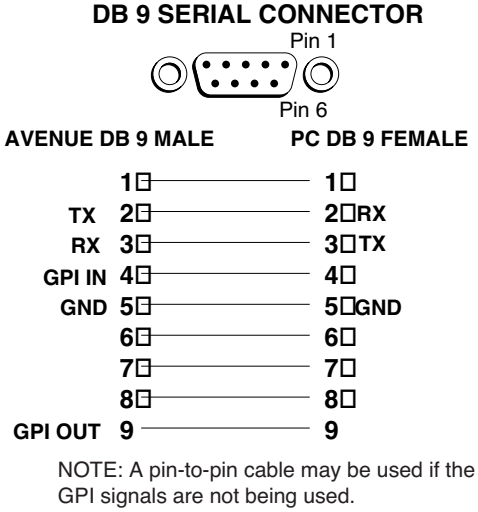
If you will be looping frames together, connect the AveNet connector on the first frame in the loop to the next frame AveNet connector with standard RJ11 LAN phone cable. The unused connectors must be terminated with 100 ohm LAN terminations at the first and last frames in the group.



Avenue Backplane Serial Port, AveNet and Ethernet Connections

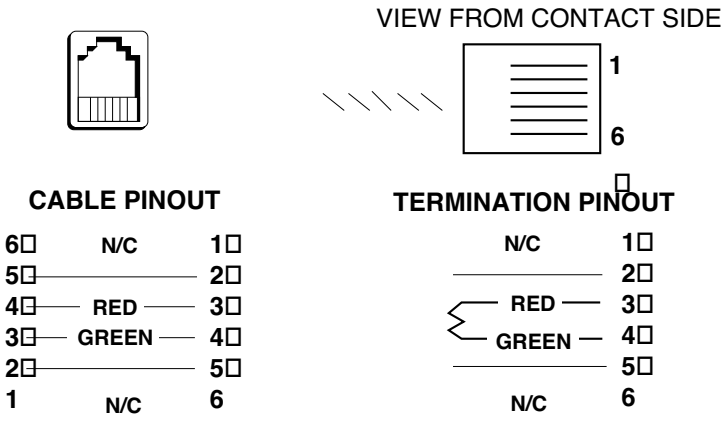
Cable Pinouts

If you will be building your own DB 9 serial cable, refer to the illustrations below for pinout details.



DB 9 Serial Cable Pinout

Pinouts of the RJ-11 connector and termination are shown in detail below. Each frame must have a unique AveNet Address that is set on the Control module. Refer to the 5030/5035 Control Module data pack or the System Overview section in the manual binder for more details.



RJ11 Cable Pinout

Installing the Avenue PC Application

The Avenue PC application comes on a CD-ROM and has the following system requirements:

- PC Running any Windows operating system
- 5-10 MB of hard disk space
- CD-ROM Drive

Follow the instructions below to install Avenue PC.

1. Insert the Avenue PC CD-ROM into your CD-ROM drive.
2. To locate the Avenue PC CD, double-click on My Computer to locate the CD-ROM drive icon or use Windows Explorer to find the Avenue PC CD-ROM.
3. Open the CD-ROM and double click on the Avenue **Setup** Icon to start the installation. Follow the prompts to take you through the procedure. Install the application in the desired directory as prompted.
4. The installation process will give you a shortcut to the Avenue application under the Windows **Start** button or you may install a shortcut on your desktop if desired.
5. Click on the Avenue PC icon to start the application.
6. You should see a list of Avenue frames your PC is connected to. If the PC is not connecting properly, go to the Avenue **Options** pulldown, **Preferences,** and select the correct PC Comm Port.

Updating Avenue PC Software

Avenue software updates are available periodically to download from the Ensemble Designs web site. The web site also provides technical bulletins, installation and release notes and frequently asked questions about Avenue PC.

To install a newer software version, first check the Avenue PC version you are running by looking in the **Help** pulldown menus under **About...**. If the version is 1.3.0 or newer, downloading the new version will overwrite the older one. For older versions (before 1.3.0), be sure to un-install Avenue PC before you install the newer version or you may have two different versions on your machine.

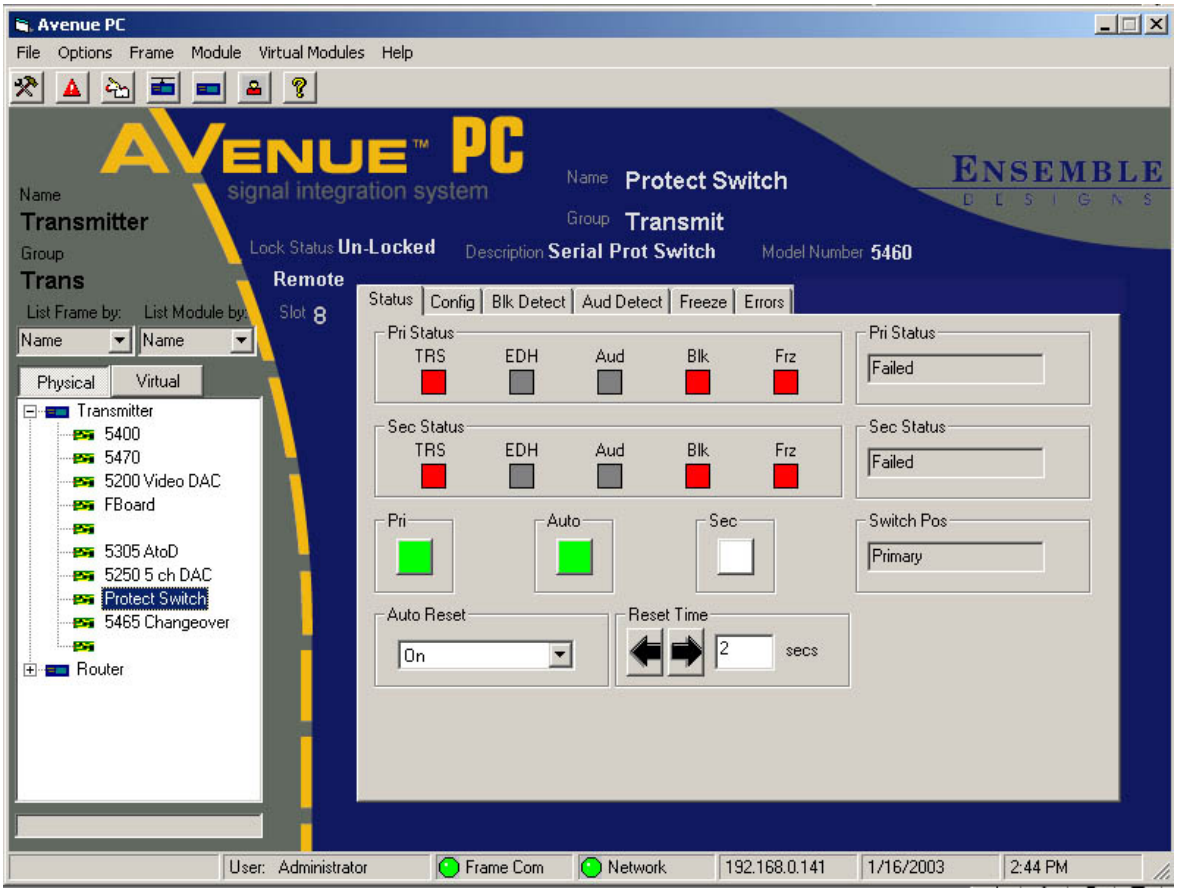
To download a newer version, log on to the web site at http://www.ensembledesigns.com. Select Support and Avenue PC. You will need to enter your company name and the serial number of your Avenue PC (written on the front of the CD ROM). Select the version of Avenue PC you want to download and click on it. Save the zip file to a temporary directory, unzip the file and double-click on the **setup.exe** to install the new software.

The latest Avenue PC Manual is available under the **Help** pulldown in Avenue PC or you may download the latest documentation in pdf format from the web site.

AVENUE PC OPERATION

The Mainscreen

Open the Avenue PC application and refer to the Avenue PC Mainscreen below.



Each of the Mainscreen Avenue components are described in detail in this data pack. Refer to the descriptions below for accessing each function of the Avenue application.

The Avenue PC pulldown menus are identified below.

The Avenue PC icons shown below provide quick access to the following pulldown functions.

Setup - brings up the Preferences menus.

Alarms - brings up the Alarm menus.

Edit Names - edit frame or module names.

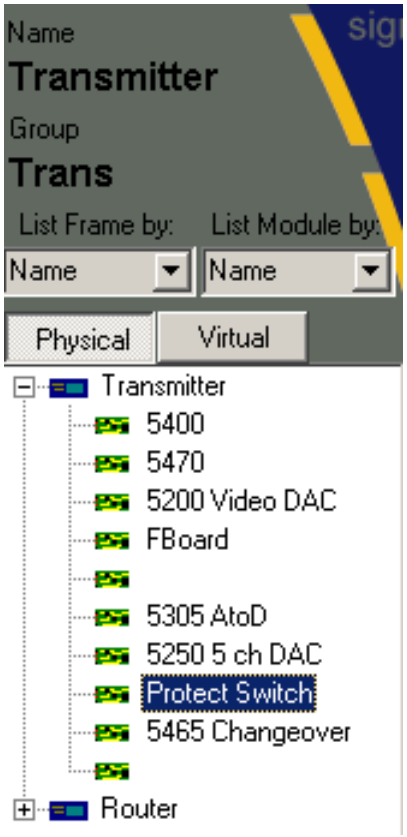
Update Network Frames - update all frame lists in network.

Update Frame - update frame list currently connected.

Change User Levels - brings up the change User Level window.

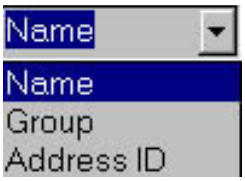
Avenue PC Help

The **Module Selection** screen is illustrated at right. Available frames on the Avenue network will appear in the window. Expanding each frame will show the Avenue modules present in each frame.

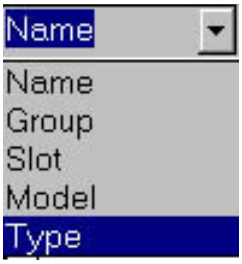


As shown in the **List Frame By** illustration below, the frames can be listed by **Name**, **Group** and **Address ID**. The modules can be listed by **Name**, **Group**, **Slot**, **Model,** and **Type** as shown in the **List Module By** pulldown below.

Select the frame (+) to expand the list to show the modules present. Use the **Update Frame Network List** or **Update Frame List** icons to update the latest listing.



List Frame By Pulldown

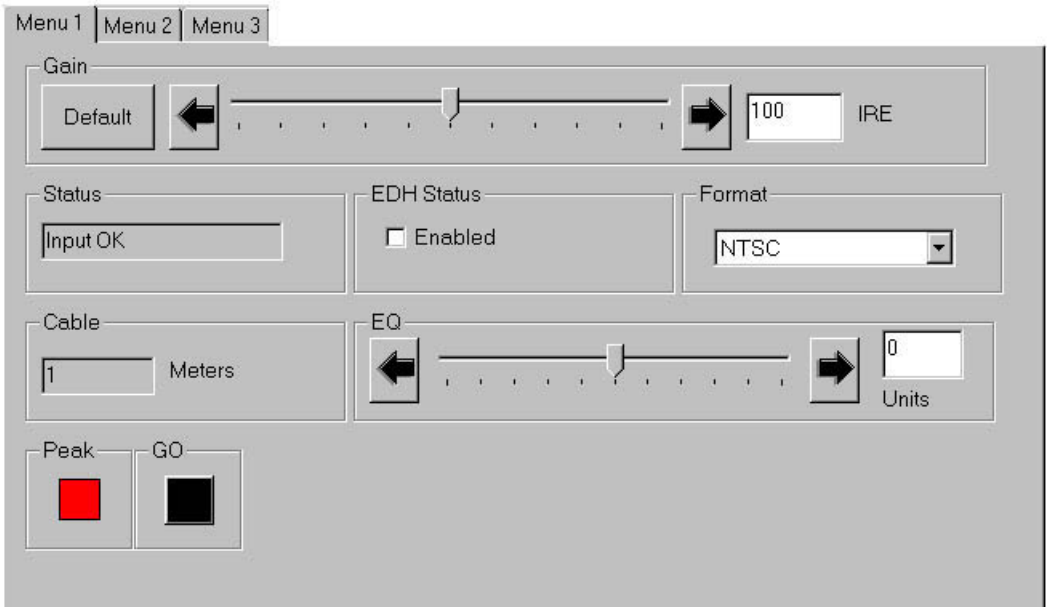


List Module By Pulldown

Both Physical and Virtual Modules can be shown in the list. The Physical modules are those that are present in the networked frames. Virtual Modules are custom groups of menus and parameters based on Physical modules that can be created using Avenue PC as explained later in this data pack. You may list only physical modules, only Virtual Modules or both as explained in the **Options** pulldown, **Preferences** menu section of this data pack.

When you select a module from the list above, the setup menus available for that particular module will be displayed as shown in the example of the Mainscreen on the previous page. Also displayed on the Mainscreen above the menus will be the **Name** and **Description** of the module, the **Group**, and **Module** number and whether the module is set to **Remote** or **Local** and if the module is **Locked** or **Unlocked**. Make sure the front panel switch on the module is set to **Remote** to allow it to be controlled by Avenue PC.

Each type of module has different menu selections. The example shown below gives a generic summary of parameters. For specific module menu screens, refer to the individual data pack that shipped with the module.



The lower portion of the Mainscreen displays the current **User** level, **Frame Com** status, Serial **Com Port** or **Network** interface type, **Data rate** information or **IP Address**, **Date** and **Time** as illustrated in the figure below.

User: Shows the current User level assigned to this control point.

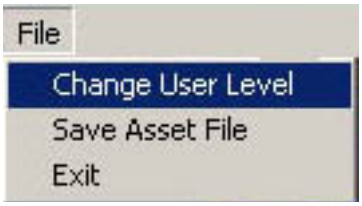
Frame Com: This indicator should be green indicating proper communication with the Avenue frame. If it is red, check your frame status.

Com or Network: If you are using a serial connection to the Avenue frame, this indicator should be green showing a proper serial connection between the PC and Avenue and list the Com port used on the PC. If it is red, the port did not open. Check your Communication menu in the Preferences pulldown to make sure a valid serial port is enabled.

When you are connected to Avenue via a network connection the indicator should show a **Network** connection. It should be green showing a proper network connection between the PC and the Avenue frame. If it is red, the PC is not communicating over the network. Check your Network connection in the Communication menu in the Preferences pulldown to make sure a valid IP Address is assigned.

The **COM Port** (**1**, **2**, **3** or **4**) or the **IP Address** of the PC should be reported correctly. The **Date** and **Time** are also displayed from the information in your PC.

File Pulldown Menus



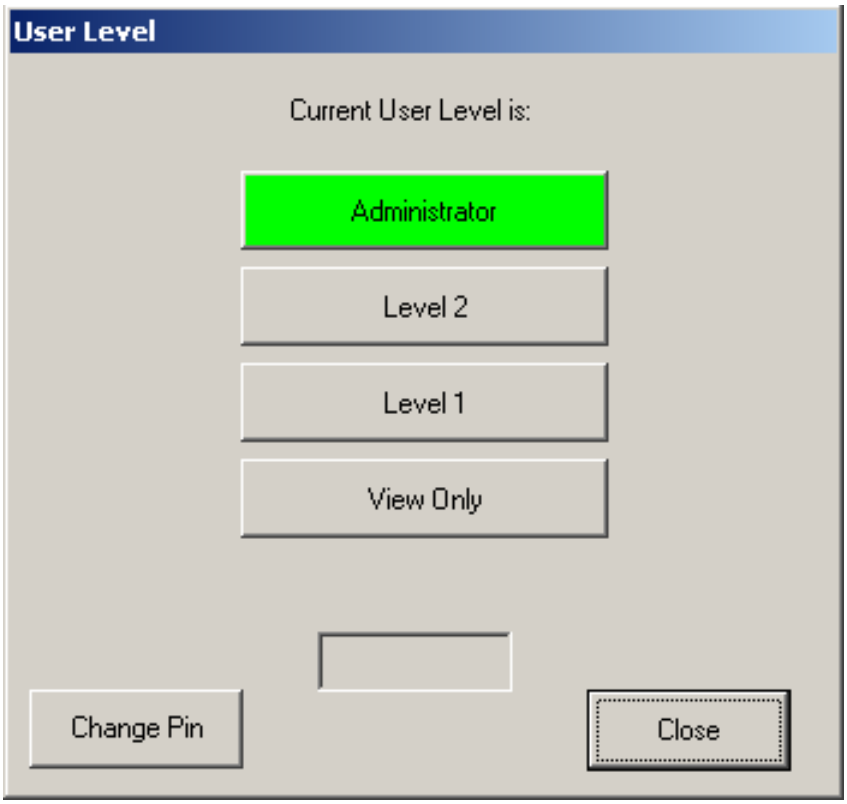
The **File** pulldown menu shown above contains three functions: **Change User Level**, **Save Asset File** and **Exit**.

Change User Level: Allows you to change the current User Level of this Avenue PC control point or change the four-digit Pin code for any of the User Levels. There are four User Levels, **Administrator**, **Level 1**, **Level 2**, and **View Only** as shown in the figure below.

Each module parameter has a user control level assigned to it allowing certain user levels of access to change the values. These module control user levels are set by default for each parameter in software. The default user level for each parameter may be changed from this Avenue PC control point by the Administrator in the **Change Module User Level** in the **Module** pulldown menu described later in this data pack.

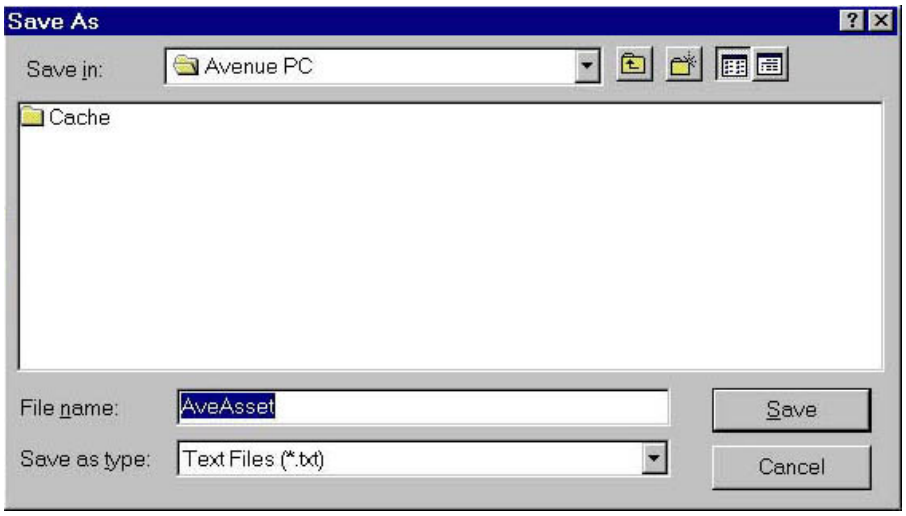
To change the Pin code, select the User Level and the **Change Pin** button. Enter a new 4-digit Pin code for the desired User Level.

NOTE: The **Restore User Levels At Startup** checkbox in the **Security** tab in the Preferences pulldown menu should be checked to assure that the assigned User levels will remain valid if Avenue PC is restarted.



Save Asset File: Allows you to save the current frame module configurations into a text file which include information about each module, including the slot location, the type of module, the serial number, the name of the module, and the software version running on the module. This file can be loaded into a database application for inventory purposes or wherever it may be useful to have this information.

The **Save Asset** screen is shown below.

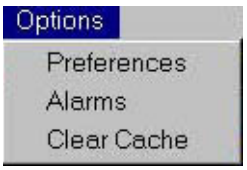


Any **Save Asset** file can be opened and saved in a database application using a comma delimited format. You may then print out the file for reference. An example of a file saved to a database application is shown below.

Exit: Selecting **Exit** closes the Avenue PC application.

	A	B	C	D	E	F	G	H
1	Slot	Name	Group	Model #	Module Type	Hardware Rev	Software Rev	Serial #
2	Frame	Edit Suite A	Video & audio					
3	1	Empty						
4	2	Audio Sync 1	Audio	6030	Video Ref Generator	6030-0	v1.0.0	
5	3	Bcam A/D ch 1-4	Audio	6010	4-ch 20-bit Audio ADC	6010-0	v1.0.0	
6	4	Bcam D/A ch 1-4	Audio	6020	4-ch 20-bit Audio DAC	6020-0	v1.0.0	
7	5	Empty						
8	6	Empty						
9	7	Betacam 1	Video	5300	Analog to Digital	5302-2	v1.2.2	BKEH8161
10	8	VHS #2	Video	5300	Analog to Digital	5302-2	v1.2.2	BKEH8159
11	9	Empty						
12	10	Empty						
13	Frame	Master Control	Video					
14	1	Empty						
15	2	Empty						
16	3	Empty						
17	4	Black DA	Eng	5150	Analog Video DA	XXXX-0	v 1.1.0	SN 198412
18	5	601 Progam DA	Eng	5110	Reclocking DA	5110-0	v 1.1.0	KJEE1291
19	6	601 Preview DA	Eng	5100	Serial DA	5100-0	v 1.1.0	IJED1006
20	7	On air D/A NTSC	Eng	5200	10 bit Video DAC	5200-1	v 1.2.4	AKEG1370
21	8	Monitor 1-5	Video	5250	5 Chan DAC	5250-0	v 1.1.0	BKEK1221
22	9	Sat Feed 1	Video	5300	Analog to Digital	5302-2	v1.2.2	BKEH8162
23	10	Empty						

Option Pulldown Menus



The **Option** pulldown menus include **Preferences**, **Alarms** and **Clear Cache**.

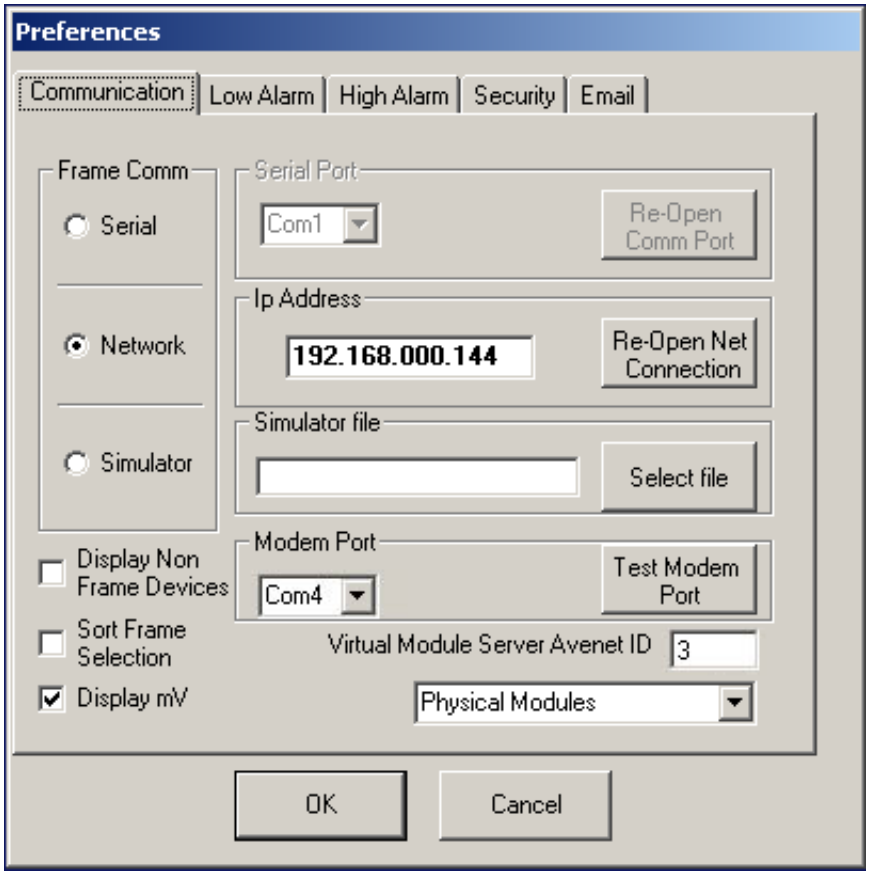
Preferences

The **Preferences** menus consist of the **Communication** setup menu for selecting frame communications, the **Low** and **High Alarm** selection menus and the **Security** menu.

Communication Menu:

In the **Communication** menu illustrated below, select the frame communication method, either **Serial** or **Network**.

If you will be using a **Serial Port**, assign a free port on your PC from the pulldown and leave the baud rate set to 38400.



For **Network** connections, set the IP Address in the menu to match the IP Address on the Control Module in the Avenue frame connected directly to the Ethernet network. Refer to the System Overview section in the manual binder for more information on setting the IP Address on the Control module.

Selecting **Simulator** allows you to enter a simulated mode for demonstration purposes only. Simulator files are included with the Avenue software for different types of simulation examples. The lower portion of the Avenue PC Mainscreen will change when you are in this mode. Disable this mode for normal operation.

Check the **Display Non Frame Devices** box if other types of control devices are on the AveNet loop and you would like them displayed in the Mainscreen frame list. This will allow you to download software to these devices via Avenue PC.

Check the **Sort Frame Selection** box to list the frame names or numbers in alphabetical or numerical order in the frame lists on the Mainscreen. With this box unchecked, the frames will automatically be sorted by assigned AveNet numbe

In the Avenue system, IRE is the default unit of measure for parameters such as video levels. To change the default unit of measure to millivolts, check the **Display mV** box. Values will then be displayed in millivolts where applicable.

The **Modem Port** can be used to connect to the Avenue PC alarm system to send a page to a telephone number as shown in the **Low/High Alarm** section. Select the port from the pulldown menu you will be connecting the modem to.

The **Virtual Module Server Avenet ID** is the Avenet number of the frame (Control module) that is assigned to act as the storage location for any virtual modules created on the PC as described later in the Virtual Modules section of this data pack. Any frame (Control module) communicating with Avenue PC can be used as the Virtual Module server.

The pulldown menu below the **Virtual Module Server Avenet ID** allows you to choose the type of modules that will be displayed in the Mainscreen Module Selection screen. You may display **Physical Modules** only, **Virtual Modules** only or all **Physical & Virtual** modules.

Low and High Alarms: The control data from each frame module can be used to alert you when a module indicator becomes active or a module is missing. There are two alarm conditions, **Low** and **High**. You may define both types of alarms making one a higher priority than the other or setting up a higher priority condition in one type of alarm.

For example, you can set an alarm to go off if the input to a module is bad, or you might set an alarm to occur if a module losses its reference input.

Each alarm condition allows you to define the characteristics that will alert you when a module condition changes. The **Low Alarm** menu screen shown below shows the types of alarms available.

Visual – Select the **Blink Icon** checkbox to blink the alarm icon on the Avenue Mainscreen when an alarm occurs.

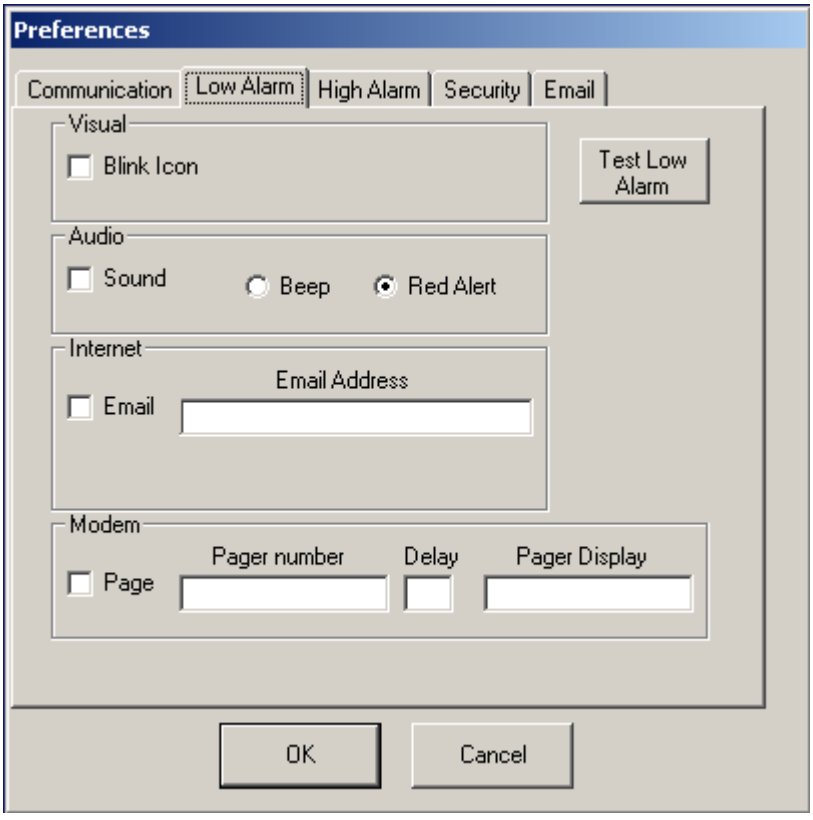
Audio – Select the **Sound** checkbox and then the **Beep** or **Red Alert** button to indicate what type of sound alarm you wish to hear.

Internet – Email service set up on your PC can be set to send an Email to a designated person when an alarm occurs. Check the **Email** checkbox and enter an email address.

Modem – Select the Page checkbox to activate the Modem function. Enter a pager or phone number to be called when an alarm occurs. Enter a comma to pause the phone number you are dialing. The delay is in seconds.

Use the **Test Low Alarm** button to test the actions you have chosen.

The **High Alarm** menu screen is identical to the **Low Alarm** screen below. Define a high alarm in the same manner.

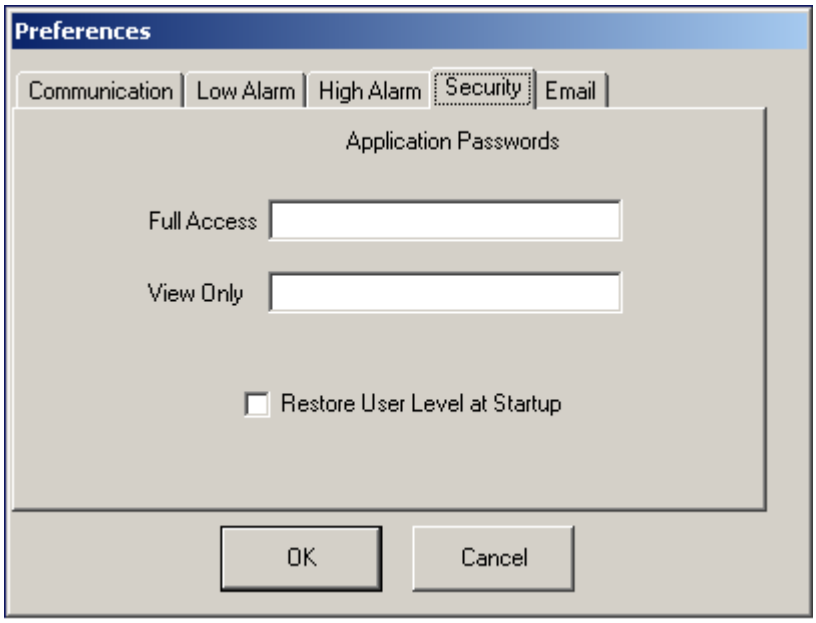


Security: Two modes of password protection are provided for security purposes, **Full Access** and **View Only**, as shown in the **Security** menu screen below.

Typing a password into **Full Access** enables the full password protection feature. When Avenue PC is started, the user must enter this password to access and edit any of the menus where parameters are set, such as Preferences, module/frame menus, and alarms.

Typing a password into **View Only** enables the view only feature where the user can view the menus but not edit them.

Check the **Restore User Level at Startup** box to save the User Levels set up under the **File** pulldown, **Change User Levels** function described earlier.



If a password has been entered into one or both of the boxes, the **Password Entry** window will appear as shown below when Avenue PC is started. Type the designated password(s) to allow the access you have set up. If a password has been assigned to only one type of access, the other password will go to a default condition where a return (**ENTER**) in the unassigned box enables the access.

Leaving both of the password boxes blank will disable the password protection.

Typing a password into **Full Access** enables the full password protection feature. When Avenue PC is started, the user must enter this password to access and edit any of the menus where parameters are set, such as Preferences, module/frame menus, and alarms.

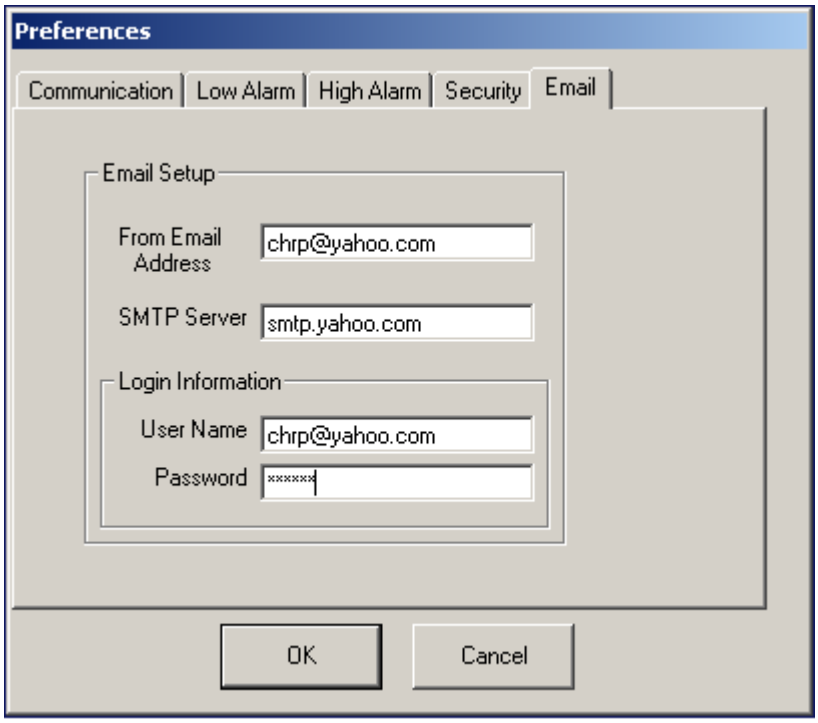
Email: Use this menu to specifiy the email account and server from which an alarm notification will come if an alarm occurs**.**

From Email Address – Enter the email address for the desired email account. This account must reside on the facility's email system and server.

SMTP – Enter the name of the SMTP server for the email account.

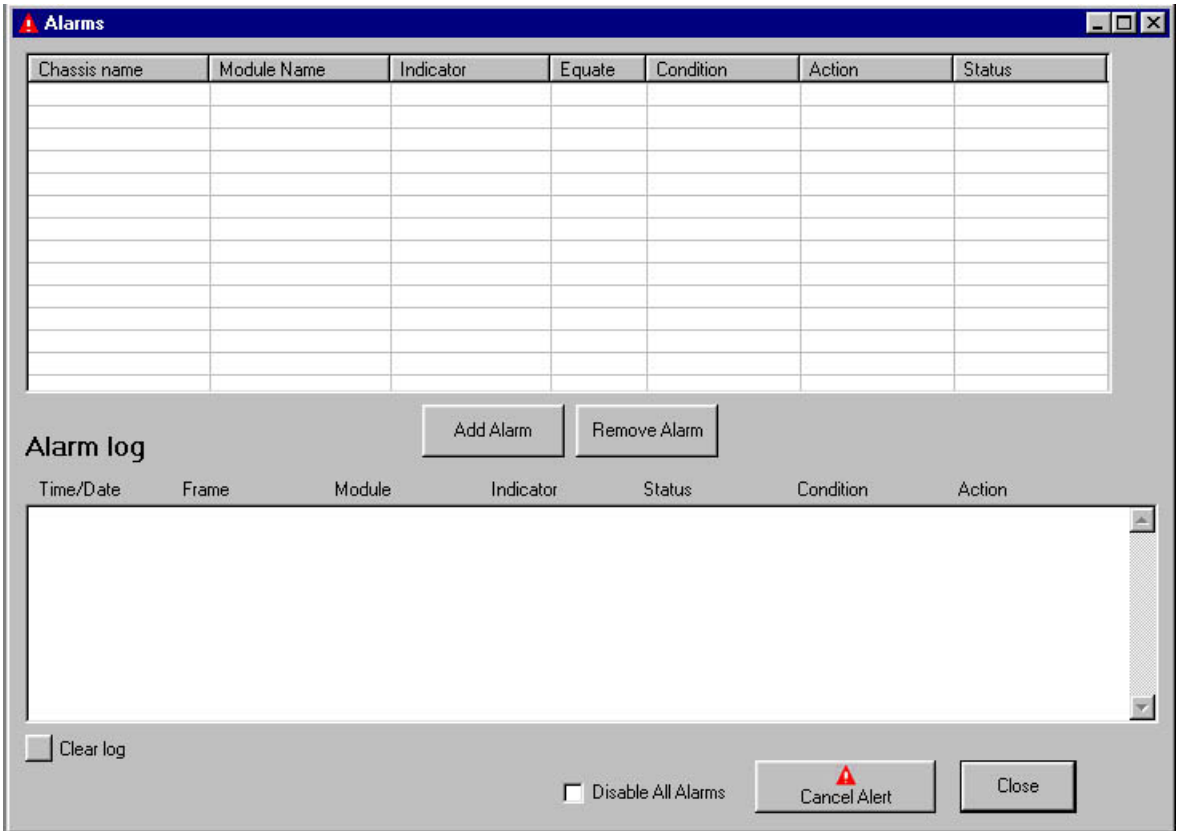
User Name – Enter the user name for the email account.

Password – Enter the password for the email account.



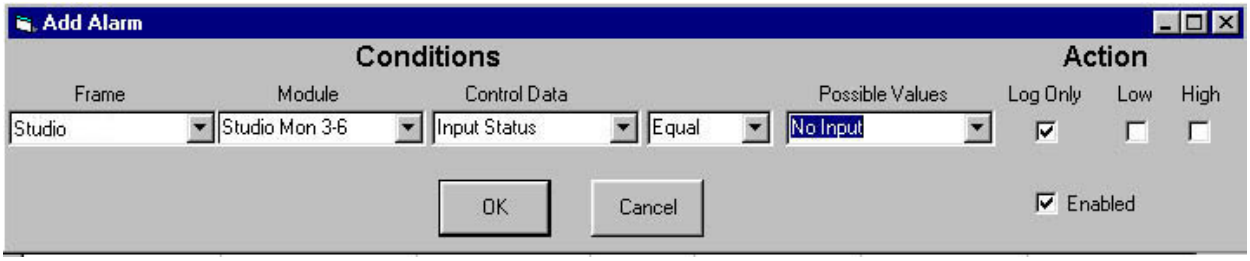
Alarms

Selecting the **Alarms** pulldown under the **Options** tab, brings up the **Alarm Log** screen shown below. To add an alarm, click on the **Add Alarm** box to bring up the **Conditions** entry screen shown in the lower figure.



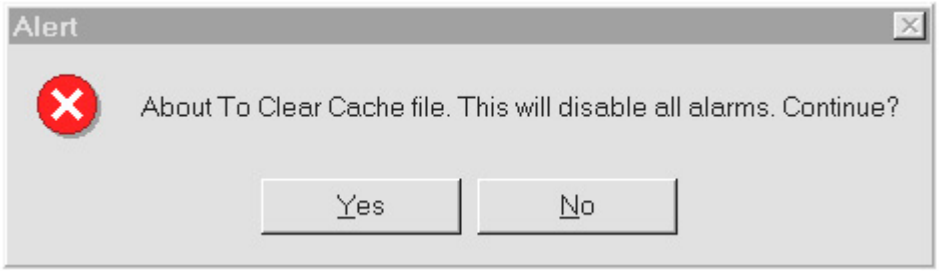
In the **Conditions** area shown below, enter the **Frame** name, **Module** name, and choose the **Control Data** criteria for the alarm from the list given. In the **Action** area, select the type of action you would like the alarm to perform, either **Log Only**, **Low** and/or **High**. The **Low** and/or **High** alarms will have the attributes chosen under the **Low** and **High** menu screens described in the previous section.

You may also enable or disable the alarm with the **Enable** check box in the **Conditions** screen.

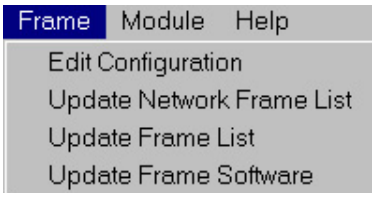


Clear Cache

Selecting **Clear Cache** brings up the alert box shown below. The cache file stores the current module information on hard disk to speed up module access time. Only use this function when working with the factory or for troubleshooting purposes. After the cache has been cleared, you will have to manually re-enable all alarms.



Frame Pulldown Menus

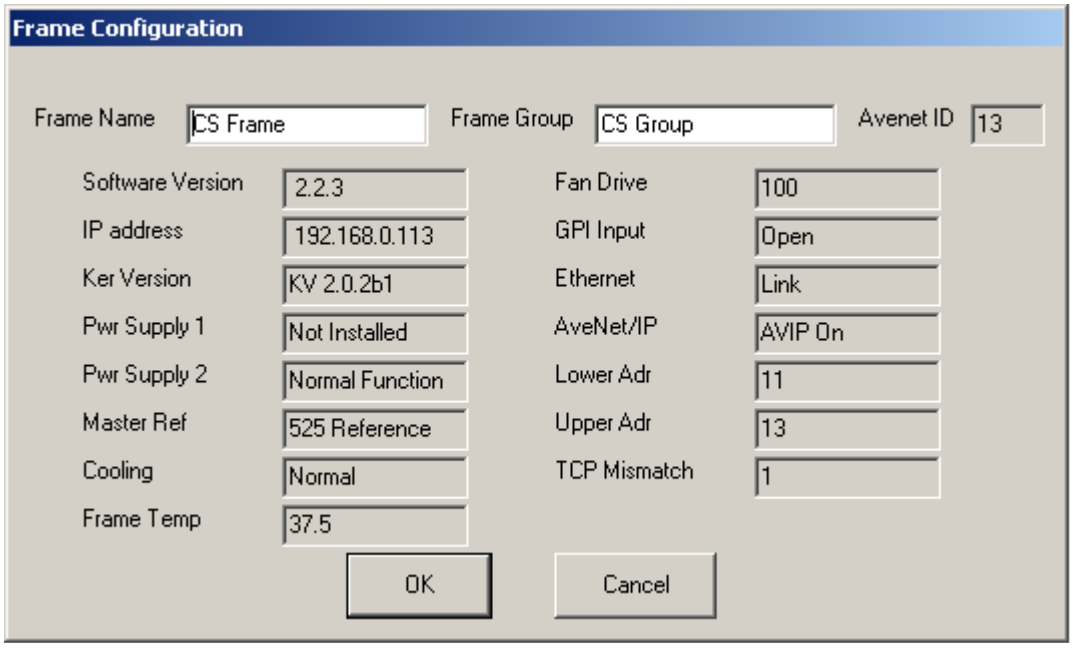


The Frame pulldown menus include **Edit Configuration**, **Update Network Frame List**, **Update Frame List** and **Update Frame Software**.

Edit Configuration: This menu allows you to name each frame and frame group in the system. Select a frame in the frame list on the Mainscreen, then select **Edit Configuration** to bring up the menu below. Type in or edit the **Frame Name** and **Frame Group** in the boxes. Each name can be up to 15 characters long.

Information on the currently selected frame is reported for the following:

- Software version
- IP Address
- Ker Version (kernel version of the operating system)
- Power Supply 1 (option) status
- Power Supply 2 status
- Master Reference
- Cooling (fan state)
- Frame Temp (in degrees centigrade)
- Fan Drive (percentage of fan speed being utilized)
- GPI Input (Open or Closed)
- Ethernet
- AveNet/IP (On or Off)
- Lower Adr (lowest AveNet address of frame in network)
- Upper Adr (highest AveNet address of frame in network)
- TCP Mismatch (factory use only)



NOTE: Certain characters are not allowed when editing the name of a module, chassis or group. These characters include dashes, commas, periods, forward slashes and back slashes.

Update Network Frame List: Select this function to update the frames listed that are present on the network. The updated information will appear on the Mainscreen. You may also select the **Update Network Frame List** icon explained earlier to update the network frame list.

Update Frame List: Select this function to update the frames listed on the Mainscreen. You may also select the **Update Frame List** icon indicated below to update the network frame list.

Update Frame Software: You may update the frame software on the 5030/35 Control Module with this function. Log on to the Ensemble Designs web site at http://www.ensembledesigns.com and click on Support. Click on Avenue PC, then on Download.

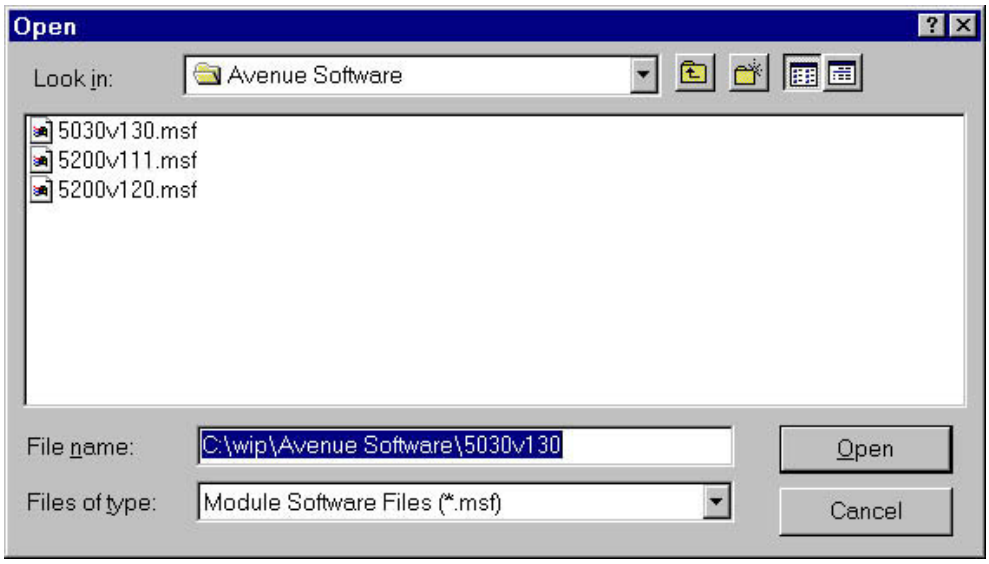
You will need to enter your company name and a frame serial number to access the download area. Locate the frame serial number on the rear of each frame on the silver sticker with black letters. After entering this information, you will access the Avenue Download page.

The latest documentation for each Avenue module is available for download in pdf format at the top of this page. Scroll to the Firmware for Modules section and locate the 5030/35 Control module software.

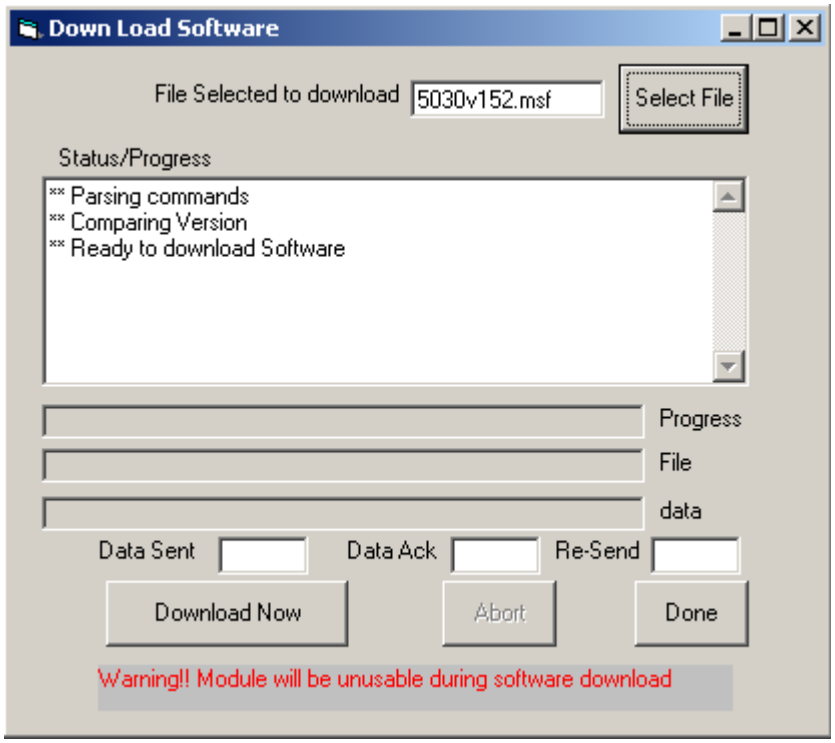
Check the current version of the Control module on the web site against the version running on your system to make sure the download version is more current. To check the current version, at the front of the Control module enter the first status menu **VER**. The current software version loaded on the module will scroll across the display. Refer to the 5030/35 Control module data pack for full details. The system software version is also available on each module **Edit Name** screen under **Software Rev** as shown in the screen on the previous page. If you also have an Avenue Touch Screen, you can find the system software version under **Configuration**.

Select the 5030/35 Control module software and after the document has loaded, download the file to your local drive by saving the file in your browser exactly as it appears in the **Save As** file name box. It will save to an **.msf** file.

In the Module/Frame selection window in the Mainscreen, click on the frame you want to update. Select **Update Frame Software** in the pulldown. This will bring up the **Open** file selection window shown below. Find the correct file you downloaded from the web site and open it.



This will bring up the **Download Software** screen shown below. The file for the 5030 Control module you have selected should appear in the **File Selected to download** box. If not, press **Select File** to return to the **Open** file menu shown on the preceding page to locate the correct file. Avenue PC will not allow you to download an incorrect type of module file. It will however, allow you to download an earlier version and overwrite the current version. So be sure to check your current version against the one you are downloading as mentioned earlier.

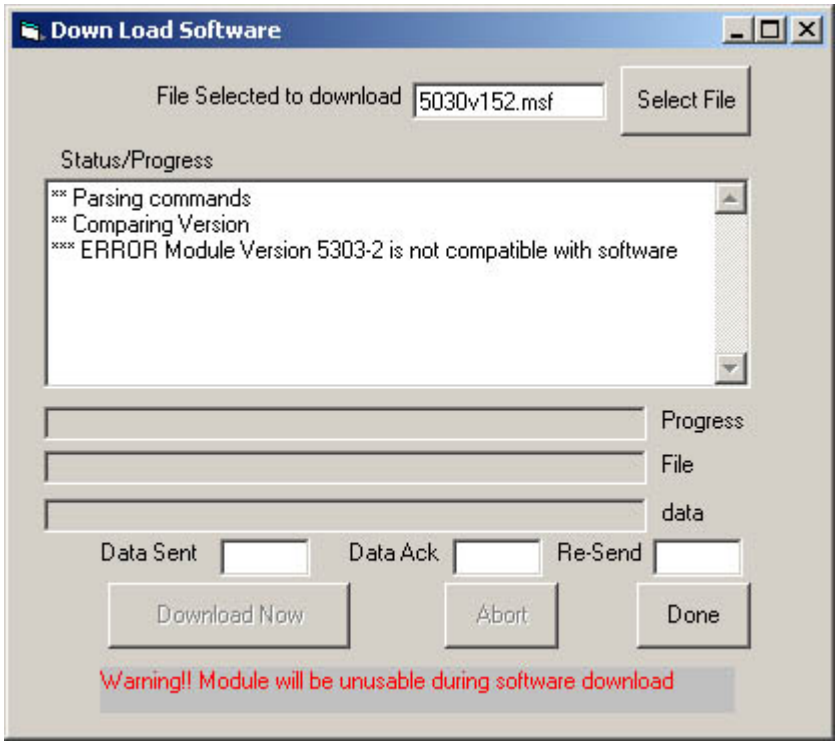


To perform the download, press the **Download Now** button at the bottom left of the screen. You will see the status script describing the progress of the download and a progress bar below it, along with the **File** and **Data** progress bars. The **Data Sent** box will report the information from the download while the **Data Ack** will report the data received by the module. The **Re-send** box will indicate how many times the operation has been attempted. A complete, error free download with no re-sends should report a 1 in each box.

During the software download, the **RUN** indicator on the front of the 5030/35 Control module will display **K**, indicating the module is operating in "kernel" mode. (**K** should appear only in download mode and may indicate a software error at other times.) Note that the module will be unusable during the download.

You may abort the download by pressing the middle **Abort** button (grayed out above). This will result in an incomplete download and you will have to restart the download operation for the module to operate properly. The module will remain in "kernel" mode until a new download is completed.

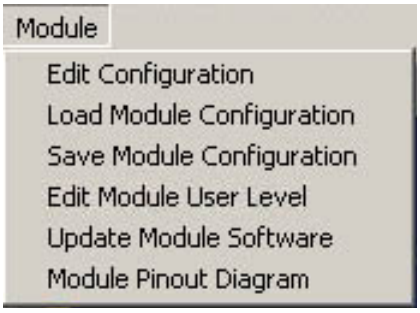
If you are attempting to download an incorrect file type for the module, an error message will display in the Status/Progress window similar to the one shown below.



After the download is finished, press the **Done** button in the window above. The **RUN** indicator on the front of the Control module should return to **R** for normal operation if the download was successful. The new software version will also appear in the **VER** status function on the Control module.

Update all the 5030/35 Control modules in your system with the new version software.

Module Pulldown Menus



The **Module** pulldown menus include **Edit Configuration**, **Load Module Configuration**, **Save Module Configuration, Edit Module User Level, Update Module Software** and **Module Pinout Diagram**.

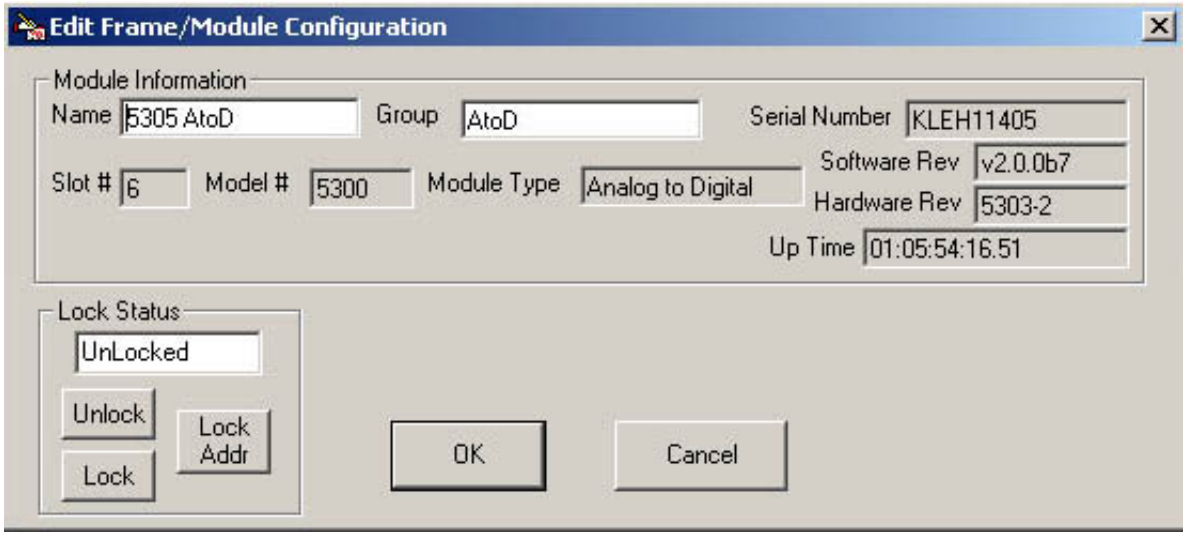
Edit Configuration: This menu allows you to name each module and group in the frame. Expand the frame list on the Mainscreen and select a module from the list. Select **Edit Configuration** to bring up the **Edit Frame/Module** screen shown below. Type in or edit the **Module Name** and **Group** in the boxes. Each name can be up to 15 characters long.

Read only information about the selected module is also displayed including the **Serial Number**, **Software Rev** and **Hardware Rev**, **Slot #**, **Model #**, **Module Type** and **Up Time** (amount of time the module has been powered up in days, hours, minutes, seconds).

The **Lock Status** controls show the current lock status of the module. For Avenue PC control the Administrator can select **Unlock** or **Lock** to change the status. Selecting the **Lock Add** brings up the Avenet address of the control point for this module.

Select **OK** to save changes to the screen or **Cancel** to close with no changes.

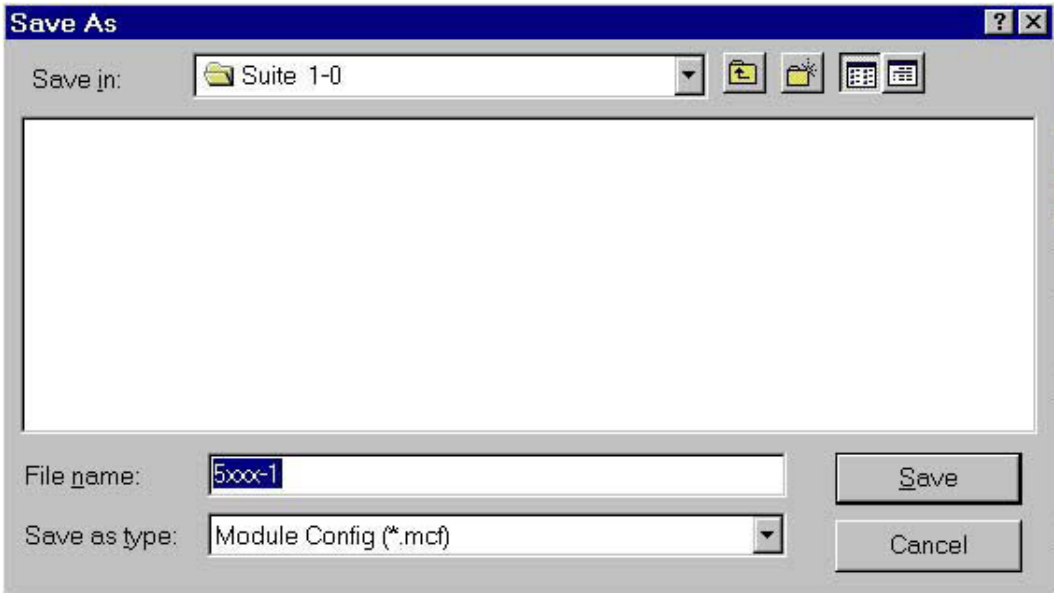
NOTE: Certain characters are not allowed when editing the name of a module, chassis or group. These characters include dashes, commas, periods, forward slashes and back slashes.



Load Module Configuration: Selecting this function brings up a file location menu. The configuration from a stored file can be downloaded to another module of the same type.

Save Module Configuration: This menu allows you to save a module configuration to a file. All module parameters will be stored and this file may be saved or downloaded to another module of the same type.

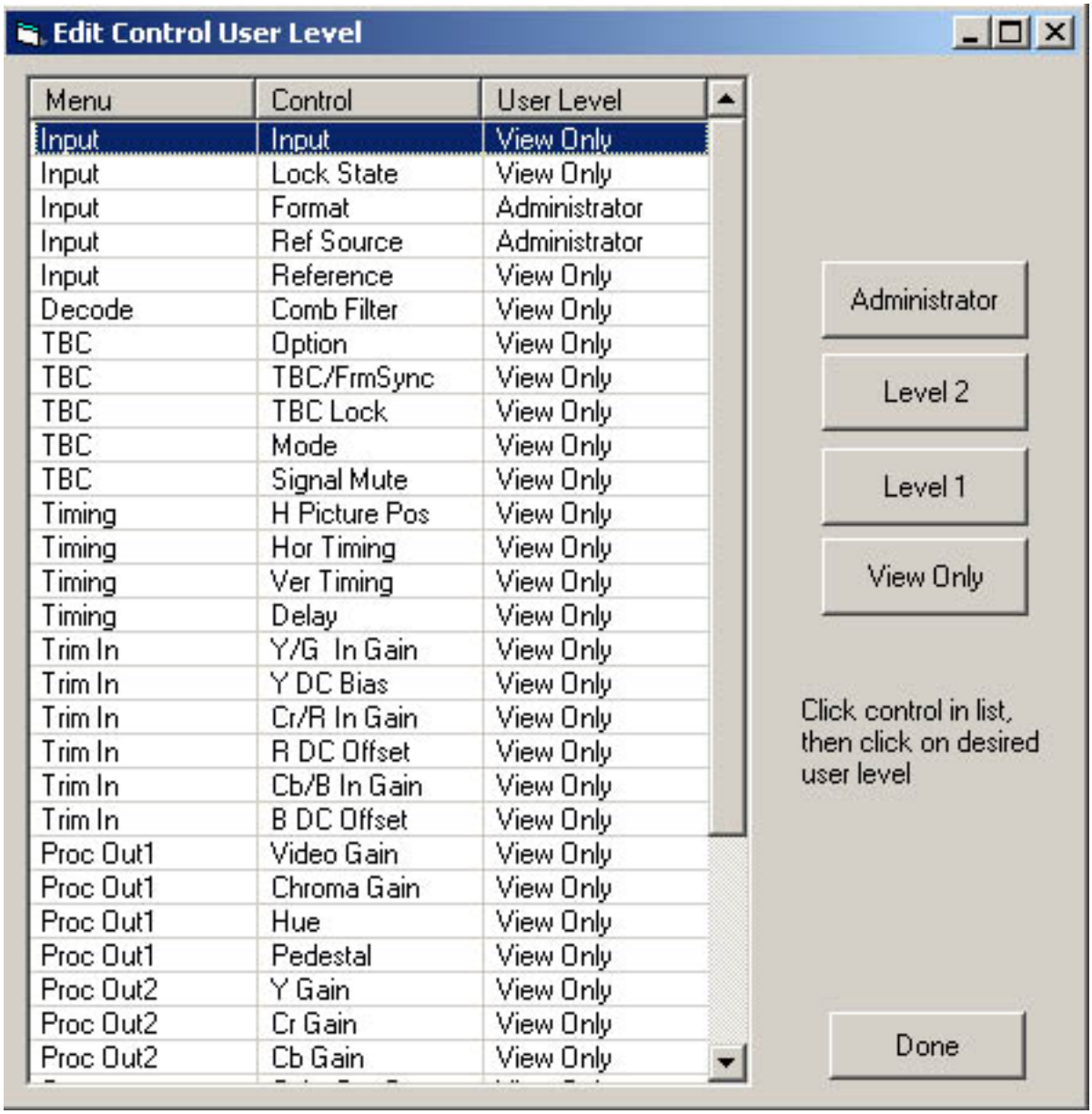
The file access menu screens for both **Load** and **Save Configuration** are identical and appear as in the illustration below.



Edit Module User Level: Modules in the Avenue system running v2.0 software or later have a User Level assigned to each adjustable control parameter. These levels are assigned to a default in software according to the type of adjustment. The User Levels of these parameters can be edited by an Administrator if desired using this menu.

To edit Control User Levels, select an Avenue module from the frame list so its control parameters appear in the Edit Control User Level window similar to the example in the figure below.

Select the individual Control in the list then click on the User Level desired for this Control parameter. Select **Done** when finished to save and close the list.



Update Module Software: You may update the individual module software with this function. Log on to the Ensemble Designs web site at http://www.ensembledesigns.com and click on Support. Click on Avenue PC, then on Download.

You will need to enter your company name and a frame serial number to access the download area. Locate the serial number on the rear of each frame on the silver sticker with black letters. After entering this information, you will access the Avenue Download page.

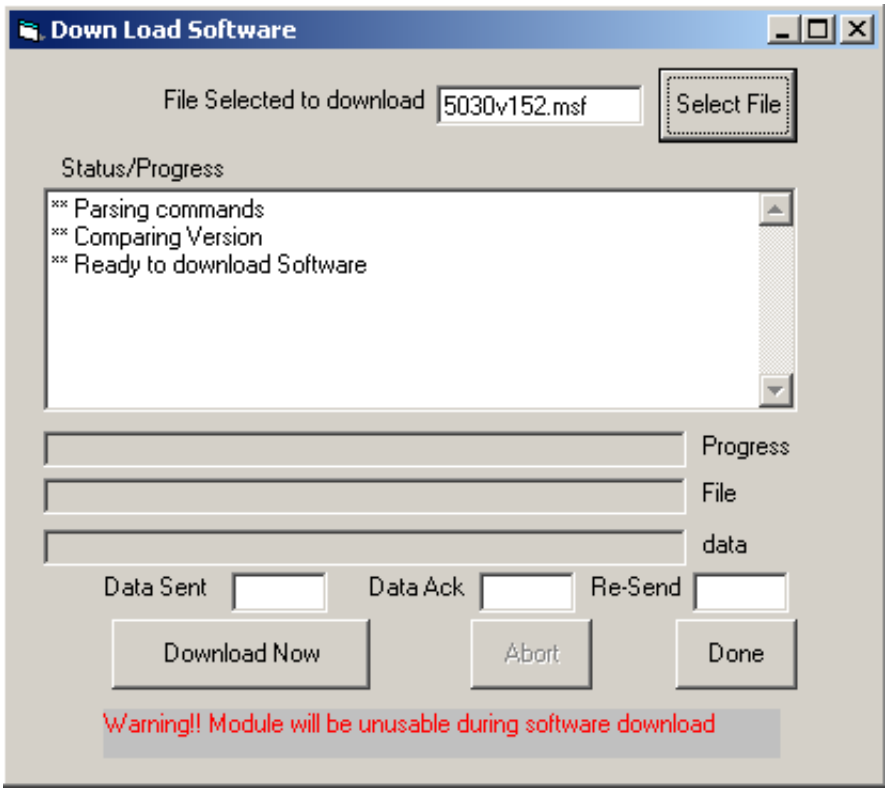
The latest documentation for each Avenue module is available for download in pdf format at the top of this page. Scroll to the Firmware for Modules section and locate the individual module software listings.

Check the current version of the module on the web site against the version running on your system to make sure the download version is more current. Select the module you want to update in the **Module Selection** window on the Mainscreen.Go to the **Edit Name** pulldown shown on the preceding page. The current hardware version loaded on the module will be shown in the **Hardware Rev** box.

Select the new version software you wish to download and after the document has loaded, download the file to your local drive by saving the file in your browser exactly as it appears in the **Save As** file name box. It will save to a **.msf** file.

Select **Update Frame Software** in the pulldown. This will bring up the **Open** file selection window. Find the correct file you downloaded from the web site and open it.

This will bring up the **Download Software** screen shown below. The file for the module you have selected should appear in the **File Selected to download** box. If not, press **Select File** to return to the **Open** file menu shown above to locate the correct file. Avenue PC will not allow you to download an incorrect type of module file.



It will however, allow you to download an earlier version and overwrite the current version. So be sure to check your current version against the one you are downloading as mentioned earlier. Any compatibility errors will appear in the script as shown in the example below. Refer to the web site for notes and updates on software compatibility issues.

To perform the download, press the **Download Now** button at the bottom left of the screen. You will see the status script describing the progress of the download and a progress bar below it, along with the **File** and **Data** progress bars. The **Data Sent** box will report the information from the download while the **Data Ack** will report the data received by the module. The **Re-send** box will indicate how many times the operation has been attempted. (A complete, error-free download with no re-sends should report a 1 in each box.)

During the software download the module is not functional and should not be used. The **RUN** light on the module will blink in a series of two blinks while the module is downloading the “kernel” information and then blink rapidly during the second portion of the download.

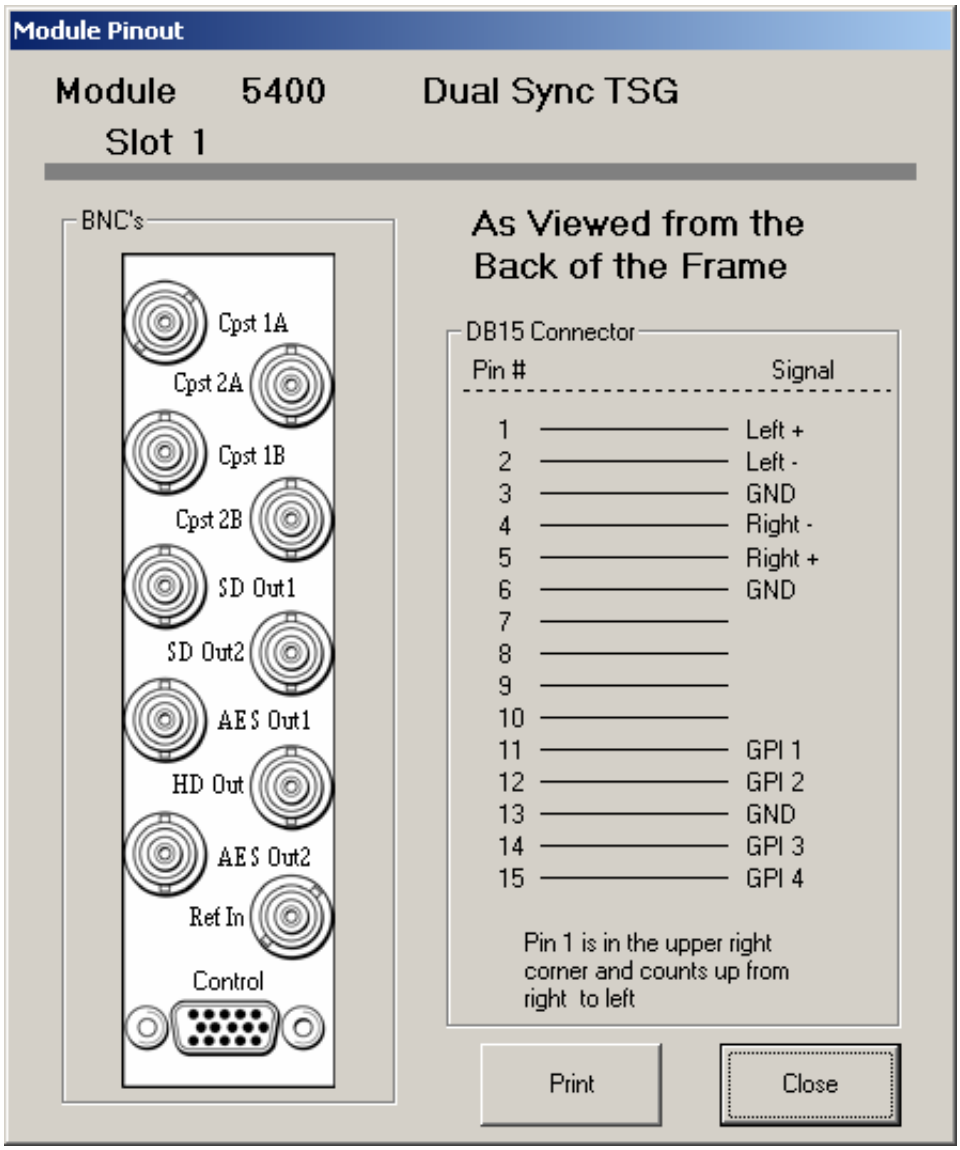
If you are attempting to download an incorrect file type for the module, an error message will display in the Status/Progress window similar to the one shown in the Frame Software Download section.

You may abort the download by pressing the middle **Abort** button (grayed out above). This will result in an incomplete download and you will have to restart the download operation for the module to operate properly. An incomplete download will be indicated by the module **RUN** light blinking as explained above.

After the download is finished, press the **Done** button in the Download window. The **RUN** indicator on the front of the module should return to normal operation if the download was successful. If the light is blinking quickly or with two blinks in succession, the download may have failed. If this occurs, you will need to redownload the new version. Check that the new software version appears in the **Hardware Rev** box on the **Edit Name** pulldown.

Download the new version software to all of the same type modules in your system.

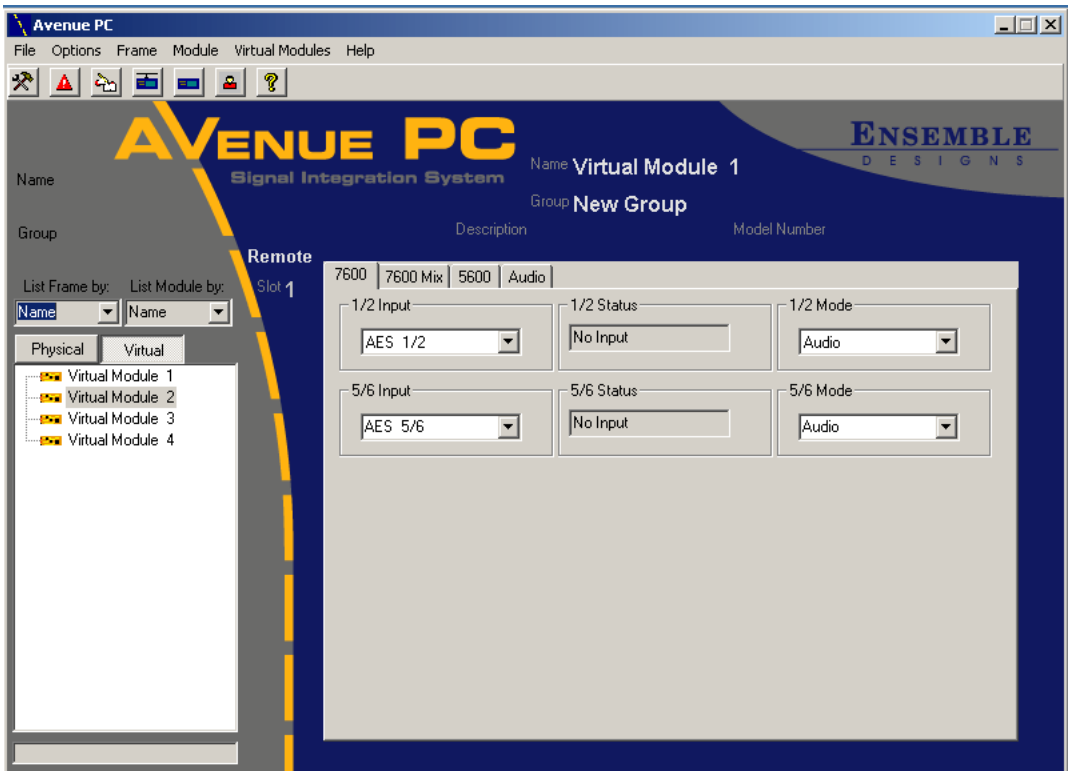
Module Pinout Diagram: Backplane BNC connectors and the 15-pin high density connector pinouts for the module are given under this pulldown as shown below.



CREATING AND USING VIRTUAL MODULES

Virtual Modules are custom menus that combine functionality from any modules available on the network. A “Virtual Module” can include controls from several different modules present in your system such as an embedder, a video converter, and an audio delay module. Menus and parameter names can be grouped and customized to suit the needs of the user. A Virtual Module is authored with Avenue PC and exported (downloaded) to a control point (target) server on the network. Control point servers can be any Avenue frame with a 5030/55 Control module installed or any Tabletop Touch Screen.

The AveNet address of the control point server destination for the download of the Virtual Module (frame or Touch Screen) must be specified in the **Configuration** tab of the **Preferences** pulldown menu as described in **Option Pulldown Menus** section of this manual. The **Configuration** tab also includes the view options for the Module Selection screen. To see the Virtual Modules downloaded to a control point, either **Physical & Virtual** or **Virtual** must be selected. Virtual Modules will appear on the Module Selection screen in the same manner as a physical module as shown below.

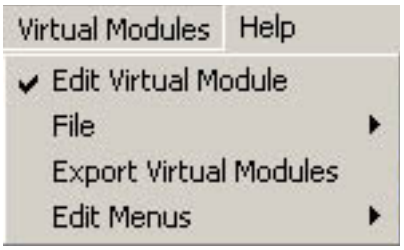


The procedure for creating and using Virtual Modules is summarized below for quick reference. Use this summary along with the detailed control descriptions that follow to create and use Virtual Modules.

1. In the **Options**, **Preferences**, **Communication**, select **Physical & Virtual** from the drop down box at the lower right of the window. This allow both types of modules to be seen in the Frame and Modules list.
2. In the **Virtual Module Server AveNet ID** box, enter the AveNet Address of the Frame or Table Top Touch Screen panel you wish to use as the Virtual Module Server and hit the **Enter** key on your keyboard. Click **OK** to close the Preferences window.

3. On the Avenue PC top Menu Bar, select **Virtual Modules**. Click **Edit Virtual Module** and the Virtual Module edit screen will appear. Note that this screen will be present until you click again on **Edit Virtual Module**, removing the check mark in front of this item.
4. If you wish to use an existing Virtual Module file, go to the **Virtual Modules** pulldown on the Menu Bar. Click on **File**, **Load** and select the desired .vmf file in the directory that appears. This will bring the existing Virtual Module file into the Virtual Module edit environment so that you add your new module or edit existing Virtual Modules. If you are not editing an existing .vmf file and wish to create a new module, select **Virtual Modules**, **Edit Menus**, **Module**, and click on **Add New Virtual Module**. This module can be named with **Virtual Modules**, **Edit Menus**, **Module**, **Edit Module Name**. (It can also be renamed in the usual Windows manner by selecting the name and typing in a new one.)
6. Above the Frame and Module list on the left side of the Avenue PC Mainscreen, select **Physical**. Now select the Frame and Avenue module you wish to use as the first source for the new Virtual Module. This will place all of the control parameters for the selected module into the Physical Modules section on the left side of the Virtual Modules edit screen.
7. In the Physical Modules list on the left, highlight a menu and then a control you wish to use as the first source in your Virtual Module and drag it into the Virtual Module Menu area on the right of the edit screen. Controls may be added from this Physical Module or any other Physical Module that is available in the Frame list by dragging them as noted above. Two to four controls will usually fit on one menu tab, depending on the size and type of these controls.
8. It is possible to add Spaces and Line Feeds to position controls to suit your preferences. To do this, left click (select) the line in the Virtual Module menu where you wish to place the Space or Line Feed. Right click on the highlighted control to bring up the action selection pulldown and choose the appropriate action.
9. Audio level controls are vertical in the Avenue PC display and horizontal on the Touch Screen. It is usually necessary to add two Line Feeds between the second and third Audio Level controls for proper display on the Touch Screen. Logic built into Avenue PC prevents display of Line Feeds on the PC when they follow an Audio Level control so that these controls will also appear properly in the display.
10. A Menu tab may be renamed in **Virtual Modules**, **Edit Menu**, **Menu**, **Edit Menu Name**, or by right clicking the tab. Control and Module names can be changed in the same manner.
11. Menu tabs can be added in **Virtual Modules**, **Edit Menu**, **Menu**, **Insert New Menu** (or **Append New Menu**). Drag controls into this new menu as done previously.
12. Additional Virtual Modules can be added to the file in the manner described above. When you have finished building the Virtual Modules, click on **File**, **Save As**, and save the module as a .vmf file with a name of your choice to a directory on your PC.
13. Next, click **Export Virtual Modules** in the **Virtual Module** pulldown. Clicking **Download Now will** begin the transfer of the Virtual Modules to the selected Control module on the network. When you are finished, click **Virtual Modules** on the Menu Bar and then click **Edit Virtual Modules** to uncheck the selection and close the edit window.
14. Now click **Update Network Frames** on the main Avenue PC Menu Bar and both the Physical and Virtual Modules will be available for your use.

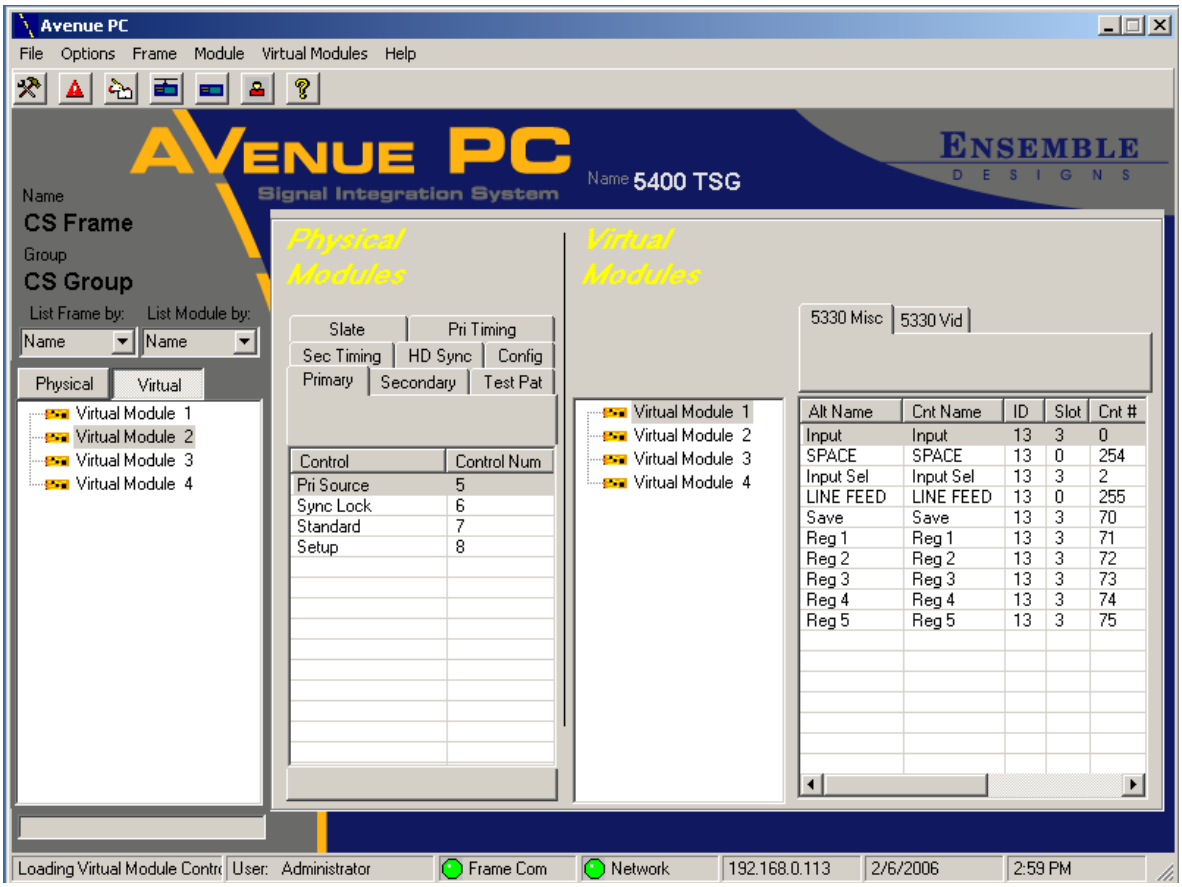
Virtual Modules Pulldown Menus

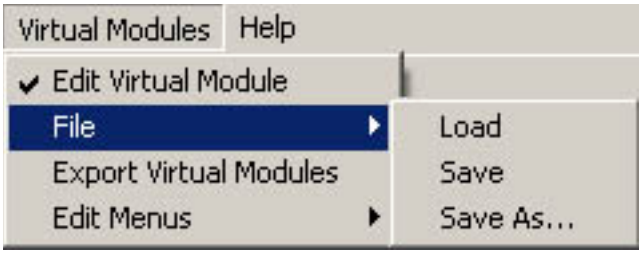


The **Virtual Modules** menus include **Edit Virtual Module**, **File**, **Export Virtual Modules**, and **Edit Menus**. Each of these controls is described in detail in this section.

Edit Virtual Modules: Select this menu to open the main **Virtual Modules** edit screen shown below. Virtual Modules can be loaded to the edit screen and edited as desired then exported to the target server.

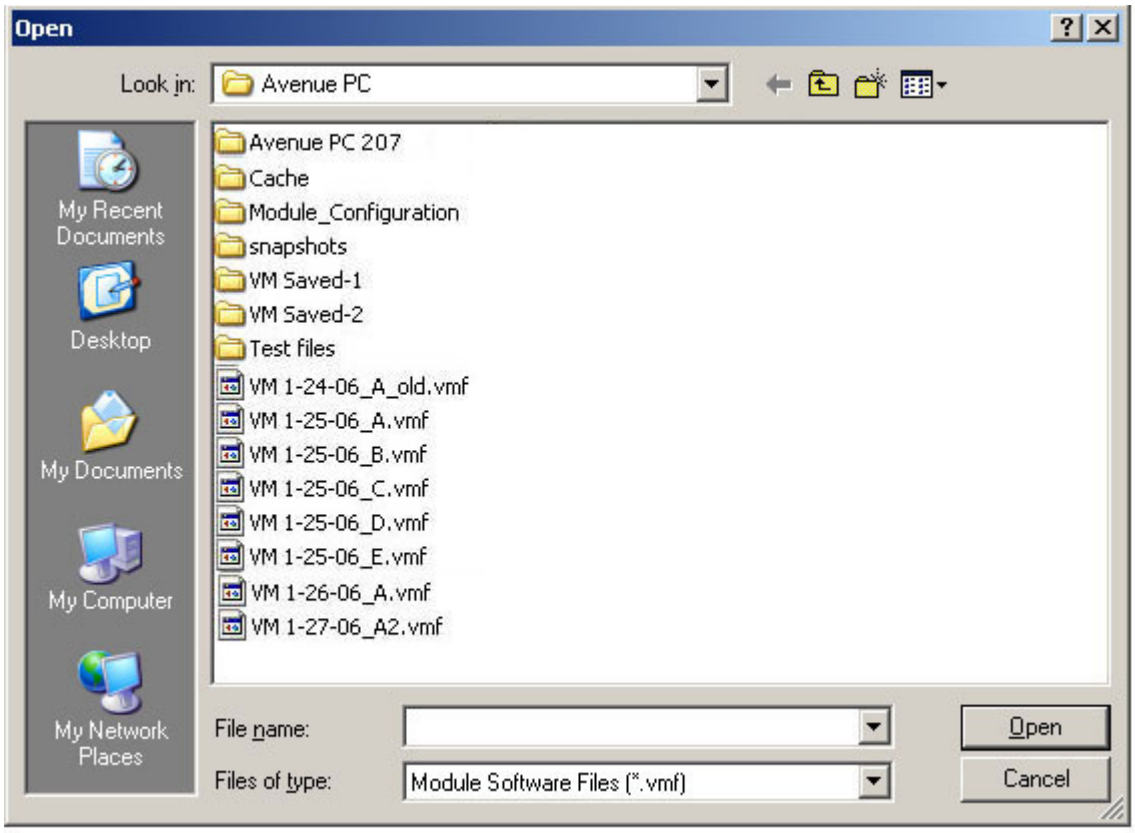
Uncheck the **Edit Virtual Module** selection to turn off the Edit screen and return to the Avenue PC Mainscreen.





File Menus: The File Menu has the following three controls:

Load – use the **Load** control to upload a Virtual Module .vmf file from the main directory of saved Virtual Module files into the edit Screen. When **Load** is selected, the directory where the .vmf files have been saved will appear as shown below. The selected .vmf fie will populate the Virtual Module edit screen and can then be edited and saved or exported to the target server.



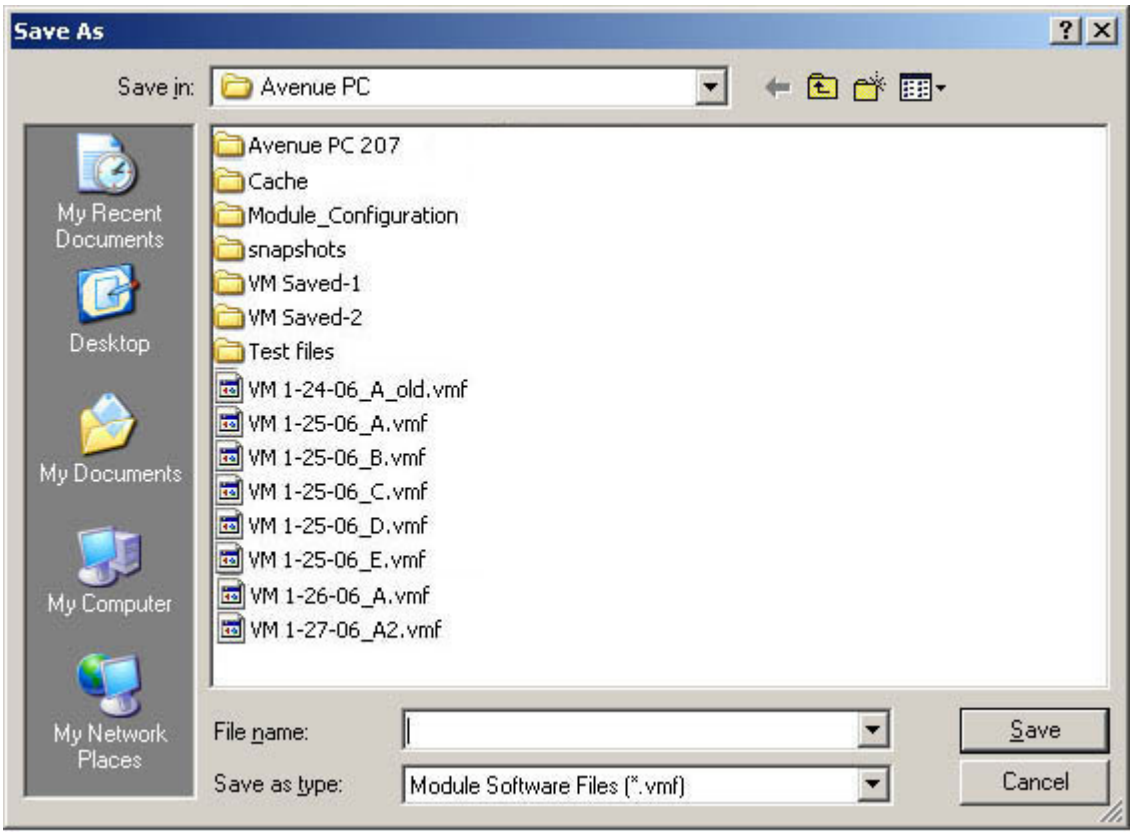
Save – selecting this control saves the state of the currently active Virtual Module in the edit screen. The changes made to this Virtual Module are saved locally on Avenue PC and will not appear on the Virtual Module menu until this file is exported to the target server.

To save any changes to the Avenue PC directory, use the **Save As** control described next.

Save As – selecting this control will bring up the default **Save As** Avenue PC directory shown below. Use this function to save new Virtual Modules or edited files to the main Avenue PC directory for later recall.

Module .vmf files can be saved to any designated directory on the local PC running Avenue PC.

NOTE: Certain characters are not allowed when editing the name of a module, chassis or group. These characters include dashes, commas, periods, forward slashes and back slashes.



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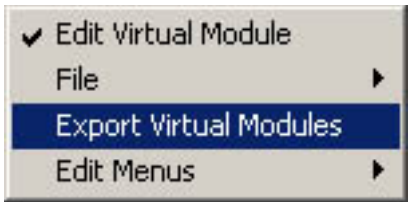
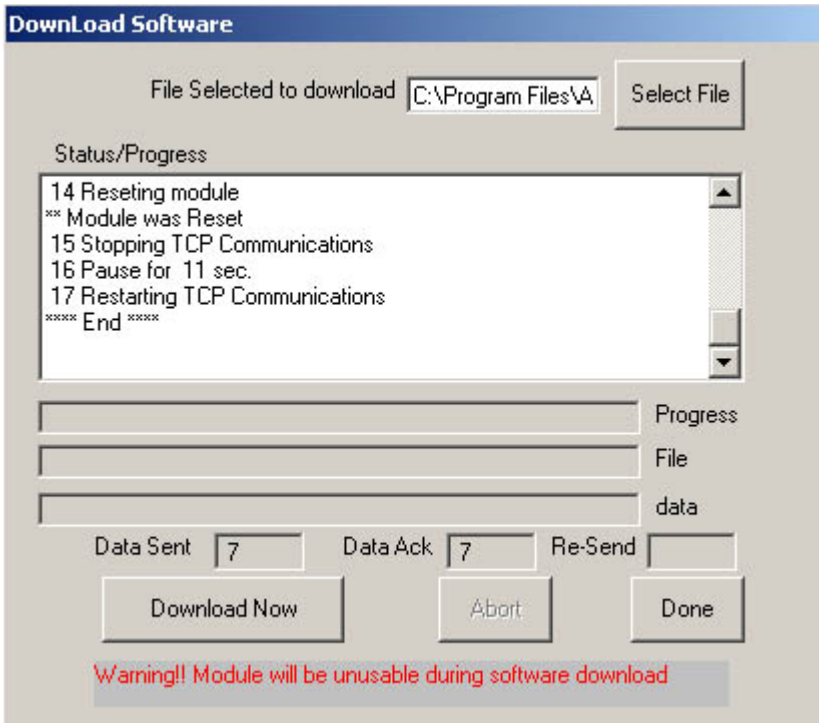


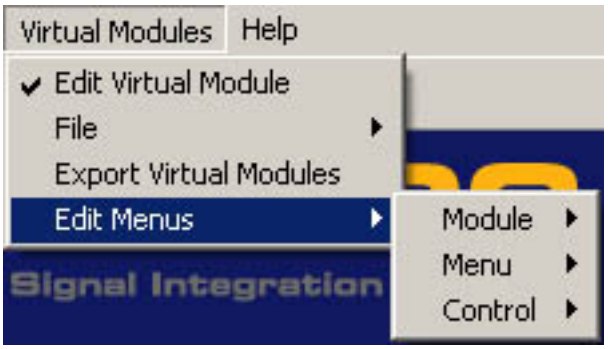
Export Virtual Modules: Once Virtual Modules have been created or edited as desired select **Save** in the previous **File** menu then use this control to send them to the target server selected in bottom of the **Options**, **Preferences**, **Communication** menu shown in the example below.

Selecting **Export Virtual Modules** will bring up the Download Software screen shown below. Select **Download Now** to send the Virtual Module(s) currently active in the edit screen to the Virtual Module Server shown above.

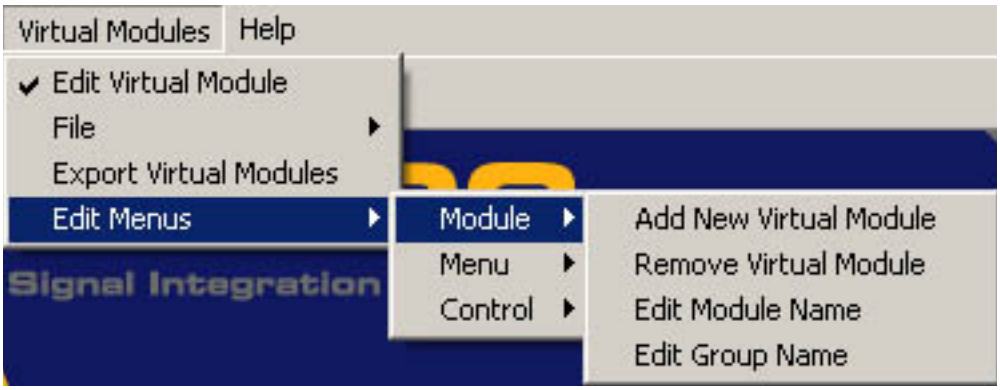


The Progress bar will indicate that the software is downloading. When the download is complete, the **Done** button will become active. Press the **Done** button to finish.

Click on the **Update Frame** icon at the top of the Avenue PC Mainscreen to refresh the status of the Virtual Modules frame list. Your Virtual Modules should now show up in the Virtual frame list.



The Virtual Modules **Edit Menus** include the **Module**, **Menu**, and **Control** pulldowns explained below.



Edit Menus: Module: The **Edit Menus Module** pulldown shown above provides controls for the following functions:

Add New Virtual Module: Select this control to add a new Virtual Module to existing Virtual Modules present on the edit screen or to create a new Virtual Module or set of modules.

To create a new Virtual Module, select **Add New Virtual Module** from the pulldown or right-click in the center of the Virtual Module edit screen to bring up the Module functions shown on the next page. The new Virtual Module will appear in the Virtual Modules edit screen.

Remove Virtual Module: Once a Virtual Module has been created it can be removed by selecting the Virtual Module in the list then selecting **Remove Virtual Module** in the menu pulldown or by right-clicking on the Virtual Module name and selecting the remove function.

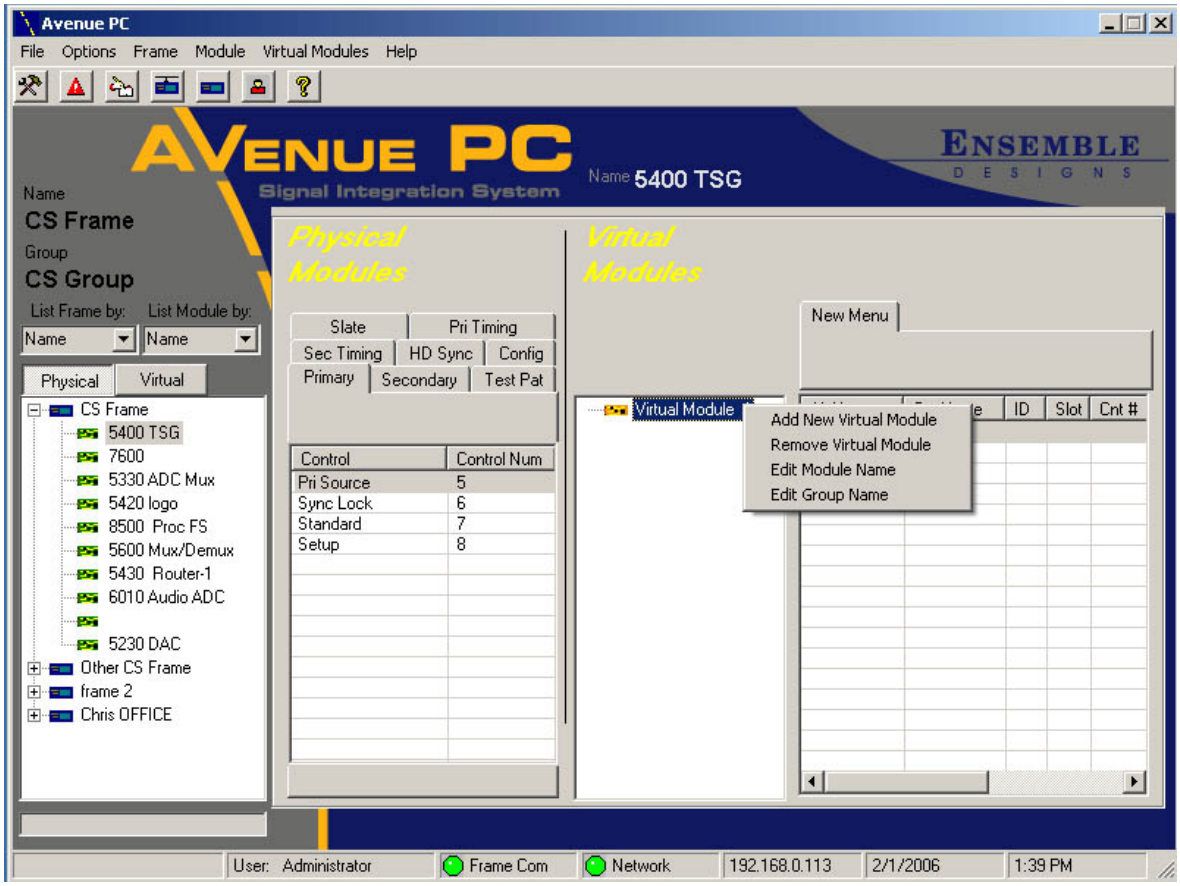
Edit Module Name: To rename the Virtual Module, select **Edit Module Name** from the **Edit Menus** pulldown or right-click on the Virtual Module name and select **Edit Module Name**. This will bring up an **Edit Module Name** dialog box and allow you to enter a name for the Virtual Module.

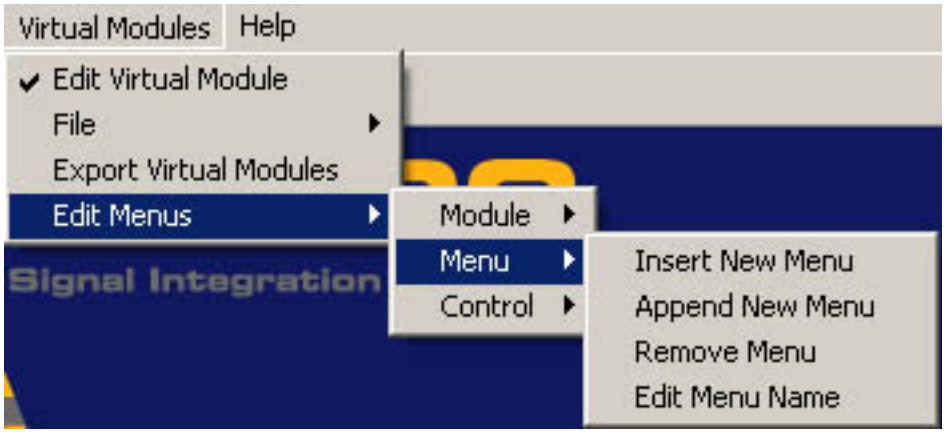
Edit Group Name: Use the **Edit Group Name** function to create or change a group name that will appear on a Touch Screen or the Avenue PC Mainscreen.

To add controls to a Virtual Module, select the Physical Frame list on the left of the Avenue PC Mainscreen to show the modules present on the network. You may choose the controls desired in the Physical modules to populate the new Virtual Module. Select a module in the Physical list and the controls for this module will be entered into the Physical Modules area of the edit screen as shown below.

Add as many Virtual Modules to the edit screen as desired with any number of controls from Physical modules on the network. Note that these physical modules must not be removed or replaced with different Avenue module types. In order for the Virtual Modules to operate properly, these physical modules must not be changed.

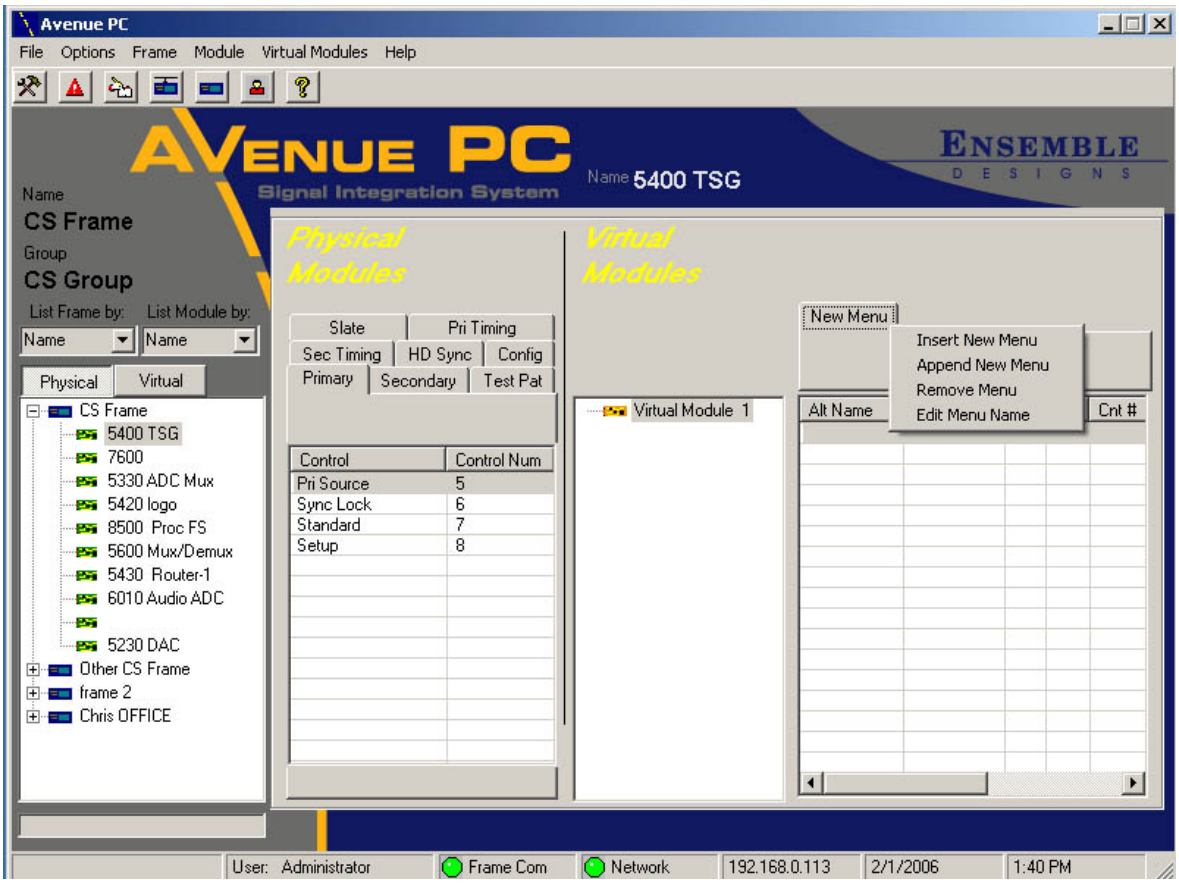
Use the **Edit Menus: Menu** controls described next to add, organize, and name menus.





Edit Menus: Menu: Use the **Menu** pulldown choices to perform the following menu functions on a Virtual Module:

Insert New Menu: To add a new menu to the Virtual Module, select the **Insert New Menu** control from the pulldown or right click on the edit screen to bring up the controls as shown in the example below. Selecting this control will place a new menu in front of the active menu. Use the next control **Append New Menu** to add a new menu after the last menu.



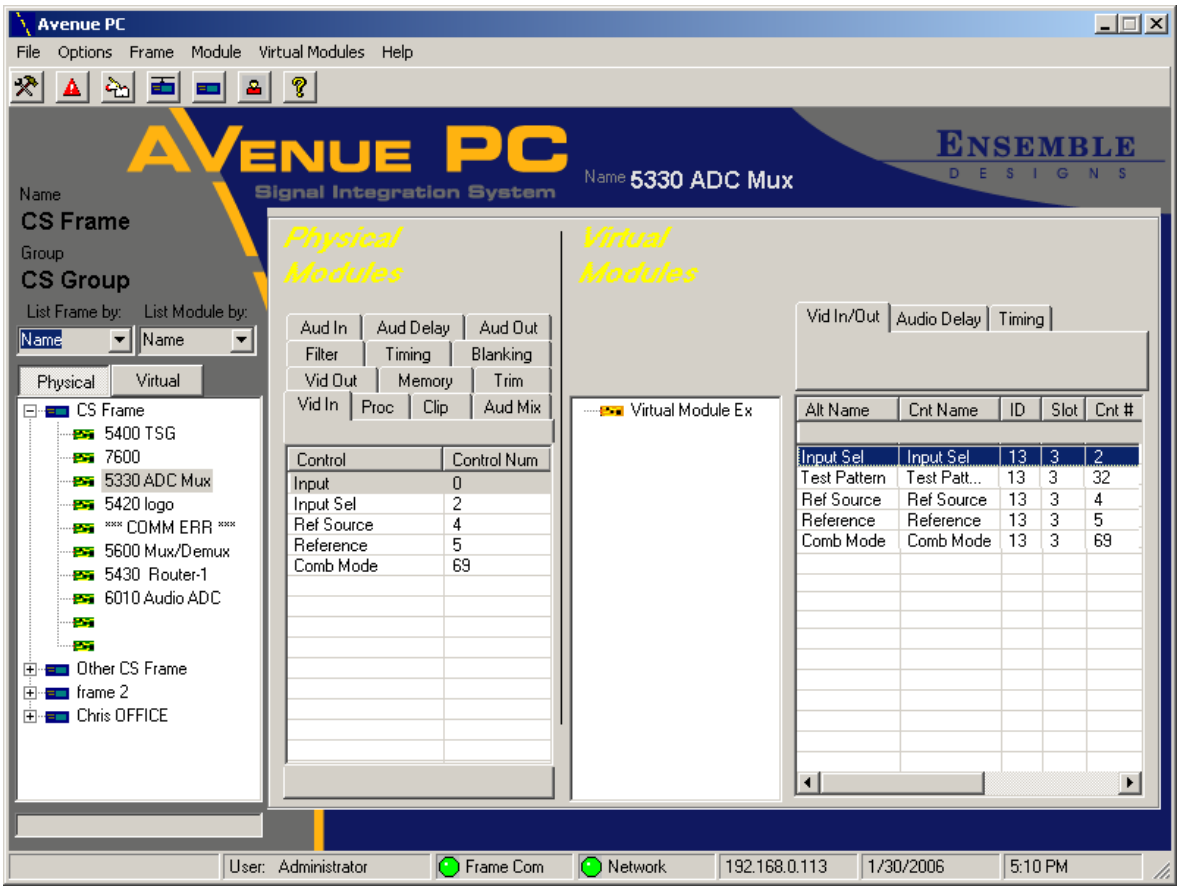
Append New Menu: Use this control to add a new menu tab after (behind) the last menu. This will add a menu at the end of the menu structure.

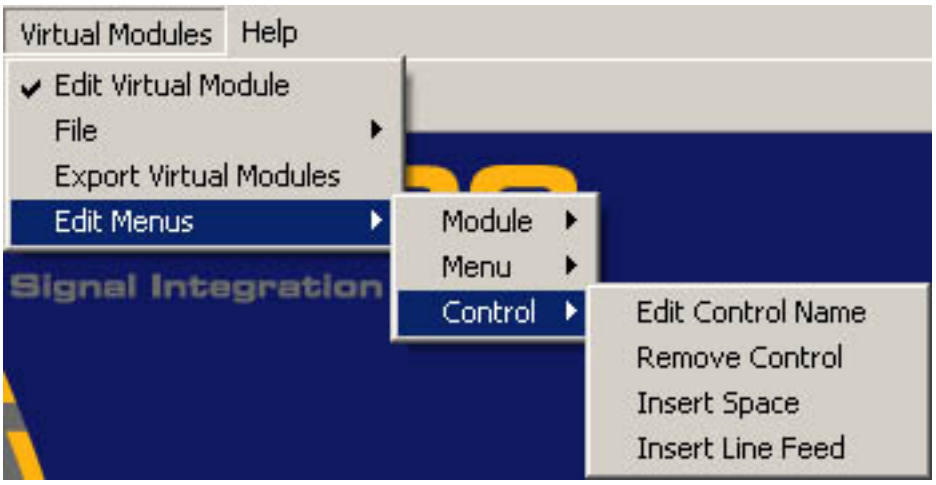
Remove Menu: Use this control to remove a menu by selecting the menu tab of the menu to be removed to make it active then using this control in the pulldown or by right clicking on the menu tab and select **Remove Menu**.

Edit Menu Name: Use this control to edit a menu name. Click on the menu tab you wish to change to make it active and use the **Edit Menu Name** pulldown or right click on the menu tab to bring up the edit screen. You may also highlight the name and change it using the keyboard.

A Virtual Module has been created in the illustration below with three menu tabs. Menus can be populated with controls from the Physical modules as they are created or anytime during the process of creating the Virtual Module.

Each control that is added will report the **Cnt Name**, **ID**, and **Slot** and **Crt #** of the original Physical module from which it was copied as shown below. The **Alt Name** field can be modified as desired using the **Edit Menu: Control** functions described next to change the name of the control. Controls can be renamed and removed, and you may insert spaces or line feeds.

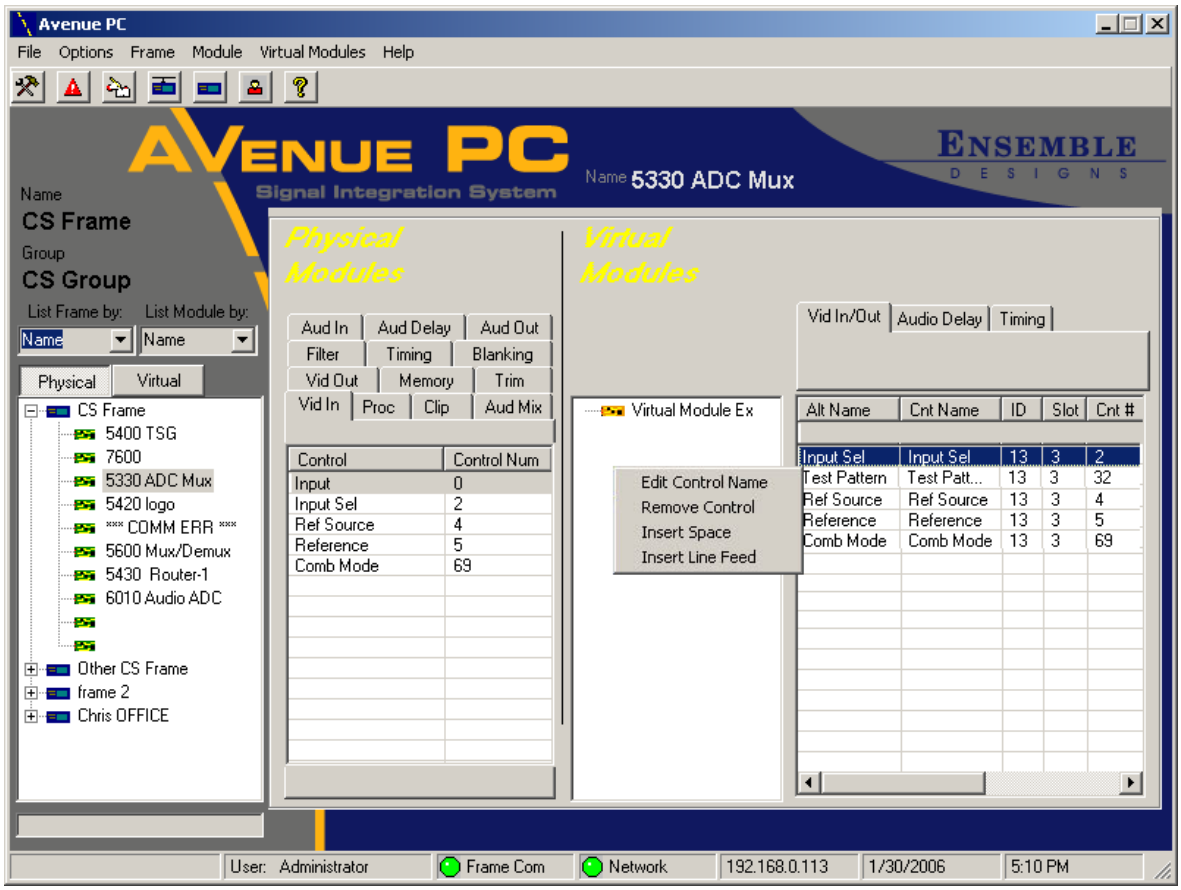




Edit Menus: Control: Use the **Control** pulldown choices to do perform the following functions on a Virtual Module:

Edit Control Name: Each control in a Virtual Module can be given an alternate name in the **Alt Name** field. Highlight the control you wish to edit and select the **Edit Control Name** pulldown or right click on the highlighted control to bring up the controls as shown below.

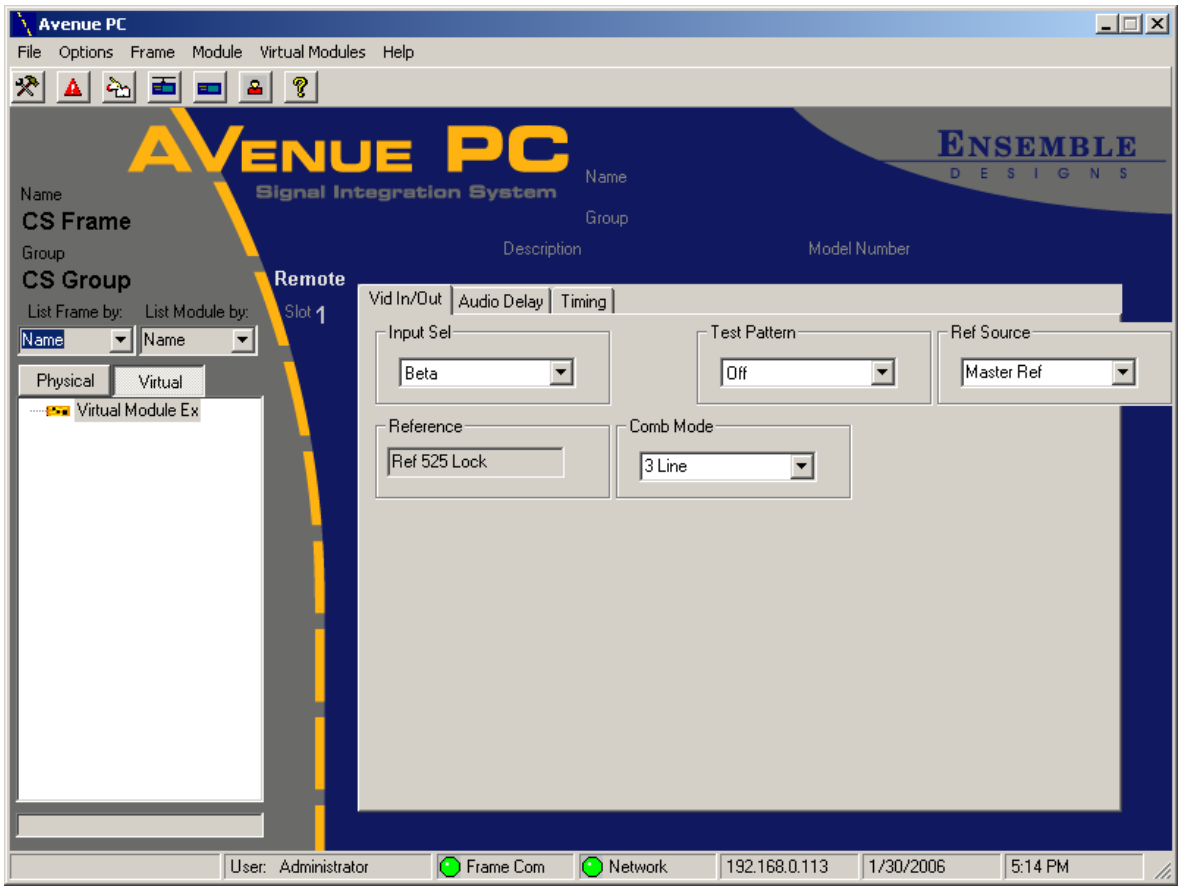
Remove Control: Remove a control by selecting it and using the Remove control from the pulldown or the edit screen.



You will not be able to see the actual Virtual Module you have created on the Avenue PC Mainscreen until you have saved it and exported it to the target server. In some cases when you have exported the module and view it, you may need to add spaces or line feeds.

In the example shown below, a Virtual Module has been created, downloaded, and then viewed in Avenue PC. As you can see, the structure of the controls imported into this module requires a line feed added to move the Ref Source control to the next line.

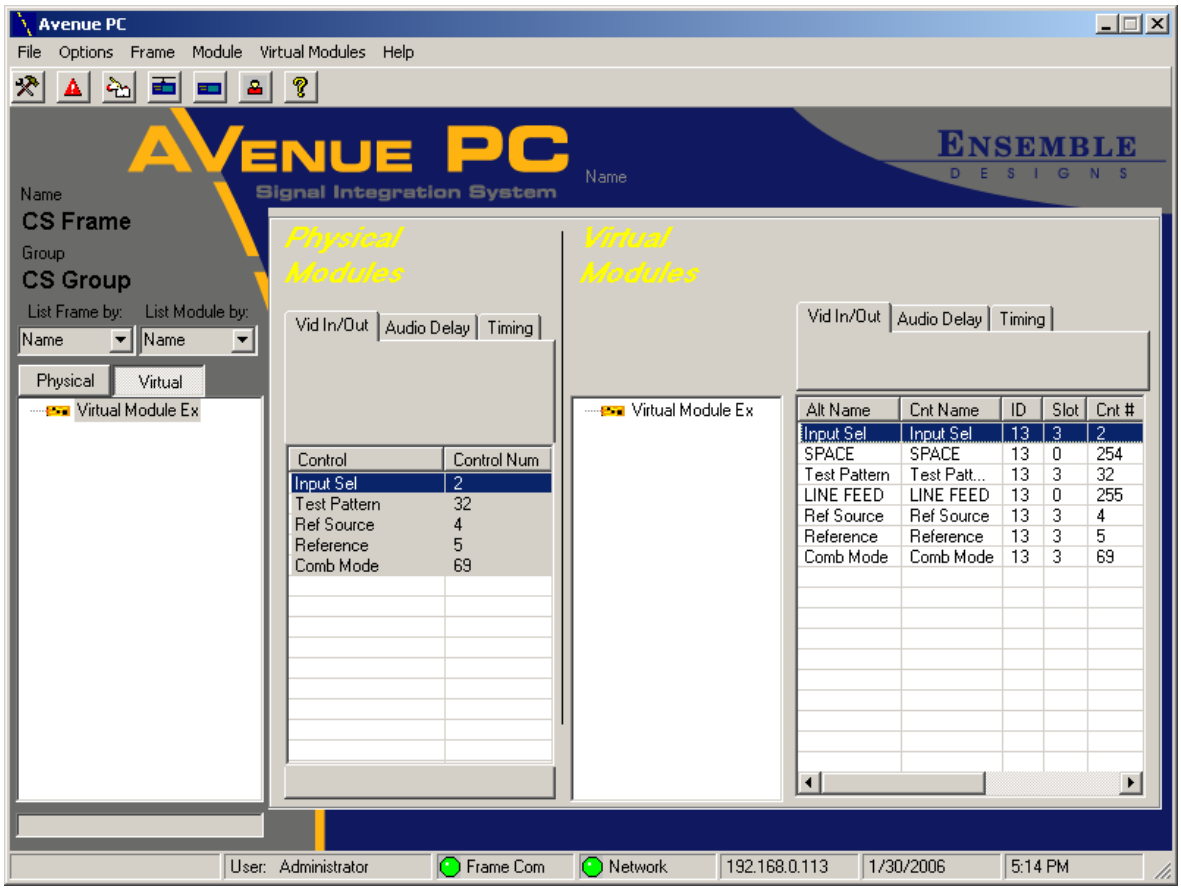
To do this, open the Virtual Module edit screen by selecting **Edit Virtual Module** in the Virtual Modules pulldown.



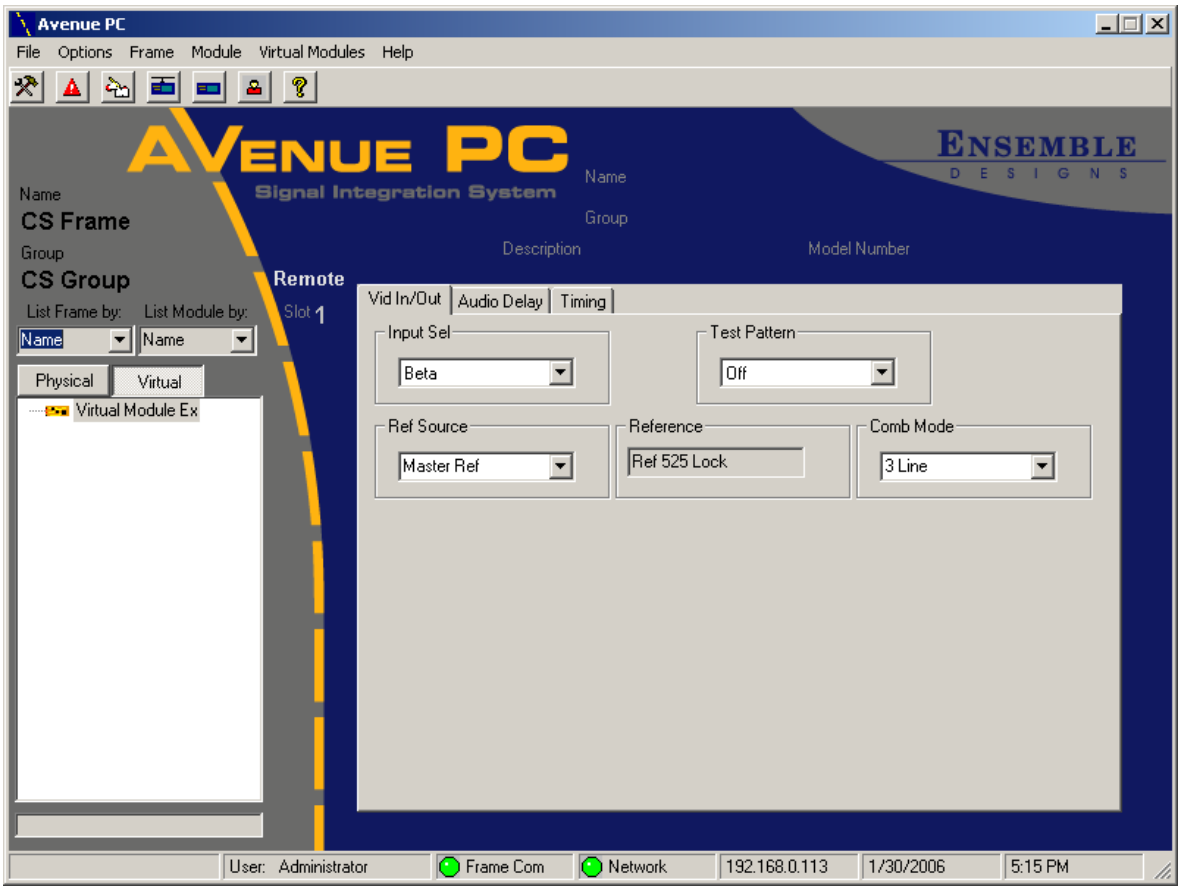
Insert Space/Line Feed: Virtual Modules can be completely customized as desired including adding spaces and line feeds to move controls. In the edit screen, load the Virtual Module you wish to change by selecting **File/Load** and selecting the file to be changed.

In the previous example, a line feed was needed after the Test Pattern control to put the Ref Source control on the next line. To add a space or line feed between controls, left click the line in the Virtual Module menu where you wish to place a space or line feed to select it. Right click on the highlighted line to bring up the controls then choose either **Insert Space** or **Insert Line Feed**.

If a control is placed in the wrong row it may be dragged to a different row by holding down the left mouse button while dragging it up or down.



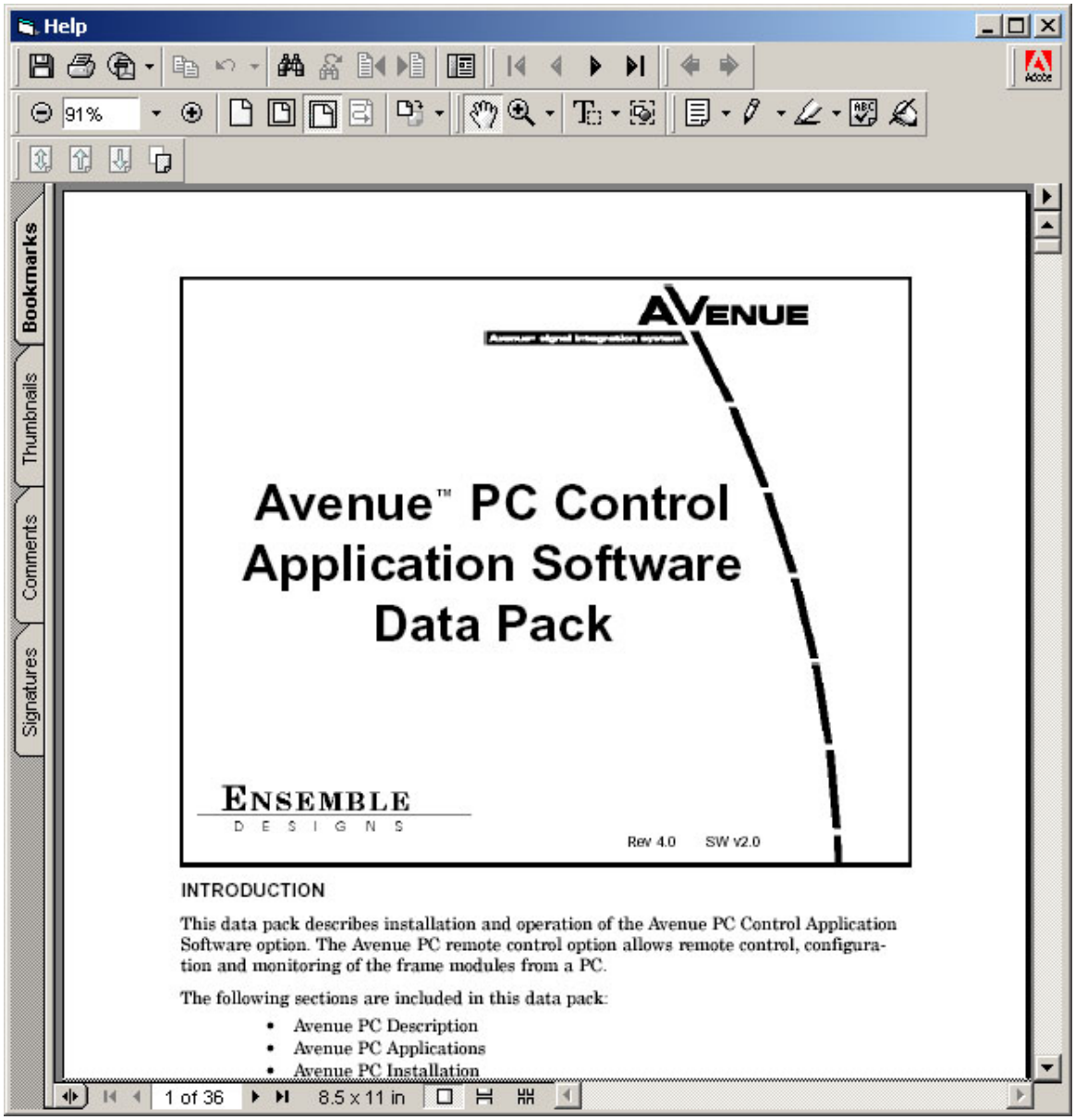
From the original example, a **SPACE** has been added after the Input Sel control and a **LINE FEED** after the Test Pattern control to create the final Virtual Module shown below.



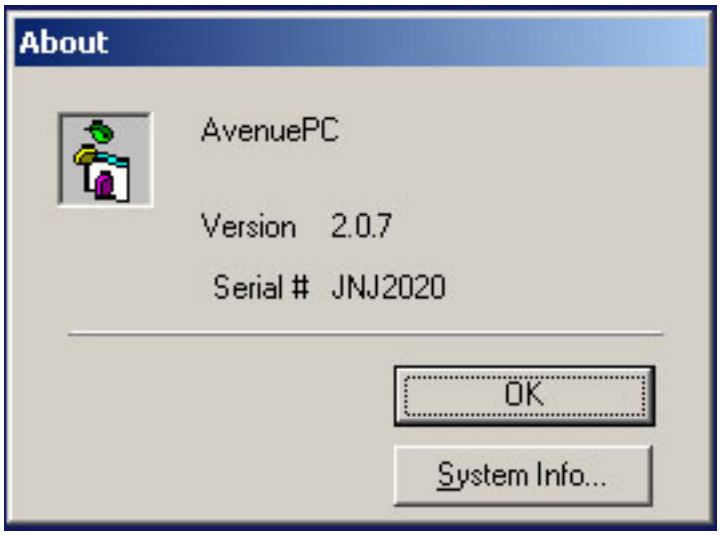
Help Pulldown Menus

The **Help** pulldown menu includes the **Contents** and the **About...** sections.

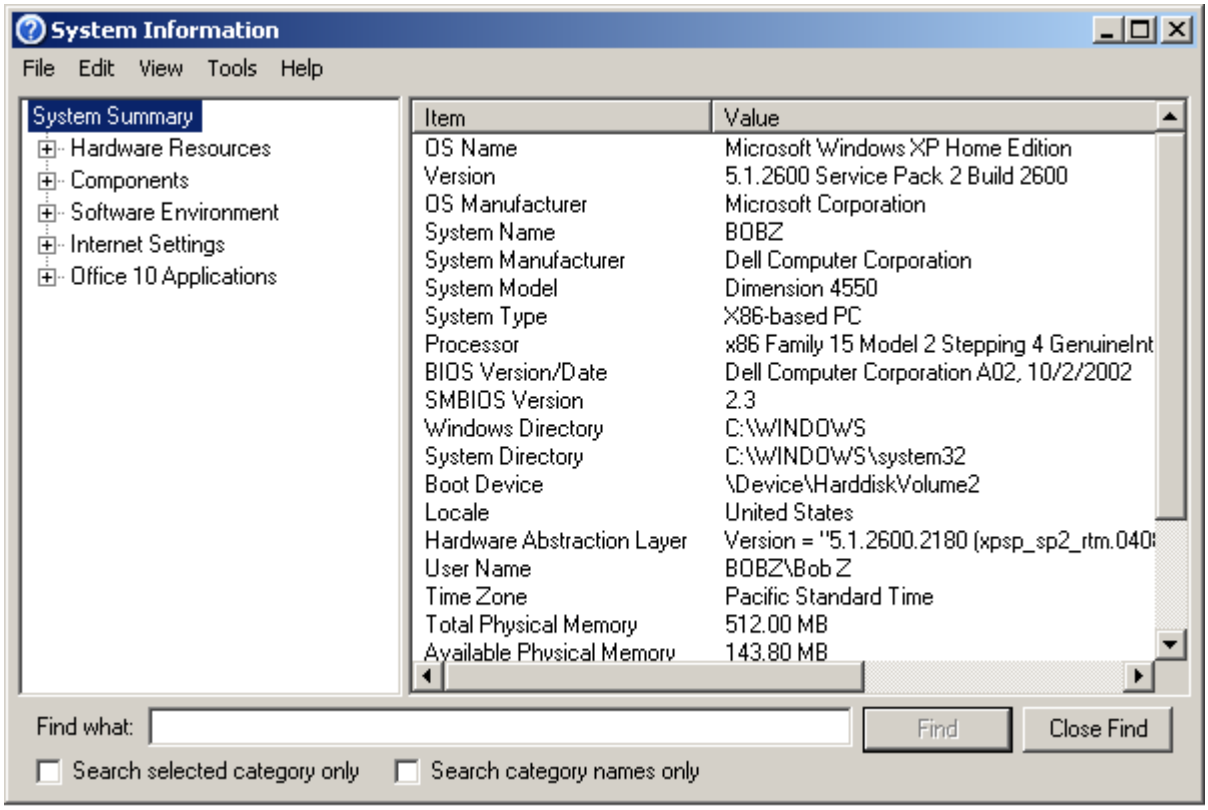
Contents: This section gives you an online Avenue PC manual in pdf format. You will need Adobe Acrobat Reader to access this file. You may download a free version of this application for any platform at http://www.adobe.com.



About...: Select the **About** menu for information on the current version of Avenue PC installed on your system as shown below.



System Info...: Select **System Info...**to bring up information on your PC system as shown below.



TROUBLESHOOTING

Use this section for Avenue PC troubleshooting tips.

Virtual Modules

Virtual Module appears incorrectly on menu screen or Touch Avenue Alert appears:

After Virtual Modules have been created, the physical modules they have been created from must remain in the same frame position for them to operate properly. Moving Avenue modules that have been used in Virtual Module creation will produce undesirable and unpredictable results.

When a Virtual Module is loaded on the Touch Screen and a physical module has been moved or replaced by a different module type, the following Avenue Alert will appear in the Touch Screen menu. There is currently no warning in the Avenue PC menus when this occurs. Menus in Avenue PC will appear incorrectly when this condition occurs.