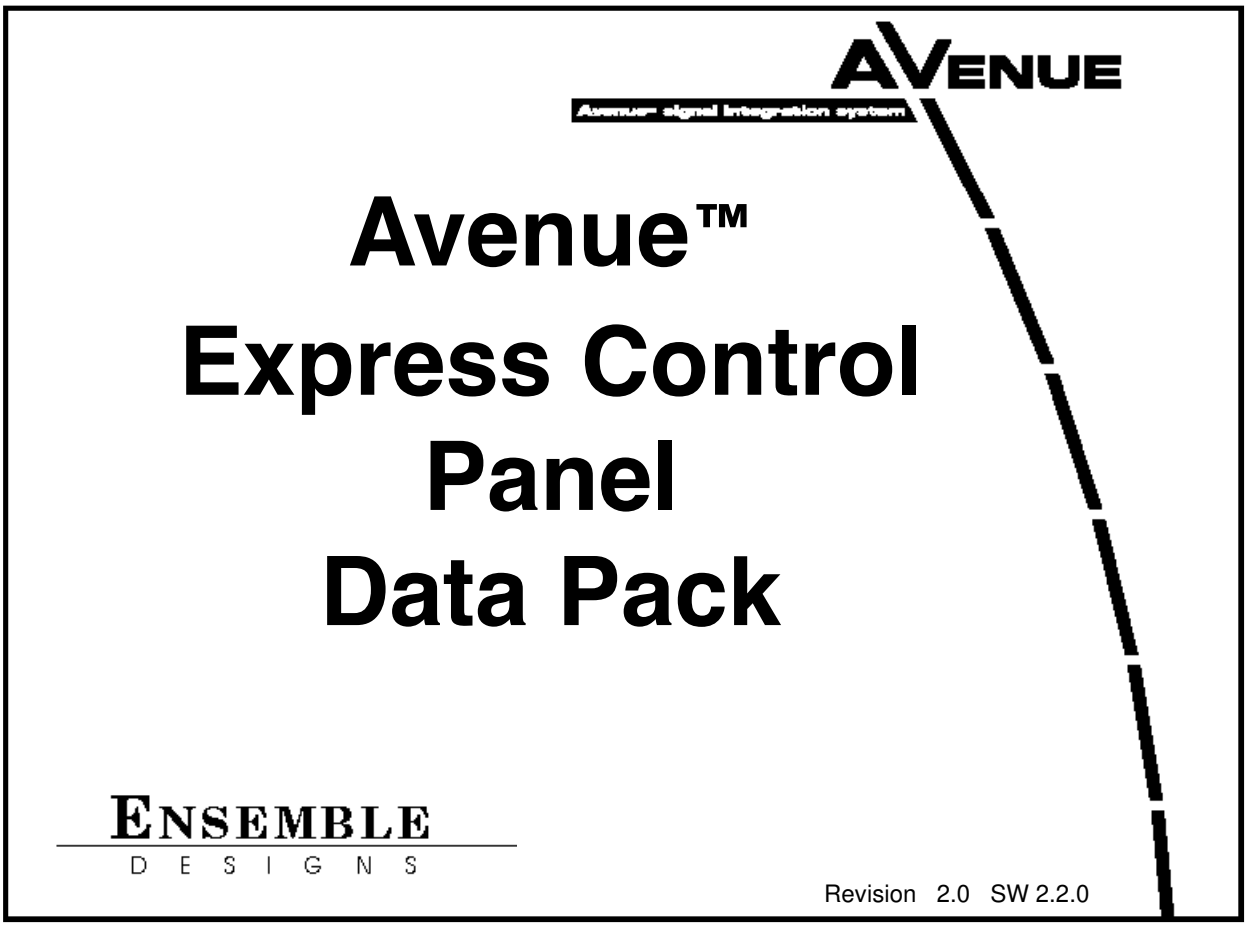


INTRODUCTION

This data pack provides detailed installation, configuration and operation information for the **Avenue Express Control Panel** as part of the Avenue Signal Control System.

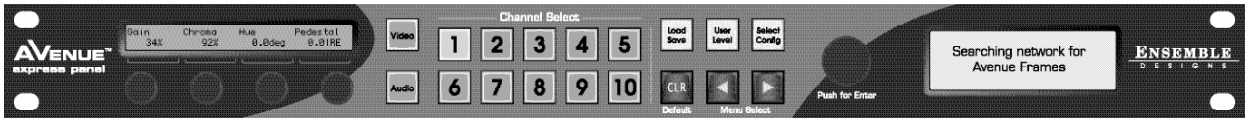
The module information in this data pack is organized into the following sections:

- Express Control Panel Overview
- Express Control Panel Application
- Express Control Panel Installation
- Express Panel Controls Overview
- Express Panel Configuration
- Channel Select Configuration and Operation
- Warranty and Factory Service

EXPRESS CONTROL PANEL OVERVIEW

The Avenue Express Control Panel is excellent for use in satellite receiving, ingest areas, and remote trucks. The Avenue Express Control Panel has the following overall features:

- Elegant control for the 7500, 8400, and 8500 Video Processing Frame Sync modules as well as other Avenue modules
- Dedicated knobs for video, chroma, pedestal, and hue
- Adjust audio levels for multiple groups
- Control all parameters of all Avenue modules
- Easily adjust video levels, timing, audio delay and other parameters
- Intuitive user interface
- Compact 1 RU design
- Easy to install
- User Levels for security
- Module lock out for critical paths
- Use any combination of Touch Screen, Express Panels or PCs for control and monitoring



Avenue Express Control Panel

While it can be used to control any Avenue module, the Express Panel really shines when used with the Signal Acquisition system, the 7500, 8400, and 8500 Video Processing Frame Sync modules.With dedicated video, chroma, pedestal, and hue knobs, live shading is easy. The continuous rotation velocity sensitive knobs are responsive and dependable. Audio levels for multiple groups are easily accessed as well. All other parameters, including timing and audio delay, are accessed through an intuitive menu interface.

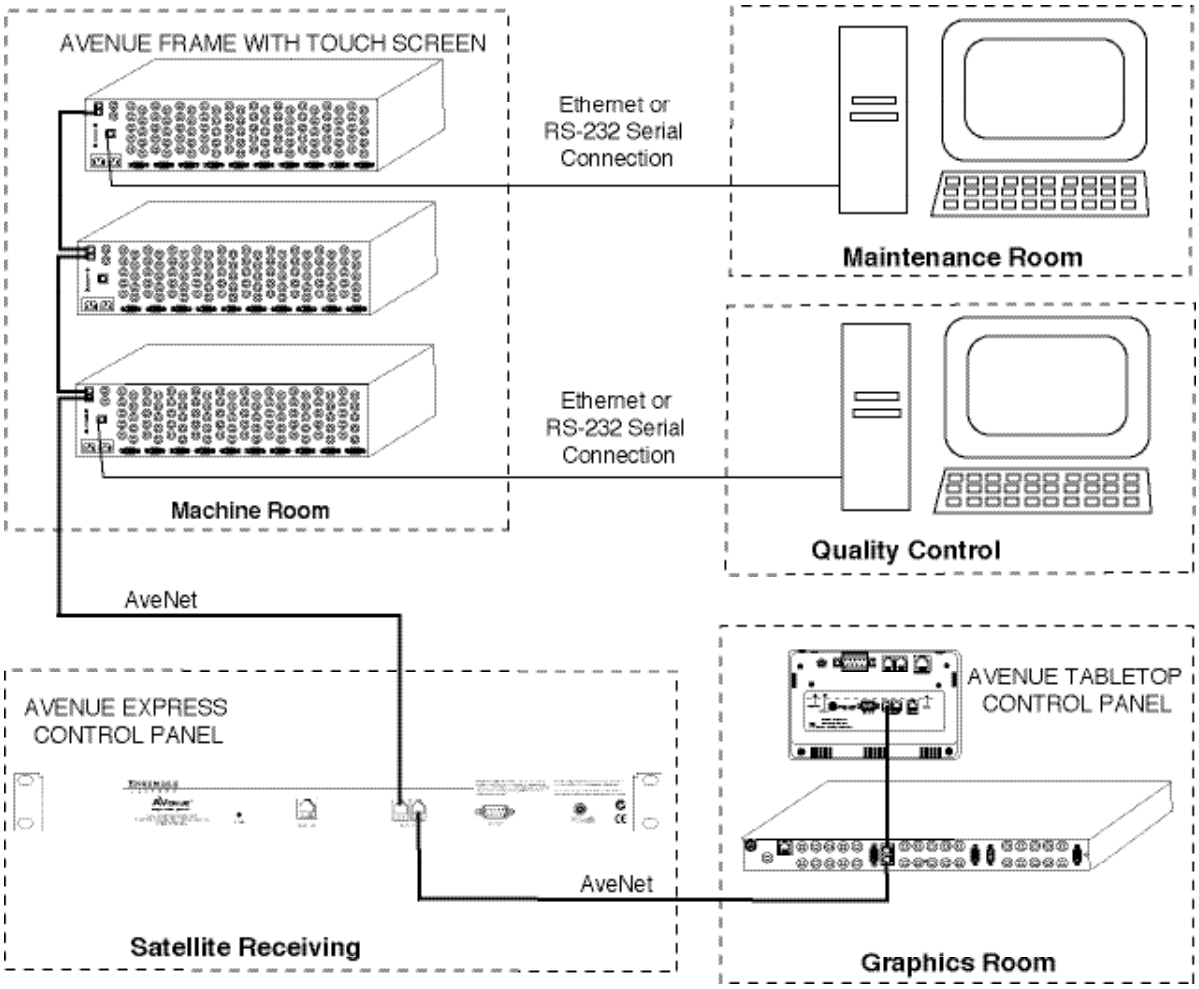
One Express Panel can control most modules in your Avenue system. Refer to the manual data pack for particular modules that cannot be controlled by the Express Panel. Alternately you can have as many Touch Screen and Express Panels as you like in your Avenue system. Customize the control system for your needs. Any number of 1 RU and 3 RU Avenue frames can be connected together through the AveNet interframe LAN bus to create an Avenue network. These networks can then communicate over Ethernet using the AveNet over IP feature (AVIP). The frames can be controlled by a single control panel or any number of control panels installed on the network.

Remote control of Avenue frames is provided through a series of menus for system configuration and for setting parameters for each module installed in the frames. A series of menus allow you to set AveNet and IP Addresses, enable AveNet Over IP (AVIP), name and monitor modules, frames and groups of frames, and set module parameters in the system.

To configure and use the Express Panel, follow the instruction starting with Express Panel Configuration.

EXPRESS CONTROL PANEL APPLICATION

In the illustration below, an Avenue Express Control Panel is used in a satellite receiving area and interfaced to a complete Avenue system via AveNet. Any number of frames, Touch Screens, and Tabletop or Express Control panels can be connected via AveNet using twisted pair cable. PCs connect to any frame serially or via Ethernet.



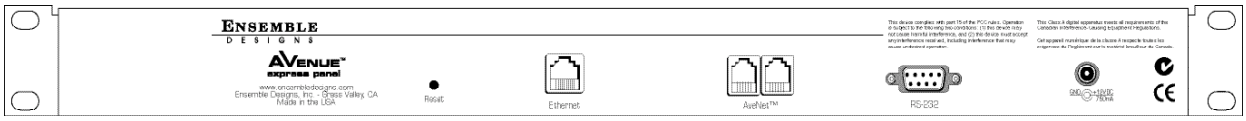
Avenue Express Control Panel Application

Warning

Rick of electric shock. Qualifed service personael should only access power supply after frame has been unplugged from power.

EXPRESS CONTROL PANEL INSTALLATION

The 1 RU Avenue Express Control Panel is designed to be installed in a standard 19 inch rack with four customer-supplied standard rack screws. This section explains any physical installation and cabling instructions necessary for using Avenue Express Control Panels.



Express Control Panel Rear Connectors

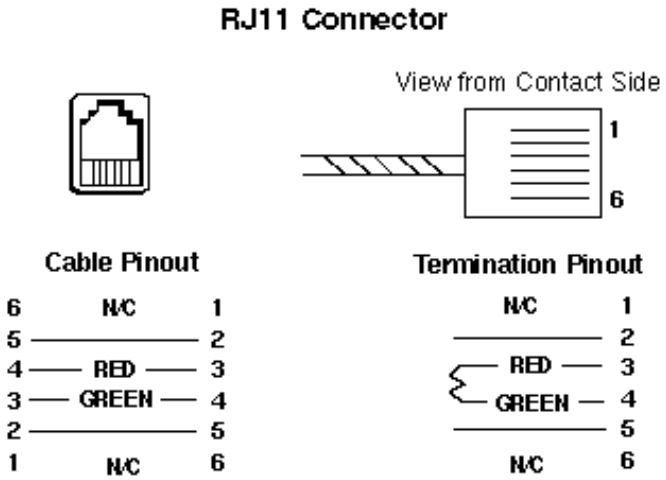
After physical installation, network configuration of the Express Panel and System parameter such as LED brightness can be set up using the Local controls in the Express Panel menus. Refer to the Configuration section of this data pack.

Cabling

Network connection of an Express Panel is made on the rear of the panel as illustrated below. The Express Panel can Avenue frames through via Ethernet, through an AveNet connection, or with a serial interface.

AveNet:

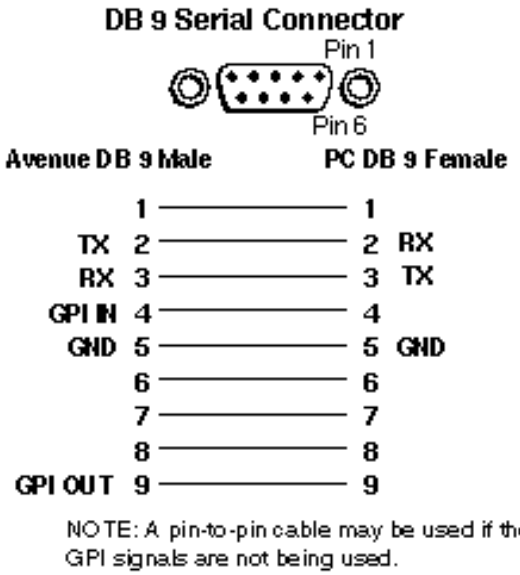
AveNet is the Avenue control bus that allows communication between frames by the System Control modules in each frame. Up to 20 frames can be connected on each individual AveNet network. Any number of AveNet networks can then be connected together via Ethernet. AveNet connection between frames requires looping between



AveNet RJ11 Connector Pinout

the standard RJ11 LAN connectors of each frame with standard phone cable or custom-made simple twisted pair LAN cable. The unused connectors must be terminated with 100 ohm LAN terminations at the first and last frames in the group. Pinouts of the RJ11 connector and termination are shown below.

Each Avenue device on the AveNet LAN network must have a different AveNet address. The address is set using the Status menu functions on the front of the 5030/35 Control module in each frame. Refer to the **Express Panel Networking** section for detailed information.



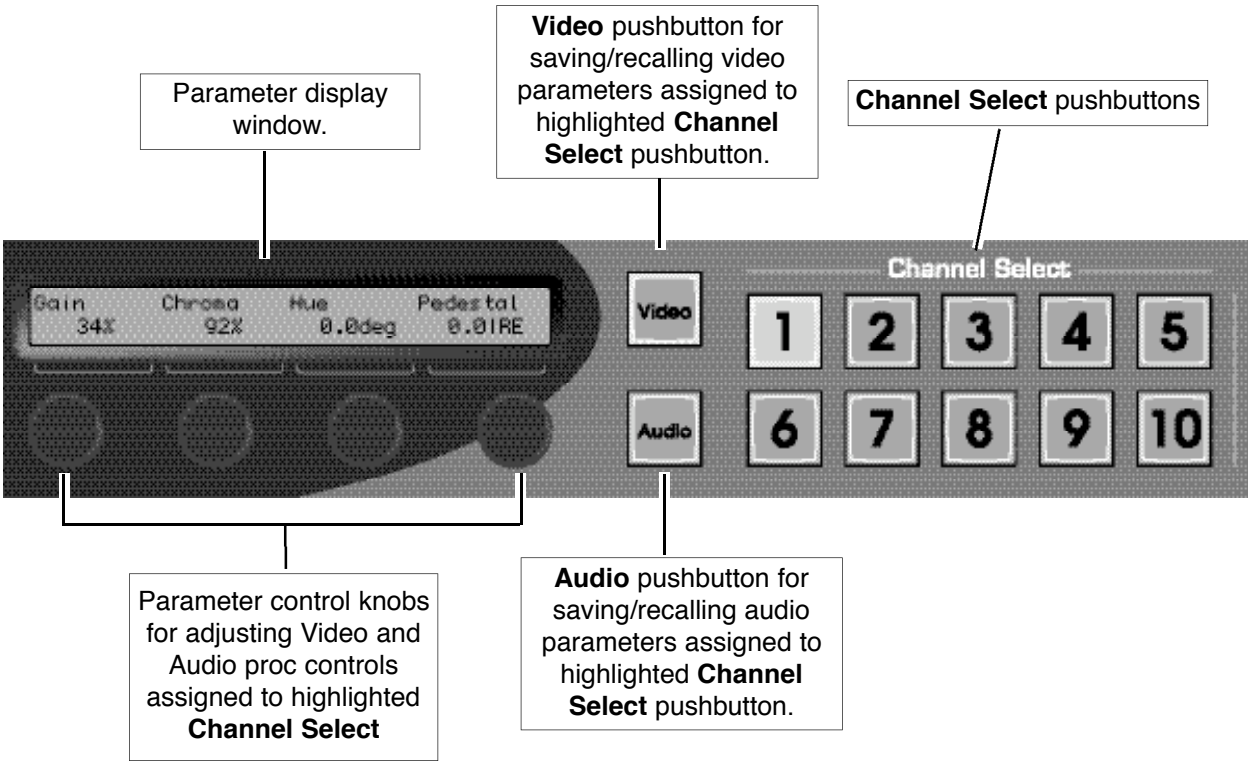
Serial Connector Pinout

EXPRESS PANEL CONTROLS OVERVIEW

The Express Control Panel is divided into two main control areas: the Channel controls and the Configuration controls.

Channel Controls

The Channel controls on the Express Panel are shown in the figure below. The 10 Channel Select pushbuttons, the Video and Audio pushbuttons, and the read-out display on the left side of the panel are the main Channel controls.



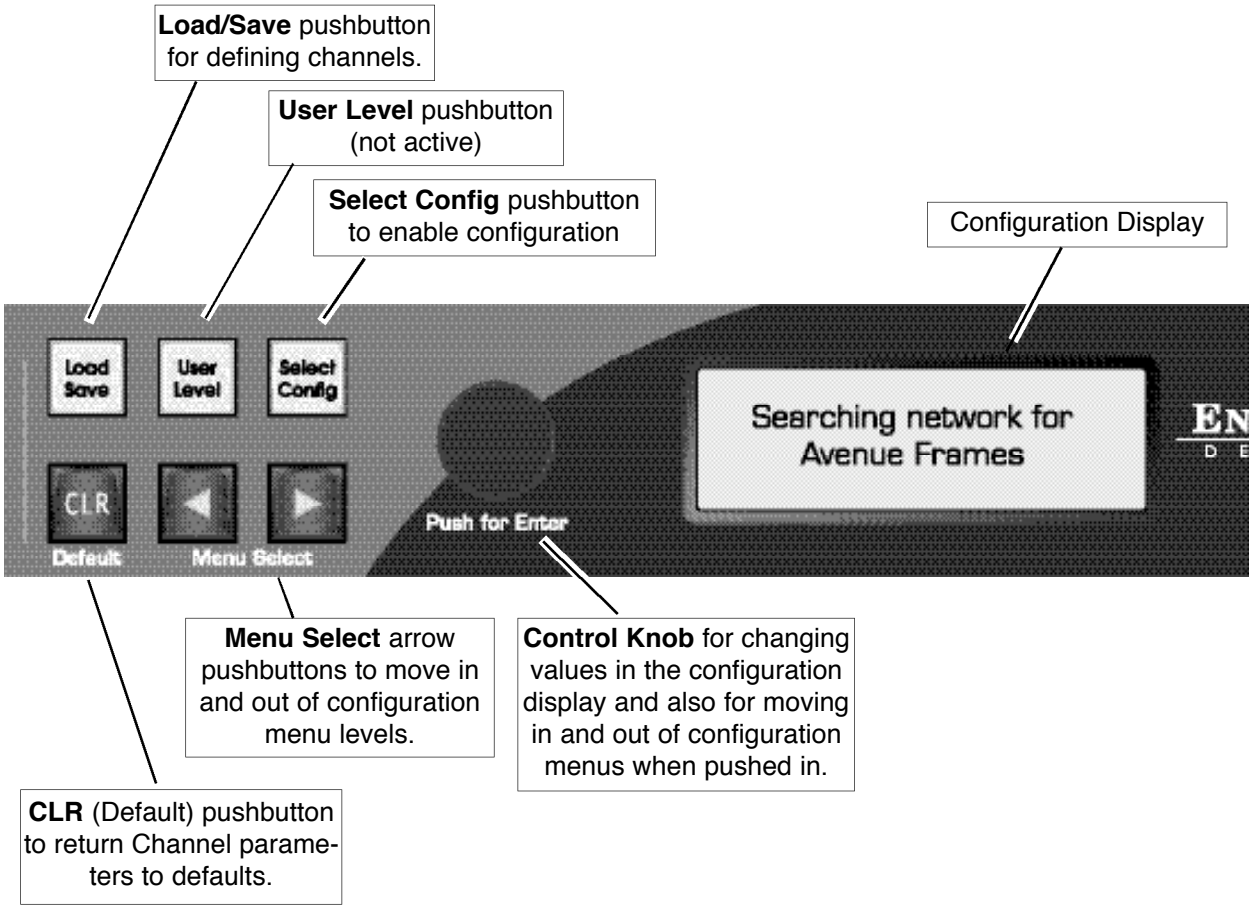
Channel Control Overview on Express Panel

A Channel is defined as a set of video and audio processing control parameters from any Avenue module connected to the Express Panel. The video and audio can be from different modules if desired. Video and audio parameters are configured to a Channel Select pushbutton with the Configuration controls as described in detail later in the Channel Configuration section of this data pack. When a configured Channel is recalled by selecting a Channel Select pushbutton, each proc amp parameter or audio level can be changed using the four knobs under the display.

Ethernet:

Avenue frames may be controlled by a Express Panel connected to a 10BaseT Ethernet network. The IP Address for each frame in the network is set on the System Control module in each frame or frames connected to the Ethernet network. The Avenue backplanes have a standard RJ45 connector for Ethernet interface.

Each Avenue device on the Ethernet network must have a different IP Address, including the Express Panel. The address for the frame is set using the Status menu



Configuration Control Overview on Express Panel

functions on the front of the 5030/35 Control Module in each frame or a Touch Screen or Express Panel. Refer to the **Express Panel Networking** section for detailed information.

Serial Control:

If using a serial interface connection from the Express Panel to remotely control a frame (or series of frames connected via AveNet), connect a 9-pin D to 9-pin D cable (pinout is shown in the pinout diagram below) from the **Serial Control** port on the rear of the Express Panel to the serial port on an Avenue frame with a 5030/5035 Control module installed.

Power:

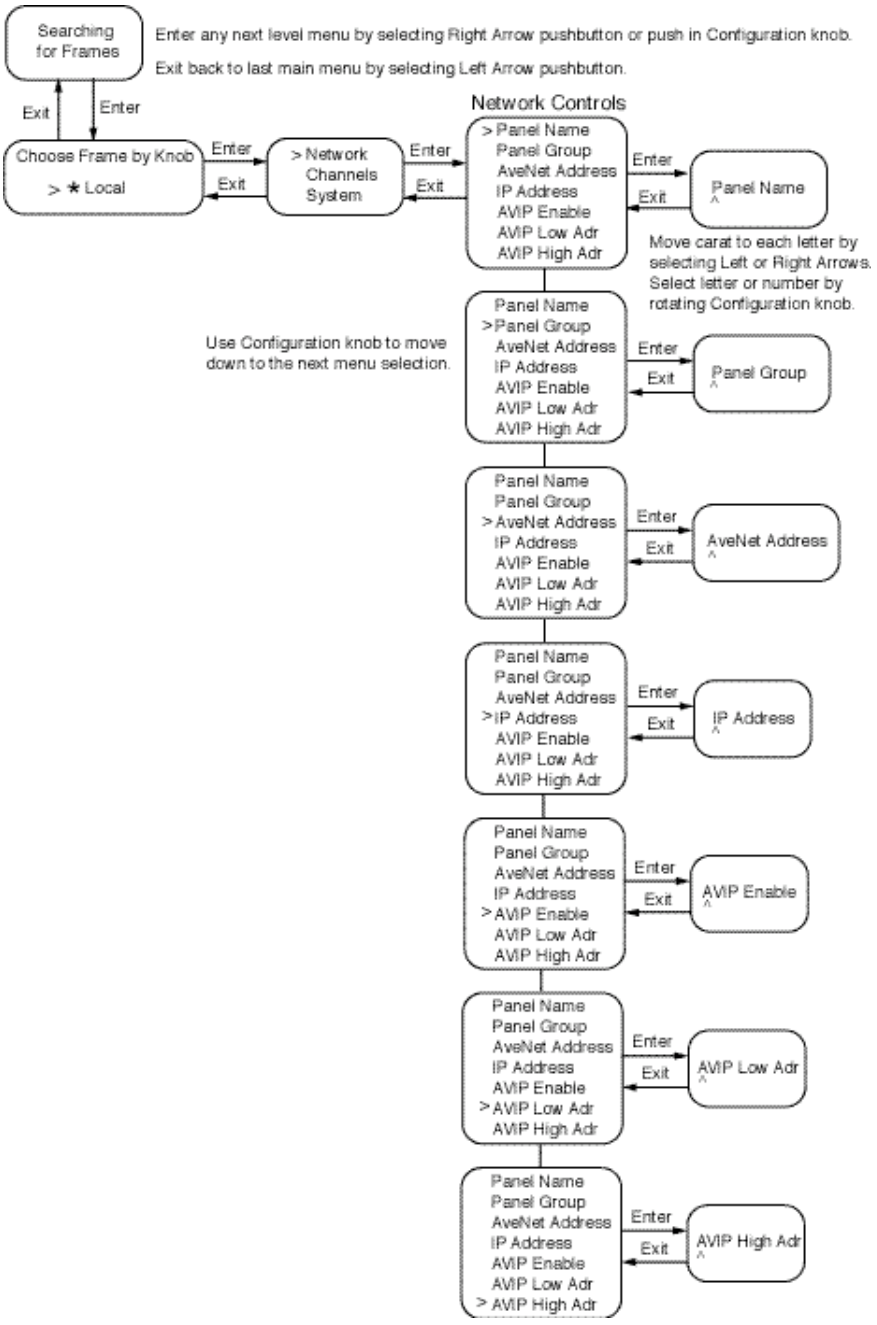
Connect the AC power adapter included with the panel to the power connection on the

far right of the rear panel. Tighten the protective cap to hold the power connection in place. As soon as power is connected, the panel will be powered up. After reviewing the control overview next, proceed to the Express Panel Configuration section.

Configuration Controls

The main configuration controls present on the Express Panel are shown in the figure below. These controls and the read-out display on the right side of the panel are used to configure the panel itself, configure frames on the panel network, modules in the frames, and the 10 available channels on the left side of the panel.

Operation of each of these controls is described in more detail in each configuration section (Express Panel, Frames, Modules, and Channels).



Express Panel Networking Menu Tree

EXPRESS PANEL CONFIGURATION

Express Panel configuration is done as described in the following steps:

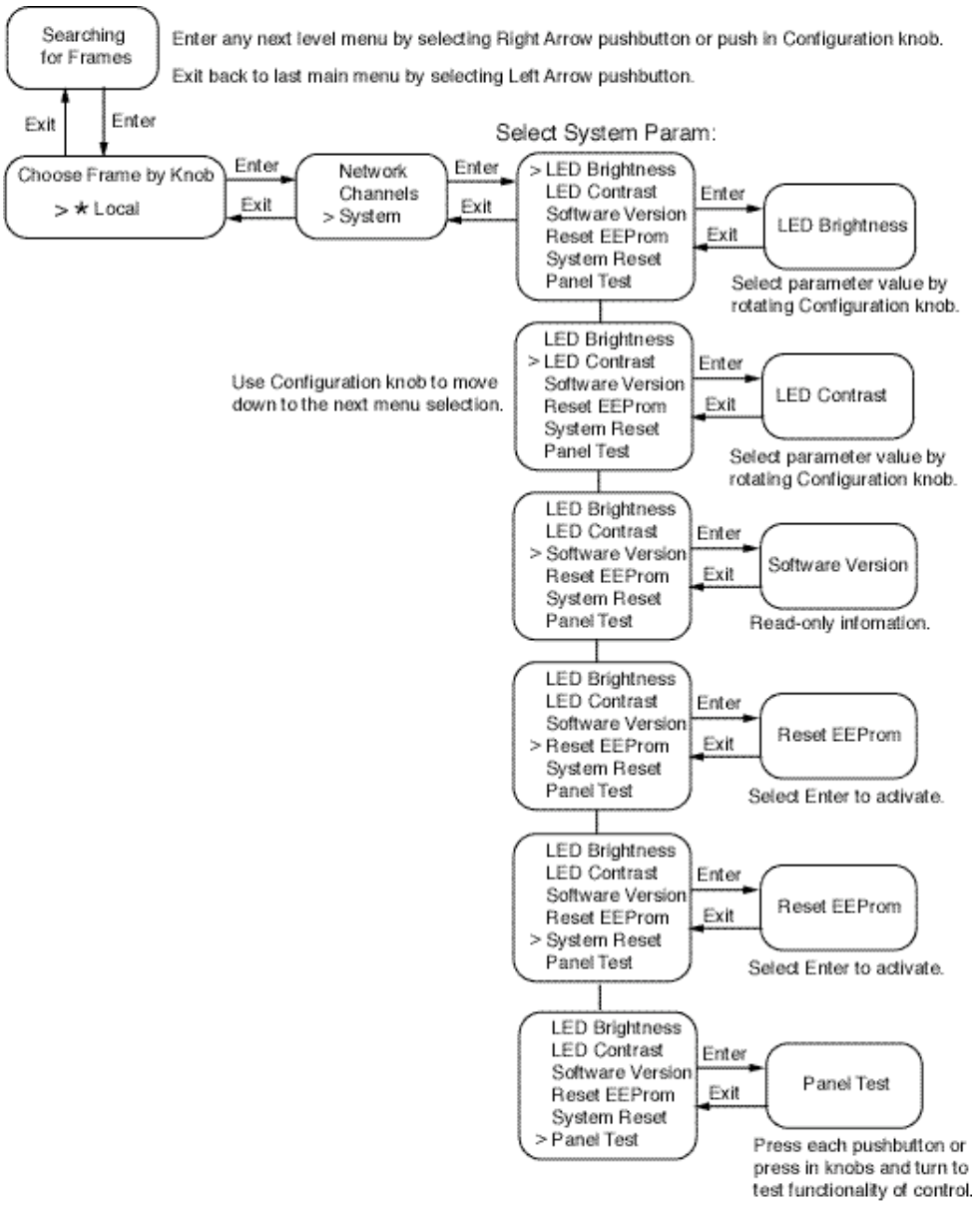
- Express Panel Networking
- Express Panel System Configuration

Express Panel Networking

The first step in Express Panel configuration is to connect the Express Panel to an Avenue network. The panel can communicate through an Ethernet or AveNet connection to an existing Avenue network or be the central controller of a separate network. Please refer to the Avenue System Overview that accompanies every Avenue frame for complete details on interfacing Avenue control devices to a network. There are a number of ways to configure the panel in a network.

Begin Express Panel network configuration by entering the Configuration mode. Use the instructions below and refer to the graphical representation of the menu tree given on the following page.

1. Enter the Configuration mode by selecting the **Select Config** pushbutton. It will illuminate red to indicate you are now in Configuration mode.
2. The first configuration menu to come up in the Configuration display will be the **Choose Frame by Knob**. If no networking parameters are set up for the panel, only a **jLocal** frame will be listed (this panel).
3. Enter the **jLocal** mode by selecting the **Right Arrow** pushbutton or push in the **Configuration** knob.
4. The **jLocal** mode has three choices: **Network**, **Channels** (not active), **or System**. Use the Configuration knob to place the indicator carat next to the **Network** selection and enter the mode by selecting the **Right Arrow** pushbutton or push in the **Configuration** knob.
5. The **Network** mode will have the following network parameters that can be set for this panel depending on how it is being interfaced into an Avenue network. (This is explained in more detail in the Avenue System Overview Networking section as mentioned earlier.)
    - Panel Name
    - Panel Group
    - AveNet Address
    - IP Address
    - AVIP Enable
6. Use the Configuration knob to move the indicator carat to each of the selections, then enter each selection by selecting the **Right Arrow** pushbutton or push in the **Configuration** knob.
7. For each panel networking parameter, use the **Left** and **Right Arrow** pushbuttons to scroll to each letter or number in the parameter. For example, to assign a panel name, use the **Right Arrow** pushbutton to scroll to the first letter in the default panel name. To change this letter, rotate the Configuration knob until you reach



Express Panel System Parameters Menu Tree

the desired letter. Move to the next letter with the **Right Arrow** pushbutton and use the Configuration knob to select the second letter of the name.

8. Once you have finished assigning a panel name, use the **Left Arrow** pushbutton to leave this menu and return to the main Network menu. Use the Configuration knob to put the indicator carat on the next parameter you wish to set.

   After setting a parameter, you must exit the menu back to the last main menu then use the Configuration knob to move to the next selection.

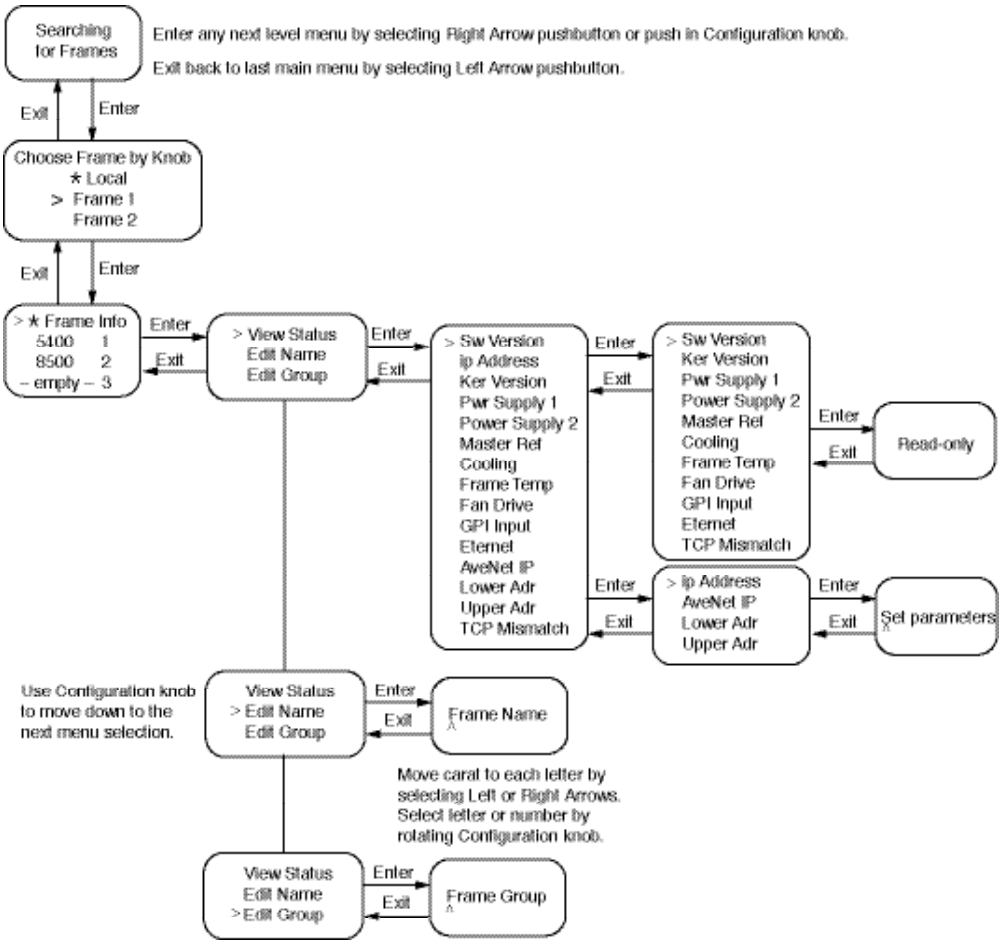
9. Continue to assign parameters in the list as required. Exit out of the Network menu to the System menu. Note that the Channels selection is not active at this time.

Express Panel System Parameters Configuration

The next step in Express Panel configuration is to configure the System parameters for the panel. This includes LED brightness, LCD contrast and other panel characteristics. Read-only status information and System Reset controls are also available from this menu.

Continue the configuration by moving the indicator carat to the System selection and enter this menu. Use the instructions below and refer to the graphical representation of the System menu tree given on the following page.

1. The **System** menu will have the following parameters that can be set for this panel to determine panel characteristics as follows:
    - LED Brightness
    - LCD Contrast
    - Software Version
    - Reset EEProm
    - System Reset
    - Panel Test
2. Use the Configuration knob to move the indicator carat to each of the selections, then enter each selection by selecting the **Right Arrow** pushbutton or push in the **Configuration** knob.
3. For panel system parameters requiring a value such as LED Brightness and LCD Contrast, use the Configuration knob to scroll through the values to reach the value desired.
4. The Software Version is a read-only field describing the software version running on this panel.
5. The Reset EEProm and Reset System are activated by pushing in the Configuration knob.
6. A Panel Test is included which will report the name of the control as you activate it. Each knob, pushbutton and LED can be tested and will be reported on the display. The following panel controls will be reported when activated:
    - Left and Right arrow pushbuttons
    - Knobs 1-4 and Knob 5 (Configuration)
    - Clear, Save, and User pushbuttons
    - Channel pushbuttons 1-10



Frame Parameters Menu Tree

Frame and Module Control and Configuration

Now that the Express Panel is set up in the Avenue network and configured for use in your environment, you can access frames on the network and individual modules in each frame and use the panel for the controls described in this section.

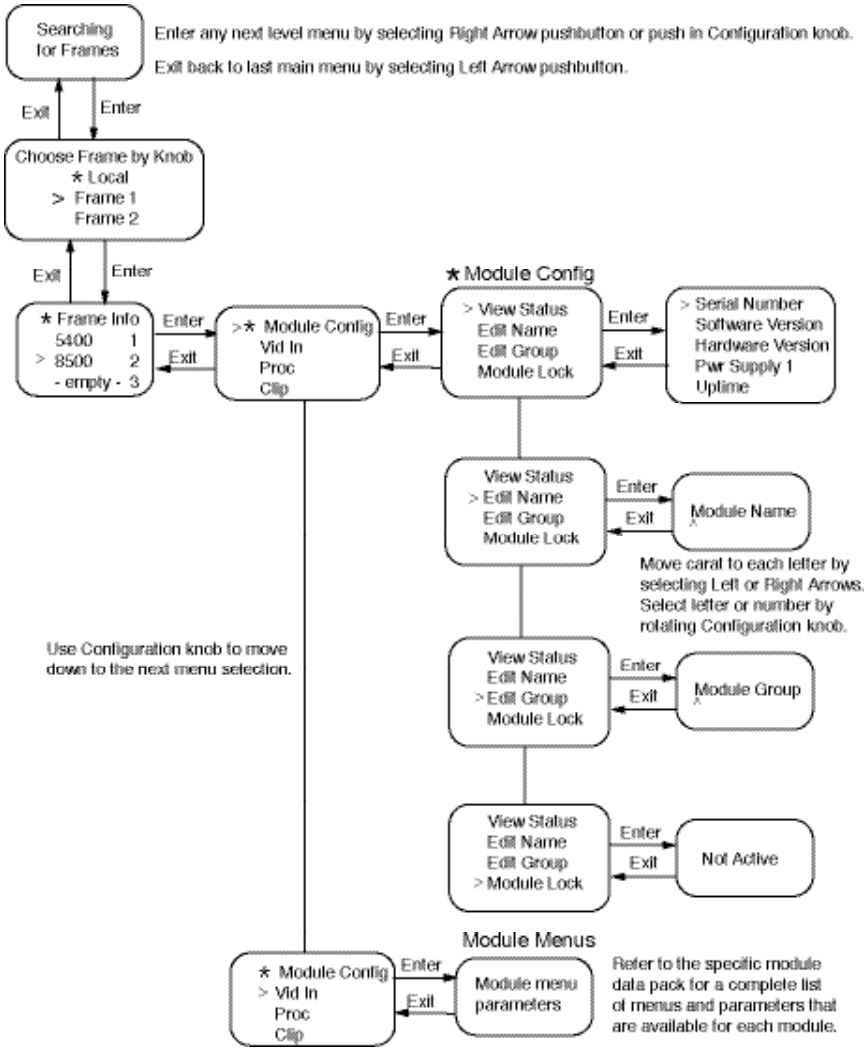
Frame Control and Configuration

To access the available frames on the Avenue network, follow the steps below.

1. Enter the Configuration mode by selecting the **Select Config** pushbutton. It will illuminate red to indicate you are now in Configuration mode.
2. The first configuration menu to come up in the Configuration display will be the **Choose Frame by Knob**. The list of available frames will be shown as illustrated in the Frame Configuration tree on the following page.
3. Use the Configuration knob to move the indicator carat to a frame and enter the frame menu by selecting the **Right Arrow** pushbutton or push in the **Configuration** knob.
4. The first selection is j**Frame Info**. Enter this menu and move the indicator carat to View Status and enter the menu for a list of read-only frame status items and configurable parameters such as IP Address as shown in the menu tree on the next page.

   To view each Status item, move the carat to the item and enter the menu. Exit back to the last menu and move the carat to the next item.
5. You may edit the Frame Name and the Frame Group if desired. To edit either of these parameters move the indicator carat to the desired function and select Enter by using the **Right Arrow** pushbutton or pushing in the **Configuration** knob.

   Edit the Frame Name or Group by moving the carat to each letter or number and rotating the Configuration knob to the desired letter or number.



Module Parameters Menu Tree

While in a Frame menu, move the carat to a module present in the frame and enter the module to set the following module parameters with the Express Panel. Slots with no module with be indicated as **- empty -**.Refer to the Module Menu Tree on the next page.

Module Control and Configuration

To access the available modules in each frame on the Avenue network, follow the steps below.

1. The first module configuration menu to come up in the Configuration display will be **jModule Config**. Below this will be a list of available modules in the frame.
2. Enter the **jModule Config** menu by selecting the **Right Arrow** pushbutton or push in the **Configuration** knob.
3. The first selection is **View Status**. Move the indicator carat to **View Status** and enter the menu for a list of read-only module status items as shown in the menu tree on the next page.

   To view each Status item, move the carat to the item and enter the menu. Exit back to the last menu and move the carat to the next item.
4. You may edit the Module Name and the Module Group if desired. To edit either of these parameters move the indicator carat to the desired function and select Enter by using the **Right Arrow** pushbutton or pushing in the **Configuration** knob.

   Edit the Module Name or Group by moving the carat to each letter or number and rotating the Configuration knob to the desired letter or number.
5. The last selection in the **jModule Config** menu, **Module Lock**, is not active at this time.
6. The next items in the Module menu are the available menus for the selected module. All of the menus available for the selected module are listed. Enter each menu and adjust parameters if active. Some parameters may not be available for adjustment. Refer to the specific module data pack for a list of all module menus and parameters. These menus are different for every Avenue module.

CHANNEL SELECT CONFIGURATION AND OPERATION

To.configure and use the **Channel Select** pushbuttons to recall Video proc amp and Audio levels controls for easy adjustment with the Express Panel knobs on the left of the panel, refer to the instructions below. This functionality is best utilized on the 7500, 8400, and 8500 modules.

Channel Select Configuration

1. Enter the Configuration mode by selecting the **Select Config** pushbutton. It will illuminate red to indicate you are now in Configuration mode.
2. Enter the **Choose Frame by Knob** selection and move the carat to the frame containing the module you wish to use for the Video or Audio selection for a channel.
3. Move the carat to the desired module and enter the module menus.
4. With the **Select Confi**g pushbutton still enabled, select the **Load Save** pushbutton, then the **Video** pushbutton. Push a **Channel Select** pushbutton to assign the Video parameters from the selected module in the Configuration display into this selected channel.

   When the Video parameters have been saved to a channel, the corresponding **Channel Select** pushbutton will illuminate green when pressed. The Configuration Display will now show what module is assigned to the **Video** pushbutton and the Parameter display on the left of the panel will show the proc amp controls (Video, Chroma, Hue, and Pedestal) for this module.
5. Now assign the Audio parameters to the same channel if desired. You must return to the Configuration display and repeat the steps above to enter the same module or choose another module in the list and assign the Audio parameters in the same manner.

   When the Audio configuration is complete, the The Configuration Display (shown below) will now show what module is assigned to the **Audio** pushbutton and the Parameter display on the left of the panel will show the audio level controls (Ch 1, Ch 2, Ch 3, and Ch 4) for this module.
6. Do this for each **Channel Select** pushbutton.

Channel Select Operation

To use the **Channel Select** pushbuttons to recall Video proc amp and Audio levels, refer to the instructions below.

1. With the Config Select pushbutton turned off, select a **Channel Select** pushbutton. If this pushbutton has been configured, it will illuminate green. The Configuration display will show what module has been assigned to the Video and Audio pushbuttons for this channel and the video or audio parameters will appear in the Parameter window on the left of the panel.
2. Select the **Video** or **Audio** pushbutton and use the four knobs to adjust the desired parameters for this channel.
3. You may return any of the four video or audio parameters to the module defaults by selecting the **CLR** pushbutton then pushing in the knob corresponding to the parameter you wish to reset.

SOFTWARE UPDATING

Software upgrades can be downloaded onto your PC and then Avenue PC will distribute the update to the control panel. (Refer to the Avenue PC documentation for more information) Periodically updates will be posted on our web site. I

WARRANTY AND FACTORY SERVICE

Warranty

This module is covered by a five year limited warranty, as stated in the main Preface of this manual. If you require service (under warranty or not), please contact Ensemble Designs and ask for customer service before you return the unit. This will allow the service technician to provide any other suggestions for identifying the problem and recommend possible solutions.

Factory Service

If you return equipment for repair, please get a Return Material Authorization Number (RMA) from the factory first.

Ship the product and a written description of the problem to:

Ensemble Designs, Inc.

Attention: Customer Service RMA #####

870 Gold Flat Rd.

Nevada City, CA. 95959 USA

(530) 478-1830

Fax: (530) 478-1832

service@ensembledesigns.com

http://www.ensembledesigns.com

Be sure to put your RMA number on the outside of the box.