Section 5B – Karrera & Kayenne Technical - Panels

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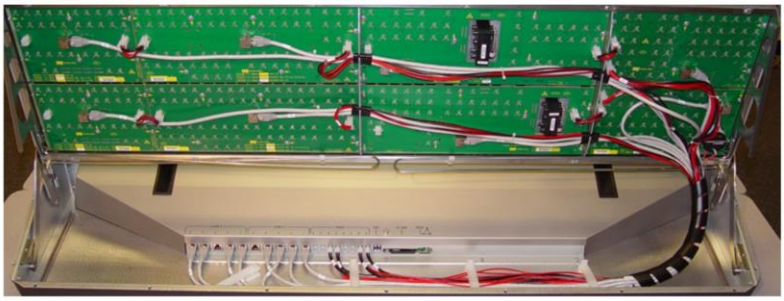
Karrera Panels - 2 M/E



Stripe Data & Power Connections See Notes for Data Cable Connection Order

USB Connections for Processor Boot & Diagnostics ONLY

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Panel internal Cabling

• The Panel processor in the bottom of the Panel tray has connections for all of the Button Boards for both Power and Data.

• The power connections all have “self Mending” fuses. These act as a Circuit Breaker and open the circuit when a short or over current condition exists. To reset them, the unit must be powered down and after a few short minutes, powered up.

• All of the power connections are made by 4 Pin Molex type connectors. In some cases, power is daisy – chained from one board to the next.

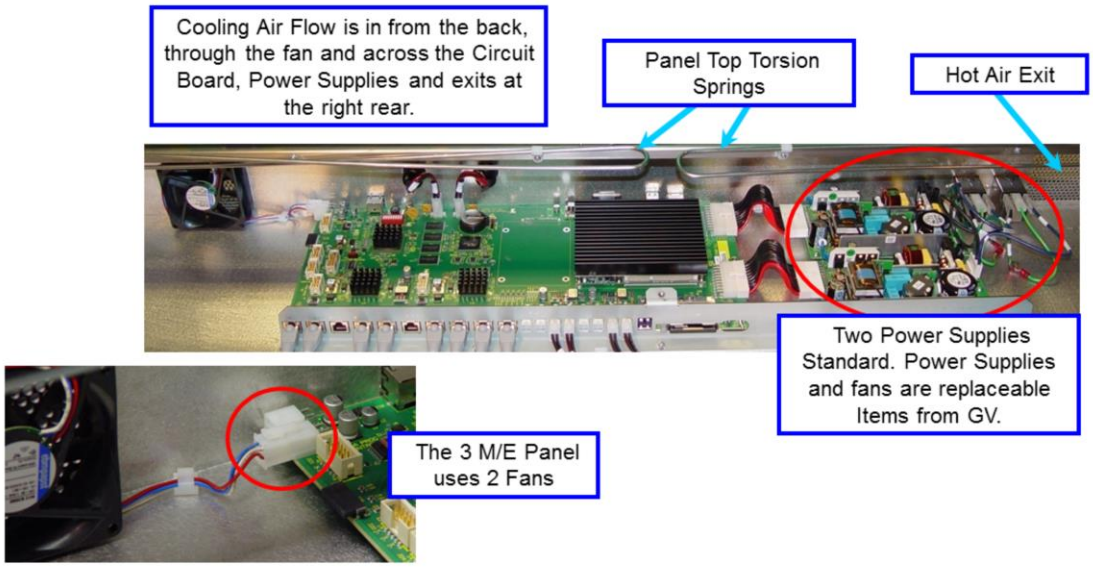
• The Data connections are divided into sets of five RJ-45 connecters on the Processor. They are labeled from right to left: 1 to 5. Each group of five are dedicated to a Stripe and are labeled for Stripes: A, B and in the case of a 3 M/E Panel, C.

• Boards in a Stripe are connected to the Ports in order: The far right board must connect to Port 1. The next board to the left, to Port 2, etc. When only 4 Ports are used, a gap may be anywhere.

• Stripe A will always feed the Top Stripe on the Panel. Stripe B is for the Bottom Stripe on a 2 M/E Panel or the middle on a 3 M/E Panel.

• On a 3 M/E Panel, Stripe C Data cables will connect on the far left to a Data Extension Board connected to the main Processor. This board supplies the additional five RJ-45 connections required for the third stripe.

Karrera Panels – 2 M/E – Cooling & Power Supplies



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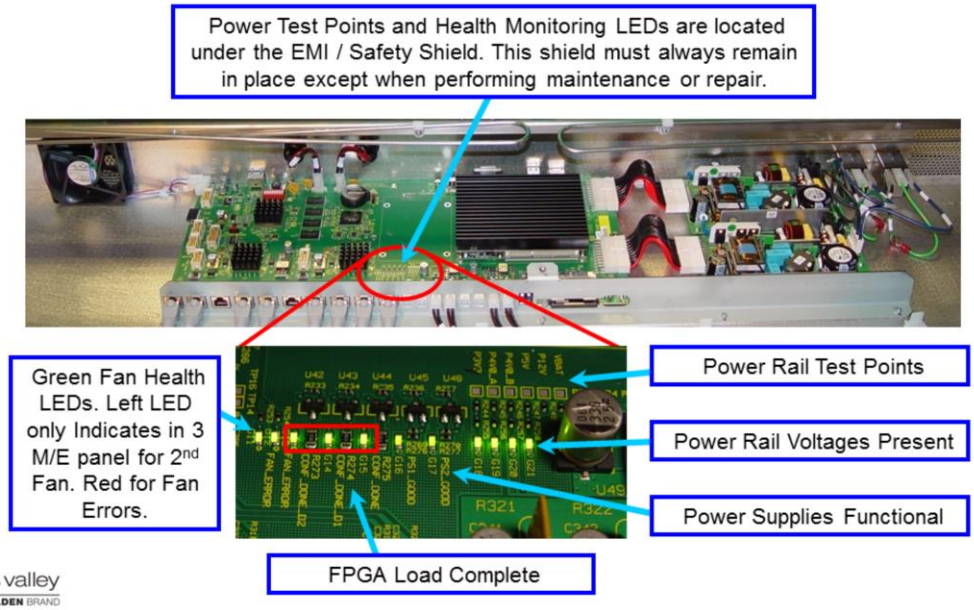
Panel Cooling

- The Cover over the Processor Board and power Supplies should NEVER be removed during Operation. This will result in both a safety hazard and will over heat the processor board.
- A 2 M/E Panel has one cooling fan and for correct error reporting and fan control needs to be plugged into the front fan Molex connector. The rear connector is reserved for the 2nd fan used on the 3 M/E Panel.
- The 2 Power Supplies are standard and are a replaceable part from Grass valley.
- Care must always be taken when raising and lowering the Panel Top. Ensure that there are no objects in the way.

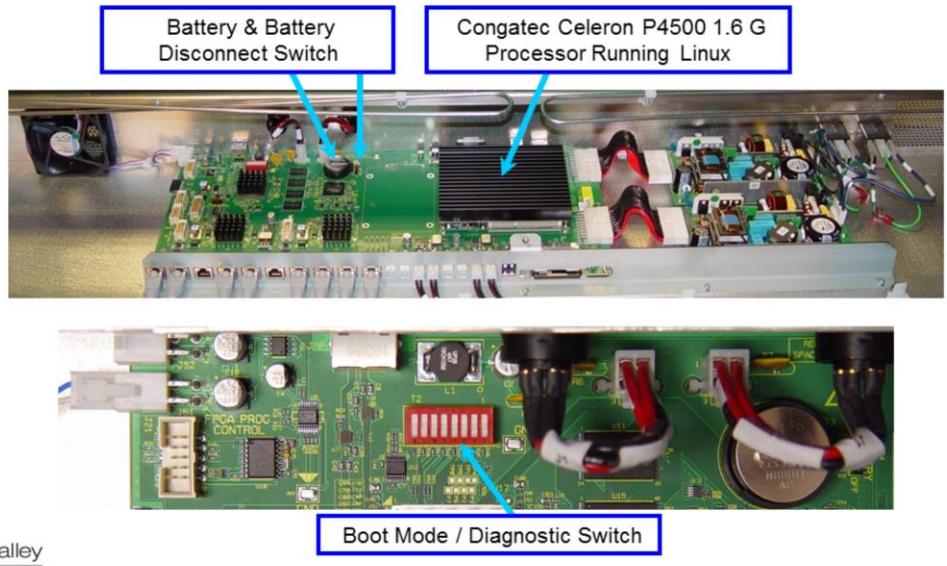
Karrera Panels – Test Points & Indicators



Hardware & Indicators

- The Panel processor cover must be removed in order to see the status of the Health LEDs.
- Panel Board Types will report to logging as:
  - 4731 ="**sourceselect10**" (10 Button Source Select)
  - 4734 ="**sourceselect10_devicewindow**" (10 button Source Select Device Window)
  - 4741 ="**sourceselect15**" (15 Button Source Select)
  - 4728 ="**sourceselect15_systembar**" (15 Button Source Select System Controls)
  - 4737 ="**aux10**" (10 Button Aux Select)
  - 4739 ="**aux15**" (15 Button Aux Select)
  - 4720 ="**transition_localemem**" (Transition & Local E-Mem Board)
  - 4723 ="**localemem_transition**" (Local E-Mem & Transition Board)
  - 4717 ="**transition_horizontalkeyer**" (Transition & Horizontal Keyer Board)
  - 4726 ="**multifunction**" (Multifunction Board)
  - 4725 ="**masterememe**" (Master E-Mem panel Board)

Karrera Panels – Processor & Battery



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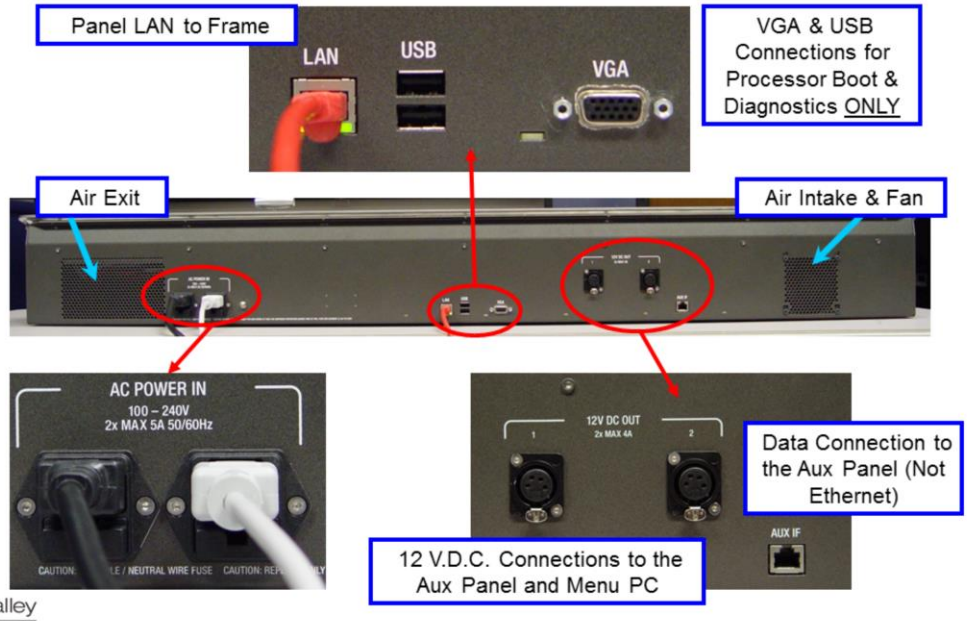
Processor Hardware

- The lithium cell battery is to keep the panel Bios, Date and Time all accurate and current.
- The Boot Mode Switch needs to be in position 0 for all switches for normal operation.
  - Switch 1 when selected to position 1, will boot the operating system (Linux) and not the Panel Application. This is used in the factory for testing and loading software. This position will also enable FTP communication over the network connection.
  - Switch 2 when selected to position 1, will enable “Crash Dumps”. This is a diagnostic mode and not recommended for use in normal operation.
  - Switches 3-8 are for software development modes and should never be placed in the “On” or position 1 at any time.

Karrera Panels - 2 & 3 M/E - Connections



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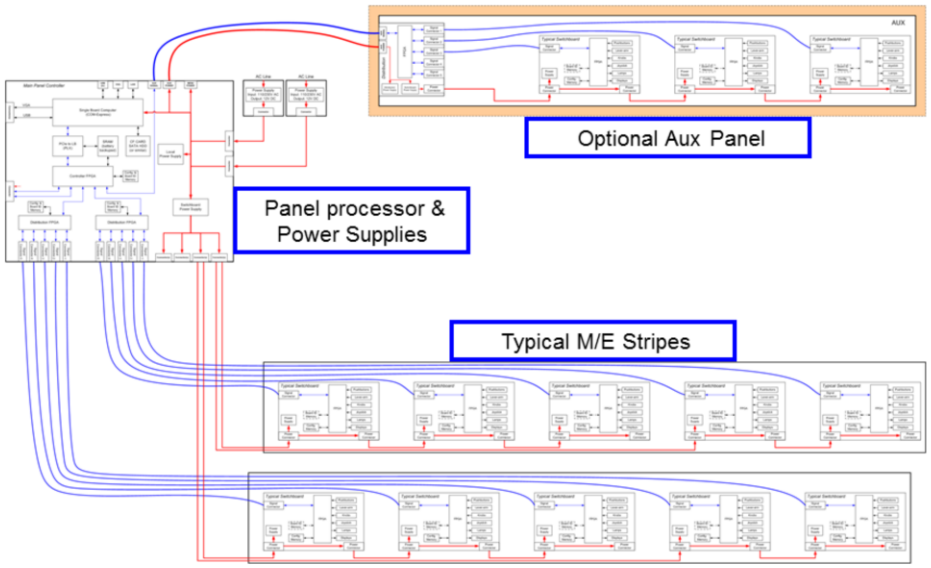
Karrera Panels - 2 M/E Processor & Interconnects



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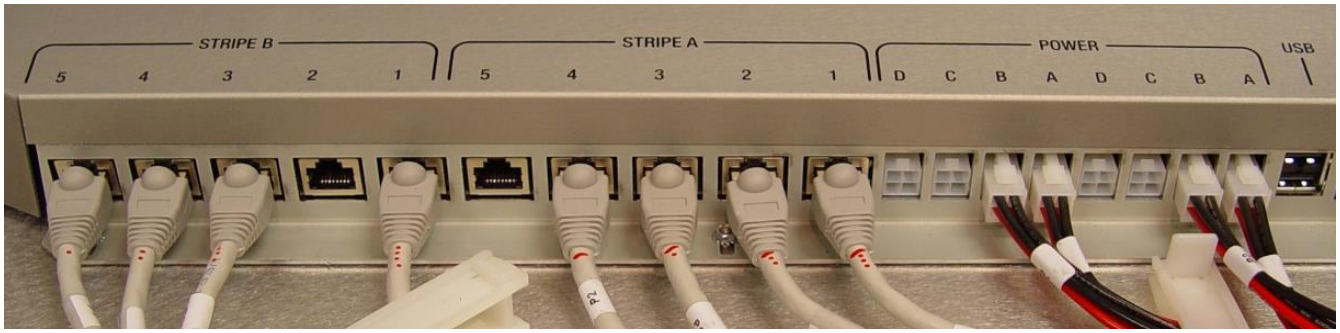
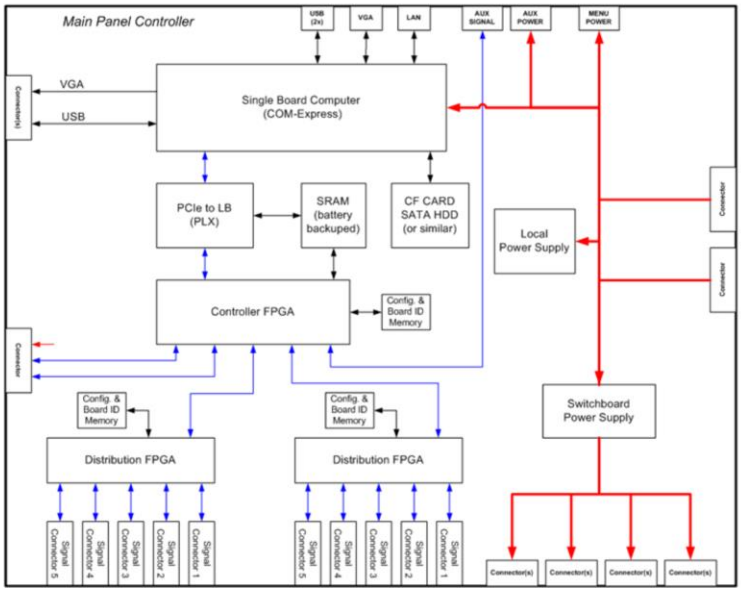
Data Connections

- Each Stripe must communicate with the Processor in the correct order.
- The Data connections are divided into sets of five RJ-45 connecters on the Processor. They are labeled from right to left: 1 to 5. Each group of five are dedicated to a Stripe and are labeled for Stripes: A, B and in the case of a 3 M/E Panel, C.
- Boards in a Stripe are connected to the Ports in order: The far right board must connect to Port 1. The next board to the left, to Port 2, etc. When only 4 Ports are used, a gap may be anywhere.



Karrera Panels Processor & Interconnects



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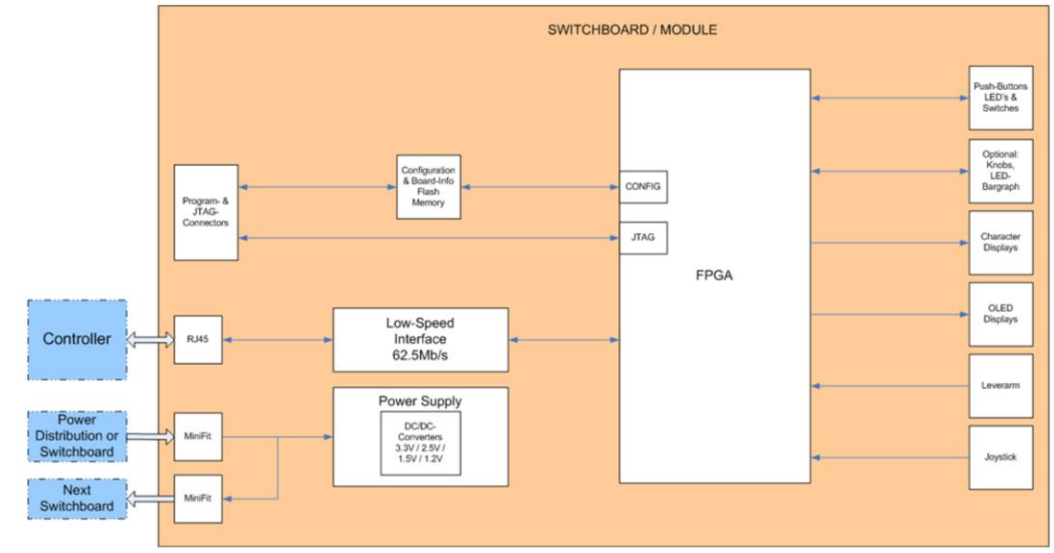
Karrera Panels Button Board & Intercorrects



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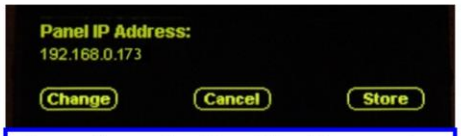
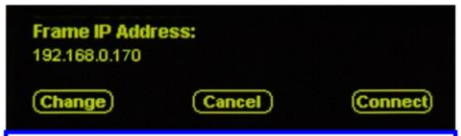
Network Addressing – Karrera Panel

1. Press "Menu" to access the First Page.
2. Press "Page" to move between Pages.
3. Select "IP Addr".
   Use the Top Row of Buttons for Menu Selection.
   Use the Keypad for Address Input.

4. Select The Device / Address to Change.



Store will save the Panel IP address and re-boot the Panel.



"Connect" will initiate communication with the Video Frame.

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Karrera Network Addressing

- The Karrera Panels have 2 pages of Panel utility menus.
- From any E-Mem panel, select "Menu and Page" to view and chose the desired menu.
- Panel and target Frame IP Addressing is done from page 2.

Karrera Panel - M/E Delegation

1. Press “Menu” to access the First Page. (Menu 1)
2. Select “Stripe Deleg”.
3. Select Desired M/E per Stripe / Row.

Top Rows show Low Talley representing a two Stripe (2 M/E) Panel. The 3rd row of buttons would be illuminated also for a 3 M/E Panel.

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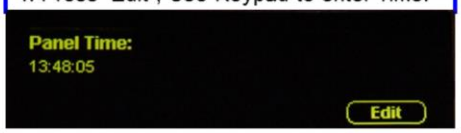
M/E Delegation

- The Panel Menu functions can be accessed by selecting “Menu” from any of the E-MEM panels.
- Stripe Delegation is just one of several functions available.
- Only the M/Es that are in your current Suite will be listed on the delegation menu.

Karrera Panel Settings

1. Press "Menu" to access the First Page.
2. Press "Page" to move between Pages.
3. Select desired choice.
   Use the Top Row of Buttons for Menu Selection.
   Use the Keypad for Numeric Input.

4. Press "Edit", Use Keypad to enter Time.



5. Press "Edit", Use Keypad to enter Date.

Select the desired Time in Minutes for the panel to go into Saver Mode (dark) after non activity on the panel.

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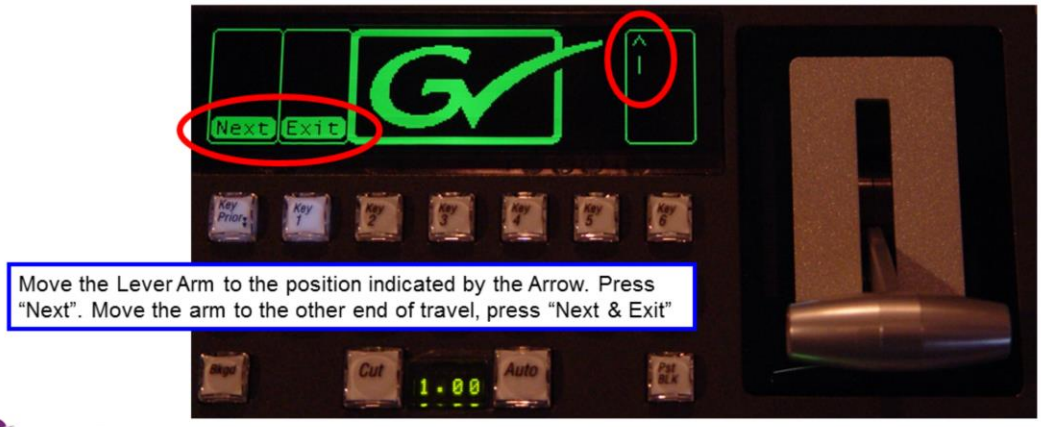
Panel Menus

- The Panel Menu functions can be accessed by selecting "Menu" from any of the E-MEM panels.
- Stripe Delegation is just one of several functions available.

Karrera Panel Adjustments



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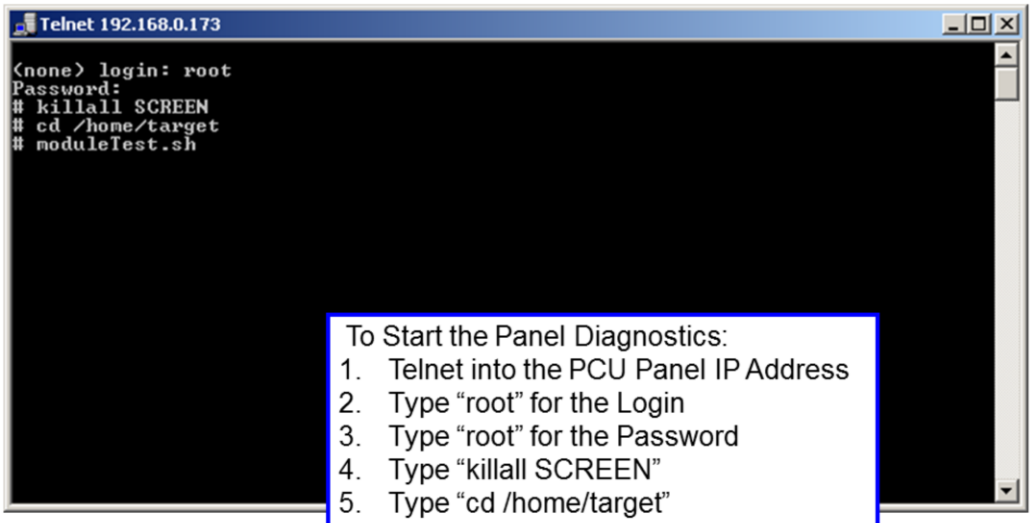
Panel Adjustments

- The Panel Menu functions can be accessed by selecting “Menu” from any of the E-MEM panels.
- The Transition Lever Arms and the Joy Stick all require a calibration after any software change or update.
- From the Panel Menu, select “Calib”. Then Select the device to calibrate, Joystick, Lever 1 or Lever 2. Lever 3 may be selected on a 3 M/E Panel. The individual routines will have instructions appear on the panel displays. Follow the instructions and “Exit”.

Kayenne & Karrera Panel Diagnostics (1)



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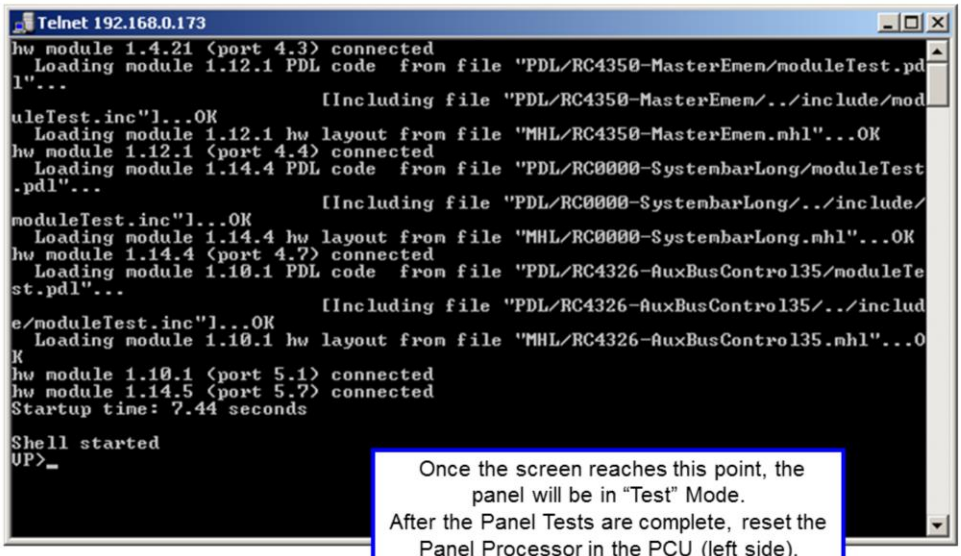
Full Panel Diagnostic Test

- All of the Karrera and Kayenne Panel Switches and Displays can be thoroughly tested when the system is off line. A Video frame connection is not needed.
- Each Module or Button Board has several tests to check all switch functions, button addressing, button colors and display elements and colors.
- Telnet to the Panel processor IP Address and follow the prompts and instructions above. The panel will reboot in the diagnostic mode. None of the normal panel functions or communication will operate in this mode.
- Run through the desired tests or all if needed.
- Reboot the Panel when done. This will boot the panel in the normal operating mode and re-establish communications with the Video Frame.
- Over the next pages, the panel photos show the Kayenne Panel running through all of the test. The Karrera Panel works the same way. Just keep an eye open for the 2 red buttons and remember where they are located on each module as you test.

Kayenne & Karrera Panel Diagnostics (2)



Once the screen reaches this point, the panel will be in "Test" Mode.
After the Panel Tests are complete, reset the Panel Processor in the PCU (left side).

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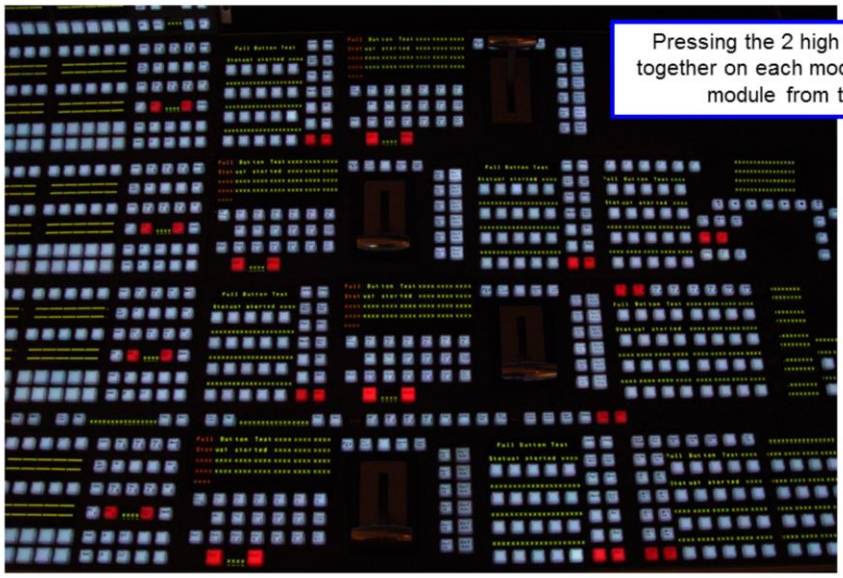
Kayenne Panel Diagnostics (1)



Pressing the 2 high tally red buttons together on each module will cycle that module from test to test.

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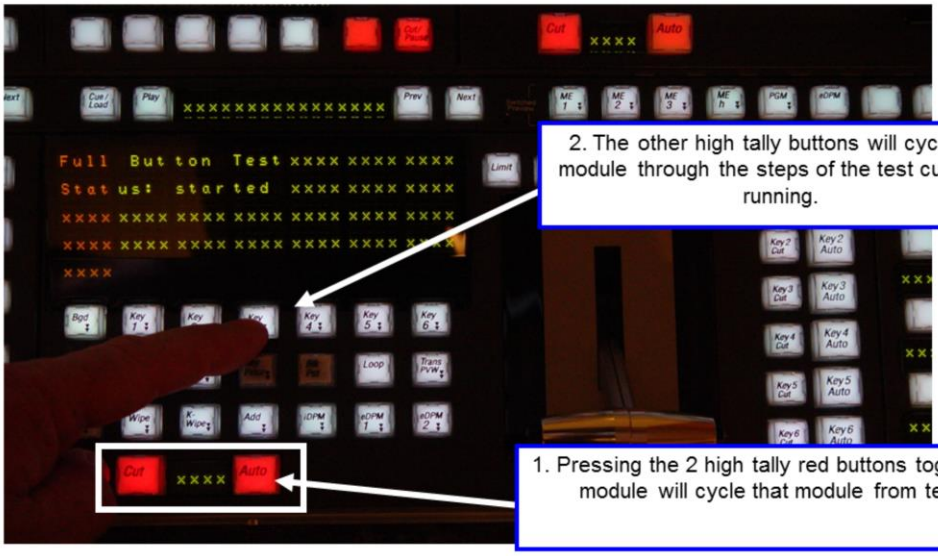
Kayenne Panel Diagnostics (2)



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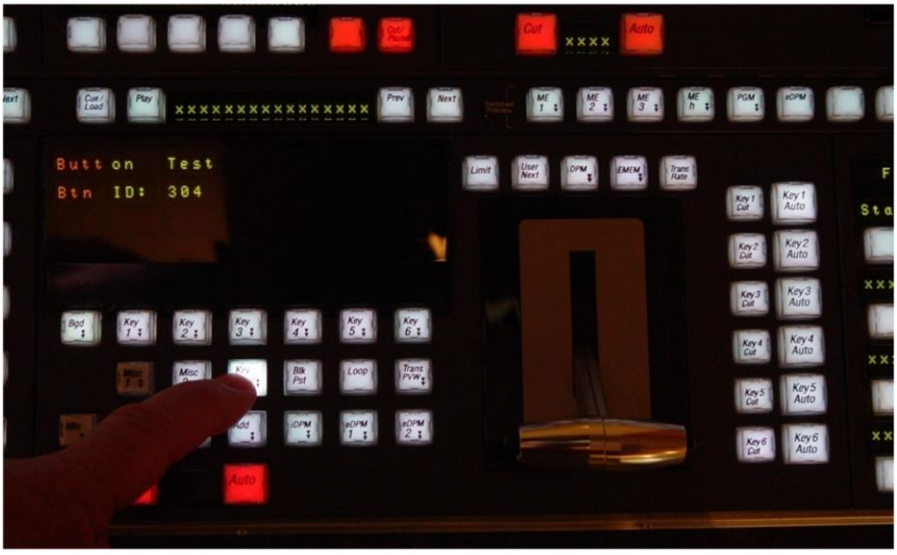
Kayenne Panel Diagnostics (3)



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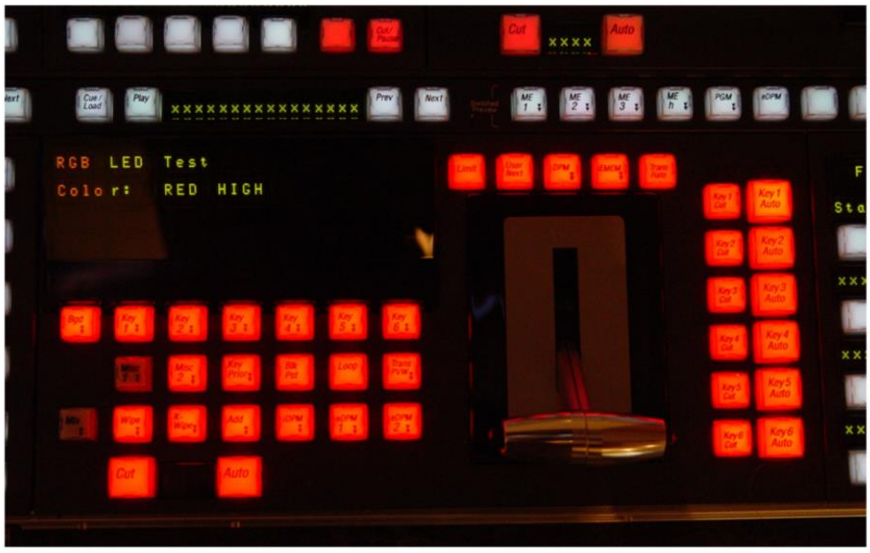
Kayenne Panel Diagnostics (4)



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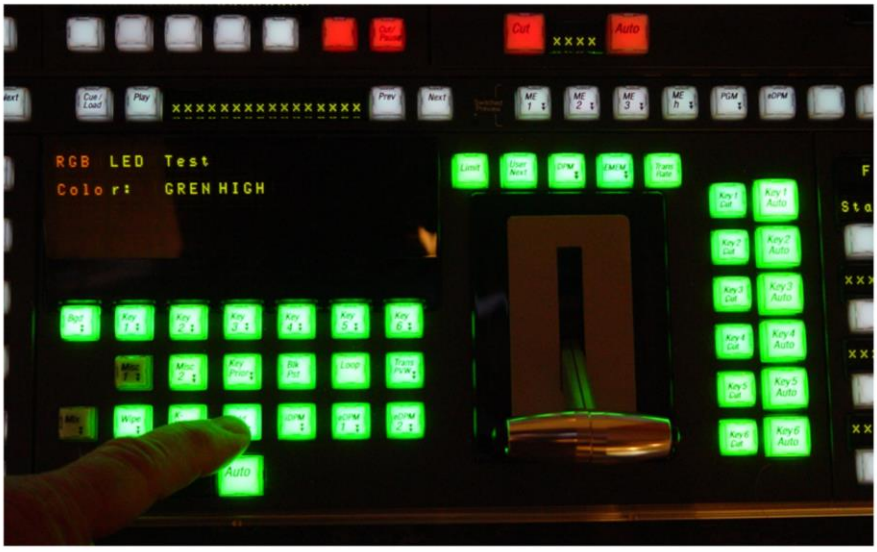
Kayenne Panel Diagnostics (5)



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Kayenne Panel Diagnostics (6)

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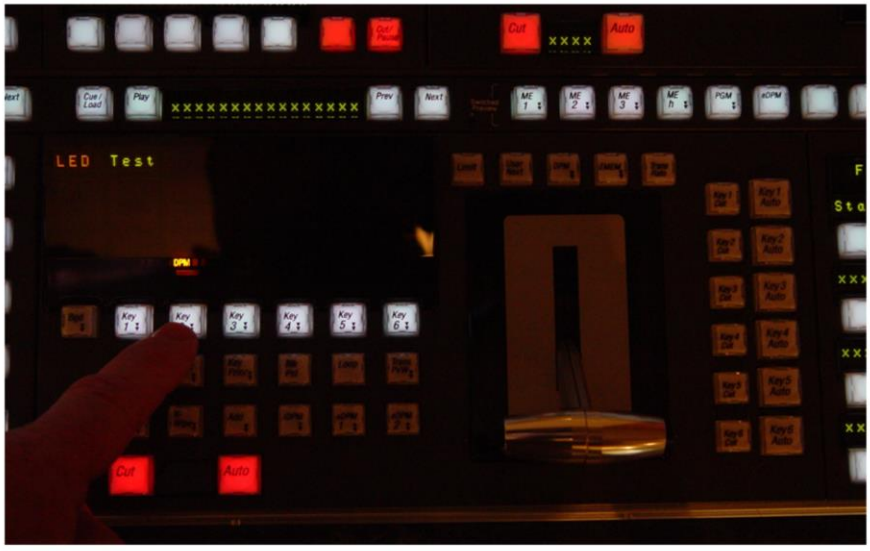
Full Panel Diagnostic Test – Button LED Calibration

- This test may only be completed when using a special diagnostic probe that inserts into the button shaft. When used with a PC running a special application and talking to the probe AND the PCU, color and intensity can be calibrated or balanced with all other buttons.
- Always bypass this step by pressing the red buttons. NEVER press the “Sel Ref or Calib” buttons.
- Running this routine without the probe and software will change the appearance of the affected buttons. This will require the replacement of the module with Customer Service.

Kayenne Panel Diagnostics (7)



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Kayenne Panel Diagnostics (8)

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Kayenne Panel Diagnostics (9)

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Kayenne Panel Diagnostics (10)

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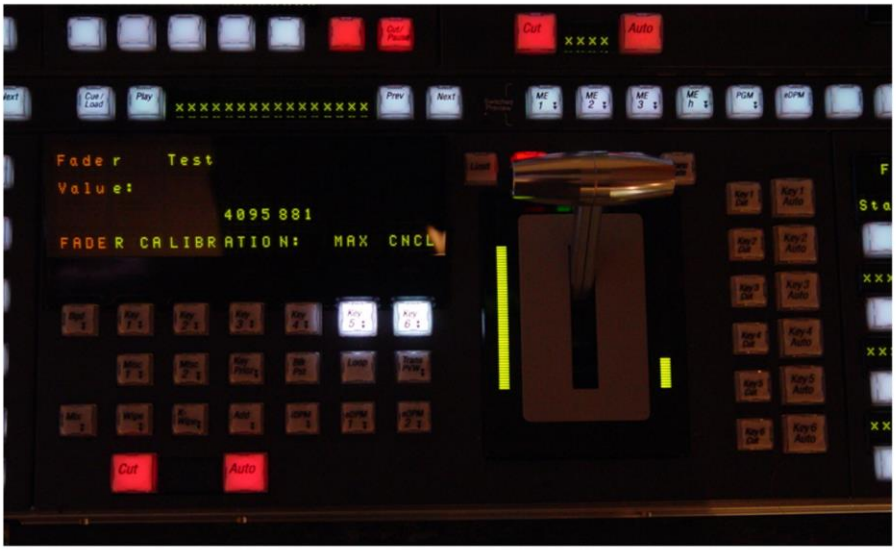
Kayenne Panel Diagnostics (11)



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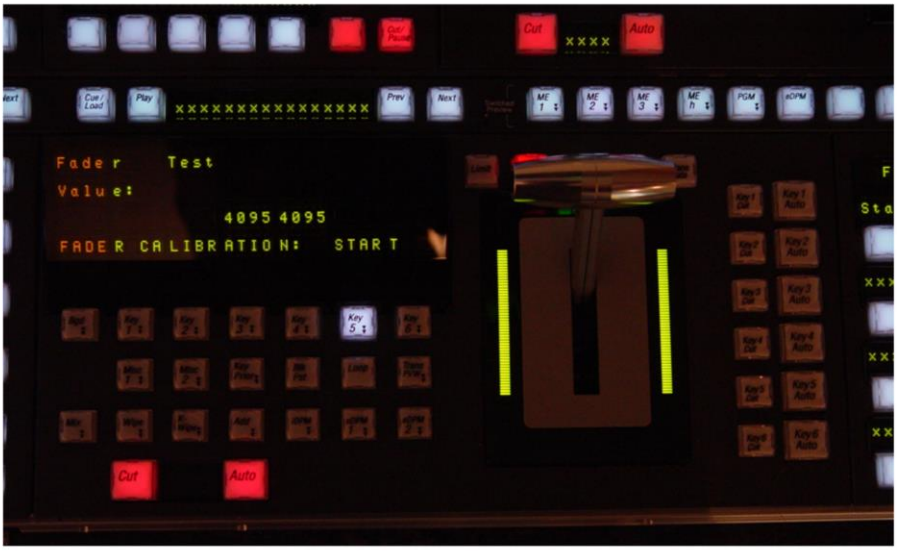
Kayenne Panel Diagnostics (12)



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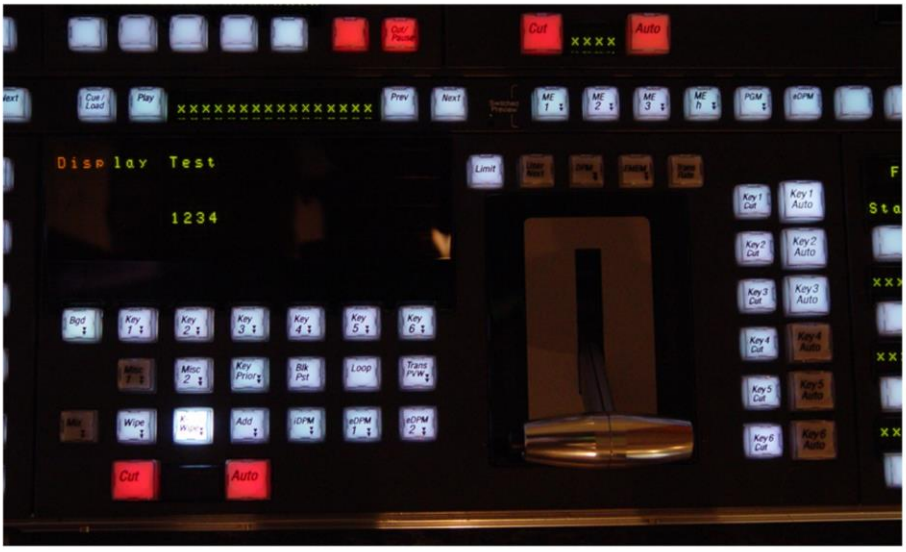
Kayenne Panel Diagnostics (13)



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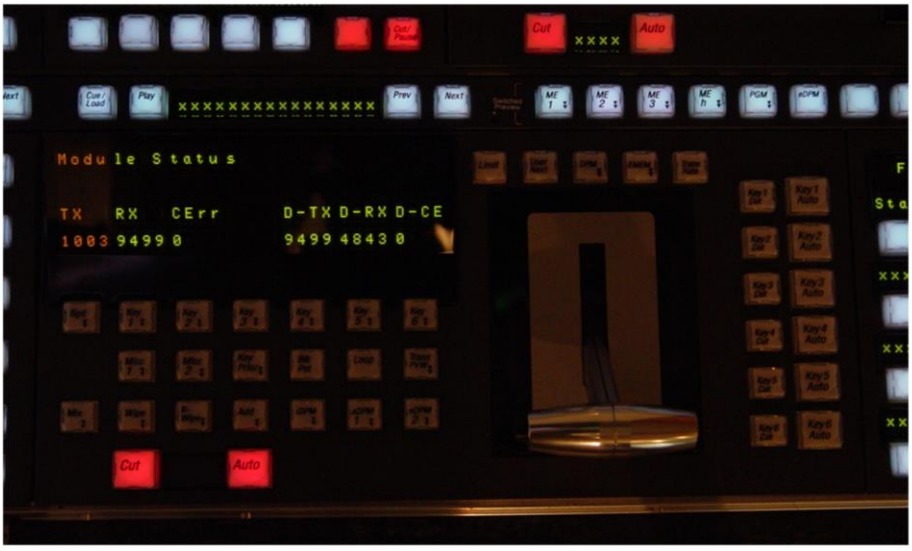
Kayenne Panel Diagnostics (14)



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Kayenne Panel Diagnostics (15)

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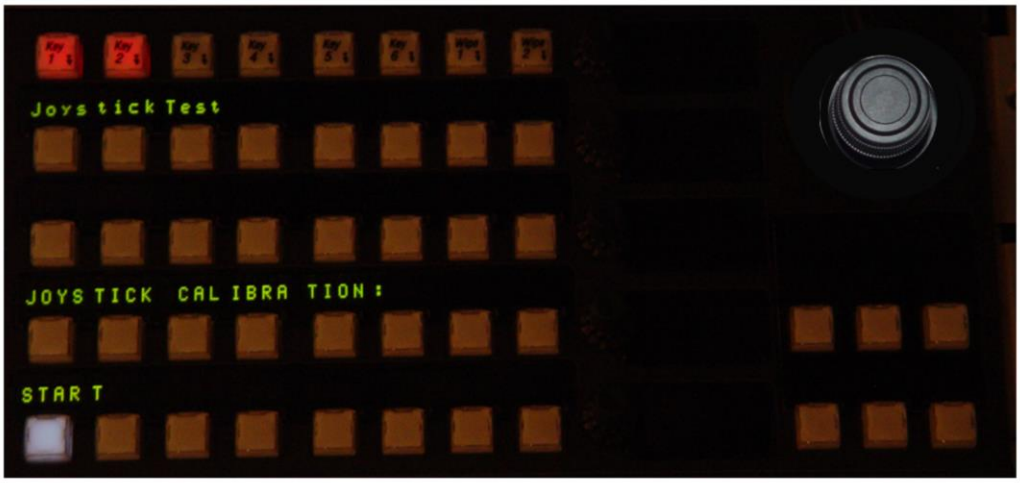
Kayenne Panel Diagnostics (16)



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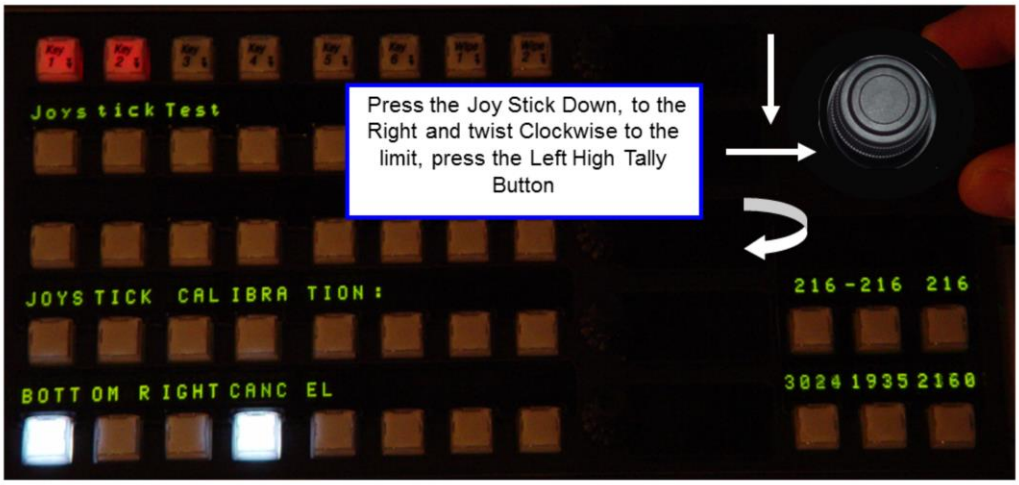
Kayenne Panel Diagnostics (17)



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Kayenne Panel Diagnostics (18)

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Kayenne Panel Diagnostics (19)

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Kayenne Panel Diagnostics (20)

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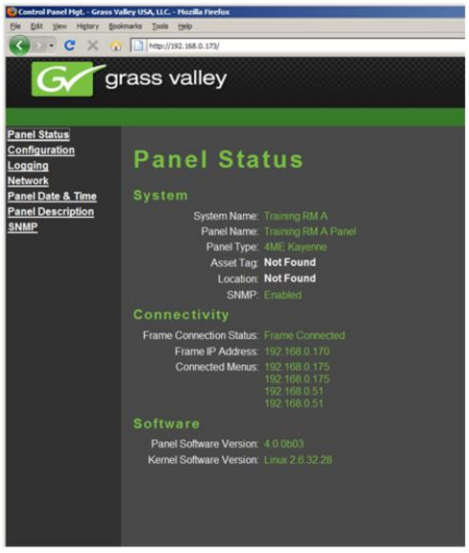
Karrera & Kayenne Web Browser (1)



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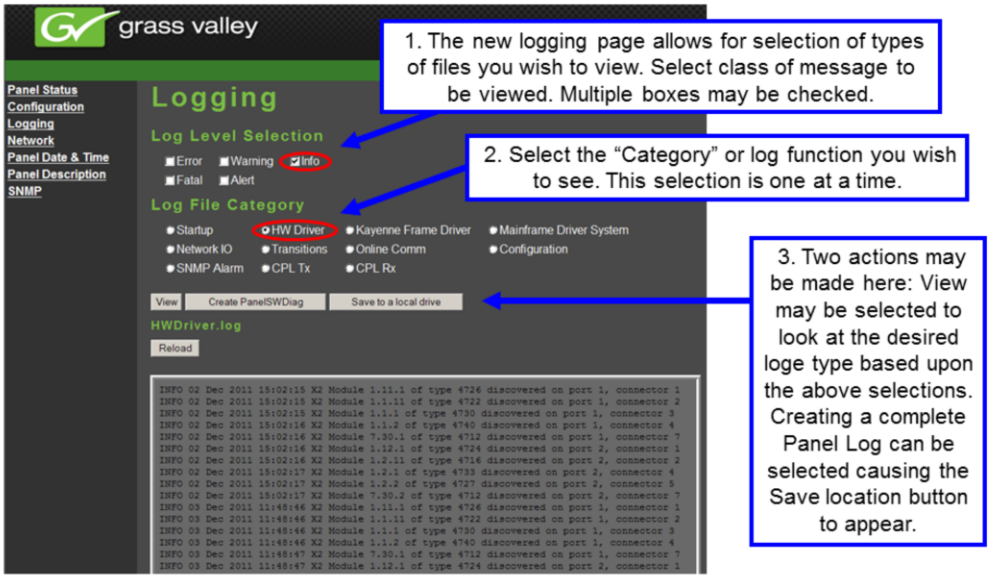
Karrera & Kayenne Web Browser (2)



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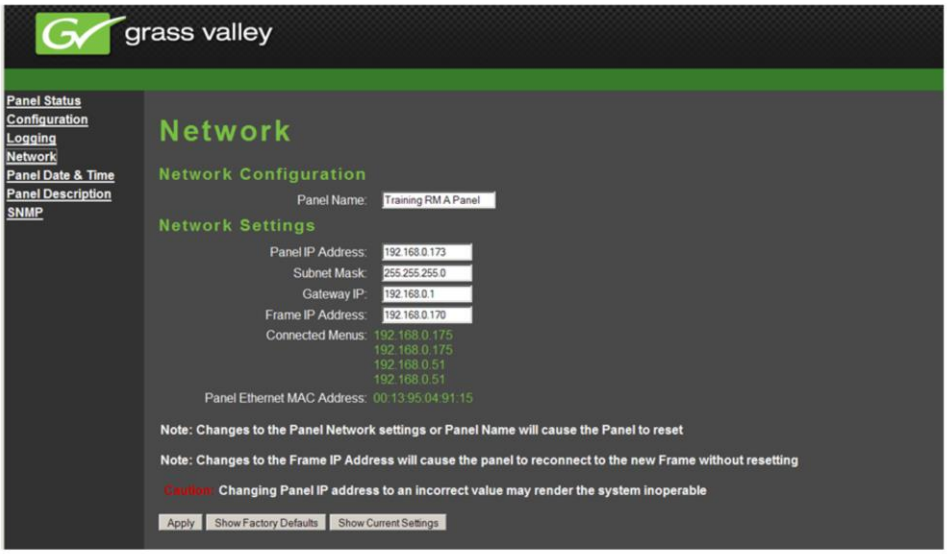
- Karrera Panel Board Types will report to logging as:
  - 4731 ="**sourceselect10**" (10 Button Source Select)
  - 4734 ="**sourceselect10_devicewindow**" (10 button Source Select Device Window)
  - 4741 ="**sourceselect15**" (15 Button Source Select)
  - 4728 ="**sourceselect15_systembar**" (15 Button Source Select System Controls)
  - 4737 ="**aux10**" (10 Button Aux Select)
  - 4739 ="**aux15**" (15 Button Aux Select)
  - 4720 ="**transition_localemem**" (Transition & Local E-Mem Board)
  - 4723 ="**localemem_transition**" (Local E-Mem & Transition Board)
  - 4717 ="**transition_horizontalkeyer**" (Transition & Horizontal Keyer Board)
  - 4726 ="**multifunction**" (Multifunction Board)
  - 4725 ="**masterememe**" (Master E-Mem panel Board)

Karrera & Kayenne Web Browser (3)



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Karrera & Kayenne Web Browser (4)

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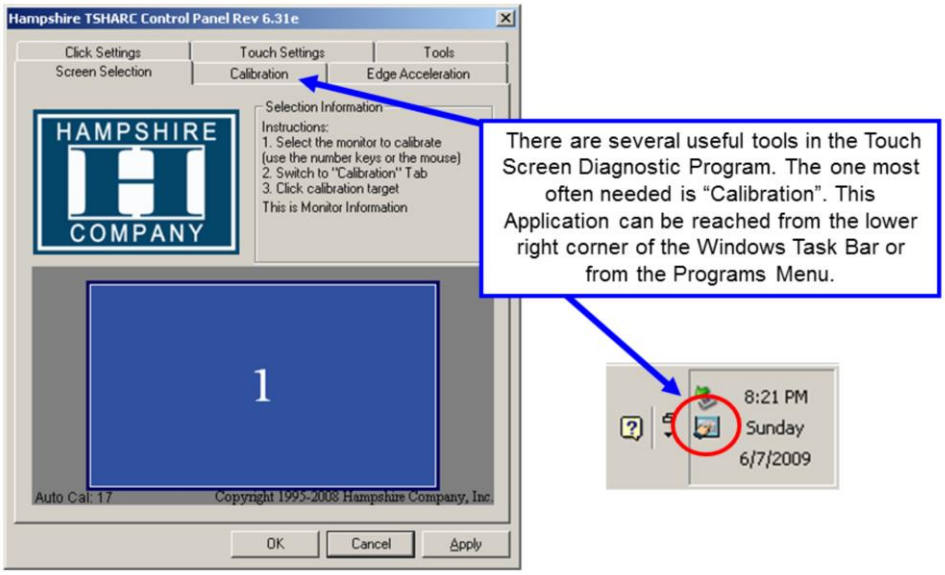
Kayenne Menu Touch Screen – Hampshire (1)



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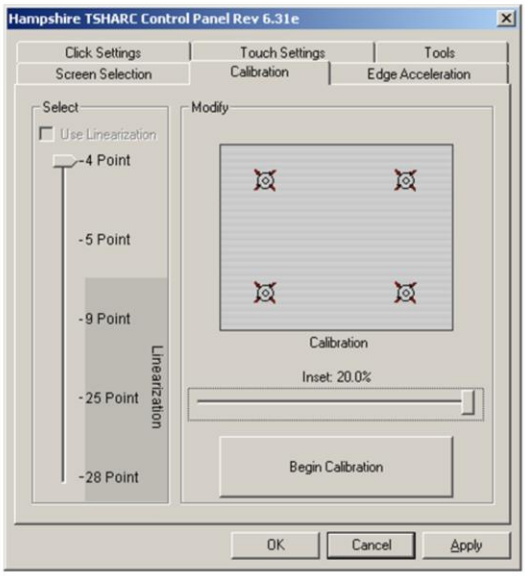
Kayenne Menu Touch Screen – Hampshire (2)



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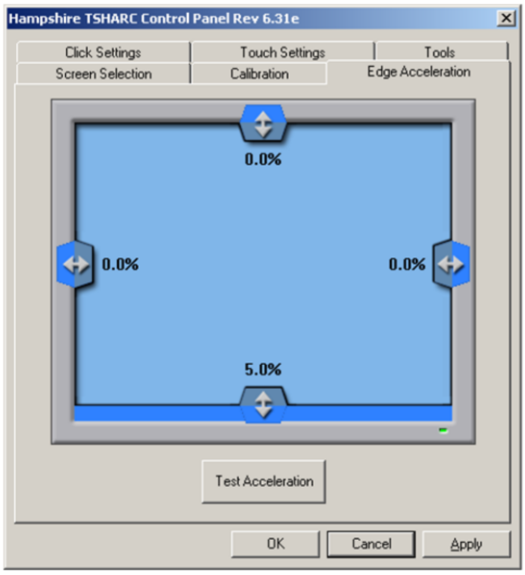
Kayenne Menu Touch Screen – Hampshire (3)



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