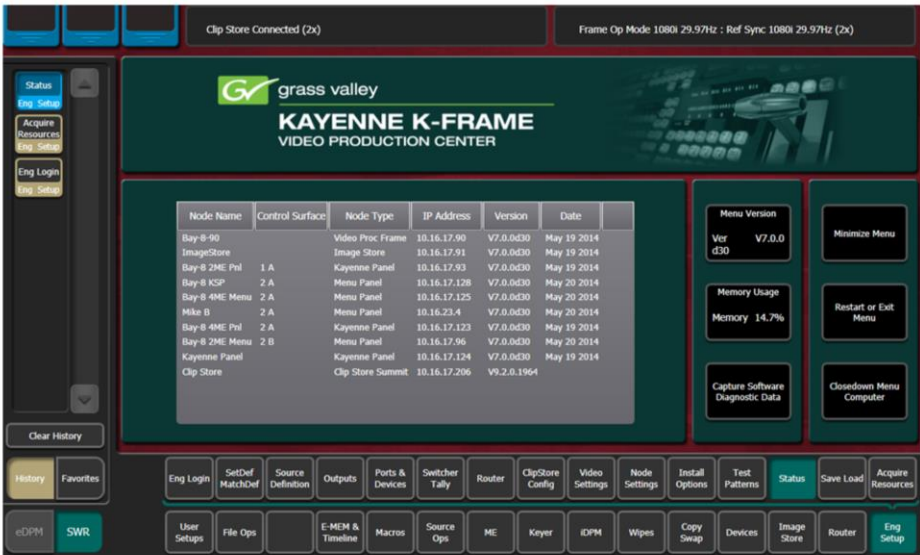


Section 2 – Karrera & Kayenne Basic Configuration



The Kayenne/Karrera Menu is designed for fast access to menus and incorporates a shallow menu structure, many ‘Top menu’ buttons, ‘History’ and ‘Favorite’ Menu selections.

It runs on a standard Windows platform (Windws XP, 7 or 8)

Section 2 – Karrera & Kayenne Basic Configuration

- Menu Overview
- Engineering Setup
 - IP Addressing
 - Node List Creation / Communication
 - Video and License settings
 - Source Definitions and Outputs
- User Setup
 - Button Mapping
- Saving and Loading Engineering Configuration files
 - Local and Remote Storage
- Exercise



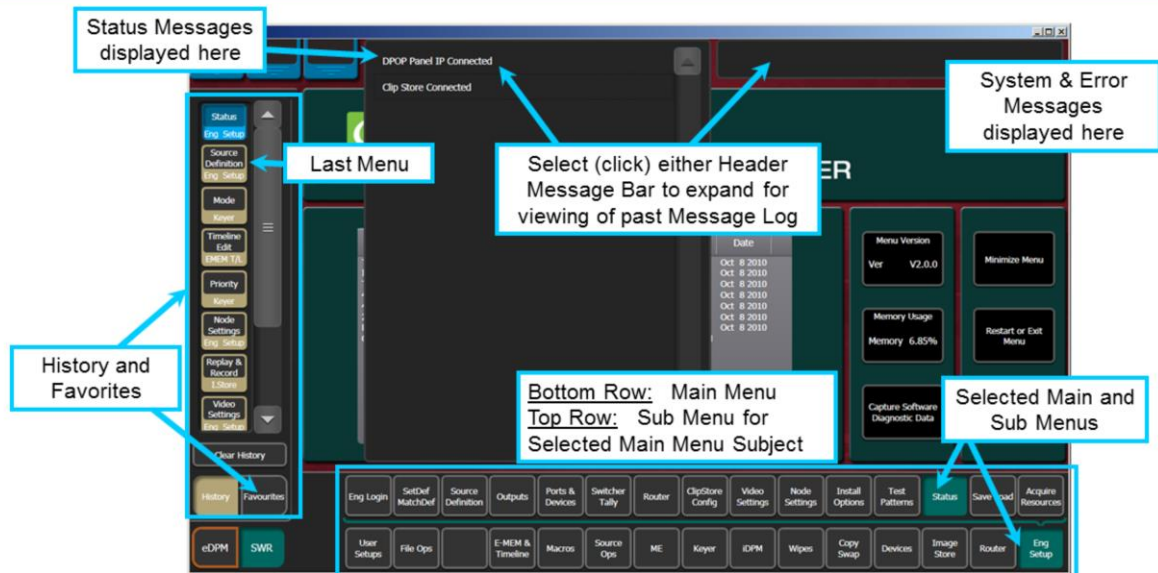
Section 2 – Karrera & Kayenne Objectives

Section Objectives

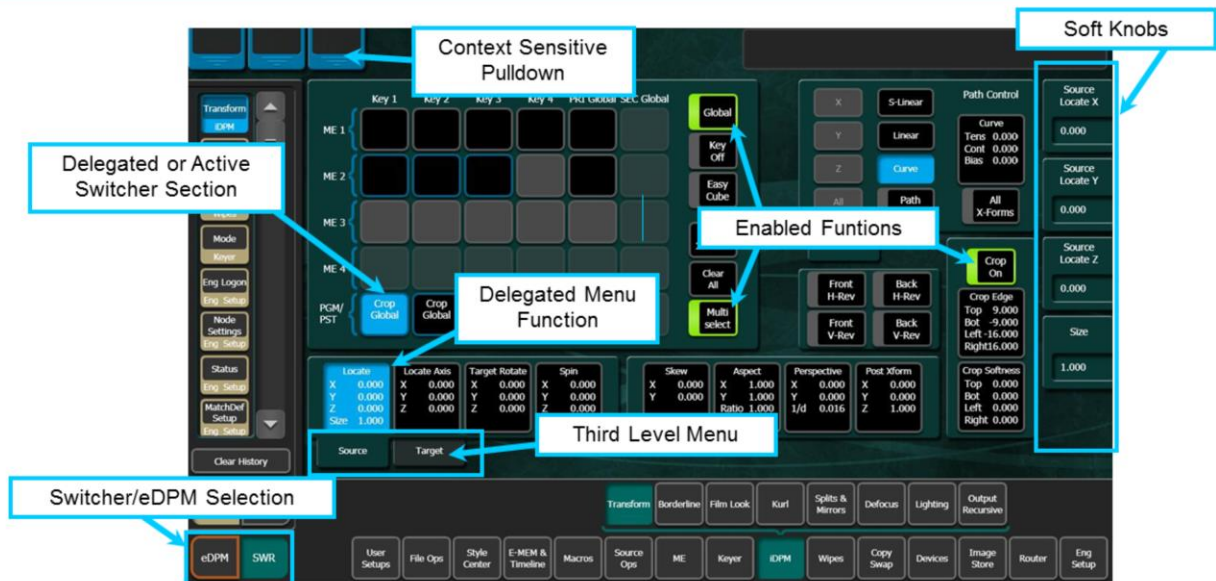
- Understand how to navigate the Menu system and use History and Favorites
- Understand how to set IP addresses of Ethernet nodes and assign them to a Suite
- Know how to set the Video Format for the system
- Know how to program Video Sources and Output Signals
- Know how to Map Sources to Buttons
- Know how to Save System configuration files to a local or Remote Storage location
- Know how to assign resources to Suites



Menu Navigation (1)



Menu Navigation (2)



Selected Menu: iDPM / Transform / Source; Pgm/Pst / Key 1 Delegated

2 - 5

Engineering Setup Menu Tree (1)

Eng Login	Ability to access & configure Suites and Control Surfaces										
SetDef MatchDef	Configure I/O Format Conversion and Enables										
Source Definition	<u>Configure all internal and external inputs / create sources</u>										
Outputs	<u>Configure all Outputs including Aux Busses and ClipStore Channels</u>										
Ports & Devices	<table><tr><td>Pbus Ports</td><td>Assign Pbus Ports, Addresses, Speed, Triggers and Names</td></tr><tr><td>GPI Outputs</td><td>Assign GPI Relays, Duration and Names</td></tr><tr><td>External Devices</td><td>Define up to 32* Devices, Addresses, Protocols and Names</td></tr><tr><td>Serial Tally Ports</td><td>Assign Serial Tally Communication Port and Speed</td></tr><tr><td>Editor Ports</td><td>Assign Editor Ports, Speed and Names</td></tr></table>	Pbus Ports	Assign Pbus Ports, Addresses, Speed, Triggers and Names	GPI Outputs	Assign GPI Relays, Duration and Names	External Devices	Define up to 32* Devices, Addresses, Protocols and Names	Serial Tally Ports	Assign Serial Tally Communication Port and Speed	Editor Ports	Assign Editor Ports, Speed and Names
Pbus Ports	Assign Pbus Ports, Addresses, Speed, Triggers and Names										
GPI Outputs	Assign GPI Relays, Duration and Names										
External Devices	Define up to 32* Devices, Addresses, Protocols and Names										
Serial Tally Ports	Assign Serial Tally Communication Port and Speed										
Editor Ports	Assign Editor Ports, Speed and Names										



Note: Underlined items are required for Basic Configuration

2 - 6

Not all Engineering Setup Menus are required for operation. Several are for external communications and options.

The External Devices Menu may configure up to 32 devices or channels. But only 28 are possible if the ClipStore is enabled and configured. It counts as 4 controllable channels.

Engineering Setup Menu Tree (2)

Switcher Taly	Assign Tally Relays and define multiple Tally Trigger or Calculations
Router	Define Communications to a facility Router, Access Sources and Destinations
ClipStore Config	Configure ClipStore Channels: Numbers, Formats, Timing, Aspect etc
Video Settings	<u>Select Sync Reference and Operating Format</u> , Config Matte Limits, Blanking etc
Install Options	View License Parameters, Install or change licenses
Test Patterns	Select Internal Test Signal Generator Pattern, used as internal source



Note: Underlined items are required for Basic Configuration

Engineering Setup Menu Tree (3)

Node Settings	Frame Suite Nodes & ID	<u>Define Hardware Names and IP Addresses</u>
	PCU Configuration	<u>*Configure PCU Ports to Panel Stripe Mapping and Surface*</u>
	Control Surfaces	<u>Identifies to Frame, all Devices that may provide Control Comms</u>
	Remote Aux IP Network	<u>Define Remote Aux Panel IP Addresses and Panel Type</u>
	Remote Aux Logical Map	<u>Assign Aux Bus* to be Controlled by a Remote Aux Panel</u>
	Remote Aux Button Map	<u>Assign Sources by Name to Buttons on individual Aux Panels</u>
Status		<u>Lists Applications running, Memory Usage, Access to capture Log information</u>
Save Load		<u>Allows Save of all Engineering Configuration Data to Storage locations</u>

* PCU Configuration only used with Kayenne Panels. Menu missing from Karrera Menu.



Note: Underlined items are required for Basic Configuration

2 - 8

Two types of Remote Aux Panel are available for Kayenne usage: The single Bus panel that allows control of only one Aux Bus. Or the Multiple Delegation Panel allowing control of up to 16 Aux Busses.

* As the Karrera panels all have an internal processor, the PCU Configuration Menu Tab is not present (or needed) in the Karrera Menu Software.

Engineering Setup Menu Tree (4)

1.5G Frame

Acquire
Resources

MEs &
Backgrounds

Map Physical to Logical MEs, Bkgds to the desired Suite

DPM
Channels

Apply iDPMs channel Control to desired Control Surfaces

External
Devices

Apply External Device Control to desired Control Surfaces

PBus
Devices

Assign desired PBus Channels to Control Surfaces

Image
Stores

Assign Image Store Channel Size and Control to Control Surfaces

Camera
Control

Allow Control Surfaces ability to operate some Camera Functions

Router
Destinations

Assign, Allow certain Router Controlled Outputs to Control Surfaces

3G K-Frame

Acquire
Resources

Effects, Stores
and Viewers

Map Physical to Logical MEs, MVs ISS, CSs, Bkgds and DPMs to Suites

Devices
& PBus

Apply iDPM channel Control to desired Control Surfaces

Router
Destinations

Apply External Device Control to desired Control Surfaces

Camera
Control

Allow Control Surfaces ability to operate some Camera Functions

GPI
Outputs

Assign GPI Control to Control Surfaces



Note: Underlined items are required for Basic Configuration

2 - 9

Acquire Resources allows Suites to be set up. This menu controls the assignment of all MEs, backgrounds, DPMs, Image Store and ClipStore Channels etc.

By default, all resources are allocated to Suite 1. In order to acquire resources for Suite 2, the desired resources must first be released from Suite 1 to make them available for use elsewhere.

The Acquire Resources page has a different arrangement for the K-Frame hardware.

User Setups – Panel Prefs Menu Tree

	Button Mapping	<u>Assign Sources by Name* to Crosspoint Buttons</u>
	Panel Color Scheme	Define Panel Button Colors and scheme
	Source Colors	Define / Customize Individual Crosspoint Button Colors
	Macro-E-MEM Start Number	Assign First or Start Macro Recall Numbering per Stripe
	DPOP Prefs	Define How buttons react to DPOP (Double Punch)
	Shift Prefs	Assign Shift Button Functions per Crosspoint Button Row
	Panel User Interactions	Misc Define Functions: Time Displays, Key Adjust, DPOP Enable
	Aux Delegate Mapping	Assign Aux Buses and Misc Functions to Local Aux Panel Buttons



Note: Underlined items are required for Basic Configuration

2 - 10

* Names assigned to the Crosspoint button displays or OLEDs (Organic Light Emitting Diodes) will be Engineering (Source) Names until other names are created in the Engineering or Source Patch menus. An Eng ID number will be displayed if an Engineering Name is not created.

Any Source Crosspoint Button may have up to 4 different Sources assigned. Each button may have the normal position source name displayed but when the 2nd, 3rd or 4th shifts are selected, the button display and source will change to a different mapping.

Basic Eng Setup Configuration Steps / Flow

Identify all Devices, set Names and IP Addresses
Check Communication

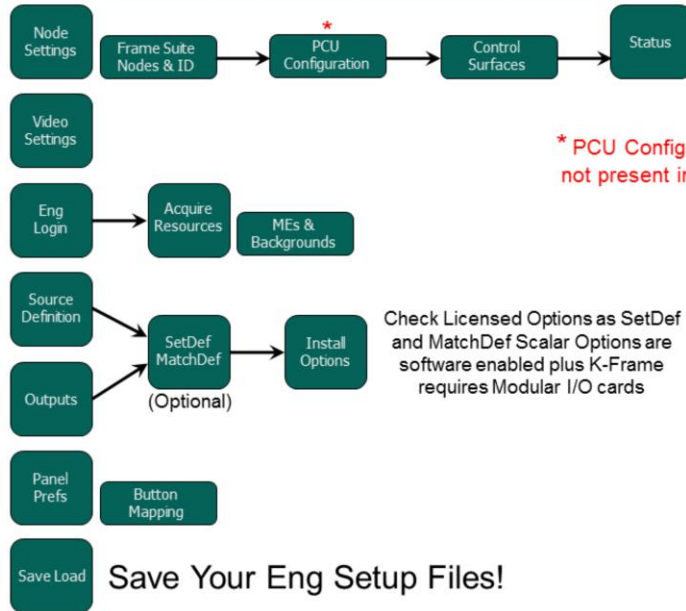
Set Switcher operating Video Format, choose Appropriate Reference

Configure Physical to Logical ME Relationship Per suite (if needed**))

Configure Engineering Sources: Names, Input #s, Signal and Device Type

Configure Outputs: Type, Connector #, Names, Aux Busses

Map Engineering Sources To Crosspoint Buttons, Verify Eng Display Name



****** The default physical to logical mapping is as shown earlier. The top board in either frame is mapped as the PGM/PST ME and processes the first 24 inputs and first 12 outputs. The next board will be ME 1. This usually does not need to be changed unless you are configuring suites and have a second panel.

***** As the Karrera panels all have an internal processor, the PCU Configuration Menu Tab is not present (or needed) in the Karrera Menu Software. All other steps on this page are needed for both systems.

Eng Setup – System Type Identification

The screenshot shows the 'Eng Setup / Status' menu. At the top, the 'KARRERA' logo is circled in blue. Below it is a table of system components:

Node Name	Control Surface	Node Type	IP Address	Version	Date
Training RMA		Video Proc Frame	192.168.0.170	V4.0.0	Dec 23 2011
Imager/Box		Image Box	192.168.0.171	V4.0.0	Dec 23 2011
KARRERA MENU	1 A	Menu Panel	192.168.0.181	V4.0.0	
Law's PC	1 A	Menu Panel	192.168.0.55	V4.0.0	
Training Room A PC	1 A	Menu Panel	192.168.0.51	V4.0.0	
Karrera 2 M/E Panel	2 B	RT Panel	192.168.0.177	V4.0.0	
Kayenne 4.5 M/E Panel	1 A	RT Panel	192.168.0.173	V4.0.0	
Kayenne 2.5 M/E Panel	2 A	RT Panel	192.168.0.178	V4.0.0	
Kayenne 2.5 M/E Menu	2 A	Menu Panel	192.168.0.176	V4.0.0	
Kayenne 4.5 M/E Menu	1 A	Menu Panel	192.168.0.175	V4.0.0	

Other menu items include 'Menu Version' (V4.0.0), 'Minimize Menu', 'Current Auth Code for Perm' (3W1C-K4C0-R444-9CZ8-HKSN-9M6Z), 'System ID' (Karrera, 56188), 'Option Group' (Perm), and a table of options.

Below the screenshot is a photo of the hardware with a blue circle highlighting the EEPROMs on the Video Frame Mother Board. A callout box points to this area with the following text:

System Type is based on the License from GV and NOT the Panel. The License AND System ID are stored in the EEPROMs on the Video Frame Mother Board.



2 - 12

The System Type, Karrera or Kayenne, is displayed on the Eng Setup / Status AND Eng Setup / Install Options menu pages.

- This System Type is based upon Options, Packages and Panel Types purchased.
- The Name displayed is driven by the License created and installed by Grass Valley. This license can be changed or upgraded in the field when a new Permanent or Temporary License is acquired from Sales or Customer Service.
- This license information, as well as the System / Customer ID number, is stored on the two EEPROMs (Electrically Erasable Programmable Read Only Memory) located on the Mother Board inside of the Video Processing Frame.

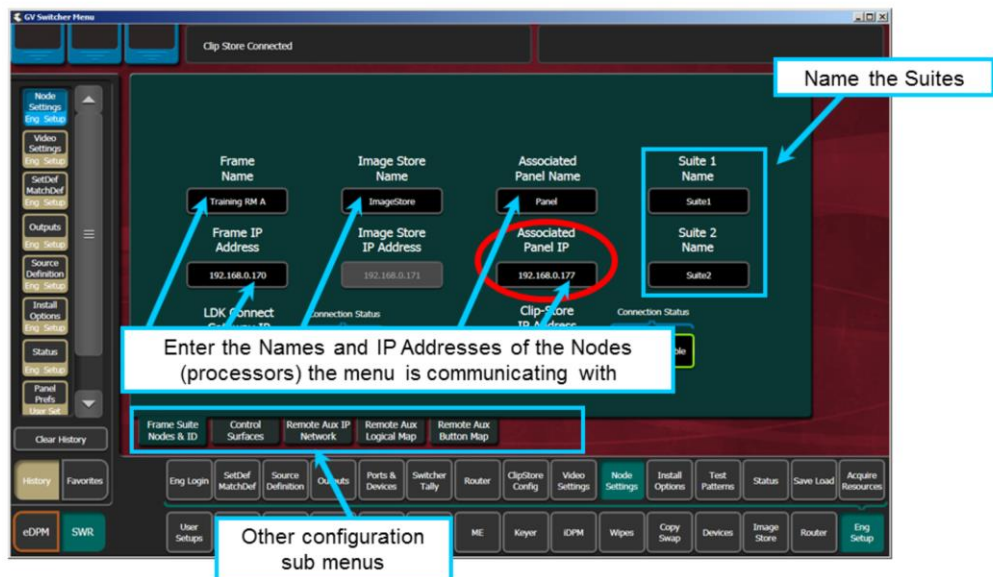
Karrera Systems, Panels and the Karrera Soft Panel must run on Version 4.0 and newer software.

A Karrera panel can run in a Kayenne system but not vice versa.

The Menu Application is 98% generic between both the Karrera and Kayenne System types.

- The Menu will display the correct choices for the Associated Panel type (Kayenne or Karrera) when the specific Panel IP Address is entered into the "Associated Panel IP" field of the Eng Setup / Nodes Settings / Frame Suite Nodes & ID Menu.

Eng Setup - Node Settings – Naming & Addressing (1)



2 - 13

Eng Setup menu showing Node settings for each Suite and the Suite names.

The “Associated Panel IP” entry must have the correct address entered of the Panel that this menu is working with. This allows the menu PC to listen and respond to the panel.

- This association will allow the menu application to display the correct menu options based upon if it is working with a Kayenne or Karrera. This is regardless of what is displayed on the Status and Install Options pages.
- This entry also allows for Panel D-Pops (Double Panel Button Push Operations) to function correctly and delegate the correct menu.
- This entry will allow the ability to attach a Macro to a specific panel button.

Karrera & Kayenne Default IP Addresses

- Video Frame Addresses:
 - Video Processor CPU 192.168.0.170
 - Image Store CPU 192.168.0.171
- Control Panel (PCU) Addresses:
 - Panel Surface 1A 192.168.0.173
 - Touch Screen Menu 1 192.168.0.175
 - Touch Screen Menu 2 192.168.0.176
 - Panel Surface 1B 192.168.0.177
 - Panel Surface 2A 192.168.0.178
 - Panel Surface 2B 192.168.0.179
- Optional Hardware Addresses:
 - Clip Store Server 192.168.0.180
- **Reserved Internal Addresses, Do Not Use anywhere on Kayenne LAN:**
 - Video Processor CPU (Frame) 192.168.0.172
 - Panel Aux LAN Port (PCU) 192.168.0.174



These are the default IP addresses for the Kayenne system components as shipped from the factory.

The ClipStore is an option to the Kayenne/Karrera System comprised of a Grass Valley K2 Summit (4 channel) or a Grass Valley K2 Solo (2 Channel) stand alone server. When the Server is ordered as the ClipStore option, it will ship with a different software image including App Center Elite and a default IP address of 192.168.0.180. This address is different than the normal K2 IP address as shipped from the factory.

Starting with software version 2.0, the Image Store address will always be the Video Processor CPU address plus 1. You will no longer be able to set this address in the Kayenne menu. The display will show the address but be “greyed out” not allowing a change to be made. This address can be changed or entered in the Video Frame Web Browser tool. (See next page plus Panel & Frame chapters for Web Browser addressing examples.)

The Karrera Panel also has a default shipping IP address of 192.168.0.173. This way it is plug and play with existing stock Kayenne systems.

Eng Setup - Node Settings – Naming & Addressing (2)

Starting with Version 2 Software, the Image Store IP address can no longer be set here. The default address will be the Frame IP +1. This can also be set using the Web Browser.

1. Enter Clip Store IP Address
2. Select "Enable" to activate
3. Indicator will be green if communicating correctly



2 - 15

Eng Setup menu showing Node settings for each suite and Suite names.

Frame Proc and Image Store IP addresses are set using a web browser below. These may be set to any legal address upon the same network.

Entering the "Frame IP Address" into the above window tells the menu processor how to communicate with the frame.

The displayed Image Store IP address (shown in grey) will be read automatically from the frame. This, again, tells the menu how to communicate with the Image Store Processor.

Clip Store Enable & Address is new in Version 2.0. Camera Enable was added in version 3.0 (See Panel chapter 5 for New screen).



Kayenne Web Access

Frame Network Addresses

[Software Versions](#)

[Frame Status](#)

[Frame Message Log](#)

[Frame Network Addresses](#)

[Frame Date and Time](#)

[Frame Description](#)

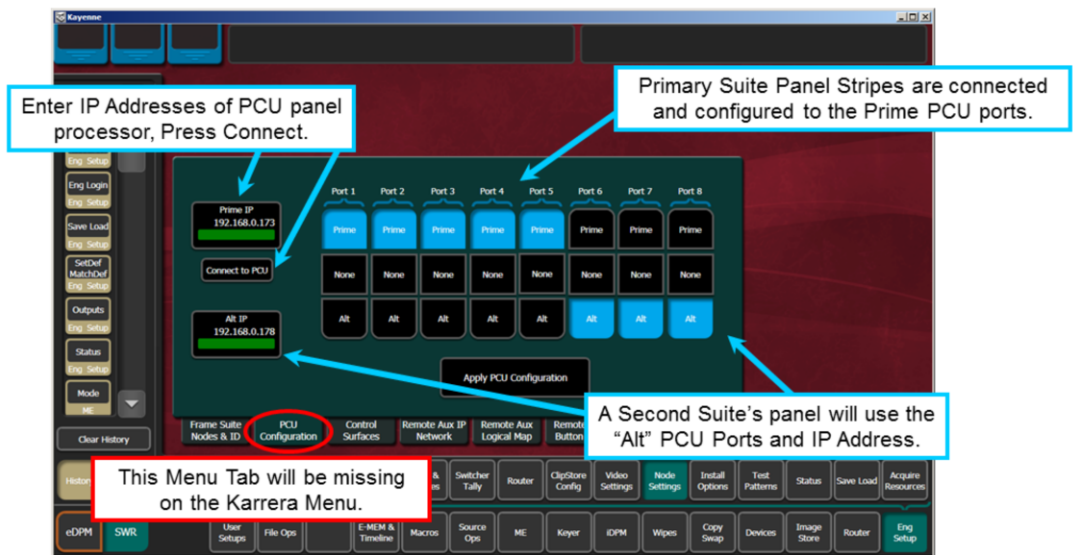
Facility LAN

IP Address : 192.168.0.170
Subnet Mask : 255.255.255.0
Gateway IP : 192.168.0.1

Image Store LAN

IP Address : 192.168.0.171
Subnet Mask : 255.255.255.0
Gateway IP : 192.168.0.1

Eng Setup - PCU Configuration – Kayenne Only



2 - 16

Eng Setup Menu above showing PCU configuration for a standard 4 ME panel in one suite and an additional 2 ME panel as a second control surface in one suite or as a second suite.

See Chapter 5 (Panels) for correct port connection and mapping procedures.

The top ME Stripe will always connect to the lowest port number. In this case, Stripe #1 (top ME Stripe) is connected to port #1, The next stripe below is connected to port #2 and so on.

The Aux Panel Stripe will always be the last port used for a panel. In this case it is connected to Port #5.

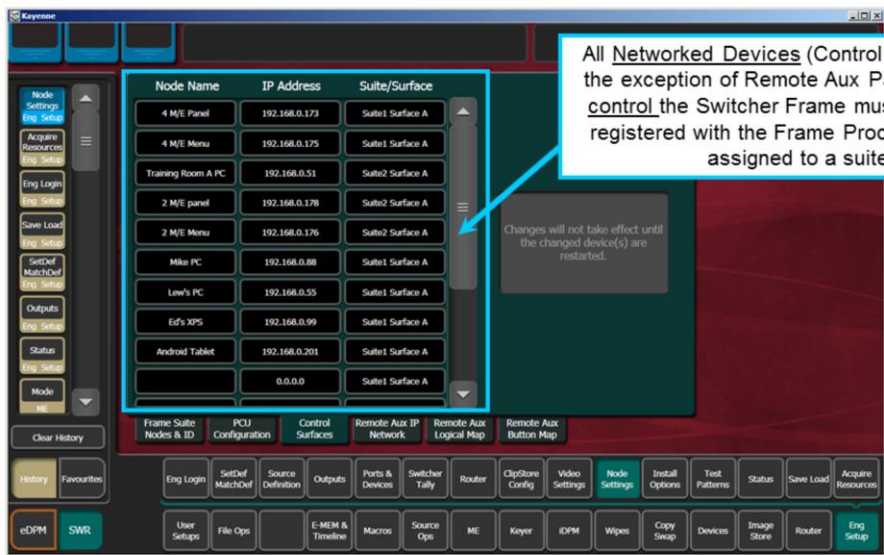
The image to the right shows a PCU with 5 stripes connected: 4 ME Stripes and 1 Aux Stripe. For this image, the Configuration screen above would display "None" for Ports 6, 7 and 8. The "Alt IP" window would display "0.0.0.0".



The "Alt IP" address is entered ONLY when using a second control surface. In other words, a second panel connected to the same PCU as the primary panel.

The PCU and Frame Processor use this "Spoofed" IP address to communicate with the second panel as if it had its own Panel processor and NIC. But as the one PCU processor controls both panels, this allows the commands and tally to be differentiated. *** Do NOT try to change the IP address on the second panel. It must always read the same as the Primary IP*.**

Eng Setup - Node Settings - Control Surfaces



Node Name	IP Address	Suite/Surface
4 M/E Panel	192.168.0.173	Suite1 Surface A
4 M/E Menu	192.168.0.175	Suite1 Surface A
Training Room A PC	192.168.0.51	Suite2 Surface A
2 M/E panel	192.168.0.178	Suite2 Surface A
2 M/E Menu	192.168.0.176	Suite1 Surface A
Mike PC	192.168.0.88	Suite1 Surface A
Lew's PC	192.168.0.35	Suite1 Surface A
Ed's XPS	192.168.0.99	Suite1 Surface A
Android Tablet	192.168.0.201	Suite1 Surface A
	0.0.0.0	Suite1 Surface A

All Networked Devices (Control Surfaces with the exception of Remote Aux Panels) that will control the Switcher Frame must be listed or registered with the Frame Processor and be assigned to a suite.

Changes will not take effect until the changed device(s) are restarted.



Eng Setup menu showing Node settings for each control surface.

These are the devices that are allowed communication with the Frame Processor. Only devices that originate control or commands are entered here.

This table may be accessed and modified by any computer running the menu application.

These devices are stored on the Frame Processor in the Compact Flash Card as part of our NV RAM.

When Clearing NV RAM, this table will be deleted. Ensure you have this information backed up.

A PC running the Menu Application may connect to the frame processor without being in this table. Enter the PC name and IP address and reset the Menu Application in order to operate the system from this PC.

Eng Setup - Status

Status Information & Windows Controls

Node Name	Control Surface	Node Type	IP Address	Version	Date
Training RM A	1 A	Video Proc Frame	192.168.0.120	V3.0.0	Jan 19 2013
Image Store	1 A	Image Store	192.168.0.171	V3.0.0	Jan 19 2013
4 M/E Panel	1 A	RT Panel	192.168.0.171	V3.0.0	Jan 19 2013
Lower PC	1 A	Menu Panel	192.168.0.171	V3.0.0	Jan 19 2013
Training Room A PC	2 A	Menu Panel	192.168.0.55	V3.0.0	Jan 19 2013
4 M/E Menu	1 A	Menu Panel	192.168.0.175	V3.0.0	Jan 19 2013
2 M/E panel	1 A	RT Panel	192.168.0.176	V3.0.0	Jan 19 2013
Clip Store	2 A	Clip Store Summit	192.168.0.180	V7.2.7.1403	Jan 19 2013

List of Nodes currently connected to the frame

Versions and Build Dates in RED indicate different from Frame Software Version

Status Information & Windows Controls

- Menu Version: Ver V3.0.0
- Memory Usage: Memory 3.81%
- Capture Software Diagnostic Data
- Minimize Menu
- Restart or Exit Menu
- Shutdown Menu Computer

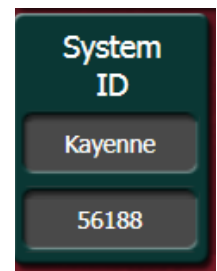


2 - 18

Eng Setup Status menu showing which devices are communicating with the frame. All items shown are based upon the frame processor polling all devices for their status. Any device shown in red indicates a different software version than that of the frame processor.

Starting with Version 4.0 software, Karrera Panels are compatible with the Kayenne Frame. The menu is the same for both Kayenne and Karrera with only a couple of small differences.

The menu status page (shown above) will Display “Kayenne” if the system (frame) is licensed as a Kayenne. See the “Eng Setup / Install Options” menu to see this display at right. If it shows “Karrera” (instead of Kayenne), the system is licensed as a Karrera and the menu Status page (regardless of what panel it is tied to) will Display Karrera. One way to determine if the menu is acting and displaying correctly is to check the “Eng Setup / Node Settings” menu. Look at the second tab: If the “PCU Configuration” tab is present, the menu panel is associated to and most likely talking with a



Kayenne Panel processor. If the second tab is “Control Surfaces”, the menu is talking to a Karrera Panel processor. To verify that the menu application is talking to the correct panel, view and verify that the correct panel IP Address is displayed in the “Associated Panel IP” window of the “Eng Setup / Node Settings / Frame Suite Nodes & ID” menu. Having this address correct allows the menu to verify which type of panel it is communicating with as well as allowing D-Pops and Macro Attach to function.

Eng Setup - Video Settings - 1.5G Frame

1. Select Reference to set the operating mode of the switcher

Timing Analyzer allows input signal timing to reference, to be checked

2. Sync Reference window will indicate new source and if it is locked or not

3. Reboot of the Video frame required after lock status acquired

The screenshot shows the 'Eng Setup' menu with 'Video Settings' selected. The 'Sync Reference' window is highlighted, showing 'Status: Locked' and 'Operating Mode: 1080/29.97Hz'. The 'Timing Analyzer' window is also visible, showing 'Serial Input Autotiming' data. The 'Matte Limiting' window shows 'None' selected. The 'M/E Output Blanking' window shows 'Pass Ancillary Data' selected. The 'System Timing' window shows 'Hori.: 0.000' and 'Vert.: 0'. The 'Default iDPM' window shows 'Crop Edge' settings.

Eng Setup menu showing Video Settings for Switcher format and the Timing Analyzer. Switching between HD and SD requires the frame to be rebooted.

- SD Analog refers to Color Black.
- HD Analog refers to Tri-Level Sync.
- HD & SD Digital allows for one input connector to be selected as the reference source.

System Timing is a global adjustment compared to the switcher reference. The switcher timing may be moved in reference to the sync input.

Matte Limiting refers to the limiting applied to the internal Matte generators

- "None" will allow any color matte levels to be created, legal levels or not.
- "Decod" keeps all matte generators to colors that will decode to legal RGB values.
- "Transmit" refers to limiting the matte generators Luma and Chroma levels to that of an Analog legal level signal required by an analog transmitter or studio systems to prevent over modulating.
- "Both" is combines Decode and transmit limitations to Decode and keeps all mattes legal for RGB and Analog levels.

ME Output blanking passes (Pass) or strips (Regen) all vertical and horizontal Ancillary Data. This included any EDH packets and Embedded Audio. Default iDPM allows for the setting of global crop edges.

Eng Setup - Video Settings - K-Frame v5.1

The screenshot displays the 'Eng Setup - Video Settings - K-Frame v5.1' interface. The interface is divided into several sections:

- Left Sidebar:** Contains navigation buttons for Video Settings, Test Patterns, Library, ClipStore, Images, Backup & Restore, Suite Props, Install Options, and Clear History.
- Reference Sync Selection:** Includes a 'Frame Status' indicator (currently 'Locked') and an 'Input Sync Rate' set to '1080/29.97Hz'.
- Frame Operating Mode:** A grid of buttons for various video standards, including 525i, 625i, 720p, 1080i, 1080p-A, 1080p-B, and 1080p-H. A callout points to the 1080p-A button with the text: '2. Select the operating mode of the switcher'.
- Timing Analyzer:** Located in the top right, it shows 'Source' 3, 'Timing Window' (1080i 29.97Hz, +/- 6.16µSec), and 'Format' (1080i/sf 29/30, Horiz -0.027 µSec, Vert 0 lines). A callout points to this section with the text: 'Use the Timing Analyzer to check the timing of each Source'.
- Status Bar:** At the top right, it displays 'Frame Op Mode 1080i 29.97Hz : Ref Sync 1080i 29.97Hz'. A callout points to it with the text: 'Status bar shows change of state'.
- Bottom Section:** Includes 'Output Blanking' (Pass, Ancillary Data, Regen, Blanking), 'Matte Limiting' (None, Decod, Transm, Both), 'Command Processing' (Any Field, Even Field, Odd Field), and 'System Timing' (Horiz 0.000, Vert 0).
- Bottom Buttons:** A row of buttons for eDPM, SWR, User Setup, File Ops, E-MEM & Timeline, Macros, Source Ops, ME, Kayer, IDPM, Wipes, Copy Swap, Devices, Image Store, Router, and Eng Setup.

Callouts provide additional instructions:

- 'Sync Reference window will indicate if the frame is locked or not.' (points to the Frame Status indicator)
- '1. Select a source if locking to an input signal' (points to the Input Sync Rate dropdown)

The Grass Valley logo is visible in the bottom left corner.

Eng Setup menu for K-Frame.

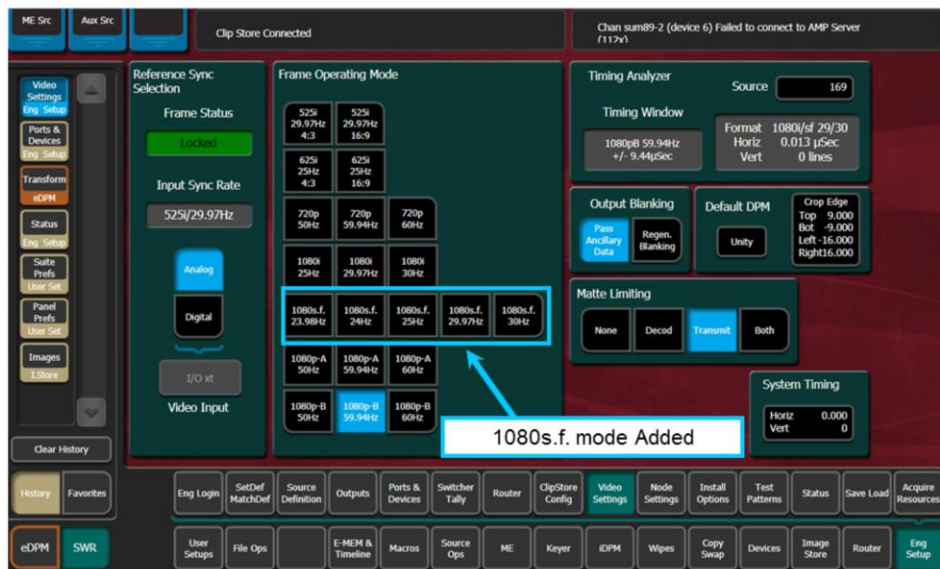
Only 1 Analog or internal source reference is required.

The frame operating modes now include the 1080p A and 1080p B standards.

Switching frame operating modes will cause the switcher to reset. Any Effects are retained.

A slightly different arrangement of the timing analyzer has been implemented.

Eng Setup - Video Settings v6.0 - 1080 sf modes



Eng Setup/ Video Settings menu for K-Frame.

Only 1 Analog or internal source reference is required.

The frame operating modes now include the 1080p A and 1080p B standards.

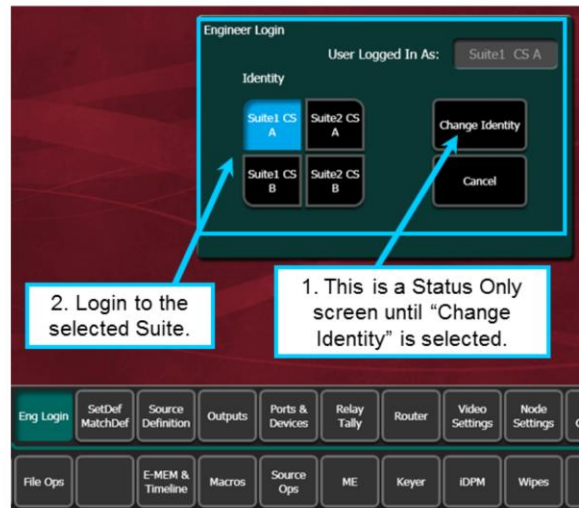
Switching frame operating modes will cause the switcher to reset.

Any Effects are retained.

A slightly different arrangement of the timing analyzer has been implemented.

Eng Setup - Eng Login

- No password is required to log in to a suite
- There are 2 suites
- Suites can be named under: Eng Setup / Node Settings
- There are also 2 Control Surfaces (CS) A and B to allow for 2 possible configurations per suite for different panel layouts
- The default Suite for a Menu is set under: EngSetup / Node Settings / Control Surfaces

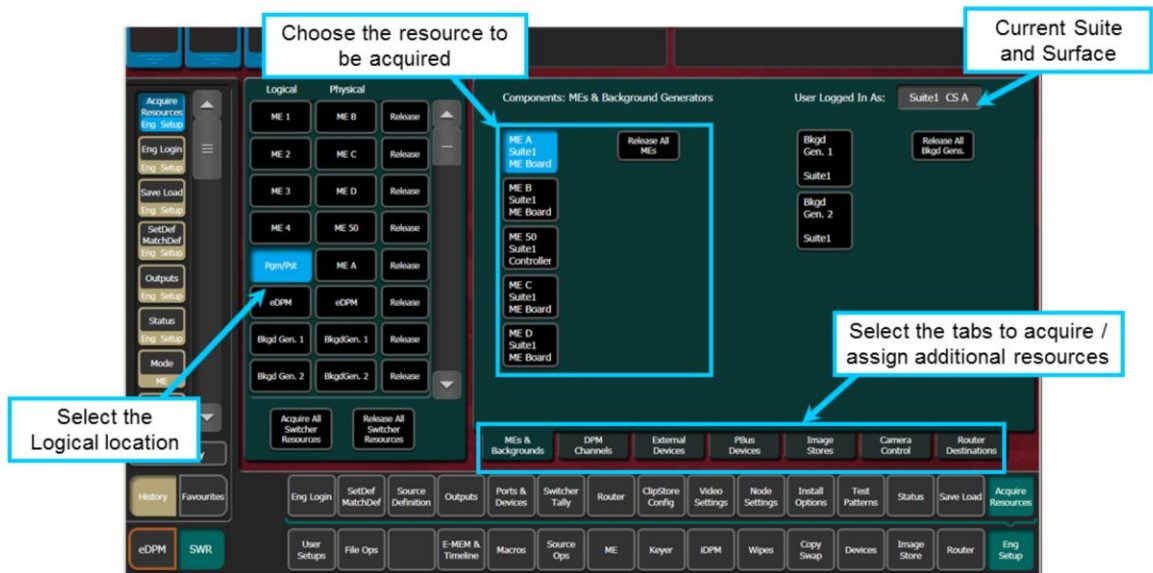


Eng Setup, Eng Login screen.

Control depends on which Suite the menu is logged in to, not which Suite the menu is assigned to.

Logging into a different Suite will allow this Menu to modify the parameters of the other Suite. This is a temporary operation and the Menu will return to the default Suite when a Menu App or the frame is restarted.

Eng Setup - Acquire Resources - 1.5 G frame

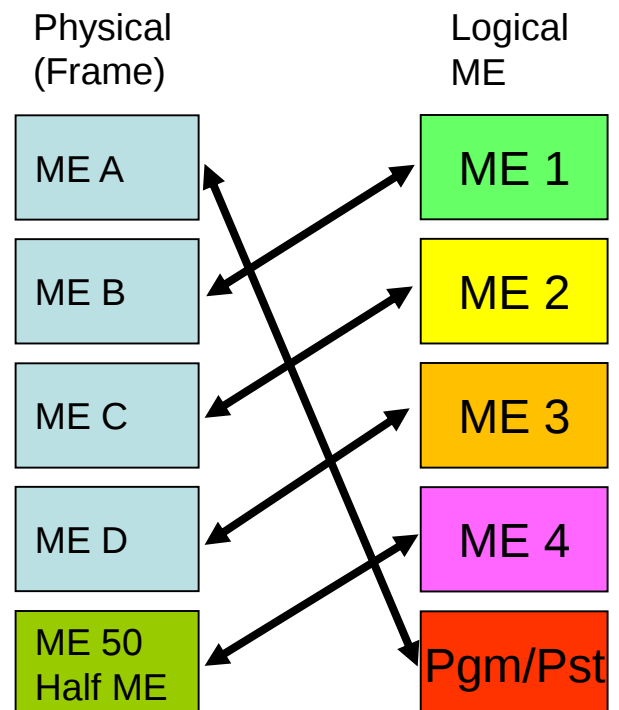


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Eng Setup menu showing Resource Assignments.

This menu allows the EIC to:

- Name the Physical ME boards in the Video Frame by ME number.
- Assign ME function to different Control Surfaces within one Suite or to a separate Suite.
- Assign standard features such as Background Generators or Device Control channels to different Control Surfaces or Suites.
- Assign licensed features such as Chroma Key, ClipStore or Image Store channels to different Control Surfaces or Suites.



Eng Setup - Acquire Resources - 3G K-Frame v6.0

Current status of the Logical Resources assigned to this suite

Acquired iDPM channels can be assigned to the eDPM or to the ME pool

State of the switches Physical Resources

Select the tabs to Release or Acquire additional resources

grass valley
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Eng Setup menu showing Resource Assignments for the K-Frame.

Note the 10 channels of Image Store, 4 ME boards with an A and B per ME board.

Note that any ME can be assigned as an eDPM (1 per Suite)

Note that the number of iDPM channels acquired is shared between the MEs and the eDPM, out of the number of channels available in the current Suite.

ME-CT is the Controller ME.

Additional buttons are added in v7.0 to assign an ME to the Multiviewer.

Eng Setup - Acquire Resources - 3G K-Frame v 7.0

Logical Resources

Physical Resources

User Logged In As: Suite2 CS A

MultiViewer Options added in v 7.0

State of the switchers Physical ME Resources

Channels can be:
Acquired
No Suite
NL – Not Licensed
NP – Not Present

Number of MultiViewers available (v 7.0)

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ME A, B, C, D Can be used as MEs, eDPM's or as a MV depending on licensing

ME-CT can be used as an ME or MV but not as an eDPM.

MX-MV only exists in the Large Frame and can only be used for MV (On Controller card). It will appear 'greyed out' in the Compact Frame.

ME hardware can be used as MV without an ME License.

The eDPM requires and ME license as well as an eDPM license.

Example shows a 5 ME switcher with an eDPM and 4 MultiViewers in Suite 2

iDPM licenses depend on presence of physical hardware.

Eng Setup - Acquire Resources - 3G K-Frame v 7.0 (2)

Logical Resources

Physical Resources

User Logged In As: Suite2 CS A

State of the switchers Physical IS Resources

Image Store and ClipStore Channels can be assigned to either Suite

Image Store Memory can be assigned in 1GB increments between Suites

Image Store Memory

Units: 10 Available: 1

Release Selected

Release All In Group Acquire All In Group

Effects, Stores & Viewers PBus Devices External Devices Router Destinations Camera Control GPI Outputs

Eng Login SetDef MatchDef Source Definition Outputs Ports & Devices Switcher Tally Router ClipStore Config Video Settings Node Settings Install Options Test Patterns Status Save Load Acquire Resources

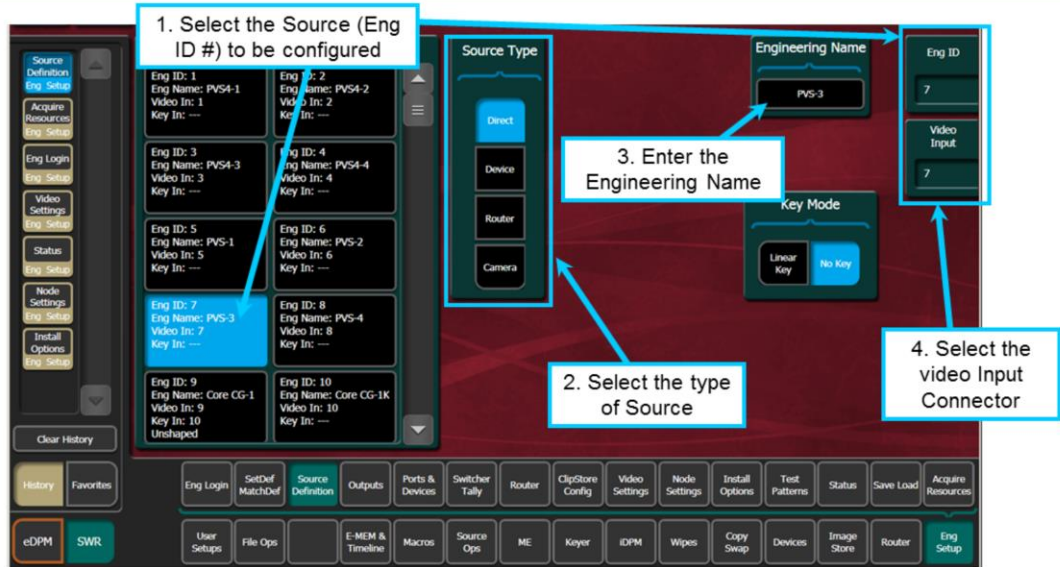
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The Physical Image Store channels (A-J) can be assigned to any logical IS channel 1-10.

Memory allocation allows the memory to be partitioned between the 2 Suites in 1GV increments

Eng Setup - Source Definition (1)



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Eng Setup menu showing Source Definitions for a Keyed Source.

The Kayenne Frame has a list of 96 Engineering Source IDs. The K-frame list goes to 300 Source IDs.

The K-frame has a larger the number of sources available, 192 (160 + 32 Modular) instead of 90 for the standard Kayenne frame.

Eng Setup - Source Definition (2)

7. The Engineering Name will be the Default Source Name until other Display Names are created

6. The Source List windows will Display the configuration information

5. Add Key information (if required)

Key Mode: Linear Key, No Key, Shaped Video, Set Unkey

Clip High: 100.0%, Clip Low: 0.0%

Source List:

Eng ID	Eng Name	Video In	Key In
Eng ID: 1	Eng Name: PVS4-1	Video In: 1	Key In: ---
Eng ID: 2	Eng Name: PVS4-2	Video In: 2	Key In: ---
Eng ID: 3	Eng Name: PVS4-3	Video In: 3	Key In: ---
Eng ID: 4	Eng Name: PVS4-4	Video In: 4	Key In: ---
Eng ID: 5	Eng Name: PVS-1	Video In: 5	Key In: ---
Eng ID: 6	Eng Name: PVS-2	Video In: 6	Key In: ---
Eng ID: 7	Eng Name: PVS-3	Video In: 7	Key In: ---
Eng ID: 8	Eng Name: PVS-4	Video In: 8	Key In: ---
Eng ID: 9	Eng Name: Core CG-1	Video In: 9	Key In: 10 Shaped
Eng ID: 10	Eng Name: Core CG-1K	Video In: 10	Key In: ---



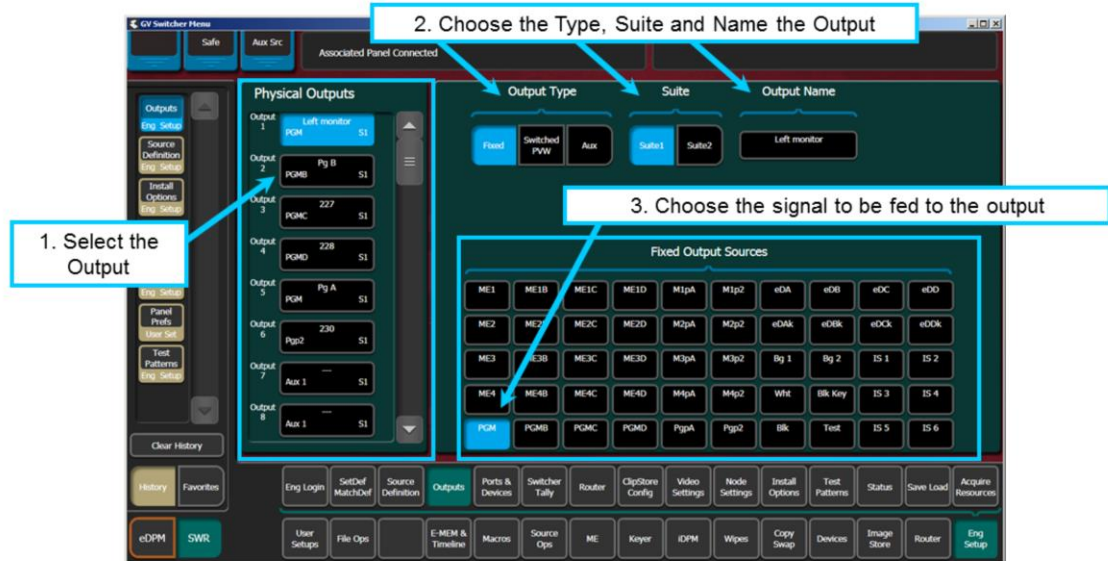
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Eng Setup menu showing Source Definitions for a Keyed Source.

For each Keyed Source select the Shape mode to match the output of the device being configured. For an explanation of shaping see the appendix.

The Keyed source's key settings can be adjusted with the Clip Low and Clip High controls, if the levels are different from the standard defaults so that it will key correctly when in 'Fixed Linear' key mode.

Eng Setup - Outputs (1)



Eng Setup menu showing Fixed (Internal) output signal assignments.

Outputs may be assigned to either Suite 1 or Suite 2.

Each suite may have a "Switched Preview or Program Out" without affecting the other suite.

The "Output Name" is used for reference and serial tally output only.

Eng Setup - Outputs (2)

Each suite can have its own Aux bus 1

Aux busses are assigned to Suites and can be paired

46 Logical Aux busses can be used (96 in K-frame)



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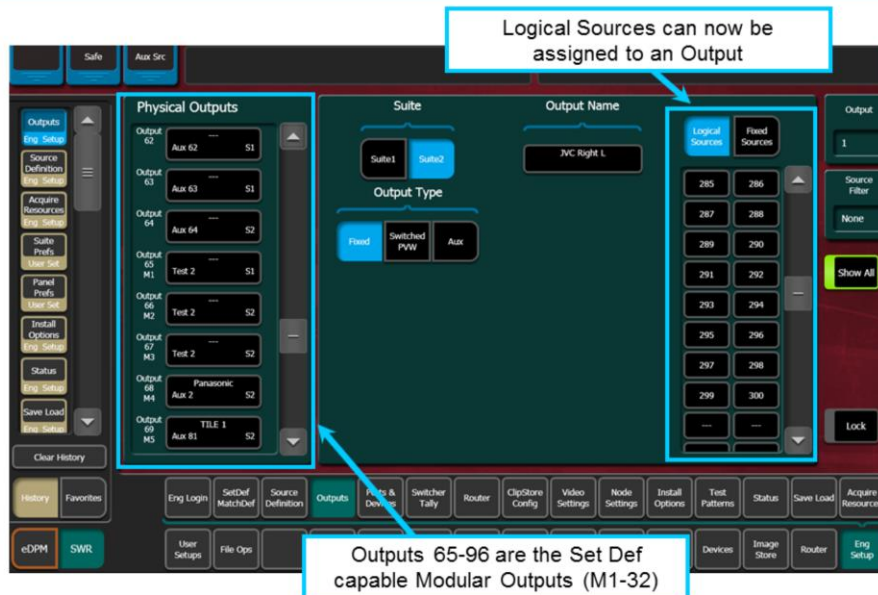
Eng Setup menu showing Aux bus assignments.

Aux Busses may be paired and called “A and B” channels. The odd number output is first configured as the desired Aux Bus number. Then selecting “Aux Bus Pair” will make that channel the A channel and the next output number will become the same number but it will become the B channel. This is most often used for Video + Key pairs.

ClipStore input or record channels are also configured here. This is the Aux bus outputs that feed the record channels of a ClipStore option.

K-frame has 96 Logical Aux busses per Suite.

Eng Setup - Outputs (3) - K-Frame

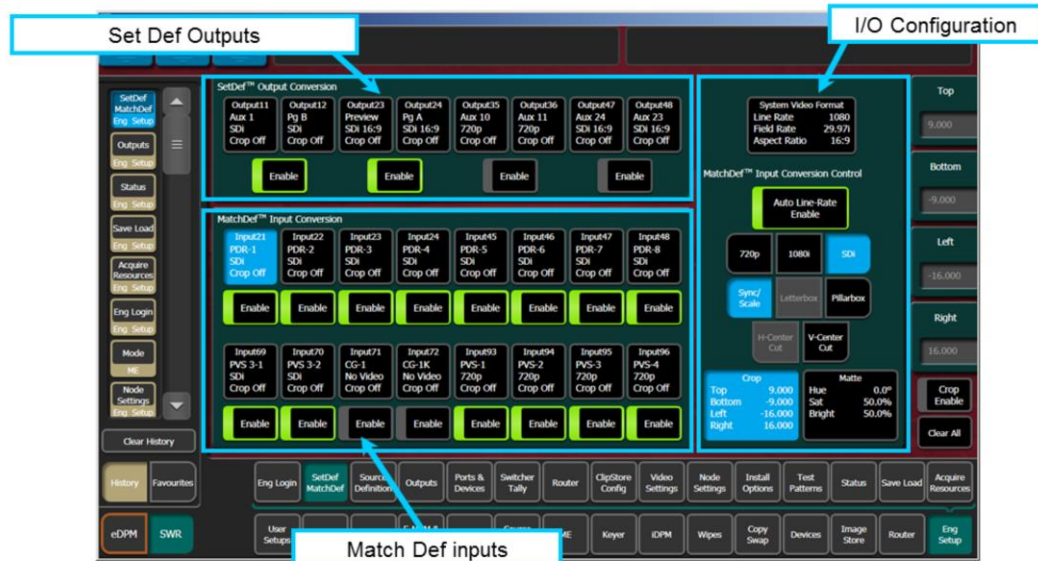


Outputs 65-96 (M1-M32) are the Set Def capable Modular Outputs. The numbers are the same for both small and large frame sizes. They can be named and assigned to either Suite.

Refer to the Set Def menu to determine the status of the Set Def outputs.

Outputs can also now be assigned a direct Input Source as a feed if required.

Eng Setup - SetDef - Match Def - 1.5G frame



Eng Setup menu showing Set and Match Def configuration.

Set Def is the feature that allows up to 8 outputs to be format converted from that of the switcher. If the switcher is running in 1080i / 59.94, these outputs (in pairs) may be configured to output 720p / 59.94 or 480i / 59.94 (SDI 525). The system will not rate convert from 59.94 to 50 however.

Match Def allows for up to 16 physical inputs to be format converted from that of the switcher. Again the inputs must be of the same Vertical rate.

If Set Def or Match Def are not licensed, these inputs and outputs will operate in the same format of the switcher, like any other input or output.

“Set01 & Set02” are always the top ME board (A) and the last 2 outputs of the board (11 and 12). (Set3 & Set4: ME B, outputs 23 & 24; Set5 & Set6: ME C, outputs 35 & 36; Set7 & Set8: ME D, outputs 47 & 48).

Set Def Options are always configured in pairs and must operate in the same video format.

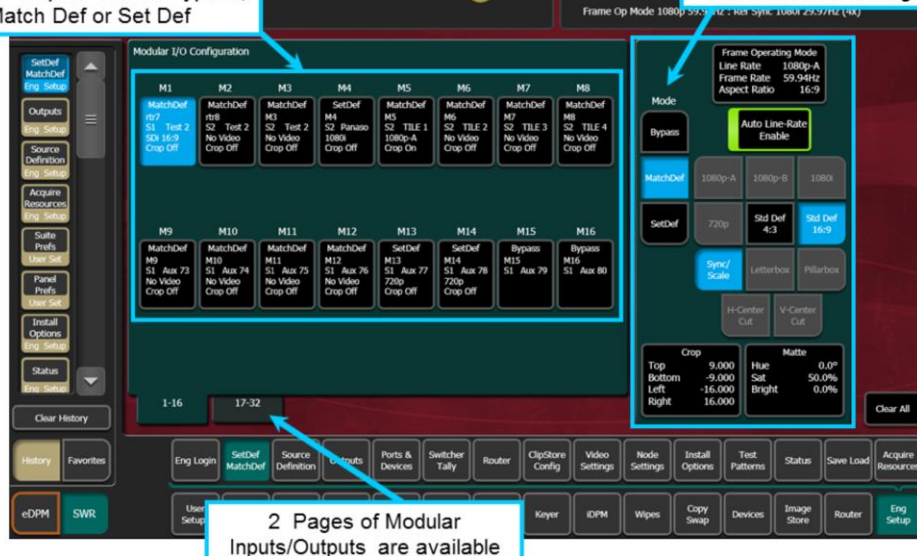
Match Def and Set Def options will introduce 1 frame of video delay.

The Engineering Set Def Match Def menu overrides the operator menu under Source Ops.

Eng Setup - SetDef - Match Def - K-Frame

Modular Outputs can be Bypass, Match Def or Set Def

I/O Mode and Configuration



2 Pages of Modular Inputs/Outputs are available



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Modular I/O modules have 3 modes. Bypass, Match Def and Set Def.

In Bypass mode both the associated Input and Outputs will be in Bypass. (ie In 161/Out 65)

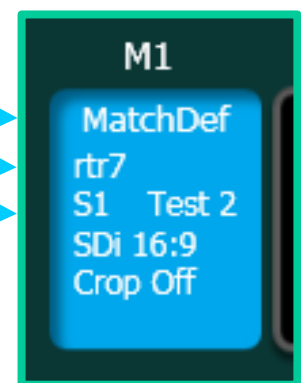
In Match Def mode the Input conversion will be active and the Output will be in Bypass

In Set Def mode the Output conversion will be active and the Input will be in Bypass

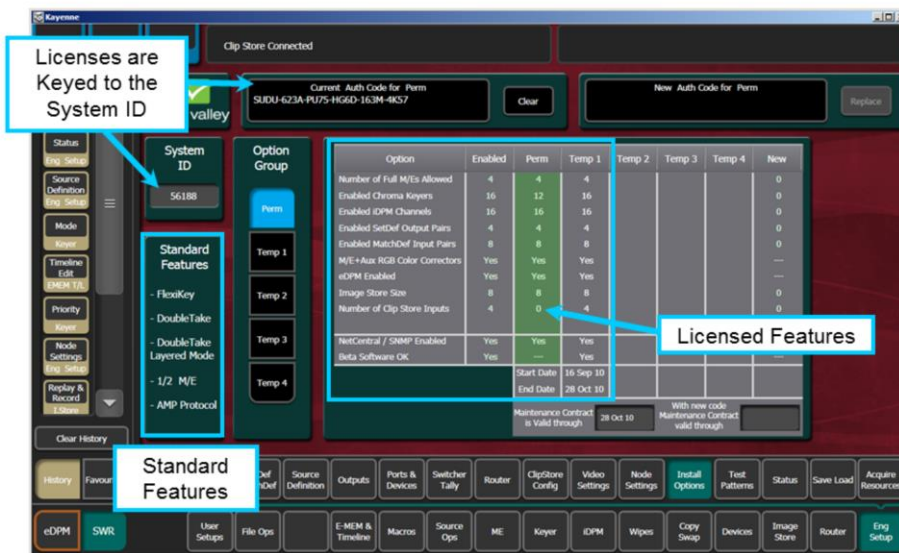
Input and Output formats now include 1080p-A and 1080p-B, This is active regardless of the presence of a 1080p license.

Inputs are numbered 161-192. Outputs are numbered 65-96.

Mode →
Match Def Source →
Set Def Output →



Eng Setup - Kayenne Install Options, Pre-Version 4



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Eng Setup / Install Options menu showing Installed options for a Kayenne system running version 2 software. Version 3 added the Camera integration enable. This menu changed in appearance with Version 4. The new menu looks identical to the next page but will list Kayenne in the System ID box for Kayenne Licensed systems.

The system ID number is created from the Frame Serial Number and is the last 5 numbers.

The system will leave the factory with a permanent “Perm” License. At any time, a new set of features may be requested or purchased. This will require either a new Perm license or a temporary license.

A “Temp” license will add features to the Perm license.

A “Temp” license will always have an expiration date. This is the last calendar day these additional features will operate. The license expires at midnight at the end of the expiration date. **The “temp” features will NOT expire or turn off until the frame is reset after the expiration date.**

When a “Temp” license is within 2 days of expiration, the menu panel may start to display warning messages. These messages are not currently working in software versions 2 and 3. When the temp license expires, the Perm license is still in affect.

System ID and License information is stored on the Video Frame back plane PCB. This way, boards may be removed and replaced without affecting the system permissions and ID.

Eng Setup - Karrera Install Options, Version 4.0

Option	Enabled	Perm
Number of Full M/Es Allowed	4	4
Enabled Chroma Keys	2	2
Enabled IDPM Channels	4	4
Enabled SetDef Output Pairs	4	4
Enabled MatchDef Input Pairs	8	8
M/E+Aux RGB Color Correctors	Yes	Yes
eDPM Enabled	Yes	Yes
Image Store Size	8	8
Number of Clip Store Inputs	0	0
Camera Integration Enabled	Yes	Yes
Flexi Key Enabled	Yes	Yes
Double Take Enabled	Yes	Yes
Half ME Enabled	Yes	Yes
Soft Panel Enabled	Yes	Yes
SNMP Enabled	Yes	Yes
Beta Software OK	Yes	Yes



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Eng Setup / Install Options menu showing Installed options for a Karrera system running version 4 software.

The Kayenne version of this menu will look the same but will show “Kayenne” in the System ID box. “Soft Panel Enable” has been added to Kayenne as has the System ID Type for 4.0.

Karrera and Kayenne have most all of the same features. Kayenne has more standard features where Karrera has them as options. You can see increased list.

The Karrera Soft Panel (KSP and listed in the license as Soft Panel Enabled) is new for version 4 software. This option, when licensed can run with either a Kayenne or Karrera system.

The system ID number is created from the Frame Serial Number and is the last 5 numbers.

The system will leave the factory with a permanent “Perm” license. At any time, a new set of features may be requested or purchased. This will require either a new Perm license or a temporary license.

A “Temp” license will add features to the Perm license.

A “Temp” license will always have an expiration date. This is the last calendar day these additional features will operate. The license expires at midnight at the end of the expiration date. **The “temp” features will NOT expire or turn off until the frame is reset after the expiration date.**

Eng Setup - K-Frame - Install Options, v 5.x, 6.x and 7.x

Option	Enabled	Total Licensed	Perm
Full MEs	8	8	8
Controller ME	1	1	1
ClipStore Channels	4	4	4
Image Store Cache Size (GB)	32	32	32
Chroma Keys	54	54	54
DPM Channels	16	16	16
RGB Color Correction	Yes	Yes	Yes
eDPM	2	2	2
FlexiKey™	Yes	Yes	Yes
DoubleTake™	Yes	Yes	Yes
Ethernet Tally	Yes	Yes	Yes
Soft Panel	Yes	Yes	Yes
SNMP	Yes	Yes	Yes
SetDef MatchDef Scalers	32	32	32
HD 1080p	Yes	Yes	Yes
2D DPMs	Yes	Yes	Yes
Image Store Movies	Yes	Yes	Yes
ME View	Yes	Yes	Yes
Multiviewer	4	4	4

In v7.0 ME View and Multiviewer added

Additional K-Frame Options include:

- 2D-DPMs All (54 max) or None
- eDPM (1 per Suite)
- 1080p HD capability
- Image Store Clip capability (Now called Movies) (v 6.0)
- Extra memory for the Image Store (32GB max)
- Ethernet Tally
- The ME View Option (added in v 6.0)
- The Multiviewer Option (added in v7.0)

Panel Prefs - Button Mapping

Each Bank can be Mapped differently

Button Count

Special Buttons allow for Delegation and Shift modes to be moved, or the assignment to be None

* 3 Different Button Mappings are remembered, 1 for each Panel Type (Select 15 for the KSP)



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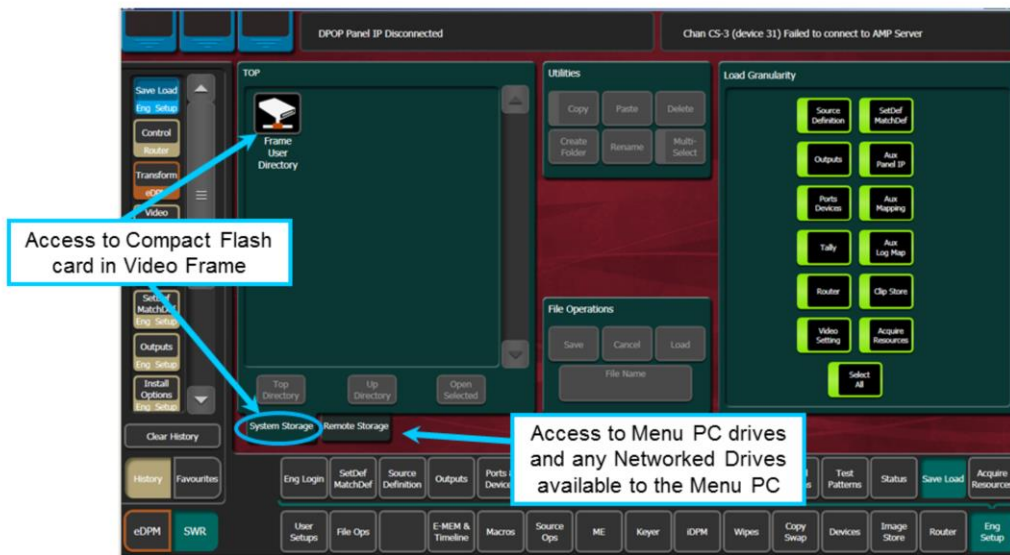
The Source List shows the sources based on their Engineering ID numbers.

Following the External Inputs are Virtual Sources and then the individual MEs, other internal sources and the Image Store outputs.

The Source Filter can be set to filter the names of the sources to show for example Cameras or VTRs.

* This menu operates the same for both Karrera and Kayenne. Use "15 in the Button Count section for the KSP (Karrera Soft Panel).

Engineering File Management



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Engineering setup or Configuration files may be stored (saved) to the frame Compact Flash card or to a drive of your choice.

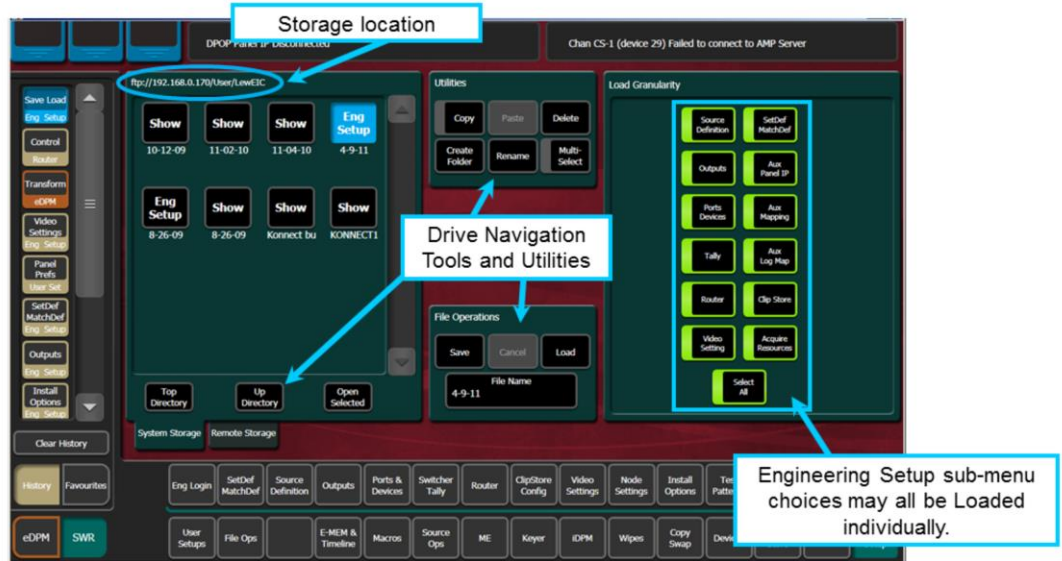
By selecting "System Storage" as seen above, you are choosing the Video Frame CF card as a file location.

By selecting "Remote Storage" you are choosing a networked drive as a file location. This may be the Kayenne/Karrera Menu Windows Processor in the PCU or any drive on a remote PC.

It is a idea good to save files to remote locations in addition to the system drive. When you exchange or update a Frame Processor module the saved Eng Setup files can then be loaded into the new module..



Engineering File Management



“Show” Files are a folder that may contain several different user or “TD” saved files. These can be anything from Button Mapping to E-Mems, R-Mems, Macros etc.

Show files are saved in a similar “Save / Load” type menu under “File Ops”.

Engineering setup Files may be saved in File Ops as part of a Show or under Engineering Setup / Save Load as seen above.

It is recommended to save Engineering files daily as you are creating configurations or adding new hardware to the switcher’s operation.

Saving the engineering files with this menu is much faster than in File Ops as a Show File.