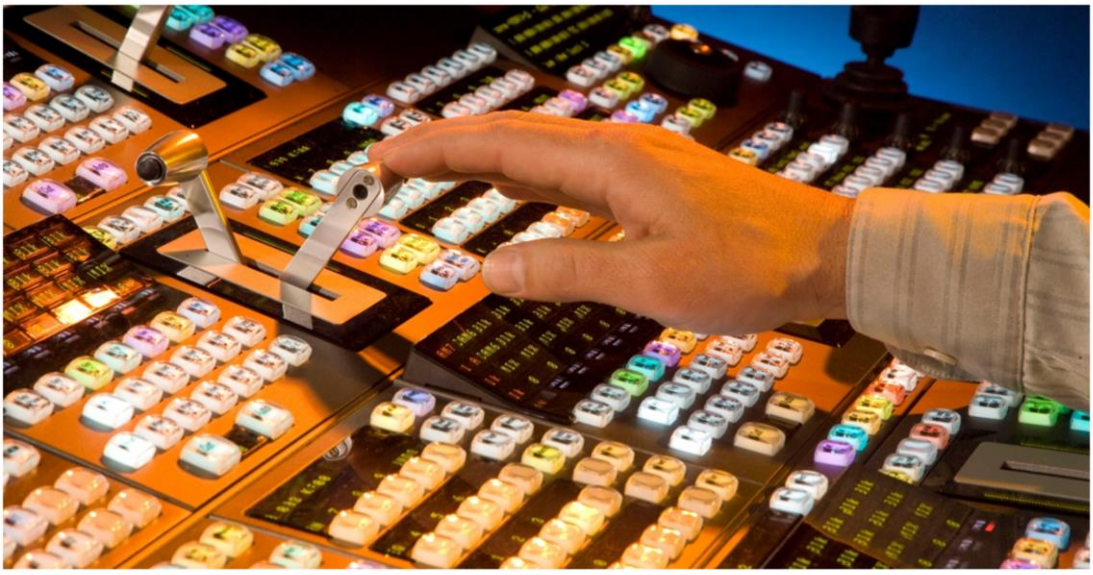
Section 3 – Karrera & Kayenne Survival Operations



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Section 3 – Karrera & Kayenne Survival Operations

- Source Selection Module
  - Delegations
- Transition Module
  - Display
  - Background Transitions
  - Key controls
- Multi Function Module
  - Keys, Mattes and Wipes
- Local E-MEM module
- Master E-MEM module
  - Basic Timelines
  - Basic iDPM
- Exercise

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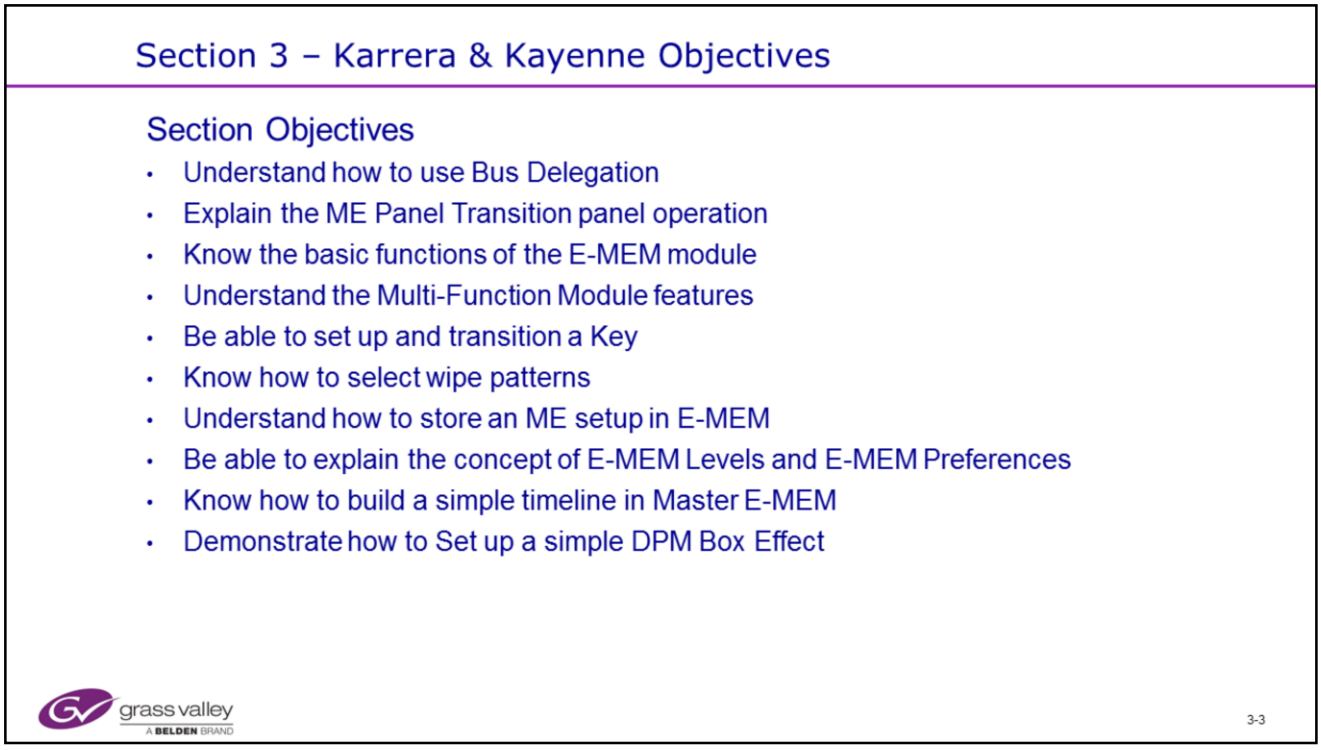
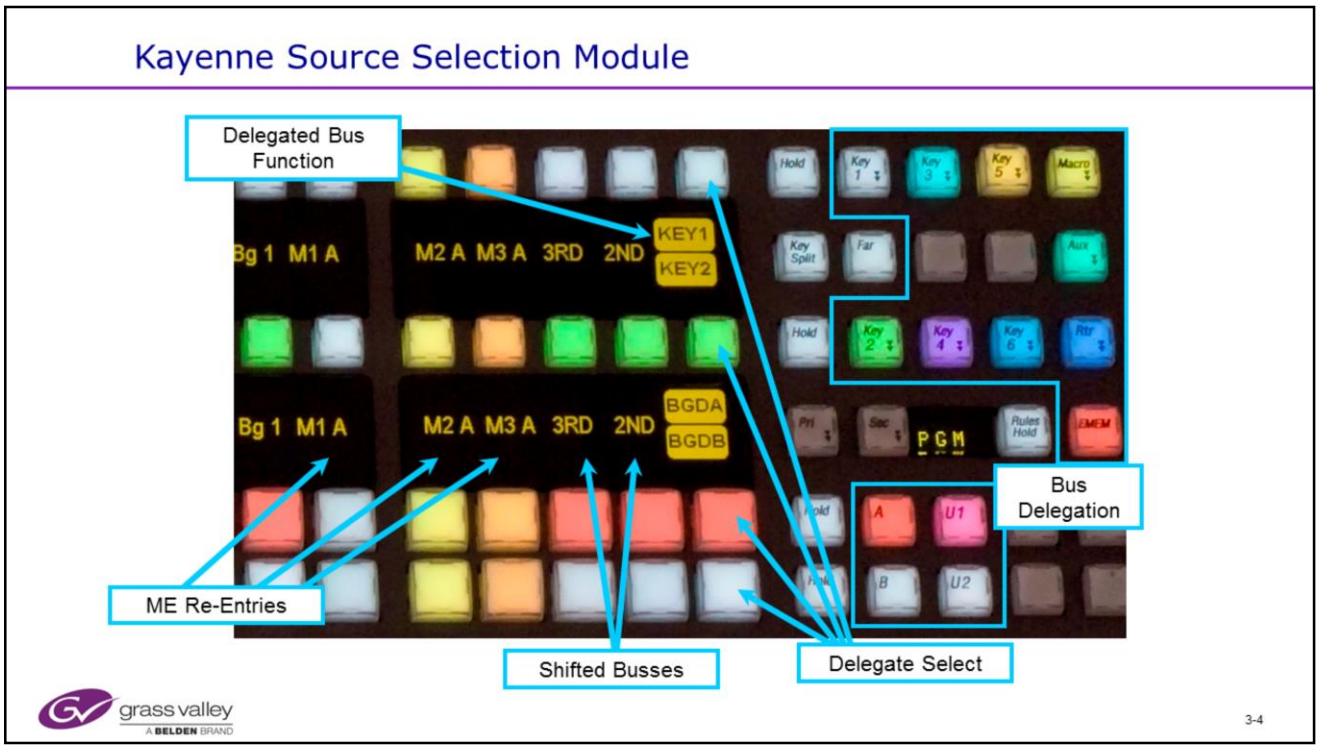
This section covers the layout and basic operation of switcher functions.

It is not an operators class and is provided to allow an engineer or technician to check out system operability.



• The Kayenne and Karrera systems use the same software and hardware platforms prior to version 5. Starting with Version 5, the new 3 GB compliant “K-Frame” will be available. The same hardware is used for Karrera and Kayenne Panels and Menus. Older systems will remain at version 4.x.

• This course is intended to cover all products and covers the differences between hardware and software as needed. When specifics are not called out, assume that they are the same for both products.



Bus Delegations include any of the 6 Keyers, 6 Background busses (A, B, C, D, U1, U2) Macro, Aux, Router and E-MEM. These delegations are remembered as part of Panel Memory. Some bus delegations are not possible for some busses.

All bus sources including ME reentries, 2nd and 3rd Shift buttons and the bus delegate function can be mapped as needed to any button.

A single press and hold of the 2nd or 3rd (Shift) CrossPoint buttons above will temporarily change the selected bus to a shifted set of sources.

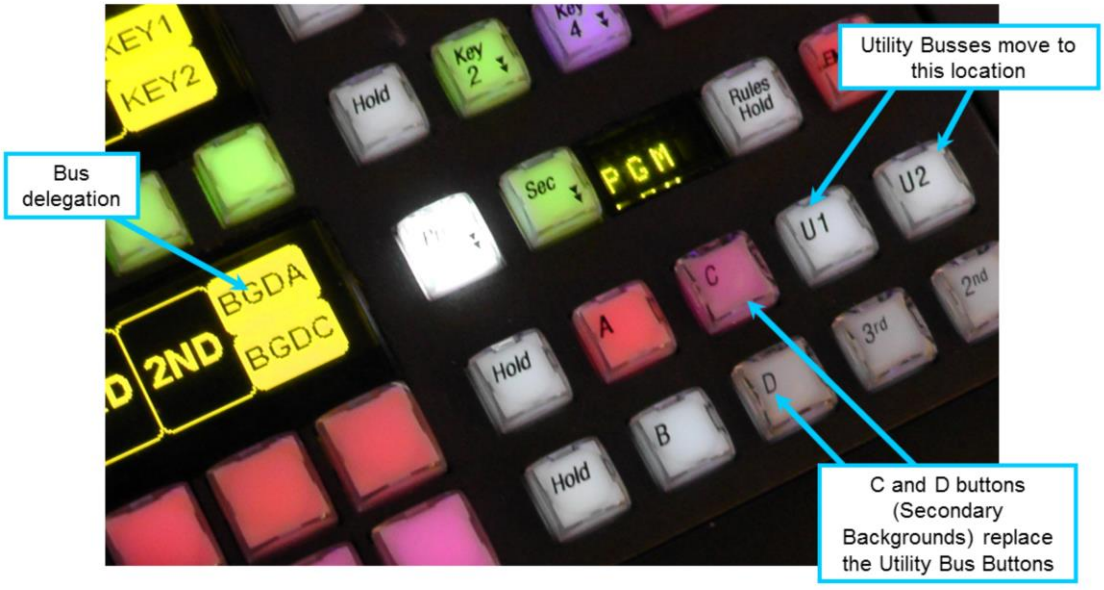
DPOP (Double Press Operation) will allow the user to lock certain buttons into another or second function. In some cases a DPOP will delegate a menu to the desired function. For example:

- DPOP a wipe key on any transition panel will select the wipe menu on the menu panel AND delegate that screen to the ME and Key or Background you are working with.
- DPOP the 2ND or 3RD CrossPoint buttons above will lock the bus into the 2nd or 3rd (shifted) source selections.

The Delegate Select buttons allow the user to change the function of a row of buttons. In the example above, the top row of white buttons is currently delegated to Key 1 Sources

To change the row delegation from Key 1 to Key 5 (or any other), press and hold the Delegate Select button for that row and while holding, select a choice from the Bus Delegation area. In this example, Key 5. Release buttons and display for the row will now show Key 5 instead of Key 1.

Kayenne Source Selection Module - K-Frame



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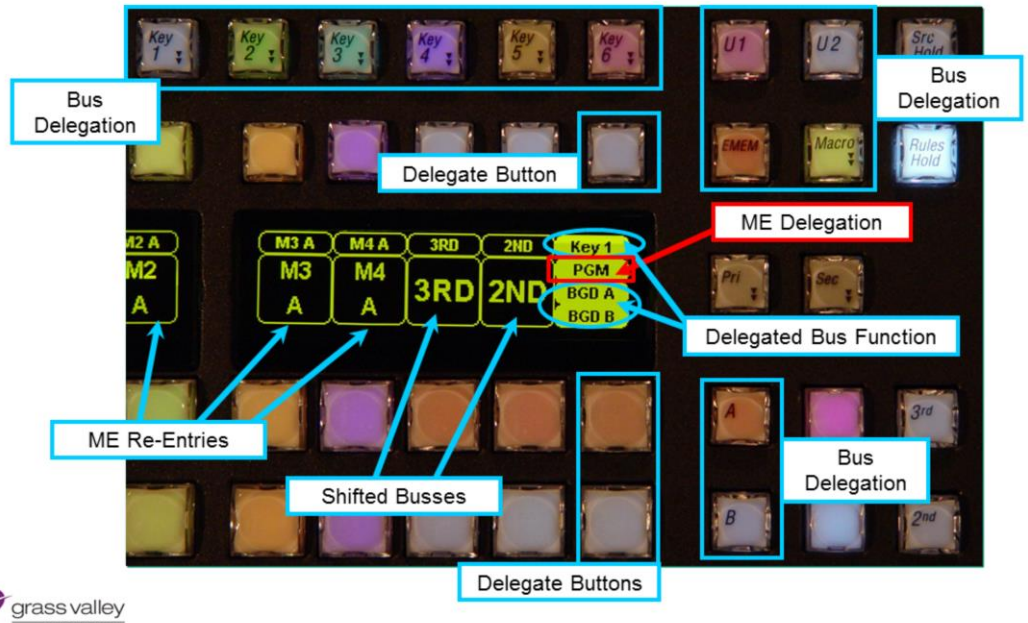
3-5

- The K-Frame has 2 new bus buttons, C and D, which replace the Utility busses as the Secondary ME backgrounds.
- The Utility busses are still available when needed.
- The Karrera panel has a similar arrangement.
- Bus delegation works as before.

Karrera Source Selection Module



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- All bus sources including ME re-entries, 2nd and 3rd Shift buttons can be mapped as needed to any button. Bus Delegate function buttons cannot be remapped or assigned to different locations.
- The delegated bus functions are displayed in the associated panel display.
- Holding down a Bus Delegation button provides temporary access to the selected bus for quick source selection. The display and bus colors will change to show the bus status.
- Holding down the Bus Delegation button while pressing the bus Delegate button changes the delegated bus assignment.
- Some bus delegations are not possible for some busses.

Karrera & Kayenne Transition Module

- Selecting Transition Components
  - Background (A/B), K1, K2, K3, K4, K5, K6
- Selecting Transition Modes
  - Mix
  - Primary and Secondary Wipes
  - User Transitions – Matte, FAM, NAM
  - Preset Black Transitions
  - Key Priority Transitions
- Previewing Transitions
- Setting Transition Rates
- Keyer Hot Cut/Mix Buttons
- Combining operation of Keys and Background Transitions

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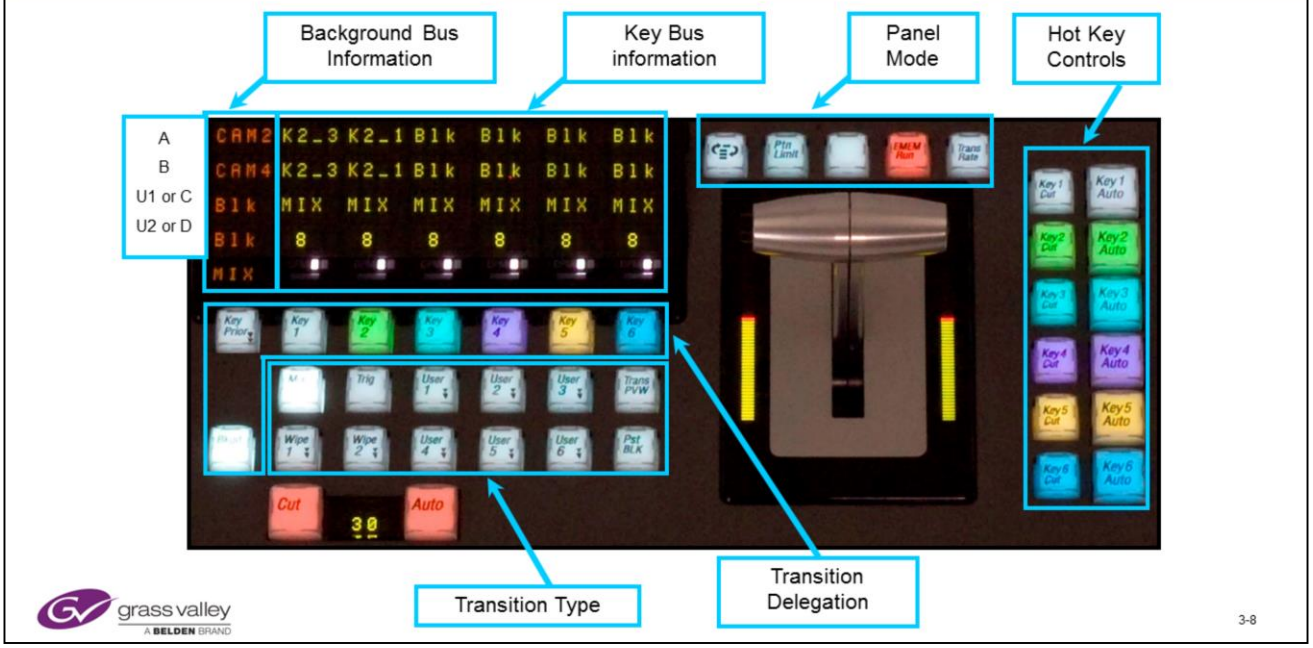
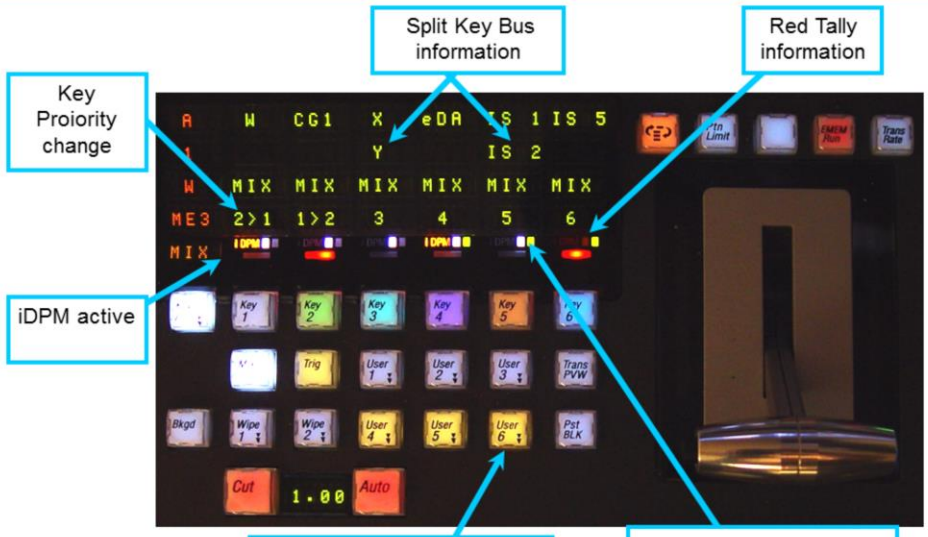
Kayenne Transition Module (1)



- Transition delegation controls what will change when a transition is made.
- The image resulting from delegation selections is shown on the ME Look Ahead Preview output.
- The Transition type selects the type of transition – Mix , Wipe, User etc.
- Display shows the sources on the A, B, U1, U2 (or C and D for K-frame switchers) and Key busses.
- Transition type, rates and status is also displayed.

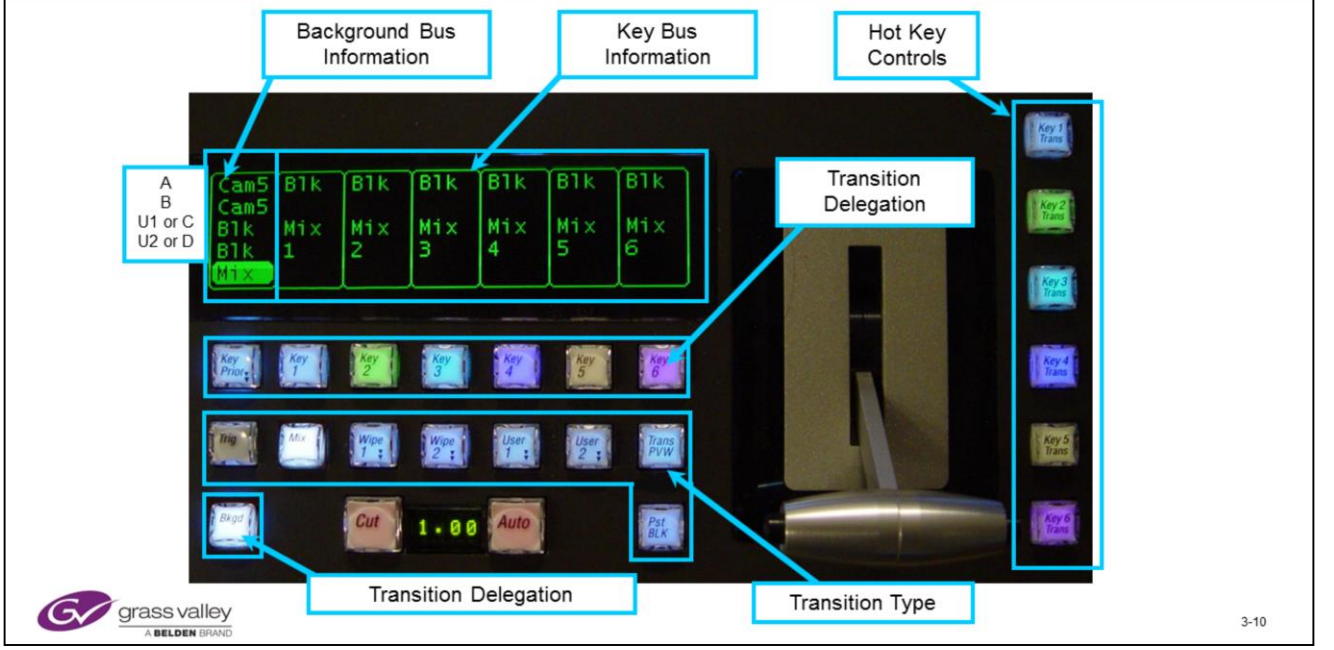
Kayenne Transition Module (2)



3-9

- The display also shows Tally, Key partition, iDPM and Priority status information.
- Split keys are also displayed when the key is different from the source assignment.
- Any active replaced Macro buttons show yellow.

Karrera Transition Module



• Transition Delegation buttons control what will change when a transition is made. Sometimes referred to as 'Next transition' buttons. The result of delegation selections is shown on the ME Look Ahead Preview output.

• The Transition Type buttons select the type of transition – Mix , Wipe, User etc.

• The Transition Display shows the current sources on the A, B, U1, U2 and Key busses. Transition type, transition rates and key status is also displayed.

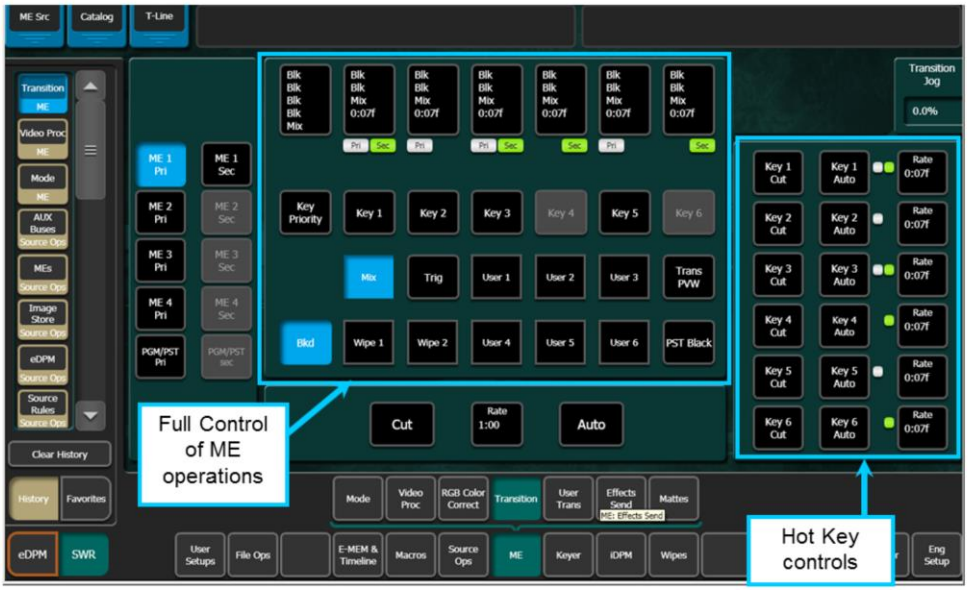
• The Hot Key controls provide instant Key Cut or Key Mix control of all 6 Keyers on the ME.

• The double triangles on some buttons indicate a double press (D-Pop) will call up the associated menu page.

• Transition Preview does not function for the half ME.

• The Background, Mix and Key Priority buttons may be moved to any of those three locations for user convenience.

Transition Menu



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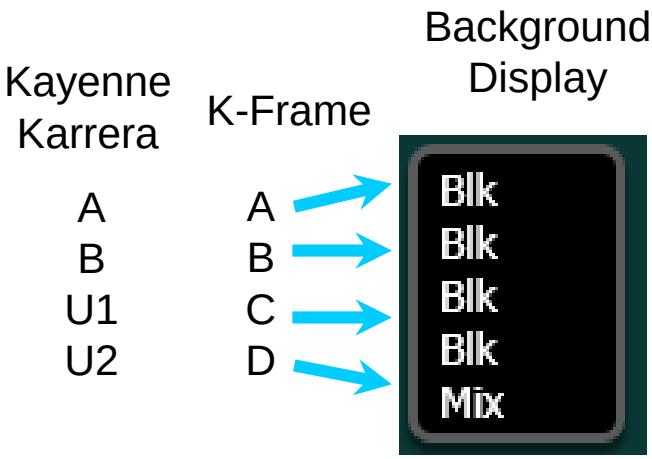
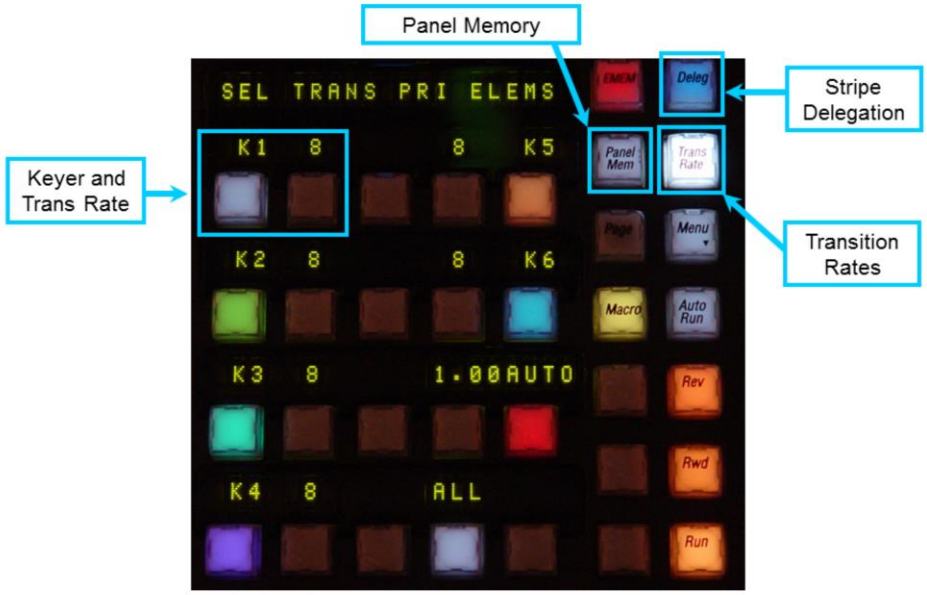
3-11

- The Menu ME transition controls provide the same capability as the Transition panel buttons, except Macros.



Kayenne Transition Rates



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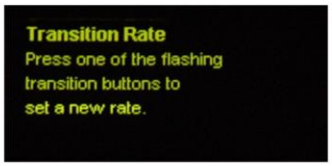
3-12

- Transition rates can be entered as a number (frames), seconds, '.', frames, or seconds, '.', frames, '.', fields

1.5G Menu shown

Karrera Transition Rates



1. Press the “Menu” Button.
2. Select “Trans Rate”. The above display will show.
3. Chose and press one of the flashing keys (Auto & Hot Cut Keys).
4. Use the menu at right to set the rate.

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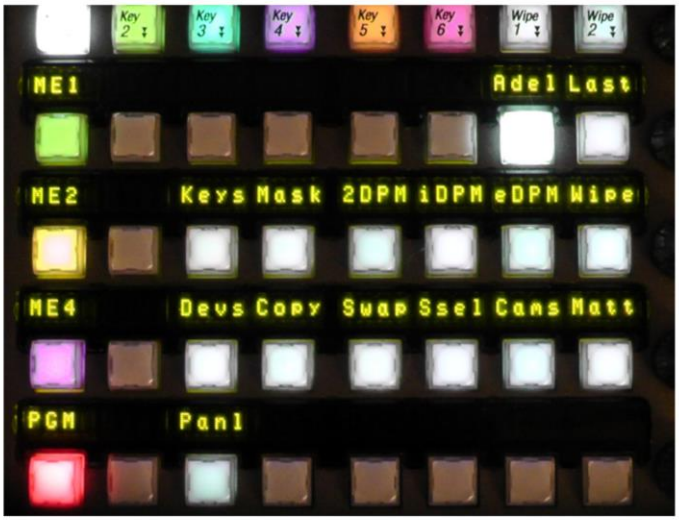
3-13

• Transition rates can be entered as a number (frames), seconds, ‘.’, frames, or seconds, ’.’, frames, ‘.’, fields

Kayenne Panel Multi Function Module - Home

- The Multi Function module provide access to many useful control groups these are:
  - Keys
  - Mask
  - 2DPM (K-Frame)
  - iDPM
  - eDPM
  - Wipe
  - Devs (Devices)
  - Copy
  - Swap
  - Ssel (Source Select)
  - Cams
  - Matt
  - Panel



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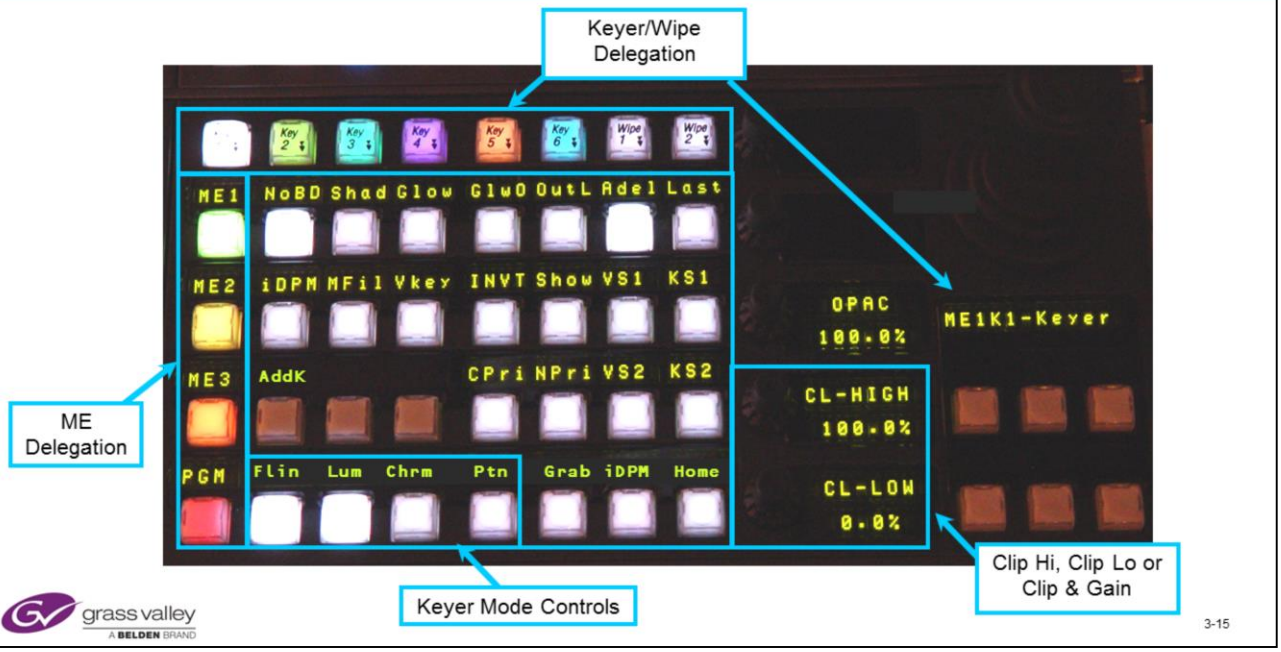
3-14

• The Multi Function Module (MFM) provides fast access to many functions.

• ‘Adel’ (Auto Delegate) allows transition buttons on the ME’s to keep the MFM in step with the operator’s selections.

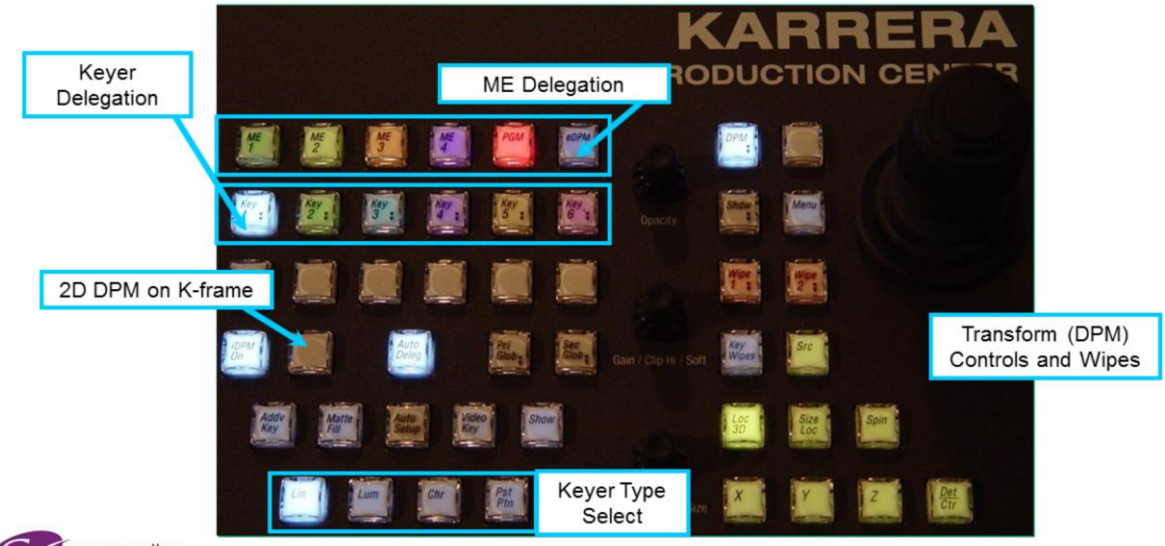
Kayenne Multi Function Module - Keyer



- The Keyer panel mode of the Multi Function Module provides selection of the basic mode (Fixed Linear, Adjustable Linear, Luminance, Chrominance Keys or Preset Pattern).
- DPOP the Keyer button to access the Keyer menu.

Karrera Multi Function Panel

- Keyer & DPM Delegation & Control

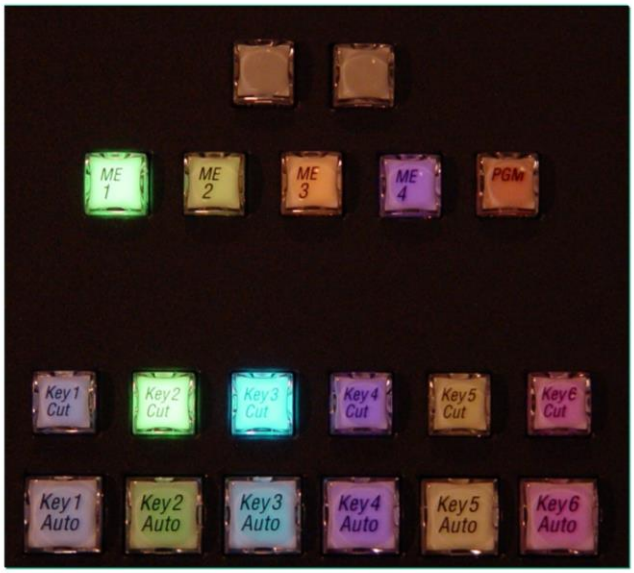


3-16

- The Multi-Function section of the panel is delegated to the current ME and Keyer automatically if Auto Delegation is on. (Auto Deleg)
- If “Auto Deleg” is off, all delegations will have to be made manually.

Karrera Horizontal Keyer Control

- Convenient Keyer Control Location
- Cut or Transition any Keyer, any ME regardless of Panel Stripe Delegation
- Color Coded for ME and Keyer identification
- All buttons are Hot Key buttons



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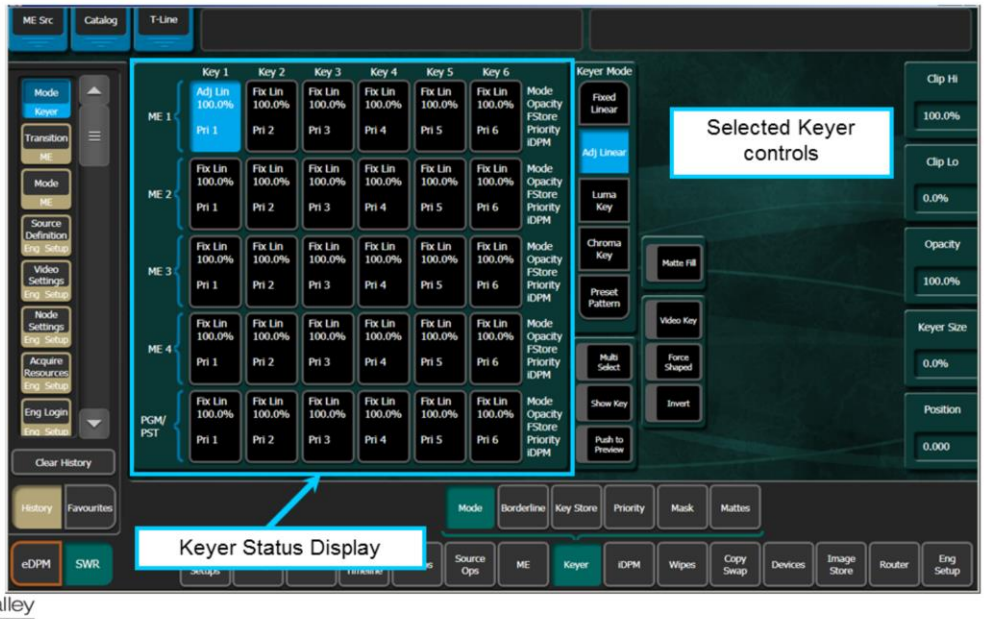
3-17

• Horizontal Keyer Control is a new feature that has been requested by many Operators (TDs).

• This section allows for fast (hot) control of either cutting or initiating the current transition via an Auto-Trans.

• Fast access to any or all 6 Keys on all of the MEs regardless of Panel Stripe Delegation.

Keyer Status and Mode selection



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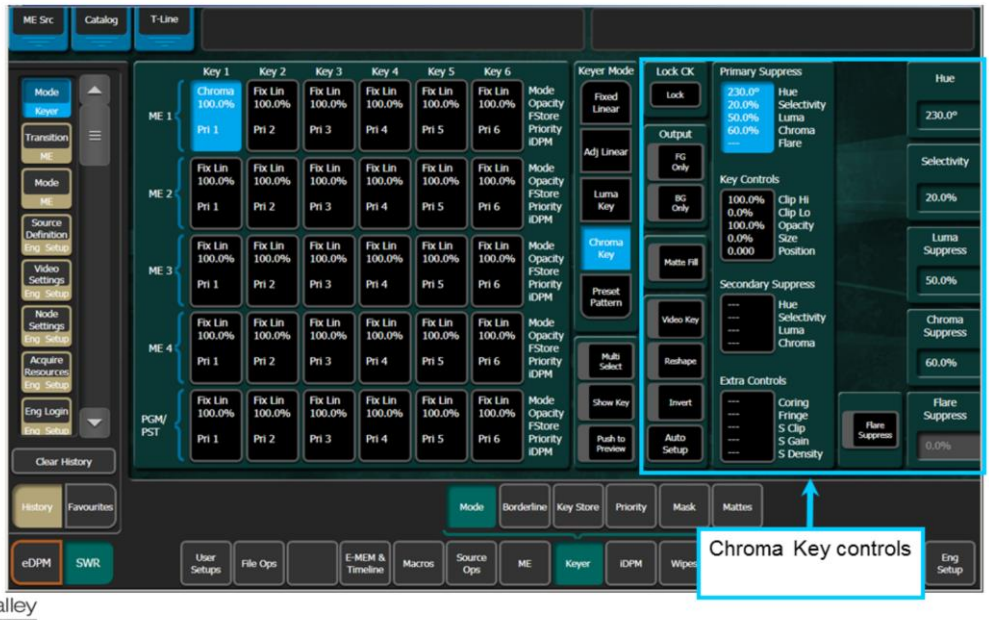
3-18

- All Keyers on all of the 4.5 MEs have Linear and Luminance key capability.
- In the Kayenne frame the Full Keyers (1-4) have additional functions of Chroma Key (option), Preset Pattern, Masking or iDPM (option)

the Half ME only has Linear and Luminance Key capability.

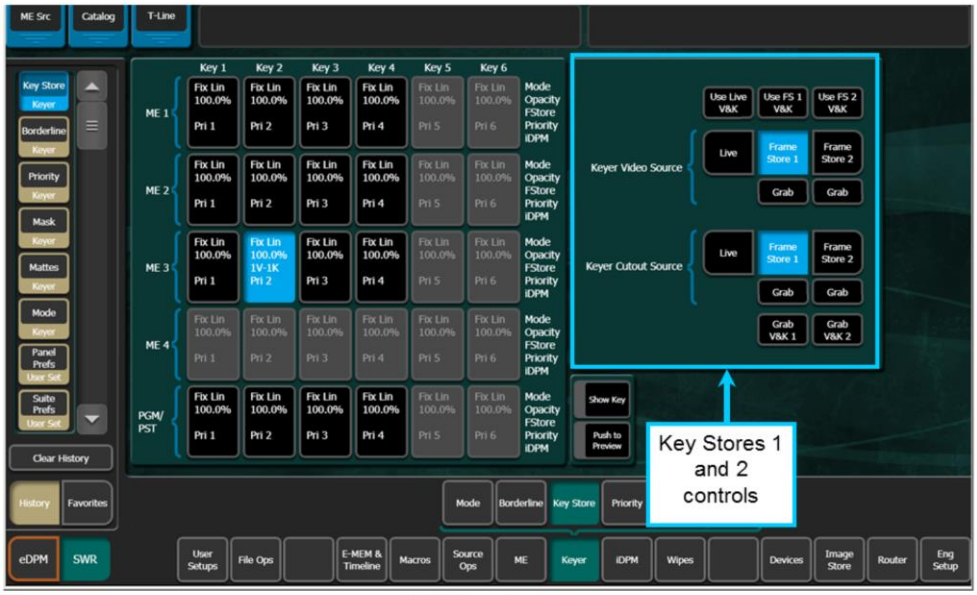
- All Keyers in the K-frame have the same functionality: Chroma Key, Preset Patterns, Key Masks, Key Stores and 2D-DPMs (if Licensed), including the Controller ME.
- The only exception to this on the K-Frame is the Controller ME cannot use an iDPM channel.

Keyer - Chroma Keyer



- Use Auto setup to perform a quick Chroma Key. This sets the main Chroma Key parameters of Hue, Selectivity, Luma and Chroma Suppression and Clip Hi and Clip Lo settings for the chosen color.
- All other Chroma Key controls must be set manually.

Keyer - Key Stores

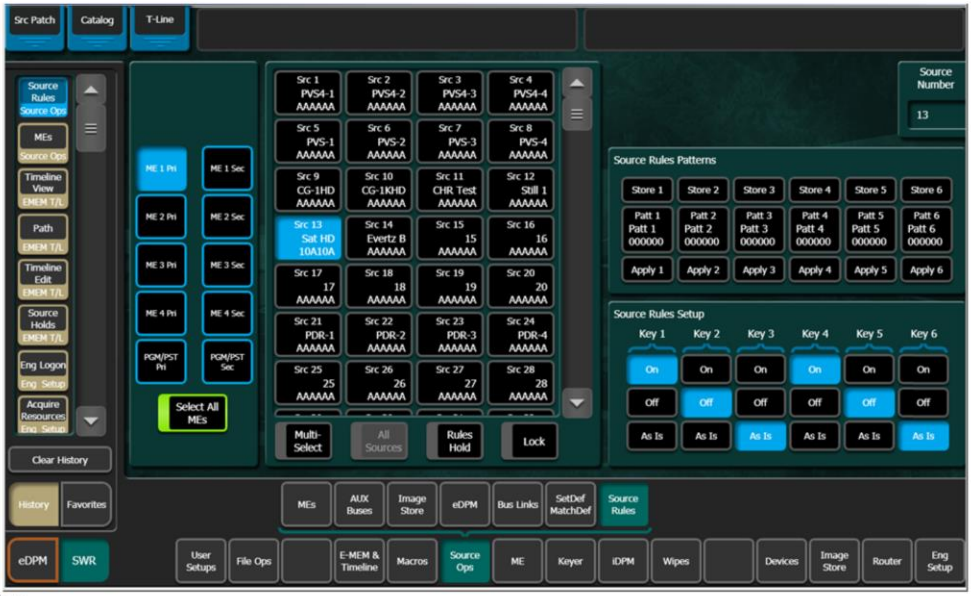


1.5G Menu shown

3-20

- The 4 main Keyers (1,2,3 or 4) on the full MEs also have 2 Video and Key stores (volatile RAM) on 1.5 G Frame.
- In the K-frame ALL Keyers have 2 Key Stores.

Source Ops - Source Rules



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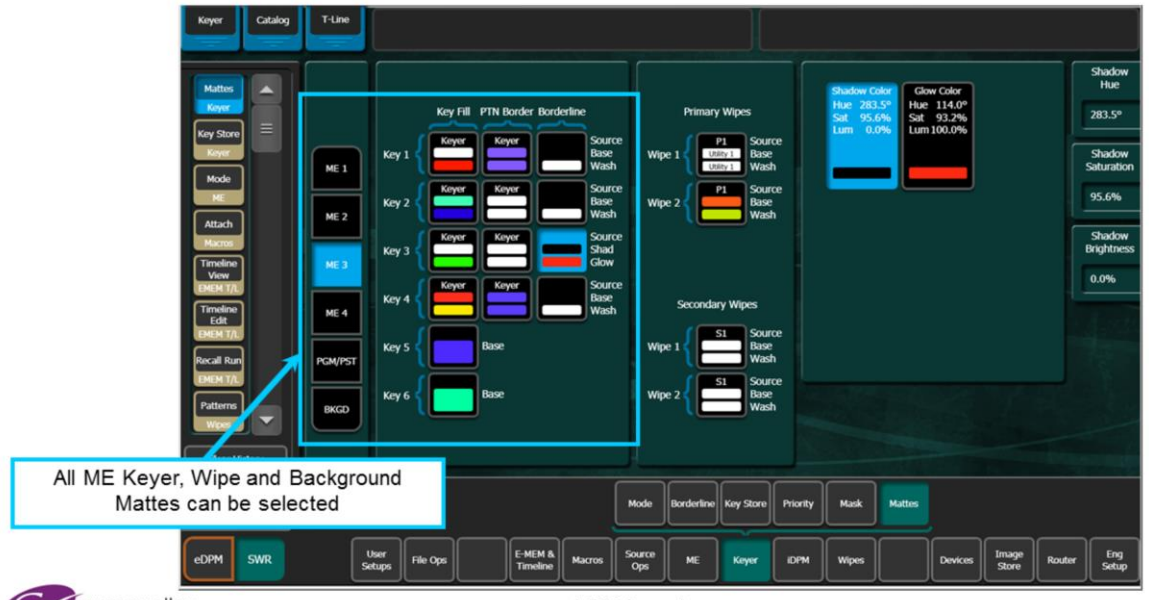
3-21

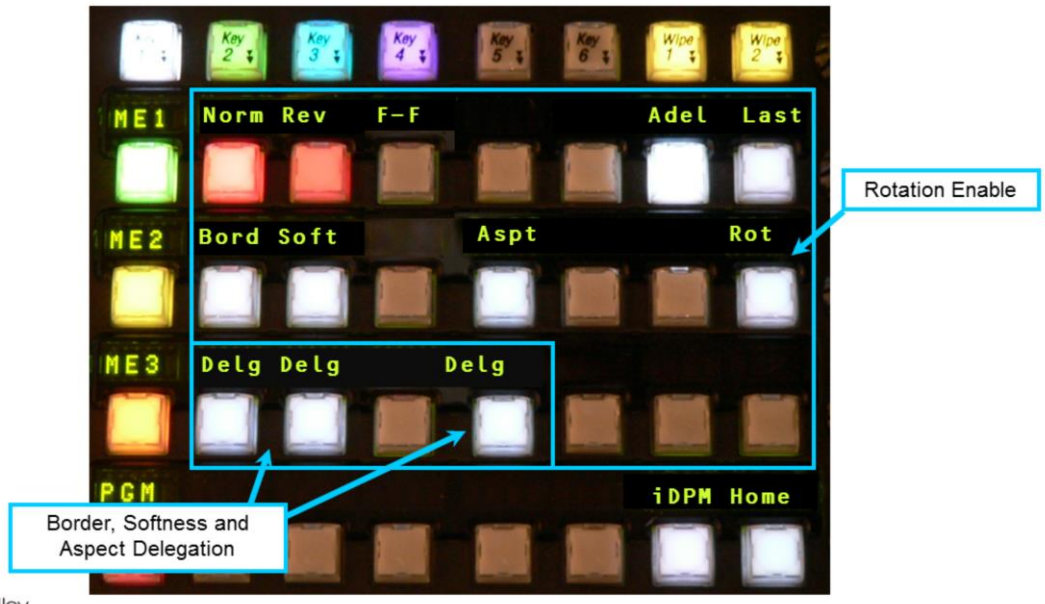
- Source Rules showing Source 13 set to control keys 1, 2, 4 and 5.

Keyer - Matte Menu



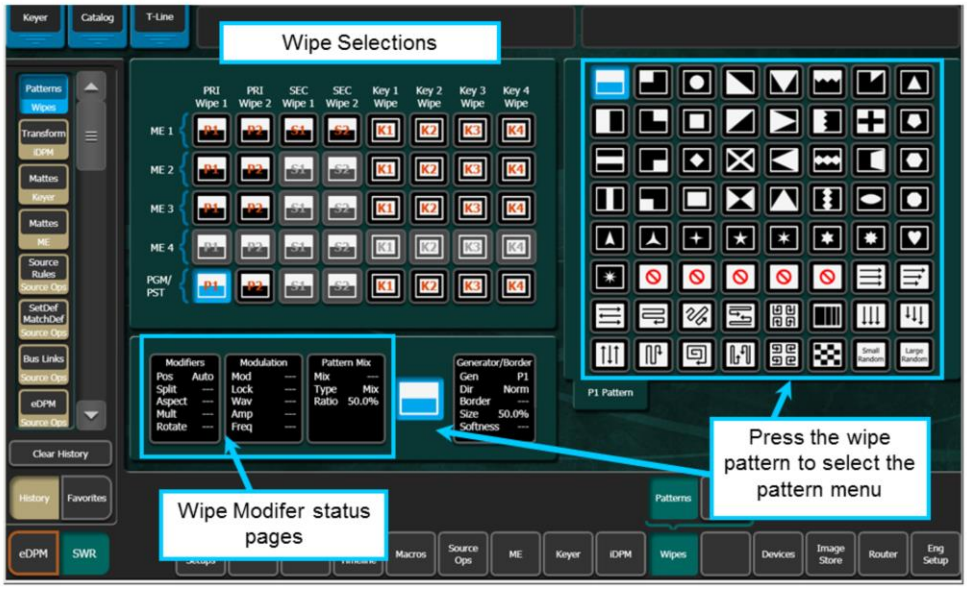
- Use Keyer - Matte (or Wipe – Matte) to access the Matte menu.
- All Keyers in the K-Frame have all matte functionality – Pattern Borders and Borderline (if an iDPM is allocated to the Keyer)

Kayenne Multi Function Module - Wipes



- One Example of the Multi Function Module showing Wipe controls available.
- Home returns to the Top Menu.

Wipe Menu



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3-24

- Full MEs have 2 Main Wipes on Primary (P1, P2) and Secondary (S1, S2) plus Keyer wipes on Keyers 1,2,3 and 4
- Keyer wipes have some limited capabilities.

E-MEM Operations

- Each E-MEM level has 1000 E-MEM registers (000 - 999)
- These are split into Pages, Banks and Registers
- E-MEMs have Effect recall, Effects Dissolve, Sequence and Timeline Run control
- Timelines have to be build in the Master E-MEM panel or in the menu
- 1 button recalls can be performed within any bank
  - If you are in Page 0, Bank 5, pressing '6' recalls 056
- 3 button recalls can be performed with any page
  - If you are in Page 200, pressing 'Bank', '3', '6' recalls 236
- 5 button recalls can be performed to go to any register
  - Press 'Page', '4', 'Bank', '8', '2' - for register 482

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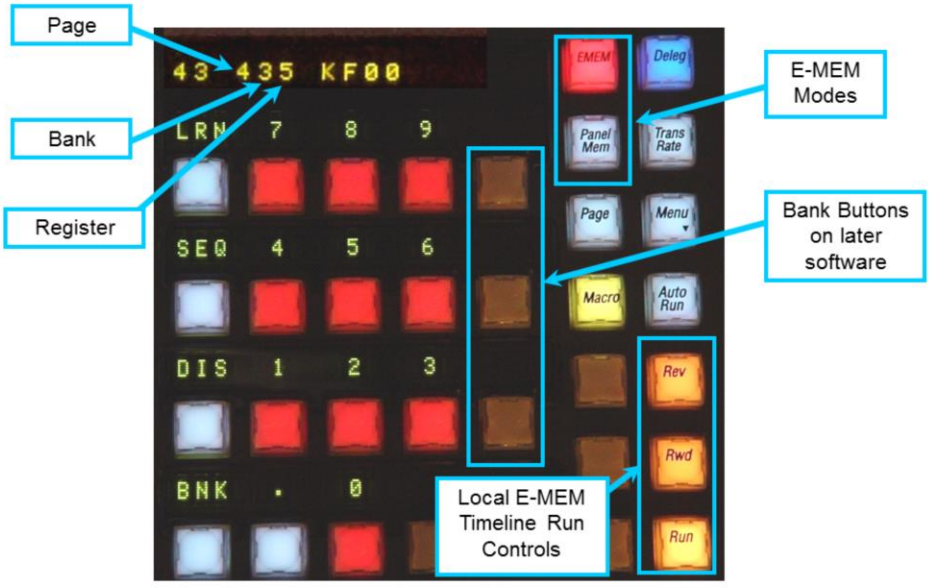
E-MEM, Effects Memory allows the state of the selected parts of the switcher to be stored into a storage location or 'Register'

It has been designed for easy and fast operation. If working within a page and a bank only 2 button presses are required: Learn and the register number.

Recalls are even easier, simply press the register number!

Changing banks requires additional button presses but often staying within a few banks is all that is needed. Dedicated bank buttons are provided for the bottom 4 banks (0-3), double pressing these buttons selects the shifted bank number (4-7). This expands the learn to 80 registers with only 3 buttons to Learn or 2 for Recall operations.

Kayenne Local ME E-MEM Module



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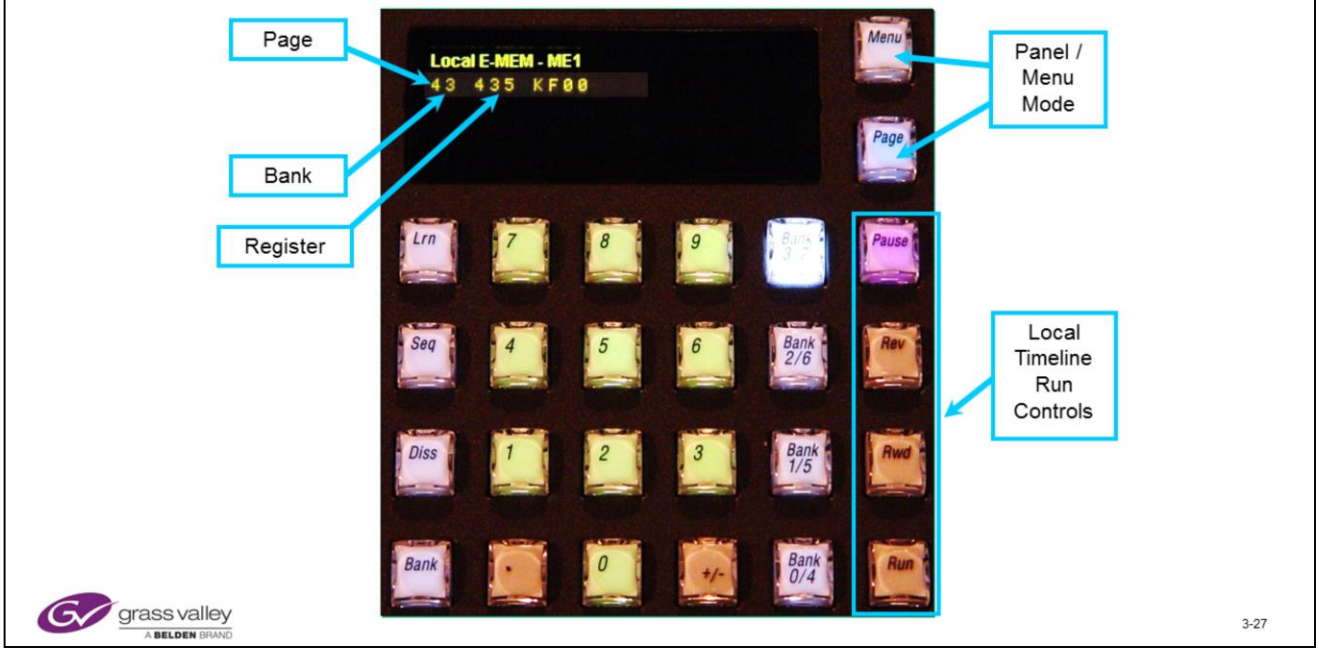
- The Local E-MEM panel controls the same local ME status and any parameters assigned to the local E-MEM under the User Setups/ Suite Prefs/ E-MEM prefs menu.
- The Local E-MEM effects are the same as those controlled by the Master E-MEM.

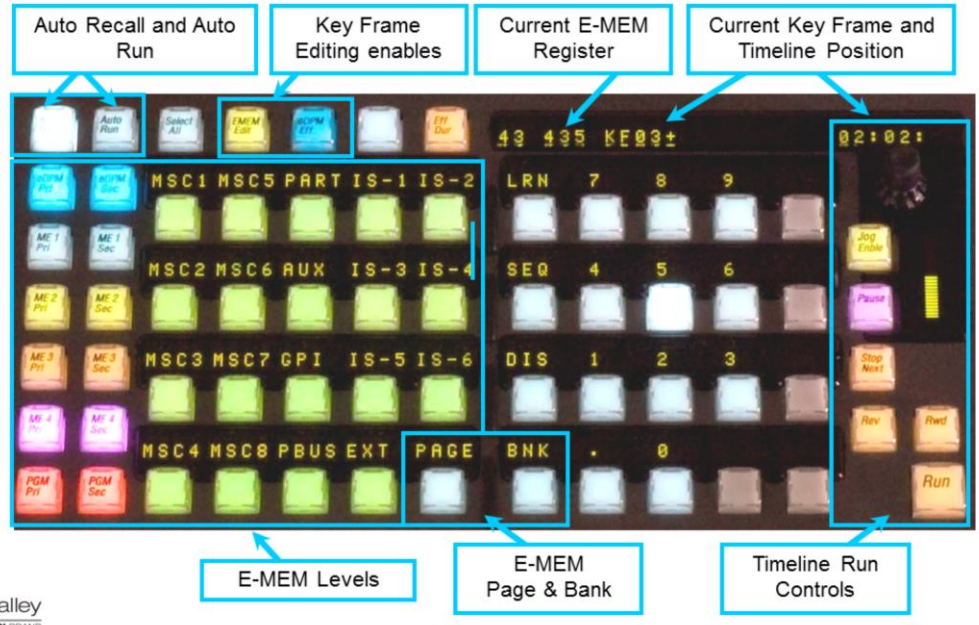
Karrera Local ME E-MEM Module



The local E-MEM panel has various modes. These are:

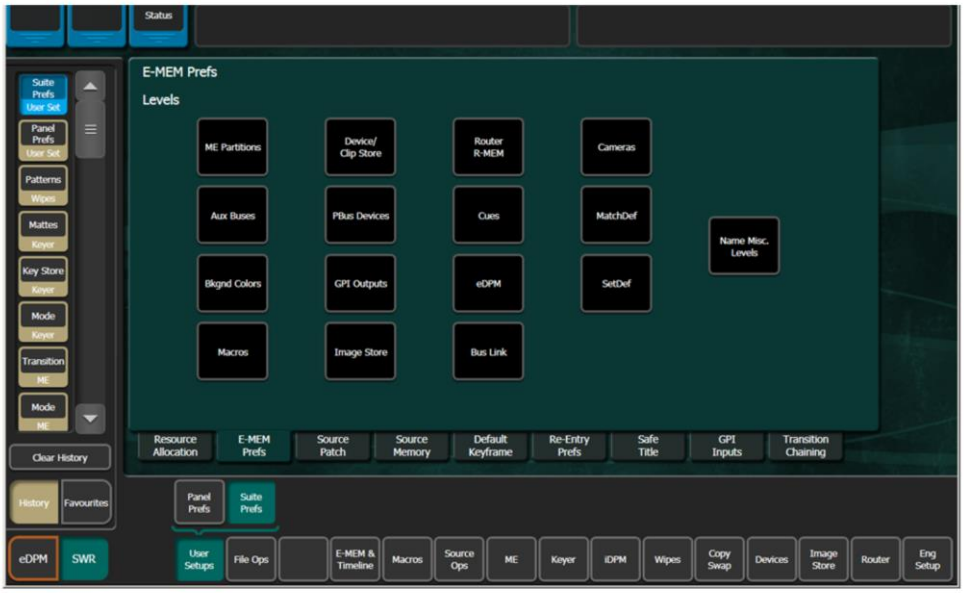
- Local E-MEM learn and Recall mode.
- The local E-MEM has 1000 registers designated as Page #, Bank # and Register #. (Sometimes simply referred to as register # 435)
- Effect run controls allow for direct control of Run, Auto Run, Rev and Rewind of timeline effects built in Master E-MEM.
- Accessed by pressing “Menu”:
    - Panel Stripe delegation
    - Panel Memory control
    - Macro Recall Mode
    - Network Addressing
    - Calibration Routines
    - Transition Rate control for the main and Key transitions.
    - Page entry when in E-MEM or Macro mode

Kayenne Master E-MEM Module



- Auto Recall allows a Master E-MEM register to recall the Levels that were originally Learned.
- You can turn off Auto Recall to modify levels independently.
- If Auto Run is enabled a timeline will Run immediately after the register is recalled.
- E-MEM edit converts the panel into Edit mode to allow Timelines to be built.

Suite Prefs - E-MEM Prefs



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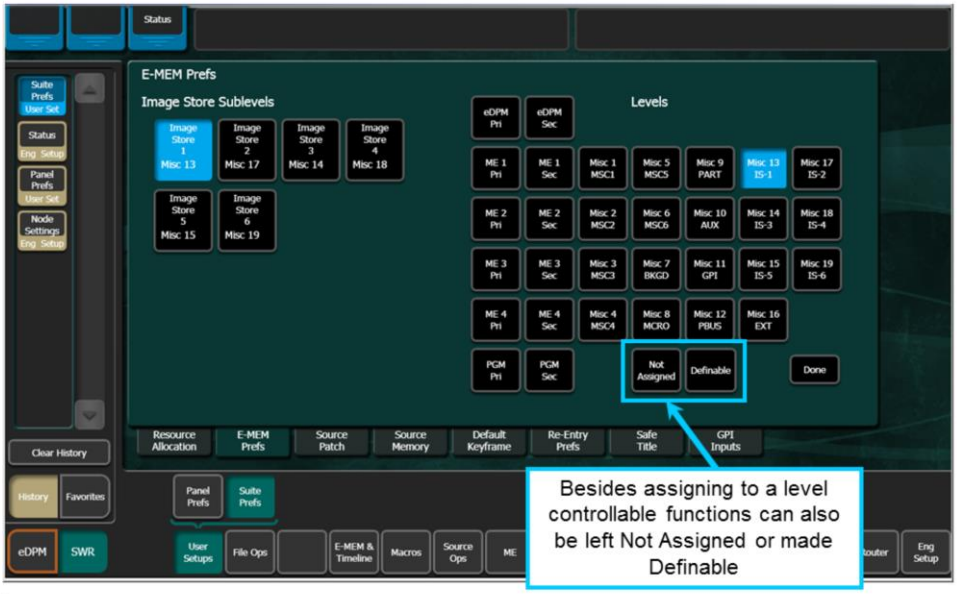
3-29

- E-MEM Prefs allows the different switcher areas to be assigned to the E-MEM levels.
- Each level can be named. (4 char)
- K-Frame does not provide E-MEM control of the Set Def and Match Def features.

Suite Prefs - E-MEM Prefs - Image Store



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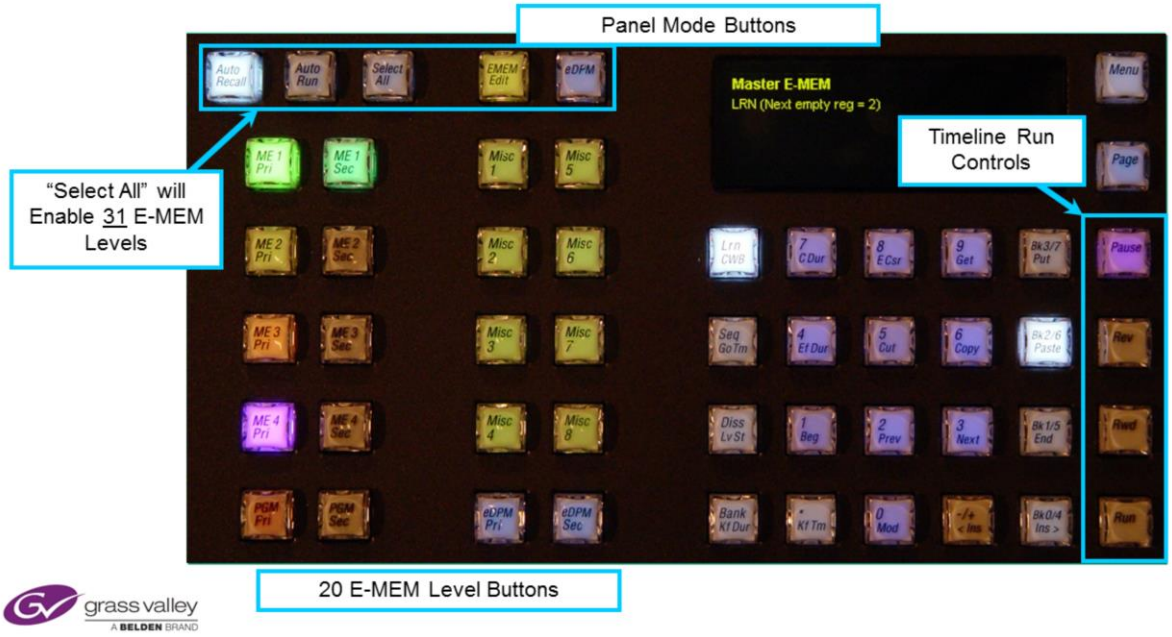
3-30

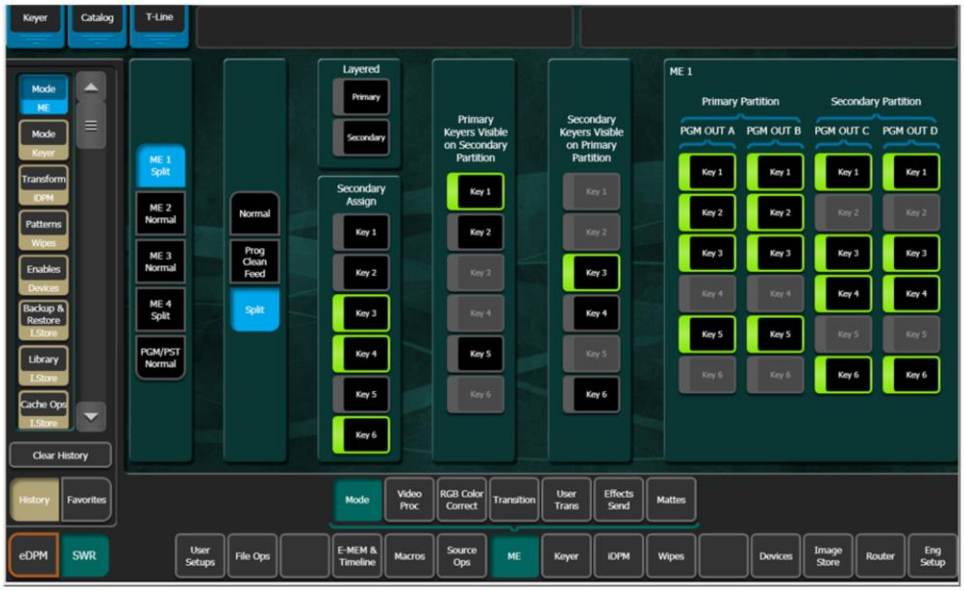
- E-MEM control can be assigned to any Level button, left ‘Not Assigned’ to an E-MEM level or made ‘Definable’.
- ‘Definable’ allows the control to be defined in the E-MEM Timeline menu.

Karrera Master E-MEM Module



- The 20 E-MEM Level buttons allow the various parts of the switcher to be controlled together in any combination (Auto Recall mode) or individually.
- 'Select All' selects ALL 31 levels. Those not on the panel can be enabled or disabled from the menu.
- The ME buttons are dedicated to control the ME Primary and Secondary functions.
- The yellow Miscellaneous buttons are definable and can be modified through the Daily Setup, Suite Prefs, E-MEM Prefs menu.
- The Miscellaneous button labels can also be changed.
- Each switcher Level has 1000 E-MEM registers split into Page, Bank and Register.
- Effect run controls allow for direct control of Run, Rev and Rewind operations on an effect.
- A Stop Next (Keyframe) button, Pause button and jog knob are provide to aide in building effects.

ME - Modes



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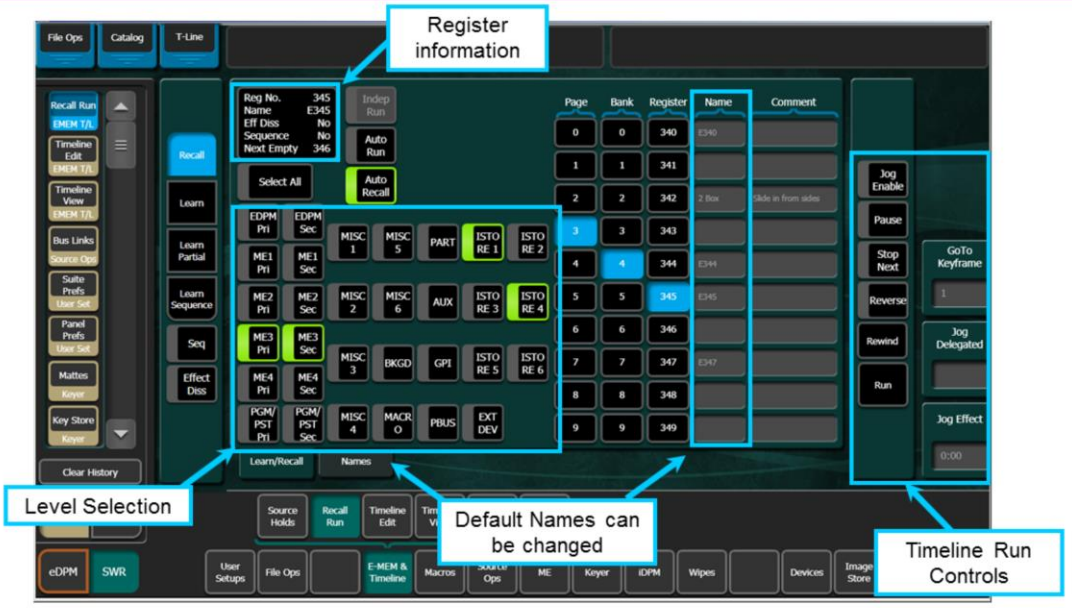
3-32

• ME mode showing the ME1 Partition set for Split mode with 3 Key assignments controlled by the Secondary ME.

E-MEM Recall and Run



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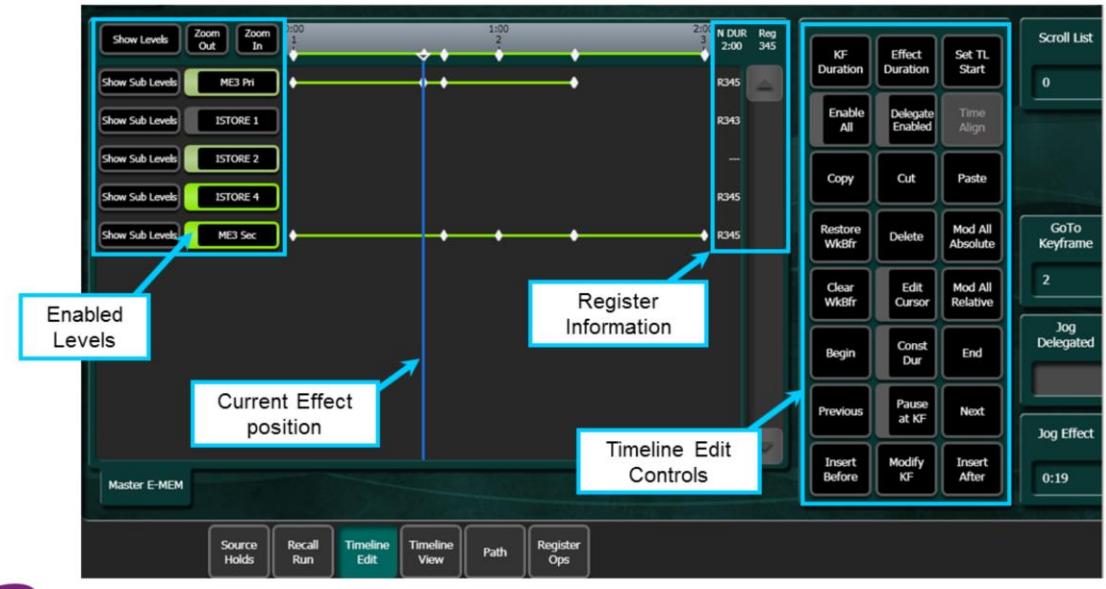
3-33

- The Recall Run menu provides similar functions to the Master E-MEM panel showing all 31 Level Enables.
- Effects can also be named and commented on.

E-MEM and Timeline Edit



- E-MEM and Timeline Menu showing Timeline Edit page and Sub levels
- This is shown as an example only, for a complete discussion of switcher operations refer to the manual or attend a formal operations course.

Kayenne Master E-MEM Timeline Edit

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3-35

CWB = Clear Working Buffer – Clears the enabled E-MEM levels to the Default Keyframe state.

Orange buttons are navigation (Beg, Prv, Nxt, End, Go to KF, Go to Time, KF time and Level Start) Orange is also used for KF Duration and Effect Duration

Yellow buttons are editing (Mod, Insert Before, Insert After)

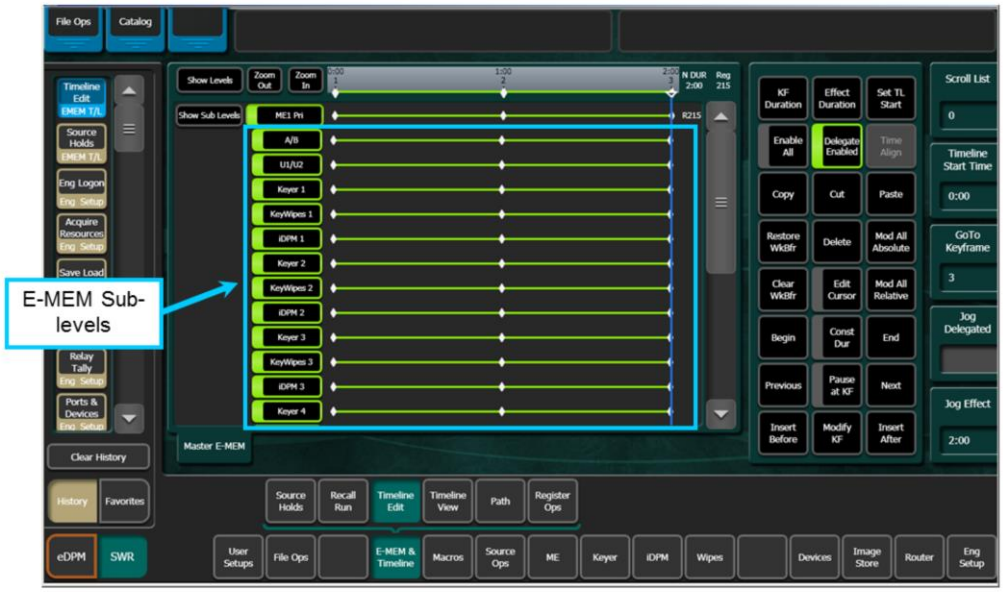
Green is used for Cursor control (Constant Duration, Time Cursor and Edit Cursor)

Blue is used for Cut, Copy, Paste and Delete.

Blue is also used for Delegate mode.

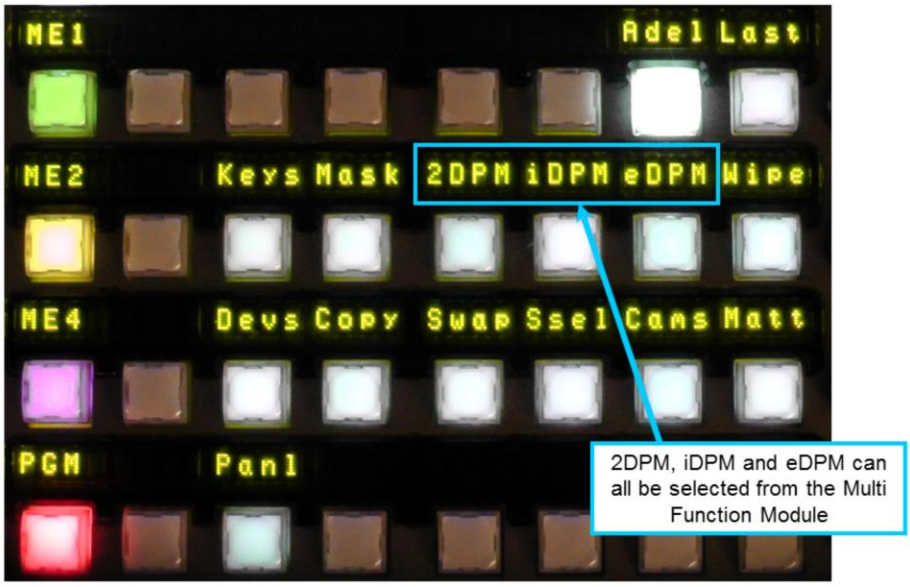
Display shows dissimilar registers (Up Arrow) and position between KFs (+)

E-MEM and Timeline



- E-MEM and Timeline Menu showing Timeline Edit page and Sub levels.

MFM - Transform Home Page



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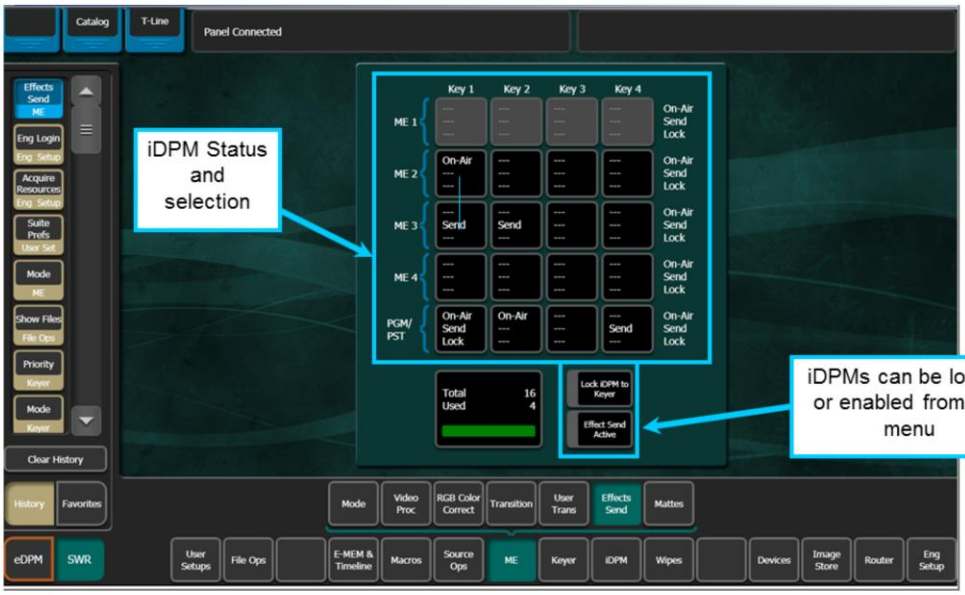
3-37

Multi Function Module showing the different DPM selections..

ME - Effects Send

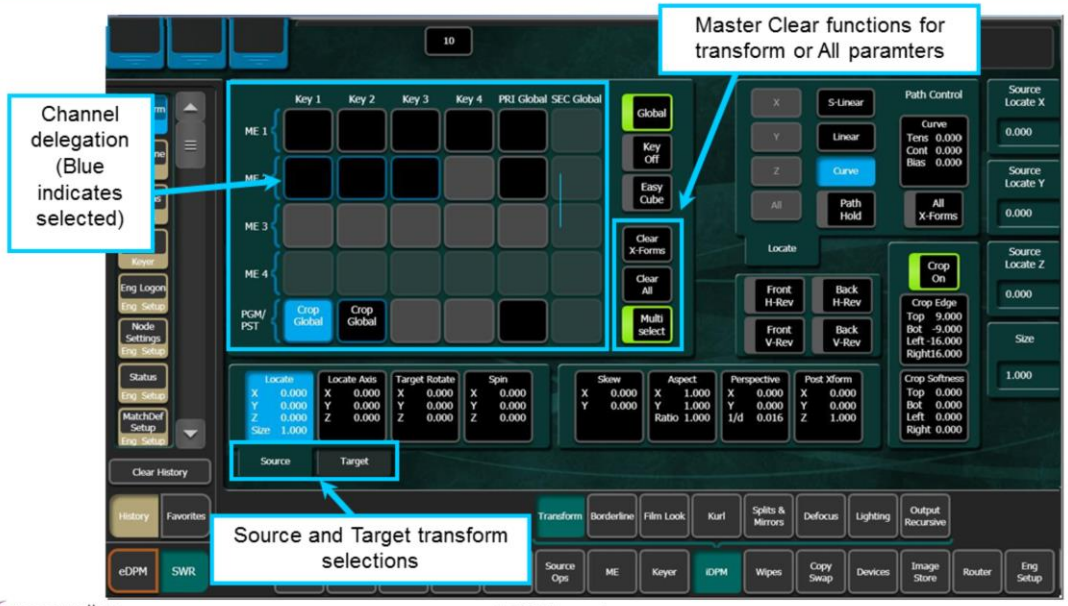


1.5G Menu shown

3-38

- iDPMs are normally enabled from the Keyer or iDPM mode of the MFM.
- This menu allows an operator to lock iDPMs to specific Keyers. This is useful if all of the iDPMs are not optioned or in the K-frame where there are not enough iDPMS for all Keyers.

iDPM - Transform Menu

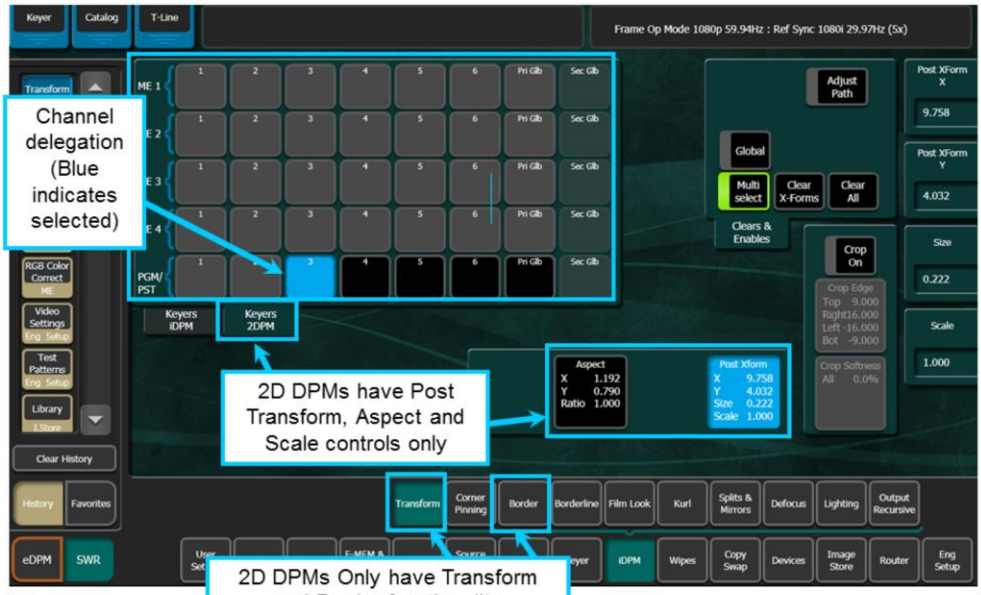


1.5G Menu shown

3-39

- iDPM menu showing Transform sub menu and channel delegation.
- Double click a channel to turn it on

2D DPM - Transform Menu - K-Frame



3-40

- iDPM menu showing Transform sub menu and channel delegation.
- Double click a channel to turn it on.

Kayenne iDPM - Transform

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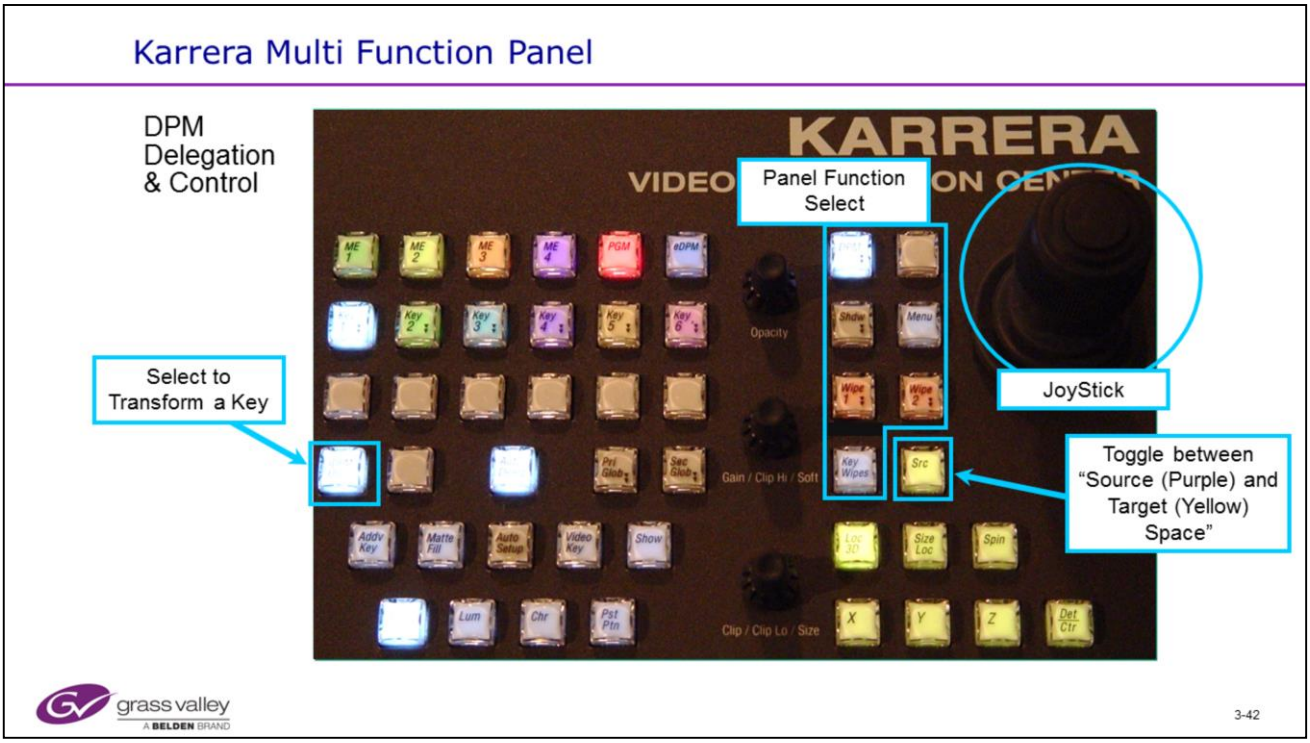
3-41

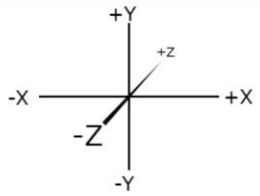
- Multi Function Module showing iDPM controls. Source and Target modes have different colors. Magenta for Source, Green for Target.

Karrera Multi Function Panel

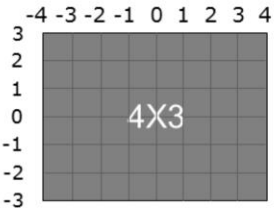


- The Multi-Function section of the panel is delegated to the current ME and Keyer automatically if Auto Delegation is on. (Auto Deleg)
- If "Auto Deleg" is off, all delegations will have to be made manually.
- Many of the Transform Controls that are on the Kayenne MFM can only be accessed on Karrera from the Transform and Keyer Menus.

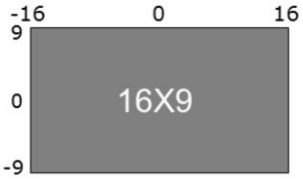
Locate and Axis Parameters - Screen Units



- X = Horizontal Axis, Left to Right
- Y = Vertical Axis, Top to Bottom
- Z = Depth Axis, Front to Back



- X: Left edge = -4, Right edge = +4
- Y: Top = +3, Bottom = -3
- Z: (+) (CCW) Away from viewpoint to ∞, (-) (CW) Toward the viewpoint = -16.67



- X: Left edge = -16, Right edge = +16
- Y: Top = +9, Bottom = -9
- Z: (+) (CCW) Away from viewpoint, (-) (CW) Toward the viewpoint

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3-43

iDPM Screen Units:

- Standard Definition screens (4:3 aspect ratio) are commonly divided into screen units based on the horizontal axis of minus 4 to plus 4 and the vertical axis divided into minus 3 to plus 3.
- High Definition and Standard Definition wide screen (16:9 aspect ratio) screens are divided the same way but with plus and minus 16 screen units horizontal and plus and minus 9 screen units in the vertical axis.
- The Z axis works the same for both SD and HD. At the plane of the screen, the Z axis value is 0 (zero). Transforming the image toward you from the screen is moving the image in the minus direction. Moving the image away from you and making it look smaller is moving in the plus direction.
- Even though the image looks smaller as you move it in the +Z axis, in video reality it is actually the same size as it was when the Z axis value was 0.
- Z Axis locate moves the image toward you or away from you but does not change the actual “size”. This is like standing next to a train car on the track. It looks quite large. But when that same train car has moved 100 feet down the track, it appears smaller. The car has not changed in size.
- The “Size” function changes the actual size of the image, shrinking it or growing it.