KAYENNE/KARRERA/ GV KORONA

VIDEO PRODUCTION CENTER

Release Notes

VERSION 14.3

071896501-AL

2019-03-27

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K-Frame 14.3 Release Notes

About this Manual

This document describes the new features and other information specific to the K-Frame Video Production Center, Version 14.3 switcher software for the Kayenne, Karrera, and GV Korona systems.

For More Information

For information about installing, configuring, and operating K-Frame systems, see the K-Frame Video Production Center Documentation Libraries found on the Grass Valley website at grassvalley.com and on the USB thumb drive provided with your system.

New in this Release

- **PTP Reference**—PTP reference is configured in the Eng Setup, Video Settings menu, see **About PTP Reference**, on page 3
- **Suite Resources Menu**—Includes Aux Bus Transition, Suite Signal Type (HDR Payload), and Re-Entry, see Suite Resources Menu Added, on page 5
- **Device Menu Enhancements**—Support for ChyronHego® Click Effects PRIME® and LyricX® added, plus menu buttons and parameters that change based on device type including manufacturer icons when provided, see Devices Menu Enhancements (ChyronHego® Click Effects Prime/LyricX), on page 7
- **1080sf 4K 2SI**—EZ 4K support for 1080sf Frame Operating Modes added, see 1080sf EZ 4K Frame Operating Modes, on page 16

14.3 Upgrade/Downgrade Requirements

- **Software Upgrade Instructions**—see Update the K-Frame Software, on page 24.
- **HAD FPGA Upgrade Required**—HAD FPGA upgrades are included for this release, see the *Kayenne/Karrera/GV Korona Installation & Service Manual* for HAD upgrade instructions.

Generally, each board takes approximately 4 to 5 minutes to upgrade the HAD programming, with the following exceptions:

- PTP Mezzanine board—approximately 9 to 10 minutes
- V-series 8x4 SDI I/O board—approximately 25 minutes

> IMPORTANT: Board HAD upgrades are done in parallel using the 'Flash All HADs' command, therefore the duration of the upgrade will be that of the board that takes the longest to program.

- **Board ARM Software Downgrades**—Switcher software downgrades to versions earlier than 14.3 (14.2.x or 14.1.x, are the earliest supported) for GV K-Frame X and V-series systems with IP I/O boards require the EIC (Engineer In Charge) to manually downgrade the Board ARM Software, see Downgrade the IP Board ARM Software**, on page 17**.
- **12.X to 14.3 IP Board ARM Software Upgrade**—an IP I/O Board ARM Software upgrade is required when upgrading from 12.x to 14.3 (and newer), see 12.X to 14.3 Upgrade: Install IP Board ARM Software, on page 21.
- **PTP Mezzanine Board ARM Software Upgrade**—The board ARM software on the PTP Mezzanine board must be upgraded to enable the PTP feature the first time, see PTP Mezzanine Board ARM Software Upgrade, on page 19.

Supported in an Upcoming Release

Video I/O, IP I/O Config menu buttons and tabs:

The following *GV K-Frame X* and *V-series* menus and buttons are present (some are grayed out), however they will be supported in a future release.

- **SFP**—fixed to the default value (buttons in pop-up menu pane (**SFP 2A**, **SFP 3A**, etc.)
- **Auto Detect** —button - Stream Format pop-up button pane and Bulk Configuration menus.

About PTP Reference

K-Frame switchers connect to, and receive PTP reference from, the PTP Master server on the network. The Grass Valley switcher PTP reference parameters can be configured in the Eng Setup, Video Settings, PTP menu tab. PTP settings are saved in Engineering Setups as part of the Video Settings.

Configuring the PTP Master

The networked PTP master server configuration is set by the administrator. The PTP master server network settings and the PTP Master switcher menu pane settings must match.

Default Switcher Master PTP configuration

PTP Master Pane Button Descriptions

Button	
SFP A	Primary SFP input
SFP B	Secondary, redundant SFP input
Active	Active SFP • Green=Active • White=Inactive
IGMP Address	Multicast network protocol address for PTP reference, select to enter address
Domain	Network domain, select to enter domain ID
Announce TimeOut	Number of timeouts before alerting to a PTP Master device data loss, select to enter Announce TimeOut number
Status	• Locked=Synced, • Unlocked=Present not synced, • Not present=No connection

SFP Redundancy

SFP inputs have redundancy and automatically change to the redundant channel if there is an interruption in the connection. If for example a disruption occurs with input SFP 1A, the primary, the secondary SFP 1B automatically becomes the active connection (green status). When SFP 1A reconnects, SFP 1A will again become the active SFP without any action on the part of the operator.

SFP Input Status

The SFP Status for each input can be locked while the Frame Status is unlocked; for example while the Frame is still connecting. Once connected, the Frame Status will display "Locked" and the PTP reference will be synced. However, both SFP inputs must be locked for the Frame to report a "Locked" status.

Port Configuration

The Local IP, Subnet Mask, and Gateway match the Frame backplane SFPs. The input SFPs must match the Master PTP server network settings to synchronize the signals. Local IPs for each SFP input must be different to support redundancy. Select each data pad and enter the Local IP, Subnet Mask, and Gateway using the pop-up numeric keypad.
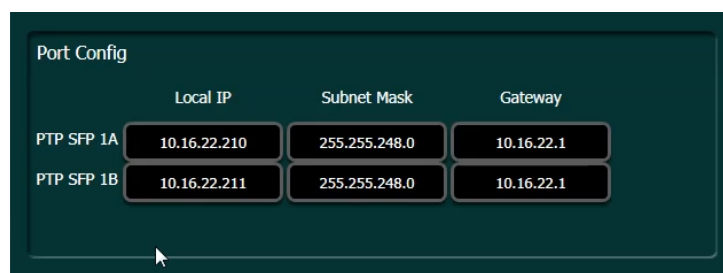
Suite Resources Menu Added

The Suite Resources menu has been added to the User Setups, Suite Prefs menu. The new menu includes Aux Bus Transition, Re-Entry, and the new Suite Signal Type (HDR Payload) feature. For Aux Bus Transition and Re-Entry information, see the *Kayenne/Karrera/GV Korona User Manual*.

Note: Re-Entry was a Suite Prefs menu category in earlier versions.

About Suite Signal Type—HDR Mode

K-Frame systems transmit Payload ID parameter values based on the Frame Operating Mode and Suite Signal Type settings. All outputs for the current suite will transmit the same Payload ID parameter values.

Note: K-Frame systems transmit HDR Payload ID parameter values only, signals are not converted.

The following HDR modes are supported:

- SDR—Standard Dynamic Range
- S-Log3—Gamma curve
- PQ—Perceptual Quantization
- HLG—Hybrid Log-Gamma

Default settings

- HDR Mode—SDR
- Color Space—Rec 709
- Bit Depth—10-Bit

HDR Payload ID Specifications

Suite Signal Type Specifications

Transmission	Recommendation	Description
HDR: Rec BT2100	ITU-R BT.2100-2 (07/2018) (HLG, PQ)	Image parameter values for high dynamic range television for use in production and international programme exchange
Colorimetry: Rec BT2020	ITU-R BT.2020-2 (10/2015)	Parameter values for ultra-high definition television systems for production and international programme exchange
Colorimetry: Rec BT709	ITU-R BT.709-6 (06/2015)	Parameter values for the HDTV standards for production and international programme exchange

PID Specifications

SMPTE	Description
ST 352:2013	Payload Identification Codes for Serial Digital Interfaces, base line
ST 292-1:2018	1.5 Gb/s Signal/Data Serial Interface, define 1080i, 1080p,1080 psf—720p does NOT support HDR
ST 425-1:2017	Source Image Format and Ancillary Data Mapping for the 3 Gb/s Serial Interface, 1080p Level A
ST 372:2017	Dual Link 1.5 Gb/s Digital Interface for 1920 × 1080 and 2048 × 1080 Picture Formats, 1080p Level B

Set the HDR Payload ID

Set the Suite Signal Type in the User Setups, Suite Prefs, Suite Resources menu to modify the Payload ID parameter values to match the source video's HDR Mode, Color Space, and Bit Depth. All outputs for the current suite will have the same Payload ID.

> **Note:** K-Frame systems transmit Payload ID parameter values only, signals are not converted.
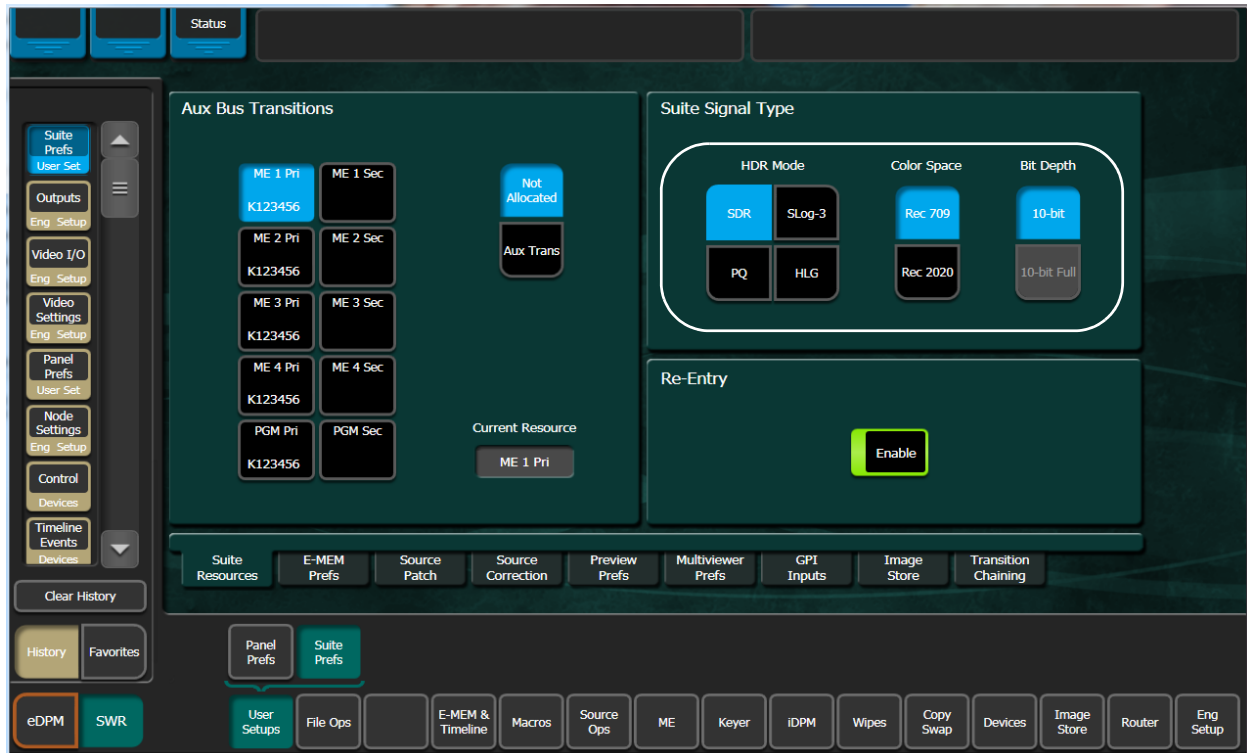
Devices Menu Enhancements (ChyronHego® Click Effects Prime/LyricX)

Device menu enhancements include:

- ChyronHego® Click Effects PRIME and LyricX graphics support,
- Controls that change based on external device type, for example ClipStore/DDR devices use the Timecode, Even List, Program Clip, and Stop, Play, etc., while graphic devices use Activate, Scene List, Program Scene, and In and Out, etc.,
- A device manufacturer's icon (when provided) is displayed in the Device Summary point of use button for faster device identification,
- Mute for External AMP Devices, and
- Device selections are saved as part of the Show file.

Enables Menu

The Enables menu provides controls for enabling and disabling each external device individually or collectively. (See the *Kayenne/Karrera/GV Korona User Manual* for Editor Control information.)

Timeline Events Menu

The Timeline Events menu allows you to learn selected external device control commands along an E-MEM timeline (see the *Kayenne/Karrera/GV Korona User Manual* for E-MEM operations). The controls change based on the type of device selected.

ClipStore/DDR External Device Types

When a ClipStore or DDR type device is selected, those controls are displayed in the Devices, Timeline Events menu.

Devices Timeline Events Menu Buttons—ClipStore/DDR

Button	Description

Device Summary point of use	• Select to enable
	• Engineering name (or "Current Device" label if loaded on the Control Panel System Bar)
	• Device name
	• Device Type (DDR AMP, DDR AMP Serial, VDCP Ethernet, VDCP Serial, DDR Odetics, DDR BVW, VTR BVW)
	Status:
	• Device icon (when provided from manufacturer)
	• Device type
	• Clip loaded
	• Cue Time
	• Command
	   Play
	   Stop
	• Gang Enabled/Disabled
	• Loop Enabled/Disabled
	• Connection status bar

Load	Load enable, select data pad for folder and clip file operation menu
Cue	Cue enable, select data pad to enter Cue Time
Play	Play enable, select data pad to enter Play Speed
Stop	Stop clip
Gang Enable	Gang enable, select data pad to choose device from Gang Device Picker
Gang Disable	Disable Ganging

Devices Timeline Events Menu Buttons—ClipStore/DDR

Button	Description
Loop Enable	Enable Loops
Loop Disable	Disable Loops
Clear Delegated Device Events	Clears enabled buttons, data pad entries, and loaded clips for the selected point of use (Device Summary)
Clear All Events	Clears enabled buttons, data pad entries, and loaded clips for all Device Summary point of use buttons
Device	Device search, select data pad to enter device ID

ChyronHego® Click Effects PRIME and LyricX

When a ChyronHego® Click Effects Prime/LyricX device type is selected, those controls are displayed in the Devices, Timeline Events menu.

> **Note:** Gang and Loop buttons are not used and grayed out for Click Effects PRIME and LyricX, however they will be available for other AMP devices.

Devices Timeline Events Menu Buttons—Click Effects PRIME/Lyric

Button	Description

Device Summary point of use	• Select to enable
	• Engineering name (or "Current Device" label if loaded on the Control Panel System Bar)
	• Device name
	• Device Type (Amp Ethernet)
	Status:
	• Device icon (when provided from manufacturer)
	• Device type
	• Scene
	• Cue Time
	• Command
	   Play
	   Stop
	• Connection status bar

Load	Load enable, select data pad for folder and scene file operations menu
Activate	Displays folder and scene file operations menu, activate scene for control and to identify the active scene when layered on one channel
In	Take scene
Out	Take scene off-air **Note:** To cue the same scene again after the Out button is selected, use the Cue To Begin button (not the In button)
Clear Delegated Device Events	Clears enabled buttons and activated scenes for the selected point of use (Device Summary)
Clear All Events	Clears enabled buttons and activated scenes for all Device Summary point of use buttons
Device	Device search, select data pad to enter device ID

About ChyronHego® Click Effects and Lyric Workflow and Layering

It is recommended that one scene be activated per channel. However, multiple scenes can be layered on one channel but it is important to note which scenes are layered, the order, and which scene is active; using the Activate button can assist in identifying each scene in the channel.

Control Menu

Control up to five devices in the Main menu tab and up to eight each in the Dev 1 and Dev 2 menu tabs. The main control channel (left), provides ganging and multiple transport controls while a subset of those controls are provided for the four channels on the right. The Dev 1 and Dev 2 menu tabs also provide a subset of the main channel controls for each control pane.

Devices Control Menu, Main Control Buttons—ClipStore/DDR

Button	Description
Device point of use	• Selection displays Device Picker • Engineering name • Device name Status: • Device icon (when provided from manufacturer) • Connection status bar
Time Code	Enter Time Code in pop-up keypad; 00:00:00:00 Hours, Minutes, Seconds, Frames
Event List (Active/---)	Displays 'Active' with event list loaded, opens file operations menu
Preset Clip	Displays next clip (next event list clip), opens Event list file operations menu
<>(Swap)	Swaps the Preset Clip with the Program clip, taking it on air
Program Clip	Displays on-air clip, opens Current Device file operations menu
Gang Status	Displays ganged devices when Gang Enable is highlighted
Gang Enable	Enable ganging
Off Air Advance	Automatically loads next event list clip to Preset Clip
Auto Start	Sets clip to play when loaded to Program Clip
Loop	Clip runs continuously, cuing the first frame once the last frame is played

Devices Control Menu, Main Control Buttons—ClipStore/DDR

Button	Description
Progress bar	Percentage of clip played
Record Enable	Begin recording source
Record Time	Enable record time, select data pad to enter Record Time duration
Mute	Mute clip audio for the channel
Cue To Begin	Cues to beginning clip or mark in point if set
Mark In Data Pad	Displays Mark In time code
Mark	Mark clip at current time code
Jog Back	Move back one frame
Var Play Speed	Play clip faster or slower than 100%, select to enter percentage in pop-up keypad
Jog Forward	Move forward one frame
Rewind	Rewind clip
Stop	Stop clip
Play	Play clip
Fast Forward	Advance clip at a fast speed
Swap (Control panes, right)	Exchange a clip from a Control channel (right) with the Main Control channel (left)

Event List Menu

Key controls change in the Event List menu based on the device type selected, i.e. ClipStore/DDR versus graphics devices.

ClipStore/DDR:
- Clip Browser,
- List Edit,
- Event List,
- Loaded

Graphics devices (e.g. ChyronHego® PRIME**):**
- Scene Browser (Current Folder/thumbnails for View List supported in an upcoming release),
- List Edit,
- Event List (thumbnails supported in an upcoming release),
- Loaded

About the Devices Event List Menu

The Devices, Event List menu provides list editing and transport controls for devices.

Clip/Scene Browser Menu Pane Buttons

Button	Description
Current Folder	Select to open Current Folder operations menu (graphic devices supported in an upcoming release)
View - List -	Select to choose thumbnail size or list view (graphic devices supported in an upcoming release)
Clip/Scene scrolling list	Selection works with Replace, Insert Before, and Insert, List Edit enable buttons

List Edit/Event List Menu Pane Buttons

Button	Description
Device Summary point of use	• Select to choose a device • Engineering name • Device name • Connection status bar
Replace	Select to enable, replaces selected event with Browser selection; multiple selections can be replaced
Insert Before	Select to enable, inserts Browser selection before selected event; multiple selections can be inserted

List Edit/Event List Menu Pane Buttons

Button	Description
Insert After ('Insert' if Event List is empty)	Select to enable, inserts Browser selection after selected event; multiple scenes can be inserted
Undo	Undo last List Edit action
Delete	Delete Event List selection
Unload List	Clear Event List
Cut	Cut a Event List selection
Copy	Copy Event List selection
Paste	Paste copied/cut event to Event List
Move Up	Move Event List selection up
Move Down	Move Event List selection down
Save List	Save Event List
Event List Pane	
Event List	Current events, works with List Edit operations
Loaded	Green box indicates currently loaded event

Transport Control Pane Buttons

Button	Description
Auto Load	Select to enable, auto-load next event to Program
Auto Start	Select to enable, auto-start event when loaded to Program
Off Air Advance	Select to enable, auto-load next event to Preset Clip
Previous Event	Select the previous event in the list
Next Event	Select the next event in the list
Mark	Marks event time code, works with the Play/Stop/Cue To Begin buttons
Load Event/Cut To Begin	Load selected event/Cue To Begin; select to play
ClipStore/DDR	
Stop	Stop clip
Play	Play clip
Graphics Device	
Out	Take scene off-air
In	Take scene on-air

1080sf EZ 4K Frame Operating Modes

EZ 4K (Quad Link) 1080sf (Segmented Frame) modes have been added to the Eng Setup, Video Settings, Operating Mode menu for 4K 2SI. As with other EZ 4K modes, once the inputs and outputs are configured (see *Kayenne/Karrera/GV Korona Installation & Service Manual*), selecting the mode will auto-acquire physical M/E resources as 4Ksf 2SI in Suite 1. Selections are saved with Video Settings and can be loaded or disabled as part of Load Settings granularity in the File Ops, Eng Setup menu.
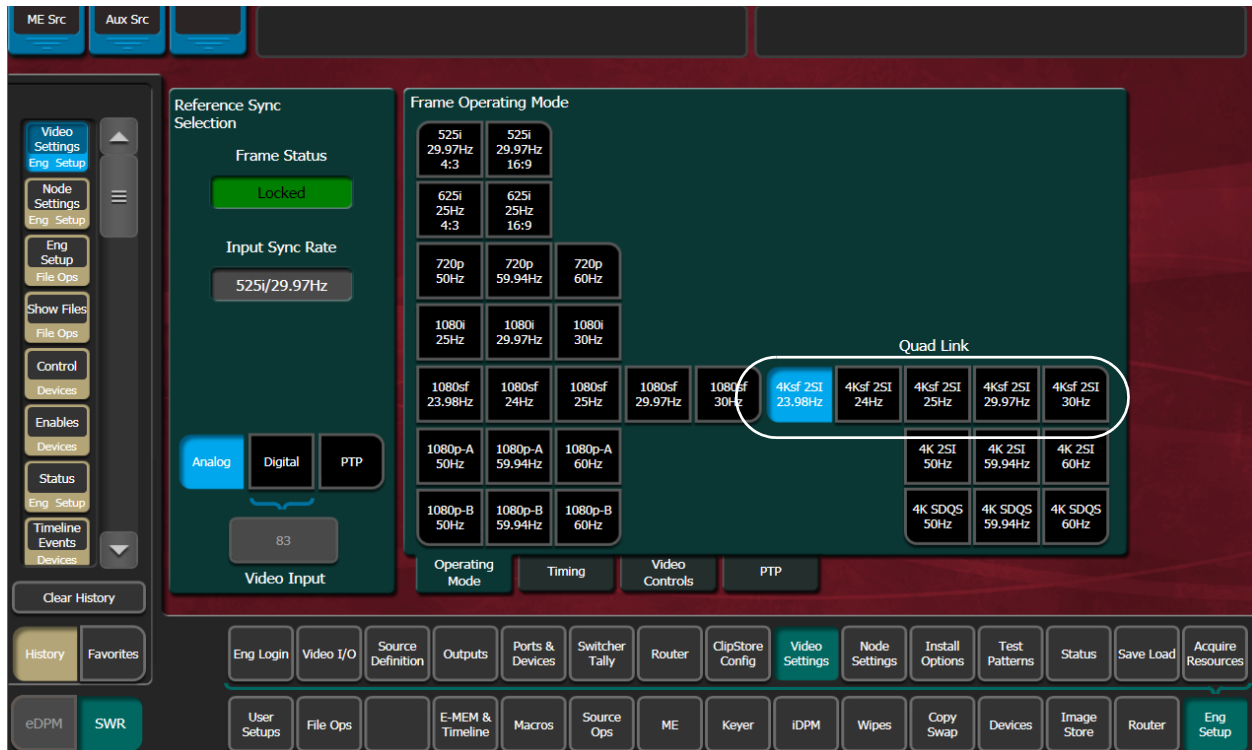
Downgrade the IP Board ARM Software

When downgrading the switcher software, the GV K-Frame X and V-series systems with IP boards installed require the Board ARM software version to be downgraded to match using the 'Flash All SD Cards' console command.

> CAUTION: Do not downgrade to switcher software versions earlier than 14.1.0 from 14.3.x with IP I/O boards installed.

Using a serial connection is recommended because it provides more status during the upgrade but a Telnet session can be used.

1 Install the *earlier* version of the software (Update the K-Frame Software, on page 24).

2 Prepare for the ARM software installation:

    a For a serial console installation (recommended) on GV K-Frame X, open the Frame door and attach the serial console cable to the front edge of the Controller board. For V-series, the Console RS232 serial port can be accessed at the rear of the Frame (for help locating the Frame serial console ports, see the *Kayenne/Karrera/GV Korona Installation & Service Manual*).

    b For Telnet, open a Telnet Session to the Frame by clicking on the Windows Start menu and entering **telnet**, space, <**Frame IP Address**> (example: telnet 10.10.10.100) in the *Search* field.

3 Upgrade or verify that the board FPGA HADs are up to date.

4 To check the HAD status, enter checkHADs at the prompt:

```
->checkHADs
```

Result:

    HADs up-to-date: `value = 1 = 0x1`

    HADs out-of-date: `value = 0 = 0x0`

5 If the HADs are out of date, see the *Maintenance* section of the *Kayenne/Karrera/GV Korona Installation & Service Manual* for HAD upgrade instructions.

6 Enter the console menu by typing consoleMenu at the prompt:

```
->consoleMenu
```

Result:

```
[1] Status            [2] Controller        [3] ME
[4] PTP Mezz          [5] Vid 16x8 IO       [6] Mod 8x4 IO
[7] Image Store       [8] Spare             [9] Debug
[10] Software Options [11] Fan Controller   [P] Power Supply
[H] Boot Sw Help      [D] DisableAllUpdates [M] DisableAllMonitoring
[x] Exit to shell
```

7 Enter the number nine [9] for the Debug menu, at the prompt: `->9`

Result:

```
[1] GPI                    [2] Tally                  [3] MessageControl
[4] TimeThreads            [5] Router Control         [6] RDP/CPL Tests
[7] Show image info        [8] Show DMA info          [9] Feature Tests
[10] Transition            [11] Switch Image DMA      [12] Temp Show All
[13] Temp Adjust Parms     [14] Dump HAD Info         [15] Flash All HADs
[16] Flash All SD Cards    [17] Flash All HADs/SDs    [18] NP Aux Control
[19] Field Timing          [20] CPL Msg Timing        [21] Display Re-entries
[22] DebugNetwork          [23] DebugImageStore       [24] Debug Event Control
[x] Exit
```

8 Enter the number sixteen [16] for 'Flash All SD Cards', at the prompt:

    ->16

9 For Serial Console:

> CAUTION: Do not power cycle or reset the Frame until the following result is displayed, showing that all boards are upgraded. Doing so can corrupt the SD card.

Results will be similar to the following example, reporting the new version for *all* boards:

```
set request for configuration data for 16x8 IO IP 4
16x8 IO IP 4: Set to RUN from WAIT_FOR_RUN_AFTER_RESET
16x8 IO IP 4 reports SD Image version: V14.2.0
```

10 For Telnet only:

    a Open an Internet Explorer window and enter the IP Address of the Frame to display the K-Frame Web pages.

    b Select **Frame Message Log**, then **Current** (it can take several minutes for data to transfer to the Frame Message Log, continue to select the **Frame Message Log** button until all boards report the new version).

> CAUTION: Do not power cycle or reset the Frame until the following result is displayed, showing that all boards are upgraded. Doing so can corrupt the SD card.

Results will be similar to the following example in the Message Log, reporting the new version for *all* boards:

```
set request for configuration data for 16x8 IO IP 4
16x8 IO IP 4: Set to RUN from WAIT_FOR_RUN_AFTER_RESET
16x8 IO IP 4 reports SD Image version: V14.2.0
```

PTP Mezzanine Board ARM Software Upgrade

To enable the PTP feature, the following Board ARM Software upgrade procedure must be completed for the PTP Mezzanine board.

> Note: Once software version 14.3 is installed, newer updates will no longer require the Board ARM Software upgrade procedure; it will be automatic.

Using a serial connection is recommended because it provides more status during the upgrade but a Telnet session can be used.

1   Install the software (Update the K-Frame Software, on page 24).

2   Prepare for the ARM software installation:

   a   For a serial console installation (recommended) on GV K-Frame X, open the Frame door and attach the serial console cable to the front edge of the Controller board. For V-series, the Console RS232 serial port can be accessed at the rear of the Frame (for help locating the Frame serial console ports, see the *Kayenne/Karrera/GV Korona Installation & Service Manual*).

   b   For Telnet, open a Telnet Session to the Frame by clicking on the Windows Start menu and entering **telnet**, space, <**Frame IP Address**> (example: telnet 10.10.10.100) in the S*earch* field.

3   Upgrade or verify that the board FPGA HADs are up to date.

4   To check the HAD status, enter checkHADs at the prompt:
```
->checkHADs
```
Result:

   HADs up-to-date: `value = 1 = 0x1`

   HADs out-of-date: `value = 0 = 0x0`

5   If the HADs are out of date, see the *Maintenance* section of the *Kayenne/Karrera/GV Korona Installation & Service Manual* for HAD upgrade instructions.

6   Enter the console menu by typing consoleMenu at the prompt:
```
->consoleMenu
```
Result:

```
[1] Status              [2] Controller          [3] ME
[4] PTP Mezz            [5] Vid 16x8 IO         [6] Mod 8x4 IO
[7] Image Store        [8] Spare               [9] Debug
[10] Software Options  [11] Fan Controller     [P] Power Supply
[H] Boot Sw Help       [D] DisableAllUpdates   [M] DisableAllMonitoring
[x] Exit to shell
```

7   Enter the number four [4] for PTP Mezz, at the prompt: `->4`

Result:

```
-> consoleMenu
 [1] Status              [2] Controller         [3] ME
 [4] PTP Mezz            [5] Vid 16x8 IO        [6] Mod 8x4 IO
 [7] Image Store         [8] Spare              [9] Debug
 [10] Software Options   [11] Fan Controller    [P] Power Supply
 [H] Boot Sw Help        [D] DisableAllUpdates  [M] DisableAllMonitoring
 [x] Exit to shell
```

8 Enter the letter [a] for ARM at the prompt: ->A

Result:

```
[1] Peek              [2] Poke              [3] BlockPeek
[4] LongPeek          [5] LongPoke          [6] LongBlockPeek
[7] LoadFPGAs         [8] HAD               [9] PtpMezz
[A] ARM               [11] MAC Addresses    [B] Board ID
[T] Temp Monitor      [D] DisableBoardUpdates  [x] Exit
```

9 Enter [u] for Upgrade ARM Image at the prompt ->U

Result:

```
[D] Debug              [V] Get ARM SW Img Versio [U] Upgrade ARM Image
[S] Get PTP Stats      [I] Set up IP             [x] Exit
```

> CAUTION: Do not power cycle or reset the Frame until the following result is displayed, showing that upgrade is complete. Doing so can corrupt the SD card.

For Serial Console, the console will report data similar to the following example:
```
PTP: Set to RUN from WAIT_FOR_RUN_AFTER_RESET
PTP reports SD Image version: V14.3.1
```

10 For Telnet only:

   a Close the Telnet session.

   b Wait at least 10 minutes before continuing.

   c Start a new Telnet session and repeat Step 6 through Step 8.

   Result:

```
[D] Debug              [V] Get ARM SW Img Versio [U] Upgrade ARM Image
[S] Get PTP Stats      [I] Set up IP             [x] Exit
```

   d Enter the letter [d] for the Debug menu, at the prompt: ->D

   e Enter [r] for reset at the prompt ->R

   Result:

```
[C] Command           [S] SetCommType        [G] GetCommType
[R] ResetBoard        [E] Enable PTPController  [D] Disable PTPController
[x] Exit
```

   f Open an Internet Explorer window and enter the IP Address of the Frame to display the K-Frame Web pages.

g Select **Frame Message Log** (left), then **Current** (it can take several minutes for data to transfer to the Frame Message Log, continue to select the **Frame Message Log** button until all boards report the new version).

CAUTION: Do not power cycle or reset the Frame until the following result is displayed, showing that all boards are updated. Doing so can corrupt the SD card.

Results will be similar to the following example in the Message Log, reporting the new version for *all* boards:

```
* 28 Nov 2018 14:55:09 (72378) PTP: Set to RUN from
WAIT_FOR_RUN_AFTER_RESET
* 28 Nov 2018 14:55:06 (72378) PTP reports SD Image version: V14.3.1
```

12.X to 14.3 Upgrade: Install IP Board ARM Software

GV K-Frame X and V-series IP systems with switcher software version 12.x.x require an upgrade to the latest IP I/O Board ARM software when installing 14.3.x software. Upgrade the ARM software using either a serial connection or Telnet session.

Note: Starting with switcher software version 14.0.0, Board ARM Software upgrades for IP I/O boards are no longer required; the process has been automated.

Using a serial connection is recommended because it provides more status during the upgrade but a Telnet session can be used.

1 Using the K-Frame Installer, install the 14.3.1 software (Update the K-Frame Software, on page 24).

2 Prepare for the ARM software installation:

a For a serial console installation (recommended) on GV K-Frame X, open the Frame door and attach the serial console cable to the front edge of the Controller board. For V-series, the Console RS232 serial port can be accessed at the rear of the Frame (for help locating the Frame serial console ports, see the *Kayenne/Karrera/GV Korona Installation & Service Manual*).

b For Telnet, open a Telnet Session to the Frame by clicking on the Windows Start menu and entering **telnet**, space, <**Frame IP Address**> (example: telnet 10.10.10.100) in the S*earch* field.

3 Upgrade or verify that the board FPGA HADs are up to date.

4 To check the HAD status, enter checkHADs at the prompt:

```
->checkHADs
```

Result:

HADs up-to-date: `value = 1 = 0x1`

HADs out-of-date: `value = 0 = 0x0`

5 If the HADs are out of date, see the *Maintenance* section of the *Kayenne/Karrera/GV Korona Installation & Service Manual* for HAD upgrade instructions.

6 Enter the console menu by typing consoleMenu at the prompt:

```
->consoleMenu
```

Result:

```
[1] Status              [2] Controller         [3] ME
[4] PTP Mezz            [5] Vid 16x8 IO        [6] Mod 8x4 IO
[7] Image Store         [8] Spare              [9] Debug
[10] Software Options   [11] Fan Controller    [P] Power Supply
[H] Boot Sw Help        [D] DisableAllUpdates  [M] DisableAllMonitoring
[x] Exit to shell
```

7 Enter the number nine [9] for the Debug menu, at the prompt: ->9

Result:

```
> 9
[1] GPI                 [2] Tally              [3] MessageControl
[4] TimeThreads         [5] Router Control     [6] RDP/CPL Tests
[7] Show image info     [8] Show DMA info      [9] Feature Tests
[10] Transition         [11] Switch Image DMA  [12] Temp Show All
[13] Temp Adjust Parms  [14] Dump HAD Info     [15] Flash All HADs
[16] Upgrade All ARM SW [17] NP Aux Control    [18] Field Timing
[19] CPL Msg Timing     [20] Display Re-entries [21] DebugNetwork
[22] DebugImageStore    [23] Debug Event Control [x] Exit
```

8 Enter the number sixteen [16] for Upgrade All ARM SW, at the prompt:

```
->16
```

9 For Serial Console:

Results will be similar to the following example, reporting the new version for *all* boards:

```
set request for configuration data for 16x8 IO IP 4
16x8 IO IP 4: Set to RUN from WAIT_FOR_RUN_AFTER_RESET
16x8 IO IP 4 reports SD Image version: V14.3.0
```

10 For Telnet only:

a Open an Internet Explorer window and enter the IP Address of the Frame to display the K-Frame Web pages.

b Select **Frame Message Log**, then **Current** (it can take several minutes for data to transfer to the Frame Message Log, continue to select the **Frame Message Log** button until all boards report the new version).

Results will be similar to the following example in the Message Log, reporting the new version for *all* boards:

```
set request for configuration data for 16x8 IO IP 4
16x8 IO IP 4: Set to RUN from WAIT_FOR_RUN_AFTER_RESET
16x8 IO IP 4 reports SD Image version: V14.3.0
```

About the K-Frame Software Update

K-Frame systems are shipped with the current software version installed on the Frame and Control Surface. Updates to K-Frame system software are available for download from the Grass Valley website. Software installation tools are provided with each update package.

The K-Frame Deployment Tool extracts and copies Grass Valley switcher system files to a Menu Panel or PC. These files include the K-Frame Installer Program.

The K-Frame Installer Program is used to install the extracted software to Grass Valley Video Processor Frame(s) and Control Panel(s) over the network. The K-Frame Installer Program also launches other installation tools (wizards). One wizard installs the Menu application directly on the Menu Panel or PC running the installer program. If multiple Menu Panels (or PCs running the Menu application) exist, each must be updated individually. Installation wizards can also be launched for the KSP and NetConfig features.

Run the Menu Auditor for Third Party Updates

The Menu Auditor Program is included on the provided USB Stick and available from the grassvalley.com support menu. Check the Grass Valley Website for the latest version. Run the Menu Auditor to verify that the correct Third Party Updates are installed, including Microsoft .NET. The Menu Auditor will indicate which updates are needed.
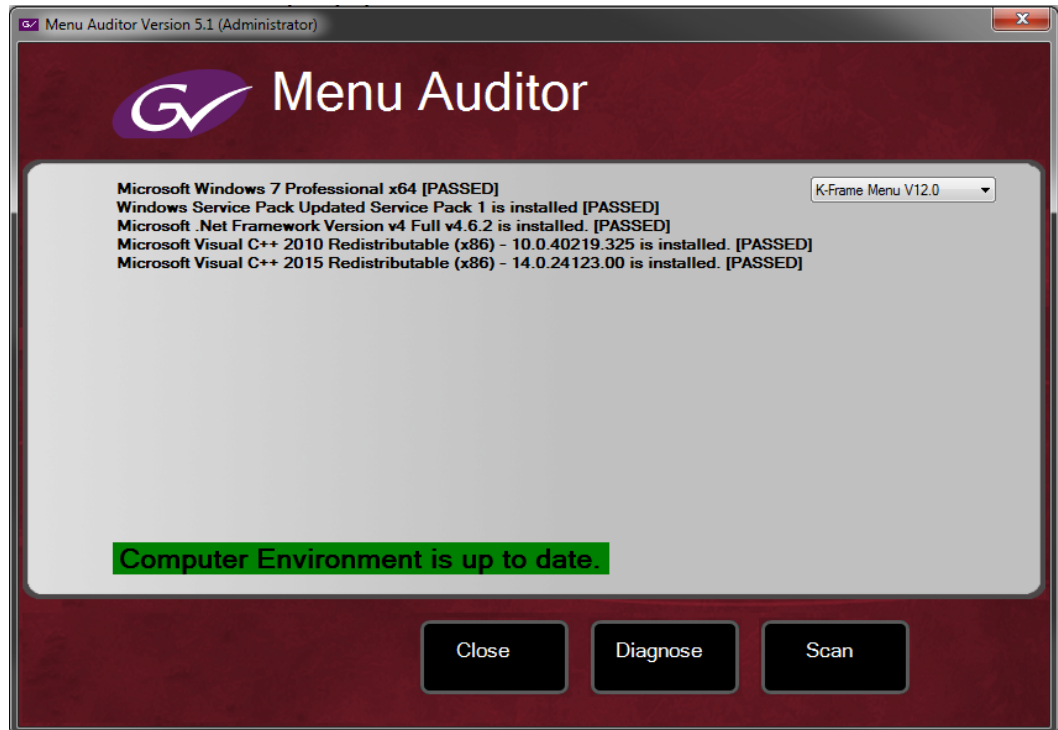
> CAUTION: Out of date third-party software can cause the menu to become unstable or stop working.

To check for third party updates on a Menu Panel or Menu on PC:

1 Run the Menu Auditor Program.
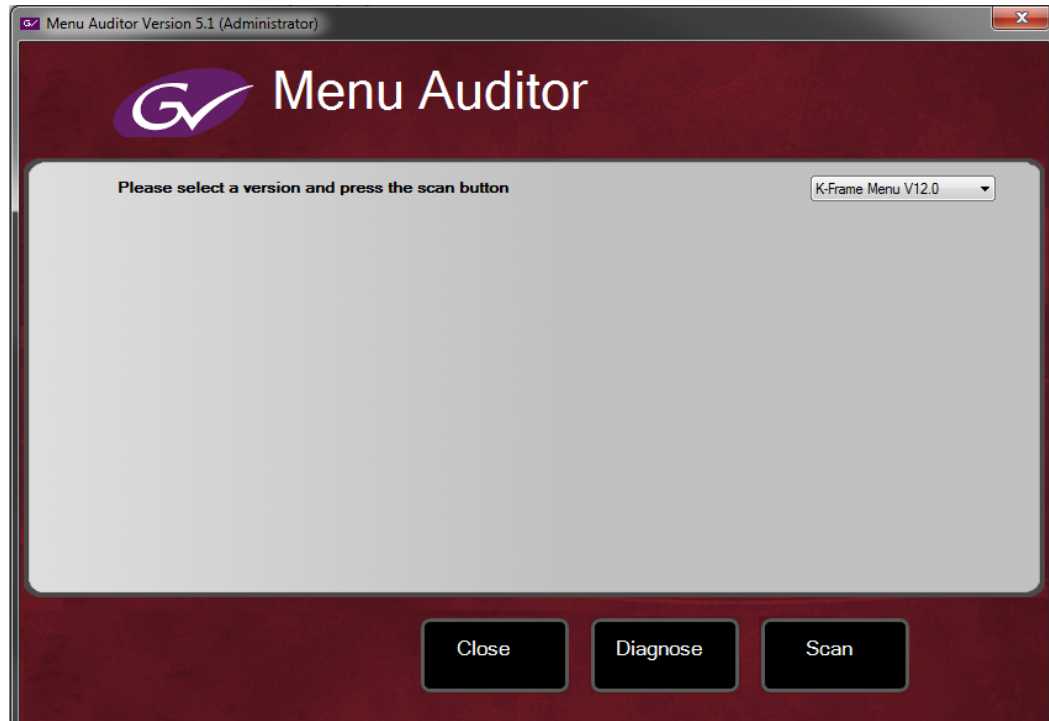
2 Select **Scan**. The Auditor will check each relevant installation and indicate the state of the computer environment.

3 Select the **Install** buttons of any files that are not of the correct version.

4 Select the **Diagnose** button to run the scan and put the windows machine data into a file for diagnostic purposes.

Materials Required

You will need the following materials for this update:

- K-FrameSetup.exe, which can be downloaded from the Grass Valley Customer Support website along with the latest ClipStore/Summit software, Release Notes, and Release Notes Addendum, and copied to a USB stick,
- Backup media for configuration and effects files,
- USB mouse and keyboard, and
- a Menu Panel, or user PC, properly configured on the switcher system network.

Update the K-Frame Software

This software update procedure assumes your Grass Valley switcher system is fully operational with all network communications properly configured. Refer to the *K-Frame Installation & Service Manual* for configuration instructions.

Back up Current Configuration and Effects Files:

1 Save your system configuration files (Eng Setup, User Setups), and your operational registers (EMEM, Macros, etc.) and other settings. You can create a Show file that contains all this information. See the K-Frame Kayenne/Karrera/GV Korona User Manual for file operations instructions.

> **Note:** A thumb drive that includes the current Grass Valley switcher software version is a convenient location to back up these files.

2 Store the backup media in a safe place. You may want to use these files if you decide to back down to that earlier software version.

Deploy the Switcher Update Package Files and Installer:

1 Exit the Menu application and any other applications that may be running on the Menu Panel or PC.

2 Disable any virus protection, Windows firewall, and any other firewall protections that may have been installed on the Menu Panel or PC. Firewalls must be inactive to allow switcher system software installation over the network.

3 Run the K-Frame Setup application, either:

   a Insert the K-Frame Software USB stick into an available port on the Menu Panel or PC. Locate the removable disk in My Computer, open **K-FrameSetup.exe**, and select **OK**,

   - or -

   b Download the K-FrameSetup.exe file from the Grass Valley download site, open the file, and select **OK**.

> **Note:** If the same K-Frame Deployment Tool version files are detected, a Repair/Remove screen is displayed, allowing re-installation or removal of the Deployment files

4 Select **Next** in the K-Frame Deployment Tool window.

5 Accept the license agreement and select **Next**.

6 Select **Next** to accept the default deployment location. Alternatively, you can Browse to a different location to deploy the files. The "Ready to Install the Application" screen appears next.

7 Select **Next** to deploy the files.

Result: When the deployment completes, the K-Frame Installer Program will launch automatically. After the switcher files have been deployed, the K-Frame Installer Program can be launched at any time by opening the **K-Frame Installer** from the desktop icon.

K-Frame Installer Program Description

The K-Frame Installer Program initial screen has buttons on the left used to select various installers.
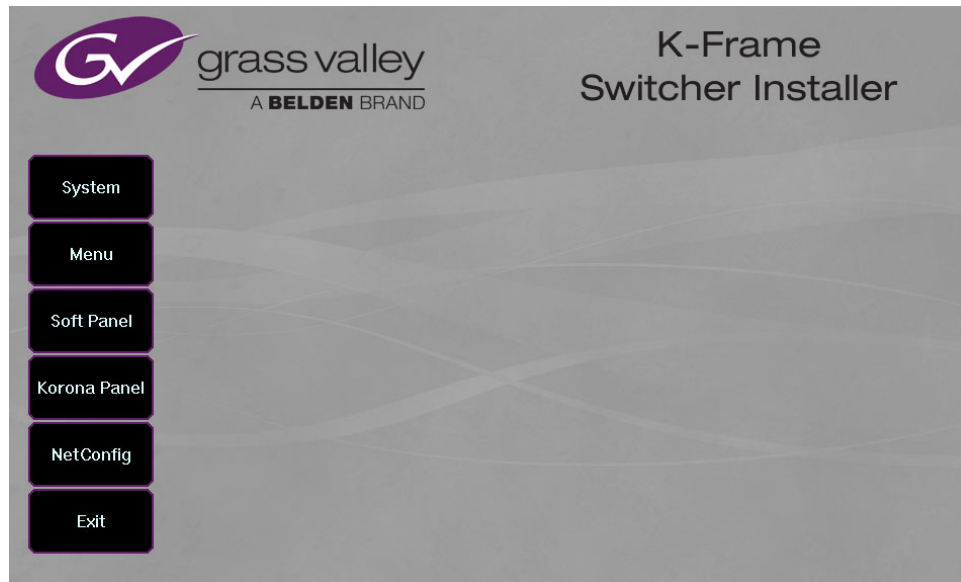
When **System** is selected, a screen appears with an expandable central hierarchy window, information on the upper right, and function buttons on the lower right.

Navigate to the Frame or Control Panel device in the hierarchy to display information for that device or install software.
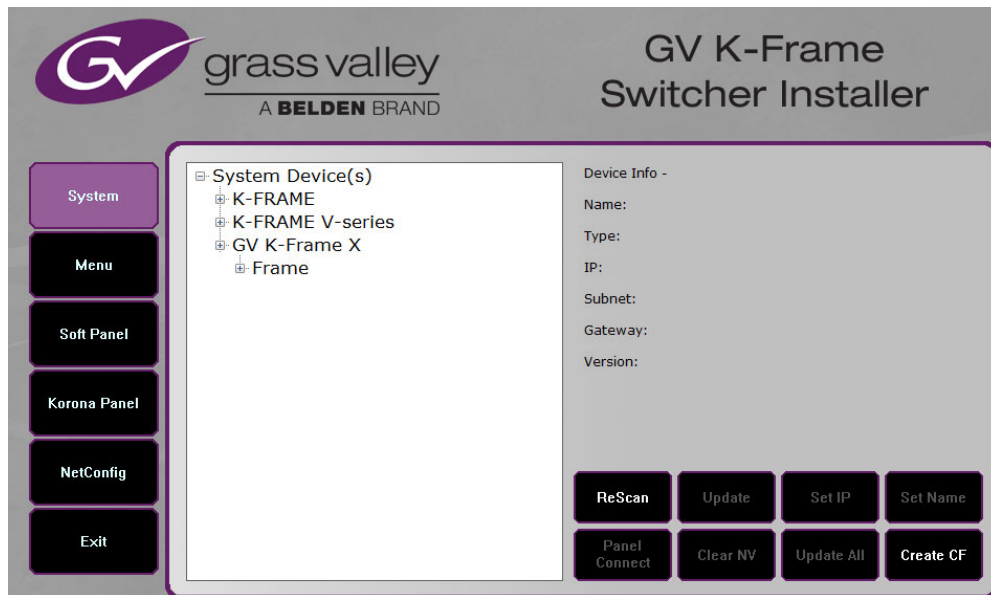
Selecting **System Device(s)**, at the top of the hierarchy window displays the types of switcher devices residing on the network. Selecting a switcher device displays the system names present on the network of that switcher. Each system name is taken from the Video Processor Frame name. Selecting a system name reveals Frame, Panel, and optional Image Store items for that system, which when opened, allows selection of the individual devices making up that system. When a specific device is selected, information for it is displayed on

the right. This hierarchy allows easy identification of each switcher system's components when multiple switchers reside on the same network.

The K-Frame Installer program has the following other features, accessed by selecting its labeled button:

Rescan - Rescans the network for devices. This refreshes the screen to show the currently connected components and any modified system names.

Update - Updates the software on the selected device using the software deployed with this K-Frame Installer version.

Set Name - Opens a window allowing you to change the name of the selected device.

Set IP - (Control Panel selected in hierarchy window) - Opens a window allowing you to enter the IP address the Control Panel will use to communicate with the Video Processor Frame.

Clear NV - (Frame or Control Panel selected) Clears NV Memory.

Update All - (System selected) Updates software to all devices for the selected system, excluding Menus.

Create CF - Allows the creation of a Control Panel Compact Flash Card onto another CF Card.

> CAUTION: : The Create CF process wipes and formats the CF card.

Update the K-Frame System Software

For Kayenne and Karrera, the K-Frame system's Video Processor Frame, Control Panels, and optional Image Stores can be updated in one operation. The GV Korona Control Panel is updated separately from the Frame and Image Store, see Update the GV Korona Control Panel Software, on page 28.

1   With the K-Frame Switcher Installer Program launched, select the **System** button.
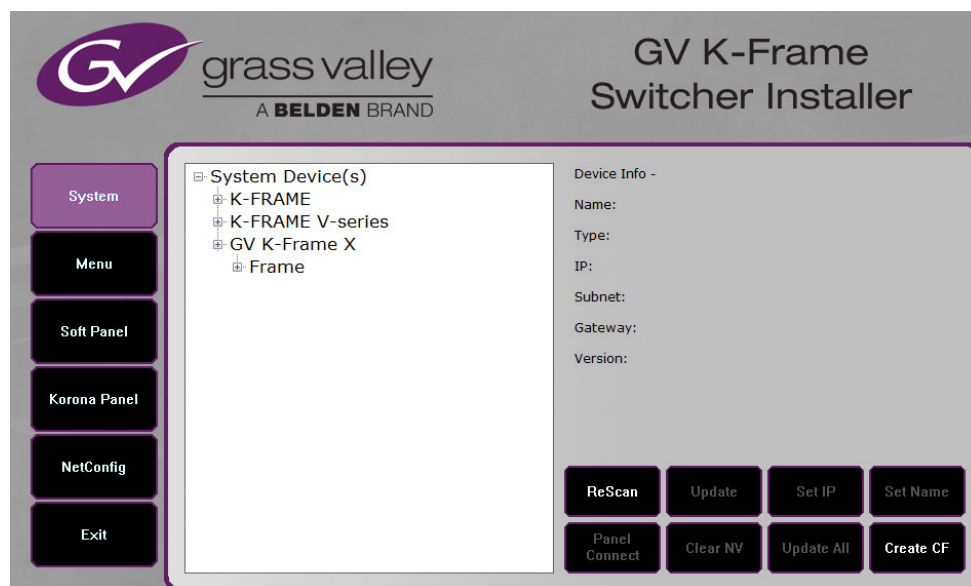
2 In the System menu, each K-Frame Switcher system consists of a Video Processor Frame, associated Control Panels; and PCU(s) for Kayenne, and optional Image Store. Use the mouse to navigate to the desired system (not an individual system device). When a system has been selected the **Update All** button becomes active.

3 Select **Update All**. The Software update warning dialog is displayed.
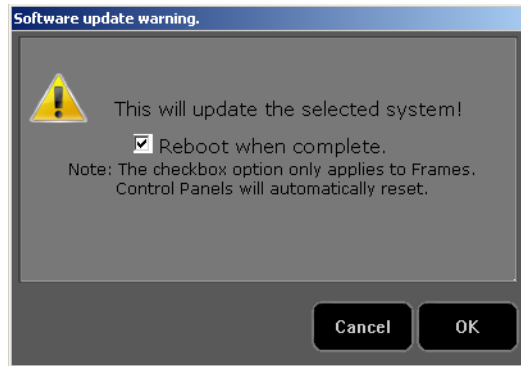
If the Reboot when complete box is checked, the Video Processor Frame, optional Image Store, and all associated Control Panels will reboot after the **OK** button in the Software update warning dialog is selected. If the box is not checked, you will need to manually reboot the Video Processor Frame and optional Image Store hardware after the software files have finished installing. Control Panels are always rebooted after a software update.

4 Select **OK**.

5 Select **Finish** when complete.

Update the GV Korona Control Panel Software

The GV Korona Control Panel software is updated separately from the Video Processor Frame.

1 With the K-Frame Switcher Installer Program launched, select **Korona Panel**.

2 Accept the License Agreement, select **Next**, and follow the prompts.

About Updating Spare Kayenne Control Panel Modules

The Kayenne K-Frame Control Panel FPGAs will automatically be updated with software installation. However spare Kayenne Control Panel Modules must be connected to the Control Panel after initial software installation and the Control Panel software re-installed so all modules are loaded with the current FPGAs and ready for use when needed.

CAUTION:	Do not interrupt power to GV switcher systems during software installation; the FPGAs will revert to an older version. If power is lost during software installation, install the software once the power has been restored.

Install the Menu Panel Application Update

CAUTION: :	For Menu on PC, you must be logged on as administrator or the installation will fail.

1 Select the K-Frame Switcher Installer desktop icon, if necessary, to launch the K-Frame Switcher Installer Program.
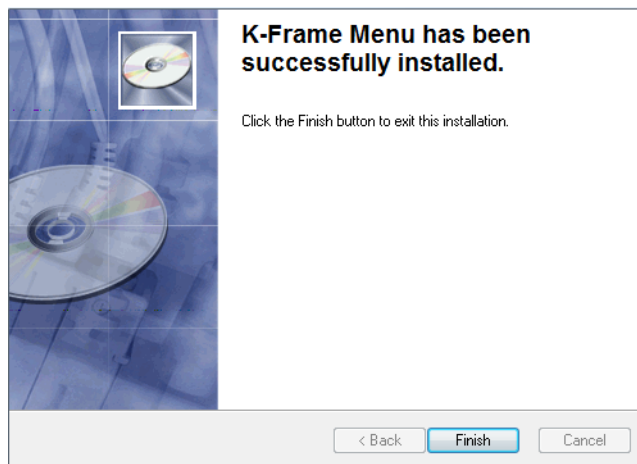

2 Select the **Menu** button. The K-Frame Menu Installation tool will launch.

3 Select **Next**.

4 In either the Karrera, Kayenne, or GV Korona Control Panel area, choose either the Menu Platform (the Touch Screen Menu Panel) or User PC, and select **Next**.

5 Enter a name and organization in the User Information screen, leave the Anyone who uses this computer setting selected, and select **Next**.

> **Note:** Selecting Only for me limits some settings to the currently logged in user. This may be appropriate if the Menu application is installed onto a PC shared by several users. However, this is not a foolproof security method and should not be relied on for mission critical applications.

6 Select **Next** to accept the default installation location. Alternatively, you can browse to a different location to install the application.

7 In the Ready to Install the Application menu, select **Next**.

8 When done, the Menu Successfully Installed screen appears, select **Finish**.

If you installed onto Menu hardware you will be prompted to reboot the computer.

9 Select **Exit** and answer **Yes** at the prompt to exit the K-Frame Installer.

Selecting the K-Frame Menu icon launches the new version of the Menu Panel application.

Soft Panel Installation

Selecting the Soft Panel button launches an individual installer for the KSP option. The Soft Panel installer is intended for a customer provided PC and the process is identical to the Menu on PC (see Install the Menu Panel Application Update, on page 29. Install the menu and follow the prompts. See the *KSP Switcher Soft Panel Graphical User Interface Instruction Manual* for more information.

Soft Panel requirements:

- The installed menu software matches the K-Frame system
- 1920 x1080 display resolution
- Microsoft .NET Framework 4.5 Windows 7/Windows 10 (see Run the Menu Auditor for Third Party Updates, on page 23)
- Microsoft Visual Studio 2010 redistributable is installed—(see Run the Menu Auditor for Third Party Updates, on page 23)

Add the PC's Name and IP Address with the KSP software to the node list in the Eng Setup, Control Surfaces menu.

The KSP option is activated with a purchased license key.

About Upgrading the Host Address Decoder (HAD) FPGA

Each CPU or Image Store board installed in a Grass Valley K-Frame Video Processing Frame has a PCI Express endpoint for communication with the host processor. These PCI endpoints are governed by the HAD FPGA. Software updates can include firmware upgrades for these endpoint HADs.

For HAD FPGA upgrade instructions, see the maintenance information in the *Kayenne/Karrera/GV Korona Installation & Service Manual*.

> CAUTION: It is recommended that HAD (Host Address Decoder) FPGA (Field Programmable Gate Array) upgrades are performed by qualified personnel only, for example an EIC (Engineer In Charge).

About Upgrading the PTP Board ARM Software

For GV K-Frame X and V-series Frames, each 16x8 and 8x4 Video IP I/O (8x4 only for V-series) and PTP Mezzanine board (GV K-Frame X only) require a board ARM software upgrade as part of the software installation. For ARM upgrade instructions, see the maintenance information in the *Kayenne/Karrera/GV Korona Installation & Service Manual*.

> IMPORTANT: Board software updates are to be performed by qualified service personnel only.

Clear NV RAM for Control Panel and Frame

Use the following procedure on the Menu Panel or Menu on PC running the Menu Panel application that operates with the updated Video Processor Frame.

> **Note:** A new Menu Panel or PC that has not been used with the switcher system will need to be configured as a Control Surface Node before it can operate with a switcher system. See the *K-Frame Installation & Service Manual* for specific instructions.

1 From the K-Frame Installer menu, select the **System** button.
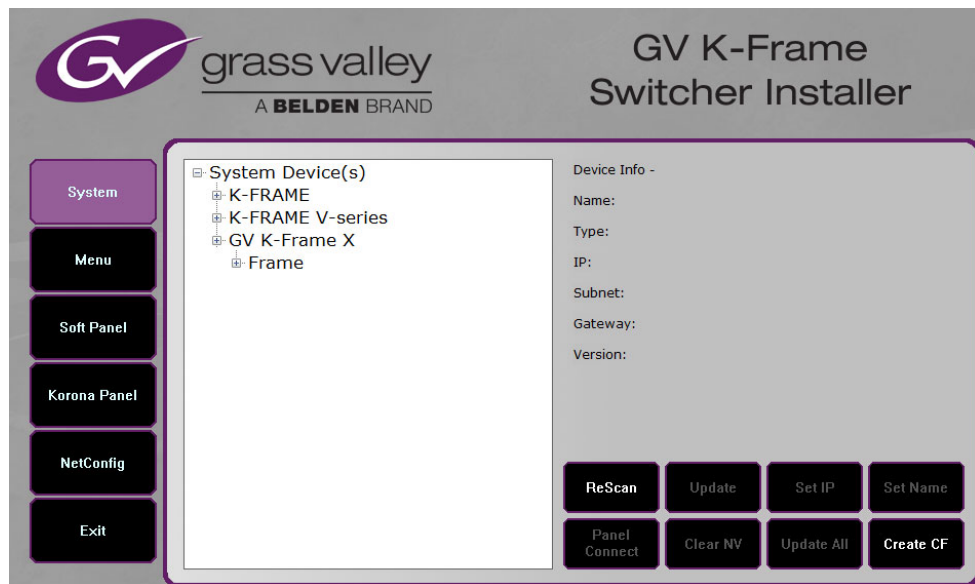
2 Select the device to be cleared.

3 Select the **Clear NV** button. Repeat for Control Panel and Frame.

Sample Files and DPM Effects

Sample files or other elements and instructions for use are provided with an installer from the Grass Valley website. The K-Frame Sample Installer, available on the Software USB thumb drive that came with your system and from the Grass Valley website, can be used to

place the K-Frame samples in the C:\K_Frame\user\Samples directory on the GV Switcher system.

> IMPORTANT: When upgrading, install the samples after the initial software upgrade.

During installation, you can choose to install all (the default) sample effects or select specific effects, reducing installation times.

Sample DPM Effects

Starting with switcher software version 11.0, sample DPM effects are provided with the K-Frame Sample Installer. It is important to read the accompanying instructions on how to load and run the sample DPM effects.

> **Note:** The C:/Images folder must be a shared folder on the network to use sample Image Store stills with sample DPM Effects.

About K-Frame V-series and S-series Samples and Effects

For K-Frame S-series and V-series Frames, samples that are built using more than four keyers will need some customization before incorporating those elements into a production.

Install NetConfig and Newton Configurator (Optional)

Select the **NetConfig** button to launch the K-Frame NetConfig installer (similar to the Menu Panel installer). Both NetConfig and the Newton Configurator plug-in will be installed. Follow the directions displayed to install these applications onto that Menu Panel or PC.

> **Note:** The K-Frame Installer Application and the separate NetConfig application cannot run simultaneously on the same Menu Panel or PC.

Check Software Versions

Launch the Menu application. The Status menu lists the switcher system devices. Ensure all the components are running the same software version. Mismatched versions will be reported with red text.

Confirm System Operation

1 Verify that all the installed MEs are operational. Select different crosspoints on the Control Panel and fly a key with an iDPM.

2 Ensure that any software enabled options operate correctly. Existing authorization codes should work with the new software.

3 Check that EMEMs run properly:

• Older effects should work with the new software. If there are differences, however, you will need to edit or rebuild the effect with the new software version.

• If older effects use iDPMs, it may require that you load, update, and save the show (see the *K-Frame User Manual* for more information).

4 Reload the Macros and check that they operate correctly.

5 Load some Image Store images and confirm they display correctly.

Back up New Configuration and Effects Files

1 When you are satisfied with system operation, save the new configuration files and effects as a Show file to a folder you've created on that version's K-Frame Software USB stick.

2 Label the media with the version and date and store it in a safe place.

3 Reactivate any virus protection on the Menu panel that may have been disabled at the start of this procedure.

This completes the standard switcher system software update procedure.

Update Other Grass Valley Switcher Systems Software

More than one switcher system (multiple Video Processor Frames) may reside on your network. Each system can operate simultaneously with different software versions, as long as all the components in each system run the same software version.

Additional switcher systems are updated using the same procedure as described.

1 Select the other switcher system on the K-Frame Installer Program System hierarchy screen, and choose Update All.

2 Insert the K-Frame Software USB stick into each Menu Panel or PC associated with that switcher system and choose the Menu software update button.

Individual Switcher System Component Update

Individual components can be selected for update (just the Video Processor Frame, optional Image Store, or just one Control Panel). However, all components of a switcher system must run the same software version. If updating components individually, make sure they all are at the same version before resuming K-Frame system operation.

> CAUTION: Allow the Video Processor Frame and optional Image Store to completely finish rebooting before attempting to install Control Panel software. The Control Panel update process requires the Frame to be operational.

K-Frame Software Removal With Windows OS

K-Frame Deployment Tool versions and Menu Panel programs can be removed using standard Windows techniques (Setup/Add or Remove Programs/Uninstall or Change Programs, etc.).

Deployment Archive Files

When new software versions are installed with the K-Frame Deployment tool, older version deployment files are not automatically removed. Each K-Frame deployment creates its own software version folder. If the default installation location, or the same alternative destination, is always chosen, all the version folders will be listed together.

> **Note:** All the components of a switcher system must run the same software version. If you want to return to an earlier version of software, you should back-down the software on the Video Processor Frame, all Control Panels, and all Menu Panel applications used with that switcher system.

Default destinations:

- C:\Program Files (x86)\Grass Valley\GV Switcher\ K_Frame_Switcher_VX.X for 32-bit
- C:\Program Files\Grass Valley\GV Switcher\ K_Frame_Switcher_VX.X for 64-bit systems.

Running the K_FrameInstaller.exe file in any version's folder will permit installation of that version's files.

> CAUTION: Before installing an older version of the Menu Panel application, you must first remove the newer, currently installed Menu Panel version, either using that newer version's K-Frame Deploy Tool or Windows Add or remove programs.

Calibrate the Lever Arm and Joystick

See the Maintenance section of the *Kayenne/Karrera/GV Korona Installation & Service Manual*.

K-Frame System Suggested IP Addresses

K-Frame systems are shipped with default IP addresses, and it is suggested that you reserve several IP Address in sequence to configure Control Panel suites and additional devices. These default addresses can be used if the K-Frame system is operating on a dedicated network with no other devices present.

Note that these addresses can be changed during installation so your system may not be using these defaults.

K-Frame System Default IP Addresses

Device	IP Address
Video Processor Frame	192.168.0.170
Image Store	192.168.0.171
Control Panel Suite 1A	192.168.0.173
Touch Screen Menu Panel 1	192.168.0.175
ClipStore	192.168.0.180
All Subnet Masks)	255.255.255.0
All Gateways (except V1.6.5 software Remote Aux panel)	192.168.0.1
Reserved For Future Use	CAUTION: Do not connect any devices configured with the following IP addresses to a Karrera network.

K-Frame System Default IP Addresses

Device	IP Address
Video Processor Frame Gigabit Ethernet	192.168.0.172
PCU Panel (Kayenne) Reserved LAN Port	192.168.0.174

> **Note:** Customer orders with multiple Control Panels will be preconfigured to the listed IP addresses. However, if one of these additional Control Panels is reset to factory defaults, it will be given the standard 1A default 192.168.0.173 address.

IP Addresses and Single Control Surface Systems

A new Grass Valley system will operate on an isolated network with the default IP addresses configured at the factory (except for 32 Crosspoint Remote Aux panels). However, if you wish to integrate the system into an existing network, wish to use gateway communications, or wish to add more control surface components, then the IP addresses may need to be changed.

IP Addresses and Multiple Control Surfaces and Suites

If you plan to use multiple control surfaces (for example, more than one Control Panel or more than one Menu Panel) with the same Video Processor frame, you must make sure the IP addresses of the additional items are unique before connecting them to the network. Using default IP addresses will cause network conflicts and unpredictable system operation. See the *Kayenne/Karrera/GV Korona Installation & Service Manual* for network configuration information.

Grass Valley Technical Support

For technical assistance, contact our international support center, at 1-800-547-8949 (US and Canada) or +1 530 478 4148.

To obtain a local phone number for the support center nearest you, please consult the Contact Us section of Grass Valley's website (www.grassvalley.com).

An online form for e-mail contact is also available from the website.

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