Rainier Summit

4K-Compatible Multiviewer with Integrated Router

Revision 1.0.0, (August, 2017)

AVITECH

ABOUT THIS MANUAL
This manual contains information on how to use Avitech Rainier Summit series.

The following conventions are used to emphasize elements of text throughout the manual.


provides additional hints or information that require special attention.


identifies warnings which must be strictly followed.

Any name of a menu, command, icon or button displayed on the screen is shown in a bold typeset. For example: On the **Start** menu select **Settings**.

To assist us in making improvements to this user manual, we welcome any comments and constructive criticism. Email us at: sales@avitechvideo.com.

WARNING
Do not attempt to disassemble Rainier Summit series. Doing so may void the warranty. There are no user serviceable parts inside. Please refer all servicing to qualified personnel.

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Statement of Compliance

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1. Getting Started

The **Rainier Summit series** is Avitech's newest addition of multiviewers designed to meet 4K monitoring demands. The 2RU **Rainier Summit** with modular design accommodates up to 24 multiple-rate SDI/CVBS video sources on six hot-swappable multiviewer cards. Each card features both HDMI and SDI outputs that can be independently configured to meet various display and production requirements. Rainier Summit offers high-resolution multiview video and on-screen graphics up to 4K30 Ultra HD (UHD) clarity while managing with complete layout flexibility.

Utilizing a high-speed built-in router, Rainier Summit enables flexible routing and unlimited signal repetition across image windows of different multiviewer cards. Through internal and external cascading, it allows user to combine multiple cards for multiview monitoring of up to 100 sources; ideal for building fully dynamic multiviewing systems for video production and master control.

This chapter introduces the features and specifications as well as the external components of Rainier Summit.

1.1 Package Contents

The following standard items are included in the shipping package:

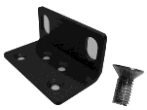
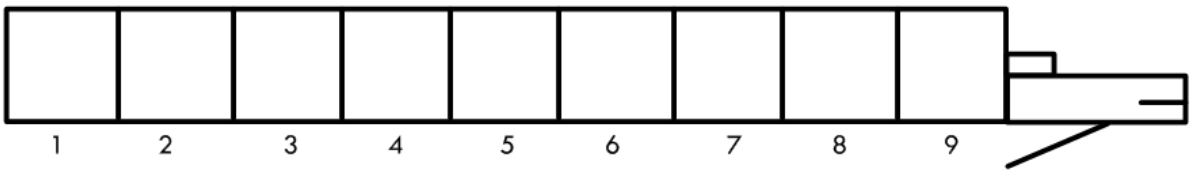
	
Avitech Rainier Summit series	**Utility Disc** (software and user manual)
	
460 Watts Power Supply (optional)	**Standard Power Cord** (USA customer only) **for Rainier Summit series**
	
DVI to HDMI Adapter (optional)	**RJ-50 GPI Terminal Block**
	
DC to DC Cable (optional – when purchasing redundancy power)	**Power Supply Station** (optional – when purchasing redundancy power)
	
Ear with screw (installed on Rainier Summit Series upon order for assembly on to rack mount)	

Table 1-1 Package Contents

Due to space limitation the LTC 1, LTC 2 and serial connectors are replaced with a RJ-50 connector. The pin definition of the RJ-50 terminal block is shown next.



Pin	Assignment
1	LTC #1 P (+)
2	LTC #1 N (-)
3	LTC #2 P (+)
4	LTC #2 N (-)
5	RS-232 Rx
6	Gnd
7	Gnd
8	RS-232 Tx
9	

Figure 1-1 Avitech RJ-50 Pin Definition

1.2 Product Features

- ✓ *Rainier Summit modular 2U chassis houses up to six Independent multiviewer cards and ensures no single point of failure*
- ✓ *Hot-swappable I/O card and fan module support field-serviceable card expansion and reconfiguration without interrupting signal routing*
- ✓ *Integrated router enables any-to-any signal routing and repetition across multiple windows/ displays; no external upstream router is required*
- ✓ *Automatic sensing of SDI (3G-Level A & B /HD/SD) and CVBS (NTSC/PAL) input signals*
- ✓ *Support of both HDMI and SDI multiviewer output; HDMI supports full range of resolutions up to 4K UHD (3840×2160/30Hz/4:2:2)*
- ✓ *Multiview outputs can be duplicated and concurrently monitored from different cards without external DA or routing cabling*
- ✓ *Internal cascade allows grouping of any selected modules for displaying 8, 12, 16, 20, and 24 image/video sources on one screen, or duplicates the same image to respective outputs*
- ✓ *Support of 16-channel SDI embedded audio and audio delay adjustment*
- ✓ *Cascading up to 25 cards from multiple Rainier Summit facilitates the monitoring of 100 sources on one display or duplicated to multiple displays*
- ✓ *Seamless layout control and system configuration through dedicated control software; all cascaded units are controlled and managed instantly via one software*
- ✓ *Linear Time Code (LTC) – optional / Vertical Interval Time Code (VITC) – optional / Embedded (LTC/VITC/DVITC) Time Code detect and display*
- ✓ *Genlock capability supports synchronizing multiviewer outputs to the reference signal and the rest of studio/production equipment*
- ✓ *Supports Avitech's Phoenix-Q configuration interface through an Ethernet connection*
- ✓ *Supports TSL through Ethernet (IP) or serial interface (RS-232)*
- ✓ *Supports General Purpose Input/Output through Ethernet (working in conjunction with Avitech's Pacific GPIO Box)*
- ✓ *Supports Avitech HTTP Protocol*

- ✓ *Redundant hot-swappable power supply (working in conjunction with Avitech Pacific PSS (Power Supply Station))*
- ✓ *<u>Video and Audio Control:</u>*
  1. *Free-scaling windows, quad view, Picture-in-Picture (PiP), full screen view, adjustable safe area, and aspect ratio control*
  2. *Image cropping and panning*
  3. *Closed Caption (CC) detection*
  4. *Supports 16-channel SDI embedded audio; 8 channels selectable for monitoring via OSD*
  5. *Adjustable audio delay (0 ~ 2700ms)*
  6. *Audio output supports up to 8-channel HDMI / 16-channel SDI embedded or stereo phone jack audio output*

- ✓ *<u>On Screen Display (OSD):</u>*

  1. Border
  - ✓ *Image borders*
  - ✓ *Video borders*

  2. Labels
  - ✓ *True type font label*
  - ✓ *UMD – (under monitor display)*

  3. Alarms
  - ✓ *Video: Video loss / Video freeze / Video black*
  - ✓ *Audio: Audio loss / Audio high / Audio low / Out of Phase*
  - ✓ *Fan failure alarm*
  - ✓ *Power failure alarm*
  - ✓ *System operating temperature monitoring alarm*
  - ✓ *Timecode Loss (for SDI embedded timecode only)*

  4. Signal format / Active Format Description (AFD) / Closed Caption detection

  5. Tally (up to four tallies per image window)

  6. Audio meter

  7. Loudness meter (optional)

  8. Digital clock (up to two digital clocks) and Analog clock (up to two analog clocks) per card

  9. User logo, display label and configurable background color

  10. External Linear Time Code display (option)

  11. SDI Embedded Time Code display per image window

  12. Safe area and aspect ratio detection

1.3 Specifications

Rainier Summit – SDI card	
Input	
SDI/CVBS (75 Ω, BNC connector)	Automatic sensing, the following input signals are supported: ❖ ***3G-SDI**: SMPTE 424M-2006 level A and level B-DS (Dual Stream)* *YCbCr 4:2:2 10-bit* *1080p60, 1080p59.94, 1080p50* ❖ ***HD-SDI**: SMPTE 292M* *1080p30, 1080p29.97, 1080PsF29.97 (segmented frame), 1080p25, 1080PsF24, 1080PsF23.98, 1080i60, 1080i59.94, 1080i50, 1035i60, 1035i59.94, 720p60, 720p59.94, 720p50, 720p30, 720p29.97, 720p25* ❖ ***SD-SDI**: SMPTE 259M* *525_60, 625_50* ❖ ***CVBS**: NTSC/PAL* ❖ ***Input cable length**:* ✓ ***3G-SDI**: 100m (328 ft.) Belden 1694A at 3Gbps* ✓ ***HD-SDI**: 150m (492 ft.) Belden 1694A at 1.5Gbps* ✓ ***SD-SDI**: 300m (984 ft.) Belden 1694A at 270Mbps* ❖ ***Return loss**: 15 dB up to 1.5 GHz*
Output	
HDMI and DVI (through HDMI to DVI adapter)	Normal/VESA output timing; 8-bit/10-bit HDMI color depth; User configurable: ❖ *3840×2160 (4K UHD) 25Hz/30Hz* ❖ *1920×1200 (WUXGA) 50Hz/60Hz* ❖ *1920×1080 (HD 1080) 50Hz/59.94Hz/60Hz Progressive* ❖ *1920×1080 (HD 1080) 50Hz/59.94Hz/60Hz Interlaced* ❖ *1280×720 (HD 720) 50Hz/59.94Hz/60Hz* ❖ *640×480 (VGA) 60Hz* *Note: The 59.94Hz refresh rate is only supported during transmission of a genlock source to the Ref IN port.*
SDI (75 Ω, BNC connector)	User configurable: ❖ *1920×1080 50Hz/60Hz Progressive (4:2:2 YCbCr/10-bit)* ❖ *1920×1080 50Hz/60Hz Interlaced (4:2:2 YCbCr/10-bit)* ❖ ***Return loss**: 15 dB up to 1.5 GHz*

Table 1-3 Rainier Summit – SDI Card Specifications

Rainier Summit – Control card	
Control interface (RJ45/RJ50 connector)	❖ *Serial: for connecting to TSL port of the TSL controller for TSL interface* ❖ *Ethernet for connecting to Windows-based Phoenix-Q software*
Cascade (BNC/HDMI connector)	For cascaded SDI/HDMI input signals from an upstream Rainier Summit
LTC/VITC (RJ50/BNC connector)	❖ *BNC connector: for the third Linear (or Longitudinal) Timecode input or Vertical Interval Timecode input* ❖ *RJ50 connector: for first and second LTC input* Electrical: single end Impedance: >30k ohms Sensitivity: 500 mV pk-pk (5V maximum)
Audio (Headphone jack)	Analog audio (stereo audio output)
Keyboard/Mouse control (USB A connector)	❖ *For in-system GUI's keyboard/mouse control (not available in the first release)* ❖ *For alarm log in the USB thumb drive*

Rainier Summit – Control card	
Power	Power consumption: *460 Watt (maximum)* Power Supply ❖ *For in system power supply: AC100~240V 50/60Hz* ❖ *PIB (working in conjunction with Avitech Pacific PSS POB): 12 V DC*
Dimension/Weight	Dimension*: 15.72 × 17.28 × 3.50 inch (39.93 × 43.90 × 8.88 cm)* Weight: *18.74 lbs (8.50 Kg)*
Environment/Safety	Temperature: ❖ *Operating: 0 ℃ (32 ℉) to 40 ℃ (104 ℉)* ❖ *Storage: –10 ℃ (14 ℉) to 50 ℃ (122 ℉)* Humidity, 0% to 80% relative, non-condensing Safety, FCC/CE/C-Tick Class A

Table 1-4 Rainier Summit-2 – Control Card Specifications

1.4 Connections to the Rainier Summit

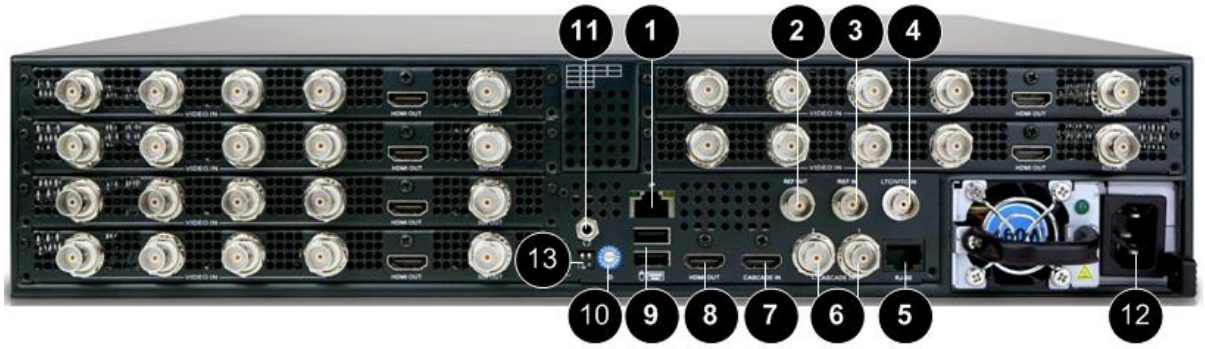


Figure 1-1 Rainier Summit Control Card Components

Control Card	
❶ **Ethernet (IP)**	Ethernet (IP) port for window layout control, preset save and recall, and system configuration via Windows-based Phoenix-Q software.
❷ **Ref Out**	For Genlock signal output that supports: 720p 50Hz, 720p 59.94Hz, 720p 60Hz
❸ **Ref In**	For Genlock signal input that supports: ❖ Black Burst: NTSC: 0.429 Vp-p / PAL: 0.45 Vp-p ❖ Tri-level: 0.6 Vp-p ❖ SD/HD/3G-SDI
❹ **LTC/VITC In**	For external timecode input ❖ Linear (or Longitudinal) timecode input (encoding of SMPTE timecode data in an audio signal) (LTC 3) ❖ Vertical interval timecode (encoding of SMPTE timecode data into the vertical blanking interval of the video signal)
❺ **LTC/Serial**	For external linear timecode inputs (LTC1 and LTC2) and TSL controller communication via RS-232 interface
❻ **Cascade In 1/2**	BNC connectors for externally cascaded SDI input signals from an upstream Rainier Summit (cascade input 1 and cascade input 2)
❼ **HDMI In**	For externally cascaded HDMI input signal from an upstream Rainier Summit
❽ **HDMI Out**	For in-system GUI's display
❾ **Keyboard/Mouse**	For in-system GUI's keyboard and mouse control (not available in the first release) For alarm log in the USB thumb drive
❿ **ID**	Rotary dial to assign unique addresses in systems with two or more cascaded chassis.
⓫ **Headset**	1/8 inch audio port for connecting headphones (stereo)
⓬ **Power**	AC100~240V 50/60Hz

Control Card	
⓭ **Dip Switches**	Updates the firmware; as well as resets the Rainier Summit to the factory-default setting. *Note: Dip Switch 2 is for factory reset, see Appendix D.*

Table 1-6 Rainier Summit-2 Rear Component Description

Figure 1-2 Rainier Summit Multiview Card Components

SDI Card	
❶ **SDI/CVBS IN**	BNC connectors for SDI (3G Level A and B /HD/SD) / CVBS (NTSC/PAL) video source signals ❖ Supports up to 16-channel embedded audio, with 8 channels selectable for on-screen monitoring
❷ **HDMI OUT**	HDMI connector for outputting the multiview signal to HDMI or DVI display (for monitoring resolution up to 4K30 UHD) ❖ Supports 8-channel embedded audio (for HDMI output)
❸ **SDI OUT**	BNC connector for SDI output ❖ Supports up to 16-channel embedded audio ❖ Independently configured multiview video with resolution up to 1080p60 ❖ Routed output for any of the 24 source signals

Table 1-7 Rainier Summit-2 – (SDI Card) Component Description

1.5 Connections to Redundant Power of Pacific Power Supply Station (PSS)

✓ ***Power Input Board (PIB) of Rainier Summit-2 for redundant power***

Figure 1-3 Rainier Summit Multiview Power Input Board Components

Rainier Summit-2	
❶ **DC INPUT (PIB)**	DC connector for 12V / 19A power input

Table 1-8 Power Input Board – Component Description

✓ ***Power Output Board (POB) of Pacific PSS for redundant power***

Figure 1-4 Pacific PSS Components

Pacific PSS	
❶ **Power IN**	AC100~240V 50/60Hz
❷ **Ethernet (IP)**	Ethernet (IP) port for control, power supply status monitoring and system configuration via Windows-based Phoenix-Q software
❸ **DC OUT (POB)**	DC connector for 12V / 17A power output

Table 1-9 Pacific PSS – Component Description

1.6 Redundant Power Connection for Rainier Summit / Pacific PSS

The following illustration shows a redundant power connection for the Rainier Summit and PSS (Power Supply Station).

Figure 1-5 Redundant Power Connection

*Step 1. Connect one end of the first DC to DC cable to the **DC OUT** port on the POB (Power Out Board) of the Pacific PSS. Connect one end of the second DC to DC cable to the **DC OUT** port on the POB of the Pacific PSS.*

*Step 2. Connect the other end of the first DC to DC cable to the **DC IN** port on the PIB (Power In Board) of the Rainier Summit. Connect the other end of the second DC to DC cable to **DC IN** port on the PIB of the Rainier Summit.*

Step 3. Connect the AC power cords to the 100~240V power jack for both of the Power Supply.

2. Hardware Configuration

This chapter discusses the process of installing a card into the Rainier Summit chassis.

1. *To prevent any damage to hardware components as well as avoid any injury, make sure to turn off power coming from the power strip to Rainier Summit before making any changes to the hardware configuration.*
2. *Not applicable for Rainier Summit-S.*

2.1 Installing a New Card on a Blank Slot

The Rainier Summit chassis accepts the following card:

✓ *Rainier Summit – (SDI card)*

Step 1. Remove the two screws securing the back plate.

Figure 2-1 Remove the Two Back Plate Screws

Step 2. Remove the back plate.

Figure 2-2 Remove the Back Plate

Step 3. Align both sides of the card to the rails, and slide all the way into the chassis.

Figure 2-3 Align the New Card to the Rail on Both Sides

Step 4. Tighten the screws on both sides to secure the new card to the chassis.

Figure 2-4 Tighten the Screws on Both Sides

2.2 Removing a Previously Installed Card

Step 1. Use a flat screwdriver to unscrew the left and right puller screws on the control card module.

Figure 2-5 Remove the Left and Right Puller Screws on Control Board

Step 2. Use the just removed puller screws and screw it to both sides of the card to be removed.

Figure 2-6 Screw the Left and Right Puller Screws to Old Card

Step 3. Remove the left and right screws securing the card to be removed from the chassis.

Figure 2-7 Remove the Left and Right Screws

Step 4. Grasp both left and right puller screws and pull the card to be removed away from the chassis.

Figure 2-8 Pull the Left and Right Puller Screws

Step 5. Remove left and right puller screws on just removed card and return to control board module.

3. Phoenix-Q Configuration

The Avitech Phoenix-Q program requires no installation. Just copy and run the system files on the computer's hard drive. This chapter introduces the Phoenix-Q software for setting up the Rainier Summit.

1. *Make sure the Rainier Summit is powered on and connected properly to the computer via Ethernet before launching the Phoenix-Q software.*
2. ***DO NOT*** *use the serial cable to connect the Rainier Summit to the computer. The serial port is for connecting to a TSL controller/interface.*

3.1 Connection Method

Connect the Rainier Summit to the controlling computer via an Ethernet cable.

Before connecting the computer to the Rainier Summit, the computer will need to be changed to a static IP, and its subnet mask must be set to a similar range as the Rainier Summit ("192.168.0.5" – factory-default IP address). Or, the IP address of the Rainier Summit can be changed to a similar range as the controlling computer. See Appendix C for details.

3.2 Pinging the Rainier Summit

Make sure to be able to ping the chassis at "192.168.0.5" (factory-default IP address).

Step 1. Run the Phoenix-Q software by double-clicking ***Phoenix-Q.exe****.*

Step 2. Enter the factory-default IP address ***192.168.0.5****. Then click* ***Ping****.*

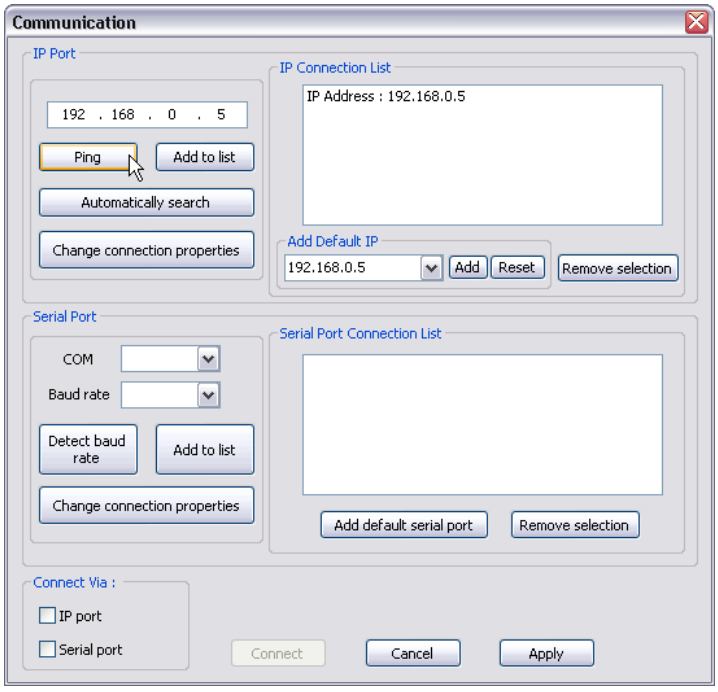


Figure 3-1 Phoenix-Q Software: Enter the IP Address to Ping

*Step 3. The following window will appear to signify a successful communication. Click **OK** to exit.*

Figure 3-2 Phoenix-Q Software: IP Address Pinged Successfully

3.3 Starting Up the Phoenix-Q Software

*Step 1. Run the Phoenix-Q software by double-clicking **Phoenix-Q.exe**.*

Step 2. Make sure to set the correct IP address (see Appendix C for details).

*Step 3. Select the only type of connection allowed by clicking the **IP Port** checkbox. Then click **Connect**.*

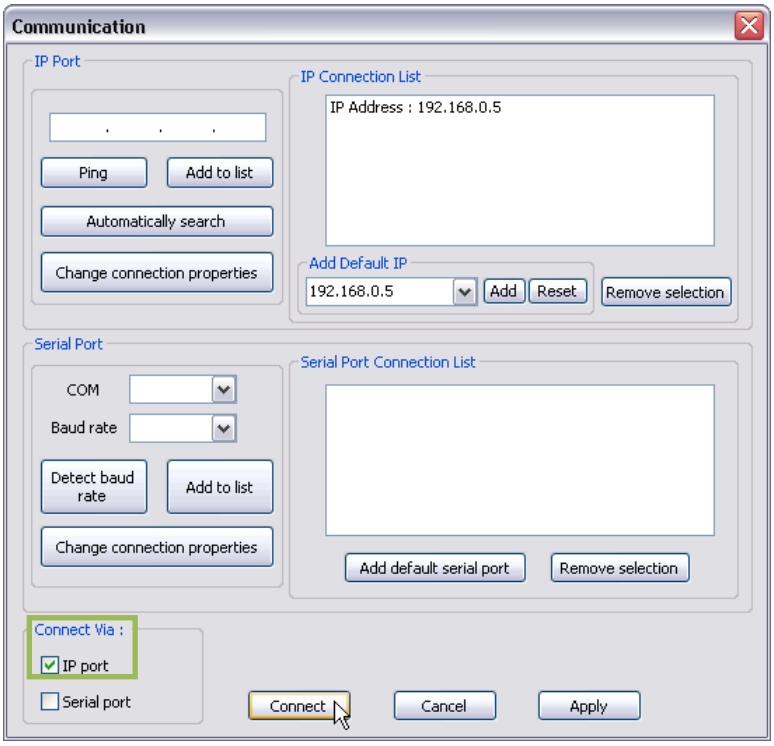


Figure 3-3 Phoenix-Q Software: Select the Ethernet Connection Method

*If Windows detects and pops up the security alert window as shown below, just click **Unblock** to proceed.*

Phoenix-Q will start to search for the Rainier Summit.

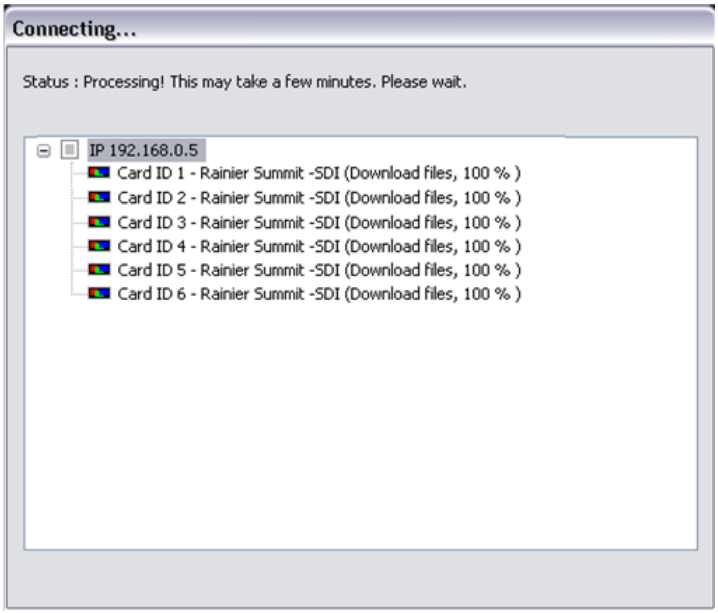


Figure 3-4 Phoenix-Q Software: Connection Progress

1. *When cascading the Rainier Summit, make sure each chassis has been assigned a different IP address.*
2. *Make sure the IP address of the computer running the Phoenix-Q software is in the same network as that of the Rainier Summit.*

*The **Group Setup** window will list all the card(s) of the Rainier Summit with the default IP under **Idle Device**.*

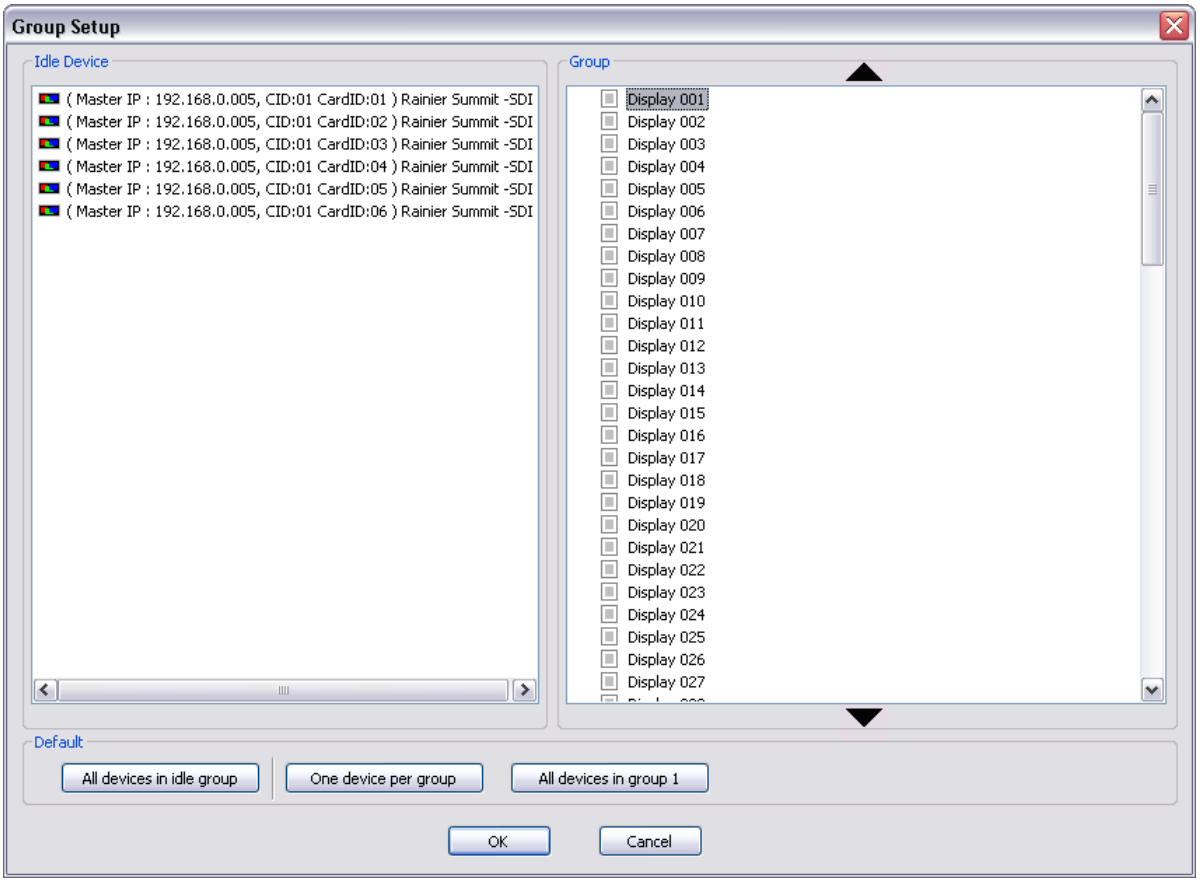


Figure 3-5 Phoenix-Q Software: Group Setup

*Step 4. To assign the grouping, drag an **Idle Device** listed on the left panel to the desired **Group**/ **Display #** on the right panel (i.e. **Group**/**Display 001**).*

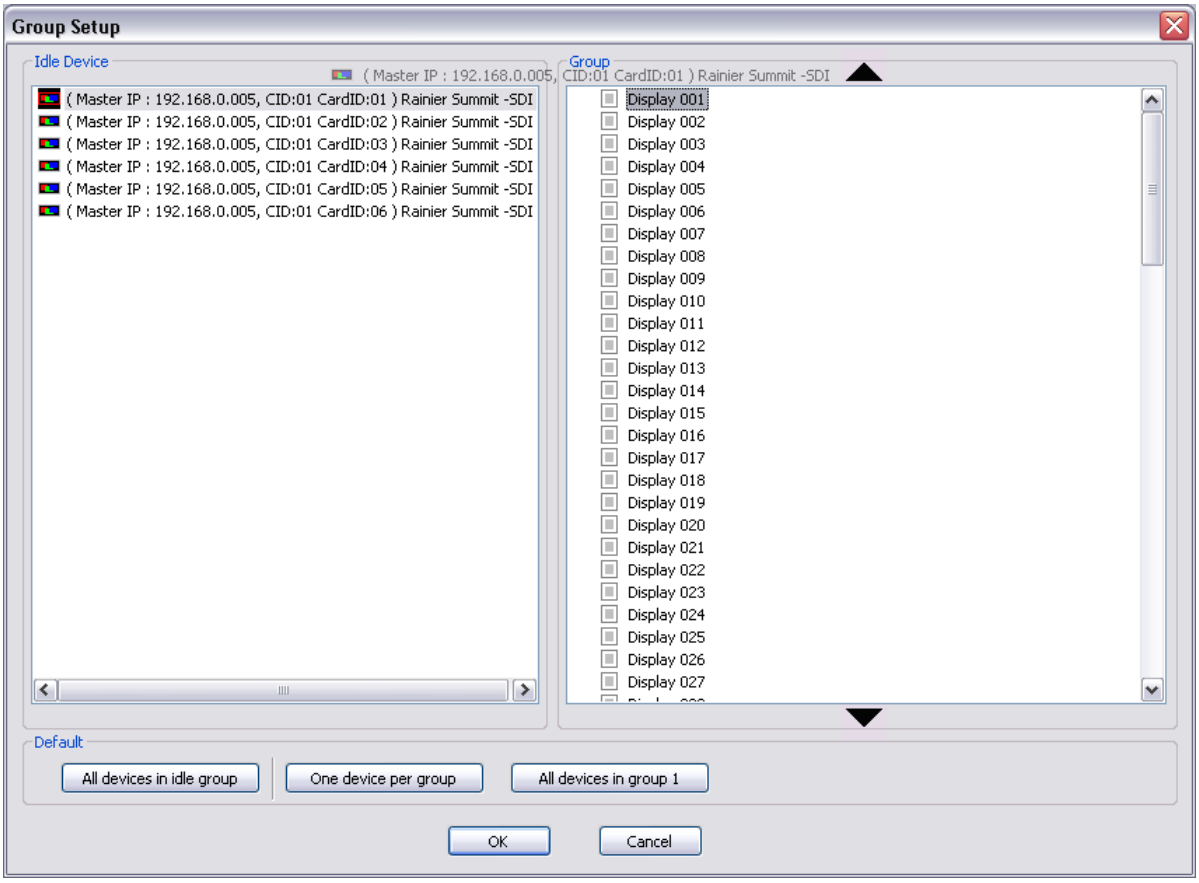


Figure 3-6 Phoenix-Q Software: Assign Idle Device to Group/Display #

*Or, click the **One Device Per Group** button to assign a card of the Rainier Summit to each display or click **All Devices in Group 1** to assign all cards to belong to **Group**/**Device 1**.*

After being assigned, each card will be displayed under its respective assigned group/display.

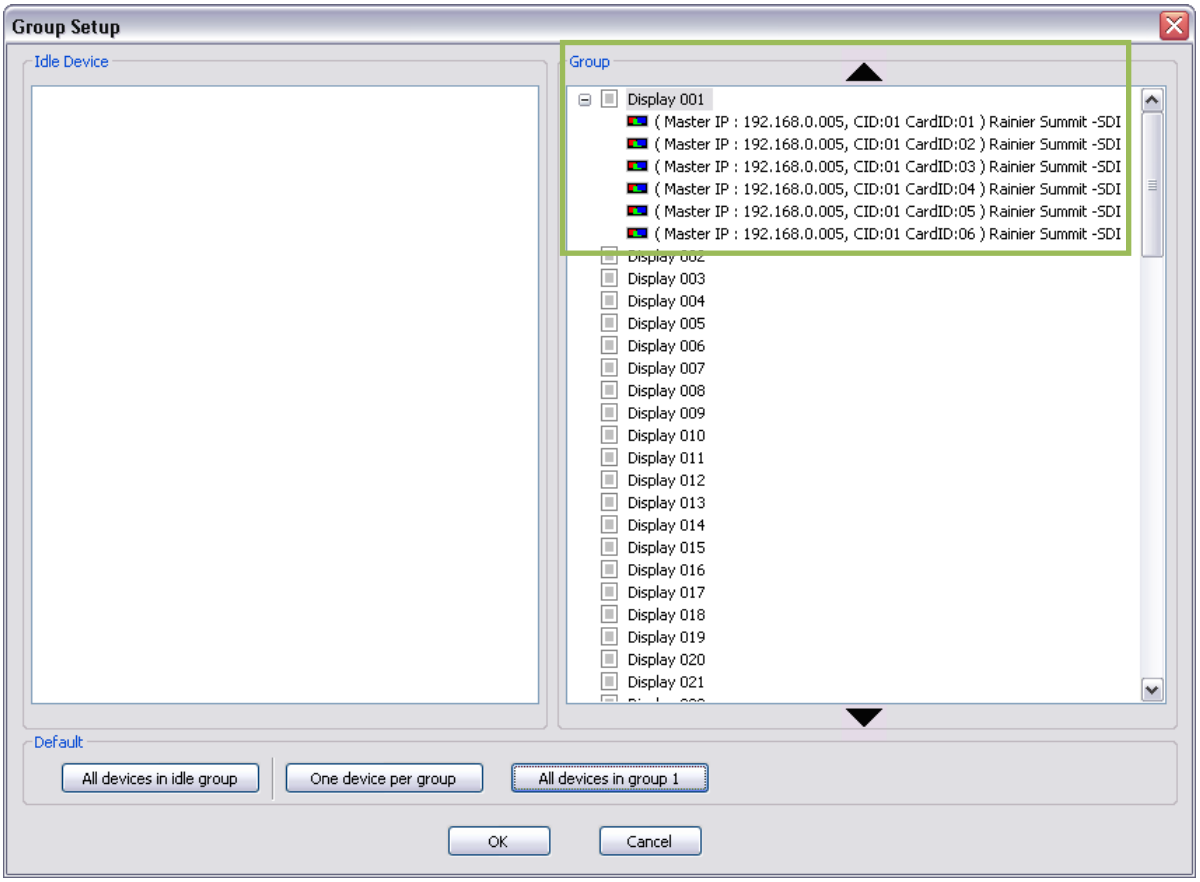


Figure 3-7 Phoenix-Q Software: Idle Device Assigned to Group/Display 001

*Step 5. Next, click **OK** to exit the **Group Setup** window. Phoenix-Q will save the configuration file "System.json" to the device's flash memory.*

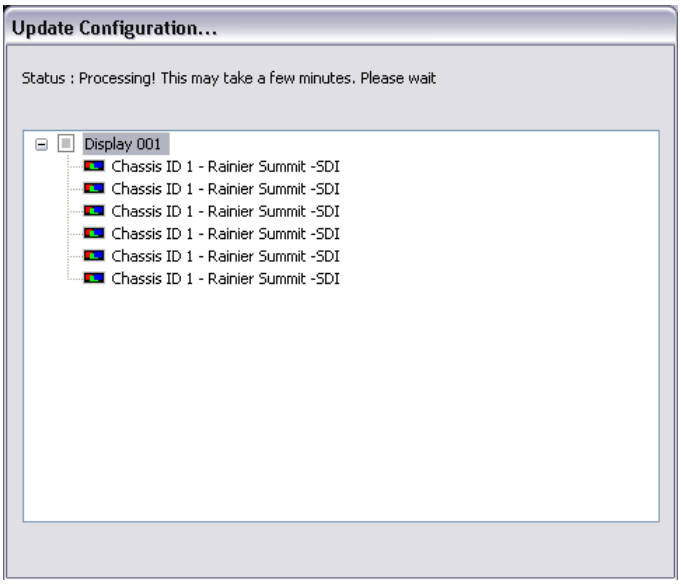


Figure 3-8 Phoenix-Q Software: Update the Configuration Progress

*After completing the group/display setup, and any time afterwards when the IP address(s) of the Rainier Summit is changed (see Appendix C), perform the simple step of entering the **Group Setup** window and then clicking **OK** to exit (there is no need to re-assign the grouping as this has been done by the system). This step is just to maintain system integrity when running the "HTTP" command.*

The next figure shows the sample devices assigned to "Group/Display 001."
On the Phoenix-Q software interface shown below, "[5.1]" signifies the IP number of the chassis and card ID number of the module assigned to the group/display. Hence "[5.2]" would signify a chassis IP with number 192.168.0.5 and card ID number 2.
The "(O:H/S/E)" appearing after the Rainier Summit-SDI signifies audio "O"utput that is "H"DMI / "S"DI / "E"arphone OUT.

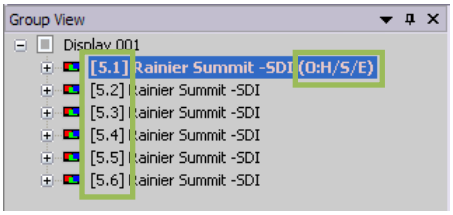


Figure 3-9 Phoenix-Q Software: Chassis IP and Card ID Number; Audio Output Source Guide

*Place the mouse cursor over a specific Rainier Summit and information regarding the "**Summit IP** #" / "**Card ID** #" / "**Resolution**" / "**Audio Output**" for that device.*

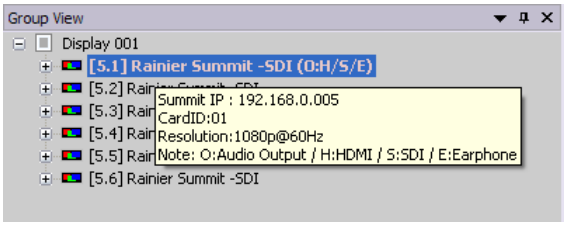


Figure 3-10 Phoenix-Q Software: Device Information and Reference

3.4 Window Layout

3.4.1 Arrange Windows (by Group)

For a quick layout setup of the video windows, right-click the "Group/Display ###" tab to access the **Group Layout** menu. Select from **2×2** up to **10×10** as possible grid positions on the monitor.

Throughout this manual, we will refer to the multiple window interface shown below as the "main display area".

The layout size available for the particular model will depend on the monitor's supported resolution, OSD display and the smallest window size limitation.

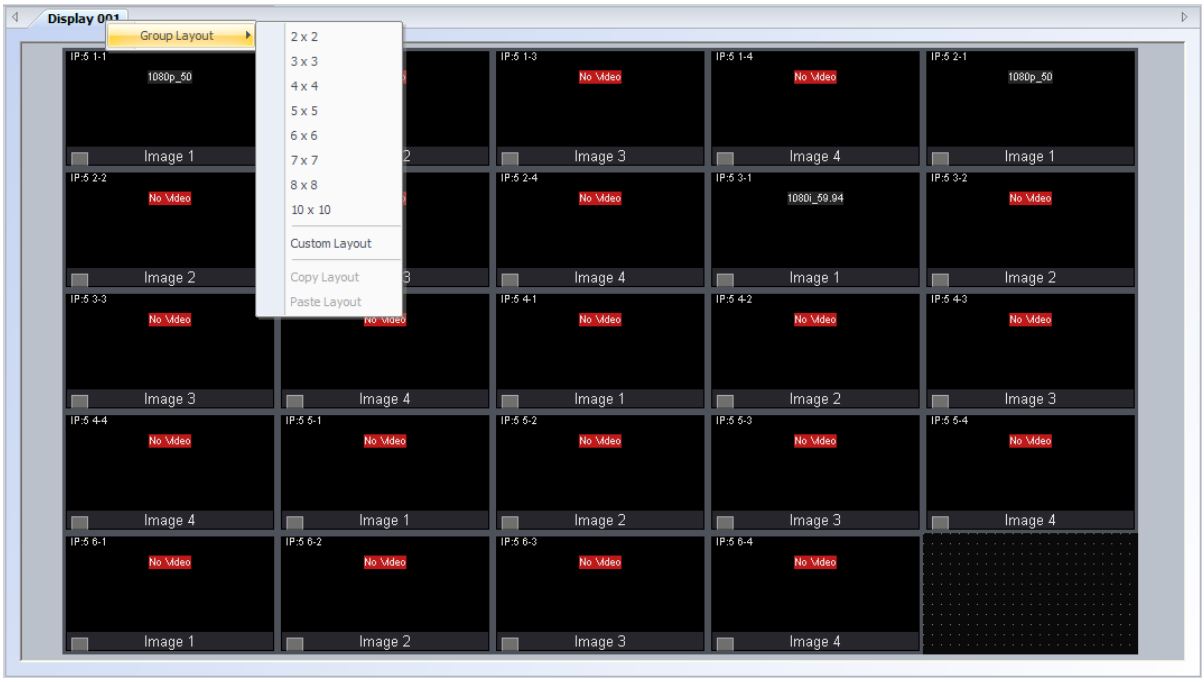


Figure 3-11 Phoenix-Q Software: Group Layout

Upon selecting **Custom Layout**, specify the **Window Ratio** (**Normal** / **4:3** / **16:9**). If **Normal** is selected, set the **Horizontal** and **Vertical** number of windows (**2** to **11**) as possible grid positions on the monitor. If **4:3** or **16:9** is selected, just set the **Horizontal** number of windows (**2** to **11**).

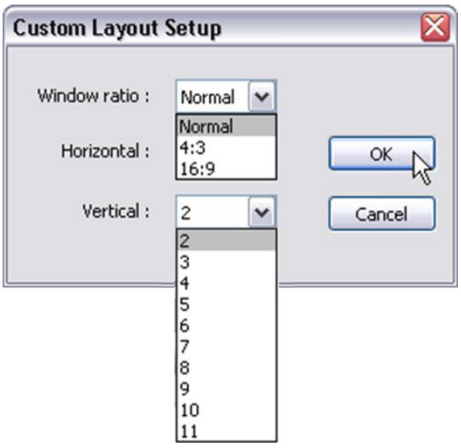


Figure 3-12 Phoenix-Q Software: Set Customized Layout

3.4.2 Resize/Reposition Window

Resize a Window

Perform the following steps to resize a window:

*Method 1. Right-click a window, then select **Size**. Select the desired preset size from the submenu.*

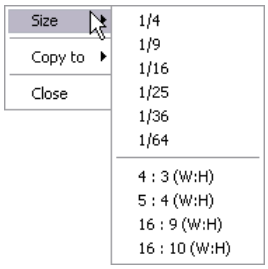


Figure 3-13 Phoenix-Q Software: Select a Window Size (right-click a window)

Method 2. In the main display area, resize a window by dragging the border of a window to the desired size.

Method 3. Select a window in the GUI, and then use the "Properties" menu to specify the exact size for each window on a pixel-by-pixel basis.

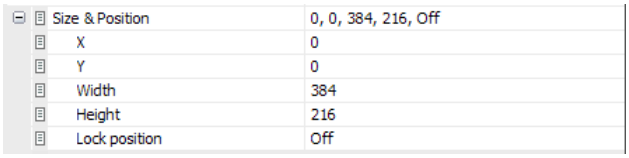


Figure 3-14 Phoenix-Q Software: Specify a Window Size (Properties menu)

Be aware that there is a scaling limit for each window that constrains the maximum/minimum scalable size:
- *For an 1080i source signal displayed on Image 2/4, the maximum size is 960×600 pixels.*
- *When Tally/Meter is enabled, the minimum width of a window allowed is the width of four tallies combined. The minimum height allowed is the height of four audio meters combined (positioned horizontally). When Tally/Meter is disabled, the minimum window size allowed is 1/15 the size of the source signal.*
- *The width increases by 4 pixels when the main display area of the Phoenix-Q program is shown at a 25% magnification; and increments by 2 pixels when shown at 50% or 100% magnification. The height always increments by one pixel.*

Reposition a Window

Perform the following steps to reposition a window:

Method 1. In the main display area, drag the center of a window and drop to a new position or use the left/right/up/down arrow buttons on the keyboard. It will instantly be updated on the monitor.

Method 2. Another option is to select a window in the GUI, and then use the "Properties" menu to specify the exact position for each window on a pixel-by-pixel basis.

3.4.3 Full Screen Mode; Swap Window Contents

Full Screen Mode

Double-click a window to enter full screen mode. Double-click again to return from full screen mode.

Swap Window

*Move cursor to the bottom left hand corner of a window until a letter **S** appears.*

Figure 3-15 Phoenix-Q Software: Swap Window

*Click the letter **S** to select a source window and then click again at a destination window where you wish to swap the contents from the source. This will swap all the contents and properties of the source window to the destination window.*

3.4.4 Copy Window Properties

*Right-click an item (with icon) on the **Properties** window (except with icon) and click the following to quickly apply the settings to –*

1. *All the windows (**Card→All**)*
2. *A particular window (**Card→Image 1/2/3/4**)*
3. *All the cards belonging to the same (**Group/Display**)*
4. *The entire (**System**)*

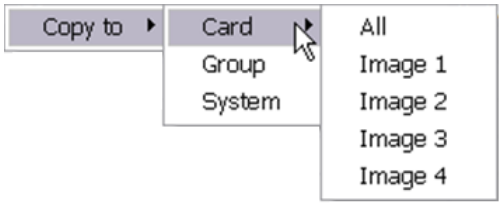


Figure 3-16 Phoenix-Q Software: Right-click Menu to Easily Apply Settings to Card/Group/System

Under the “Group/Display ###” tab, the properties of a window can be copied to another or all windows of the same chassis, as well as to the entire system.

*Right-click a window, select **Copy to**, and click the following to quickly apply the settings to –*

1. *All the windows (**Card→All**)*
2. *A particular window (**Card→Image 1/2/3/4**)*
3. *All cards belonging to the same (**Group/Display**)*
4. *The entire (**System**)*

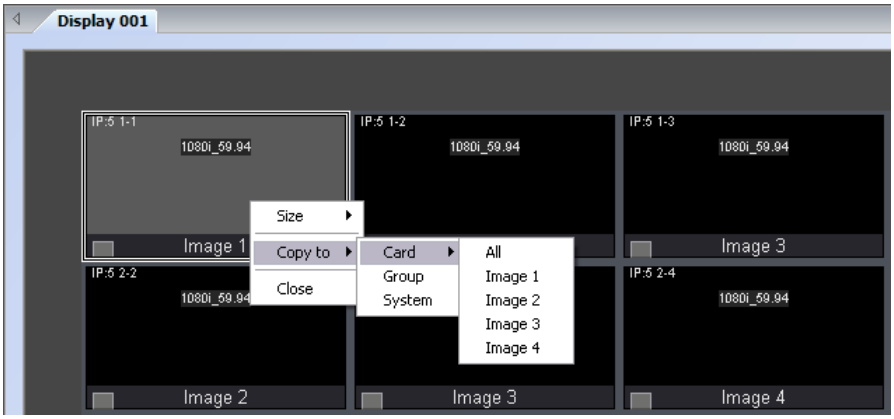


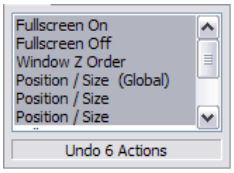
Figure 3-17 Phoenix-Q Software: Right-click a Window and Click “Copy to”

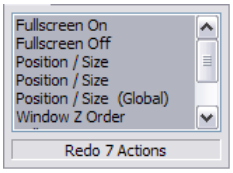
The properties that can be copied include the following:

- ✓ *Window size:*
  1. *width*
  2. *height*
- ✓ *Label:*
  1. *on/off switch*
  2. *type (ANSI label)*
  3. *font color*
  4. *background color*
- ✓ *Aspect ratio:*
  1. *on/off switch*
  2. *sync type*
  3. *fit image size*
- ✓ *Safe area:*
  1. *on/off switch*
  2. *horizontal and vertical markers*
- ✓ *Meter:*
  1. *on/off switch*
  2. *layout and alarm trigger*
  3. *scale*
  4. *Position*
  5. *group*
  6. *Width*
  7. *meter label*
  8. *color*
  9. *vertical coordinates*
  10. *VU/PPM switch*
- ✓ *Image border:*
  1. *on/off switch*
  2. *width*
  3. *color*
- ✓ *Video border:*
  1. *on/off switch*
  2. *width*
  3. *color*

3.4.5 Undo/Redo Changes

Click the  to undo the previous step; alternatively click the  to redo the previous step that was undone.

To undo 

or redo 

multiple actions click the drop-down arrow symbol beside the undo/redo button, then highlight and click the actions to be undone or redone. Click the scrollbar to highlight more than six actions.

The following actions will clear the list of undo/redo from their lists:

- ✓ *Load/save preset file*
- ✓ *Set display resolution*
- ✓ *Group reset*
- ✓ *Change group setup*
- ✓ *Set to default state*

3.4.6 Align Windows

Align a set of windows horizontally or vertically. Choose how the windows will be lined up in relation to each other. For example, clicking the **Align Right** button (

) aligns the right edges of the windows with each other.

To align a set of windows horizontally/vertically:

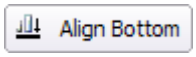
*Step 1. Select the windows by clicking the first window with the left mouse button and the succeeding windows using the keyboard's **Ctrl** key + left mouse button.*

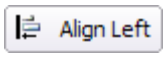
*Other applications that are currently running on the same computer with the Phoenix-Q software may also be using the same **Ctrl** key + left mouse button hot-key, and it may disable multiple window selection in the Phoenix-Q software. In that case, close the other program first before using the **Ctrl** key + left mouse button in Phoenix-Q.*

Step 2. Click one of the following buttons to set how the windows will be lined up with each other. The alignment will follow the position of the last window selected.

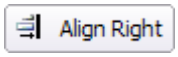
- ✓ *Top* 

- ✓ *Middle* 

- ✓ *Bottom* 

- ✓ *Left* 

- ✓ *Center* 

- ✓ *Right* 

*To undo alignment of windows, simply click the **Undo** button repeatedly according to the number of windows that were aligned with the last selected window.*

3.4.7 Copy Window Size

These functions allow a set of selected windows to copy the width, height, or size of a designated window appearing on screen. For example, clicking the **Make Same Width** button (Make Same Width) would set the selected windows to have the same width.

To modify the window size:

*Step 1. Select the windows by clicking the first window with the left mouse button and the succeeding windows using the keyboard's **Ctrl** key + left mouse button.*

*Other applications that are currently running on the same computer with the Phoenix-Q software may also be using the same **Ctrl** key + left mouse button hot-key, and it may disable multiple window selection in the Phoenix-Q software. Close the other program first before using **Ctrl** key + left mouse button in Phoenix-Q.*

Step 2. Click one of the following buttons to set the window's width, height, or size following that of the last window selected.

✓ *Copy width* Make Same Width

✓ *Copy height* Make Same Height

*To prevent distortion on the window's image (for "interlaced" input signal), make sure the height of the image (excluding label and border) **IS NOT** smaller than one-half of the vertical active region of input source (i.e. if resolution is set at 1080i 50Hz then the image's height must not be less than 600 pixels).*

✓ *Copy size* Make Same Size

*To undo the window's size modification just click the **Undo** button repeatedly according to the number of windows that were modified except the last selected window.*

*By default the main display area of the Phoenix-Q program is shown at a **25%** magnification. This means the entire layout (single or multiple windows) is visible at one-fourth magnification within the main display area. Zoom in (**50%** or **100%**) to get a closer look at a window's detail.*

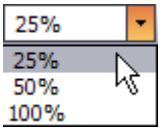


Figure 3-18 Phoenix-Q Software: Set Customized Level Magnification for Viewing Windows

3.4.8 Remove Horizontal/Vertical Spacing

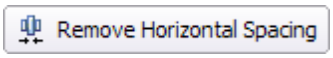
Eliminate the space between a set of windows horizontally or vertically. Choose how the windows will be lined up in relation to each other. For example, clicking the **Remove Vertical Spacing** button (Remove Vertical Spacing) eliminates the vertical space between a set of windows.

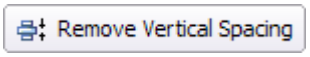
To position a set of windows side-by-side by removing the horizontal/vertical space:

*Step 1. Select the windows by clicking the first window with the left mouse button and the succeeding windows using the keyboard's **Ctrl** key + left mouse button.*

*Other applications that are currently running on the same computer with the Phoenix-Q software may also be using the same **Ctrl** key + left mouse button hot-key, and it may disable multiple window selection in the Phoenix-Q software. Close the other program first before using the **Ctrl** key + left mouse button in Phoenix-Q.*

Step 2. Click one of the following buttons to eliminate the vertical/horizontal spacing between the windows. The position of the last window selected does not change while those of the other window(s) change to remove any vertical/horizontal spacing in-between.

✓ *Horizontal* 

✓ *Vertical* 

1. ***Remove Horizontal Spacing*** *is disabled (grayed-out) if any two consecutive window's selected are overlapped horizontally (x-axis perspective).*
2. ***Remove Vertical Spacing*** *is disabled (grayed-out) if any two consecutive windows selected are overlapped vertically (y-axis perspective).*

3.5 Temperature

Click the  to open the message window for monitoring the temperature status of Rainier Summit.

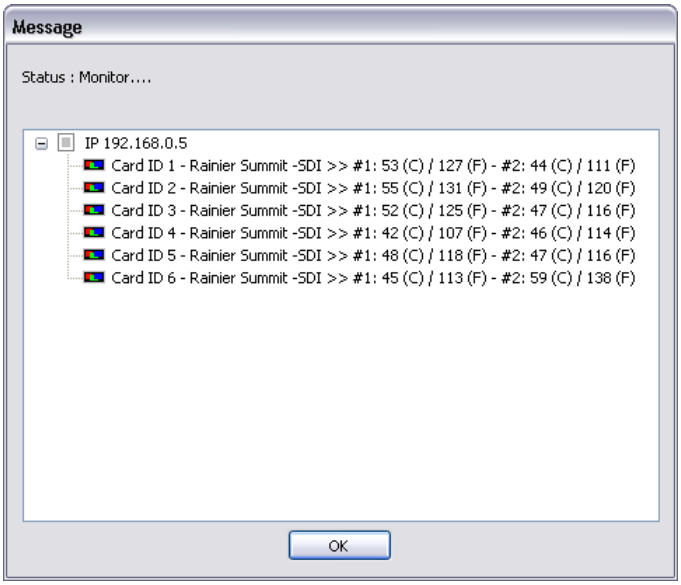


Figure 3-19 Temperature: Temperature Log

3.6 Visual Studio

For a quick overall view of monitors installed in the studio, use the "Visual Studio" tab to easily view the present setups.

Step 1. To configure how the monitors will appear in the "Visual Studio" tab, right-click anywhere inside the "Visual Studio" tab and click ***Visual Studio Setting****.*

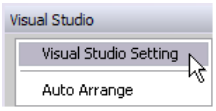


Figure 3-20 Visual Studio: Click "Visual Studio Setting"

Step 2. ❶ *Click to select the particular **Group** ### (card ID) on the left column.*
❷ *Click the destination **Visual Studio** ### (group) on the right column.*
❸ *Click the right arrow button* [>>].

*Select other **Group** ### to belong to a **Visual Studio** ### group. Multiple **Group** ### can be assigned to the same **Visual Studio** ### group. Finally, click **OK** to exit the **Visual Studio Setting** window.*

*To remove a particular **Group** ### from the previously assigned **Visual Studio** ### on the right column; click to select it. Then, click the left arrow button* [<<] .

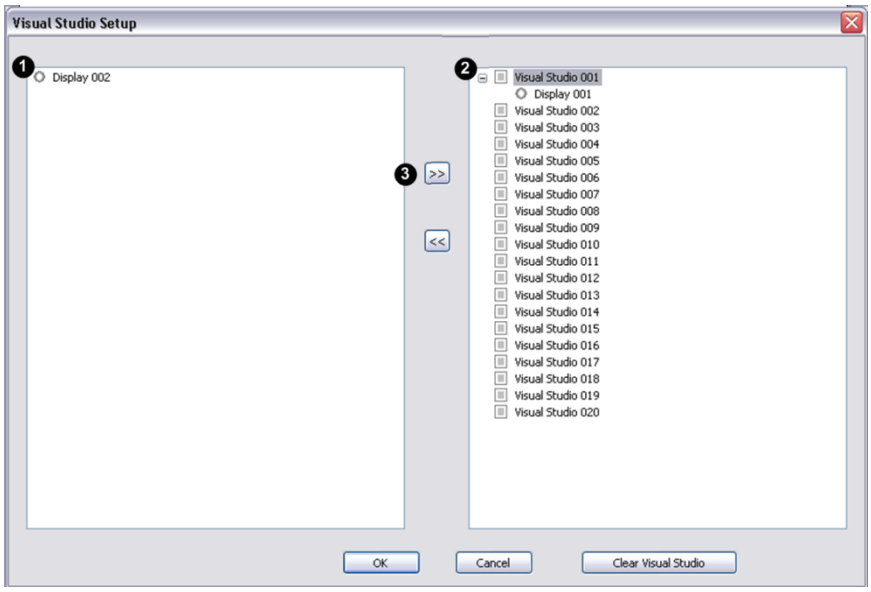


Figure 3-21 Visual Studio: Assigning Visual Groups

Step 3. *On the "Visual Studio" tab, select the desired layout by right-clicking anywhere and then select **Layout**. Choose from **2×2** up to **10×10** as possible grid positions, as well as specify a fixed 1 row by "N" columns or "N" rows by 1 column.*

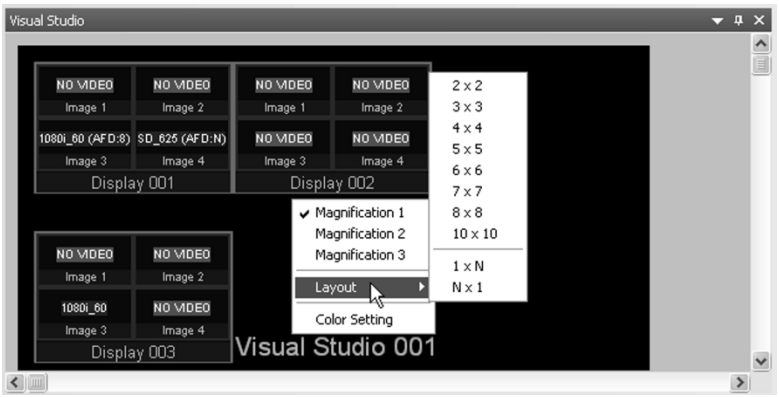


Figure 3-22 Visual Studio: Select the "Layout"

*If more than one **Group** ### was assigned to a **Visual Studio** ### group, initially the **Group** ### appearing on the "Visual Studio" tab may be stacked on top of each other. Configure the desired **Layout** to display the other **Group** ###.*

Quick Information

Positioning the cursor on top of a window will alternate between a quick information of the window and the prompt "Double-click → Group ###" to allow the bringing up of a particular group's layout view in the main display area in the "Group ###" tab.

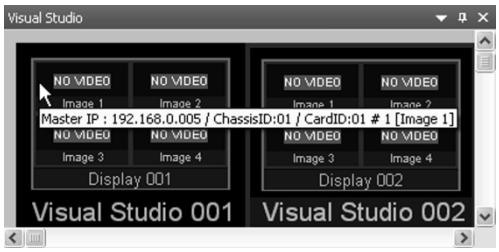


Figure 3-23 Visual Studio: Window Quick Information

Magnification

Right-click anywhere on a window to select from the three available magnifications.

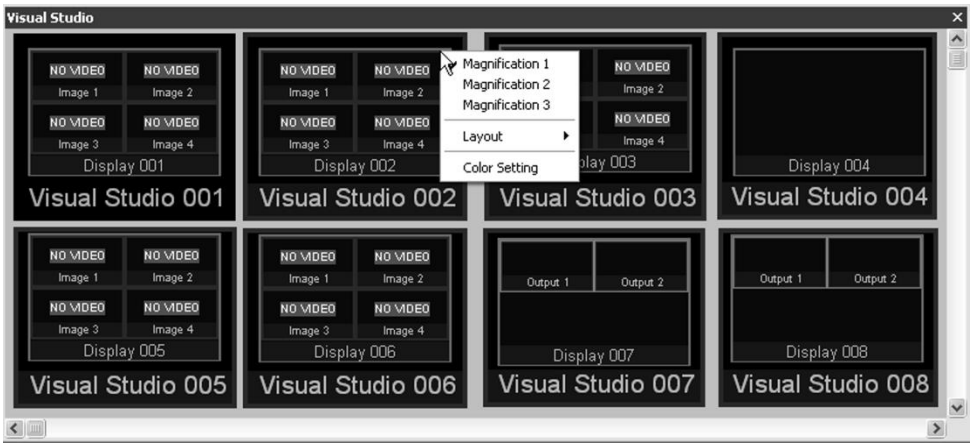


Figure 3-24 Visual Studio: Select the Magnification

Color Setup

*To set the border color and label color (font and background), right-click anywhere on a window and click **Color Setting**.*

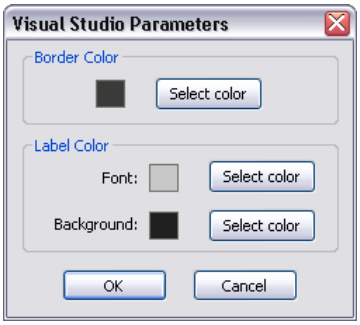


Figure 3-25 Visual Studio: Set the Border and Label Color

Auto Arrange

Allow the system to automatically arrange the layout of the windows appearing in the Visual Studio tab.

Figure 3-26 Visual Studio: “Auto Arrange”

3.7 Available Windows

Image windows that are disabled (turned off) reside in a tab called “Available Windows”.

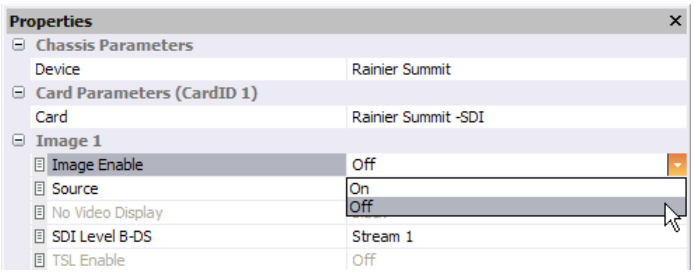


Figure 3-27 Properties Tab: Turning “Off” the Image Window

*You can also close (disable) a particular window by clicking **Close**. The closed window would appear as an icon under the “Available Windows” tab. To activate the window again, simply drag the window back onto the main display area.*

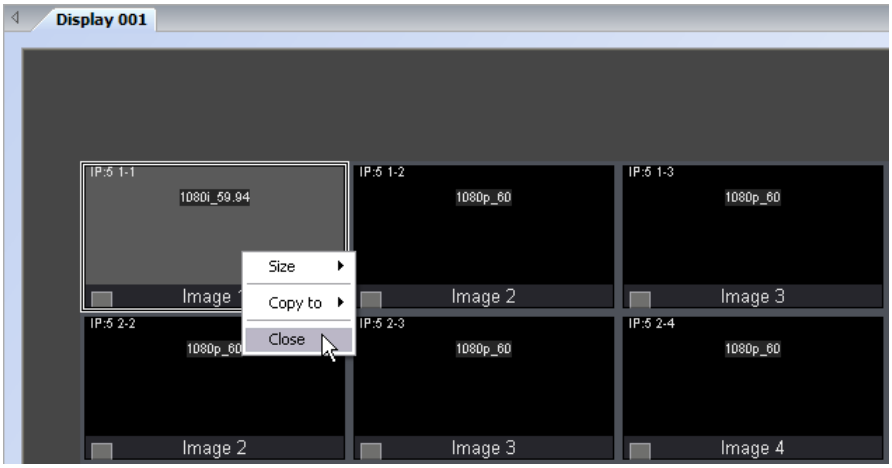


Figure 3-28 Phoenix-Q Software: Right-click a Window and Click “Close”

To turn back “on” an image window (re-enable), use any of the two methods listed below:

*Method 1. Select the desired image window to be turned on. Then select **Image Enable → On** in the “Properties” tab.*

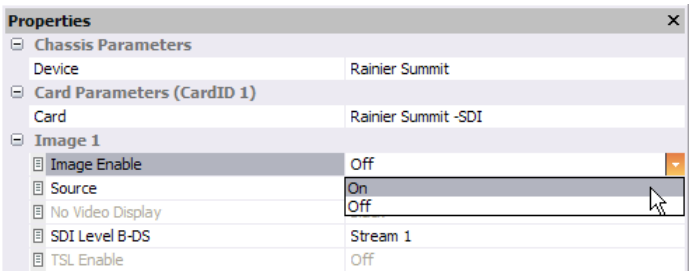


Figure 3-29 Properties Tab: Turning “On” the Image Window

Method 2. Drag the window to be enabled from the “Available Windows” tab to the “Group ###” tab.
Action ❶ (drag window to an empty location) will allow the selected window to appear in the previously empty space.
Action ❷ (drag window on top of another window) will cause the former occupant window to be disabled (turned off) and be moved to the "Available Windows" tab ❸.

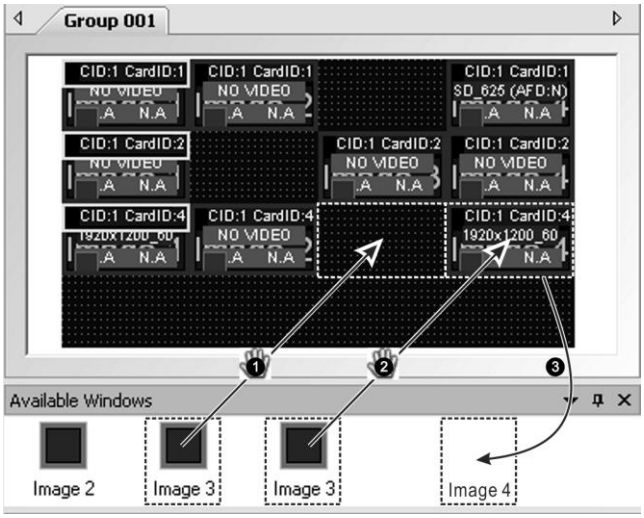


Figure 3-30 Properties Tab: Turning “On” the Image Window

Placing the mouse pointer on top of a window residing in the “Available Windows” tab displays information about the image window.

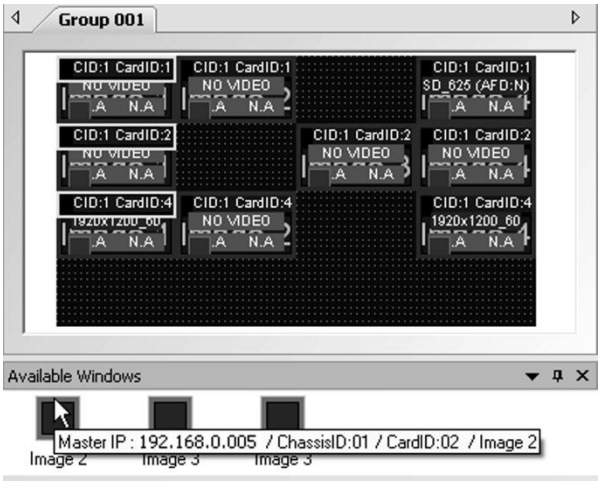


Figure 3-31 Available Windows Tab: Image Window Information

3.8 Log Window

Aside from letting you view the various system messages in Phoenix-Q, you can export the log messages as a text file. This is most helpful when monitoring incidences of video loss/freeze/black, audio high/low/loss/ out of phase, metadata Active Format Description (AFD) display and closed caption detection.

*Step 1. Right-click anywhere inside "Log Window" tab and when the menu appears, click **Export**.*

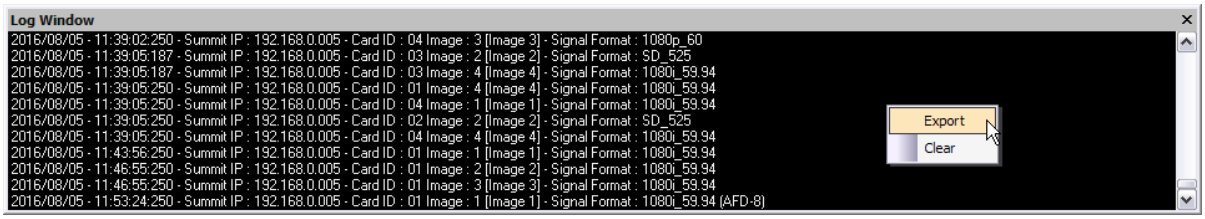


Figure 3-32 Log Window: Right-click Menu "Export"

*Step 2. Assign a filename and click **Save** to store the data.*

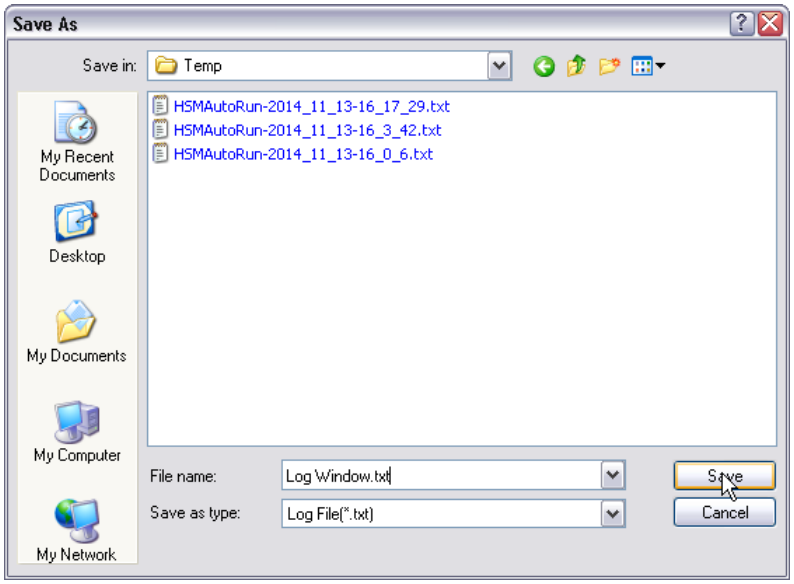


Figure 3-33 Phoenix-Q Software: Save Log Window Information

Refer to the computer's hard drive (C: \Avitech\Backup\Backup_date_time\Log\ folder) for various system log message text files exported from the device.

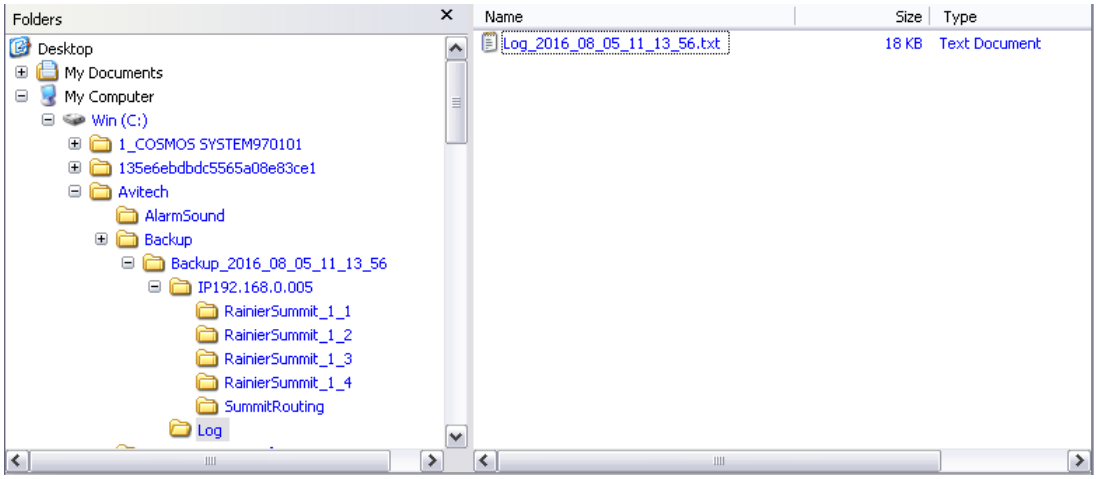


Figure 3-34 Phoenix-Q Software: Location of the Saved Log File

3.9 Briefing

This function allows cycling between layout presets for a slideshow effect.

*Step 1. Right-click the numeric title bar under the "Briefing" tab and when the menu appears, click **Add**.*

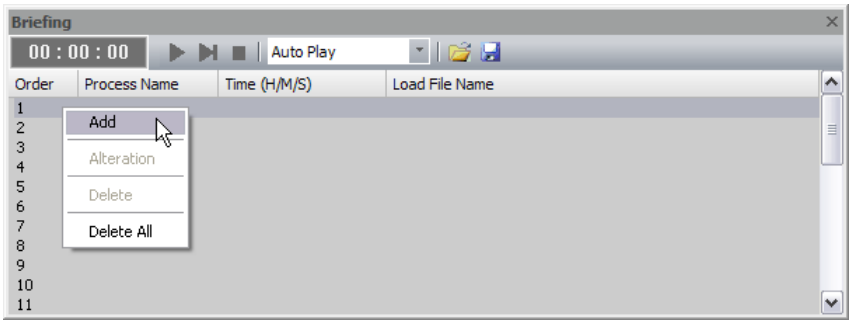


Figure 3-35 Briefing: Click "Add"

*Step 2. Enter the **Process name**, specify the **Time (H : M : S)**, and then select the previously saved preset **File** (refer to section (3.1) "File Menu" for more information on saving presets). Click **OK** to continue. Continue adding new processes for "briefing."*

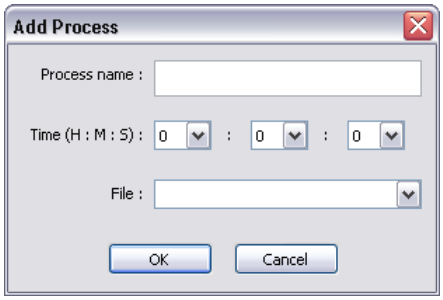


Figure 3-36 Phoenix-Q Software: "Add Process" Window

*Step 3. On the drop-down menu, select **Auto Play**, **Auto Play (Repeat)**, **Manual**, or **Manual (Repeat)**. Then click play to start viewing the slideshow.*

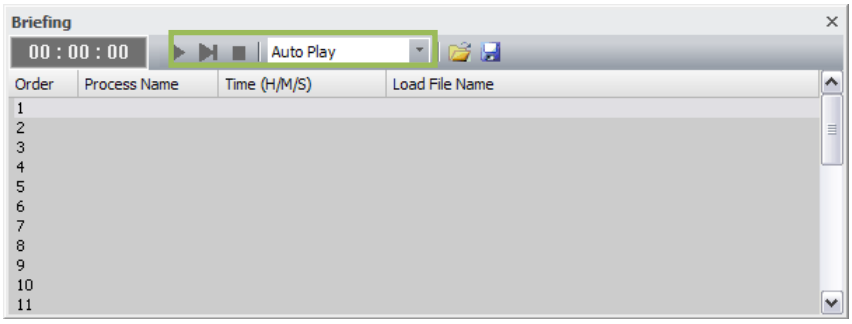


Figure 3-37 Briefing: Select the Type of Playback

3.10 Router

Enable routing of source signals to any or multiple windows for monitoring. The next figure shows the user interface of the “Router” tab for routing control. Placing the mouse cursor over an input icon will show the input source’s information such as **Source Name** / **Signal Type**.

The router function is disabled by default. To turn on this function, locate **Router Disable** under the **Properties→Chassis Parameters** menu of Phoenix-Q and turn it **Off**.

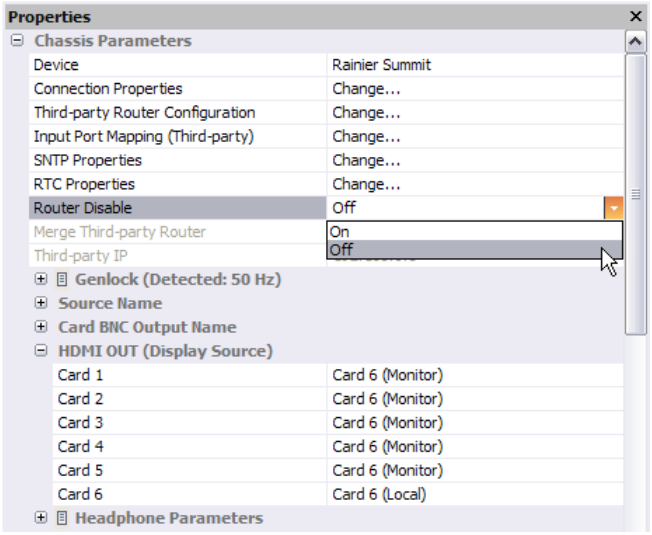


Figure 3-38 Phoenix-Q: Chassis Parameters Panel

Figure 3-39 Phoenix-Q: Router Tab

To set video routing, perform the following steps:

Step 1. Click any element of the Rainier Summit and the router UI will appear on the "Router" tab.

*Step 2. Select a source signal to route by first clicking its input signal icon under the "Router" tab, and then select the router destination(s) by clicking one or more windows on the main display area. Click **TAKE** to apply the routing.*

Figure 3-40 Router: Routing the Source Signal Process

When setting up video routing:

1. *Left-click on the target input port. On the main display area, any window already routed from this input will turn white in its border and green in its background.*
2. *Left-click a new window to be designated as the routing destination and it will turn red in its border, and blue in its background (viewed from the main display area). Left-click this window again to cancel routing to this designation; its window border and background color will revert back.*
3. *Click **TAKE** to confirm the routing. On the main display area, the window with a newly routed source signal will turn white in its border, and green in its background.*

To set video routing to SDI OUT, perform the following steps:

The **SDI Output Display Mode** of a card is set to Multiview (Sync HDMI) by default. To change the output display mode function, locate **SDI Output Display Mode** under **Properties→Card Parameters** menu of Phoenix-Q and select **BNC Input** from the drop-down menu.

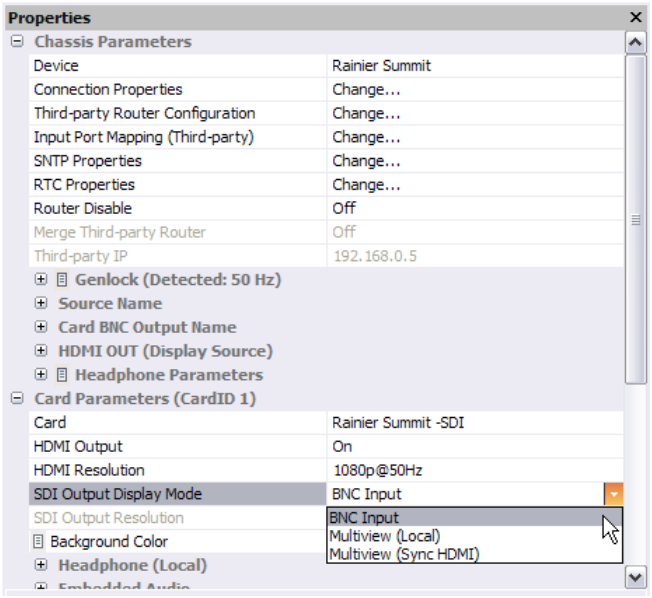


Figure 3-41 Phoenix-Q: Card Parameters Panel

Step 1. Click any element of the Rainier Summit and the router UI will appear on the "Router" tab.

*Step 2. Select a source signal to route by first clicking its input signal icon under the "Router" tab, and then select the router destination by clicking one or more on the destination display area. Click **TAKE** to apply the routing.*

Figure 3-42 Router: "Source Routing to SDI Out" Process

4. Basic Setup Using the Phoenix-Q Software

This chapter continues the discussion on the various functions of the Phoenix-Q software for setting up the Rainier Summit, as well as familiarization of the menus found in the Phoenix-Q software.

Some items appearing on the menus of the Phoenix-Q software may not be available for the Rainier Summit (grayed-out).

4.1 File Menu

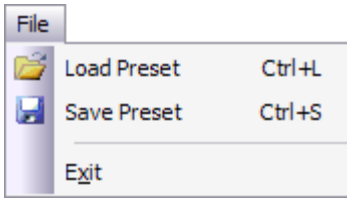


Figure 4-1 Phoenix-Q Software: File Menu

All the presets created are stored in the Rainier Summit's flash memory, **NOT ON** the computer running the Phoenix-Q software. To save a preset and write it to the internal flash memory of the Rainier Summit, perform the following steps:

Step 1. Configure the window layout on the main display area to how you want it to be displayed.

*Step 2. Click **File** and then **Save Preset**.*

*Step 3. Enter a unique filename for the preset, and click **OK** to save. Repeat these steps for each additional preset.*

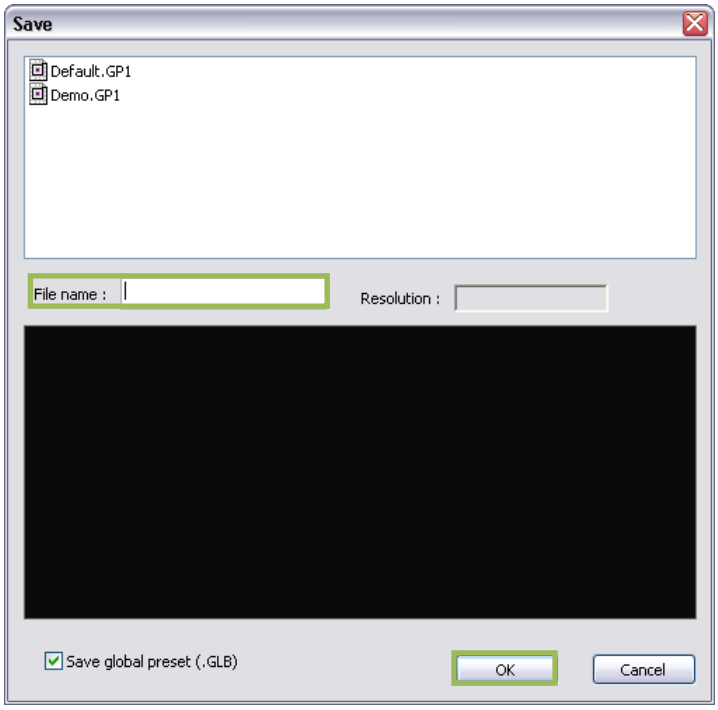


Figure 4-2 Phoenix-Q Software: Enter Unique Filename for Preset

1. *The file extension **GP#** will be added to the filename of a group's preset.*
2. *Click to select **Save Global Preset** (with checkmark) to save a group preset that can be applied to all the groups. The file extension **GLB** will be added to the filename.*

*Delete a file appearing on the **Save** window by right-clicking the filename and clicking **Delete**.*

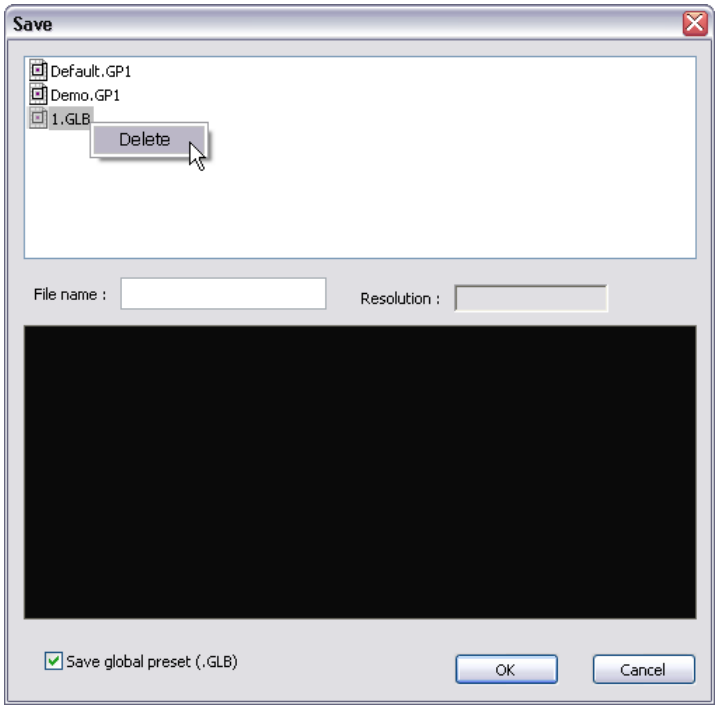


Figure 4-3 Phoenix-Q Software: Delete File in Save Window

*To delete all the files appearing on the window, right-click anywhere inside the window (except on the files) and click **Delete All**. When the confirmation window appears, click **OK** to proceed.*

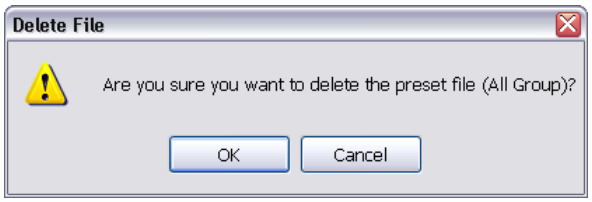


Figure 4-4 Phoenix-Q Software: Delete All Preset Files Confirmation

*Step 4. After creating presets load the file to be the master layout which gets loaded when the Rainier Summit is powered on by clicking **Load Preset**.*

*Step 5. Select a saved file and then click **OK** to load the preset.*
Opening a preset file with "GP#" as filename extension loads a single group preset; while opening a preset file with "GLB" as filename extension loads a preset that applies to all groups (global preset).

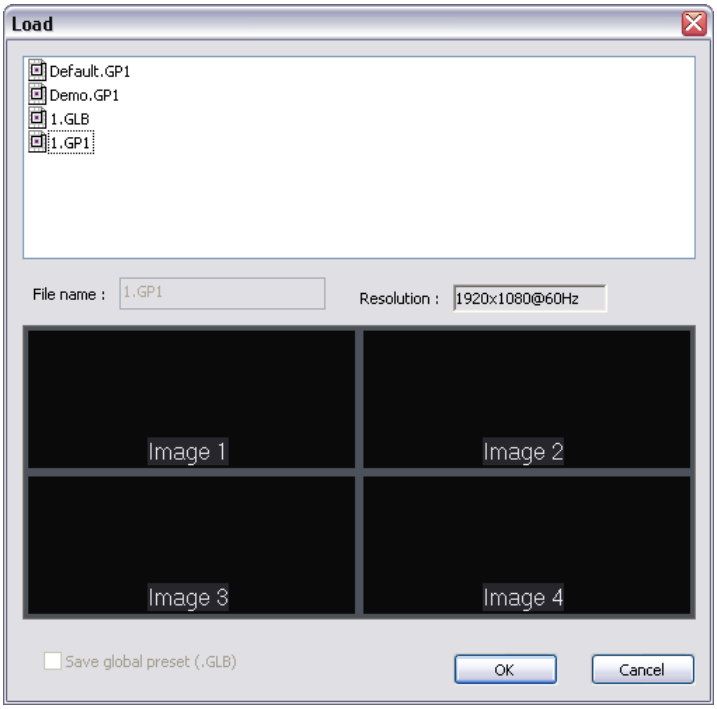


Figure 4-5 Phoenix-Q Software: Load Preset File

*Similar to the **Save** window, delete a file appearing on the **Load** window by right-clicking the filename and clicking **Delete**. To delete all the files appearing on the window right-click anywhere inside the window (except the filename itself) and click **Delete All**. When the confirmation window appears, click **OK** to proceed.*

*Step 6. Click **Exit** to close the Phoenix-Q software. By clicking **Yes** to confirm saving, all the changes would be saved to the configuration file "System.json" in the device's flash memory.*

4.2 Edit Menu

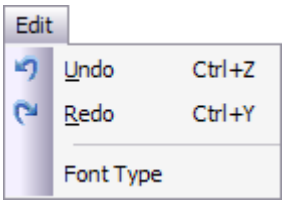


Figure 4-6 Phoenix-Q Software: Edit Menu

Edit Menu	
Undo	Click **Undo** to cancel the previous step.
Redo	Click **Redo** to repeat the previous step that was cancelled.
Font Type	Click **Font Type** to set the **Font**, **Font style**, and **Size**.

Table 4-1 Phoenix-Q Software: Edit Menu Description

Font Type: *Click **Font Type** to select the **Font**, **Font style**, and **Size**. Then, click **OK**.*

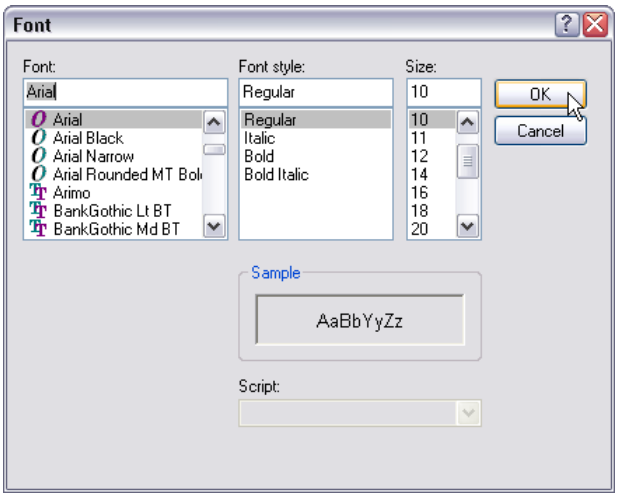


Figure 4-7 Phoenix-Q Software: Set Font Properties

***For Windows 7:** When using the Phoenix-Q in a different language other than English, the **Font** "Arial" might not appear as the default font-type. This may cause the label appearing in the window to appear askew. Perform the following steps to return the default font type to **Arial**.*

*Step 1. Click **Control Panel** and when the next screen appears, click **Appearance and Personalization**.*

*Step 2. On the next screen, click **Change Font Settings** under **Fonts**.*

*Step 3. On the next screen, click **Font Settings**.*

*Step 4. On the next screen, click to unselect the **Hide fonts based on language settings** checkbox. Then click **OK** to exit.*

*Step 5. On the Phoenix-Q software, click to select **Arial** as the default **Font** and click **OK**.*

4.3 View Menu

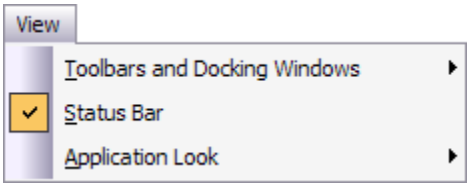


Figure 4-8 Phoenix-Q Software: View Menu

View Menu	
Toolbars and Docking Windows	Enable (with checkmark) or disable the display of any of the toolbars or windows as well as **Customize** the display. *See figure (4-9)
Status Bar	When selected (with checkmark) the status bar is displayed on the bottom of the Phoenix-Q software. Click to select or unselect.
Application Look	Click **Application Look** to select the overall design and theme of the Phoenix-Q software. *See figure (4-11)

Table 4-2 Phoenix-Q Software: View Menu Description

Toolbars and Docking Windows:

Enable (with checkmark) or disable display of **Standard** toolbar, **Available Windows** panel, **Log Window** panel, **Group View** panel, **Properties** panel, **Briefing** panel, as well as **Customize** display.

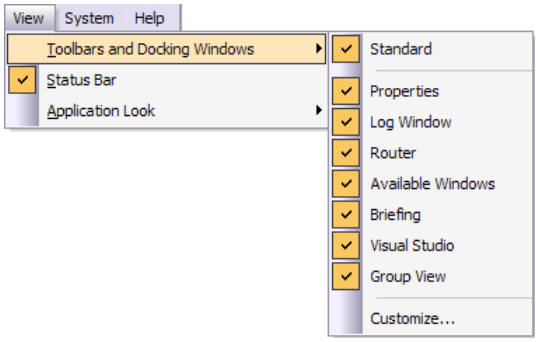


Figure 4-9 Phoenix-Q Software: "Toolbars and Docking Windows" Menu

Customize:

Click **Customize** to design the look of the menus and commands appearing on the Phoenix-Q software. Click the particular folder (**Commands**, **Toolbars**, **Menu** and **Options**) and then make the necessary changes. Click **Close** when finished to exit.

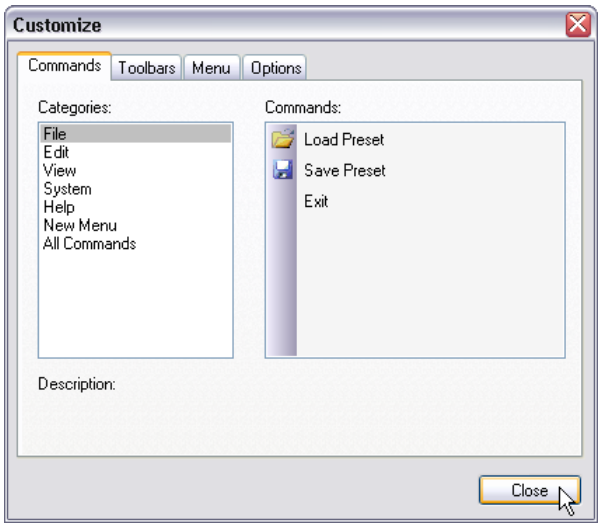


Figure 4-10 Phoenix-Q Software: "Customize the Toolbars" Window

Application Look:

Click **Application Look** to select the overall design and theme of the Phoenix-Q software. Click the themes title to view the theme. The "dot" in front of **Type 2** signifies that it is the currently selected theme.

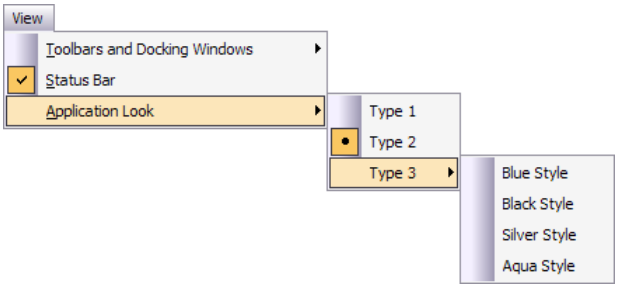


Figure 4-11 Phoenix-Q Software: "Application Look" Menu

4.4 System Menu

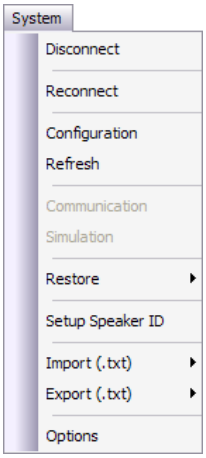


Figure 4-12 Phoenix-Q Software: System Menu

System Menu	
Connect or **Disconnect**	**Connect** the computer and Rainier Summit via Ethernet connection; or **Disconnect** it. Before connecting make sure that the correct configurations are entered under the item **Communication**.
Reconnect	Upon unplugging the Ethernet cable and re-connecting it, click **Reconnect** to continue the configuration process.
Configuration	Click **Configuration** to assign the groupings. Create the configuration of a particular group (for example move the device to another group as so desired by dragging the device listed under **Group 001** to **Group 003**) and then click **OK**. The Phoenix-Q software will save the configuration file "System.json" to the Rainier Summit's flash memory.
Refresh	Click **Refresh** to discard the current group configuration and return to the previous one last saved as a preset. *Note: This feature is only effective when the Phoenix-Q software stays connected to the device after group configuration were changed. Upon **Exit**ing the software, you will need to use the **Restore** function to recover the previous group configuration and restore the preset files.*
Communication	Click **Communication** to select the **IP Port** "Ethernet" mode of connection between the computer and Rainier Summit. *Note: This item is not available when the computer is connected to the Rainier Summit.*
Simulation	*Note: For factory testing only, this item is not available for normal use.*
Restore	To restore a preset follow the steps outlined in figures (4-20 to 4-23).
Setup Speaker ID	Use **Setup Speaker ID** to set up which speakers to monitor for audio sources.
Import	Import image labels or alarm sound file from a .txt file. See figures (4-21 to 4-24) for details.
Export	Export image labels or alarm sound parameters to be edited externally. See figures (4-26 to 4-29) for details.
Options	**Options** opens up a pop-up window to customize a number of default settings for Phoenix-Q. These settings are organized into the following categories; **System**, **General→External Device**, and **Communication**. See figures (4-30 to 4-48) for details.

Table 4-3 Phoenix-Q Software: System Menu Description

Configuration: *To change the current group configuration setting or add the cards under **Idle Group** to the existing group configuration, perform the following steps:*

*Step 1. Click **Configuration**.*

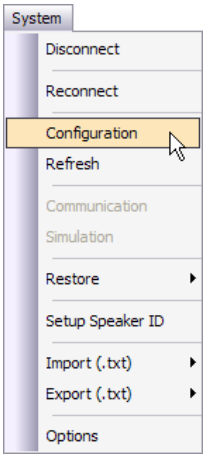


Figure 4-13 Phoenix-Q Software: "Configuration" Window

*The **Group Setup** window will appear.*

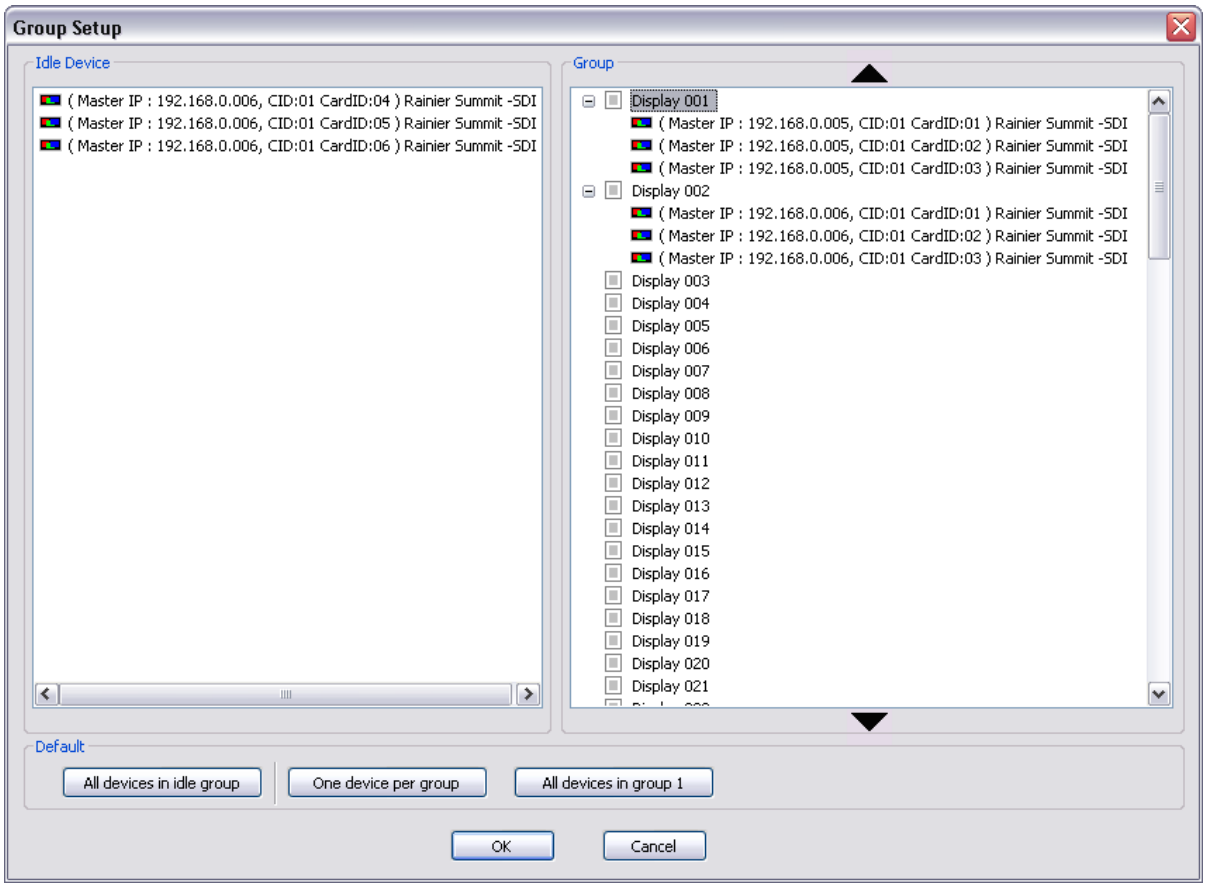


Figure 4-14 Phoenix-Q Software: "Group Setup" Window

*Step 2. To assign the grouping just drag the **Idle Device** on the left panel to the desired **Group #** on the right panel (i.e. **Group 003**).*

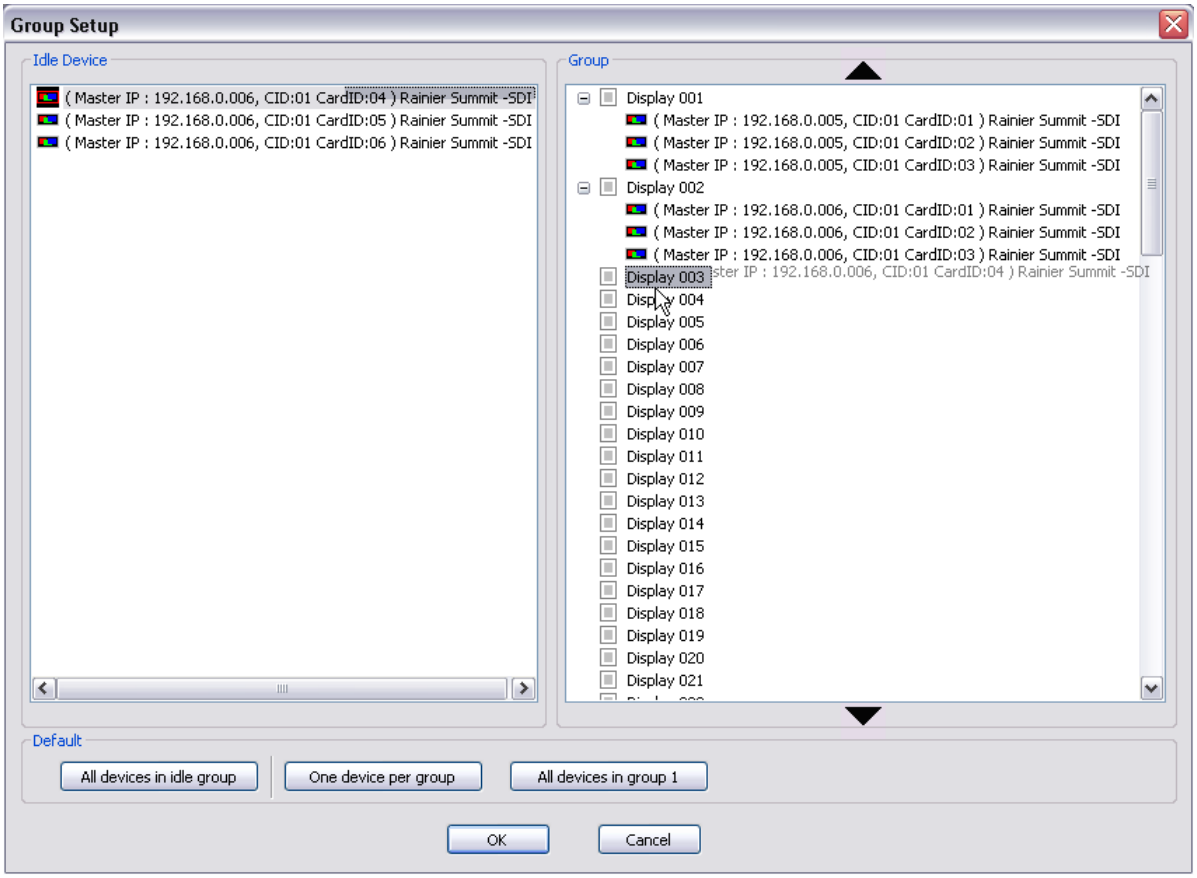


Figure 4-15 Phoenix-Q Software: Assign Group # to Idle Device

After dragging/assigning the card, it is displayed as belonging to the assigned group.

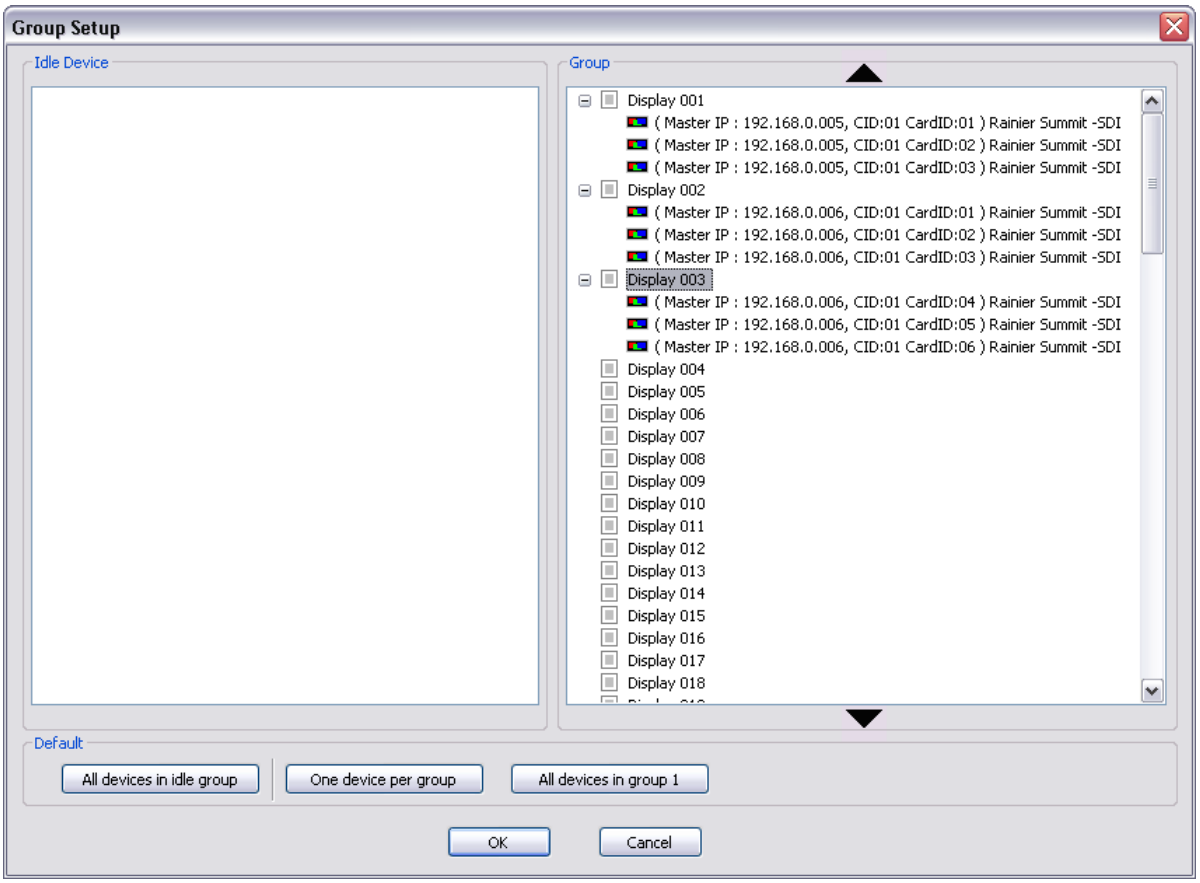


Figure 4-16 Phoenix-Q Software: Idle Device Assigned to Group 003

*Step 3. Repeat the previous step for any additional **Idle Device**(s). Next, click **OK** to exit the **Group Setup** window. Phoenix-Q will save the configuration file "System.json" to the device's flash memory.*

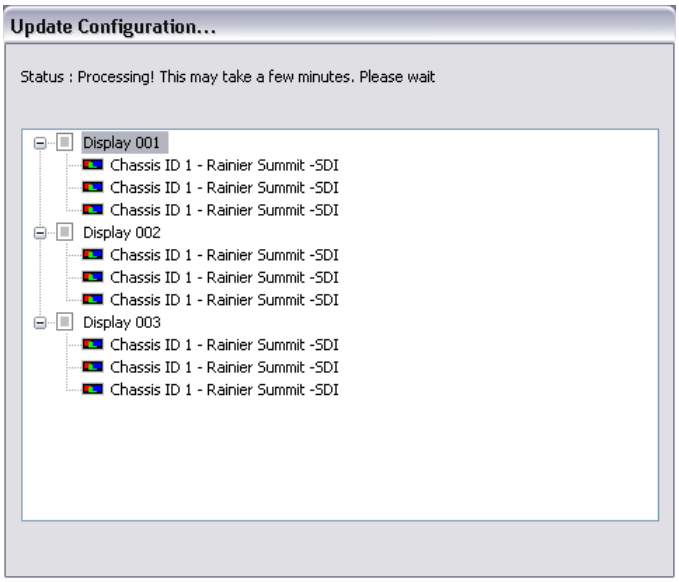


Figure 4-17 Phoenix-Q Software: Update Configuration Progress

Refresh: *To discard the current group configuration setting and return to the previous group configuration as well as restore the preset files, perform the following steps.*

*Step 1. Click **Refresh**.*

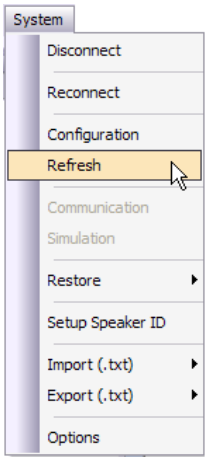


Figure 4-18 Phoenix-Q Software: "Refresh" Window

The progress of restoration will be shown.

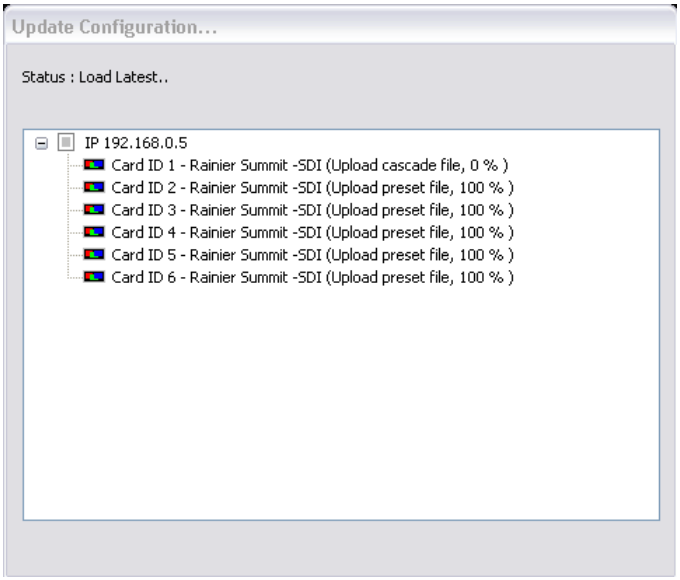


Figure 4-19 Phoenix-Q Software: "Restore" Progress

Restore: *To manually **Restore** a preset perform the following steps.*

Step 1. Set the Rainier Summit to the factory-default value (see Appendix C for details).

*Step 2. Make sure that the **IP address** setting of the chassis being restored matches the old chassis' setting (if the restoration to be attempted is not for the same chassis).*

*Step 3. Click **System→Restore→Configuration and Files**.*

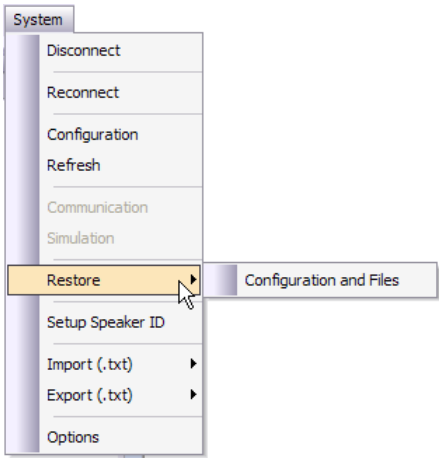


Figure 4-20 Phoenix-Q Software: Click "System"→"Restore"→"Configuration and Files"

Step 4. *The **Date** window shows the previously saved preset(s) in folders organized by dates. The **Preview Configuration** window shows the group setup of the just selected folder. The **Present Configuration** window shows the current group setup of the Rainier Summit.*

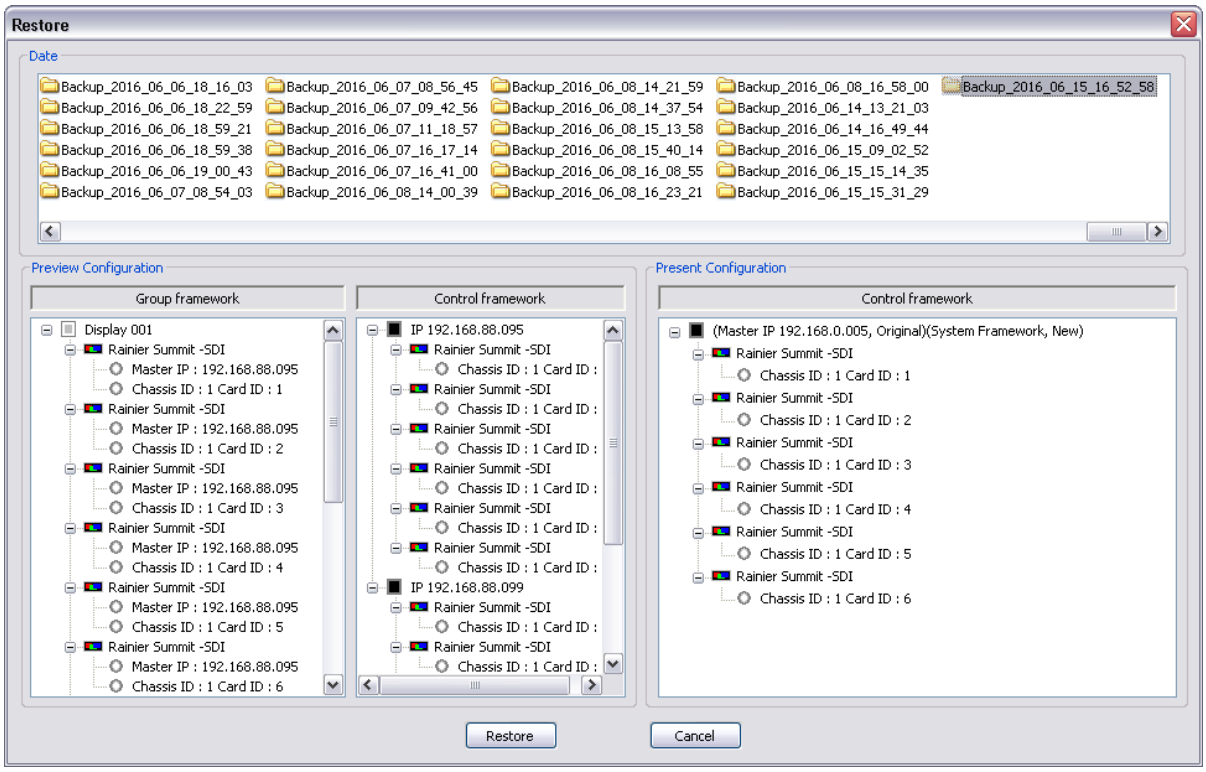


Figure 4-21 Phoenix-Q Software: “Restore” Window

Step 5. *Click to select a restore point (i.e. **Backup_2016_06_15_16_52_58**). The system will compare the setup listed in the **Present Configuration** window with the setup listed in the **Preview Configuration** window (i.e. **Identical**, **Different**, **New Device**).*

*When the setup of the **Present Configuration** window is different from the setup in the **Preview Configuration** window (i.e. upon selecting **Backup_2016_06_15_16_52_58** folder in the **Date** window), manual restoration is not allowed by the system and the **Restore** button remains grayed-out.*

*Step 6. Click **Restore**. The progress of restoration will be shown.*

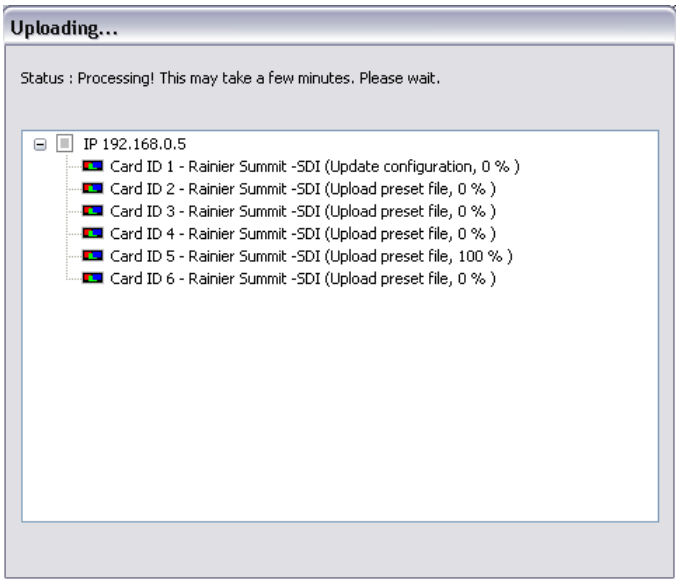


Figure 4-22 Phoenix-Q Software: "Restore" Progress

*Step 7. Reboot the Rainier Summit to complete the **Restore** process.*

Figure 4-23 Phoenix-Q Software: Reboot Device

Setup Speaker ID: *When there are two or more cascaded chassis, use **Setup Speaker ID** to assign each card ID to output to a designated chassis headset connector. Make sure to first assign two or more chassis cards to the same group.*

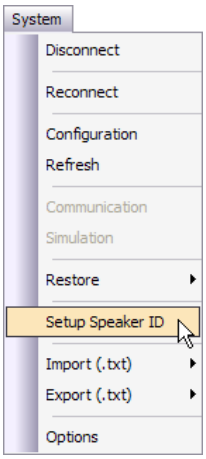


Figure 4-24 Phoenix-Q Software: Click "System"→"Setup Speaker ID"

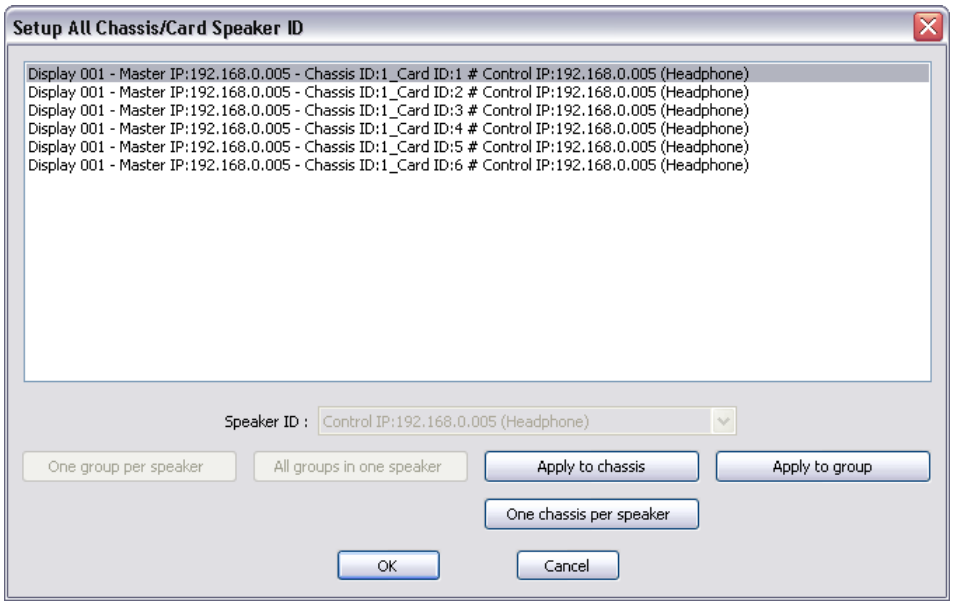


Figure 4-25 Phoenix-Q Software: Card Speaker ID

This item is only available when the computer is connected to the Rainier Summit.

Import and Export Labels / Alarm Sound

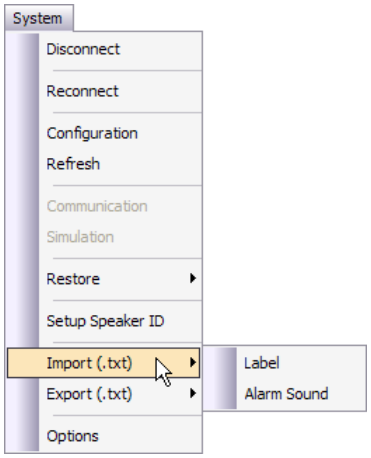


Figure 4-26 Phoenix-Q Software: Click "System"→"Import/Export Label (.txt)"

1. *The Label settings here will affect all the labels of the Groups in the System.*
2. *Refer to Appendix A for complete details on using the **Import/Export→Alarm Sound** function.*

Export the label to be edited externally. The most convenient way is to export the file (label) as:

✓ ***Label** – up to 30 characters; can contain the English characters A–Z, a–z, 0–9*

*Step 1. Click **System→Export (.txt)→Label** and assign a filename. Then click **Save**.*

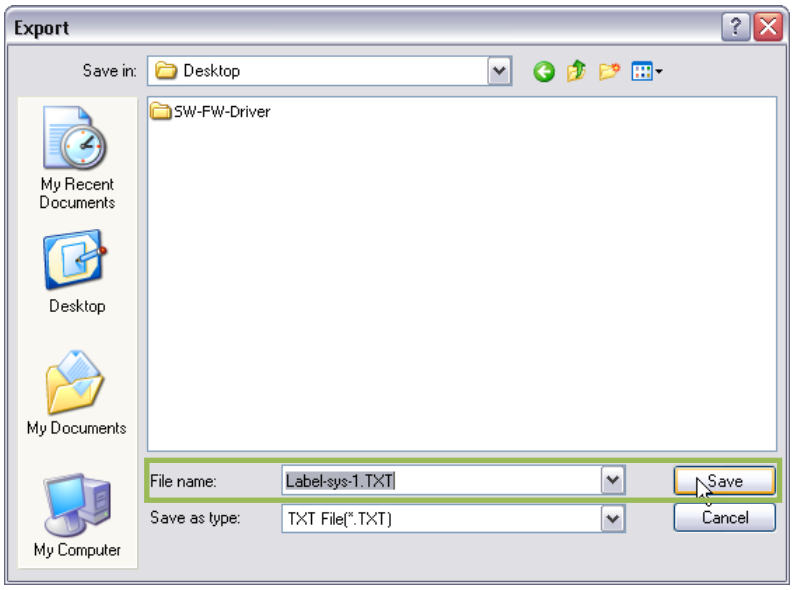


Figure 4-27 Phoenix-Q Software: Export Label

*Step 2. Open the exported text file. The first row of text provides a guide to the two types of labels (**A** for **ANSI Label**). Change the label type as desired by typing **A** after the dash "**–**" (highlighted as shown below).*

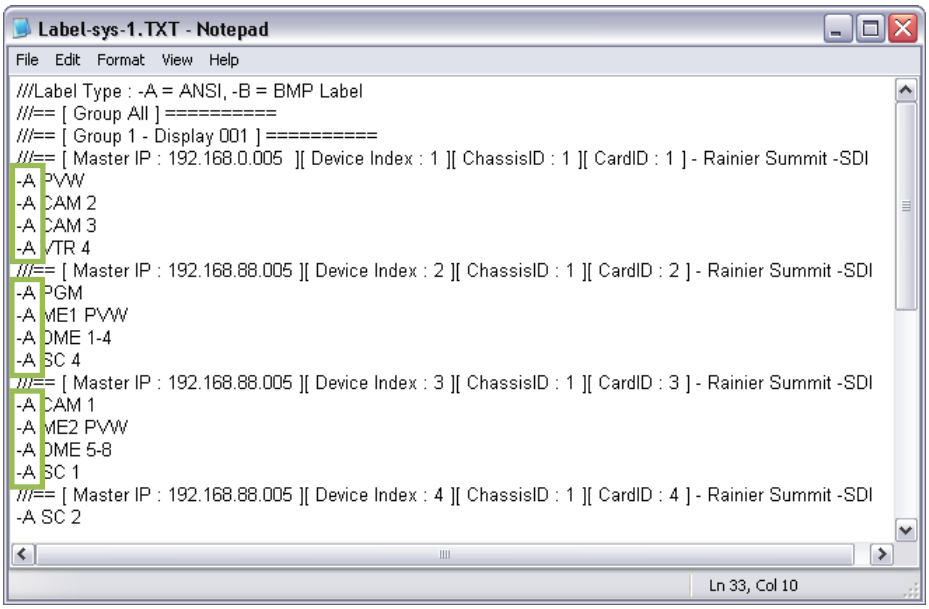


Figure 4-28 Phoenix-Q Software: Change Label Type

*Step 3. Edit the text in the file (highlighted as shown below). When done editing the label, save the **txt** file and import it. The on-screen labels will be updated.*

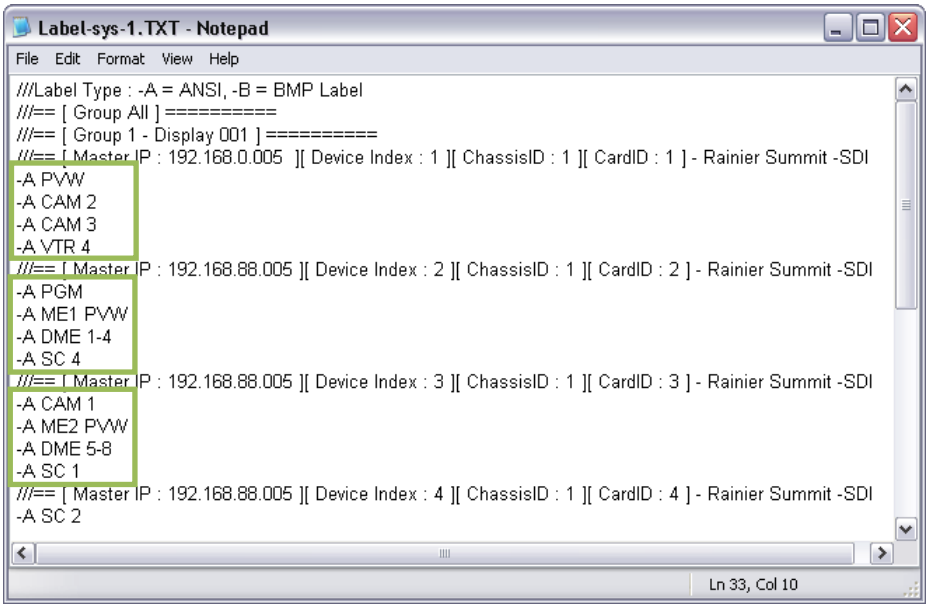


Figure 4-29 Phoenix-Q Software: Change Label Text

Options: *Opens a pop-up window with system configuration settings.*

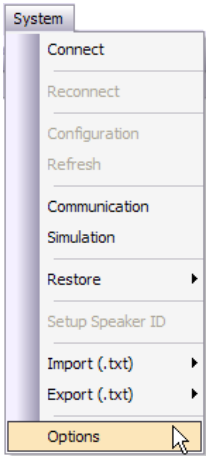


Figure 4-30 Phoenix-Q Software: Click “System”→“Options”

*Some of the functions are only available when Phoenix-Q software **is not** connected to the Rainier Summit.*

✓ ***General→Accessing information store folder***

*When **Accessing information store folder** is set to **Default**, the Phoenix-Q software will save all backup files to the computer hard drive's "C:\Avitech\Backup\" folder (available when Phoenix-Q is not connected to Rainier Summit).*

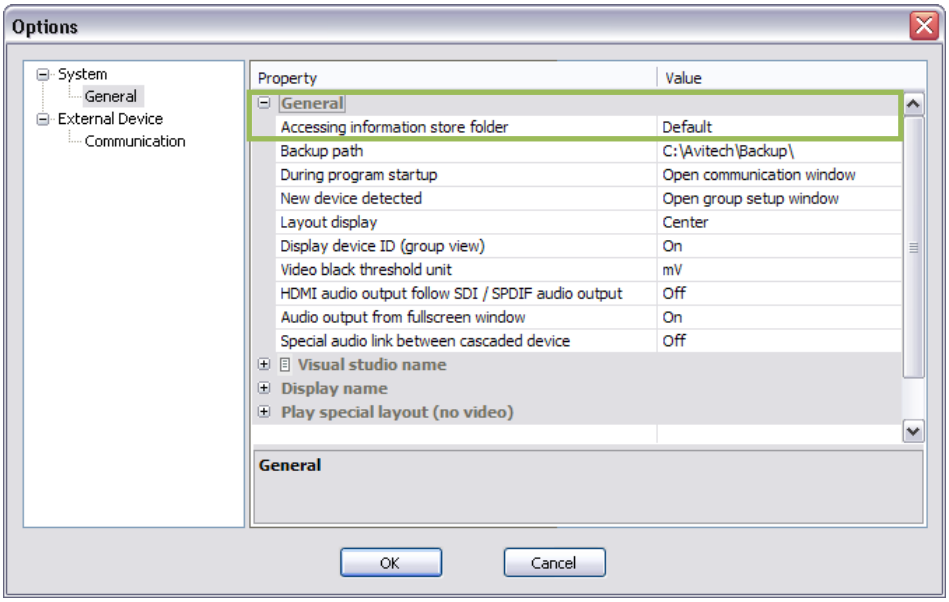


Figure 4-31 Options: "System"→"General"→"Accessing information store folder"→"Default"

*To change the destination folder, click the drop-down button (click the cell's rightmost portion) and then select **Software folder**. All the backup files will then be saved to the same folder where the Phoenix-Q executable file resides (available when Phoenix-Q is not connected to Rainier Summit).*

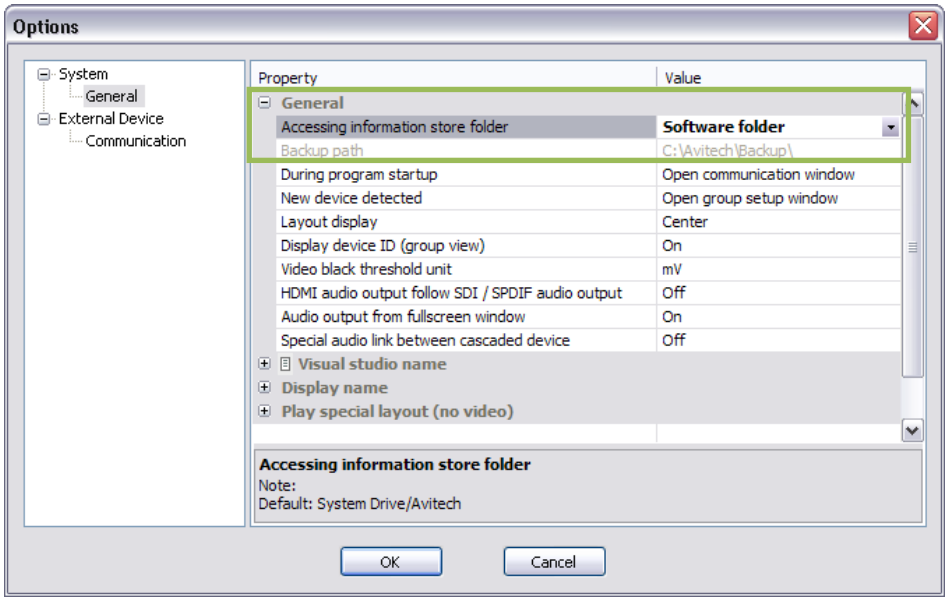


Figure 4-32 Options: "System"→"General"→"Accessing information store folder"→"Software folder"

✓ ***General→Backup path***

The default backup path "C:\Avitech\Backup\" contains the system configuration, preset files, system log data, and firmware version information. To change the backup path, type the desired path in the ***Value*** *column (available when Phoenix-Q is not connected to the Rainier Summit).*

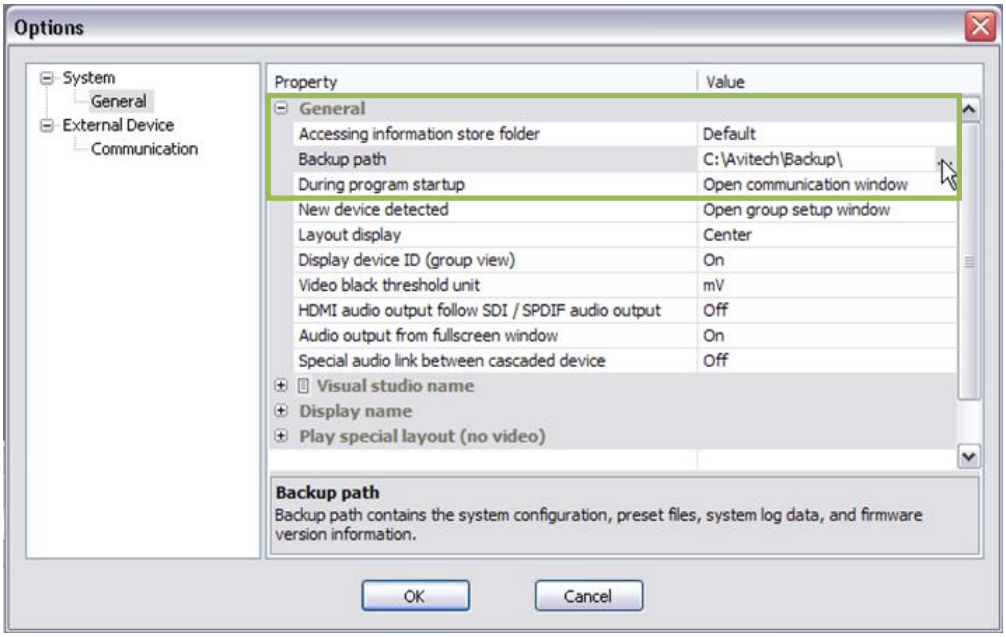


Figure 4-33 Options: "System"→"General"→"Backup Path"

Or click the select folder button "…" (on right-most edge) and when the ***Select Folder*** *screen appears choose from the existing folders or click the* ***Make New Folder*** *button to create a new folder. Then click* ***OK*** *to exit.*

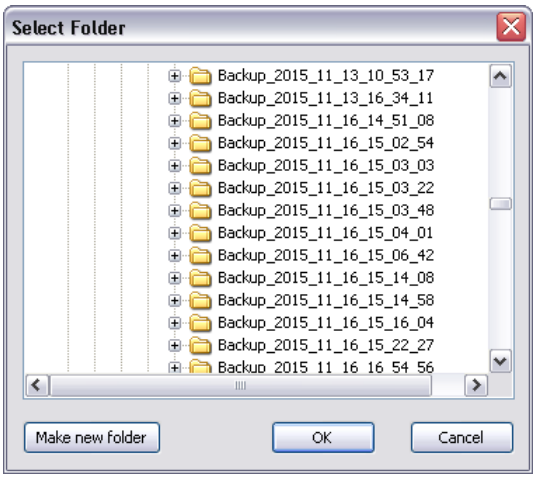


Figure 4-34 Phoenix-Q Software: Select Folder Window

✓ ***General→During program startup***

Click the drop-down button (click the cell's rightmost edge) to select ***Open communication window*** *that allows the Phoenix-Q program to open the* ***Communication*** *window upon startup.*

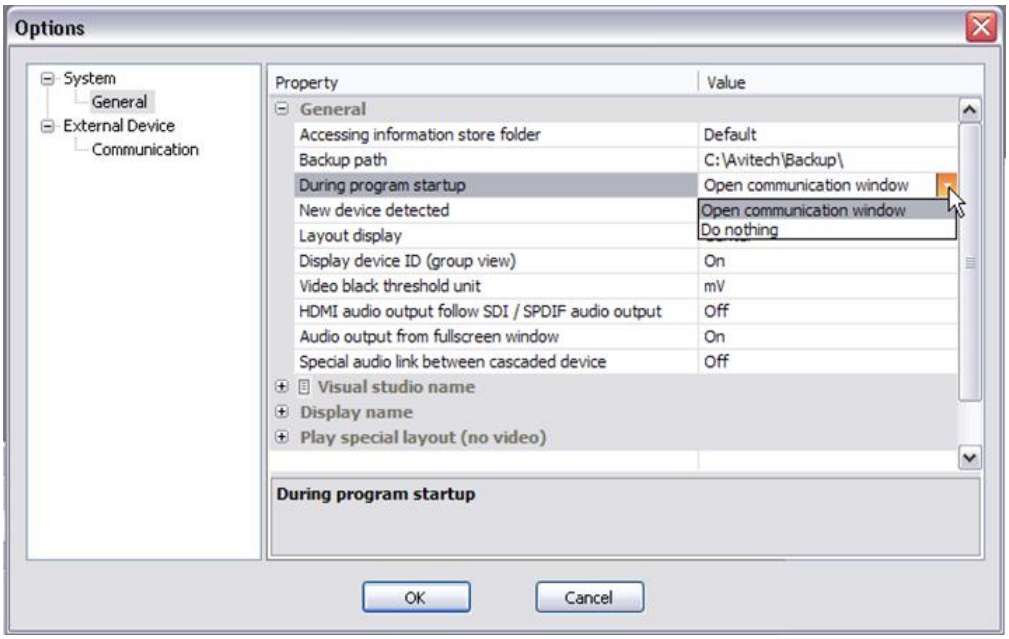


Figure 4-35 Options: "System"→"General"→"During Program Startup"

✓ ***General→New device detected***

Click the drop-down button (click the cell's rightmost edge) and select ***Open group setup window*** *that allows the Phoenix-Q program to open the* ***Group Setup*** *window when a new device has been detected.*

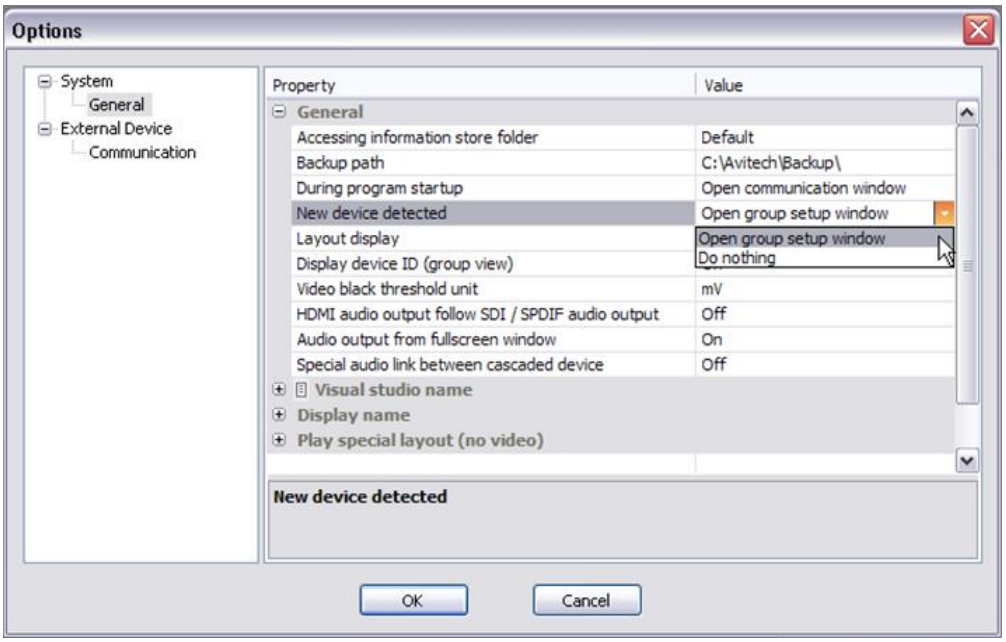


Figure 4-36 Options: "System"→"General"→"New Device Detected"

To prevent an error when detecting a new device it is highly recommended the new device be returned to its default setting before connecting it to the present setup.

✓ ***General→Layout display***

*Click the drop-down button (click the cell's rightmost edge) to select **Center** or **Upper left corner** that allows the preview window to be displayed in the center or upper left corner.*

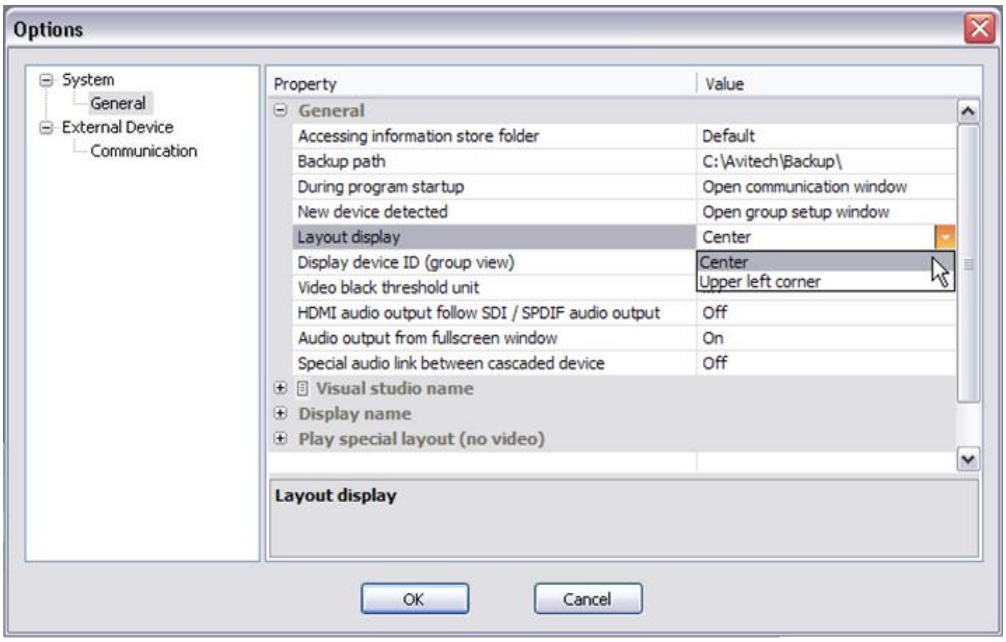


Figure 4-37 Options: "System"→"General"→"Layout Display"

✓ ***General→Display device ID (group view)***

*To display the device ID information in the **Group View** panel, make sure **Display Device ID (group view)** is enabled (set **On**). Click the drop-down button [click the **Display device ID (group view)** cell's rightmost edge] to select **On**.*

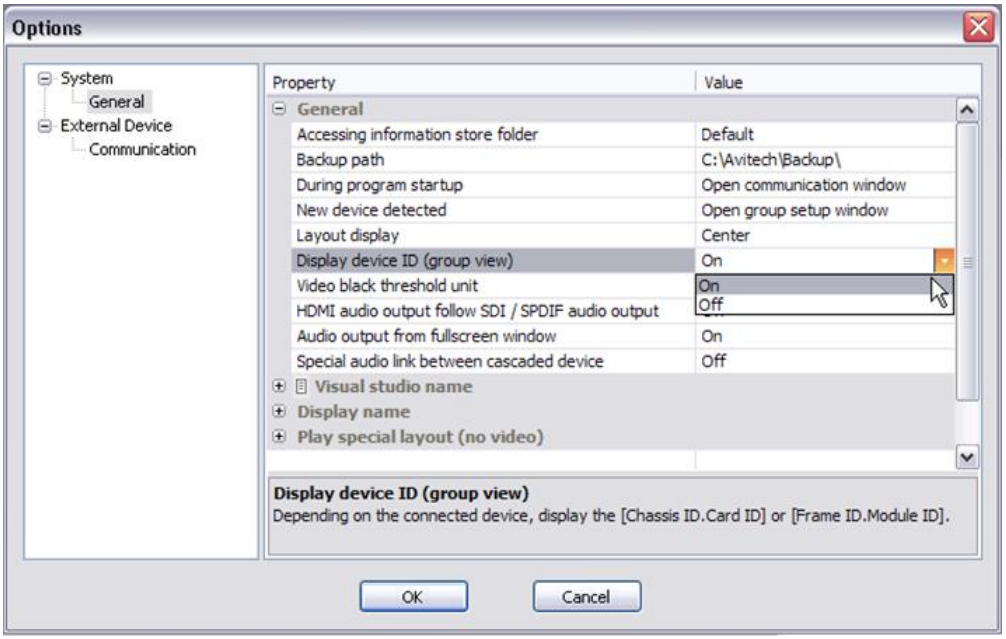


Figure 4-38 Options: "System"→"General"→"Display Device ID (Group View)"

✓ ***General→Video black threshold unit***

*Set the level (in **IRE** or **mV** units) when the signal will be considered black. Click the drop-down button [click the **Video black threshold unit** cell's rightmost edge] to select **IRE** or **mV**.*

***IRE** is a unit used in the measurement of composite video signals. Its name is derived from the initials of the Institute of Radio Engineers. While **mV** stands for millivolt.*

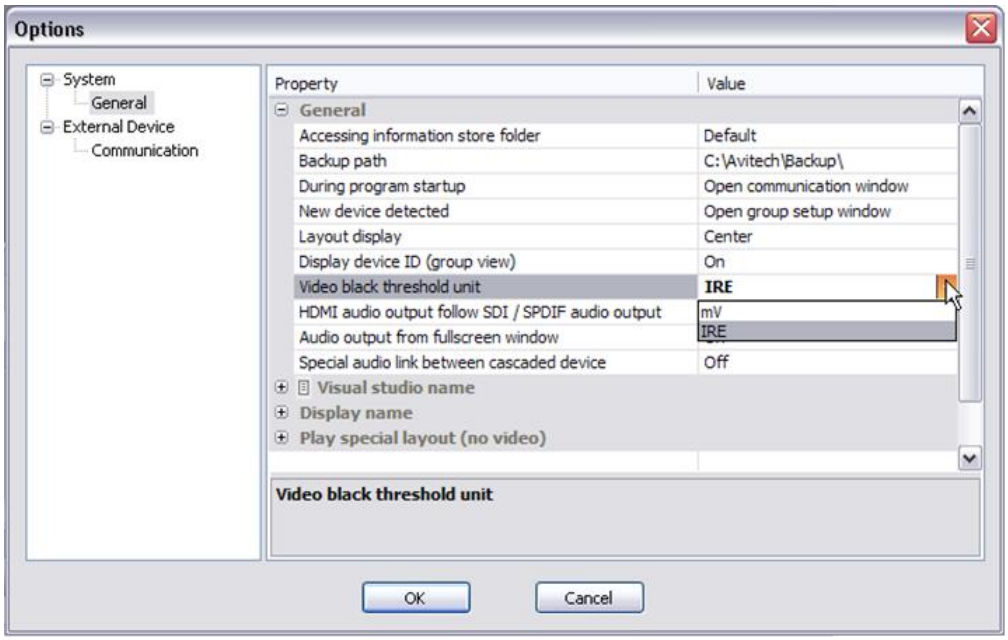


Figure 4-39 Options: "System"→"General"→"Video Black Threshold Unit"

✓ ***General→HDMI Audio output follow SDI / SPDIF audio output***
*To allow the HDMI audio output to have the same audio output as SDI (**Properties** portion – **Card Parameters→Headphone (Local)→Source**), make sure **HDMI Audio Output Follow SDI / SPDIF Audio Output** is enabled (set **On**). Click the drop-down button [click the **HDMI Audio Output Follow SDI / SPDIF Audio Output** cell's rightmost edge] to select **On**.*

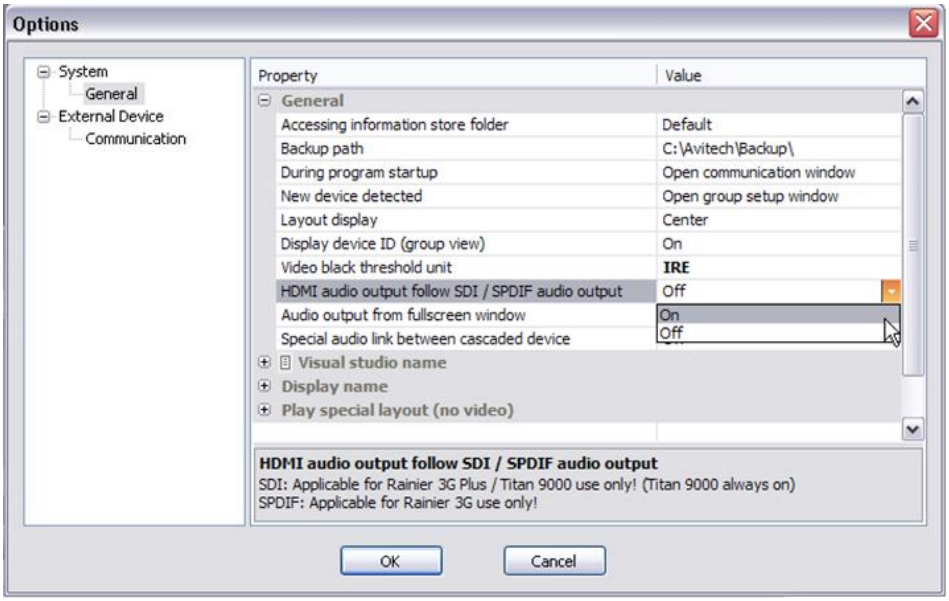


Figure 4-40 Options: "System"→"General"→"HDMI Audio Output Follow SDI / SPDIF Audio Output"

*Upon selecting **On** the following reminder appears.*

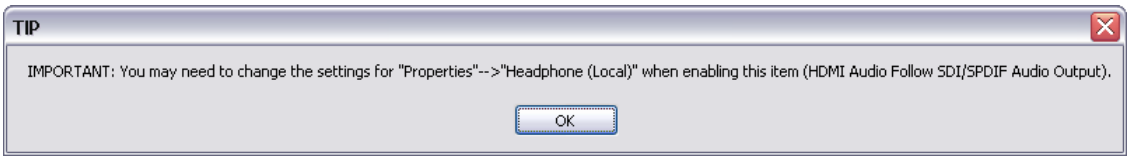


Figure 4-41 Reminder upon Enabling “HDMI Audio Output Follow SDI / SPDIF Audio Output”

✓ ***General→Audio output from fullscreen window***

*To allow audio output to route to the window that just entered full screen mode, make sure **Audio output from fullscreen window** is enabled (set **On**). Click the drop-down button [click the **Audio output from fullscreen window** cell’s rightmost edge] to select **On**.*

Audio output will return to the previous window source upon exiting from full screen mode.

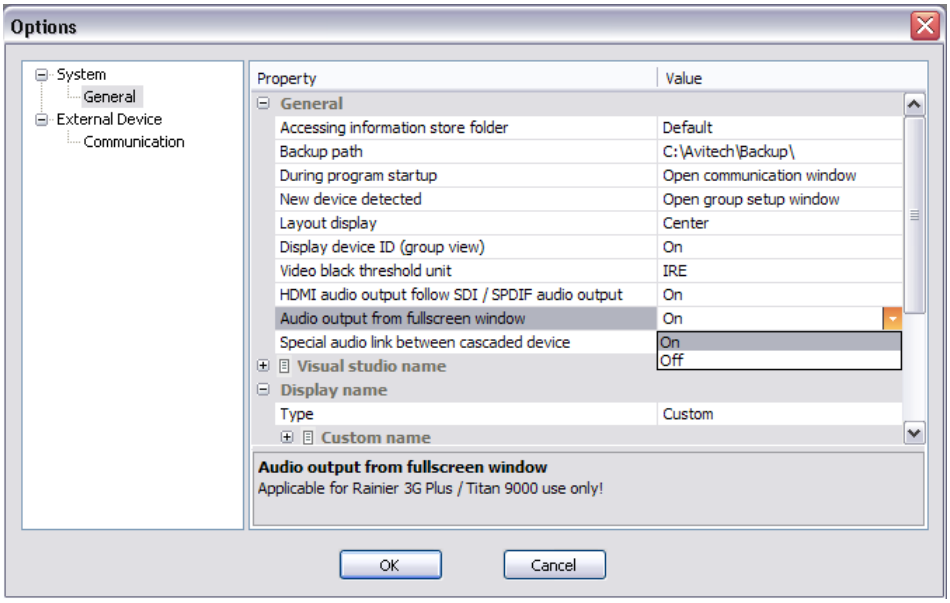


Figure 4-42 Options: “System”→“General”→“Audio Output From Full Screen Window”

✓ ***General→Special audio link between cascaded device***

To allow the audio signal to pass through between cascaded Rainier Summits (both device must belong to the same group), make sure ***Special audio link between cascaded device*** *is enabled (set* ***On****). Click the drop-down button [click the* ***Special audio link between cascaded device*** *cell's rightmost edge] to select* ***On****.*

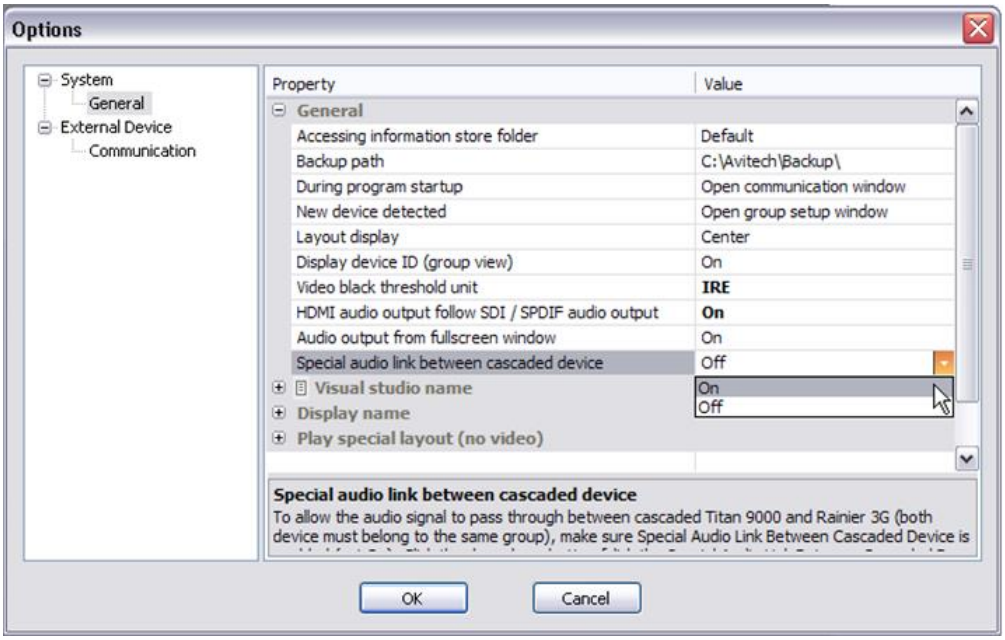


Figure 4-43 Options: "System"→"General"→"Special Audio Link between Cascaded Device"

✓ ***General→Visual studio name***

Type the Visual Studio group's new name (up to 30 characters).

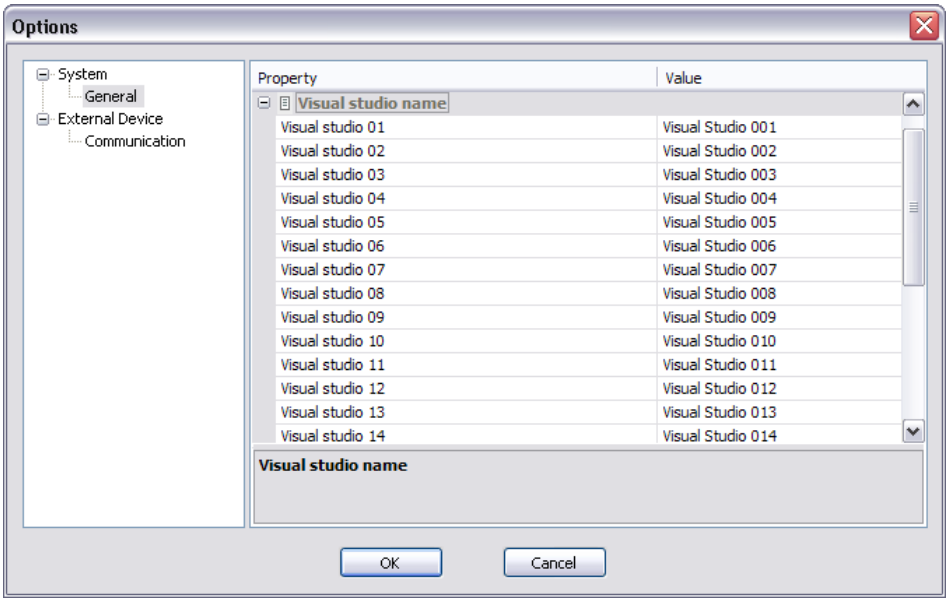


Figure 4-44 Options: "System"→"General"→"Visual Studio Name"

✓ ***General→Display name→Type***

*To change the group's displayed name, select **Custom**. Click the drop-down button [click the **Type** cell's rightmost edge] to select **Custom**.*

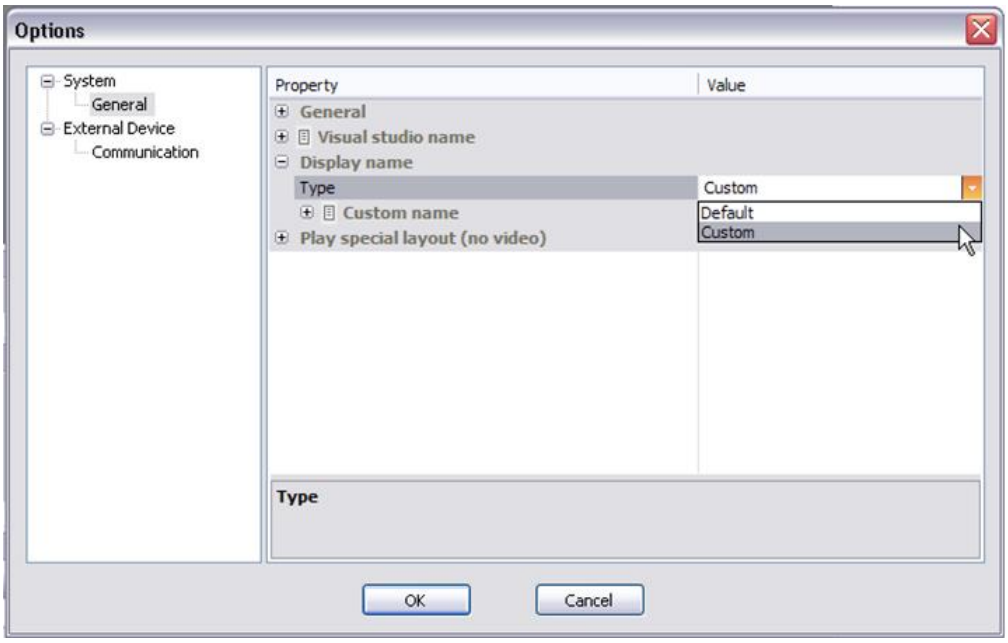


Figure 4-45 Options: "System"→"General"→"Type"

✓ ***General→Display name→Custom name***

Type the group's new name (up to 30 characters).

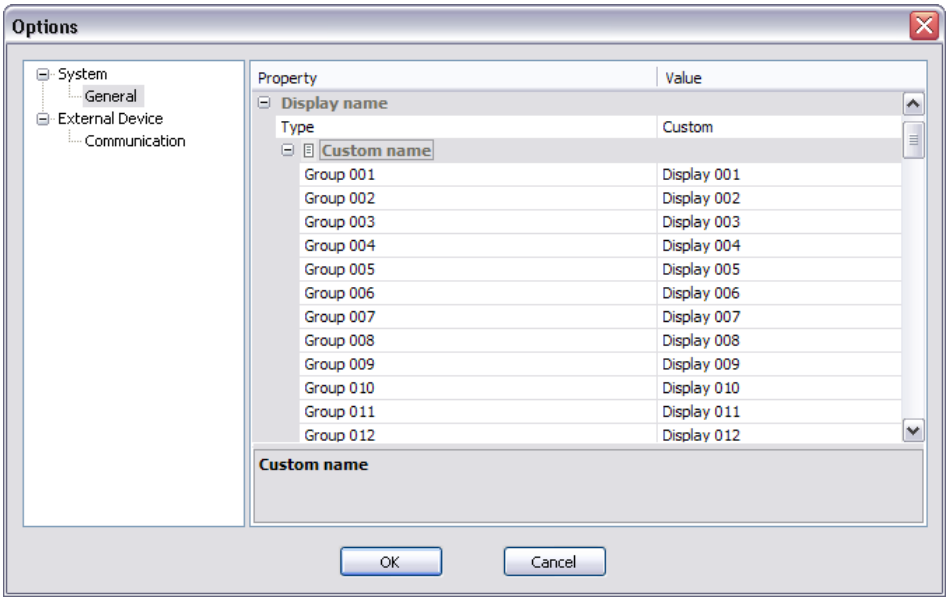


Figure 4-46 Options: "System"→"General"→"Custom Name"

✓ ***Play special layout (no video)***
*Make sure that **Play special layout** when **No Video** occurs is **Enable**d (set **On**). Click the drop-down button (click the **Display Type** cell's rightmost edge) to select **Quad** or **Fullscreen**.*

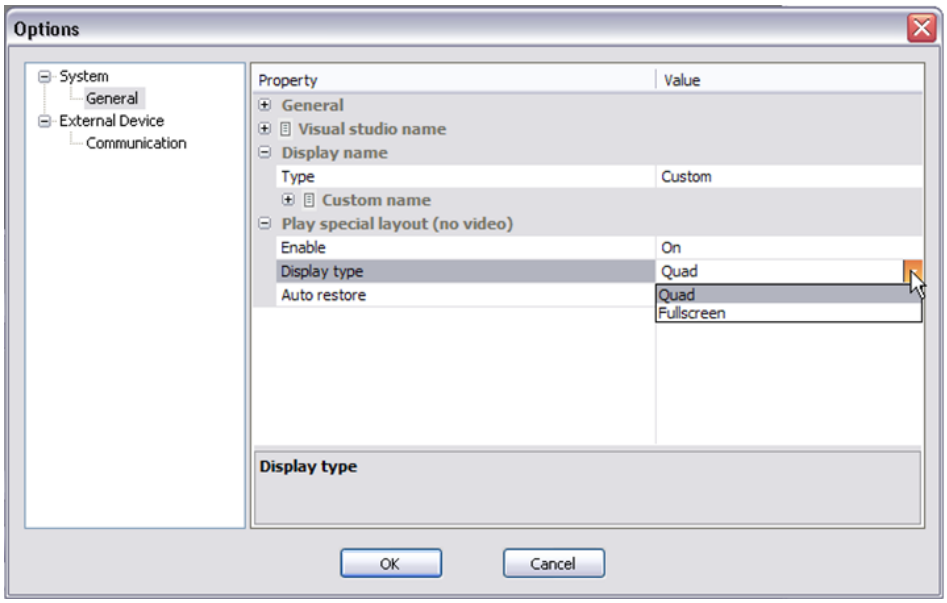


Figure 4-47 Options: "System"→"Play Special Layout (No Video)"→"Display Type"

Display Type**: **Quad/Fullscreen
The following sample scenarios may occur:

***Sample scenario 1** – a single window loses video signal*
Regardless of the present monitor's window layout, the quad/full screen layout would be displayed and the single window without video signal would occupy the top-left position/full screen to warn the user that a particular window has no video signal.

***Sample scenario 2** – three windows lose video signal*
Regardless of the present monitor's window layout, the quad layout would be displayed and the three windows without video signal would occupy the top-left, top-right, and bottom-left positions to warn the user that the three windows have lost video signal.

Or, the window whose video signal is last detected as missing would occupy the fullscreen as warning.

Auto Restore
The following sample scenarios may occur:

***Sample scenario 1** – a single window loses video signal*
*Allows the window layout to revert back to where it was before signal loss occurred. Click the drop-down button (click the **Auto Restore** cell's rightmost edge) to select **On**. When **Auto Restore** is disabled (set **Off**) then right-click the window and select **Close** to allow the window layout to revert back to where it was before signal loss occurred.*

***Sample scenario 2** – window #2 has regained video signal out of the three windows that lost video signal*
*Allows window #2 that has regained video signal to be removed from the screen. Click the drop-down button (click the **Auto Restore** cell's rightmost edge) to select **On**. When **Auto Restore** is disabled (set **Off**) then right-click the window and select **Close** to allow the window layout to revert back to what it was before signal loss occurred. For **Quad Display Type** (previous item) then window #3 would occupy the place vacated by window #2. Or, for **Full screen Display Type**, then the second-to-the-last window that lost video signal would occupy the whole screen.*

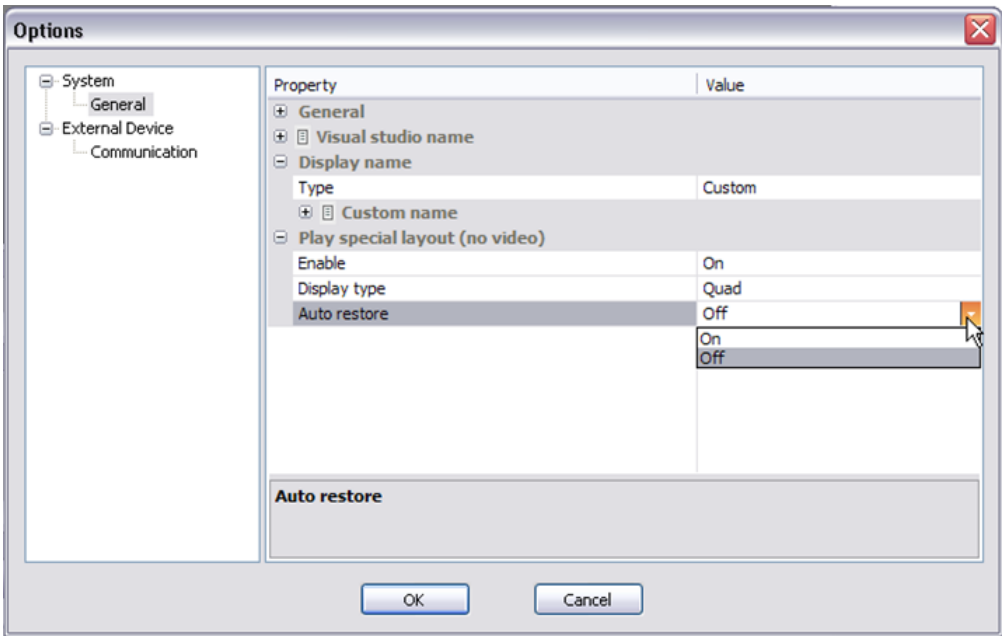


Figure 4-48 Options: "System"→"Play Special Layout (No Video)"→"Auto Restore"

4.5 Help Menu

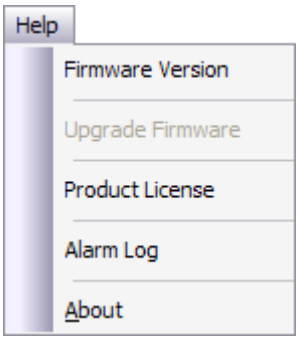


Figure 4-49 Phoenix-Q Software: Help Menu

Help Menu	
Firmware Version	Click to export as a .txt file.
Upgrade Firmware	Click **Upgrade Firmware** to bring the device's firmware up-to-date (see "Firmware Upgrade Reference Guide" for details).
Product License	Click **Product License** to upgrade the license to an authorized version (see Appendix G for details).
Alarm Log	Click **Alarm Log** to check the log data for export as a .txt alarm log file
About	Click **About** to see a pop-up window displaying information about the Phoenix-Q software (i.e., version number).

Table 4-4 Phoenix-Q Software: Help Menu Description

4.5.1 Firmware Version

*Step 1. Click **Firmware Version**.*

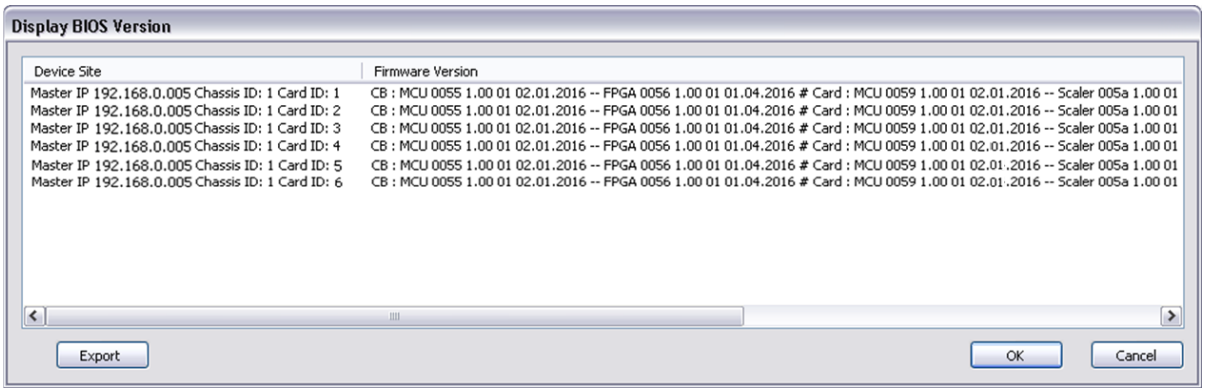


Figure 4-50 Phoenix-Q Software: Firmware Version

*Step 2. Click **Export**.*

*Step 3. Assign a filename and click **Save** to store the data.*

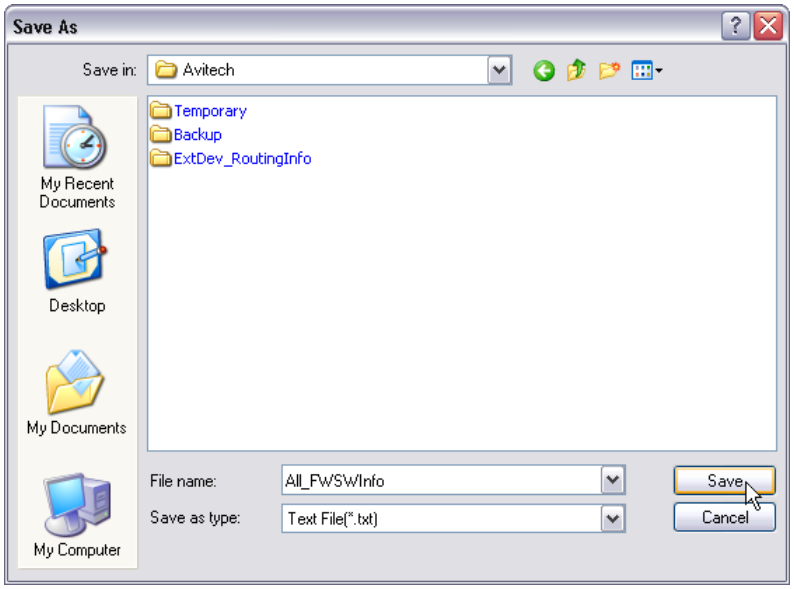


Figure 4-51 Phoenix-Q Software: Save Firmware Version Information

4.5.2 Upgrade Firmware

*Click **Upgrade Firmware** to bring the device's firmware up-to-date (see "Firmware Upgrade Reference Guide for Rainier Summit" for details).*

Click "System"→"Disconnect" first before firmware upgrade.

4.5.3 Product License

*Click **Product License** to check the license information. There are two License Statuses,*

***Authorized License** – used permanently*

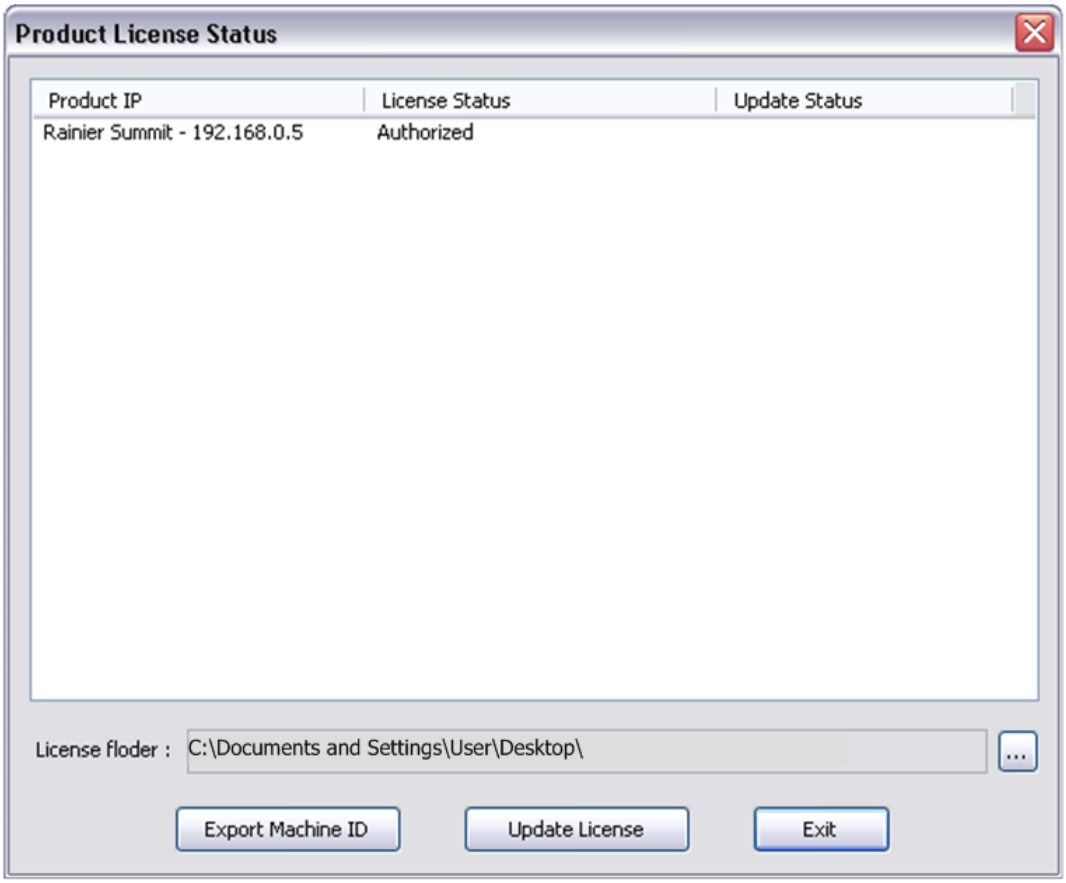


Figure 4-52 License Status: Authorized

Trial License *– for a maximum period of 180 days starting from the date of first use of the Phoenix-Q; and/or from the first use of the Rainier Summit for evaluation purposes. (see Appendix G for details).*

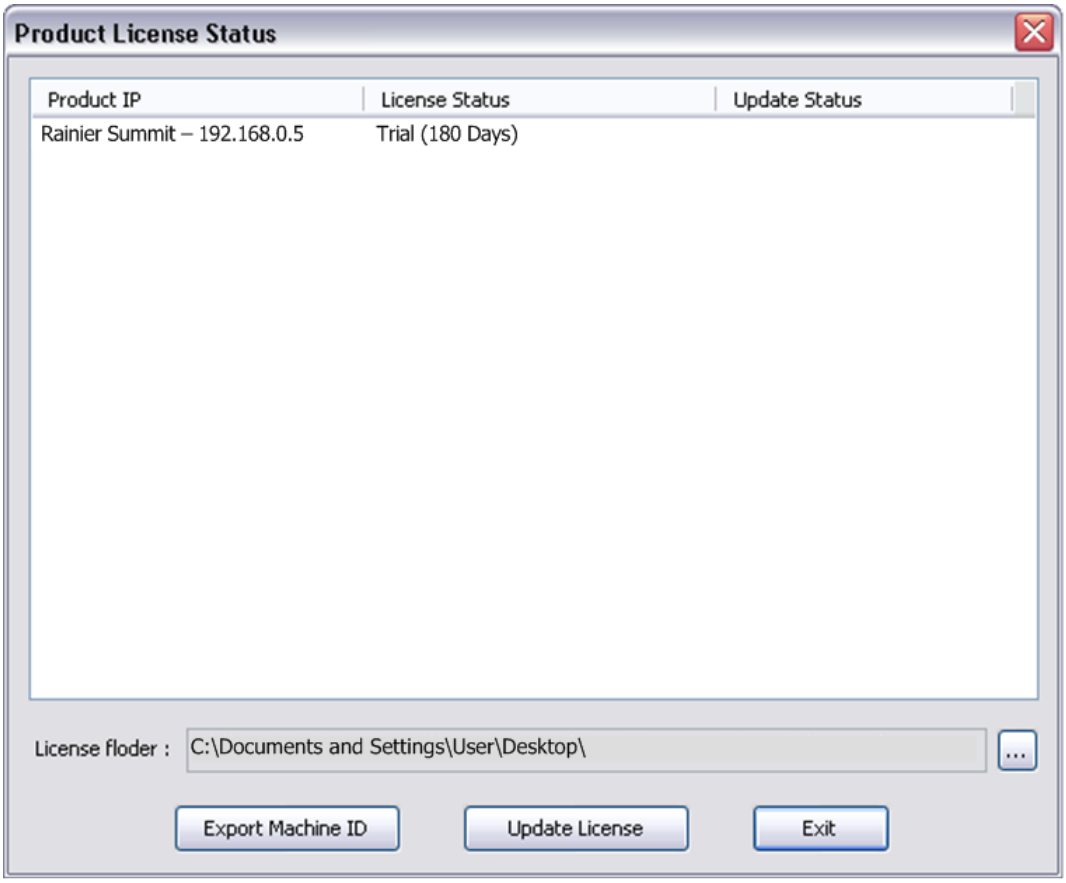


Figure 4-53 License Status: Trial

4.5.4 Alarm Log

*The alarm log of Rainier Summit contains a record of occurrences, such as **System Alarm** (power failure, fan failure, temperature too high alarm) / **No Video** / **Video Black** / **Video Freeze** / **No Audio**.*

*Click **Alarm Log**. The **Alarm Log** window shows the configuration for sorting the alarm data of Rainier Summit.*

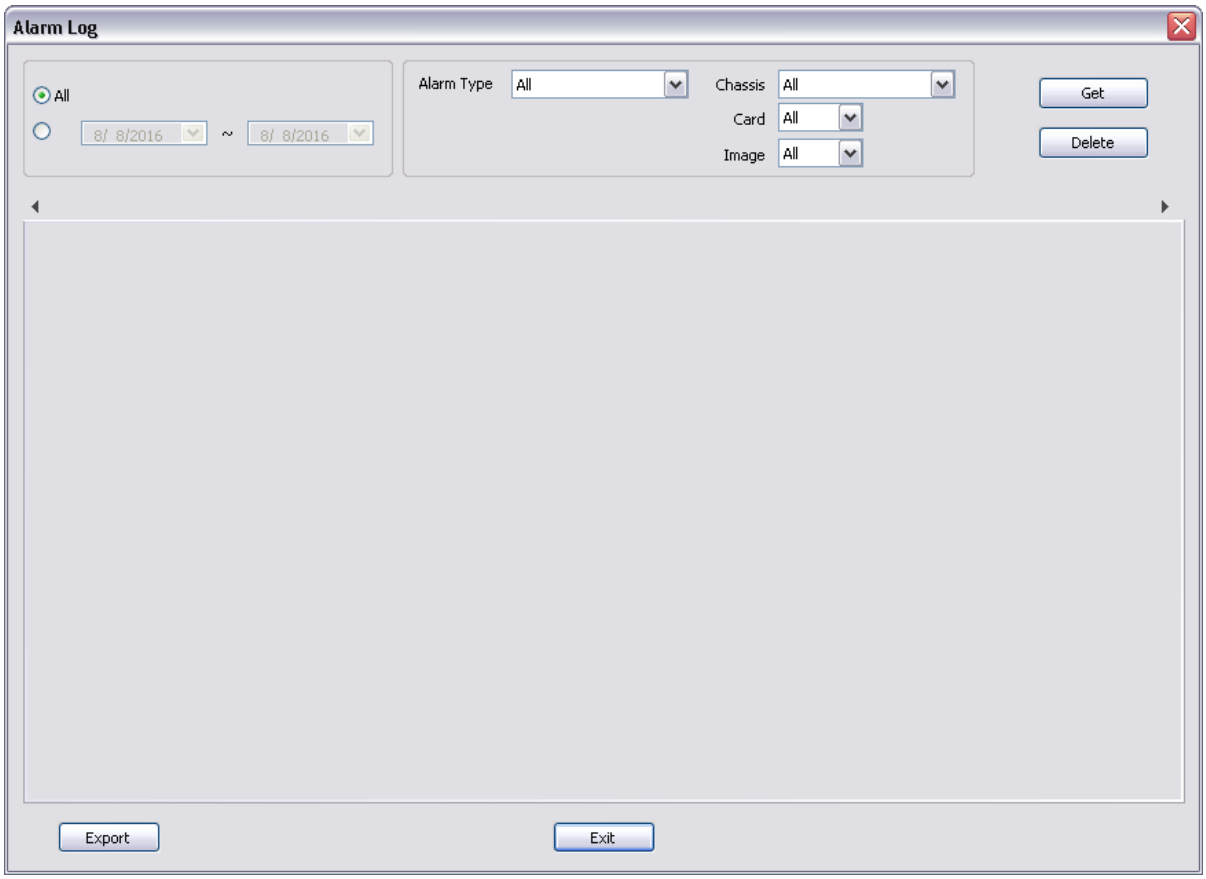


Figure 4-54 Phoenix-Q Software: Alarm Log

The alarm log will be only be stored in the USB thumb drive connected to the USB port of the Control Board. Otherwise, Phoenix-Q must be running and connected to the Rainier Summit for logging the alarm status.

*Step 1. Click **All** (from the initial date) or **manually set the period**.*

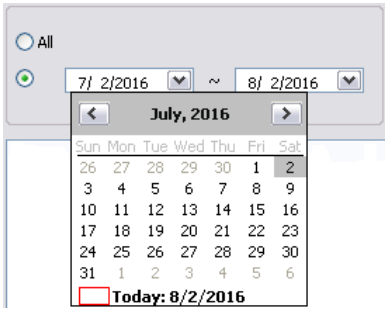


Figure 4-55 Phoenix-Q Software: “Alarm Log”→“Date Setting”

*Step 2. Select the **Alarm Type** from the drop-down menu.*

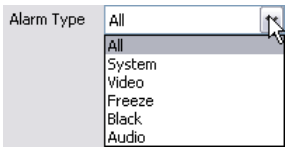


Figure 4-56 Phoenix-Q Software: “Alarm Log”→“Alarm Type”

*Step 3. Select the desired **Chassis** / **Card** / **Image** from the drop-down menu.*

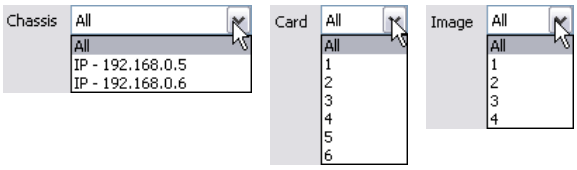


Figure 4-57 Phoenix-Q Software: “Alarm Log”→“Chassis/Card/Image Setting”

*Step 4. Click **Get** to compile and generate a system alarm log.*

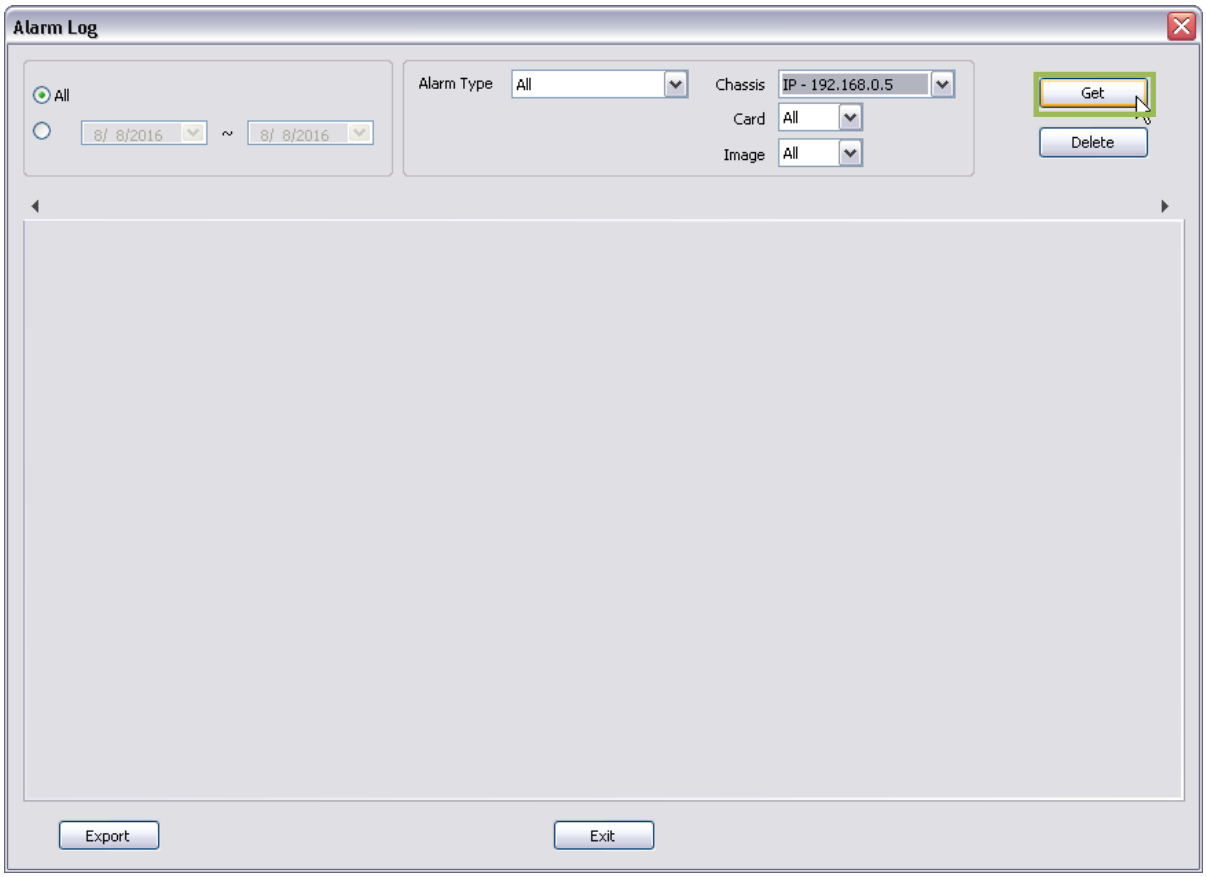


Figure 4-58 Alarm Log: Obtain Log (Get)

The progress of obtaining a log will be shown.

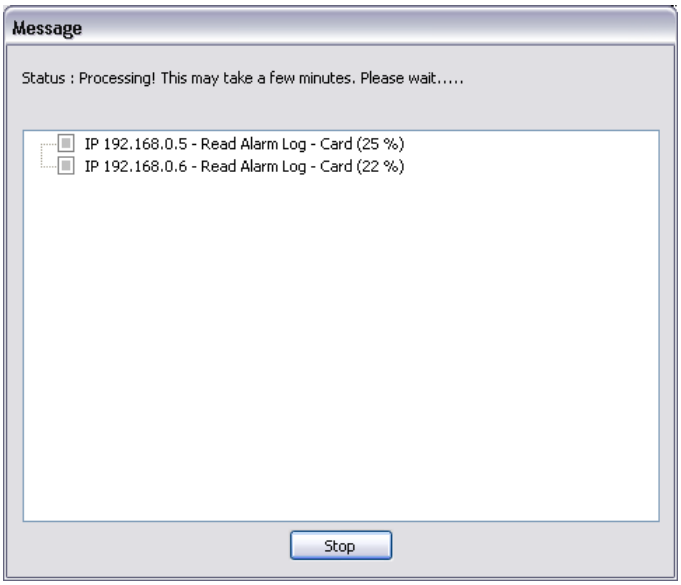


Figure 4-59 Alarm Log: Obtain Log Progress Window

Once the process is complete, the alarm log will be shown via tag naming under a particular Chassis IP.

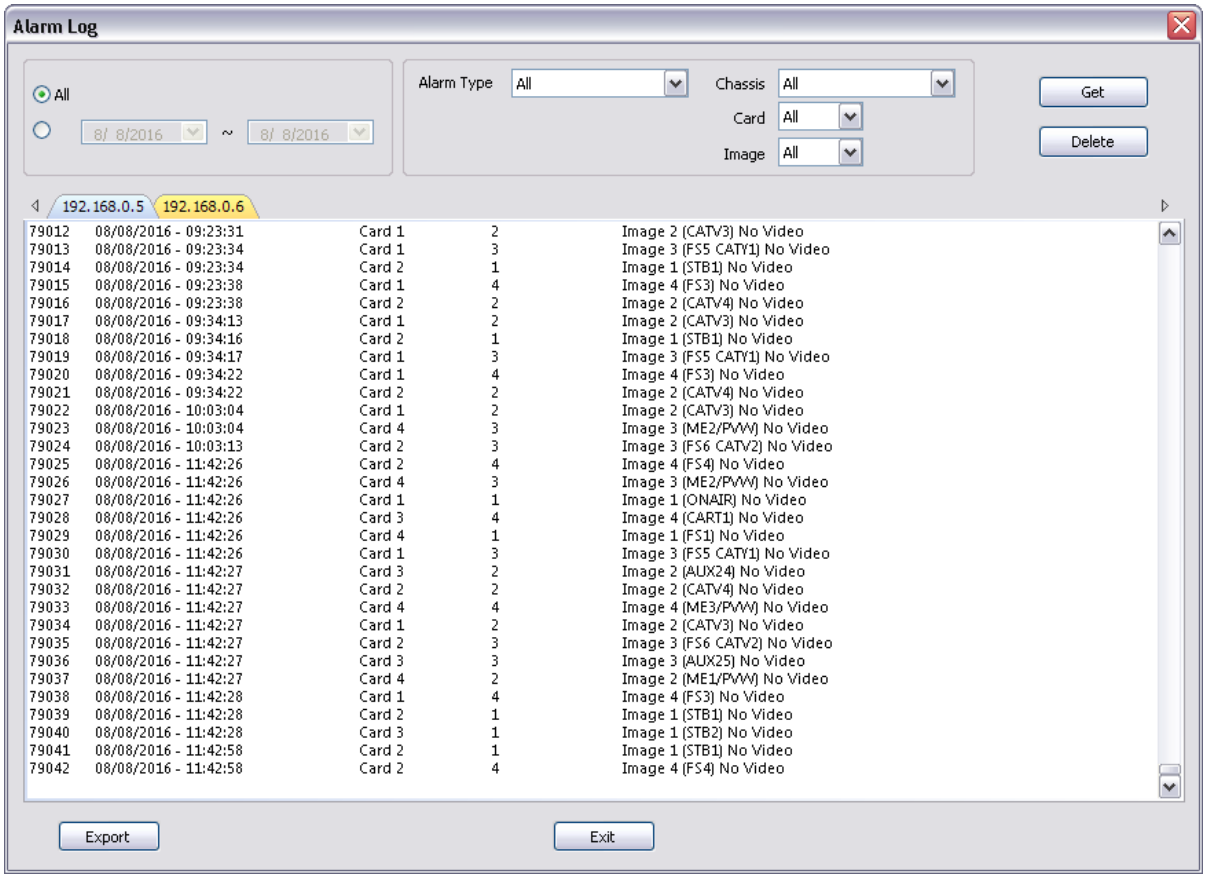


Figure 4-60 Alarm Log: Alarm Log Window via Tag Naming

*Step 5. Click **Export** to store the alarm log data.*

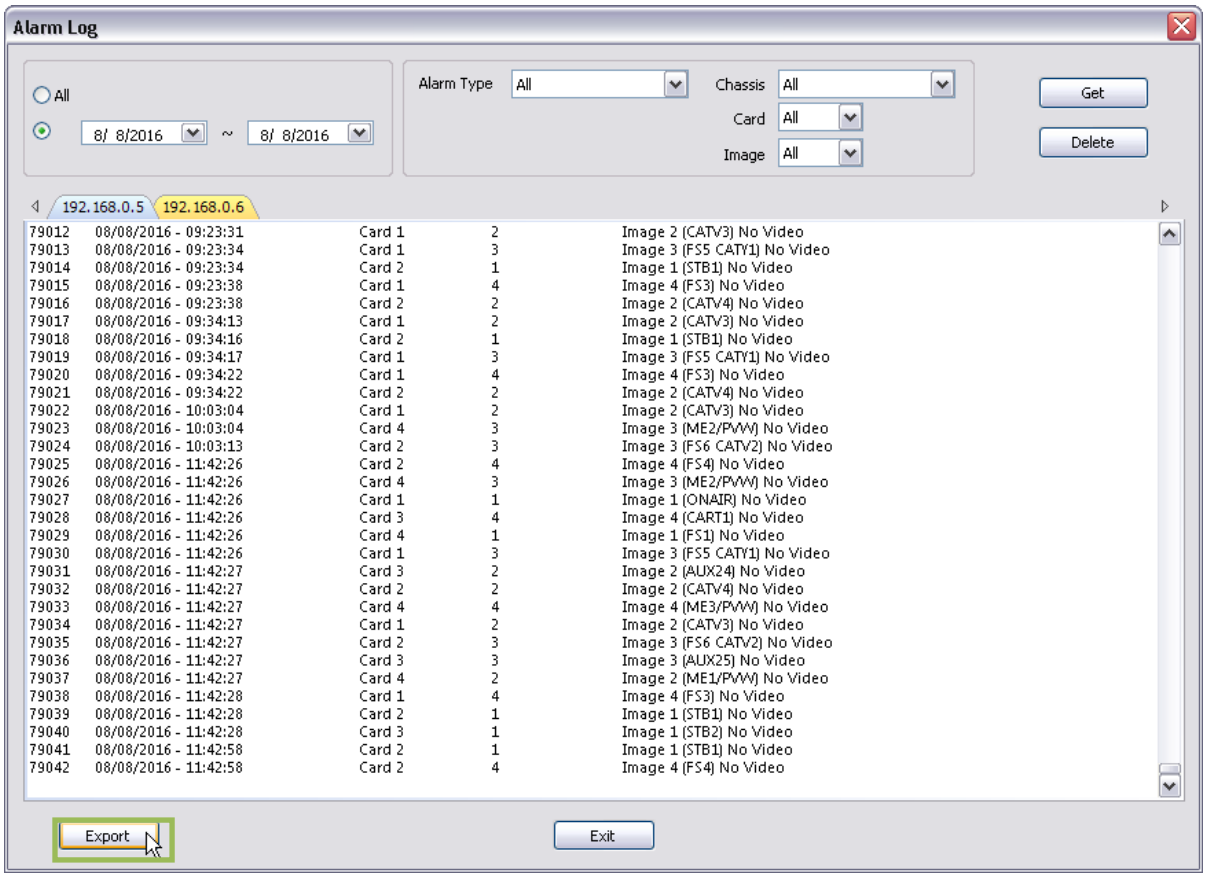


Figure 4-61 Alarm Log: Export Alarm Log

*Step 6. Assign a filename and click **Save**.*

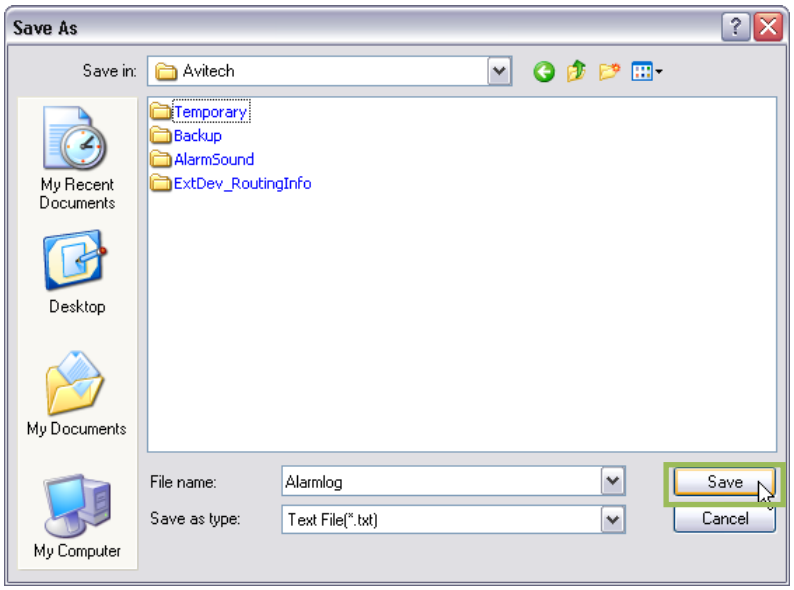


Figure 4-62 Alarm Log: Assign a File name for the Alarm Log

*Step 7. Click **OK** to exit.*

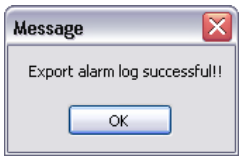


Figure 4-63 Alarm Log Export Successful

4.5.5 About

*Click **About** to see a pop-up box showing the Phoenix-Q software information.*

Figure 4-64 Phoenix-Q Software: Version Information

5. Setting the Chassis/Group/Card Properties

To set the properties of the Rainier Summit, click to select the “card” on the **Group View** window (left panel) and the **Properties** window (right panel) would list the parameters available for setup.

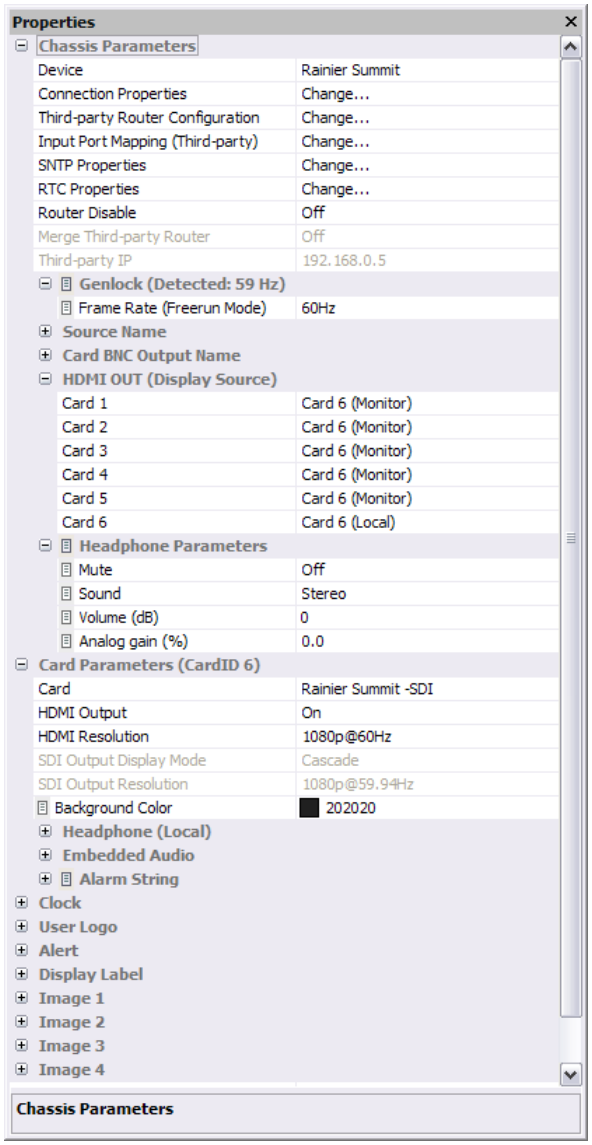


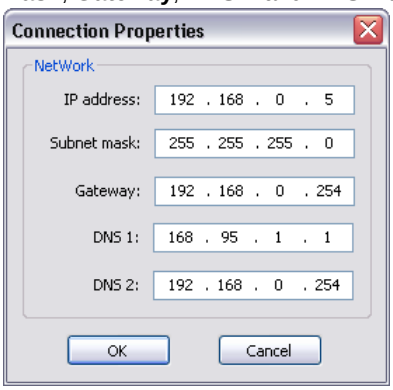
Figure 5-1 Phoenix-Q Software: Chassis and Card Properties Window

5.1 Rainier Summit Properties Setup

Connection Properties

Change . . .

Set the network **Connection Properties** by entering the **IP address**, **Subnet mask**, **Gateway**, **DNS 1** and **DNS 2** to connect.

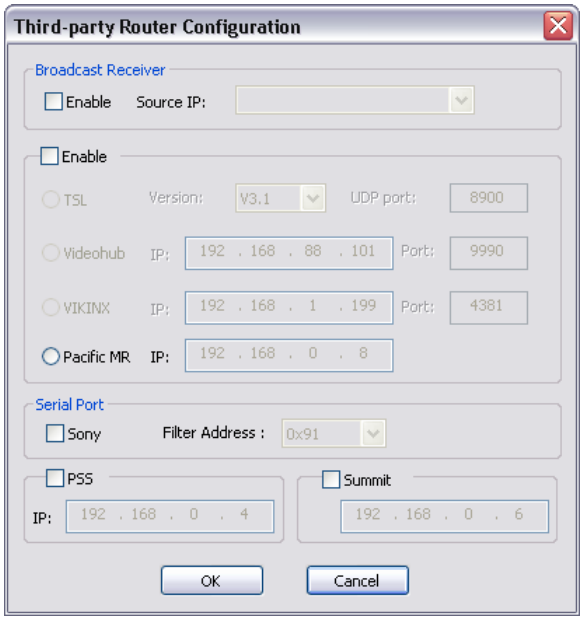


Note: This item is only available when Phoenix-Q is disconnected from the master chassis.

Third-party Router Configuration

Change . . .

- Check/uncheck to "Enable" for the Rainier Summit as the master unit for managing an upstream third-party router and assign the **Source IP** of the master Rainier Summit.



- Check/uncheck to **Enable** a **Third-party Device**. Currently, third-party devices supported are **TSL**, **Videohub**, and **VikinX**. Click the respective radio button to select an upstream third-party device. Make sure to enter the correct **UDP** (User Datagram Protocol) **Port** value that matches the connected router.
- Check/uncheck to **Enable** a **SONY** switcher. Click the respective radio button to select an upstream third-party device. Make sure to enter the correct **Filter Address** value that matches the connected switcher.
- Check/uncheck **PSS** when Rainier Summit working in conjunction with **Pacific PSS**. Assign a specific PSS' **IP**.
- Check/uncheck **Summit** when the Rainier Summit upstream video source is coming from another Rainier Summit's **SDI OUT**. Assign a specific Rainier Summit's **IP**.

When configuring, connect the Rainier Summit, the controlling computer and the **Third-party Device** to an Ethernet hub via **Ethernet** connection. Or connect the

Third-party Router Configuration

(*Master* Rainier Summit) **RS-232** port to the **Third-party Device**.

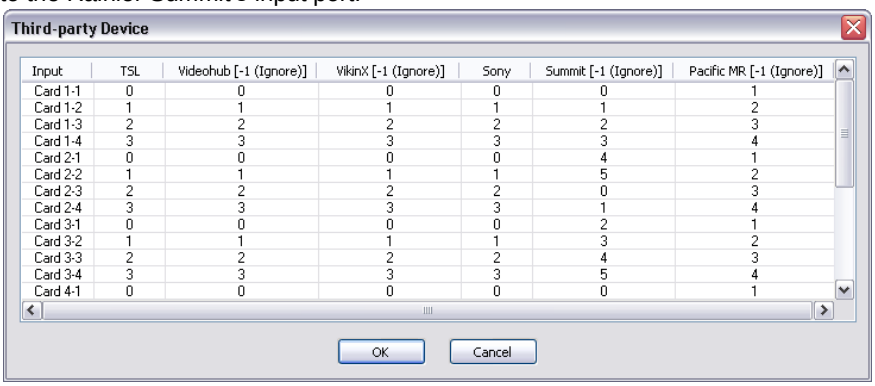
Note: To implement TSL other than selecting "Enable"

- ✓ *"TSL UMD Properties" must be "On" and "Display Address / Option" must be configured.*
- ✓ *"Label→Display Type" for the particular Window must be configured "UMD" or "D-Name/UMD"*

Input Port Mapping (Third-party)

Change . . .

Set the **Input Port Mapping** by entering the corresponding port number connected to the Rainier Summit's input port.



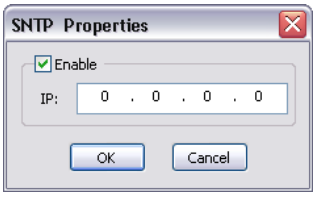
Note: If the entered port number is equal to "-1", firmware will ignore it. If the value matches the third-party routing's setting then the UDM label will be applied and displayed in the label of the Windows.

SNTP Properties

Change . . .

Enable the **SNTP** feature. Upon selecting RTC, it allows the clock to synchronize the time with an external SNTP time server.

Set the **SNTP time server IP address** for synchronizing the clock time with an external SNTP time server.

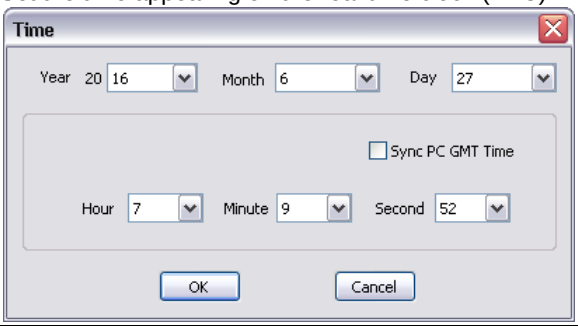


*Note:When **SNTP** is **Enabled**, **RTC** clock will synchronize the module's clock with the SNTP time server.*

RTC Properties

Change . . .

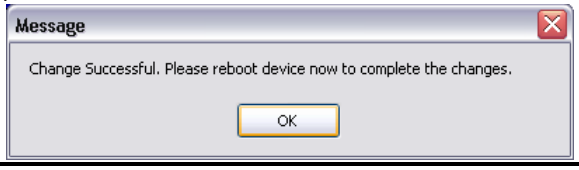
Set the time appearing on the real time clock (RTC).



Router Disable	
On / **Off**	Turn on or off the built-in video router function. *Note: When **Router Disable** is **On**, the "Router" tab will not function.*

Merge Third-party Router	
On / **Off**	Turn on to control the third-party router. *Note: This item is not available when **Router Disable** is **Off**.*

Third-party IP	
IP address	Select the IP address of the chosen third-party router to control. *Note: Available IP address(es) for selection are configured in the item **Third-Party Router Communication**.*

Genlock (Detected: Hz)	
Frame Rate (Freerun Mode) (50 / 59.94 / 60)	Detect and sync the reference input for Genlock function (frame synchronizer). Or manually select the reference input frame rate. After changing the frame rate, confirm that the intended sync source is connected to the multiviewer's Ref input port and then reboot the device. 

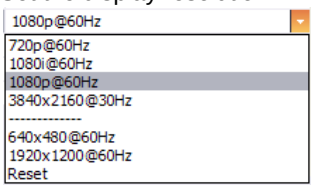
Source Name	
BNC 1 – **BNC 24** (Card 1:1 – BNC 1 ~ Card 6:4 – BNC 24)	Enter the text string to appear as the image window's on-screen label. *Note: This text string will be shown on the label when the label's **Display Type** is set as Source Name* (***S-Name***).

Card BNC Output Name	
Card 1 – **Card 6**	Enter the text string to appear as the image window's on-screen label. *Note: This text string will be shown on the label when the label's **Display Type** is set as Source Name* (***S-Name***).

HDMI OUT (Display Source)	
Card 1/2/3/4/5/6 (Card 1/2/3/4/5/6, Local / Monitor)	Select a display source as the output to each of the card's **HDMI OUT** port. Select a card's **Local** multiview source as the output source or the last card's **Monitor** source as the output source to another card's **HDMI OUT** port. *Note: The last card can only select local multiview source as its output to display.*

Headphone Parameters	
Mute (On / Off)	Turn off the audio output coming from the headphone connected to the audio output port.
Sound (Stereo / Mono Left / Mono Right)	Select whether audio output is one-sided or coming from both sides of the headphone.
Volume (dB) (–64 up to 12)	Set the volume level of audio output from the headphone.
Analog gain (%) (0.0, 14.3, 28.6, 42.9, 57.1, 71.4, 85.7, 100.0)	Adjust the proper volume level (previous item) and proper audio analog amplifier's gain (this item) to achieve the best SNR (signal-to-noise ratio). Signal-to-noise ratio is a measure used in comparing the level of a desired signal to the level of background noise.

*The following table shows the **Properties** setting for **Card Parameters** in the Rainier Summit.*

Card Parameters	
HDMI Output (On / Off)	Turn on or off the HDMI output.
HDMI Resolution	Set the display resolution.  *Note: The frame rate of the HDMI output resolution will depend on the **Genlock** input frame rate. If the **Genlock** input frame rate is 60Hz, then the HDMI output resolution will only list all the supported 60Hz output resolution.*
SDI Output Display Mode (BNC Input / Multiview (Local) / Multiview (Sync HDMI))	Select whether the SDI output is coming from the BNC input, Multiview layout (Local) or from another main board's cascaded multiview layout (Sync HDMI).
SDI Output Resolution (1080p / 1080i)	Set the SDI display resolution. *Note: The frame rate of the SDI output resolution will depend on the **Genlock** input frame rate. If the **Genlock** input frame rate is 60Hz, then the SDI output resolution will only list all the supported 60Hz output resolution*.
Background Color	 Specify the display's background color. Click **Other** for more color choices (**Standard** tab) or customize color (**Custom** tab) by setting **Hue**/**Saturation**/ **Luminance** as well as **Red**/**Green**/**Blue** values.

Headphone (Local)	
Source	Select the source of the audio signal to be played on the headphone. Image 1/2/3/ 4 embedded audio, or pass through embedded audio.
Channel	Select the source of the audio signal to be played on the headphone. (**Group 1/2/3/4 CH1/CH2**, **Group 1/2/3/4 CH3/CH4**)
Audio Delay (On / Off)	Turn on or off the audio delay.
Audio Delay (0 to 8191 Millisecond	Allows adjustment of headphone audio output to maximize the relative timing of the audio and video signals on the monitor wall display. Use the slider to adjust the audio monitoring delay until the headphone audio output and video are well synchronized on the monitor wall display. *Note: By design, the audio signal is approximately 5.56 ms.*

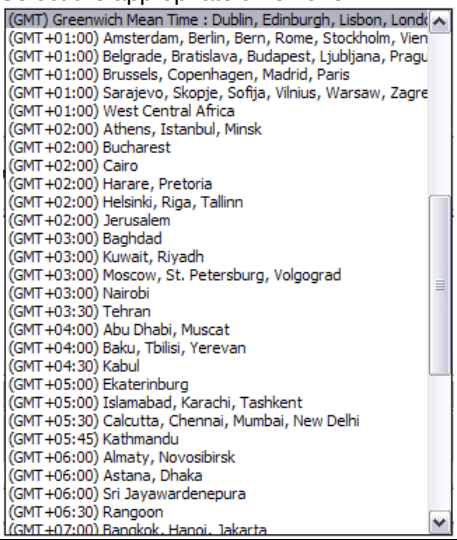
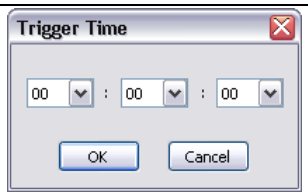
Embedded Audio	
SDI Output	
Mute (On / Off)	Turn on or off the audio output coming from the **SDI OUT** port.
Source	Select the source of embedded audio signal that will be outputted through the **SDI OUT** port (**Image 1/2/3/4** embedded audio, or pass through embedded audio (Local/Monitor)). *Note:* *1. When the **SDI Output Display Mode** is **Multiview (Local)**, the embedded audio will pass through the local audio source, likewise the **SDI Output Display Mode** is **Multiview (Sync HDMI)**, and the embedded audio will pass through from the monitor's audio source.* *2. When the **SDI Output Display Mode** is **BNC Input**, the audio source cannot be selected.*

HDMI Output	
Mute (On / Off)	Turn on or off the audio output coming from the **HDMI OUT** port.
Source	Select the source of the embedded audio signal that will be outputted through the **HDMI OUT** (**Image 1**/**2**/**3**/**4** embedded audio, or pass through embedded audio (Local/Monitor)). *Note:* *1. When the **HDMI Output (Display Source)** is **Card (Local)**, the embedded audio will pass through the local audio source, likewise the **HDMI Output (Display Source)** is **Card (Monitor)**, and the embedded audio will pass through from the monitor's audio source.* *2. The pass through embedded audio **Source** of **Card 6** is fixed at local and cannot be changed.*
Primary Group	Assign the primary embedded audio group to (**Group 1**/**2**/**3**/**4**).
Secondary Group	Assign the secondary embedded audio group to (**Group 1**/**2**/**3**/**4**).
Delay Enable (On / Off)	Turn on or off the audio delay.
Audio Delay (1 to 2700 millisecond)	Allow adjustment of embedded audio output to maximize the relative timing of the audio and video signals on the monitor display. Use the slider to adjust the audio monitoring delay until the audio output and video outputs are well synchronized. *Note: By design, audio signal is approximately 10.6 ms ahead of video.*

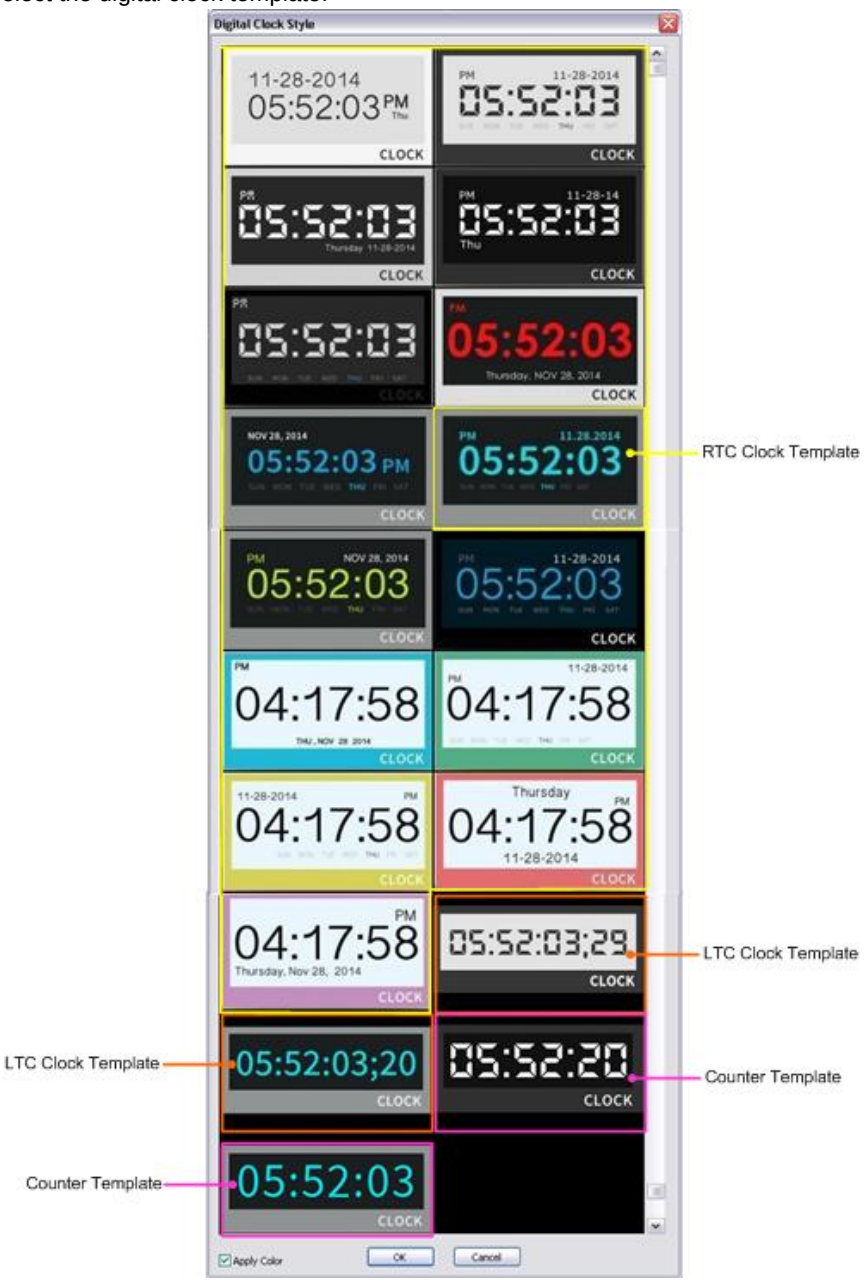
Alarm String	
No Video	Indicate when the input video signal is missing.
Video Freeze	Indicate when the input video signal is detected to be frozen.
Video Black	Indicate when the input video signal is detected as a black screen.
No Audio	Indicate when the embedded audio input signal is absent.
Audio High	Indicate when the embedded audio input volume exceeds the upper threshold.
Audio Low	Indicate when the embedded audio input volume exceeds the lower threshold.
Audio Out of Phase	Indicate when the embedded audio input signal is detected as out of phase.
No C.C	Indicate when the closed caption data is missing.
C.C 708	Indicate when the closed caption service (C.C 708) is missing.
C.C 608	Indicate when the closed caption service (C.C 608) is missing.
Timecode Loss	Indicate when the SDI embedded timecode signal is missing.

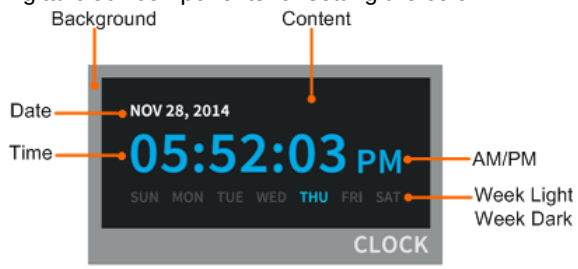
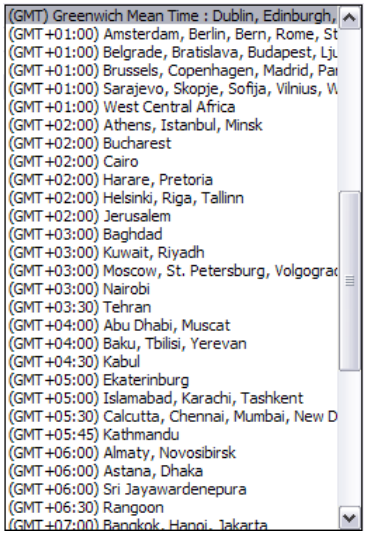
1. Alarm text strings are user-definable and will appear on an Image window's dedicated alarm area.
2. Currently, the Rainier Summit only supports the English text string for customized alert messages.

Clock	
Preset Time	
Index 1 – **Index 8**	Set the preset time "duration" to be used in digital counter clock(s). *Note: This item is not available when both of the two **Digital Clock**(s) in each card are **Off**.*
Preset Time Trigger	
Enable (On / Off)	Activate the "clock preset time" counter feature.
Source (RTC / LTC #1 / LTC #2 / LTC #3 / VITC)	Select the clock source as the reference time for triggering **Index #** of the preset time.

Clock	
Time Zone	Select the appropriate time zone. 
Daylight Saving Time (On / Off)	Enable the clock **Source** to take into account the one-hour difference in real time due to “daylight saving time” (DST).
Trigger 1 – 10	
Enable (On / Off)	Activate **Trigger #** for triggering specific preset time **Index #**.
Clock ID (Digital 1 / Digital 2)	Select a digital clock to display the preset time **Index #** when being triggered.
Trigger Time Change . . .	 Set the time for the preset time **Index #** to be triggered.
Preset Time ID (1/2/3/4/5/6/7/8)	Select the preset time **Index #** to be triggered.
Count (Up / Down)	Select the counting method: **Up** (forward) or **Down** (reverse).

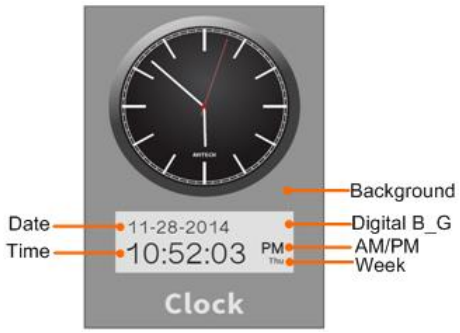
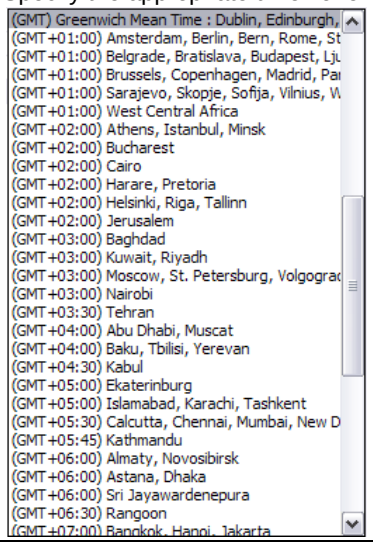
Digital Clock #1 / #2	
Enable (On / Off)	Allow the display of digital clock on screen.

Digital Clock #1 / #2	
Template Change . . .	Select the digital clock template.  Digital Clock Template
Hide (**Fullscreen mode)** (On / Off)	Allow the display of clock during full screen mode.
Size	
X **Y**	Specify the location of the clock appearing on screen by setting the **X** and **Y** coordinates.
Width **Height**	Specify size of clock appearing on screen by setting the **Width** and **Height** values. *Note: The minimum size for RTC clock template is 196×110; 128×53 for the counter clock template.*

Color	
Background **Content** **Time** **AM/PM** **Date** **Week Light** **Week Dark**	Digital clock components for setting the color   Set the digital clock components' color appearing on screen. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
Time	
Source (RTC / LTC #1 / LTC #2 / LTC #3 / VITC)	Activate the timecode feature by selecting the RTC, LTC or Counter template. The RTC timecode feature allows the synchronization of the clock with an external SNTP time server; or with a RTC time. The IP port on the rear of the chassis can control, as well as receive, timecode information simultaneously.
Preset Time ID (1/2/3/4/5/6/7/8)	Select the preset time **Index #**. *Note: This item is only available when selecting Counter_Template in **Template** for **Digital Clock #**.*
Pause (On / Off)	Allow the pausing/resumption of the time count. *Note: This item is only available when selecting Counter_Template in **Template** for **Digital Clock #**.*
Count (Up / Down)	Select the counting method: **Up** (forward) or **Down** (reverse). *Note: This item is only available when selecting Counter_Template in **Template** for **Digital Clock #**.*
Daylight Saving Time (On / Off)	Enable the clock **Source** to take into account the one-hour difference in real time due to daylight saving time (DST). *Note: This item is not available when selecting Counter_Template in **Template** for **Digital Clock #**.*
Time Zone	Specify the desired time zone.  *Note: This item is not available when selecting Counter_Template in **Template** for **Digital Clock #**.*
Format (12-hour / 24-hour)	Select the clock display format. *Note: This item is not available when selecting Counter_Template in **Template** for **Digital Clock #**.*

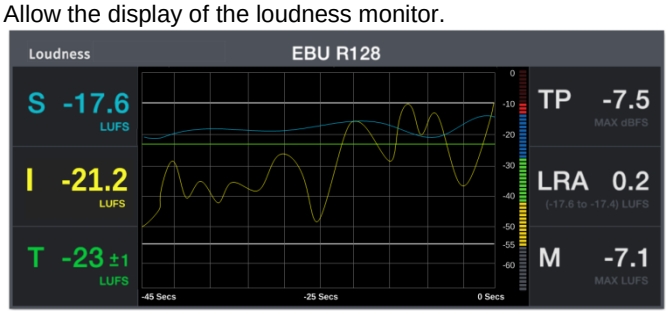
Digital Clock #1 / #2	
Date Format (DD_MM / MM_DD)	Select the date and month display format. *Note: This item is not available when selecting Counter_Template in **Template** for **Digital Clock #**.*
Display Frame (On / Off)	Enable the source's frame (linear timecode frame) value to be shown on screen. *Note: This item is only available when selecting **LTC_Template** in **Digital Clock 1** or **Digital Clock 2**.*
Label: Clock	
Enable (On / Off)	Allow the display of the clock's label.
Position (Bottom / Top)	Change the clock's label position (default label position is "Bottom").
Align (Right / Center / Left)	Change the alignment of the clock's label string (default label aligns to the "Right").
Label Font Color (On / Off)	 Specify the clock's label font color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/ **Luminance** as well as the **Red**/**Green**/**Blue** values.
Text	Change the content of the clock's label text string (default label is "Clock"). *Note: Currently, the Rainier Summit only supports English, Japanese, Korean, Chinese (Traditional), Chinese (Simplified) text string.*

Analog Clock #1 / #2	
Enable (On / Off)	Allow the display of analog clock on screen.
Template Change . . .	 Select the analog clock template.
Hide (Fullscreen mode) (On / Off)	Allow the display of clock during full screen mode.
Size	
X **Y**	Specify the location of the clock appearing on screen by setting the **X** and **Y** coordinates.
Width **Height**	Specify the size of the clock appearing on screen by setting the **Width** and **Height** values. *Note: The minimum size for template_1 is 128×128, template_2 is 128×148, and template_3 is 128×181.*

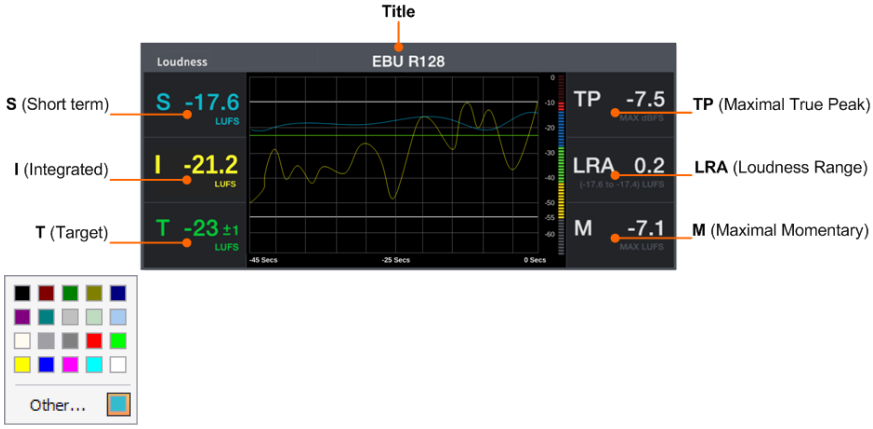
Color	
Background **Time** **Date** **Week** **AM/PM** **Digital B_G**	Analog clock components for setting the color   Set analog clock components' color appearing on screen. Click **Other** for more color choices (**Standard** tab) or customize color (**Custom** tab) by setting **Hue**/**Saturation**/**Luminance** as well as **Red**/**Green**/**Blue** values.
Border	
Width (0 – 6 pixel)	Set border width for the analog clock (default border width is "2").
Border Color	 Change analog clock's border color for each pixel/line (**Line 1**/**2**/**3**/**4**/**5**/**6**).
Time	
Date Format (DD_MM / MM_DD)	Select the date and month display format. *Note: This item is only available when selecting Template_3 in **Template*** for **Analog Clock #**.
Daylight Saving Time (On / Off)	Enable the clock **Source** to take into account the one-hour difference in real time due to daylight saving time (DST).
Time Zone	Specify the appropriate time zone. 
Label: Clock	
Enable (On / Off)	Allow the display of the clock's label.
Position (Bottom / Top)	Change the clock's label position (default label position is at the "Bottom").

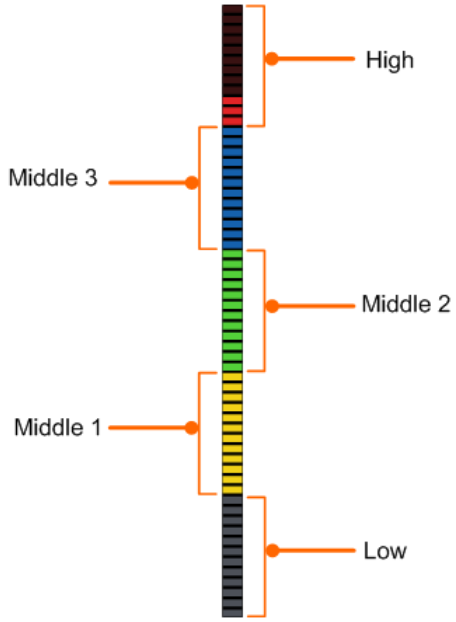
Analog Clock #1 / #2	
Text	Change the content of the clock's label text string (default label is "Clock"). *Note: Currently, the Rainier Summit only supports English, Japanese, Korean, Chinese (Traditional), and Chinese (Simplified) text string.*
Label Font Color	 Specify the clock's label font color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/ **Luminance** as well as the **Red**/**Green**/**Blue** values.

User Logo	
Enable (On / Off)	Allow the display of user logo.
Display (Foreground / Background)	Set the user logo to be a part of the image in the window (display in foreground) or to appear as a background on the image window.
Hide (Full screen mode) (On / Off)	Allow the display of user logo during full screen mode (default is "On"). *Note: Only available when **Foreground** was selected in the previous item **Display**.*
Picture Upload	Click the cell's rightmost edge "open" button [...] to select a bitmap file to upload as user logo (i.e. 1920×1200 image would take approximately 180 seconds or more depending on the system's resource allocation). *Note: To fill the entire screen, size (pixel) of the user logo picture must be the same as the multiviewer's output resolution. In case file size is larger than the Rainier Summit's output resolution (see **Card Parameters→Resolution**), the system will detect and prevent it from displaying as the user logo picture.*
Position	
X **Y**	Specify the location of the user logo appearing on screen by setting the **X** and **Y** coordinates.
Width **Height**	Specify the size of the user logo appearing on screen by setting the **Width** and **Height** values.

Loudness	❖ *This item only applies for the main board bundled with a loudness card.*
Enable (On / Off)	Allow the display of the loudness monitor.  Loudness Monitor
Hide (Full screen mode) (On / Off)	Allow the display of the loudness monitor during full screen mode (default is "On").
Profile (EBU R128, ATSC A/85, User defined)	Set the loudness compliance measurement. The **EBU R128** or **ATSC A/85** Mode is displayed only when the measurements are compliant with those specifications. **User defined** mode allows you to set a specified loudness range measurement.

Loudness	❖ *This item only applies for the main board bundled with a loudness card.*
Time Range	Set the horizontal time scale of the loudness monitor to the desired duration. 1 second 5 seconds 10 seconds 15 seconds 20 seconds 25 seconds 30 seconds 35 seconds 40 seconds 45 seconds 50 seconds 55 seconds 1 minute 5 minutes 10 minutes 20 minutes 30 minutes
Size	
X **Y**	Specify the location of the loudness monitor appearing on screen by setting the **X** and **Y** coordinates.
Width **Height**	Specify the size of the loudness monitor appearing on screen by setting the **Width** and **Height** values.
User Defined	
Loudness Range (On / Off)	Allow the display of the loudness range. Loudness Range (LRA) is a measure of the variation of loudness on a macroscopic time-scale. Loudness Range or LRA describes the overall program material range: from the softest to the loudest portion. The range is quantified in LU, and to avoid extreme events from affecting the overall result, the top 5% and the lowest 10% of the total loudness range is being excluded from the LRA measurement.
Target (–60 to –10)	Set the user-defined **Target** level. This parameter will change the target value in the loudness monitor. Target levels are specified in various broadcast standards, but only varies slightly. For instance, the ATSC A/85 standard recommends a target of –24 and uses the LKFS term, whereas the EBU R128 standard sets the target level at –23 and uses the LUFS term.
Relative Gate (–8 or –10)	Set the user defines Relative Gate. A gating scheme that pauses measurement when the audio level drops below a threshold of –10 or –8 LU relative to an un-gated measurement of the same program material has been developed.
Short Term (1 to 15)	Set the user-defined Short Term value. Changing this parameter affects the short term calculation. Short-term loudness (S) corresponds to loudness using a three second sliding window with no gating. It is basically equivalent to momentary loudness but with a long measurement period.
Measurement	
Mode (HDMI OUT / SDI OUT)	Select the audio channels for monitoring to the HDMI OUT or SDI OUT port.
Source	*This item is not applicable when **HDMI OUT** is selected in the previous item **Mode**.*
Channel 1 – **Channel 4** (Group 1 CH1/CH2 Group 1 CH3/CH4 Group 2 CH1/CH2 Group 2 CH3/CH4 Group 3 CH1/CH2 Group 3 CH3/CH4 Group 4 CH1/CH2 Group 4 CH3/CH4)	Select the audio meter's group (embedded audio) of Channel 1 ~ Channel 4. SDI embedded audio is divided into four groups (CH1 to CH4), any of the 4 Groups can be assigned to Channel 1/2/3/4.
Monitor	
Left (Group # CH#/CH#)	Select the **Left** channels of the 5.1 surround sound audio system that you wish to assign to the HDMI OUT. *Note: The group and channel shown in the drop-down menu list will depend on the meter's group selected in the previous item.*

Loudness	❖ *This item only applies for the main board bundled with a loudness card.*
Right (Group # CH#/CH#)	Select the **Right** channels of the 5.1 surround sound audio system that you wish to assign to the HDMI OUT. *Note: The group and channel shown in the drop-down menu list will depend on the meter's group selected in the previous item.*
Center (Group # CH#/CH#)	Select the **Center** channels of the 5.1 surround sound audio system that you wish to assign to the HDMI OUT. *Note: The group and channel shown in the drop-down menu list will depend on the meter's group selected in the previous item.*
Left Surround (Group # CH#/CH#)	Select the **Left Surround** channels of the 5.1 surround sound audio system that you wish to assign to the HDMI OUT. *Note: The group and channel shown in the drop-down menu list will depend on the meter's group selected in the previous item.*
Right Surround (Group # CH#/CH#)	Select the **Right Surround** channels of the 5.1 surround sound audio system that you wish to assign to the HDMI OUT. *Note: The group and channel shown in the drop-down menu list will depend on the meter's group selected in the previous item.*
Label	
Text	Input the text string appearing on the label of the loudness monitor (up to 32 characters).
Text Color	 Specify the loudness monitor's label font color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
Color	
Title **S** (Short term) **I** (Integrated) **T** (Target) **TP** (Maximal True Peak) **LRA** (Loudness Range) **M** (Maximal Momentary)	Color setting for loudness monitor's components.  Specify the loudness monitor component's color appearance on screen. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.

Meter	
High Light / High Dark **Middle3 Light / Middle3 Dark** **Middle2 Light / Middle2 Dark** **Middle1 Light / Middle1 Dark** **Low Light / Low Dark**	Color setting for loudness meter components.   Specify the light and dark color's degree in the loudness meter appearing on screen. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
Alarm	
Too Loud	
Enable (On / Off)	Allow the display of the "Volume is too loud" alarm.
Align (–70 to 0)	Specify the meter's measurement alignment when the audio is too loud. This parameter sets the maximum allowable value for the integrated (I) measurement without triggering an alarm. For instance, the maximum tolerance is set to –20. If the integrated measurement is –19, then a "Volume is too loud" alarm will be triggered. If the integrated (I) measurement is –20, then no alarm will be triggered.
Too Quiet	
Enable (On / Off)	Allow the display of the "Volume is too low" alarm.
Align (–70 to 0)	Specify the meter's measurement alignment when the audio is too low (inaudible). This parameter sets the minimum allowable value for the integrated (I) measurement without triggering an alarm. For instance, the maximum tolerance set to –25. If the integrated measurement is –25, then a "Volume is too quiet" alarm will be triggered. If the integrated measurement is –26, then no alarm is triggered.

Alert	
Alert – Power	
Enable (On / Off)	Turn on the power alert feature that is triggered when either one of the power source in redundant power supply is cut-off.
Display Preview Test (On / Off)	Allows the confirmation of the power alert position appearing on screen.

Alert	
Time Lag (Always on, 1, 5, 10, 30 minutes, 1, 2, 6, 12, 24 hours)	Set the time interval between cut-off of one of the redundant power source and when power alarm is shown on screen.
Display Time (Seconds) (1 to 120)	Set the length of time that power alarm remains on screen.
Font Color	 Specify the power alert's font color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/ **Luminance** as well as the **Red**/**Green**/**Blue** values.
Border Color	 Change the power alert's border color.
Position (X / Y)	Specify the location of the power alert appearing on screen by setting the **X** and **Y** coordinates.
Alert – Fan	
Enable (On / Off)	Turn on the fan alarm feature that is triggered when either one of the power source from the redundant power supply is cut-off.
Display Preview Test (On / Off)	Allows you to confirm the fan alert's position appearing on screen.
Time Lag (Always on, 1, 5, 10, 30 minutes, 1, 2, 6, 12, 24 hours)	Set the time interval between the occurrence of cut-off of one of the fan module and when power alarm is shown on screen.
Display Time (Seconds) (1 to 120)	Set the length of time that fan alert remains on screen.
Font Color	 Specify the fan alert's font color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/ **Luminance** as well as the **Red**/**Green**/**Blue** values.
Border Color	 Change the fan alert's border color.
Position (X / Y)	Specify the location of the fan alert appearing on screen by setting the **X** and **Y** coordinates.
Alert – Temperature	
Enable (On / Off)	Turn on the temperature alert feature that is triggered when a card's operating temperature is warmer than normal.
Display Preview Test (On / Off)	Allows you to confirm the temperature alert display position on screen.
Time Lag (Always on, 1, 5, 10, 30 minutes, 1, 2, 6, 12, 24 hours)	Set the time interval when a card's operating temperature is not normal and when the temperature alert is shown on screen.

Alert	
Display Time (Seconds) (1 to 120)	Set the length of time that a card's operating temperature alert remains on screen.
Font Color	 Specify the temperature alert's font color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/ **Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
Border Color	 Change the temperature alert's border color.
Position (X / Y)	Specify the location of the temperature alert appearing on screen by setting the **X** and **Y** coordinates.

Display Label	
Enable (On / Off)	Allow you to show the display label on screen.
Priority (Top Most / Background)	Set the display label to the top most level over the window (display top most in foreground) or to appear as a background on the image window.
Hide (**Fullscreen mode)** (On / Off)	Allows showing of the display label during full screen mode (default is "Off").
Position	
X **Y**	Specify the location of the display label appearing on screen by setting the **X** and **Y** coordinates.
Label: Display 001	
Size (6 – 72 pixel)	Set the size (height) of the display label (default label is "72" pixel).
Font Color	 Specify the display label's font color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/ **Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
B-G Color	 Specify the display label's background color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/ **Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
Text	Change the content of the display label's text string. *Note: Currently, the Rainier Summit only supports English, Japanese, Korean, Chinese (Traditional), Chinese (Simplified) text string.*
Border	
Border Width (0 – 6 pixel)	Set the border width for the display label (default border width is "2").

Border	
Border Color	 Change the display label's border color.

Table 5-1 Phoenix-Q Software: Setting the Chassis and Card Properties for Rainier Summit

*The following table shows the **Properties** setting for each image window in the Rainier Summit.*

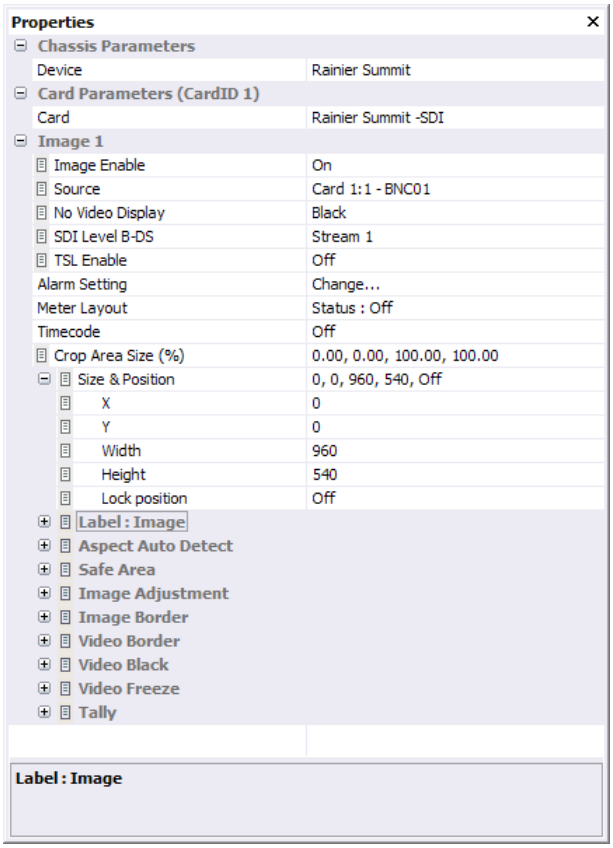
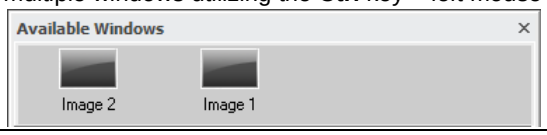
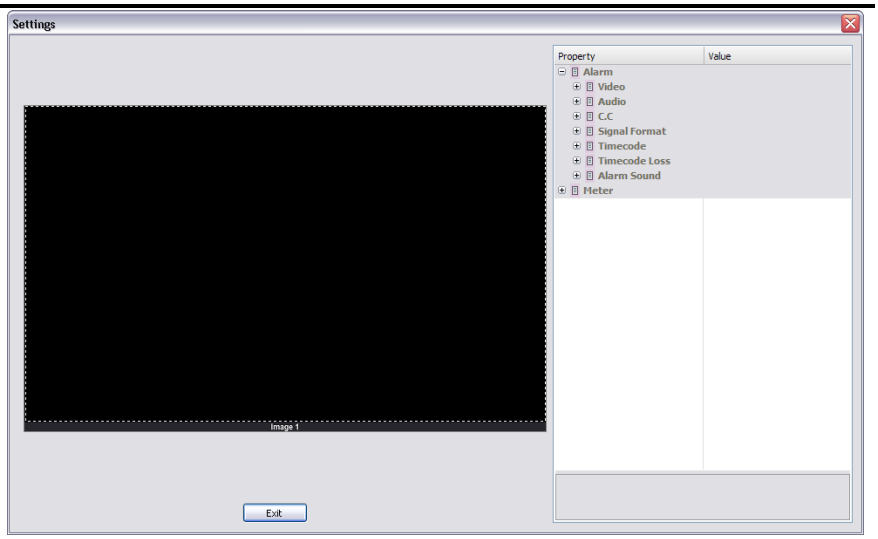
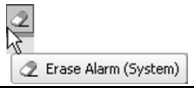


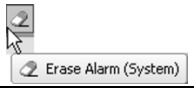
Figure 5-2 Phoenix-Q Software: Image Properties Window

Image	
Image Enable (On / Off)	Show or hide the selected window on the monitor. Upon selecting **Off**, the hidden window will appear on the **Available Windows** panel (see below). To display the window again, simply drag the icon into the main display area (can also drag multiple windows utilizing the **Ctrl** key + left mouse button). 
Source (Card 1:1 – BNC01 to Card 6:4 – BNC24)	Select the input signal source for each window (i.e. if **Card 2:1** – **BNC05** was selected for a window, the window would be displaying the same input signal from Card 2, BNC port 1).
No Video Display (Black / Last Frame)	Select the display format when detecting the absence of video signal (default display shows a "Black" image on the window).
SDI Level B-DS (Stream 1 / Stream 2)	Select the 3G-SDI level B dual stream channel to monitor (default is "Stream 1") *Note: Dual Stream 3G-SDI is a specific variant of the 3G-SDI signal that combines two completely separate 4:2:2 image streams into a single SDI signal.*
TSL Enable (On / Off)	Enable/Disable TSL for the configuration of the IP port with a TSL connection.

Alarm Setting	
Change . . .	 Open up the alarm "Settings" window for configuring alarm detection and display for each image window.

Video	
Freeze Display (On / Off)	Activate the "video freeze" alarm feature. Freeze detection is done by comparing successive frames based on the **Video Freeze**'s parameters (Sensitivity Level, Period, and Threshold) under the "Image" properties. Once the alarm is triggered, it will only be released if the freeze condition is no longer detected. *Note: Analog input signal is not supported.*
Black Display (On / Off)	Activate the "video black" alarm feature. Black detection is done by comparing successive frames based on the **Video Black**'s parameters (Video Detect Area, Level, Threshold, and Detect Number (Frame)) under the **Image** properties. Once the alarm is triggered, it will only be released if the black display condition is no longer detected. *Note: Analog input signal is not supported.*
Display Enable (On / Off)	Enable/Disable the video alarm display (for video signal loss). The alarm will be released upon detecting the presence of video signal.

Video	
No Video Lock (On / Off)	Turning on video alarm lock allows the alarm during occurrence of “NO VIDEO / VIDEO BLACK / VIDEO FREEZE” to remain on screen even after video image signal has resumed streaming from the input source. This feature is most useful when the operator is away and wants to keep track of any occurrence of “video loss, video black or video freeze. *Note: To remove the “NO VIDEO” text on screen, click the **Erase Alarm** button.* 
Horizontal Position (Left / Center / Right)	Adjust the position of the video alarm horizontally (default alarm horizontal position is “Center”).
Vertical Position (Top / Center / Bottom)	Adjust the position of the video alarm vertically (default alarm vertical position is “Top”).
Font Color	 Specify the video alarm’s font color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/ **Luminance** as well as the **Red**/**Green**/**Blue** values.
B-G Color	 Specify the video alarm’s background color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/ **Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
Blending Level (0 up to 7)	Use the slider to set the transparency level (default is “0” (no transparency)) of the alarm appearing on screen.
Video Border	
Red Color (On / Off)	Enable the image window’s border to turn **Red** as warning.
Flash (On / Off)	Enable the image window’s border to **Flash** as warning.

Audio	
Display Enable (On / Off)	Enable/Disable audio alarm display (for audio signal loss/high/low/out of phase).
No Audio Lock (On / Off)	Turning on audio alarm lock allows the alarm during occurrence of “NO AUDIO / OUT OF PHASE” to remain on screen even after audio signal has resumed streaming from the input source. This feature is most useful when the operator is away and wants to keep track of any occurrence of audio loss or out of phase. *Note: To remove the “NO AUDIO” text on screen click the **Erase Alarm** button.* 
No Audio Alarm (Single Meter) (On / Off)	Activate the alarm that is triggered when no audio is detected.
Horizontal Position (Left / Center / Right)	Adjust the position of the audio alarm horizontally (default alarm horizontal position is “Center”).
Vertical Position (Top / Center / Bottom)	Adjust the position of the audio alarm vertically (default alarm vertical position is “Center”).

Audio	
Font Color	 Specify the audio alarm's font color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/ **Luminance** as well as the **Red**/**Green**/**Blue** values.
B-G Color	 Specify the audio alarm's background color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/ **Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
Blending Level (0 up to 7)	Use the slider to set the transparency level (default is "0" (no transparency)) of the alarm appearing on screen.
Video Border	
Red Color (On / Off)	Enable the image window's border to turn **Red** as warning.
Flash (On / Off)	Enable the image window's border to **Flash** as warning.
Response Time	
Signal In (0.25 to 49.75)	Set the **Signal In** alarm response time for audio alarm to react upon regaining the audio signal (audio signal status from "abnormal" to "normal").
Signal Out (0.25 to 49.75)	Set the **Signal Out** alarm response time for audio alarm to react upon losing the audio signal (audio signal status from "normal" to "abnormal").

C.C	
C.C Detect (On / Off)	Allow detection of closed captioning. "No C.C" would be displayed if detection is enabled but input signal is without closed captioning.
Mode (Auto Sense / C.C 608 / C.C 708)	Allow to show the type of closed captioning. Upon selecting **Auto Sense**, the Rainier Summit will automatically detect ancillary packets (DID/SDID) located in the vertical blanking region of the input source. Alternatively, select **C.C 608** or **C.C 708** for closed captioning services defined in their respective standards.
Horizontal Position (Left / Center / Right)	Adjust the position of the C.C alarm horizontally (default alarm horizontal position is "Right").
Vertical Position (Top / Center / Bottom)	Adjust the position of the C.C alarm vertically (default alarm vertical position is "Bottom").
Font Color	 Specify the C.C alarm's font color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/ **Luminance** as well as the **Red**/**Green**/**Blue** values.
B-G Color	 Specify the C.C alarm's background color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/ **Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
Blending Level (0 up to 7)	Use the slider to set the transparency (default is "0" (no transparency)) of the label appearing on screen.

Signal Format	
Enable (On / Off)	Enable/Disable the display of input video signal format for each image window.
Horizontal Position (Left / Center / Right)	Adjust the position of the signal format horizontally (default alarm horizontal position is “Left”).
Vertical Position (Top / Center / Bottom)	Adjust the position of the signal format vertically (default alarm vertical position is “Top”).
Font Size (6 to 72)	Set the size (height) of the signal format (default font size is “20” pixel).
Font Color	 Specify the signal format’s font color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/ **Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
B-G Color	 Specify the signal format’s background color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/ **Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
Blending Level (0 up to 7)	Use the slider to set the transparency level (default is “0” (no transparency)) of the signal format appearing on screen.
Display AFD (On / Off)	**On**: Display the AFD (**Active Format Description**). Standard AFD (active format description) codes provide information about where in the coded picture the active video is and also the "protected area" (area that needs to be shown). Outside of the protected area, edges at the sides or the top/bottom can be removed without missing anything significant. The Rainier Summit can then use this information, together with knowledge of the display shape and user preferences, to choose a presentation mode. ❖ *Active area signaling allows the display device to process the incoming signal to provide the highest resolution and most accurate picture possible. While aspect ratio signaling allows the display device to produce the best image possible*. **Off**: Disable the AFD display feature. *Note: This item is only available when selecting **On** for **Signal Format**.*

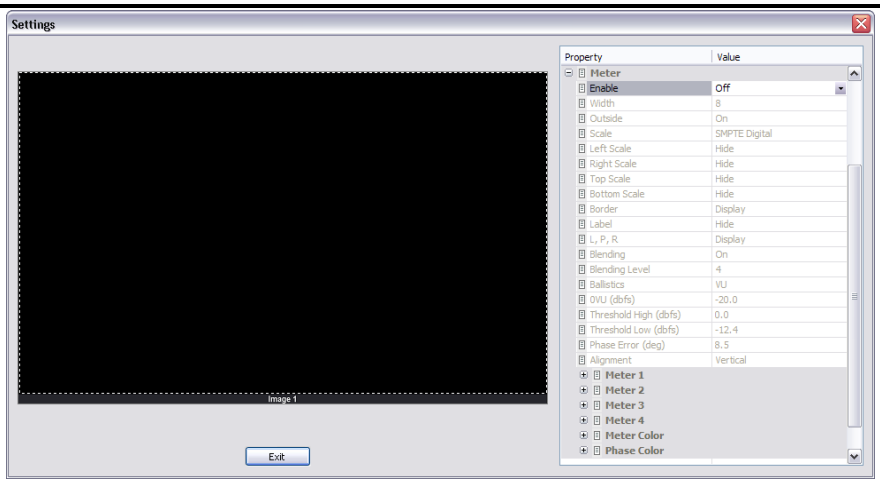
Timecode	
Enable (On / Off)	Enable/Disable timecode display (form of media metadata).
Horizontal Position (Left / Center / Right)	Adjust the position of the timecode horizontally (default alarm horizontal position is “Center”).
Vertical Position (Top / Center / Bottom)	Adjust the position of the timecode vertically (default alarm vertical position is “Bottom”).
Background	Display the timecode’s background.
Font Size (6 to 72)	Set the size (height) of the timecode (default font size is “20” pixels).
Font Color	 Specify the timecode’s font color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/ **Luminance** as well as the **Red**/**Green**/**Blue** values.

Timecode	
B-G Color	 Specify the timecode's background color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/ **Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
Blending Level (0 up to 7)	Use the slider to set the transparency (default is "3") of the timecode appearing on screen.
Mode (LTC / VITC #1 / VITC #2)	Select the input source of the timecode to be displayed on a window when the input source is HD-SDI. *Note: This item is not available upon selecting **On** in **DVITC**.*
DVITC (On / Off)	Enable/Disable timecode display for DVITC.
Line Number (10 ~ 20)	Specify the DVITC inserted in an active line for extraction of a SD-SDI input source. ❖ For 525-line/60-field systems, the DVITC shall be inserted on lines 12 and 275. Insertion on lines 14 and 277 is optional. ❖ For 625-line/50-field systems, the DVITC shall be inserted on lines 19 and 332. Insertion on lines 21 and 334 is optional. Default: Line 19 for SD-625.

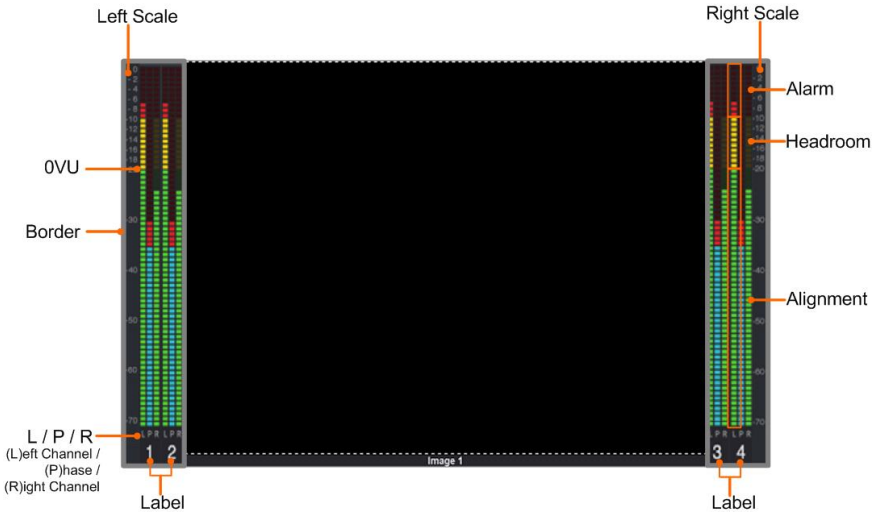
Timecode Loss	
Enable (On / Off)	Enable/Disable display of timecode loss alarm for each image window.
Horizontal Position (Left / Center / Right)	Adjust the position of the timecode loss alarm horizontally (default alarm horizontal position is "Center").
Vertical Position (Top / Center / Bottom)	Adjust the position of the timecode loss alarm vertically (default alarm vertical position is "Bottom").
Font Color	 Specify the timecode loss' font color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/ **Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
B-G Color	 Specify the timecode loss's background color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/ **Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.

Alarm Sound	
Video	
Enable (On / Off)	Activate playback of alarm sound when no video/video black/freeze is detected in a window. *Note: To enable alarm sound playback, click the **Start Alarm Sound (System)** icon (will become grayed-out).* 

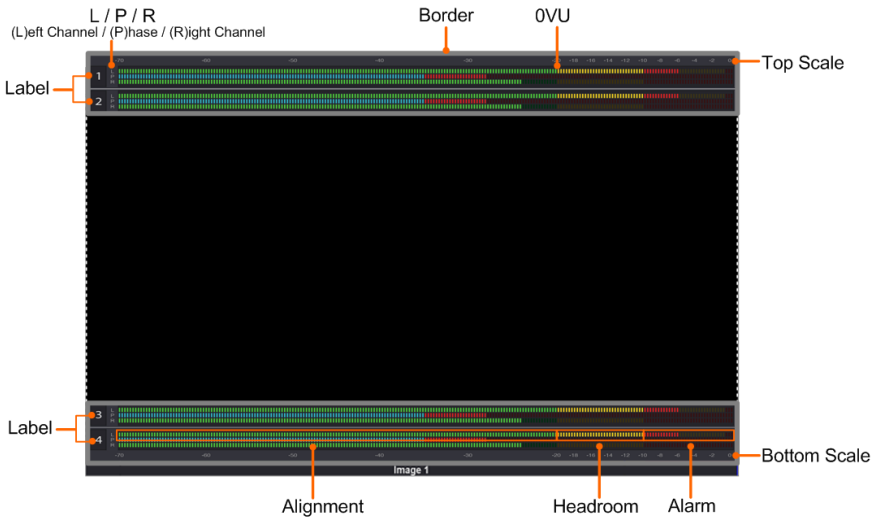
Alarm Sound	
Set Playback Duration (Second)	Set “video alarm” sound playback duration (seconds) for a window. *Note: To shut off alarm sound playback before the specified time set has elapsed, click the **Start Alarm Sound (System)** icon (will become grayed-out).* 
File	Click the cell’s rightmost edge “change” button to select the audio file as the video alarm sound for the window. *Note: Only the “WAV” audio file format is supported.*
Audio	
Enable (On / Off)	Activate playback of alarm sound when no audio is detected in a window. *Note: To enable alarm sound playback, click the **Start Alarm Sound (System)** icon (will become grayed-out).* 
Set Playback Duration (Second)	Set “audio alarm” sound playback duration (seconds) for a specific window. *Note: To shut off alarm sound playback before the specified time duration has elapsed, click the **Start Alarm Sound (System)** icon (will become grayed-out).* 
File	Click the cell’s rightmost edge “change” button to select the audio file as the audio alarm sound for the window. *Note: Only the “WAV” audio file format is supported.*

Meter Layout	
Status: On / Off Change . . .	 Specify the audio meter layout for the particular window to monitor on screen.

Meter Layout



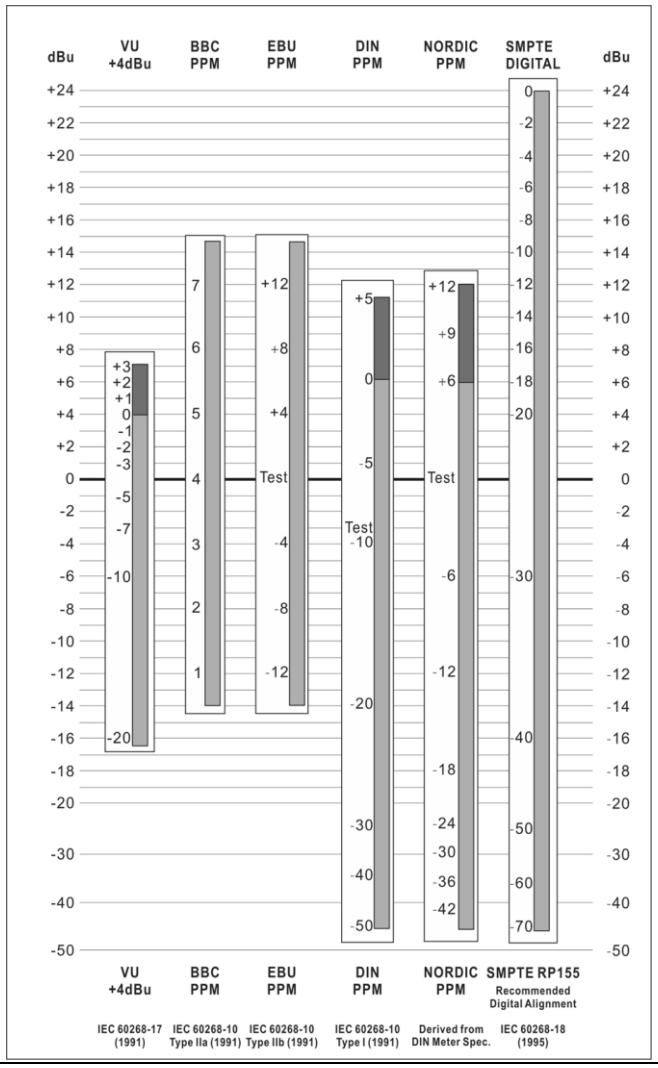
Meter layout vertically positioned.

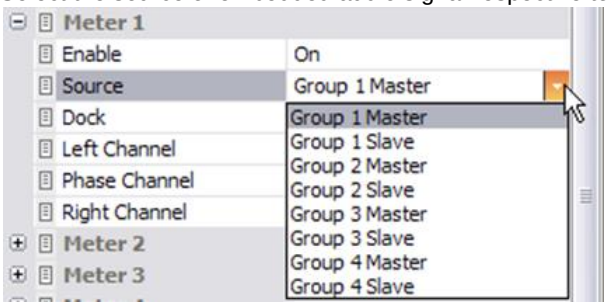


Meter layout horizontally positioned.

Enable (On / Off)	Enable/Disable audio meter display for each image window.
Width (4 to 16)	Specify the audio meter's width.(range from "4" to "16" pixels per channel)
Outside (On / Off)	Allow the location of the audio meter to be outside the video area. *Note: This is not allowed when the image width is less than 128 pixels.*

Meter Layout

Scale	Allow the selection of the type of meter scale. Audio meter scale: **SMPTE Digital** / **VU** / **BBC PPM** / **EBU PPM** / **DIN PPM** / **Nordic PPM** 
Left Scale (Display / Hide)	Display/Hide the scale of the meter when located at the left of a window. *Note: This is not allowed when the **Position** is **Horizontal**.*
Right Scale (Display / Hide)	Display/Hide the scale of the meter when located at the right of a window. *Note: This is not allowed when the **Position** is **Horizontal**.*
Top Scale (Display / Hide)	Display/Hide the scale of the meter when located at the top of a window. *Note: This is not allowed when the **Position** is **Vertical**.*
Bottom Scale (Display / Hide)	Display/Hide the scale of the meter when located at the bottom of a window. *Note: This is not allowed when the **Position** is **Vertical**.*
Border (Display / Hide)	Display/Hide the border of the meter.
Label (Display / Hide)	Display/Hide the label of the meter.
L / P / R (Display / Hide)	Display/Hide the Left channel/Phase/Right channel meter.
Blending (On / Off)	Allow meter blending with video.
Blending Level (0 up to 7)	Use the slider to set the transparency (default is “0” (no transparency)) of the meter appearing on screen.

Meter Layout	
Ballistics (PPM / VU)	Select the meter's ballistics. Meters which monitor audio levels are typically one of two varieties: VU (Volume Unit) or PPM (Peak Program Meters). Though both perform the same function, they accomplish the function in very different manners. A VU meter displays the average volume level of an audio signal. A PPM displays the peak volume level of an audio signal. For a steady state sine wave tone, the difference between the average level (VU) and the peak level (PPM) is about 3 dB. But for a complex audio signal (speech or music), the difference between the average level (VU) and the peak level (PPM) can be 10 to 12 dB. This difference between the reading of a VU meter and a PPM is known as the crest factor. Whereas the VU meter has fairly equal attack and release times, the PPM is characterized by having a very slow fall-back time, taking over 1.5 seconds to fall back 20dB (the specifications vary slightly for Type I and II meters). The reasoning for the slow fall-back was to reduce eye-fatigue and make the peak indication easier to assimilate. The specifications of all types of PPM are detailed in IEC 60268-10 (1991), and the scale used by the BBC comprises the numbers 1-7 in white on a black background. There are 4dB between each mark, and PPM 4 is the reference level (0dBu). EBU, DIN and Nordic variants of the PPM exist with different scales. The EBU version replaces the BBC numbers with the equivalent dBu values, while both the Nordic and DIN versions accommodate a much wider dynamic range.
0VU (dBFS) (–70 to 0)	–20 dBFS in SMPTE digital unit or 4 dBu in VU unit (default); user adjustable; also known as the safe range.
Threshold High (dBFS) (–69.7 to 0)	0 to –9.9 dBFS (default); 0 to –12 dBFS depending on "0VU" setting; the "alarm" range is equivalent to the upper half of 0 dBFS minus the previous item "0VU" setting.
Threshold Low (dBFS) (–70 to –0.3)	–10 to –19.9 dBFS (default); –20.7 to –41.58 dBFS depending on the "alignment" setting. The "headroom" range is equivalent to the lower half of 0 dBFS minus the "alignment" setting; also known as the headroom before alarm range is reached.
Phase Error (deg) (0 to 180)	90 deg (default). When monitoring a stereo signal, the coherence between the 2 channels (i.e., how similar they are) greatly affects its mono compatibility. The phase meter indicates the relative phase of the two channels and thereby provides some measure of mono compatibility. Phase meter reading in the upper half of the scale indicates acceptable mono compatibility, whereas the lower half means completely out of phase.
Position (Vertical / Horizontal)	Specify the audio meter's position (default meter position is "Vertical").
Meter 1 / 2 / 3 / 4	
Enable (ON / Off)	Allow **Meter 1/2/3/4** for a particular window.
Source	Select the source of embedded audio signal respective to each image window.  *Note: Any of the four **Groups** (**Master** or **Slave**) can be assigned to **Meters** **1**, **2**, **3**, and **4**.*
Dock (Left/right) (Top/bottom)	Position the **Meter 1/2/3/4**'s dock on the left or right side of a window. *Note: Dock at the top or bottom side of a window will be available when meter position is **Horizontal**.*
Left Channel	Display the left channel of **Meter 1/2/3/4** in a window.
Phase Channel	Display the phase channel of **Meter 1/2/3/4** in a window.
Right Channel	Display the right channel of **Meter 1/2/3/4** in a window.

Meter Layout

Meter Color

Alarm Light / Dark
Headroom Light / Dark
Alignment Light / Dark

Specify the light/dark color of the meter's alarm, headroom and alignment. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/**Luminance** as well as **Red**/**Green**/**Blue** values.

Phase Color

90 ~ 180 Degree Light / Dark

Specify the 90 ~ 180 degree of phase meter light/dark color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.

0 ~ 90 Degree Light / Dark

Specify the 0 ~ 90 degree of phase meter light/dark color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.

Crop Area Size (%)

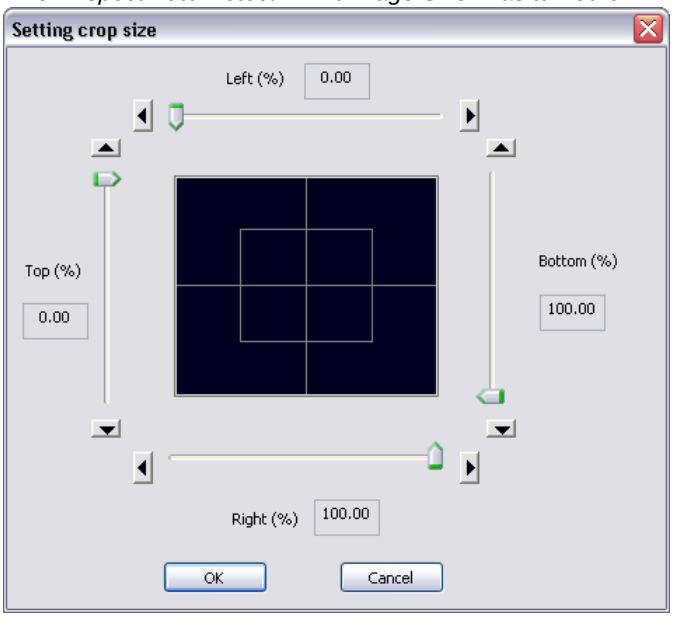
Crop Image

Set the specific size of the crop (zoom in) image on a particular window. Freely adjust the horizontal (**L**eft and **R**ight) and vertical (**T**op and **B**ottom) markers to set the size of the cropped image.

You can also click the ◀ ▶ ▲ ▼ buttons to make smaller adjustments.

Note:

1. Any adjustments using the marker/button is shown on the monitor in real-time.
2. This item is not available for the following conditions:
a. when window is in full-screen mode
b. the image has previously been cropped
c. "Aspect Auto Detect"→"Fit Image Size" was turned on.



After setting the parameters and clicking "OK" a cropped (zoomed in) image of the former window will be created.

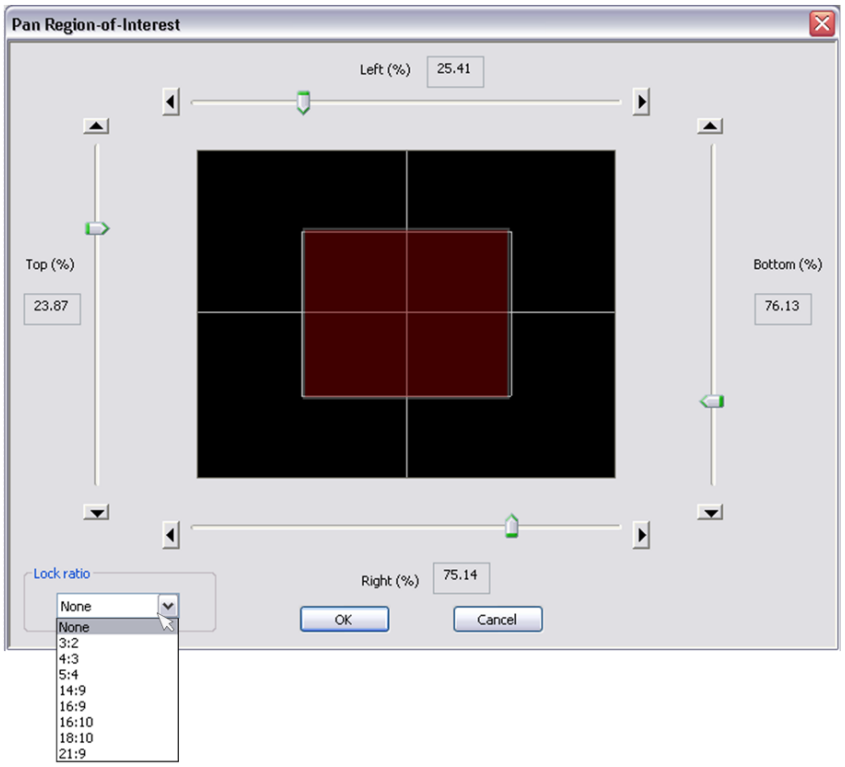
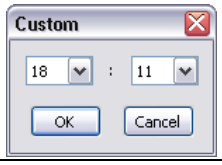
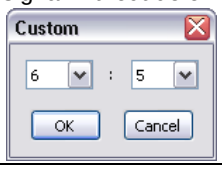
Crop Area Size (%)	
Pan Region-of-Interest	To pan is to move the "zoomed in" area around in the image window. Panning changes the image view in the same way that scrolling moves the image up, down, to the left, or to the right in the image window. When the entire image is not displayed you can quickly pan to see parts of the image that were hidden. Freely adjust the horizontal (**Left** and **Right**) and vertical (**Top** and **Bottom**) markers to set a pan region. You can also click the buttons to make smaller adjustments to the markers. Then use the mouse (drag with the symbol) to pan the cropped image window (zoomed in area). You can also set the "Lock ratio" to be fixed **3:2**, **4:3**, **5:4**, **14:9**, **16:9**, **16:10**, **18:10**, **21:9**, or **None**.  *Scenario 1: Using "Crop Image" and then "Pan Region of Interest."* Using the "Pan Region of Interest" does not affect the size or position of the cropped image window. After creating the cropped image (zoomed in area), you can still click the buttons to make smaller adjustments to the markers. Then use the mouse (drag with the symbol) to pan the cropped image window (zoomed in area). The viewing area is only limited to the cropped image (zoomed in area). Freely adjusting the horizontal (**Left** and **Right**) and vertical (**Top** and **Bottom**) markers would cause a stretching/shrinking of the original cropped image (zoomed in area). *Scenario 2: Using "Pan Region of Interest" without "Crop Image."* Freely use the horizontal (**L**eft and **R**ight) and vertical (**T**op and **B**ottom) markers to set a pan region. After creating the pan region (zoomed in area), you can still click the buttons to make smaller adjustments to the markers. Then use the mouse (drag with the symbol) to pan the image window (zoomed in area). Notice that the zoomed in area would fill up the whole window area.
Restore Image	Allows you to undo the previous cropping action and restore the image prior to cropping (1:1). Then adjust (enlarge) the window size manually by dragging the sides/corners.

Image Size / Position	
X **Y**	Specify the position of a window appearing on screen by setting the **X** and **Y** coordinates.
Width **Height**	Specify the size of a window appearing on screen by setting the **Width** and **Height** values. *Note: When OSD is enabled, the minimum width of a window allowed is the widths of four tallies combined. The minimum height allowed is the heights of four audio meters combined (positioned horizontally). When OSD is disabled, the minimum window size allowed is 1/15 the size of the input source.*
Lock Position (On / Off)	Lock or unlock the position of the window appearing on screen. *Note: When **Lock Position** is **On**, the window size cannot be set to full screen.*

Label: Image 1 / 2 / 3 / 4	
Enable (On / Off)	Show the label appearing on the window. Keep in mind that each window supports one line of text.
Hide (Fullscreen mode) (On / Off)	Allow showing the label during full screen mode.
Display Type	
Destination Name (D-Name)	Display the destination name.
Source Name (S-Name)	Display the source name.
UMD	Display the under monitor display.
D-Name / S-Name	Display both the destination name and source name.
D-Name / UMD	Display both the destination name and under monitor display.
S-Name / UMD	Display both the source name and under monitor display.
D-Name / S-Name / UMD	Display the destination name, source name and under monitor display.
Destination Name	Input the text string appearing on the label of a window (up to 32 characters). *Note: Currently, the Rainier Summit only supports English, Japanese, Korean, Chinese (Traditional), Chinese (Simplified) text string.*
Position (Bottom / Top)	Place the label on top/bottom of the window.
Text Align (Left / Center / Right)	Set the label string to align to the left or center or right.
Size (6 to 72)	Specify the window's label size.
Font Color	 Specify the window label's font color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/ **Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
Background Color	 Specify the window label's background color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/ **Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
Outside (On / Off)	Place the label outside the video. *Note: This is not allowed when the image height is less than 80 pixels.*
Blending Enable (On / Off)	Allow label blending with video.
Blending Level (0 up to 7)	Use the slider to set the transparency (default is "0" (no transparency)) of the label appearing on screen. *Note: This is not allowed when the **Blending Enable** is **Off**.*
Outline Font (On / Off)	To display the label text with outline.

Label: Image 1 / 2 / 3 / 4	
Outline Color	 Specify the label's outline color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/ **Luminance** as well as the **Red**/**Green**/**Blue** values. *Note: This is not allowed when the **Outline Font** is **Off**.*
Outline Width (1/2/3/4)	Set outline width for the label text. *Note: This is not allowed when the **Outline Font** is **Off**.*

Aspect Auto Detect	
Enable (On / Off)	Allow automatic detection of the input signal's aspect ratio. For 3G/HD-SDI input signal, the aspect ratio will be 16:9. For SD-SDI/composite, the aspect ratio setting can be 4:3/16:9.
Sync Type Default AFD Code Frame Custom	Upon selecting **Default**, the aspect ratio will follow the settings on the next two items: **HD-SDI** (fixed at **16:9**) and **SD-SDI/Composite** (fixed at **4:3**). Upon selecting **AFD Code Frame**, the "protected area" that will be shown on screen takes priority.
Custom (HD-SDI) 4:3 5:4 16:9 16:10 Custom	Select **Custom** to set the aspect ratio for a HD-SDI input signal. If the input signal's aspect ratio differs from that of the monitor in which it is displayed, you may also customize a particular aspect ratio by setting the width/height to display the signal without deformation. 
Custom (SD-SDI/Composite) 4:3 5:4 16:9 16:10 Custom	Select **Custom** to set the aspect ratio for a SD-SDI/Composite input signal. If the input signal's aspect ratio differs from that of the monitor in which it is displayed, you may also customize a particular aspect ratio by setting the width/height to display the signal without deformation. 
Fit Image Size (On / Off)	Upon selecting **On**, and if the previous item **Sync Type→Default** was selected; the image will adjust to fit the window size (fixed at **16:9** for **HD-SDI** or **4:3/16:9** for **SD-SDI/Composite**). Upon selecting **On**, and if the previous item **Sync Type→ AFD** was selected; the window size will adjust to fit the image based on the affixed AFD code (if included) of the corresponding input source.

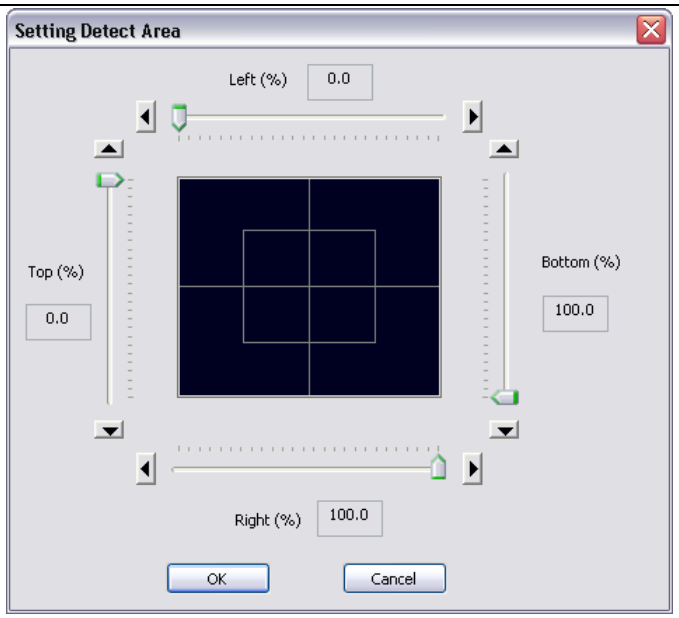
Safe Area	
Enable (On / Off)	Display the safe area mask on a window. *Note: Default settings are 20% for left/top and 60% for width/height.*
Left/Top **Width/Height (%)** (0 to 100)	Freely adjust horizontal (**Left** and **Width**) and vertical (**Top** and **Height**) mask. *Note: This item is only available when the previous item is set **On**.*
Mask Color	 Specify the safe area's mask color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/ **Luminance** as well as the **Red**/**Green**/**Blue** values.

Safe Area	
Mask Blending (0 up to 7)	Use the slider to set the transparency (default is “0” (no transparency)) of the safe area mask appearing on screen.
Mask-Border	
Enable (On / Off)	Display the border of safe area.
Width (1 up to 6)	Set border width of safe area.
Color	 Specify the border color for safe area. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/ **Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
Crossline	
Enable (On / Off)	Display the crossline of safe area.
Width (1 up to 6)	Set width of the crossline for safe area.
Color	 Specify the crossline’s color for safe area. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/ **Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.
Blending Level (0 up to 7)	Use the slider to set the transparency (default is “0” (no transparency)) of the cross line appearing on screen.

Image Adjustment	
Brightness (–128 to 127)	Adjust the brightness (127) or darkness (–128) of the input signal. This control can correct exposure problems caused by too much light (overexposure) or too little light (underexposure); default brightness is “0”. *Note: This item is only available for the composite input signal.*
Contrast (0 to 255)	Adjust the difference in tone between the dark (0) and light (255) areas of the input signal. Moving the slider to the right makes the light areas lighter and the dark areas darker. For example, if the image has a dull, gray tone, sharpen the detail by increasing the contrast (default contrast is “100”). *Note: This item is only available for the composite input signal.*
Hue (–128 to 127)	Adjust the intensity of the color of input signal (default hue is “0”). *Note: This item is only available for the composite input signal.*
U Gain (0 to 200)	Adjust the vividness of color (Cb) of the input signal. For example, moving the slider to the right increases the vividness of a blue sky in an image. Moving the slider to the left reduces the vividness of the color. Create a black-and-white image effect by moving the slider all the way to the left so that all colors in the image are removed (default U gain is “128”). *Note: This item is only available for the composite input signal.*
V Gain (0 to 200)	Adjust the vividness of color (Cr) of the input signal. For example, moving the slider to the right increases the vividness of a blue sky in an image. Moving the slider to the left reduces the vividness of the color. Create a black-and-white image effect by moving the slider all the way to the left so that all colors in the image are removed (default V gain is “128”). *Note: This item is only available for the composite input signal.*
Sharpness (–128 to 127)	Adjust the sharpness to increase the contrast, enhance image edges, or reduce shading of the input signal (default sharpness is “0”). *Note: This item is only available for 3G/HD/SD-SDI input signal.*

Image Border	
Enable (On / Off)	Display the border of an image.
Gradient (On / Off)	Display the gradient effect for the border of an image.
Width (1 up to 6)	Set the border width of an image.
Color	 Specify the image border color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/ **Luminance** as well as the **Red**/**Green**/**Blue** values.

Video Border	
Enable (On / Off)	Display the border of a video.
Width (1 up to 6)	Set the width of the border for a video.
Color	 Specify the video border color. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue**/**Saturation**/**Luminance** as well as the **Red**/**Green**/**Blue** values.

Video Black	
Detect (On / Off)	Enable the “Video Black” alarm feature. *Note: Analog input signal is not supported.*
Video Detect Area (L/T/W/H, %) Change…	 Freely adjust the horizontal (**L**eft and **R**ight) and vertical (**T**op and **B**ottom) markers to set the scope of area to be monitored when “no video” occurs. *Note: This item is only available when **Detect** is set **On**. If the **Safe Area** item has been previously set **On**, **Video Detect Area** will temporarily use the mask area border to help set the **Video Detect Area**.*

Video Black	
Level (1 to 255)	Set the level (grayscale) which the detected signal will be considered black.
Threshold (IRE/mV) (0 to 100 for IRE 0 to 700 for mV)	Set the level (IRE/mV) which the detected signal will be considered black. *Note: The IRE/mV unit will depend on the choice in* ***System→Option→General→Video black threshold unit****.*
Detect Number (Frame) (0 to 255 frame)	Set the number of successive "black" frames to be assessed prior to determining "video black".

Video Freeze	
Detect (On / Off)	Enable the "Video Freeze" alarm feature. *Note: Analog input signal is not supported.*
Time (1 to 15 second)	Set the time interval to wait before triggering an alarm once the criteria (sensitivity level) for "video freeze" has been detected. *Note: It may take up to one second more than the value of the "Time" parameter to trigger a video freeze alarm.*
Sensitivity Level (0 to 10)	Set the motion sensitivity of image for triggering "Video Freeze" alarm. Adjust the sensitivity on a range of **0** (for filtering out noise in a noisy signal) to **10** (for a clean signal) according to the signal being monitored. Also, when the sensitivity is set very low, a "not so noticeable difference" in frame by frame content comparison (i.e. a talk show video where the background is constant and the only motion detectable is the announcer's lip movement) may trigger the alarm. In this case consider increasing the **Sensitivity Level** or **Time** (previous item) values.
Threshold (0 to 100)	Set the threshold level on which the detected signal will be considered in a video freeze state.

Video Black *(no video) and* ***Video Freeze*** *cannot happen simultaneously. When both conditions exist,* ***Video Black*** *has the higher priority.*
Likewise, both functions are not available for an analog input signal.

Tally	
Flash (On / Off)	Enable flashing tally for a window or all the windows in a group.
Tally 1/2/3/4	
LED (On / Off)	Display **Tally 1/2/3/4** for a window.
Label (On / Off)	Turn on or off the label in case an event occurs. *Note:* ***Tally 1/2/3/4*** *can trigger either* ***Label*** *alert or* ***Border*** *alert, but there is only one border or label. If the entire* ***Tally 1/2/3/4*** *is triggered simultaneously, the display priority will be tally 1, tally 2, tally 3 and then tally 4.*
Border (On / Off)	Turn on or off the border in case an event occurs.
Light Color	 Select the preferred **Tally 1/2/3/4** color when it is turned on. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue/Saturation/Luminance** as well as the **Red/Green/Blue** values.

Dark Color	 Select the preferred **Tally 1/2/3/4** color when turned off. Click **Other** for more color choices (**Standard** tab) or customize the color (**Custom** tab) by setting the **Hue/ Saturation/Luminance** as well as the **Red/Green/Blue** values.

Table 5-2 Phoenix-Q Software: Setting Chassis and Card Properties for Rainier Summit

5.2 Setting Group Parameters

The settings here only affect the cards included in a designated group (Group/Display 00#). Upon right-clicking the target Group/Display # heading, the following menu will appear.

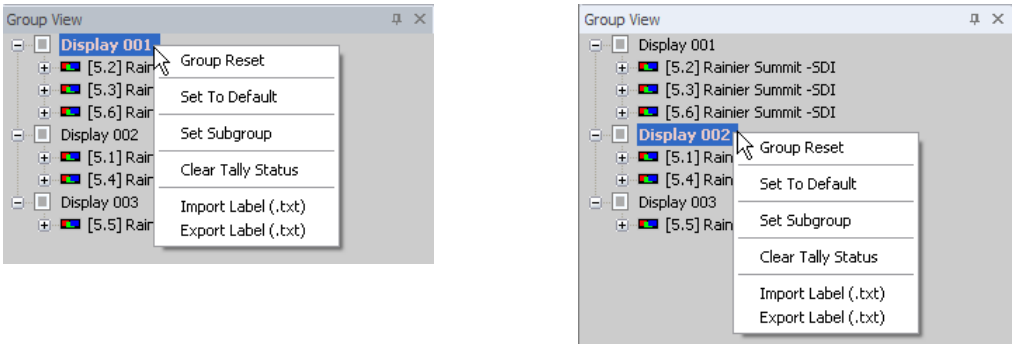


Figure 5-3 Phoenix-Q Software: Set Group Parameter

✓ *Click **Group Reset** to refresh the group setting.*

✓ *Click **Set to Default** to return to its default settings:*
- ✓ *1080p output resolution, 60Hz vertical frequency*
- ✓ *Default preset layout (total number of rows/columns depending on the number of cards on each group)*
- ✓ *Label is set "On" (background color "dark grey" with RGB value of 38, 38, 44; font color "grey" with RGB value of 229, 229, 229; fill background set "On", transparency set "Off", outside the video set "On")*
- ✓ *Image Border is set "On" (2 pixel in width and "grey" color with RGB value of 77, 81, 89)*
- ✓ *Video Border is set "Off"*
- ✓ *Clock is set "Off"*
- ✓ *Meter is set "Off"*
- ✓ *Alarm is set "Off"*
- ✓ *Signal Type is set "Off"*
- ✓ *User Logo is set "Off"*
- ✓ *Display Label is set "Off"*

✓ *Click **Clear Tally Status** to clear up any tally that has appeared on screen.*

✓ ***Import (.txt)→Label** from / **Export (.txt)→Label** to be edited externally. The most convenient way is to export the file (label) as:*
- ✓ ***ANSI** – up to 30 characters; can contain the English characters A–Z, a–z, 0–9*

1. *These items are only available when the computer is connected to the Rainier Summit.*
2. *The settings here will only affect the labels of the windows within the selected Group. However, the process of editing and importing the labels is the same as described on page 45.*
3. *To change all the labels in the "System", see page 45.*

6. Cascading

Cascading is the technique of "daisy-chaining" multiple Rainier Summits via an HDMI/SDI display and a digital control backbone. This connection allows the combined Rainier Summit to operate as a single integrated system. Up to 25 cards can be combined in this fashion to create extremely large and complex systems with the ability to simultaneously monitor audio, video, and computer signals on the same display.

Cascading in Rainier Summit can be classified into two types:

- ✓ *Internal cascading – achieved by grouping 2 or 3 or 4 or 5 or 6 cards within a single Rainier Summit through the Phoenix-Q configuration software (six displays of any four multiple windows combination).*

- ✓ *External cascading – achieved by physically "daisy-chaining" two or more Rainier Summit chassis (up to 25 cards) to increase windows on one screen (up to 100 – achieved by cascading 25 cards with four windows from each of the cards). Multiple cards allow multiple SDI signals on one display.*

The following illustrations would require a working knowledge of Phoenix-Q software.
For an in-depth understanding of Phoenix-Q, turn to the succeeding chapters for more information.

6.1 Internal Cascading

6.1.1 Cascade of Three Groups and Duplicate Display

Scenario: Internal cascade of three groups (3-card, 2-card, and independent quad) with duplicated outputs on multiple monitors.

*To change the group setup, go to **System→Configuration**. To assign the grouping drag the card to the desired **Group #** on the right panel (i.e. **Group 002**, **Group 003**). Verify this as shown on the Group View tree found on the left panel of the Phoenix-Q software.*

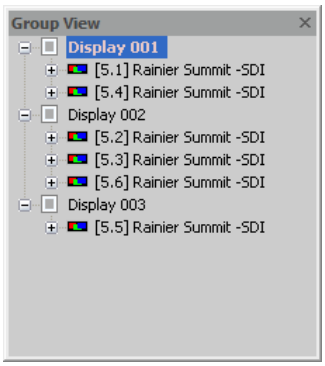


Figure 6-1 Phoenix-Q Software: Group View Panel

*There is no need to make any adjustments in the **HDMI OUT** item in the **Properties** panel as the software smartly does it for you.*

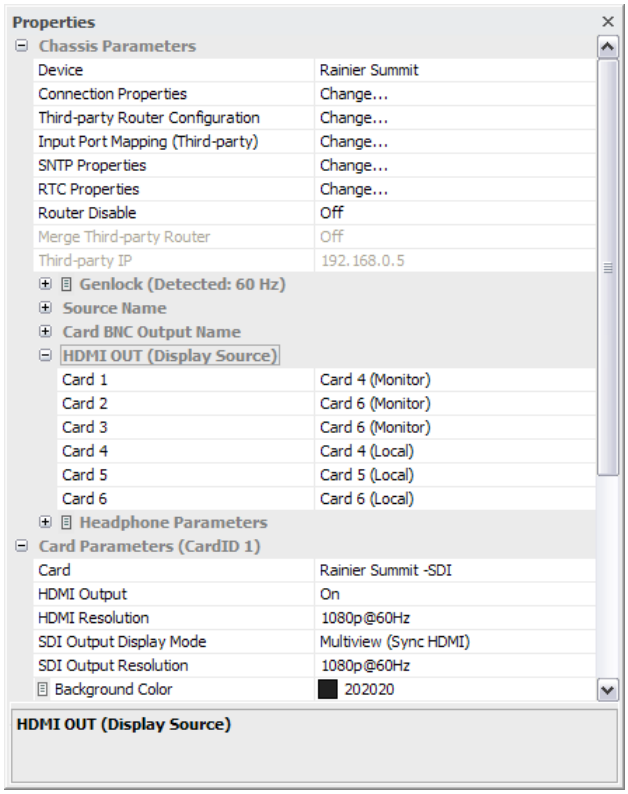


Figure 6-2 Phoenix-Q Software: Properties – HDMI OUT (Display Source)

The following figure illustrates the above setup.

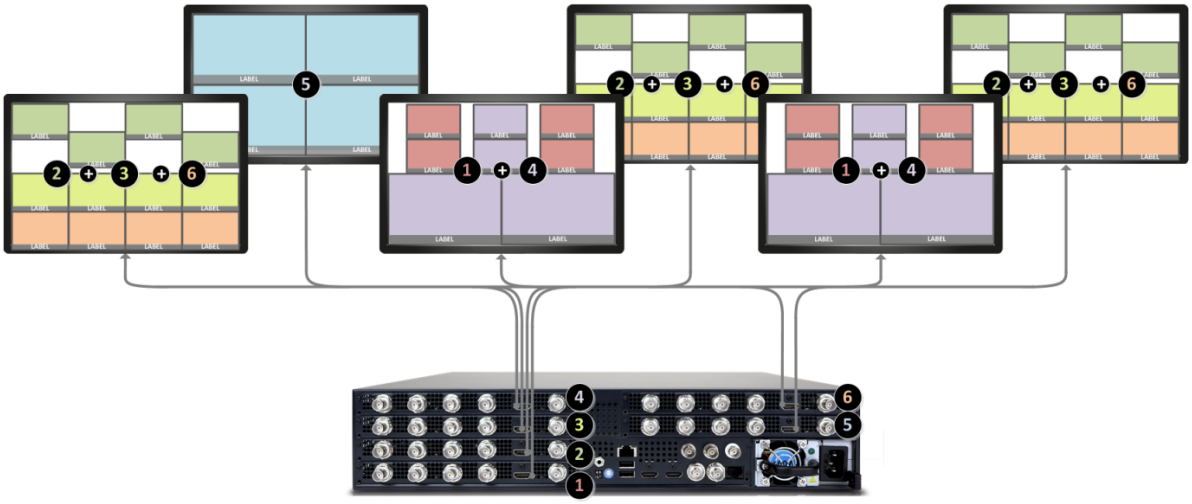


Figure 6-3 Cascade Two Groups (3-Cards for Each Group) with Duplicate Output Illustration

6.1.2 Cascade Five Cards and One Independent Quad Display

Scenario: Internal cascade of two groups (5-card and independent quad) with duplicated outputs on multiple monitors

*To change the group setup, go to **System→Configuration**. To assign the grouping, drag the card to the desired **Group #** on the right panel (i.e. **Group/Display 002**). Verify this as shown on the Group View tree found on the left panel of the Phoenix-Q software.*

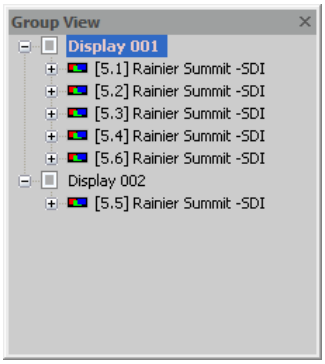


Figure 6-4 Phoenix-Q Software: Group View Panel

*There is no need to make any adjustments in the **HDMI OUT** item in the **Properties** panel as the software smartly does it for you.*

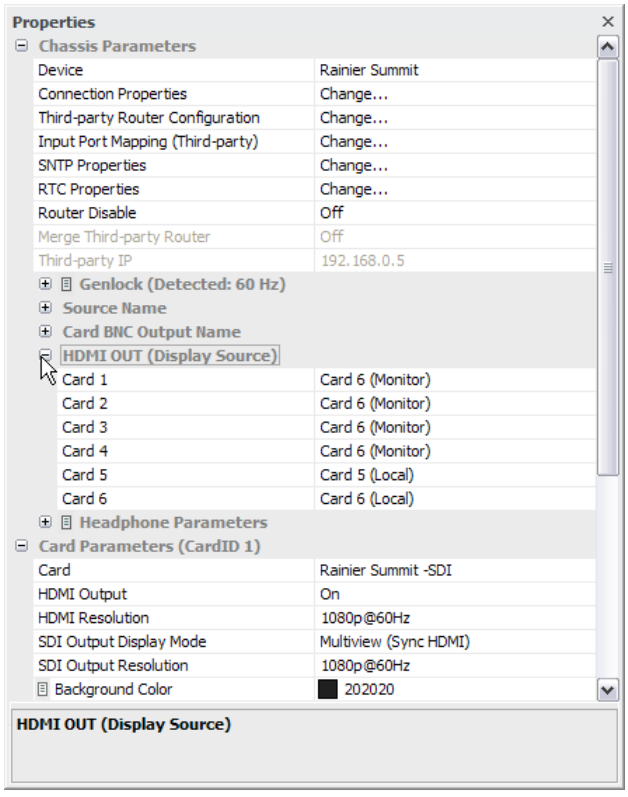


Figure 6-5 Phoenix-Q Software: Properties – HDMI OUT (Display Source)

The following figure illustrates the above setup.

Figure 6-6 Cascade Five Cards With Duplicated Output and One Independent Quad Illustration

6.1.3 Cascade All Six Cards

Scenario: Internal cascade of six cards in a group with duplicated outputs on multiple monitors.

*To change the group setup, go to **System→Configuration**. To assign the grouping, drag the card to the desired **Group/Display #** on the right panel (i.e. **Group/Display 001**). Verify this as shown on the Group View tree found on the left panel of the Phoenix-Q software*

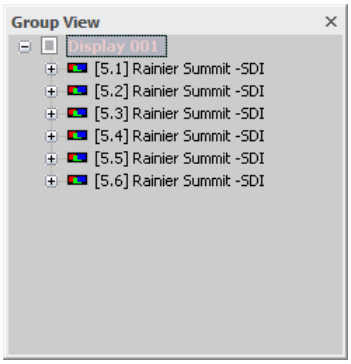


Figure 6-7 Phoenix-Q Software: Group View Panel

*There is no need of any adjustments in the **HDMI OUT** item in the **Properties** panel as the software smartly does it for you.*

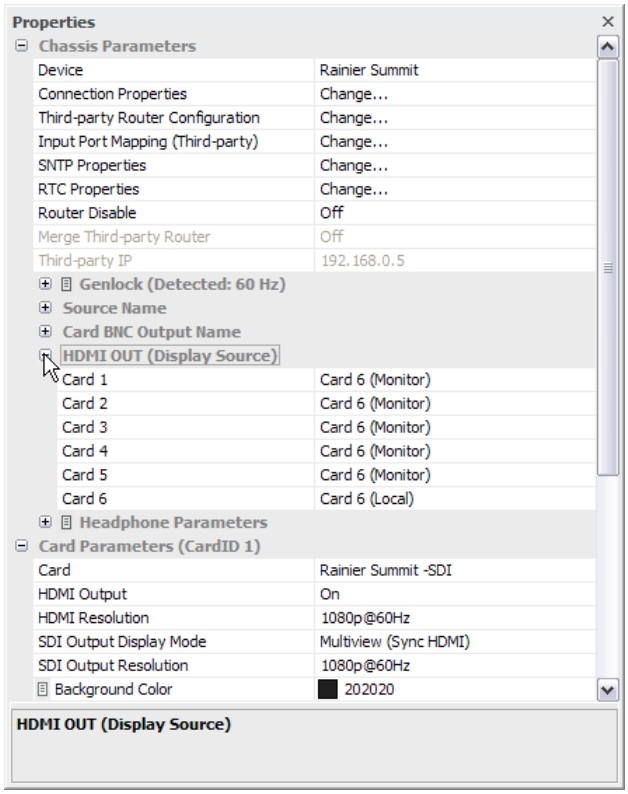


Figure 6-8 Phoenix-Q Software: Properties – HDMI OUT (Display Source)

The following figure illustrates the above setup.

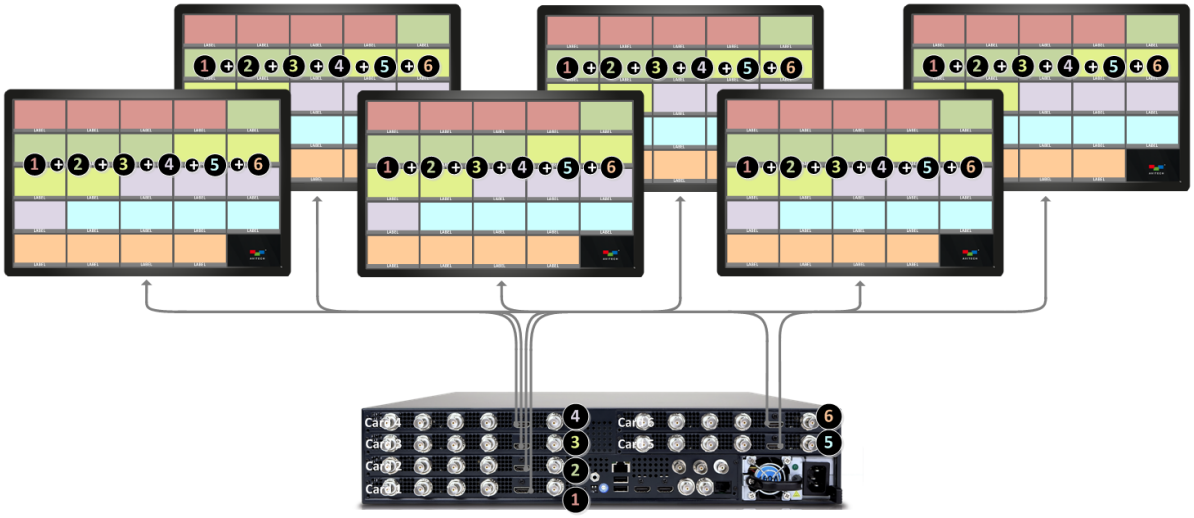


Figure 6-9 Cascade Six Cards Illustration

6.2 Internal Cascade with Built-in Router for Source / Multiview Output Configuration

The built-in router enables routing of any source signal across multiple displays (unlimited signal repetition across both HDMI and SDI outputs). Requiring no external routers or switchers, the Rainier Summit delivers a single multiviewing solution that ensures maximized monitoring flexibility and simple system installation.

Scenario: Router integration enables displaying any source signal on any output monitor (HDMI and SDI) with unlimited signal repetition and any source signal output to a downstream device (SDI output).

*To change the group setup, go to **System→Configuration**. To assign the grouping, drag the card to the desired **Group/Display #** on the right panel (i.e. **Group/Display 002**, **Group/Display 003**). Verify this as shown on the Group View tree found on the left panel of the Phoenix-Q software.*

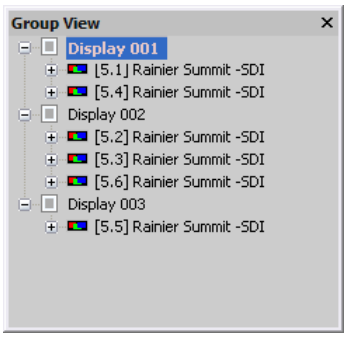


Figure 6-7 Phoenix-Q Software: Group View Panel

*There is no need of any adjustments in the **HDMI OUT** item in the **Properties** panel as the software smartly does it for you.*

*Step 1. The built-in router function is disabled by default. To turn on this function, locate **Router Disable** under the **Properties** menu of the Rainier Summit and turn it* **Off**.

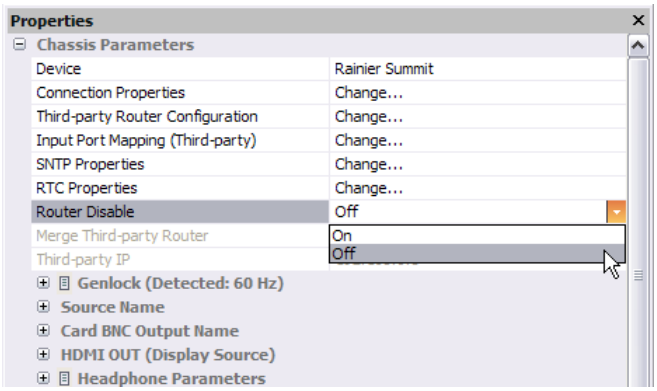


Figure 6-10 Phoenix-Q Software: Chassis Parameters Panel

Step 2. Click any element of the Rainier Summit and the router user interface will appear on the "Router tab".

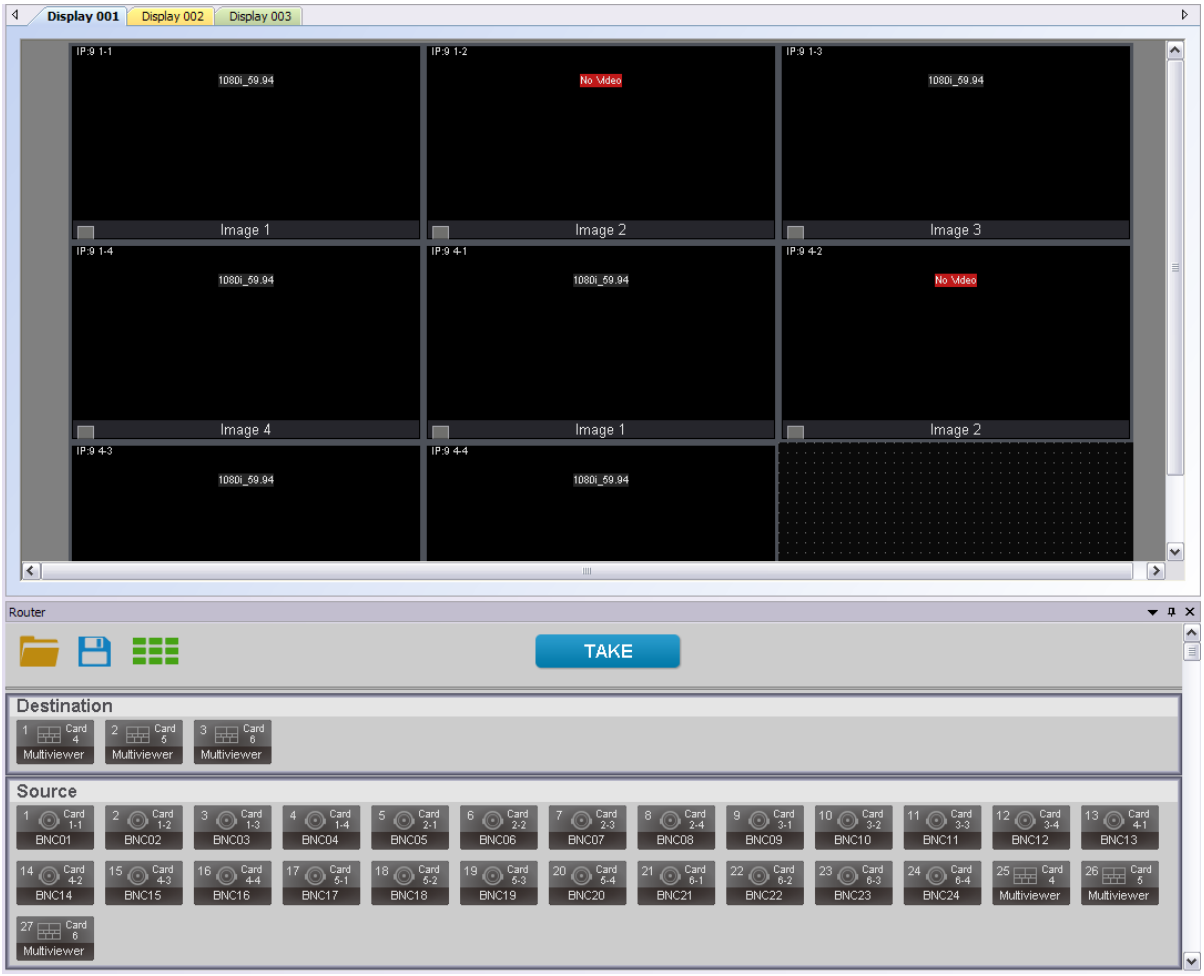


Figure 6-11 Phoenix-Q Software: Router Tab

*Step 3. To allow the input source signal to be directly routed to SDI outputs (SDI output of Card 5 / Card 6) for local/remote preview or production usage, click the drop-down button [click the **SDI Output Display Mode** cell's rightmost edge] to select **BNC Input**. The SDI Out of Card 5 and Card 6 will appear on the Destination list.*

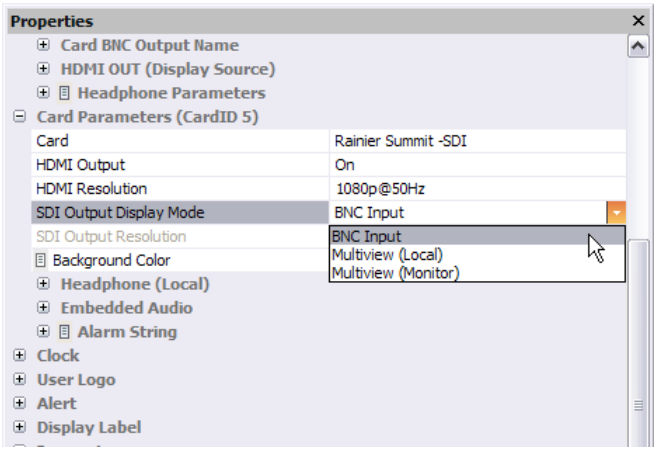


Figure 6-12 Phoenix-Q Software: Card Parameters Panel

Figure 6-13 Router: SDI Out in Destination

*Step 4. To allow the multiview display (Card 1+ Card 4) can be routed to SDI output (SDI output of Card 4) for remote monitoring, click the drop-down button [click the **SDI Output Display Mode** cell's rightmost edge] to select **Multiview (Local)**.*

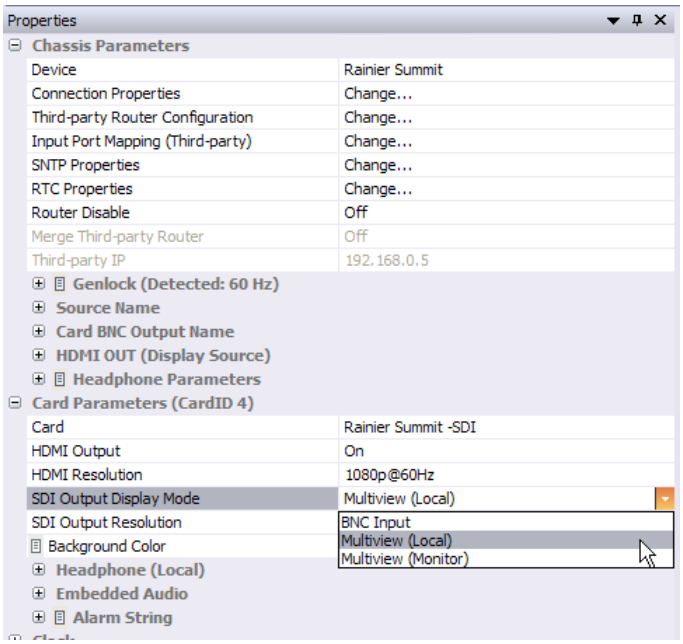


Figure 6-8 Phoenix-Q Software: Properties – SDI OUTPUT (Display Mode)

*Step 5. Select a source signal to route by first clicking its input signal icon under the "Router" tab, and then select the router destination(s) by clicking one or more windows on the main display area. Click **TAKE** to apply the routing.*

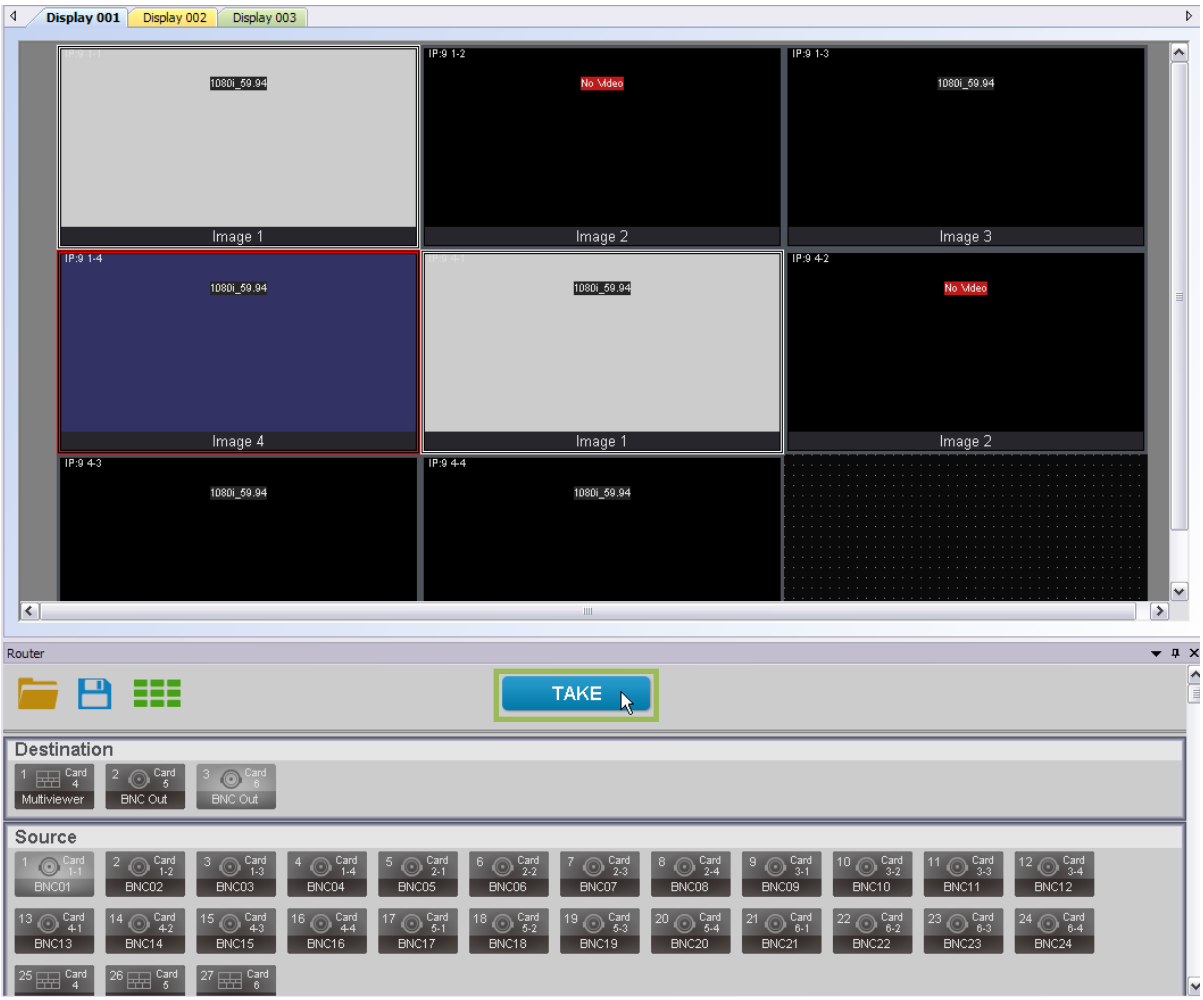


Figure 6-14 Router: Source Routing Process

The following figure illustrates the above setup.

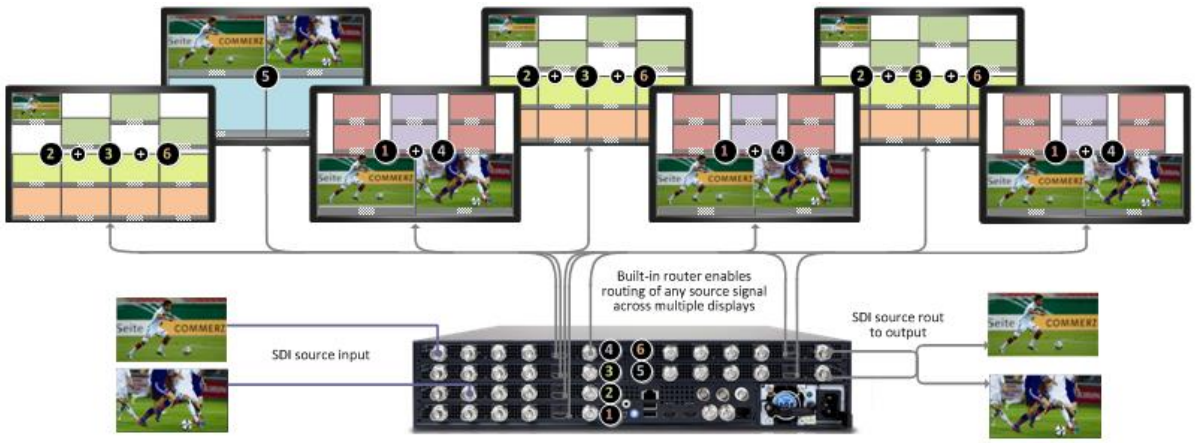


Figure 6-15 Internal Cascade Configurations with Built-in Router Illustration

6.3 Internal Cascading for Display Redundancy

Scenario: Internal Cascade for Display Redundancy

*Step 1. Make sure that all the cards' ID belongs to the same group. Verify this as shown on the **Group View** tree found on the left panel of the Phoenix-Q software. To change the group setup, go to **System→Configuration**.*

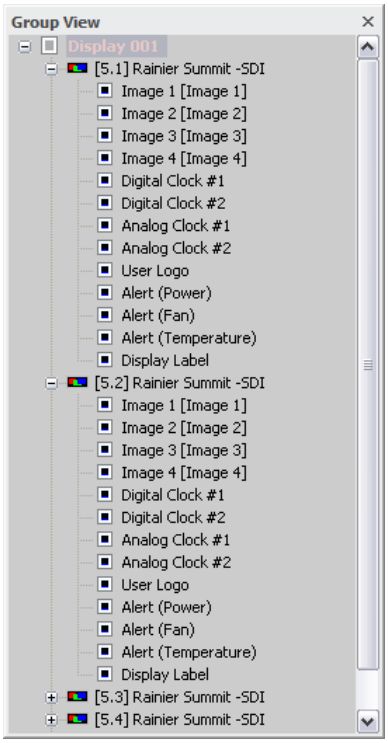


Figure 6-11 Phoenix-Q Software: Group View Panel

*Step 2. Right-click the group heading in the **Group View** panel (i.e. **Display 001**) and then click **Set Subgroup** item in the menu.*

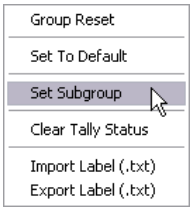


Figure 6-12 Phoenix-Q Software: Group View Panel – Set Subgroup

*Step 3. Drag the desired configuration (either the left or right on the illustration below) and then click **OK**.*

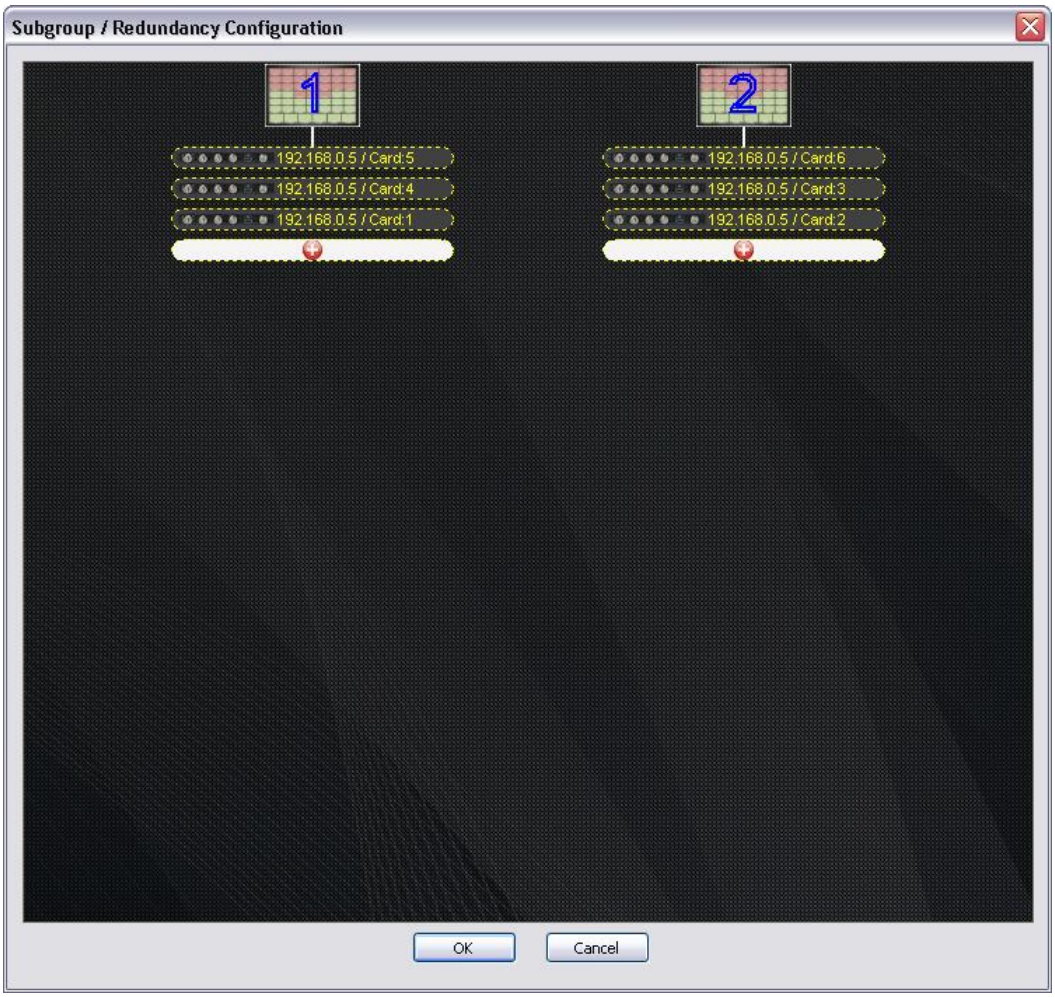


Figure 6-13 Phoenix-Q Software: Set Subgroup Configuration

*There is no need to make any adjustments in the **HDMI OUT** item in **Properties** panel as the software smartly does it for you.*

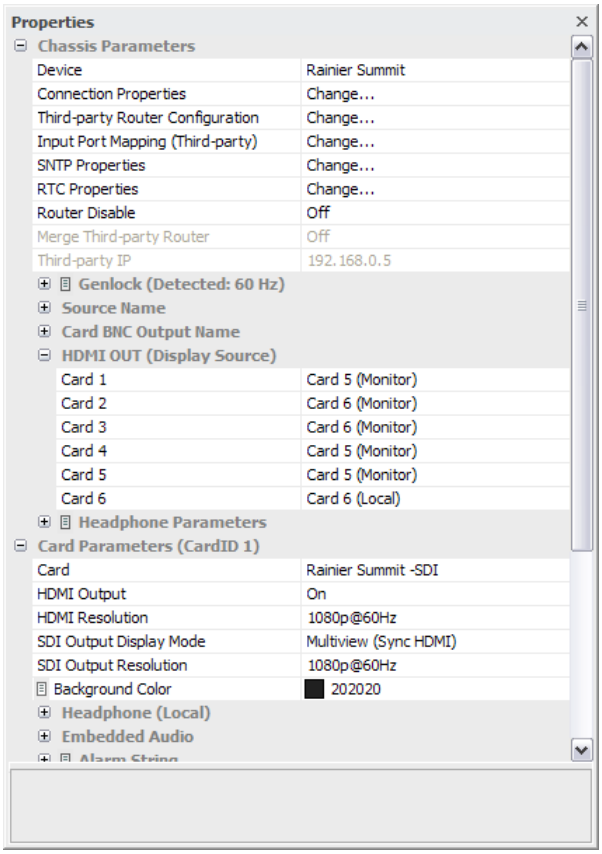


Figure 6-14 Phoenix-Q Software: Properties – HDMI OUT (Display Source)

The following figure illustrates the above setup.

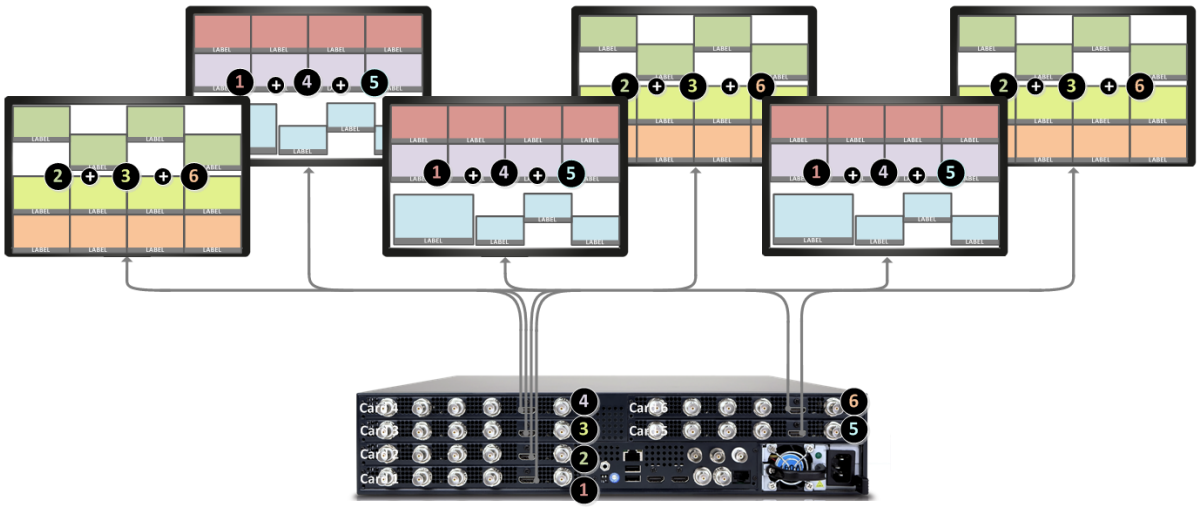


Figure 6-15 Cascade Two Groups (3-Cards for each group) with Duplicate Output Illustration

6.4 External Cascading

To prevent input conflicts, when cascading two or more Rainier Summits, make sure each Rainier Summit gets assigned a unique IP address. (The IP address of the Rainier Summit can be changed to a similar range as the controlling computer. See Appendix C for details)

6.4.1 Cascade Two Units via SDI Cascade In

*Step 1. Connect the Ethernet cables between each Rainier Summit's **IP** port and the Ethernet hub.*

Step 2. Change the IP address by first clicking the default IP Address: 192.168.0.5 entry in the IP Connection List window. Then, click Change Connection Properties. The present IP address is shown in the IP address field. The corresponding Subnet Mask and Gateway belonging to the present IP address is also displayed.

*Step 3. To display video overlay from each Rainier Summit, all units must be connected to each other through a BNC cable. Connect one end to the **SDI OUT** port on the first Rainier Summit's **last** card (up to six cards in a single Rainier Summit), and the other end to the **CASCADE IN 1** (BNC) port of the next Rainier Summit's (control card) in the chain.*

*Step 4. Connect one end of the HDMI/BNC cable to the **HDMI/BNC OUT** port on the last Rainier Summit cascaded and the other end to the group's output monitor.*

Step 5. Connect an Ethernet cable between the computer that is running the Phoenix-Q software and an Ethernet hub. Make sure to be able to ping the entire Rainier Summit's IP address.

The following illustration shows a typical setup of cascaded Rainier Summits.

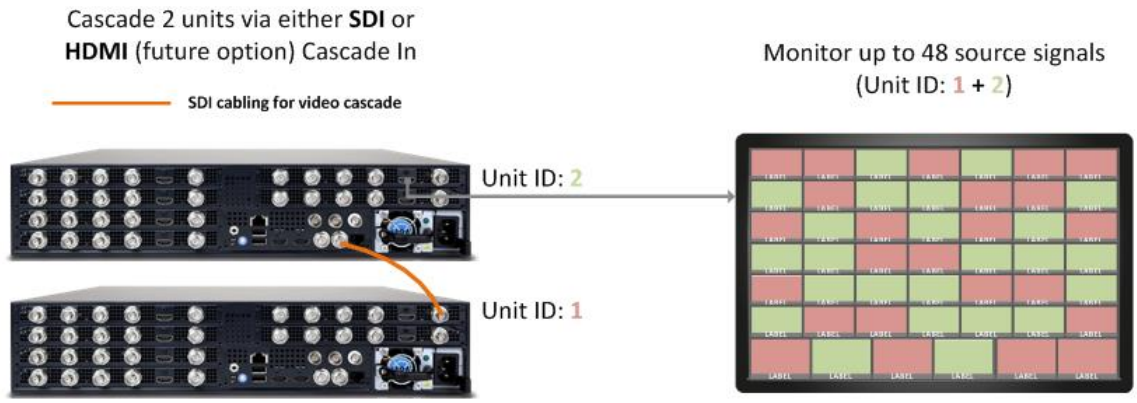


Figure 6-16 Cascaded Rainier Summit Illustration

6.4.2 Cascade 25 Cards via SDI Cascade In

*Step 1. Connect the Ethernet cables between each Rainier Summit's **IP** port and an Ethernet hub.*

Step 2. Change the IP address by first clicking the default IP Address: 192.168.0.5 entry in the IP Connection List window. Then, click Change Connection Properties. The present IP address is shown in the IP address field. The corresponding Subnet Mask and Gateway belonging to the present IP address is also displayed.

*Step 3. To display video overlay from each Rainier Summit, all units must be connected to each other through a BNC cable. Connect one end to the **SDI OUT** port on the first Rainier Summit's **last** card (up to six cards in a single Rainier Summit), and the other end to the **CASCADE IN 1** (BNC) port of the next Rainier Summit's (control card) in the chain.*

*Step 4. Connect one end of the HDMI/BNC cable to the **HDMI/SDI OUT** port on the last Rainier Summit cascaded and the other end to the group output monitor.*

Step 5. Connect an Ethernet cable between the computer that is running the Phoenix-Q software and an Ethernet hub. Make sure to be able to ping the entire Rainier Summit's IP address.

The following illustration shows a typical setup of cascaded Rainier Summit.

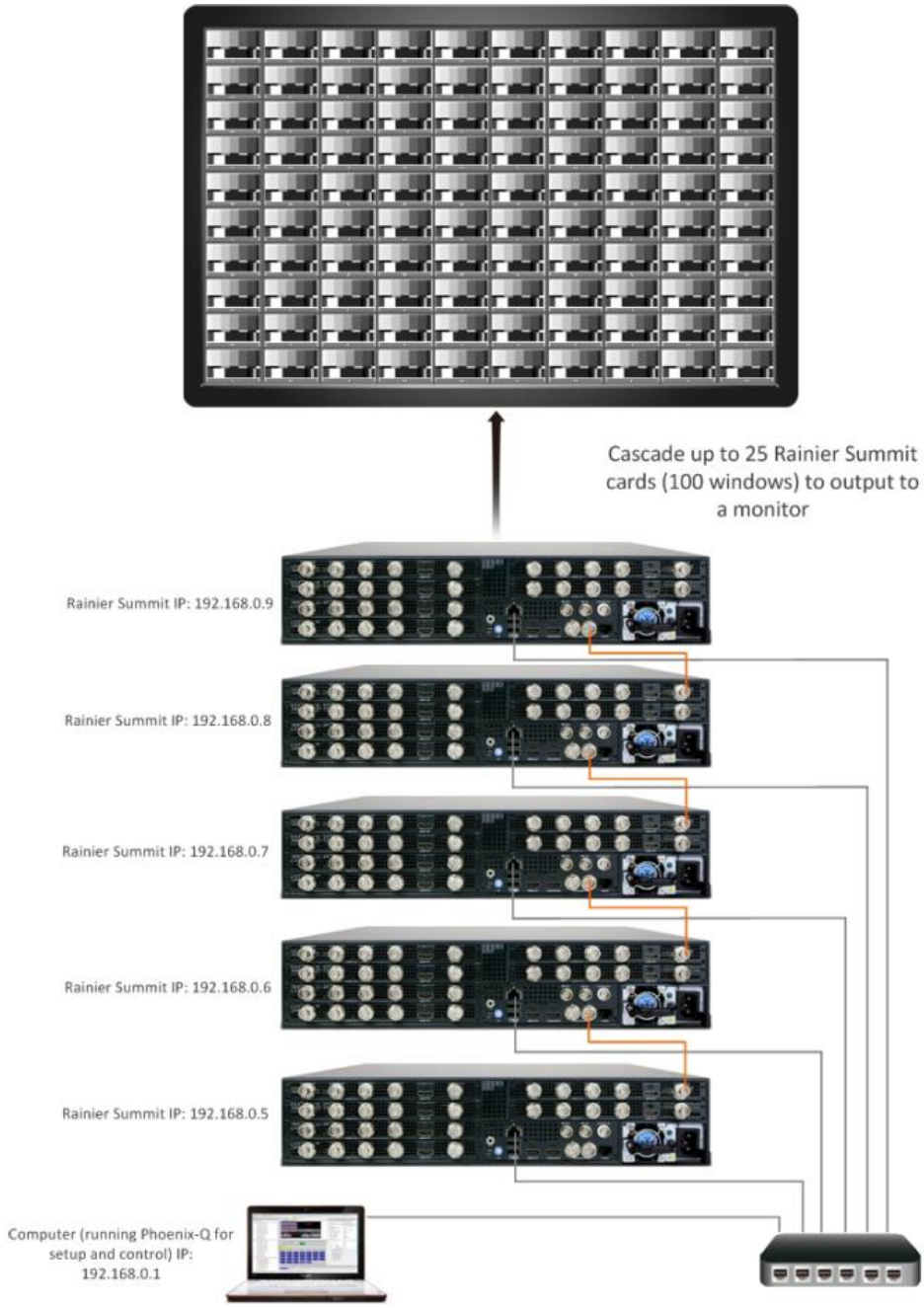


Figure 6-17 Cascaded Rainier Summit Illustration

Example: Take SDI output of any card to the next chassis' cascade input

To be able to display all 48 input source windows (24 from each chassis) in one monitor, make sure to assign all 12 cards (6 from each chassis) to the same group.
Likewise, assigning card(s) to another group will display the second group's window on a second monitor.

① *The second chassis' (IP: 192.168.0.6) card ID 1 output with the first chassis' (IP: 192.168.0.5) cascade input.*

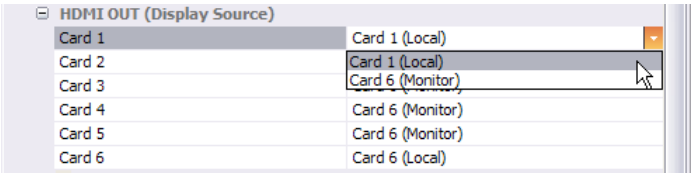


Figure 6-18 Phoenix-Q Properties: HDMI OUT (Display Source) Setting

✓ *Upon selecting "Card 1 (Local)" for "Card 1' HDMI OUT" only the four windows of the second chassis (IP: 6 Card 1) + 24 windows of the first chassis (IP: 5) will be displayed.*

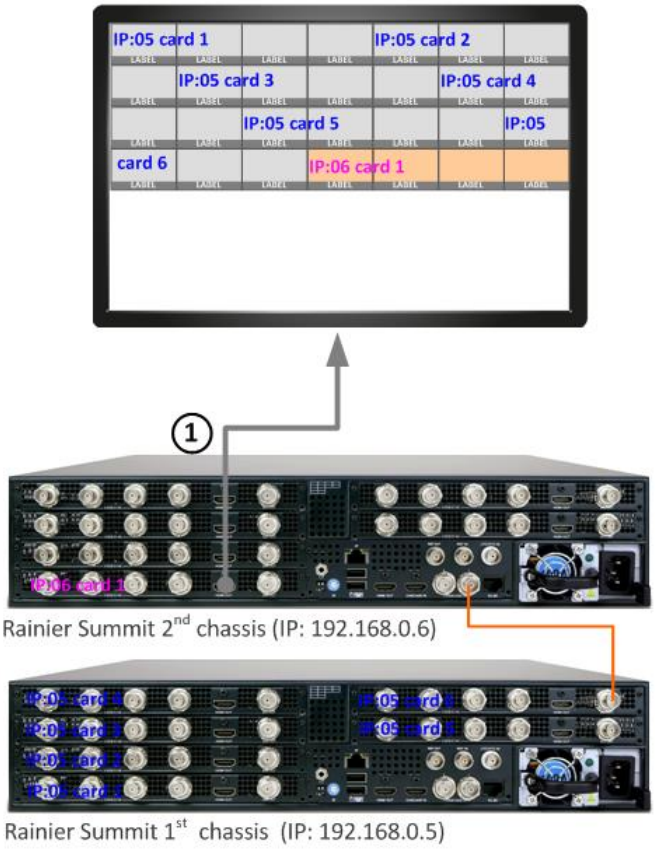


Figure 6-19 SDI Output of Card ID 1 to the Previous Chassis' Cascade Input (Illustration 1)

✓ *Upon selecting "Card 6 (Monitor)" for "Card 1' HDMI OUT" then all the 24 windows of the second chassis (IP: 6) + 24 windows of the first chassis (IP: 5) will be displayed.*

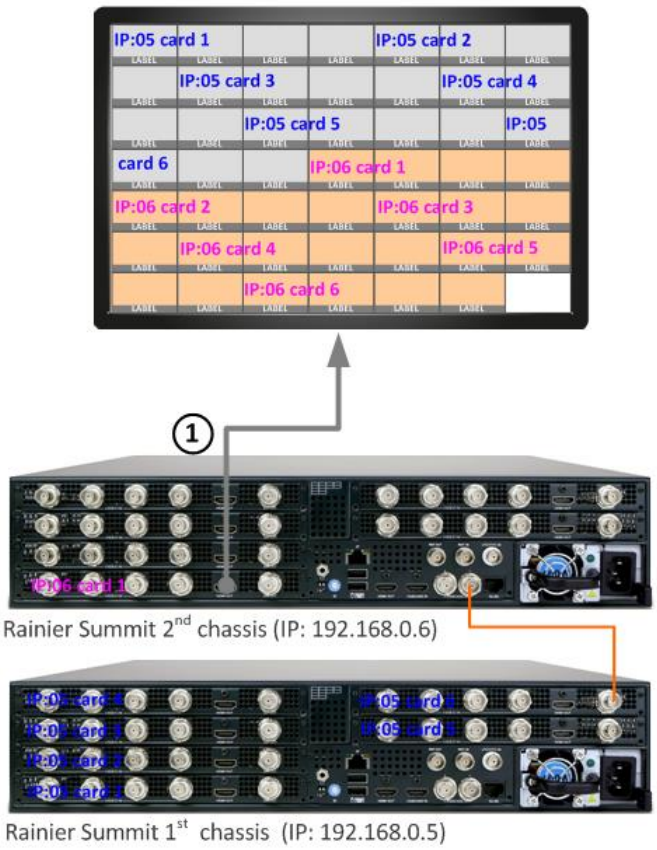


Figure 6-20 SDI Output of Card ID 1 to the Previous Chassis' Cascade Input (Illustration 2)

② *The second chassis' (IP: 192.168.0.6) card ID 3 output with the next chassis' cascade input.*

✓ *Upon selecting "Card 3 (Local)" for "Card 3' HDMI OUT" then only the 12 windows of the second chassis (IP: 6 Card 1, Card 2 and Card 3) + 24 windows of the first chassis (IP: 5) will be displayed.*

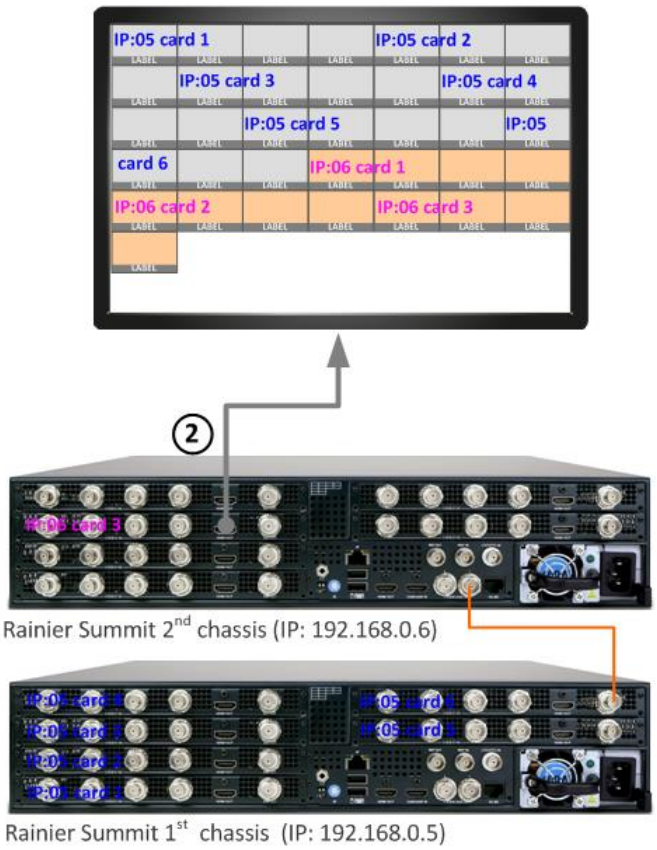


Figure 6-21 SDI Output of Card ID 1 to the Previous Chassis' Cascade Input (Illustration 3)

✓ *Upon selecting "Card 3 (Monitor)" for "Card 3' HDMI OUT" then the 24 windows of the second chassis (IP: 6) + 24 windows of the first chassis (IP: 5) will be displayed.*

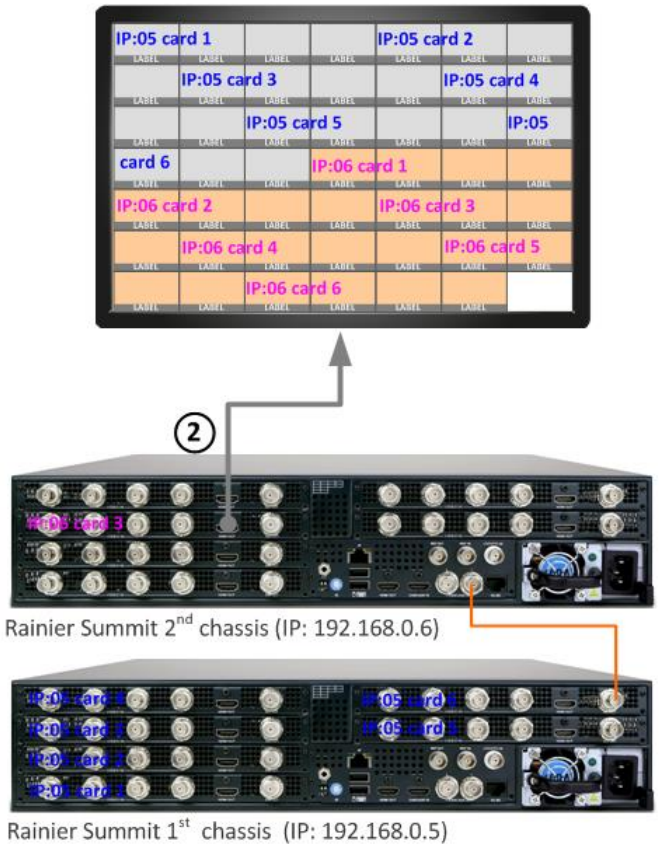


Figure 6-22 SDI Output of Card ID 3 to the Previous Chassis' Cascade Input (Illustration 4)

6.4.3 Cascade Three Units via SDI Cascade Plus Genlock Source Cascade In

*Step 1. Connect the Ethernet cables between each Rainier Summit's **IP** port and an Ethernet hub.*

Step 2. Change the IP address by first clicking the default IP Address: 192.168.0.5 entry in the IP Connection List window. Then, click Change Connection Properties. The present IP address is shown in the IP address field. The corresponding Subnet Mask and Gateway belonging to the present IP address is also displayed.

*Step 3. To display video overlay from each Rainier Summit, all units must be connected to each other through a BNC cable. Connect one end to the **SDI OUT** port on the first Rainier Summit's **last** card (up to six cards in a single Rainier Summit), and the other end to the **CASCADE IN 1** (BNC) port of the next Rainier Summit' (control card) in the chain.*

*Step 4. Connect one end of the HDMI cable to the **HDMI OUT** port on the last Rainier Summit cascaded and the other end to the group output monitor.*

Step 5. Connect an Ethernet cable between the computer that is running the Phoenix-Q software and an Ethernet hub. Make sure to be able to ping the entire Rainier Summit's IP address.

The following illustration shows a typical setup of cascaded Rainier Summit.

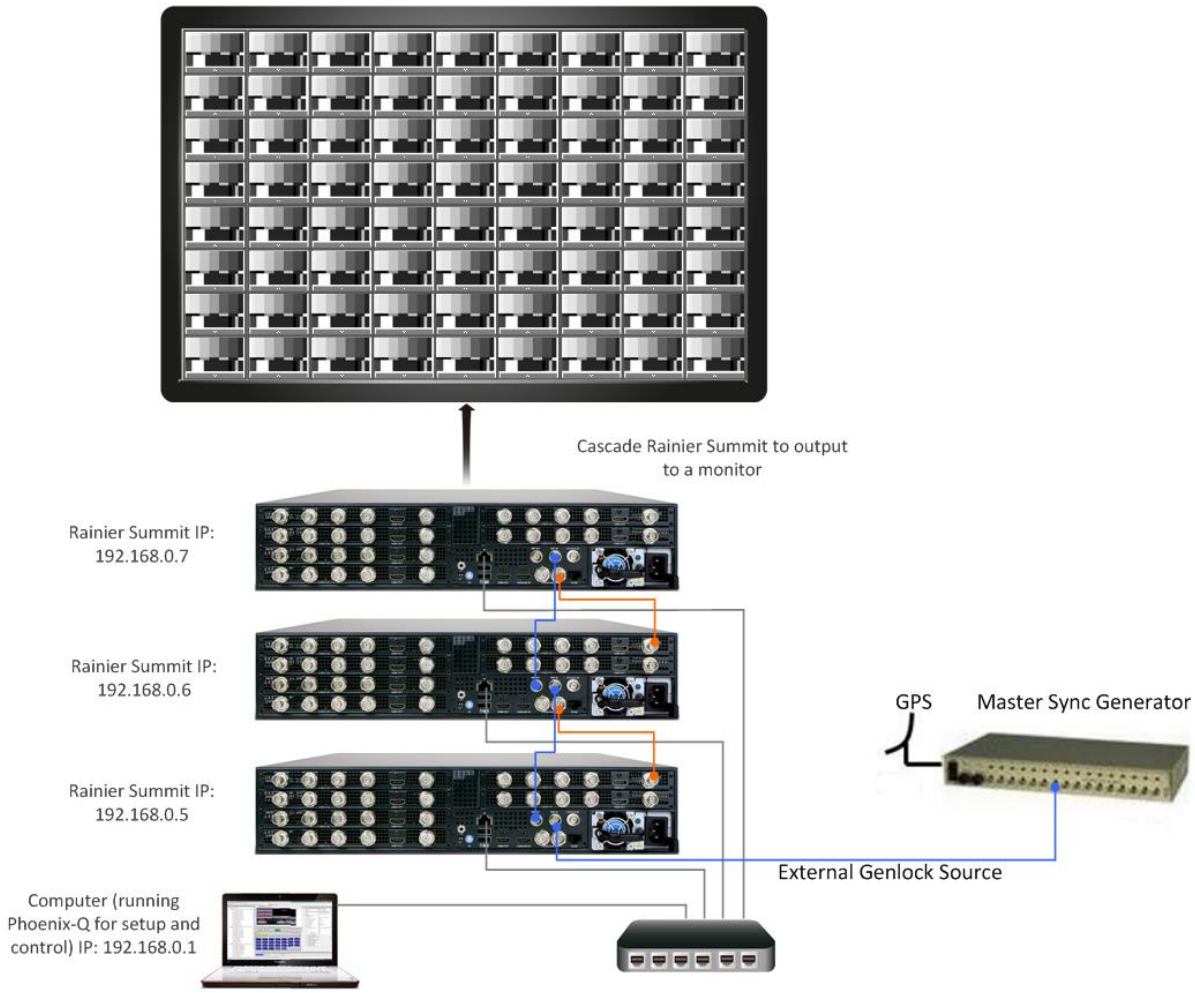


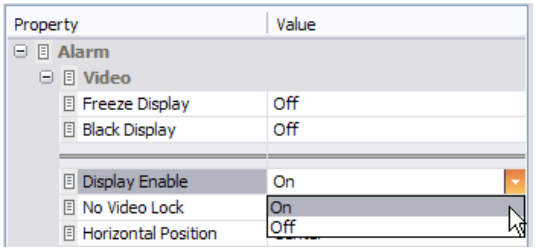
Figure 6-23 Cascaded Rainier Summit Illustration

Appendix A Setting Up the Alarm Sound

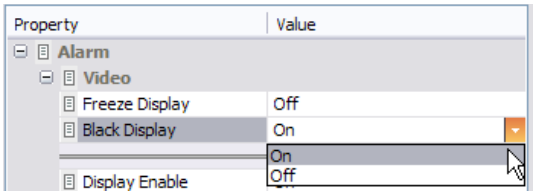
An audible alarm sound (“WAV” file format only) can be played during an occurrence of (no video/video black/video freeze) / (no audio) in each image window to allow for easy monitoring. This appendix lists the steps to set up playback of alarm sound.

A.1 Alarm Sound Setup for No Video / Video Black / Video Freeze Occurrence

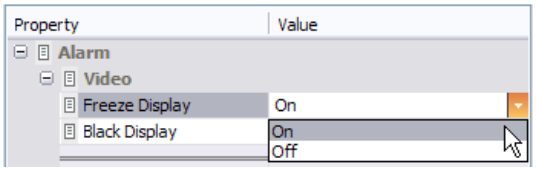
*Step 1. Under Image properties, select **On** in the **Alarm Setting→Alarm→Video→Display Enable** to activate the “no video” alarm feature.*



*Step 2. Select **On** in the **Alarm Setting→Black Display** to activate the “video black” alarm feature.*

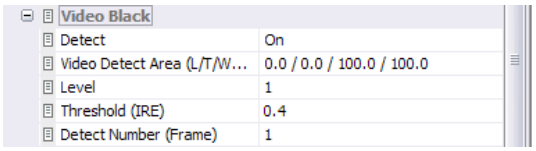


*Step 3. Select **On** in the **Alarm Setting→Freeze Display** to activate the “video freeze” alarm feature.*



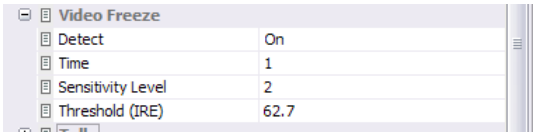
__Video Black__ and __Video Freeze__ are not available for an analog input signal.

*Step 4. Select **On** in the **Image Properties→Video Black→Detect**, and then freely adjust the **Video Detect Area**, **Level**, **Threshold (IRE/mV)** and **Detect Number (Frame)** to set the parameters for detecting video black.*



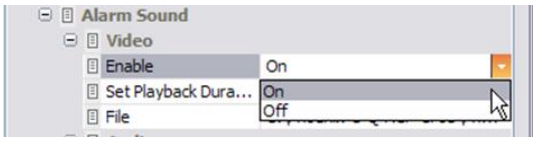
*The IRE/mV unit will depend on your choice in **System→Option→General→Video black threshold unit**.*

Step 5. Select **On** in **Image Properties→Video Freeze→Detect**, and then freely adjust the **Sensitivity Level**, **Time**, and **Threshold** to set the parameters for detecting video freeze.



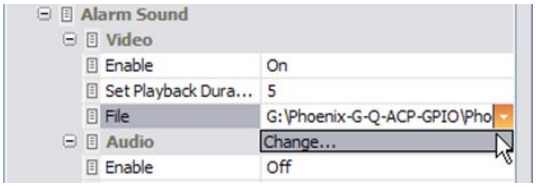
Video Black and **Video Freeze** cannot happen simultaneously. When both conditions exist, **Video Black** has the higher priority. Likewise, both functions are not available for analog input signal.

Step 6. Select **On** in **Alarm Setting→Alarm Sound→Video→Enable** to activate playback of alarm sound when no video/video black/video freeze is detected in an image window.



Step 7. Set the "video alarm" sound playback duration (seconds) for an image window.

Step 8. Click **Change** in **File** to choose another alarm sound to play when video alarm occurs for an image window.



Click the **Browse** button to select the location of the audio file. Click **Play** to hear a sampling of the alarm sound selected. Then click **OK** to exit.

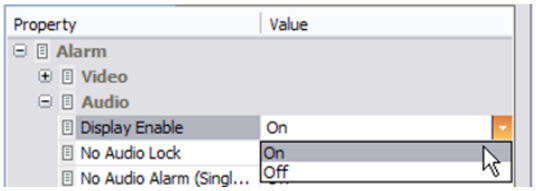
At present, only the "WAV" audio file format is supported.

Step 9. To enable alarm sound playback, click the **Start Alarm Sound (System)** icon (this functions as the main switch – will become grayed-out).

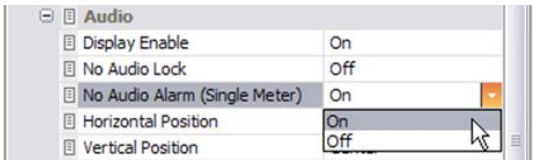
*To shut off alarm sound playback before the specified time duration has elapsed, click the **Stop Alarm Sound (System)** icon (will become grayed-out).*

A.2 Alarm Sound Setup for No Audio Occurrence

*Step 1. Under Image properties, select **On** in **Alarm Setting→Alarm→Audio→Display Enable** to activate the "no audio" alarm feature.*

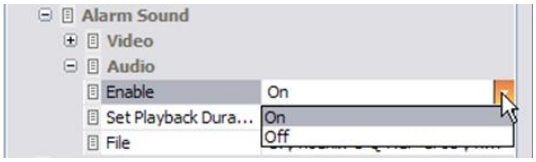


*Step 2. Select **On** in **No Audio Alarm (Single Meter)** to activate the alarm that will be triggered when no audio is detected on any of the enabled meters in the **Meter** dialog boxes (refer to step 9).*

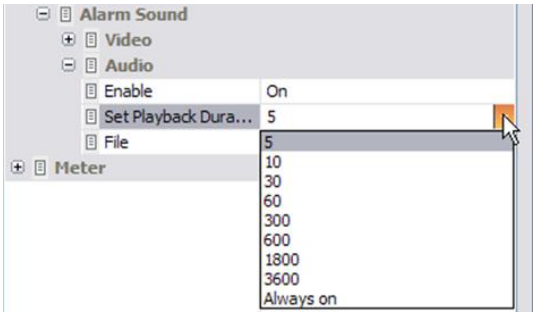


*Step 3. Set the **Signal In/Out** alarm **Response Time** for audio alarm to react upon regaining/losing audio signal (signal status from "normal" to abnormal", or vice versa).*

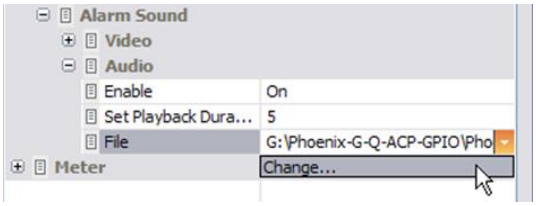
*Step 4. Select **On** in **Alarm Setting→Alarm Sound→Audio→Enable** to activate playback of alarm sound when no audio is detected in a particular image window.*



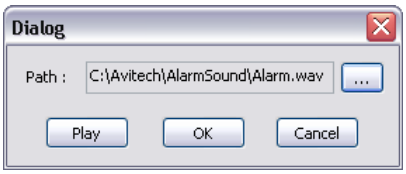
Step 5. Set the "audio alarm" sound playback duration (seconds) for an image window.



Step 6. *Click **Change** in **File** to choose another alarm sound to play when audio alarm occurs for an image window.*

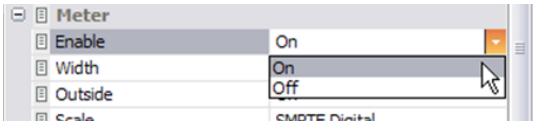


*Click the **Browse** button to select the location of the audio file. Click **Play** to hear a sampling of the alarm sound selected. Then click **OK** to exit.*

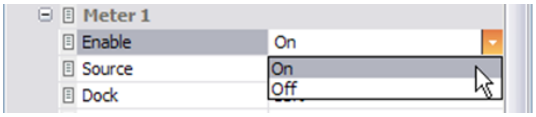


At present, only the "WAV" audio file format is supported.

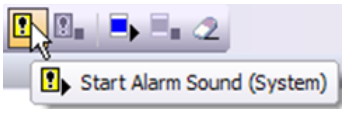
Step 7. *Select **On** in **Meter→Meter Enable** to turn on the audio meter for monitoring.*



Step 8. *Select **On** in **Meter 1/2/3/4→Enable** to monitor.*



Step 9. *To enable alarm sound playback, click **Start Alarm Sound (System)** icon (this functions as the main switch – will become grayed-out).*



*To shut off alarm sound playback before the specified time duration has elapsed, click **Stop Alarm Sound (System)** icon (will become grayed-out).*

A.3 Import and Export Alarm Sound

Export the **Alarm Sound** parameters to be edited externally using a text editor (i.e. Microsoft® Notepad), and then import it.

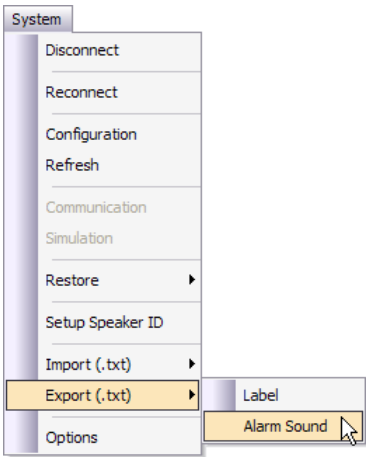


Figure A-1 Phoenix-Q Software: Click "System"→"Import/Export (.txt)"→"Alarm Sound"

*Step 1. Click **System→Export (.txt)→Alarm Sound** and assign a filename. Then click **Save**.*

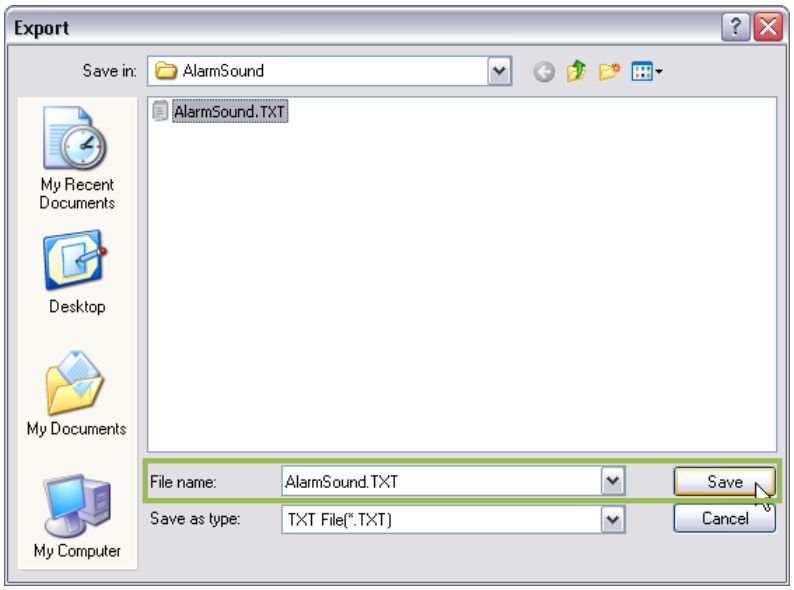


Figure A-2 Phoenix-Q Software: Export Alarm Sound

Step 2. Edit the text in the file (highlighted as shown below).
Make sure to follow the correct syntax "Video Sound File – file path\filename.wav" where only a space must be located before and after the dash (–).

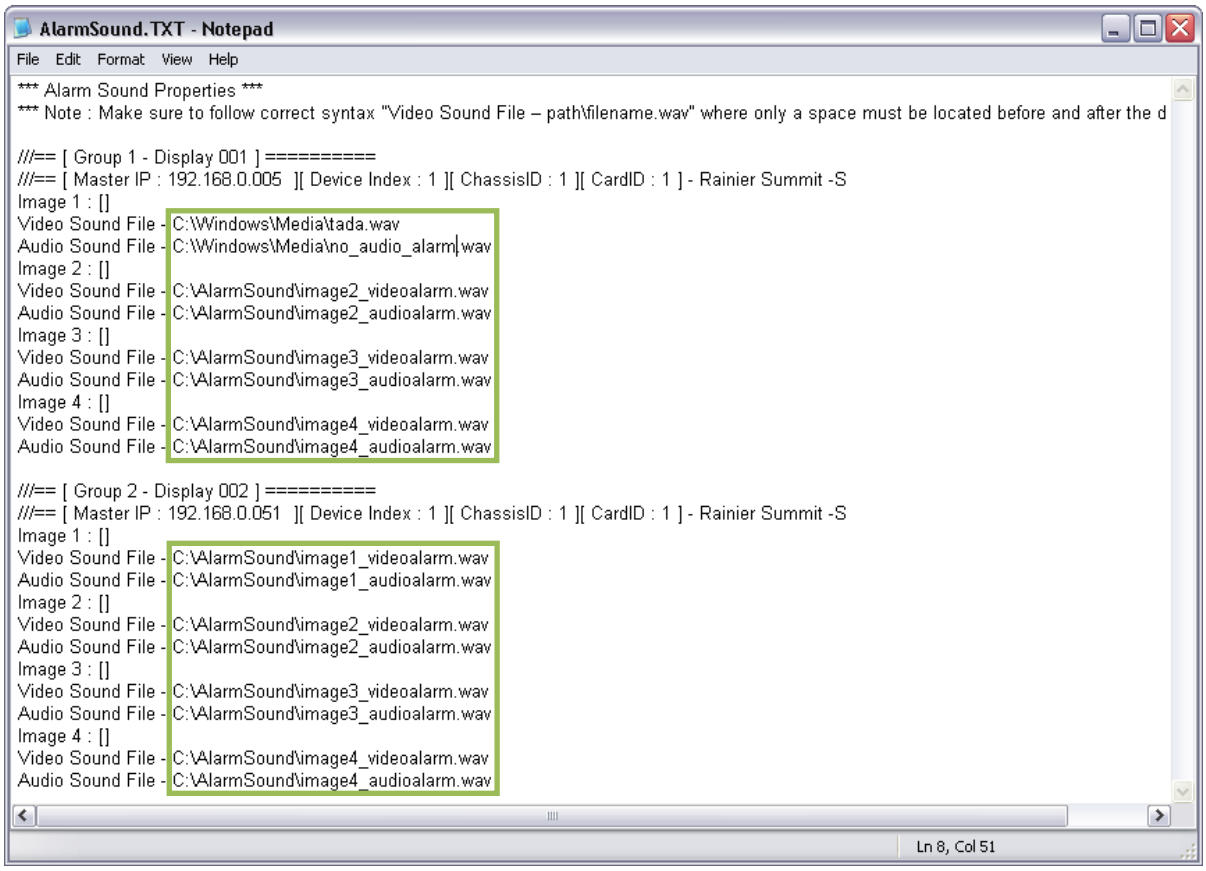


Figure A-3 Phoenix-Q Software: Change Alarm Sound File

*Step 3. When done editing the alarm sound filename, save the **txt** file and import it. The alarm sound WAV file(s) will be updated.*

A.4 Special Layout

Before starting or stopping the display of the special screen layout when “no video” occurs, make sure to enable the feature. To find out, click **System→Options** on the Phoenix-Q software’s drop-down menu.

The highlighted item must be set at **On**.

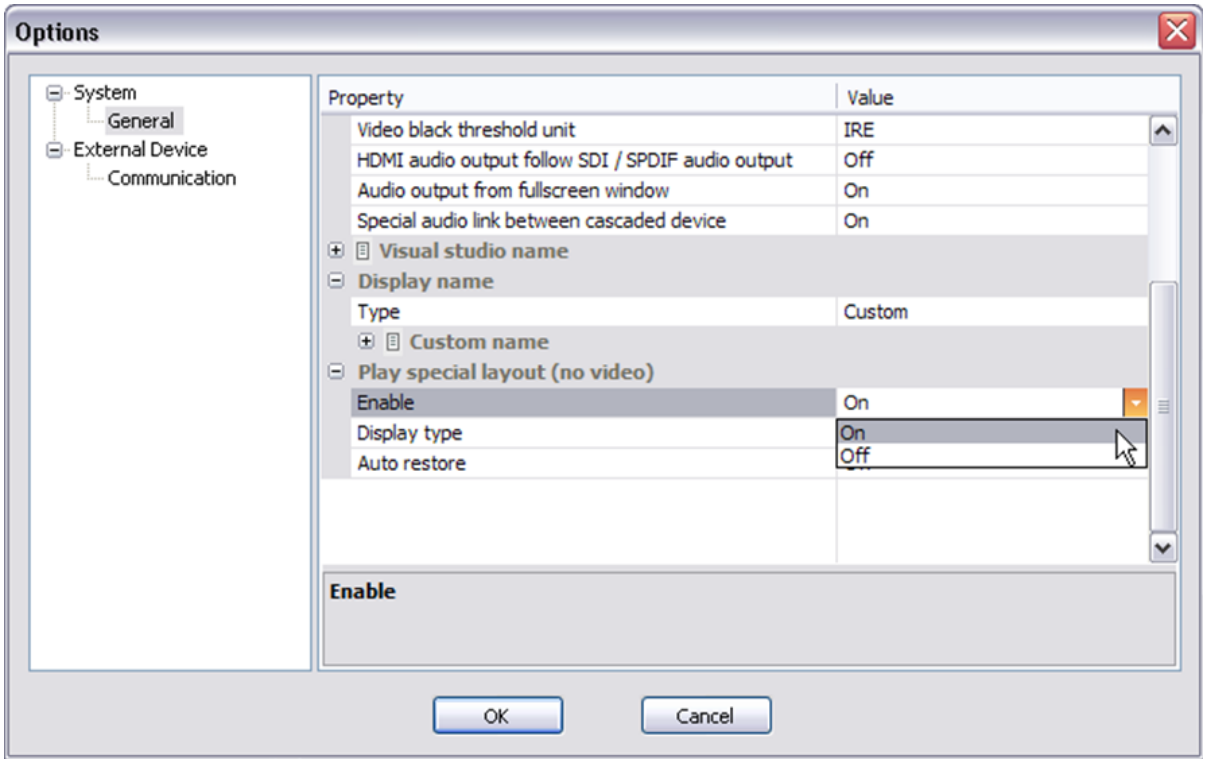


Figure A-4 Options: Enable Special Layout

Otherwise, the icon located on the Standard tool bar as shown below would be disabled (grayed-out). When enabled, click the icon to activate special screen layout alert when **No Video** occurs.

Figure A-5 Phoenix-Q Software: Enable Special Layout Button

When the special screen layout alert occurs, deactivate it by clicking the icon next to the one shown in the previous step. Notice that when the special screen layout alert occurs, many functions on the Phoenix-Q software will be disabled (i.e. **Group View** window, **Properties** window, window resize/ reposition in the main layout area…etc.).

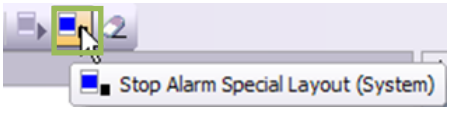


Figure A-6 Phoenix-Q Software: Shut Off Special Screen Layout Alert Button

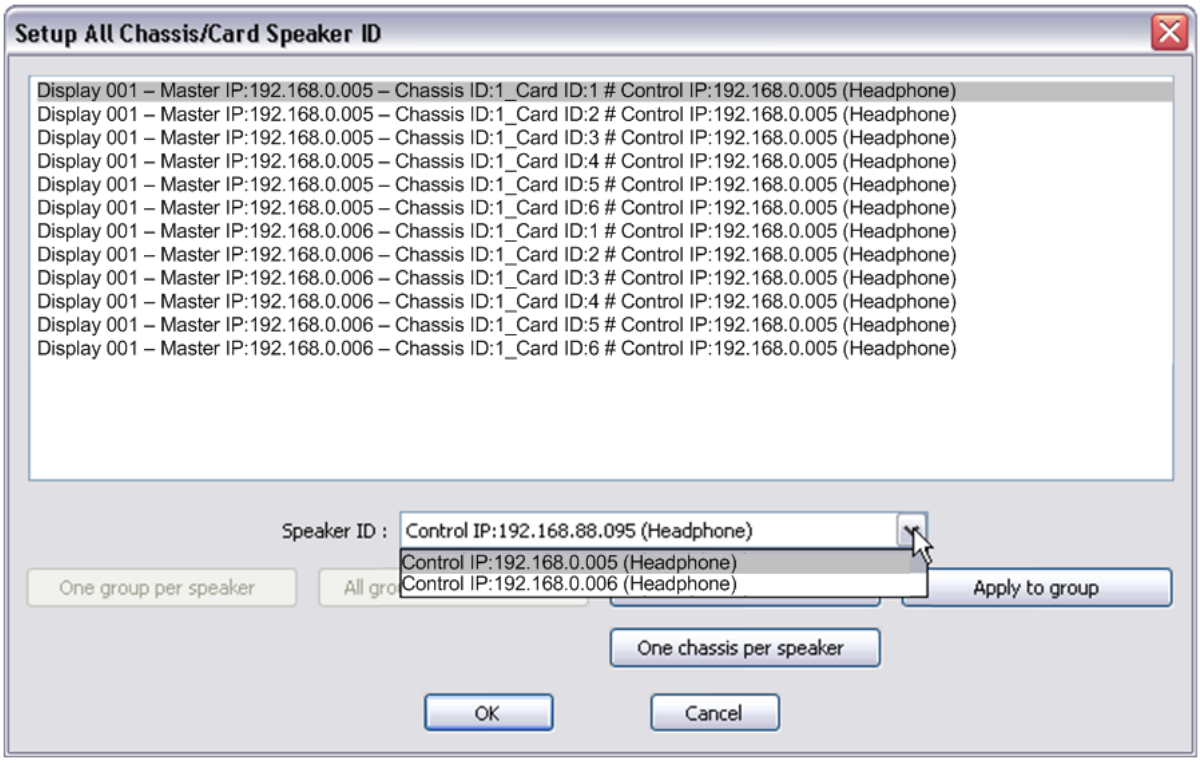
Appendix B Setting Up Audio

B.1 Setting Up the Speaker ID / Headphone for Audio Monitoring

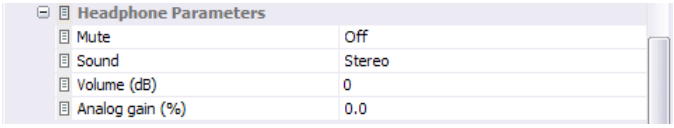
Step 1. ***For two or more cascaded chassis ID***

The ***System →Setup Speaker ID*** *functions to assign where each card will output to a particular chassis' headset connector.*

Make sure that two or more cascaded chassis' cards belong to the same group.



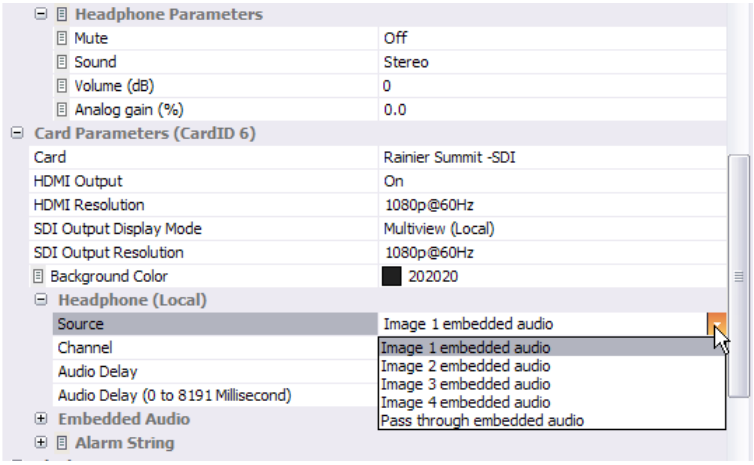
Step 2. To allow audio monitoring through the headphone connected to the headset port of the chassis, make sure to make the correct settings for the items under "Headphone Parameters" (Mute=Off; Sound; Volume (dB) and Analog gain (%)).



Step 3. *To further allow audio monitoring through the headphone connected to the headset port of the chassis, make sure to make the correct source settings for the items under "Headphone (Local)".*

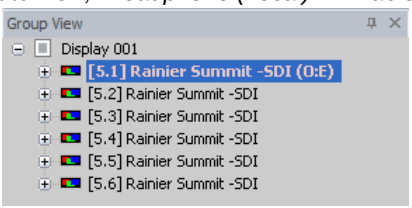
Select the output type of embedded audio signal (when available, see below "Note").
Select "Image # embedded audio" to allow output to come from the embedded audio signal of the selected "Source" image (next item).

Or, select "Pass through embedded audio" to allow audio output from another internally cascaded card or from another externally cascaded chassis' card.

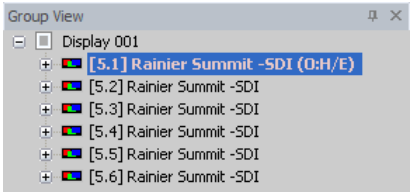


1. *Channel / Audio Delay / Audio Delay (0 to 8191 ms) under "Headphone (Local)" will be disabled upon selecting "Pass through embedded audio."*
2. *The "Group View" column provides quick information on settings in "Properties→Card Parameters" section:*

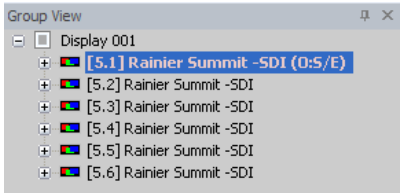
Scenario 1 (O:E): "HDMI Audio Mute"=On; "Headphone (Local)"→Enable=On



Scenario 2 (O:H/E): "HDMI Audio Mute"=Off; "Headphone (Local)"→Enable=On



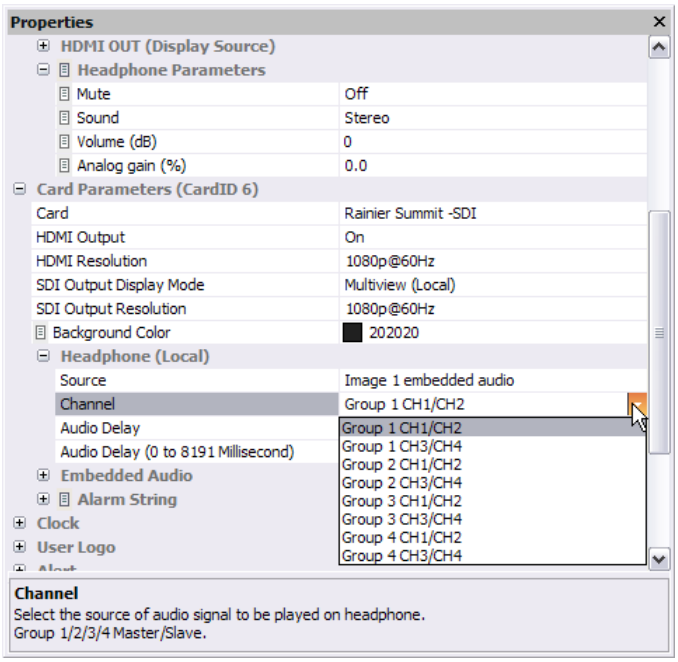
Scenario 3 (O:S/E): "HDMI Audio Mute"=On; "Headphone (Local)"→Enable=On



Step 4. Select the audio channel to monitor via headphone.

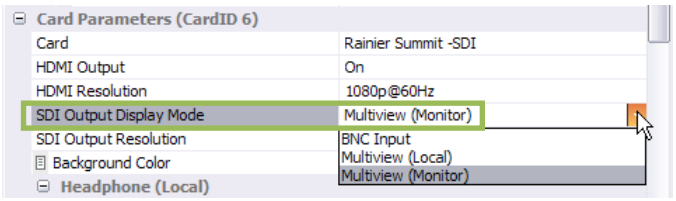
for an 8-channel (7.1) and 6-channel (5.1) surround audio system, select from any of the first two groups listed in the drop-down menu
(Group 1 CH1/CH2 or CH3/CH4; Group 2 CH1/CH2 or CH3/CH4)

for a 2-channel (stereo) audio system, only the first group is applicable
(Group 1 CH1/CH2)



B.2 Setting Up the SDI Output With Audio

Step 1. To allow audio monitoring through the SDI output port of the card connected to a downstream device, make sure to make the correct settings for the items under "Card Parameters" (SDI Output Display Mode = Multiview (Monitor) or Multiview (Local)).

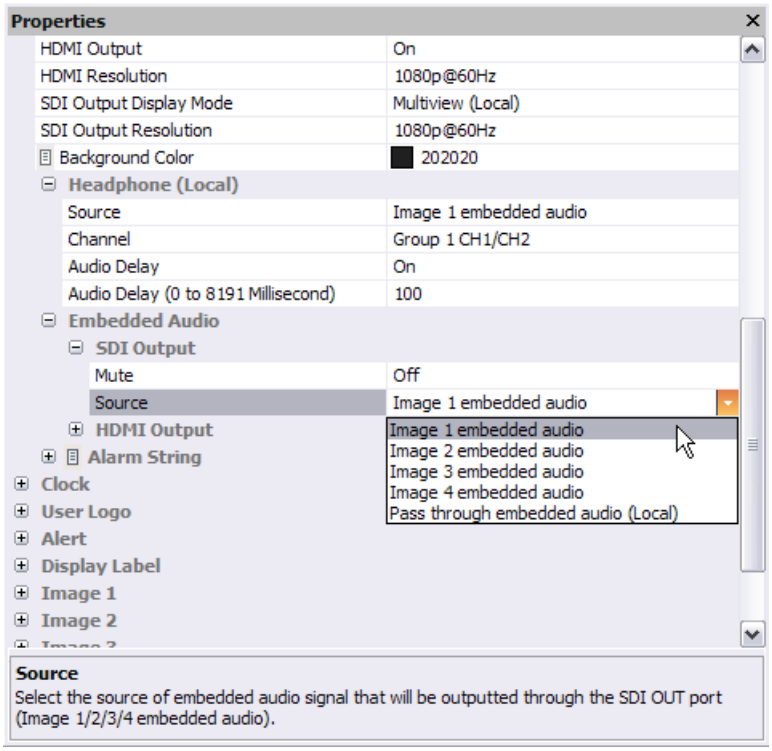


Mute / Source under "SDI Output" will be disabled upon selecting BNC Input under the "SDI Output Display Mode" in the previous item.

Step 2. Select "Off" to turn on audio meter monitoring of the "Mute".

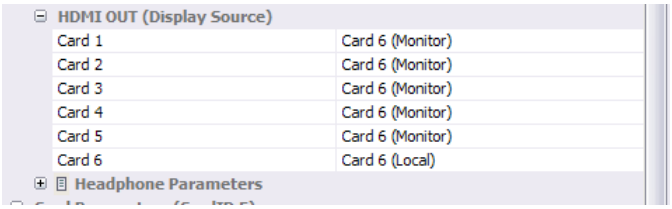
Select "Image # embedded audio" to allow the output to come from the embedded audio signal of the selected "Source" image (next item).

Select "Pass through embedded audio" to allow audio output from another internally cascaded card or another externally cascaded chassis' card.



B.3 Setting Up the HDMI Output With Audio

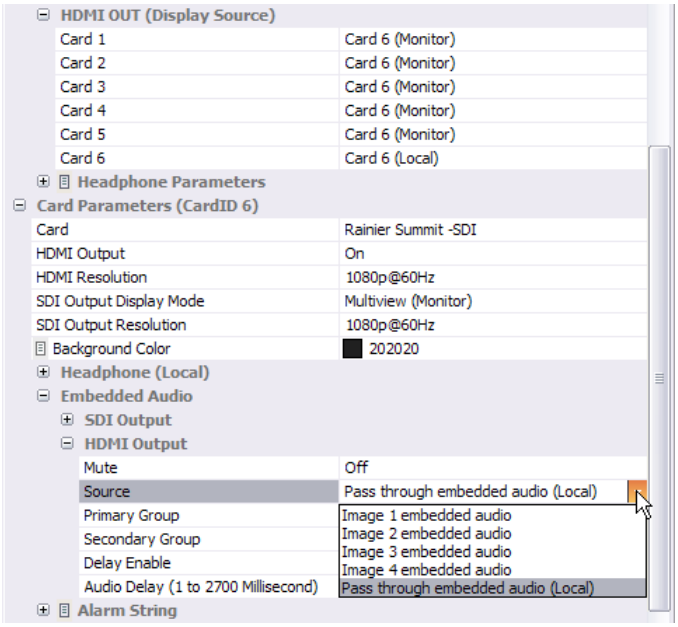
Step 1. To allow audio monitoring through the HDMI output port of the card connected to a downstream device, make sure to make the correct settings for the items under "Chassis Parameters" (HDMI Output = Card # (Local) or Card 6 (Monitor), for Card 6 to be fixed at Card 6 (Local)).



Step 2. Select "Off" to turn on audio meter monitoring of the "Mute".

Select "Image # embedded audio" to allow the output to come from the embedded audio signal of the selected "Source" image (next item).

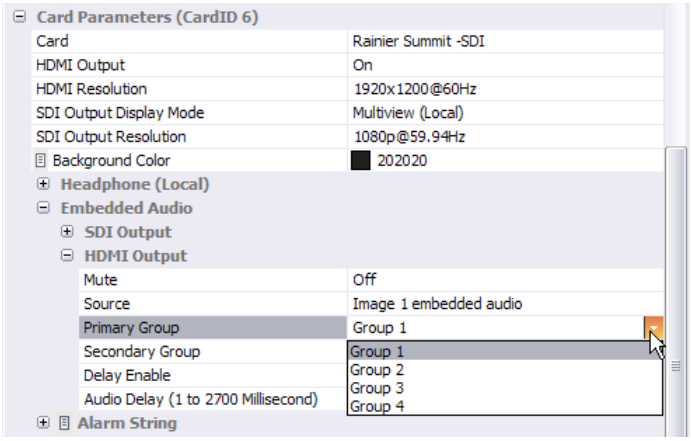
Select "Pass through embedded audio" to allow audio output from another internally cascaded card or another externally cascaded chassis' card.



Step 3. Select the combination of "Primary Group" and "Secondary Group" to be monitored.

for an 8-channel (7.1) and 6-channel (5.1) surround audio system, select "Group 1" or "Group 2."

for a 2-channel (stereo) audio system, only Group 1 is applicable for both Primary Group and Secondary Group.



Sample Illustration 1

To allow audio output from the chassis' headset port and from each card's HDMI OUT port –

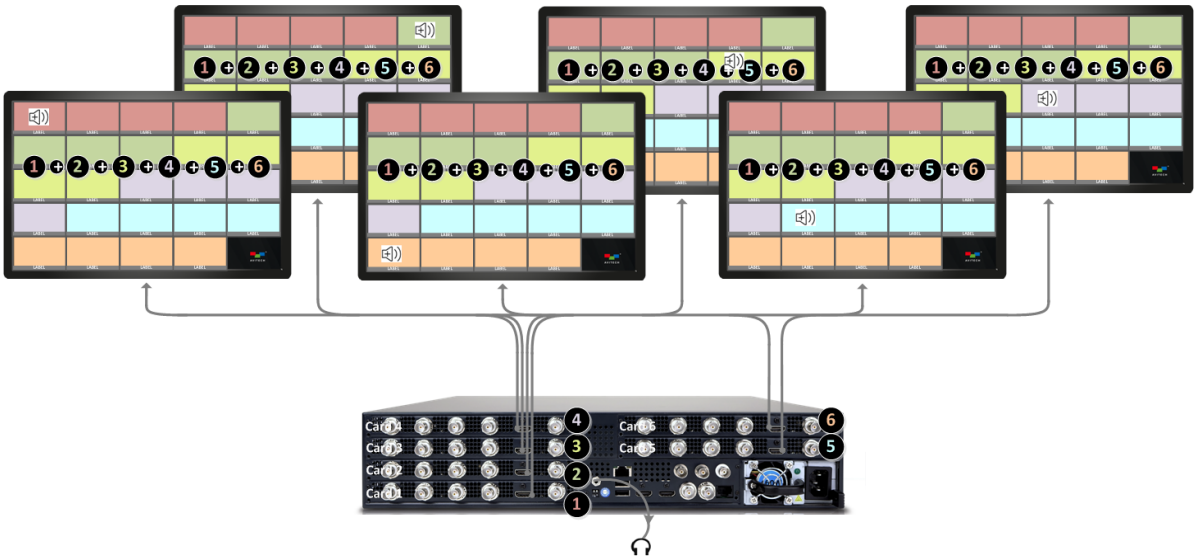
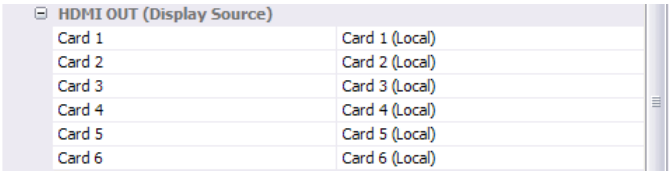
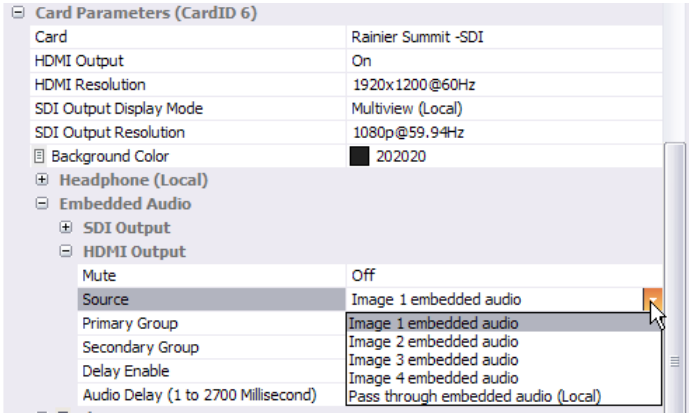


Figure B-1 Audio Output From Each Card's HDMI OUT Port as well as Headset

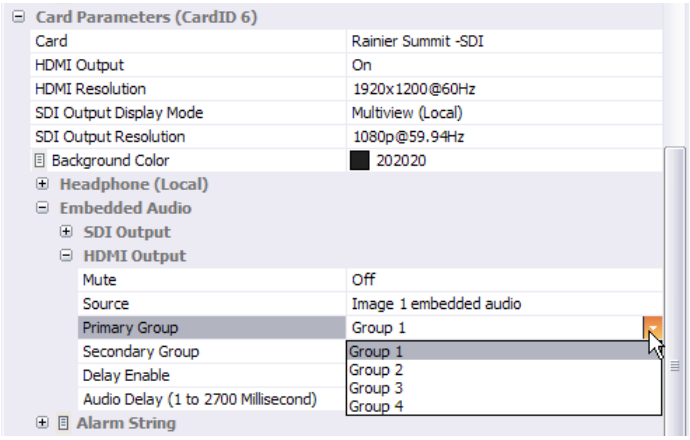
- ✓ ***HDMI OUT (Display Source)→Card #→Card # (Local)*** *(under Chassis Parameters so this includes all six cards)*



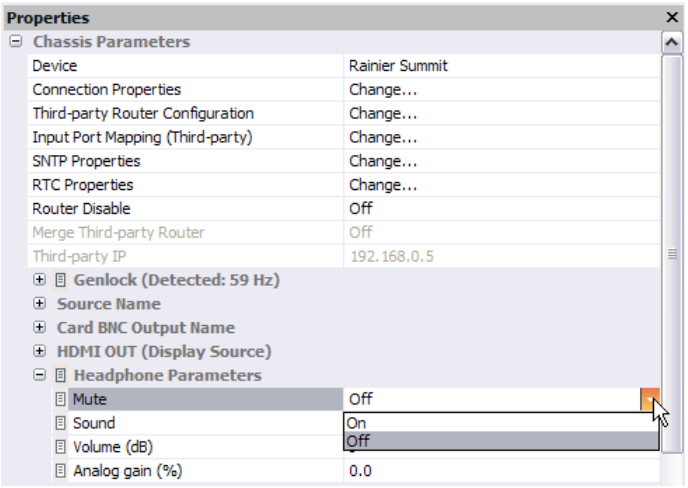
- ✓ ***Embedded Audio→HDMI Output→Source*** *(card level; select from among the four image's audio signal for each card)*



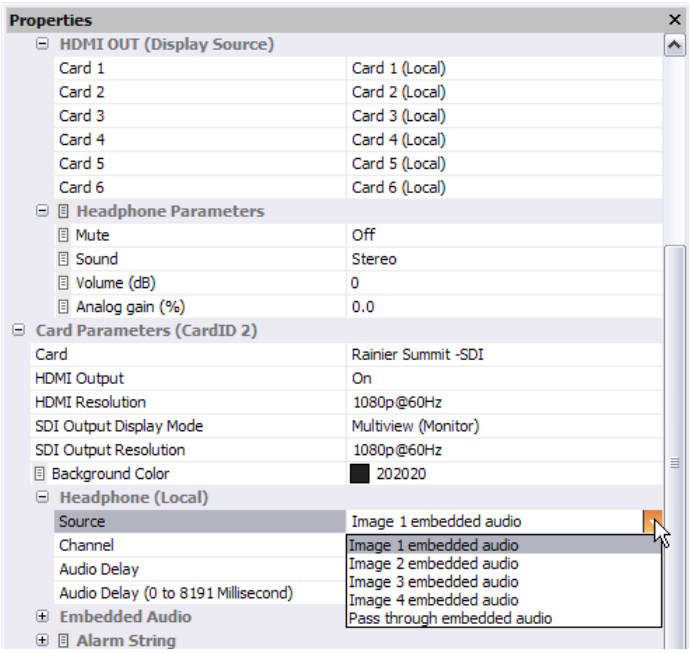
✓ *Select the combination of "Primary Group" and "Secondary Group" to be monitored.*



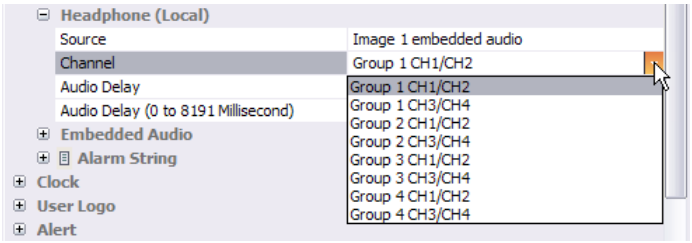
✓ ***Headphone Parameters→Mute→Off*** *(chassis level so this includes all six cards)*



✓ ***Headphone (Local)→Source*** *(card level; select from among the four image's audio signal or pass through embedded audio)*



✓ ***Headphone (Local)→Channel→Group 1 CH1/CH2*** *(default setting; card level; depending on the signal source, select another group to monitor if available)*



Sample Illustration 2

To allow audio output from the second chassis' (IP: 192.168.0.6) headset port and from the first chassis (IP: 192.168.0.5) card ID 5 image 3 embedded audio –

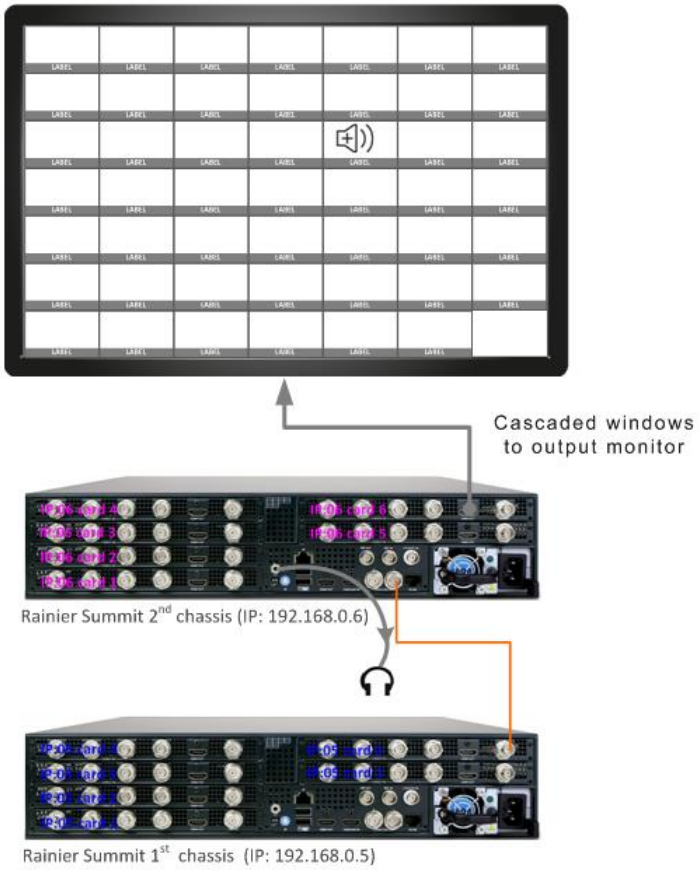
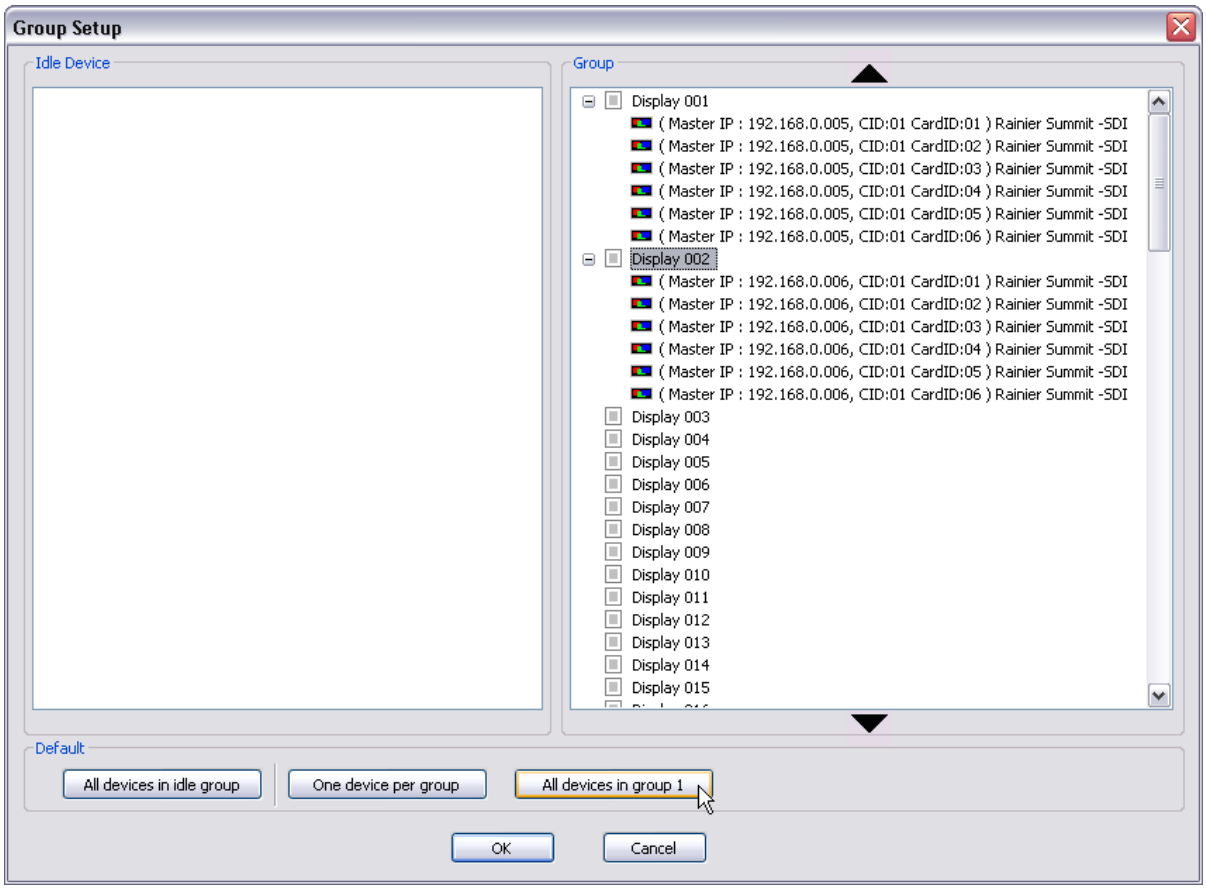
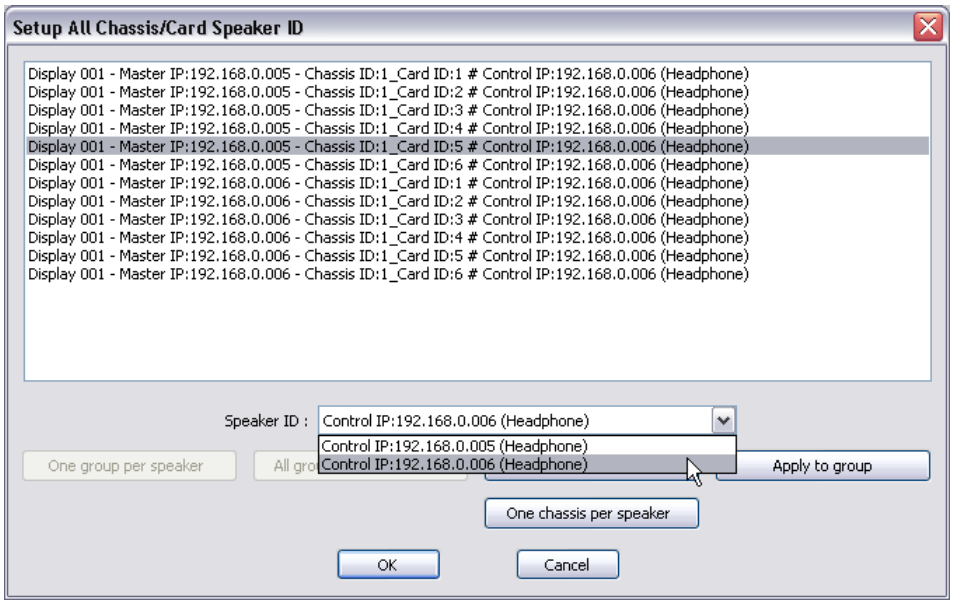


Figure B-2 Audio Output From the First Chassis Card ID 5 Image 3 as well as the Second Chassis' Headset

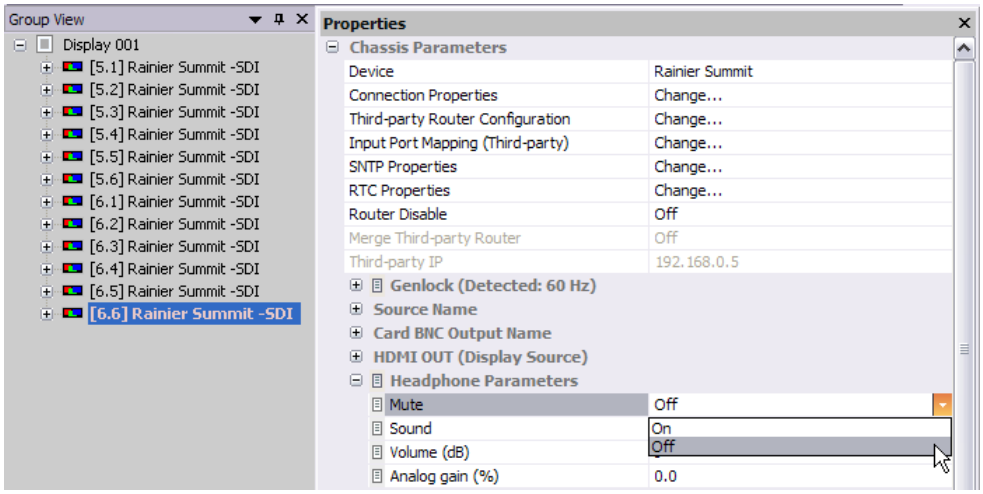
✓ *Assign all 12 cards to one group*



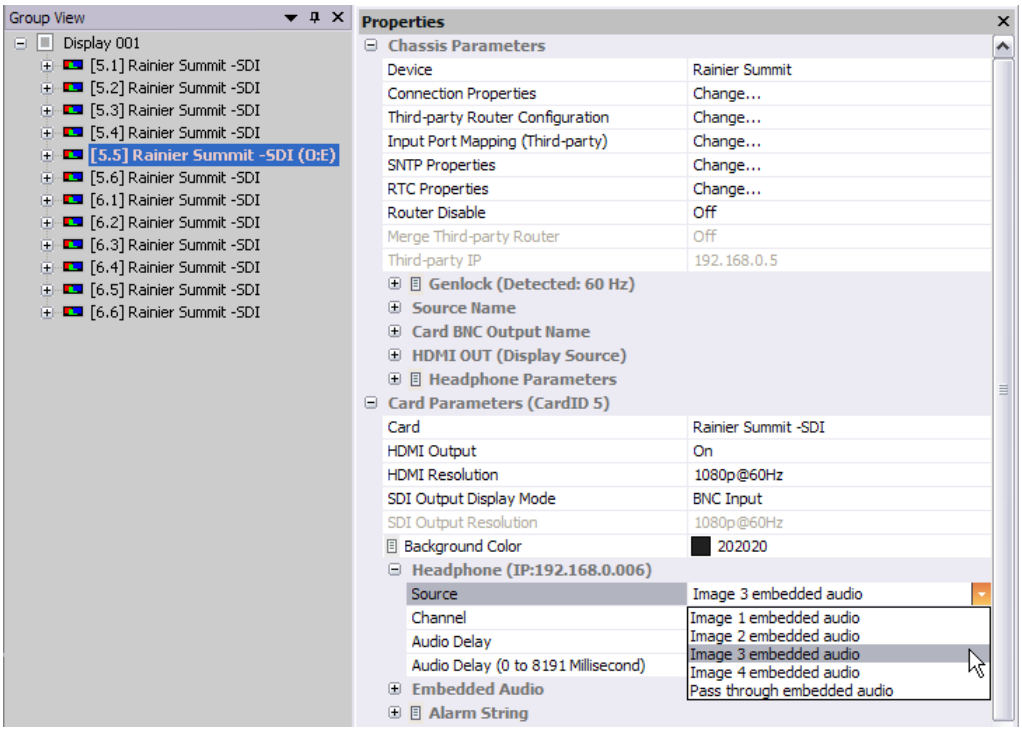
✓ ***System→Setup Speaker ID*** *(set chassis IP:192.168.0.5 card ID 5 to output the audio to the chassis' IP:192.168.0.6 headset port)*



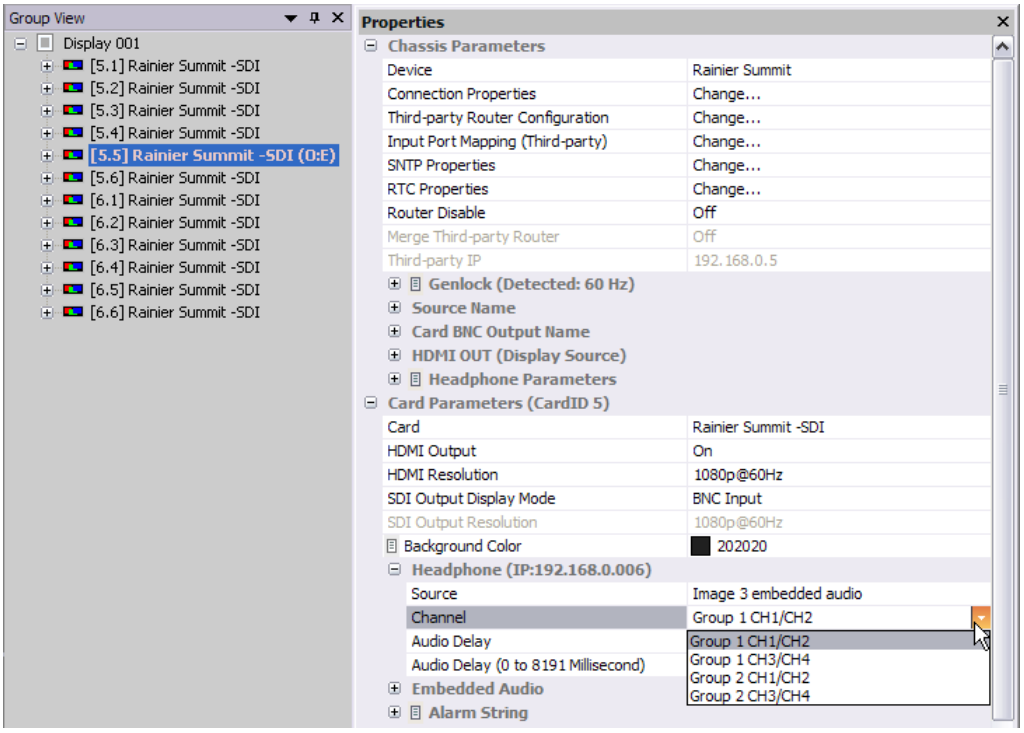
✓ ***Headphone Parameters→Mute→Off*** *(chassis IP:192.168.0.6; chassis level so this includes all six cards)*



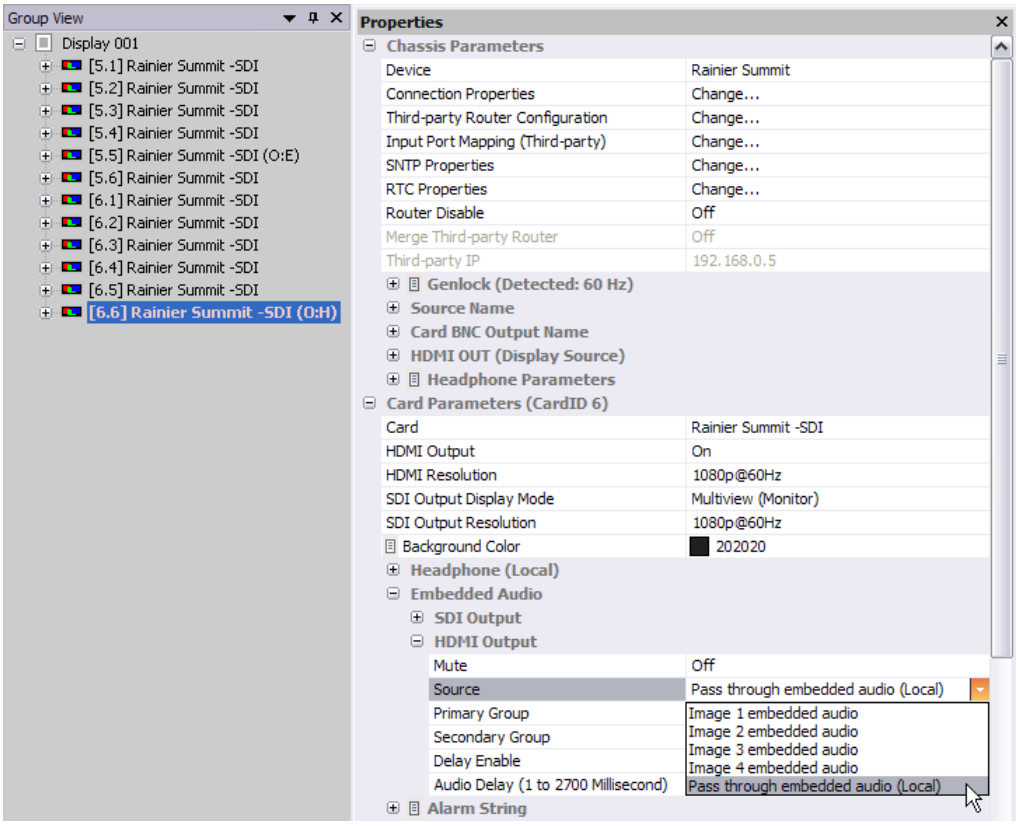
✓ ***Headphone (Local)→Source*** *(card level; this must be set for chassis IP:192.168.0.5 card ID 5; select "Image 3 embedded audio." Take note that only one card can be enabled at a time, turning on card ID 6's local headphone will cause the other card's local headphone to be set as pass through embedded audio)*



✓ ***Headphone (Local)→Channel→Group 1 CH1/CH2*** *(default setting; card level; depending on the signal source select another group to monitor if available)*



✓ ***Embedded Audio→Source***
(chassis IP:192.168.0.6 card ID 1 to card ID 6 select "Pass through embedded audio"; chassis IP:192.168.0.5 card ID 6 select "Pass through embedded audio"; card 5 select "Image 3 embedded audio"; card ID 1 to card ID 4 select "Pass through embedded audio")



Appendix C Setting Up Static IP

The following two methods allow the Rainier Summit to be in the same network mask as the connected computer.

Method 1: Change the IP Address of the Rainier Summit Chassis

Step 1. Run the Phoenix-Q software by double-clicking ***Phoenix-Q.exe****.*

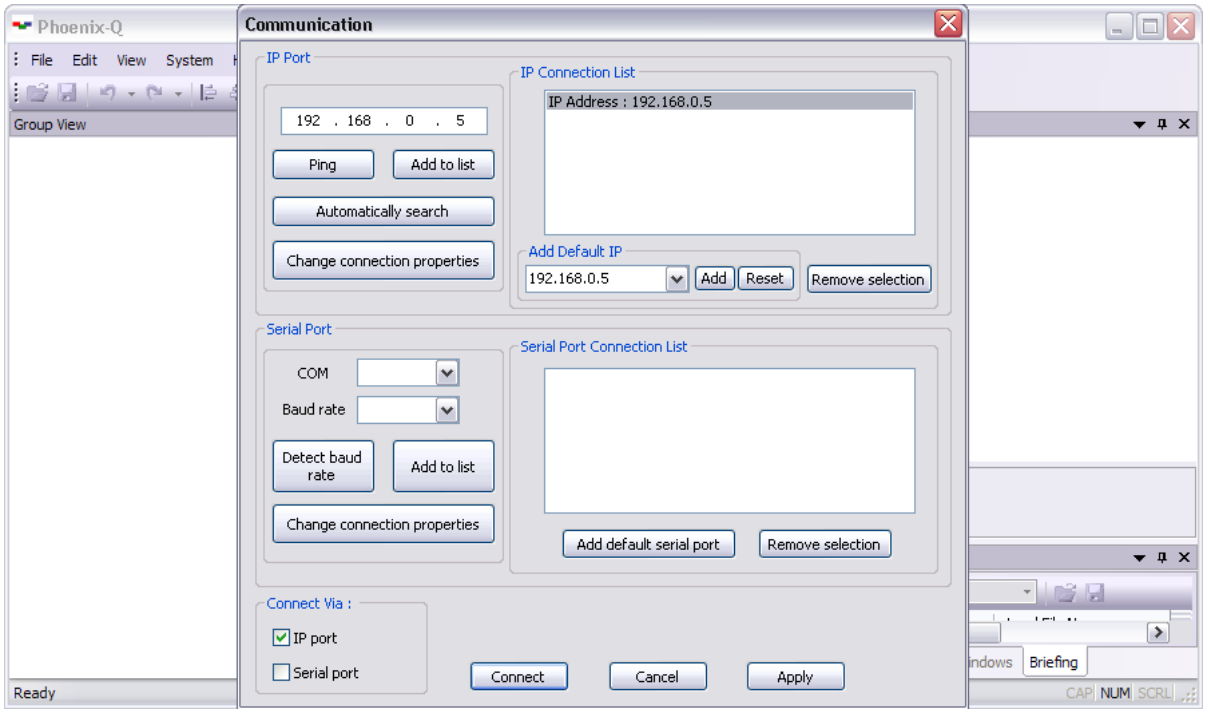


Figure C-1 Phoenix-Q Software: Initial Screen

Step 2. *Change the IP address by first clicking the default **IP Address: 192.168.0.5** entry in the **IP Connection List** window. Then, click **Change Connection Properties**.*

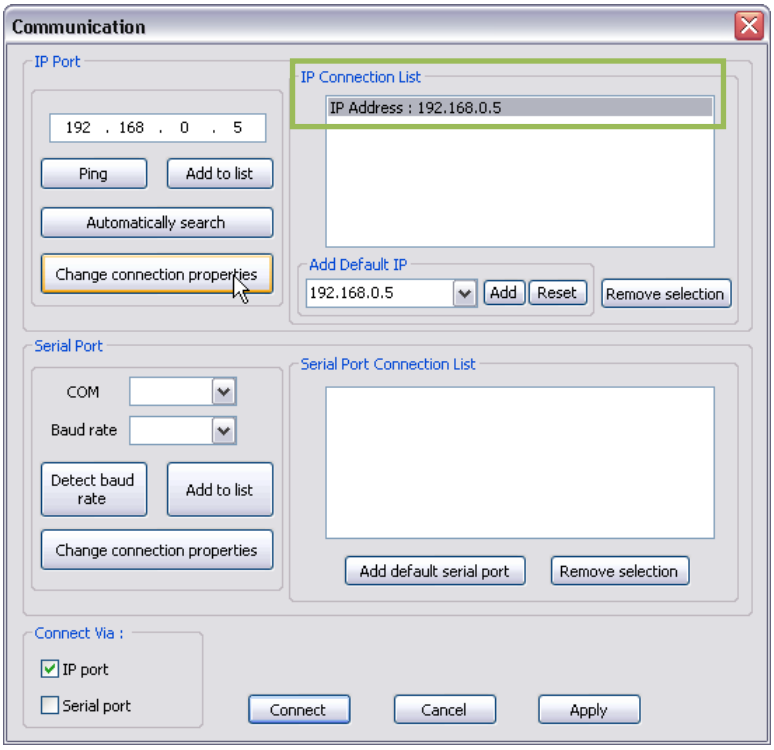


Figure C-2 Phoenix-Q Software: Click "Change Connection Properties"

*The present IP address is shown in the **IP address** field. The corresponding **Subnet Mask** and **Gateway** belonging to the present IP address is also displayed.*

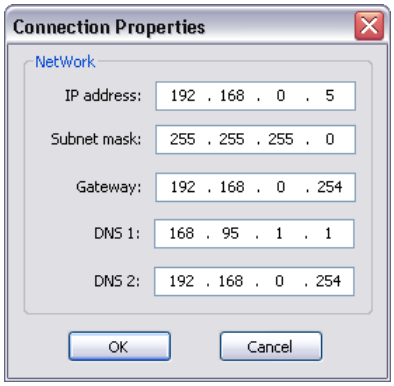


Figure C-3 Phoenix Q Software: "Connection Properties" Screen

Step 3. *Enter a new **IP address**. Edit the **Subnet Mask** and **Gateway**. Then, click **OK**. The IP address will be changed for the target device (saved to flash memory of the Rainier Summit).*

Step 4. *Click **OK** to exit.*

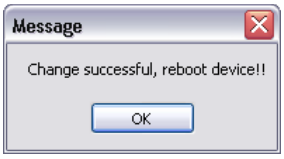


Figure C-4 IP Address Change Successful

Method 2: Change the IP Address of the Controlling Computer

For Windows XP

*Step 1. Click **Start**, and then right-click **My Network Places**, and click **Properties**.*

*Step 2. When the next screen appears, right-click **Local Area Connection** icon, and click **Properties**.*

*Step 3. When the next screen appears, click to highlight the **Internet Protocol (TCP/IP)**, and click **Properties**.*

*Step 4. When the next screen appears, click the radio button to select **Use the following IP address**, and then enter the **IP address: 192 . 168 . 0 . x** (where **x** is any value from **1 – 4** or **6 – 253**), and **Subnet mask: 255 . 255 . 255 . 0**.*

*Step 5. Click **OK** to exit.*

For Windows 7

*Step 1. Click **Start** and type in **Network and Sharing Center**.*

*Step 2. Click **Change Adapter Settings** on the left.*

*Step 3. Right-click the **Local Area Connection** that the Rainier Summit is connected to and select **Properties**.*

*Step 4. When the next screen appears, click to highlight **Internet Protocol Version 4 (TCP/IPv4)**, and click **Properties**.*

*Step 5. When the next screen appears, click the radio button to select **Use the following IP address**, and then enter the **IP address: 192 . 168 . 0 . x** (where **x** is any value from **1 – 4** or **6 – 253**), and **Subnet mask: 255 . 255 . 255 . 0**.*

*Step 6. Click **OK** to exit.*

For Windows 10

*Step 1. On the taskbar, right click on the internet icon and click **Open Network and Sharing Center**.*

*Step 2. In the **Control Panel** > **Network and Internet** > **Network and Sharing Center**, click the **Connections** link on the left.*

*Step 3. A new window will open up showing the details about your internet connection, click **Properties**.*

*Step 4. Another window will open up showing the items used by your connection, click **Internet Protocol Version 4 (TCP/IPv4**) if you want to change the IPv4 address of your computer. Then click **Properties**.*

*Step 5. When the next page appears, click the radio button to select **Use the following IP address**, and then enter the **IP address: 192 . 168 . 1 . x** (where **x** is any value from **1 – 4** or **6 – 253**), and **Subnet mask: 255 . 255 . 255 . 0**.*

*Step 6. Click **OK** to exit.*

Appendix D Resetting to the Factory-Default State

The following two methods allow the resetting of the Rainier Summit to the factory-default state.

Method 1: Using the Dip Switch

Step 1. Turn off power from the power strip to the Rainier Summit.

*Step 2. Push the number **2** dip switch located on the rear of the Rainier Summit downward to the **On** position.*

Figure D-1 Push Number 2 Dip Switch Downward

Step 3. Power-on the Rainier Summit by restoring power coming from the power strip.

*Step 4. Push back the number **2** dip switch upward to the default position.*

Method 2: Using the Phoenix-Q Software

*Step 1. Run the Phoenix-Q utility by double-clicking **Phoenix-Q_Vx.xx.exe**.*

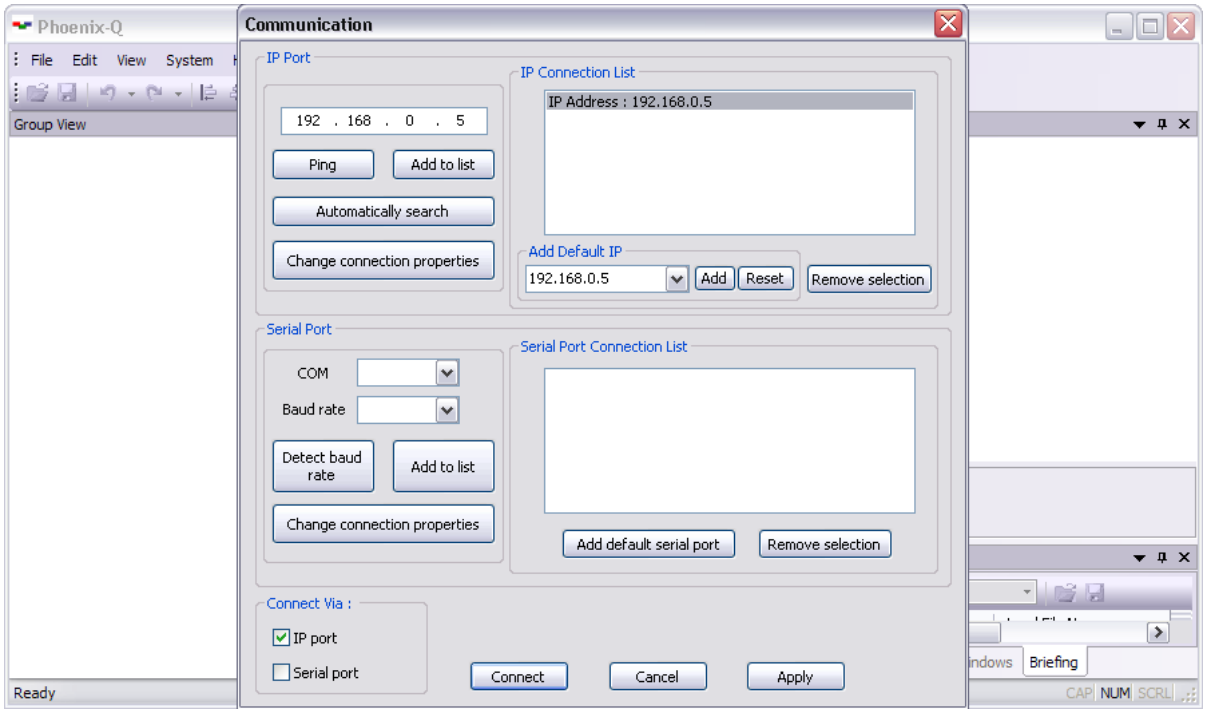


Figure D-2 Phoenix-Q Utility

*Step 2. Click **Cancel** to exit the **Communication** screen.*

*The **Communication** window will always pop-up upon starting up Phoenix-Q utility.*

*Step 3. Click **Help→Upgrade Firmware**.*

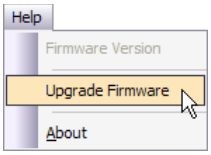


Figure D-3 Phoenix-Q Utility: Help→Upgrade Firmware

*Step 4. Select **Rainier Summit** and click **Start** to continue.*

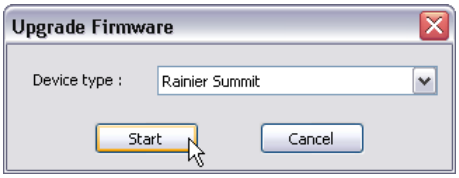


Figure D-4 Upgrade Firmware: Device Type

*Step 5. Select **CB** and then type in the Rainier Summit's IP address (or use the factory-default address **192.168.0.5**) for resetting to the factory-default state.*

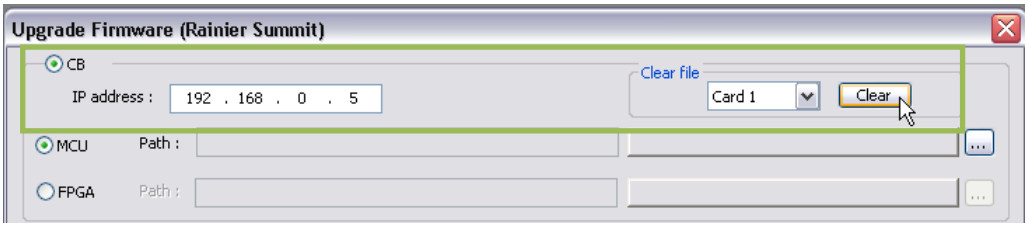


Figure D-5 Upgrade the Firmware: CB

Step 6. Make sure the Card ID is correct.

*Step 7. Click **Clear** to start the reset process.*

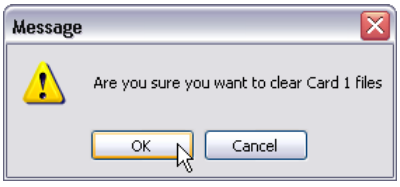


Figure D-6 Clear Card 1

Step 8. Reboot the Rainier Summit (using the power strip to turn OFF and ON) to complete the resetting to the factory-default state.

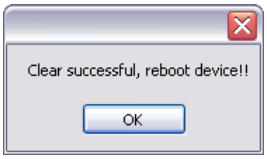


Figure D-7 Reboot the Device

Appendix E Compatibility with Third-party Interface Device

The Rainier Summit system supports production switchers and other tally interface devices through an Ethernet connection. The combined system can dynamically update the monitor wall elements to reflect any text and status updates from the switcher/tally device. This appendix describes how Rainier Summit can be configured to receive dynamic labels and status from any tally interface devices.

At the time of writing of this manual, the Rainier Summit has been tested to support TSL, BlackMagic Videohub Router, Vikinx Router and Sony switcher. Other production switchers or video router may be added in the future.

Setting Up the Configuration

For the Rainier Summit to receive status information from a third-party device and display on the monitor wall as a visual tally information, configure the Rainier Summit by performing the following setup in Phoenix-Q software:

Step 1. Run the Phoenix-Q software (see chapter 3 for details).

Step 2. Make sure to set the correct IP address (see Appendix C for details).

*Step 3. On the **Properties** window under **Third-party Router Configuration**, click the rightmost edge and click **Change**.*

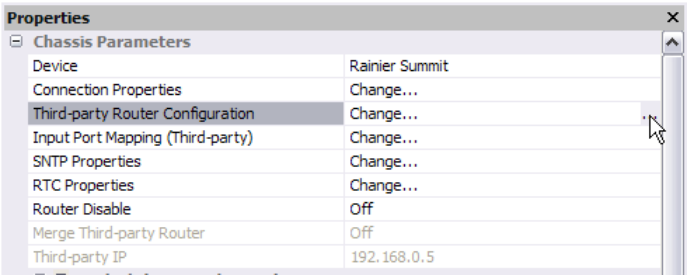


Figure E-1 Properties: Change TSL UDP Parameters

*Step 4. Click **Enable** and click the radio button to select an upstream third-party device.*

- ✓ *If the upstream third-party device is TSL, select the correct **Version** number and enter the correct **UDP Port** (User Datagram Protocol) value.*
- ✓ *If the upstream third-party device is Videohub or VIKINX, enter the correct **IP** address and the **Port** value that matches the connected switcher or router.*

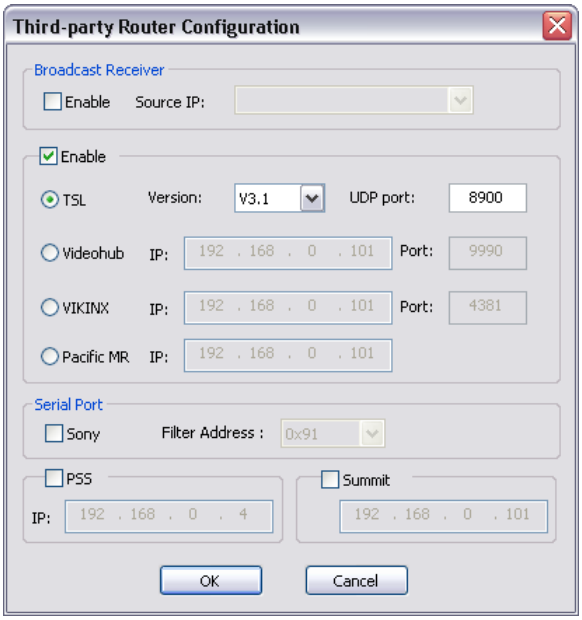


Figure E-2 Enable Third-party Parameters

*Step 5. Click **Enable** and enter the Source **IP** address for the Rainier Summit to be able to receive dynamic source names and tally information from an upstream third-party device, and broadcast to another Rainier Summit. Then, click **OK** to exit.*

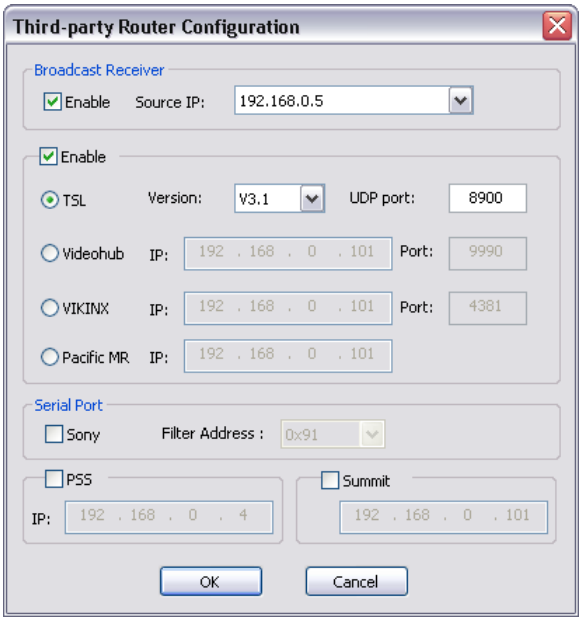


Figure E-3 Enable the Parameters for Rainier Summit as a Broadcast Receiver

Step 6. *On the **Image Properties** window under **TSL Enable**, make sure it was set **On** for the **Image #** of the Rainier Summit that the Sony switcher wishes to communicate with.*

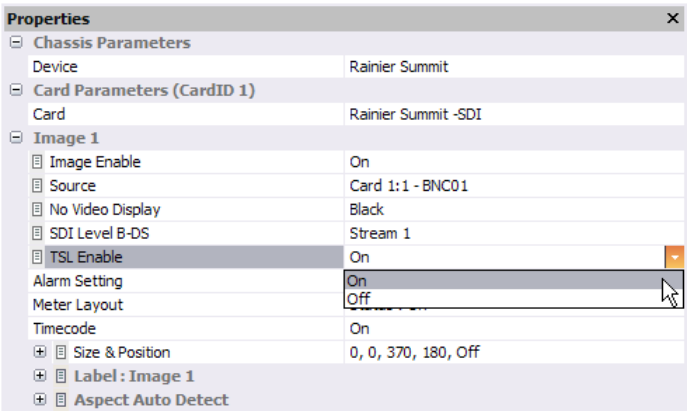


Figure E-4 Phoenix-Q Software: Enable Image #'s TSL UMD Properties

Step 7. *On the **Properties** window under **Third-party Router Configuration**, click the rightmost edge and click **Change**.*

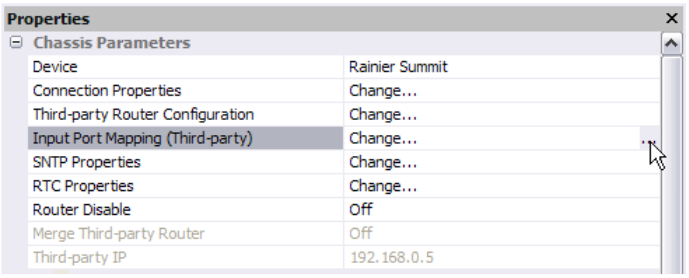


Figure E-5 Phoenix-Q Software: Change the Input Port Mapping (Third-party)

*Make sure that the **Input Port Mapping (Third-party)** address corresponds to the assigned value of the Sony switcher.*

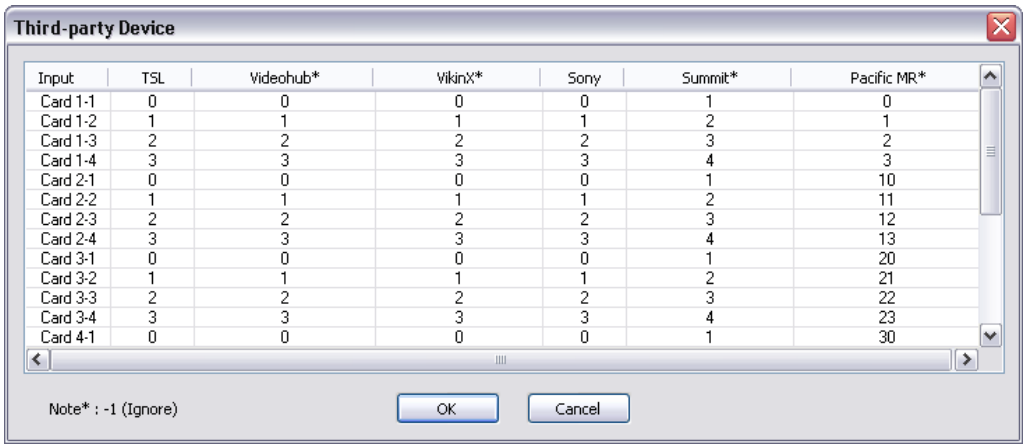


Figure E-6 Phoenix-Q Software: Select the Correct Display Address That Matches the Sony Switcher

*Step 9. Make sure the label **Display Type** of the image window is set at **Destination Name (D-Name)**.*

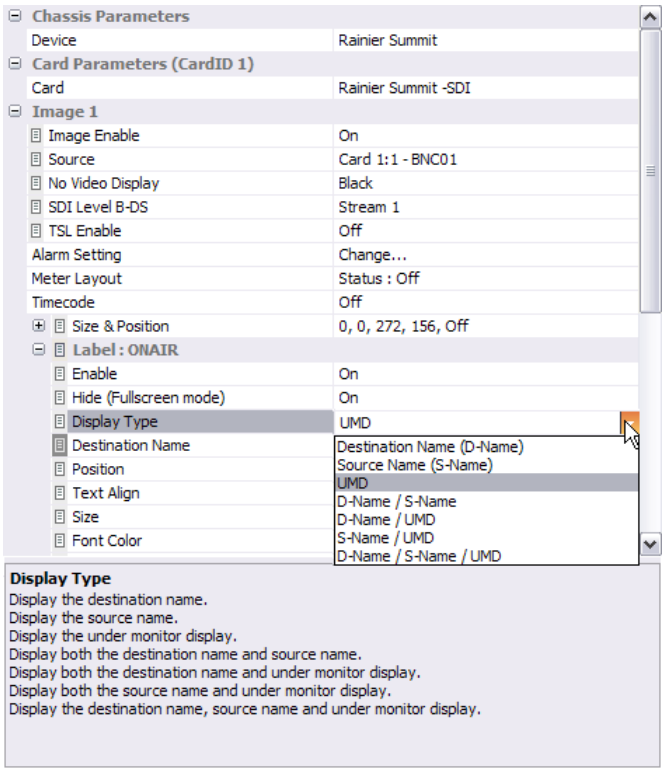


Figure E-6 Phoenix-Q Software: Select the Correct Display Type

Appendix F Compatibility with Sony Switcher Interface Device

The Rainier Summit system supports production switchers and other tally interface devices through the following:

- **parallel** (together with a re-worked serial cable + RS-232 to 422 converter + mini null modem adapter + Avitech RJ45 to RS-232 cable) or
- **serial** (together with Pacific GPIO + RS-232 to 422 converter + mini null modem adapter + re-worked serial cable) connection.

The combined system can dynamically update monitor wall elements to reflect text and status updates from the switcher/tally device. This appendix describes how Rainier Summit can be configured to receive dynamic labels and status from tally interface devices.

F.1 Setting Up the Configuration

To display the contribution on the monitor wall as a visual tally information, configure the Rainier Summit by performing the following setting in Phoenix-Q software:

Step 1. Run the Phoenix-Q software (see chapter 3 for details).

Step 2. Make sure to set the correct IP address (see Appendix C for details).

*Step 3. On the **Properties** window under **Third-party Router Configuration**, click the rightmost edge and click **Change**.*

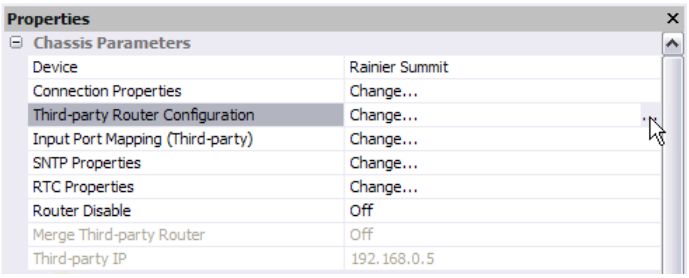


Figure F-1 Properties: Change TSL UDP Parameters

*Step 4. Click **Sony** for the upstream third-party device. Enter the correct **Filter Address** (User Datagram Protocol) value that matches the connected switcher. Then, click **OK** to exit.*

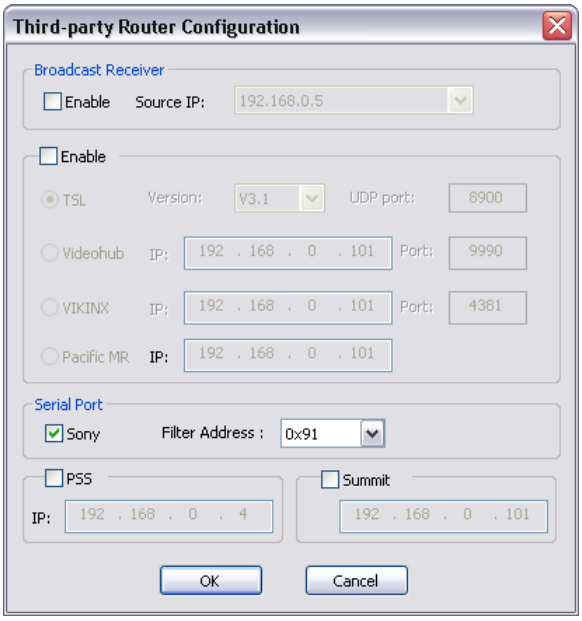


Figure F-2 Enable TSL UDP Parameters

*Step 5. On the **Properties** window under **Third-party Router Configuration**, click the rightmost edge and click **Change**.*

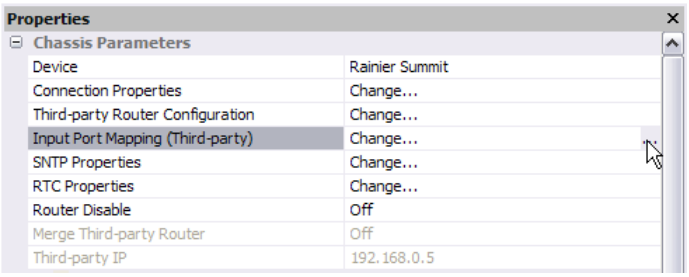


Figure F-3 Phoenix-Q Software: Change the Input Port Mapping (Third-party)

*Make sure that the **Input Port Mapping (Third-party)** address corresponds to the assigned value of the Sony switcher.*

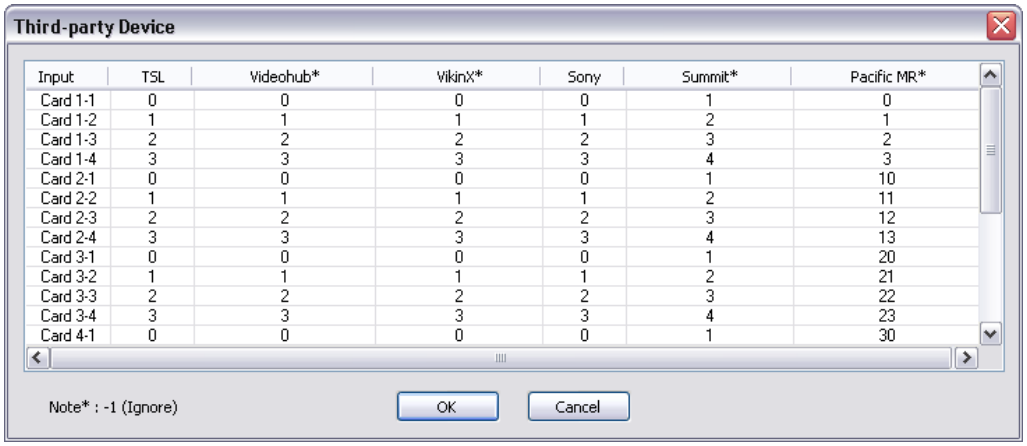


Figure F-4 Phoenix-Q Software: Select the Correct Display Address That Matches the Sony Switcher

*Step 6. Make sure that the **Label→Display Type** of the image window is set at **Destination Name (D-Name)**.*

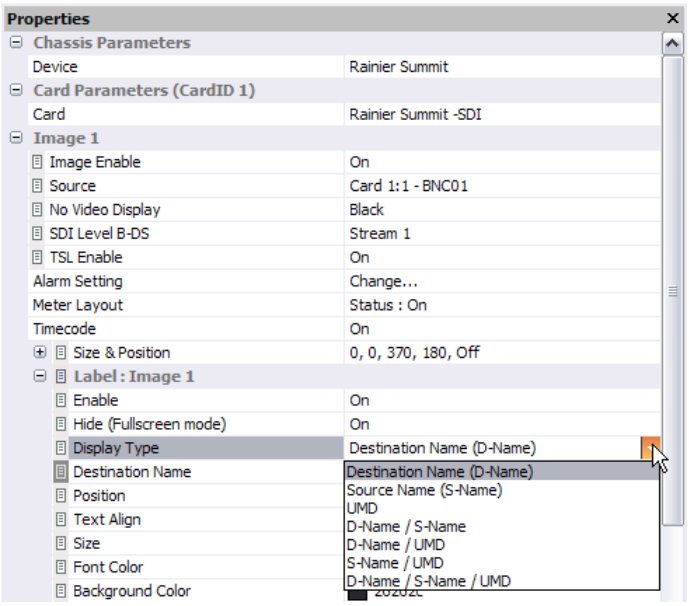


Figure F-5 Phoenix-Q Software: Select the Correct Display Type

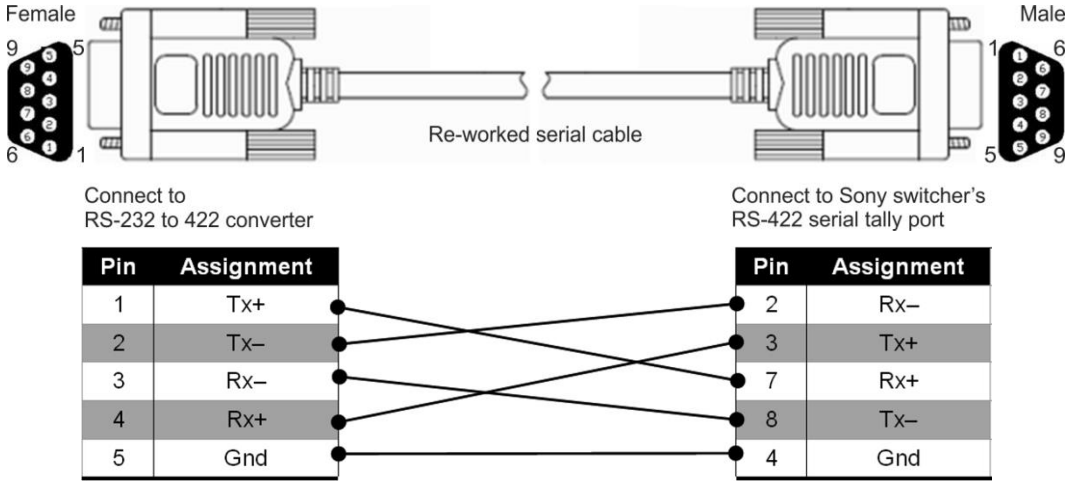
F.2 Connecting With a Sony Production Switcher via Serial Mode

The Rainier Summit is able to receive status information from a Sony switcher through a re-worked serial cable, the RS-232 to 422 converter, mini null modem adapter (DB9 male to DB9 male) and Avitech RJ-45 to RS-232 cable.

The Rainier Summit can receive dynamic source names and tally information from a Sony switcher. The procedure below describes how to set up the Rainier Summit to interface with a Sony production switcher.

*Step 1. Connect an Ethernet cable between the Rainier Summit **IP** port and router.*

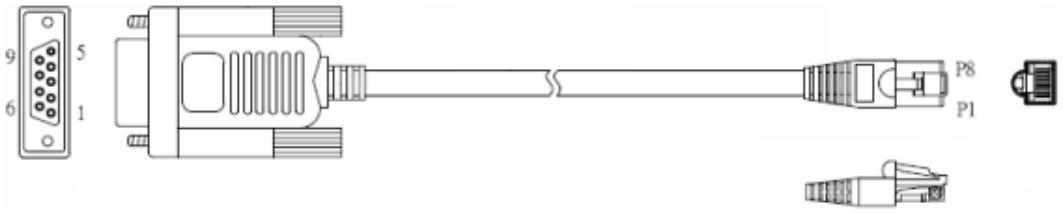
Step 2. Connect a special re-worked serial cable between the Sony switcher's RS-422 serial tally port and RS-232 to 422 converter.



Pin	Assignment	Pin	Assignment
1	Tx+	2	Rx–
2	Tx–	3	Tx+
3	Rx–	7	Rx+
4	Rx+	8	Tx–
5	Gnd	4	Gnd

Figure F-6 Re-worked Serial Cable Pin Assignment

Step 3. Connect one end of the mini null modem adapter (DB9 male to DB9 male) to the RS-232 to 422 converter; and the other end to the Avitech RJ-45 to RS-232 cable.



DB9-FM		RJ-45	
Pin	Assignment	Pin	Assignment
1		1	Tx
2	Tx	2	Gnd
3	Rx	3	
4		4	Rx
5	Gnd	5	Gnd
6		6	
7		7	
8	5 V	8	5 V
9			

Figure F-7 Avitech RJ-45 to RS-232 (DB9-FM) Cable Pin Assignment

*Step 4. Connect the Avitech RJ-45 to RS-232 cable to the **RJ50** port located on the rear panel of the Rainier Summit.*

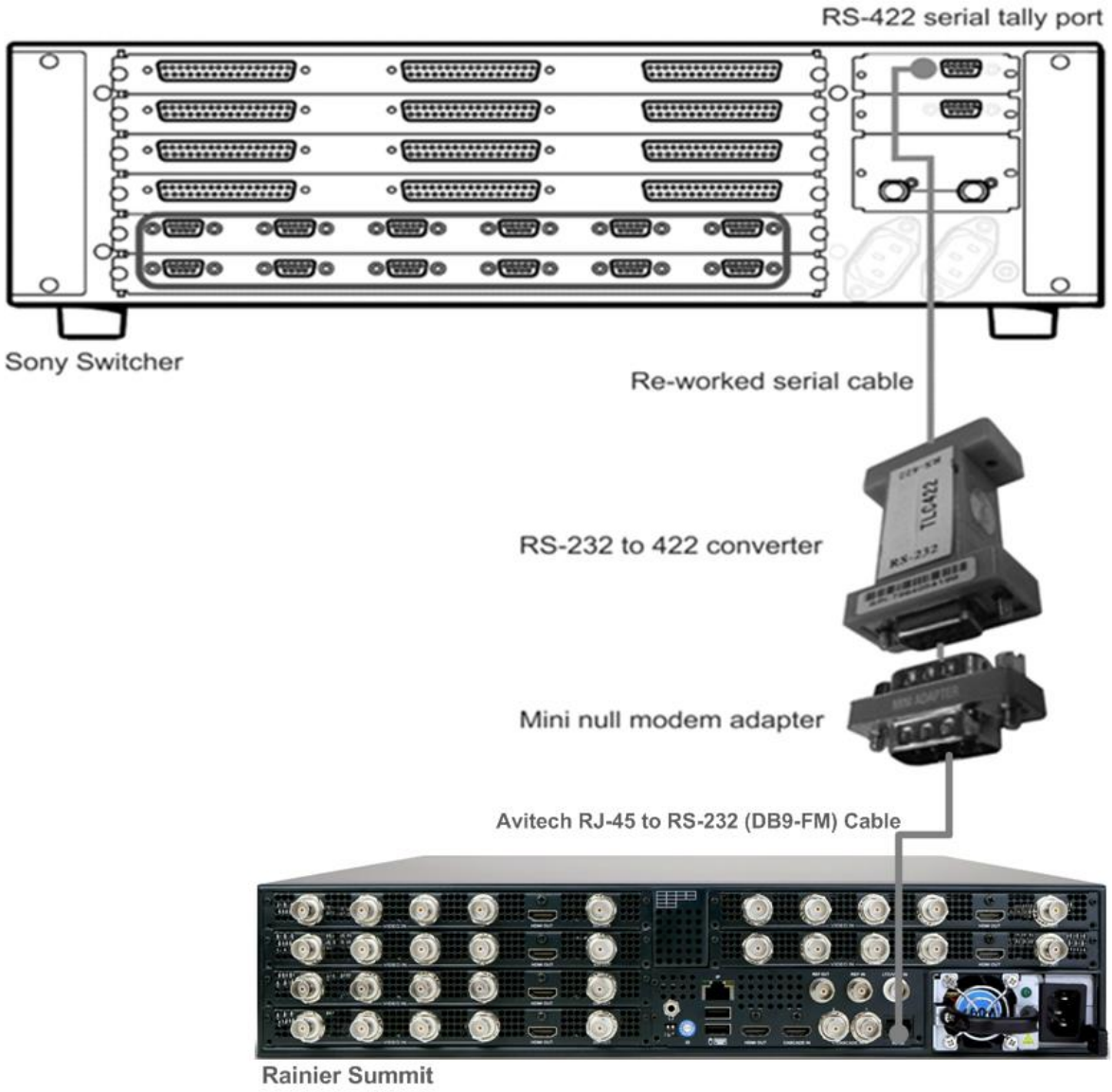


Figure F-8 Physical Connection (Sony Switcher)

Step 5. Enable serial tally on one of the switcher's ports (refer to the Sony Production Switcher System User Guide for details).

F.3 Connecting With a Sony Production Switcher via Parallel Mode

For the Rainier Summit to receive status information from a third-party device, use the Pacific GPIO Box as the GPI Interface. Pacific GPIO is a General Purpose Input/Output box for GPIO (General Purpose Input/Output Interface) task assignment.

No software configuration is needed on the Pacific GPIO box, only a hardware connection is necessary.

*Step 1. Connect an Ethernet cable between the Rainier Summit's **IP** port and router.*

*Step 2. Connect an Ethernet cable between the Pacific GPIO's **IP** port and router.*

*Step 3. Connect a terminal block to the DB-25 connectors (**GPIO-1** / **2** / **3** / **4** / **5**) of the GPIO box for GP trigger signal input or output.*

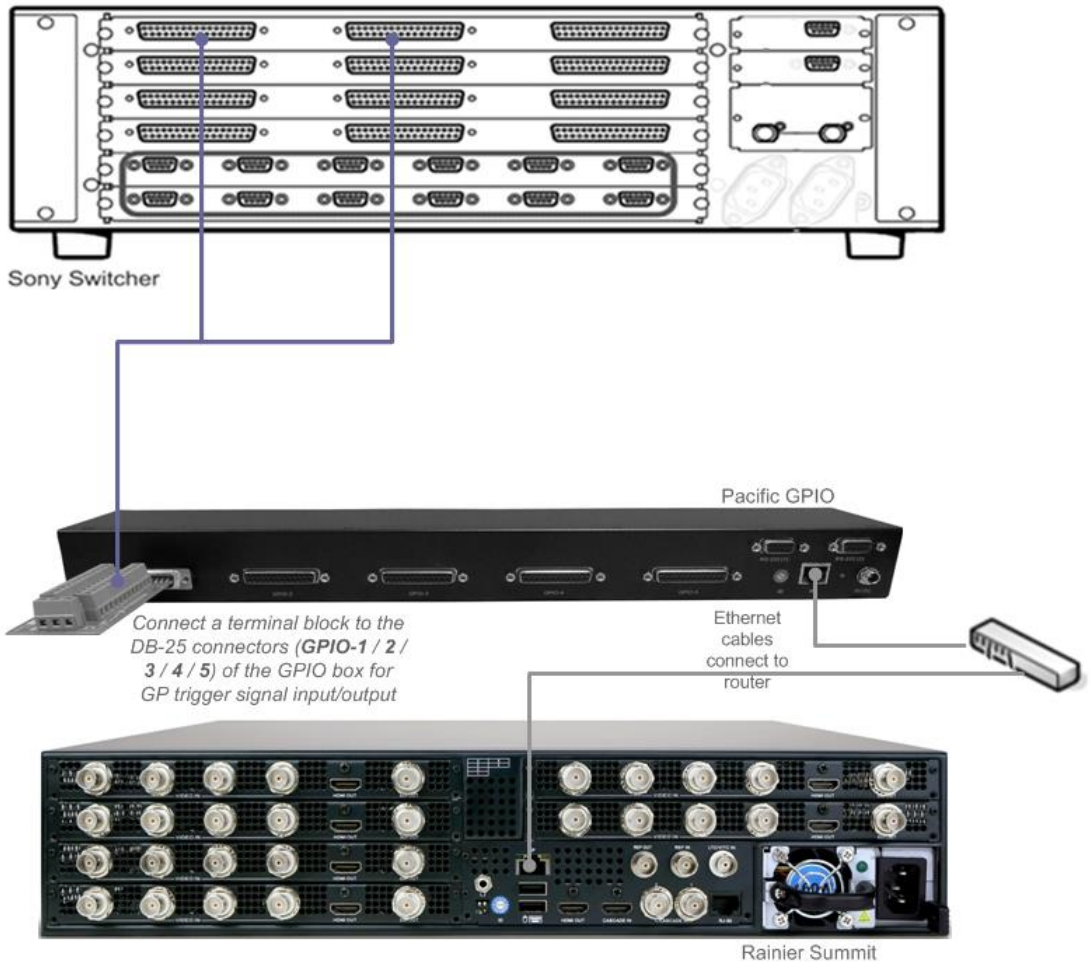


Figure F-9 Physical Connection (Sony Switcher)

Step 4. Connect one end of the cable to the GPI port of the Sony switcher; and the other end to the terminal block and to the DB-25 connectors of the GPIO box.

Step 5. Enable tally on one of the switcher's ports (refer to the Sony Production Switcher System User Guide for details).

Appendix G Avitech Trial Product Licensing

G.1 Trial License Statement

Avitech offers to our respected customer a trial license for them to evaluate Avitech's newest multiviewer product. All the functions of a trial license are identical to the official version. This Trial License is intended only for evaluation purposes of the Rainier Summit. The evaluation period is only up to 180 days.

G.1.1 License

Please read this agreement carefully before using the "Phoenix-Q" program to connect and control the Rainier Summit. Phoenix-Q will only be licensed to you if you accept the terms of this agreement. Phoenix-Q is copyrighted and licensed, not sold. This Trial License is intended for evaluation purposes of the Rainier Summit ONLY. You may not:

1) use, copy, merge, or transfer the program except as permitted by Avitech;
2) reverse assemble, reverse compile, or otherwise translate the program except as specifically permitted by law without the possibility of a contractual waiver;
3) sub-license, rent or lease the program; or
4) supply or provide copies of the program to third parties, or allow external access to the program.

G.1.2 Terms

The Trial License commences on the Effective (activation) Date and continues for a period **up to** 180 days thereafter ("Evaluation Period"). You can use this trial license to assess the Rainier Summit, and then decide whether you would like to upgrade the trial license to an authorized license. You can contact or email Avitech's technical support at any time to convert from a trial license to an authorized license.

At the time of writing of this manual, the "Trial License" user will not receive any warning message or hint that the evaluation period (depends on the initial agreement with Avitech) is nearly due. This means that as a user you must be aware of when you first started using the trial license and taking note when the trial license will elapse. If no effort is made to convert from a trial license to an authorized license, and upon using your Rainier Summit, instead of a normal output display, only "color bars" will be outputted to the display monitor(s).

G.2 Conversion from a Trial License to an Authorized License

G.2.1 Exporting the Machine ID

When you purchase an authorized license, you may need to export the machine ID file of the Rainier Summit, and then email the file to Avitech's technical support.

To export the machine ID file of the Rainier Summit, perform the following steps:

*Step 1. Run the Phoenix-Q software by double-clicking **Phoenix-Q.exe**.*

Step 2. Make sure to set the correct IP address (see Appendix C for details).

*Step 3. Select the only type of connection allowed by clicking the **IP Port** checkbox. Then click **Connect**.*

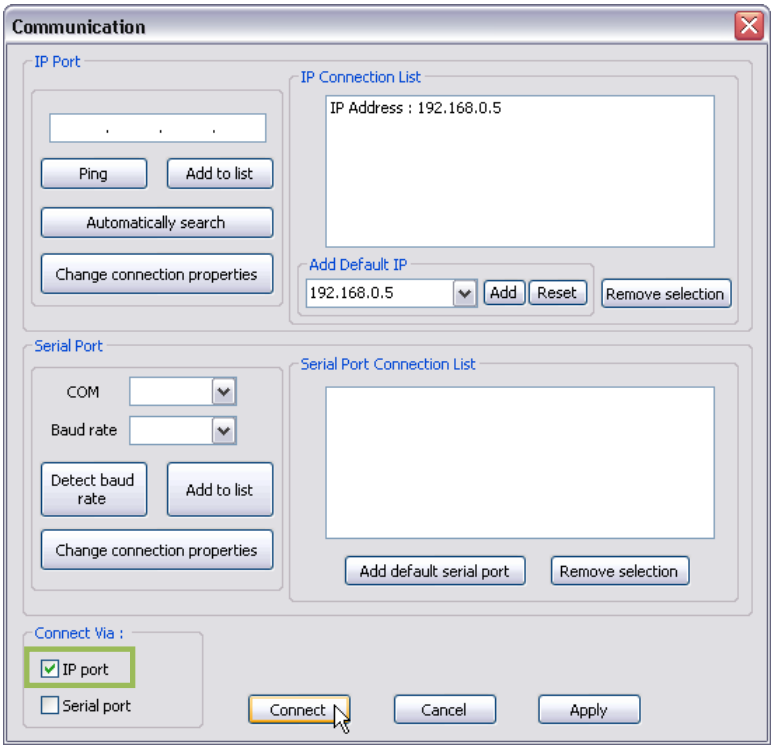


Figure G-1 Phoenix-Q Software: Select the Ethernet Connection Method

*Step 4. Click **Help → Product License**.*

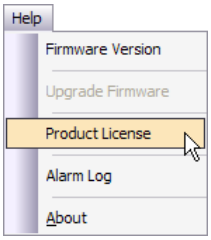


Figure G-2 Phoenix-Q Utility: Help → Product License

*Step 4. Click **Export Machine ID**.*

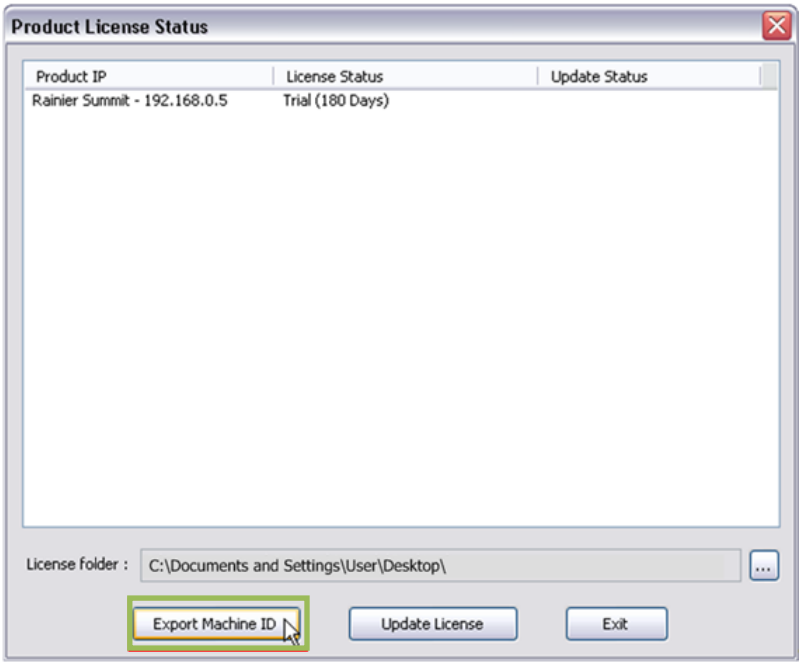


Figure G-3 Phoenix-Q Utility: Export Machine ID

*Step 5. Assign a file path and click **OK** to store the data.*

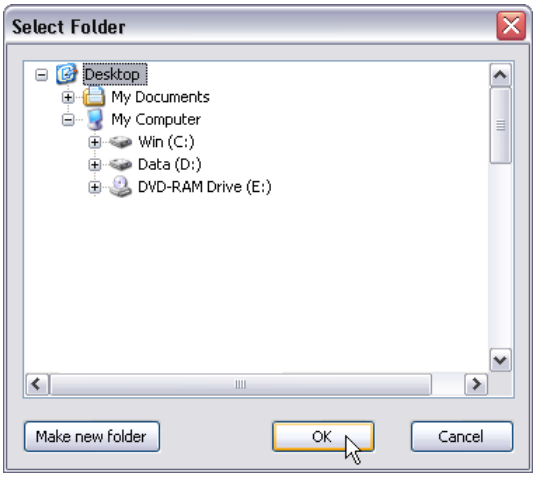


Figure G-4 Phoenix-Q Utility: Assign the File Path

*Step 5. Click **Exit** to complete the Export Machine ID process.*

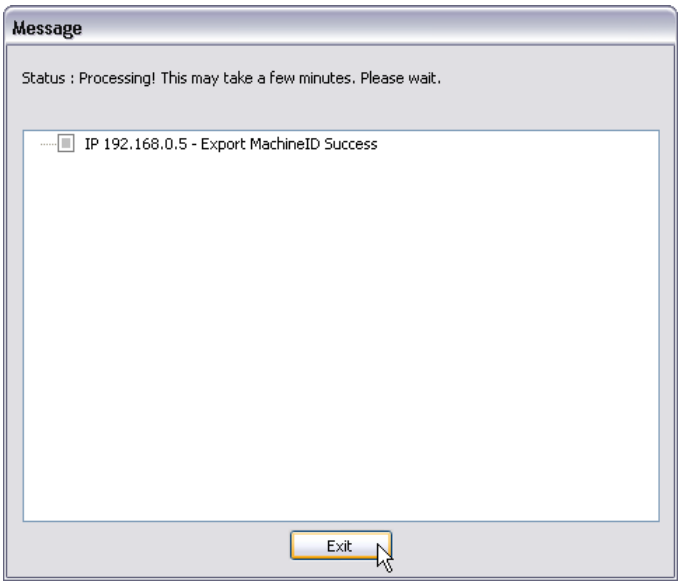


Figure G-5 Phoenix-Q Utility: Export Machine ID Successful

*Step 6. Provide the "**MachineID_IP_192_168_0_5_00_13_34.bin**" file to Avitech's technical support.*

The file name of the Machine ID will be named according to the machine's IP address and Mac Address.

G.2.2 License Update

Upon receiving an authorized license, you may need to upload the license file to the Rainier Summit to be able to start using the Authorized Version.

To update the license file of the Rainier Summit, perform the following steps:

*Step 1. Run the Phoenix-Q software by double-clicking **Phoenix-Q.exe**.*

Step 2. Make sure to set the correct IP address (see Appendix C for details).

*Step 3. Select the only type of connection allowed by clicking the **IP Port** checkbox. Then click **Connect**.*

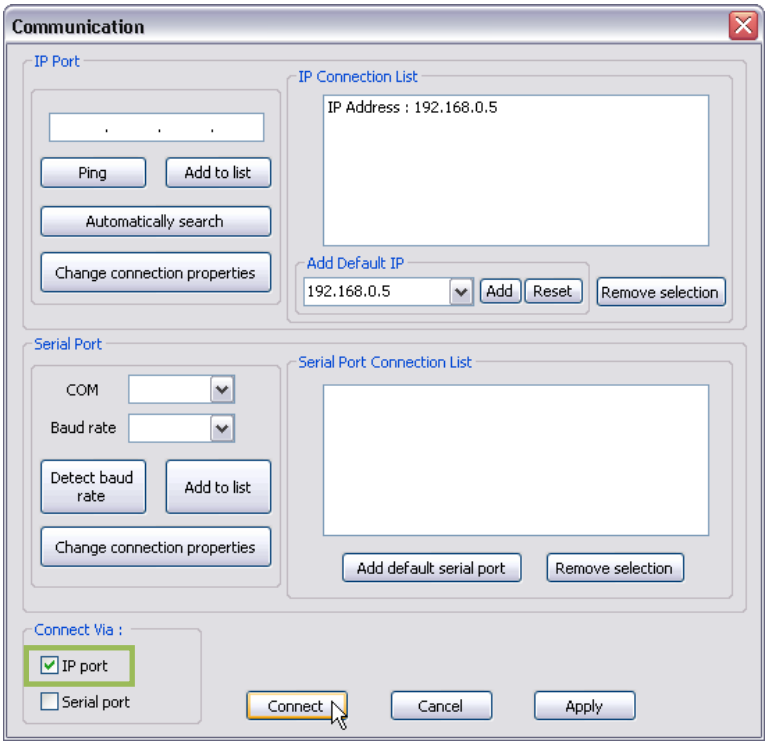


Figure G-6 Phoenix-Q Software: Select the Ethernet Connection Method

*Step 4. Click **Help → Product License**.*

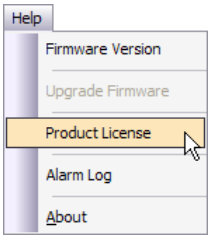


Figure G-7 Phoenix-Q Utility: Help → Product License

*Step 5. Under the **License folder**, click **Browse** [...] to load "**License_IP_192_168_0_5_00_13_34.dat**". Then click **Update License**.*

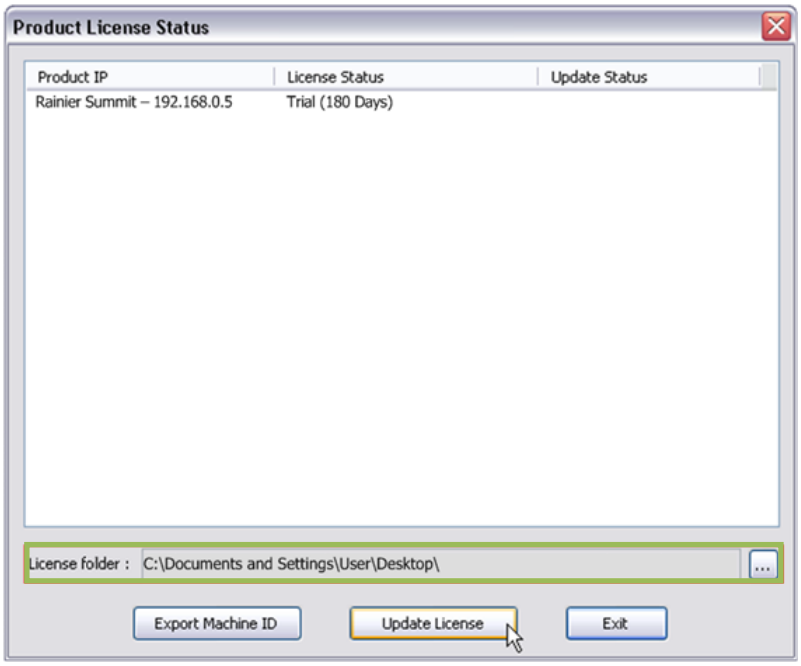


Figure G-8 Update License: Assign the License File Folder Path

Step 6. Reboot the Rainier Summit (power strip OFF and ON) to complete the Update License process.

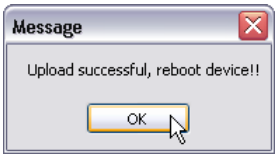


Figure G-9 Update License: Reboot the Device