Sequoia 2H2U
One of a kind multiviewing

Revision 1.0.3, (May, 2014)

AVITECH

ABOUT THIS MANUAL
This manual contains information on how to use the Avitech Sequoia 2H2U mouse keyboard controller. There are 3 chapters in this manual.

✓ **Getting Started** introduces the features and specifications as well as the external components of the Avitech Sequoia 2H2U.

✓ **System Configuration** discusses the process of setting up the Sequoia 2H2U.

✓ **Basic Operations**, introduces the 2 types of operating modes. Using the mouse and keyboard hot-keys to perform basic operations as well as using the touch-screen display with Avitech Sequoia 2H2U.

The following conventions are used to distinguish 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. Please email us at: sales@avitechvideo.com.

WARNING
Do not attempt to disassemble the Sequoia 2H2U. Doing so may void the warranty. There are no serviceable parts inside. Please refer all servicing to qualified personnel.

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1. Getting Started

The Avitech Sequoia 2H2U is a highly innovative device. The Sequoia integrates the functions of a KVM *(keyboard video mouse)* switch and a robust multi-viewer into one enclosure. The Sequoia 2H2U provides a simple solution for any user who works in an environment with multiple computer systems and Pro A/V equipment. With the Sequoia 2H2U seamlessly switch up to 2 computers and 2 video signals; and control up to 2 computers with just one keyboard and mouse. Additionally, its scalability (through cascading) allows the Sequoia to be ideal for both individual users and corporate applications.

The Sequoia features a visual user interface (<u>Host</u> operation mode) which allows users to configure the layout through an OSD (on screen display). While in <u>Host</u> operation mode easily convert video images to full screen, adjust windows to any size and move windows to any position. Also, for a hands‑on user experience**,** the Sequoia 2H2U can be used with a touch-screen display. The touch-screen controls are powerful and intuitive; switch sources, resize windows, move windows to any position, and control a remote computer with a tap of your finger.

This chapter introduces the features and specifications as well as the external components of Avitech Sequoia 2H2U.

1.1 Package Contents

After unpacking the shipping carton, the following standard items can be found:

Avitech Sequoia 2H2U

Utility Disc (software and user manual)

12 V DC/5A Power Adapter

Standard Power Cord (USA customers only)

Rubber Foot (4 pcs)   **USB-A to USB-B Cable**

HDMI Cable (optional)   **Sequoia 5-in-1 Cable (optional)**

DVI to HDMI Adapter (optional)

Table 1-1 Package Contents

The following items are included if optional rack mount kit is ordered.

Front Bracket   **Power Adapter Tray**

| Multi angle hex driver (2 mm) | FH MSH AB 3×6 Screws (12 pieces) |

Table 1-2 Optional Rack Mount Package Contents

1.2 Product Features

The Sequoia 2H2U is HDCP-compliant and capable of HDMI and DVI output (DVI through an adapter). It features automatic detection and selection of optimum display resolution, automatic sensing of input signal, flexible window configuration (any size, any position), Picture-in-Picture (PiP) overlay display, video loss detection, image/gain (can be adjusted manually or automatically), and crop/pan image.

The Sequoia can control up to 2 computers and 2 video sources and can automatically detect PS/2 & USB interfaces. It is also hot-pluggable which allows the addition/removal of computers without powering down devices. The Sequoia's front panel features LED indicators for monitoring the following: Connected Computers (<u>Active</u> or <u>Standby</u>), Operation Mode (<u>Host</u> or <u>Remote</u>) and Power.

For audio monitoring the Sequoia 2H2U features two built-in speakers, a 1/8 inch headphone jack and an on screen display (OSD) of audio meters. The Sequoia 2H2U accepts embedded/HDMI$^{®}$ audio (7.1ch, 5.1ch, 2ch-stereo) and analog audio (stereo). To assist with audio/video re-syncing the Sequoia 2H2U features up to 170ms of audio delay.

Fully utilize the flexibility of the Sequoia 2H2U with Avitech's Phoenix-G software (formerly called Galaxy). With Phoenix-G control software you can easily configure display options, crop/pan images, save up to 23 presets and even program a list of display layouts for the Sequoia to automatically cycle through ("Briefing" feature – refer to Sequoia 2H2U Phoenix-G manual for more details). Moreover, with Avitech's Hook utility (patent pending), a laptop can be used to control the Sequoia 2H2U via the USB port on the front panel .

For larger applications cascade up to 5 Sequoia 2H2U's and control up to 10 computers and 10 video sources, SDI (3G/HD/SD) CVBS (NTSC/PAL), with just one keyboard and mouse.

1. *Non-standard keyboards (e.g., keyboards with a USB hub, keyboards that need driver installation and programmable keyboard, etc.) are not supported.*
2. *Compatibility between the computer and the Sequoia 4H may depend on the computer's BIOS Setup. If an incompatibility occurs, you may refer to the computer's BIOS Setup and make sure USB port and PS/2 port are enabled if these items exist in the computer's BIOS Setup (typically found in the "Advanced" or "Onboard Device Configuration" menu).*
3. *Hook utility currently supports the Sequoia solo series (non-cascaded) and the Pacific X-HDU (an HDMI transmitter-Pacific X-HDUT (TX) and an HDMI receiver-Pacific X-HDUR (RX) allows transmission of 1080p60 HD over 100 meters based on HDBaseT$^{®}$ technology – refer to Pacific X-HDU user manual for more details). Connect a laptop (or desktop) computer to the Sequoia solo series or Pacific X-HDU and simulate keyboard/mouse function for remote control processing (KVM feature).*
4. *Refer to Avitech Hook utility user manual for more details.*

1.3 Specifications

Input	

HDMI or DVI
(through DVI to HDMI adapter)
	Automatic sensing
	❖ *HDMI mode:*
	  ✓ *480i, 480p, 576i, 576p, 720p, 1080i, 1080p*
	❖ *DVI-D mode:*
	  ✓ *Up to 1920×1200*
	Transmission of audio signal is not included when using the DVI to HDMI adapter.

SDI	Automatic sensing ❖ *3G-SDI: 1080p 23.98/24/25/29.97/30/50/59.94/60Hz (up to 100 meters)* ❖ *HD-SDI: 720p, 1080i 50/59.94/60Hz* ❖ *SD-SDI: 480i, 60Hz / 576i, 50Hz* ❖ *NTSC/PAL analog composite signals*

Output	
HDMI or DVI (through DVI to HDMI adapter)	Automatic sensing or user selectable ❖ *Up to 1920×1200 (WUXGA) at 50Hz/60Hz or 1600×1200 (UXGA) 75Hz* ❖ *Up to eight channel (7.1) audio configuration* Transmission of audio signal is not included when using the DVI to HDMI adapter.

Others	
Peripheral sharing	USB type A port (for USB 2.0 hub) × 2
Computer connection	Up to 2 units (maximum)

Port switching	Method:
	❖ *Keyboard hot-keys (both in Host and Remote operation modes)*
	❖ *Mouse*
	  OSD (pop-up menu – in Host operation mode)
	  Surfer feature (in Remote operation mode)

Power	Power consumption is 25W Power Supply (*adapter*): ❖ *Input (AC): 100 to 240V 50Hz/60Hz* ❖ *Output (DC): 12V DC/5A*
Operating System	Microsoft Windows 98 Special Edition, 2000 Professional, XP, Vista, Server 2003, Server 2008, Windows 7, Windows 8 Mac (O/S X 10.5 or later version only) Linux OS: Fedora 10, Ubuntu 8.1, Scientific 5.2, RedHat, Mint 6.0, Debian 5.0, PC Linux OS 2009, SUSE 11.1, Mandriva 2009, CentOS 5.2 *Note: Windows NT is not supported*
Dimensions/Weight	Dimensions: 261×174×44 mm (10.3×6.9×1.7 inch) Weight: 1.3 kg (2.8 lb)
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 B

Table 1-3 Specifications
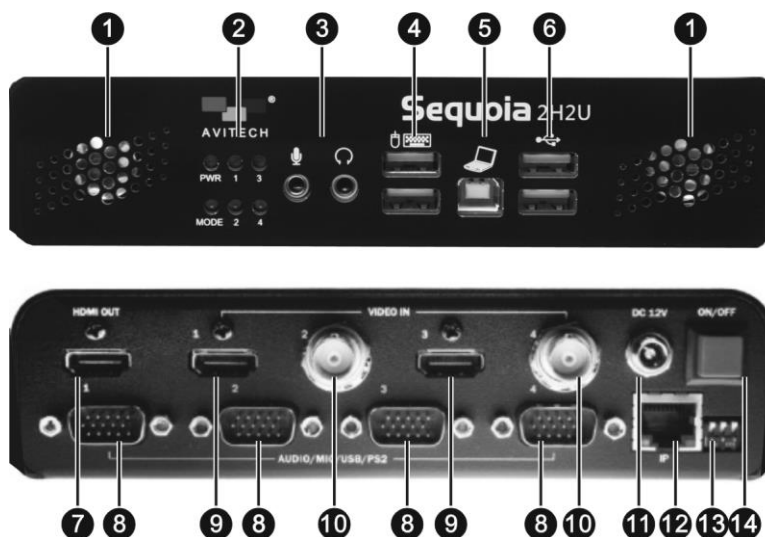
1.4 Connections to the Sequoia 2H2U

Figure 1-1 Sequoia 2H2U Components

Front Panel	
❶ **Stereo Speaker Set**	Embedded speakers for monitoring audio. (Volume can be adjusted and output can be enabled/disabled.)
❷ **Indicators**	❖ **PWR** ✓ Glows green when the Sequoia 2H2U is turned ON. ❖ **MODE** ✓ Glows green when the Sequoia is in <u>Host</u> operation mode. ✓ Glows amber when the Sequoia is in <u>Remote</u> operation mode. ❖ **1** and **3** ✓ Glows green when a particular computer is operating under <u>Remote</u> operation mode (full control through keyboard and mouse). ✓ Glows amber when a particular computer is operating under <u>Host</u> operation mode (monitoring only). ✓ Blinks amber on a particular re-booting or powered-off computer connected to the Sequoia 2H2U. LED indicators **2** and **4** have been disabled.
❸ **Audio In/Out**	❖ 🎧 ✓ Connects to the green connector for headphone function (stereo). ❖ 🎤 ✓ Connects to the red connector for microphone function.
❹ **USB Type A (keyboard/mouse)**	Connects to a USB mouse and keyboard. Use these ports for control in <u>Host</u> operation mode.
❺ **USB Type B**	Connects to a remote computer for control through USB mouse and keyboard.
❻ **USB Type A (peripheral sharing)**	These 2 ports can connect to a USB 2.0 hub, USB flash disk, etc.

Rear Panel	
❼ **HDMI Output**	HDMI connector for HDMI/DVI output (a DVI to HDMI adapter may be required)
❽ **5-in-1 Input**	Use the Sequoia's proprietary 5-in-1 cable for connections **Inputs 1/3:** connect to remote computer's USB, PS/2 and audio ports **Inputs 2/4:** connect to an A/V device's audio connector
❾ **HDMI Input 1/3**	HDMI connectors for HDMI/DVI inputs (a DVI to HDMI converter may be required)
❿ **BNC Input 2/4**	BNC connectors for SDI (3G/HD/SD) CVBS (NTSC/PAL) video inputs. *Note: SDI embedded audio is also supported.*
⓫ **Power (DC 12V)**	Connects to the 12V DC/5A power adapter
⓬ **Ethernet (IP)**	For setup using the Phoenix-G software (Galaxy) and control using ASCII Z commands via a network connection (Protocol: TCP/IP, UDP)
⓭ **Dip Switches**	Resets the Sequoia to factory-default settings; or updates firmware
⓮ **Power Switch**	Turns the Sequoia 2H2U power ON and OFF

Table 1-4 Sequoia 2H2U Component Description

2. System Configuration

This chapter discusses the process of setting up Sequoia 2H2U.

2.1 Getting the Sequoia 2H2U Ready

The Sequoia 2H2U can be connected to most monitors and some touch-screen displays. It can also be cascaded with up to five (5) Sequoias for larger applications.

To control the Sequoia 2H2U directly, connect a keyboard and mouse to the USB port ⌨ on its front panel. Alternatively, to control the Sequoia remotely, use a laptop (or desktop) computer and connect to the Sequoia's USB (type B) port 🔌 on its front panel, (use a USB A/B cable). Then, run Avitech's Hook software utility on the controlling computer to simulate mouse and keyboard operation.

> 1. Hook utility currently supports the Sequoia solo series (non-cascaded) and the Pacific X-HDU (an HDMI transmitter-Pacific X-HDUT (TX) and an HDMI receiver-Pacific X-HDUR (RX) allows transmission of 1080p60 HD over 100 meters based on HDBaseT® technology – refer to Pacific X-HDU user manual for more details). Connect a laptop (or desktop) computer to the Sequoia solo series or Pacific X-HDU and simulate keyboard/mouse function for remote control processing (KVM feature).
> 2. Refer to Avitech Hook utility user manual for more details.

2.1.1 Basic Setup When Connecting to an Regular or Touch-screen Display

The following figure shows a typical setup with an Avitech Sequoia 2H2U connected to two computers and two A/V devices.

> DO NOT place any object on the top or side panels of the Sequoia 2H2U.
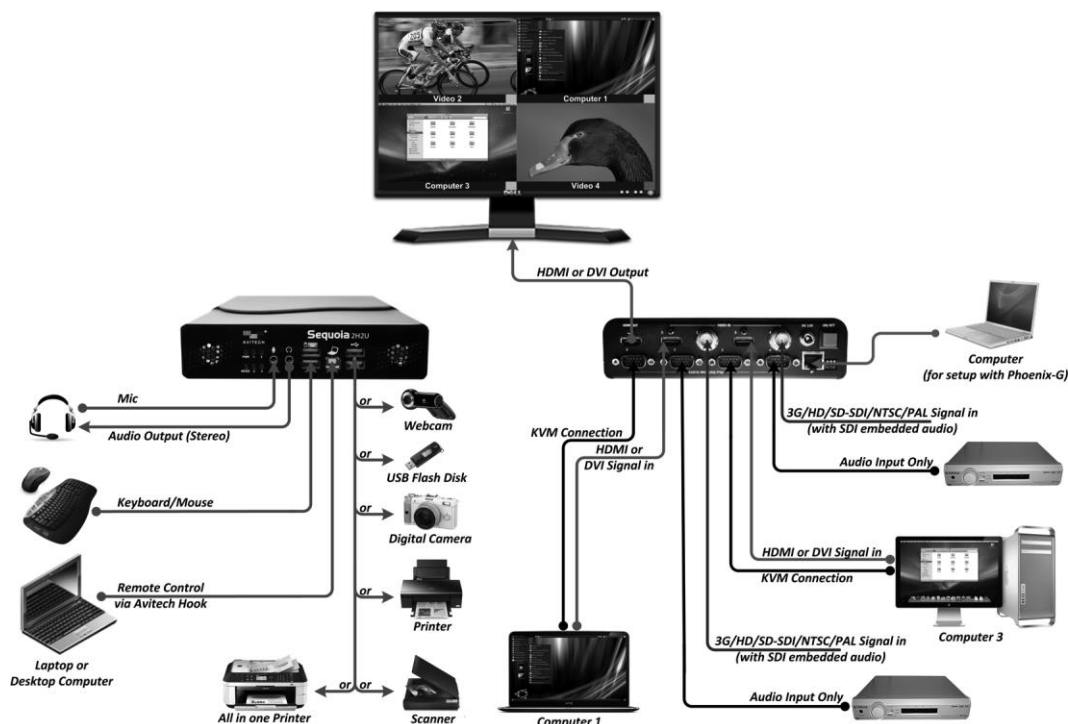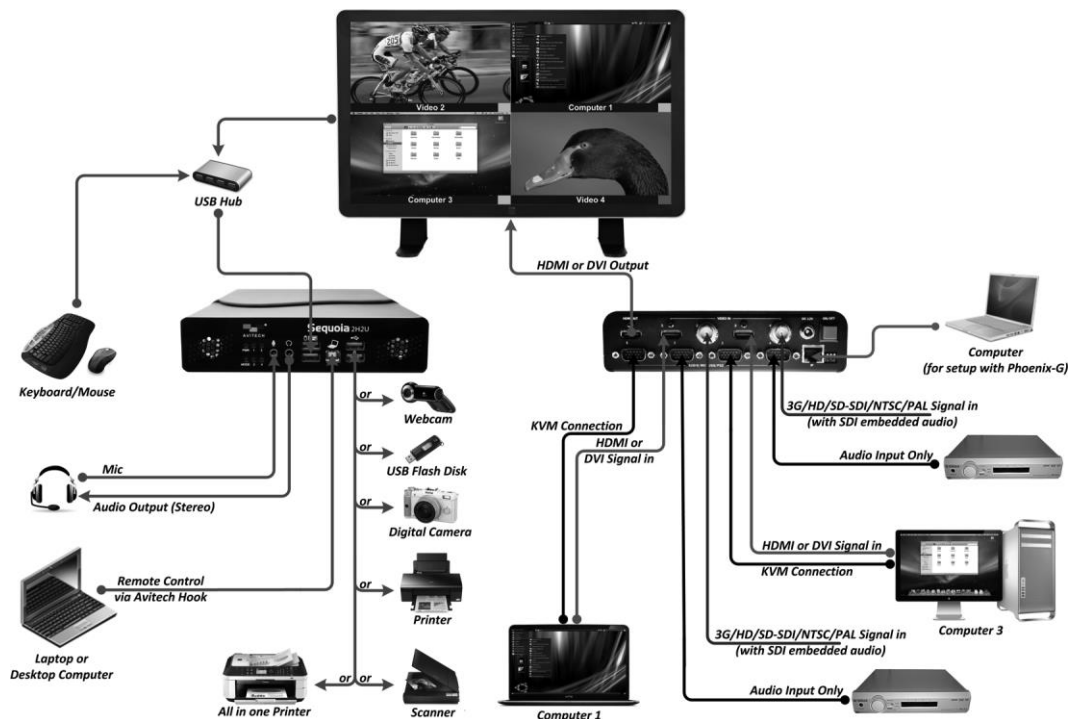> Doing so could affect its internal components and/or its heat dissipation.

Figure 2-1 Sequoia 2H2U with Regular Display Setup

Figure 2-2 Sequoia 2H2U with Touch-screen Display Setup

*Step 1. Connect the 5-in-1 cable to the first computer's USB or PS/2 port and then connect the 5-in-1 cable to its audio ports (mic in, audio out). Connect the other end of the 5-in-1 cable to the Sequoia's source **1** port (DB15 connector at rear panel). Repeat this process for the second computer and connect to **SOURCE 3**.*

📄 *1.   We highly recommend using a USB connection instead of a PS/2 connection when available. In case no USB connection is available and a PS/2 connection must be utilized, make sure to first power on the Sequoia 2H2U, then turn on the computer afterwards.*
*2.   **(For Windows 2000 users)** Upon connecting the Sequoia through USB for the first time to the computer, perform the windows on-screen steps to initialize the USB connection.*

*Step 2. Connect the first A/V device's audio output to the Sequoia 2H2U's **SOURCE 2** input (DB15 connector on rear panel) via the 5-in-1 cable. Repeat this process for the second A/V device and connect to **SOURCE 4**.*

*Step 3. Connect a HDMI or DVI (DVI through an adapter) display to the **HDMI OUT** port on the Sequoia's rear panel.*

*Step 4. Connect the first computer's HDMI or DVI (DVI through an adapter) output to the Sequoia 2H2U's **VIDEO IN 1** port (HDMI connection). Repeat this process for the second computer and connect to **VIDEO IN 3**.*

*Step 5. Connect the first A/V devices BNC output to the Sequoia's **VIDEO IN 2** port with a BNC cable. Repeat this process for second A/V device and connect to **VIDEO IN 4**.*

Step 6. Connect the mouse and keyboard to the mouse/keyboard USB ports 🖱⌨ located on the Sequoia 2H2U's front panel. When connecting 3 or more devices at the same time such as; a touch-screen, a mouse and a keyboard you can connect a USB hub to increase the number of USB connections. (refer to Figure 2-2)

📄 *Non-standard keyboards (e.g., keyboards with a USB hub, keyboards that need driver installation and programmable keyboard, etc.) are not supported.*

Step 7. Connect the provided 12 V DC power adapter and then power on the Sequoia.

1. For computers using the PS/2 connection instead of a USB connection; re-boot at this time.
2. It is not necessary to re-boot computers connected via USB connection (plug and play feature).

Step 8. *Move the mouse or press the **Pause/Break** key to display the Sequoia's <u>Host</u> cursor (will disappear again after 5 seconds of inactivity). Move the mouse again to display the <u>Host</u> cursor.*

Step 9. *The pop-up menu S ↵ ⊠ will appear upon moving the cursor to the window's top right position.*
  ✓ *Click the ↵ symbol or double-click the left mouse button on the desired window to enter <u>Remote</u> operation mode.*
  ✓ *<u>Remote</u> operation mode connects you directly to the selected computer.*
  ✓ *The Sequoia's (<u>Host</u>) keyboard and mouse will now control the selected computer.*
  ✓ *Item not applicable for Sequoia 2H2U with touch-screen display setup or PS/2 connection –*
  *"Surfer" feature (default setting is "on") is enabled, moving the mouse to the same border that is shared with another remote computer will cause the Sequoia's (<u>Host</u>) keyboard and mouse to control another selected computer. Pressing **Alt** + **Ctrl** + **Shift** + **F10** will toggle this feature "off" and "on."*

When connecting to touch-screen display
*Press **Ctrl** + **T** on the keyboard to perform a screen calibration.*
This is necessary when connecting to a touch-screen for first time or upon resetting the Sequoia 2H2U.
  ✓ *The following symbol will appear in the top left portion of the screen: ⊠*
  ✓ *Use a stylus or a finger to press on the center of the symbol until the next symbol appears (takes approximately five seconds).*
  ✓ *Perform this step each time the ⊠ symbol appears (top left, top right, lower left, lower right).*
  ✓ *Upon completing screen calibration the Sequoia will return to <u>Host</u> operation mode and the four source windows will re-appear on screen.*

2.1.2 Basic Setup When Cascading Sequoia Devices

Cascading is the technique of "daisy-chaining" Sequoia devices (up to 5) through a USB A/B cable. Only the keyboard and mouse are cascaded. Other functions (e.g., audio, video, and USB hub) are not, and depend on the output from each individual computer and the associated Sequoia. (see Figure 2-3)

The following figure shows 3 Sequoia 2H2U cascaded together; with each Sequoia 2H2U connected to 2 computers.

Cascading is available on the Sequoia 2H2U, 4H and 2x2V. A combination of any of these Sequoia devices can be cascaded to meet custom applications.
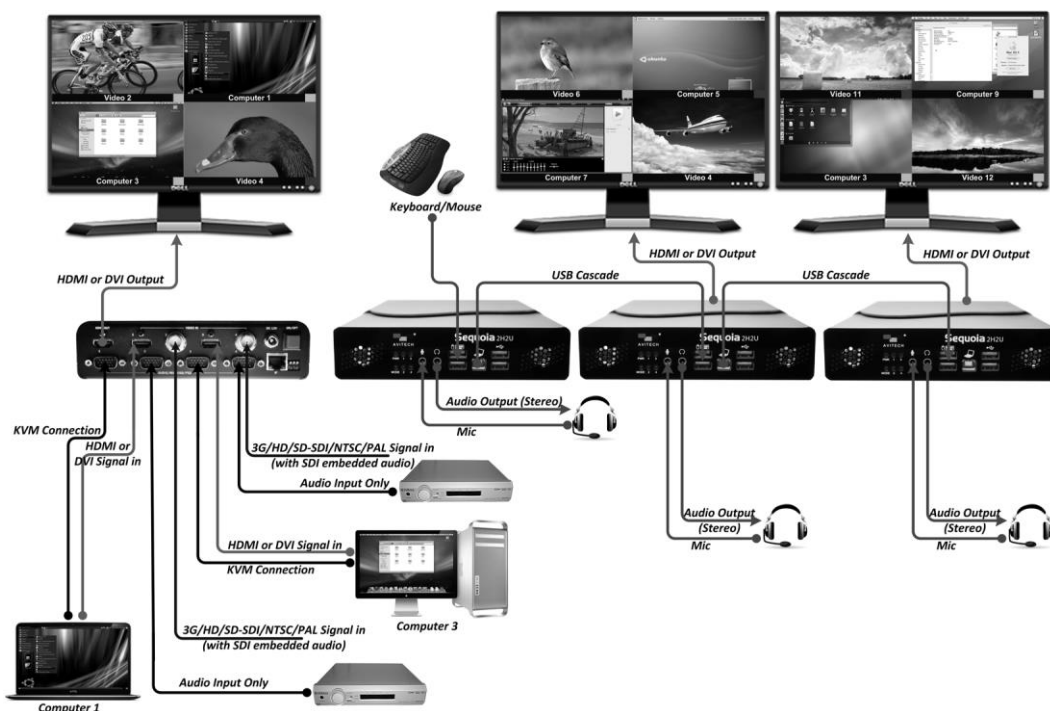

Figure 2-3 Cascading Three Sequoia 2H2U's Setup

Step 1. *Perform steps 1 – 7 for the first Sequoia 2H2U as outlined for Regular Display in the previous section "Basic Setup When Connecting to a Regular or Touch-screen Display."*

Step 2. *Repeat the above-mentioned steps for the second and third Sequoia 2H2U to be cascaded.*

Step 3. *Connect a mouse and keyboard to the USB ports ⌨ located on the Sequoia's front panel. (first Sequoia only)*

Step 4. *Connect first Sequoia's USB (type-B) port 🖱 to second Sequoia's USB (type-A) port ⌨ using standard USB A/B cable. Repeat this procedure to connect second Sequoia to the third.*

Step 5. *Move the mouse or press **Pause/Break** key and* Host *cursor will appear on display (will disappear again after 5 seconds of inactivity). Move the mouse again to display the* Host *cursor.*

Step 6. *Place the cursor on the display of the master/first Sequoia 2H2U, (the one with the mouse and keyboard connected to it), then perform a system configuration reset by pressing: **Ctrl** + **Shift** + **Alt** + **R**. The reset takes approximately four seconds for each module. During this process each Sequoia's **Mode** – LED turns off, one at a time.*

Step 7. *Move* Host *cursor across all 3 displays to allow system to complete USB device initialization.*

If the cursor is unable to move over all three displays, perform steps 5 and 6 again.

Step 8.   The pop-up menu ∫ ⏎ ⛶ appears when the <u>Host</u> cursor is moved over the top right portion of a window.

✓   Click the ⏎ symbol or double-click the left mouse button on the desired window to enter <u>Remote</u> operation mode.

✓   <u>Remote</u> operation mode connects you directly to the selected computer.

✓   The Sequoia's (<u>Host</u>) keyboard & mouse will now control the selected computer.

✓   This item is not applicable for Sequoia 2H2U with touch-screen display cascaded setup or with PS/2 connection –
"Surfer" feature (default setting is "on") is enabled, moving the mouse to the same border that is shared with another remote computer will cause the Sequoia's (<u>Host</u>) keyboard and mouse to control another selected computer. Pressing **Alt** + **Ctrl** + **Shift** + **F10** will toggle this feature "off" and "on."

3. Basic Operations

There are 2 types of operating modes while using the Sequoia 2H2U; <u>Host</u> operation mode and <u>Remote</u> operation mode. This chapter discusses both operational modes.

✓   ***Host* Operation Mode**

When the Sequoia 2H2U is in <u>Host</u> operation mode, the <u>Host</u> cursor is controlled by the locally connected mouse device. Or in the case of a cascaded setup the cursor is controlled by the mouse device that is connected to the Master Sequoia. The <u>Host</u> cursor controls the positions and sizes of the windows for up to two remote computers and 2 A/V sources (up to 10 of each when cascaded).

📄 | *Upon re-connecting a keyboard or mouse, the cursor may disappear.*
   | *Press the **Pause/Break** key to solve this problem.*

✓   ***Remote* Operation Mode**

When the Sequoia 2H2U is in <u>Remote</u> operation mode, the mouse cursor and keyboard are used to control a specific computer connected to the Sequoia 2H2U.

Understanding the Terminology:

❖ *USB host – refers to mouse/keyboard USB ports ⌷🖮 located on the Sequoia 2H2U front panel.*

❖ *USB device – refers to the DB15 connector (source **1** and **3** ports) located on the Sequoia 2H2U rear panel that connects to the computer's USB port through the 5-in-1 cable.*

Tips on Navigating the Sequoia 2H2U:

❖ *Up to 2 computers and two A/V sources can connect to a single Sequoia 2H2U. Sequoia puts each input source in a window and can display all 4 windows on one output display. Thus, 2 computers and 2 video signals can be displayed and controlled from a single monitor.*

❖ *When <u>Host</u> operation mode is active, use the mouse connected to the Sequoia to re-size and re-position any window on the output display.*

❖ *To switch operation to a remote computer; move the <u>Host</u> cursor into a specific window on the screen and then click the ↵ "enter icon" or double-click the left mouse button.*

❖ *<u>Remote</u> operation mode works with computers only, <u>Remote</u> operation mode cannot be entered on video sources (e.g., Blu-Ray player).*

❖ *When <u>Remote</u> operation mode is active, use mouse and keyboard to operate a single computer. <u>Note</u>: The computer is displayed within a window on the monitor.*

❖ *When in <u>Remote</u> operation mode, the master Sequoia 2H2U automatically transfers the mouse and keyboard control to the selected computer.*

❖ *To switch back to <u>Host</u> operation mode, use "**Pause/Break**" hot-key. <u>Host</u> cursor will reappear.*

3.1 <u>Host</u> Operation Mode

In this mode, monitor a quad screen or double-click the window of the particular computer to be controlled. Following are the basic operations that can be performed in <u>Host</u> operation mode.

3.1.1 Pop-up Selections

Upon moving the <u>Host</u> cursor to the top right corner of a window, the following pop-up icons appear.

- ❖ S : *swap window*

- ❖ ↵ : *enter a computer window*

- ❖ 🔲 : *full screen*

- ❖ 🔳 : *return from full screen*

📄 | *When the Sequoia has detected that a particular computer's USB (or PS/2) port is not connected, then the enter ↵ pop-up icon is not shown on that window (only USB connections are hot-pluggable).*

3.1.2 Functions

The Sequoia 2H2U allows the swapping of window position, window size adjustment, and audio output selection. Following are the summarized <u>Host</u> operation mode functions.

Function	
Window resizing	Drag the border of a window to a desired size
Window repositioning	Drag a window to a new position
Window position swapping	Move the <u>Host</u> cursor to the top right corner of a window, click the **S** icon and then move the cursor (now a capital letter **S**) to the destination window and click the left mouse button.
Full screen window	Move the <u>Host</u> cursor to the top right corner of a window, click the 🔲 icon then the window will maximize to full screen. Select 🔳 to return back from full screen.

Access a remote computer	Method 1:
	    Move the <u>Host</u> cursor to the top right corner of a remote computer window, click ↵ to access the <u>Remote</u> operation mode.
	Method 2:
	    Move the <u>Host</u> cursor so it is on the desired remote computers' window and double-click.

Lock/unlock window layout	Move the <u>Host</u> cursor to the top left corner of the display until the cursor becomes a capital letter **L**, then click to lock the window layout. Repeat these steps to unlock the layout.
Enable/disable audio output	Double-click the audio tally 🟩 (green) and it will turn to 🟥 (red) to signify that audio output is coming from a window. *<u>Note</u>: To enable an audio output from a source that is not the active window, refer to the Phoenix-G (Galaxy) user manual.*

Table 3-1 <u>Host</u> Operation Mode Functions

3.1.3 Hot-keys

Hot-keys are available when utilizing the Sequoia 2H2U under the <u>Host</u> operation mode. Following are the summarized <u>Host</u> operation mode hot-keys.

Keys	
Alt + F# (F1 – F12)	Use **Alt** + **F1** – **F12** function keys (*up to F23 with special keyboard)* to load user-created preset files. Sequoia can store 23 user created presets.
Alt + F	Toggle a particular window's full screen mode on/off. <u>Note</u>: *The window selected is where the <u>Host</u> cursor is currently residing.*
Alt + L	Toggle lock/unlock window layout
Ctrl + Esc	This allows Ethernet communication so that you can use the Phoenix-G (Galaxy) control software and sending of ASCII Z commands.
Ctrl + F# (F1 – F4)	Loads the particular window to full screen mode, thereby causing other window(s) to fade from view. Where **F#** is the source window number (e.g., **Ctrl** + **F1** will call up the source **1** window). In a cascaded system: First move the <u>Host</u> cursor to the desired module then select the source.
Ctrl + L	Toggle lock/unlock keyboard and mouse. When locked the keyboard and mouse are inoperable. This is useful for when users are away.
Ctrl + O	Toggle muting the audio output on/off (mute).
Ctrl + P	Toggle a window on and off. Where **P** is the source/window number (e.g., **Ctrl** + **1** will turn on/off the source **1** window).
Ctrl + R	Toggles between aspect ratios, for the window that the <u>Host</u> cursor is on. Settings: 4:3, 16:9 and off.
Ctrl + S	Saves the latest preset to the Sequoia so that on the next boot-up the latest preset will be loaded. <u>Note</u>: *Also simultaneously saves latest presets for cascaded modules.*
Ctrl + X	When a video signal does not fill up the entire frame a black bar fills in the empty space that is left behind. Pressing **Ctrl** + **X** crops off the black bars. When applying this function, make sure the image does not have a black or dark grey background to avoid cropping off part of the actual image. <u>Note</u>: *Only applicable for HDMI and DVI input signals (SDI not supported)*
Ctrl + Y	**Redo**: redo up to ten previously "undone" actions.
Ctrl + Z	**Undo**: undo up to ten previous actions.
Ctrl + Shift + Alt + R	Reset the cascaded module's system configuration only.
F# or Shift + F#	Access a remote computer (**F#** represents keys **F1** or **F2**). **F1** corresponds to the **Source 1** window while **F2** corresponds to the **Source 3** window. Window swapping can be enabled/disabled from the Phoenix-G (Galaxy) control software. When the parameter inside the Phoenix-G (Galaxy) software "**Swap with Active Window**" is **enabled** *(under the Sequoia Properties menu)* then: <u>Upon Pressing F#:</u> The active window and the selected window swap positions. And selected window enters <u>Remote</u> operation mode. <u>Upon Pressing Shift + F#:</u> Selected window enters <u>Remote</u> operation mode (no swapping). When the parameter "**Swap with Active Window**" is **disabled** then: <u>Upon Pressing F#:</u> Selected window enters <u>Remote</u> operation mode (no swapping). <u>Upon Pressing Shift + F#:</u> The active window and the selected window swap positions. And selected window enters <u>Remote</u> operation mode.
Home	When in full screen mode, toggle between full screen in foreground and full screen in background.
Page Up/Down	Switch between the 3 factory-default presets.
Shift + I	Switch audio input source between **HDMI IN** and source ports. Audio tally ▮ (red) signifies that audio output is coming from a particular window.

Keys	
Shift + L	Toggle priority of overlaying windows on/off – upon clicking a window will not cause the window to become the topmost window.
Shift + O	Switch the audio output between the Sequoia's internal speakers and the **HDMI OUT** port. *Note: This function is not available when connected to the **HDMI OUT** port via a DVI-to-HDMI adapter.*
Shift + ← / **Shift + →**	Due to subtle differences in processing times; the audio and video may need to be re-synced, this is done by adjusting the audio delay. The Sequoia provides up to 170 milliseconds of audio delay adjustment. Use (**Shift + ←**) to decrease delay and (**Shift + →**) to increase delay. (red LED)
Tab	Move the <u>Host</u> cursor from one display (monitor) to the other (applicable only during cascading).
← / →	Decrease/increase the volume level (10 levels including mute). (green LED)
↑	Load the previous **user-created** preset file. *Note: Use the Phoenix-G (Galaxy) control software to create and save your own presets.*
↓	Load the next **user-created** preset file.

Table 3-2 Hot-keys of <u>Host</u> Operation Mode

*Pressing **Ctrl + Esc** hot-keys as well as the "Load Preset" action will clear the undo (**Ctrl + Z**) and redo (**Ctrl + Y**) list in memory.*

3.2 <u>Remote</u> Operation Mode

3.2.1 Hot-keys

The following hot-keys are only available when utilizing Sequoia 2H2U under <u>Remote</u> operation mode.

Keys	
<u>**Pause**</u> **Break**	Exit from the <u>Remote</u> operation mode to the <u>Host</u> operation mode.
Ctrl + Esc	This command allows Ethernet communication so that you can use the Phoenix-G (Galaxy) control software. *Note:* *1. Pressing **Ctrl + Esc** will also open up the Windows start menu. This is okay, simply exit the Windows start menu and proceed.* *2. To disable "Surfer" feature (next hot-key description), pressing **Ctrl + Esc** and then running and quitting Phoenix-G software can accomplish this. "Surfer" feature will automatically be enabled upon entering "<u>Host</u> operation mode" and then entering "<u>Remote</u> operation mode."*
Ctrl + Shift + Alt + F10	Toggles the "Surfer" feature on and off; wherein upon moving mouse to same border that is shared with another remote computer will cause the Sequoia's (<u>Host</u>) keyboard and mouse to control next selected computer. *Note:* *1. Not applicable for Sequoia 2H2U with touch-screen display setup or with PS/2 connection.* *2. Not applicable after pressing the above-mentioned **Ctrl + Esc** hot-key and then running and quitting Phoenix-G software. "Surfer" feature will automatically be enabled upon entering "<u>Host</u> Operation Mode" and then entering "<u>Remote</u> operation mode."* *3. Refer to Appendix A for more details.*

Keys	
Ctrl + Shift + Alt + V	This command is used to read the Sequoia's USB device firmware version (DB15 connector (source **1** and **3** ports) located on the Sequoia 2H2U rear panel that connects to the computer's USB port through the 5-in-1 cable). Open Microsoft® Notepad and then press **Ctrl + Shift + Alt + V** to paste the firmware text to Notepad.
	*Note: This function is only available when the computer and Sequoia are connected via the 5-in-1 cable's **USB port**.*
Ctrl + Pause Break or **Shift + Pause Break**	Switch control (cycle) from window 1→window 3→window 1, and so forth. The controlling function is available only if the computer and Sequoia 2H2U are connected via the 5-in-1 cable.
	Note: *1. If only one computer is connected, then no switching would occur.* *2. Not applicable after pressing the above-mentioned **Ctrl + Esc** hot-key. Hot-key function will automatically be enabled upon entering "Host Operation Mode" and then entering "Remote operation mode."*

Table 3-3 Hot-keys of Remote Operation Mode

*When using Apple's MacBook computer, use "**control** + **option (Alt)** + **shift** + **k**" to perform Host/Remote operation mode switch because there is no "**Pause/Break**" key.*

Appendix A Using the Surfer Feature

📄 *"Surfer" feature is not available for Sequoia 2H2U with touch-screen display setup or with PS/2 connection.*

The "Surfer" feature is designed for ease of transferring control from one remote computer window to another. Just moving the mouse to the nearest side border of another remote computer will cause the Sequoia's (Host) keyboard and mouse to transfer control to next selected computer.

📄 *By default, the "Surfer" feature is enabled upon starting up the Sequoia 2H2U.*
*The **Ctrl** + **Shift** + **Alt** + **F10** hot-keys allow you to toggle "Surfer" feature on and off.*

*"Surfer" feature will be disabled after pressing **Ctrl** + **Esc** hot-key and then running and quitting Phoenix-G software. "Surfer" feature will automatically be enabled upon entering "Host Operation Mode" and then entering "Remote operation mode."*

A.1 "Surfer" Feature on Uniform Quad Layout That Fills Entire Screen

❖ *Below figure shows the allowed "Source" window control switching action upon moving the mouse to the window sides "with arrow" and "shaded line" indicators. Moving the mouse from one "Source" window to the other transfers control from the former window to the target window. No "Source" window control switching action will occur upon moving the mouse to the window sides "without arrow" and "shaded line" indicators.*
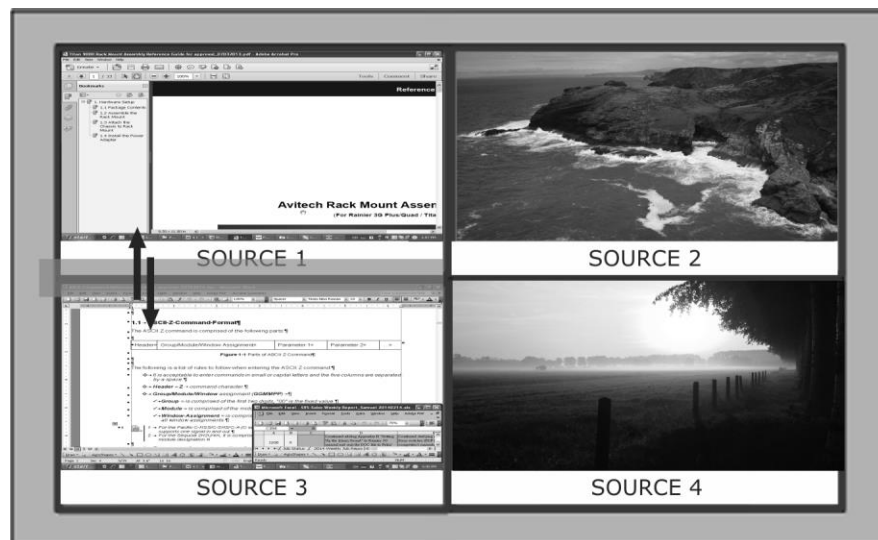

Figure A-1 "Surfer" Feature on Default Preset 1

📄 *Default setting of item **Swap with active window** (Phoenix-G→Settings→System Parameter→Sequoia Properties U.I.) is enabled (with checkmark), so swapping of active window position will also take place.*
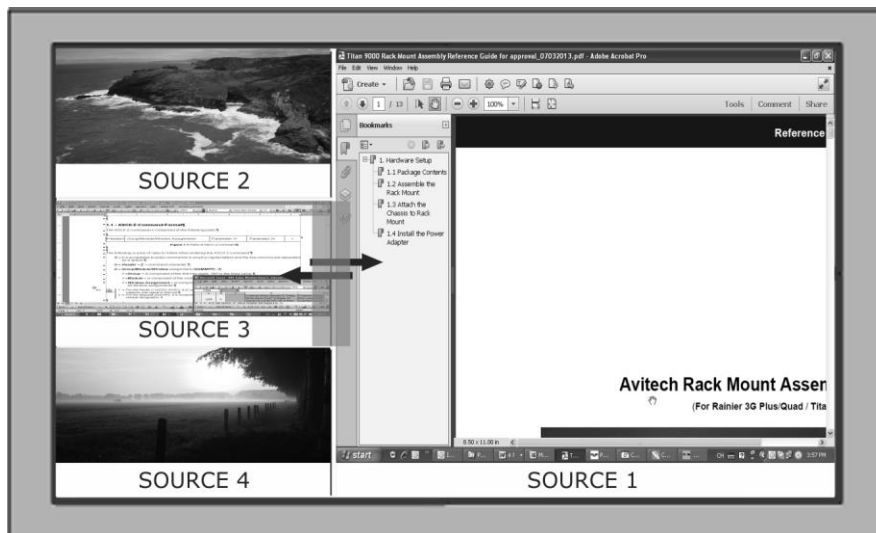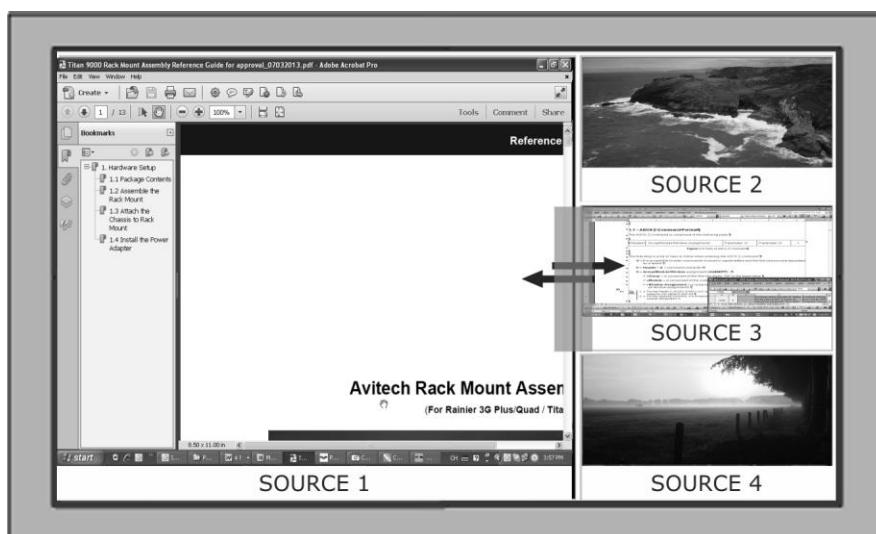
Figure A-2 "Surfer" Feature on Default Preset 2

Figure A-3 "Surfer" Feature on Default Preset 3

A.2   "Surfer" Feature on Non-uniform Quad Layout

❖ *Below figure shows possible "Source" window control switching action upon moving the mouse to the window sides "with arrow" and "line" indicators. Moving the mouse from one "Source" window to the other transfers control from the former window to the target window.*
No "Source" window control switching action will occur upon moving the mouse to the window sides "without arrow" and "line" indicators.
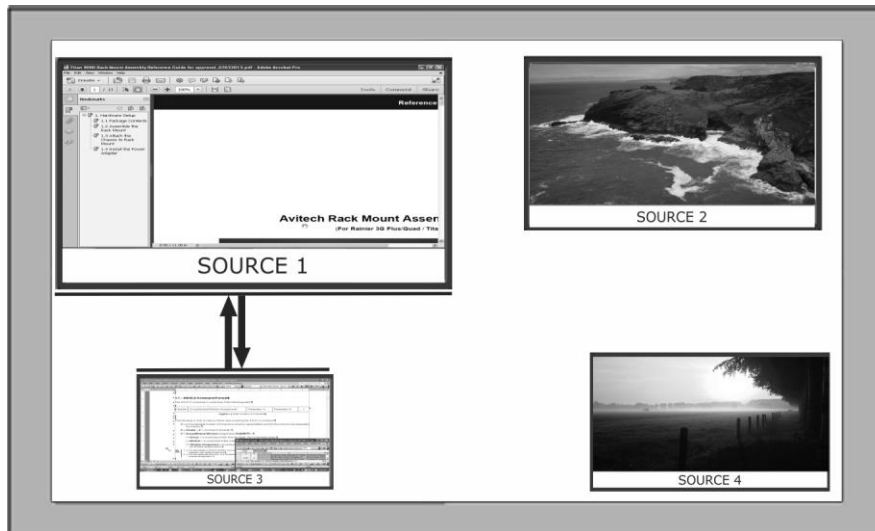

Figure A-4 "Surfer" Feature on Non-uniform Quad Layout

📄 *1. In case of overlay "Source" windows, switching of control will occur when mouse cursor has left the area where the 2 "Source" windows overlay into the target window.*
*2. Default setting of item **Swap with active window** (Phoenix-G→**Settings**→**System Parameter**→ **Sequoia Properties** U.I.) is enabled (with checkmark), so swapping of active window position will also take place.*

A.3   "Surfer" Feature on Full Screen "Source" Window

❖ *Below figure shows possible "Source" window control switching action upon moving the mouse to the window sides "with arrow" and "line" indicators. Moving the mouse from one "Source" window to the other transfers control from the former window to the latter one.*
No "Source" window control switching action will occur upon moving the mouse to the window sides "without arrow" and "line" indicators.
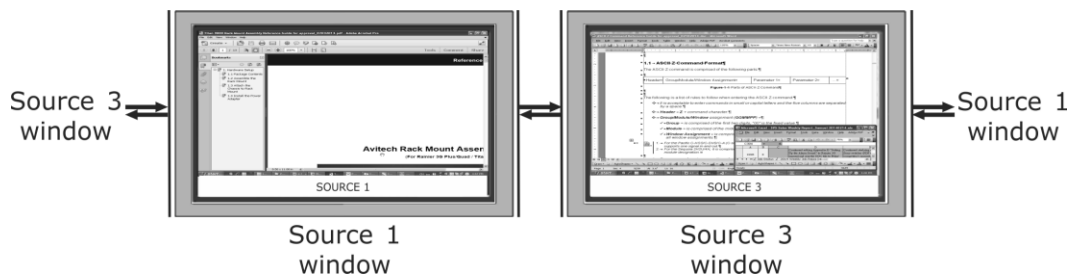

Figure A-5 "Surfer" Feature on Full Screen "Source" Window

A.4 "Surfer" Feature on Cascaded System

❖ *Below figure shows a sample 3 Sequoia 2H2U cascaded system.*
The "Surfer" feature is confined within each Sequoia only.
(refer to the abovementioned illustrations on using the "Surfer" feature within each Sequoia)

❖ *For example: if user is currently in control of "Source 1" computer window of Sequoia 2 (Remote operation mode); and wishes to switch control to "Source 3" computer window of Sequoia 3 (Remote operation mode), perform the following:*

*Step 1: Press **Pause/Break** key (or double-click the middle wheel mouse button) to exit (Remote operation mode) and enter (Host operation mode). Control of "Source 1" computer window of Sequoia 2 has now been disengaged.*

Step 2: Move the Host cursor to the right edge of the display of Sequoia 2 to allow it to jump to left edge of the display of Sequoia 3 (still in Host operation mode but this time location of Host cursor is now in Sequoia 3).
*Pressing **Tab** key can also move Host cursor from Sequoia 2 display to Sequoia 3 display (**Tab** key only moves in a clockwise cascaded direction – to move in a counterclockwise cascaded direction, the mouse cursor can be moved to the left edge of the display to effect this action).*

Step 3: Move the Host cursor over the top right portion of "Source 3" computer window of Sequoia 3 to click the ⏎ symbol of the pop-up menu S ⏎ ⛶
Or, double-click the left mouse button on the desired window to switch control to it (enter Remote operation mode).

The "Surfer" feature can now be used within Sequoia 3.
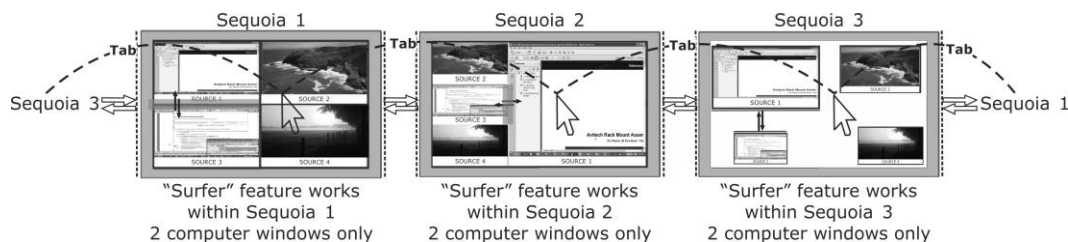
Legend:
Host operation mode action (moving between Sequoia 2H2U) = dotted line and arrow (no fill)
Remote operation mode action (within a particular Sequoia 2H2U) = shaded line and arrow (with fill)

Figure A-6 "Surfer" Feature on Cascaded System

Up to 5 Sequoia 2H2U can be cascaded.

Appendix B   Using the Touch-screen

📄 *When using a touch-screen monitor with the Sequoia 2H2U for the first time or after a factory reset make sure to perform a screen calibration. (For details refer to Chapter 2.1.1, "Basic Setup When Connecting to a Touch-screen Display.")*

B.1   Lock/Unlock Window Layout

Use the finger (or stylus) to tap the top left corner of the monitor until a capital letter "L" is displayed then tap the "L" symbol twice and the current layout will be locked. Repeat these steps to unlock the layout.

Figure B-1 Touch-screen: Lock/Unlock Window Layout

B.2   Pop-up Selection

Use a stylus (or finger) to tap the top right corner of a window and the following icons will appear: (S / ↵ / ⛶). To execute an icons' function press on it for approximately 1 second.

To perform the "swap window function," press on the S icon for 1 second, and then tap twice on the destination window.

Figure B-2 Touch-screen: Pop-up Selection

B.3   Audio Tally

To enable audio output on any window, tap twice on the audio tally ■ (green) and it will turn to (red) ■ to signify that audio output is coming from the window.

> *By default, audio output corresponds to the active window. To enable audio output from a source other than the active window, use the Phoenix-G (Galaxy) control software and disable the item **Audio Output from Active Window** (remove checkmark) under **Settings→System Parameter→Sequoia Properties**.*

B.4 Move/Resize Window

To move a window, tap anywhere near the center of the window and when the ⊕ symbol appears, drag the window to a new position.

To resize a window, tap anywhere near the edge of the window and when the directional arrows appear, drag the windows' border to the desired size.
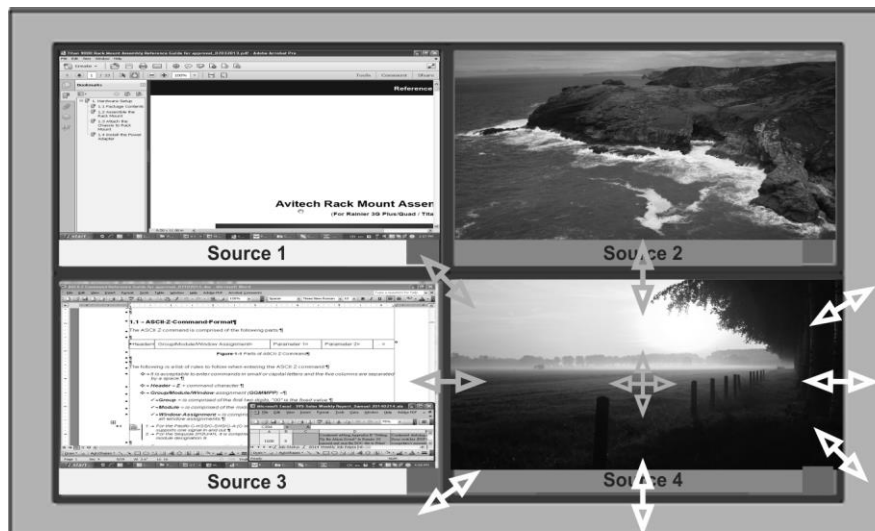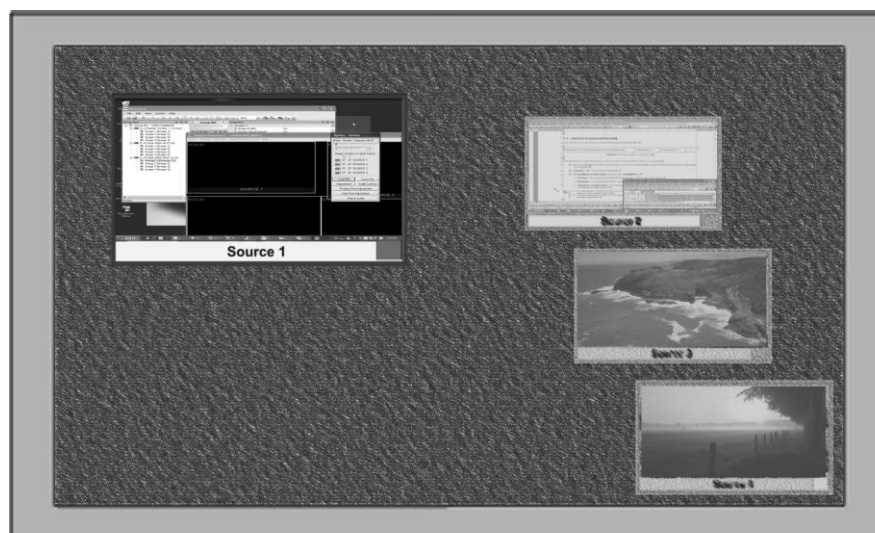

Tap and drag to resize / move window

Figure B-3 Touch-screen: Move/Resize Window

B.5 Exit from <u>Remote</u> Operation Mode to <u>Host</u> Operation Mode

To exit from <u>Remote</u> operation mode to <u>Host</u> operation mode tap twice anywhere outside the "active" Remote window. This includes tapping twice on any of the other windows.
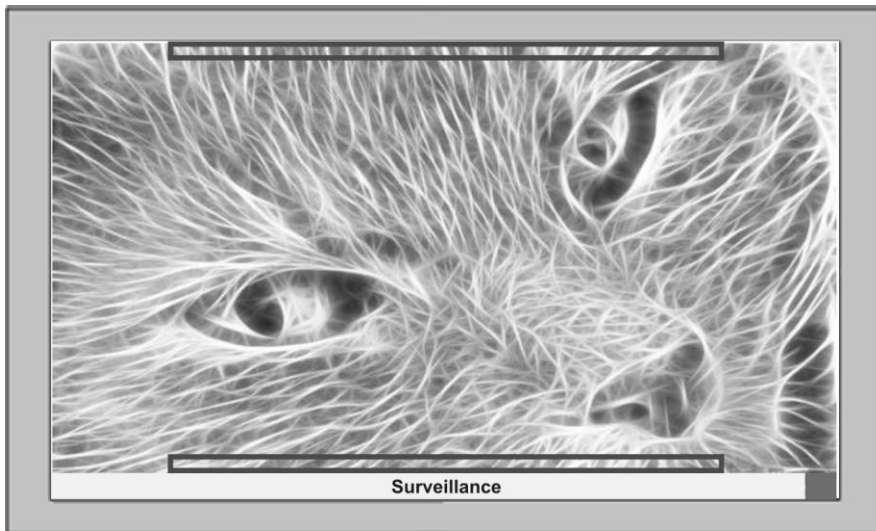

Tap twice anywhere outside Source 1 window

Figure B-4 Touch-screen: Exit <u>Remote</u> Operation Mode

To exit from (Full Screen) <u>Remote</u> operation mode; press the upper or lower inch of the touch-screen for approximately 1.5 seconds.

<u>Note</u>: Figure B-5 indicates these areas with the black rectangles.

Tap and continue pressing on the upper or lower areas
indicated by the black rectangles

Figure B-5 Touch-screen: Exit <u>Remote</u> Operation Mode (When in Full Screen)

B.6 Switch Control (Cycle) Between Windows

To switch control from window 1→window 2; press anywhere on window 2 for approximately 0.5 second.

When the "**Swap with Active Window**" parameter is set to (ON) then switching control from window 1→window 2 will also swap the locations of the windows. The *"Swap with Active Window"* parameter can only be adjusted using the Phoenix-G (Galaxy) control software.
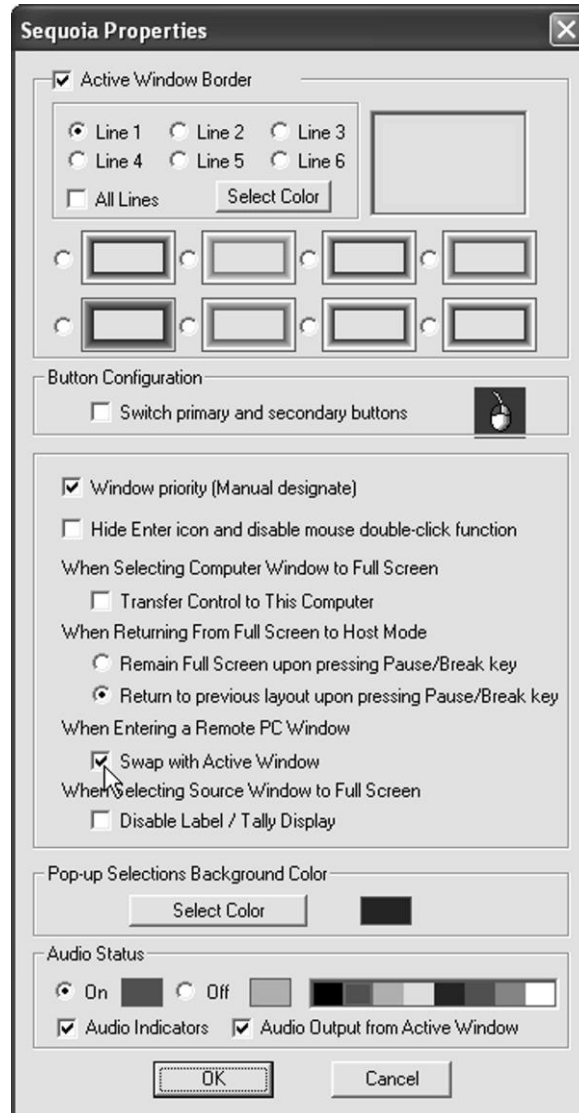

Figure B-6 Phoenix-G Utility: Swap with Active Window

To switch Sources (cycle) while in Full Screen <u>Remote</u> operation mode; press within an inch of the left or right edges of the touch-screen and hold for approximately 1.5 seconds. (Refer to Figure B-7.)

<u>Cycle forward</u>: press **right** side of screen:
window 1→window 2→window 3→window 4→ window 1

<u>Cycle Backward</u>: press **left** side of screen:
window 1→window 4→window 3→window 2→window 1

Tap and continue pressing on the left or right areas indicated by the black rectangles

Figure B-7 Touch-screen: Switch Sources while in Full Screen Mode

Appendix C   Using the Touch-to-Mouse Utility (for Windows XP only)

The Touch-to-Mouse utility is designed for use with a touch-screen monitor and a remote computer running Windows XP. To start the Touch-to-Mouse utility, perform the following steps:

Step 1.   **Copy** the file "Sequoia USB Touch Tool.exe" to the designated computer.

Step 2.   **Double-click** the file: "Sequoia USB Touch Tool.exe".

Step 3.   **Right-click** the Touch-to-Mouse icon (🖱) appearing on Windows taskbar, select **Settings**.

Step 4.   Set the **Double-click Speed** with the slider or enter the time in (**ms**).
             <u>Note</u>: two successive taps on the touch-screen mimics double-clicking the left-mouse button.
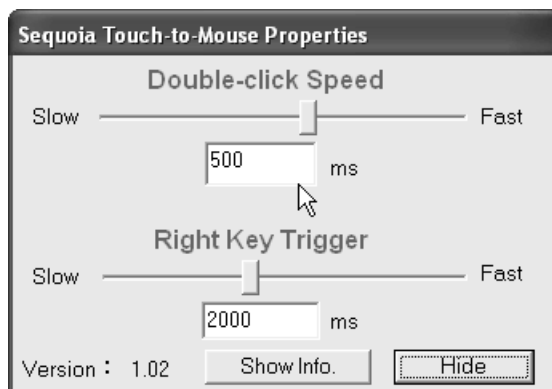

Figure C-1 Touch-to-Mouse Utility Setup

Step 5.   Set the **Right Key Trigger** with the slider or enter the time in (**ms**). To mimic the action of the right-mouse button hold your finger on the touch-screen until the specified time has elapsed.

Step 6.   Then click **Hide** when finished.

📄 | *To automatically start Touch-to-Mouse upon the next Windows XP boot-up, right-click the Touch-to-Mouse icon and select "**Auto-start when Windows starts-up**." (A checkmark will appear signifying it is enabled.)*
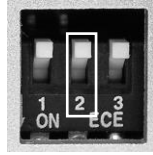
Appendix D   Resetting to the Factory-Default State

To reset your Sequoia to its factory-default state, perform the following steps:

Step 1. Power-off the Sequoia by pressing the power switch.

Step 2. Push number 2 (middle) dip switch located on Sequoia's rear panel downward to ON position.

Figure D-1 Push the Number **2** (Middle) Dip Switch

Step 3. Power-on the Sequoia by pressing the power switch.

Step 4. Push back the number 2 (middle) dip switch upward to the default position.

Upon resetting your device to factory-default state, your previously saved preset files will be automatically removed. You need to use the Phoenix-G software to set output resolution and create preset file(s) again.