Sequoia 4H

One of a kind multiviewing

Revision 1.1.2, (April, 2018)

AVITECH

ABOUT THIS MANUAL
This manual contains information on how to use the Avitech Sequoia 4H mouse keyboard controller. There are three chapters in this manual.

- ✓ **Getting Started** introduces the features and specifications as well as the external components of the Avitech Sequoia 4H.
- ✓ **System Configuration** discusses the process of setting up the Sequoia 4H.
- ✓ **Basic Operations** introduces the two types of operating modes. Also demonstrates use of the mouse and keyboard hot-keys to perform basic operations and its compatibility with the touch-screen display with Avitech Sequoia 4H.

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 4H. Doing so may void the warranty. There are no serviceable parts inside. Please refer all servicing to qualified personnel.

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Marking labels located on the exterior of the device indicate the regulations that the model complies with. Please check the marking labels on the device and refer to the corresponding statements in this chapter. Some notices apply to specific models only.

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Dette produkt er i overensstemmelse med det europæiske direktiv 1999/5/EC.

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Dit product is in navolging van de bepalingen van Europees Directief 1999/5/EC.

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Australia and New Zealand C-Tick Marking and Compliance Notice Statement of Compliance

This product complies with Australia and New Zealand's standards for radio interference.

1. Getting Started

Avitech Sequoia 4H is a highly innovative device. Sequoia integrates functions of a KVM *(keyboard video mouse)* switch and a robust multi-viewer into a single enclosure. Sequoia 4H provides a simple solution for any user who works in an environment with multiple computers. The Sequoia 4H is able to seamlessly switch and control up to four computers with just a keyboard and mouse. Additionally, its scalability (through cascading) allows Sequoia to be ideal for both individual users and corporate applications.

The Sequoia features a visual user interface (Host operation mode) which allows users to configure the layout through an OSD (on screen display). While in Host operation mode, it easily converts video images to full screen, adjusts windows to any size and moves windows to any position. Also, for a more hands-on user experience**,** the Sequoia 4H can be used with a touch-screen display. The touch-screen controls are receptive and intuitive; it switches sources, resizes windows, moves windows to any position, and controls a remote computer with a tap of your finger.

This chapter introduces the features and specifications, as well as the external components of the Sequoia 4H.

1.1 Package Contents

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

Avitech Sequoia 4H

Utility Disc (software and user manual)

12 V DC/5A Power Adapter

Standard Power Cord (USA customer only)

Rubber Foot (4 pcs)

USB-A to USB-B Cable

HDMI Cable (optional)

Sequoia USB-A to DB-15 Cable (optional)

DVI to HDMI Adapter (optional)

Table 1-1 Package Contents

The following items are included if the optional rack mount kit was also 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 4H is HDCP-compatible and capable of HDMI and DVI output (DVI via an adapter). It features automatic detection and a selection of optimum display resolution, automatic input signal detection, a more flexible window configuration (any size, any position), Picture-in-Picture (PiP) overlay display, video loss detection, image/gain that can be adjusted manually or automatically, and crop/pan image.

The Sequoia can control up to four computers, and can automatically detect USB interface. It is also hot-pluggable, which allows the addition/removal of computers without powering down any devices. Auto-sensing video signal presence and keyboard & mouse operations on the UI, the Sequoia 4H automatically enters power saving mode after a period of idle time, optimizing power management. The Sequoia's front panel features LED indicators for monitoring the following:
Connected Computers (Active or Standby), Operation Mode (Host or Remote) and Power.

For audio monitoring, the Sequoia 4H features two built-in speakers and a 1/8 inch headphone jack. The Sequoia 4H accepts embedded/HDMI® audio (2ch-stereo) and analog audio (stereo). To assist with audio/video re-syncing, the Sequoia 4H features up to 170ms of audio delay.

The Sequoia 4H is able to fully utilize the flexibility of Avitech's Phoenix-G software (formerly called Galaxy). With the 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 (the "Briefing" feature – refer to Sequoia 4H Phoenix-G manual for more details). Moreover, with Avitech's Hook utility (patent pending), a laptop can be used to control the Sequoia 4H via the USB port located on the front panel  .

For larger applications, it's possible to cascade up to five Sequoia 4H's and control up to 20 computers with just one keyboard and mouse.

1. *Non-standard keyboards (i.e. 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 is enabled if this item exists 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** (via 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.

Output	
HDMI or **DVI** (via DVI to HDMI adapter)	Automatic sensing or user selectable ❖ *Up to 1920×1200 (WUXGA) at 50Hz/60Hz or 1600×1200 (UXGA) 75Hz* 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 four 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)*
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*
Power	Power consumption is 25W Power Supply (*adapter)*: ❖ *Input (AC): 100 to 240V 50Hz / 60Hz* ❖ *Output (DC): 12V DC / 5A*
Dimension/Weight	Dimension, 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 4H

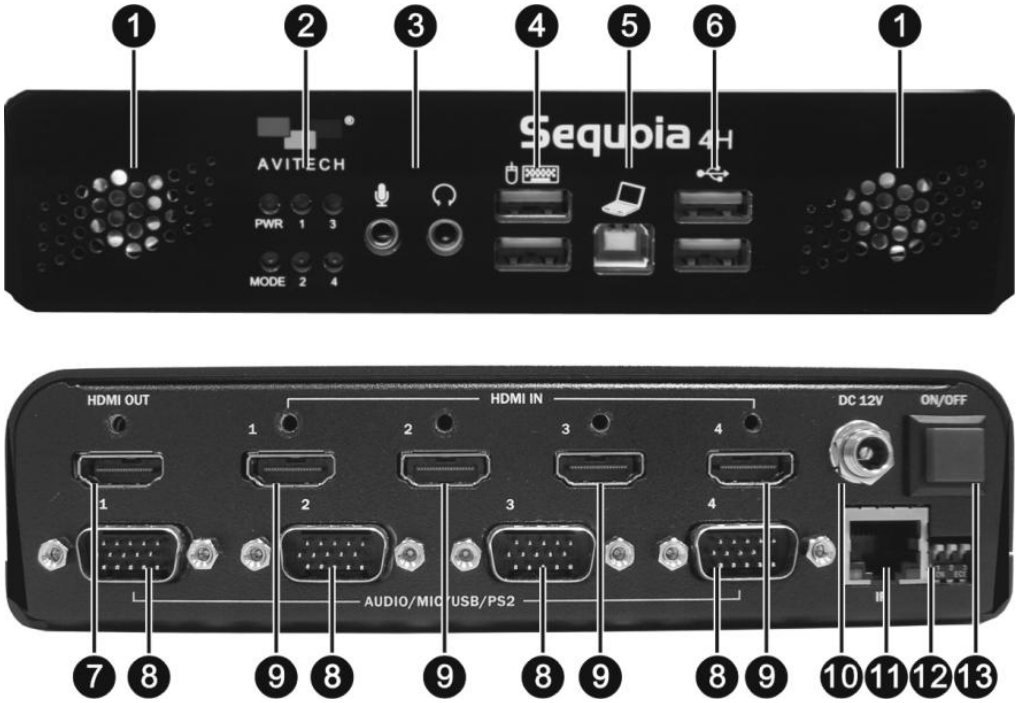


Figure 1-1 Sequoia 4H Components

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 4H is turned ON ❖ **MODE** ✓ Glows green when the Sequoia 4H is in Host operation mode ✓ Glows amber when the Sequoia 4H is in Remote operation mode ❖ **1** to **4** ✓ Glows green when a computer is operating under Remote operation mode (full control through keyboard and mouse) ✓ Glows amber when a particular computer is operating under Host operation mode (monitoring only) ✓ Blinks amber when a rebooting or powered-off computer is connected to the Sequoia 4H
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 keyboard and mouse. Use these ports for control in Host operation mode
❺ **USB Type B**	Connects to remote computer for control via a USB keyboard and mouse
❻ **USB Type A** (peripheral sharing)	These two ports can connect to a USB 2.0 hub, USB flash disk, etc.

Rear Panel	
❼ **HDMI Output**	Connects a monitor/display via HDMI or DVI signal cable. (a DVI to HDMI converter may be required)
❽ **DB-15 Input**	Connects the remote computer's USB connectors via the USB-A to DB-15 cable
❾ **HDMI Input**	Connects HDMI/DVI inputs via HDMI or DVI signal cable. (a DVI to HDMI converter may be required)
❿ **Power (DC 12V)**	Connects to the 12V DC/5A power adapter
⓫ **Ethernet (IP)**	For setup using the Phoenix-G software (Galaxy) and control using ASCII Z commands via a network connection (Protocol: TCP/IP, UDP)
⓬ **Dip Switches**	Resets the Sequoia to factory-default settings; or updates firmware
⓭ **Power Switch**	Turns the Sequoia 4H power ON and OFF

Table 1-4 Sequoia 4H Component Description

2. System Configuration

This chapter discusses the process of setting up Sequoia 4H.

2.1 Getting the Sequoia 4H Ready

The Sequoia 4H can be connected to most monitors and some touch-screen displays. It can also be cascaded with up to five Sequoias for larger applications.

To control the Sequoia 4H 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 it 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 keyboard and mouse 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 a Regular or Touch-screen Display

The following figure shows a typical setup with an Avitech Sequoia 4H connected to four computers.

DO NOT place any object on the top or side panels of the Sequoia 4H.
Doing so could affect its internal components and/or its heat dissipation.

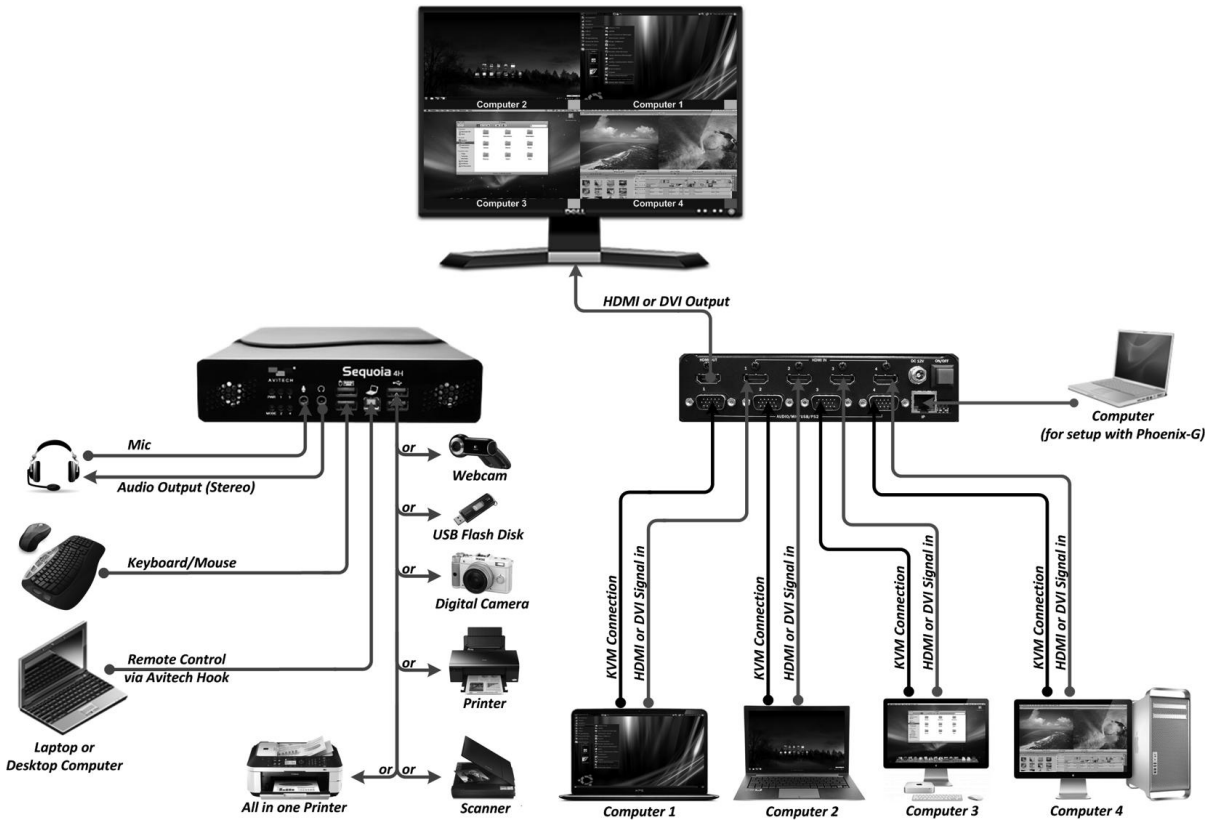


Figure 2-1 Sequoia 4H with Regular Display Setup

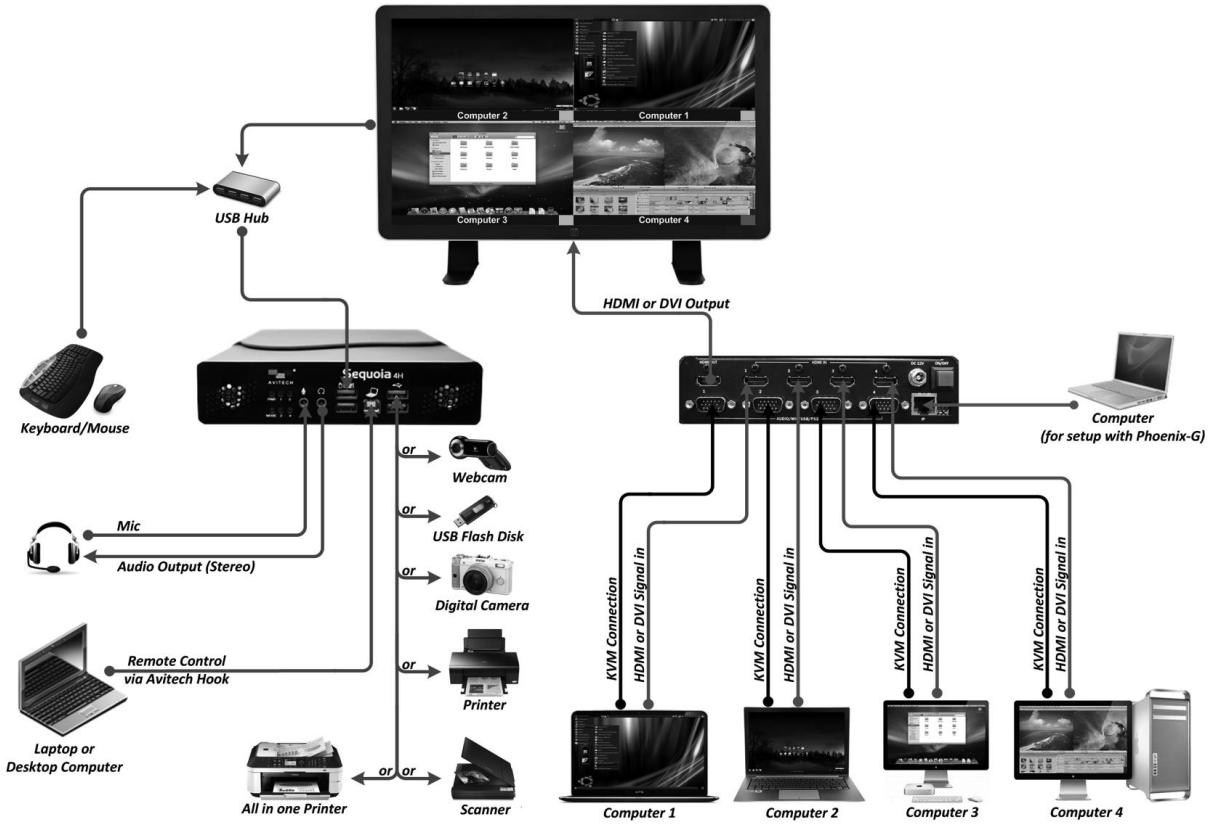


Figure 2-2 Sequoia 4H with Touch-screen Display Setup

*Step 1. Connect the USB-A to DB-15 cable to first computer's USB port. Connect other end of USB-A to DB-15 cable to the Sequoia's source **1** port (DB15 connector at rear panel). Repeat this process for all subsequent computers.*

***(For Windows 2000 users)** Upon connecting the Sequoia via USB for the first time to the computer, perform the windows on-screen steps to initialize the USB connection.*

*Step 2. Connect a HDMI or DVI (via a DVI to HDMI adapter) display to the **HDMI OUT** port on the Sequoia's rear panel.*

*Step 3. Connect the first computer's HDMI or DVI (via an adapter) output to the Sequoia's **HDMI IN 1** port through a HDMI cable. Repeat this process for all subsequent computers.*

Step 4. Connect the keyboard and mouse to the keyboard/mouse USB ports located on the Sequoia 4H front panel. When connecting three 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.)

1. *Non-standard keyboards (i.e. keyboards with a USB hub, keyboards that need driver installation and programmable keyboard, etc.) are not supported.*
2. *The Sequoia 4H automatically detects signal presence and keyboard/mouse operation on the UI. In cases where all four video inputs and UI operation are not detected for a set of time (five minutes by default), the Sequoia 4H automatically turns off its monitor output and enters power saving mode.*
3. *Refer to Avitech Phoenix-G user manual for details regarding power saving mode configurations.*

Step 5. Connect the provided 12V DC power adapter to the Sequoia 4H and turn the Sequoia on.

*Step 6. Move the mouse or press the **Pause/Break** key to display the Sequoia's Host cursor (will disappear again after five seconds of inactivity). Move the mouse again to display the Host cursor.*

Step 7. Pop-up menu S ↵ ⛶ will appear upon moving Host cursor to the window's top right position.

- ✓ *Click the ↵ symbol or double-click the left mouse button on the desired window to enter Remote operation mode.*
- ✓ *Remote operation mode connects you directly to the selected computer.*
- ✓ *The Sequoia's (Host) keyboard and mouse will now control the selected computer.*
- ✓ *Item not applicable for Sequoia 4H with touch-screen display setup –*
  "Surfer" feature (default setting is "on") is enabled, moving the mouse to a border that is shared with another remote computer will cause the Sequoia's (Host) keyboard and mouse to control the other 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 4H.

- ✓ *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 Host 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 combining multiple Sequoia devices (up to five) through USB A/B cables. Only the keyboard and mouse are cascaded. Other functions (i.e. 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 three Sequoia 4H's cascaded together; with each Sequoia 4H connected to four computers.

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

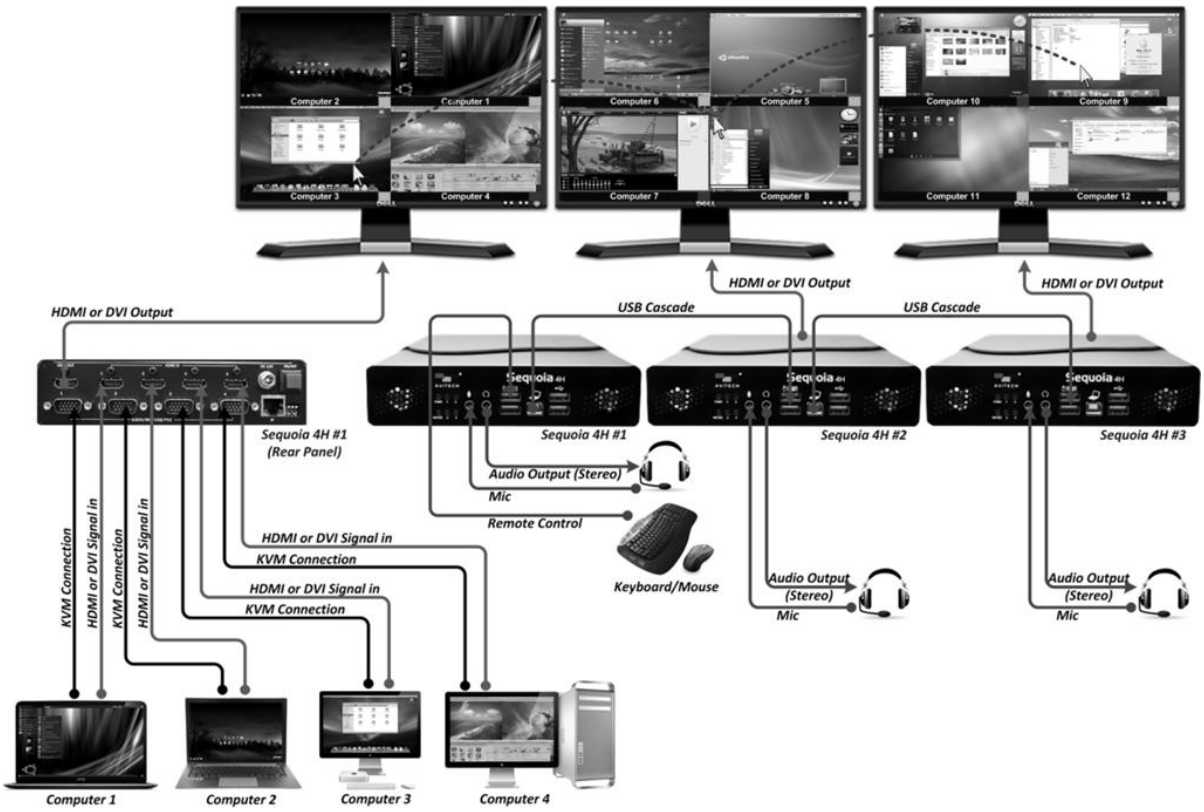


Figure 2-3 Cascading Three Sequoia 4H's Setup

Step 1. Perform steps 1 – 3 for the first Sequoia as outlined in the previous section (2.1.1) "Basic Setup When Connecting to a Regular or Touch-screen Display."

Step 2. Repeat the aforementioned steps for the second and third Sequoia 4H to be cascaded.

Step 3. Connect a keyboard and mouse 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 a 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 the Host mouse cursor will appear on display (will disappear again after five seconds of inactivity). Move the mouse again to display the Host cursor.*

*Step 6. Place the cursor on the display of the first Sequoia 4H with the keyboard and mouse 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 the Host mouse cursor across all three displays in order for the system to complete the 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 Host 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 Remote operation mode.*
- ✓ *Remote operation mode connects you directly to the selected computer.*
- ✓ *The Sequoia's (Host) keyboard and mouse will now control the selected computer.*
- ✓ *Item is not applicable for Sequoia 4H with touch-screen display cascaded setup – "Surfer" feature (default setting is "on") is enabled, moving the mouse to a border shared with another remote computer will cause the Sequoia's (Host) keyboard and mouse to control the other computer.*
  *Pressing **Alt** + **Ctrl** + **Shift** + **F10** will toggle this feature "off" and "on."*

3. Basic Operations

There are two types of operating modes while using the Sequoia 4H; the Host mode and the Remote mode. This chapter discusses both operational modes.

✓ *Host Operation Mode*

When the Sequoia 4H is in Host operation mode, the Host cursor is controlled by the mouse connected to the Sequoia 4H. Or in the case of a cascaded setup, the cursor is controlled by the mouse that is connected to the Master Sequoia. The Host cursor controls the positions and sizes of the windows for up to four remote computers (up to 20 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 4H is in Remote operation mode, the keyboard and mouse cursor are used to control a computer connected to the Sequoia 4H.

Understanding the Terminology:

- *USB host – refers to the keyboard/mouse USB ports located on the front panel of the Sequoia 4H.*
- *USB device – refers to the DB15 connector (source **1** – **4** ports) located on the Sequoia 4H rear panel that connects to the computer's USB port through the USB-A to DB-15 cable.*

Tips on Navigating the Sequoia 4H:

- *Up to four computers are able to connect with a single Sequoia 4H. The Sequoia puts each remote computer in a window, and displays all four windows on one monitor. This is how four computers can be displayed and controlled from a single monitor.*
- *When Host 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 Host cursor into a specific window on the screen and then click the ↵ "enter icon" or double-click the left mouse button.*
- *Remote operation mode works with computers only. Remote operation mode cannot be entered on other video sources (i.e. Blu-Ray players).*
- *When Remote operation mode is active, use keyboard and mouse to operate a single computer. Note: The computer is displayed within a window on the monitor.*
- *When in Remote operation mode, the master Sequoia 4H automatically transfers the keyboard and mouse control to the selected computer.*
- *To switch back to the Host operation mode, use the keyboard hot-key "**Pause**/**Break**." The Host cursor should reappear.*

3.1 Host Operation Mode

In this mode, you can monitor up to four screens or double-click the window of a computer to be controlled. The following are the basic operations that can be performed in Host operation mode

3.1.1 Pop-up Selections

Upon moving the Host cursor to the top right corner of a particular window, the following pop-up selections appear.

- S: *swap window*
- ↵: *enter a computer window*
- ⛶: *full screen*
- ⛶: *return from full screen*

When the Sequoia detects that a particular computer's USB port is not connected, the enter ↵ pop-up icon will not show on that window.

3.1.2 Functions

The Sequoia 4H allows the swapping of window positions, window size adjustments, and audio output selections. The following are summarized functions of the Host operation mode.

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 Host 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 Host cursor to the top right corner of a window and click on the ⛶ icon to maximize to full screen. Select ⛶ to return back from full screen.
Access a remote computer	Method 1: Move the Host cursor to the top right corner of a remote computer window, click ↵ to access the Remote operation mode. Method 2: Move the Host cursor so that it is on the desired remote computers' window and double-click.
Lock/unlock window layout	Move the Host 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 an audio output is coming from a window. *Note: 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 Host Operation Mode Functions

3.1.3 Hot-keys

Hot-keys are available when utilizing the Sequoia 4H under the Host operation mode. Detailed below are the Host 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 up to 23 user-created presets.
Alt + **F**	Toggle a particular window's full screen mode on/off. *Note: The window selected is where the Host 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 send ASCII Z commands.
Ctrl + **F#** (F1 – F4)	This loads the window to full screen mode, while making the other window(s) fade from view; Where **F#** is the source window number (i.e. **Ctrl** + **F1** will call up the source **1** window). In a cascaded system: First move the Host 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.
Ctrl + **O**	Toggle the audio output on/off (mute).
Ctrl + **P**	Toggle a window on and off where **P** is the source/window number (i.e. **Ctrl** + **1** will turn on/off the source **1** window).
Ctrl + **R**	Toggles between aspect ratios for the window that the Host cursor is on. Available settings: 4:3, 16:9 and off.
Ctrl + **S**	Saves latest preset to the Sequoia so that on the next boot-up the latest preset will be loaded. *Note: Also saves latest presets for cascaded modules.*
Ctrl + **X**	When a video signal does not fill up the entire frame, a black border fills in the empty space that is left behind. Pressing **Ctrl** + **X** crops the black bars. When applying this function, make sure the image does not have a black or dark grey background to avoid cropping part of the actual image.
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# (F1 – F4)	Access a remote computer, **F#** represents keys **F1** to **F4**. **F1** corresponds to the source **1** window and **F2** source **2**, etc. *Note: Window can also be selected by double-clicking it.* Upon selection, enters Remote operation mode of the selected window. Window swapping can be enabled from the Phoenix-G (Galaxy) control software. While in Phoenix-G, go to **Sequoia Properties** and check the **Swap with Active Window** parameter.
Home	While in full screen mode, toggle between full screen in foreground and full screen in background.
Page Up/ **Page Down**	Switch between the three factory-default presets.
Shift + **F#** (F1 – F4)	Access a remote computer *(with active window swapping)*. **F#** represents keys **F1** to **F4**. **F1** corresponds to source **1**, **F2** source **2**, etc. You can also hold **Shift** and double-click the mouse on the desired window for the same effect. Upon selection, enters Remote operation mode of the selected window. *Note: When the parameter inside the Phoenix-G (Galaxy) software "Swap with Active Window" is enabled (with checkmark) then the functions of **F#** and **Shift** + **F#** switch. Thus, the hot-key **Shift** + **F#** will not cause swapping. **F#** will cause swapping.*
Shift + **I**	Switch audio input source between **HDMI IN** and source ports. The audio tally ■ (red) shows that audio output is coming from a particular window.

Keys	
Shift + **L**	Toggle priority of overlay 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 converter.*
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 4H provides up to 170 milliseconds of audio delay adjustment. Use (**Shift** + ←) to decrease delay and (**Shift** + →) to increase delay.  (red LED)
Tab	Move the Host cursor from one display (monitor) to the next (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.
Ctrl + **Alt** + **F4**	Turn on/off power saving mode (power saving mode is "off" by default). Reaction time can be configured from the Phoenix-G (Galaxy) control software. While in Phoenix-G, go to **Sequoia Properties** and check the **Power Saving** parameter.

Table 3-2 Hot-keys of Host 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 Remote Operation Mode

3.2.1 Hot-keys

Hot-keys are available when utilizing the Sequoia 4H under the Remote operation mode. Detailed below are the Remote operation mode hot-keys.

Keys	
Pause Break	Exits from the Remote operation mode to the Host operation mode. Or, double-click the middle mouse wheel button in Sequoia 4H model with "Surfer" feature only.
Ctrl + **Esc**	This command allows Ethernet communication so that you can use the Phoenix-G (Galaxy) control software or send ASCII Z commands. *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 also disable the "Surfer" feature (next hot-key description), press **Ctrl** + **Esc** and run and quit the Phoenix-G software. "Surfer" feature will automatically be re-enabled upon entering "Host operation mode" and then entering "Remote operation mode."*

Keys	
Ctrl + **Shift** + **Alt** + **F10**	Toggles the "Surfer" feature on and off; moving mouse to a border shared with another computer will cause the Sequoia's (Host) keyboard and mouse to control the other computer. *Note:* *1. Not applicable with Sequoia 4H with touch-screen display setup.* *2. Not applicable after pressing the above-mentioned **Ctrl** + **Esc** hot-key, and then running and quitting Phoenix-G software. "Surfer" feature is automatically enabled upon entering "Host Operation Mode" and then entering the "Remote operation mode."* *3. Refer to Appendix A for more details.*
Ctrl + **Shift** + **Alt** + **V**	This command is used to read the Sequoia's USB device firmware version (DB15 connector (source **1** – **4** ports), which is located on the Sequoia 4H rear panel that connects to the computer's USB port through the USB-A to DB-15 cable). Open Microsoft® Notepad and then press **Ctrl** + **Shift** + **Alt** + **V** to paste the firmware text onto Notepad. *Note: This function is only available when the computer and Sequoia are connected via the USB-A to DB-15 cable's **USB port**.*
Ctrl + **Pause Break**	Switches control from window 1 up to window 4, then back to window 1. If only one computer is connected, then no cycling will occur. Make sure to press the **Ctrl** key first, because pressing the **Pause/Break** key first will just remove you from Remote operation mode. *Note: This function is only available when the computer and Sequoia are connected via the USB-A to DB-15 cable's **USB port**.* **Example**: If Sequoia 4H is connected to 4 computers via the USB-A to DB-15 cable, then hot-key switching would be from: computer 1→computer 2→ computer 3→computer 4→computer 1. If one of the sources does not have a controllable input (such as a DVD player), that source would be skipped, for example if source 2 has no input and source 4 is connected to a DVD player, then hot-key switching would be from computer 1→ computer 3→computer 1. *Note: 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."*
Shift + **Pause Break**	Switch control backward from window 1→window 4→window 3→window 2→window 1. If only one computer is connected, then no switching would occur. Make sure to press **Shift** key first because **Pause/Break** key would exit from Remote operation mode to Host operation mode. *Note: 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 keyboard or Apple keyboard or keyboard without "**Pause/Break**" key, use "**control** + **option (Alt)** + **shift** + **p**" 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 4H with touch-screen display setup.

The "Surfer" feature is designed to make it easy to control multiple remote computer windows. Just moving the mouse to the window of another computer will allow the Sequoia's (Host) keyboard and mouse to control that computer.

By default, the "Surfer" feature is enabled upon starting up the Sequoia 4H.
*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 "Source" window control switching action upon moving the mouse to the window side. Moving the mouse from one "Source" window to another transfers control from the former window to the target window.*

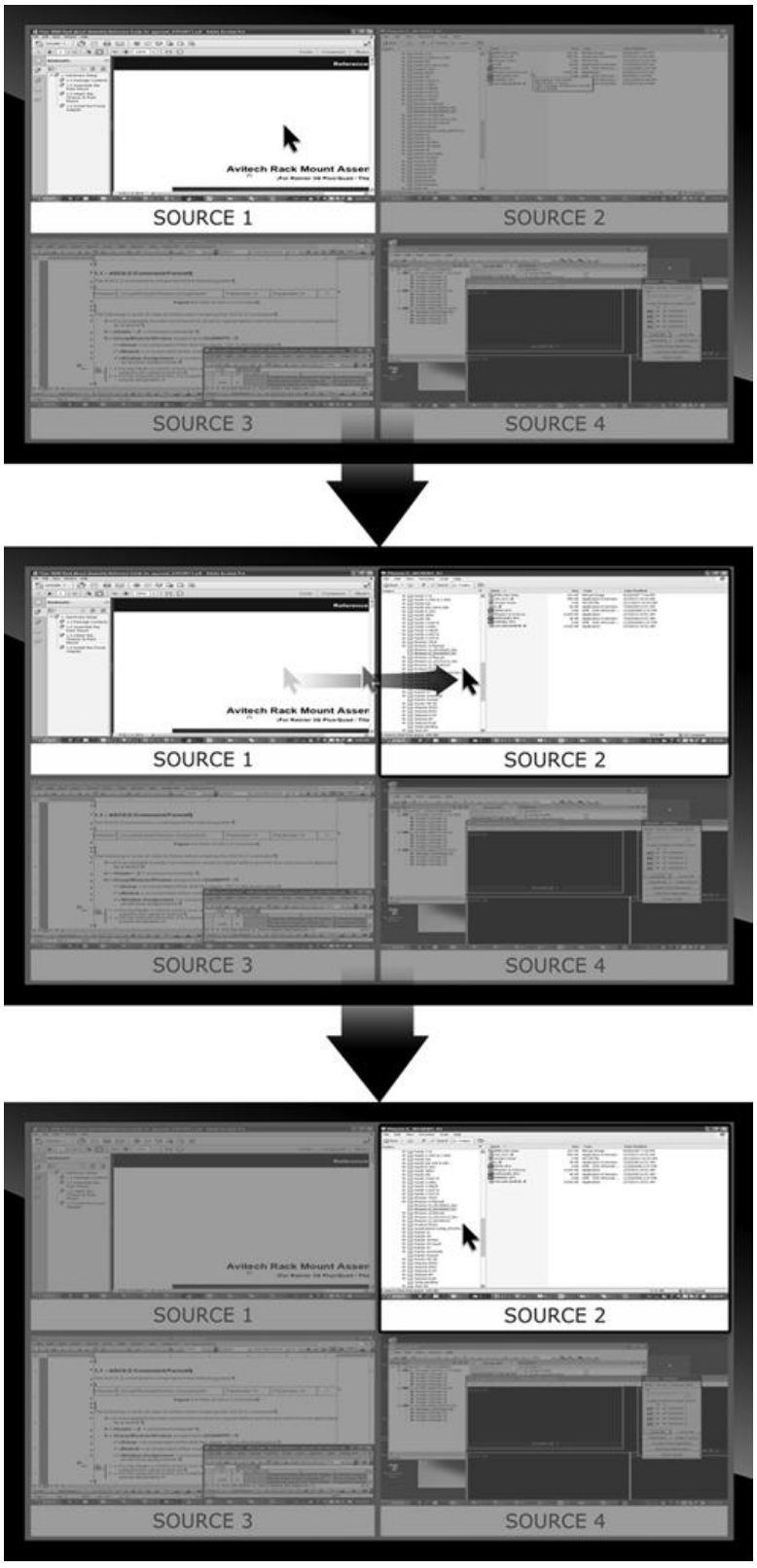


Figure A-1 "Surfer" Feature

❖ *Below figure shows the allowed "Source" window control switching action upon moving the mouse to the window sides ("shaded area" indicators). Moving the mouse from one "Source" window to another transfers control from the former window to the target window.*
No "Source" window control switching action will occur upon moving the mouse to the outer borders of the screen.

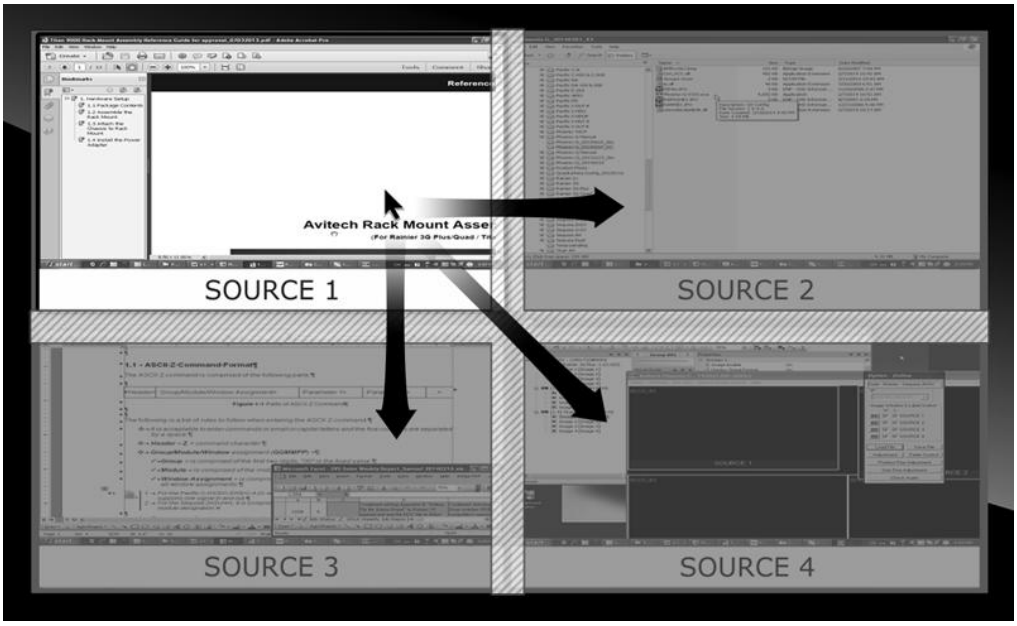


Figure A-2 "Surfer" Feature on Default Preset 1

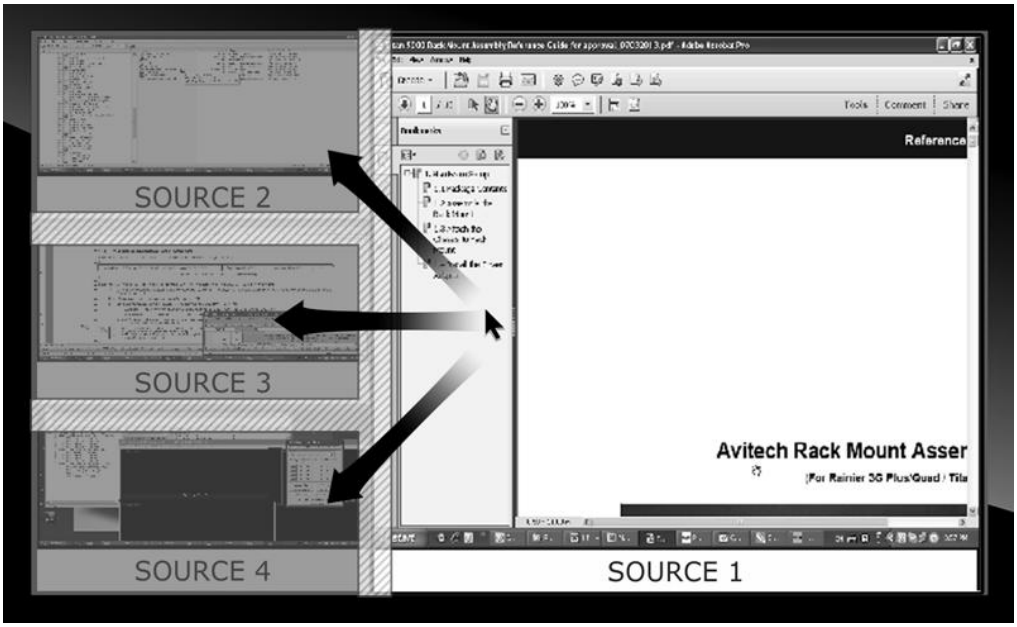


Figure A-3 "Surfer" Feature on Default Preset 2

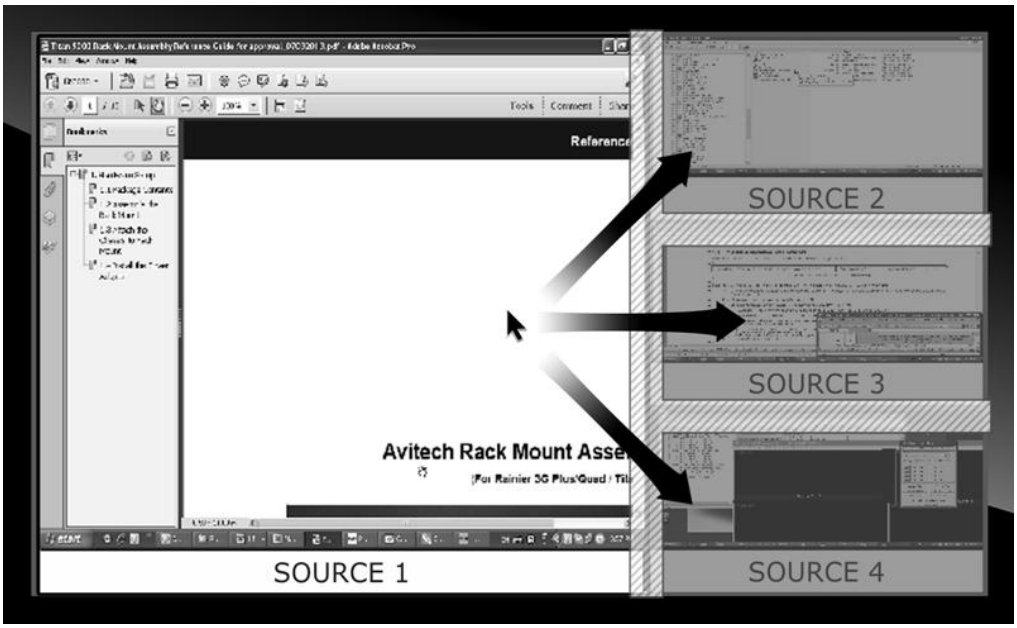


Figure A-4 "Surfer" Feature on Default Preset 3

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

- *Below figure shows possible "Source" window control switching actions. 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 area indicators.*

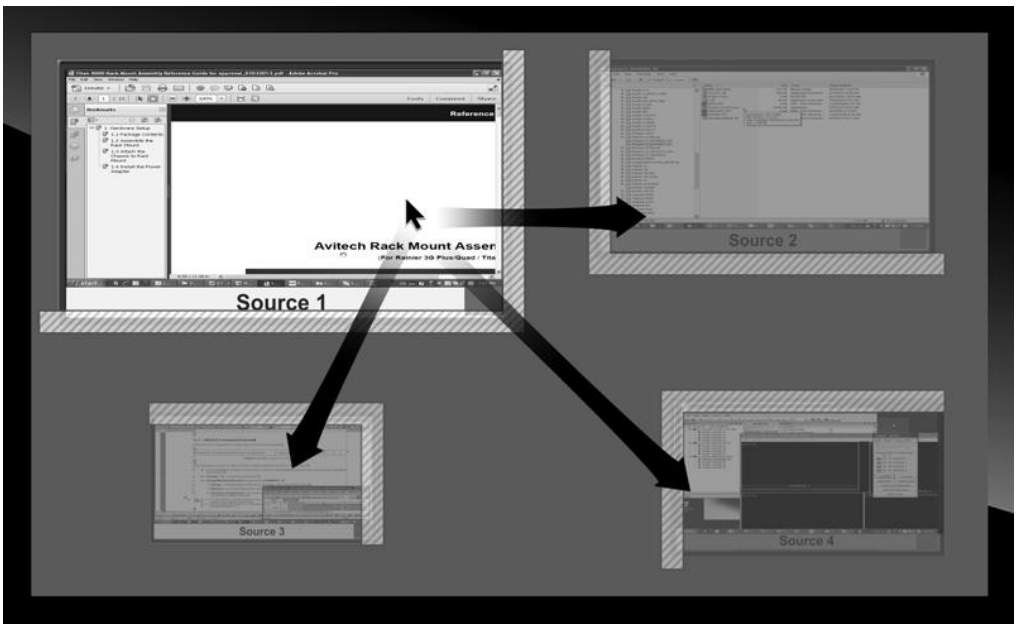


Figure A-5 "Surfer" Feature on Non-uniform Quad Layout

Scenario 1:
In case of overlaying "Source" windows, switching of control will occur when the mouse cursor has left the area where the 2 "Source" windows overlay.

Scenario 2:
In case one of the window is set at "Full screen in background" layout (right-click a window then click "Full screen" then click "Full screen in background" using the Phoenix-G software or press "Home" hot-key), disable "Full screen in background" for "Surfer" feature to function properly.

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

- *Below figure shows possible "Source" window control switching action upon moving the mouse to the sides of the window. Moving the mouse from one "Source" window to the next transfers control from the former window to the latter one.*
  No "Source" window control switching action will occur when moving the mouse to the top and bottom of the window.

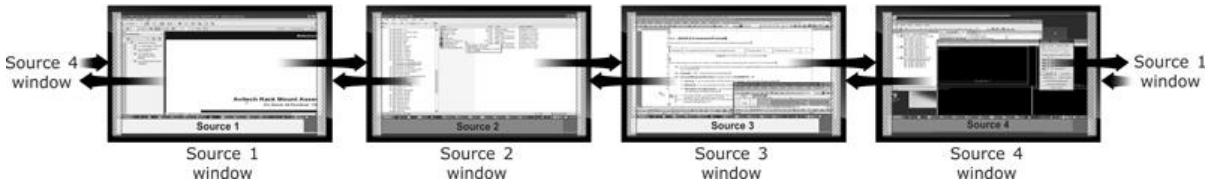


Figure A-5 "Surfer" Feature on Full Screen "Source" Window

A.4 "Surfer" Feature on Cascaded System

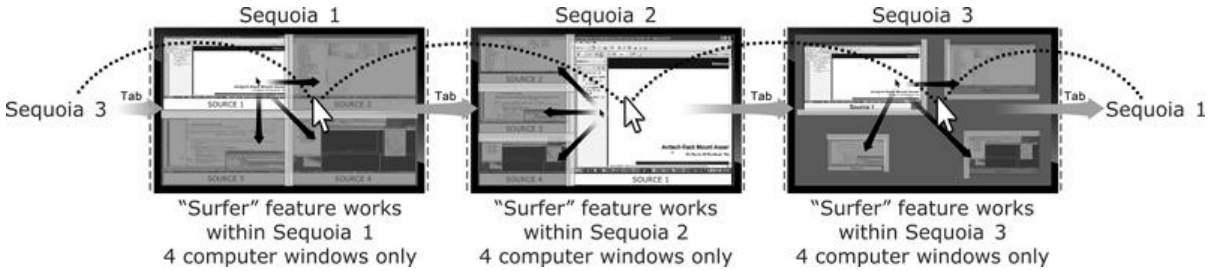
- *Below figure shows a sample three Sequoia 4H cascaded system.*
  The "Surfer" feature is confined within each Sequoia only.
  (refer to the abovementioned illustrations on using the "Surfer" feature in each Sequoia)
- *To shift control from a "Source" window to the "Source" window of another Sequoia (For example: if user is currently in control of "Source 1" computer window of Sequoia 1 while in Remote operation mode; and wishes to switch control to "Source 1" computer window of Sequoia 2), 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 1 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 1 display to Sequoia 2 display (**Tab** key only moves in a clockwise cascaded direction – to move in a counterclockwise cascaded direction, the mouse cursor has to be moved to the left edge of the display).*

  Step 3: Move the Host cursor over the top right portion of "Source 1" computer window of Sequoia 2 to click the ↵ symbol on 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 2.



Legend:
Host operation mode action (moving between Sequoia 4H) = dotted line and arrow (no fill)
Remote operation mode action (within a particular Sequoia 4H) = shaded area and arrow (with fill)

Figure A-6 "Surfer" Feature on Cascaded System

Up to five Sequoia 4H can be cascaded.

Appendix B Using the Touch-screen

Touch-screen function is not available for Sequoia 4H with "Surfer" feature.

B.1 Lock/Unlock Window Layout

When using a touch-screen monitor with the Sequoia 4H 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.")

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.

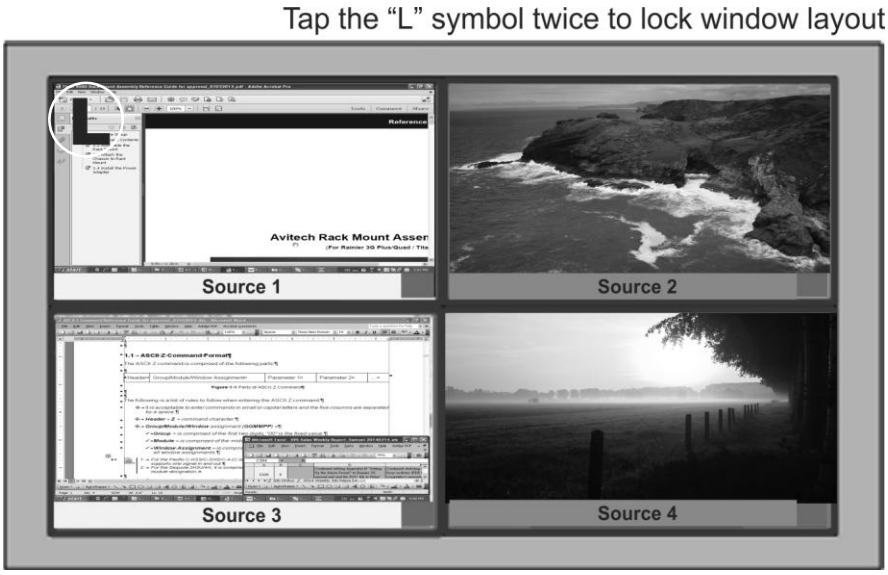


Figure B-1 Touch-screen: Lock/Unlock Window Layout

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 icon's function press on it for approximately one second.

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

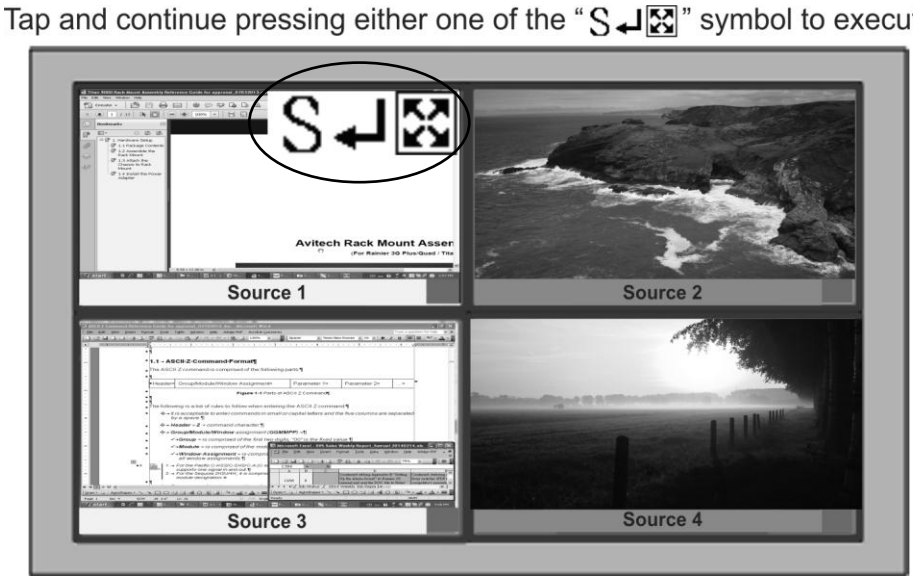


Figure B-2 Touch-screen: Pop-up Selection

B.3 Audio Tally

To enable audio output on any window, tap twice on the audio tally (green) and it will turn to (red) showing 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.

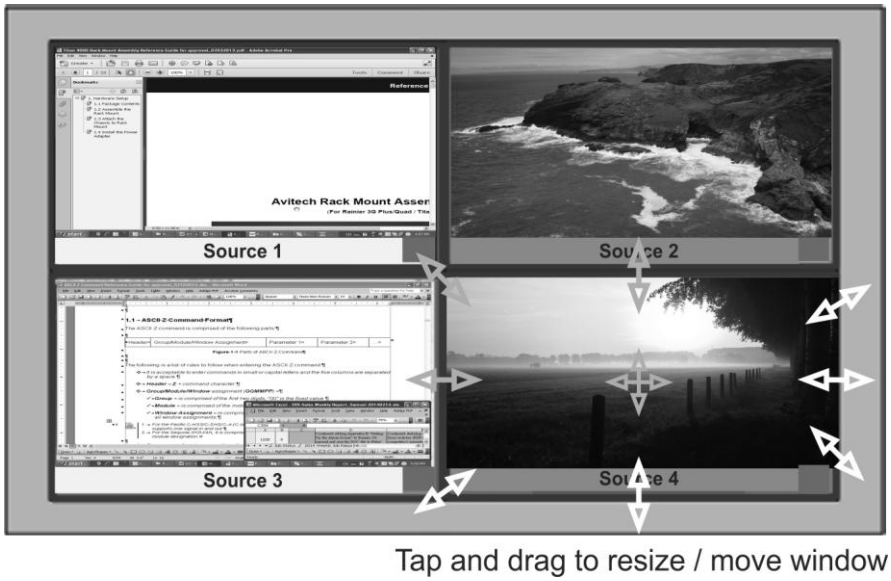


Figure B-3 Touch-screen: Move/Resize Window

B.5 Exit from Remote Operation Mode to Host Operation Mode

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

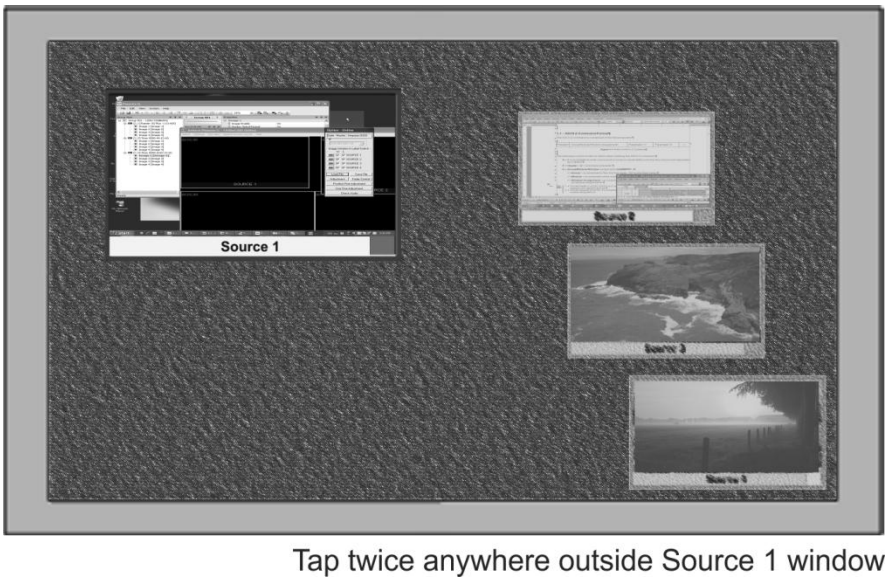


Figure B-4 Touch-screen: Exit Remote Operation Mode

To exit from (Full Screen) Remote operation mode, press the upper or lower inch of the touch-screen for approximately 1.5 seconds.
Note: Figure B-5 indicates these areas with the black rectangles.

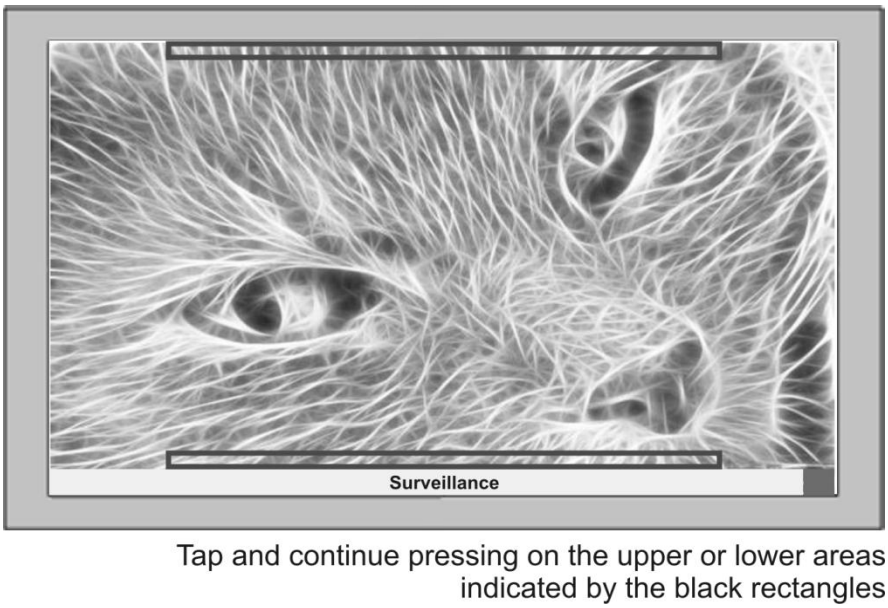


Figure B-5 Touch-screen: Exit Remote Operation Mode (When in Full Screen)

B.6 Switch Control (Cycle) Between Windows

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

When the **Swap with Active Window** parameter is set to (ON), 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.

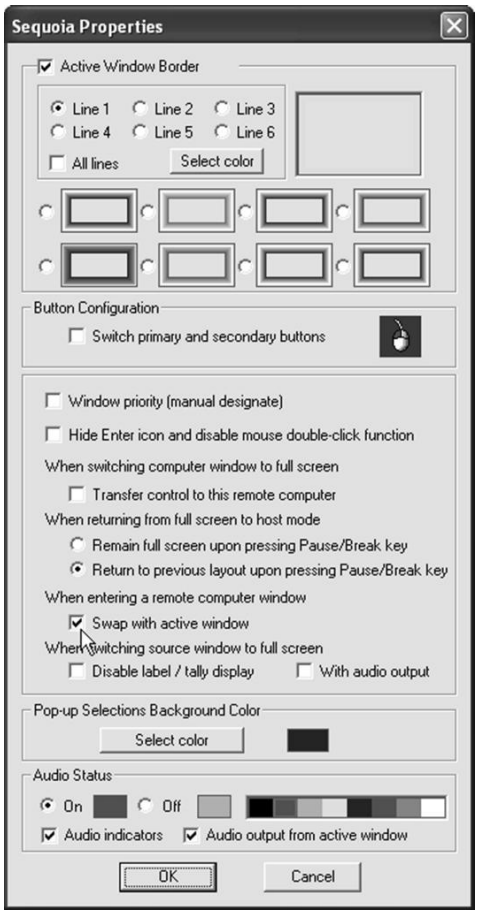


Figure B-6 Phoenix-G Utility: Swap with Active Window

To switch Sources (cycle) while in Full Screen Remote 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.)

- Cycle Forward: press **right** side of screen:
  window 1 → window 2 → window 3 → window 4 → window 1

- Cycle Backward: press **left** side of screen:
  window 1 → window 4 → window 3 → window 2 → window 1

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 and select* ***Settings****.*

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

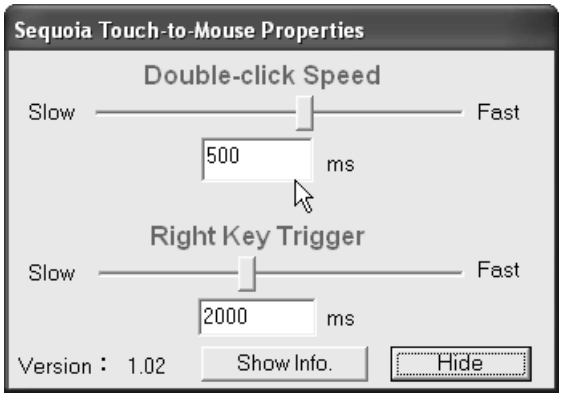


Figure C-1 Touch-to-Mouse Utility Setup

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 downwards to the **ON** position.*

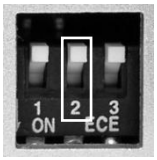


Figure D-1 Push down the Number **2** (Middle) Dip Switch

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

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

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