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INTRODUCTION

Overview

The purpose of this document is to review and explain to users and administrators the features and functionality of the On Screen Display (OSD) menu for HSL's KVM Combiners.

To enter OSD mode press Lctrl | Rctrl | o, or Lctrl | Lalt | o

Once OSD is opened, mouse movement will be limited to navigation through the different menus of the OSD and will not be transferred to the connected computers.



VIDEO SETTINGS

Video Settings

Use this menu to change different settings related to the KVM Combiner's video and display options.

SECURE KVM COMBINER HSL

VIDEO SETTINGS

Video Settings

Channel Settings

USB Settings

Audio Settings

Advanced Operations

System Info

Auto Scaling:

- ☐ Maintain aspect ratio
- ☐ Ignore aspect ratio
- ☐ None

Window Border:

- ☐ No Border
- ☐ Half Border
- ☐ Full Border

Presentation Mode:

- ☐ Full
- ☐ Off
- ☐ Partial

Set Output Resolution:

- ☐ 3840x2160
- ☐ 2560x1600
- ☐ 3440x1440
- ☐ 2560x1440
- ☐ 1920x1200
- ☐ 3840x1080
- ☐ 1920x1080
- ☐ 2048x2048

EDID:

- ☐ Internal
- ☐ User Mode
- ☐ Monitor
- ☐ Admin Mode

Multi Head (multi-select)

Channel:

- ☐ None
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8

PIP Switching mode:

- ☐ Enable
- ☐ Disable

Boot to:

- ☐ Preset 1
- ☐ Preset 2
- ☐ Preset 3
- ☐ Preset 4
- ☐ Preset 5
- ☐ Preset 6
- ☐ Preset 7
- ☐ Preset 8
- ☐ Tile
- ☐ Scale

Display Mode:

- ☐ Single - primary
- ☐ Single - secondary
- ☐ Duplicate
- ☐ Extend
- ☐ Crossed

Maintain Aspect Ratio of Preset Layouts:

- ☐ Enable
- ☐ Disable

Dual Display Layout:

- ☐ Horizontal
- ☐ Vertical

Border thickness (pixel):

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6

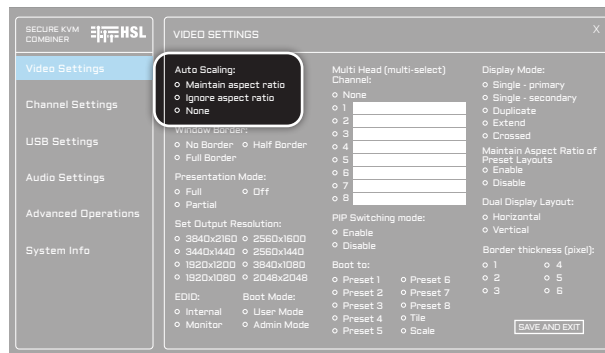
SAVE AND EXIT

VIDEO SETTINGS

Auto Scaling

Auto scaling determines the presentation of the image in each combiner window.

- **Maintain aspect ratio** – The Combiner keeps the window in the same aspect ratio as the original image. In this option, the window may rescale to maintain the aspect ratio.
- **Ignore aspect ratio** – The Combiner will auto scale the image into the size of the window defined by the user. The image is spread across the entire space it is given.
- **None** – The user changes the window size without maintaining the aspect ratio, but the picture would not be displayed across the entire space of the window until the user presses the Lctrl | Lctrl | W keyboard shortcut

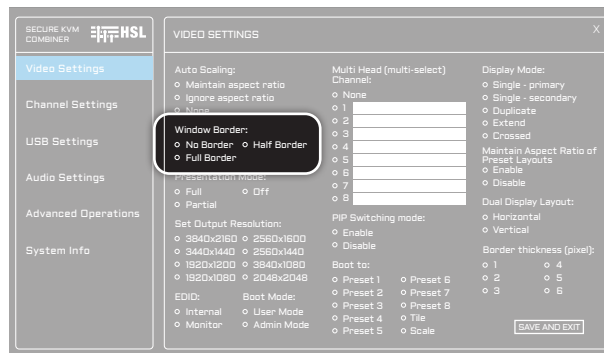


VIDEO SETTINGS

Window Border

This section of the menu controls the thickness of the frame around the windows of the KVM Combiner. The Frame color can be configured as well to make it easier for the user to identify the different windows.

- **No Border** – No visible border around the windows.
- **Full Border** – Complete frame around each window.
- **Half Border** – A frame will appear on the top and right side of each window only.



VIDEO SETTINGS

Presentation Mode

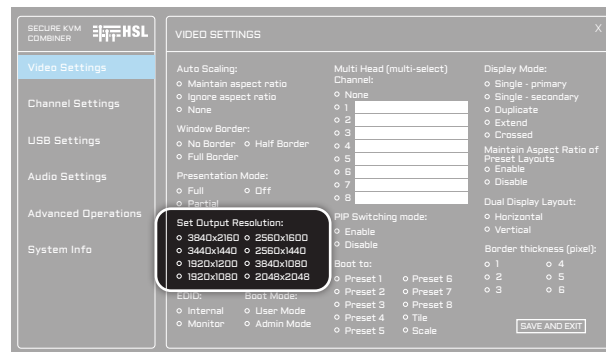
Presentation mode is a preset mode that simplifies operation for the untrained user.

- **Full** – Every chosen source will go to full screen automatically.
- **Partial** – At channel select, the window will go to full screen; a second channel select will change the viewing mode to quad.
- **Off** – Cancel presentation mode

Set Output Resolution

Controls output resolution on both connected display.

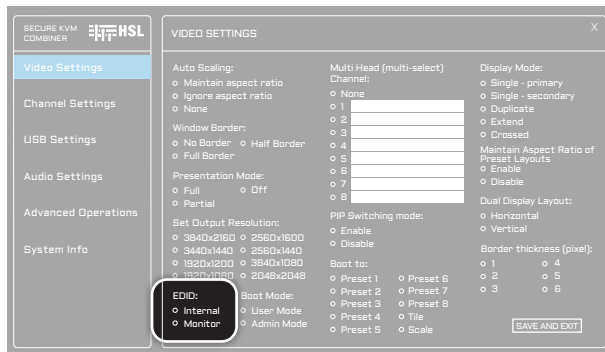
This is the equivalent to Lctrl | Lctrl | F11 | D | 1-8



VIDEO SETTINGS

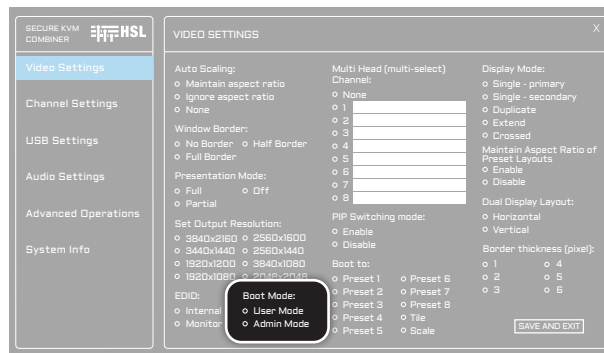
EDID

- **Internal** – The KVM Combiner will provide a pre-defined EDID file compatible with 4K 30HZ resolution to the allowed channels.
- **Monitor** – The EDID from the primary display will be sent to all connected endpoints.



Boot Mode

- **User mode** – User mode is the standard working mode with an HSL KVM combiner.
- **Admin mode** – Admin mode allows the user to move windows around, set their sizes, create and save presets, and perform other tasks that will configure the unit for daily operation.



VIDEO SETTINGS

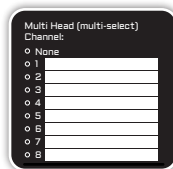
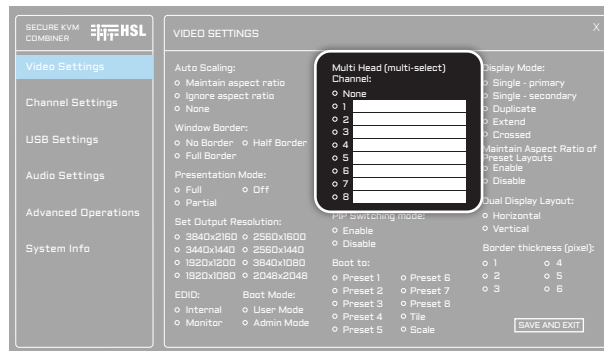
Multi-Head (multi-select) Channel

HSL's KVM combiners are not limited to use only single display endpoints. This section instructs the user on how to configure the KVM combiner for use in a multi head (display) endpoints.

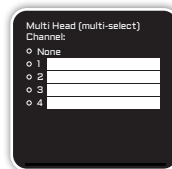
Selecting a channel means that there is a multi-head PC connected to that channel and that the USB of that endpoint is controlled via that channel. On the text box next to the selected channel, add the other channels to which displays from the same endpoints are connected.

For example, having a quad-head PC connected on channels 1-4 means that the user will need to select channel 1 and in the text box write 1+2+3+4.

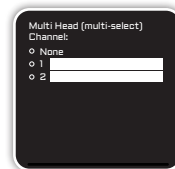
USB needs to be connected via channel 1.



16-Port Combiner



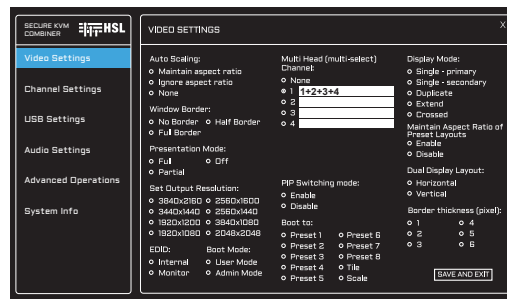
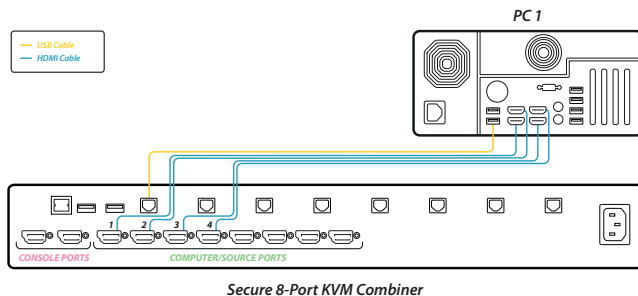
8-Port Combiner



4-Port Combiner

VIDEO SETTINGS

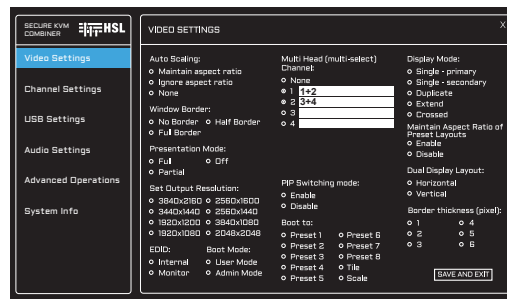
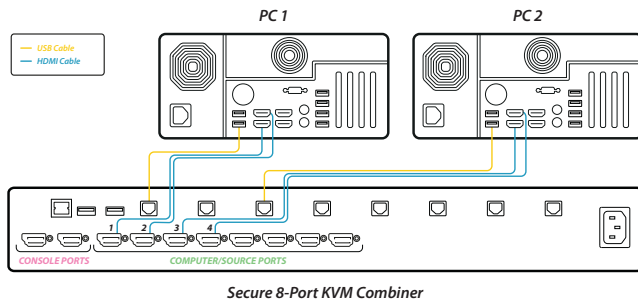
Multi-Head (multi-select) Channel - System Diagram 1



KVM Combiner OSD

VIDEO SETTINGS

Multi-Head (multi-select) Channel - System Diagram 2



KVM Combiner OSD

VIDEO SETTINGS

PIP (Picture-in-Picture) Switching Mode

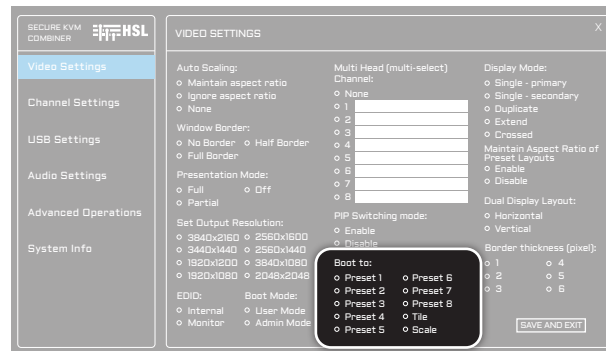
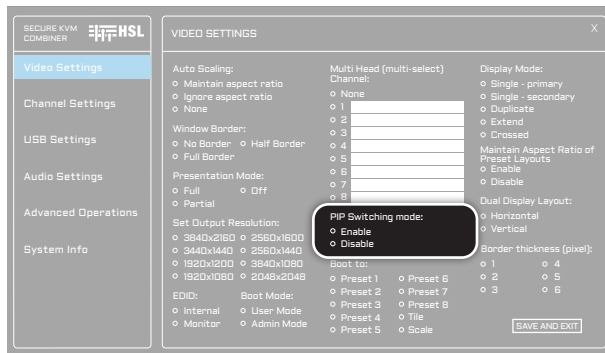
PIP Switching Mode defines how the mouse movement switches channels when the KVM combiner is in PIP mode. PIP mode is a working mode in which a smaller window is placed on top of a bigger window (which is in the background).

When PIP Switching Mode is enabled (default) you may switch between the 2 sources by crossing the borders; when it is disabled, the mouse would pass behind the foreground window source and remain in the background window.

Boot to

This section defines the behavior of the Combiner upon boot.

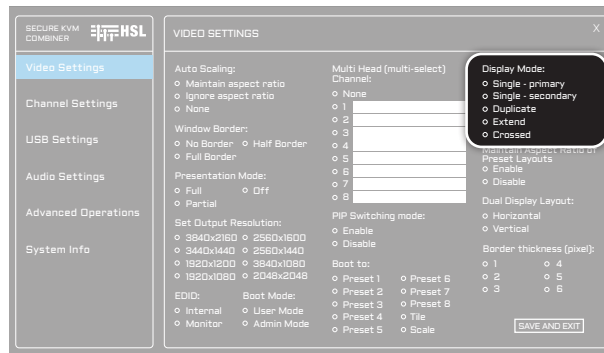
The Combiner can boot to any one of the 8 user preloaded presets. It can also boot to tile mode (Quad look), or scale mode.



VIDEO SETTINGS

Display Mode

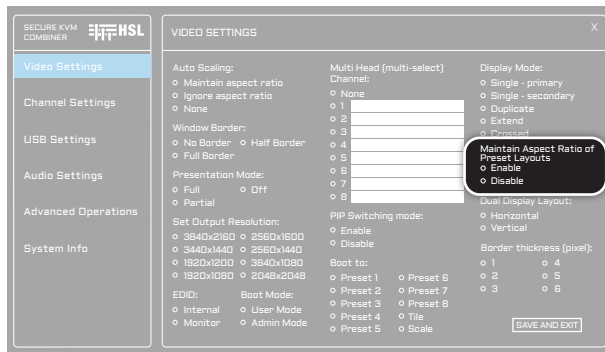
- **Single - primary** – In this option only the primary output of the combiner is operational, and all sources would be shown on that screen.
- **Single - secondary** – In this option only the secondary output of the combiner is operational, and all sources would be shown on that screen.
- **Duplicate** – Both screens would be active and would show the same image.
- **Extend** – In this mode both screens would be active and the displays would show in extend mode. The user will be able to drag or open windows on either of the two displays.
- **Crossed** – In this mode the combiner would act the same as extend mode, however the first half of the inputs would show in the secondary display while the second half of the sources would be displayed in the primary screen.



VIDEO SETTINGS

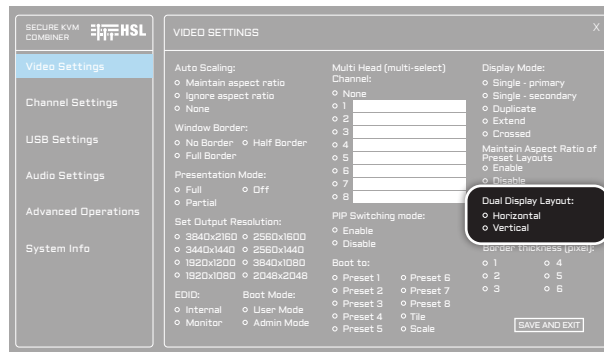
Maintain Aspect ratio of Preset Layouts

In this section the user can select to maintain the predefined aspect ratios or disable it. (Preset layouts are **Lctrl | Lctrl | Q**, ect.).



Dual Display layout

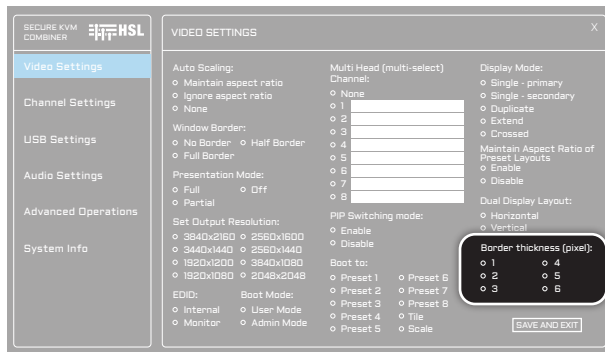
Defines the layout of the two displays (side by side for horizontal and one on top of the other for vertical).



VIDEO SETTINGS

Border Thickness

Defines what would be the tickness (in pixels) of the frame around the windows (if enabled).



CHANNEL SETTINGS

Channel Settings

SECURE KVM
COMBINER

HSL

Video Settings

Channel Settings

USB Settings

Audio Settings

Advanced Operations

System Info

CHANNEL SETTINGS

Channel Name Visibility:
☐ Always on
☐ On for sec
☐ Off

Background:
☐ Solid
☐ Transparent
☐ Off

Channel Name Location:

Select Channel:
o1 o2 o3 o4 o5 o6 o7 o8 o9 o10 o11 o12 o13 o14 o15 o16

Channel Visibility:
☐ Pin to top
☐ Send to back
☐ Unpin

Channel Color:

☐ Red
☐ Orange
☐ Yellow
☐ White
☐ Mint

☐ Green
☐ Cyan
☐ Blue
☐ Purple
☐ Magenta

Channel Name
(up to 8 characters):

Duplicate Channel:
☐ Enable
☐ Disable

Direct Mode:
☐ Enable
☐ Disable

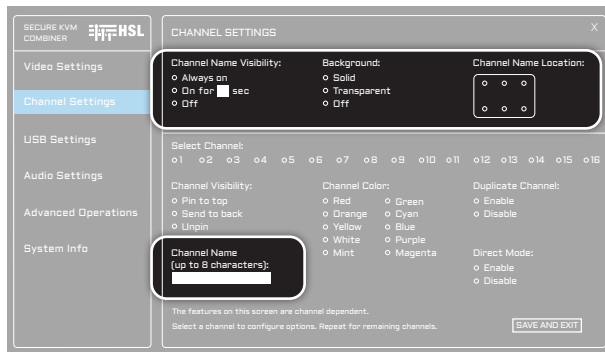
The features on this screen are channel dependent.
Select a channel to configure options. Repeat for remaining channels.

SAVE AND EXIT

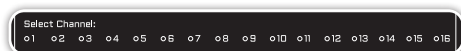
CHANNEL SETTINGS

Channel Name and Channel Name Visibility

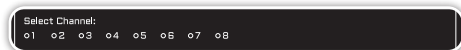
It is possible to assign a name for each channel. That name is configured to appear on the window in different positions, either permanently or temporarily.



Select Channel



16-Port Combiner



8-Port Combiner



4-Port Combiner

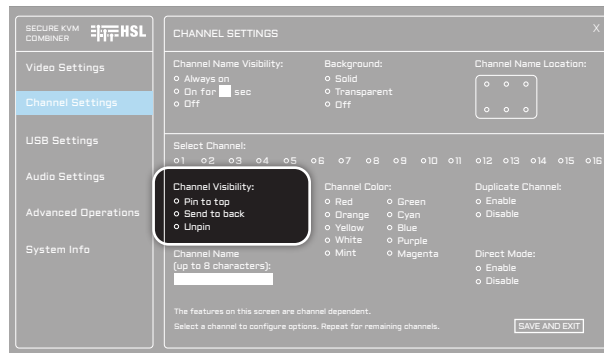
CHANNEL SETTINGS

Channel Visibility

- **Pin to top** – The selected windows will always appear on top of all other windows, whether active or not.
- **Send to back** – The selected windows will always appear in the background of all other windows, whether active or not.
- **Unpin** – This channel would act according to default.

Note: If two windows are defined as pin to top, the last one to be set will be on top of the previously set channel.

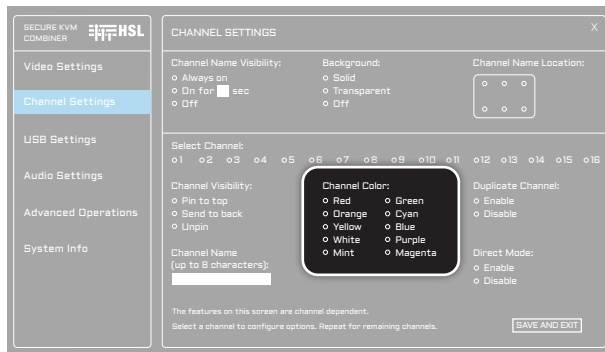
Please note: This Channel Settings view will change depending on the Combiner type. For a 4-port Combiner only channels 1-4 would show; for an 8-port Combiner, channels 1-8 would show; for a 16-port Combiner, channels 1-16 would show.



CHANNEL SETTINGS

Channel Color

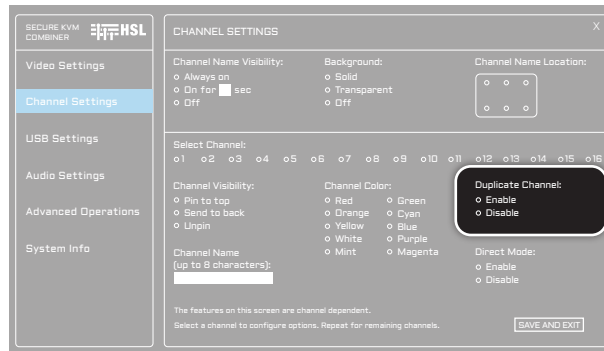
Each window's frame and background color can be set from a predefined list of colors: Red, Orange, Yellow, White, Green, Cyan, Blue, Purple, and Magenta.



Duplicate Channel

The Combiner will enable one of the sources to be duplicated and appear twice on the display.

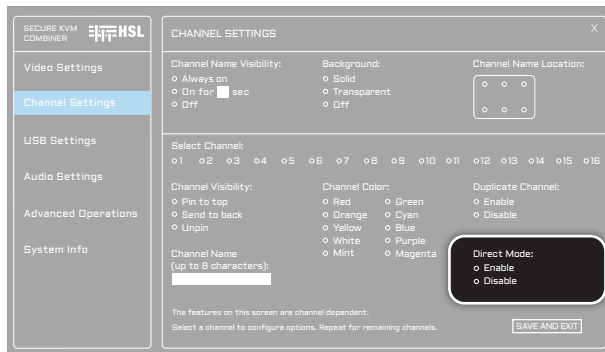
Note: When using Scale Mode, the duplicated channel will vary based on the active channel.



CHANNEL SETTINGS

Direct Mode

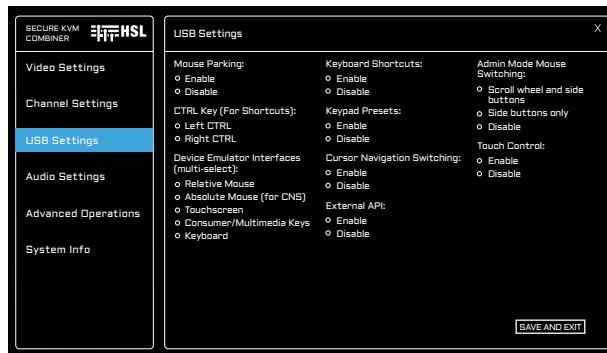
Direct mode reduces the latency of a channel to zero. When applying direct mode to a channel, the video will bypass all memory or buffering components and will be presented directly on the display. Direct mode is applicable only for channels displayed at full screen.



USB SETTINGS

USB Settings

In this section, the user can configure the different settings governing the USB behavior of the Combiner.



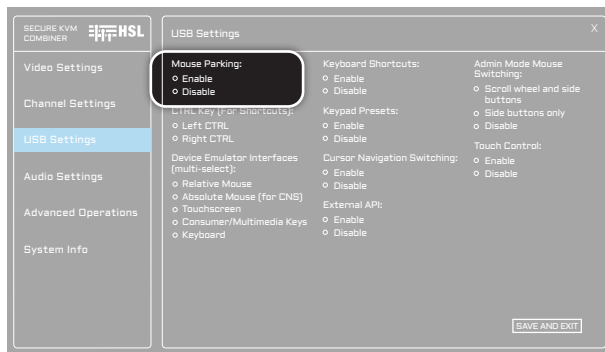
USB SETTINGS

Mouse Parking

This section describes how the user can activate or deactivate mouse parking.

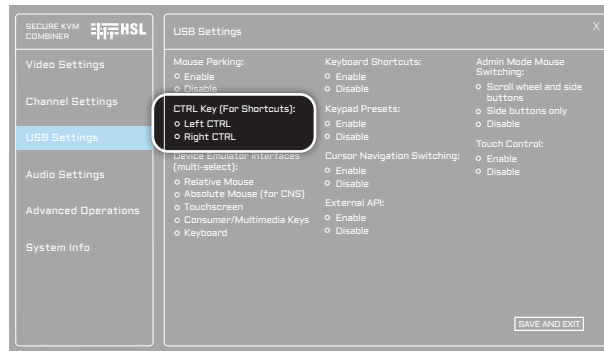
When activated, the mouse cursor will be “parked” in the bottom right corner on non-selected (non-active) channels.

When disabled, the mouse cursor will not be “parked” but will stay in its last location prior to leaving the channel.



CTRL Key

This section describes how to select the shortcut ctrl key to be either Lctrl or Rctrl. For example, if the user chooses the Rctrl option to enter quad mode, they would press **Rctrl | Rctrl | Q**. If the user chooses the Lctrl option to enter quad mode, they would press the shortcut **Lctrl | Lctrl | Q**. The default is left CTRL.



USB SETTINGS

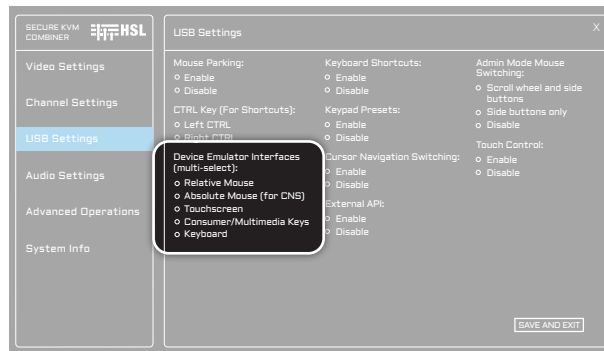
Device Emulator Interfaces

This section explains what kinds of USB interfaces the Combiner passes to the sources via USB.

The options are:

- **Relative Mouse** – a regular mouse interface.
- **Absolute Mouse** – This interface is needed for Cursor Navigation Switching.
- **Touchscreen** – The use of a touch screen as a pointing device.
- **Consumer/multimedia keys** – This would let the keyboard pass special keys like mute, volume etc.
- **Keyboard** – A regular keyboard.

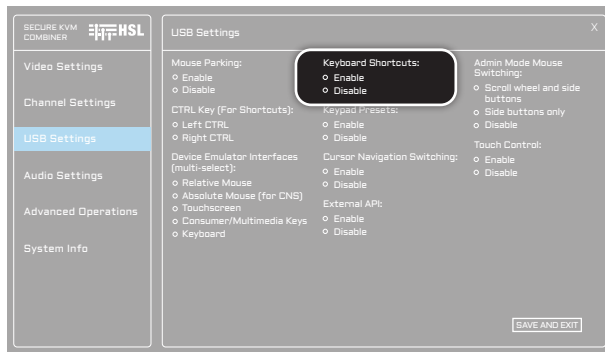
The defaults are keyboard, Relative Mouse and Absolute Mouse.



USB SETTINGS

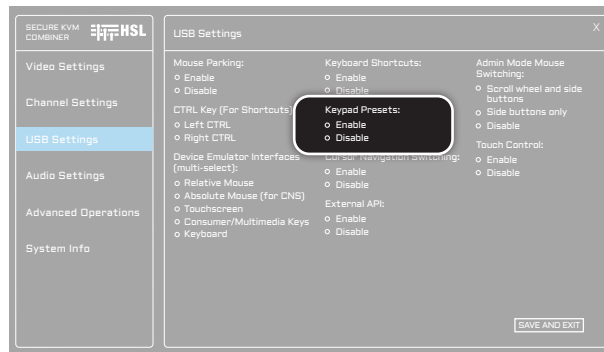
Keyboard Shortcuts

In this section the user has the option to choose if they want the combiner to switch sources with keyboard shortcuts or not using the **Lctrl** | **Lctrl** | **1-4/ 1-8/ 1-16** depending on the combiner being used.



Keypad Presets

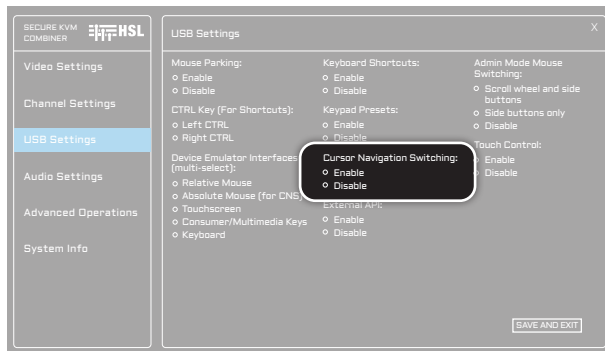
Use the num – keypad to activate pre-made presets, as described in the user manual.



USB SETTINGS

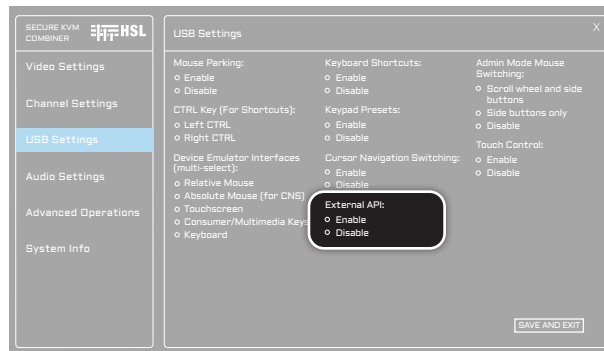
Cursor Navigation Switching

Switch active channels by moving the mouse from window to window.



External API

Activate or disable the API (RS-232) option of the Combiner.



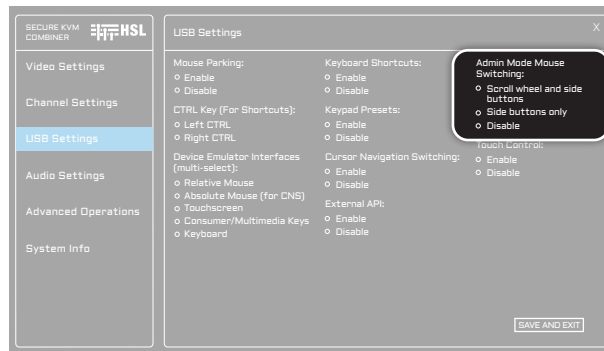
USB SETTINGS

Admin Mode Mouse Switching

Switch in and out of Admin mode.

- **Scroll wheel and side buttons** – Press the mouse wheel or side buttons to get in and out of Admin mode.
- **Side buttons only** – Use side buttons only.
- **Disable** – Use only **Lctrl | Lctrl | o** to enter Admin mode and **Lctrl | Lctrl | u** to activate user mode.

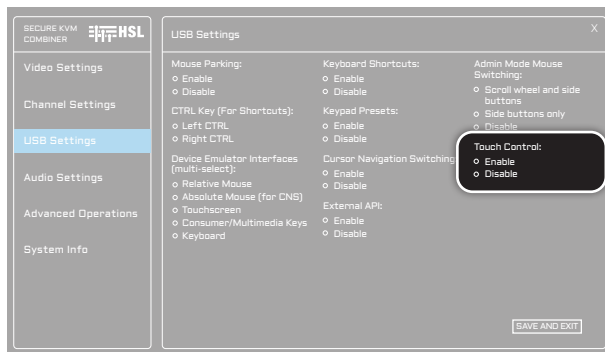
Note: In all the options above, the user can use the hotkeys **Lctrl | Lctrl | o** to enter Admin mode and **Lctrl | Lctrl | u** to exit Admin mode and return to user mode..



USB SETTINGS

Touch Control

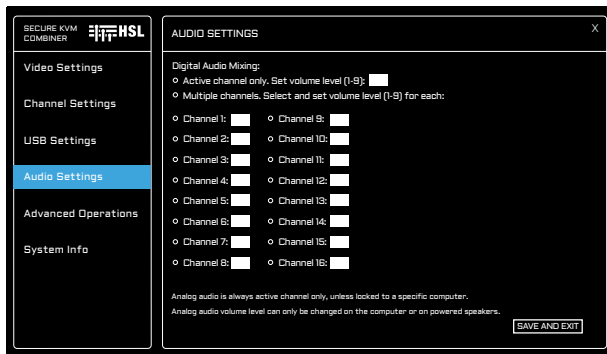
Control the Combiner using a touch interface.



AUDIO SETTINGS

Audio Settings

This section relates to configuring the digital audio (audio which is carried via the HDMI or DP interfaces).



All the changes that can be made are specific for digital audio but not Analog.

Volume level can be adjusted by entering a number 1-9, with 1 being the lowest volume and 9 being the highest.

- **Active channel only** – Sound will be heard from the active channel only.
- **Multiple channels** – It is possible to hear audio from multiple channels simultaneously. For each selected channel it is possible to set the volume level.

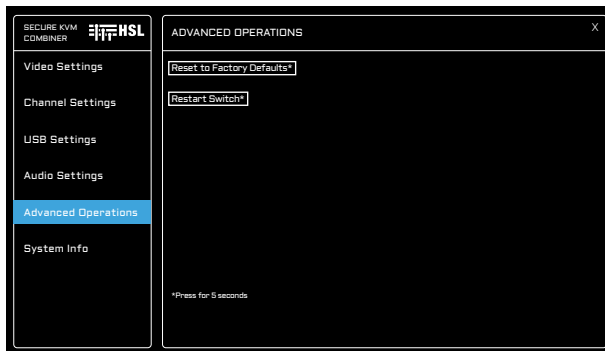
Note: Analog audio is always activated on the active channel unless it is locked on a different port. Analog audio volume level can be changed only on the source itself or by powered speakers with the volume set option.

Please note: The description on this page may vary depending on the type of Combiner in use. A 4-port Combiner would have only channels 1-4 on the screen, an 8-port Combiner 1-8, and a 16 port Combiner 1-16.

ADVANCED OPERATIONS

Advanced Operations

In this section, of the menu the user has two options :



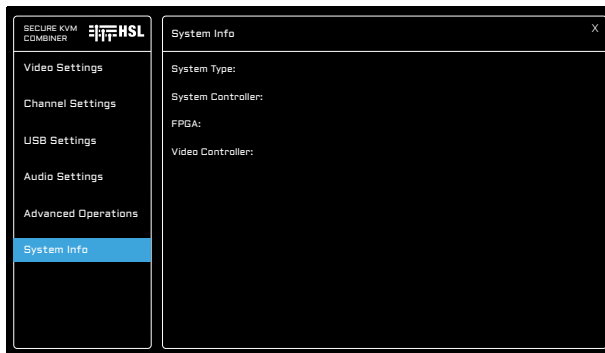
- **Reset to factory defaults** – This option is the equivalent to **Lctrl | Lctrl | f11 | R**. It resets the combiner and changes the configurations back to defaults. Note, this option would erase any presets or layouts previously made.
- **Restart Switch** – This option is a way to reboot the combiner without changing settings, configuration or erasing presets and layouts. It is the equivalent to a power cycle.

Note: In order to choose any of these options, press and hold the mouse's left button on top of the selected option for at least 5 seconds.

SYSTEM INFO

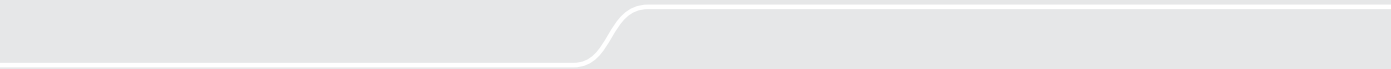
System Info

This section presents information about the device. This menu shows the user a few key factors about their system:



- **System Type** – This selection will show the user if the system is secured or commercial.
- **System Controller** – This would show the user the FW (firmware) version on the system controller.
- **FPGA** – The FW version on the FPGA.

This information may be helpful for technical support in the future.



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