

Panasonic[®]

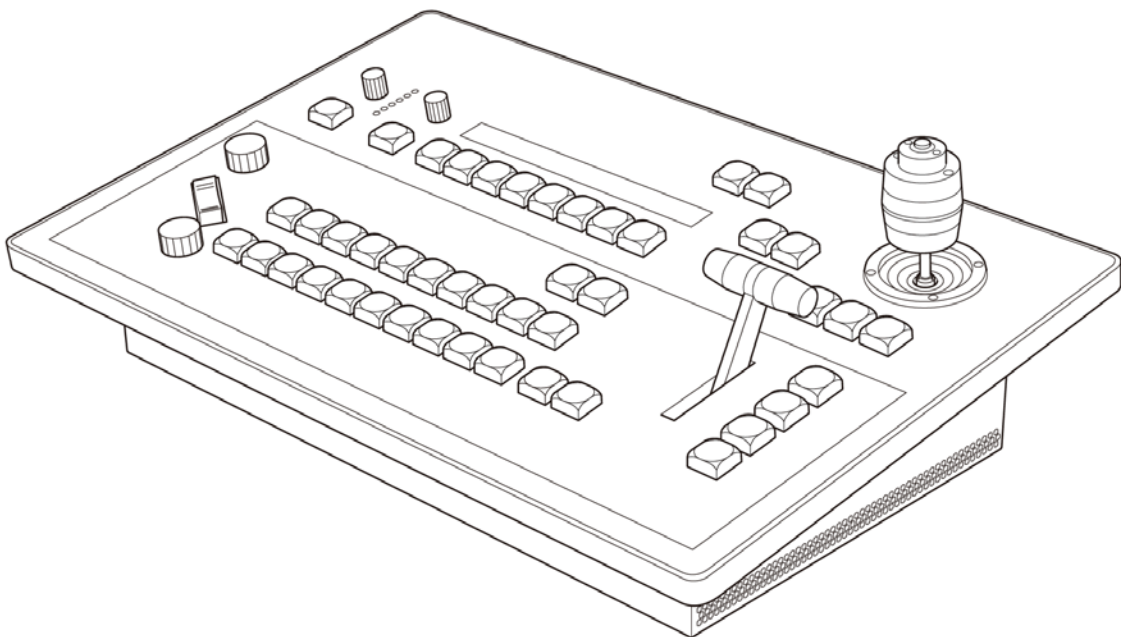
Operating Instructions Supplement

Upgraded functions

Live Production Center

AV-HLC100P

AV-HLC100E

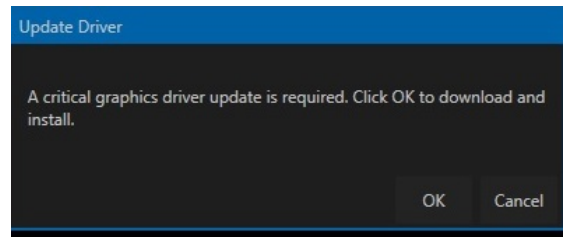


Note

● New Video Driver

New Video driver installation may be required to have functions properly.

If following message is appeared when starting HLC100 application, New Video Driver installation is required. Please connect HLC100 to Internet, and click OK. Follow instruction to install driver. Once installation is done, turn Power OFF and ON again.



This procedure is required because AV-HLC100 needs special video driver to work all functions. Once this procedure is done, you can proceed Windows Update to keep updated security setting.

● Required Driver and Plug-in installation.

To have all functions work properly, latest NDI|HX Driver and Streaming Plug-in installation are required.

(1) NDI|HX Driver installation

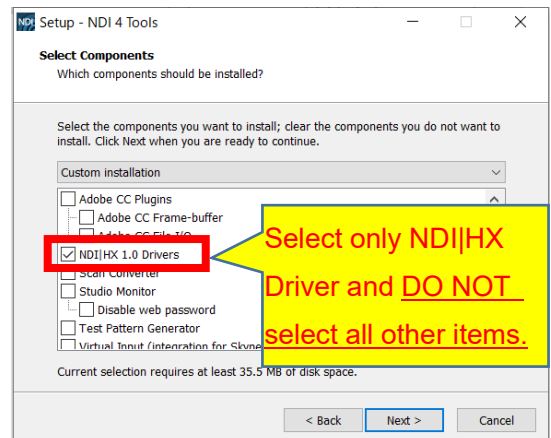
This driver is required when using NDI|HX sources.

Download NDI TOOL from following site.

<https://www.ndi.tv/tools/#download-tools>

Select NDI Tools for Windows, download and install it.

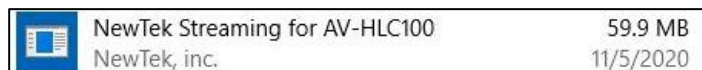
During installation, select only NDI|HX 1.0 Drivers. Unselect all other tools and install.



(2) Streaming Plug-in installation

This plug-in is required when streaming or recording.

* Before installing Plug-in, make sure that old version is not installed. Exit from HLC100 app, go into Windows Setting/Apps menu and make sure “**NewTek Streaming for AV-HLC100**” (Refer below figure) is not installed. If it is installed, click it to uninstall, then install new version



Connect HLC100 to Internet, and click STREAM/RECORD, then plug-in will be automatically downloaded and installed. After installing the plug-in, restart AV-HLC100.

You can download Plug-in file and install locally from following site;

<http://new.tk/HLCP191113>



1, Improved function list

Following functions are improved/added with Version 7-1-200407.

NO	Item	Description
(1)	Project management	Save/Load Project file (Complete HLC100 setting) at Admin panel (6 slot)
(2)	Hot Key Customization	Able to add/customize Hot Key operation
(3)	External Source for Title	Title can be used with Input Sources, or can be used as 2 nd PiP
(4)	Count Down timer	Add functions into Clock
(5)	PTZ OSD Operation improvement	Same operation as RP50
(6)	Lens Control Improvement	Same as RP50 sensitivity, Keep AUTO/manual status
(7)	SKYPE TX bug fix	Fix latest Microsoft SKYPE TX bug
(8)	RTMPS streaming support	Support RTMPS (secured) streaming for Facebook or others.
(9)	Web control	Control Audio Mixer and Switcher function from PC/Tablet

Also following functions are improved with Version 7-1-200520.

NO	Item	Description
(1)	YouTube Preset in Streaming	Fix connection problem with YouTube Preset in Streaming menu.

2, Description of New function

(1) Project management

Administration panel is newly designed on AV-HLC100. Now it includes Session selection. You can save/recall all setting not only video format but also all other setting such as inputs by using this function. 6 slot of sessions are available to select.

Administration panel appears when you first launch your system. This is where you choose which "session" you wish to open and choose its video format, but the panel also provides access to a number of other utilities, settings, and information.

The settings you choose are retained for the currently selected session, as are any assets you might import into it, along with its configuration options for video and audio inputs and control states.

NOTE THAT THE ADMINISTRATION PANEL WILL NOT BE SHOWN EVERY TIME YOU LAUNCH AV-HLC100.

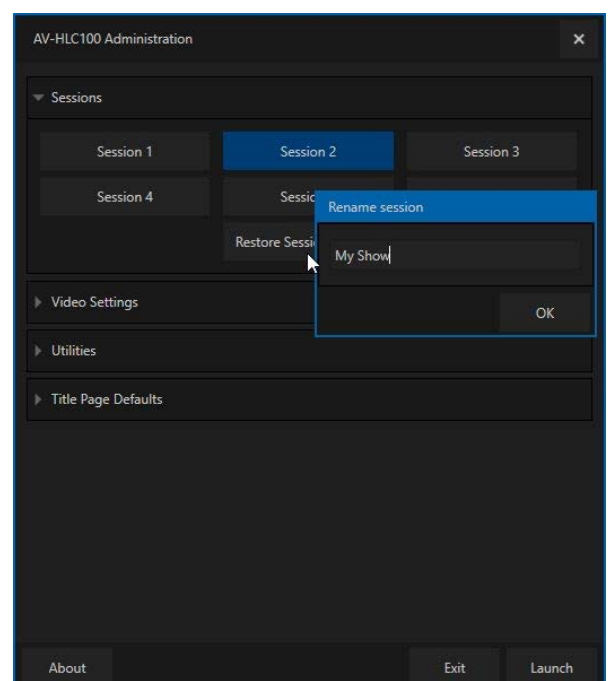
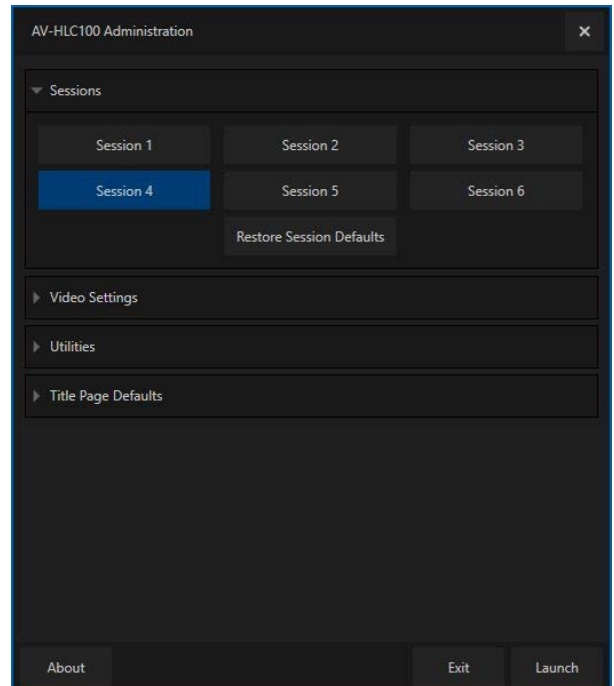
Rather, AV-HLC100 will automatically open the last session you worked in.

To deliberately open another session instead, the Administration panel can be displayed from the Windows *Start menu* folder named "Panasonic AV-HLC100", or you can choose to display it when exiting from the Live Desktop.

Clicking the Launch button at lower right opens the currently highlighted session, and takes you directly to the *Live Desktop* to begin production.

HLC100's *session* implementation lets you quickly recall a specific operating environment on demand.

Session name also can be customized by right clicking session button. Set unique name for each session for easy identification.



(2) Hotkey Customization

It can often be quicker to use a keyboard shortcut than to navigate the mouse to a control. This section provides a table listing the hotkey combinations supported by AV-HLC100.

Below list shows default setting of Hotkey;

Operation	Shortcut
(Show/Hide) Switcher Input Configuration Dialog	top row number (1-8)
(Show/Hide) Input Configuration Dialog for Preview Selection	*
(Show/Hide) CLIPS Configuration Dialog	i
(Show/Hide) STILL Configuration Dialog	o
CLIP PREV	j
CLIP Stop	k
CLIP Play	l
CLIP NEXT	; (semi-colon)
CLIP Toggle Autoplay	' (apostrophe)
STILL PREV	, (comma)
STILL NEXT	. (period)
STILL Toggle Auto Advance	/
Title Editor (show panel)	t
Recall Title Preset #	numpad (1-8)
Store/Update Title Preset #	CTRL + numpad (1-8)
Close dialog	ESC
Display software version	Alt + b

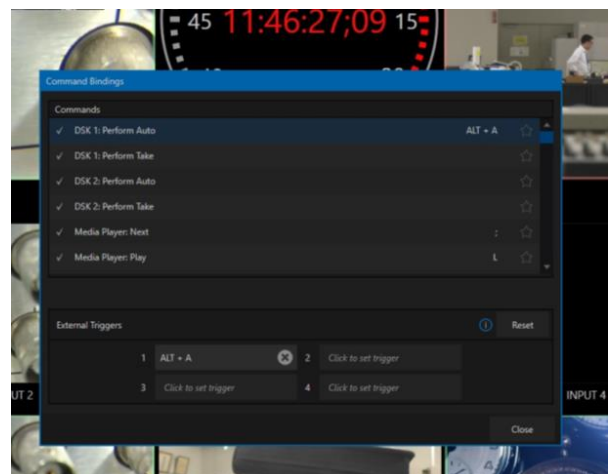
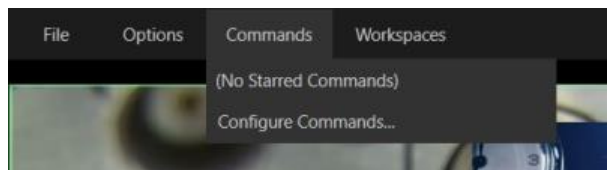
Those setting can be customized on GUI by selecting Commands/Configure Commands menu.

- i) Open Commands menu and select "Configure Commands"
- ii) Select target function from list, click one of External Triggers #1-4, and record Key stroke from keyboard. Key Stroke can be combination of ALT, SHIFT or Ctrl.

Once set is done, you can control each functions by clicking on keyboard.

Available functions are;

- PiP Auto/CUT, Title Auto/Cut,
- Media Player Play/Stop/Prev/Next/Auto,
- Still Store Play/Stop/Prev/Next/Auto, Input 1-8/Clip/Still Config screen open,
- PGM source select, PVW source select, Title Save to preset#1-9, Title select preset #1-9,
- Open Title Editor, PRV Config screen open, Perform Auto/Cut/FTB

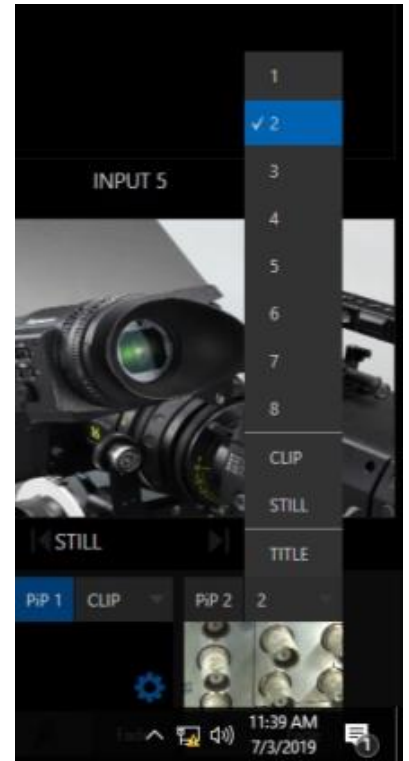


(3) External Source for Title

Now you can use External Source for Title, or you can use 2 of PiP.

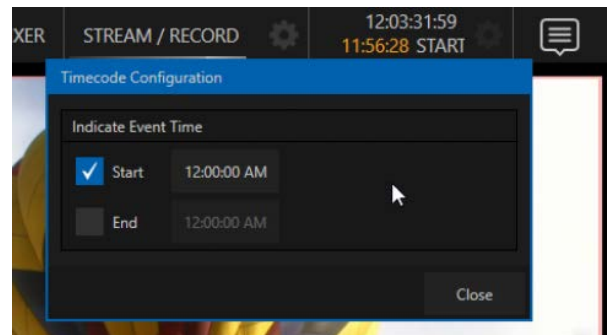
Select Title source from Input#1-8, Clip or Store to use as 2nd PiP. When selected source includes alpha channel (key source), it will be overlaid as keyed source. When it does not includes alpha channel, it will be overlaid as full PiP.

When using Title, select TITLE.



(4) Count Down timer

Click the gear icon next to the Dashboard clock to open the Timecode Configuration dialog. Note that you can set Start and End times for your production or event. When you do so, additional 'countdown' information is displayed in the Dashboard. Additionally, clocks shown in the monitor Workspaces will also update to show a second display with similar countdown information.



(5) PTZ OSD Operation improvement

OSD (On Screen Display) of PTZ operation is improved.

Now all operation can be done by one knob.

- i) Select target PTZ
- ii) Turn ON OSD by pushing OSD button
- iii) Turn and click knob to select and set.
- iv) Turn OFF OSD by pushing OSD button again



(6) Lens Control Improvement

PTZ lens control is improved. AUTO/Manual setting will remain until clicking knob (Focus/Iris)

Focus Iris control are improved. Faster and smoother control can be done.

(7) SKYPE TX bug fix

Now latest SKYPE TX can be connected with HLC100.

(8) RTMPS streaming support

Some of provider such as Facebook is requesting RTMPS format. Now HLC100 supports this format to stream out.

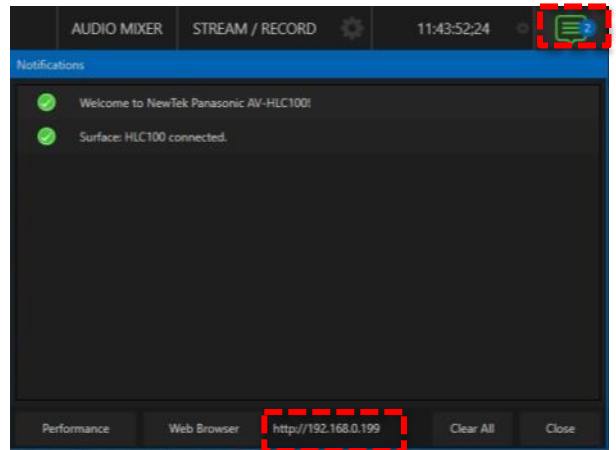
(9) Web control

At times it can be very useful to operate your AV-HLC100 remotely from a laptop or mobile device on the same network. AV-HLC100's powerful Web Control applets allow you to conveniently access many features from a web browser.

i) Identify IP address

To confirm IP address of AV-HLC100, click icon at upper right corner of GUI screen, then Notification screen is shown. You can find IP address that currently AV-HLC100 is set.

If network is not connected, this will not show correct address. Make sure AV-HLC100 is connected correctly.



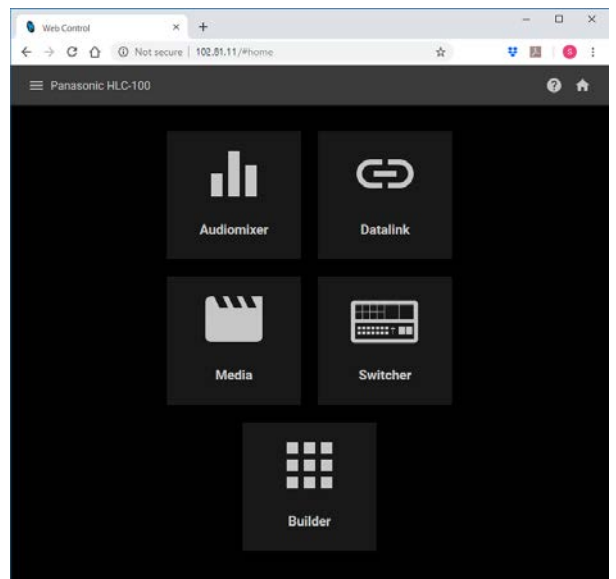
ii) Connect from other PC/Tablet.

PC/Tablet must be connected with same subnet of HLC100.

On PC/tablet, open Web Browser (Latest one such as Chrome. Internet Explorer does not work), and input IP address that was shown on procedure i).

When ID and password is requested, input "admin" and "12345" as default ID and password.

Then Home screen will be shown.



The Home page shows icons for a group of control applets, as follows:

Audio Mixer – monitor and control volume levels for Audio Mixer sources and outputs.

DataLink – view and edit DataLink keys and their values to remotely update title page content.

Media – modify the makeup of your STILLS and CLIPS playlists, and exercise playback control remotely.

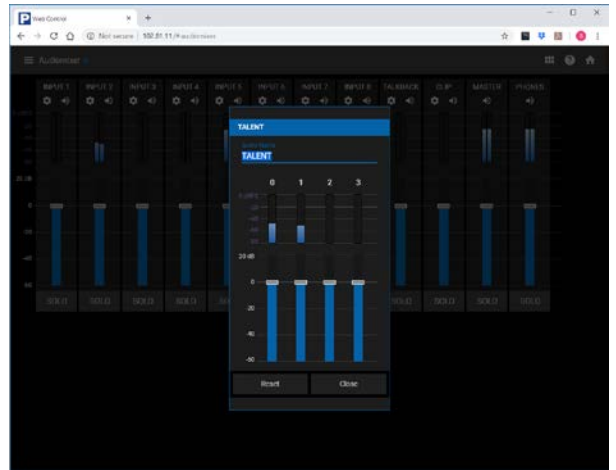
Switcher – Switch your show from a tablet or other mobile device.

Builder – Design your own control page and control

iii) Audio mixer

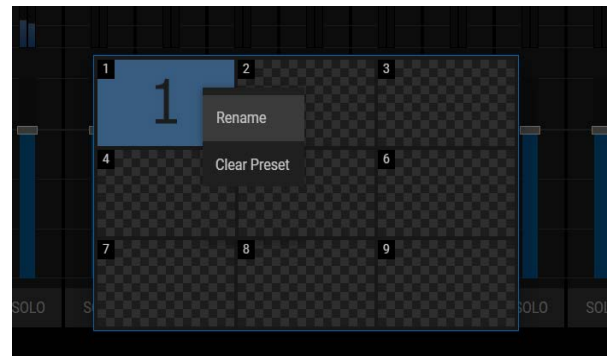
The web-based *Audio Mixer* applet provides convenient outboard audio level control for all audio sources.

Each input and output is represented by a primary volume fader and VU meter. Volume for a source can be adjusted by dragging the fader up or down; click the speaker icon located above the VU meter to toggle Mute.



Clicking the gear icon beside the Mute button opens a small panel providing VUs and level controls for each individual channel supplied by the related source. Note, too, that you can modify the source name in this popup dialog.

A unique feature of the Mixer applet is that it hosts *Audio Mixer* presets. Click the *preset bin* button just left of the (?) in the Audio Mixer applet's titlebar



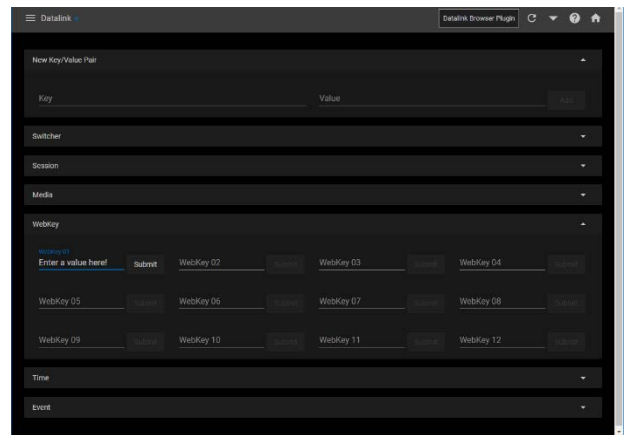
to open the preset bin. Click an empty preset to store the current Mixer setup, then click it again later to recall it. Right-click an existing preset to *Rename*, or *Clear* it.

Clicking the SOLO button allows you to exclusively listen to the related source on AV-HLC100's headphone output.

To return to the *Home page* after making adjustments, click the *Home page* icon at right in the page header, or use the menu (marked by a three-barred icon) at extreme left to jump to another applet.

iv) DataLink

The DataLink™ page allows you to remotely enter new values for DataLink keys (which, you'll recall can be used to greatly extend AV-HLC100's titling system .



Key names are group by type under expandable headers. The *New Key/Value Pair* group actually allows you to create your own custom DataLink keys and set their values, which can then be updated remotely using the applet.

Note that, since key values can come from a variety of sources, some of which can be modified externally or updated *automatically, the titlebar contains a Refresh icon.

* For example, values for some keys in the *Time* group change constantly – thus any local edit you make could well be overwritten moments later.

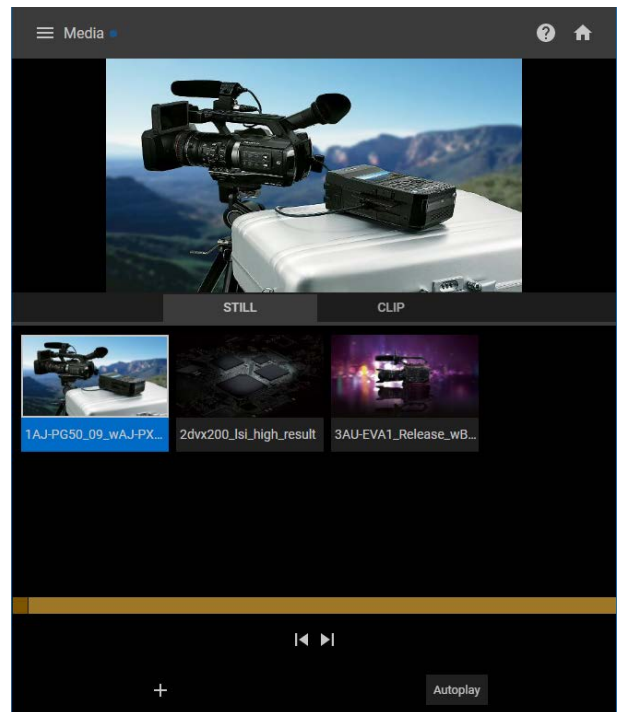
Hint: The WebKey section exposes the keys and values supplied by the DataLink plugin, which is a free download prepared for the Chrome® web browser. To access this, click the corresponding button in the applet's titlebar.

v) Media

Controls on the Media page provide remote access to AV-HLC100's internal media players (*CLIPS* and *STILLS*).

Click either the *STILL* or *CLIP* tab to see the live player output, and the content of the corresponding playlist. *Previous* and *Next* selection controls are located just below the scrub bar, or you can simply click a playlist icon to select it.

The *Autoplay* button at the bottom of the *Media* applet toggles the corresponding feature in the CLIP player.



Managing Media

Click the + icon to open a *Media Browser* providing access to relevant folders on AV-HLC100, and make a selection to add the item to the playlist. Or, very conveniently, click the blue *Browse* button in the footer of the *Media Browser* to open a local file explorer to access files on the device hosting the web browser (or elsewhere on the local network).

In the latter case, the selected file(s) will be copied across the network to the appropriate storage location on AV-HLC100 (in addition to being added to the playlist).

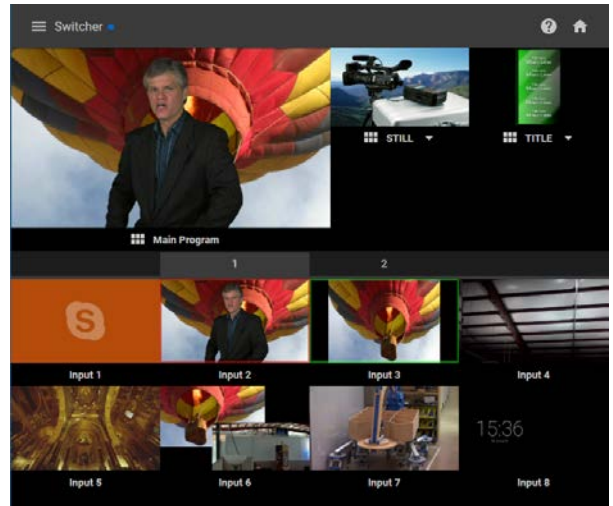
Hint: Depending on available bandwidth, it may not always be suitable to transfer large video clips across the network to AV-HLC100 in this manner during live production.

vi) Switcher

The *Switcher* applet, while quite simple, is one of the more powerful *Web Control* features.

Video from each of AV-HLC100's connected and internal sources is displayed in one of the two tabbed panes comprising the lower half of the applet display. *Program* output is shown at left above these tabs, and the two overlay channels (*PiP* and *Title*) are shown at right next to this.

Drop-down menus beneath the overlay monitors allow you to change the source assigned to these channels.



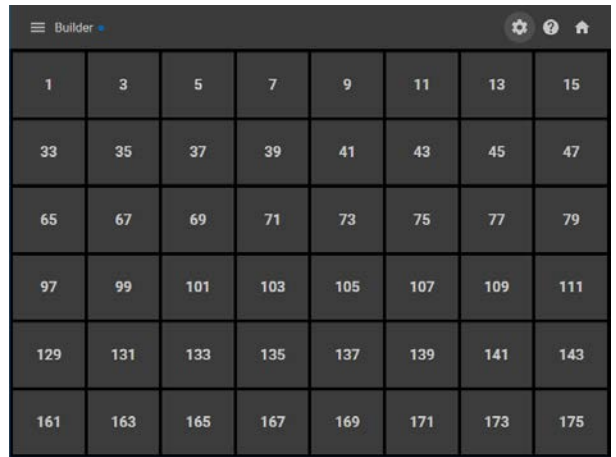
As well, the small 'matrix' gadget beneath the overlay channels and Program opens a transition preset bin for the associated video channel. This dialog allows you to choose one of nine transition presets, and change the speed with which your selection is applied.

Hint: The preset effects in the bin must be configured in the AV-HLC100 interface. The first two presets are permanently assigned to CUT and FADE, to provide quick access to these two important effects.

Switching the Program source or displaying (or hiding) an overlay channel is a simple matter – just tap the viewport for the desired source to CUT, and swipe (or click and drag) horizontally on it to transition using the selected effect.

vii) Builder

The Builder is probably the most powerful and flexible applet in the *Web Control* arsenal. At its core, Builder lets you assign any AV-HLC100 command (drawing on the list of operations that can be assigned to a keyboard shortcut) to buttons that appear in the browser interface. In turn, buttons can be styled, labeled, and can even show images or moving video streams.



Initially, there is not much to see here – just a set of square buttons that, when clicked, do nothing at all. You might wonder at the seemingly odd numbering scheme. Let’s spend a few moments designing a few custom buttons and all will become clear.

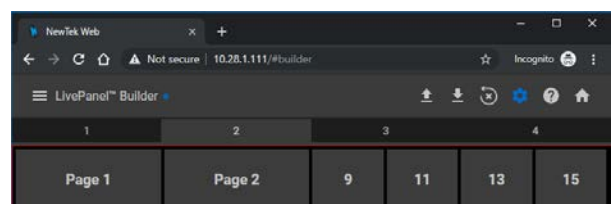
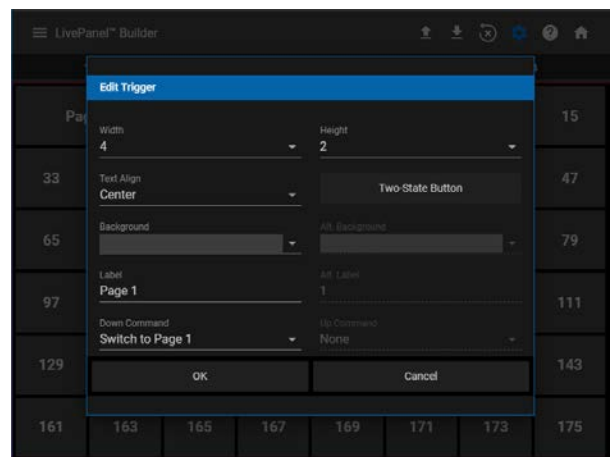
To assign a function to a button, we need to enable Builder’s *edit mode*. To do so, click the gear icon at right in Builder’s titlebar. A red border is added to the button panel to signify that *edit mode* is active.



In addition, note that a set of four number tabs is added above the button panel. Builder gives you four separate pages of buttons to work with, allowing you to set up different layouts for unique control requirements.

Let’s begin by adding a simple button:

- 1) In edit mode, then, click the button numbered “1”.
The button configuration dialog shown.
- 2) Change the *Width* value to “4”, leaving *Height* at the default value of “2”.
- 3) Click the *Background* color swatch and select the darkest gray color.
- 4) Edit the Label value by entering “Page 1”.
- 5) Then use the *Down Command* menu to choose “Switch to Page 1”
- 6) Click OK
- 7) Now click button 5, and repeat steps 2-4, but this time select “Switch to Page 2” as the *Down Command*.

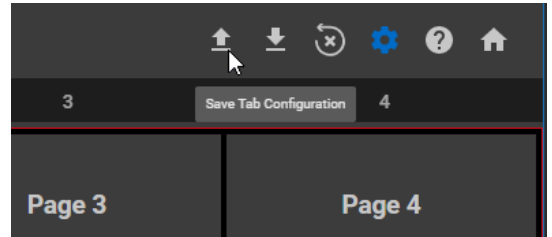


At this point, we've added two 'page buttons' to the first page. Continue to create two similar buttons to go to pages 3 and 4.

At this point, we could exit edit mode by clicking the gear icon again, and we would be able to switch from Page 1 to a different page in Builder ... but, having done so, we would be unable to switch back from to Page 1, because we haven't added any functions to Page 2.

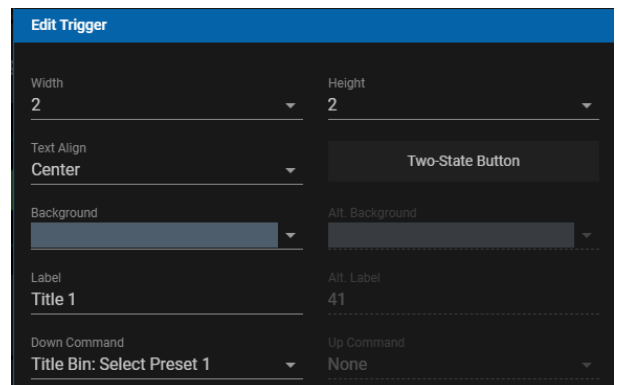
To solve this, let's save the layout for Page 1, then copy it to Pages 2-4.

- 8) Having added four 'go to page' buttons to page 1 as outlined above, click the *Save Tab Configuration* icon in the titlebar to store this button layout in the local Downloads folder.
- 9) Go to the second *Builder* tab, and click the nearby *Load Tab Configuration* icon.
- 10) Navigate to your local Downloads folder, and load the (JSON format) file you saved above.
- 11) Repeat the last two steps for the remaining *Builder* tabs.



Now we can freely switch pages, but since they are identical there isn't much reason to do so. Let's add some useful functionality beginning with Page 1.

- 12) Still in *edit mode*, return to page 1 by clicking tab 1 at the top of the page.
- 13) Click button 33 to open its configuration dialog.
- 14) Set Width to "8" and Height to "4".
- 15) Remove all text from the button Label field, leaving it empty.
- 16) Click the *Background* menu, and select the *Choose Video Source* button.
- 17) In the *Trigger Video Source* popup dialog, select the TITLE entry.
- 18) Select "Title: Perform Auto" as the *Down Command*.
- 19) Click OK to complete setup for this button.



At this point, if you leave *edit mode*, "Page 1" should look something like shown right side.

You can now view the currently active title page in your web browser, and better yet, it's a button; clicking it will cause AV-HLC100 to show or hide the title on *Program output* using the currently designated transition effect.

Let's add a little more useful functionality to Page 1.



20) Edit button 41, changing its *Label* to “Title 1”, and assigning the command “Title Bin: Select Preset 1” as the *Down Command*.

21) Repeat the last step for buttons 43, 45, 47, 73, 75, 77 and 79 –incrementing the number in the *Label* field (“Title 2”, “Title 3”, etc.) and the preset (“Select Preset 2”, “Select Preset 3”) for each successive button.



Now you have created something really quite useful. The handful of controls you’ve added would allow someone to use the web browser of a mobile device, such as a tablet or phone, to easily select a specific title page, display it, and finally remove it from view after a few moments.

Let’s continue our exploration of *Builder* by configuring Page 2.

22) Re-enable *edit mode* by clicking the gear icon in *Builder’s* titlebar, and select the second tab.

23) Assign two large (8x5) “buttons” as shown to serve as ‘live monitors’ by selecting the CLIP and Mix 1 video sources as their respective Backgrounds.

24) Continue using the button commands listed below and the skills you learned above to complete the layout:



- a. CLIP: Previous
- b. Clip: Stop
- c. Clip: Play
- d. Clip: Next
- e. Transition: Perform Cut
- f. Transition: Perform Auto
- g. PGM Row: Set Index 01-06
- h. PGM Row: Set Clips
- i. PGM Row: Set Stills
- j. PRV Row: Set Index 01-06
- k. PRV Row: Set Clips
- l. PRV Row: Set Stills

With this page complete, you can now cut directly to a *Switcher* source by selecting a red ‘Program row’ button, or queue your upcoming source on *Preview* and transition to it using the AUTO button. As well, you can select and preview the current item in your *CLIPS* playlist source, and control playback.

Hint: If you have set AV-HLC100’s AUX Video Default (Options menu) to Preview, you can switch your AUX source using the green button row in this Builder page.

This mini-tutorial has introduced the versatility of the *Builder* applet, which can serve to provide remote control convenience and simplicity for many purposes.