CYP ///

EL-41PIP

4-Way HDMI Switch with Integrated Picture-in-Picture (PIP) Technology

/// **OPERATION MANUAL**

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SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

REVISION HISTORY

VERSION NO.	DATE	SUMMARY OF CHANGE
v1.00	29/01/13	First Release
v1.01	06/11/13	Added rack ears to contents
v1.02	21/08/14	Added Supported Resolutions Chart, Web GUI and updated RS-232 and OSD Sections
v1.03	02/03/15	Amended Cover Image/Front Panel Diagram

CONTENTS

1. INTRODUCTION

The EL-41PIP is an advanced 4 Way HDMI switch with integrated Multi-view (Picture In Picture) technology. This plug and play solution offers advanced control and display options for the integration of 4 sources onto a single display. The EL-41PIP is the perfect cost effective solution for integrating CCTV or a combination of sources into any single display within any commercial or residential AV installation.

2. APPLICATIONS

/// Broadcasting room and control

/// Surveillance room and control

/// Public advertisement and control

/// Digital Presentation

3. PACKAGE CONTENTS

/// 1 x EL-41PIP Advanced 4 Way HDMI Switch

/// 1 x Remote Control (CR-124)

/// 1 x Rack Ears (Pair)

/// 1 x 12V/3A DC Power Adaptor

/// Operation Manual

4. SYSTEM REQUIREMENTS

Source equipment such as DVD/Blu-ray player and PC/Laptop devices and output HD TV/monitor.

5. FEATURES

/// Integration of up to 4 sources on a single display

/// Multiple screen layout configurations

/// Seamless switching of channels and on screen windows

/// Fade in out display functionality

/// Ability to mirror and rotate images

/// Zoom & Shrink HDMI Video and/or Overlay

/// Resolutions supported :

   -HDTV: 480i to 1080p plus 1080p24fps
   -PC: VGA to UXGA

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6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel
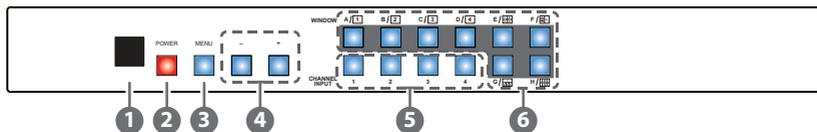
① **IR WINDOW:** Accepts the IR signal from the supplied remote control.

② **POWER:** Press to turn the unit on or to put it into standby mode.

③ **MENU Button:** Press this button to bring up the On-screen Display (OSD) menu on screen.

④ **MINUS/PLUS (–/+):** Press these buttons to navigate down/up the OSD menu.

⑤ **CHANNEL INPUT 1~4:** Press to cycle through the four HDMI sources to be displayed in the corresponding window. All windows can display the same input or each channel can display a different input.

⑥ **WINDOW A~H:** Press these hot keys to select the required screen configuration. Windows A to D will display the selected channel in full screen. Windows E to H can simultaneously display a combination of channels on the same screen.

Windows A to D's source selection corresponds to channel inputs 1 to 4. To change the input channel for Window A, press the button for channel input 1. You will not be able to select the buttons for channel inputs 2 to 4 when window A is selected. The sizes for Windows E to H are adjustable through the OSD menu settings.

Note: Only Window G is PIP (Picture-in-Picture) whereas E, F and H are POP (Picture-out-of-Picture) modes.

The order of priority when windows overlap each other is Channel 4 > Channel 3 > Channel 2 > Channel 1 i.e Channel 4 will cover Channel 3, Channel 3 will cover Channel 2 and so on.

Note: Under some circumstances the window borders may show some interference, adjusting the display's motion setting may resolve this issue.

6.2 Rear Panel
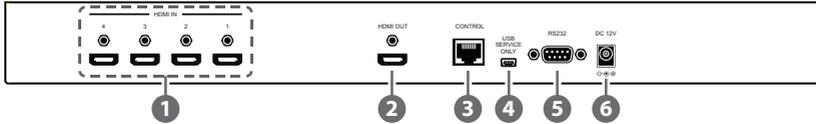
① HDMI IN 1~4: Connect to up to four source HDMI equipped source devices such as DVD/Blu-ray players and or PC/Laptop devices.

② HDMI OUT: Connect to a HD TV/monitor or HDMI matrix for display of the image.

③ CONTROL: Connect to an active network for Telnet control (refer to Section 6.5 for details on Telnet commands).

Warning: Please do not connect this port directly to the PC/Laptop as the Telnet function will not work.

④ USB SERVICE ONLY: Manufacturer use only.

⑤ RS-232: Connect to a PC/Laptop or RS-232 control system to use RS-232 commands to control the device (refer to Section 6.5 for details on RS-232 commands).

⑥ DC 12V: Connect the 12V DC power supply to the unit and plug the adaptor into an AC outlet.

6.3 Remote Control

1 Power: Press this button to switch the device on or to set it to standby mode.

2 Info: Press this button to display the device's firmwareersion.

3 Input CH 1/2/3/4: Press these buttons to cycle through the HDMI sources (1 to 4) for each channel to be displayed on screen.

4 WA~WH: Press these hot keys to select the screen setting where WA to WD display the selected channel in full screen and WE to WH display different combinations of all 4 channels on the same screen.

5 Mute: Press this button to mute the audio from the HDMI output.

6 ▲ ▼ ► ◄ and OK Buttons: Press these buttons to navigate through the OSD menu and press OK to enter or confirm settings.

7 Menu: Press this button to enter into the OSD menu.

8 Exit: Press this button to exit the OSD menu or settings.

9 Fade-In-Out*: Press this button to switch on or off the Fade in/out function.

10 Chromakey*: Press this button to activate the Chroma key function where CH 1 is the background and CH 2 is the overlaid (top)image.

11 Mirror*: Press this button to display the screen in mirror image.

12 Rotation*: Press this button to rotate the image 90˚ left/right or 180˚ upside down.

13 Audio 1/2/3/4: Press these buttons to select the audio from HDMI input source 1 to 4.

14 FAV. 1/2/3/4: Press these buttons to bring up the previously stored customised screen settings.
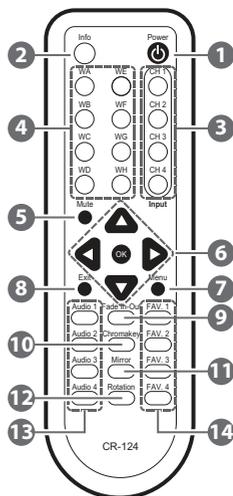
Note: The functions with an asterisk (*) will only work when displaying Windows A to D. The system will revert to Window A if these functions are used when Windows E to H are displayed.

6.4 RS-232 Protocols

UNIT	
PIN	**Assignment**
1	NC
2	Tx
3	Rx
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

Remote Control	
PIN	**Assignment**
1	NC
2	Rx
3	Tx
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

Baud Rate: 115,200 bps

Data Bit: 8 bits

Parity: None

Flow Control: None

Stop Bit: 1

6.5 RS-232 and Telnet Commands

Command	Description
RESO 0~18	SET OUTPUT RESOLUTION (0) 480p, (1) 576p, (2) 720p 50Hz, (3) 720p 60Hz, (4) 1080p 24Hz, (5) 1080p 25Hz, (6) 1080p 30Hz, (7) 1080p 50Hz, (8) 1080p 60Hz, (9) 1024x768 60Hz, (10) 1280x800 60Hz, (11) 1280x1024 60Hz, (12) 1366x768 60Hz, (13) 1440x900 60Hz, (14) 1600x900 60Hz, (15)1600x1200 60Hz, (16) 1680x1050 60Hz, (17)1920x1200 60Hz, (18) Native
OSDDIS 0/1	ENABLE/DISABLE ONSCREEN DISPLAY (0) OFF, (1) ON
OSDH 0~20	OSD H OFFSET 0~20
OSDV 0~20	OSD V OFFSET 0~20
OSDTIME 0~50	OSD TIMEOUT 0~50
OSDGAIN 0~10	OSD GAIN VALUE 0~10
BRI 0~4 0~100	SET BRIGHTNESS VALUE FOR CHANNEL (0) All, (1~4) CHANNEL, (0~100) VALUE
CON 0~4 0~100	SET CONTRAST VALUE FOR CHANNEL PORT (0) All, (1~4) CHANNEL, (0~100) VALUE
SAT 0~4 0~100	SET SATURTATION VALUE FOR CHANNEL PORT (0) All, (1~4) CHANNEL, (0~100) VALUE
HUE 0~4 0~100	SET HUE VALUE FOR CHANNEL PORT (0) All, (1~4) CHANNEL, (0~100) VALUE

Command	Description
HSIZE 1~4 0~X**	SET IMAGE HORIZONTAL SIZE (1~4) CHANNEL, (0~X) X=HORIZONTAL PIXEL FOR CURRENT RESOLUTION
VSIZE 1~4 0~X**	SET IMAGE VERTICAL SIZE (1~4) CHANNEL, (0~X) X=VERTICAL PIXEL FOR CURRENT RESOLUTION
HPOS 1~4 0~X**	SET HORIZONTAL POSITION OF SPECIFIED CHANNEL (1~4) CHANNEL, (0~X) X=HORIZONTAL PIXEL FOR CURRENT RESOLUTION
VPOS 1~4 0~X**	SET VERTICAL POSITION OF SPECIFIED CHANNEL (1~4) CHANNEL, (0~X) X=VERTICAL PIXEL FOR CURRENT RESOLUTION
IMAGE 1~4 0~1**	CHANNEL(S) OUTPUT ON/OFF (1~4) CHANNEL, (0/1) OFF/ON
PRI 1~4 1~4**	SET CHANNEL PRIORITY (1~4) CHANNEL, (1~4) PRIORITY
LABEL 1~4 XXX**	ASSIGN A VIDEO NAME (1~4) VIDEO, (XXX) ABCEDFGH...
STORE 1~4**	SAVE THE CURRENT WINDOW STATE TO FAV. (1~4) FAV.
RECALL 1~12	RECALL A WINDOW STATE (1) WINDOW A, (2) WINDOW B, (3) WINDOW C, (4) WINDOW D, (5) WINDOW E, (6) WINDOW F, (7) WINDOW G, (8) WINDOW H, (9) WINDOW FAV. 1, (10) WINDOW FAV. 2, (11) WINDOW FAV. 3, (12) WINDOW FAV. 4
MIRROR 0/1*	ENABLE/DISABLE MIRROR EFFECT (0/1) OFF/ON
FADE 0~21*	ENABLE/DISABLE FADE EFFECTS (0) OFF, (1) 1.0 s, (2) 1.1 s, (3) 1.2 s, (4) 1.3 s, (5) 1.4 s, (5) 1.5 s, (6) 1.6 s, (7) 1.7 s, (8) 1.8 s, (9) 1.9 s, (10) 2.0 s, (11) 2.1 s, (12) 2.2 s, (13) 2.3 s, (14) 2.4 s, (15) 2.5 s, (16) 2.6 s, (17) 2.7 s, (18) 2.8 s, (19) 2.9 s, (20) 3.0 s

Command	Description
ROTATE 0~3*	SET VIDEO ROTATION VIDEO TO PRESET POSITIONS (0) ROTATE OFF, (1) R90, (2) L90, (3) 180
CHRC R/G/B MIN/ MAX 0~255*	SET THE RGB COLOUR RANGE FOR THE CHROMA KEY (R/G/B) COLOUR CHANNEL (MIN/MAX) COLOUR VALUE ++(0~15) SET PRESENT VALUE 0~255 RBG MAX (0)15, (1)31, (2)47, (3)63, (4)79, (5)95, (6)111, (7)127, (8)143, (9)159, (10)175, (11)191, (12)207, (13)223, (14)239, (15)255 RGB MIN (0)00, (1)16, (2)32, (3)48, (4)64, (5)80, (6)96, (7)112, (8)128, (9)144, (10)160, (11)176, (12)192, (13)208, (14)224, (15)240
CHRSW 0/1*	SET THE CHROMA KEY ON/OFF (0) OFF, (1) ON
WND001	Change to Window A
WND002	Change to Window B
WND003	Change to Window C
WND004	Change to Window D
WND005	Change to Window E
WND006	Change to Window F
WND007	Change to Window G
WND008	Change to Window H
CH1001	Change CH1 to Source 1
CH1002	Change CH1 to Source 2
CH1003	Change CH1 to Source 3
CH1004	Change CH1 to Source 4
CH2001	Change CH2 to Source 1
CH2002	Change CH2 to Source 2
CH2003	Change CH2 to Source 3

Command	Description
CH2004	Change CH2 to Source 4
CH3001	Change CH3 to Source 1
CH3002	Change CH3 to Source 2
CH3003	Change CH3 to Source 3
CH3004	Change CH3 to Source 4
CH4001	Change CH4 to Source 1
CH4002	Change CH4 to Source 2
CH4003	Change CH4 to Source 3
CH4004	Change CH4 to Source 4
IO1000**	CH1 Image OFF
IO1001**	CH1 Image ON
IO2000**	CH2 Image OFF
IO2001**	CH2 Image ON
IO3000	CH3 Image OFF
IO3001	CH3 Image ON
IO4000	CH4 Image OFF
IO4001	CH4 Image ON
MUT000	Mute Off
MUT001	Mute On
AUD001	Change Output Audio to Source 1
AUD002	Change Output Audio to Source 2
AUD003	Change Output Audio to Source 3
AUD004	Change Output Audio to Source 4
FAD000*	Fade In-Out Off
FAD001*	Fade In-Out On
CHR000*	Chromakey Function Off
CHR001*	Chromakey Function On
MIR000*	Mirror Function Off
MIR001*	Mirror Function On
ROT000*	Rotation Function Off

Command	Description
ROT001*	Rotation Function R
ROT002*	Rotation Function L
ROT003*	Rotation Function Up-Side Down
SFA001**	Store window format to FAV 1
SFA002**	Store window format to FAV 2
SFA003**	Store window format to FAV 2
SFA004**	Store window format to FAV 4
RFA001**	Recall window from FAV 1
RFA002**	Recall window from FAV 2
RFA003*	Recall window from FAV 3
RFA004*	Recall window from FAV 4
POW000	OFF
POW001	ON
IPMODE 0/1	SET IP MODE TO DHCP OR STATIC (0) DHCP, (1) STATIC
IPADD XXX.XXX.XXX.XXX	SET IP ADDRESS (XXX) 0~255
MAADD XXX.XXX.XXX.XXX	SET SUBNET ADDRESS (XXX) 0~255
GAADD XXX.XXX.XXX.XXX	SET GATEWAY ADDRESS (XXX) 0~255
ETHTIME 0~6	ETHERNET TIMEOUT (0) OFF, (1) 10 MINUTE, (2) 20 MINUTE, (3) 30 MINUTE, (4) 40 MINUTE, (5) 50 MINUTE, (6) 60 MINUTE
RELINK	RELINK THE UNIT IN 2 SECONDS
DEFAULT	RESET THE UNIT TO FACTORY DEFAULTS
VICH 1~4 0~4	VIDEO CHANNEL COMMAND (1~4) VIDEO, (0) ALL CHANNEL OUTPUTS, (1~4) CHANNEL OUTPUTS
MUTE 0/1	MUTE AUDIO (0) OFF, (1) ON

Command	Description
POW 0/1	POWER THE UNIT ON/OFF (0) OFF, (1) ON
AUDIO 1~4	CHANGE OUTPUT AUDIO TO SPECIFIED SOURCE (1~4) AUDIO SOURCE
IMRE B/C/S/H	RESET THE IMAGE TO FACTORY DEFAULTS (B) BRIGHTNESS, (C) CONTRAST, (S) SATURATION, (H) HUE
PIRE	RESET THE UNIT PICTURE SETTINGS TO FACTORY DEFAULTS
CHRE 0~4**	RESET THE WINDOWS SETTINGS TO FACTORY DEFAULTS (0) ALL CHANNEL OUTPUTS, (1~4) CHANNEL OUTPUTS
WICORE*	RESET THE WINDOW CONVERT TO FACTORY DEFAULTS
RIPM	SHOW CURRENT IP MODE
IPCONFIG	SHOW IP CONFIGURATION
HELP	PRINTS ALL AVAILABLE RS-232/TELNET COMMANDS TO THE SCREEN
?	PRINTS ALL AVAILABLE RS-232/TELNET COMMANDS TO THE SCREEN

Note:
1. *Commands with two asterisks (**) will function under Windows E to H and FAV. 1 to 4.*
2. *Commands with one asterisk (*) will function under Windows A to D.*

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6.6 OSD Menu

Main Menu	1st Layer	2nd Layer	3rd Layer
I/O Setup	Output Resolution	480P, 579P, 720P50/60, 1080P24/25/30/50/60, 1024x768, 1280x800, 1280x1024, 1366x768, 1440x900, 1600x900, 1600x1200, 1680x1050, 1920x1200, NATIVE	
		Menu Back	
	OSD Settings	Info Display	On/**Off**
		H Offset	0~20 (5)
		V Offset	0~20 (5)
		Timeout	**Off**~50
		Gain	0~10 (2)
		Menu Back	
	Menu Exit		
Image Adjust	Brightness Adjust	CH 1	0~100 (50)
		CH 2	0~100 (50)
		CH 3	0~100 (50)
		CH 4	0~100 (50)
		Value Reset	
		Menu Exit	
	Contrast Adjust	CH 1	0~100 (50)
		CH 2	0~100 (50)
		CH 3	0~100 (50)
		CH 4	0~100 (50)
		Value Reset	
		Menu Exit	
	Hue Adjust	CH 1	0~100 (50)
		CH 2	0~100 (50)
		CH 3	0~100 (50)
		CH 4	0~100 (50)
		Value Reset	
		Menu Exit	
	Saturation	CH 1	0~100 (50)
		CH 2	0~100 (50)
		CH 3	0~100 (50)
		CH 4	0~100 (50)
		Value Reset	
		Menu Exit	
	Picture Reset		
	Menu Exit		

Main Menu	1st Layer	2nd Layer	3rd Layer
Window Setup	Channel 1 Select	Size	CH1 Wxxx Hxxx
			Width Unit
			Width Ten
			Width Hundred
			Height Unit
			Height Ten
			Height Hundred
		Position	CH1 Hxxx Vxxx
			Horizontal Unit
			Horizontal Ten
			Horizontal Hundred
			Vertical Unit
			Vertical Ten
			Vertical Hundred
		Image Output	**On**/Off
		Priority	CH1→4,CH2→3, CH3→2,CH4→1
		Window Reset	
		Menu Exit	
	Channel 2 Select	Size	CH2 Wxxx Hxxx
			Width Unit
			Width Ten
			Width Hundred
			Height Unit
			Height Ten
			Height Hundred
		Position	CH2 Hxxx Vxxx
			Horizontal Unit
			Horizontal Ten
			Horizontal Hundred
			Vertical Unit
			Vertical Ten
			Vertical Hundred
		Image Output	**On**/Off
		Priority	CH1→4,CH2→3, CH3→2,CH4→1
		Window Reset	
		Menu Exit	

Main Menu	1st Layer	2nd Layer	3rd Layer
Window Setup (Cont.)	Channel 3 Select	Size	CH3 Wxxx Hxxx
			Width Unit
			Width Ten
			Width Hundred
			Height Unit
			Height Ten
			Height Hundred
		Position	CH3 Hxxx Vxxx
			Horizontal Unit
			Horizontal Ten
			Horizontal Hundred
			Vertical Unit
			Vertical Ten
			Vertical Hundred
		Image Output	**On**/Off
		Priority	CH1→4,CH2→3, CH3→2,CH4→1
		Window Reset	
		Menu Exit	
	Channel 4 Select	Size	CH4 Wxxx Hxxx
			Width Unit
			Width Ten
			Width Hundred
			Height Unit
			Height Ten
			Height Hundred
		Position	CH4 Hxxx Vxxx
			Horizontal Unit
			Horizontal Ten
			Horizontal Hundred
			Vertical Unit
			Vertical Ten
			Vertical Hundred
		Image Output	**On**/Off
		Priority	CH1→4,CH2→3, CH3→2,CH4→1
		Window Reset	
		Menu Exit	

Main Menu	1st Layer	2nd Layer	3rd Layer
Window Setup (Cont.)	Label Select	VIDEO 1	VIDEO **1**/2/3/4
		VIDEO 2	VIDEO 1/**2**/3/4
		VIDEO 3	VIDEO 1/2/**3**/4
		VIDEO 4	VIDEO 1/2/3/**4**
		Menu Exit	
	Favours Store	FAV 1 Store	ON/**OFF**/OK
		FAV 2 Store	ON/**OFF**/OK
		FAV 3 Store	ON/**OFF**/OK
		FAV 4 Store	ON/**OFF**/OK
		Menu Exit	
	Menu Exit		
Window Convert	Channel 1 Convert	Mirror	On/**Off**
		Fade In-Out	**Off**/1.0/1.1/1.2 Convert /1.3/1.4/1.5/1.6/1.7/1.8/1.9/2.0/2.1/2.2/ 2.3/2.4/2.5/2.6/ 2.7/2.8/2.9/3.0
		Rotation	R90/L90/Up-Side Down180/**Off**
		Window Reset	
		Menu Exit	
	Channel 2 Convert	Mirror	On/**Off**
		Fade In-Out	**Off**/1.0/1.1/1.2 Convert /1.3/1.4/1.5/1.6/1.7/1.8/1.9/2.0/2.1/2.2/ 2.3/2.4/2.5/2.6/ 2.7/2.8/2.9/3.0
		Rotation	R90/L90/Up-Side Down180/Off
		Window Reset	
		Menu Exit	

Main Menu	1st Layer	2nd Layer	3rd Layer
Window Convert (Cont.)	Channel 3 Convert	Mirror	On/**Off**
		Fade In-Out	**Off**/1.0/1.1/1.2 Convert /1.3/1.4/1.5/1.6/1.7/1.8/1.9/2.0/2.1/2.2/ 2.3/2.4/2.5/2.6/ 2.7/2.8/2.9/3.0
		Rotation	R90/L90/Up-Side Down180/Off
		Window Reset	
		Menu Exit	
	Channel 4 Convert	Mirror	On/**Off**
		Fade In-Out	**Off**/1.0/1.1/1.2 Convert /1.3/1.4/1.5/1.6/1.7/1.8/1.9/2.0/2.1/2.2/ 2.3/2.4/2.5/2.6/ 2.7/2.8/2.9/3.0
		Rotation	R90/L90/Up-Side Down180/Off
		Window Reset	
		Menu Exit	
Chromakey Setup*	Minimum For R	000~255(0)	
	Maximum For R	000~255(15)	
	Minimum For G	000~255(0)	
	Maximum For G	000~255(15)	
	Minimum For B	000~255(0)	
	Maximum For B	000~255(15)	
	Switch	ON/**OFF**	
	Exit		

Main Menu	1st Layer	2nd Layer	3rd Layer
Ethernet **Setup**	IP Mode	Static/*DHCP*	
	Static Set	IP/Mask/Gate	
	Byte1 High	XXX *192 255 192*	000~255
	Byte2	XXX *168 255 168*	000~255
	Byte3	XXX *5 255 5*	000~255
	Byte4 Low	XXX *159 0 254*	000~255
	Re-Link	*No*/Yes	
	Exit		
	Static/DHCP IP	LINKED/NOT LINKED	
	IP	IP/Mask/Gate	
	Mask	XXX.XXX.XXX.XXX	
	Gate	XXX.XXX.XXX.XXX	
	Mac	XXX.XXX.XXX.XXX	
	Sink HDMI /DVI		
Information **Menu Exit**	Model xxxxxxx		
	Native xxxxxxx		
	F/V version		

Note:

1. *Chromakey Setup only works when CH 1and CH 2 are selected. CH 1 is the background and CH 2 is the top layer to be overlaid.*
2. *The Chromakey function is designed for overlapping two video images (such as news reports, weather forecasts or educational videos). The background colour of CH 2 is usually a single, solid, colour which can be easily removed. The RGB setting is for the CH2 video where the minimum setting figures cannot be greater than the maximum figures and the maximum figures cannot be lower than the minimum setting figures.*
3. *When input 1 or 2 has no source connected a warning message will appear on the OSD.*
4. *Figures in **BOLD** are default settings.*

6.7 Telnet Control

Before attempting to use the telnet control, please ensure that both the Scaler (via the 'CONTROL' port) and the PC/Laptop are connected to the active networks.

To access the telnet control in Windows 7, click on the 'Start' menu and type "cmd" in the Search field then press enter

Under Windows XP go to the 'Start' menu and click on "Run", type "cmd" with then press enter.

Under Mac OS X, go to Go→Applications→Utilities→Terminal

See below for reference.

Once in the command line interface (CLI) type "telnet", then the IP address of the unit and hit enter.
Note: The IP address of the Scaler can be found under Ethernet Setup on the device's OSD menu.

This will bring us into the device which we wish to control. Type "?" to lists all the available commands.

Type "IPCONFIG" To show all IP configurations. To reset the IP, type "IPMODE" to set static IP/DHCP (For a full list of commands, see Section 6.6).

Note: Commands will be not executed unless followed with a carriage return. Commands are not case-sensitive. If the IP is changed then the IP Address required for Telnet access will also need to be changed accordingly. A power cycle is also required for every IP change.

![CYP logo]

6.8 WebGUI Control

On a PC/Laptop that is connected to the same active network as the Scaler, open a web browser and type the device's IP address on the web address entry bar. The browser will display the device's Image Adjust, Output Resolution, etc.
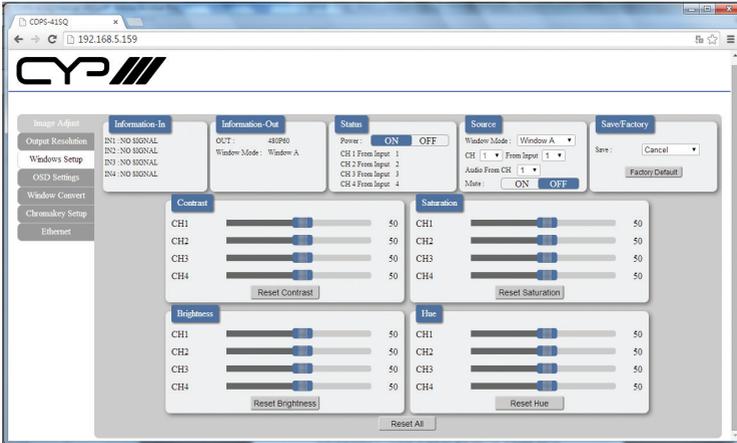
Click on the 'image Adjust' tab to control power, Window Mode and the window setting.
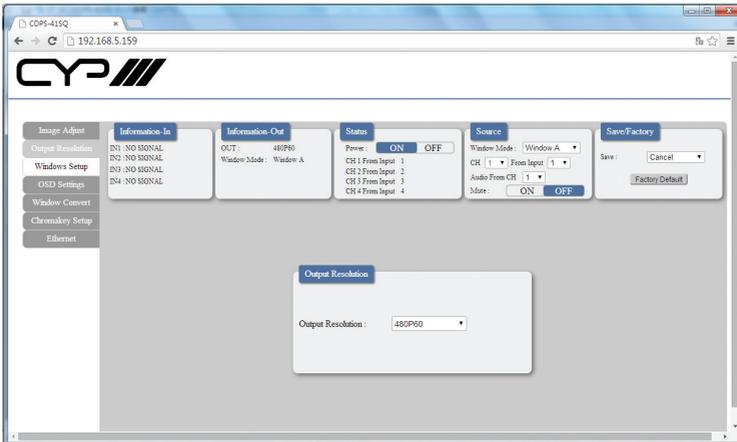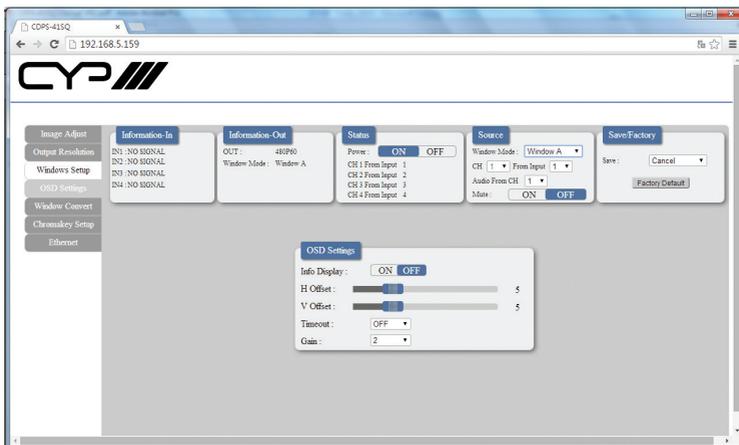

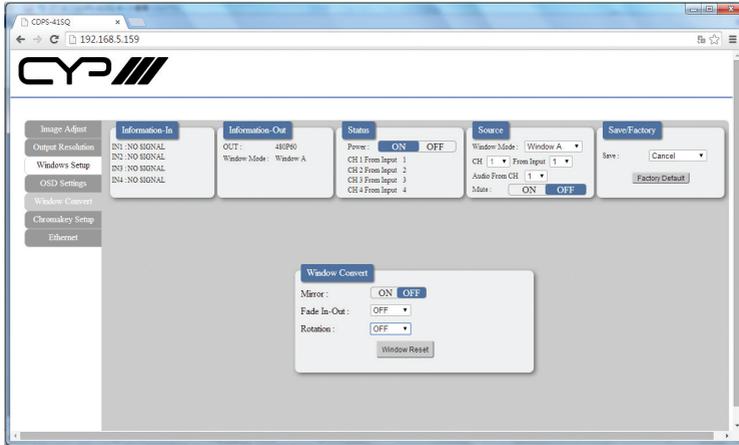Clicking on the 'Output Resolution' tab to set the output display resolution.
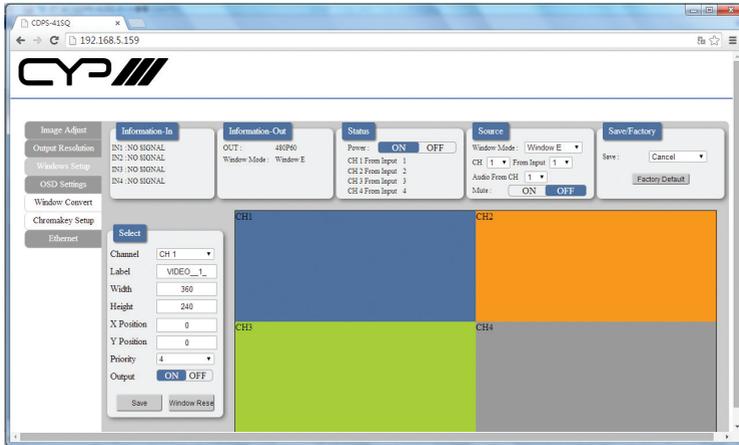
Click on the 'Windows Setup' tab to set the output display format.

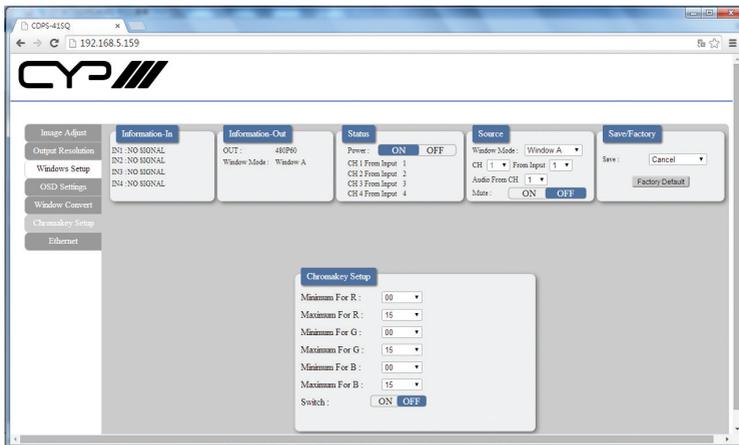*Note: This function is only available under window E~H.*

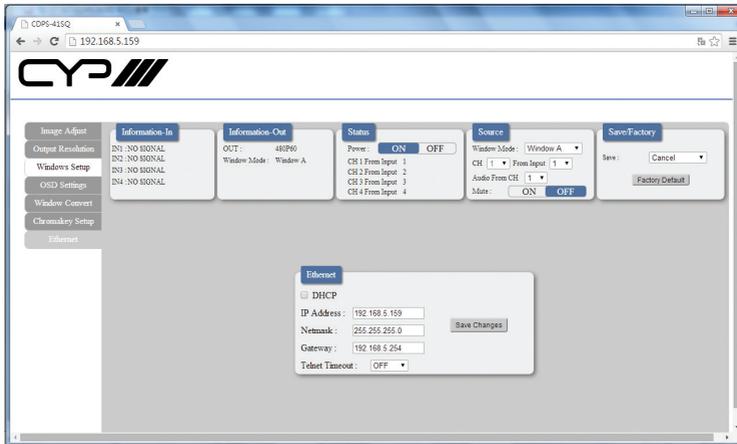Click on the 'OSD Settings' tab to set the OSD function and position.

Click on the 'Window Convert' tab to set the output display angle.

Note: This function is only available under window A~D.

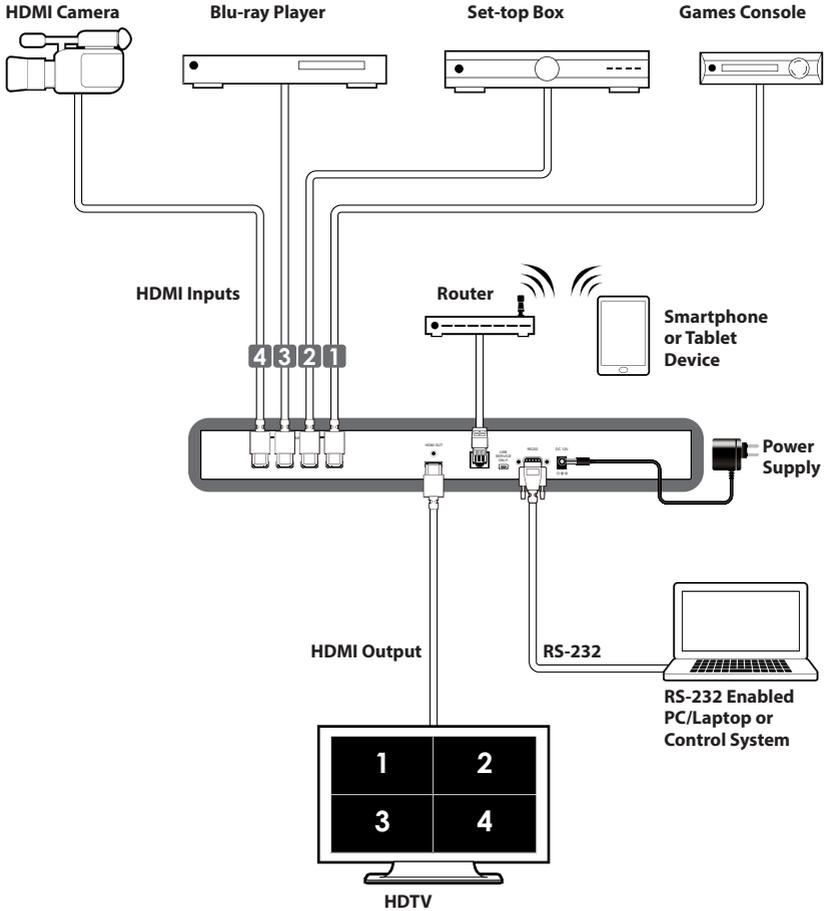Click on the 'Chromakey Setup' tab to set the output display colour.

Note: This function is only available under window E~H.

Click on the 'Ethernet' tab to reset the IP configuration. The system will ask for a reboot of the device when any of these settings are changed. The IP address needed to access the Web GUI control will also need to be changed accordingly on the web address entry bar.

Note: Commands will be not executed unless followed with a carriage return Commands are not case-sensitive.

7. CONNECTION DIAGRAM

HDMI Camera   **Blu-ray Player**   **Set-top Box**   **Games Console**

HDMI Inputs   **Router**   **Smartphone or Tablet Device**

4 3 2 1

Power Supply

HDMI Output   **RS-232**

RS-232 Enabled PC/Laptop or Control System

1	2
3	4

HDTV

Screen Configurations:

1	2
3	4

2	
3	1
4	

1		
2	3	4

1	2	3	4

8. SPECIFICATIONS

8.1 Technical Specifications

Video Bandwidth	225 MHz/6.75 Gbps
Input Ports	4× HDMI
Output Port	1× HDMI
Supported Input Resolutions	PC:VGA~WUXGA, HD: 480i~1080p
Supported Output Resolutions	1080p@60
HDMI Input Cable Distance	Up to 15m/1080p@12 bits
HDMI Output Cable Distance	Up to 15m/1080p@8 bits
Supports Sampling Rate	32~192 kHz
ESD Protection	Human body model:
	±8kV (air-gap discharge)
	±4kV (contact-gap discharge)
Power Supply	12V/3A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	436mm(W) × 247mm(D) × 44mm(H)
Weight	2200 g
Chassis Material	Aluminum
Colour	Black
Operating Temperature	0 ˚C ~ 40 ˚C / 32 ˚F ~ 104 ˚F
Storage Temperature	−20˚C ~ 60 ˚C / −4 ˚F ~ 140 ˚F
Relative Humidity	20 ~ 90 % RH (non-condensing)
Power Consumption	18W

8.2 Supported Resolutions

HDMI RESOLUTIONS	INPUT	OUTPUT
640x480@60/72/75/85	✓	-
800x600@56/60/72/75/85	✓	-
1024x768@60/70/75/85	✓	1024x768@60
1360x768@60	✓	-
1280x768@60/75	✓	-
1280x800@60	-	✓
1280x1024@60/75	✓	1280x1024@60
1366x768@60	✓	✓
1440x900@60	-	✓
1600x900@60	-	✓
1600x1200@60	✓	✓
1680x1050@60	-	✓
1920x1200@60	✓	✓
480i60	✓	-
576i50	✓	-
480p60	✓	✓
576p50	✓	✓
720p50	✓	✓
720p60	✓	✓
1080i50	✓	-
1080i60	✓	-
1080p24	✓	✓
1080p25	-	✓
1080p30	-	✓
1080p50	✓	✓
1080p60	✓	✓

9. ACRONYMS

ACRONYM	COMPLETE TERM
CEC	Consumer Electronics Control
DVI	Digital V isual Interface
HDCP	High-bandwidth Digital Content Protection
HDMI	High Definition Multimedia Interface
PIP	Picture-in-Picture
POP	Picture out of picture
IR	Infrared