

USER MANUAL

AVSC-0501QMV

4K QUAD MULTIVIEWER 5 X 1

24/7 TECHNICAL SUPPORT AT 1.877.877.2269 OR VISIT BLACKBOX.COM

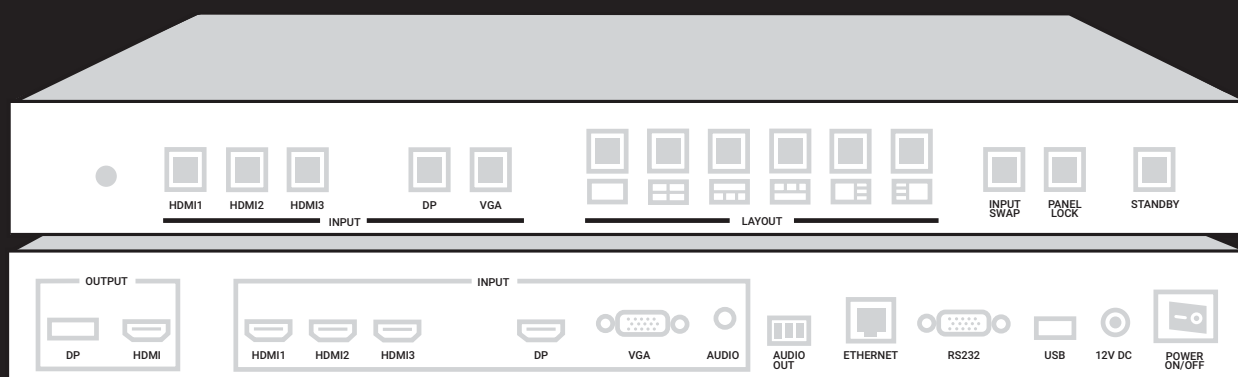


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CHAPTER 1: SPECIFICATIONS

TABLE 1-1. SPECIFICATIONS

SPECIFICATION	DESCRIPTION
Connectors	
Input	(3) HDMI 2.0 locking; (1) DisplayPort 1.2; (1) VGA; (1) Audio In
Output	(1) HDMI 2.0 locking; (1) DisplayPort 1.2; (1) Audio Out
Ethernet Port	(1) RJ-45
RS-232/Telnet	Web UI
Firmware Upgrade	(1) USB 2.0
Indicators	
LEDs	(1) Input (blue); (1) Layout (blue); (1) Input Swap (blue); (1) Panel Lock (blue); (1) Standby On (red); (1) Standby Off (green)
User Controls	
Front-Panel Buttons	(5) Input buttons: HDMI1-HDMI3, DP, VGA; (5) Layout buttons: A through E; (1) Input Swap button; (1) Panel Lock button; (1) Standby button
Front Panel Receiver	(1) IR Remote Control Receiver
Back-Panel Button	(1) Power ON/OFF switch
Video Output Resolution	
Resolution	Up to 4096 x 2160 @ 60 Hz, 4:4:4 color sampling NOTE: Also supports lower resolutions
Power	
Power Supply	(1) 12-VDC, 1-A locking barrel connector
Power Consumption	15 W
Environment	
Operating Temperature	32 to 113° F (0 to 45° C)
Operating Humidity	20 to 90% relative humidity
Storage Temperature	-4 to +140° F (-20 to +60° C)
Physical	
Dimensions	1.77"H (1U) x 9.1"W x 17.3"D (4.5 x 23 x 44 cm)
Weight	5.98 lb. (2.72 kg)

CHAPTER 2: OVERVIEW

2.1 INTRODUCTION

The 4K Quad Multiviewer is a simple, cost-effective video scaler designed to enable a true 4K @ 60 Hz UHD, HD, SD video display device, virtually handling any input resolution up to 4K @ 60 Hz. It provides (3) HDMI inputs, (1) VGA input, (1) DisplayPort input, (1) analog audio input, (1) HDMI output and (1) DP loopthrough.

2.2 FEATURES

The 4K Quad Multiviewer supports the following features:

- ♦ 4K @ 60 dual display output, the primary display does full screen/PIP/POP/multi-view and the secondary display does full screen.
- ♦ (14) different screen layouts including (6) preset screen layouts and (8) extra customized screen layouts
- ♦ (8) custom presets
- ♦ Input resolution up to 4K @ 60 Hz, 4:4:4 color sampling
- ♦ Output resolution up to 4K @ 60 Hz, 4:4:4 color sampling
- ♦ Upscaling up to 4K @ 60 Hz, 4:4:4 color sampling
- ♦ Deep Color and HDCP 1.4 / 2.2
- ♦ Fast switching between input channels or screen layout modes
- ♦ Rotation R90o/ L90o or flip output in full screen layout
- ♦ Dolby Digital® 5.1, DTS® 5.1 and uncompressed 7.1 linear PCM audio includes stereo analog audio input
- ♦ Stereo audio output
- ♦ Front panel button, IR remote control, RS-232/Telnet and Web UI control
- ♦ USB port firmware upgrade

2.3 WHAT'S INCLUDED

Your package should include the following items. If anything is missing or damaged, contact Black Box Technical Support at 877-877-2269 or info@blackbox.com

- ♦ (1) Quad MultiViewer - 4K60, HDMI, DisplayPort, VGA, IP, 5x1
- ♦ (1) Remote Control
- ♦ (1) HDMI to DP Adapter (part number VA-HDMI-DP)
- ♦ (1) 12-VDC, 12-V, 2-A output power adapter
- ♦ (2) Rackmount brackets
- ♦ (4) Rubber pads for desktop mounting
- ♦ (1) bag of screws
- ♦ This user manual



2.4 HARDWARE DESCRIPTION

2.4.1 PRODUCT APPEARANCE

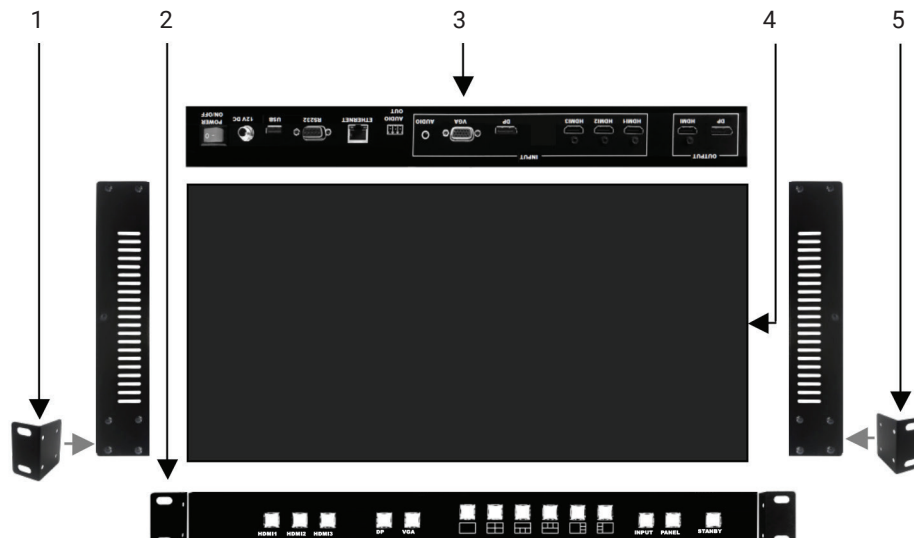


FIGURE 2-1. 4K QUAD MULTIVIEWER

TABLE 2-1. 4K QUAD MULTIVIEWER COMPONENTS

NUMBER IN FIGURE 2-1	PIN	SIGNAL
1	Rackmount bracket	Attach the bracket to the left side of the system chassis for rackmount installation
2	Front panel	Control the 4K Quad View Presentation Switcher or directly via the front panel pushbuttons
3	Rear panel	Connect Video and Audio signal via rear panel input connectors
4	System Chassis	Black metal housing and the size is 1 rack unit
5	Rackmount bracket*	Attach the bracket to the right side of the system chassis for rackmount installation

*Rackmount bracket: The screws for the bracket are screwed on the unit in advance when the 4K Quad View Presentation Switcher is assembled. Spare screws are included in the package as accessories to attach the bracket.

CHAPTER 2: OVERVIEW

2.4.2 FRONT PANEL

Figure 2-2 shows the front panel of the 4K Quad Multiviewer. Table 2-2 describes its components.

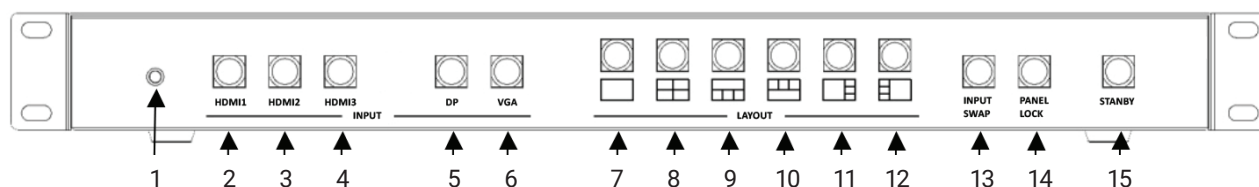


FIGURE 2-2. FRONT PANEL OF THE 4K QUAD MULTIVIEWER

TABLE 2-2. FRONT PANEL COMPONENTS

NUMBER IN FIGURE 2-2	COMPONENT	DESCRIPTION
1	IR Receiver	Receives signals from the remote control transmitter
2	*Input: HDMI1	Press to select the HDMI 1 input in full screen. Press to select HDMI 1 audio in multi-view screen.
3	*Input: HDMI2	Press to select the HDMI 2 input in full screen. Press to select HDMI 2 audio in multi-view screen.
4	*Input: HDMI3	Press to select the HDMI 3 input in full screen. Press to select HDMI 3 audio in multi-view screen.
5	*Input: DP	Press to select the DP input in full screen. Press to select DP audio in multi-view screen.
6	*Input: VGA	Press to select the VGA input in full screen. Press to select "AUDIO" audio in multi-view screen.
7	*Layout:	Press to select Layout A (full screen mode).
8	*Layout: 	Press to select Layout B.
9	*Layout: 	Press to select Layout C.
10	*Layout: 	Press to select Layout D.
11	*Layout: 	Press to select Layout E.
12	*Layout: 	Press to select Layout F.

*See Appendixes A and B.

TABLE 2-2 (CONTINUED). FRONT PANEL COMPONENTS

NUMBER IN FIGURE 2-2	COMPONENT	DESCRIPTION
13	Input Swap	Toggle the input source in Layout B, C, D, E, and F mode.
14	Panel Lock	Press to lock or unlock the front panel buttons.
15	Standby	Press to put the system into standby mode or wake up the system.



2.4.3 BACK PANEL

Figure 2-3 shows the back panel of the 4K Quad Multiviewer. Table 2-3 describes its components.

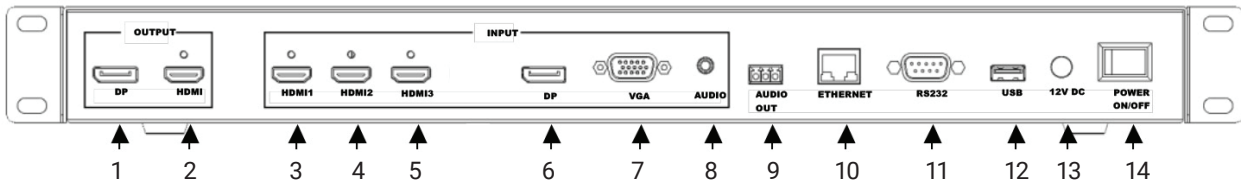


FIGURE 2-3. BACK PANEL OF THE 4K QUAD MULTIVIEWER

TABLE 2-3. BACK PANEL COMPONENTS

NUMBER IN FIGURE 2-3	COMPONENT	DESCRIPTION
1	Output: DP	Connect to a DisplayPort display device, outputs only video from DP input
2	Output: HDMI	Connect to the HDMI display device, connector on rear panel with locking
3	Input: HDMI1	Connect to the HDMI source device, connector on rear panel with locking
4	Input: HDMI2	Connect to the HDMI source device, connector on rear panel with locking
5	Input: HDMI3	Connect to the HDMI source device, connector on rear panel with locking
6	Input: DP	Connect to the DP source
7	Input: VGA	Connect to the VGA source
8	Input: Audio	Connect to the AUDIO source
9	Audio Out	Connect to the audio amplifier
10	Ethernet	Connect to PC or other controller through IP network
11	RS-232/Telnet	Connect to PC or other controller
12	USB	Connect a USB flash drive for firmware upgrade
13	12 VDC	Connect to the 12-V/2-A locking power supply, connector on rear panel
14	Power ON/OFF	Power switch to turn ON or OFF

2.4.4 IR REMOTE CONTROL

Figure 2-4 shows the IR Remote Control. Table 2-4 describes its components.

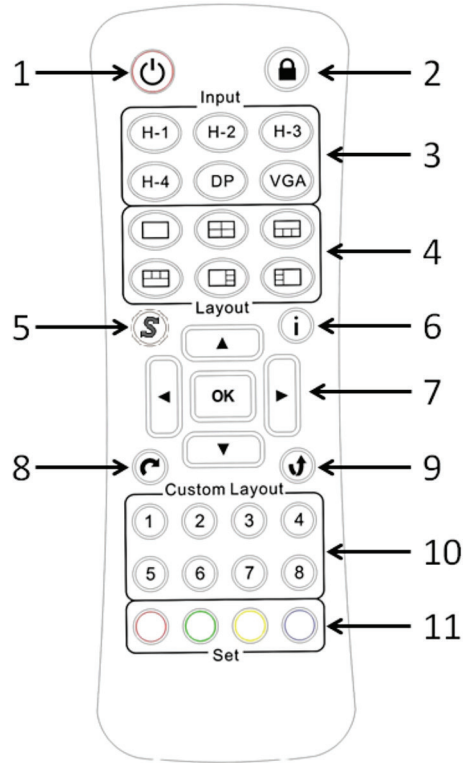


FIGURE 2-4. IR REMOTE CONTROL

TABLE 2-4. BUTTONS ON THE IR REMOTE CONTROL

NUMBER IN FIGURE 2-4	BUTTON	DESCRIPTION
1	Standby	Press to set the system into standby mode or wake up the system.
2	Lock	Press to lock or unlock the front panel buttons.
3	*Input: H1	Select HDMI 1 in full screen mode Select HDMI 1 audio in multi-view mode
3	*Input: H2	Select HDMI 2 in full screen mode Select HDMI 2 audio in multi-view mode
3	*Input: H3	Select HDMI 3 in full screen mode Select HDMI 3 audio in multi-view mode
3	DP	Select DP in full screen mode Select DP audio in multi-view mode
3	VGA	Select VGA in full screen mode Select "AUDIO" audio in multi-view mode

CHAPTER 2: OVERVIEW

TABLE 2-4 (CONTINUED). BUTTONS ON THE IR REMOTE CONTROL

NUMBER IN FIGURE 2-4	BUTTON	DESCRIPTION
4	*Layout	Select the Layout A (full screen mode)
4	*Layout: 	Select the Layout B
4	*Layout: 	Select the Layout C
4	*Layout: 	Select the Layout D
4	*Layout: 	Select the Layout E
4	*Layout: 	Select the Layout F
5	*Input Swap 	Toggle the Input source in Layour B, C, D, E,and F mode
6	Info 	System information
7	OK 	Reserved
7	Up 	Reserved
7	Down 	Reserved
7	Left 	Reserved
7	Right 	Reserved
8	*Rotate 	Rotate the video display R90°/L90° in full screen mode
9	Flip 	Flip display screen in full screen mode
10	*Custom Layout 1	Select the custom screen layout 1
10	*Custom Layout 2	Select the custom screen layout 2
10	*Custom Layout 3	Select the custom screen layout 3
10	*Custom Layout 4	Select the custom screen layout 4
10	*Custom Layout 5	Select the custom screen layout 5
10	*Custom Layout 6	Select the custom screen layout 6
10	*Custom Layout 7	Select the custom screen layout 7
10	*Custom Layout 8	Select the custom screen layout 8

* See Appendixes A and B

* Does not support auto detect mode setting for the output resolution via remote control

TABLE 2-4 (CONTINUED). BUTTONS ON THE IR REMOTE CONTROL

NUMBER IN FIGURE 2-4	BUTTON	DESCRIPTION
11	Set: Red:	Set output resolution to 3840 x 2160 @ 60 Hz
11	Set: Green:	Set output resolution to 3840 x 2160 @ 30 Hz
11	Set: Yellow	Set output resolution to 1920 x 1080 @ 60 Hz
11	Set: Blue	Set output resolution to 1280 x 720 @ 60 Hz

CHAPTER 3: INSTALLATION

3.1 WIRING DIAGRAM

Figure 3-1 shows the typical wiring connections used in a 4K Quad Multiviewer application.

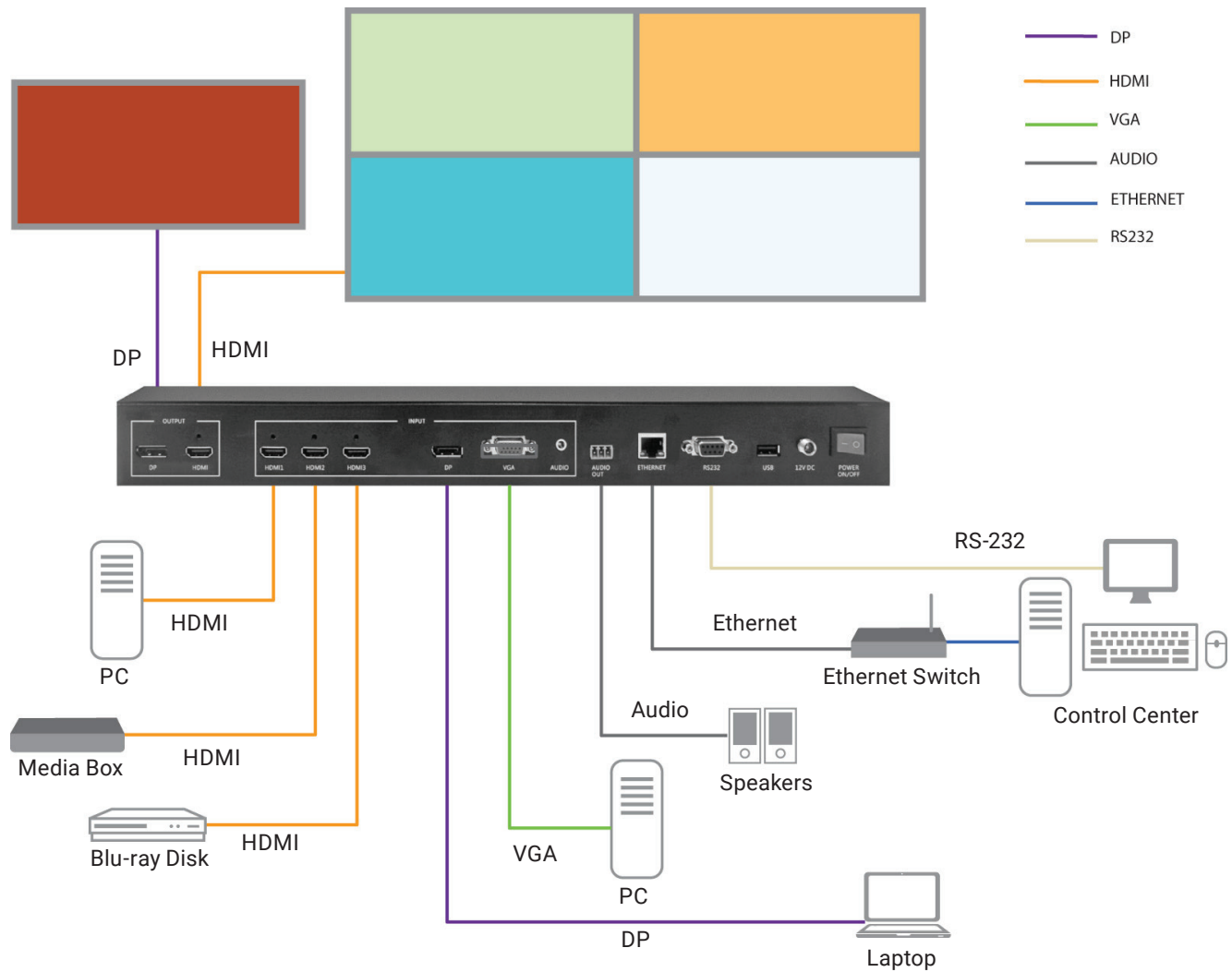


FIGURE 3-1. CONNECTIONS

CHAPTER 3: INSTALLATION

Follow the steps below:

1. Connect an HDMI source to the HDMI 1 input connector.
2. Connect an HDMI source to the HDMI 2 input connector.
3. Connect an HDMI source to the HDMI 3 input connector.
4. Connect a DP source to the DP input connector.
5. Connect a VGA video source to the VGA HD15 input connector.
6. Connect an audio source to the audio input connector.
7. Connect the HDMI output connector to an HDMI display device.
8. Connect the DP loopthrough output connector to a DP display device.
9. Connect the audio output connector to the audio amplifier, as required.
10. Connect the 12-V/2-A adapter to the 12-VDC connector.

3.2 RACKMOUNT INSTALLATION

Take the following steps to attach the two brackets to the system chassis and install it into a rack.

1. Remove all cables and power supply before mount the 4K Quad View Presentation Switcher in the rack.
2. Place the system chassis on a sturdy surface.
3. Attach one bracket to the left side of the system chassis by using the screwdriver and four screws.
4. Attach the other bracket to the right side of the system chassis by using the screwdriver and four screws.
5. Use your tape measure and level to ensure that the supporting shelf and the chassis are installed straight and level.
6. Make sure that your path to the rack is unobstructed.
7. Slide the unit into the rack and position using the attached L brackets so that the slots in the brackets are positioned over the appropriate mounting holes in the side rails of the rack.
8. Securely fasten the unit into the rack by using the four screws that are supplied with the rackmount kit, installing two of the screws on each side of the unit. Use a screwdriver to tighten the screws on each side of the unit.



CHAPTER 4: CONFIGURATION

4.1 FRONT AND BACK PANEL BUTTONS

See Sections 2.4.2 and 2.4.3.

4.2 WEB UI

You can connect the Ethernet directly from a PC to the 4K Quad Multiviewer. Follow the steps below to configure your PC Ethernet setting.

4.2.1 DIRECTLY CONNECT TO THE PC VIA AN ETHERNET CABLE

1. Click Start > Control Panel > Network and Sharing Center
2. Click "Change Adapter Settings"
3. Highlight the network adapter you want to use to connect to the device and click "Change Settings" for this connection.
Use the "Local Area Connection Properties" window for the selected network adapter.
4. Highlight the Internet Protocol Version 4 (TCP/IPv4)
5. Click Properties. The Internet Protocol Properties window is relevant to your IT system.
6. Select "Use the following IP Address for static IP address" and fill in the details. For TCP/IPv4, you can use any IP address in the range 169.254.1.1 to 169.254.255.255 (excluding 169.254.1.202).
7. Type in the subnet mask: 255.255.0.0.
8. Click "OK."



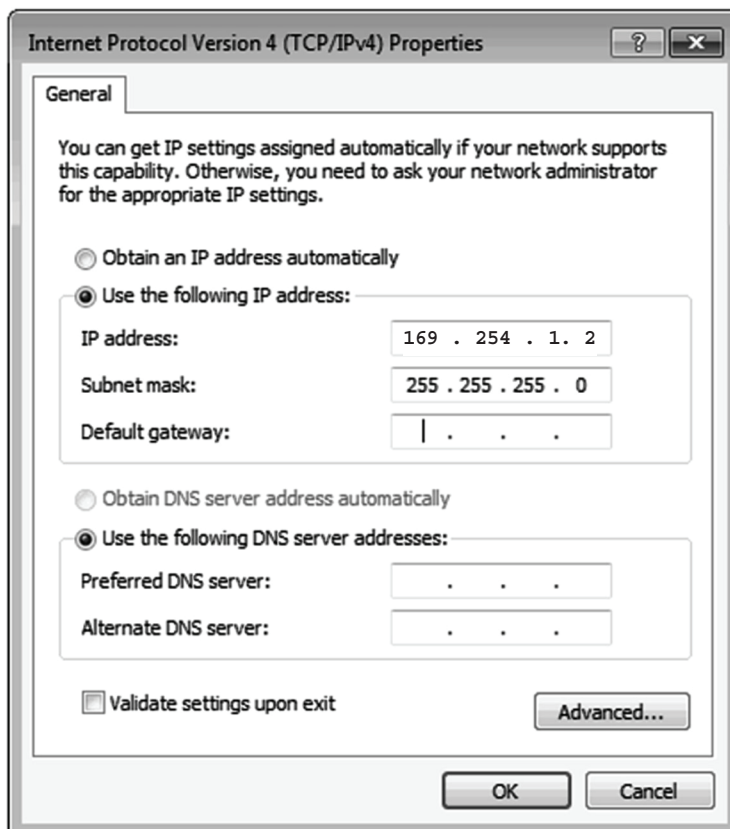


FIGURE 4-1. TCP/IPV4 WINDOW

9. After completing steps 1–8 successfully, you can click into Web UI by typing the default ip address 169.254.1.202 into the web browser.

4.2.2 ETHERNET HUB OR ROUTER

First follow section 4.2.1 and open web browser then follow 4.2.3 to set the Ethernet type to DHCP. You can connect the Ethernet port of the 4K Quad Multiviewer to the Ethernet port on a network hub or network router, via an Ethernet cable with RJ-45 connector.

4.2.3 SYSTEM SETTING PAGE IN WEB UI

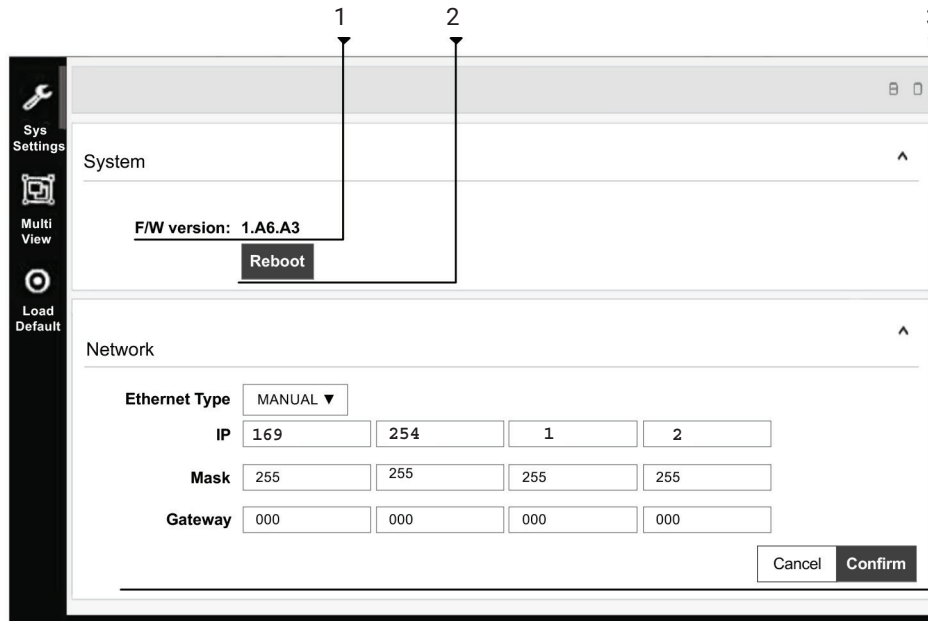


FIGURE 4-2. SYSTEM SETTING PAGE IN WEB UI

TABLE 4-1. SYSTEM SETTINGS PAGE COMPONENTS

NUMBER IN FIGURE 4-2	COMPONENT	DESCRIPTION
1	System: FW version	System firmware version
2	System: Reboot	Reboot 4K Quad View Presentation Switcher
3	Network: Ethernet Type	Change the network type to Static IP or DHCP Press "Confirm" after setting has finished or press "Cancel" to ignore the modification.

CHAPTER 4: CONFIGURATION

4.2.4 MULTI-VIEW PAGE IN WEB UI

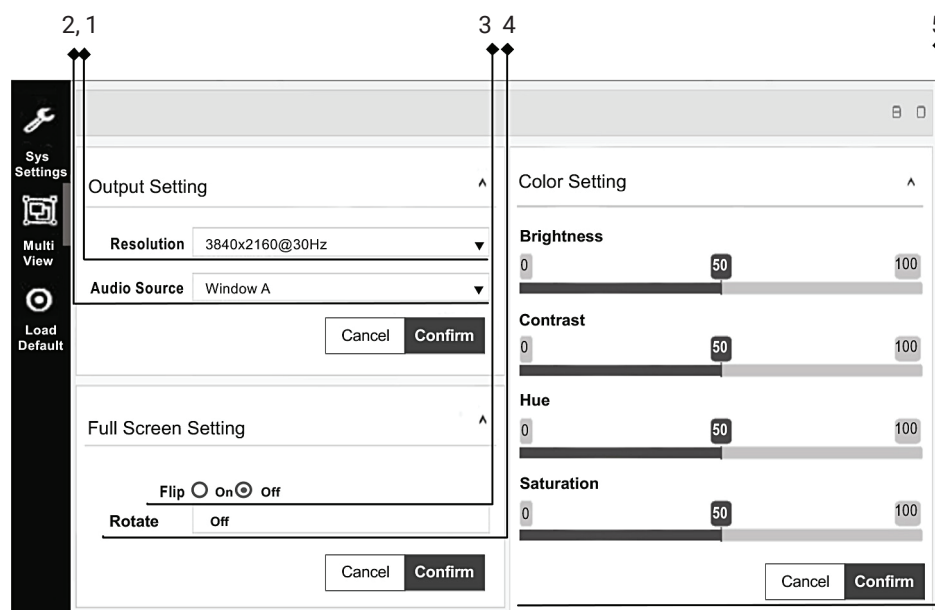


FIGURE 4-3. MULTI-VIEW PAGE IN WEB UI, SCREEN 1

TABLE 4-2. MULTI-VIEW PAGE COMPONENTS

NUMBER IN FIGURE 4-3	COMPONENT	DESCRIPTION
1	Output Setting: Resolution	Select output resolution 0: Auto (default) 1: 3840 x 2160 @ 60 Hz 2: 3840 x 2160 @ 30 Hz 3: 1920 x 1080 @ 60 Hz 4: 1280 x 720 @ 60 Hz 5: 480p @ 60 Hz Press "Confirm" after setting has finished or press "Cancel" to ignore the modification.
2	Output Setting: Audio Source*	Select audio output source 1: Window A (default) 2: HDMI1 3: HDMI2 4: HDMI3 5: DP 6: VGA 7: Mute Press "Confirm" after setting has finished or press "Cancel" to ignore the modification.

*HDMI4 audio NA in multi-view and custom layout mode

TABLE 4-2 (CONTINUED). MULTI-VIEW PAGE COMPONENTS

NUMBER IN FIGURE 4-3	COMPONENT	DESCRIPTION
3	Full Screen Setting: Flip	Flip video display in full screen mode 1: On 2: Off (default) Press "Confirm" after setting has finished or press "Cancel" to ignore the modification..
4	Full Screen Setting: Rotate**	Rotate video display in full screen mode 1: Off (default) 2: L90o 3: R90o Press "Confirm" after setting has finished or press "Cancel" to ignore the modification.
5	Color Setting	Modify color setting 1: 50 (default) 2: 0–100 Press "Confirm" after setting has finished or press "Cancel" to ignore the modification.

*See Appendix A

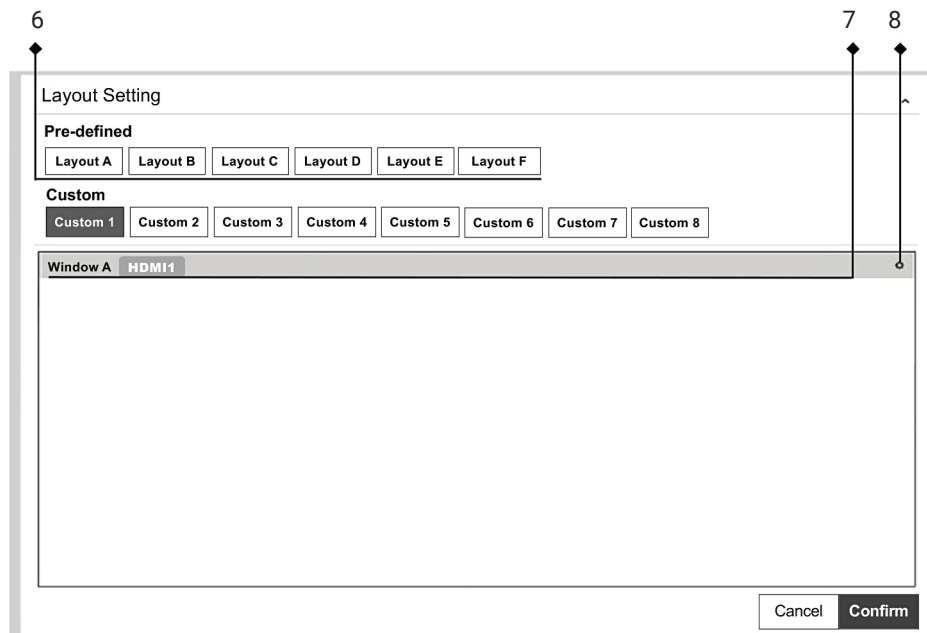


FIGURE 4-4. MULTI-VIEW PAGE IN WEB UI, SCREEN 2

TABLE 4-3. MULTI-VIEW PAGE COMPONENTS

NUMBER IN FIGURE 4-4	COMPONENT	DESCRIPTION
6	Layout Setting: Pre-defined*	Select display layout type on monitor 1: Layout A (default, full screen) 2: Layout B 3: Layout C 4: Layout D 5: Layout E 6: Layout F Press "Confirm" after setting has finished or press "Cancel" to ignore the modification.
7	Layout Setting: Window Info.	Main Screen: Window A Sub Screen: Window B, Window C, Window D Window A input source: HDMI1 (default) Window B input source: HDMI2 (default) Window C input source: HDMI3 (default) Window D input source: DP (default) Press "Confirm" after setting has finished or press "Cancel" to ignore the modification.
8	Layout Setting: Layout A Gear Icon	Select Input Source 1: HDMI1 (default) 2: HDMI2 3: HDMI3 4: HDMI4 5: DP 6: VGA

*See Appendixes A and B

CHAPTER 4: CONFIGURATION

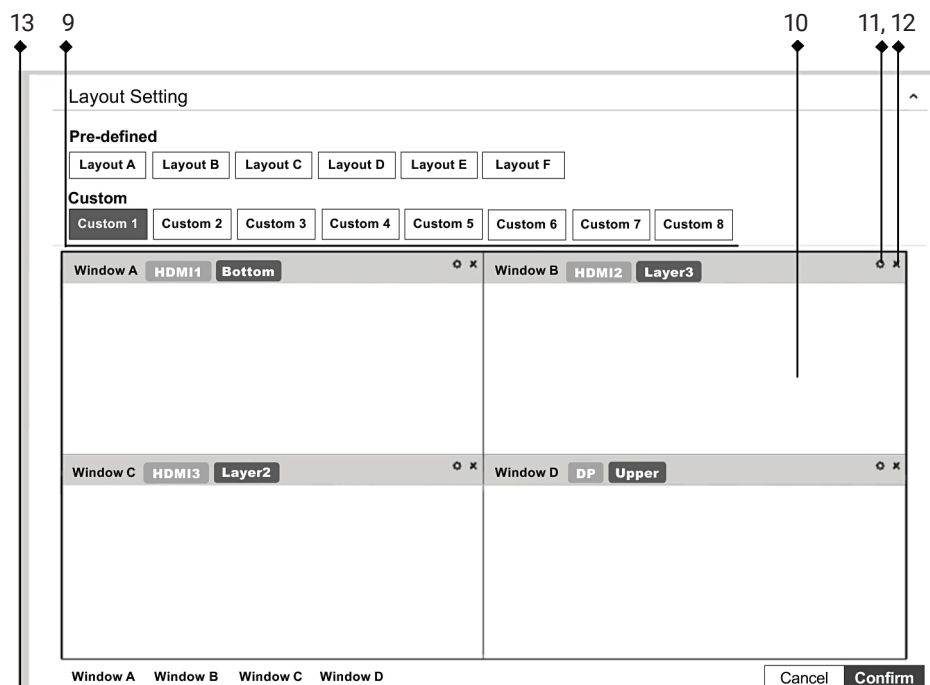


FIGURE 4-5. MULTI-VIEW PAGE IN WEB UI, SCREEN 3

TABLE 4-4. MULTI-VIEW PAGE COMPONENTS

NUMBER IN FIGURE 4-5	COMPONENT	DESCRIPTION
9	Layout Setting: Custom*	Select display custom layout type on monitor Press "Confirm" after setting has finished or press "Cancel" to ignore the modification.
10	Layout Setting: Window**	Window Information in upper left side of the window. 1. Window name: Window A, B, C and D 2. Blue mark: Indicates the Input source (it can be changed in "Gear icon"). 3. Orange mark: Indicates the display layer. The Window A to D position can be moved when clicking mouse left button. The size of Window A to D can be modified when moving mouse cursor to right or bottom of the window corner.
11	Layout Setting: Gear Icon	Select Input Source 1: HDMI1 (default) 2: HDMI2 3: HDMI3 4: DP 5: VGA
12	Layout Setting: x icon	Press to close the window.
13	Layout Setting: Open/Close Window	Press to open or close the window.

*See Appendixes A and B

**"Orange mark:" layer definition

CHAPTER 4: CONFIGURATION

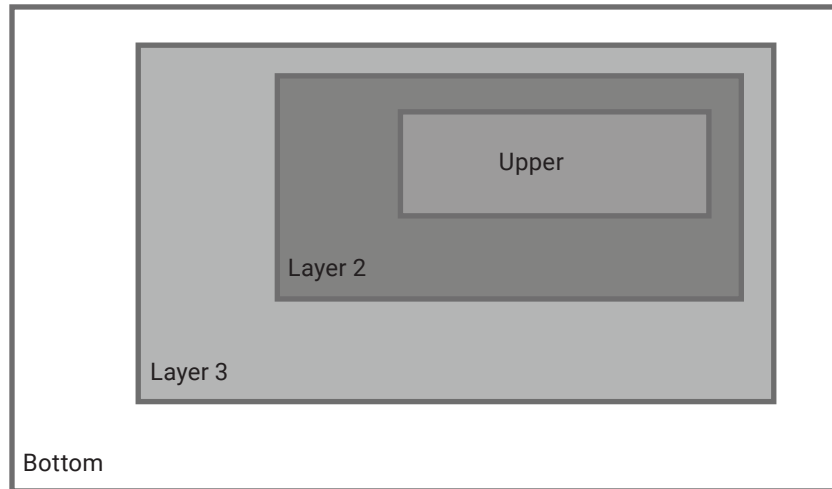


FIGURE 4-6. LAYERS

4.2.5 LOAD DEFAULT IN WEB UI

FIGURE 4-7. LOAD DEFAULT IN WEB UI

CHAPTER 4: CONFIGURATION

4.3 RS-232/TELNET

Table 4-5 lists RS-232/Telnet commands.

TABLE 4-5. RS-232/TELNET COMMANDS

COMMAND	DESCRIPTION	PARAMETER
HELP	List all commands and description	—
?	List all commands and description	—
SPOW 0/1	Set the unit power ON/OFF	0=OFF, 1=ON
RPOW	Show current power state	—
SRES 0–5	Set output resolution	0: Auto (default) 1: 3840 x 2160 @ 60 2: 3840 x 2160 @ 30 3: 1920 x 1080 @ 60 4: 1280 x 720 @ 60 5: 640 x 480 @ 60
RRES	Show current output resolution	—
SIOSDD N	Enable on-screen information display	N=0, 1, 2 0: OSD off 1: OSD on 2: OSD information disappears within 5s (default)
SBRI N	Set Brightness value for output	N=0–100, Default 50
RBRI	Show Brightness current value for output	—
SCON N	Set Contrast value for output	N=0–100, Default 50
RCON	Show Contrast current value	—
SSAT N	Set Saturation value for output	N=0–100, Default 50
RSAT	Show Saturation current value	—
SHUE N	Set Hue value for output	N=0–100, Default 50
RHUE	Show Hue current value	—
SIMRE 0–4	Reset Color Setting value to default	0 = All, Brightness + Contrast + Saturation + Hue 1 = Brightness 2 = Contrast 3 = Saturation 4 = Hue



TABLE 4-5 (CONTINUED). RS-232/TELNET COMMANDS

COMMAND	DESCRIPTION	PARAMETER
SIN2CH N M	Set Input Source M to Window N	Window N = 1 1: A, 2: B, 3: C, 4: D Input Source M = 1–5 1: HDMI1, 2: HDMI2, 3: HDMI3, 5: DP, 6: VGA
SHSIZE N M	Set Window horizontal size	Window N = 1–4 1: A, 2: B, 3: C, 4: D Horizontal size M = 0–31
RHSIZE	Show Window Horizontal Size current value	Window A–D = Window 1–4 Horizontal Size 0–31
SVSIZE N M	Set Image Vertical Size	Window N = 1–4 1: A, 2: B, 3: C, 4: D Vertical size M = 0–17
RVSIZE	Show Window Vertical Size current value	Window A–D = Window 1–4 Vertical Size 0–17
SHPOS N M	Set horizontal position of specified window	Window N = 1–4 1: A, 2: B, 3: C, 4: D Horizontal position = 0–31
RHPOS	Show Window Horizontal position current value	Window A–D = Window 1–4 Horizontal position 0–31
SVPOS N M	Set vertical position of specified window	Window N = 1–4 1: A, 2: B, 3: C, 4: D Vertical position = 0–17
RVPOS	Show Window Vertical position current value	Window A–D = Window 1–4 Vertical position 0–17
SWIN N M	Set output window ON/OFF	Window N = 1–4 1: A, 2: B, 3: C, 4: D M = 0/OFF, 1/ON
RWIN N	Show output window	Window N = 1–4 1: A, 2: B, 3: C, 4: D 0: ALL
SPRI N M	Set Window Layer priority	Layer Priority: M = 1–4, 1 = BOTTOM, 2 = LAYER, 3 = LAYER2, 4 = UPPER
RPRI N	Show Window Layer priority	Window N = 0–4 1: A, 2: B, 3: C, 4: D 0: ALL

TABLE 4-5 (CONTINUED). RS-232/TELNET COMMANDS

COMMAND	DESCRIPTION	PARAMETER
SRECALL 1–14	Set the layout shown to Layout A–Custom 8	1 = LAYOUT A, 2 = LAYOUT B, 3 = LAYOUT C, 4 = LAYOUT D, 5 = LAYOUT E, 6 = LAYOUT F, 7 = CUSTOM 1, 8 = CUSTOM 2, 9 = CUSTOM 3, 10 = CUSTOM 4, 11 = CUSTOM 5, 12 = CUSTOM 6, 13 = CUSTOM 7, 14 = CUSTOM 8
SROTATE 0–4	Set Video Rotation SRECALL 1 must be enabled before SROTATE	0=ROTATE OFF, 1 = L90, 2 = R90, 3 = Flip on, 4 = Flip off Default 0
RROTATE	Show Current Video Rotation	—
SIPM 0/1	Set IP mode to DHCP or Static	0 = DHCP 1= Static, Default = 1
RIPM	Show Current IP mode	—
SIPADD N M X Y	Set Static IP address	N=0–255, M=0–255, X=0–255, Y=0–255
RIPADD	Show static current IP address	—
SMAADD N M X Y	Set Static Subnet address	N=0–255, M=0–255, X=0–255, Y=0–255
RMAADD	Show Static Current Subnet address	—
SGAADD N M X Y	Set Static Gateway address	N=0–255, M=0–255, X=0–255, Y=0–255

TABLE 4-5 (CONTINUED). RS-232/TELNET COMMANDS

COMMAND	DESCRIPTION	PARAMETER
RGAADD	Set Static Current Gateway address	—
IPCONFIG	Show Ethernet address	—
DEFAULT	Reset the unit to factory defaults	—
SMUTE 0/1	Set Mute audio	0 = Mute 1= Unmuted
RMUTE	Show Current Mute	—
SAUDIO N	Set Output audio to specified source	AUDIO SELECT N=0–6, 0 = WINDOW A, 1 = HDMI1, 2 = HDMI2, 3 = HDMI3, 4 = reserve, 5 = DP, 6 = VGA
RAUDIO	Show Output audio source	—
SWICORE	Reset the Window A – Window D settings to factory defaults	—
RFW	Show Firmware version	—
REBOOT	System Reboot	—
READEDID	Read EDID info from sink device	—

APPENDIX A: FUNCTION NA LIST

TABLE A-1. INPUT RESOLUTION

INPUT	LAYOUT A	LAYOUT B	LAYOUT C	LAYOUT D	LAYOUT E	LAYOUT F	CUSTOM LAYOUT
4K60	Rotate NA INPUT SWAP NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA
4K30	Rotate NA INPUT SWAP NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA
1080p	INPUT SWAP NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA
720p	INPUT SWAP NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA
480p	INPUT SWAP NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA	Rotate NA Flip NA

TABLE A-2. OUTPUT RESOLUTION

INPUT	LAYOUT A	LAYOUT B	LAYOUT C	LAYOUT D	LAYOUT E	LAYOUT F	CUSTOM LAYOUT
4K60	—	—	—	—	—	—	—
4K30	—	—	—	—	—	—	—
1080p	—	—	—	—	—	—	—
720p	—	—	—	—	HDMI OUTPUT NA	HDMI OUTPUT NA	HDMI OUTPUT NA
480p	—	HDMI OUTPUT NA	HDMI OUTPUT NA	HDMI OUTPUT NA	HDMI OUTPUT NA	HDMI OUTPUT NA	HDMI OUTPUT NA



APPENDIX B: FRONT PANEL SCREEN LAYOUT

TABLE B-1. FRONT PANEL SCREEN LAYOUT INDICATOR

SCREEN LAYOUT	LAYOUT A INDICATOR	LAYOUT B INDICATOR	LAYOUT C INDICATOR	LAYOUT D INDICATOR	LAYOUT E INDICATOR	LAYOUT F INDICATOR
Layout A	V					
Layout B		V				
Layout C			V			
Layout D				V		
Layout E					V	
Layout F						V
Custom Layout	V	V				

APPENDIX C: REGULATORY INFORMATION

C.1 CE AND ROHS2

This product complies with CE and ROHS2 certifications.



APPENDIX C: REGULATORY INFORMATION

C.2 NOM STATEMENT

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá de lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquear la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
10. El equipo eléctrico debe ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.
12. Precaución debe ser tomada de tal manera que la tierra física y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energía.
16. El cable de corriente deberá ser desconectado del equipo cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos líquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
 - A: El cable de poder o el contacto ha sido dañado; u
 - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
 - C: El aparato ha sido expuesto a la lluvia; o
 - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
 - E: El aparato ha sido tirado o su cubierta ha sido dañada.

APPENDIX D: DISCLAIMER/TRADEMARKS

D.1 DISCLAIMER

Black Box Network Services shall not be liable for damages of any kind, including, but not limited to, punitive, consequential or cost of cover damages, resulting from any errors in the product information or specifications set forth in this document and Black Box Network Services may revise this document at any time without notice.

D.2 TRADEMARKS USED IN THIS MANUAL

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