

User Guide

Universal Presentation Switcher / Scaler

DVI-3571a



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WARNING – Product Safety

1. Do not dismantle the product housing or modify the printed circuit board module as this may result in electrical shock or burn.
2. Do not attempt to service this product yourself as opening or removing the product housing may expose you to dangerous voltages or other hazards. Refer all servicing to qualified service personnel.
3. Keep this product away from liquids. Spills into the product housing may result in fire, electrical shock, or equipment damage. If liquid spills into the housing, unplug the product immediately. Have the product checked by a qualified service engineer before using it again.
4. Place the product in an even and stable location. If the product falls or is dropped, it may cause an injury and/or malfunction.
5. Avoid exposing the product to extreme temperatures or to high humidity levels as this may result in damage to the product.
6. Only use the supplied External AC Power Adapter. The use of other power adapters may cause this product to fail or may cause a fire.
7. Do not twist or exert excessive force on the ends of the connected cables as this can cause them to malfunction. Take precaution to ensure that all connected cables are not forced to bend beyond their minimum bend radius.

Product Liability

Every effort has been made to ensure that this product is free of defects. DVI Gear cannot be held liable for the use of this product or for any direct or indirect consequential damages arising from its use. It is the responsibility of the users of this product to check that it is suitable for their requirements and that it is installed correctly.

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1.0 INTRODUCTION

The DVI-3571a is a universal presentation switcher / scaler that is ideally suited for use in conference rooms, training facilities, classrooms, auditoriums, and other presentation applications. The DVI-3571a accepts up to eight (8) video inputs: 3x HDMI (or DVI), 3x RGB Analog (VGA), 1x Component Video and 1x Composite Video. Each input supports a broad range of signal formats and resolutions. The selected input signal is routed simultaneously to 2x HDMI outputs and 1x RGB Analog (VGA) output for downstream display and/or processing. Two high performance scaling engines provide user-selectable output resolutions up to 1080p and 1920x1200.

The DVI-3571a supports HDMI audio embedding and de-embedding. Each video input is coupled with an analog stereo audio input connection. After passing through an A/D converter, the selected audio input may be embedded in the HDMI output signal, as well as routed to both analog and digital audio output ports. The DVI-3571a also supports user-adjustable audio delay up to 150 ms for lip sync correction.

The DVI-3571a includes a variety of control options, including Ethernet, RS232, IR Remote, and front panel selection. These control features allow the unit to be seamlessly integrated into any professional AV system.

Our professional digital distribution products have been serving the industry for over ten (10) years. DVI Gear offers a full line of high quality Digital Matrix Routers, Switchers, Splitters, Video Scalers, Up/Down/Cross Converters, Format Converters, Analog-Digital Converters, as well as a wide range of long reach Digital Cables, Extenders, and Optical Transmission systems.

1.1 Features

The DVI-3571a Presentation Switcher / Scaler has many innovative features:

- Inputs support HDTV resolutions up to 1080p; PC resolutions up to 1920x1200
- User-selectable HDMI and VGA output resolutions up to 1080p and 1920x1200 / 60Hz
- Supports HDMI / DVI input signals with or without HDCP encryption
- Includes 8x inputs: 3x HDMI / DVI, 3x RGB Analog, 1x Component Video, 1x Composite Video
- Provides 3x mirrored video outputs: 2x HDMI, 1x RGB Analog
- Each video input is coupled with an analog stereo audio input port
- Supports audio embedding and de-embedding; includes digital and analog outputs
- Controllable using Ethernet, IR remote, RS-232, and front panel
- Built-in web browser GUI control
- Screw-locking DC power connector for added security
- Rugged 1U metal enclosure, rack-mounting ears included

2.0 SPECIFICATIONS

Performance	
Format Compliance	HDMI v1.2, HDCP v1.1 and DVI v1.0
Video Input Formats	Composite Video: NTSC or PAL Component Video: YPbPr / YCbCr HD15: Analog RGB,H,V HDMI: Digital RGB
Maximum Pixel Clock Frequency	165 MHz
Maximum Video Bit Rate	1.65 Gbps (single-link)
Supported Color Depth	8-bit
Audio Input Formats	HDMI: embedded audio Analog Stereo Audio: 20K Ω impedance
Audio Output Formats	HDMI: embedded audio Analog Stereo Audio: 20K Ω impedance Digital Audio (S/PDIF): 75 Ω impedance
Audio Bandwidth	20 Hz to 20 kHz
Audio Sampling Rate	48 kHz, 2CH, LPCM
Audio Levels	Stereo Audio: unity, nominal S/PDIF: 0.5 - 1.0 Vpp
Audio Delay Adjustment	Off, 40ms, 110ms, 150ms
Input Connections	
Composite Video Input	1x RCA female connector; Stereo Audio on 2x RCA female connectors
Component Video Input	1x 3x RCA female connectors; Stereo Audio on 2x RCA female connectors
Analog RGB Input	3x HD15 (VGA) female connectors; Stereo Audio on 3x 3.5mm PC audio female connectors
HDMI Input	3x HDMI 19-pin female connectors; Stereo Audio on 3x 3.5mm PC audio female connectors
Power Input	1x Screw-locking 5.5 mm / 2.0 mm female connector
Output Connections	
HDMI Output	2x HDMI 19-pin female connectors
Analog RGB Output	1x HD15 (VGA) female connector
Digital Audio Output	1x S/PDIF on RCA female connector
Analog Audio Output	1x Stereo Audio on 3.5mm PC audio female connector
Scaling Engine	
Phase Lock Loops	8-bit, Triple-Analog-to-Digital Converter
De-Interlacing	3D Motion-Adaptive De-Interlacing
Pull-Down	3:2 with 2:2 recovery
Noise Reduction	3D
Display Settings	Contrast, Brightness, Hue, Sharpness, Saturation, R-G-B Levels, Aspect Ratio, Noise Reduction



2.1 Specifications (continued)

Control	
Front Panel	13x Buttons with On-Screen Display navigation
IR Remote Control	IR Remote Control with On-Screen Display navigation
RS-232	Serial communication, 9-pin
Ethernet	Web browser GUI or TelNet
Mechanical	
Dimensions (H-W-D)	1.9" x 17.0" x 7.2" (47.0 mm x 432.0 mm x 183.0 mm)
Weight	4.9 lbs. (2.2 Kg)
Construction	Heavy-duty 1mm metal enclosure with jet black finish
Mounting Options	Rack-Mount Ears, 1U full width
Environmental	
Operating Temperature	+32° to +104° F (0° to +40° C)
Storage Temperature	-4° to +140° F (-20° to +60° C)
Humidity (storage / operating)	20% to 90% (non-condensing)
Power Requirements	
External AC Power Adapter	Input: 100~240VAC / 50-60Hz Output: 5VDC, 2.6A
Power Consumption	5 VDC, 2.2 Amps, 11 Watts
Regulatory Approvals	
Switcher / Scaler unit	FCC, CE, RoHS
AC Power Adapter	FCC, CE, UL, C-UL, CEC, GS, PSE, RoHS
Warranty	
Limited Warranty	3 Years Parts and Labor
Model Number	
DVI-3571a	Universal Presentation Switcher / Scaler
Accessories Included	
1x External AC Power Adapter	
1x IR Remote Control Unit	
1x IR Receiver	
1x User Guide	
4x Rubber Feet	
1x Rack-Mount Ears Set	
1x HD-15 to 3-RCA adapter cable	
Optional Accessories	
International AC Power Adapter (Euro, UK, Australia)	

Specifications are subject to change without notice.



2.2 Supported Input Formats and Resolutions

The DVI-3571a accepts HDMI or DVI (using DVI-to-HDMI adapter cable), HD15 (VGA), Composite Video and Analog Component Video via separate connectors. Each of the 8x input ports includes a dedicated analog stereo audio port. The following tables show the supported input and output resolutions:

Input Resolution	Vertical Rate (Hz)	Scan Format	Signal Format / Connectors
720 x 480	60 (NTSC)	Interlaced	Composite Video via 1x RCA Component Video (YCbCr) via 3x RCA RGB,H,V via HD15 and HDMI
720 x 576	50 (PAL)	Interlaced	
720 x 480	60	Progressive	Component Video (YPbPr) via 3x RCA RGB,H,V via HD15 and HDMI
720 x 576	50	Progressive	
1280 x 720	50,60	Progressive	
1920 x 1080	50,60	Progressive	
1920 x 1080	50, 60	Interlaced	
640 x 480	60	Progressive	
800 x 600	60	Progressive	
1024 x 768	60	Progressive	
1280 x 768	60	Progressive	
1360 x 768	60	Progressive	
1280 x 720	60	Progressive	
1280 x 800	60	Progressive	
1280 x 1024	60	Progressive	
1440 x 900	60	Progressive	
1400 x 1050	60	Progressive	
1680 x 1050	60	Progressive	
1600 x 1200	60	Progressive	
1920 x 1200	60	Progressive	



2.3 Supported Output Formats and Resolutions

The DVI-3571a has two HDMI or DVI (using DVI-to-HDMI adapter cable) outputs and one HD15 (VGA) output. The selected input signal is routed to all three outputs simultaneously. Auxiliary S/PDIF digital and stereo audio outputs are also included.

Output Resolution	Vertical Rate (Hz)	Scan Format	Signal Format / Connectors
720 x 480 ⁽¹⁾	60	Progressive	Analog Component Video (YPbPr) via HD15 to 3x RCA adapter cable Digital Component Video via HDMI
720 x 576 ⁽¹⁾	50	Progressive	
1280 x 720 ⁽¹⁾	50, 60	Progressive	
1920 x 1080p ⁽¹⁾	50, 60	Progressive	
1920 x 1080i ⁽¹⁾	50, 60	Interlaced	
640 x 480	60	Progressive	Analog RGB via HD15 Digital RGB via HDMI
800 x 600	60	Progressive	
1024 x 768	60	Progressive	
1280 x 768	60	Progressive	
1360 x 768	60	Progressive	
1280 x 720	60	Progressive	
1280 x 800	60	Progressive	
1280 x 1024	60	Progressive	
1440 x 900	60	Progressive	
1400 x 1050	60	Progressive	
1680 x 1050	60	Progressive	
1600 x 1200	60	Progressive	
1920 x 1080	60	Progressive	
1920 x 1200	60	Progressive	

Note 1: These resolutions are intended for viewing on television displays.

3.0 PACKAGE CONTENTS

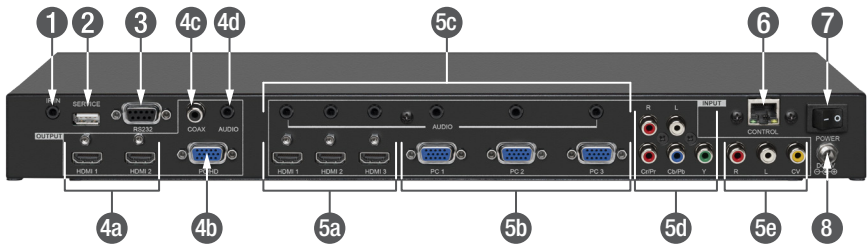
Before attempting to use this unit, please check the packaging and make certain the following items are contained in the shipping carton:

- 1x DVI-3571a Universal Presentation Switcher / Scaler
- 1x External AC Power Adapter
- 1x User Guide
- 1x IR Remote Control Unit
- 1x IR Receiver
- 4x Rubber Feet
- 1x Rack-Mount Ears (set of 2)
- 1x HD-15 to 3-RCA adapter cable

Note: Please retain the original packing material in case you need to return the unit. If you find any items are missing, contact your reseller or DVIgear immediately. Please have the Model Number, Serial Number, and Invoice Number available for reference when you call.

4.0 CONNECTING THE HARDWARE

Please study the image below and become familiar with the signal inputs, outputs, the location of the power connector, and the location of the power switch.



- 1 IR Input:** Connect to the supplied IR receiver. Use with included IR remote.
- 2 Service:** Reserved for qualified technical personnel.
- 3 RS-232 Control Port:** See Section 5.6 for details on commands.
- 4a HDMI Outputs:** Connect to HDMI or DVI (using an adapter cable) displays.
- 4b PC/HD Output:** Connect to a compatible analog display.⁽¹⁾⁽²⁾
- 4c COAX (S/PDIF) Audio Output:** Connect to an amplifier or active speakers.⁽³⁾
- 4d Analog Audio Output:** Connect to an amplifier or active speakers.
- 5a HDMI Inputs:** Connect to HDMI or DVI (using an adapter cable) sources.⁽³⁾
- 5b PC Inputs:** Connect to legacy PC/laptop sources.
- 5c Analog Audio Inputs:** 3.5mm stereo female connectors.
- 5d YPbPr + L/R Audio Input:** Connect to a component video + L/R audio source.



- 5e **CV + L/R Audio Input:** Connect to a composite video + L/R audio source.
- 6 **Ethernet Control Port:** See Section 5.7 for details on Web GUI.
- 7 **Master Power Switch:** Turn device ON/OFF. Front panel power button is used to toggle standby mode.
- 8 **DC Power Input:** Locking female connector for AC Power Adapter.

Note 1: For component video output, use the included HD15 to 3-RCA adapter cable. See table on page 6 for information on supported output resolutions.

Note 2: All three outputs will display the same selected signal at the chosen resolution. When the selected HDMI input source signal has HDCP protected content, the VGA/ Component output will not display any image.

Note 3: For HDMI signal sources, the OSD menu allows user selection of either the embedded audio (HDMI: AUTO) or external analog stereo audio (HDMI: EXT). See section 5.3.2 for more details.

Remove power from the source and destination devices. Referring to the product image on page 7, connect the appropriate cables to all inputs and outputs. Each video input connector is coupled with a dedicated analog stereo audio input. This allows the DVI-3571a to accept external audio signals along with the selected video input and transmit the audio on the HDMI outputs. Separate digital (S/PDIF) and analog stereo audio outputs are also provided.

Take care to use high quality cables. Note that low quality cables can cause serious image quality degradation, as well as limit the maximum possible distances between the Switcher / Scaler and the source and destination devices. Cable selection is especially important for long HDMI and DVI cables due to the high bit rates of these digital signals. For best results use DVI Gear's **Super High Resolution™** (SHR™) HDMI and DVI cables.

After the cables are connected, connect the supplied AC Power Adapter to the DVI-3571a. Use only the furnished power adapter to avoid the possibility of equipment damage due to over-voltage or under-current from generic AC adapters.

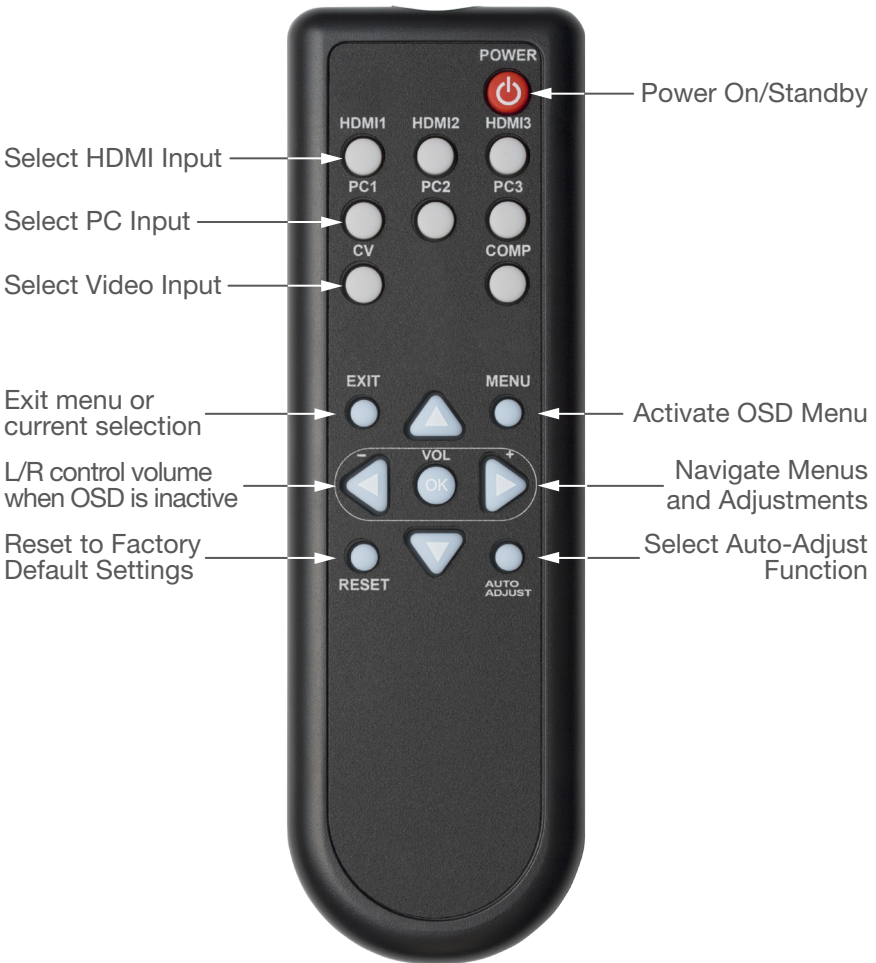
Plug the AC Power Adapter into an AC wall outlet. Switch the unit ON using the master power switch on the rear of the unit. Verify that the Status LED above the power button on the front of the unit lights up green, indicating that power has been applied to the unit. It may be necessary to press the power button on the front of the unit. Press the power button on the front of the unit to toggle between ON and standby modes. Use the power switch on the rear of the unit to cycle the unit OFF / ON again as needed. Finally, supply power to the source and destination devices. In the event of a power outage, this unit will automatically power ON and restore the last used settings as soon as power is reapplied to the unit.

Note: This product utilizes a "Screw-Lock" DC power connector to prevent the power cable from coming loose. Insert the DC plug into the power input jack on the rear panel, then gently screw the collar in the clockwise direction by hand to lock it in place. To remove the power connection, simply unscrew the collar counter-clockwise and then extract the power cable.

5.0 OPERATING THE UNIT

The DVI-3571a can be operated from either the front panel controls, the supplied Infrared Remote Control, the RS-232 port or the Ethernet port. Please take the time to familiarize yourself with the location and function of the various control buttons on the Controller.

5.1 IR Remote Control



5.2 Front Panel Controls

The front panel has controls to manually control the DVI-3571a Universal Presentation Switcher / Scaler.



- 1 Power ON / OFF Button and LED:** Turns unit ON or sets it to Standby (LED indicates status).
- 2 Infrared Receiver:** Use with supplied IR remote.
- 3 INPUT Buttons and LEDs:** Direct selection of source (LED indicates selected source).
- 4 MENU:** Press to access OSD menus.
- 5 (- / +) Buttons:** Press to navigate down / up in the OSD menu.
- 6 ENTER:** Press to confirm OSD menu selection.

Note: Press “-” and “ENTER” simultaneously to instantly switch the output to 720p resolution or press “+” and “ENTER” simultaneously to switch the output to XGA resolution.

5.3 Using the On-Screen Display Menus

Regardless of whether you operate the switcher / scaler from the front panel or with the IR Remote Control unit, it is important to become familiar with the On-Screen Display (OSD) Menu structure in order to take full advantage of the capabilities this product has to offer.

5.3.1 Menu Navigation

If you are using the front panel control method, press the MENU button to display the OSD menu. Once the menus are displayed, use the “+”, “-”, and ENTER buttons to navigate through the menu structure. The “-” button will move the cursor down and “+” will move the cursor up. Once the desired function has been highlighted, press the ENTER button to select the function. After the function has been selected, use the “+” and “-” buttons to increase or decrease the selected value. After the adjustment has been made, press the ENTER button to save the adjustment. To escape the OSD menus, simply press the MENU button repeatedly until the OSD turns off.

On the IR remote control unit, press the MENU button to display the OSD menus. Use the arrow buttons to navigate through the OSD menus. Once the desired function has been highlighted, press the OK button to select it, and then use the arrow buttons to make the desired adjustment. Press the OK button to save the adjustment. Press EXIT to escape from the OSD menus.

5.3.2 Menu Structure

The OSD menu structure is as shown below. Items in bold and with an asterisk (*) are the factory default settings. Items in bold and in brackets [] are the default values for those settings.

High Level	Secondary Level	Adjustment	
DISPLAY	OUTPUT	640×480 60 / 800×600 60 / 1024×768 60 / 1280×768 60 / 1360×768 60 / 1280×720 60 / 1280×800 60 / 1280×1024 60 / 1440×900 60 / 1400×1050 60 / 1680×1050 60 / 1600×1200 60 / 1920×1080 60 / 1920×1200 60 / 720×480P 60 / 1280×720P 60* / 1920×1080I 60 / 1920×1080P 60 / 720×576P 50 / 1280×720P 50 / 1920×1080I 50 / 1920×1080P 50	
	SIZE (aspect ratio)	OVER SCAN	
		FULL	
		FOLLOW INPUT*	
		PAN SCAN	
		LETTER BOX	
		UNDER 2	
		UNDER 1	
	MODE INFO	OFF, INFO* , ON	
	INPUT HDCP (HDMI mode only)	OFF, ON*	
PC (PC mode only) ⁽¹⁾	AUTO SETUP		
	H_POSITION		
	V_POSITION		
	PHASE		
	CLOCK		
	WXGA / XGA*		
	RESET		
COLOR	CONTRAST	0~60 [30]	
	BRIGHTNESS	0~60 [30]	
	COLOR	R,G,B 0~1023 [512] R,G,B OFFSET 0~1023 [512]	
	HUE	0~60 [30]	
	SATURATION	0~60 [30]	
	SHARPNESS	0~30 [3]	
	NR.	OFF* , LOW, MIDDLE, HIGH	
AUDIO	VOLUME	0~100 [100]	
	DELAY	OFF* , 40ms, 110ms, 150ms	
	SOUND	ON* , MUTE	
	SOURCE (HDMI mode only)	AUTO* , EXT.	
SETUP	FACTORY RESET		
	KEY LOCK	OFF* , ON	
	POWER SAVE	OFF* , ON	
	IP MODE	DHCP* , STATIC	
	SET STATIC IP	IP ADDRESS: 0.0.0.0.~255.255.255.255 [192.168.0.1] SUBNET MASK: 0.0.0.0.~255.255.255.255 [255.255.255.0] DEF. GATEWAY: 0.0.0.0.~255.255.255.255 [192.168.0.254]	
	FREERUN COLOR	BLACK, BLUE*	
INFORMATION	INPUT		
	OUTPUT		
	REVISION		
	IP ADDRESS		

Note 1: The PC menu is only active when the PC Input is selected as the source.



The selection of the **Video Menu** or **PC Menu** is made automatically based on the selected input signal. Please note the differences in the menu structure to the left.

The **Display Menu** allows user adjustment of several selections, such as output resolution, size (aspect ratio), info display mode, input HDCP mode, and several PC mode adjustments.

The **Output Function** allows you to specify the output resolution you want the Switcher / Scaler to produce. For example, if you are using an HDMI display that can only accept a 1080i HDTV input signal, set the output resolution of the Switcher / Scaler to 1080i. Keep in mind that selecting an output resolution that is not supported by your display can cause an apparent malfunction. Therefore, be certain you know what resolutions your display device can accept BEFORE making these menu selections. For best results, it is usually recommended to set the unit's output resolution to match the native resolution of the connected display. Please consult your owner's manual in order to determine your display's native resolution.

The **Size Function** has seven user selections: Letterbox, Overscan, Panscan, Underscan (1 and 2), Full, and Follow Input. The Size function is used to alter the Aspect Ratio of the output signal in order to achieve a desired format on the display or destination device. The following are the menu selections for the Size function and their effect:

Letterbox	Remaps the picture content to a letterbox format within the new resolution. Best used to remap source content from 4:3 aspect ratio to 16:9.
Overscan	Remaps the picture content larger than the original image in order to reduce the black bars at the top and bottom of a 16:9 letterbox source.
Panscan	Remaps the picture content to a smaller size than the output resolution and centers the content in the middle of the image. Best used to remap source content from letterbox or 16:9 aspect ratio to 4:3.
Underscan 1	Remaps the picture content to a smaller size than the output resolution.
Underscan 2	Remaps the picture content even smaller than the Underscan 1 setting.
Full	Remaps the picture content to full output resolution. This setting should be used with high resolution data to maximize clarity.
Follow Input	Maintains the original aspect ratio of the source image relative to the selected output resolution's aspect ratio. For example, if a 4:3 source resolution (e.g. 640x480) is output to a 16:9 resolution (e.g. 1920x1080), then the image on the display would be pillar-boxed with black bars to the left and right of the image. On the other hand, if a 16:9 source image is output with a 4:3 resolution it will letterbox the image with black bars above and below the image.

The **Input HDCP Function** allows the user to enable or disable HDCP capability on the HDMI input ports.



The **PC Function** is available when a PC input is selected. Several user adjustments are available.

The **Color Menu** allows user selection of several image adjustments, such as contrast, brightness, color, hue, saturation, sharpness and noise reduction.

The **Color Function** allows user adjustment of gain and offset. The RGB values are used to set the color balance of the white point, and the RGB Offset values are used to set the color balance of the black point of the image.

The **NR (Noise Reduction) Function** has four choices: Low, Middle, High and Off. For most applications it is recommend that this setting be left in the Off position.

The **Audio Menu** allows user selection of volume, lip-sync delay, sound muting, and HDMI audio selection.

The **Source Function** is used to select between either the embedded audio on the HDMI input signal (HDMI: AUTO) or the external analog stereo audio (HDMI: EXT). Additionally, if the selected HDMI input contains an embedded audio signal, this audio can be passed through the COAX audio output up to the full HDMI audio capability. To do this, set the source to Auto, and then connect an HDMI signal with embedded audio on an HDMI input port. Whatever audio is present on the HDMI signal will pass through the COAX output.

The **Setup Menu** contains technical settings, such as key lock, power save, IP mode, IP settings, and Freerun Color. This menu also allows the user to perform a factory reset.

The **Factory Reset Function** operates differently depending on whether the front panel control or the IR remote control is used. When using the IR remote, all settings will return to factory defaults. When using the front panel control, all settings will return to factory defaults except IP Mode, Output Resolution, and the Input Selection. The factory default input selection is composite video.

When the **Power Save Function** is enabled, the unit will enter standby mode after 3 minutes if there is no input signal present. Standby mode may also be toggled using the power button on the front panel.

The **IP Mode Function** allows user selection of either DHCP Mode or Static IP Mode. DHCP Mode is the default setting and is recommended when the unit is connected to a network. In this mode, the network will dynamically assign an IP address to the Switcher / Scaler. In some applications it may be desirable to use the Static IP Mode when the unit is connected to a network. In such cases, please consult an IT administrator for an available IP address. If the unit is in a peer-to-peer configuration with a direct connection to a PC or laptop, the Static IP Mode must be used. It should be noted that in this configuration an Ethernet crossover cable must also be used.

The **Set Static IP Function** allows user configuration of IP address, subnet mask, and default gateway. To make adjustments, the unit must be set to Static IP Mode.

If an input video signal is not present, a solid color, called the **Freerun Color**, will be displayed. The Freerun Color Function allows user selection of either blue or black.

The **Information Menu** contains technical information. If you have problems with the Switcher / Scaler and require assistance, a technician may ask you to read information from this menu as part of the troubleshooting process.

5.4 RS-232 Protocol

The DVI-3571a is equipped with an RS-232 serial control port. The connection between the DVI-3571a and PC host controller should be made with an RS-232 modem cable.

Pin-Out of RS-232 Modem Cable

DVI-3571a			Host Controller	
PIN	Definition		PIN	Definition
1	NC		1	NC
2	TxD	→	2	RxD
3	RxD	←	3	TxD
4	NC		4	NC
5	GND	↔	5	GND
6	NC		6	NC
7	NC		7	NC
8	NC		8	NC
9	NC		9	NC

RS-232 Transmission Format:

Baud Rate: 19,200 bps
 Data Bit: 8 bits
 Parity: None
 Stop Bit: 1 bit
 Flow Control: None

5.5 Telnet Control

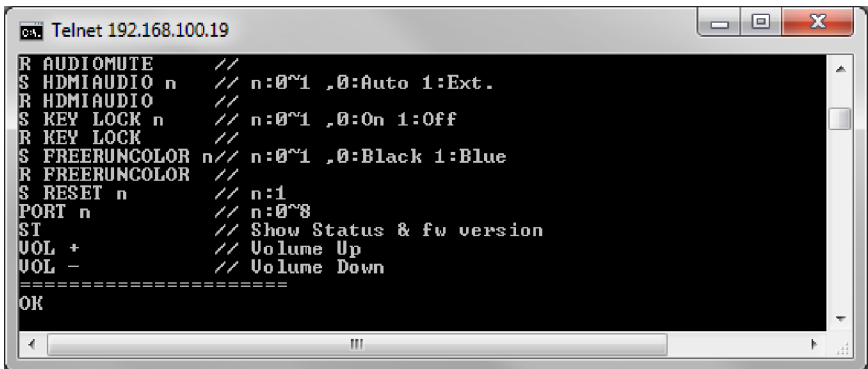
To access the Telnet control capability, first make certain that the DVI-3571a unit and the control system being used are both connected to an active network. The DVI-3571a may be connected to the network using the Ethernet port on the rear panel.

Next, use your Telnet client of choice to connect directly to the DVI-3571a using the unit's IP address. By default, the unit is set to DHCP mode and will be assigned an IP address by the network. This assigned IP address can be found by navigating through the OSD menu to the Information Menu. However, if the

unit is set to Static IP Mode, then the factory default IP address is 192.168.0.1. To use the Telnet software on Windows XP, Vista, 7, or 8, follow the steps listed below:

Note: Windows XP and Vista come with Telnet software installed and activated. However, on later versions of Windows such as Windows 7 and 8, the built-in Telnet software must be manually activated. Activate it by turning on “Telnet Client” through the Control Panel, Programs and Features, Turn Windows Features on or off. Please consult a qualified technical specialist if further assistance is required.

1. On older versions of Windows, go to the “Start” menu and click “Run.”
2. On older versions of Windows, after the Run command window opens, type “cmd” and then press Enter. On newer versions of Windows, go to the “Start” menu and type “cmd.” These methods are used to open the Windows Command Line Interface (CLI).
3. Once in the Windows CLI, type “telnet” then a space, followed by the IP address of the DVI-3571a you wish to control. Then press Enter. The PC will connect to the unit and the Telnet Command Service prompt will appear.
4. You may now begin sending commands directly to the DVI-3571a unit. To receive a listing of all available commands, please type “?”. A list of commands is also provided in Section 5.6 of this User Guide. Note that all commands must be followed by pressing the Enter key.



```
OK Telnet 192.168.100.19
R AUDIOMUTE //
S HDMI AUDIO n // n:0~1 _0:Auto 1:Ext.
R HDMI AUDIO
S KEY LOCK n // n:0~1 _0:On 1:Off
R KEY LOCK
S FREERUNCOLOR n // n:0~1 _0:Black 1:Blue
R FREERUNCOLOR //
S RESET n // n:1
PORT n // n:0~8
ST // Show Status & fw version
UOL + // Volume Up
UOL - // Volume Down
=====
OK
```

5.6 RS-232 and Telnet Commands

Most of the RS-232 and Telnet commands use the following syntax structure:

<action> space <function> space <value>

For example, to set (action) the brightness (function) to 25 (value), type: “S BRIGHTNESS 25.” These commands are not case sensitive. The commands listed on the following table apply to both RS-232 and Telnet control methods.

5.6.1 RS-232 and Telnet Command Set

In order to be executed, these commands must be followed by a Carriage Return (CR) command. For some systems, a Line Feed (LF) command may also be required. None of the following commands are case sensitive.

Command		Description
S POWER 0/1	0 = OFF	1 = ON
R POWER	Reports the numeric equivalent for POWER setting (as above).	
S SOURCE 1~8	1 = HDMI 1 2 = HDMI 2 3 = HDMI 3 4 = YPbPr	5 = VIDEO 6 = PC 1 7 = PC 2 8 = PC 3
R SOURCE	Reports the numerical equivalent for SOURCE setting (as above).	
S OUTPUT 0~21 ⁽¹⁾	0 = 640×480 1 = 800×600 2 = 1024×768 3 = 1280×768 4 = 1360×768 5 = 1280×720 6 = 1280×800 7 = 1280×1024 8 = 1440×900 9 = 1400×1050 10 = 1680×1050	11 = 1600×1200 12 = 1920×1080 13 = 1920×1200 14 = 480p@60 15 = 720p@60 16 = 1080i@60 17 = 1080p@60 18 = 576p@50 19 = 720p@50 20 = 1080i@50 21 = 1080p@50
R OUTPUT	Reports the numerical equivalent for OUTPUT setting (as above).	
S SIZE 0~6	0 = OVERSCAN 1 = FULL 2 = FOLLOW INPUT 3 = PAN SCAN	4 = LETTER BOX 5 = UNDER 2 6 = UNDER 1
R SIZE	Reports the numerical equivalent for SIZE setting (as above).	
S INPUT HDCP 0/1	0 = ON	1 = OFF (For use with certain computers)
R INPUT HDCP	Reports the numerical equivalent for INPUT HDCP setting (as above).	
S CONTRAST 0~60	Sets the numerical equivalent for CONTRAST setting (0~60).	
R CONTRAST	Reports the numerical equivalent for CONTRAST setting.	
S BRIGHTNESS 0~60	Sets the numerical equivalent for the BRIGHTNESS setting (0~60).	
R BRIGHTNESS	Reports the numerical equivalent for the BRIGHTNESS setting.	
S HUE 0~60	Sets the numerical equivalent for the HUE setting (0~60).	
R HUE	Reports the numerical equivalent for the HUE setting.	

Note 1: Resolution settings 0-13 are RGB encoded. Resolution settings 14-21 are YUV encoded.

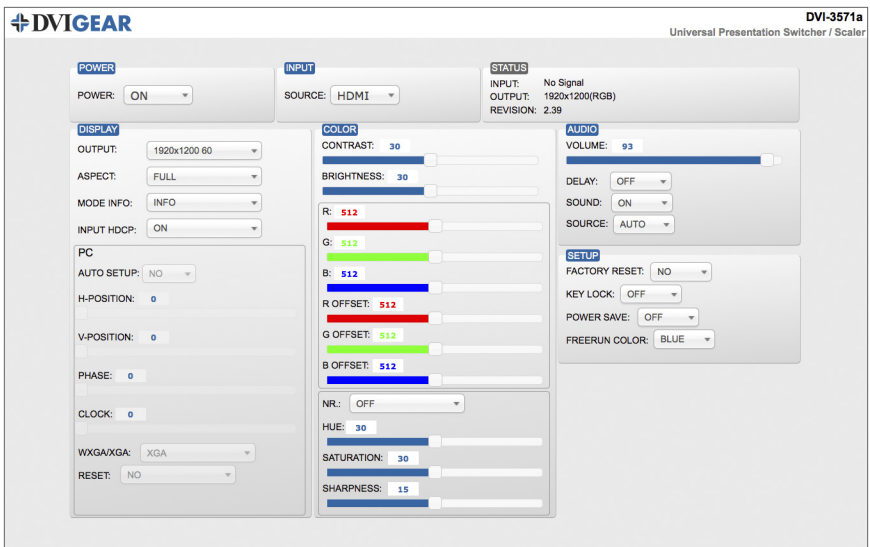
5.6.1 RS-232 and Telnet Command Set (continued)

Command	Description	
S SATURATION 0~60	Sets the numerical equivalent for the SATURATION setting (0~60).	
R SATURATION	Reports the numerical equivalent for the SATURATION setting.	
S SHARPNESS 0~30	Sets the numerical equivalent for the SHARPNESS setting (0~60).	
R SHARPNESS	Reports the numerical equivalent for SHARPNESS setting.	
S NR 0~3	0 = OFF 1 = LOW	2 = MIDDLE 3 = HIGH
R NR	Reports the numerical equivalent for the NOISE REDUCTION setting (as above).	
S VOLUME 0~100	Sets the numerical equivalent for VOLUME setting (0~100).	
R VOLUME	Reports the numerical equivalent for VOLUME setting.	
S AUDIO DELAY 0~3	0 = OFF 1 = 40ms	2 = 110ms 3 = 150ms
R AUDIO DELAY	Reports the numeric equivalent for the AUDIO DELAY setting (as above).	
S AUDIO MUTE 0/1	0 = ON	1 = MUTE
R AUDIO MUTE	Reports the numeric equivalent for the AUDIO MUTE setting (as above).	
S HDMI AUDIO 0/1	0 = AUTO	1 = EXT
R HDMI AUDIO	Reports the numeric equivalent for HDMI AUDIO setting (as above).	
S KEY LOCK 0/1	0 = ENABLE	1 = DISABLE
R KEY LOCK	Reports the numeric equivalent for KEY LOCK setting (as above).	
S FREERUNCOLOR 0/1	0 = BLACK	1 = BLUE
R FREERUNCOLOR	Reports the numerical equivalent for the free run color setting (as above).	
S RESET 1	Resets the unit to factory defaults.	
PORT 0~8 ⁽¹⁾	0 = LAST MEMORY 1 = HDMI 1 2 = HDMI 2 3 = HDMI 3 4 = YPbPr	5 = VIDEO 6 = PC 1 7 = PC 2 8 = PC 3
ST	Checks the FIRMWARE version and SOURCE information: VERSION: 0.00 x.xx SOURCE: HDMI ~ PC3 PORT ON: LAST ~ PC3	
VOL + VOL -	Raises or lowers the volume level from the current set volume.	
QUIT	Exit (Telnet Only).	

Note 1: The “port” command sets the default input that will be selected when power is applied to the unit. The “last memory” option makes the Switcher / Scaler unit power on with whatever input was last viewed before powering off.

5.7 Web GUI Control

To access the Web GUI Control capability, first make certain that the DVI-3571a unit and the control system being used are both connected to an active network. The DVI-3571a may be connected to the network using the Ethernet port on the rear panel. Open a web browser on the controlling PC or laptop and enter the Switcher / Scaler's IP address into the web address entry bar. By default, the unit is set to DHCP mode and will be assigned an IP address by the network. This assigned IP address can be found by navigating through the OSD menu to the Information Menu. However, if the unit is set to Static IP Mode, then the factory default IP address is 192.168.0.1. The browser will load the DVI-3571a Web GUI Control page (see below for reference). All functions of the unit are controllable from this single screen.





6.0 TROUBLESHOOTING

If this unit does not appear to be functioning, bypass the Switcher / Scaler by using a short set of cables to connect each source device directly to a known good destination device, then verify that a proper image and sound are present.

If the signal is present under these conditions, make certain that power is present to the Switcher / Scaler unit. Check to be sure the AC power adapter is plugged into a working AC power outlet and into the rear of the Switcher / Scaler. The Master Power Switch on the rear panel of the unit should be switched ON. It may also be necessary to press the power button on the front panel. Next, check to be certain all cables are securely connected and do not show signs of damage.

If the front panel buttons do not appear to be functioning, the Key Lock Mode may be enabled. To deactivate this mode, use the IR remote to navigate through the OSD menu to turn off Key Lock Mode.

Note: *Use of low quality HDMI and DVI cables can seriously degrade the performance of this product. To ensure optimal performance and maximum cable distance, use premium quality cables such as DVI Gear's Super High Resolution (SHR™) Series cables.*

Note: *All three outputs will display the same selected signal at the chosen resolution. When the selected HDMI input source signal has HDCP content, the VGA/Component output will not display any image.*

If the video and/or audio from the HDMI inputs does not appear to be functioning, the HDCP setting may need to be adjusted. Using your preferred control method (Web GUI, On-Screen Display Menu, etc.), navigate to the Input HDCP setting and make certain it is set to the appropriate selection for the input device currently connected to the HDMI input.

The YPbPr resolutions 480p, 576p, 720p, 1080i, 1080p are intended for display on a television. If these resolutions are selected for output to a PC monitor, the image may appear to be over-sharpened. To correct this, use your preferred control method (Web GUI, On-Screen Display Menu, etc.) to select one of the PC output resolutions available.

If the unit constantly displays information on the screen (e.g. output resolution, source, etc.), navigate in the menu to the Mode Info Function and set this to INFO or OFF.

As a final step before contacting technical support, using the IR Remote Control unit, press the RESET key, which will return the unit to the default factory settings.

If the problem persists after trying the above suggestions, please contact your dealer for additional assistance. If the dealer's technical personnel are unable to assist you, please contact DVI Gear via telephone at 1.888.463.9927 (toll-free for United States and Canada) or 1.770.421.6699. You may contact DVI Gear by e-mail at support@dvigear.com.



7.0 LIMITED WARRANTY

LIMITED WARRANTY – Subject to the limitations stated below, DVIgear warrants that this product will be free from defects in materials and workmanship for a period of three (3) years from the date of purchase.

Should the product, in DVIgear’s opinion, prove defective within the warranty period stated above, DVIgear, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of DVIgear. This warranty does not apply to products that have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not intended.

If repairs are necessary under this warranty policy, the original purchaser must obtain a Return Authorization Number from DVIgear and return the product freight prepaid to a location designated by DVIgear. After repairs are complete, the product will be returned, freight prepaid.

The foregoing warranty is the sole and exclusive warranty given by DVIgear, express or implied, and DVIgear disclaims all implied warranties, including but not limited to implied warranties of merchantability or fitness for a particular use.

LIMITATIONS – The liability of DVIgear with respect to any defective products will be limited to the repair or replacement of such products. In no event shall DVIgear be responsible or liable for any damage arising from the use of such defective products, including but not limited to loss of use, revenue or profit, whether such damages are direct, indirect, consequential or otherwise and whether such damages are incurred by the reseller, end-user, or any third-party.

8.0 REGULATORY COMPLIANCE

This product is compliant with appropriate FCC, CE and RoHS rules and regulations. The supplied AC Power Adapter is compliant with FCC, CE, UL, C-UL, CEC, GS, PSE and RoHS rules and regulations.



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