

Gefen TOOLBOX

High Definition 1080p Scaler

GTB-HD-1080PS
GTB-HD-1080PS-BLK

User Manual



www.gefentoolbox.com

ASKING FOR ASSISTANCE

Technical Support:

Telephone (818) 772-9100
(800) 545-6900

Fax (818) 772-9120

Technical Support Hours:

8:00 AM to 5:00 PM Monday thru Friday Pacific Time

Write To:

Gefen, LLC
c/o Customer Service
20600 Nordhoff St
Chatsworth, CA 91311

www.gefentoolbox.com
support@gefentoolbox.com

Notice

Gefen, LLC reserves the right to make changes in the hardware, packaging, and any accompanying documentation without prior written notice.

High Definition 1080p Scaler is a trademark of Gefen, LLC

HDMI, the HDMI logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing in the United States and other countries.

© 2011 Gefen, LLC. All rights reserved.
All trademarks are the property of their respective owners.

Rev A4

CONTENTS

- 1 Introduction
- 2 Operation Notes
- 3 Features
- 4 Panel Layout
- 5 Panel Descriptions
- 6 IR Remote Control Layout / Descriptions
- 8 Installing the IR Remote Control Unit
- 9 IR Remote Control Unit Configuration
- 10 Connecting and Operating the High Definition 1080p Scaler
 - 10 Wiring Diagram
- 11 Menu System
 - 11 Video Menu
 - 13 Color Menu
 - 14 Output Menu
 - 15 OSD Menu
 - 16 Audio Menu
 - 16 Information Menu
- 17 RS-232 Serial Control Interface
- 18 RS-232 Serial Commands
- 43 Main Menu System Summary
- 44 Video Menu System Summary
- 48 Color Menu System Summary
- 49 Output Menu System Summary
- 50 OSD Menu System Summary
- 52 Audio Menu System Summary
- 53 Information Menu System Summary
- 54 Specifications
- 55 Warranty

INTRODUCTION

Congratulations on your purchase of the GefenToolBox High Definition 1080p Scaler. Your complete satisfaction is very important to us.

Gefen

We specialize in total integration for your home theater, while also focusing on going above and beyond customer expectations to ensure you get the most from your hardware. We invite you to explore our distinct product line and hope you find your solutions. Don't see what you are looking for here? Please call us so we can better assist you with your particular needs.

Why GefenToolBox?

The GefenToolBox line offers portable and easy-to-install solutions for common A/V system integration setups using HDMI connectivity. GefenToolBox products are wall-mountable and small in size. GefenToolBox products are easily transported in the field and are ready for immediate and simple installations in working environments. These products come finished in glossy black or ivory to blend in with either a white wall or black cabinet.

The GefenToolBox High Definition 1080p Scaler

The GefenToolBox High Definition 1080p Scaler allows you to scale one HDMI input to one HDMI output with up to 1080p Full HD and Deep Color. This unit can vastly improve the quality of the image by outputting the video to the native resolution of the display, bypassing the display's internal scaler. Video can be manually scaled up and down in all resolutions up to 1080p Full HD.

This product can also be used to downscale, making it ideal for distributing a Hi-Def signal to multiple displays that do not support the same maximum resolutions in an HDMI distribution system, while still showing maximum resolution on the higher-definition displays. It can also be used for DVI signals with appropriate adapters.

The GefenToolBox High Definition 1080p Scaler is conveniently wall-mountable so it can be easily installed behind the display. This Scaler offers RS-232 control and is field-upgradeable.

How It Works

Use the included HDMI cable to connect the source to the High Definition 1080p Scaler. Connect the display to the Scaler using an HDMI cable. Connect an optical and / or coax audio cable from the source to the Scaler. Another set of optical and / or coax audio cables can be connected to an A/V receiver or amplifier. Connect the 5V DC locking power supply to the Scaler and connect the power cord to an available electrical outlet. Select the audio input by using the On-Screen Display with the front panel buttons or the included IR remote control.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE HIGH DEFINITION 1080P SCALER

- The High Definition 1080p Scaler will convert between digital and analog audio formats.
- Compatible with all HDMI and DVI* displays.

*When used with a DVI to HDMI adapter.

FEATURES

Features

- Scales digital video output up to 1080p Full HD and 2K
- Can be used as a down-scaler to support lower-resolution displays in multi-display distribution systems
- Supports DVI-D signals via appropriate adapters
- Supports standard and high bit-rate audio and up to eight channels of LPCM audio via HDMI.
- Supports up to two channels of LPCM audio via S/PDIF and TOSLINK outputs.
- High performance frame rate conversion engine
- Auto 3:2 pull-down and 2:2 pull-down detection and recovery
- Aspect Ratio Control
- Proprietary Advanced Color Engine Technology provides brilliant color, intensified contrast and details, vivid skin tones, and sharp edges
- Selectable audio input: HDMI, TOSLINK, or S/PDIF
- Built-in on-screen display (OSD) menu controlled via an optional remote control (sold separately)
- RS-232 control
- Field-upgradeable
- Wall-mountable

Package Includes

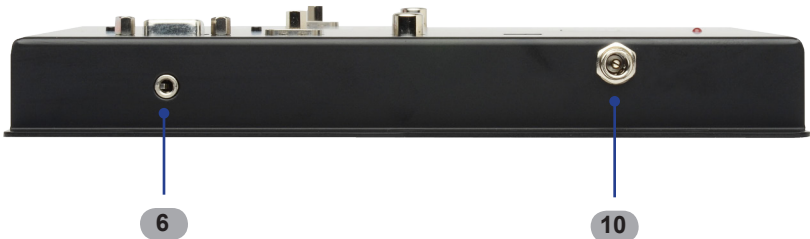
- (1) GefenToolBox High Definition 1080p Scaler
- (1) 6 ft. HDMI cable (M-M)
- (1) 5V DC Locking Power Supply
- (1) IR remote
- (1) User Manual

PANEL LAYOUT

Top Panel



Side Panel



PANEL DESCRIPTIONS

1 Menu Navigation Buttons

The Menu button is used to enable the on-screen Menu System. The [-] and [+] buttons are used to change values and navigate within the Menu System.

2 HDMI In

Connect a Hi-Def source device to this port using the included HDMI cable.

3 Coax In

Connect a digital audio source using a coax cable to this S/PDIF port.

4 Optical In

Connect a digital audio source using an optical cable to this TOSLINK port.

5 RS-232 Serial Port

This port is used for serial communication using an RS-232 control device. Access to certain features are only available through the RS-232 interface.

6 Ext IR

Connect an IR Extender (EXT-RMT-EXTIR) to this port.

7 HDMI Out

Connect an HDTV display to this port.

8 Coax Out

Connect a coax cable from this S/PDIF connector to an audio output device.

9 Optical Out

Connect an optical cable from this TOSLINK connector to an audio output device.

10 5 V DC Locking Power Connector

Connect the included 5 V DC locking power supply to this receptacle.

11 IR Window

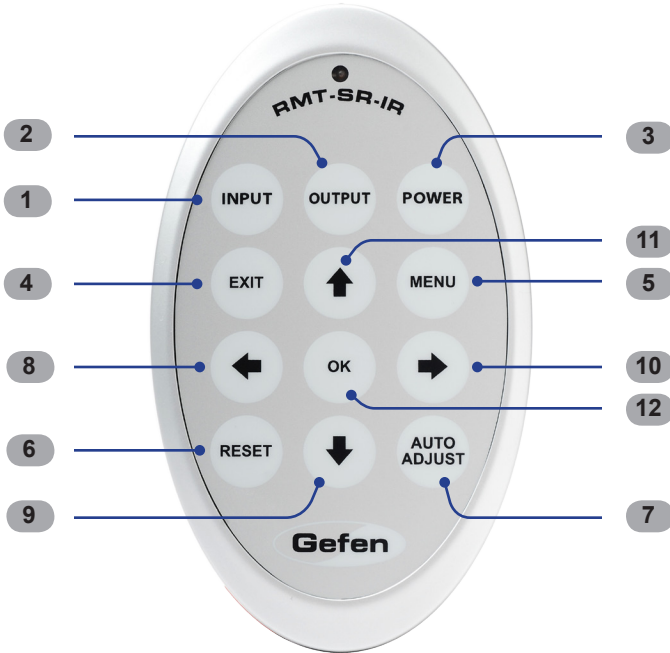
Receives IR commands from the optional IR Remote Control Unit (RMT-SR-IR).

12 Power Indicator

This LED will glow bright red when power is applied to the unit.

IR REMOTE CONTROL LAYOUT / DESCRIPTIONS

RMT-SR-IR Remote Control Unit



- 1 Input**
Cycles through the available audio inputs: HDMI, Coaxial, or Optical.
- 2 Output**
Cycles through the available output resolutions. See the Output Menu section on page 14 for a list of available output resolutions.
- 3 Power**
Turns the unit ON or OFF (standby).
- 4 Exit**
Exits the current menu option and menu system.
- 5 Menu**
Displays the on-screen Menu System.
- 6 Reset**
Resets the input and output resolutions to factory default.
- 7 Auto Adjust**
Sets the display for optimal resolution and aspect ratio based on the display's EDID information and the currently selected sources output resolution.

IR REMOTE CONTROL DESCRIPTIONS

- 8** *Left Cursor*
Used to navigate to the left within the on-screen Menu System.
- 9** *Down Cursor*
Used to navigate downwards in the on-screen Menu System.
- 10** *Right Cursor*
Used to navigate to the right within the on-screen Menu System.
- 11** *Up Cursor*
Used to navigate up within the on-screen Menu System.
- 12** *OK*
Confirms the current selection. This button performs the same function as the Menu button on the front panel of the Scaler.

INSTALLING THE IR REMOTE CONTROL UNIT

Installing the IR Remote Control Battery

1. Remove the battery cover on the back of the IR Remote Control unit.
2. Insert the included battery into the open battery slot. The positive (+) side of the battery should be facing up.
3. Replace the battery cover.

The Remote Control unit ships with two batteries. One battery is required for operation and the other battery is a spare.



Battery Slot



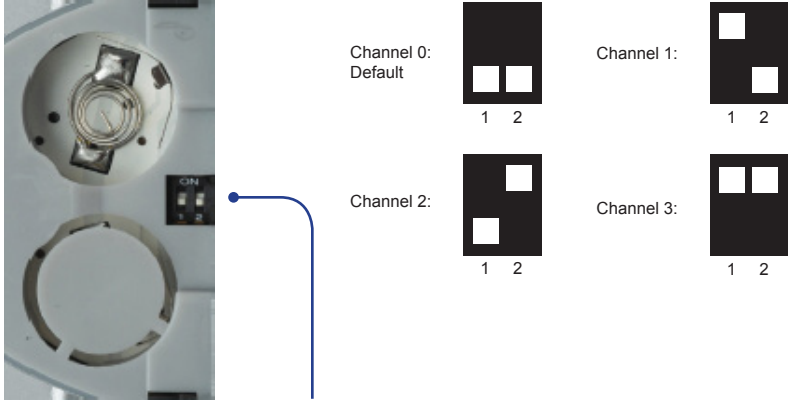
WARNING: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

IR REMOTE CONTROL UNIT CONFIGURATION

Setting the IR Remote Control Channel

In the event that IR commands from other remote controls interfere with the supplied IR Remote Control unit, changing the IR channel on the IR Remote Control unit will fix the problem. The IR Remote Control unit has a bank of DIP switches used for setting the IR channel.

The DIP switch bank is located underneath the battery cover.



Exposed DIP switch bank between the battery slots.

It is important that the IR channel on the Remote Control unit, matches the IR channel set on the GefenToolBox High Definition 1080p Scaler. For example, if both DIP switches on the IR Remote Control unit are set to IR channel 0 (both DIP switches down), then the High Definition 1080p Scaler must also be set to IR channel 0. Refer to page 15 on changing the IR channel on the High Definition 1080p Scaler.

CONNECTING AND OPERATING THE HIGH DEFINITION 1080P SCALER

How to Connect the High Definition 1080p Scaler

1. Connect the included HDMI cable from the Hi-Def source to the HDMI In port on the High Definition 1080p Scaler.
2. Connect a coax cable from a Digital audio source to the S/PDIF input connector. An Optical cable can also be connected from the digital audio source to the TOSLINK input connector on the High Definition 1080p Scaler.



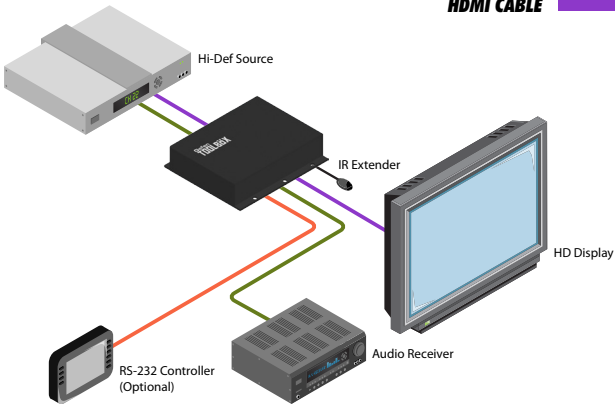
NOTE: Only one digital input (S/PDIF or TOSLINK®) can be selected as an audio source at a time.

3. Connect an HDMI cable from the HDMI Out port on the High Definition 1080p Scaler to an HDTV display.
4. Connect the coax cable and/or optical cable from S/PDIF and/or TOSLINK outputs to an A/V receiver or other audio output device(s).
5. Connect the included 5 V DC locking power supply to the locking power connector on the Scaler then connect the AC power cord to an available electrical outlet.

Wiring Diagram for the GefenToolBox High Definition 1080p Scaler

**Gefen
TOOLBOX**

DIGITAL AUDIO TOSLINK CABLE
or DIGITAL AUDIO S/PDIF CABLE } 
RS-232 CABLE 
HDMI CABLE 



GTB-HD-1080PS

MENU SYSTEM

Video Menu

To access the Video Menu, press the Menu button. Use the + or - buttons to highlight the Video Menu icon. Press the Menu button to enter the Video Menu. Use the + or - buttons to scroll through each of the parameters. Press the Menu button to change the selected parameter. Use the + or - buttons to increase or decrease the values.

Picture Mode

Preset and user configuration settings for different viewing scenarios. Preset settings will not allow user adjustment. Only the USER option will allow customized video settings. The USER settings are saved.

- **Standard** - Useful for general content
- **Movie** - useful for dimly lit environments
- **Vivid** - useful for accentuating colors for a more vibrant image
- **User** - user configuration settings

Contrast

Adjusts the Contrast by increments of 1. Minimum value: 1, Maximum value: 100.

Brightness

Adjusts the Brightness by increments of 1. Minimum value: 1, Maximum value: 100.

Hue

Adjusts the Hue by increments of 1. Minimum value: 1, Maximum value: 100.

Saturation

Adjusts the Saturation level by increments of 1 or -1. Minimum value: 1, Maximum value: 100.

Sharpness

Adjusts the sharpness in increments of 1 on a scale of 1 to 100 (default 50).

MENU SYSTEM

Scale

Sets the scaling adjustment. Options are: Full, Overscan, Underscan, Letterbox U.S. (Underscan), PanScan U.S. (Underscan), Letterbox Full, and PanScan Full.

Full

Stretches the image to fill the screen

Maintain Aspect

Maintains the aspect ratio of the output signal

Overscan

Stretches the image to fullscreen and just beyond the border of the display

Underscan

Stretches the image to fullscreen and just within the border of the screen

Letterbox U.S. (Underscan)

Stretches the image to 16:9 aspect ratio with underscan

PanScan U.S. (Underscan)

Stretches the image to 4:3 aspect ratio with underscan

Letterbox Full

Stretches the image to 16:9 aspect ratio without underscan

PanScan Full

Stretches the image to 4:3 aspect ratio without underscan

NR (Noise Reduction)

Reduces noise artifacts in the picture. This option is only available when the input signal is 480i or 480p.

Exit

Exits the Video Menu and returns control to the Main Menu.

MENU SYSTEM

Color Menu

To access the Color Menu, press the Menu button. Use the + or - buttons to highlight the Color Menu icon. Press the Menu button to enter the Color Menu. Use the + or - buttons to scroll through each of the parameters. Press the Menu button to change the selected parameter. Use the + or - buttons to increase or decrease the values.

Color Tone

- **Normal** - Use for general content
- **Warm** - Red-shift RGB values for a warmer color
- **Cool** - Blue-shifts RGB values for a cooler video color
- **User** - Allows individual adjustment of Red, Green, and Blue color components.

Red

Adjusts the Red value by increments of 1. Minimum value: 1, Maximum value: 100.

Green

Adjusts the Green value by increments of 1. Minimum value: 1, Maximum value: 100.

Blue

Adjusts the Blue value by increments of 1. Minimum value: 1, Maximum value: 100.

Exit

Exits the Color Menu and returns control to the Main Menu.

MENU SYSTEM

Output Menu

To access the Output Menu, press the Menu button. Use the + or - buttons to highlight the Output Menu icon. Press the Menu button to enter the Output Menu. Use the + or - buttons to select the desired output resolution. Press the Enter button to enable the selected output resolution. Use the + or - buttons to select the Exit option to exit the Option Menu and return control to the Main Menu.

VGA	480i	576i	WXGA
SVGA	480p	576p	WSXGA
XGA	720p60	720p50	WUXGA
SXGA	1080i60	1080i50	2K50
UXGA	1080p60	1080p50	2K60
1080p-1	1080p-2	1080p-3	
	Native*	Exit	

* The Native option will select the native resolution of the connected display based on the EDID from the display.

The Output Menu also contains three frame rate conversion modes:

- 1080p-1 : 1080p 24/50/60 No frame rate conversion.
- 1080p-2 : 1080p 24/60 Converts all frame rates (except 24) to 60.
- 1080p-3 : 1080p 24/50 Converts all frame rates (except 24) to 50.



NOTE: If a resolution that is not supported by the display is selected, then the on-screen Menu will no longer be visible. To correct this, press the OUTPUT button on the IR Remote Control Unit and cycle through the output resolutions until a supported mode is displayed.

Exit

Exits the Output Menu and returns control to the Main Menu.

MENU SYSTEM

OSD Menu

To access the OSD Menu, press the Menu button. Use the + or - buttons to highlight the OSD Menu icon. Press the Menu button to enter the OSD Menu. Use the + or - buttons to scroll through each of the parameters. Press the Menu button to change the selected parameter. Use the + or - buttons to increase or decrease the values.

H-Position (Horizontal Position)

Adjusts the horizontal position on the Menu System on the screen. Minimum value: 1, Maximum value: 100.

V-Position (Vertical Position)

Adjusts the vertical position of the Menu System on the screen. Minimum value: 1, Maximum value: 100.

Time Out

Adjusts the amount of time (in seconds) before the OSD automatically closes. Minimum value: 1, Maximum value: 100.

Background

Sets the transparency level of the OSD background. Minimum value: 0, Maximum value: 8.

Remote Channels

Sets the remote channel for use with the IR Remote Control Unit. Minimum value: 0, Maximum value: 3.



WARNING: If the selected Remote Channel in this menu and does not match the IR Channel set in the IR Remote Control Unit, the unit will cease to respond to IR commands from the remote.

Exit

Exits the OSD Menu and returns control to the Main Menu.

MENU SYSTEM

Audio Menu

To access the Audio Menu, press the Menu button. Use the + or - buttons to highlight the Audio Menu icon. Press the Menu button to enter the Audio Menu. Use the + or - buttons to scroll through each of the parameters. Press the Menu button to change the selected parameter. Use the + or - buttons to increase or decrease the values.

Source

Selects the audio input source: HDMI, Coaxial, or Optical.

Sound

Selects audio output option: On or Mute.

Exit

Exits the OSD Menu and returns control to the Main Menu.

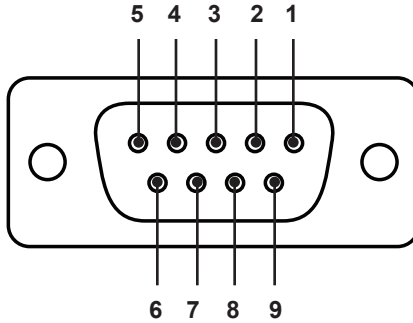
Information Menu

To access the Information Menu, press the Menu button. Use the + or - buttons to highlight the Information Menu icon. Press the Menu button to enter the Information Menu. The following information is displayed on the Information Menu screen:

- Audio Input Source and the Color Space
- Input Resolution
- Output Resolution
- Firmware Version

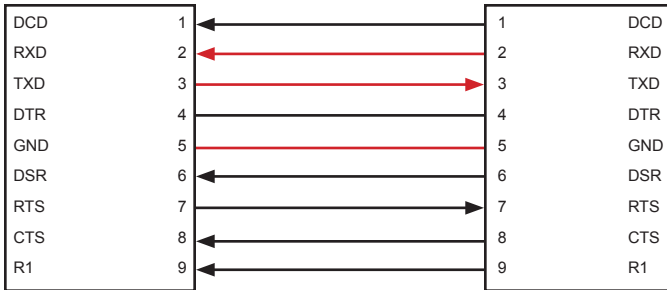
RS-232 SERIAL CONTROL INTERFACE

RS-232 Interface



RS-232 Controller

Matrix



Only TXD, RXD, and GND are used.

RS232 Settings

Baud rate19200
 Data bits 8
 Parity bits None
 Stop bits1
 Flow Control None



IMPORTANT: When sending RS-232 commands, a carriage return must be included at the end of the command. A space *must* be included between the command and the parameter.

RS-232 COMMANDS

Command	Description
<i>blue</i>	Sets the blue color component value of the output signal
<i>brightness</i>	Sets the brightness level of the output signal
<i>clrtmp</i>	Sets the color temperature of the output signal
<i>contrast</i>	Sets the contrast level of the output signal
<i>dflt</i>	Resets the scaler to default settings
<i>green</i>	Sets the green color component value of the output signal
<i>help?</i>	Displays the command list
<i>hue</i>	Sets the picture hue of the output signal
<i>in</i>	Changes the audio input
<i>info?</i>	Returns the current hardware and firmware version
<i>ir</i>	Sets the IR channel for the scaler
<i>mute</i>	Enables / disables audio muting
<i>osdbkgn</i>	Sets the OSD background transparency value
<i>osdhpos</i>	Sets the horizontal screen position of the OSD
<i>osdtmout</i>	Sets the OSD timeout value
<i>osdvpos</i>	Sets the vertical screen position of the OSD
<i>output</i>	Sets the output resolution
<i>picturemode</i>	Sets the picture color mode
<i>pwr</i>	Power-on / Power-off the scaler
<i>red</i>	Sets the red color component value of the output signal
<i>saturation</i>	Sets the saturation value of the output signal
<i>sharpness</i>	Sets the sharpness value of the output signal
<i>size</i>	Sets the picture size of the output signal
<i>stat</i>	Enables/disables terminal feedback

blue Command

The `blue` command sets the blue color component value of the output signal.

Syntax:

```
blue param1
```

Parameters:

<i>param1</i>	Number	[1 ... 100]
---------------	--------	-------------

Notes:

This command can only be used when `clrtmp = user`. See page 21 for details.

Use the following syntax to return the current value of the blue component. Do not use a space between the question mark (?) and the command.

```
blue?
```

Examples:

```
blue 65
```

```
blue?
```

```
BLUE 65
```

brightness Command

The `brightness` command sets the brightness level of the output signal.

Syntax:

```
brightness param1
```

Parameters:

<i>param1</i>	Number	[1 ... 100]
---------------	--------	-------------

Notes:

Use the following syntax to return the current brightness value. Do not use a space between the question mark (?) and the command.

```
brightness?
```

Examples:

```
brightness 70
```

```
brightness?
```

```
BRIGHTNESS 70
```


clrtmp Command

The `brightness` command sets the color temperature of the output signal.

Syntax:

```
clrtmp param1
```

Parameters:

param1

String

String	Description
nrml	Normal color temperature
warm	Red values are increased
cool	Blue values are increased
user	User settings

Notes:

Use the following syntax to return the current color temperature value. Do not use a space between the question mark (?) and the command.

```
clrtmp?
```

Examples:

```
clrtmp warm
```

```
clrtmp?
```

```
CLRTMP WARM
```

contrast Command

The `contrast` command sets the contrast of the output signal.

Syntax:

```
contrast param1
```

Parameters:

<i>param1</i>	Number	[1 ... 100]
---------------	--------	-------------

Notes:

Use the following syntax to return the current contrast value. Do not use a space between the question mark (?) and the command.

```
contrast?
```

Examples:

```
contrast 30
```

```
contrast?
```

```
CONTRAST 30
```

dflt Command

The `dflt` command resets the scaler to factory-default settings.

Syntax:

`dflt`

Parameters:

None

Example:

`dflt`

green Command

The `green` command sets the blue color component value of the output signal.

Syntax:

```
green param1
```

Parameters:

<i>param1</i>	Number	[1 ... 100]
---------------	--------	-------------

Notes:

This command can only be used when `clrtmp = user`. See page 21 for details.

Use the following syntax to return the current value of the green component. Do not use a space between the question mark (?) and the command.

```
green?
```

Examples:

```
green 61
```

```
green?
```

```
GREEN 61
```

help Command

The `help` command displays the RS-232 command list. The question mark (?) must be included, without a space, as part of the command.

Syntax:

`help?`

Parameters:

None

Example

`help`

```
PWR[?]  
MUTE[?]  
IN[?]  
OUTPUT[?]  
SIZE[?]  
PICTUREMODE[?]  
CONTRAST[?]  
BRIGHTNESS[?]  
HUE[?]  
SATURATION[?]  
SHARPNESS[?]  
CLRTPM[?]  
RED[?]  
GREEN[?]  
BLUE[?]  
OSDHPOS[?]  
OSDVPOS[?]  
OSDTMOUT[?]  
OSDBKGND[?]  
IR[?]  
STAT[?]  
DFLT  
INFO[?]
```

hue Command

The `hue` command sets the hue of the output signal.

Syntax:

```
hue param1
```

Parameters:

<i>param1</i>	Number	[1 ... 100]
---------------	--------	-------------

Notes:

Use the following syntax to return the current hue value. Do not use a space between the question mark (?) and the command.

```
hue?
```

Examples:

```
hue 40
```

```
hue?
```

```
HUE 40
```

RS-232 COMMANDS

in Command

The `in` command sets the audio input.

Syntax:

```
in param1
```

Parameters:

param1

String

String	Description
hdmi	Uses the HDMI input
opti	Uses the TOSLINK® input
coax	Uses the S/PDIF input

Notes:

Use the following syntax to return the current audio input. Do not use a space between the question mark (?) and the command.

```
in?
```

Examples:

```
in opti
```

```
in?
```

```
IN OPTI
```

info? Command

The `info?` command returns the current version of the scaler firmware.

Syntax:

```
info?
```

Parameters:

None

Notes:

Use the following syntax to return the current audio input. Do not use a space between the question mark (?) and the command.

```
info?
```

Examples:

```
info?
```

```
FW V2.03 - HW 1.00
```


ir Command

The `ir` command sets the IR channel on the scaler. The scaler must be set to the same IR channel as the IR remote control unit (see page 9), in order to function correctly.

Syntax:

```
ir param1
```

Parameters:

<i>param1</i>	Number	[1 ... 4]
---------------	--------	-----------

Notes:

Use the following syntax to return the current audio channel of the scaler. Do not use a space between the question mark (?) and the command.

```
ir?
```

Examples:

```
ir 2
```

```
ir?
```

```
IR 2
```

mute Command

The `mute` command enables / disables audio muting of the output signal.

Syntax:

```
mute param1
```

Parameters:

param1

String

String	Description
on	Enables audio muting
off	Disables audio muting

Notes:

Use the following syntax to return the current muting state. Do not use a space between the question mark (?) and the command.

```
mute?
```

Examples:

```
mute on
```

```
mute?
```

```
MUTE ON
```

osdbkgnd Command

The `osdbkgnd` command sets the transparency value for the OSD background. Setting the value to 100 will result in an opaque background.

Syntax:

```
osdbkgnd param1
```

Parameters:

<i>param1</i>	Number	[1 ... 100]
---------------	--------	-------------

Notes:

Use the following syntax to return the current transparency value. Do not use a space between the question mark (?) and the command.

```
osdbkgnd?
```

Examples:

```
osdbkgnd 75
```

```
osdbkgnd?
```

```
OSDBKGND 75
```

osdhpos Command

The `osdhpos` command sets the horizontal position of the OSD. The default value is 50 (horizontally-centered). Values less than 50 will move the OSD to the left. Values greater than 50 will move the OSD to the right.

Syntax:

```
osdhpos param1
```

Parameters:

<i>param1</i>	Number	[1 ... 100]
---------------	--------	-------------

Notes:

Use the following syntax to return the current value. Do not use a space between the question mark (?) and the command.

```
osdhpos?
```

Examples:

```
osdhpos 75
```

```
osdhpos?
```

```
OSDHPOS 75
```

osdtmout Command

The `osdtmout` command sets the time-out value for the OSD. The specified value is in seconds.

Syntax:

```
osdhpos param1
```

Parameters:

<i>param1</i>	Number	[1 ... 100]
---------------	--------	-------------

Notes:

Use the following syntax to return the current time-out value. Do not use a space between the question mark (?) and the command.

```
osdtmout?
```

Examples:

```
osdtmout 90
```

```
osdtmout?
```

```
OSDTMOUT 90
```

osdvpos Command

The `osdhpos` command sets the vertical position of the OSD. The default value is 50 (vertically-centered). Values less than 50 will move the OSD toward the top of the screen. Values greater than 50 will move the OSD toward the bottom of the screen.

Syntax:

```
osdvpos param1
```

Parameters:

<i>param1</i>	Number	[1 ... 100]
---------------	--------	-------------

Notes:

Use the following syntax to return the current value. Do not use a space between the question mark (?) and the command.

```
osdvpos?
```

Examples:

```
osdvpos 42
```

```
osdvpos?
```

```
OSDVPOS 42
```

RS-232 COMMANDS

output Command

The `output` command sets the resolution of the output signal.

Syntax:

```
output param1
```

Parameters:

param1

String

1080i50	480i	uxga
1080i60	480p	vga
1080p-1	576i	wsxga
1080p-2	576p	wuxga
1080p-3	720p50	wxga
1080p50	720p60	xga
1080p60	native	
2K50	svga	
2K60	sxga	

Notes:

See page 14 for details on output resolutions.

Use the following syntax to return the current output resolution. Do not use a space between the question mark (?) and the command.

```
output?
```

Examples:

```
output 1080i60
```

```
output?
```

```
OUTPUT 1080I60
```

picturemode Command

The `picturemode` command sets the resolution of the output signal.

Syntax:

```
picturemode param1
```

Parameters:

param1

String

String	Description
standard	Standard viewing
movie	For dimly-lit environments
vivid	Vibrant colors
user	User settings

Notes:

See page 11 for more information on picture mode settings.

Use the following syntax to return the current picture mode setting. Do not use a space between the question mark (?) and the command.

```
picturemode?
```

Examples:

```
picturemode vivid
```

```
picturemode?
```

```
PICTUREMODE VIVID
```


pwr Command

The `pwr` command sets the resolution of the output signal.

Syntax:

```
pwr param1
```

Parameters:

param1

String

String	Description
on	Power-on the scaler
off	Power-off the scaler

Notes:

Use the following syntax to return the current power state. Do not use a space between the question mark (?) and the command.

```
pwr?
```

Examples:

```
pwr off
```

```
pwr?
```

```
POWER OFF
```

RS-232 COMMANDS

red Command

The `red` command sets the red color component value of the output signal.

Syntax:

```
red param1
```

Parameters:

<i>param1</i>	Number	[1 ... 100]
---------------	--------	-------------

Notes:

This command can only be used when `clrtmp = user`. See page 21 for details.

Use the following syntax to return the current value of the red component. Do not use a space between the question mark (?) and the command.

```
red?
```

Examples:

```
red 52
```

```
red?
```

```
RED 52
```

saturation Command

The `saturation` command sets the hue of the output signal.

Syntax:

```
saturation param1
```

Parameters:

<i>param1</i>	Number	[1 ... 100]
---------------	--------	-------------

Notes:

Use the following syntax to return the current saturation value. Do not use a space between the question mark (?) and the command.

```
saturation?
```

Examples:

```
saturation 74
```

```
saturation?
```

```
SATURATION 74
```

sharpness Command

The `sharpness` command sets the hue of the output signal.

Syntax:

```
sharpness param1
```

Parameters:

<i>param1</i>	Number	[1 ... 100]
---------------	--------	-------------

Notes:

Use the following syntax to return the current sharpness value. Do not use a space between the question mark (?) and the command.

```
sharpness?
```

Examples:

```
sharpness 44
```

```
sharpness?
```

```
SHARPNESS 44
```

RS-232 COMMANDS

size Command

The `size` command sets the hue of the output signal.

Syntax:

```
size param1
```

Parameters:

param1

String

String	Description
full	Full screen
ma	Maintain aspect ratio
ovscan	Overscan
unscan	Underscan
ltrbox	Letterbox U.S.
ltrboxf	Letterbox U.S. (Full)
pnsca	Pan-and-Scan
pnscaf	Pan-and-Scan (Full)

Notes:

Use the following syntax to return the current size setting. Do not use a space between the question mark (?) and the command.

```
size?
```

Examples:

```
size ltrbox
```

```
size?
```

```
SIZE LTRBOX
```

stat Command

The `stat` command enables/disables terminal feedback.

Syntax:

```
stat
```

Parameters:

None

Notes:

Use the following syntax to return the current status setting. Do not use a space between the question mark (?) and the command.

```
stat
```

Examples:

```
stat on
```

```
STAT ON
```

```
ir 2
```

```
IR 2
```

```
stat off
```

```
STAT OFF
```

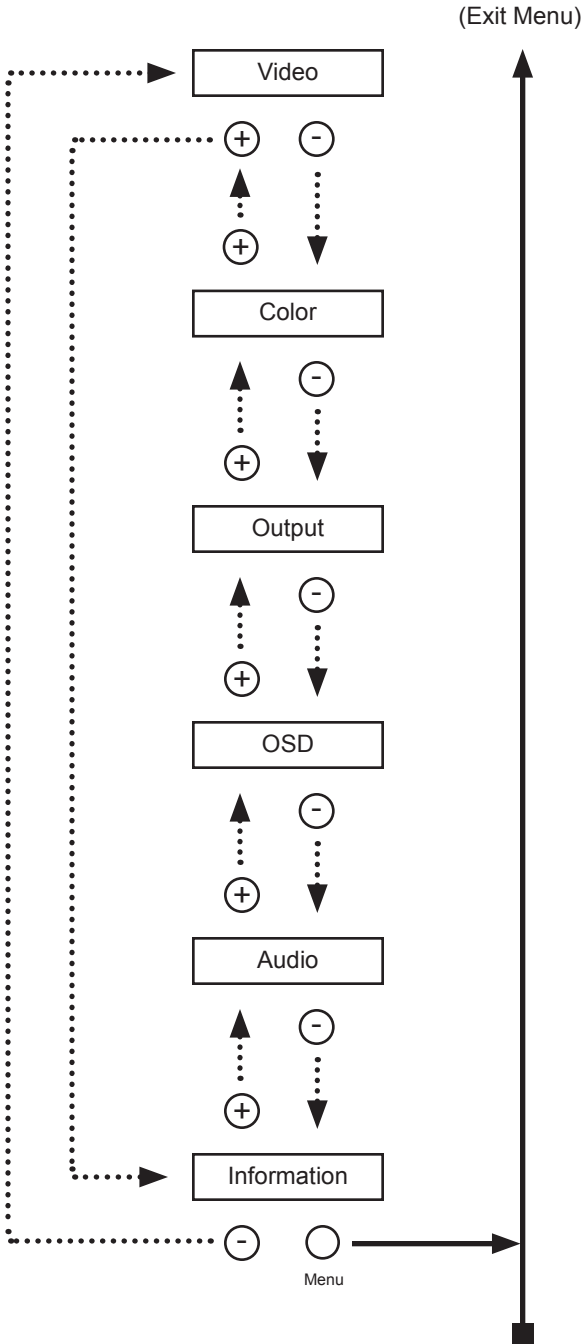
```
ir 3
```

(no feedback is displayed)

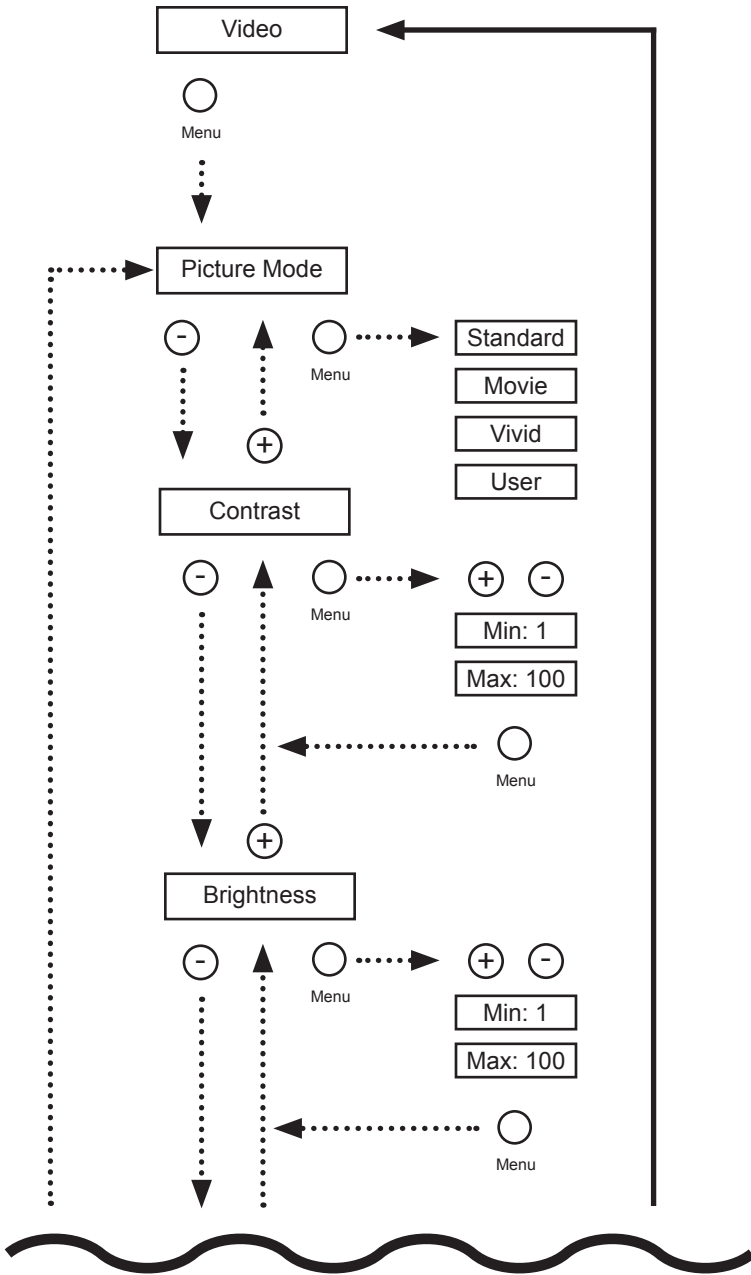
```
stat?
```

```
STAT OFF
```

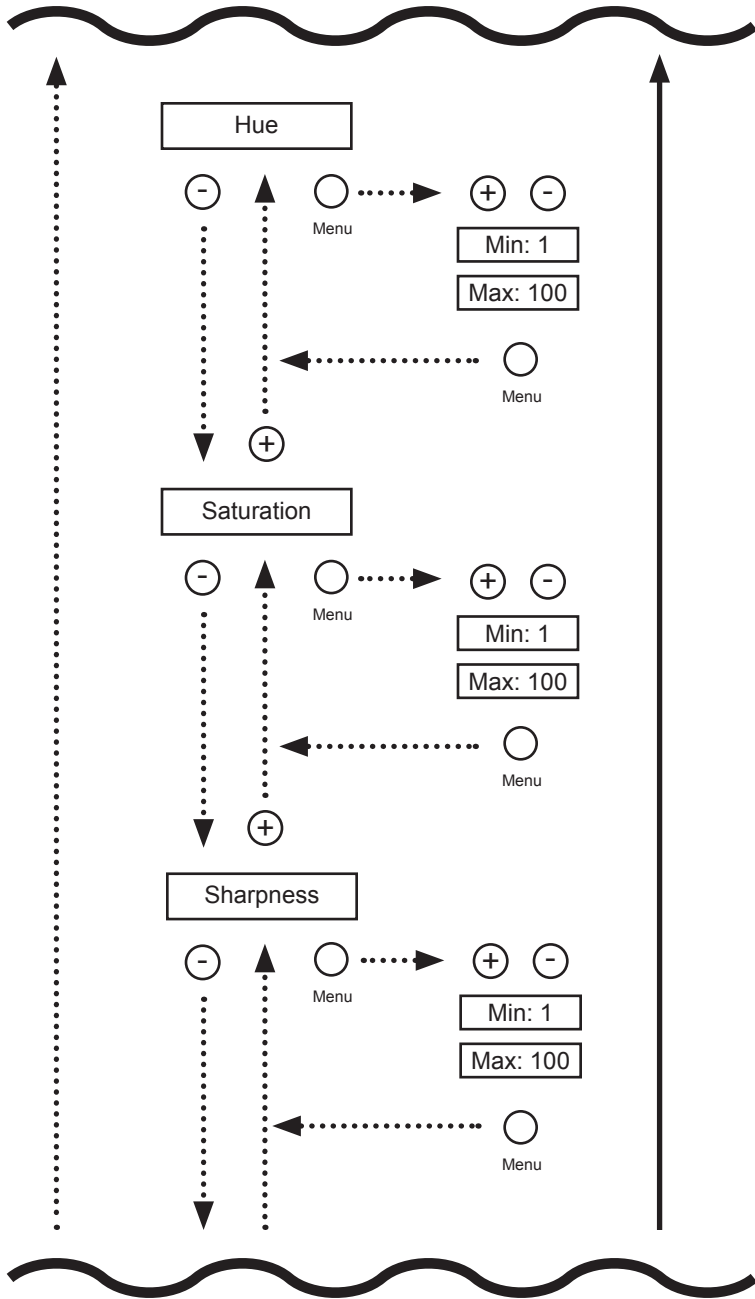
MAIN MENU SYSTEM SUMMARY



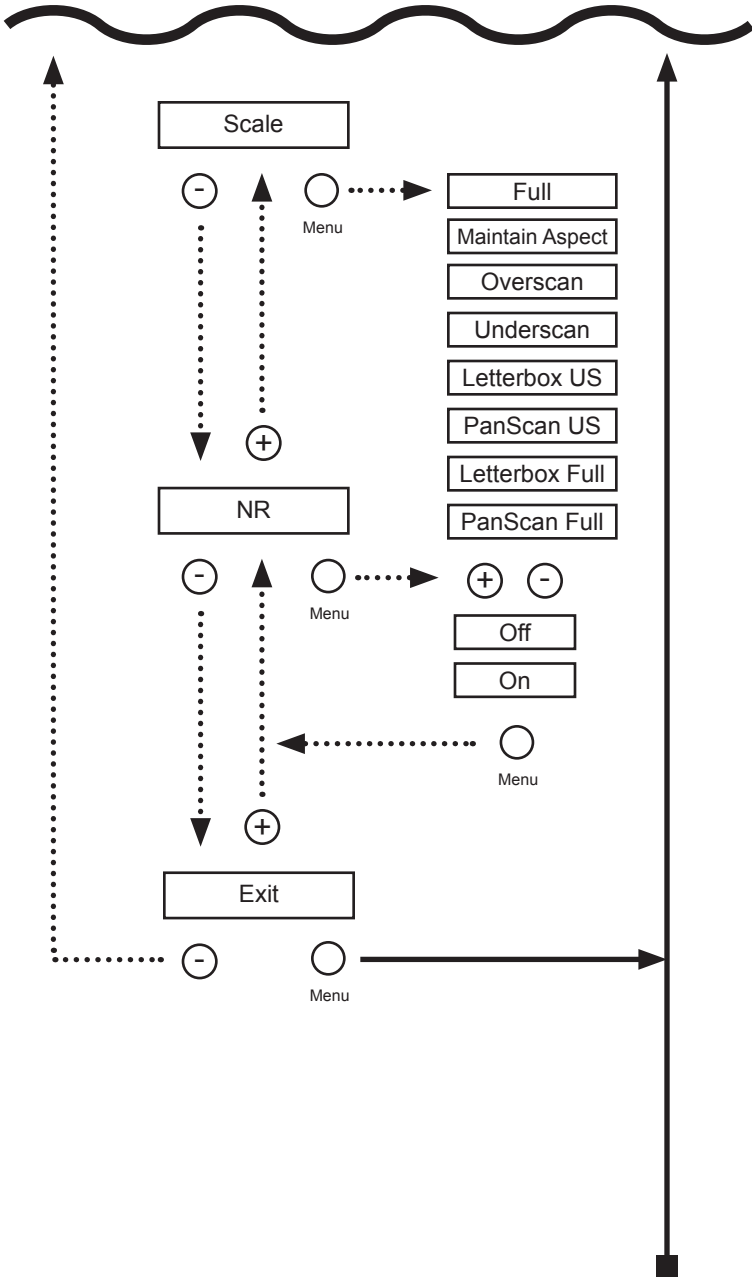
VIDEO MENU SYSTEM SUMMARY



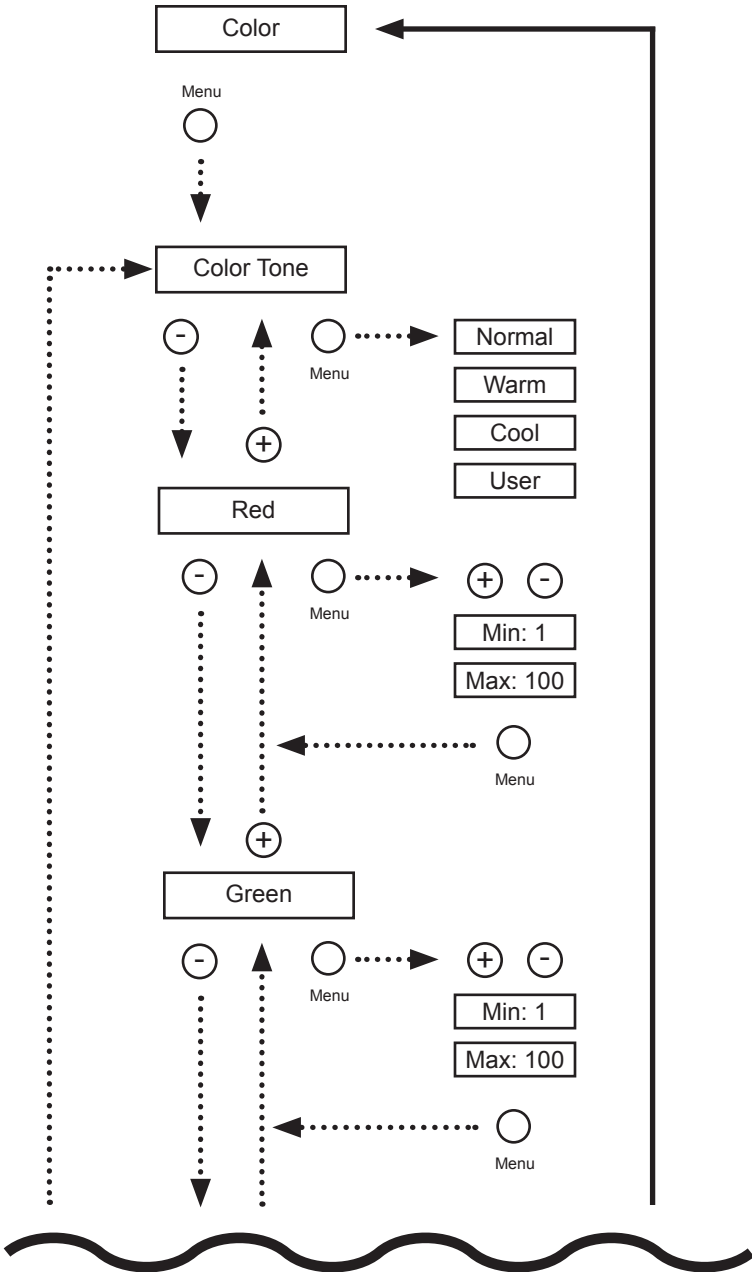
VIDEO MENU SYSTEM SUMMARY



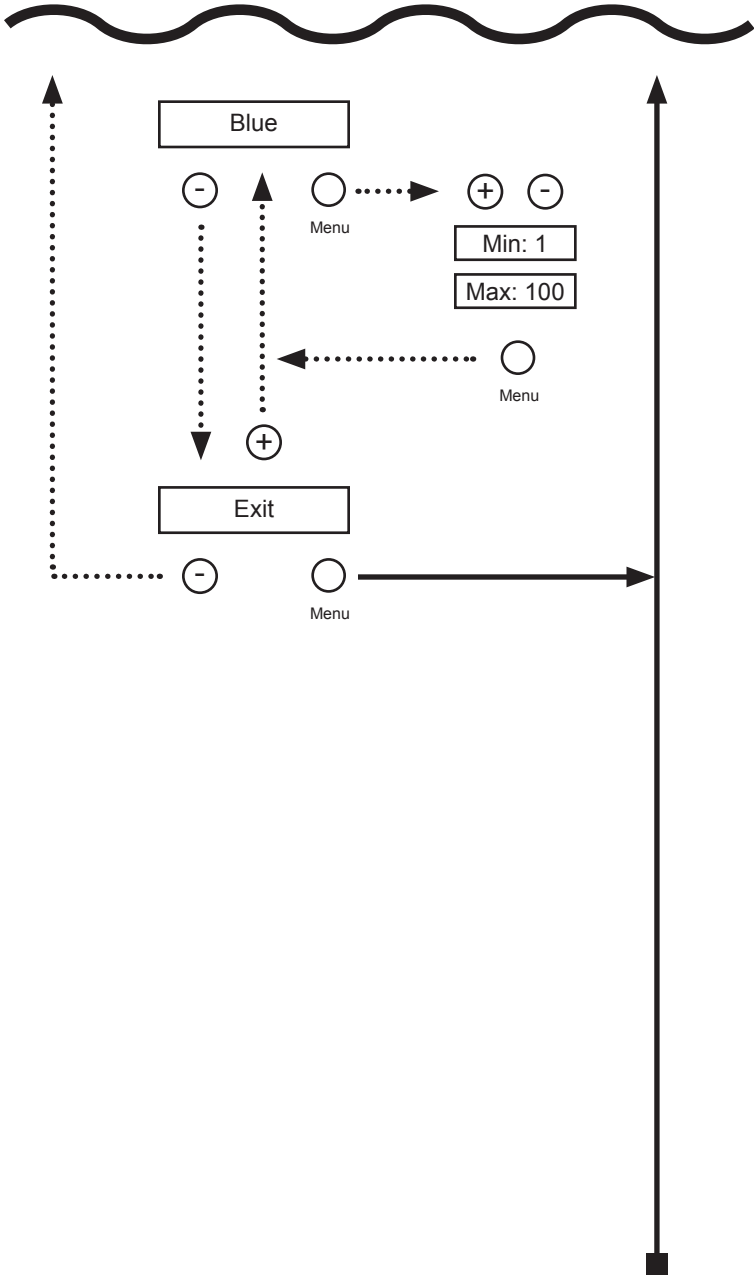
VIDEO MENU SYSTEM SUMMARY



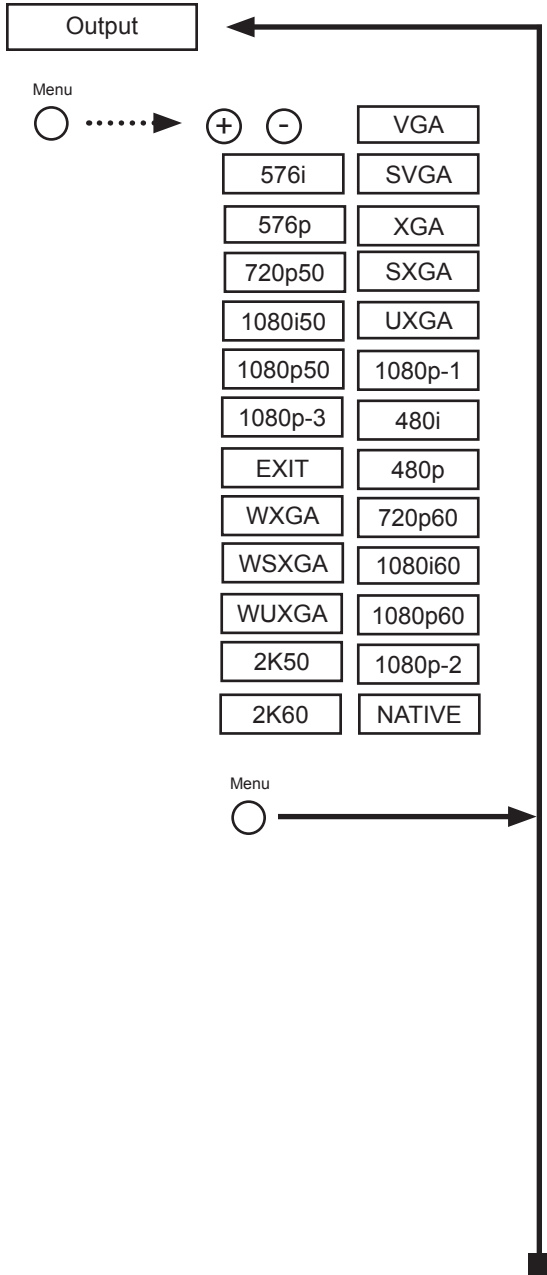
COLOR MENU SYSTEM SUMMARY



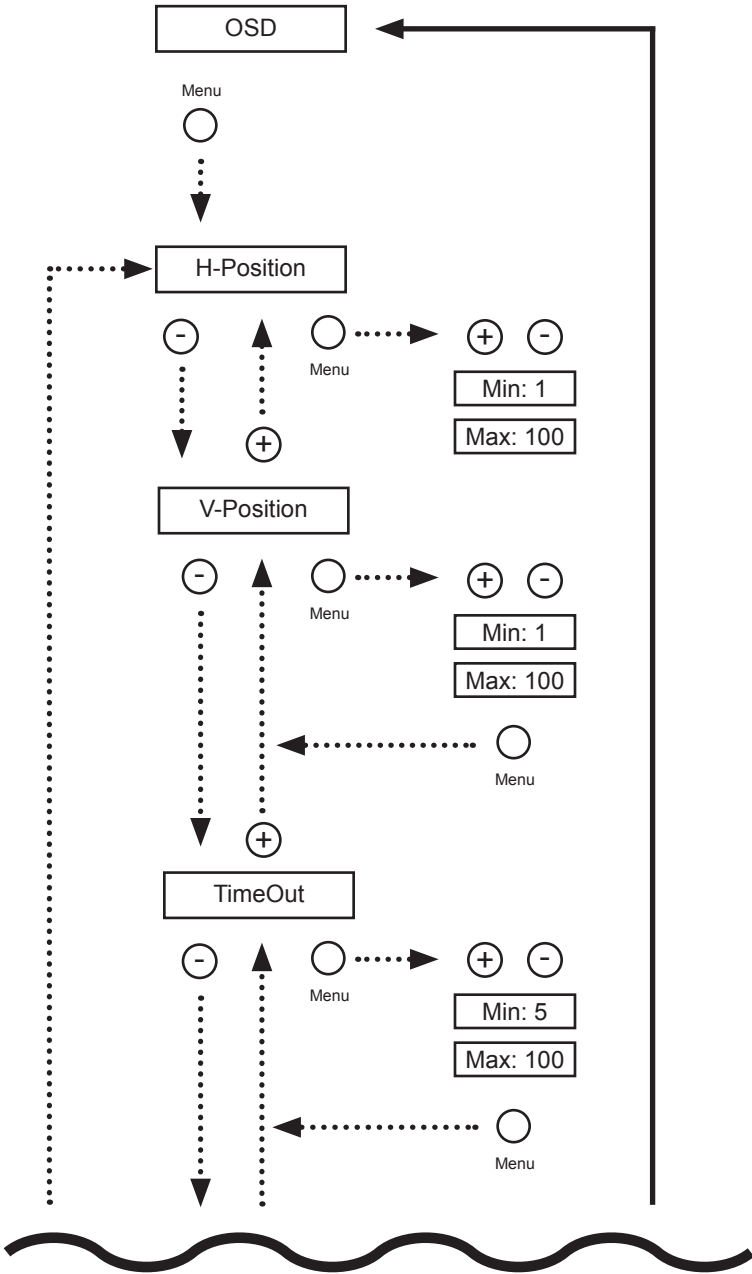
COLOR MENU SYSTEM SUMMARY



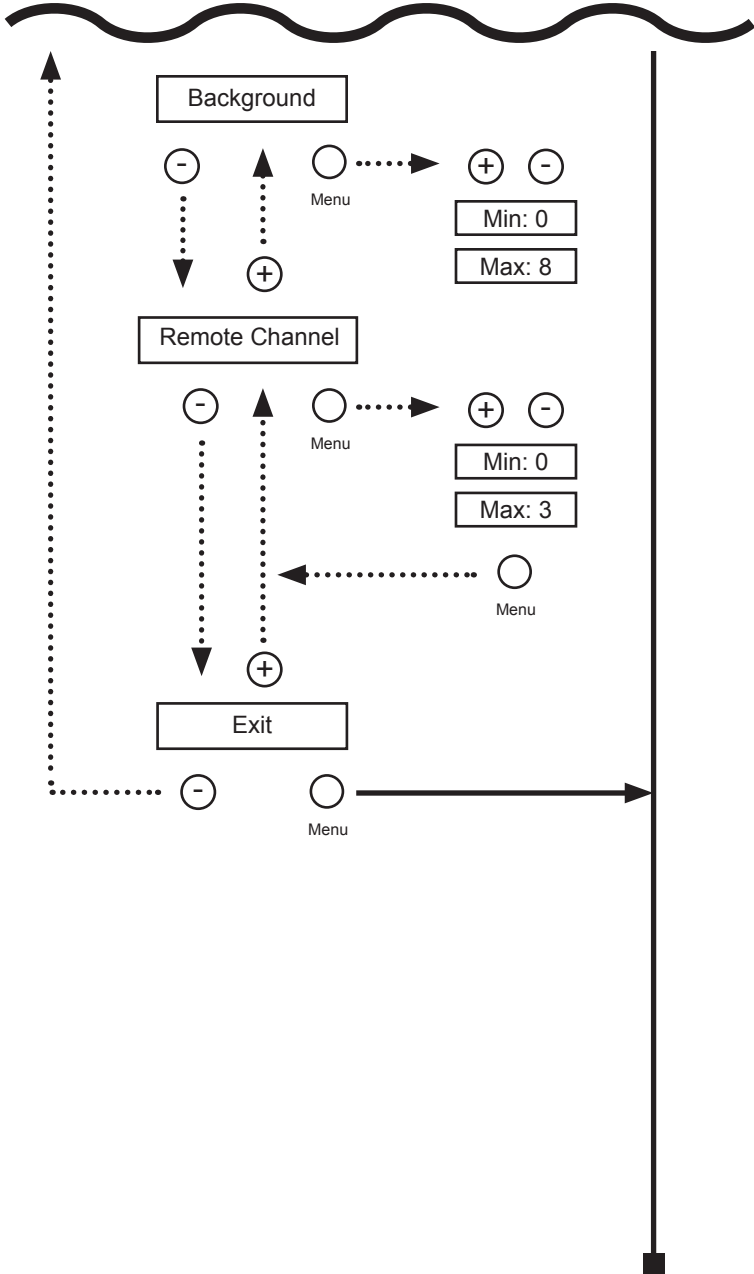
OUTPUT MENU SYSTEM SUMMARY



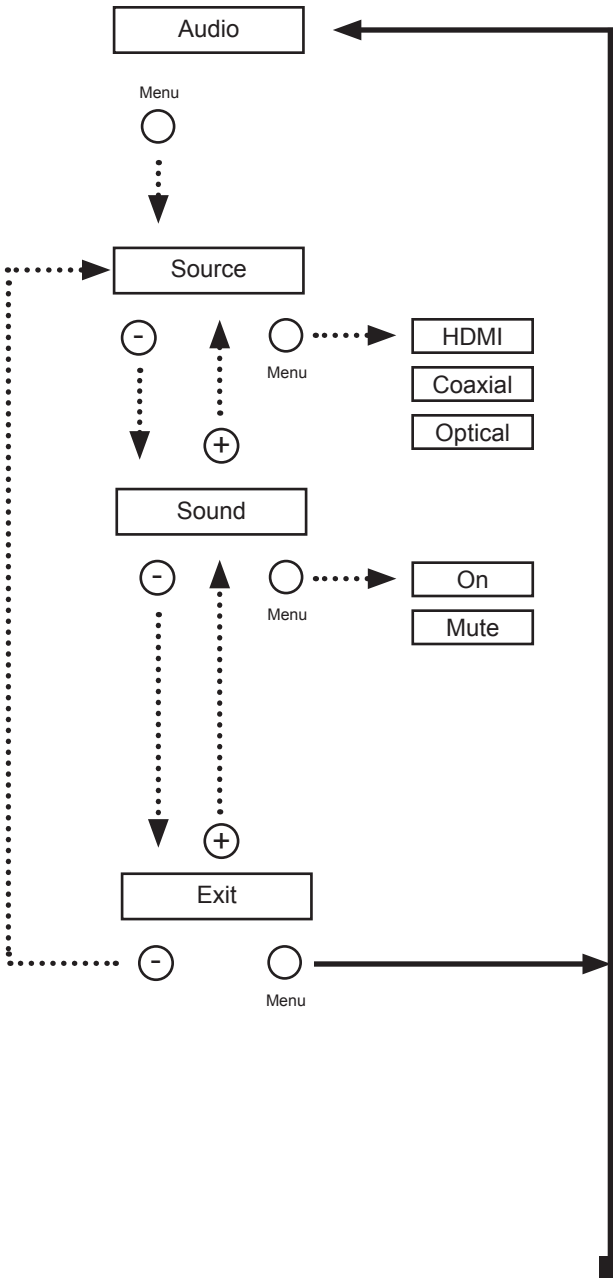
OSD MENU SYSTEM SUMMARY



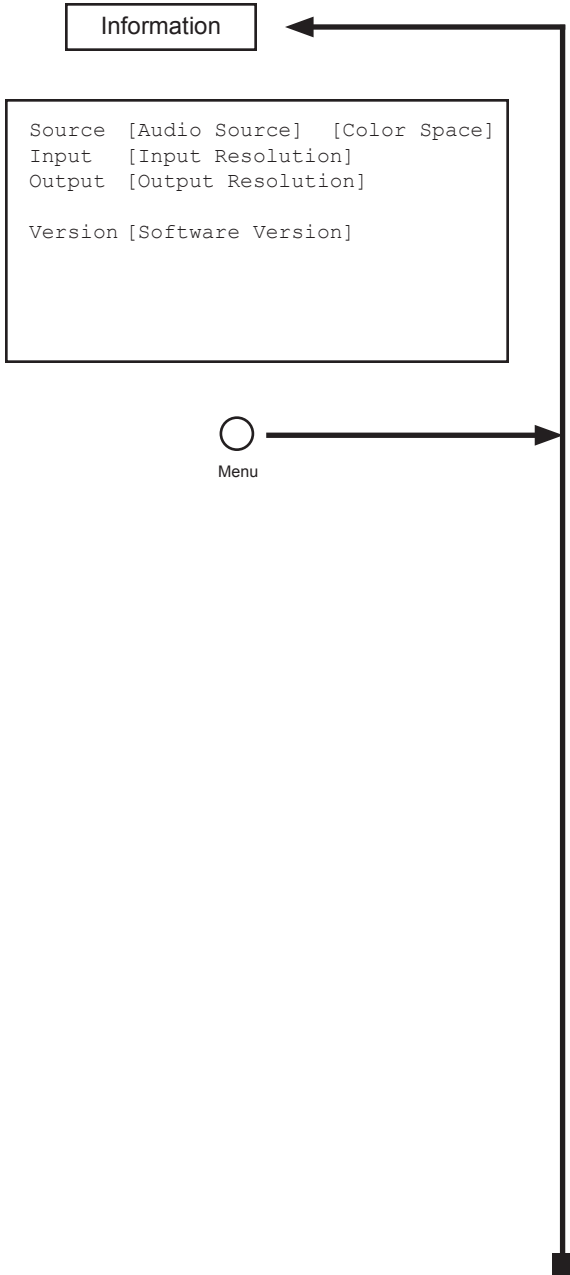
OSD MENU SYSTEM SUMMARY



AUDIO MENU SYSTEM SUMMARY



INFORMATION MENU SYSTEM SUMMARY



SPECIFICATIONS

Maximum Pixel Clock.....	225 MHz
Input DDC Signal.....	5 V p-p (TTL)
Input Video Signal.....	1.2 V p-p
HDMI Input.....	(1) Type A 19-pin, female
HDMI Output.....	(1) Type A 19-pin, female
Audio Input.....	(1) TOSLINK, (1) S/PDIF
Audio Output.....	(1) TOSLINK, (1) S/PDIF
RS-232 Serial Port.....	DB-9, female
IR Extender.....	3.5 mm mini-stereo jack
Power Supply.....	5 V DC, Locking
Dimensions (W x H x D).....	8" x 7" x 1" (203mm x 178mm x 25mm)
Shipping Weight.....	4 lbs. (1.8 kg)

WARRANTY

Gefen warrants the equipment it manufactures to be free from defects in material and workmanship.

If equipment fails because of such defects and Gefen is notified within two (2) years from the date of shipment, Gefen will, at its option, repair or replace the equipment, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications. Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of reshipment to the Buyer.

This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.

1. Proof of sale may be required in order to claim warranty.
2. Customers outside the US are responsible for shipping charges to and from Gefen.
3. Copper cables are limited to a 30 day warranty and cables must be in their original condition.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. The technical information contained herein regarding the features and specifications is subject to change without notice.

For the latest warranty coverage information, refer to the Warranty and Return Policy under the Support section of the Gefen Web site at www.gefen.com.

PRODUCT REGISTRATION

Please register your product online by visiting the Register Product page under the Support section of the Gefen Web site.



20600 Nordhoff St., Chatsworth CA 91311
1-800-545-6900 818-772-9100 fax: 818-772-9120
www.gefentoolbox.com support@gefentoolbox.com



This product uses UL listed power supplies.