

Gefen

4X2 Switcher for HDMI 1.3

EXT-HDMI1.3-442

User Manual



www.gefen.com

1080P
PROGRESSIVE

HDMI™
HIGH DEFINITION MULTIMEDIA INTERFACE

HDTV

Blu-ray Disc™

ASKING FOR ASSISTANCE

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Notice

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INTRODUCTION

Congratulations on your purchase of the 4x2 Switcher for HDMI 1.3. Your complete satisfaction is very important to us.

Gefen

Gefen delivers innovative, progressive computer and electronics add-on solutions that harness integration, extension, distribution and conversion technologies. Gefen's reliable, plug-and-play products supplement cross-platform computer systems, professional audio/video environments and HDTV systems of all sizes with hard-working solutions that are easy to implement and simple to operate.

The Gefen 4x2 Switcher for HDMI 1.3

Gefen's 4x2 Switcher for HDMI 1.3 has four HDMI inputs and two HDMI outputs. Up to four HD audio/video sources are connected at one time to the HDMI inputs such as satellite systems and Blu-Ray players. Two mirrored HDMI outputs send HD audio/video signals to two HDTV displays simultaneously. A convenient S/PDIF digital audio out allows connection to an external audio video receiver if desired. Switching is done via the included IR remote.

How It Works

Connect four HD audio/video sources to the 4x2 Switcher for HDMI 1.3's inputs. Connect two displays to the HDMI outputs. An external amplifier or receiver can be connected to the S/PDIF digital audio output on the rear of the switcher if desired. Once the sources, the switcher and the displays are powered and connected, select which source to view of four using the IR remote.

Note:

All displays that cannot show the same video resolution(s) as the Primary Display connected to Output #1 may fail to show a picture. Secondary displays follow the Primary by sharing the resolution and capability information (EDID) obtained from the Primary Display.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE 4X2 SWITCHER FOR HDMI 1.3

- Display information (EDID) is needed by the source to determine the capabilities of the connected display. This is especially important for HDMI 1.3 sources because without the right information in the EDID none of the features for HDMI1.3 will be enabled. The 4x2 Switcher for HDMI 1.3 features an EDID selection that will allow the user to choose an external EDID from an attached display or an built-in internal EDID. Please see page 6 for more details.
- The source device will output a single video resolution that all displays must be capable of accepting.
- This devices is HDMI 1.3 compliant. Please see page 3 for supported HDMI 1.3 features.
- Supports HDTV resolutions up to 1080p Full HD and computer resolutions of 1900 x 1200.
- The digital S/PDIF output only supports the transmission of the following audio formats:
 - LPCM 2-channel (32 ~ 192 Khz sampling rate)
 - Dolby AC3 2-channel and 5.1-channel
 - Dolby Digital Plus 5.1-channel
 - DTS 2-channel and 5.1-channel
- LPCM of more than 2 channels, Dolby Digital Plus of 7.1 channel, DTS-HD, and Dolby TrueHD are supported through the HDMI output only (not on the S/PDIF output).

FEATURES

Features

- Switch easily between any two HDMI™/DVI sources
- Outputs are mirrored to four HDMI™/DVI displays simultaneously
- Maintains high resolution video - beautiful, sharp HDTV resolutions up to 1080p, 2k, and computer resolutions up to 1920 x 1200 are easily achieved
- Discrete IR remote (included)
- HDMI™ and HDCP compliant

HDMI 1.3 Features

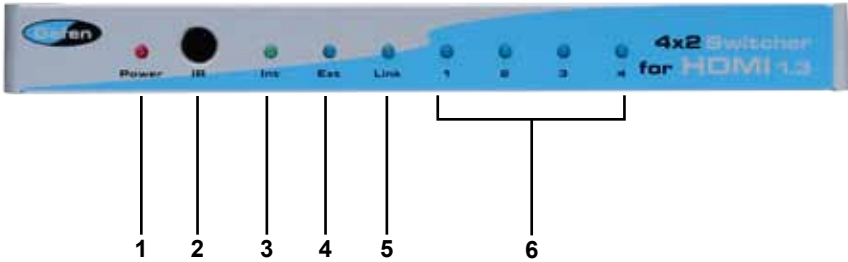
- Lip-Sync Pass Through
- 225 MHz (up to 12 bit YUV 444 supported @ 1080p)
- Deep Color Supported (XV Color Supported)
- Color Space Conversion Supported
- Dolby TrueHD & DTS Master Audio Supported
- CEC Pass Through

Package Includes

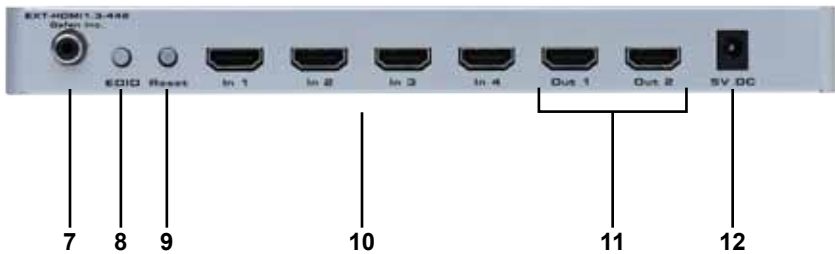
- (1) 4x2 Switcher for HDMI 1.3
- (1) 5V DC Power Supply
- (4) 6 Foot HDMI Cables (M-M)
- (1) User's Manual

PANEL LAYOUT

Front Panel



Back Panel



PANEL DESCRIPTIONS

1 Power LED Indicator

This LED will become active once the included 5V DC power supply is properly connected between the unit and a open wall power receptacle.

2 IR (Infrared) Receiver

This receiver will accept command for switching between input HDMI devices using the included RMT-4IR remote control.

3 Internal EDID Mode LED Indicator

This LED will become active when the unit is using the pre-loaded EDID. Please see page 6 for more details.

4 External EDID Mode LED Indicator

This LED will become active when the unit is using the EDID from the HDMI device connected to HDMI output port 1. Please see page 6 for more details.

5 Link LED Indicator

This LED will become active when the unit is properly connected to an HDMI capable device on either of the HDMI output ports.

6 Currently Selected Input LED Indicator

There is one LED for each of the four input ports. The LED for the currently selected HDMI input will be active.

7 S/PDIF Audio Output

This output will supply supported audio formats for output to an external audio decoder or device. This is an optical TOSLINK type digital audio connector.

8 EDID Selection Toggle Button

This button will toggle between the internal external EDID modes. To determine which mode is currently being used, please note which EDID mode LED is active on the front panel of the unit.

9 Reset Button

This button will reset the unit and force all devices in the chain to re-transmit/re-read EDID. It is essential that the unit be reset after the EDID mode has been changed. Please see page 6 for more details.

10 HDMI Input Ports 1-4

Connect up to 4 HDMI source devices to these HDMI input ports. Selection between these inputs are made using the included RMT-4IR remote control.

11 HDMI Output Ports 1-2

Connect up to 2 HDMI capable devices to these HDMI output ports. The currently selected HDMI input source device will be output through both of these HDMI output ports.

12 5V DC Power Input Port

Connect the included 5V DC power supply between this port and an open wall power receptacle.

CONNECTING AND OPERATING THE 4X2 SWITCHER FOR HDMI 1.3

How to Connect the 4x2 Switcher for HDMI 1.3

1. Connect up to four HDMI source devices to the 4x2 Switcher for HDMI 1.3 using the supplied HDMI cables.
2. If using the S/PDIF optical audio output, connect a S/DIF coaxial audio cable between the 4x2 Switcher for HDMI 1.3 and a appropriate audio decoder or device.
3. Connect up to two HDMI capable devices to the 4x2 Switcher for HDMI 1.3 using the supplied HDMI cables.

NOTE: The display connected to the port labeled OUT 1 will have its EDID used when the external EDID mode is active. If there are displays with different resolutions in the setup it is recommended that the display with the lowest resolution be placed on the HDMI port labeled OUT 1. This way, all of the displays should be able to display an image when the external EDID mode is active.

4. Connect the included 5V DC power adapter to the 4x2 Switcher for HDMI 1.3 power input port.
5. Power on the displays first and then the source.

How to Operate the 4x2 Switcher for HDMI 1.3

Use the included RMT4-IR remote control to switch between HDMI inputs. Please see page 7 for a description of the RMT4-IR remote control.

EDID Modes and Reset Buttons

The EDID source is selectable between the display connected to the HDMI output port labeled OUT 1 or the built-in internal EDID. These 2 modes are selectable by toggling the EDID button located on the back panel. To switch modes, follow the instructions below.

1. Note the current EDID mode by viewing the front panel's LED array. If the INT LED is active the internal EDID mode is in use. If the EXT LED is active the external EDID mode is in use.
2. If the currently selected EDID mode is not the desired EDID mode, press the EDID button on the rear panel once. The active LED will now switch and the new EDID mode will become active once the unit is reset.
3. Press the reset button to cycle power and initiate the newly selected EDID mode.

The EDID carries import information that the source reads to determine what resolutions and features are supported. The internal EDID has support for resolutions up to 1080p and includes Dolby TrueHD and DTS-HD features.

RMT4-IR REMOTE CONTROL DESCRIPTION



The included RMT-4IR remote control is used to switch between inputs on the 4x2 Switcher for HDMI 1.3. Only one input can be selected at a time and this input is then mirrored to the four HDMI outputs on the rear panel.

Switching

Press the 1 button to switch to HDMI input 1.

Press the 2 button to switch to HDMI input 2.

Press the 3 button to switch to HDMI input 3.

Press the 4 button to switch to HDMI input 4.

IR CHANNEL CONFIGURATION

Why would I need to change the remote channel?

In some instances, the 4x2 Switcher for HDMI 1.3 may use IR codes that conflict with other IR remote control devices. The unit may switch inputs when another brand IR remote control is used or the RMT-4IR may cause other brand IR controlled devices to behave unexpectedly.

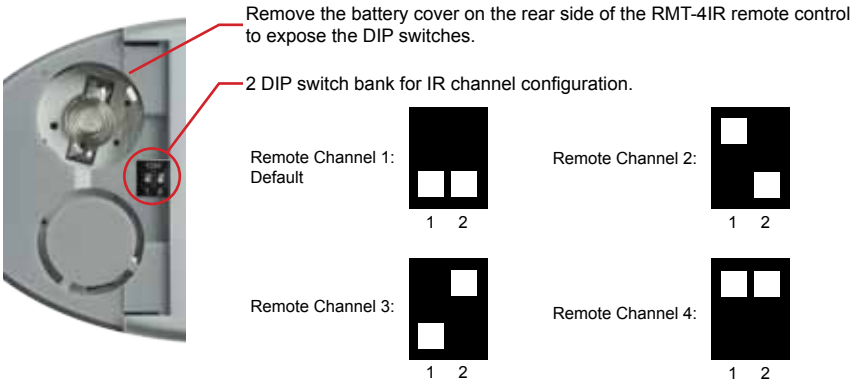
I am experiencing the issues listed above. What do I do?

In these cases it is recommended to change the IR channel that the RMT-4IR remote control and the 4x2 Switcher for HDMI 1.3 use. The IR channel is configured independently on the RMT-4IR remote control and the 4x2 Switcher for HDMI 1.3 but the channel selection must match on both units for proper operation.

How Do I change the Remote Channel?

There are service DIP switches on the RMT-4IR remote control for channel configuration. The 4x2 Switcher for HDMI 1.3 uses a combination of buttons on the rear panel to configure the IR channel. There are 4 channels available for use. Please use the diagram below and information on the next page to locate and change the IR channel to one that is not the default. Remember that the IR channel must match on both the unit and remote control for successful operation.

RMT-4IR Remote Control



IR CHANNEL CONFIGURATION

LED Indicators

The 4x2 Switcher for HDMI 1.3 uses inactive LED and blinking LED combinations to indicate to the user which channel is currently active. The **Currently Selected Input LED Indicators** (Item 6 on page 4 and 5) are the two LEDs used to indicate the IR channel. These LED's will directly correspond to DIP switches 1 and 2 on the RMT-4IR remote control.

LED Input Indicator 1 corresponds to DIP switch 1 on the RMT-4IR remote control.

LED Input Indicator 2 corresponds to DIP switch 2 on the RMT-4IR remote control.

An inactive LED will correspond to a DIP switch set to OFF.

A blinking LED will correspond to a DIP switch set to ON.

For example: IR Channel 2 would be indicated by the following:

RMT-4IR:	DIP switch 1 - ON DIP Switch 2 - OFF
Main Unit:	LED Input Indicator 1 - Blinking LED Input Indicator 2 - Off

Changing IR Channels on the 4x2 Switcher for HDMI 1.3.

The 4x2 Switcher for HDMI 1.3 will use the EDID and Reset buttons, located on the rear panel, for IR channel configuration. Use the steps below to change the IR channel. Please ensure that the IR channel matches on both the RMT-4IR remote control and the 4x2 Switcher for HDMI 1.3.

1. Press and hold down the EDID button.
2. While holding the EDID button, press the Reset button once.
3. The LED indicators for the current IR channel will be active.
4. While holding the EDID button, press the Reset button once to cycle to the next IR channel. The LED indicators will indicate the IR channel change.
5. Repeat step 4 until the desired channel is reached.

Note: The IR channel will cycle from Channel 1 through Channel 4 and then cycle back to Channel 1.

SPECIFICATIONS

Video Amplifier Bandwidth	225 MHz
Input Video Signal	1.2 Volts p-p
Input DDC Signal	5 Volts p-p (TTL)
Single Link Range	1080p/60 12 bit color depth, 1920x1200
HDMI Connector	Type A 19 Pin Female
Power Supply	5V DC
Power Consumption	10 Watts (max)
Dimensions	12"W x 1.25"H x 4.25"D
Shipping Weight	6 lbs.

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.



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