Gefen

4x4 HDTV KVM Matrix

USER MANUAL

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ASKING FOR ASSISTANCE

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Thank you for purchasing the 4x4 HDTV KVM Matrix.

The 4x4 HDTV KVM Matrix switches four DVI sources to any four DVI displays.

Now you can easily switch four cross-platform computers to four digital displays. Our 4x4 HDTV KVM Matrix provides a simple, reliable and highly effective method of creating multiple computer workstations, with each workstation capable of accessing any one of the computers or sources at any time by remote control. You also have the option of setting up the four stations locally or extending them with a Gefen extender. When used with computers, USB and Audio Matrix control signals follow the DVI input for optimal control. The 4x4 HDTV KVM Matrix also supports the connection of HDCP compliant sources and displays.

Note: The switching is done by using either the RMT-16-IR remote control or through the RS232 port. The 4x4 HDTV KVM Matrix is rack mountable. Any HDTV with HDMI inputs can be connected to the DVI outputs of the matrix by using a DVI to HDMI adapter if the cable used is HDMI.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING
OR OPERATING THE 4X4 HDTV KVM MATRIX

- You should connect all the cables and power supplies prior to connecting power to the HDTV sources and 4x4 HDTV KVM Matrix.

- When powering the sources, the display needs to point to the source input.

- The 4x4 HDTV KVM Matrix is housed in a metal box for better RF shielding.

- The 4x4 HDTV KVM Matrix works with all DVI and HDMI displays.

- The 4x4 HDTV KVM Matrix supports both AUDIO and VIDEO signals.

- The 4x4 HDTV KVM Matrix is fully HDCP compliant.

Features

- Increases your productivity by providing you with access to four computers from four workstations

- Maintains highest resolution digital video with no loss of quality

- Supports either PC or Mac USB keyboards/mice

- USB 1.1 Matrix Switching capabilities

- Supports analog audio matrixing

- Discrete IR remote (included)

- Supports resolutions up to 1080p, 2K, and 1920 x 1200

- Supports DDWG standards for DVI monitors
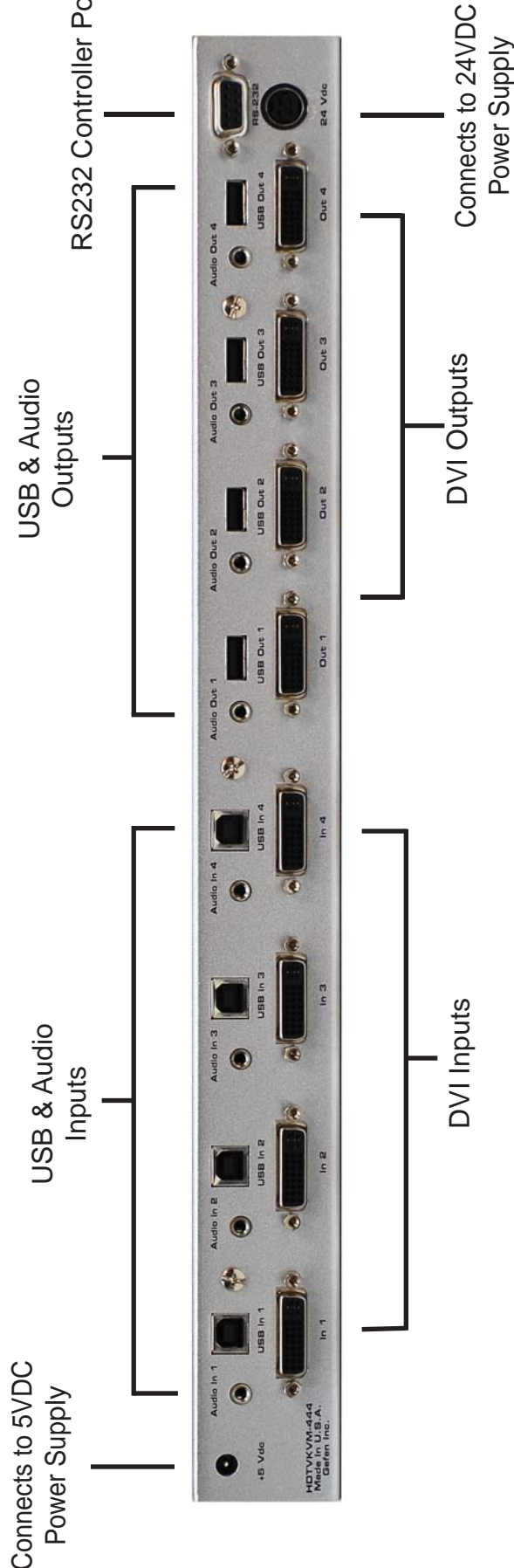
- Includes rack ears

- HDCP Compliant

Includes:

(1) 4x4 HDTV KVM Matrix
(1) RMT-16IR
(1) 24v Power Supply
(1) 5V Power Supply
(4) 6ft Audio Cables
(4) 6ft DVI Cables
(4) 6ft USB Cables
(1) Set of Rack Ears

Front Panel

Power Indicator

IR Sensor

IR Extender Eye Port

Display 4
LED Indicator

Display 3
LED Indicator

Display 2
LED Indicator

Display 1
LED Indicator

Back Panel

RS232 Controller Port

Connects to 24VDC
Power Supply

USB & Audio
Outputs

DVI Outputs

USB & Audio
Inputs

DVI Inputs

Connects to 5VDC
Power Supply

3

USING THE 4X4 HDTV KVM MATRIX

1   Connect all the sources to the DVI inputs on the 4x4 HDTV KVM Matrix, using the supplied cables.

2   Connect the HDMI/DVI displays to the outputs on the 4x4 HDTV KVM Matrix.

3   Connect the 24VDC power supply to the 4x4 HDTV KVM Matrix.

4   Controlling the 4x4 HDTV KVM Matrix using the RMT16-IR:

Pressing Buttons...	Switches...
1-4	Display 1 to view Source 1, 2, 3, or 4
5-8	Display 2 to view Source 1, 2, 3, or 4
9-12	Display 3 to view Source 1, 2, 3, or 4
13-16	Display 4 to view Source 1, 2, 3, or 4

*Note for computers connected to the 4x4 HDTV KVM Matrix - When your computer boots up, it looks for an EDID (extended display identification data) from the display to tell it what monitor is connected and what resolution to output. During boot up of the computer you should have ONLY one output selected to one input at a time so that the computer gets the EDID of the display that is selected. If you have multiple outputs selected to one computer, the computer will read the EDID of the last output selected to it. If all your displays are the same, or all displays are capable of running at the same resolution then this step does not matter.

1. Remove battery cover from the back of the RMT16-IR remote.

2. Verify that dip switches 1 & 2 are in the down (OFF) position.

3. Insert the battery, hold the battery so that you can see the positive side facing up. The side that is not marked must be facing down.

4. Test the RMT16-IR remote by pressing ONLY one button at a time. The indicator light on the remote will flash once each time you press a button. WARNING: Do not press multiple buttons simultaneously and do NOT press buttons rapidly. These actions will cause the remote to reset and steps 1-4 will have to be repeated.

Note: The RMT16-IR ships with two batteries. One battery is required for operation, the second battery is complimentary.

DIP SWITCH GUIDELINES

Inside the 4x4 HDTV KVM Matrix is a bank of Dip Switches. Below is a table describing their functions. By default, all switches are set to the Off position.

| Dip Switch #	Name	Description
1	Switching Delay	Adds a 3 second delay to switching
2	On Board EDID	Feeds a Generic HDMI EDID to all Inputs
3	IR Code Dip Switch	Corresponds to Dip Switch 1 on RMT16-IR
4	IR Code Dip Switch	Corresponds to Dip Switch 2 on RMT16-IR
5	Unused	
6	Unused	
7	Unused	
8	Edge Select	+Edge Pixels

1 2 3 4 5 6 7 8
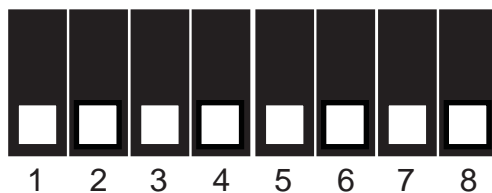
How to open the 4x4 HDTV KVM Matrix:
To access the dip switches, first remove the 10 hex nuts on the back of the unit (8 located above each DVI port and 2 adjacent to the RS232 port). Remove the 5 Philips screws under the unit and the 4 screws on each side of the unit. Now carefully remove the cover of the 4x4 HDTV KVM Matrix.

IR CODES

In the event of IR conflicts, please do the following:

1. Remove the battery cover from the back of the RMT16-IR remote.

2. Locate the Dip Switches above the batteries

3. Switch the Dip Switches on the RMT16-IR to any of the combinations pictured below.

4. Dip Switches 1 and 2 in the RMT16-IR correspond with Dip Switches 3 and 4 inside the 4x4 HDTV KVM Matrix respectively. Switch the switches inside the 4x4 HDTV KVM Matrix to match the same Remote Channel as the RMT16-IR. The 4x4 HDTV KVM Matrix is now set to a new IR Code.

Remote Channel 0:
1   2

Remote Channel 1:
1   2

Remote Channel 2:
1   2

Remote Channel 3:
1   2
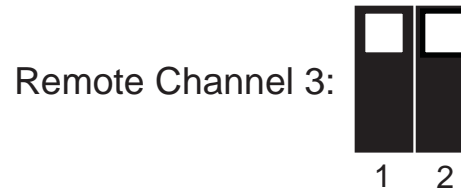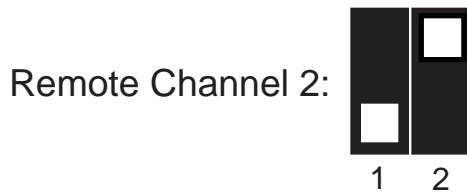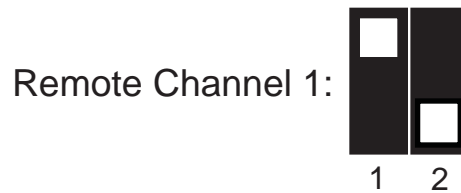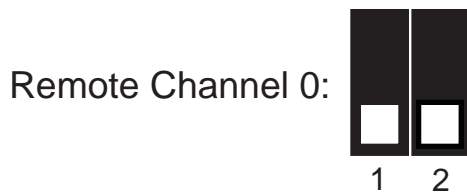
9 Pin Female — Send / Transmit / Ground — 9 Pin Male
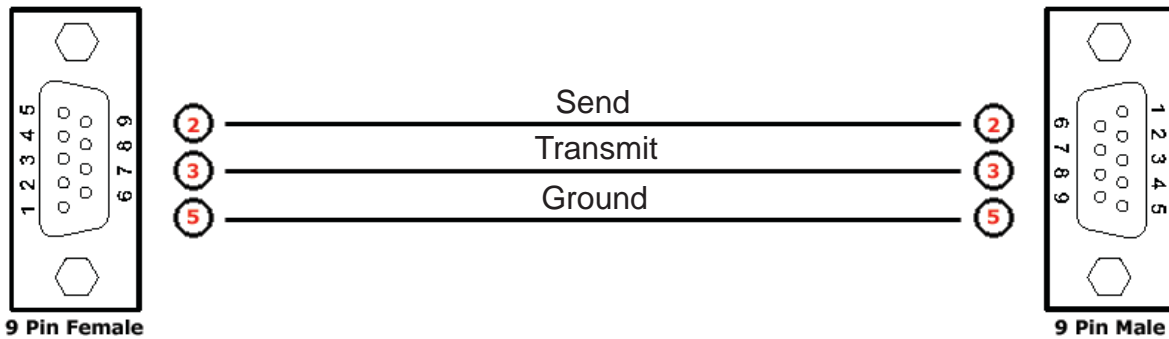
Binary Table

ASCII	Corresponding RMT16-IR Button	Hex	ASCII	Corresponding RMT16-IR Button	Hex
1	1	0011 0001	9	9	0011 1001
2	2	0011 0010	a	10	0110 0001
3	3	0011 0011	b	11	0110 0010
4	4	0011 0100	c	12	0110 0011
5	5	0011 0101	d	13	0110 0100
6	6	0011 0110	e	14	0110 0101
7	7	0011 0111	f	15	0110 0110
8	8	0011 1000	g	16	0110 0111

RS232 Settings

Bits per second 19200

Data bits 8

Parity .... None

Stop bits 1

Flow Control .... None
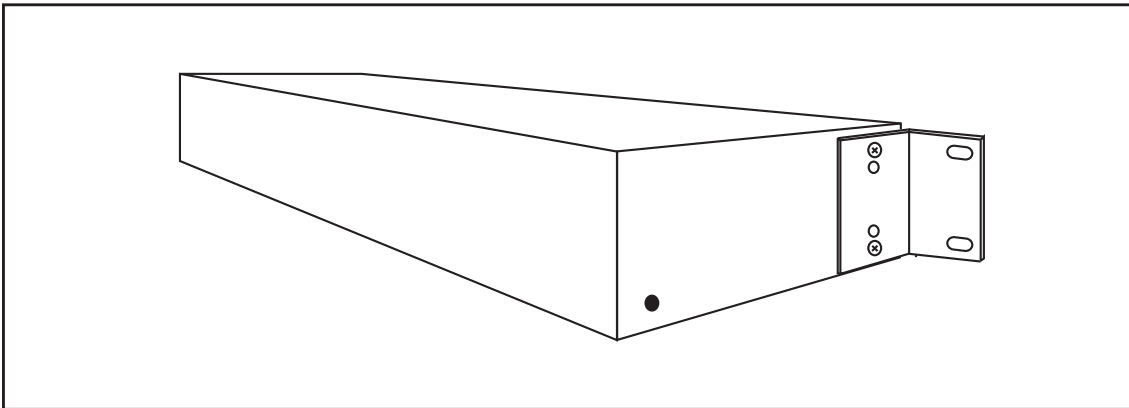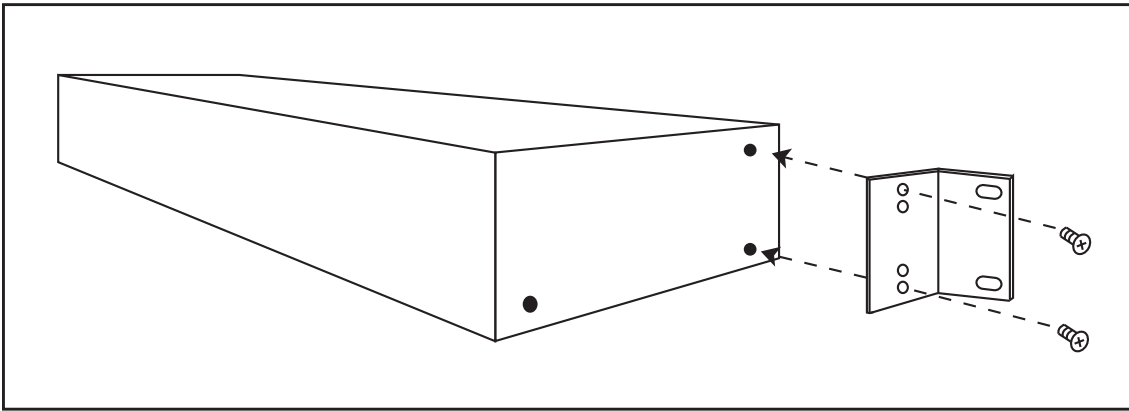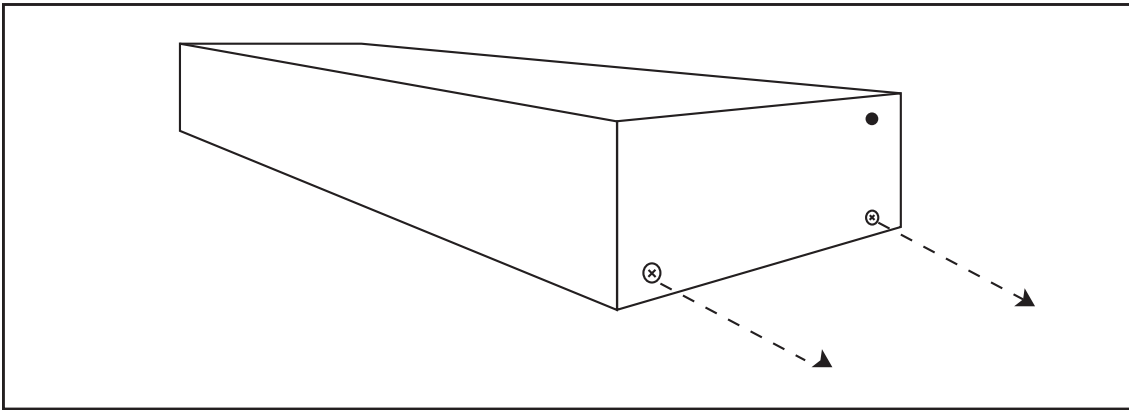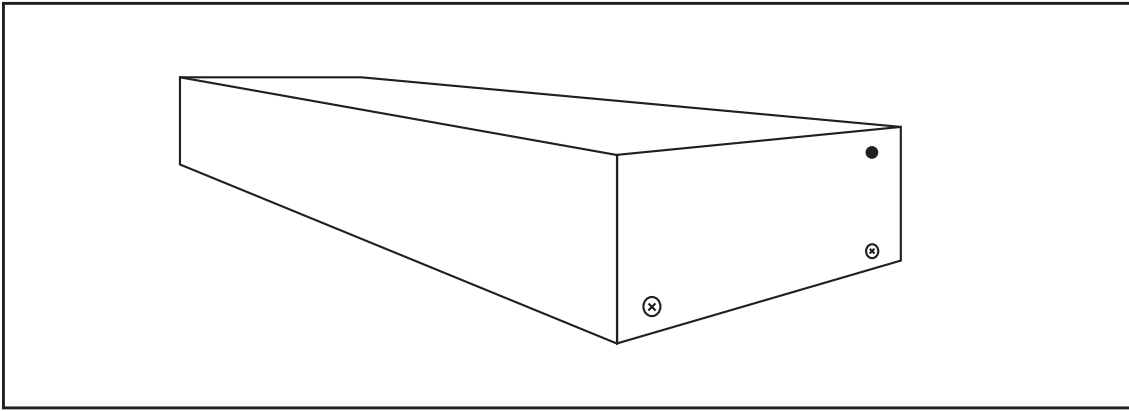
SPECIFICATIONS

Video Amplifier Bandwidth..1.65 Gbps

Input Video Signal...1.2 volts p-p

Input DDC Signal..5 volts p-p (TTL)

Single Link Range...1080p/1920 x 1200

DVI Connector..DVI-I 29 pin female (digital only)

USB Input Connectors...Type "B"

USB Output Connectors...Type "A"

Audio Connectors..3.5mm mini stereo

Power Supply...24V DC

Power Supply...5V DC

Power Consumption..80 watts (max)

Dimensions...17"W x 1.75"H x 6.75"D

Rackmountable..1U Rack Space

Shipping Weight...12 Lbs