

OCTAVA™

4x4 HD Matrix Switch

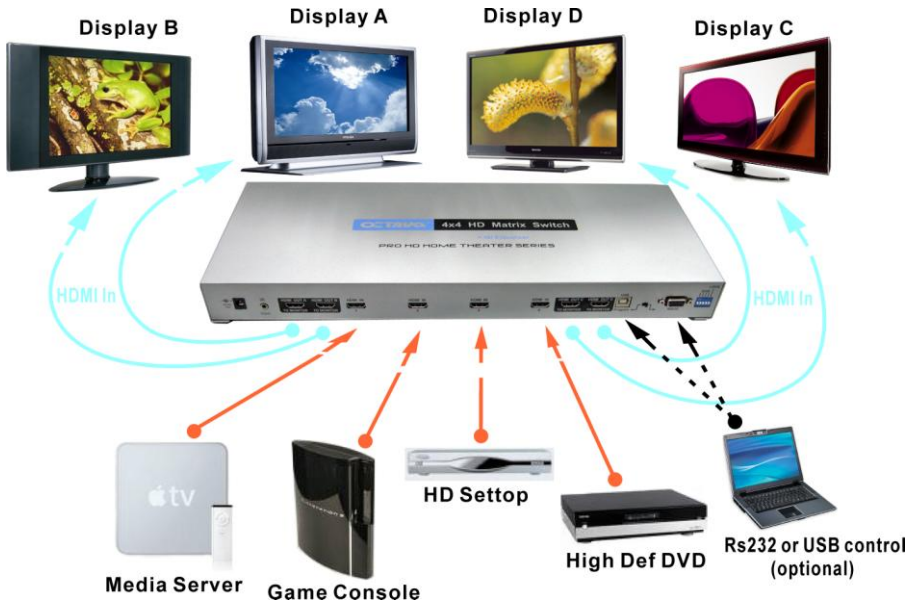
PRO HD HOME THEATER SERIES

Model: HDMX44-V1.3

Installation Guide

Contents

| | |
|--|----|
| Application Diagram..... | 3 |
| Installation..... | 3 |
| Description..... | 4 |
| Features..... | 5 |
| Remote Control Guide | 8 |
| RS232 Control Commands | 10 |
| USB Service Port..... | 10 |
| EDID Configuration | 12 |
| Changing EDID mode..... | 13 |
| 1 RU Rackmount..... | 15 |
| Disabling / Enabling IR Remote Control Receiver..... | 15 |
| Warranty..... | 16 |
| Disclaimers..... | 16 |
| Specifications..... | 17 |



Application Diagram

Installation:

- 1) Connect HD display, A/V receiver to the HDMI Outputs
- 2) Connect the HDMI sources to the HDMI INPUTS
- 3) Turn On HD display, A/V receiver, HDMI sources.
- 4) Connect the DC power adapter to power on Matrix

Description:

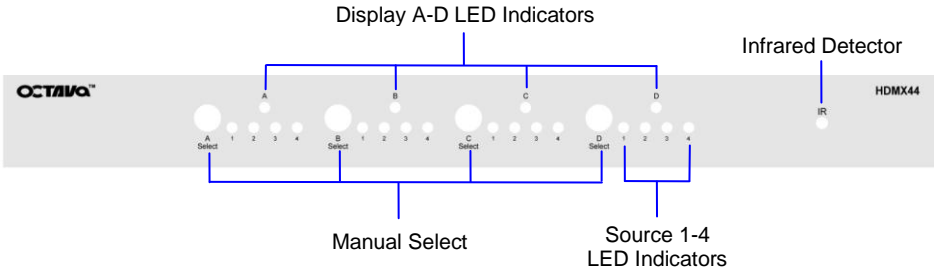
The **Octava 4x4 HD Matrix Switch** allows you to route 4 HD sources to any 4 HD displays! The 4x4 HDMI matrix allows 256 viewing combination of 4 HD sources on 4 HDTVs. You can create Picture By Picture or even have the SAME picture on all 4 HD screens. The 4x4 HDMI Matrix switch is a complete HD routing solution for whole home HDTV systems.

The **Octava 4x4 HD Matrix** is **Full 1080P, V1.3** compatible.

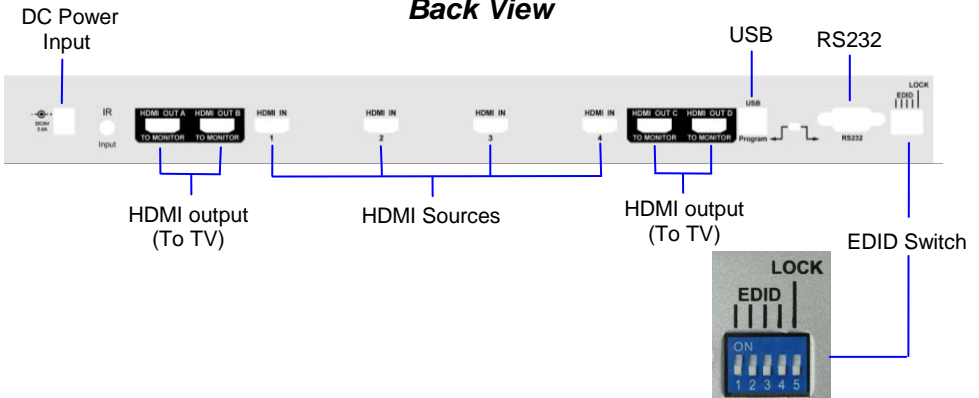
Features:

- Watch ANY 4 HD programs simultaneously on 4 Displays!
- **Full HD, 1080P**
- 4 HDMI inputs, 4 HDMI outputs.
- Matrix allows 256 viewing combinations
- 1 RU mountable
- RS-232 control
- Works with HDMI or DVI-D, HDCP-enabled HDTV
- Supports high resolution video 480P, 720I/P, 1080I/P
- Easy to switch 4 HDMI or DVI-D sources to 4 displays.
- Remote Control (IR) included. Discrete Code allows direct channel control.
- External IR Jack for extension

Front View



Back View



| Switch Number | 1 | 2 | 3 | 4 | 5 |
|---------------|------------------|------------------|------------------|------------------|---|
| Name | EDID switch | EDID switch | EDID switch | EDID switch | Programming/ LOCK switch |
| Function | EDID MODE select | EDID MODE select | EDID MODE select | EDID MODE select | Programming/ LOCK |
| | | | | | Down= EDID Programming mode Up= Locked |

LED Indication:

The Output LED indicates the OUTPUT that is selected.

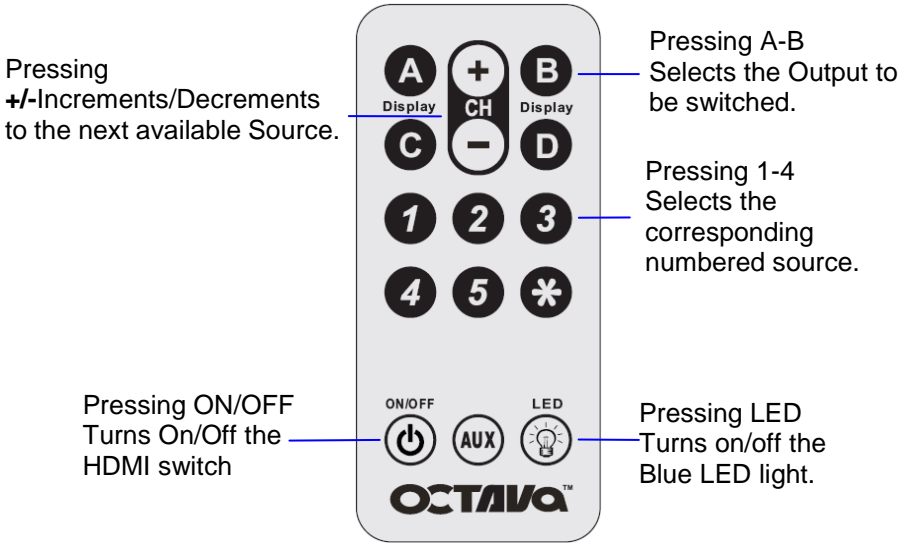
For example, if the OUTPUT B LED is ON, then pressing channel buttons will switch the inputs to OUTPUT B.



Indicates the Output that the Input will be switched to. In this case HDMI Out B



Input 2 is switched
to Display B

Remote Control Guide:



| Button | Function | Notes |
|---|--|-------|
| +, - | Increments/Decrements to the next available Source | |
| 1,2,3,4 | Selects the corresponding numbered source. | |
|  | Turns ON/OFF the LED light. | |
|  | Turns ON/OFF the HDMI switch | |
| Other | Not used | |

Octava's Remote control uses discrete code so can be easily integrated with most Universal Remote Controls such as Logitech's Harmony.

Basic Quick Start:

Use the remote control to select the Display that you wish to control followed by the Input (DVD, Settop) that you wish to watch.

For example:

-Pressing **Display B**, “**2**” will switch Input 2 to HDMI Out B.

-To connect **DIPLAY A to IN1 and DISPLAY B to IN3** you simply follow this sequence

Step 1) **Display A, 1 (this will set Display A to Input 1)**

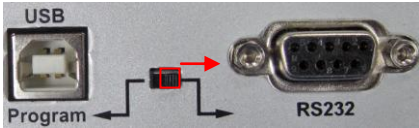
Step 2) **Display B, 3 (this will set Display B to Input 3)**

Here are some more examples:

| Output Selection (Step 1) | Input Selection (Step2) | Result |
|----------------------------------|--------------------------------|--|
| DISPLAY A | “2” | Display A switches to Input 2 |
| DISPLAY B | “1” | Display B switches to Input 1 |
| DISPLAY C | “2” | Display C switches to Input 2 |
| DISPLAY D | “1” | Display D switches to Input 1 |
| DISPLAY A | “+” | Display A increments to next available Input |
| DISPLAY B | “-” | Display B decrements to next available Input |
| DISPLAY C | “+” | Display C increments to next available Input |
| DISPLAY D | “-” | Display D decrements to next available Input |

RS232 Control Commands:

The Octava 4x4 HD Matrix Switch can be easily integrated with 3rd Party control systems via RS232 control. The following shows the control protocol for controlling the HDMX44.



Set the switch to RS-232 side as shown.

| RS-232 protocol | |
|-----------------|------|
| Baud Rate | 9600 |
| Data Bits | 8 |
| Parity Check | none |
| Stop Bits | 1 |
| Flow control | none |

Controlling the HDMX44 via RS232 can be done by send a series of commands per the **RS232 Command Table**.

| Basic controls | | | | | |
|---|----------|------|------|------|------|
| Note: The commands are in HEX. No spaces between HEX codes. | | | | | |
| | HEX CODE | | | | |
| Port Status | 0x02 | 0x30 | 0x30 | 0x31 | 0x03 |
| Turn ON LED | 0x02 | 0x30 | 0x30 | 0x33 | 0x03 |
| Turn OFF LED | 0x02 | 0x30 | 0x30 | 0x34 | 0x03 |
| Turn ON Power | 0x02 | 0x30 | 0x30 | 0x35 | 0x03 |
| Turn OFF Power | 0x02 | 0x30 | 0x30 | 0x36 | 0x03 |

Example:

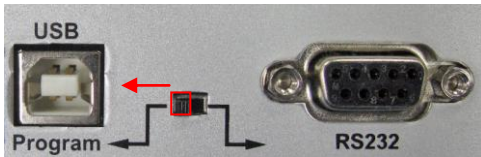
To turn off LED. Send Command:

02 30 30 34 03 in Hex

| Switching Commands | | | | | |
|--|-----------------|------|------|------|------|
| Note: The commands are in HEX. No spaces between HEX codes. | | | | | |
| Output A Switching Commands | HEX CODE | | | | |
| Select OUT A to Input port 1 | 0x02 | 0x32 | 0x31 | 0x31 | 0x03 |
| Select OUT A to Input port 2 | 0x02 | 0x32 | 0x31 | 0x32 | 0x03 |
| Select OUT A to Input port 3 | 0x02 | 0x32 | 0x31 | 0x33 | 0x03 |
| Select OUT A to Input port 4 | 0x02 | 0x32 | 0x31 | 0x34 | 0x03 |
| Output B Switching Commands | | | | | |
| Select OUT B to Input port 1 | 0x02 | 0x32 | 0x32 | 0x31 | 0x03 |
| Select OUT B to Input port 2 | 0x02 | 0x32 | 0x32 | 0x32 | 0x03 |
| Select OUT B to Input port 3 | 0x02 | 0x32 | 0x32 | 0x33 | 0x03 |
| Select OUT B to Input port 4 | 0x02 | 0x32 | 0x32 | 0x34 | 0x03 |
| Output C Switching Commands | | | | | |
| Select OUT C to Input port 1 | 0x02 | 0x32 | 0x33 | 0x31 | 0x03 |
| Select OUT C to Input port 2 | 0x02 | 0x32 | 0x33 | 0x32 | 0x03 |
| Select OUT C to Input port 3 | 0x02 | 0x32 | 0x33 | 0x33 | 0x03 |
| Select OUT C to Input port 4 | 0x02 | 0x32 | 0x33 | 0x34 | 0x03 |
| Output D Switching Commands | | | | | |
| Select OUT D to Input port 1 | 0x02 | 0x32 | 0x34 | 0x31 | 0x03 |
| Select OUT D to Input port 2 | 0x02 | 0x32 | 0x34 | 0x32 | 0x03 |
| Select OUT D to Input port 3 | 0x02 | 0x32 | 0x34 | 0x33 | 0x03 |
| Select OUT D to Input port 4 | 0x02 | 0x32 | 0x34 | 0x34 | 0x03 |

USB Service Port:

The USB port is for service and EDID updates if needed. Contact us for this feature.



Set the switch to USB/Program side as shown.



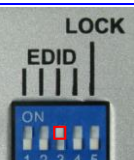
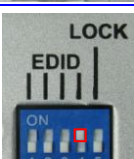

EDID Configuration:

The Matrix is preloaded with 5 common EDID configurations.

It is recommended to keep the EDID in the default factory mode 1 for most Applications.



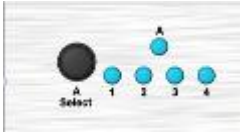
Custom EDID mode can be downloaded via USB. Contact us for this feature.


To change the EDID settings, please see section “*changing EDID settings*” for programming instructions.

| Mode | Video | Audio | Description | Switch settings |
|------|--|---|--|--|
| 1 | 480P,720I/P, 1080I/P | PCM, Bitstream (Dolby Digital, DTS) | Default Mode. Internal EDID |  |
| 2 | Read EDID of all monitors/receivers and set: Video=Minimum Resolution of devices connected. | Read EDID of all monitors/receivers and set: AUDIO =Maximum capability of devices connected. | External EDID |  |
| 3 | 480P,720 I/P, 1080 I | 2 CH PCM | Basic Mode. Internal EDID |  |
| 4 | 480P, 720 I/P, 1080 I/P, + 3D specifier | PCM, Bitstream (Dolby Digital, DTS) | 3D Mode. Internal EDID |  |
| 5 | 480P, 720 I/P, 1080 I/P Custom mode(user download) | 2 CH PCM Custom mode(user download) | Internal EDID Custom Mode |  |

Changing EDID mode:

It is recommended to keep the EDID in the factory default MODE1.
If necessary, you may set to different EDID mode by following these instructions.

| Step | Action | | Notes |
|------|---|---|---|
| 1 | Disconnect all sources and display from Matrix | | |
| 2 | Set switch 1,2,3,4,5 to down position as shown | |  |
| 3 | Set the EDID to the mode desired. (MODE 2 shown.) | See page 11 for other EDID modes |  |
| 4 | Reset Power to the Matrix by disconnecting the power and reconnecting power. | |  |
| 5 | The LED will now indicate the EDID Mode that you will program.(mode 2 shown) | LED will flash: 1=Mode 1 2=Mode 2 3=Mode 3 4=Mode 4 1+4=Mode 5 |  |
| 6 | Press the "A" button on the front panel. LED will flash for ~2 min while programming. | Programming will take ~2 minutes. LED will flash while programming. |  |
| 7 | Wait. Programming is complete when LED indicates "1" | |  |

| | | | |
|----|--|--|---|
| 8 | Set the Program/ LOCK switch #5 to LOCK Position (UP) | |  |
| 9 | Connect all video sources and displays to Matrix and turn ON | | |
| 10 | Re-power the Matrix. | | |

1 RU Rackmount:

The Octava 4x4 HD Matrix Switch can be installed in a 1 RU rack by simply installing the rack mounts included.



Disabling /Enabling Front Panel IR Remote Receiver:

To disable the front panel IR remote receiver-insert the plastic plug into the IR jack as shown.



Front panel
IR receiver -disabled



Front panel
IR receiver -enabled

Warranty

Octava warrants the equipment purchased to be free from defects in material and workmanship under normal use and service for a period of 1 year. In the event applicable law imposes any implied warranties, the implied warranty period is limited to 1 year from the date of receipt. If Octava's equipment fails because of defects (1) year from the date of receipt, Octava will at its option, A) repair or replace the equipment, or B) request return of equipment for refund of the price paid for the product provided that the equipment has not been subjected to mechanical, electrical or other abuse or modifications. Proof of sale required to claim warranty.

Disclaimers

IN NO EVENT SHALL OCTAVA'S OR ITS SUPPLIER'S LIABILITY FOR ANY CLAIM WHATSOEVER EXCEED THE COST OF THE PRODUCTS GIVING RISE TO THE CLAIM, WHETHER BASED IN CONTRACT, WARRANTY, INDEMNITY OR TORT (INCLUDING, WITHOUT LIMITATION, NEGLIGENCE AND STRICT LIABILITY) OR OTHERWISE. IN NO EVENT SHALL OCTAVA INC. OR ITS SUPPLIERS BE LIABLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL OR OTHER INDIRECT DAMAGES (INCLUDING, WITHOUT LIMITATION, LOSS OF REVENUES, PROFITS OR OPPORTUNITIES), HOWEVER CAUSED, ON ANY THEORY OF LIABILITY, WHETHER OR NOT OCTAVA INC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

WHILE EVERY PRECAUTION HAS BEEN TAKEN IN THE PREPARATION OF THIS MANUAL, OCTAVA ASSUMES NO RESPONSIBILITY FOR ERRORS OR OMISSIONS. IN NO EVENT WILL OCTAVA ASSUME ANY LIABILITY FOR DAMAGES RESULTING FROM THE USE OF THE INFORMATION CONTAINED HEREIN.

OCTAVA RESERVES THE RIGHT TO CHANGE THE SPECIFICATIONS, FUNCTIONS OR CIRCUITRY OF THE PRODUCT WITHOUT NOTICE.

| Description | Specifications |
|------------------------------|--|
| Model | HDMX44-V1.3 |
| HDMI Inputs | 4 |
| HDMI Outputs | 4 |
| IN/Out Connectors | 19 pin HDMI female type-A |
| RS-232 control port | 1 |
| Display Selection | Remote, Manual, RS232 |
| Video Resolution | 480 P, 720 I/P, 1080 I/P |
| Video Data Rate | 6.75 Gbps |
| Vertical Frequency Scan Rate | 24 / 50 / 60 Hz |
| Dimension | 16.85 x 6.29 x 1.67 inch (427.9 x 159.75 x 42.3 mm) |
| DC adapter (included) | 9VDC, 2.5A |
| Rackmount capable | 1RU, Rack mounts included |
| Remote control (IR) | Infrared, Discrete code |

For Questions and support:

Email : info@octavainc.com

URL: www.octavainc.com

Copyright© 2011 Octava Inc. All rights reserved.

HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LL.C

All trademarks are the sole property of their respective companies