

**OCTAVA™**

**4x1 HD Video Switch + ARC**

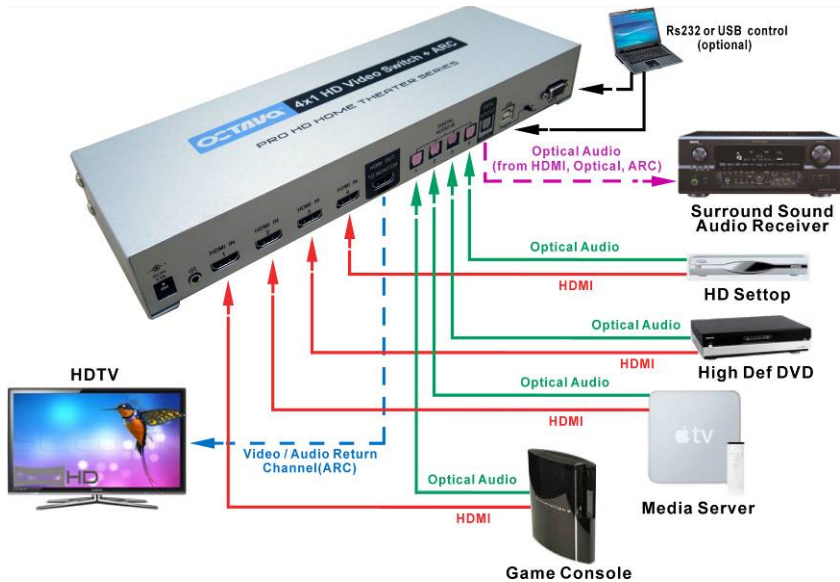
**PRO HD HOME THEATER SERIES**

**Model: HD41-ARC**

**Installation Guide**

## Contents

Application Diagram.....	3
Description.....	3
Features.....	4
Installation.....	4
Remote Control Guide .....	6
RS232 Control Commands .....	7
USB Service Port.....	9
Smart Scan™ .....	9
1 RU Rackmount.....	10
Disabling / Enabling IR Remote Control Receiver.....	10
Warranty.....	11
Disclaimers.....	11
Specifications.....	12



## Application Diagram

### Description:

The Octava 4x1 HDMI switch +ARC is a complete HD video and audio switch solution designed to work with HDTV's with ARC(audio return channel) and your existing audio receiver system with Optical Audio inputs.

The Octava 4x1 HDMI switch +ARC includes: 4 HDMI inputs, 4 Optical Audio inputs, 1 Optical Audio output, 1 HDMI output with ARC support.

The Optical Audio Output can operate in 3 modes thus allow users total flexibility :

- 1) convert HDMI Input source to Optical Audio Format
- 2) convert HDMI ARC from HDTV to Optical Audio Format
- 3) Switch directly from 4 Optical inputs to the Optical Output

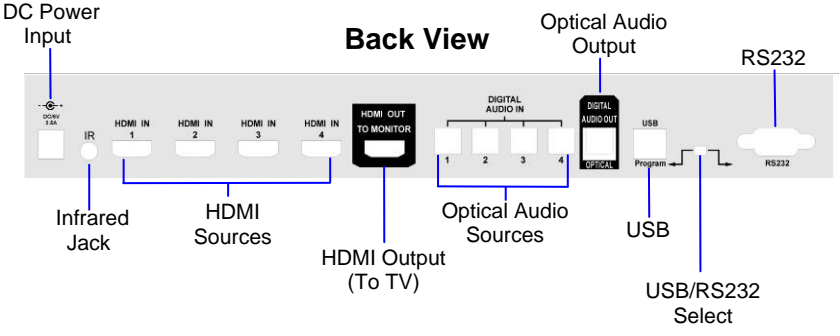
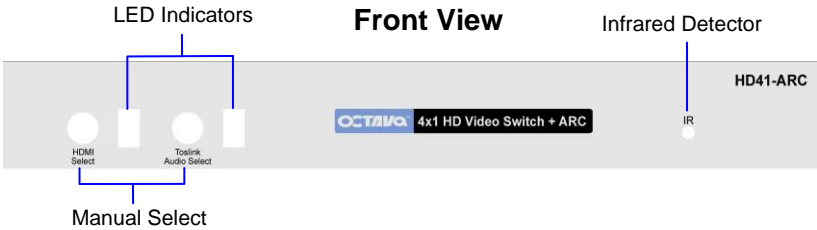
When used in the Optical switching mode, the Optical source can be independent from HDMI source selection. For example, you may view a video on the HDTV while listening to a different audio source via Optical Input.

## **Features:**

- Switch 4 HDMI sources to 1 output
- 3D support , 1080P
- 4 Optical Audio Inputs
- 1 Optical Audio Output
  - Optical audio mode 1: convert HDMI audio to optical output
  - Optical audio mode 2: convert HDMI ARC from HDTV to Optical Audio Format
  - Optical audio mode 3: Switch directly from the 4 Optical inputs to the Optical Output
- Independent Optical source selection
- 1 RU mountable
- Supports high resolution video 480p, 720i/p, 1080i/p
- Remote Control (IR) included. Discrete Code allows direct channel control.
- External IR Jack for extension

## **Installation:**

- 1)Connect the Monitor to the HDMI OUT
- 2)Connect the HDMI sources to the HDMI INPUTS
- 3)Turn On your HDTV and at least 1 HD source
- 4)Connect the DC power adapter.



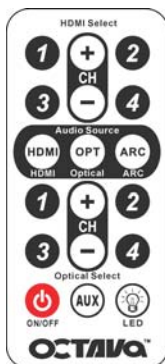
**HDMI Select**  
Change HDMI input Port



**Toslink Audio Select**  
Change Digital Audio Output Source

<b>Examples</b>	
	HDMI Out = Input 1 Digital Audio Output = HDMI Input 1
	HDMI Out = Input 1 Digital Audio Output = From ARC of HDTV
	HDMI Out = Input 1 Digital Audio Output = Optical In1
	HDMI Out = Input 2 Digital Audio Output = Optical In3

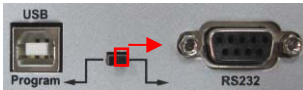
## Remote Control Guide:



	Function	
	<p><b>1-4</b> Switch HDMI input 1-4</p> <p><b>+/-</b> Switch HDMI input to next input</p>	
	<p><b>HDMI-Optical</b> Audio output will be converted from the HDMI Input selected.</p>	<p>LED will indicate H</p>
	<p><b>OPT-</b> Optical Audio is switched from Optical Input selected.</p> <p>Pressing <b>OPT</b> will automatically synchronize the Optical Input Port to the HDMI port # selected.</p> <p>For example: If HDMI = input 2. Press <b>OPT</b> will automatically switch Optical Audio Output to input #2</p>	
	<p><b>ARC-</b> Optical Audio will play audio from HDTV ARC Port</p> <p><i>Note: to use ARC feature. You may need to enable CEC control on your equipment.</i></p>	<p>LED will indicate A</p>
	<p>Press to directly switch optical input.</p> <p><b>1-4</b> Switch Optical input 1-4</p> <p><b>+/-</b> Switch Optical input to next input</p> <p>Hint: Press <b>OPT</b> to synchronize the Optical Input Port to the HDMI port # selected.</p>	
	<p>Turns ON/OFF the LED light.</p>	
	<p>Turns ON/OFF the HD41-ARC</p>	

## RS232 Control Commands:

The Octava HD41-ARC can be easily integrated with 3<sup>rd</sup> Party control systems via RS232 control. The following shows the control protocol:



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

Basic controls				
Note: The commands are in HEX. No spaces between HEX codes. "0x" denotes HEX and not part of command				
	HEX CODE			
Port Status	0x02	0x30	0x31	0x03
Turn ON LED	0x02	0x30	0x33	0x03
Turn OFF LED	0x02	0x30	0x34	0x03
Turn ON Power	0x02	0x30	0x35	0x03
Turn OFF Power	0x02	0x30	0x36	0x03
Turn ON Smart Scan	0x02	0x30	0x37	0x03
Turn OFF Smart Scan	0x02	0x30	0x38	0x03

For Example:

Turn OFF LED Send: 02 30 34 03 ( in hex, no space)

### Video Switching Commands

Note: The commands are in HEX. No spaces between HEX codes.  
"0x" denotes HEX and not part of command

Output A Switching Commands	HEX CODE			
Select OUT A to Input port 1	0x02	0x32	0x31	0x03
Select OUT A to Input port 2	0x02	0x32	0x32	0x03
Select OUT A to Input port 3	0x02	0x32	0x33	0x03
Select OUT A to Input port 4	0x02	0x32	0x34	0x03

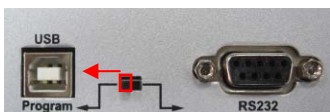
### Audio Switching Commands

Note: The commands are in HEX. No spaces between HEX codes.  
"0x" denotes HEX and not part of command

Output A Switching Commands	HEX CODE			
HDMI Audio Input → Digital Audio Out	0x02	0x39	0x35	0x03
HDTV ARC port → Digital Audio Out	0x02	0x39	0x36	0x03
Optical In 1 → Digital Audio Out	0x02	0x39	0x31	0x03
Optical In 2 → Digital Audio Out	0x02	0x39	0x32	0x03
Optical In 3 → Digital Audio Out	0x02	0x39	0x33	0x03
Optical In 4 → Digital Audio Out	0x02	0x39	0x34	0x03

## USB Service Port:

The USB port is for service and updates if needed. Contact us if you need service.



Set the switch to USB/Program side as shown.

## Smart Scan™:

**Smart Scan™** will automatically switch to the HDMI input source when the input source is turned on and detected. If no HDMI sources are detected, then the switch will go into standby mode. The Scan is ON as default.

### Turning Scan OFF:

In the event that you wish to Turn OFF the Smart Scan feature please follow these steps:

	To Disable Scan	
1	Connect Power to the switch	
2	Press and hold down the HDMI select AND Toslink Audio Select Button for 5 seconds until LED display shows 0	An image showing two circular buttons. The left button is labeled 'HDMI Select' and the right button is labeled 'Toslink Audio Select'. Both buttons have a red arrow pointing to them, indicating they should be pressed.
3	Done. Scan is now turned off	

### Turning Scan ON:

You can turn the Smart Scan feature back on by simply recycling the power to the switch. This will enable the Smart Scan feature.

## 1 RU Rackmount :

The Octava HD41-ARC 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.



**IR disabled**



**IR 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.

<b>Description</b>	<b>Specifications</b>
Model	HD41-ARC
HDMI Inputs	4
HDMI Display Output	1
Optical Audio Inputs	4
Optical Audio Output	1
Display Selection	Remote, Manual, RS232
Single Link Range	480P, 720 I/P, 1080 I/P
Video Data Rate	6.75 Gbps
Vertical Frequency Scan Rate	24 / 50 / 60 Hz
Dimension	12.70 x 4.1 x 1.67 inch (322.5 x 104.1 x 42.3mm)
DC adapter (included)	5VDC, 2.5A
Rackmount capable	1RU, Rack mounts included
Remote control (IR)	Infrared, discrete code.

For Questions and support:

Email: [info@octavainc.com](mailto:info@octavainc.com)

URL: [www.octavainc.com](http://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

Rev.B