



4x4 Audio/Video Matrix Switch

with 4K Video Resolution Support

Model 103081



- ◆ Distributes any combination of four HDMI sources to four displays

User Manual



www.cablematters.com

Table of Contents

1. INTRODUCTION	1
1.1 Introduction	
1.2 Copyright and Trademarks	
1.3 FCC Compliance Statement	
2. PRODUCT OVERVIEW	
2.1 Package Contents	
2.2 Product Description	2
2.3 Product Features	
3. CONNECTION AND OPERATION	
3.1 Installation Checklist.....	3
3.2 Front Panel Connections	
3.3 Rear Panel Connections.....	4
3.4 IR Remote Functions	
3.5 Connection Instructions	5
3.6 EDID Programming Options Menu	
3.7 Audio Mirrored Output Ports.....	7
3.8 Video and Audio Settings with a Windows Computer	8
3.9 Video and Audio Settings with a Mac Computer	9
4. COMPUTER REMOTE PROGRAMMING	10
4.1 RS-232 Cable	
4.2 Configuration over IP	
4.3 EDID Tab Menu	11
4.4 Matrix Tab Menu	
5. TROUBLESHOOTING TIPS	12
6. TECHNICAL SPECIFICATIONS	13
7. WARRANTY AND SUPPORT	14
7.1 Customer Support and Contact Information	
7.2 Warranty Information	
7.3 Limitations of Liability	

1. INTRODUCTION

1.1 Introduction

Thank you for your purchase from Cable Matters® Inc., the 'Reliable Connectivity' company. This User Manual provides an overview of the features and installation of your new

4x4 Matrix Switch with 4K video resolution support

Please read these instructions carefully before connecting, operating, or configuring this product. Please keep this manual for future reference.

Contact support@cablematters.com for questions or product support.

1.2 Copyright and Trademarks

Specifications are subject to change without notice. Cable Matters is a registered trademark or trademark of Cable Matters Inc. All rights reserved. All other trademarks are the property of their respective owners.

1.3 FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

2. PRODUCT OVERVIEW

2.1 Package Contents

Please check that the following items are contained in the package:

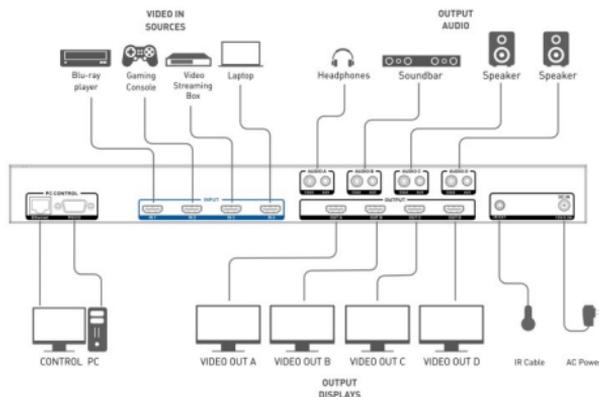
- 1 x 4x4 Matrix Switch
- 1 x AC Power Adapter
- 1 x IR Remote with battery
- 1 X IR Extension Cable
- 2 x Mounting Brackets with screws
- 1 x RS232 Cable (download software from Cable Matters)
- 2 x 4K rated HDMI Cables
- 1 x User Manual (available as a PDF from Cable Matters)

NOTE: Two HMDI cables are included. Additional cables are sold separately.

www.cablematters.com

2.2 Product Description

The Cable Matters® 4x4 Audio/Video Matrix Switch is the perfect solution for switching any combination of HDMI sources to displays with HDMI input ports. Connect up to four devices to four separate displays. Control each device independently with the handheld IR remote.



2.3 Product Features

- Connect up to 4 input sources with HDMI output
- Switch sources between 4 output displays with HDMI
- Provides compatibility between 4K and 1080p sources and displays
- Intelligent EDID feature allows programming of sources and displays
- Simultaneous switching with a handheld IR remote
- Video resolution support up to 4K UHD 3840 x 2160 @ 60Hz
- Dolby Digital, DTS, Dolby TrueHD, DTS HD-Master Audio support
- Audio support for 2.1, 5.1, and 7.1 surround sound
- HDMI audio output mirroring with 3.5mm stereo and digital coax ports
- Program remotely with an RS-232 cable or over a network with IP
- Rugged metal housing construction reduces EMI/RFI noise
- Includes a 2-Pack of 4K rated HDMI cables

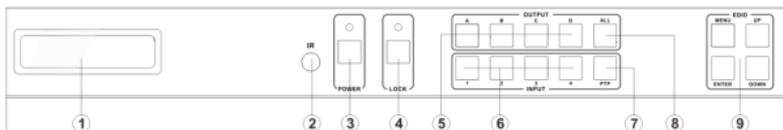
3. CONNECTION AND OPERATION

3.1 Installation Checklist

Please review these steps before installing the HDMI Matrix Switch

- Power-off the source and display equipment before connecting
- Matrix must be located within 4.5 feet of an electrical outlet
- 4K displays require 4K rated HDMI cables in the shortest length needed
- Use high quality solid copper HDMI cables for the best performance
- Certain cable set-top boxes may block replication of the signal
- Test the Matrix and cabling before installing in a permanent location
- Connecting an HDMI cable longer than 35 feet is not recommended

3.2 Front Panel Connections



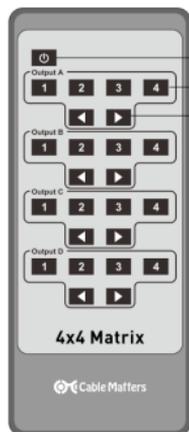
- 1) LED connection status screen
- 2) IR sensor window
- 3) POWER On/Off with green LED
- 4) Panel LOCK button to prevent accidental switching
- 5) OUTPUT: Display selection buttons A, B, C, D
- 6) INPUT: Source selection buttons 1, 2, 3, 4
- 7) PIP: Point-to-Point connects A-1, B-2, C-3, D-4
- 8) ALL: Select all four displays and connect to a single input
- 9) MENU: Display EDID settings

3.3 Rear Panel Connections



- 1) Ethernet: Access Matrix programming over a network with IP
- 2) RS-232: Access Matrix programming with an RS-232 cable
- 3) INPUT: Connect an HDMI cable to sources 1, 2, 3, 4
- 4) OUTPUT: Connect an HDMI cable to displays A, B, C, D
- 5) AUDIO: Mirrors each output port with a 3.5mm or digital coax cable
- 6) IR EXT: Connect the included IR extension cable
- 7) DC-IN: Power cable port

3.4 IR Remote Functions



- ① 1) Power On/Off switch
- ② 2) Select Output A, B, C or D
- ③ 3) Select Input 1,2,3 or 4
- 4) Use L/R arrows to scroll through the Inputs

NOTES:

Remove the battery tab before using

Remote must have line of sight with the IR reader window on the Matrix

3.5 Connection Instructions

1. Connect the AC power adapter to the unit and an electrical outlet
2. Power off all the source equipment and output displays
3. Connect the HDMI cables to the sources and output displays
4. Power on the video sources and output displays
5. Depress the Matrix **POWER** button to establish the connections
6. Select the **HDMI INPUT** on the menu of each display
7. Select the **AUDIO INPUT** on the menu of each display
8. Check the **HDMI AUDIO OUTPUT** from the source (if needed)
9. Switch inputs to the displays with the buttons on the Matrix or with the handheld remote

3.6 EDID Programming

This 4x4 HDMI Matrix can connect HDMI source equipment and output displays with different video resolutions and audio output settings. The settings can be individually programmed using the EDID management function. The available programming options that can be selected are listed on the next page.

- 1) Depress the **EDID MENU** button
- 2) Press the **UP** or **DOWN** buttons to find the video and audio setting
- 3) Press **ENTER**
- 4) Press the **UP** or **DOWN** to locate the **INPUT** for 1,2,3 or 4
- 5) Press the **ALL** button to select all **OUTPUTS A+B+C+D**
- 6) Press the **PTP** button to connect A to 1, B to 2, C to 3, D to 4

EDID #	DESCRIPTION
1	1080p, 2 Ch Audio
2	1080p, Dolby Digital, DTS 5.1
3	1080p, HD Audio 7.1
4	1080i, 2 Ch Audio
5	1080i, Dolby Digital, DTS 5.1
6	1080i, HD Audio 7.1
7	3D, 1080p, 2 Ch Audio
8	3D, 1080p, Dolby Digital, DTS 5.1
9	3D, 1080p, HD Audio 7.1
10	4K30_444, 2 Ch Audio
11	4K30_444, Dolby Digital, DTS 5.1
12	4K30_444, HD Audio 7.1
13	4K60_420, 2 Ch Audio
14	4K60_420, Dolby Digital, DTS 5.1
15	4K60_420, HD Audio 7.1
16	4K60_444, 2 Ch Audio
17	4K60_444, Dolby Digital, DTS 5.1
18	4K60_444 HD Audio 7.1
19	Copy HDMI Output A
20	Copy HDMI Output B
21	Copy HDMI Output C
22	Copy HDMI Output D

www.cablematters.com

3.7 Audio Mirrored Output Ports



Audio can be mirrored from Displays A, B, C or D

The COAX ports connect a digital audio coaxial cable for 2 channel stereo or compressed 5.1 surround sound.

The AUX ports connect a 3.5mm stereo cable to a headset or speaker for 2 channel audio.

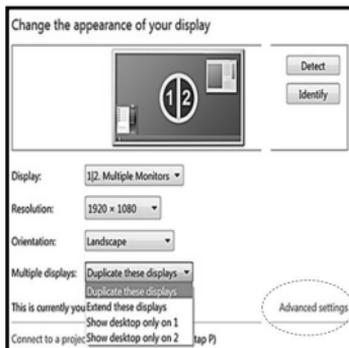
Note:

The 4x4 Matrix supports 2.1, 5.1 and 7.1 Dolby Digital, DTS, Dolby TrueHD, and DTS HD-Master Audio over HDMI.

3.8 Video and Audio Settings with a Windows Computer

VIDEO SETTINGS

- 1) Right-click on desktop and select **Screen Resolution**
- 2) Select **Duplicate** or **Extend**
- 3) Click on **Advanced settings** to change the refresh rate



NOTE: Refer to the user manual of your monitor, TV, or projector to change the resolution and sound settings. Verify that audio is supported on the display.



SOUND SETTINGS

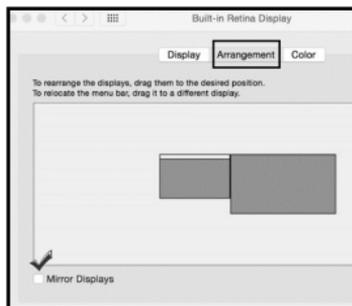
- 1) Select **Control Panel > Sound**
- 2) Select **Playback** tab
- 3) Adjust volume from the connected display menu (if equipped)



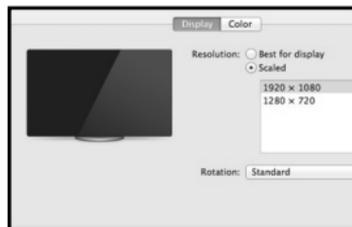
3.9 Video and Audio Settings with a Mac Computer

VIDEO SETTINGS

- 1) Open **Apple** Menu
- 2) Select **System Preferences**
- 3) Click on **Displays**
- 4) Click **Arrangement** tab
- 5) Choose **Duplicate** or **Extend**
- 6) Select **Display** tab to adjust the resolution



NOTE: Refer to the user manual of your monitor, TV, or projector to change the resolution and sound input settings and to verify that audio is supported.



SOUND SETTINGS

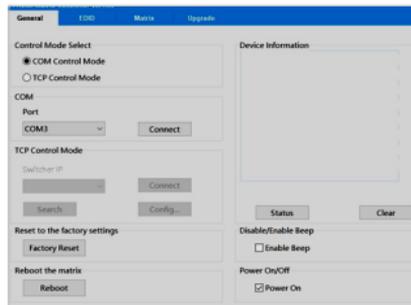
- 1) Open **Apple** Menu
- 2) Select **System Preferences**
- 3) Click on **Sound**
- 4) Select Output tab
- 5) Adjust volume at connected display



4. COMPUTER REMOTE PROGRAMMING

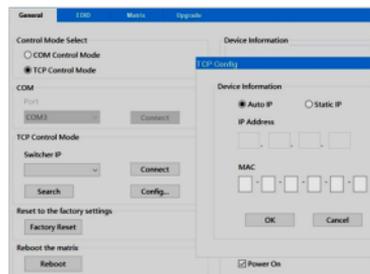
4.1 RS-232 Cable

- 1) Connect an RS-232 cable to a Windows computer with the included cable (use a USB to RS-232 converter cable, if needed)
- 2) Download the Matrix App from www.cablematters.com/downloads under SKU 103081
- 3) Install and launch the App
- 4) Select *COM Control Mode*
- 5) Select the connected *COM* port
- 6) Click *Connect*



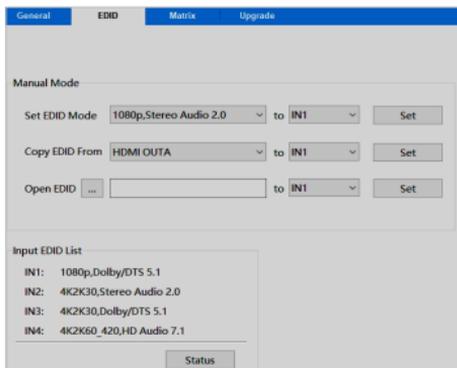
4.2 Configuration over IP

- 1) Connect to the Internet with a Windows computer
- 2) Download the Matrix App from www.cablematters.com/downloads under SKU 103081
- 3) Connect the Matrix to a router
- 4) Install and launch the App
- 5) Select *TCP Control Mode*
- 6) Click *Search* to find the IP address
- 7) Select the IP and click *Connect*



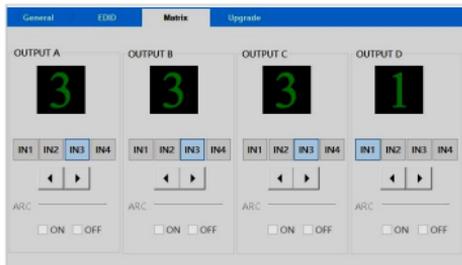
4.3 EDID Tab Menu

- Click on the EDID tab to manually program the EDID mode for each input
- Copy the EDID setting from Output displays A, B, C, D



4.4 Matrix Tab Menu

- Select the Input and Output.
- Activate the ARC (Audio Return Channel)



5. TROUBLESHOOTING TIPS

- Verify that the Matrix and all connected equipment have power.
- Verify that all cables are connected to the correct input and output ports.
- Verify that the correct video input source and output display is selected.
- Connected equipment must support HDCP to view protected video content.
- A 'Not Supported' error message may indicate that the source equipment does not support HDCP (or more than 1 output) for content protected video.
- Directly connect the video source to a display to test for compatibility.
- Check the audio output settings from the source device or computer.
- Test each HDMI cable by connecting it with other equipment.
- Connecting an HDMI cable longer than 35 feet is not recommended.
- Place the Matrix away from fluorescent lighting or equipment that generates electrical noise.
- Check that the IR sensor window on the front panel is not blocked.
- Reboot the video sources and output displays after making changes.

Contact support@cablematters.com with any questions.

6. TECHNICAL SPECIFICATIONS Model 103081**Matrix Connections**

HDMI Input	4 x HDMI 19 pin female
HDMI Output	4 x HDMI 19 pin female
Audio Output	4 x 3.5mm female
.....	4 x RCA female
Ethernet	RJ45 female
RS-232	DB-9 female
Power	1 x 12V DC power input

Video Resolution Support

4K UHD Max	3840 x 2160 @ 60Hz
------------------	--------------------

Frequency Bandwidth	594 MHz (18 Gbps)
----------------------------------	-------------------

Matrix Housing Dimensions

(W x D x H) / Weight	17.3 x 7.9 x 1.8 Inches / 4 Pounds
----------------------------	------------------------------------

Remote Specifications

(L x W x H) / Weight	4.7 x 1.9 x 0.3 Inches / 1.3 Ounces
----------------------------	-------------------------------------

Battery	CR2025 Lithium
---------------	----------------

Environmental

Operating Temperature	32°F to 104°F
-----------------------------	---------------

Storage Temperature	-4°F to 140°F
---------------------------	---------------

AC Power Supply	US Standard 12V 2.5A, 4.8 Feet
------------------------------	--------------------------------

Regulatory Approvals

Matrix Switch	FCC, C E, RoHS
---------------------	----------------

Warranty	Limited One Year
-----------------------	------------------

User Manual (available in a PDF)	English Version
-----------------------------------------------	-----------------

NOTE: Specifications are subject to change without notice.

7. Warranty and Support

7.1 Customer Support and Contact Information

Cable Matters offers lifetime technical support as an integral part of our commitment to provide industry leading solutions.

Email us with any questions at support@cablematters.com.

7.2 Warranty Information

This product is backed by a limited one-year warranty. The warranty covers parts and labor costs only. Cable Matters does not warrant its products from defects or damages arising from misuse, abuse, or normal wear.

7.3 Limitation of Liability

In no event shall Cable Matters Inc. (including their officers, directors, employees or agents) be liable for any damages (whether direct or indirect, special, punitive, incidental, consequential, or otherwise), loss of profits, loss of business, or any pecuniary loss, arising out of, or related to the use of this product exceeding the actual price paid for the product (as allowed by state law.

View our compatible products at www.cablematters.com



4K-Rated HDMI Cables
Model 300019



USB 2.0 to Serial Cable
Model 202031