

# MV41

79079 User Manual

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### Seamless HDMI 4x1 Multiview Switcher



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[www.tekvox.com](http://www.tekvox.com)

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## 79079 User Manual

### **Preface**

Read this user manual carefully before using the product. Pictures shown in this manual are for reference only. Different product model specifications may vary.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. The functions described in this version were updated October, 2020. In order to continue improving the product, we reserve the right to make function or parameter changes without notice or obligation. Please refer to the dealers for the latest details.

### **Surge Protection Device Recommended**

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.



### **Safety Precautions**

To ensure the best performance from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully, and save the original box and packing material for possible future shipment
- Follow basic safety precautions to reduce the risk of fire, electrical shock, and injury to persons
- Do not dismantle the housing or modify the module (electrical shock or burn hazard)
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration, or malfunction
- Refer all servicing to qualified service personnel
- To prevent fire or shock hazard, do not expose the unit to rain or moisture, or install this product near water
- Do not put any heavy items on the product's power cable
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards
- Install the device in a place with sufficient ventilation to avoid damage caused by overheating
- Keep the module away from liquids
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Unplug the power cord when left unused for a long period of time
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes

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### 1. Product Introduction

The high performance 4x1 quad multi-viewer supports four high-definition inputs displayed on one screen simultaneously, with five multi-viewer display modes available. The product can be controlled via the front panel button, remote control and RS-232

#### 1.1 Features

- Video resolutions up to 1080p@60Hz
- Quad multiviewer with five supported display modes
- Audio supports LPCM 2/5.1/7.1CH, Dolby 5.1CH, Dolby True HD, DTS-HD
- Audio input can be selected from any of the input sources
- Controllable via IR remote, front panel buttons, or RS232
- HDMI 1.4b, HDCP 1.4, and DVI-compliant

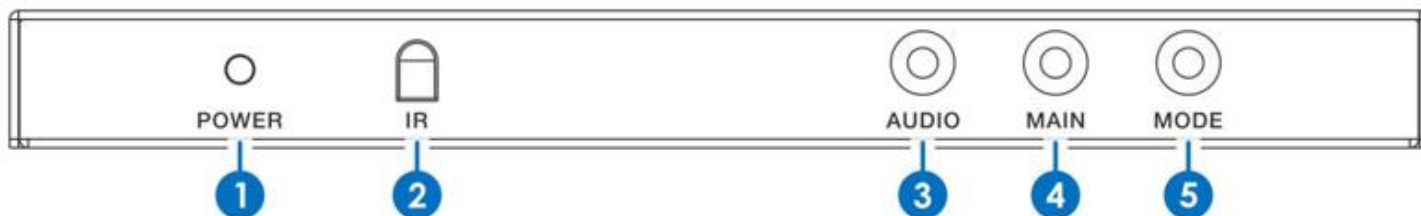
#### 1.2 Package Contents

- 1 x HDMI 4x1 Quad Multiviewer
- 1 x 5V/2A DC Power Adapter
- 1 x IR Remote Controller
- 1 x User Manual

**Note:** Please contact your distributor immediately if any damage or defect in the components is found.

### 2. Operation

#### 2.1 Front Panel Description

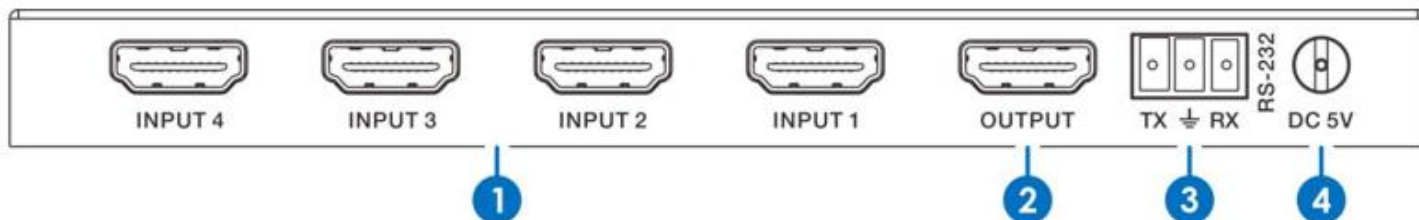


1. **POWER:** System power indicator light
2. **IR:** Remote control IR receiver
3. **AUDIO:** Audio output selection button
4. **MAIN:** Input source selection
5. **MODE:** Select multiview display mode

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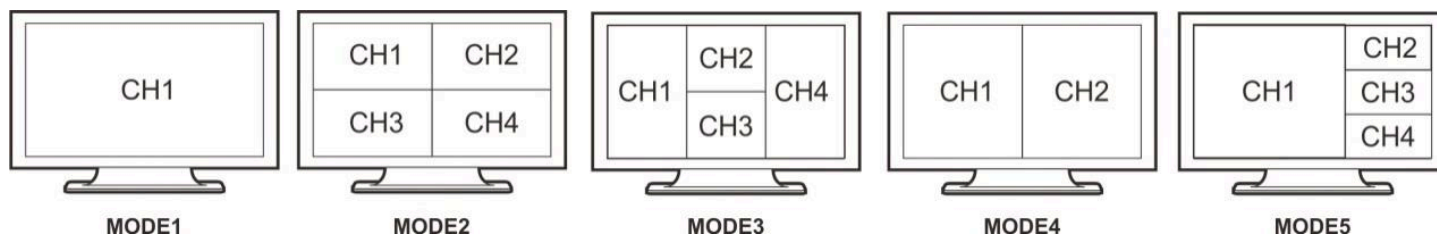
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### 2.2 Rear Panel



1. **INPUT 1/2/3/4:** Connect to HDMI source devices (e.g. PC, Blu-ray player, etc.)
2. **OUTPUT:** Connect to HDMI display device (e.g. Flat-panel TV, Projector)
3. **RS-232:** Connect the RS-232 port to control system
4. **DC 5V:** Connect 5V/2A power adapter to AC wall outlet

### 3. Display Modes



**Mode 1:** Displays a single HDMI source at a time. Pressing the MAIN button on the front panel or IR remote will switch to the next source, in the order 1 > 2 > 3 > 4 > 1.

**Mode 2:** Displays all four inputs at once, all at the same size.

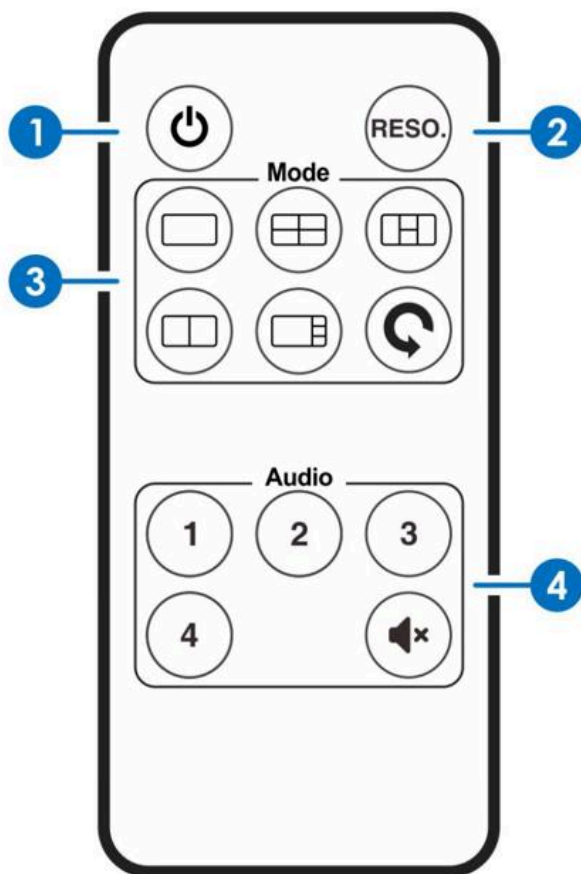
**Mode 3:** Displays all four inputs at once, with Inputs 1 & 4 on either side, and Inputs 2 & 3 stacked top and bottom in the middle of the screen

**Mode 4:** Displays two inputs at once, side-by-side. Pressing the MAIN button on the front panel or IR remote will switch to the other two inputs (1 & 2 <-> 3 & 4)

**Mode 5:** Displays all four inputs at once, with one source large on the left side of the screen, and the other sources smaller on the right. Pressing the MAIN button on the front panel or IR remote will switch which input source is shown larger on the left, in the order 1 > 2 > 3 > 4 > 1 (audio output will correspond to the larger HDMI input)

**Attention:** Pressing the AUDIO button on the front panel or IR remote will switch to the next source or mute the audio, in the order 1 > 2 > 3 > 4 > Muted > 1.

### 4. Remote Control




#### 1. Power/Standby:

Press to turn the unit on, or to set it to Standby Mode

#### 2. Resolution:

Press to set output resolution to either 720p to 1080p

#### 3. Mode:

Press to select the corresponding display mode, as described in §3. Display Modes. Pressing the  button will switch to the next display mode in order.

#### 4. Audio:

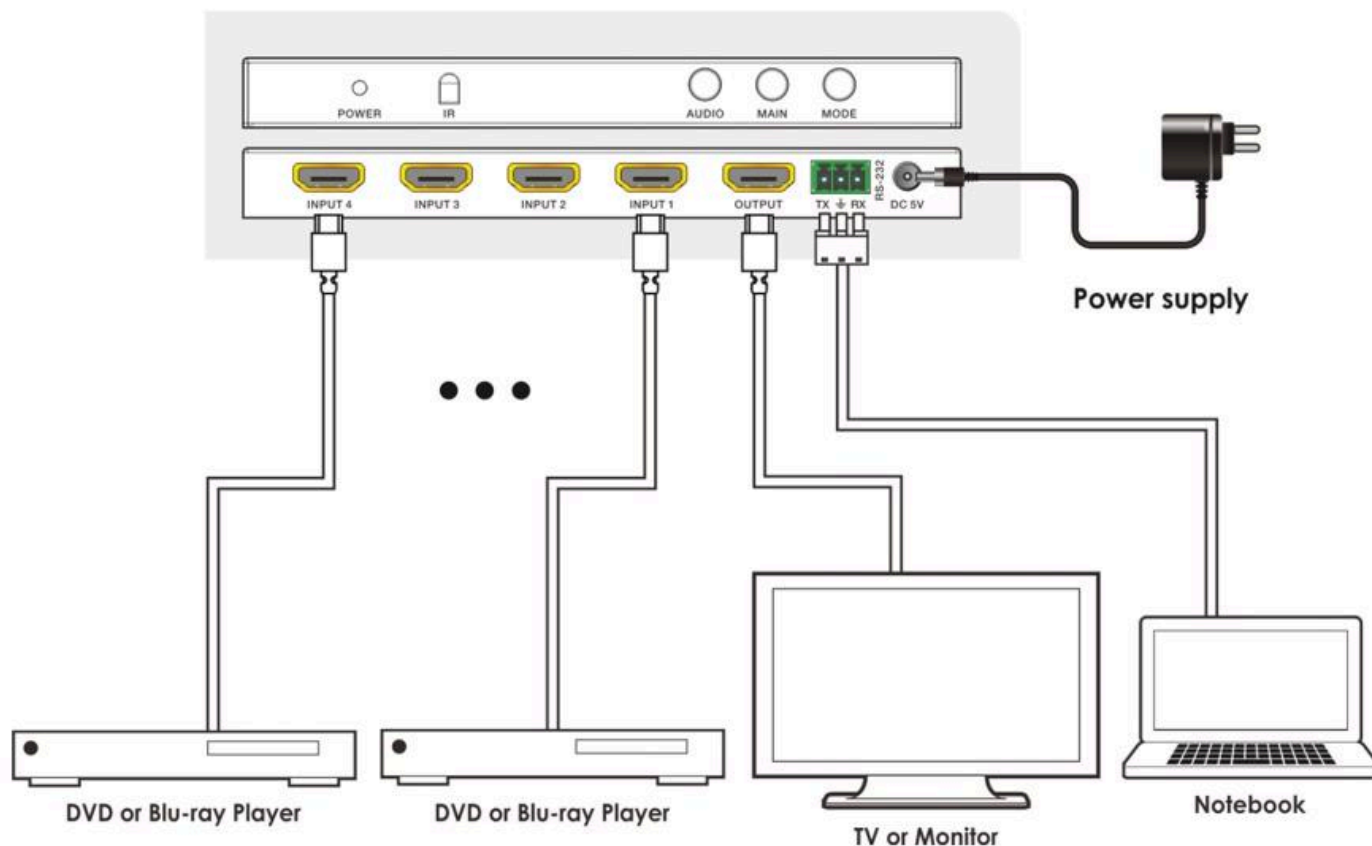
Press a number to select the corresponding input as the audio source

Press the Mute button to mute the audio. Press again to set Input 1 as the audio source.

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### 5. Connection Diagram



### 6. RS232 Commands

**Baud rate:** 9600

**Data bit:** 8

**Stop bit:** 1

**Parity bit:** None

Terminate all commands with <CR><LF> (Hex: 0D0A)

All feedback commands are terminated with <LF> (Hex: 0A)

Command	Description
PRW0<CR><LF>	Turn unit power off (Standby Mode)
PWR1<CR><LF>	Turn unit power on
OSD0<CR><LF>	Disable the On-Screen Display (OSD)
OSD1<CR><LF>	Enable the OSD
RES1<CR><LF>	Set the video output resolution to 720p @ 60Hz



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Command	Description
RES2<CR><LF>	Set the video output resolution to 1080p @ 60Hz
SMD1<CR><LF>	Set switcher to single-screen display mode (Mode 1) & select Input 1
SMD2<CR><LF>	Set switcher to single-screen display mode & select Input 2
SMD3<CR><LF>	Set switcher to single-screen display mode & select Input 3
SMD4<CR><LF>	Set switcher to single-screen display mode & select Input 4
DMD12<CR><LF>	Set switcher to dual-display mode (Mode 4) & select Inputs 1 & 2
DMD34<CR><LF>	Set switcher to dual-display mode & select Inputs 3 & 4
QMD0<CR><LF>	Set switcher to quad view display mode (Mode 2)
HMD<CR><LF>	Set switcher to quad view (divided) mode (Mode 3)
QMD1<CR><LF>	Set switcher to 1 big, 3 small display mode (Mode 5) and select Input 1
QMD2<CR><LF>	Set switcher to 1 big, 3 small display mode and select Input 2
QMD3<CR><LF>	Set switcher to 1 big, 3 small display mode and select Input 3
QMD4<CR><LF>	Set switcher to 1 big, 3 small display mode and select Input 4
SAW0<CR><LF>	Mute audio
SWA1<CR><LF>	Set Input 1 as audio source
SWA2<CR><LF>	Set Input 2 as audio source
SWA3<CR><LF>	Set Input 3 as audio source
SWA4<CR><LF>	Set Input 4 as audio source
VBX0<CR><LF>	Disable split lines (lines dividing sources in multiview modes)
VBX1<CR><LF>	Enable split lines
VER<CR><LF>	Check firmware version

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### 7. Specifications

Technical	
<b>Video Resolution</b>	1080P@60Hz, 720p@60Hz, 480p@60Hz
<b>Video Bandwidth</b>	6.75 Gbps
<b>Color Space</b>	RGB, YCbCr 4:4:4, YCbCr 4:2:2
<b>Color Depth</b>	10-bit, 12-bit
<b>HDMI Audio Formats (Passthrough)</b>	LPCM 2/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
<b>ESD Protection</b>	<b>Human body model:</b> ±8kV (air-gap discharge) & ±4kV (contact discharge)
<b>Compliances</b>	HDMI 1.4b, compliant with DVI 1.0 HDCP 1.4
Connections	
<b>Inputs</b>	4 HDMI (Type-A, 19-pin, Female)
<b>Outputs</b>	1 HDMI (Type-A, 19-pin, Female) 1 RS232 (3-pin Phoenix)
Mechanical	
<b>Power Supply</b>	<b>Input:</b> 100 ~ 240 VAC, 50/60 Hz <b>Output:</b> DC 5V, 2A
<b>Power Consumption</b>	6W (max)
<b>Enclosure</b>	Metal, Black
<b>Temperature</b>	32 ~ 104°F (0 ~ 40°C)
<b>Humidity</b>	20 ~ 90%, non-condensing
<b>Product Dimensions</b>	6.3" (160.2mm) x 3.3" (84mm) x 0.61" (15.5mm)
<b>Product Weight</b>	0.74 lbs. (337g)