



Instruction Manual

AVT-6544
4x4 HDMI Matrix Switcher

Table of Contents

1.0	Introduction	2
2.0	Specifications	3
3.0	Package Contents	4
4.0	Connecting the Hardware	4
5.0	Operating The Unit	5
6.0	Troubleshooting	6
7.0	Limited Warranty	7
8.0	Regulatory Compliance	7
9.0	Contact Information	8

1.0 INTRODUCTION

Thanks for purchasing this AVT-6544 4x4 HDMI Matrix Switcher from the AV Toolbox division of TV One. The AVT-6544 provides the capability to assign any of four HDMI inputs to any of the four HDMI outputs. The AVT-6544 senses when a valid HDMI connection has been made to either the input or output. All inputs and outputs are HDMI V1.3 compliant and the device can be controlled via an Infrared remote device or by use of dedicated front panel push buttons. AV Toolbox offers a wide range of video, audio and multimedia products.

1.1 Liability Statement

Every effort has been made to ensure that this product is free of errors. AV Toolbox cannot be held liable for the use of this hardware or any direct or indirect consequential damages arising from its use. It is the responsibility of the user of the hardware to check that it is suitable for his/her requirements and that it is installed correctly. All rights reserved. No parts of this manual may be reproduced or transmitted by any form or means electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without the written consent of the publisher.

AV Toolbox reserves the right to revise any of its hardware and software following its policy to modify and/or improve its products where necessary or desirable. This statement does not affect the legal rights of the user in any way.

All third party trademarks and copyrights are recognised. The AV Toolbox logo is a trademarks of AV Toolbox. All other trademarks are the property of their respective holders.

1.2 Features

The AVT-6544 4x4 HDMI Matrix Switcher has many features that enable it to perform in a superior manner. Among those features you will find:

- V1.3 HDMI Compliant
- HDCP Compliant
- Large Variety of Bitrates and Signal Formats
- Supports DTS-HD Master Audio, Dolby True-HD and SACD Embedded Audio
- Manual or IR Remote Control
- “Hot Plug” Automatic HDMI Signal Detection

2.0 SPECIFICATIONS

Signal Inputs	
Signal Type	V1.3 HDMI
Connector Type	4x Type A HDMI
Signal Outputs	
Signal Type	V1.3 HDMI
Connector Type	4x Type A HDMI
Supported Video Formats	
24 Bit	RGB/YCbCr 4:4:4
30/36 Bit	RGB/YCbCr 4:4:4 (Deep Color)
24/30/36 Bit	RGB/YCbCr 4:2:2
Supported Audio Formats	
Embedded Audio	DTS-HD Master Audio, Dolby True-HD, DD+, DTS, DD, SACD
I/O Control	
Manual	Via Front Panel Buttons
Remote	Via IR Remote
Mechanical	
Dimensions (H-W-D)	48x380x220mm (1.9"x15"x8.6")
Weight (Net)	1.16kg (2.54lbs)
Environmental	
Operating Temperature	+10° to +50° C (+50° to +122° F)
Operating Humidity	0% to 50%, Non-condensing
Storage Temperature	0° to +70° C (+32° to +158° F)
Storage Humidity	0% to 80%, Non-condensing
Warranty	
Limited Warranty	1 Year Parts and Labor
Power Requirement	
External Power Supply	9VDC@3A
Regulatory Approvals	
Amplifier Units	FCC, CE, RoHS
Power Supplies	UL, CUL, CE, PSE, GS, RoHS
Accessories Included	
1x Power Adapter	US, UK or Euro
1x Infrared Control	
1x Operations Manual	
Product Item Numbers	
AVT-6544	4x4 HDMI Matrix Switcher

3.0 CHECKING PACKAGE CONTENTS

Before attempting to use this unit, please check the packaging and make certain the following items are contained in the shipping carton:

- 1x AVT-6544 Matrix Switcher
- 1x Power Adapter with 9VDC Output
- 1x IR Remote Control
- 1x User Manual

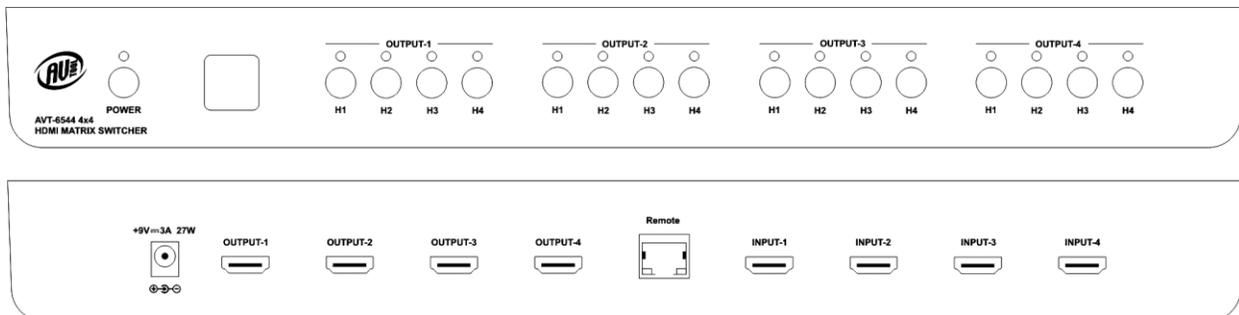
Note: Please retain the original packing material should the need ever arise to return the unit. If you find any items are missing, contact your reseller or AV Toolbox immediately. Have the Model Number, Serial Number and Invoice available for reference when you call.

4.0 CONNECTING THE HARDWARE

The AVT-6544 has a single LED that indicates when power has been applied, an Infrared remote control sensor located behind a square translucent window next to the power on/off button, four sets of four buttons that allow signal selection for the four outputs and signal selection indicator LEDs. The rear panel has the power connection, four input connections and four output connections and an RJ-45 connector that is not currently used on this product. Please take a moment to familiarize yourself with the location of the various signal selection buttons, the input and output connectors and the power input connector.

Note that you have four groups of outputs, each of which allows four possible input selections. This technology is called a 4x4 matrix switcher because all four inputs and all four outputs can be controlled independently without having an effect on one another.

Note: Make certain you connect only the supplied power adaptor to the device as serious damage can result by using improper voltages.



5.0 OPERATING THE UNIT

5.1 Connect the Unit as follows:

1. Turn off power to each HDMI source device and to all HDMI destination devices (such as Monitors).
2. Connect the output of each source device to the AVT-6544 4x4 Matrix switcher's inputs using high quality HDMI cables.
3. Connect the input of the destination devices to the output connectors of the AVT-6544 using high quality HDMI cables.
4. Turn on power to the destination Devices.
5. Plug the DC Connector from the 9VDC Power Adapter provided into the Amplifier.
6. Plug the Power Adapter into an AC Outlet and turn on the AVT-6544.
7. Turn on power to the source Devices.

Note: The AVT-6544 uses Output 1 as the primary EDID source for all Inputs. If there is no display connected to Output 1 the AVT-6544 will use a built in "compatibility" EDID.

When you press the power button, the red Power LED will illuminate on the AVT-6544 if the unit is receiving 9 volts DC. The LEDs above each of the selection buttons will illuminate with a white light if there are valid HDMI signals present. If you have these indications on the front panel of the AVT-6544, it means the switcher is ready for you to make your routing selections.

5.2 Making Signal Routing Selections

The purpose of a matrix switcher is to allow the user to route input signals to different destinations independent of one another.

The device is called a matrix because you can send one of four signals to a single destination; send four different source signals to four different destinations or any combination thereof.

For instance, you might wish to send the HDMI signal present on input number one to all four destinations. By pressing the input select for HDMI source number one for all four of the outputs, all four destinations will receive the HDMI source present on input number one.

By the same token, you could select input source number one for output number one and then select HDMI source two as the input signal on output two. Whatever is connected to the switcher's output number one would then receive the HDMI source present on the switcher's input number one but the device connected to switcher output number two would receive the HDMI signal present on the switcher's input number two.

Using this same approach, any of the four HDMI inputs can be sent to any of the four outputs present on the AVT-6544.

When you make a selection as explained above, the white LED above the appropriate input button for each output group will turn green. This means you can tell at a glance which input each of the four outputs is receiving at the moment. By noting which of the input LEDs is white, you can also tell if pressing the input button will result in sending that input's HDMI signal to the output for the desired output.

Note that once the AVT-6544 is receiving power, you can change the input cables to different HDMI sources and the AVT-6544 will recognize that you have plugged in a new HDMI source and light the white LED above the appropriate input (if there is a valid HDMI signal present). This is called "Hot Plug" sensing and if the LED is white, you can select the HDMI source is a valid HDMI format even though you did not power down the unit and the sources to reinitialize the unit.

5.3 Using the Infrared Remote Control

The Infrared Remote Control is organized using the same logic as the front panel control buttons. Each output has four dedicated input selection buttons. By pressing an input section button, you can cause the desired HDMI source to appear on the desired output.

Pressing the button on the top left causes the AVT-6544 to enter the standby state and pressing the button at the top right causes a reset command to be generated.



6.0 TROUBLESHOOTING

A problem with the AVT-6544 4x4 HDMI Matrix Switcher is rare. Most of the time, problems are caused by the use of low grade cable, too long of a cable run, bad connectors on the cable or occasionally by damaged cables. Bad grounds or use of different AC power sources for the AVT-6544, Signal Source and/or Display Device(s) may also cause problems due to ground loops. If the unit should freeze – something that can happen to any electronic device due to momentary voltage surges or a millisecond loss of power, power down all sources, destination devices and the AVT-6544 and re-power them using the procedure described in section 5.1.

After trying the above suggestions should the problem still persist, contact your dealer for additional suggestions before contacting AV Toolbox. Should the dealer's technical personnel be unable to assist you, contact AV Toolbox via the TV One support website: <http://tvone.crmdesk.com>. Create a technical support request on the site and our support team will respond within a short period of time.

7.0 LIMITED WARRANTY

LIMITED WARRANTY – AV Toolbox warrants the original purchaser that the equipment it manufactures will be free from defects in materials and workmanship for a period of one year from the date of purchase. Should this product, in AV Toolbox's opinion, prove defective within this warranty period, AV Toolbox, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of AV Toolbox. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended.

If repairs are necessary under this warranty policy, the original purchaser must obtain a Return Authorization Number from AV Toolbox and return the product to a location designated by AV Toolbox, freight prepaid. After repairs are complete, the product will be returned, freight prepaid.

LIMITATIONS - All products sold are "as is" and the above Limited Warranty is in lieu of all other warranties for this product, expressed or implied, and is strictly limited to one year from the date of purchase. AV Toolbox assumes no liability to distributors, dealers or end-users for any loss of use, revenue or profit.

AV Toolbox makes no other representation of warranty as to fitness for the purpose or merchantability or otherwise in respect of any of the products sold. The liability of AV Toolbox with respect to any defective products will be limited to the repair or replacement of such products. In no event shall AV Toolbox be responsible or liable for any damage arising from the use of such defective products whether such damages be direct, indirect, consequential or otherwise, and whether such damages are incurred by the reseller, end-user or any third party.

8.0 REGULATORY COMPLIANCE

The AVT-6544 4x4 HDMI Matrix Switcher has been tested for compliance with appropriate FCC and CE rules and regulations. The Power Adaptor/Supplies have been tested for compliance with appropriate UL, CUL, CE, PSE, GS Rules, Regulations and/or Guidelines. These Products and Power Adapters are RoHS Compliant.

9.0 CONTACT INFORMATION

Should you have questions or require assistance with this product in areas not covered by this manual, please contact AV Toolbox at the appropriate location.

AV Toolbox

A division of TVOne
2791 Circleport Drive
Erlanger, KY 41018
USA
Tel 859-647-1077
Fax 859-282-8225
sales@avtoolbox.com
www.avtoolbox.com

AV Toolbox Latin America

A division of TV One L.A.
6991 NW 82 Avenue #8
Miami, FL 33166
USA
Tel 305-396-6275
Fax 305-418-9306
sales.latinoamerica@tvone.com
www.avtoolboxla.com

TV One Asia

16F-4, NO.75, Sec. 1
Xintai 5th Rd., Xizhi Dist.
New Taipei City 22101
Taiwan R.O.C.
Tel +886 2 2698-2296
Fax +886 2 2698-2297
sales.asia@tvone.com
www.tvoneasia.com

AV Toolbox

A division of TV One Ltd
Continental Approach
Westwood Industrial Estate
Margate, Kent CT9 4JG, UK
Tel +44 (0)1843 873307
Fax +44 (0)1843 873312
sales.europe@avtoolbox.com
www.avtoolbox.co.uk

TV One Mercosur

Av. Diaz Velez 3965 #PB
(1200) Capital Federal
Buenos Aires, Argentina
Tel +54 11 5917-2525
Fax +54 11 4032-0281
sales.mercosur@tvone.com
www.tvonela.com

TV One China

Rm. 1007, Golden Peach Bldg.
No. 1900 Shangcheng Road
Pudong, Shanghai
China 200120
Tel +86 21 5830-2960
Fax +86 21 5851-7949
Email: sales.china@tvone.com
www.tvonechina.com

[End of Manual]