DVDO MATRIX⁴⁴_{TM} 4K Ultra HD 4x4 Fast HDMI® Matrix



Operation Manual

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TRADEMARK ACKNOWLEDGMENTS

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SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

Please keep the following in mind as you unpack and install this equipment:

- Follow all instructions
- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU) +5VDC @ 3A. Do not use the PSU if it is damaged.
- Warning: Using any other power supply could result in damage to this product as well as any displays or sources connected to it.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.
- Use only a dry cloth to clean
- Indoor use only: To reduce the risk of electric shock, do not use near water or expose to rain or moisture. Keep away from excess moisture
- Do not use near heat sources such as room heaters
- Read all warnings
- Use only accessories approved by DVDO including mounting brackets
- Unplug the device during lightning storms or when unused for long periods of time
- Keep away from open flames
- Protect all connected cords including power cords from being pinched, compressed, stepped on
- Do not open the case. All servicing should be done only by qualified and approved service personnel

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- Operating temperature range: e.g. 0 to 40oC.
- To disconnect power sources, remove the AC/DC adapters from the wall outlets and any USB connection.

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1. INTRODUCTION

DVDO Matrix44 is a 4K 4x4 matrix switch supporting up to 300MHz 4K 50/60Hz in and out. Designed for both home and commercial use, it provides intuitive control and fast switching for installers and home theater enthusiasts. With multiple control options and professional features, it's ready for fast and reliable integration in your next multidisplay project.

2. APPLICATIONS

- Home Theater/Entertainment
- Lecture Room/Hall Presentation
- Show Room/Demo Room
- Public Commercial Display
- Information Board

3. PACKAGE CONTENTS

- 4 by 4 HDMI 4Kx2K Matrix
- Remote Control with Battery
- Left & Right Rack Ears
- 5V DC Power Adaptor
- IR Receiver Cable

4. SYSTEM REQUIREMENTS

Input source equipment such as Blu-ray/DVD/PS3 player or Set-Top-Box and output HDMI TV/Display and or audio amplifier with connection cables.

5. FEATURES

- HDMI with 3D & 4Kx2K supported, HDCP and DVI compliant
- Supports four HDMI inputs and four HDMI outputs
- Displays any of four High-Definition sources on four HDTV displays
 Simultaneously with fast switch
- 3DTV Pass-Through
- Supports HDTV resolutions up to 4Kx2K (3840x2160@24/25/30/50/60 & 4096x2160@24Hz)
- Supports data rate from 300Mbps to 3Gbps and Deep Color up to 1080p 36-bit
- Advanced EDID management Supports individual EDID or common EDID
- · Web-GUI for easy setup and control
- RS/232, TCP/IP, and IR control
- Supports LPCM 2/5.1/7.1CH, Dolby Digital 2~5.1CH, DTS 2~5.1CH (Pass through), Dolby TrueHD and DTS-HD Master Audio
- Field-Upgradeable firmware
- Input port HDCP supports both "standard" and "Apple mode".
 The Apple mode selection to improve performance when using Apple source devices.

6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel



- **POWER:** Press this button to turn ON the device and the LED will illuminated.
- IR Window: This IR Receiver receives the remote control signal from the package include remote control only.
- IN 1~4: Press these IN buttons to select an input from the 4 input sources.
- OUT A/D: Press these buttons once a time along with an IN buttons to select an input source for an output display. i.e. OUT A→ IN1→TAKE or OUT B→ IN4→TAKE.
- GO: Press this button to confirm the selection of an IN and an OUT button.
- CANCEL: Press this button to cancel the IN/OUT selection.
- **ENTER:** Press to confirm the selection.
- MENU: Press to enter into the menu.
- +/-: Press these buttons to move up/down under menu selection.
- PRESET: Press "PRESET", the OLED menu will show Preset then select IN 1~4. Preset 1~4 after the selection, press "TAKE" to confirm the selection or press "CANCEL" to cancel the selection.
- All: Press this button to select all outputs to display with an input source.
- **MODE:** TAKE Mode/R.T.(Real Time) mode switch.
- LOCK: Press this button to lock all button functions on the panel. Press 3 seconds to relieve the lock function.
- **Display:** Displaying Input and Outputs selection and menu selection.

6.2 Rear Panel



- 1 HDMI IN: Connect from source equipment such as Blu-ray/DVD/PS3 players, Set-Top-Box or any HDMI equipped source device.
- HDMI OUT: Connect to HDMI TV/display.
- SERVICE: This slot is reserved for firmware update use only.
- CONTROL: RJ-45 connector for Ethernet control up to 10/100Mbps
- RS232: Serial control port.
- IR IN: Connect the IR Receiver included in the package for IR signal receive from the included remote control.
- **DC 5V:** Connect the included Power Supply Unit (5VDC).

Warning – use only the included power supply or damage to the product and connected displays/sources can occur.

6.3 LCD Menu

The front panel display provides access to all functions and settings. Note that the Web GUI is normally easier to use and should be the first choice for a new installation.

Items are selected by first pressing the MENU button, scroll using +/- and make a selection using Enter.

A "*" next to an item indicates it is the currently set selection

Menu item	Sub Menu	Description	Default
EDID Mode Sets what EDID is presented to	All	same EDID – choose to use output 1-4 or a preset. If set, choose what EDID is	All
each input.		presented using the "EDID ALL" Menu item	
	Appoint	Individually select an EDID for each input.	
	Exit		

EDID All	Sink A	Copy Output A display EDID	8bit/2D/PC M/1080p
If "All" is set in the EDID mode,	Sink B	Copy Output B display EDID	
this chooses what EDID is presented to all	Sink C	Copy Output C display EDID	
inputs, either from one of the outputs or a	Sink D	Copy Output D display EDID	
pre-stored EDID	8/2D/	Standard EDID,	
from the list	PCM/720p	Content: deep color/2D3D/audio/ native resolution	
	8/2D/PCM/	Standard EDID,	
	AC3/720p	Content: deep color/2D3D/audio/ native resolution	
	8/2D/	Standard EDID,	
	PCM/1080p	Content: deep color/2D3D/audio/ native resolution	
	8/2D/PCM/	Standard EDID,	
	AC3/1080p	Content: deep color/2D3D/audio/ native resolution	
	8/2D/	Standard EDID,	
	PCM/4K2K	Content: deep color/2D3D/audio/ native resolution	
	8/2D/PCM/	Standard EDID,	
	AC3/4K2K	Content: deep color/2D3D/audio/ native resolution	
	Exit		

EDID IN1 These allow individual selection of EDID for a particular input. This overrides the ALL setting	Same EDID All Meaning, same EDID as is selected in the ALL above or	Select Input 1's EDID	Same EDID All
EDID IN2	Same EDID All	Select Input 2's EDID	Same EDID All
EDID IN3	Same EDID All	Select Input 3's EDID	Same EDID All
EDID IN4	Same EDID All	Select Input 4's EDID	Same EDID All
Matrix Preset Four presets are	Preset 1	Forces all outputs to a predefined connection	A=1, B=2, C=3, D=4
allowed for quickly setting in/out	Preset 2	No.2	A=1, B=2, C=3, D=4
combinations. To set, make	Preset 3	No.3	A=1, B=2, C=3, D=4
the normal A1, B2 (etc) choices and	Preset 4	No.4	A=1, B=2, C=3, D=4
press enter	Exit		
HDCP Input Some Apple	IN1 Standard/ Apple	Set IN1 in Apple/ Standard mode	Standard
devices (like Apple TV) have different HDCP	IN2 Standard / Apple	Set IN2 in Apple/ Standard mode	Standard
requirements, to provide the	IN3 Standard / Apple	Set IN3 in Apple/ Standard mode	Standard
best experience, set any input with	IN4 Standard / Apple	Set IN4 in Apple/ Standard mode	Standard
an Apple device to "Apple mode"	Exit		

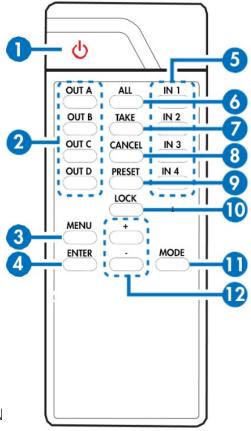
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Network Setup	IP Mode	DHCP , Static	Static
These are standard networking settings for the	IP	Setup Static IP	192.168.1.10
	Mask	Setup Static Netmask	255.255.255.0
Ethernet port. After making any changes	Gate	Setup Static Gateway	192.168.1.1
be sure to click "Do Re-Link" to make them active	Do Re-Link	Re-Link. After changing network settings, relink to save and activate.	
	Exit		
Network Status This allows reading back network settings;	Link	Network status DHCP, Static or Not Linked	
	IP	Get IP	
particularly	Mask	Get Netmask	
useful if using DHCP	Gate	Get Gateway	
	MAC	System MAC Address	
	Exit		
Source Detection This shows	IN1 On/Off , IN2 On/Off	IN1 , IN2 detect	
real time whether each	IN3 On/Off , IN4 On/Off	IN3 , IN4 detect	
input is active	Exit		

Sink A Info Shows information on each Sink	Type, Manuf.	Detect and Analysis Output A display's EDID Content: type(HDMI/ DVI/VGA), Manufactory/ Model number	
	Native	Content: native resolution	
	Video Format	Content: deep color, 2D or 3D, 4K2K	
	Audio Format	Content:PCM, BitStream, HBR	
	Exit		
Sink B Info	Same Sink A Info	Detect and Analysis Output B display's EDID	
Sink C Info	Same Sink A Info	Detect and Analysis Output C display's EDID	
Sink D Info	Same Sink A Info	Detect and Analysis Output D display's EDID	
Firmware	FW Version	Display the model number and FW version	
	Update	FW Update	
	Exit		
Factory Reset	Do Reset	Do system Reset	
	Exit		
Exit			

6.4 Remote Control

- **POWER:** Press this button to switch the system ON/OFF.
- OUT A/D: Press these buttons one a time along with an IN buttons to select an input source for an output display.
- MENU: Press to enter into the menu.
- **ENTER:** Press to confirm the selection.
- IN1~4: Press the IN buttons to select an input from the 4 input sources.
- ALL: Press this button to select all outputs to display with an input source.
- TAKE: Press this button to confirm the selection of an IN and an OUT button. (Same as "GO" on main unit)
- CANCEL: Press this button to cancel the IN
- PRESET: Press "PRESET", the menu will show Preset and select IN 1~4. After preset 1~4, press "TAKE" to confirm the selection or press "CANCEL" to cancel the selection.
- LOCK: Press this button to lock all button functions on the panel. Press 3 seconds to relieve the lock function.
- MODE: TAKE Mode/R.T. (Real Time) mode switch. When in Take/Go Mode, user presses [Input, Ouput, GO] to switch, When in R.T. mode, user presses [Input, Output] and switching happens right away
- +/-: Press these buttons to move up/down under menu selection.



6.5 RS-232 Protocols

CDPS-4	4H4HFS	Remote	Control
PIN	Assignment	PIN	Assignment
1	NC	1	NC
2	Тх	2	Rx
3	Rx	3	Tx
4	NC	4	NC
5	GND	5	GND
6	NC	6	NC
7	NC	7	NC
8	NC	8	NC
9	NC	9	NC

Baud Rate: 115200bps

Data bit: 8 bits Parity: None

Flow Control: None

Stop Bit: 1

6.6 RS-232 Commands

Command Name	Description	Description of parameter
P0	POWER OFF	NONE
P1	POWER ON	NONE
IPCONFIG	DISPLAY THE CURRENT IPCONFIG	NONE
SIPADDR XXX.XXX.	SET ETHERNET IP AD-	XXX=0~255
XXX.XXX	DRESS	
SNETMASK XXX. XXX.XXX.XXX	SET ETHERNET NETMASK	XXX=0~255
SGATEWAY XXX. XXX.XXX.XXX	SET ETHERNET GATEWAY	XXX=0~255
HTTPPORT N	SET ETHERNET PORT NUMBER	N=0~65535
RSTIP	IP CONFIGURATION RESET TO <dhcp></dhcp>	NONE
AN	SET OUTPUT A SOURCE	N=1-4
BN	SET OUTPUT B SOURCE	N=1-4
CN	SET OUTPUT C SOURCE	N=1-4
DN	SET OUTPUT D SOURCE	N=1-4
IN	SET ALL OUTPUTS SOURCE	N=1-4
EDIDMODE N	SHOW EDID MODE	N=(1)All (0)Appoint
EDIDALL	SHOW EDID MODE SOURCE FOR ALL	NONE
EDIDALL N	SET EDID CONTENT FOR ALL	N=0-9
EDIDIN	SHOW ALL INPUT EDID SOURCE	NONE
EDIDIN N1	SHOW INPUT N1 EDID SOURCE	N1=1-4

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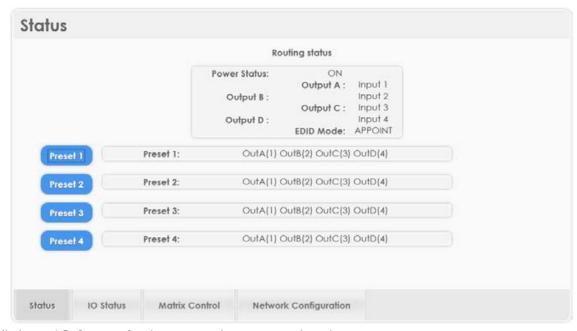
EDIDIN N1 N2	SET INPUT N1 EDID SOURCE	N1=1-4
		N2=0-9
HDCPIN	SHOW ALL INPUT HDCP STATUS	NONE
HDCPIN N1	SHOW INPUT N1 HDCP STATUS	N1=1-4
HDCPIN N1 N2	SET INPUT N1 HDCP	N1=1-4
	ON/OFF	N2=(0)OFF (ON)
PRESET	SHOW ALL PRESET CONFIG	NONE
PRESET N1	SHOW PRESET N1 CONFIG	N1=1-4
PRESET N1 N2	SET PRESET N1	N1=1-4
	CONFIGURE	N2=AXBX (X=1-6,M)
SOURCEDET	SHOW ALL INPUT SIGNAL	NONE
SOURCEDET N1	SHOW INPUT N1 SIGNAL	N1=1-4
SINKINFO	SHOW ALL OUTPUT INFORMATION	NONE
SINKINFO N1	SHOW OUTPUT N1 INFORMATION	N1=A-B
INNAME	SHOW ALL INPUT NAME	NONE
INNAME N1	SHOW INPUT N1 NAME	N1=1-4
INNAME N1 N2	SET INPUT N1 NAME	N1=1-4
		N2=ABCDEFGH
OUTNAME	SHOW ALL OUTPUT NAME	NONE
OUTNAME N1	SHOW OUTPUT N1 NAME	N1=A-B
OUTNAME N1 N2	SET OUTPUT N1 NAME	N1=A-B
		N2=ABCDEFGH

MATRIXMODE	SHOW MATRIX CURRENT MODE	NONE
MATRIXMODE N1	SET MATRIX MODE	N1=0-1
VER	SHOW DESCRIPT OF UNIT	NONE
REBOOT	SYSTEM REBOOT	NONE
HELP	SHOW COMMAND LIST	NONE
HELP N	SHOW DESCRIPT OF COMMAND	N : command name

Note: All the RS-232 command will be not executed unless followed with a carriage return. All commands are case-sensitive.

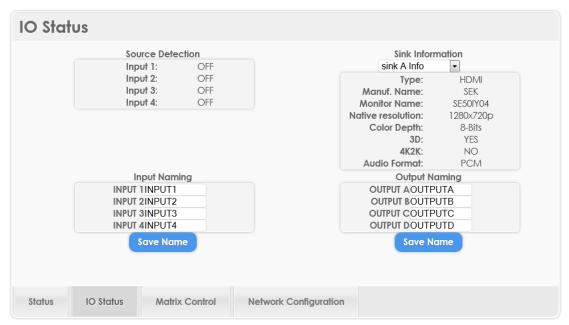
6.7 Web GUI Control

On a PC/Laptop that is connected to an active network system, open a web browser and type device's IP address (available from LCD front panel display menu system) into the web address entry bar. The browser will display the device's Status, IO Status, Matrix Control, Settings and Network Configuration control pages for users to control.

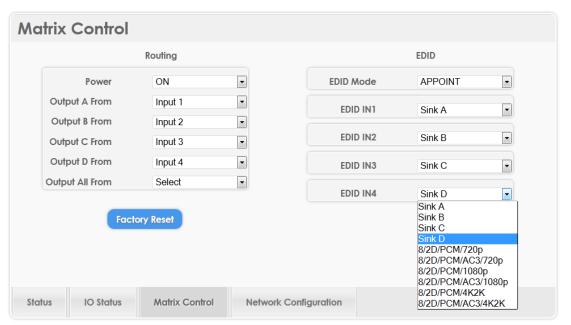


Click on IO Status for input and output selection.

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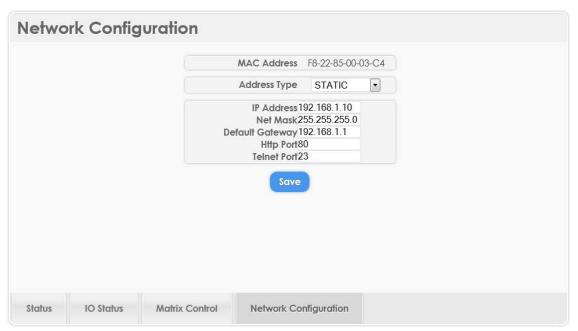


Click on Matrix Control for outputs and EIDID selections.



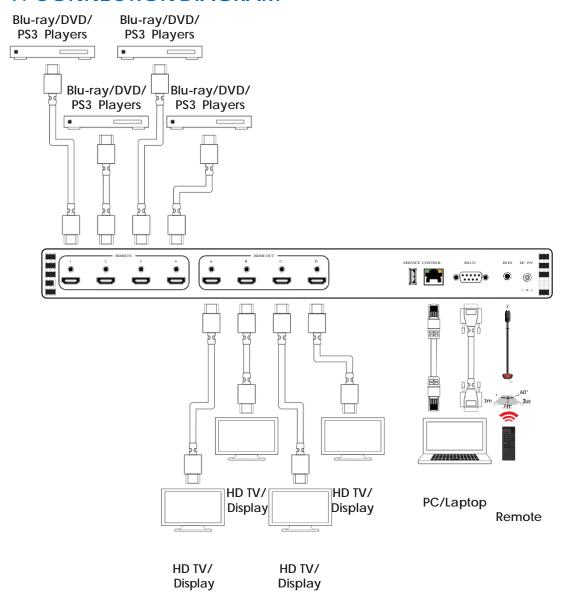
Click on Settings to set each input's HDCP Control and Preset Configuration.

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Click on Network Configuration to set the device's IP configuration. Once the changes are saved, the system will reset the IP address on the device automatically and user will need to re-enter the IP address to continue the Web GUI function.

7. CONNECTION DIAGRAM



8. SPECIFICATIONS

Frequency Bandwidth 340Mbps to 3Gbps

Input Ports 4 x HDMI

1 x USB (Service only) 1 x 10/100 Ethernet

1 x RS-232

1 x IR

Output ports 4 x HDMI

Resolution 480i~1080p@50/60, 1080p@24, 4K x 2K

(3840x2160/4096x2160)24/25/30/50/60

Output Level VGA~WUXGA

IR Frequency 30~50kHz

Power Supply 5VDC/2.6A (US/EU standards, CE/FCC/

UL certified)

ESD Protection Human body model:

±8kV (air-gap discharge) ±4kV (contact discharge)

Dimensions 438mm (W) x 269mm (D) x 44mm (H)

/Jacks Excluded

482mm (W) x 278mm (D) x 50mm (H)

/Jacks & Rack Ears Included

Weight 2936 g

HDMI/HDCP HDMI compliant, HDCP 1.4 compliant

Operating Temperature $0^{\circ}\text{C} \sim 40^{\circ}\text{C} / 32^{\circ}\text{F} \sim 104^{\circ}\text{F}$

Storage Temperature -20°C~60°C / -4°F ~ 140°F

Relative Humidity 20~90% RH (no condensation)

Power Consumption (W) 4.7

DVI and HDMI Supported Resolutions	Input	Output
640x480@60	V	V
640x480@72	V	V
640x480@75	V	V
720x480@60	V	V
720x576p@50	V	V
800x600@60	V	V
800x600@72	V	V
800x600@75	V	V
1024x768@60	V	V
1024x768@70	V	V
1024x768@75	V	V
1280x720@50	V	V
1280x720@60	V	V
1280x720p@60	V	V
1280x768@60	V	V
1280x800@60	V	V
1280x1024@60	V	V
1360x768@60	V	V
1600x1200@60	V	V
1920x1080i@50	V	V
1920x1080i@60	V	V
1920x1080p@24	V	V
1920x1080p@25	V	V
1920x1080p@30	V	V
1920x1080p@50	V	V
1920x1080p@60	V	V
1920x1200@60(RB)	V	V
3840x2160@24/25/30/50/60	V	V
4096x2160@24	V	V

Audio Sampling Rate Up to 192 kHz

HDMI input (Up to 192kHz)	HDMI output
LPCM 2CH	V
LPCM 5.1CH	V
LPCM 7.1CH	V
Dolby Digital 2~5.1CH/ DTS 2~5.1CH	V
Dolby True-HD/ DTS-HD Master Audio	V

Audio Format LPCM 2/5.1/7.1CH,Dolby Digital 2~5.1CH, DTS 2~5.1CH (Pass through), Dolby TrueHD and DTS-HD Master Audio

HDMI input	HDMI output
LPCM 2CH	V
LPCM 5.1CH	V
LPCM 7.1CH	V
Dolby Digital 2~5.1CH/ DTS 2~5.1CH	V
Dolby True-HD/ DTS-HD Master Audio	V

9. ACRONYMS

ACRONYM	COMPLETE TERM
CEC	Consumer Electronic Control
DVI	Digital Visual Interface
HDCP	High-bandwidth Digital Content Protection
HDMI	High Definition Multimedia Interface
4Kx2K	3840x2160/ 4096x2160

home page: http://www.dvdo.com

FCC Interference and Compliance Statement

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- 1. This device may not cause harmful interference, and
- 2. This device must accept any interference received, including interference that may cause undesired operation.

FCC WARNING

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. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- •Increase the separation between the equipment and the receiver.
- •Connect the equipment into an outlet different from that to which the receiver is connected.
- •Consult the dealer or an experienced radio/TV technician for help.

Caution

To comply with the limits for an FCC Class B computing device, always use the shielded signal cord supplied with this unit.

The Federal Communications Commission warns that changes or modifications of the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE mark for Class B ITE (Following European standard EN55022/1998; EN61000-3-2/1995; EN61000-3-3/1995, EN55024/1998, EN60950-1/2001)

Radio Frequency Interference Statement Warning: This is a Class B product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Warranty and Getting Help

General Warranty Terms

DVDO, Inc., (DVDO), offers a limited warranty for its DVDO products. Any product first sold to you is guaranteed to be free from defects in both components and workmanship under regular uses. The warranty period commences on the date the item ships.

Attention: Your invoice with the date of purchase, model number and serial number of the product is your proof of the date of purchase.

The International Limited Warranty is applicable and shall be honored in every country where DVDO or its Authorized Service Providers offer warranty service subject to the terms and conditions provided in this International Limited Warranty Statement.

DVDO Products Warranty Period

The warranty terms for all DVDO products are: Domestic & Asia 1Year, EU & UK 2 Years

System Warranty

During the warranty period, the defective hardware of DVDO products will be either repaired or replaced, with new or like new products, at the discretion of DVDO except in the cases listed in the Limitation of Liability Clause of this document

This International Limited Warranty covers the costs of service parts and labor required to restore your product to fully functional condition. DVDO will, at its discretion, repair or replace any defective products or parts thereof covered by this International Limited warranty with refurbished parts of the product that are equivalent to new or like new products in both functionality and performance. A product or part that is repaired or replaced under this International Limited Warranty shall be covered for the remainder of the original warranty period applying to the product or part, or for 90-days, whichever expires last. All exchanged parts and products under this International Limited Warranty will become the property of DVDO.

DVDO offers no warranty of any kind for any pre-installed software, its quality, performance, functionality, or compatibility for a particular purpose. Nor does DVDO warrant that the functions contained in the software will meet specific requirements or that the operation of the software will be uninterrupted or error-free. Thus, the software is sold 'as is" unless otherwise explicitly stated in writing.

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Obtaining the Warranty Service

Warranty service or Returned Merchandise Authorization (RMA) under this International Limited Warranty will be honored only if claims are made within the warranty period. For notifications to DVDO or products outside the warranty period, the process will be the same, but charges may apply. Contact details may be obtained on DVDO website http://www.dvdo.com/support/rma.aspx. Customers are requested to perform the following actions before claiming DVDO product as defective:

- (a) Owner must notify DVDO, during the warranty period, in writing of alleged defect, and allow DVDO a reasonable opportunity to inspect the allegedly defective product;
- (b) No Product may be returned without DVDO's consent, The DVDO RMA# must accompany all returns, and all returns must be delivered to DVDO within the warranty period;
- (c) Owner may, then at its own expense, return the allegedly defective Product, freight pre-paid and in the original packaging, accompanied by a brief statement explaining the alleged defect to DVDO;
- (d) If DVDO determines that any returned Product is not defective, or if DVDO determines that the defect is not covered by the warranty, DVDO will return the Product to the Owner at Owner's expense, freight collect, and Owner agrees to pay DVDO's reasonable cost of handling and testing;
- (e) Upon determining that a returned product is defective, to receive warranty service Owner will need to present the invoice showing the original purchase transaction. If shipping the product, Owner will need to package it carefully and send it, transportation prepaid by a traceable, insured method, to the DVDO Service Center. Package the product using adequate padding material to prevent damage in transit. The original container is ideal for this purpose. Include the RMA#, your name, return shipping address, email address and telephone number where you may be reached during business hours, inside the shipping package with the unit. Any replacement unit will be warranted under these Terms and Conditions for the remainder of the original warranty period or ninety (90) days whichever is longer.

Refer to user manual enclosed within the product package and/or information on http://www.dvdo.com/support/documentation.aspx for important tips on how to operate and troubleshoot the product.

International Warranty

Warranty may be valid when a DVDO product is purchased in one country and transferred to another country, without voiding the warranty. Please be advised that service availability and response time may vary from country to country. Warranty is transferrable within the warranty period.

DVDO is not responsible for any export and import control issues, handling fees, tariffs, import duties, and all other related fees where owner is responsible for shipping its products. This International Limited warranty does not affect your statutory rights.

Limitation of Liability

DVDO reserves the right to refuse warranty service of products under disputable conditions. DVDO also holds the rights to declare final decision whether products are within warranty conditions. The following actions and damages will result in voiding the limited warranty:

- Damage caused by act of nature, such as fire, flood, wind, earthquake, lightning, etc.
- Damage or incompatibility caused by failure to perform a proper installation or to provide an appropriate operational environment for the product, including but not limited to unstable wired/ wireless network connection and phone lines, bad grounding, external electro-magnetic fields, direct sunlight, high humidity and vibration.
- Damage caused by impact with other objects, dropping, falls, spilled liquids, or submersion in liquids.
- Damage caused by unauthorized repair or disassembling of the product.
- Damage caused by any other abuse, misuse, mishandling, or misapplication.
- Damage caused by third party peripherals (including but not limited to visible damages on motherboard or other electronic parts of the product such as burn spots after electric discharge, melting, fusing, splitting, etc.)
- Any unauthorized software or modification of built-in software not approved by DVDO.

- The serial number of the product (or serial number stickers of its parts) has been modified, removed, blurred or damaged.
- Defects caused by transportation, handling or customer abuse.

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