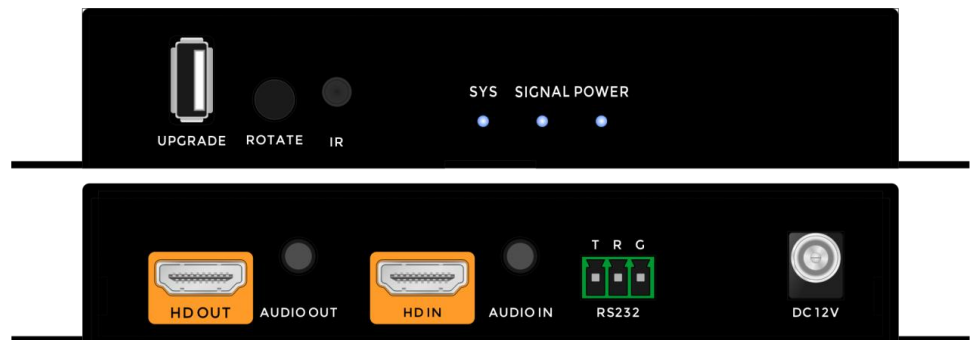


INSTRUCTION MANUAL

HDTV Supply, Inc
Los Angeles, CA



4K 60 Hz Adjuster with Rotation, Scaling, Test Pattern, and Other Functions

PART NUMBER: HDTVVPXADJ101



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SAFETY REMINDERS

To protect the device and operating personnel from electrostatic discharge, ensure that the device is properly grounded before powering it on. Please observe the following guidelines when installing, using, or maintaining this equipment.



Keep the apparatus away from moisture and liquids to prevent damage.



Clean the apparatus using only a dry cloth.



Ensure proper ventilation and avoid placing the unit in confined spaces.



Disconnect from power during storms or prolonged periods of non-use.



Do not obstruct ventilation openings to prevent overheating and potential hazards.



Prevent the power cord from being damaged by pressure or excessive bending.



Keep the unit away from heat sources to maintain safe operation.



Use only manufacturer-approved accessories.



Avoid placing open flames near or on the unit.



Seek professional servicing when required.



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FOREWORD

- Welcome to use our product. Thank you for supporting our product! For the security of you and the equipment, please be sure to carefully read the product manual before using the equipment.
- Please carefully protect the frangibility label pasted on the product, as it is the warranty voucher.
- This manual only serves as the direction for operation instead of maintenance service. Additional remarks will be provided if the functions or relate parameters change in future.
- Please first read this manual if any doubt in using the product. The equipment operation is described in detail in the manual. Please follow the specification in the book. Please contact us if you still have questions, and we will give you a satisfactory answer as soon as possible.
- The edition of the manual is subject to change without notice.

PACKAGE CONTENTS

Name	Unit	Quantity

DISCLAIMERS

The information in this manual has been thoroughly reviewed and is believed to be accurate. However, we are not responsible for any patent infringements or third-party rights violations that may arise from its use.

We do not accept liability for any inaccuracies in this document, nor do we guarantee updates or the continued accuracy of the information provided.

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INTRODUCTION

- This is an advanced signal generator capable of displaying various test patterns without the need for an HDMI input source. It supports output resolution settings—720p, 1080p, 4K30, and 4K60—configurable via the included IR remote control. When an HDMI source is connected, the device functions as an image rotator with selectable angles of 0°, 90°, 180°, and 270°, and also supports up/down-scaling. Device functions—including cascading, scaling, and rotation—can be controlled through the IR remote, front panel buttons, or RS-232 interface.

FEATURE

- Supports HDMI 2.0 with resolutions up to 3840×2160@60Hz
- Supports front panel push-buttons, IR remote, and RS-232 control
- Supports OSD (On-Screen Display), scaling, and EDID management
- Supports audio embedding and de-embedding
- Supports image rotation at 90°, 180°, 270°, and 360°
- Supports firmware upgrades via USB-A

SPECIFICATION

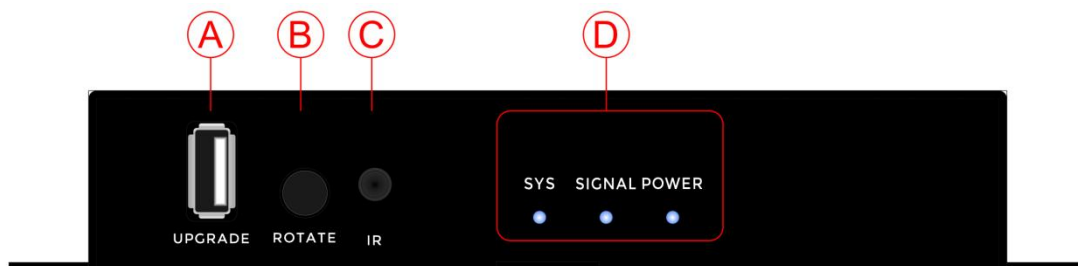
Video	
Input Port	1* HDMI2.0
Input Resolution	HDMI2.0: 640x480 ⁸ , 800x600 ⁸ , 1024x768 ⁸ , 1280x768 ⁸ , 1280x800 ⁸ , 1280x1024 ⁸ , 1360x768 ⁸ , 1366x768 ⁸ , 1440x900 ⁸ , 1400x1050 ⁸ , 1600x1200 ⁸ , 1680x1050 ⁸ , 1920x1200 ⁸ , 720x480 ⁸ (480p), 720x576 ⁶ (576p), 1280x720 ⁵ (720p30), 1280x720 ⁶ (720p50), 1280x720 ⁸ (720p60), 1920x1080 ² (1080p24), 1920x1080 ³ (1080p25), 1920x1080 ⁵ (1080p30), 1920x1080 ⁶ (1080p50), 1920x1080 ⁸ (1080p60), 3840x2160 ⁵ (2160p30),3840x2160 ⁶ (2160p50), 3840x2160 ⁸ (2160p60)
Output Port	1* HDMI2.0
Output Resolution	HDMI2.0: 1920x1080 ⁶ (1080p50), 1920x1080 ⁸ (1080p60), 3840x2160 ⁵ (2160p30) , 3840x2160 ⁶ (2160p50) , 3840x2160 ⁸ (2160p60)



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Audio	
Input Port	1x HDMI, 1*3.5mm Analog
Input audio signal	RAW PCM, 16 bit, 32/44.1/48KHz sps; PCM 2.0
Output port	1* HDMI2.0, 1* Analog Audio(3.5mm audio)
Output audio signal	RAW PCM, 16 bit, 32/44.1/48KHz sps; PCM 2.0
Control	
Front control	Rotate
IR	IR remote controller
RS232	3-pin Phoenix
Others	
Operating temperature	0 to +45 C (32 to + 113 F)
Storage temperature	-20 to +70 C (-4 to + 158 F)
Humidity	10% to 90%
Static Protection	Human body discharge mode: ±8kV (air gap discharge)/ ±4kV (contact discharge)
Power adapter	DC 12 V 1.5 A
Video	
Power consumption	10W(Max)
Product size(mm)	138*85*28
Net Weight	0.5kg

PANELS



UPGRADE: For the USB-A firmware upgrading(upgrading steps will be provided by video when needed)

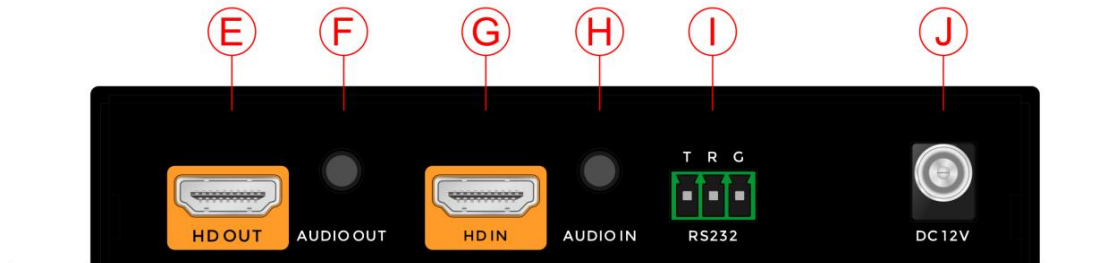
ROTATE: For the image rotate or long-press 3s to bring up/cancel OSD menu

IR: For the IR remote control

SYS: For the power and system indicator

SIGNAL: For the signal connection

POWER: for the power status



HD OUT: HDMI output up to 4K60 with scaling

AUDIO OUT: For the 3.5mm audio de-embedding

HD IN: HDMI input up to 4K60

AUDIO IN: For the 3.5mm audio embedding

RS232: Support the RS232 commands control

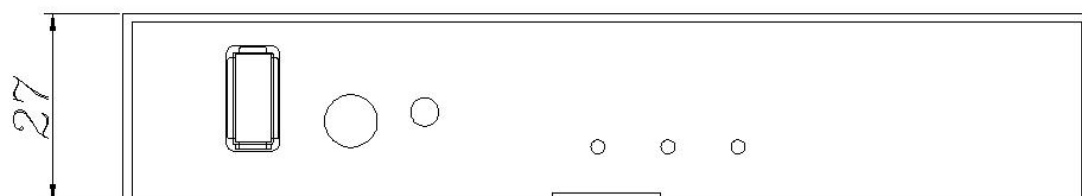
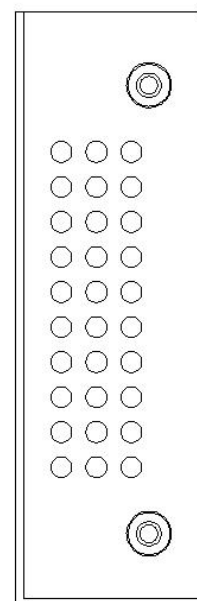
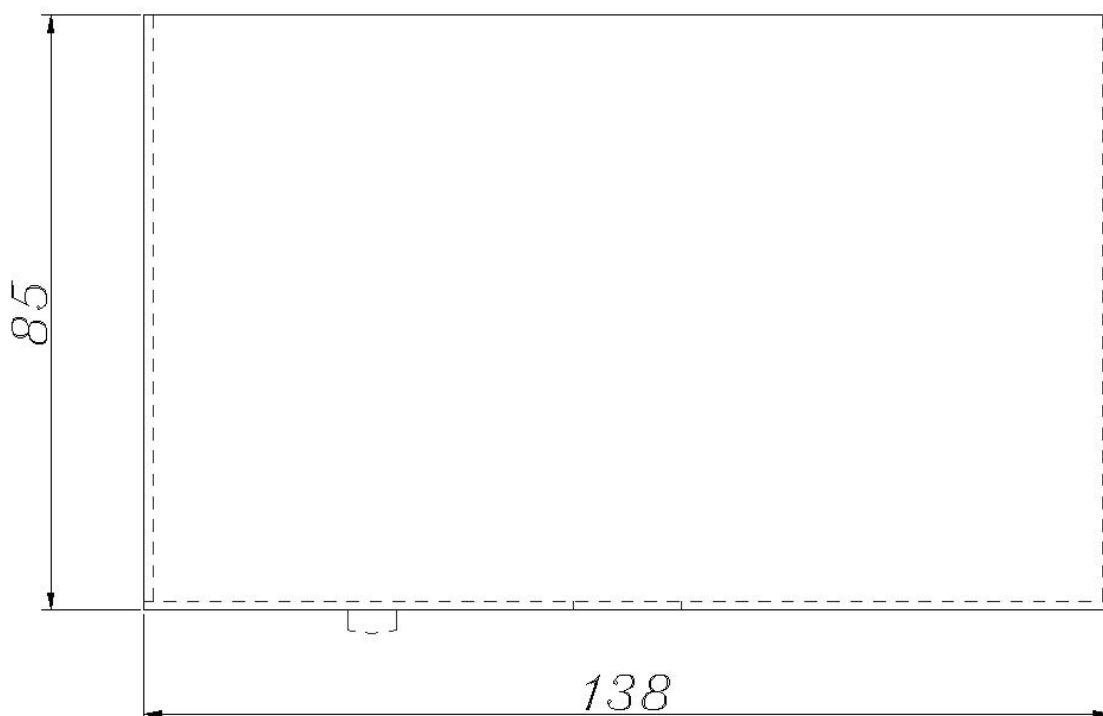
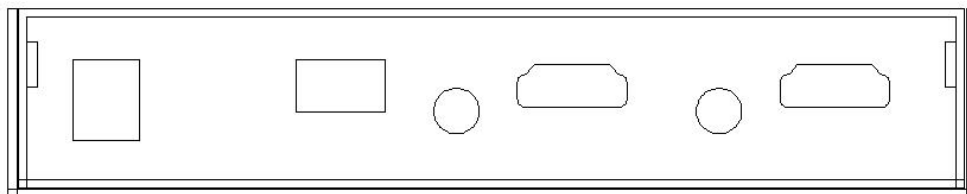
DC12V: DC12V power adapter



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PACKAGE, PANEL, AND KEYS

DIMENSION (mm)



OPERATION

Can support the front panel "ROTATE" button to have the output image rotation from 90/180/270 degrees, just a short press the button, then it can have the image rotated in the above degrees cycling:



Rotate 90



Rotate 180



Rotate 270



Normal Display

If long-press(3s) this "ROTATE" button for 3s, it will bring up the OSD menu on the HDMI output connected display to show the input/output resolution and color space those info:



8-PIN DIP Switch Setting Table

DIP	Position 0(ON)	Position 1(Numbers)
D1	RS232 EDID/resolution control enable	DIP switch EDID/resolution control enable
D2	Reserved button, Default at "1"	
D3	D3/D4 both at 00: 4K60	D3/D4 each at 01: 4K30
D4	D3/D4 both at 11: 1080P60	D3/D4 each at 10: 1920*1200
D5	D5/D6 both at 00: 4k60 EDID	D5/D6 each at 01: 4K30 EDID
D6	D5/D6 both at 11: 1080P60 EDID	D5/D6 each at 10: 1920*1200 EDID
D7	Use 3.5mm audio input	Use HDMI audio
D8	Test pattern OFF(V1.9.1)	Test pattern ON(V1.9.1)



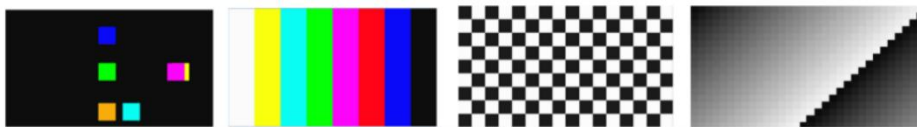
This 8-PIN DIP switch is at the bottom(ON is position 0)

NOTE: Rotation function will need to have the DIP2 set to 0 position, then use the front panel ROTATE button for the 90/180/270 degrees rotations. If long-press this ROTATE button for 3 seconds, it will enter into the OSD model, also this OSD not working when it's under the test pattern mode.



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DIP8 is for the testing patterns, when it's enable, no need to have the HDMI input connected, it will show the built-in 30 patterns as the input source (please note when did the DIP switch setting, it will need to cycle power this adjuster to have the function takes effects)



30 pre-built-in test patterns

REMOTE CONTROL

RESET: Press "RESET" buttons 6 times for factory reset

ROT1: For the output image rotation

RECALL: Press "RECALL" button 6 times to bring up OSD menu

RES: for the output resolution settings 720P, 1080P, 4K30, 4K60

SAVE: Press "SAVE" button 6 times to off the OSM menu



RS232 Control Commands

RS232 cable with straight-through connection

Communication protocol:

Baud rate: 115200

Data bit: 8

Stop bit: 1

Check bit: None

All control instructions are sent in hexadecimal mode or the ASCII format



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RS232 SERIAL COMMUNICATION PROTOCOL

HEX Format Commands

Type	Command	Function
Reset	EB 90 00 12 00 ff 21 00 00 00 00 00 00 00 00 00 00 00 00 00	EDID4K60, output at 1080P60
Output Resolution	EB 90 00 12 00 ff 23 00 00 00 00 00 00 00 00 00 00 00 00	1920x1080@60
	EB 90 00 12 00 ff 23 06 00 00 00 00 00 00 00 00 00 00 00	2560x1600@60
	EB 90 00 12 00 ff 23 08 00 00 00 00 00 00 00 00 00 00 00	3840x2160@60
	EB 90 00 12 00 ff 23 0A 00 00 00 00 00 00 00 00 00 00 00	3840x2160@30
	EB 90 00 12 00 ff 23 0D 00 00 00 00 00 00 00 00 00 00 00	4096x2160@60
	EB 90 00 12 00 ff 23 0E 00 00 00 00 00 00 00 00 00 00 00	4096x2160@30
	EB 90 00 12 00 ff 23 11 00 00 00 00 00 00 00 00 00 00 00	2560x1080@60
	EB 90 00 12 00 ff 23 12 00 00 00 00 00 00 00 00 00 00 00	2560x1440@60
INPUT EDID	EB 90 00 12 ff 02 24 02 <u>0F 00 08 70 1E</u> 00 00 00 00 00	3840*2160P30
	EB 90 00 12 ff 02 24 02 <u>0F 00 08 70 3C</u> 00 00 00 00 00	3840*2160P60
	EB 90 00 12 ff 02 24 02 <u>0A 00 06 40 3C</u> 00 00 00 00 00	2560*1600P60
	EB 90 00 12 ff 02 24 02 <u>0A 00 05 A0 3C</u> 00 00 00 00 00	2560*1440P60
	EB 90 00 12 ff 02 24 02 <u>07 80 04 B0 3C</u> 00 00 00 00 00	1920*1200P60
	EB 90 00 12 ff 02 24 02 <u>07 80 04 38 3C</u> 00 00 00 00 00	1920*1080P60
	EB 90 00 12 ff 02 24 02 <u>07 80 04 38 1E</u> 00 00 00 00 00	1920*1080P30
Output Rotation	EB 90 00 12 00 ff 34 00 00 00 00 00 00 00 00 00 00 00 00	0°
	EB 90 00 12 00 ff 34 00 01 00 00 00 00 00 00 00 00 00 00	90°
	EB 90 00 12 00 ff 34 00 05 00 00 00 00 00 00 00 00 00 00	180°
	EB 90 00 12 00 ff 34 00 02 00 00 00 00 00 00 00 00 00 00	270°
Output Freeze	EB 90 00 12 00 ff 2A 01 01 01 01 00 00 00 00 00 00 00 00 00	Freeze
	EB 90 00 12 00 ff 2A 00 00 00 00 00 00 00 00 00 00 00 00 00	Unfreeze

Output Resolution Customizing:

EB 90 00 12 00 ff 23 FF 00 00 00 00 00 00 00 00 00

Red is for the Width, Blue is for the Height, Yellow is for the frame rate

Eg, resolution 1920X1080@60

EB 90 00 12 00 ff 23 FF 07 80 04 38 3C 00 00 00 00 00 //1920X1080@60

Or resolution 2000 X 1000@60

EB 90 00 12 00 ff 23 FF 07 D0 03 E8 3C 00 00 00 00 00 //2000x1000@60

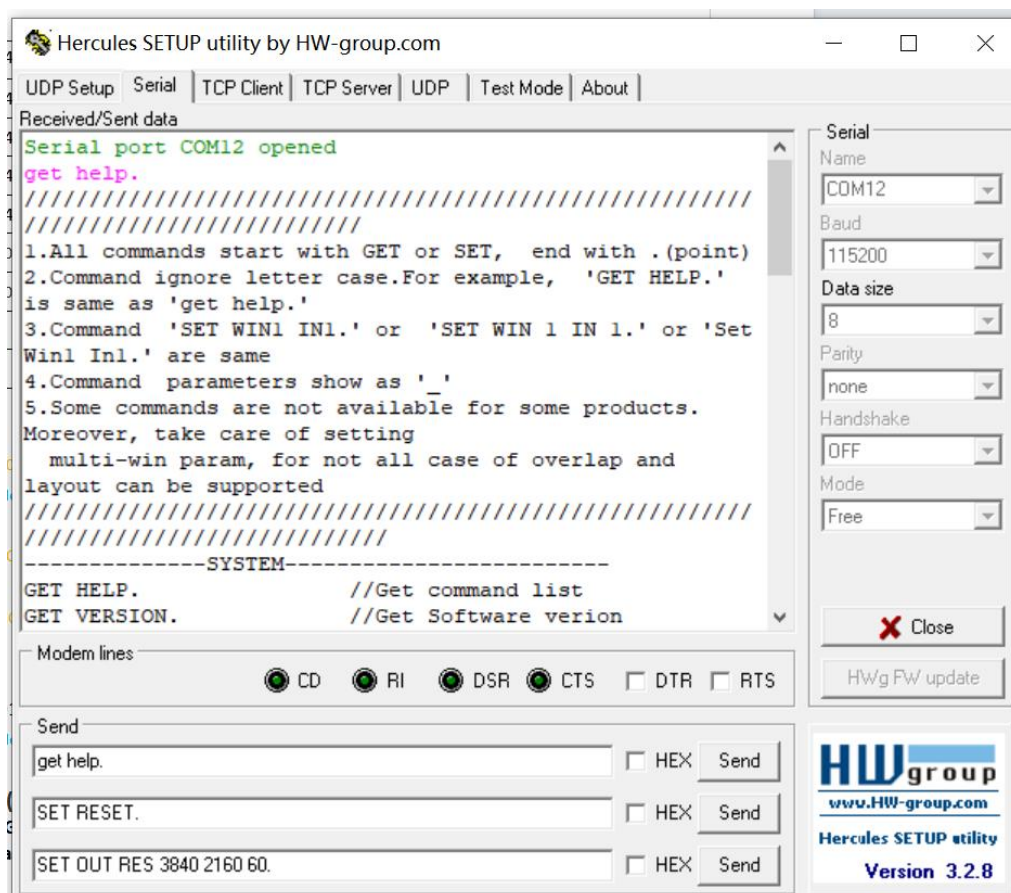
Input EDID Settings

1080x1516P60: EB 90 00 12 ff 01 24 02 04 38 05 EC 3C 00 00 00 00 00

Red is for the Width, Blue is for the Height, Yellow is for the frame rate

Commands in ASCII format(Some of the commands are applied for other products)

1. All commands start with GET or SET, end with .(point)
2. Command ignore letter case.For example, '**GET HELP.**' is same as '**get help.**'



Please know clearly that the user enjoy one-year warranty service from the date of purchase for free except the incidental expenses such as the postal expenses and transportation expenses.

Our company is entitled to refuse to provide free warranty service in the following cases, yet can provide charged maintenance service:

1. Failure to provide related purchase vouchers or the content recorded in the purchase voucher is not consistent with the product.
2. The product is damaged due to bad weather, nature or other forces majeure
3. Artificial damage caused by failure to operate the equipment as per the installation direction provided by the company.
4. The damage to the product due to repair not authorized by our company. Product failure and damage due to improper storage. The artificial scratch, breakage, stain, damage, etc. on the product appearance.

Note: The appurtenances and package, etc. otherwise than the product itself are not within the scope of warranty. This warranty excludes the transportation expenses and provides no door-to-door service. The product value will be reduced due to unsealing of and damage to the product package and the damage to or loss of related appurtenances, so those wanting to return goods please notice that the packaging expenses and appurtenance expenses caused by returning of goods shall be assumed by the returning party.

End of document.
