



# CPLUS-11HB

4K2K HDMI 6G Pattern Generator with Audio Bridge



**4kx2k<sup>+</sup>**  
**HDCP 2.2**

Operation Manual



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Version 1.0 September 2015

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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:

- 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). Do not use the PSU if it is damaged.
- 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.

## REVISION HISTORY

VERSION NO.	DATE DD/MM/YY	SUMMARY OF CHANGE
VR0	14/03/16	Preliminary Release



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## 1. INTRODUCTION

The 4K2K HDMI 6G Pattern Generator with Audio Bridge is an advanced and convenient tool for generating HDMI 6G signals for testing HDMI devices. With 6 built-in settings covering Ultra HD and Full HD resolutions, 4 test patterns, HDCP (1.4, 2.2 and non-HDCP) and 2 audio types each providing a large array of test patterns, and incorporates both digital and analog audio inputs for embedding into an HDMI output. The colorful LED design allows fast and easy selection of patterns and quick viewing of the current status.

## 2. APPLICATIONS

- Production testing
- R&D design and testing

## 3. PACKAGE CONTENTS

- 1 x 4K2K HDMI 6G Pattern Generator
- 1 x Power Adaptor
- Operation Manual

## 4. SYSTEM REQUIREMENTS

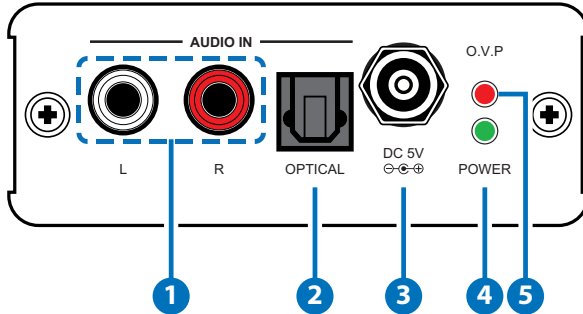
Input audio source signals with output HDMI display/monitor and connection cables.

## 5. FEATURES

- HDMI with 4K2K 6G supported and HDCP 2.2 compliant
- Generate HDMI timings up to 6Gbps 4K2K@60
- Generate HDCP v1.4/v2.2 and non-HDCP signal
- Supports external analog stereo and optical digital audio inputs

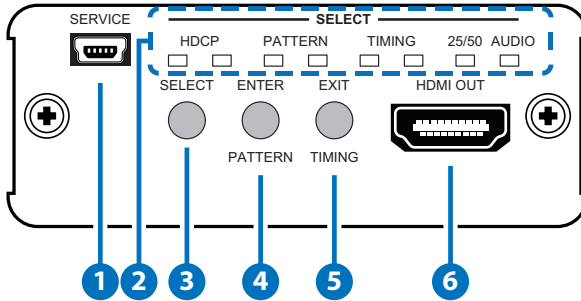
## 6. OPERATION CONTROLS AND FUNCTIONS

### 6.1 Front Panel



- 1 **AUDIO IN L/R:** Connect from audio source equipment with L/R cables.
- 2 **AUDIO IN OPTICAL:** Connect from audio source equipment with optical cable.
- 3 **POWER:** Plug the 5V DC power supply into the unit and connect the adaptor to an AC outlet.
- 4 **POWER:** This LED will illuminate when the device is connected with power supply.
- 5 **O.V.P.(Over Voltage Protection):** This LED will illuminate when the input power supply exceed from 5V to 28V and the device will be terminated.

## 6.2 Rear Panel



- 1 SERVICE:** This slot is reserved for factory use only.
- 2 SELECT LED:** These LEDs will illuminate according to the selection. Each selection with 2 LEDs of 3 colors, left LED is blue and right LED are red or green. Each LED color represent a pattern/timing as below:

	Blue	Red	Green	None	25/50
HDCP LED	HDCP2.2	HDCP1.4*	OFF		
PATTERN LED	Blue Scale	Red Scale	Green Scale	Gray Scale *	
TIMING LED	4K2K60	4K2K30	1080P60	720P60*	
	4K2K50	4K2K25	1080P50	720P50	<input type="checkbox"/>
AUDIO LED		Optical	LR*		

\*are default setting.

- 3 SELECT Button:** Press this button to enter into selection mode and both LEDs will be flashing in blue and green. Press again to enter into another selection.
- 4 ENTER/PATTERN Button:** Press this button to enter into the selection then press the SELECT button to select and the LED will illuminate in sequence from the default setting, press ENTER again to confirm the selection. When exit selection mode press this button to select pattern directly.

For example, to select HDCP 2.2 with blue scale and 4K2K60 timing from the default setting, press SELECT (to enter into selection)→

press ENTER (to select HDCP) → press SELECT 2 times (to select HDCP2.2/Blue LED) → press ENTER (to confirm HDCP selection) →

press SELECT again (to enter into PATTERN selection) → press ENTER (to select Patter) → press SELECT twice (to select Blue Scale/Blue LED) → press ENTER (to confirm Pattern selection) →

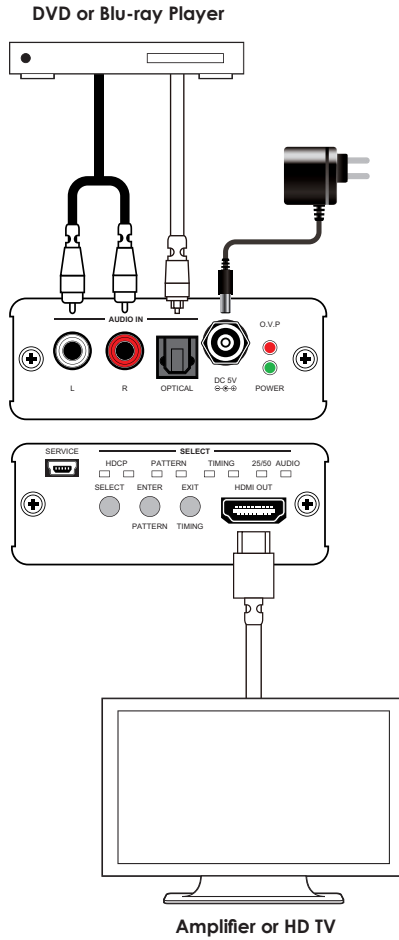
press SELECT again (to enter into Timing selection) → press ENTER (to select Timing) → press SELECT 5 times (to select 4K2k60/Blue LED) → and press ENTER (to confirm Timing selection).

Press ENTER together with EXIT to reset the setting back to default.

**Note:** *If the ENTER button is not pressed after the selection is made the setting will not be established and will remain under the selection mode.*

- 5 EXIT/TIMING Button:** Press this button to exit/cancel the selection. When exit selection mode press this button to select timing directly.
- 6 HDMI OUT:** Connect with display/monitor with HDMI cable.

## 7. CONNECTION DIAGRAM



## 8. SPECIFICATIONS

### 8.1 Technical Specifications

<b>Video Bandwidth</b>	600MHz/18Gbps
<b>Input Port</b>	1 x L/R (RCA) 1 x Optical 1 x USB(Service)
<b>Output Ports</b>	1 x HDMI
<b>Supported Resolutions</b>	720p@50/60, 1080p@50/60, 4K2K@25/30/50/60
<b>HDMI Cable Length</b>	5M/4K2K@25/30/50/60 5M/1080p@50/60
<b>Support Digital Audio</b>	48kHz
<b>Output Sampling Rate</b>	
<b>Support Analog Audio</b>	2Vrms
<b>Power Supply</b>	5V/2.6A DC (US/EU standards, CE/FCC/UL certified)
<b>Chassis Material</b>	Aluminum
<b>Chassis color</b>	Black
<b>Weight</b>	202g
<b>Dimensions</b>	78.5mm(W) x 87.1mm(D) x 30mm(H)/Jacks Excluded 78.5mm(W) x 95.25mm(D) x 30mm(H)/Jacks Included
<b>Power Consumption</b>	2.5 W

### 8.2 Supported Resolutions

RESOLUTION	EMBEDDED	OUTPUT
1280×720p@50/60	√	√
1920×1080p@50/60	√	√
3840×2160@25/30/50/60	√	√



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