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Blackbird™
4K Series 7.1 HDMI® Audio Extractor

13348

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User's Manual

SAFETY WARNINGS AND GUIDELINES

- This device is intended for indoor use only.
- Do not expose this device to water or moisture of any kind. Do not place drinks or other containers with moisture on or near the device. If moisture does get in or on the device, immediately unplug it from the power source and allow it to fully dry before reapplying power.
- Do not touch the device, the power cord, or any other connected cables with wet hands.
- Do not expose this device to excessively high temperatures. Do not place it in, on, or near heat sources, such as a fireplace, stove, radiator, etc. Do not leave it in direct sunlight.
- Prior to operation, check the unit and power cord for physical damage. Do not use if physical damage has occurred.
- Unplug this device from the power source when not in use.
- Take care to prevent damage to the power cord. Do not allow it to become crimped, pinched, walked on, or become tangled with other cords. Ensure that the power cord does not present a tripping hazard.
- Never unplug the unit by pulling on the power cord. Always grasp the connector head or adapter body.
- Ensure that power is turned off and disconnected before making any electrical connections.
- Clean using a soft, dry cloth only. Do not use chemical cleaners, solvents, or detergents. For stubborn deposits, moisten the cloth with warm water.
- This device has no user serviceable parts. Do not attempt to open, service, or modify this device.

INTRODUCTION

Thank you for purchasing this HDMI® Audio Extractor!

This device allows you to extract the audio material from your HDMI audio/video source. It then converts the HDMI-based audio to both Digital Optical S/PDIF (Toslink) and analog audio signals for use by an amplifier or AV receiver. It has a bandwidth of 10.2Gbps and therefore supports all High Speed HDMI features, including 4K (3840x2160p) video resolution and 3D video.

FEATURES

- Compliant with HDMI, HDCP 1.2, and DVI 1.0
- HDMI audio sampling rates up to 192 kHz
- Digital Optical S/PDIF (Toslink) audio sampling rates up to 192 kHz
- HDMI supports High-Bit-Rate (HBR) audio
- No HDMI output connection is required to receive audio at the analog and optical outputs
- Features 4x 3.5mm TRS jacks for analog multi-channel audio output
- Supports built-in audio EDID switching between LPCM 7.1CH, TV (external) EDID, and Bitstream audio (raw digital audio)
- Supports CEC pass-through
- Supports 4K (3840x2160p) resolution and 3D video signals

CUSTOMER SERVICE

The Monoprice Customer Service department is dedicated to ensuring that your ordering, purchasing, and delivery experience is second to none. If you have any problem with your order, please give us an opportunity to make it right. You can contact a Monoprice Customer Service representative through the Live Chat link on our website www.monoprice.com during normal business hours (Mon-Fri: 5am-7pm PT, Sat-Sun: 9am-6pm PT) or via email at support@monoprice.com

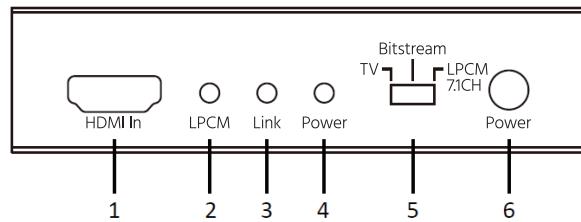
PACKAGE CONTENTS

Please take an inventory of the package contents to ensure you have all the items listed below. If anything is missing or damaged, please contact Monoprice Customer Service for a replacement.

- 1x HDMI® 7.1-channel audio extractor
- 1x AC power adapter
- 1x User's manual

PRODUCT OVERVIEW

Front Panel



1 (HDMI In): HDMI® audio/video input.

2 (LPCM): This LED illuminates when the EDID switch is set to the **LPCM 7.1CH** position.

3 (Link): This LED illuminates when there is a signal on the **HDMI In** port.

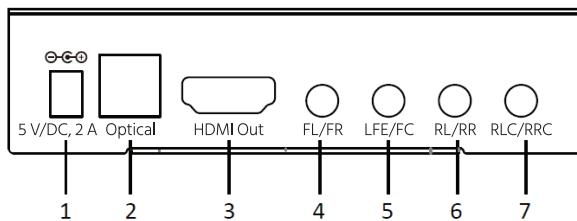
4 (Power): This LED illuminates whenever power is applied.

5 (TV / Bitstream / LPCM 7.1CH): This EDID Selection switch is used to select the EDID behavior.

- **TV Mode:** Select this pass-through option to allow the extractor to use EDID of the device connected to the **HDMI Out** port to set the audio output capabilities. Up to 7.1 channels are supported.
- **Bitstream Mode:** When this option is selected, the extractor will send raw digital audio data to the receiver to process and the analog audio output is disabled.
- **LPCM 7.1CH:** Select this option to force the output to 7.1 channel LPCM.

6 (Power): Press this button to switch power on or off.

Rear Panel



1 (5 V/DC, 2 A): DC power input jack.

2 (Optical): Digital optical S/PDIF (Toslink®) audio output connector.

3 (HDMI Out): HDMI® audio/video output connector.

4 (FL/FR): 3.5mm TRS analog output for the Front Left and Front Right channels.

5 (LFE/FC): 3.5mm TRS analog output for the Low Frequency Effects (subwoofer) and Front Center channels.

6 (RL/RR): 3.5mm TRS analog output for the Rear Left and Rear Right channels.

7 (RLC/RRC): 3.5mm TRS analog output for the Rear Left Center and Rear Right Center channels.

CABLE CONSIDERATIONS

This extractor uses the following cable types. Note that cables are not included.

Optical: Use a Digital Optical S/PDIF (Toslink®) cable to connect the extractor to an amplifier or AV receiver.

HDMI: Use a High Speed HDMI® Cable to connect to a video display. Note that connection to a video display is not necessary to extract audio.

Analog: Use 3.5mm TRS to stereo RCA cables, such as Monoprice models 665 or 666, to connect to the line inputs on an amplifier or AV receiver. Note that the left channel is assigned to the left-side label. So for example, the LFE/FC output has LFE on the left channel and FC on the right channel.

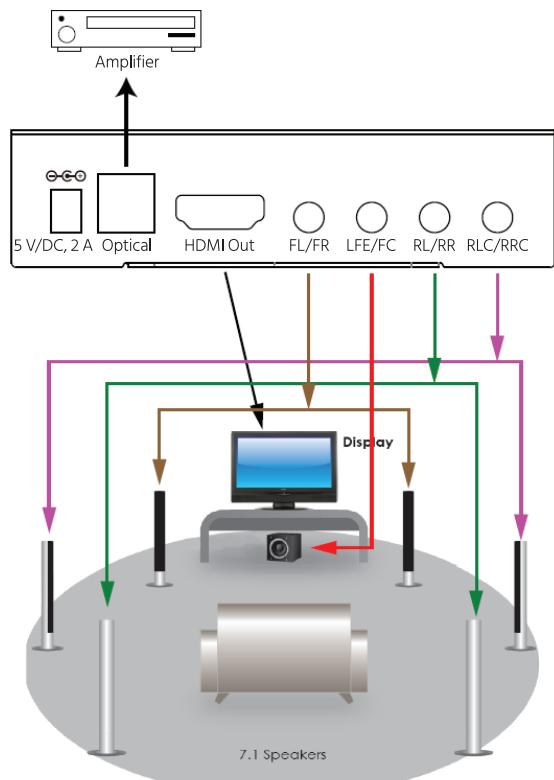
INSTALLATION

Perform the following steps to install this extractor into your home theater system. Note that although all three output options can be used, only one is required.

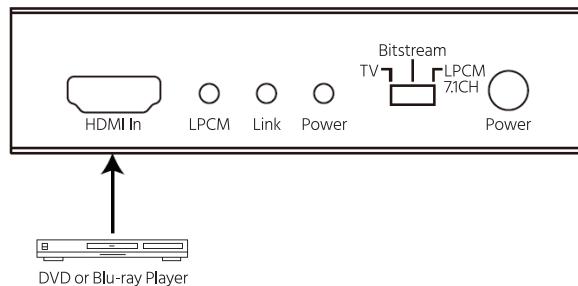
1. Ensure that all equipment is powered off and unplugged prior to making electrical connections.
2. (Optional) Using a High Speed HDMI Cable (not included), plug one end into the HDMI input on your display. Plug the other end into the **HDMI Out** port on the extractor.
3. (Optional) Using a Digital Optical S/PDIF (Toslink®) cable (not included), plug one end into the digital optical input on your amplifier or AV receiver. Plug the other end into the **Optical** port on the extractor.
4. (Optional) Using up to four 3.5mm TRS to RCA cables (not included), connect the RCA plugs to the line level inputs on your amplifier or AV receiver, then insert the 3.5mm plug into the appropriate jack on the adapter. The following table shows which outputs are used for the various channel counts:

# of Channels	Type	Outputs Used
2	Stereo (2-channel)	FL/FR
6	5.1-channel	FL/FR, LFE/FC, RL/RR
8	7.1-channel	FL/FR, LFE/FC, RL/RR, RLC/RRC

Note that in all four cases, the abbreviation of the left side of the slash is assigned to the left channel output, while that on the right side is assigned to the right channel.



5. Using a High Speed HDMI Cable (not included), plug one end into the **HDMI In** port on the extractor, then plug the other end into the HDMI output on your audio/video source device.



6. Plug the DC connector on the included AC power adapter into the **5 V/DC, 2 A** jack, then plug the adapter into a nearby AC power outlet.

7. Set the **TV / Bitstream / LPCM 7.1CH** switch to the desired position for EDID behavior. In the **TV** position, the unit will use the device connected to HDMI Out to determine the audio EDID. In the **Bitstream** position, it will send raw digital audio to the receiver for processing and the analog audio output is disabled. When set to the **LPCM 7.1CH** position, it will force the output to 7.1-channel LPCM audio.

8. Plug in and power on all connected equipment.

9. Press the **Power** button to turn the extractor on. The **Power LED** will illuminate.

Congratulations, you are now ready to enjoy the audio extracted from your HDMI source material!

TROUBLESHOOTING

Q1: No audio output from any output.

A1: Check the power LED to verify that the extractor has power. Check the HDMI® cable connections. Try using a different HDMI cable. Try setting the EDID switch to different positions.

Q2: No audio on one set of analog outputs.

A2: Check the cable connections. Verify that the audio source contains audio for the missing channel. For example, if audio is missing on the RLC/RRC channel, ensure that the source has 7.1-channel audio. Try setting the EDID switch to different positions.

TECHNICAL SUPPORT

Monoprice is pleased to provide free, live, online technical support to assist you with any questions you may have about installation, setup, troubleshooting, or product recommendations. If you ever need assistance with your new product, please come online to talk to one of our friendly and knowledgeable Tech Support Associates. Technical support is available through the online chat button on our website www.monoprice.com during regular business hours, 7 days a week. You can also get assistance through email by sending a message to tech@monoprice.com

SPECIFICATIONS

Video Bandwidth	340Mbps/channel (10.2Gbps total)
Inputs	1x HDMI®
Outputs	1x HDMI 1x Digital Optical S/PDIF (Toslink®) 4x 3.5mm TRS Analog Line Level
HDMI Audio Sampling Rate	Up to 192kHz
Digital Optical S/PDIF Sampling Rate	Up to 192kHz
HDMI Audio Formats	LPCM (2, 5.1, and 7.1 channels) DTS® (2 and 5.1 channels) DTS-HD Master Audio™
Digital Optical S/PDIF Audio Formats	LPCM (2, 5.1, and 7.1 channels) DTS (2 and 5.1 channels)
Analog Audio Formats	2, 5.1, or 7.1 channels
Input Power	5 VDC, 2A
Operating Temperature	+32 ~ +104°F (0 ~ +40°C)
Storage Temperature	-4 ~ +140°F (-20 ~ +60°C)
Dimensions	3.7" x 3.2" x 0.9" (95 x 82 x 24 mm)

REGULATORY COMPLIANCE

Notice for FCC



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.

Modifying the equipment without Monoprice's authorization may result in the equipment no longer complying with FCC requirements for Class B digital devices. In that event, your right to use the equipment may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.

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 receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Notice for Industry Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

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