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U9 U9-EAMN

U9 eARC ARC HDMI Audio Extractor/Adapter User Manual

Model: U9-EAMN

1. INTRODUCTION

The U9-EAMN is an advanced HDMI 2.0b audio extractor and adapter designed to integrate modern eARC/ARC-enabled televisions with existing audio/video receiver (AVR) systems that may not support eARC. This device facilitates the extraction of high-quality audio, including Dolby Vision and Atmos, from your HDMI source or TV's eARC/ARC port, routing it to your audio receiver while passing video to your display. It supports 4K@60Hz resolution with HDR and 4:4:4 color format, ensuring a seamless audio-visual experience.



Figure 1.1: The U9-EAMN HDMI eARC Audio Extractor.

2. KEY FEATURES

- **HDMI 2.0b Compliance:** Supports 4K@60Hz, HDR, Dolby Vision, and Atmos passthrough.
- **eARC/ARC Support:** Designed to work with eARC/ARC-enabled TVs to send audio to an HDMI audio receiver.
- **Audio Extraction:** Extracts audio from the HDMI input source to a connected HDMI receiver.
- **Flexible Connectivity:** Features dedicated ports for HDMI input, HDMI output to ARC TV, and HDMI output to AVR.
- **EDID Management:** Allows selection of EDID modes (OUT1 or OUT2) for optimal audio compatibility.
- **Compact Design:** Measures 2.76 x 2.56 x 1.06 inches, making it easy to integrate into any setup.

3. PACKAGE CONTENTS

Please verify that all items listed below are present in your package:

- U9-EAMN HDMI eARC Audio Extractor Unit
- Micro USB Power Cable



Figure 3.1: Package contents including the U9-EAMN unit, box, and micro USB power cable.

4. PRODUCT OVERVIEW

4.1. Device Layout

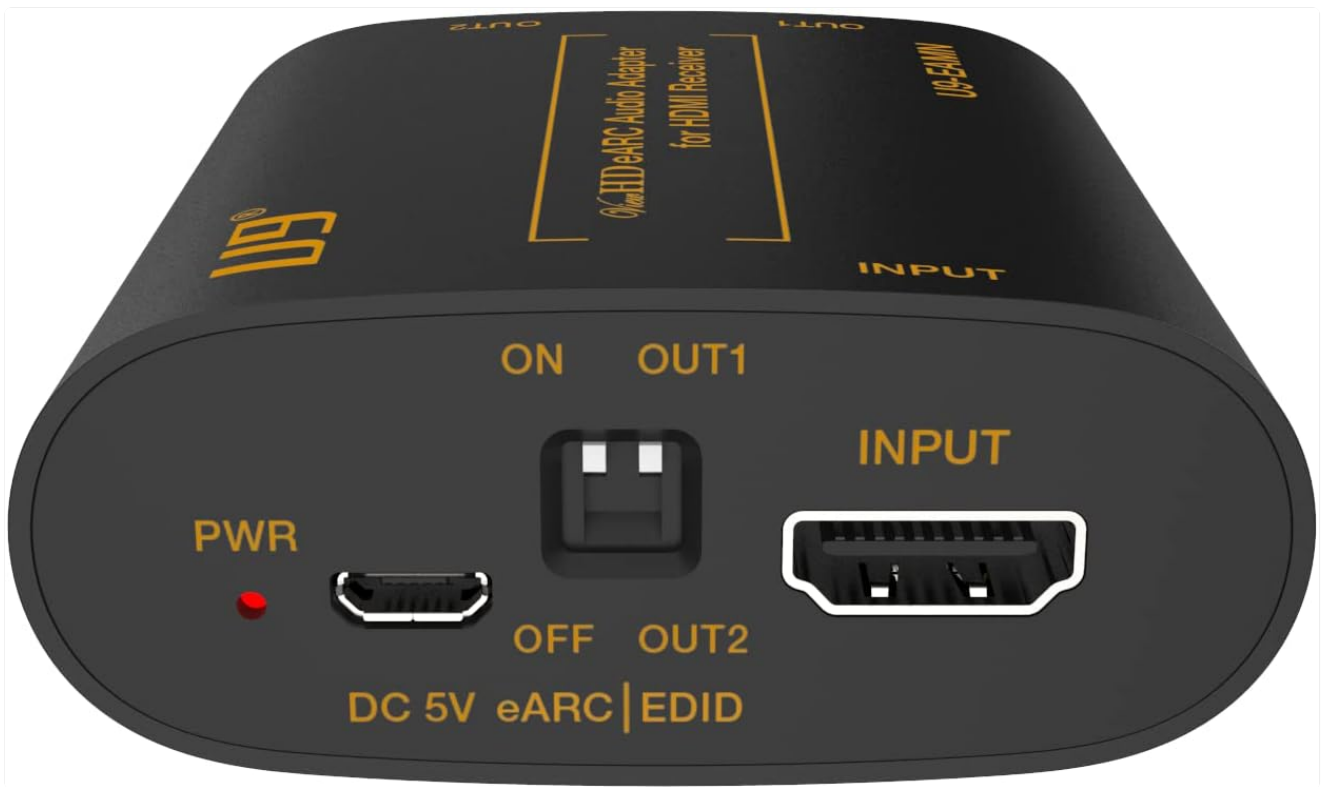


Figure 4.1: Front panel of the U9-EAMN with power input, switches, and HDMI input.



Figure 4.2: Rear panel of the U9-EAMN with HDMI outputs.

4.2. Ports and Switches

- **PWR (Micro USB):** Connect the included micro USB power cable to a constant DC 5V USB power charger. Avoid using cell phone/tablet USB chargers that may have dynamic output voltage.
- **eARC Switch (ON/OFF):**
 - **ON:** Enables eARC functionality for audio extraction from the TV's eARC port.
 - **OFF:** Disables eARC functionality, typically used for extracting audio from the HDMI INPUT source.

- **EDID Switch (OUT1/OUT2):** Controls the Extended Display Identification Data (EDID) for audio output.
 - **OUT1:** Typically used when the TV's built-in speakers are desired, or for specific audio passthrough scenarios.
 - **OUT2:** Recommended for eARC applications and when extracting audio to an HDMI receiver.
- **HDMI INPUT:** Connects to your HDMI video source (e.g., Blu-ray player, streaming device).
- **TO ARC TV (OUT1):** Connects to the ARC/eARC HDMI port of your television. If your TV does not support ARC, connect to any available HDMI input port.
- **TO AVR (OUT2):** Connects to a regular HDMI input port on your Audio/Video Receiver (AVR). This port carries the extracted audio.

5. SETUP AND CONNECTION

Follow these steps to set up your U9-EAMN audio extractor:



Figure 5.1: Typical connection diagram for the U9-EAMN.

1. **Power Connection:** Connect the micro USB power cable to the PWR port on the U9-EAMN. Plug the other end into a reliable DC 5V USB power source. Ensure the power source provides a constant voltage.
2. **HDMI Source Connection:** Connect an HDMI cable from your video source (e.g., Blu-ray player, game console, media streamer) to the **HDMI INPUT** port on the U9-EAMN.
3. **TV Connection:** Connect an HDMI cable from the **TO ARC TV (OUT1)** port on the U9-EAMN to the ARC/eARC HDMI input port on your television. If your TV does not have an ARC/eARC port, connect it to any standard HDMI input.
4. **AV Receiver Connection:** Connect an HDMI cable from the **TO AVR (OUT2)** port on the U9-EAMN to a standard HDMI input port on your Audio/Video Receiver (AVR). This connection will carry the extracted audio.
5. **Initial Settings:** Before powering on, set the eARC and EDID switches according to your desired audio configuration (refer to Section 6 for details).

6. **Power On:** Power on all connected devices (TV, AVR, HDMI source, and the U9-EAMN).

6. OPERATING INSTRUCTIONS

The U9-EAMN offers different operating modes based on the switch settings:

6.1. For TV eARC Application (TV Audio to AVR)

This mode is used when you want to send audio from your eARC-enabled TV (e.g., smart TV apps, TV tuner) to your HDMI audio receiver.

- Ensure CEC and eARC functions are enabled in your TV's settings.
- Set the **eARC switch** to the "ON" position.
- Set the **EDID switch** to the "OUT2" position.
- Connect the "TO ARC TV" port to your TV's eARC HDMI port.
- Connect the "TO AVR" port to your AV receiver.
- When eARC mode is ON, the TV's built-in speakers will typically not produce sound, as audio is routed to the AVR.

6.2. To Extract HDMI Audio from HDMI INPUT (Source Audio to AVR)

Use this mode to extract audio directly from the HDMI source connected to the "HDMI INPUT" port and send it to your HDMI receiver, while video passes through to the TV.

- Set the **eARC switch** to the "OFF" position.
- Set the **EDID switch** to the "OUT2" position.
- The HDMI audio from the connected source (e.g., Blu-ray player) will be extracted and sent to the connected HDMI receiver.

6.3. To Use TV's Built-in Speakers (Video Passthrough, No AVR Audio)

This configuration allows the TV to handle audio playback using its internal speakers, with the HDMI signal passing through without modification to the AVR.

- Set the **eARC switch** to the "OFF" position.
- Set the **EDID switch** to the "OUT1" position.
- The HDMI output signal to the TV will be identical to the HDMI input signal. The HDMI signal to the AVR will be audio only.

7. MAINTENANCE

To ensure the longevity and optimal performance of your U9-EAMN audio extractor, please follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Do not use liquid cleaners or aerosols, as they may damage the unit.
- **Ventilation:** Ensure the device is placed in a well-ventilated area to prevent overheating. Do not block any ventilation openings.
- **Handling:** Handle the device with care. Avoid dropping or subjecting it to strong impacts.
- **Power Supply:** Always use the provided micro USB power cable and a stable DC 5V power source. Disconnect power during electrical storms or when unused for long periods.

8. TROUBLESHOOTING

If you encounter issues with your U9-EAMN, please refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No audio output to AVR in eARC mode.	TV eARC/CEC not enabled; incorrect switch settings; unstable power supply.	<ul style="list-style-type: none">• Ensure TV's CEC and eARC functions are enabled in its settings.• Set eARC switch to "ON" and EDID switch to "OUT2".• Verify power supply is a constant DC 5V. Avoid dynamic voltage chargers.• Try power cycling all devices (TV, AVR, U9-EAMN, source).
No audio from HDMI INPUT source.	Incorrect switch settings.	<ul style="list-style-type: none">• Set eARC switch to "OFF" and EDID switch to "OUT2".• Ensure the HDMI source is active and outputting audio.
TV built-in speakers have no sound in eARC mode.	Normal operation for eARC mode.	<ul style="list-style-type: none">• This is expected behavior when eARC is active, as audio is routed to the AVR.• To use TV speakers, set eARC switch to "OFF" and EDID switch to "OUT1".
Intermittent audio drops.	Cable quality; power supply instability; CEC conflicts.	<ul style="list-style-type: none">• Use high-quality, certified HDMI 2.0b or 2.1 cables.• Ensure a stable DC 5V power supply.• Try disconnecting other HDMI devices or using a CEC blocker if conflicts arise.• Power cycle all devices.
Volume control not working via TV remote.	CEC/ARC limitations of older AVRs; specific TV/AVR compatibility.	<ul style="list-style-type: none">• This can be a limitation with certain AVRs or TV models.• Ensure CEC is enabled on both TV and AVR.• You may need to control volume directly on the AVR.

9. SPECIFICATIONS

Feature	Detail
Model Number	U9-EAMN
HDMI Version	HDMI 2.0b
Max Resolution Support	4K@60Hz
Color Format Support	4:4:4
HDR Support	HDR, Dolby Vision
Audio Support	Dolby Atmos, Dolby TrueHD, DTS-HD Master Audio, LPCM, etc.
Input Port	1 x HDMI Type A
Output Ports	2 x HDMI Type A (TO ARC TV, TO AVR)
Power Supply	DC 5V via Micro USB
Product Dimensions (L x W x H)	2.76 x 2.56 x 1.06 inches (70 x 65 x 27 mm)
Item Weight	5.6 ounces
Manufacturer	U9LTD



Figure 9.1: Dimensions of the U9-EAMN unit.

10. WARRANTY AND SUPPORT

U9 products are designed for reliability and performance. For warranty information or technical support, please refer to the contact details provided with your purchase or visit the official U9 website. Keep your purchase receipt for warranty claims.

For further assistance, please contact U9 customer support.

