

Operating Manual

DXA-BMD

Passive Audio Adapter for the BlackMagic Cinema Camera



This operating manual explains the adapter function settings and how to use the adapter to record audio into the camera.



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Thank You for Purchasing a Beachtek Product

Congratulations on purchasing the DXA-BMD. This adapter will provide you with exceptional performance to enable you to record professional audio directly to your camera.

- Before using this high quality device, please read this guide thoroughly to obtain the highest performance.
- Please contact us if you have any problems or questions.

Description

The Beachtek DXA-BMD is a two-channel, passive audio adapter for connecting professional audio gear from boom mics, wireless mic and mixing boards to the Blackmagic Cinema Camera.

The DXA-BMD uses exceptionally low noise, wide bandwidth, balancing transformers for pure, clean audio with no electronics to get in the way. This allows you to record high quality audio directly to the camera which will always be in sync with the video. Direct audio recording eliminates the need to have a separate audio recording device and syncing the audio in post editing.

The transformer balanced inputs provide electrical isolation for the camera and also to reduce the possibility of ground loop noise. Built-in VU meters makes it easy to verify the proper signal levels at a glance, while the level controls allow you to adjust the output signal for optimum recording. The built-in phantom power feature powers professional boom mics requiring 48 volts to operate.

The adapter mounts to the bottom of the camera and can also be mounted to any standard tripod.

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Before You Begin

- 1) These instructions refer to the use of this adapter with the Blackmagic Cinema Camera.
- 2) This adapter does not have a preamplifier to increase the signal levels from the inputs – the output level will only be as strong as the input level. Be sure to use sensitive mics that provide a strong output signal.
- 3) Some Sony wireless mics have very low output levels which will not give you good results without some form of preamplification.
- 4) When using Sennheiser EW100 wireless mic systems, set the receiver output to 0dB for the best performance with this adapter.
- 5) Note that if you overload the MIC input on the camera, it will switch to LINE mode and you will lose your signal. You will have to turn the camera off and back on to reset the input mode to MIC.

Supplied Accessories

- Two ¼" TRS output cables

Quick Setup Guide

- 1) Ensure the POWER and PH Voltage switches are set to OFF.
- 2) Install a fresh alkaline or lithium battery in the adapter.
- 3) Mount the DXA-BMD adapter to the camera.
- 4) Connect the supplied output cables from:
 - a. OUT 1 jack on the adapter to the AUDIO IN 1 jack on the camera
 - b. OUT 2 jack on the adapter to the AUDIO IN 2 jack on the camera
- 5) Connect your audio gear to the L and or R inputs of the adapter.
- 6) Set the camera audio menu as follows:
 - a) Microphone Input: **0%**
 - b) CH 1 and CH 2 Input Levels
 - Mic** for microphones and wireless mics
 - Line** for mixers
 - c) CH 1 Input: **30%**
 - d) CH 2 uses Ch 1 Input: **Off**
 - e) Ch 2 Input: **30%**
 - f) Speaker Volume: **25%**
- 7) Set the VU Meter switch on the adapter to either LINE or MIC to match the above setting.
- 8) Set the M/S switch to M for mono when using one channel or to S for stereo when using two channels. **When in mono mode, keep the unused channel level control fully clockwise.** This will isolate the unused channel from the working channel so it will not cause any interference.
- 9) Turn the adapter PWR switch on. The power LED should indicate green.

- 10) Only turn on PHANTOM on either channel if you are using a phantom powered mic attached to that channel.
- 11) Set the PH VOLTAGE switch to either 12V or 48V if either channel requires phantom power.
- 12) Adjust the LEFT and RIGHT level controls to get an average reading of between -12dB and 0dB on the VU Meter.
- 13) Plug your headphones into the phone jack on the camera and adjust the camera volume control to a comfortable level.
- 14) You are ready to record.

Adapter Connectors and Controls

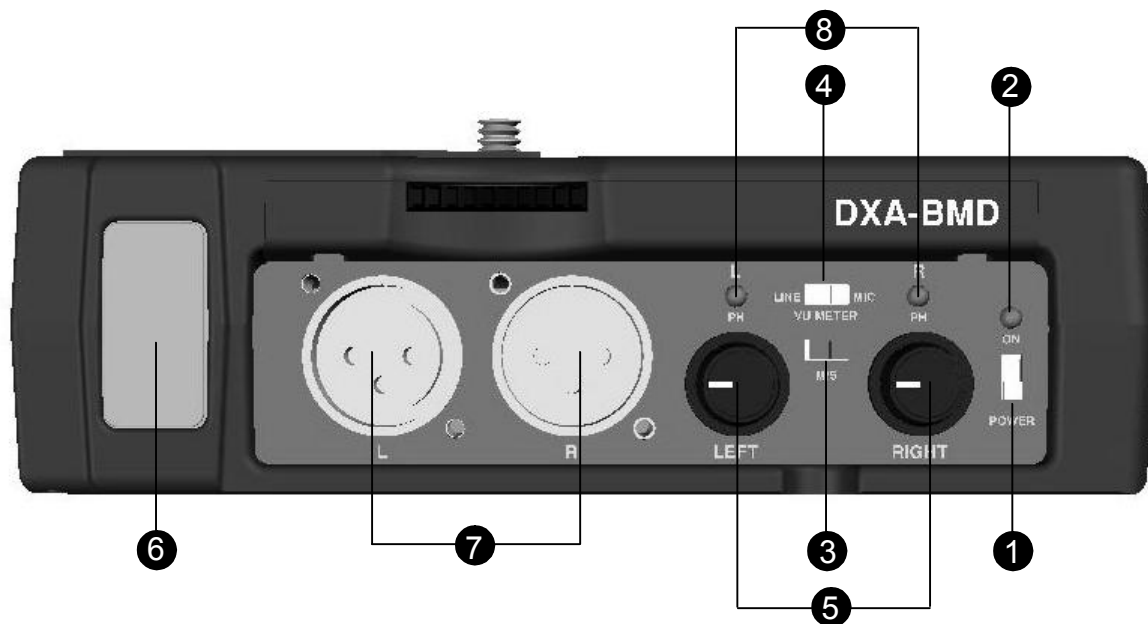
Front Panel

- ❶ PWR Switch**
Main power switch for adapter
- ❷ PWR LED**
Green indicates power on and good battery condition
Red indicates low battery voltage
- ❸ MODE Switch**
Selects M for mono or S for stereo output mode
- ❹ VU METER**
Selects VU meter calibration for either LINE when camera is set to LINE input or MIC when camera is set to MIC input.
- ❺ LEFT and RIGHT Controls**
Individual adjustment controls to adjust output levels on each channel
- ❻ VU Meter**
Indicates the sound level in dB for each channel
- ❼ L and R Inputs**
Balanced XLR inputs
- ❽ L and R PH LEDs**
Red indicates activation of phantom power

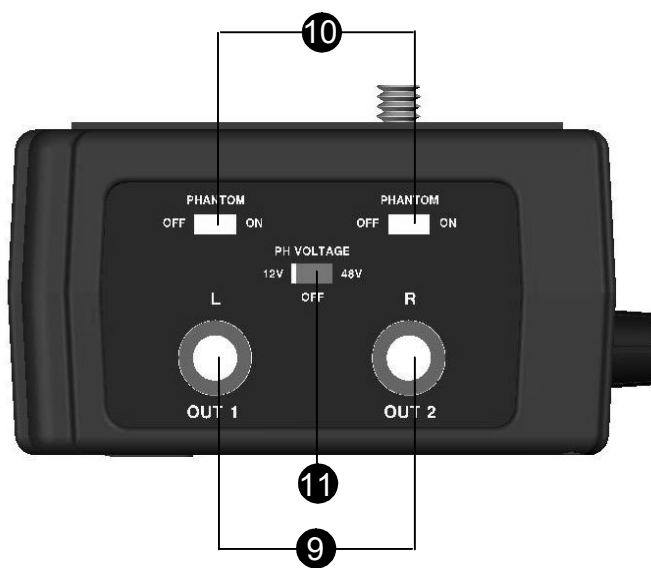
Side Panel

- ❾ OUT 1 and OUT 2**
Output jack for connection to the camera
- ❿ PHANTOM**
Activates phantom power for each channel
- ⓫ PH Voltage**
Selects phantom voltage of 12V, 48V or OFF

Front Panel



Side Panel



Setup Guide

Battery Installation

- 1) The DXA-BMD operates on one 9 volt battery. We recommend that you use either an alkaline or lithium type battery for the longest operating time.
- 2) To install the battery unlatch the drawer by pushing in and over on the drawer front, releasing and sliding the drawer out. Insert the battery with the “+” positive terminal lined up with the “+” indicator on the battery compartment. Slide the battery drawer closed until it clicks into place.

Note that the battery is not required to pass the audio signal if phantom power is not required. The battery is only used for the VU meter and phantom power. The audio will continue to be sent to the camera even if the battery goes dead or the unit is switched off.

Mounting and Connecting the Adapter to the Camera

- 1) Ensure that the camera and adapter are both switched off.
- 2) Line up the mounting bolt on top of the adapter to the tripod hole on the underside of the camera. Carefully turn the adapter mounting knob on the front panel to the right, to screw the adapter squarely into the camera. Snug the adapter to the camera, but do not over tighten.
- 3) Connect each of the supplied output cables from the OUT of the adapter to the AUDIO IN on the camera.

Initial Setup

- 1) Be sure that the PH Voltage is set to OFF
- 2) Set the PHANTOM switch for each channel to OFF as well
- 3) Set the camera audio menu as follows:
 - a) Microphone Input: **0%**
 - b) CH 1 and CH 2 Input Levels
Mic for microphones and wireless mics
Line for mixers
 - c) CH 1 Input: **30%**
 - d) CH 2 uses Ch 1 Input: **Off**
 - e) Ch 2 Input: **30%**
 - f) Speaker Volume: **25%**
- 4) Set the VU Meter switch on the adapter to either LINE or MIC to match the above setting.
- 5) Connect your microphones or a feed from a mixer to the adapter via the L and R balanced XLR inputs.
- 6) Only turn on PHANTOM on either channel if you are using a phantom powered mic attached to that channel. Never activate PHANTOM when connecting wireless mics, dynamic mics, mixing board or any device with an unbalanced (mini-plug) output.
- 7) Set the PH VOLTAGE switch to either 12V or 48V if either channel requires phantom power. Some mics can operate on the lower 12V setting to save battery life. If no phantom power is required on either channel, keep the switch in the OFF position.
- 8) Set the M/S switch to M for mono when using one input. Set the unused channel level control fully clockwise to isolate it from the working channel. When using two inputs, you should normally set the switch to S for stereo to keep each channel separated.
- 9) Plug your headphones into the phone jack on the camera to monitor the audio.

Basic Operation

After following the above Initial Setup, you should be ready to start recording.

- 1) Turn the adapter PWR switch ON. The power LED should light green indicating good battery voltage. Red indicates low battery warning.
- 2) Adjust the LEFT and RIGHT level controls to give you an average reading of between -12dB and 0dB on the VU Meter. Be sure not to exceed 0dB. This will provide a good signal level to the camera and still offer plenty of headroom for higher transient signals.
- 3) Adjust the headphone volume control on the camera to a comfortable listening level.
- 4) You are ready to record.

Notes on Getting the Best Audio Performance

The most common problem in recording professional audio on today's DSLR cameras is the hiss generated by the camera preamplifiers. You will never completely eliminate all hiss, which is normal, but you can reduce it so that it is no longer a problem.

The most important thing to remember when recording audio is to set the audio levels correctly as explained in this manual.

Setting the levels too low will give you a poor signal to noise ratio and lead to poor results. Also, setting the levels too high will cause clipping and distortion. Having the proper levels will ensure that good clean audio signals are being sent to the camera for the highest quality audio.

Features

Inputs

- Two balanced Neutrik XLR connectors

Outputs

- Two balanced TRS ¼" jacks for connection to the camera

VU Meter

- Easy to read level meters indicate proper signal level for each channel

Level Controls

- Adjusts signal level output on each channel

Phantom Power

- Provides 12 or 48 volt phantom power for professional boom mics

Power

- Easily replaceable 9 volt battery
- Low battery indicator

Case

- Sturdy die-cast aluminum enclosure

Specifications

Input Levels	MIC level: 0dB on the VU meter at -44dBu input LINE level: 0dB on the VU meter at +10dBu input
Frequency Response	20Hz to 20kHz (+/- 0.5dB)
THD	Less than 0.01% @ 1 kHz, -30dBu input
S/N Ratio	85 dB @ 1Khz, -30dBu input
Gain	Unity
VU meter	-18 to +3dB in 3dB increments
Battery Type	One 9 volt alkaline or lithium battery
Battery Duration (no phantom)	6 hours typical with alkaline battery 12 hours typical with lithium battery
Dimensions	6" x 3.75" x 1.75" (L x W x H) (152 mm x 95 mm x 44 mm)
Weight	18 oz (0.51 kg)

Warranty Information

Limited Two Year Warranty

This warranty covers any defects or malfunction in your new Beachtek adapter for two years from date of purchase.

Beachtek will replace or repair any defective or malfunctioning adapter, within the warranty period, at no charge. The warranty does not cover damage resulting from accident, alteration, misuse or abuse. The device must be sent to our service center at your expense.

Should you require service please contact us first before returning the unit to us. Return instructions can be found on our website at www.beachtek.com under the Support option.

Upon receiving the returned adapter it will be inspected and replaced or repaired if found defective. The unit will be shipped back to you within five business days at our expense.

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