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Operating Manual

DXA-HDV

Professional XLR Adapter for HDV Camcorders

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

Thank You for Purchasing a BeachTek Product

Congratulations on purchasing the DXA-HDV adapter. This adapter is packed with features to enable you to record professional audio directly to your camcorder.

- 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-HDV is a two-channel, active XLR adapter with built-in preamplifiers for attaching external microphones and other audio gear to any HDV camcorder that has a built-in mic jack. It can also be used with any other audio recording device that has a mic jack.

The DXA-HDV uses exceptionally low noise, wide bandwidth preamplifiers for superb audio. This allows you to record high quality audio directly to the camcorder which will always be in sync with the video.

The DXA-HDV is very easy to set up and use. It allows you to connect a wide variety of audio devices including wireless systems, mixers, sound boards and professional condenser microphones that require 48 volt phantom power to operate.

The level controls allow you to adjust the output signals going to the camcorder while the signal indicators give you an easy way to ensure optimum recording levels.

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

Warnings

When monitoring audio with headphones on your recording device, ensure that the headphone volume control is set low to avoid excessively loud audio damaging your hearing.

Always do a test recording and playback to ensure that the audio is acceptable.

DO NOT activate phantom power for dynamic microphones, condenser microphones that do not operate on phantom power, wireless receivers, mixing boards or any unbalanced device as it may cause damage to both the adapter and connecting device.

Turn off power to adapter before plugging or unplugging any microphones or equipment to or from the adapter.

Contents

Before you Begin

1) These instructions refer to the use of this adapter with HDV camcorders that have a mic jack. It also assumes that you are using the AGC function for audio recording. See Advanced Operation for supplemental information to use with camcorders that have manual audio controls.

2) Always monitor audio with headphones connected to the camcorder to ensure proper recording.

3) Do a few test recordings and check playback on the camcorder to ensure that the audio is captured as expected.

Supplied Accessories

• 3.5mm to 3.5mm output cable

Quick Setup Guide

1) Ensure the PWR switch is off before you begin.
2) Install a fresh alkaline or lithium battery in the adapter.
3) Mount the DXA-HDV adapter to the camcorder.
4) Connect the supplied output cable from the OUT jack on the adapter to the MIC input jack on the camcorder.
5) Connect your microphones or other audio sources to the adapter XLR or AUX inputs.
6) Initially set the G1/G2 ground switch to G2.
7) Set the GAIN switches to H.
8) Be sure to turn off the 48V phantom power switches unless it is required by the microphones.
   • DO NOT activate phantom power when attaching wireless microphones!
9) Set the LIN/MIC switches to MIC for microphones and LIN to connect to most mixing boards.
10) Set the M/S switch to M for mono when using one channel or to S for stereo when using two channels.
11) Turn the adapter PWR switch on. The power LED should indicate green.
12) Adjust the LEFT and RIGHT level controls for each channel so that the LEVEL indicators flash green. Decrease the level if they flash red.
13) Plug your headphones into the PHONE jack on the camcorder.
14) Turn on your camcorder and set it to record. Adjust the headphone control if it has one to a comfortable level. Ensure that you hear audio on both channels from the connected devices.
15) You may need to switch the G1/G2 ground switch to G1 if you hear any odd noises from ground loops. Set it to whatever positions sounds best.
16) Do a test recording and playback on the camcorder to ensure that the captured audio is satisfactory.

Adapter Connectors and Controls

Control Panel

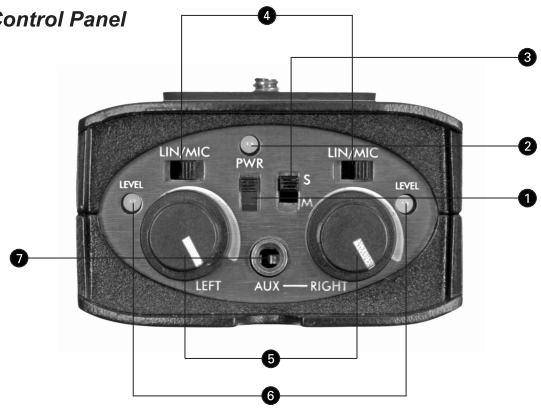
❶ PWR Switch
Main power switch for adapter

❷ PWR LED
Green indicates power on and good battery condition
Red indicates low battery voltage

❸ M/S Switch
Selects mono or stereo output mode

❹ LIN/MIC Switches
Selects LIN for line level or MIC for microphone level for each input

Control Panel



❺ LEFT and RIGHT Controls
Individual adjustment controls to adjust output levels on each channel

❻ LEVEL LEDs
The LED level indicators flicker green for good levels and red for overload

❼ AUX Input
Allows mono connection of microphones that have mini-plug connectors

XLR Panel

❽ LEFT and RIGHT XLR Inputs
Two balanced XLR inputs attach to professional microphones or other audio gear such as wireless systems or mixers and sound boards

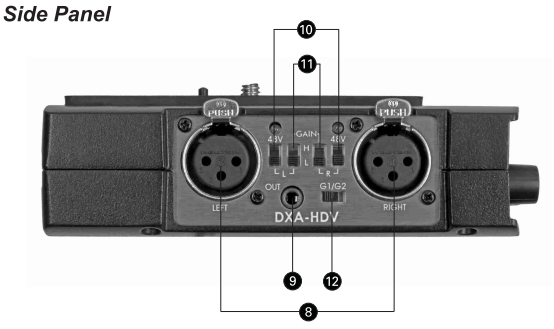
❾ OUT
Output jack for connection to the camcorder

❿ 48V Switches
Activates phantom power for that channel

⓫ GAIN switches
Selects L for unity gain and H for +15dB boost

⓬ G1/G2 Switch
Sets the ground configuration of the adapter for noise free operation

Side Panel



Setup Guide

Battery Installation

1) The DXA-HDV 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 open the cover by pulling in and out on tab on the back end of the adapter. Insert the battery with the "+" positive terminal lined up with the "+" indicator on the battery compartment. Close the cover until it clicks into place.

Mounting and Connecting the Adapter to the Camcorder

1) Ensure that the camcorder 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 camcorder. Turn the adapter mounting screw on the bottom of the adapter with a screwdriver or coin until it is snug on the camcorder.
3) Connect one end of the supplied output cable to the OUT of the adapter and the other end to the MIC on the camcorder.
4) You can also mount the adapter to any standard tripod.

Initial Setup

1) Ensure that the camcorder and adapter are both switched off.
2) Connect your microphones or other audio gear to the adapter via the XLR or AUX inputs. Note that the AUX input is a mono input and is connected to the right channel.
3) Set the LIN/MIC switch to:
   - MIC when connecting microphones or most wireless receivers
   - LIN when taking a line level feed from a mixer or sound board
4) Set the GAIN switch to H for high. This is the normal setting for most microphones. If you are using very sensitive condenser type microphones, or recording very loud sounds, you may have to set the GAIN switch to L for low to prevent distortion.
5) Set the M/S switch to M for mono when using one microphone. When using two microphones, you should normally set the switch to S for stereo to keep each channel separated.
6) Set the LEFT and RIGHT level controls fully counter-clockwise so there is no signal output.
7) Plug your headphones into the PHONES jack of the camcorder 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) Set the G1/G2 ground switch to whatever position give you the least amount of noise. Once this is set for your particular camcorder you most likely will not have to change it again.
3) Adjust the LEFT and RIGHT level controls for each channel so that the LEVEL indicators flash green. This indicates the ideal signal level of -48 dBu to -36 dBu going into the camcorder for the best signal-to-noise ratio. Decrease the level if they flash red.
4) The Auto Gain Control (AGC) in the camcorder will vary the amount of gain depending upon the input signal level. During quiet moments, the AGC will increase the gain, which will also increase the amount of hiss from the camcorder preamplifiers. Refer to the Advanced Operations section to operate the camcorder in manual mode which will give you better audio.

Notes on Getting the Best Audio Performance

The most common problem in recording professional audio on today's DV camcorders is the hiss generated by the camcorder preamplifiers. You cannot 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 camcorder for the highest quality audio.

You should use a quality professional microphone, and proper mic placement and techniques for optimum results.

Advanced Operation

Using Camcorders that have Manual Audio Features

If your camcorder allows you to disable the AGC feature we recommend that you do so to get the best performance.

Set the camcorder to manual mode and the camcorder gain to about 20 to 25% of maximum.

This setup will keep the gain in the camcorder steady and will avoid the increased noise that occurs during quiet moments of recording. It will also calibrate the LEVEL LED*s on the adapter to allow for proper adjustment of the recording levels.

Most camcorders that have manual audio controls will have a built-in VU Meter that is activated when the AGC is switched off. You can use this to precisely set the proper recording levels. If your camcorder has this feature, set the LEVEL controls on the adapter to give you a peak reading of -12 dBFS (12 dB below Full Scale). This will provide a good signal level to the camcorder and still offer plenty of headroom for higher transient signals. Please refer to your camcorder's user manual for more information on using manual audio recording mode.

Features

Inputs
- Two balanced XLR connectors for professional mics
- One unbalanced mini-jack input for consumer mics

Output
- Unbalanced stereo mini-plug jack for connection to the camcorder

Phantom Power
- Switchable 48V phantom power for both channels

LEVEL Indicators
- LED's show proper signal level for each channel at a glance

Gain Switch
- High / Low gain setting for each channel

Level Controls
- Adjusts signal level output on each channel

MIC/LINE Switches
- Allows connections of microphones or mixers for versatility

Low Noise Preamplifiers
- Exceptionally low noise circuitry for superb audio
- Wide-bandwidth for full rich sound

Power
- Easily replaceable 9 volt battery
- Low battery indicator

Case
- Sturdy die-cast aluminum enclosure

Specifications

Maximum Input Levels	MIC level: +7 dBu LINE level: +26 dBu
Output Level	Nominal MIC levels
Frequency Response	20 Hz to 20 kHz (+/- 0.5 dB)
THD	Less than 0.02% @ 1 kHz, -30 dBu input
S/N Ratio	88 dB @ 1 Khz, -30 dBu input
Gain	LO gain: 0 dB HI gain: 15 dB
Phantom Power	Dual regulated 48 volt power supplies Current to 14 mA (direct short)
LEVEL Indicators	Green: -48 dBu to -36 dBu Red: -35 dBu and over
Battery Type	One 9 volt alkaline or lithium battery
Battery Duration	3 hours typical with alkaline battery (no phantom) 8 hours typical with lithium battery (no phantom)
Dimensions	5.5" x 2.5" x 1.5" (L x W x H) (140 mm x 64 mm x 38 mm)
Weight	10 oz (0.28 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.