

# *Operating Manual*

## **DXA-SLR PURE**

**Passive Audio Adapter for DSLR Cameras**



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-SLR PURE. 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-SLR PURE is a two-channel, passive audio adapter for connecting amplified signals from a wireless mic or a mixing board to any DSLR camera that has a built-in mic jack. It can also be used with any camcorder or other audio recording device that has a mic jack. Note that it is not designed to connect directly to unamplified microphones.

The DXA-SLR PURE 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 from the camera for protection 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 phone jack lets you monitor the audio from the adapter during recording, or camera during playback.

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

## ***Warnings***

Ensure that the VOLUME control is set low to avoid excessively loud audio from damaging your hearing.

Always do a test recording and play back the audio to ensure it is acceptable.

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. It is not designed to be connected directly with most microphones as it will most likely result in a too low an output level for optimum performance with DSLR cameras. For this application you should use one of our active adapters which have built-in preamplifiers.

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## ***Before You Begin***

- 1) These instructions refer to the use of this adapter with Canon DSLR cameras unless otherwise noted.
- 2) Do a few test recordings and check playback on the camera to ensure that the audio is captured as expected. Most cameras do not have a headphone jack to monitor what is being recorded.
- 3) Some older Nikon cameras have a very sensitive microphone input and require a special 25dB padded output cable from the adapter. Please contact us for details.
- 4) Some Sony wireless mics have very low output levels which will not give you good results without some form of preamplification.
- 5) Panasonic Lumix GH1 and GH2 require a special 2.5mm mic cable which is available from our Online Store.

## ***Supplied Accessories***

- 3.5mm to 3.5mm output cable
- AV Cable for playback monitoring

## **Quick Setup Guide**

- 1) Ensure the POWER switch is set to OFF before you begin.
- 2) Install a fresh alkaline or lithium battery in the adapter.
- 3) Mount the DXA-SLR PURE adapter to the camera.
- 4) Connect the supplied output cable from the OUT jack on the adapter to the MIC input jack on the camera.
- 5) Connect your wireless mic or audio mixer to the L and or R inputs of the adapter.
- 6) Set the MONITOR switch to REC.
- 7) Set the LIN/MIC switches to:
  - MIC for wireless mics. (on the Sennheiser EW100 receiver, set it to 0dB)
  - LIN for mixers
- 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) Adjust the LEFT and RIGHT level controls to get an average reading of between -12dB and 0dB on the VU Meter. Be sure not to exceed 0dB. Note that you should keep any unused channel level control fully clockwise as mentioned in step 8.
- 11) Plug your headphones into the PHONE jack on the adapter and adjust the VOLUME control to a comfortable level. Ensure that you hear audio on both channels from the connected devices.
- 12) Do a test recording and playback on the camera to ensure that the captured audio is satisfactory.

# ***Adapter Connectors and Controls***

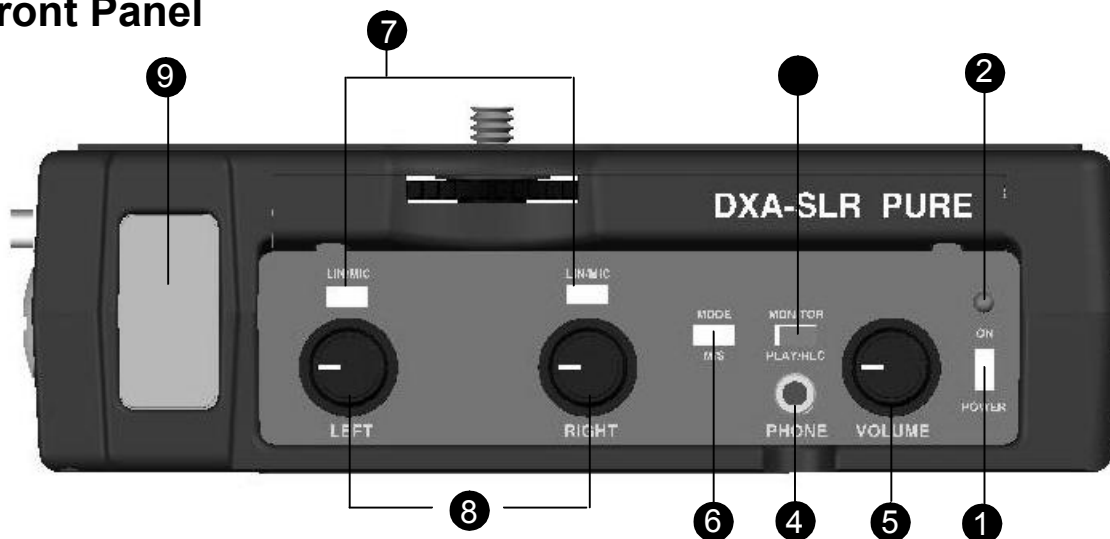
## **Front Panel**

- ① PWR Switch**  
Main power switch for adapter
- ② PWR LED**  
Green indicates power on and good battery condition  
Red indicates low battery voltage
- ③ MONITOR Switch**  
Selects headphone monitoring from either the adapter inputs during recording, or playback audio from the camera
- ④ PHONE**  
Headphone jack to monitor the audio from adapter inputs or camera
- ⑤ Volume Control**  
Adjusts the headphone volume level
- ⑥ MODE Switch**  
Selects M for mono or S for stereo output mode
- ⑦ LIN/MIC Switches**  
Selects LIN for line level, or MIC for microphone level for each input
- ⑧ LEFT and RIGHT Controls**  
Individual adjustment controls to adjust output levels on each channel
- ⑨ VU Meter**  
Indicates the sound level in dB for each channel

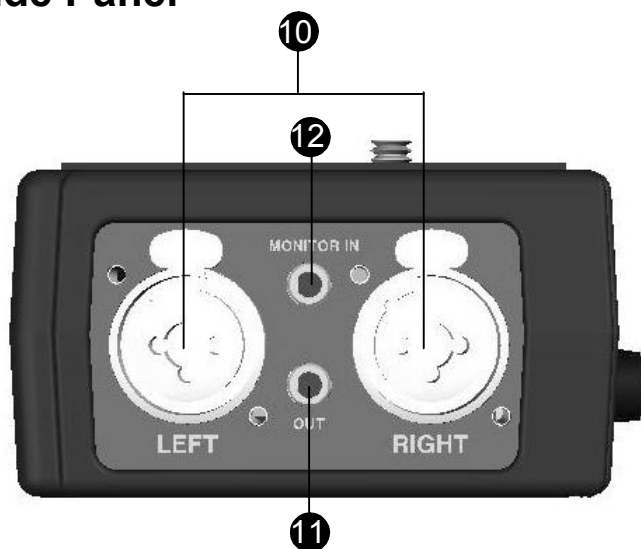
## Side Panel

- ⑩ **L and R Inputs**  
Accepts balanced XLR or ¼" unbalanced mono phone jacks
- ⑪ **OUT**  
Output jack for connection to the camera
- ⑫ **MONITOR IN**  
Input jacks for connecting the AV cable to the camera

## Front Panel



## Side Panel



# **Setup Guide**

## **Battery Installation**

- 1) The DXA-SLR PURE 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. The battery is only used for the VU meter and headphone amplifier. 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 one end of the supplied output cable to the OUT of the adapter and the other end to the MIC on the camera.

## Initial Setup

- 1) Connect your wireless mic or feed from a mixer to the adapter via the L and R inputs via balanced XLR or unbalanced ¼" mono phone jacks.
- 2) Set the LIN/MIC switch to:
  - MIC when connecting most wireless receivers.
  - LIN when taking a line level feed from a mixer or sound board.
- 3) Set the MONITOR Switch to REC to monitor the audio from the adapter inputs during recording.
- 4) 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.
- 5) Plug your headphones into the PHONE jack 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 VOLUME control for the headphones to a comfortable listening level.
- 4) Turn on the camera and do a test recording and then play back the audio from the camera to determine if the captured audio is acceptable. Refer to **Playback Monitoring** below.

The Auto Gain Control (AGC) in the camera 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 camera preamplifiers. To prevent this, refer to **Using Cameras that have Manual Audio Features** under **Advanced Operations**.

## ***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.

## ***Playback Monitoring***

To monitor audio from the camera during playback you will need to use the AV cable that came with the camera and AV cable that came with the adapter. Be sure to keep the output cable connected between the camera and adapter which supplies the needed ground path for the signal through the AV cable.

- 1) Plug the adapter AV cable into the MONITOR IN on the DXA-SLR PURE
- 2) Attach the camera AV cable to the AV output on the camera.
- 3) Note that the camera screen will go blank when the AV cable is plugged into a Canon camera. To view the video while monitoring the audio you will need to use an external monitor connected to the yellow RCA connector of the camera AV cable.
- 4) Connect the red and white RCA jacks on the adapter AV cable to the corresponding red and white plugs on the camera AV cable.
- 5) Set the MONITOR switch to PLAY.
- 6) You can now play back the clip and hear the audio through your headphones connected to PHONE output on the adapter.

Note that the playback audio may appear to have an excessive amount of hiss. This is normal since the signal is passing through the relatively noisy analog output of the camera. This is not representative of the actual recorded digital file.

## ***Advanced Operation***

### **Using Cameras that have Manual Audio Features**

If your camera allows you to disable the AGC feature we recommend that you do so to get the best performance. Set the camera to manual mode and the camera gain to about 25% of maximum on Canon cameras, or recording Level 1 on older Nikon cameras that provide 3 gain settings, or 7 on newer Nikon cameras that provide 20 gain settings.

This setup will keep the gain in the camera steady and will avoid the increased noise that occurs during quiet moments of recording. It will also calibrate the VU meter on the adapter to allow for proper adjustment of the recording levels.

## ***Features***

### Inputs

- Two XLR connectors with integrated ¼" phone jacks
- Loop back for playback monitoring

### Outputs

- Unbalanced stereo mini-plug jack for connection to the camera

### Headphone Monitor

- Built-in headphone amplifier with volume control
- 3.5mm phone jack

### VU Meter

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

### Level Controls

- Adjusts signal level output on each channel

### MIC/LINE Switches

- Allows connections of wireless microphones or mixers for versatility

### Playback Monitor

- Provides an easy way to monitor audio on playback

### Power

- Easily replaceable 9 volt battery
- Low battery indicator

### Case

- Sturdy die-cast aluminum enclosure

## ***Specifications***

Maximum Input Levels	MIC level: -3dBu LINE level: +14dBu
Output Level	-36dBu at 0dB on the VU meter
Frequency Response	20Hz to 20kHz (+/- 0.5dB)
THD	Less than 0.01% @ 1kHz, -30dBu input
S/N Ratio	85dB @ 1kHz, -30dBu input
Gain	Unity
VU meter	-18 to +3dB in 3dB increments
Battery Type	One 9 volt alkaline or lithium battery
Battery Duration	10 hours typical with alkaline battery 20 hours typical with lithium battery
Dimensions	6" x 3.75" x 1.75" (L x W x H) (152mm x 95mm x 44mm)
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](http://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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