datavideo

AUDIO DELAY BOX

AD-100

Instruction Manual

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Disclaimer of Product & Services

The information offered in this instruction manual is intended as a guide only. At all times, Datavideo Technologies will try to give correct, complete and suitable information. However, Datavideo Technologies cannot exclude that some information in this manual, from time to time, may not be correct or may be incomplete. This manual may contain typing errors, omissions or incorrect information. Datavideo Technologies always recommend that you double check the information in this document for accuracy before making any purchase decision or using the product. Datavideo Technologies is not responsible for any omissions or errors, or for any subsequent loss or damage caused by using the information contained within this manual. Further advice on the content of this manual or on the product can be obtained by contacting your local Datavideo Office or dealer.

FCC Compliance Statement

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.

⚠ Warnings and Precautions

1. Read all of these warnings and save them for later reference.
2. Follow all warnings and instructions marked on this unit.
3. Unplug this unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this unit in or near water.
5. Do not place this unit on an unstable cart, stand, or table. The unit may fall, causing serious damage.
6. Slots and openings on the cabinet top, back, and bottom are provided for ventilation. To ensure safe and reliable operation of this unit, and to protect it from overheating, do not block or cover these openings. Do not place this unit on a bed, sofa, rug, or similar surface, as the ventilation openings on the bottom of the cabinet will be blocked. This unit should never be placed near or over a heat register or radiator. This unit should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should only be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your Datavideo dealer or your local power company.
8. Do not allow anything to rest on the power cord. Do not locate this unit where the power cord will be walked on, rolled over, or otherwise stressed.
9. If an extension cord must be used with this unit, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord rating.
10. Make sure that the total amperes of all the units that are plugged into a single wall outlet do not exceed 15 amperes.
11. Never push objects of any kind into this unit through the cabinet ventilation slots, as they may touch dangerous voltage points or short out parts that could result in risk of fire or electric shock. Never spill liquid of any kind onto or into this unit.
12. Except as specifically explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing covers that are marked

"Do Not Remove" may expose you to dangerous voltage points or other risks, and will void your warranty. Refer all service issues to qualified service personnel.

13. Unplug this product from the wall outlet and refer to qualified service personnel under the following conditions:
    a. When the power cord is damaged or frayed;
    b. When liquid has spilled into the unit;
    c. When the product has been exposed to rain or water;
    d. When the product does not operate normally under normal operating conditions. Adjust only those controls that are covered by the operating instructions in this manual; improper adjustment of other controls may result in damage to the unit and may often require extensive work by a qualified technician to restore the unit to normal operation;
    e. When the product has been dropped or the cabinet has been damaged;
    f. When the product exhibits a distinct change in performance, indicating a need for service.

Warranty

Standard Warranty

- Datavideo equipment are guaranteed against any manufacturing defects for one year from the date of purchase.
- The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.
- The product warranty period beings on the purchase date. If the purchase date is unknown, the product warranty period begins on the thirtieth day after shipment from a Datavideo office.
- Damage caused by accident, misuse, unauthorized repairs, sand, grit or water is not covered under warranty.
- Viruses and malware infections on the computer systems are not covered under warranty.
- Any errors that are caused by unauthorized third-party software installations, which are not required by our computer systems, are not covered under warranty.
- All mail or transportation costs including insurance are at the expense of the owner.
- All other claims of any nature are not covered.
- Cables and batteries are not covered under warranty.
- Warranty only valid in the country or region of purchase.
- Your statutory rights are not affected.

Three Year Warranty

- All Datavideo products purchased after July 1st, 2017 are qualified for a free two years extension to the standard warranty, providing the product is registered with Datavideo within 30 days of purchase.
- Certain parts with limited lifetime expectancy such as LCD panels, DVD drives, Hard Drive, Solid State Drive, SD Card, USB Thumb Drive, Lighting, Camera module, PCIe Card are covered for 1 year.
- The three-year warranty must be registered on Datavideo's official website or with your local Datavideo office or one of its authorized distributors within 30 days of purchase.

Disposal
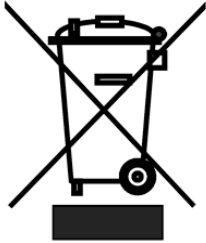
For EU Customers only - WEEE Marking

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

CE Marking is the symbol as shown on the left of this page. The letters "**CE**" are the abbreviation of French phrase "Conformité Européene" which literally means "European Conformity". The term initially used was "EC Mark" and it was officially replaced by "CE Marking" in the Directive 93/68/EEC in 1993. "CE Marking" is now used in all EU official documents.
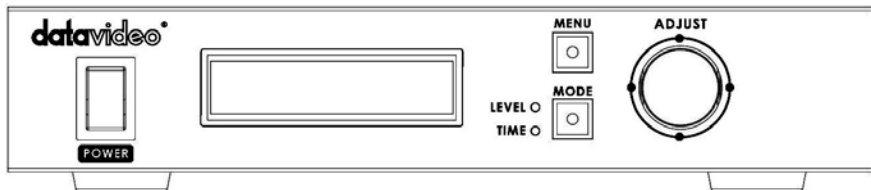
Features

- Easy to use audio delay box to synchronise video and audio
- Traditional RCA (phono) connector
- Professional XLR type connector
- Built in a rugged metal housing for use in the field or studio
- Low power consumption
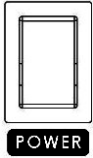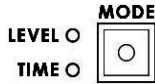- Can be powered by Datavideos PD-1 power distribution center connection

System Diagram
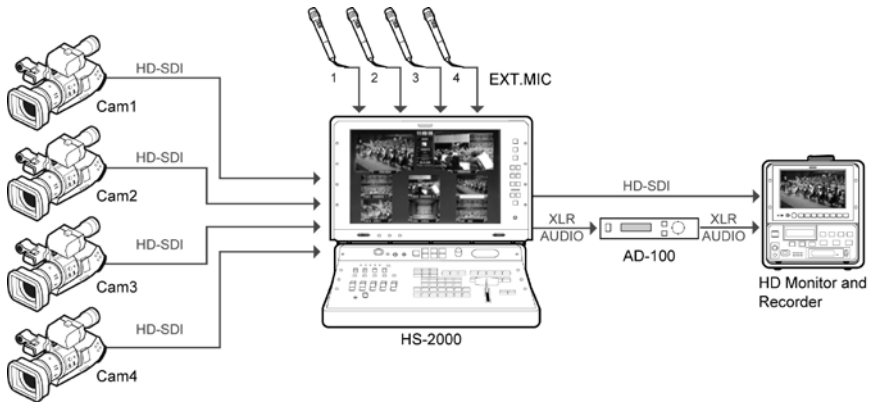
Connections & Controls

Front Panel

Power Switch
Switches the power
On / Off.

MODE
Select **LEVEL** or **TIME**
information on LCD
Display.

LEVEL will display the
audio output dBu level.
TIME will display the
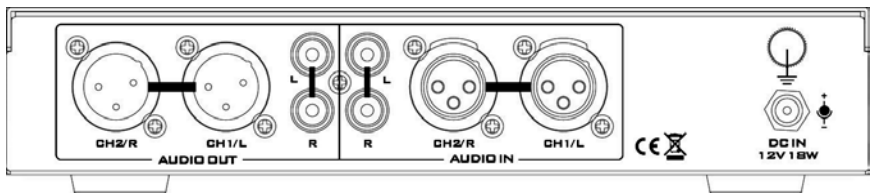AUDIO DELAY &
ATTENUATION settings.

MENU
This switch allows
access to the 9 mode
system settings.

ADJUST
The **ADJUST** knob is for
mode selection and value
adjustment.
It can be rotated to
display the correct menu
option or value and then
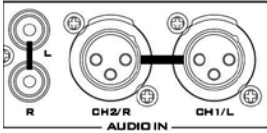pressed to select or
confirm a chosen value.

Rear Panel
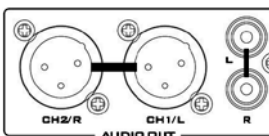
AUDIO OUT
2 channels of XLR balanced audio output.
2 channels of RCA unbalanced audio output.
For reference : 4dBu (XLR) = -10dBV (RCA)

AUDIO IN
2 channels of XLR balanced audio input.
2 channels of RCA unbalanced audio input.

DC In Socket
Connect the supplied 12V / 1.5A (18W) PSU to this socket. The connection can be secured by screwing the outer fastening ring of the DC In plug to the socket.

Grounding Terminal
When connecting this unit to any other component, make sure that it is properly grounded by connecting this terminal to an appropriate point. When connecting, use the socket and be sure to use wire with a cross-sectional area of at least 1.0 mm².

AD-100 MENU Settings

N.B. The unit will automatically exit the MENU mode if it is left idle for 12 seconds or more.

1. AUDIO_DELAY

This setting switches the audio delay function on or off.

- Press the **MENU** button to enter the system configuration settings.
- The cursor will flash at the beginning of this menu option.
- Press **MENU** button again to move the flashing cursor to the setting position.
- Turn the **ADJUST** knob to select the audio delay setting **ON** or **OFF**.
- Press the **ADJUST** knob to save or confirm the chosen setting.
- The flashing cursor will return to the beginning of this menu option.
- Rotate the **ADJUST** knob to choose another menu option or press the mode button.

2. DELAY_TIME

This setting adjusts the audio delay in 10 millisecond (ms) increments to a maximum delay of 700ms.

NB: 1000ms = 1 second   1 frame PAL = 40ms   1 frame NTSC = 33.333'ms

- Press the **MENU** button to enter the system configuration settings.
- Turn the **ADJUST** Knob to select **DELAY_TIME** mode.
- The cursor will flash at the beginning of this menu option.
- Press **MENU** button again to move the flashing cursor to the setting position.
- Turn the **ADJUST** knob to select the **DELAY_TIME** setting value from **0 ~ 700m SEC**.
- Press the **ADJUST** knob to save or confirm the chosen setting.
- The flashing cursor will return to the beginning of this menu option.
- Rotate the **ADJUST** knob to choose another menu option or press the mode button.

3. ATTENUATION

This setting adjusts how loud or quiet the audio will be at the output. *0dB=Loud* and *-60dB=Quiet*.

NB: The AD-100 is an Audio Delay device and it can also be used as a Tone Generator. *Please DO NOT connect the AD-100 directly to a headset or set of speakers as it should not be used like an Audio AMP.*

- Press the **MENU** button to enter the system configuration settings.
- Turn the **ADJUST** Knob to select **ATTENUATION** setting.
- The cursor will flash at the beginning of this menu option.
- Press **MENU** button again to move the flashing cursor to the setting position.
- Turn the **ADJUST** knob to select the **ATTENUATION** setting value from **0 ~ - 60 dB**.
- Press the **ADJUST** knob to save or confirm the chosen setting.
- The flashing cursor will return to the beginning of this menu option.
- Rotate the **ADJUST** knob to choose another menu option or press the mode button.

N.B. The unit will automatically exit the MENU mode if it is left idle for 12 seconds or more.

4. TONE_OUT

This setting switches the **TONE_OUT** function on or off.

- Press the **MENU** button to enter the system configuration settings.
- Turn the **ADJUST** Knob to select **TONE_OUT** setting.
- The cursor will flash at the beginning of this menu option.
- Press **MENU** button again to move the flashing cursor to the setting position.
- Turn the **ADJUST** knob to change the **TONE_OUT** setting between **ON** or **OFF**.
- Press the **ADJUST** knob to save or confirm the chosen setting.
- The flashing cursor will return to the beginning of this menu option.
- Rotate the **ADJUST** knob to choose another menu option or press the mode button.

N.B. The test tone will output at the level set within the TONE_LEVEL menu option. This test tone will also override any audio source already being fed through the AD-100.

5. TONE_MODE

This setting allows the 1KHz test tone to be switched on or muted.

- Press the **MENU** button to enter the system configuration settings.
- Turn the **ADJUST** Knob to select **TONE_MODE** setting.
- The cursor will flash at the beginning of this menu option.
- Press **MENU** button again to move the flashing cursor to the setting position.

- Turn the **ADJUST** knob to change the **TONE_MODE** setting between **MUTE** or **1KHZ**.
- Press the **ADJUST** knob to save or confirm the chosen setting.
- The flashing cursor will return to the beginning of this menu option.
- Rotate the **ADJUST** knob to choose another menu option or press the mode button.

N.B. The MUTE value will silence the test tone but will not restore any audio source being fed into the AD-100. Please set the TONE_OUT menu option to OFF to switch back to an audio input source instead.

6. TONE_LEVEL
This setting adjusts how loud or quiet the test tone will be at the output. *+26dBu=VERY Loud* and *-34dBu=Quiet*.

- Press the **MENU** button to enter the system configuration settings.
- Turn the **ADJUST** Knob to select **TONE_LEVEL** setting.
- The cursor will flash at the beginning of this menu option.
- Press **MENU** button again to move the flashing cursor to the setting position.
- Turn the **ADJUST** knob to select the **TONE_LEVEL** setting value from **+26 ~ -34 dBu**.
- Press the **ADJUST** knob to save or confirm the chosen setting.
- The flashing cursor will return to the beginning of this menu option.
- Rotate the **ADJUST** knob to choose another menu option or press the mode button.

N.B. The unit will automatically exit the MENU mode if it is left idle for 12 seconds or more.

7. RESET ALL
Please remove all output connections before using this feature.

This option restores the factory defaults which may be louder than expected. Please review and adjust the default menu settings before re-connecting any output connections on the AD-100 rear panel.

NB: The AD-100 is an Audio Delay device and it can also be used as a Tone Generator. Please DO NOT connect the AD-100 directly to a headset or set of speakers as it should not be used like an Audio AMP.

- Press the **MENU** button to enter the system configuration settings.
- Turn the **ADJUST** Knob to select the **RESET ALL** setting.

- The cursor will flash at the beginning of this menu option.
- Press **MENU** button again to move the flashing cursor to the setting position.
- Turn the **ADJUST** knob to change the **RESET ALL** setting from **NO** to **YES**.
- Press the **ADJUST** knob for 2 seconds, the system will return to the factory defaults.
- The setting will return to **NO**.
- Press the **MENU** or **MODE** button to start reviewing the device's default settings.

Factory Default Settings	
AUDIO_DELAY	OFF
DELAY_TIME	10ms
ATTENUATION	-0dB
TONE_OUT	OFF
TONE_MODE	1KHz
TONE_LEVEL	+4dBu

8. SOFTWARE VERSION
- Press the **MENU** button to enter the system configuration settings.
- Turn the **ADJUST** knob to select **SOFTWARE VERSION**.
- The firmware version of the AD-100 is displayed for 12 seconds.

9. ESCAPE
- After reviewing or changing the system configuration settings.
- Turn the **ADJUST** knob to select **ESCAPE**.
- Press the **ADJUST** knob to exit the system configuration mode.
- Alternatively press the **MODE** button to exit the system configuration mode instantly.

Specifications

Audio Input	• 2 x balanced stereo audio, XLR connectors • 2 x unbalanced stereo audio, RCA Phono sockets
Audio Output	• 2 x balanced stereo audio, XLR connectors • 2 x unbalanced stereo audio, RCA Phono sockets
Audio Spec	• Bandwidth 20~20KHz < +/- 3dB • S/N Ratio > 70 dB • THD. < 0.1%
Operating Temperature	• 0°C to 40°C (32°F to 102°F)
Humidity	• 10% to 90% (non condensing)
Dimensions & Weight	• 205mm (W) x 235mm (D) x 45mm (H) / 2.8 lbs/ 1.3 Kg
Power	• DC 12V / 1.5A (18W)

Service & Support

It is our goal to make your products ownership a satisfying experience. Our supporting staff is available to assist you in setting up and operating your system. Please refer to our web site www.datavideo.com for answers to common questions, support requests or contact your local office below.

Please visit our website for latest manual update.
www.datavideo.com/product/AD-100

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