

ADVC-100

Advanced Digital Video Converter

PART NO. 000-10072-001

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Canopus Technical Support
711 Charcot Avenue
San Jose, CA 95131
408 954-4506 PHONE
408 954-4504 FAX
support@canopuscorp.com

DANGER

The following conditions indicate the potential for serious bodily injury or loss of life.

Health precautions

In rare cases, flashing lights or stimulation from the bright light of a computer monitor display may trigger temporary epileptic seizures or loss of consciousness. It is believed that even individuals whom have never experienced such symptoms may be susceptible. If you or close relatives have experienced any of these symptoms, consult a doctor before using this product.

Do not use in environments requiring a high degree of reliability and safety

This product is not to be used in medical devices or life support systems. The characteristics of this product are not suited for use with such systems.

Protect against static electricity

An electrostatic discharge may damage components of this product. Do not directly touch any of the connectors or component surfaces.

Static electricity can be generated on clothing and on people. Before handling the product, discharge static electricity

from your body by touching a grounded metal surface.

Do not disassemble

Do not remove the cover or modify the ADVC-100. Fire, electric shock or malfunction may result. For internal inspection or repair, please contact your system integrator or Canopus directly.

Do not operate at other than the specified voltage

Do not operate at other than the specified voltages of AC 100–240V. Operation at other than the rated voltage may result in fire or malfunction.

Do not operate with other than the specified power supply

Do not operate with other than the specified AC adapter, or with a car power supply. Such operation may result in fire or malfunction.

Handle the AC adapter cord carefully

Do not place heavy objects on top of the cord, or place it near hot objects. Doing so may damage the cord and result in fire, electrical shock, or malfunction. Altering the cord, or excessively bending or pulling the cord may result in fire or electrical shock. If the cord is damaged, please contact your local retail outlet or Canopus directly.

CAUTION

The following conditions indicate the potential for bodily harm, damage to hardware or loss of data.

Do not pull AC adapter cord when disconnecting from electrical outlet

When disconnecting the AC adapter cord, pull on the plug, not the cord itself. Pulling on the cord can damage the cord and may result in fire or electric shock.

Do not touch AC adapter with wet hands

Do not disconnect or plug in the AC adapter when your hands are wet. Contact with water may result in electric shock, fire or damage.

Do not setup in an area that becomes hot

Do not setup in an area exposed to direct sunlight or near a heating apparatus. The heat can accumulate, causing burns, fire or damage. Also, the unit may become deformed or change color.

Do not setup other than the prescribed method

Do not setup in a manner other than prescribed. Do not use while wrapped in cloth or plastic. Heat can accumulate, causing burns, fire or damage.

If product will not be used for an extended period

If this product will not be used for an extended period of time, disconnect the AC adapter from the electrical outlet.

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10. For the purpose of reading in JPEG images, the ADVC-100 firmware incorporates a part of the results of the Independent JPEG Group.

About the Documentation

This document is the ADVC-100 User Manual.

Information not listed in this document may be listed elsewhere.

In cases where there is a difference between a description in this document and an actual operation method, the actual operation method takes precedence.

This document is written for users capable of performing basic PC operations. If there is no special description of an operation, perform that operation in the same manner as a general PC operation.

This document refers to Microsoft's Windows 2000 operating system as Windows 2000.

To simplify the descriptions, the actual product may differ from the illustrations and screenshots.

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ADVC-100

Basic Instructions

The ADVC-100 is a simple solution for converting your S-VHS and Hi8 analog tapes to DV in realtime. This manual guides you through the basics of analog/digital conversion. Package contents include:

- ADVC-100 unit
- IEEE 1394 DV Cable (4 pin-6 pin)
- AC Adapter
- Video Cable (S-Video/Composite)

QuickStart

If you want to jump right in and use the ADVC-100, simply plug it in and follow these steps.

1. Push the **Power** button on the back of the unit.
2. Connect the **IEEE 1394** cable to the unit. The larger 6-pin end goes into the back of the box, and the smaller 4-pin end goes into the capture card.

If your computer's IEEE 1394 ports are of the 6-pin variety, you can reverse the cable and plug 4-pin end into the 4-pin port on the front of the unit and the 6-pin end into your computer.

3. If you are capturing video from an analog camera, make sure the ADVC-100 is set to **Analog In** and that the camera is connected to the unit's S-Video or composite ports on the front of the unit.

If you are exporting video to an analog camera, make sure the ADVC-100 is set to **Digital In** and that the camera is connected to the unit's S-Video or composite ports on the back of the unit.

4. You can now open your editing application and begin capturing video.

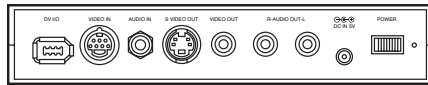
If you are capturing PAL video, you need change the DIP switch settings. For more info, see Setting DIP switches on page 8.



Deck control via software is not available when using the ADVC-100, so you'll have to manually start and stop your captures.

ADVC-100 Basics

The front of the ADVC-100 contains inputs for composite, S-Video and DV. The DV input is a 4-pin IEEE 1394 (FireWire, i.Link) port and can do both input and output.



The IMS function works with Canopus DV Products and may not work with Apple and OHCI devices.

Power button

To turn on the ADVC-100, make sure the power cord is plugged into the back of the unit and into a working electrical outlet. Then press the **Power** button on the back of the unit.

Auto (IMS) mode

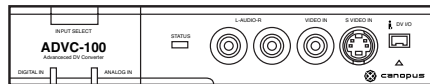
The ADVC-100's IMS (Intelligent Mode Selector) mode can automatically determine whether you are importing digital or analog video. In this mode, the unit automatically detects if there is analog or DV input and switches to the appropriate mode.

To enable this mode, make sure DIP switch 6 is in the ON position. For more information on DIP switches, see **Setting DIP switches** on page 8.

Input Select button

The **Input Select** button on the top of the unit lets you toggle between **Digital In** and **Analog In** modes. A blue light signifies which mode the ADVC-100 is using. The Input Select button will not work while the both status lights are blinking.

- **Analog In** — Indicates that the ADVC-100 is ready to receive analog video.



- **Digital In** — Indicates that the ADVC-100 is ready to receive digital video.

Status light

The **Status** light indicates separate things depending on which mode you are using.

- **Analog In** — The status light blinks when a Macrovision-protected signal is detected.
- **Digital In** — The status light blinks when the DV audio is set at 32kHz 12bit, which is used for 4-channel DV audio. See **4-channel mixing mode** on page 10 for more information.

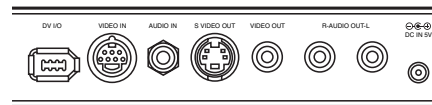
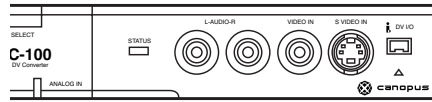
Connection Ports

The ADVC-100 has connection ports for both S-Video and composite input, as well as a 4-pin IEEE 1394 input/output port.

The back of the unit has ports for both S-Video and composite output, as well as a 6-pin IEEE 1394 input/output. There is also an additional S-Video input and Audio In, which uses a standard mini-jack interface. For best results, you should use the S-Video composite conversion table included in the package.

Analog input connectors

A priority order is set to the Input connectors. If all analog input connectors are used at the same time, the connectors are used in the following order:



The unit detects if there is a cable attached to the connector, regardless if there is a signal coming in or not.

Video Input

1. S-video (Front)
2. Composite (Front)
3. S-Video/Composite (Back)

Audio Input

1. Front L/R RCA jack
2. Back minijack

If you have two video sources that you use regularly, you should connect the one that is more frequently used to the back, and connect the other to the front only when you are using it.

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ADVC-100

Using the ADVC-100

This chapter explains basic instructions for using the ADVC-100.

Powering up the unit

To turn on the ADVC-100, press the power button on the back of the unit. The three lights on the front of the unit illuminate for 5 seconds.

After that, depending on the DIP switch (switch 5) setting, the Analog In or Digital In lights will illuminate.

Setting DIP switches

Use the DIP switches on the bottom of the unit to modify the ADVC-100's functionality. Make sure the power is turned off before you make any changes.

Table 1: DIP Switch Settings

No.	Mode	OFF	ON
1	Video Format	NTSC	PAL
2	NTSC Setup Level	0 IRE	7.5 IRE
3	Locked Audio Mode	Locked	Unlocked
4	Audio Mode	48kHz/16-bit	32kHz/12-bit
5	Power-on Input Mode	Analog	Digital
6	Input Select Mode	Manual	Auto (IMS)

By default, all of the DIP switches are in the **OFF** position.

- **Video Format** — toggles between capturing NTSC and PAL video. The ADVC-100 is set to capture NTSC video by default.
- **NTSC Setup Level** — toggles between 0 IRE (Japan NTSC) and 7.5 IRE (USA NTSC).
- **Locked Audio Mode** — toggles between capturing locked audio or unlocked audio. If you are capturing a lot of long clips, you should leave this switch in the OFF position to make sure the audio stays locked to the video.
- **Audio Mode** — toggles between 48kHz/16-bit 2-channel audio and 32kHz/12-bit 4-channel audio. See **Setting 4-channel mixing mode** on page 10 for more information.
- **Power-on Input Mode** — toggles between Analog and Digital modes when you first turn on the unit. If you primarily capture analog video, you should set this to the OFF position so the unit is in Analog In mode when you turn it on.
- **Input Select Mode** — toggles between Manual and Auto (IMS) mode. In Auto (IMS) mode, the unit detects whether there is analog or DV input. For example, if you connect an analog camera to the unit, it automatically switches to Analog In mode, and the Analog In status light illuminates.

4-channel mixing mode

When encoding DV to analog in 32kHz mode, the unit can be set to either:

1. Use the main audio channel
2. Mix main and sub channel at 50% each.

Setting 4-channel mixing mode

1. Set DIP switch 4 to the OFF position.
2. Press the **Input Select** and **Power** buttons at the same time
3. The **Status** light illuminates and switches audio modes.

Color Bar output

Press the **Input Select** button for three seconds to output color bars from the analog output. Press the select button again to resume analog output. Turning the unit off also returns it to normal output mode.

Macrovision detection

When Macrovision signals are detected by the ADVC-100:

- The brightness and contrast for both analog and DV output are lowered.
- The Status light blinks

DVCAM support

When you are connecting to a DVCAM unit, set DIP switch 3 to the OFF position to set the ADVC-100 to Locked Audio Mode.

Video signals from game consoles

If you are capturing from a video source with irregular video signals, such as game consoles, you may hear audio noise in the captured video. If this happens, try setting DIP switch 3 to the ON position so the audio is unlocked.

1394 hub function

Video input selector

You can connect two DV devices to the unit and share one analog device, such as a monitor, for output. Simply set DIP switch 6 to the ON position to enable auto input select. There are four possible scenarios for this functionality.

This function may not be supported with certain DV devices.

DV device 1=play

DV device 2=stop

Signal from 1 will be sent to 2 and analog output. Analog input will be ignored.

DV device 1=stop

DV device 2= play

Signal from 2 will be sent to 1 and analog output. Analog input will be ignored.

DV device 1 = play

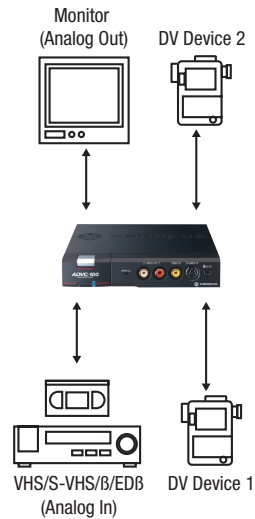
DV device 2= play

Signal will be irregular and output will be unstable. Stop one of the DV devices.

DV device 1 = stop

DV device 2= stop

Analog signal will be sent to both DV devices and also to analog output.



Using with Canopus DV products

The ADVC-100 can be used with the following Canopus DV products:

- EZDV
- DVRaptor
- DVRaptor-RT

Set DIP switch 6 setting to the ON position to enable the auto input select. See **Auto (IMS) mode** on page 3 for more information.

Connecting to your Canopus capture card

When the ADVC-100 is connected to your Canopus capture card, you can perform the following functions:

- DV devices can be controlled directly from the Canopus Edit/Video software.
- Switch the DV device to OFF to use the analog input.
- When you playback from the hard drive, the signal will be sent out to the DV device and analog output.
- Switch DV device to ON to capture from DV device to hard drive.

