

Advanced DV/SDI Converter

# ***ADVC-1000***

User Manual

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### Warranty

Your ADVC-1000 options are covered by a limited warranty when you register your Grass Valley product. This warranty is for a period of one year (or two years in European Union countries) from the date of purchase from Grass Valley or an authorized Grass Valley agent. This warranty applies only to the original purchaser of the Grass Valley product and is not transferable. Grass Valley warrants that for this period the product will be in good working order. Should our product fail to be in good working order, Grass Valley will, at its option, repair or replace it at no additional charge, provided that the product has not been subjected to misuse, abuse or non-Grass Valley authorized alternations, modifications and/or repair. Proof of purchase is required to validate your warranty.

Grass Valley is not responsible for any lost profits, lost savings or other incidental or consequential damages arising out of the use of, or inability to use, this product. This includes damage to property and, to the extent permitted by law, damages for personal injury. This warranty is in lieu of all other warranties of merchantability and fitness for a particular purpose.

### Cautions

Please observe the following cautions when using this product. If you have any questions regarding the method of usage, the descriptions herein, or any other concerns, please contact Grass Valley Technical Support.

### 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 display or TV monitor 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 is 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 Product. Fire, electric shock or malfunction may result. For internal inspection or repair, please contact your system integrator or Grass Valley 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 Grass Valley 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 areas subject to heat**

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.

## Notices & Warranties

### Only setup using 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.

### Do not cover the ADVC-1000 ventilation

Do not use the ADVC-1000 covered with a cloth or in an ill-ventilated room. Covering the vent may cause heat inside of the product resulting in fire or product malfunction.

### Precautions for use of AC adapter

The supplied AC adapter and power cord are for exclusive use of this product. Do not operate the product with other AC adapter or in other combinations.

## FCC Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## CE Notice

### WARNING

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

## Declaration of Conformity

### According to FCC Part 15

**Responsible party Name:** Canopus Corporation  
**Address:** 711 Charcot Avenue, San Jose, CA 95131  
**Telephone:** 408-954-4500  
**Declares that product Model:** ADVC-1000

complies with Part 15 of the FCC Rules.

### Product Notes

1. Unauthorized copying of a portion or the entirety of this product is prohibited.
2. The description and specifications of this product are subject to future change without notice.
3. The description of this product has been prepared to be as complete as possible. If the reader is aware of any questionable points, errors or omissions, please contact Grass Valley.
4. The company assumes no liability for the results of practical application, regardless of item (3) above.
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8. ADVC is registered trademark of Canopus Co., Ltd.
9. Other product names and related items are trademarks or registered trademarks of their respective companies.

## Notices & Warranties

### About the Documentation

This document is the ADVC-1000 User Manual.

Information not listed in this document may be listed elsewhere.

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

### About This Manual

The information contained in this manual covers the installation and specific functionality of this product.

#### Chapter 1 — Introduction

Provides information about contacting us and using this manual.

#### Chapter 2 — Basic Instructions

Describes the part names and functions and other basics of this product.

Advanced DV/SDI Converter

# ***ADVC-1000***

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Advanced DV/SDI Converter

# **ADVC-1000**

## Chapter 1

### Introduction

Thank you for purchasing the ADVC-1000 Advanced DV/SDI Converter. Before you start using your system, please read this manual and follow the installation instructions. This will ensure that you have a trouble-free setup. If you have any questions please call, fax, mail or email us at your local Grass Valley office or distributor.

## 1-1 Package Contents

The below items are included in your ADVC-1000 package:

- 1 x ADVC-1000 unit
- 1 x AC Adapter
- 1 x AC Cable
- 1 x DV Cable (6-pin to 4-pin)
- 1 x Manual  
ADVC-1000 User Manual (This document)

## 1-2 Features of the ADVC-1000

### 1. Digital-to-Digital Conversion Unit

The ADVC-1000 converts SDI signals and DV signals bidirectional. SDI (serial digital interface) signals are the standard signal for professional digital video, and DV (digital video) signals have a high PC compatibility. The ADVC-1000 uses a proven Canopus DV codec, ensuring that converted signals have a solid quality.

### 2. DV-SDI Conversion Generates Perfectly Synchronized Signals (Advanced Mode)

The ADVC-1000 converts DV signals to SDI signals while receiving a sync signal from an external source. An original Canopus synchronization technology (patent pending) enables DV-SDI conversion with output signals completely synchronized to the reference signal, preventing frame skips or frame holds during the process.

### 3. Professional Specifications Adapted to a Variety of Studio Uses

Designed for a quick and easy introduction to a wide range of studio systems, the ADVC-1000 features AV/C-R422 conversion-driven VCR control and a full complement of reference input and LTC I/O. Four-channel embedded audio support enables creation of a wide range of video systems.

## Chapter 2

### Basic Instructions

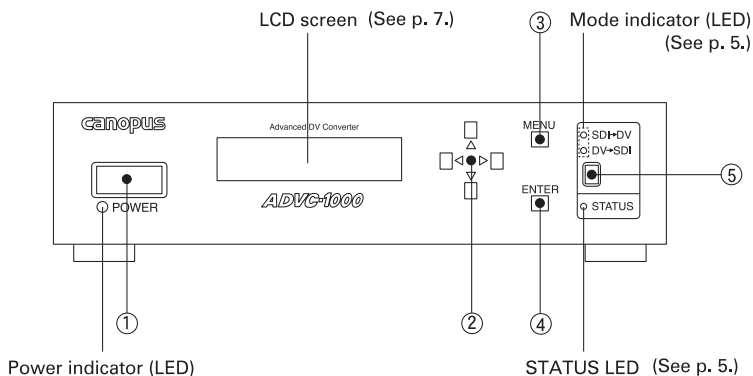
This chapter explains the part names and functions and other basics of the ADVC-1000.

- Part names and functions
- Connecting devices
- Setting Menu
- Specifications

## 2-1 Part Names and Functions

### ADVC-1000 Front Panel

The front panel of the ADVC-1000 contains the following controllers and indicators:



1. **POWER switch** -- Turns the ADVC-1000 power ON/OFF.
2. **Select key** ----- Move up/down to select menu items, and left/right to change settings. Used to apply selected settings of items without sub-menus.
3. **MENU key** ----- Press to switch the LCD screen's display between the main screen and menu screen.
4. **ENTER key** ----- Press to return to the main screen after making settings in the menu screen. For items with sub-menus, press this key to display the sub-menu screen. For items with sub-menus, select the desired setting, then press the ENTER key again to apply it. If you don't want to change the setting of a sub-menu screen, press the MENU key to return to the main screen.
5. **Mode switch** ----- Toggles between the SDI → DV and DV → SDI conversion modes.

\* The operation modes cannot always be switched depending on the settings in the menu screen. (See p. 28.)

## Front Panel LEDs

- **Mode indicator (LED)**

When only the “SDI → DV” LED is lit, ADVC-1000 converts the SDI video signal, SDI embedded audio signal or AES/EBU audio signal to a DV signal. When only the “DV → SDI” LED is lit, ADVC-1000 converts the DV signal to an SDI video signal, SDI embedded audio signal and AES/EBU audio signal.

- **STATUS LED**

Off: ..... 9-pin remote control is disabled.

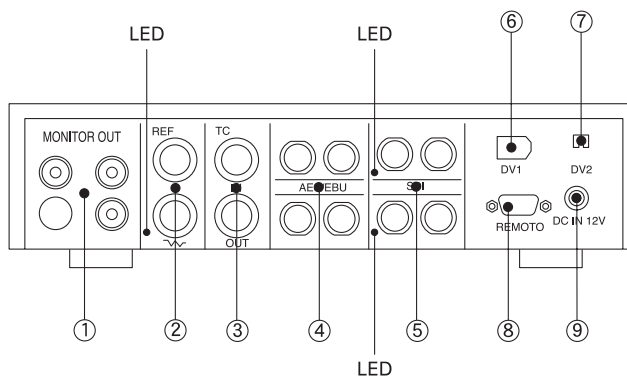
Lit green: ..... 9-pin remote control is enabled.

Lit red: ..... 9-pin remote control was set to enabled, but remote control is prevented by a communication error. Check that the 9-pin remote cable is correctly connected, that the connected device's power is ON, and that the remote control setting has been enabled on the connected device.

Flashing red: ..... A major ADVC-1000 operation error has occurred, or several signals required for operation can't be detected. Check the error status display screen. Input the required signals correctly, or change ADVC-1000's settings.

## ADVC-1000 Rear Panel

The rear panel of the ADVC-1000 contains the following connectors



1. **MONITOR OUT** ----- Output connectors for video monitor, speakers.
2. **REF** ----- Input connectors receiving sync signal. The LED lights red when sync signal input is detected. The REF connector has through output. If a cable is not connected to the output connector, it has a 75  $\Omega$  automatic termination.
3. **TC** ----- Time code I/O connectors.
4. **AES/EBU** ----- Digital audio signal I/O connectors.
5. **SDI** ----- I/O connectors for digital video and embedded audio signals. When SDI input is detected, the LED next to the SDI input connector lights red. During SDI output, the LED next to the SDI output connector lights red.
6. **DV1** ----- 6-pin DV connector.
7. **DV2** ----- 4-pin DV connector.
8. **REMOTE** ----- Remote control connector.
9. **DC-IN 12V** ----- 12V DC power supply terminal. Use the AC adapter provided.



### Info

When connecting a PC to the ADVC-1000 unit, make sure that the PC's power is turned off.

## LCD Screen Displays

There are three main screens, switched by moving the Select key up/down. Move the Select key left/right to switch between the error status screen and the main screens. Pressing the MENU key displays the Settings Menu screen.

### Main Screen 1

This screen shows the current status of the operation.

#### • SDI → DV

1. DV audio output (Upper left on the screen)



- 48kHzCH1/2 ..... Encoding digital audio input CH1 and CH2 to 48 kHz/16 bit/2 channel DV audio.
- 48kHzCH3/4 ..... Encoding digital audio input CH3 and CH4 to 48 kHz/16 bit/2 channel DV audio.
- 32kHzCH1234 ..... Encoding digital audio input CH1, CH2, CH3 and CH4 to 32 kHz/12 bit/4 channel DV audio.

2. Digital audio input (Upper right on the screen)



- Embedded ..... Obtaining digital audio input from embedded audio of SDI input connector.
- AES/EBU ..... Obtaining digital audio input from AES/EBU input connector.
- SG ..... Obtaining digital audio input from the audio signal of 1 kHz/-18 dB or 1 kHz/-20 dB (only during built-in color bar output).

### 3. 9-pin remote control deck status (Lower left on the screen)



- If blank ..... 9-pin remote control is not in use.
- NoDevice ..... Can't find deck. Check cable connection.
- NoCASSETTE ..... No tape in deck.
- STOP ..... Deck is stopped.
- PLAY ..... Deck is playing.
- STILL ..... Deck is paused.
- F.FWD ..... Deck is fast-forwarding.
- REW ..... Deck is rewinding.
- REC ..... Deck is recording.
- SHUTTLE ..... Deck is shuttling.

### 4. DV output time code display (Lower right on the screen)



- 00:00:03:22 ..... For PAL/NTSC NDF (Non Drop Frame)
  - \* A colon is used between seconds and frames as a delimiter.
- 00:00:03;22 ..... For NTSC DF (Drop Frame)
  - \* A semicolon is used between seconds and frames as a delimiter.
- :--:--:-- ..... No DV signal output



#### Info

Free-run time code is used during built-in color bar output or when time code is not input.



## • DV → SDI

### 1. DV audio input (Upper left on the screen)



48kHz/2ch ..... DV audio input is 48 kHz/ 16 bits/ 2 channels. Digital audio output CH3 and CH4 are copies of CH1 and CH2.

32kHz/4ch ..... DV audio input is 32 kHz/ 12 bits/ 4 channels.

32kHz/2ch ..... DV audio input is 32 kHz/ 16 bits/ 2 channels. Digital audio output CH3 and CH4 are copies of CH1 and CH2.

44kHz/2ch ..... DV audio input is 44.1 kHz/ 16 bits/ 2 channels. Digital audio output CH3 and CH4 are copies of CH1 and CH2.

No Stream ..... No DV signal input.

SG ..... Digital audio output is either of 1 kHz/-18dB or 1 kHz/-20 dB audio signal regardless of DV signal input (only during built-in color bar output).

### 2. Digital audio output destination (Upper right on the screen)



both ..... Same signal is output for SDI embedded audio output and AES/EBU audio output.

### 3. 9-pin remote control deck status (Lower left on the screen)



Same as during SDI → DV mode.  
(See p. 8. "9-pin remote control deck status")

## 4. DV input time code (Lower right on the screen)



00:00:03:22 ..... For PAL/NTSC NDF (Non Drop Frame)  
 \* A colon is used between seconds and frames as a delimiter.

00:00:03;22 ..... For NTSC DF (Drop Frame)  
 \* A semicolon is used between seconds and frames as a delimiter.

--:--:--:-- ..... No DV signal input



### Info

Free-run time code is used during built-in color bar output or when a valid time code is not in the DV signal.

## Main Screen 2

This screen shows information on the current settings.

### 1. Analog monitor audio output (Upper side on the screen)



1/2 ..... Outputs CH1/CH2.

3/4 ..... Outputs CH3/CH4.

1+3/2+4 ..... Outputs MIX of CH1 and CH3, MIX of CH2 and CH4.

1+2+3+4 ..... Outputs MIX of CH1, CH2, CH3 and CH4.

### 2. Time code input (Lower middle on the screen)



DVITC ..... DVITC signal in SDI video input signal is acquired, and converted into time code in output DV signal.

#### When deck control by remote connector is enabled

Acquires VITC through the remote connector to use for time code. If VITC cannot be acquired, DVITC in SDI video input signal is used.

LTC..... LTC signal input to TC connector is acquired, and converted into time code in output DV signal.

**When deck control by remote connector is enabled**

If the LTC signal input to TC connector is invalid, LTC acquired through the remote connector is used.

auto..... DVITC signal in SDI video input and LTC signal input to TC connector are acquired through the remote connector. If the LTC signal is valid, the LTC is converted into time code in output DV signal. Otherwise, DVITC is converted into time code.

**When deck control by remote connector is enabled**

If the LTC signal input to TC connector is invalid, LTC/VITC auto selection time code is acquired through the remote connector. If the auto selection TC cannot be acquired, DVITC in SDI video input signal is used.

3. Video standard (Lower right on the screen)



NTSC ..... ADVC-1000 operates in NTSC mode.

PAL ..... ADVC-1000 operates in PAL mode.



**Info**

The video standard is set by DIP switch SW4 on the bottom of the unit, or by the menu option "19 video standard". (See "DIP switch settings" on p.15 and "19 video standard" on p.23)

## Main Screen 3

This screen shows information on the current settings.

1. External synchronization enabled/disabled (Upper side on the screen)



disable ..... External synchronization function is disabled.

enable ..... External synchronization function is enabled.

advanced ..... External synchronization function in the "advanced mode" is enabled. (See p.25)

2. 9-pin remote enabled/disabled



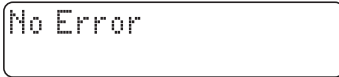
disable ..... 9-pin remote control function is disabled.

enable ..... 9-pin remote control function is enabled.

## Error Status Screen

This screen shows error messages.

- **Error Status Screen**



- **When error has occurred**

1. Time code (Upper side on the screen)



- LTC..... LTC was selected for time code input, and time code signal can't be detected from TC connector during SDI → DV mode.
- DVITC ..... DVITC was selected for time code input, and DVITC can't be detected from SDI input connector during SDI → DV mode.
- TC..... During DV → SDI mode, time code can't be detected from input DV signal.
- autoTC ..... Auto is selected for time code input, and time code signal can't be detected from neither TC connector nor SDI connector during SDI → DV mode.

2. Inputs (Lower side on the screen)



- SDIin ..... SDI input signal can't be detected during SDI → DV mode. Alternately, external synchronization to SDI input is set, but SDI input signal can't be detected.
- REFin ..... Unit is set to synchronize to reference signal input to REF connector, but sync signal input to REF connector can't be detected.

- AES12 ..... AES/EBU audio input is selected for SDI → DV mode, but signal for CH1 and CH2 used for DV encoding can't be detected.
- AES 34 ..... AES/EBU audio input is selected for SDI → DV mode, but signal for CH3 and CH4 used for DV encoding can't be detected.
- AES1234 ..... AES/EBU audio input is selected for SDI → DV mode, but signal for CH1, CH2, CH3 and CH4 used for DV encoding can't be detected.

## Other Errors

```
JitterAttenuateFail  
turn off menu #62
```

Variation in input signal exceeded ADVC-1000's jitter attenuation function tolerance limit. Change the setting of menu item 62 ("jitter attenuator") to "off".

```
set menu #13 to  
'through out'
```

When the DV audio encoding setting is 32 kHz, the "selected audio" setting of menu item 13 ("digital audio out") has no effect. Change the setting of the "digital audio out" item to "through out", or change the DV audio encoding setting to 48 kHz.

## DIP switch settings

Allow you to set various modes. SW3, SW4 may differ depending on your point of purchase.

ON →	No.	MODE	OFF	ON
1	1	PHY SPEED	S400	S200
2	2	Update Mode	Normal	Update
3	3	NTSC Setup Level	0 IRE	7.5 IRE
4	4	Video Format	NTSC	PAL
5	5	Reserved		
6	6	Reserved		
7	7	Reserved		
8	8	Reserved		



### CAUTION

Make sure to turn off the power of the ADVC-1000 unit before making any changes for DIP switch settings.

DIP switches 5, 6, 7 and 8 should be set to OFF.

#### SW1: PHY Speed

Designates the PHY speed.

\* If the setting menu "66 data rate cap." is set to "S400", please DO

NOT turn this switch to ON. (See p.31)

OFF: S400                      ON: S200

#### SW2: Update Mode

Used to update the internal software. (Set this switch to the off position for normal operations.)

OFF: Normal                      ON: Update

#### SW3: NTSC Setup Level

Designates the black (setup) level. Enabled only when the video format (standard) is NTSC.

\* This switch is ignored, unless the menu option "19 video standard (see p.23)" is set to "set by DIP switch".

OFF: 0 IRE (Japan)                      ON: 7.5 IRE (North America)

#### SW4: Video Format

Designates the video signal format.

\* The settings in the menu option "19 video standard (see p.23)" is adopted when this switch is set to OFF.

OFF: NTSC                      ON: PAL

#### SW5: Reserved

Not used. (Set this switch to the off position for normal operations.)

#### SW6: Reserved

Not used. (Set this switch to the off position for normal operations.)

#### SW7: Reserved

Not used. (Set this switch to the off position for normal operations.)

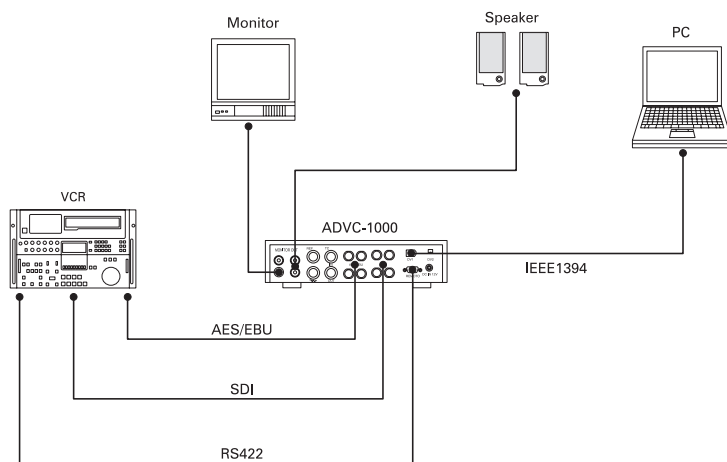
#### SW8: Reserved

Not used. (Set this switch to the off position for normal operations.)

## 2-2 Connecting Devices

### CONNECTING THE ADVC-1000 UNIT (STANDARD)

Connect the ADVC-1000 unit to your system. The diagram below illustrates the typical connection of the ADVC-1000.



#### CAUTION

DV editing software is required to playback or capture AVI video files for use on a PC or to record the file data onto tape. In addition, the PC should be equipped with an IEEE-1394 port.

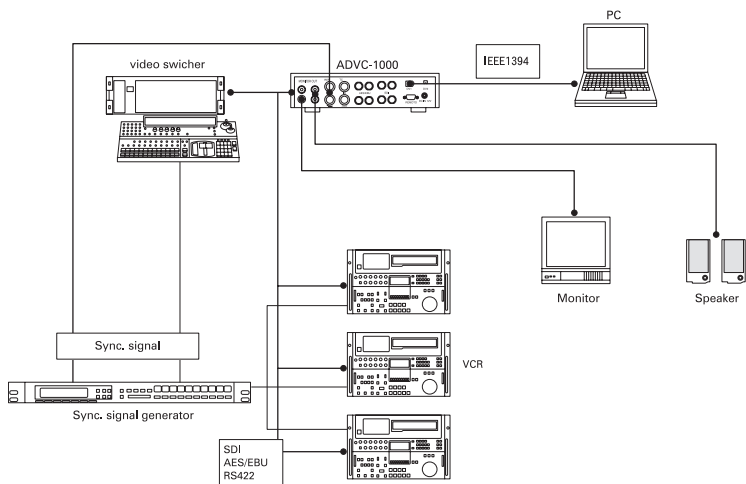


#### Info

When connecting a PC to the ADVC-1000 unit, make sure that the PC's power is turned off.



## CONNECTING THE ADVC-1000 UNIT (SYSTEM INTEGRATED)



## Quick Setting

Mode	Setting item	Settings	Ref. page
DV → SDI	22 DVITC insert line	Selecting line No. or off	24
	31 ext. sync	disable, enable, advanced	25
SDI → DV	11 DV audio encode	48kHz CH1/2, 32kHz CH1234, 48kHz CH3/4	20
	12 digital audio in	Embedded, AES/EBU	20
	21 TC input source	DVITC, LTC, auto	24

\* There are other several settings. Refer to "2-3 Setting Menu" (See P.19)

### Importing SDI data to your PC

Import the material of the tape on VCR into a PC.

1. Press the [Mode] switch on the front panel of the ADVC-1000 to switch the mode to the "SDI → DV" mode.
2. Press the [MENU] switch on the front panel of the ADVC-1000, and operate the select switch to select the desired setting.
3. Capture the data by using DV editing software.

\* For the operational procedure of the DV editing software, refer to the instruction manual provided with your DV editing software.

### Recording PC-edited data onto a tape with VCR

Export the DV data on the PC into the VCR.

1. Press the [Mode] switch on the front panel of the ADVC-1000 to switch the mode to the "DV → SDI" mode.
2. Use the DV editing software to output your data.  
\* For the operational procedure of the DV editing software, refer to the instruction manual provided with your DV editing software.
3. Use the VCR to record the data on tape.

## 2-3 Setting Menu

### Data Conversion Process Menu

1. Press the MENU key.
2. Menu items are displayed on the LCD screen.
3. Move the Select key up/down to select the desired menu item, then left/right to change the setting of the selected item. With the desired setting selected, press the ENTER key to apply the setting and return to the main screen.
4. If the current item has a sub-menu, press the ENTER key to display the sub-menu, letting you select a setting. After selecting the setting, press the ENTER key again to apply it. If you don't want to change the setting, press the MENU key to return to the main screen.



#### Info

When you change the settings of DIP switches SW3 and SW4, or the settings in the menu option "19 video standard", the unit restores the other settings than the video standard to the one at the time of factory shipment. (See "DIP switch settings" on p.15 and "19 video standard" on p.23)

### Select Key Operation



Used to select setting item (toggle sequentially among menu items 11 to 72 shown below).



Used to select setting for selected menu item (the Select key operations, right or left, select the corresponding setting).

### Settings Menu Item Nos.

<b>10 to 19: .....</b>	<b>A/V input/output settings .....</b>	<b>20-23</b>
<b>20 to 29: .....</b>	<b>Time code settings .....</b>	<b>24-25</b>
<b>30 to 39: .....</b>	<b>External synchronization settings .....</b>	<b>25-27</b>
<b>40 to 49: .....</b>	<b>9-pin remote control settings .....</b>	<b>27-28</b>
<b>50 to 59: .....</b>	<b>Signal generator output settings .....</b>	<b>28-29</b>
<b>60 to 69: .....</b>	<b>Other detailed settings .....</b>	<b>29-31</b>
<b>70 to 79: .....</b>	<b>System settings .....</b>	<b>31</b>

## 11 DV audio encode

Lets you select any of the following settings below related to the DV audio format used for DV encoding.

LCD Display

11 DV audio encode  
48kHz CH1/2

Setting	Description
48kHz CH1/2	48 kHz/2 channels; encode CH1 and CH2 audio inputs. (Factory default)
32kHz CH1234	32 kHz/4 channels; encode CH1, CH2, CH3 and CH4 audio inputs.
48kHz CH3/4	48 kHz/2 channels; encode CH3 and CH4 audio inputs as CH1 and CH2 for DV.

## 12 digital audio in

Lets you select any of the following settings related to the digital audio input in SDI → DV mode (during DV encoding).

LCD Display

12 digital audio in  
Embedded

Setting	Description
Embedded	Selects SDI embedded audio. (Factory default)
AES/EBU	Selects AES/EBU audio.



### Info

When the DV audio encoding setting is 32 kHz, the "selected audio" setting has no effect. Change the setting to "through out", or change the DV audio encoding setting of menu item 11 ("DV audio encode") to 48 kHz.

DV audio input is output in DV → SDI mode (during DV decoding).

## 13 digital audio out

Lets you select any of the following settings related to the digital audio output.

LCD Display

13 digital audio out  
through out

Setting	Description
through out	Outputs each input source audio directly. (Factory default)
selected audio	Outputs audio selected for "12 digital audio in" menu item.

## 14 analog audio mon.

Lets you select any of the following settings related to the output to the analog monitor audio output connectors.

LCD Display

14 analog audio mon.  
CH1/2

Setting	Description
CH1/2	Outputs audio CH1 and CH2. (Factory default)
CH3/4	Outputs audio CH3 and CH4.
CH1+3/2+4	Outputs mix of audio CH1 and CH3, and mix of audio CH2 and CH4.
CH1+2+3+4	Outputs mix of audio CH1, CH2, CH3 and CH4.

## 15 SDIout auto-off

Lets you select a control process that automatically stops the SDI output in SDI → DV mode (during DV encoding).

LCD Display

15 SDIout auto-off  
off

Setting	Description
off	Doesn't stop SDI output. (Factory default)
on	Stops SDI output.



### Info

When the ADV-1000's SDI connectors (IN and OUT) are connected to the SDI connectors (IN and OUT) of your device while the external sync signal is not used, set this function to on to prevent a looped connection of the SDI signal.

## 16 DVout auto-mute

Lets you select a control process that automatically stops the DV output in SDI → DV mode (during DV encoding).

LCD Display

```
16 DVout auto-mute
no SDI in
```

Setting	Description
no SDI in	Stops DV output if there is no SDI input. (Factory default)
no SDI/AES in	Stops DV output if there is no SDI input and no AES/EBU input.
off	Doesn't stop DV output.

## 17 DVout aspect info

Sets an aspect ratio for the DV stream that ADVC-1000 outputs in SDI → DV mode (DV encoding).

LCD Display

```
17 DVout aspect info
4:3
```

### For NTSC

Setting	Description
4 : 3	Sets the DV stream in 4:3 aspect ratio. (Factory default)
16 : 9 (letter box)	Sets the DV stream in 16:9 letter box.
16 : 9 (squeeze)	Sets the DV stream in 16:9 squeeze.

### For PAL

Setting	Description
4 : 3	Sets the DV stream in 4:3 aspect ratio. (Factory default)
16 : 9 (letter box)	Sets the DV stream in 16:9 letter box.
16 : 9 (anamorphic)	Sets the DV stream in 16:9 anamorphic (squeeze).



### Info

This setting will be used when capturing videos with the software such as Grass Valley EDIUS.

## 18 analog video mon.

Sets the type of the signal output from the analog monitor video out connector.

LCD Display

18 analog video mon.  
composite/s-video

### For NTSC

Setting	Description
composite/ s-video	Outputs Composite signal and S-video signal. (Factory default)
component (Betacam)	Outputs Component signal with the signal level of the Betacam.
component (SMPTE)	Outputs Component signal with the signal level compliant to SMPTE.

### For PAL

Setting	Description
composite/s-video	Outputs Composite signal and S-video signal. (Factory default)
component (EBU)	Outputs Component signal with the signal level compliant to EBU.



#### Info

See the "Outputting component signals (p. 33) on how to connect ADVC-1000 to output component signal.

## 19 video standard

This item contains a sub-menu letting you select the video standard.

LCD Display

19 video standard

Setting	Description
NTSC(525)/0 IRE	Sets to NTSC with the setup level of 0 IRE.
NTSC(525)/7.5 IRE	Sets to NTSC with the setup level of 7.5 IRE.
PAL(625)	Sets to PAL.
Set by DIP switch	Adopts the DIP switch settings specified by SW4 and SW3. (Factory default)



#### Info

Once you have changed the video standard settings (or the setup level) , you need to turn the power off to make the new setting take effect.



#### Info

When the SW4 is set to "on", the video standard is always set to PAL. To utilize this setting menu, the DIP switch SW4 must be set to "off".

## 21 TC input source

Lets you select any of the following settings related to the method used to read the time code from the deck in SDI → DV mode (during DV encoding).

LCD Display

```
21 TC inPut source
DVITC
```

Setting	Description
DVITC	Acquires time code from DVITC in SDI input.
LTC	Acquires time code from LTC.
Auto	Acquires time code from DVITC in SDI input and LTC. Adopts LTC if LTC is acquired, adopts DVITC if not. (Factory default)



### Info

Pressing the ENTER key displays sub-menus. With the desired setting selected, press the ENTER key to apply the setting and return to the main screen.

If you don't want to change the setting, press the MENU key to return to the main screen.

## 22 DVITC insert line

This item contains sub-menus letting you select from among several DVITC settings.

LCD Display

```
22 DVITC insert line
```

### • 22-1 encode line 1

Sets line (line 1), at which to insert DVITC in SDI output, in DV → SDI mode (during DV decoding).

```
>22-1 encode line 1
line 14
```

Setting	Description
Line selection	NTSC: 10 to 20 (Factory default: 14) PAL: 6 to 22 (Factory default: 19)
off	No insertion



## • 22-2 encode line 2

Sets line (line 2), at which to insert DVITC in SDI output, in DV → SDI mode (during DV decoding).

```
>22-2 encode line 2
line 16
```

Setting	Description
Line selection	NTSC: 10 to 20 (Factory default: 16) PAL: 6 to 22 (Factory default: 21)
off	No insertion

## • 22-3 decode line

Sets line, at which to read DVITC from SDI input, in SDI → DV mode (during DV encoding).

```
>22-3 decode line
auto detect
```

Setting	Description
Line selection	NTSC: 10 to 20 PAL: 6 to 22
auto detect	Auto detection (Factory default)



### Info

Normally, use "auto detect".

## 31 ext. sync

Lets you select any of the following settings related to the external sync operation.

LCD Display

```
31 ext. sync
disable
```

Setting	Description
disable	Disables external sync. (Factory default)
enable	Enables external sync.
advanced	Enables external sync operation as "Advanced Mode". (See p. 2)



### Info

This function is only available in DV → SDI mode (during DV decoding).

The "advanced" setting is only available when DV signal is input via an IEEE 1394 port compliant with PC's 1394 OHCI Specification. For supported operating system for PC, please refer to our web site.

## 32 ext. sync source

Lets you select any of the following settings related to the source used as the sync signal when performing external synchronization.

LCD Display

```
32 ext. sync source
REF. IN
```

Setting	Description
REF. IN	Synchronizes to signal input into REF connector. (Factory default)
SDI IN	Synchronizes to sync signal contained in video signal input from SDI input connector.

## 33 ext. sync conf.

Lets you set the amount to increase/decrease (in unit of 37 nano-seconds) the ADVC-1000 video output delay relative to the external sync input.

\* Pressing the ENTER key switches the screen to the mode for editing the value.

1. Move the Select key left/right to select the digit of the value you want to change.
2. Move the Select key up/down to change the value.
3. Press the ENTER key to finish the mode for editing the value.

LCD Display

```
33 ext. sync conf. >
0
```

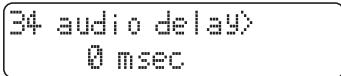
Setting	Description
Numerical value	Sets specified numerical value between -1,024 and +1,023. (Factory default: 0)

### 34 audio delay

Lets you set the amount to increase/decrease (in milliseconds) the ADVC-1000 audio output delay relative to the video output, when an external sync is enabled.

- \* Pressing the ENTER key switches the screen to the mode for editing the value.
  1. Move the Select key left/right to select the digit of the value you want to change.
  2. Move the Select key up/down to change the value.
  3. Press the ENTER key to finish the mode for editing the value.

LCD Display

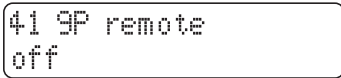


Setting	Description
Numerical value	Sets specified numerical value between -100 and +100. (Factory default: 0)

### 41 9P remote

Lets you select any of the following settings related to deck control by the 9-pin remote connector.

LCD Display



Setting	Description
off	Turns deck control by remote connector OFF. (Factory default)
on	Turns deck control by remote connector ON.
function test mode	Special mode for testing. Please do not set it to this mode in normal operations.

## 42 local disable

Lets you enable or disable the Mode switch.

LCD Display

```
42 local disable
off
```

Setting	Description
off	Permits operation mode switching by front panel controls. (Factory default)
on	Prohibits operation mode switching by front panel controls.
auto	Only prohibits operation mode switching by front panel controls when deck control by 9-pin remote terminal is enabled.
off (PB mode)	Permits operation mode switching, with operation mode switching by AV/C command prohibited.

## 51 color bar output

Lets you select the color bar output mode.

LCD Display

```
51 color bar output
off
```

Settings	Description
off	Doesn't output color bars. (Factory default)
on	Outputs color bars. In SDI → DV mode, outputs the color bar signal to DV output, SDI output, AES/EBU output and analog monitor output. In DV → SDI mode, outputs the color bar signal to SDI output, AES/EBU output and analog monitor output.



### Info

External synchronization function cannot be used.

Free-run time code is output.

### 52 SG audio level

Lets you select the testing audio signal of 1kHz.

LCD Display

52 SG audio level  
-18 dB

Settings	Description
-18 dB	Outputs testing audio signal of -18dB 1kHz in color bar output mode. (Factory default for PAL)
-20 dB	Outputs testing audio signal of -20dB 1kHz in color bar output mode. (Factory default for NTSC)

### 61 IEEE1394 clk adj.

Normally, use the setting in place at time of factory shipment (127).

LCD Display

61 IEEE1394 clk adj.  
127

Setting	Description
Numerical value	Sets specified numerical value (between 0 and 255). (Factory default: 127)

### 62 jitter attenuator

Lets you enable or disable the SDI output jitter reduction function.

LCD Display

62 jitter attenuator  
off

Setting	Description
off	Disables jitter attenuation function. (Factory default)
on	Enables jitter attenuation function.



#### Info

Inputting nonstandard signal may cause abnormal SDI outputs and analog monitor video outputs exceeding the ADVC-1000's jitter attenuation function tolerance limit. (The relevant error is displayed on the error status display screen).

Please set this function to off in this case.



### Info

If this menu is set to off, you can connect ADVC-1000 units each other using IEEE1394 cable.



### Info

If this menu is set to off, advanced setting mode "external sync" does not work.

## 63 cycle master

Lets you enable or disable cycle master acquisition.

LCD Display

```
63 cycle master
on
```

Setting	Description
on	Acquires cycle master. (Factory default)
off	Doesn't acquire cycle master.

## 64 resample filter

**Available only for NTSC**

Lets you set the type of horizontal resampling filter for Cb/Cr signal, when running in NTSC mode.

LCD Display

```
64 resample filter
default
```

Setting	Description
default	Sets default modulus. (Factory default)
type 1	Sets modulus that emphasizes anti-alias.
type 2	Sets modulus that emphasizes frequency characteristic.

## 65 AV/C transaction

Lets you select the type of the AV/C transaction at the time AV/C command is received.

LCD Display

```
65 AV/C transaction
immediate
```

Setting	Description
Immediate	Executes AV/C immediate transaction. (Factory default for NTSC)
Deferred	Sends INTERIM response, and then executes AV/C deferred transaction.

## 66 data rate cap.

Lets you set the maximum communication speed of the "dr cap" field of "iMPR/oMPR" at the time of booting and setting change.

LCD Display

```
66 data rate cap.
S100
```

Setting	Description
S100	Sets 100Mbps. (Factory default)
S200	Sets 200Mbps.
S400	Sets 400Mbps.



### Info

When the hardware is used with the DIP switch SW1 (PHY SPEED, see p.15) set to ON (S200), please DO NOT set this option to S400.

## 71 system version

This item contains sub-menus displaying firmware version numbers. Pressing the ENTER key displays a sub-menu.

LCD Display

```
71 system version>
```

## 72 factory default

Restores the settings to the values set at time of factory shipment. Pressing the ENTER key displays a sub-menu.

LCD Display

```
72 factory default>
```

### • 72-1 reset settings

Pressing the ENTER key resets settings to their values at time of factory shipment.

\* If you don't want to change the setting, press the MENU key to return to the main screen.

```
>72-1 reset settings
```

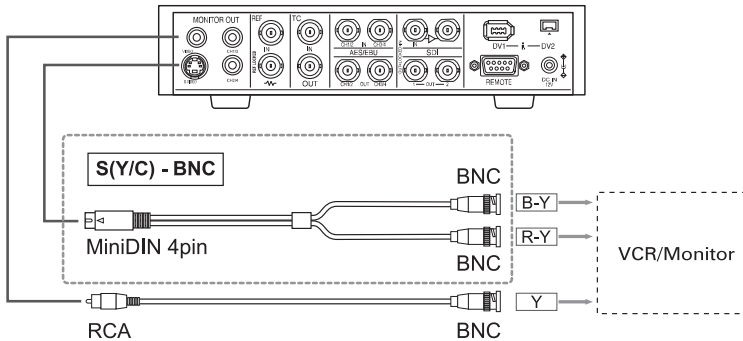
## 2-4 Specifications

Video Input	SDI	BNC x 2 (SDI IN + ACTIVE THROUGH, SMPTE 259M-C)
Video Output	SDI	BNC x 2 (SMPTE 259M-C)
	Analog	RCA x 1 (Composite), Mini DIN 4-pin x 1 (S-Video) * With a conversion cable (optional), component signal can be output. (Functions exclusively) (See p.33)
Digital Video Input/Output	DV	4-pin x 1, 6-pin x 1 (Bus power not supplied)
Audio Input	SDI	Embedded audio (SMPTE 272M-A, 20-bit/48 kHz, Locked) 4-channel input supported * Either CH1/2 or CH3/4 is selectable in SDI → DV (2ch) conversion. In SDI → DV (4ch), CH1 to 4 are converted to 32 kHz/12 bit/CH1 to 4.
	AES/EBU	BNC x 2 (CH1/2, CH3/4) 32/44.1/48 kHz, 16/20/24-bit (Unlocked/Locked)
	DV	32/44.1/48 kHz (Unlocked/Locked)16-bit, 2ch 32 kHz (Unlocked/Locked)12-bit, 4ch
Audio Output	SDI	Embedded audio (SMPTE 272M-A, 20-bit/48 kHz, Locked) 4-channel output supported * In DV (48 kHz/2ch) → SDI, copies of CH1/2 are used for CH3/4.
	AES/EBU	BNC x 2 (CH1/2, CH3/4) * 48 kHz 20-bit (Locked) or AES/EBU through output.
	DV	48 kHz/Locked/16-bit/2ch 32 kHz/Locked/12-bit/4ch
	Analog	Unbalanced audio (RCA x 2) Output channel is selectable (CH1/2, CH3/4, MIX of CH1+3/CH2+4, MIX of CH1+2+3+4)
TC Input/Output	LTC input	BNC x 1
	LTC output	BNC x 1
	VITC input	decoded from SDI input
	VITC output	encoded in SDI output (Line selection is available.)
REF In	B.B. input	BNC x 2 (INPUT and LOOP THROUGH, automatic 75Ω termination) * SDI output is available in REF sync.
Remote		D-sub 9-pin (female) x 1 (RS422A) Command converter for AV/C → RS422A
Power source		12 VDC (AC adapter included)
Current consumption		+ 12 V, 1.2 A (Max. 14 W)
Operating temperature		+ 10 to 35°C
Operating humidity		40 to 80% (No condensation)
Storage temperature		-20 to 60°C
Storage humidity		20 to 80% (No condensation)
Outside dimension/Weight		215 mm (W) x 44 (H) x 241 mm (D) / 2.0 kg (Projections not included) Ready for EIA-compliant 19" half rack-mounting



## Supplementary: Outputting Component signals (optional)

When you connect the ADVC-1000 with the conversion cable (optional), component signal can be output. (Functions exclusively)



For questions regarding the conversion cable, please contact your local Grass Valley office, distributor or the store that you have purchased this product.

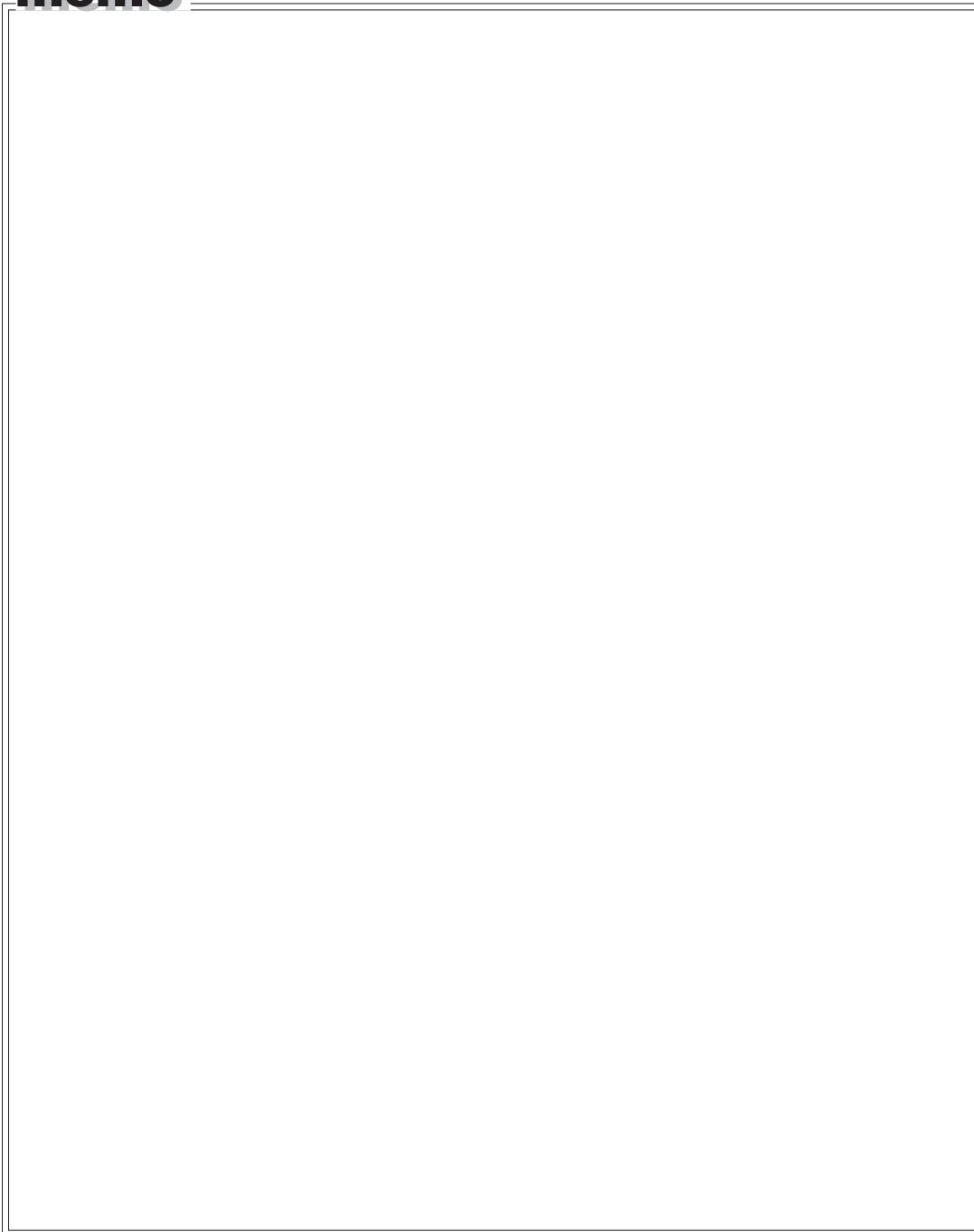
### NOTE

Analog audio output is unbalanced audio.

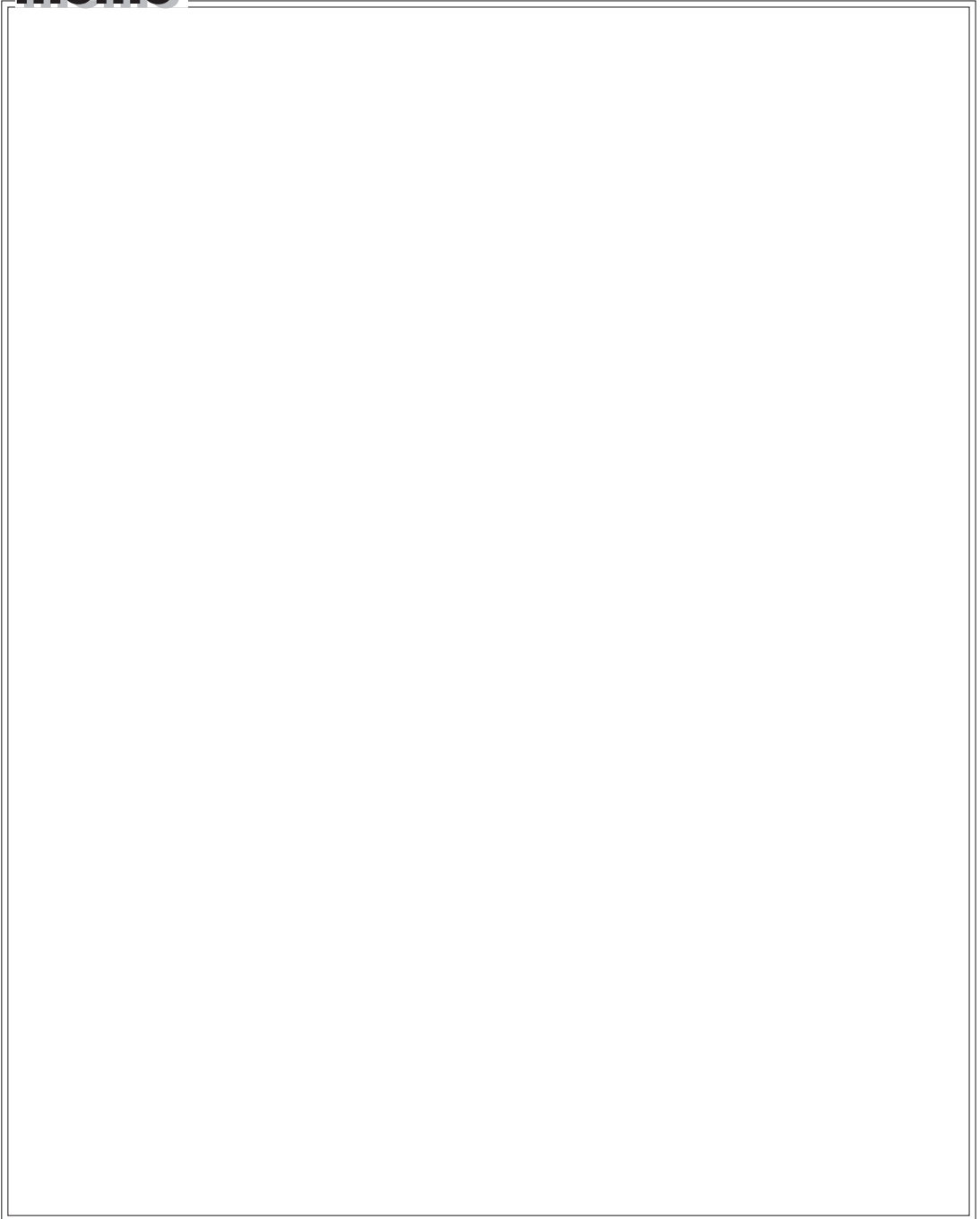
When you input the audio output to a balanced audio, use any of the following methods and adjust it to a proper level.

- \* Use an Unbalance to Balance converter
- \* Adjust the input level of VCR
- \* Adjust the audio level of Timeline

# memo



# memo



# memo

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