

# ***Live Content Producer***

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**Operating Instructions**

**Software Version 1.00**

**ANYCAST STATION**



**AWS-G500**

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# Table of Contents

Usage Notes .....	7
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## Chapter 1 Overview

Features of This System .....	9
Example Applications .....	10
Names and Functions of Parts .....	11
Front Panel.....	11
Rear Panel.....	15
Side Panel .....	18
Other Parts .....	19
Operation Screen .....	20
Menu Operations .....	23

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## Chapter 2 Preparations

Installation/Default Settings .....	27
Installing the Unit .....	27
Fitting a Keyboard .....	28
Starting and Closing Down the Unit .....	30
Selecting the Keyboard Language .....	31
Setting the Time Zone .....	31
Setting the Date and Time .....	32
Adjusting the Display Brightness.....	32
Selecting the Video Output Signal Format.....	33
Connections .....	34
Connecting a Camera with VISCA Support.....	35
Connecting a Microphone .....	35
Connecting a Computer (RGB Input).....	36
Connecting a Camcorder .....	36
Connecting a VTR .....	37
Connecting a Plasma Display/Projector .....	38
Connecting an Amplifier .....	39
Preventing Accidental Cable Disconnection .....	39
Installing Option Boards.....	40
Settings Related to Input Signals .....	41
Relation Between Input Signals and System Components...	41
Video Signal Related Settings .....	42
Audio Signal Related Settings.....	43

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## Chapter 3 Operations

<b>Video Switching .....</b>	<b>47</b>
<b>Basic</b> Basics of Video Switching .....	47
<b>Basic</b> Changing the Video with a Cut .....	48
<b>Basic</b> Changing the Video with a Effect Transition.....	50
Changing the Transition Time.....	54
Changing the Effect Pattern.....	54
Using Fade-to-Black (FTB).....	55
Using Color Bars and Color Mattes .....	56
<b>Basic</b> Using the Downstream Key (DSK) Function to	
Add Text or an Image .....	57
Showing a Logo on the Screen .....	60
Using Luminance Keying.....	62
Adjusting the Combined Video .....	63
Cropping Unwanted Portions From the Video	
Being Combined .....	64
Applying Edge Effects .....	65
<b>Controlling Cameras .....</b>	<b>66</b>
Registering Cameras to be Controlled.....	66
Controlling Camera Manually .....	67
Storing a Camera Preset .....	68
Setting the Camera Control .....	71
Resetting the Camera.....	72
<b>Audio Mixing .....</b>	<b>74</b>
<b>Using the Intercom Function .....</b>	<b>75</b>
Connecting the Intercom System.....	75
Speaking on the Intercom System .....	76
<b>Monitoring Audio .....</b>	<b>77</b>
Determining the Audio Signal Output Destinations.....	77
Displaying the Audio Signal Output Destinations .....	78
Monitoring Output Audio.....	79
Monitoring the Audio of a Particular Channel Only .....	80
<b>Video/Audio Signal Adjustments and Settings .....</b>	<b>81</b>
Adjusting Analog Video Input Signals.....	81
Adjusting the Clock Phase of RGB Signals .....	82
Adjusting Color Matte .....	82
Applying an Offset to the Program Output Video.....	82
Setting the Resolution and Frequency of the	
RGB Output Signal .....	83
Applying Filters to the Program Output Video .....	83
Adjusting the Audio Input Signal Levels .....	84
Cutting High Frequency or Low Frequency .....	84
Adjusting the Equalizer .....	85
Using the Limiter or Compressor .....	85
Adjusting the Audio Left and Right Channel Balance .....	86
Adjusting the Output Levels for Each Destination.....	86
If the Output Video Is Delayed with Respect to the Audio..	87
Adjusting the Output Using the Oscillator Signal .....	88

<b>Internal Hard Disk File Operations .....</b>	<b>90</b>
Importable Files.....	90
Importing Graphics Files.....	90
Importing Logo Files.....	91
Deleting Files.....	92
Checking the Internal Hard Disk Remaining Capacity .....	93
<b>Formatting a “Memory Stick” .....</b>	<b>94</b>
<b>Streaming .....</b>	<b>96</b>
What Is Streaming? .....	96
Configuring the Network Settings.....	96
<b>Setting Live Streaming Transmission .....</b>	<b>99</b>
Starting and Stopping Streaming.....	101
Settings Required for Viewing Streaming.....	101
Placing Streaming Links in a Web Site.....	102

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## Chapter 4 Appendix

<b>Maintenance .....</b>	<b>105</b>
Checking the Operating Software Version.....	105
Upgrading the Operating Software.....	106
<b>Messages .....</b>	<b>110</b>
Message Structure .....	110
List of Messages .....	112
<b>Troubleshooting .....</b>	<b>113</b>
<b>“Memory Stick” Media .....</b>	<b>115</b>
Notes on using “Memory Stick” media.....	115
About data.....	115
Notes on using “Memory Stick Duo”.....	115
Notes on using the Memory Select function.....	115
<b>Specifications .....</b>	<b>116</b>
<b>Dimensions .....</b>	<b>118</b>
<b>Glossary .....</b>	<b>119</b>
<b>Index .....</b>	<b>123</b>

## Owner's Record

The model and serial numbers are located at the bottom.

Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_

### WARNING

**To prevent fire or shock hazard, do not expose the unit to rain or moisture.**

**To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.**

**THIS APPARATUS MUST BE EARTHED.**

### WARNUNG

**Um Feuergefahr und die Gefahr eines elektrischen Schlages zu vermeiden, darf das Gerät weder Regen noch Feuchtigkeit ausgesetzt werden.**

**Um einen elektrischen Schlag zu vermeiden, darf das Gehäuse nicht geöffnet werden. Überlassen Sie Wartungsarbeiten stets nur qualifiziertem Fachpersonal.**

**DIESES GERÄT MUSS GEERDET WERDEN.**

### AVERTISSEMENT

**Afin d'éviter tout risque d'incendie ou d'électrocution, ne pas exposer cet appareil à la pluie ou à l'humidité.**

**Afin d'écarter tout risque d'électrocution, garder le coffret**

**fermé. Ne confier l'entretien de l'appareil qu'à un personnel qualifié.**

**CET APPAREIL DOIT ÊTRE RELIÉ À LA TERRE.**

### WARNING

This unit has no power switch.

When installing the unit, incorporate a readily accessible disconnect device in the fixed wiring, or connect the power cord to a socket-outlet which must be provided near the unit and easily accessible.

If a fault should occur during operation of the unit, operate the disconnect device to which the power supply off, or disconnect the power cords.

### WARNUNG

Dieses Gerät hat keinen Netzschalter.

Beim Einbau des Geräts ist daher im Festkabel ein leicht zugänglicher Unterbrecher einzufügen, oder das Netzkabel muß mit einer in der Nähe des Geräts befindlichen, leicht zugänglichen Wandsieckdose verbunden werden.

Wenn während des Betriebs eine Funktionsstörung auftritt, ist der Unterbrecher zu betätigen bzw. das Netzkabel abzuziehen, damit die Stromversorgung zum Gerät unterbrochen wird.

### AVERTISSEMENT

Cet appareil ne possède pas d'interrupteur d'alimentation.

Lors de l'installation de l'appareil, incorporer un dispositif de coupe dans le cablage fixe ou brancher le cordon d'alimentation dans une prise murale proche de l'appareil et facilement accessible.

En cas de problème lors du fonctionnement de l'appareil, enclencher le dispositif de coupe d'alimentation ou débrancher le cordon de la prise.

**WARNING: THIS WARNING IS APPLICABLE FOR USA ONLY.**

If used in USA, use the UL LISTED power cord specified below.

**DO NOT USE ANY OTHER POWER CORD.**

Plug Cap Parallel blade with ground pin  
(NEMA 5-15P Configuration)

Cord Type SJT, three 16 or 18 AWG wires

Length	Minimum 1.5 m, Less than 2.5 m (8 ft 3 in)
Rating	Minimum 10 A, 125 V

Using this unit at a voltage other than 120 V may require the use of a different line cord or attachment plug, or both. To reduce the risk of fire or electric shock, refer servicing to qualified service personnel.

**WARNING: THIS WARNING IS APPLICABLE FOR OTHER COUNTRIES.**

1. Use the approved Power Cord (3-core mains lead) / Appliance Connector / Plug with earthing-contacts that conforms to the safety regulations of each country if applicable.
2. Use the Power Cord (3-core mains lead) / Appliance Connector / Plug conforming to the proper ratings (Voltage, Ampere).

If you have questions on the use of the above Power Cord / Appliance Connector / Plug, please consult a qualified service personnel.

**AVERTISSEMENT:**

1. Utiliser un cordon d'alimentation approuvé (conducteur d'alimentation 3 âmes)/ connecteur d'appareil/prise avec contacts de mise à la terre conforme aux règles de sécurité de chaque pays si applicable.
2. Utiliser un cordon d'alimentation approuvé (conducteur d'alimentation 3 âmes)/ connecteur d'appareil/prise conforme aux valeurs nominales (tension, ampérage) correctes.

S'adresser à un personnel de service qualifié pour toute question concernant l'emploi du cordon d'alimentation/connecteur d'appareil/prise cidessus.

**WARNUNG:**

1. Verwenden Sie Netzkabel(dreiadrig), Geräteanschlüsse und Netzkabelstecker mit Masseleitung, die den Sicherheitsrichtlinien des jeweiligen Landes entspricht.
2. Verwenden Sie Netzkabel (dreiadrig), Geräteanschlüsse und Netzkabelstecker mit Masseleitung, die den vor Ort herrschenden Spannungsanforderungen (Spannung, Stromstärke) entsprechen.

Bei Frage über die Eignung und Sicherheit von Netzkabeln (dreiadrig), Geräteanschlüssen und Netzkabelsteckern wenden Sie sich bitte an einen qualifizierten Electrotechniker.

**For the customers in the USA**

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.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

**IMPORTANT**

The nameplate is located on the bottom

**CAUTION**

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.

Dispose of used batteries according to the manufacturer's instructions.

**IMPORTANT**

La plaque signalétique se situe sous l'appareil.

**ATTENTION**

Risque d'explosion si la batterie n'est pas remplacée correctement.

Utilisez uniquement le même type de batterie ou une batterie équivalente recommandée par le fabricant.

Jetez les batteries usagées selon les instructions du fabricant.

## WICHTIG

Das Namensschild befindet sich auf der Unterseite des Gerätes.

## VORSICHT

Explosionsgefahr bei Verwendung falscher Batterien.

Batterien nur durch den vom Hersteller empfohlenen oder einen gleichwertigen Typ ersetzen.

Verbrauchte Batterien entsprechend den Anweisungen des Herstellers entsorgen.

## For the customers in Europe

### 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.

## Pour les utilisateurs en Europe

### AVERTISSEMENT

Il s'agit d'un produit de Classe A. Dans un environnement domestique, cet appareil peut provoquer des interférences radio, dans ce cas l'utilisateur peut être amené à prendre des mesures appropriées.

## Für Kunden in Europa

### Warnung

Dies ist eine Einrichtung, welche die Funk-Entstörung nach Klasse A besitzt. Diese Einrichtung kann im Wohnbereich Funkstörungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen durchzuführen und dafür anzukommen.

## Für Kunden in Deutschland

Dieses Gerät ist nur für den Gebrauch in Gewerbe und Leichtindustrie bestimmt.

## For Customers in Taiwan only



廢電池請回收

# Usage Notes

## Copyright

Using this unit for video and/or audio switching, or distribution over the Internet or otherwise may in some cases require the permission of the copyright holder of the video or audio.

To protect copyright, observe the following points carefully when using this unit.

- When connecting a device to this unit for purposes of video or audio recording, and recording video or audio, carefully observe laws relating to copyright.
- Without the permission of the copyright holder, the showing or distribution of video or audio material of which the copyright is held by a third party, or the act of recording on the hard disk of this unit, sharing folders, and permitting of access to a private group or to the public is prohibited by law.
- Even with the right to show or distribute, the act of using this unit to edit original content with wipes or dissolves, for example, may be prohibited by law.
- With a software upgrade or functional extension, with the object of protecting copyright, the specifications for the video and audio signals that can be input may be changed without notice.

## Points to check before using devices

- When recording or streaming valuable data, be sure to check the device connections beforehand, or carry out a streaming test, to make sure that the system is operating normally.
- If when using a camera or videocassette recorder, tape or similar there should be a failure in another device preventing recording, no responsibility can be taken for any loss of the material which was to have been recorded.
- Under copyright law, you may not use recorded video or audio other than for your personal enjoyment without the permission of the copyright holder. Note that at live performances, shows and exhibitions, even for your personal entertainment shooting may be restricted.

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## Regarding cables

Use cables (particularly generic RGB) which are as short as possible.

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## IEEE1394 (i.LINK) cables

Use cables with enhanced shielding, ferrite cores, and similar noise-reduction measures.

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## About the LCD Display

- Do not wipe the surface of the LCD display with a wet object. Water that gets inside the unit may cause it to malfunction.
- Do not set or drop objects on the LCD display. Also, do not put pressure on the display, such as by leaning on it with your hand or elbow.
- Condensation may form on the LCD display when the unit is moved from a cold place to a warm place, such as from the outdoors to room temperature. If condensation forms, thoroughly wipe off any moisture before using the unit. We recommend using tissues to wipe up any condensed moisture. If you wipe up the condensed moisture while the LCD display is still cold, the condensation may form again. Therefore it is best to wait until the LCD display has warmed up to room temperature.
- The LCD display is made with extremely high precision technology. Nonetheless, in some cases black dots may appear, and red, green, and blue dots may not disappear. In addition, depending on the angle the LCD display is viewed from, you may see stripes of irregular color or brightness. This is due to the construction of the LCD display and is not a malfunction.

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## Ensuring Good Performance From This Unit

### Operation and Storage

Avoid using or storing the unit in the following places.

- Where it is subject to extremes of cold or heat (operating temperature 0°C to 40°C (32°F to 104°F))
- Where it is subject to direct sunlight for extended periods, or close to heating equipment (Note that the temperature inside a car with the

windows closed on a summer day can exceed 50°C (122°F))

- In conditions of high humidity or much dust
- Where it is subject to severe vibration
- Close to a source of strong magnetic fields
- Close to a radio, television, or other source of powerful electromagnetic radiation

### Install in a level place

This unit is designed to be operated in a level place. Do not turn it vertically, or incline at an angle of 20 degrees or more.

### Do not apply strong shocks

Dropping the unit, or subjecting it to other strong shocks may cause it to break.

### Do not obstruct the ventilation holes

To prevent the temperature from rising, do not, for example, wrap the unit in a blanket while operating.

### Care of the unit

Clean dirt from the cabinet and panel by wiping gently with a dry cloth. If the unit is very dirty, wipe with a cloth steeped in a little neutral detergent, then wipe dry. Do not use alcohol, thinners, insecticides, or other volatile solvents, as this may cause the case to deform or damage the finish.

### Shipping

Pack in the original carton, or similar packaging, to cushion the unit from violent shocks.



## Features of This System

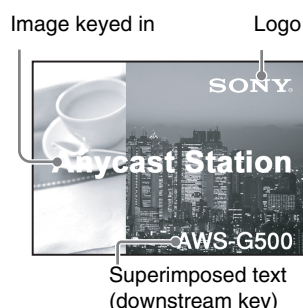
The Anycast Station Live Content Producer AWS-G500 is an audiovisual production system including camera control, video switching, and a live distribution system for the Internet. The following are the principal features.

### All-in-One

AWS-G500 is light and conveniently portable, while combining video switching and audio mixing functions with video monitor and camera control, to provide an inclusive package for live content generation. Whereas previously it was necessary to assemble various devices, this is no longer necessary, and the time and effort required to install, connect, and adjust the equipment has been greatly reduced.

### Video Switching

- You can switch among up to six video inputs: analog, DV, or RGB.
- The system provides both mix (dissolve) and wipe transition effects, and luminance keying functions.
- Before carrying out a switching operation, you can preview the next selected image in the PVW viewer.
- You can mix video using a maximum of five effects at one time, such as incorporating (keying) a separate video clip when switching between two video clips with a wipe or other transition effect, as well as superimposing text (downstream key) and displaying a copyright logo.



### Audio Mixing

You can mix up to six audio inputs. Each channel is provided with a range of functions, including fader, input trim, filter equalizer, limiter, and compressor pan (balance), allowing the sound quality and level to be adjusted on each channel separately. In addition, each channel has a prefader listen function, allowing you to monitor the input audio before any effects are applied by the fader, and each output has a delay function to correct any discrepancies between the audio and video timing.

### Remote Camera Control

- Using a camera with VISCA support, you can remotely control the camera movements, including panning, tilting, and zoom.
- The camera preset function allows you to store camera pan, tilt, and zoom settings. Using the camera preset function, you can immediately set the camera to the preset state when required just by pressing a button.

### Streaming Broadcast

You can encode in Real Media streaming file format (.rm) in real time, for a live broadcast.

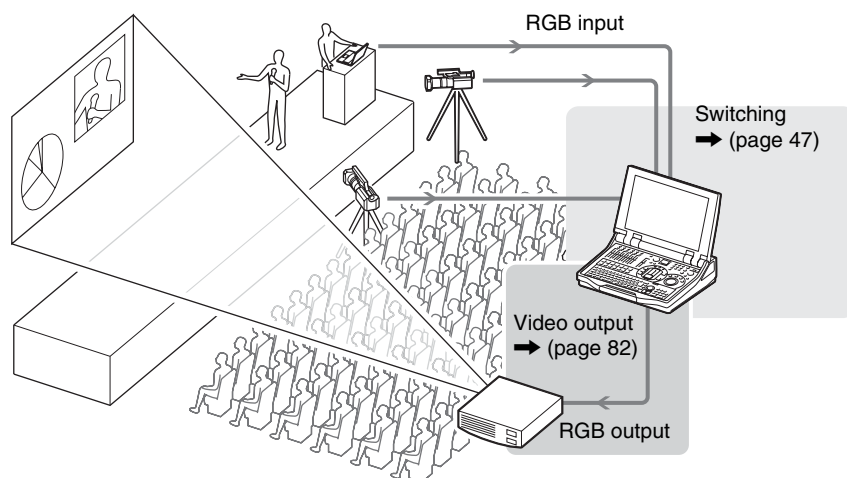
# Example Applications

The following are examples of applications utilizing the functions of AWS-G500.

## Event and presentation support

At seminars, events, and presentations you can use this unit to switch among camera inputs and data from a computer, while displaying the output on a projector or large monitor.

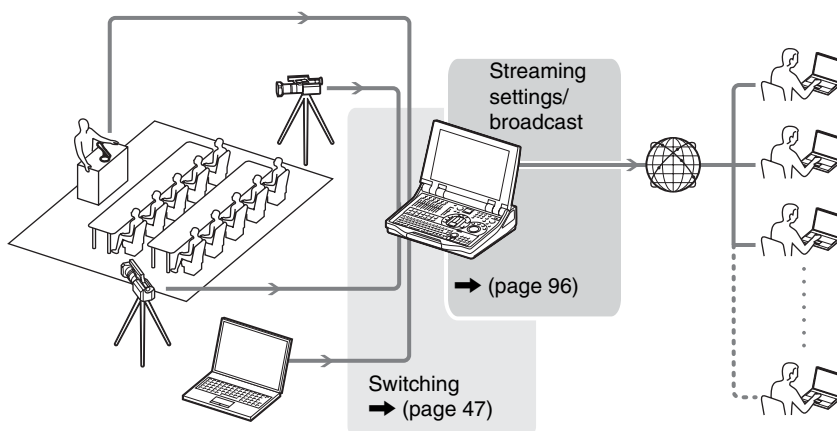
**Principal functions used:** video switching (such as cut switching), audio mixing, RGB input/output



## Simple Internet live broadcast

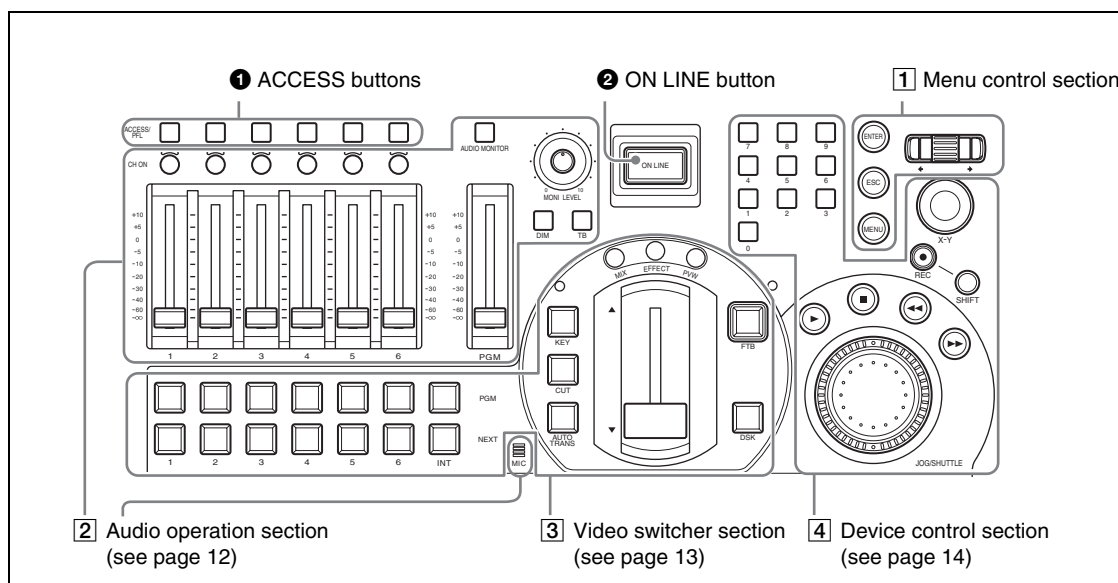
This unit includes a streaming server function. For broadcast to small audiences (about 20 people) over an intranet, this unit can be used as the streaming server without requiring an external server.

**Principal functions used:** video switching (such as a wipe transition), audio mixing, streaming encode, streaming server



# Names and Functions of Parts

## Front Panel



### 1 ACCESS buttons

These buttons display the ACCESS menu (page 24), and for audio monitoring (page 80). When you press an ACCESS button in one of columns 1 to 6, the ACCESS menu appears allowing adjustment of the related video and audio settings. If you hold down the ACCESS button in one of columns 1 to 6 for 0.5 seconds or more, you can monitor the audio assigned to the channel fader in the same column, and display the audio level meter for that channel only. By holding down two or more ACCESS buttons simultaneously, you can monitor multiple audio channels.

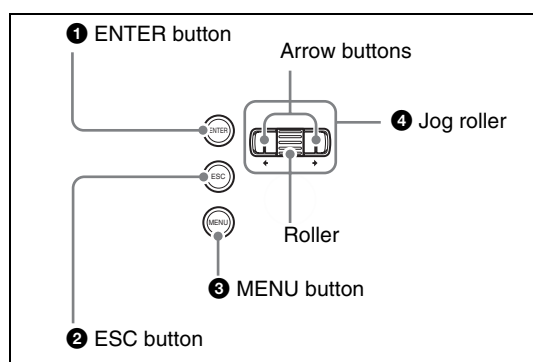
### 2 ON LINE button

This button starts and stops streaming distribution (page 101).

### 1 Menu control block

Use these controls to access the menus and settings.

*For details of operations refer to “Menu Operations” (page 23).*



### 1 ENTER button

This button confirms an item or input value in menu operations.

### 2 ESC button

This button closes the current menu. In alphanumeric input mode, it cancels, and returns one level up the menu tree.

### ③ MENU button

This toggles the setting menu on or off.

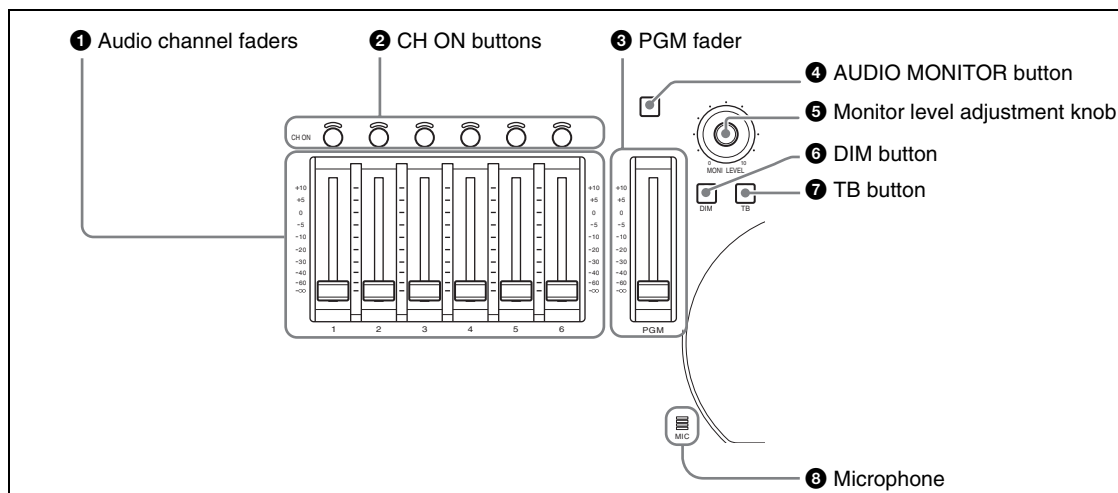
### ④ Jog roller

Turn the roller up and down to select a menu item. Pressing the roller like a button has the same effect as pressing the ENTER button.

Use the arrow buttons when a menu operation requires movement to left or right.

## ② Audio operation section

Use these controls for audio settings and operations.



### ① Audio channel faders

These buttons adjust the input levels of the audio assigned to channels 1 to 6, in the range from  $-\infty$  to +10 dB (page 74).

For details of audio signal assignment, see page 43.

### ② CH ON buttons

These buttons select whether the audio channels 1 to 6 are enabled or disabled.

Pressing a button enables the audio assigned to the corresponding audio channel. Channels for which the button is off are disabled.

### ③ PGM fader

This button adjusts the overall audio output level of the program output, in the range from  $-\infty$  to +10 dB (page 74).

### ④ AUDIO MONITOR button

This button switches the monitoring target. Pressing it cycles the audio to be monitored through the sequence PGM  $\rightarrow$  AUX1  $\rightarrow$  AUX2  $\rightarrow$  MIX  $\rightarrow$  PGM.

### ⑤ Monitor level adjustment knob

This knob adjusts the level of the monitor output and the output from the internal speakers and from the headphones.

### ⑥ DIM button

This button enables the “audio attenuate” function. This reduces each of the level of the monitor output and the output from the internal speakers and from the headphones by 20 dB.

### ⑦ TB button

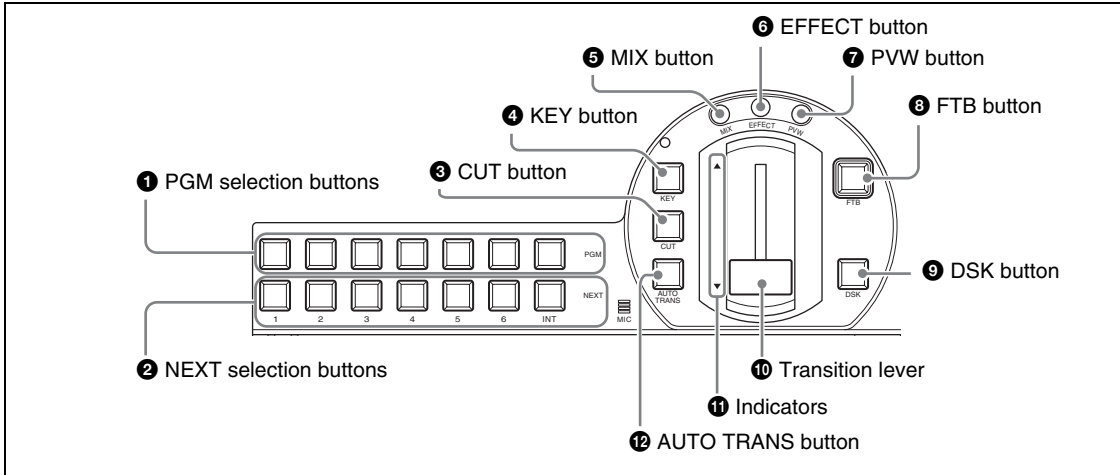
This button lets you to speak while communicating on an external intercom system. While the TB button is lit, sound from the front panel microphone and headset microphone is output over the intercom system.

### ⑧ Microphone

This button lets you speak on an external intercom system. While the TB button is lit, sound from the microphone is output over the intercom system.

### 3 Video switcher section

This switches video.



#### 1 PGM selection buttons

These buttons select the video which will be displayed on the program output (page 48). Buttons 1 to 6 select the corresponding assigned video, and the INT button selects a video image generated internally by this unit (color matte, color bars, graphics files).

When you press one of these buttons, lighting it red, the video assigned to the button is sent to the program output.

*For details of video assignment, refer to page 42.*

#### 2 NEXT selection buttons

The NEXT selection buttons have the following functions.

- Selecting the video to be output on the program output after next switching transition (page 49)
- Selecting the video to be used when inserting a key in the program output (page 62)
- Specifying a camera to be controlled during camera control operations (page 67)

Buttons 1 to 6 select the corresponding assigned video, and the INT button selects a video image generated internally by this unit (color matte, color bars, graphics files).

#### 3 CUT button

This button instantaneously switches the video (page 47).

#### 4 KEY button

This button effectuates keying (pages 62). When this key lights green, the NEXT selection buttons,

MIX button, AUTO TRANS button, CUT button, and transition lever are then assigned to keying.

#### 5 MIX button

This button effectuates a dissolve (gradually blending a new video into the existing image). When applying an effect it gradually blends in the effect (page 51).

#### 6 EFFECT button

This button enables an effect other than dissolve in a transition or when applying an effect (page 52).

#### 7 PVW button

This button is provided for future functional expansion.

#### 8 FTB button

This button fades the video in from or out to a black screen ("fade-to-black") (page 55).

#### 9 DSK button

This button add is used to images or text to the program output video (page 57). You can use it to superimpose text and so on.

#### 10 Transition lever

This lever allows you to manually execute a transition or effect (page 51).

#### 11 Indicators (▽△)

These indicators show the direction in which the transition lever is being moved. Moving the transition lever in the direction of the lit indicator starts the transition or effect.

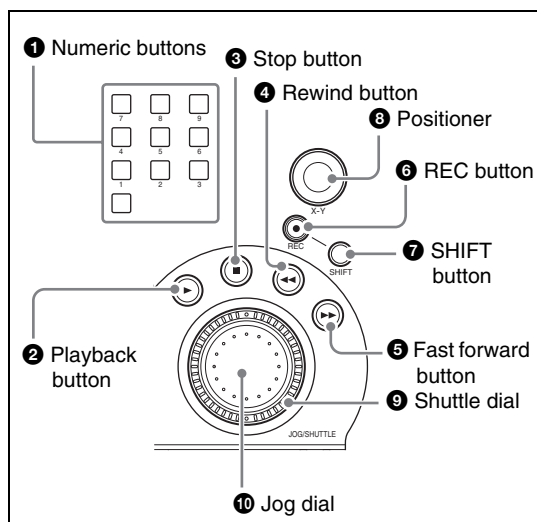
However, supposing you press the AUTO TRANS button after moving the transition lever to the middle, for example, an inconsistency between the position of the fader and the application of the effect will arise and both indicators will light.

## 12 AUTO TRANS button

This button carries out an automatic transition with a preset transition time, either from one video to another or when applying an effect (page 51).

## 4 Device control section

Use these controls for remote control of a camera supporting VISCA protocol (page 67).



## 1 Numeric buttons

These buttons are used to save or recall a camera preset (page 68).

## 2 Playback button

This button is provided for future functional expansion.

## 3 Stop button

This button is provided for future functional expansion.

## 4 Rewind button

This button is provided for future functional expansion.

## 5 Fast forward button

This button is provided for future functional expansion.

## 6 REC button

This button is provided for future functional expansion.

## 7 SHIFT button

This button is pressed while using other controls to perform the following operations.

SHIFT + jog dial	Aperture (iris) adjustment on camera with VISCA support
SHIFT + numeric button (1 to 6)	Set camera presets
SHIFT + numeric button (0)	Camera reset

## 8 Positioner

This control is used to pan or tilt the camera. You can also control the speed of the camera by adjusting how hard you press this button.

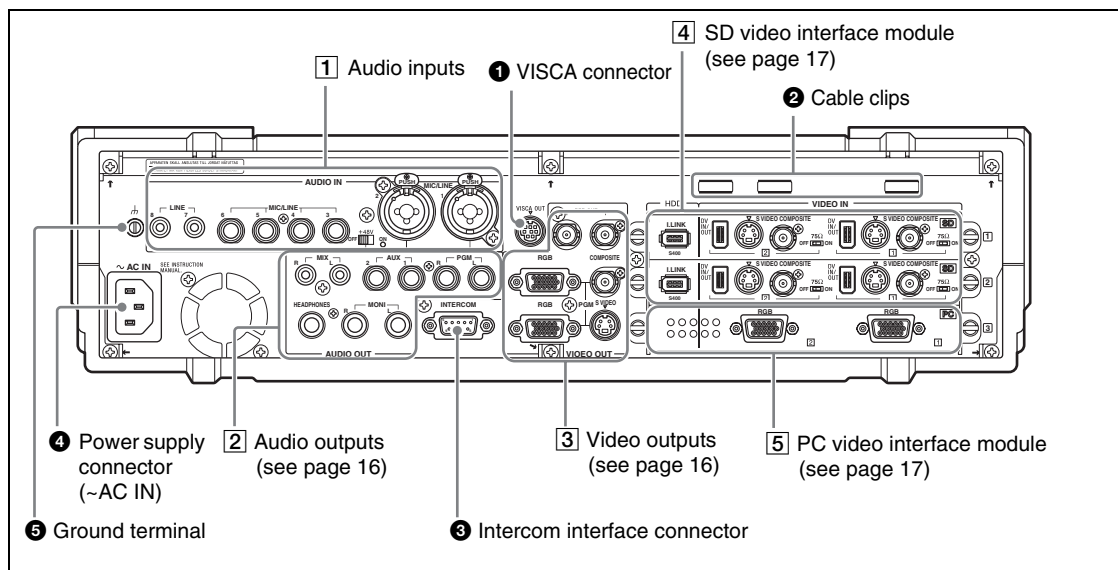
## 9 Shuttle dial (outer ring)

This dial controls the camera zoom.

## 10 Jog dial (inner dial)

This dial controls the camera focus and iris.

## Rear Panel



### 1 VISCA connector

To connect the chain of cameras with VISCA support to this unit for remote control operation, connect the VISCA cable (page 35).

### 2 Cable clips

Use these clips to prevent cables from accidentally disconnecting.

### 3 Intercom interface connector

Connect an external intercom system (page 76).

### 4 Power supply connector (~AC IN)

Use to connect to an AC outlet (page 27).

### Caution

When using a DC-AC inverter, the use of a 50 Hz ( $\pm 3\%$ ) or 60 Hz ( $\pm 3\%$ ) sine wave is recommended. Do not use a general-purpose inverter with a square output waveform.

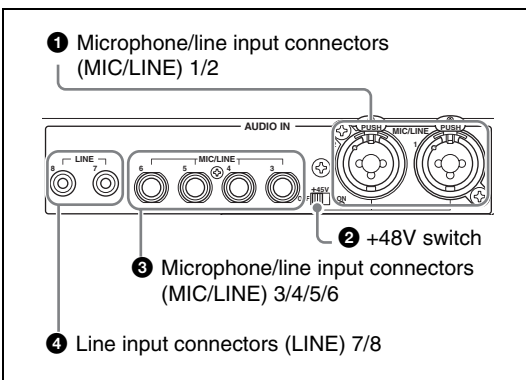
### 5 Ground terminal

When using this unit, connect the ground terminal to a grounding lead.

### Caution

The ground terminal is close to the audio input connectors, so when connecting the grounding lead be careful not to touch the audio input connectors.

### 1 Audio inputs



### 1 Microphone/line input connectors (MIC/LINE) 1/2 (XLR 3-pin, TRS shared balanced type)

Input an analog audio signal from a microphone or audio device.

### 2 +48V switch

Use this switch when a capacitor microphone requiring a power supply is connected to the microphone/line input connectors (MIC/LINE) 1/2. When this is in the ON position, +48V is supplied.

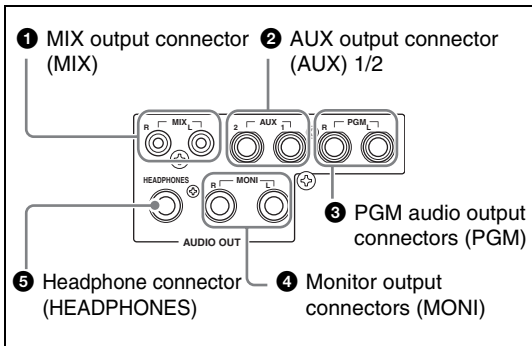
### 3 Microphone/line input connectors (MIC/LINE) 3/4/5/6 (TRS balanced type)

Input an analog audio signal from a dynamic microphone or audio device.

#### ④ Line input connectors (LINE) 7/8 (RCA)

Input an analog audio signal from an audio device.

### ② Audio outputs



#### ① MIX output connector (MIX) L/R (RCA)

These connect to an external acoustic device to output audio signals.

#### ② AUX output connector (AUX) 1/2 (TRS, balanced)

These connect to an external acoustic device to output audio signals. The output level can be adjusted.

#### ③ PGM audio output connectors (PGM) L/R (TRS, balanced)

These output the final audio (program audio) created by this unit.

#### ④ Monitor output connectors (MONI) L/R (RCA)

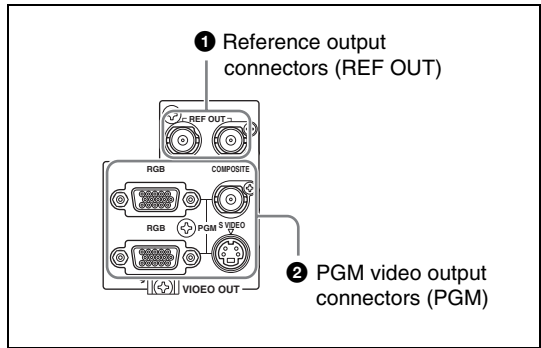
These provide monitor outputs of any of the PGM/AUX1/AUX2/MIX audio.

#### ⑤ Headphone connector (HEADPHONES) (standard phone jack)

This outputs one of the PGM/AUX1/AUX2/MIX audio (page 78).

The output level can be adjusted with the front panel monitor level adjustment knob (MONI LEVEL).

### ③ Video outputs



#### ① Reference output connectors (REF OUT) × 2

These output either a 59.94 Hz (NTSC) or 50 Hz (PAL) black burst signal to match the program output signal.

#### ② PGM video output connectors (PGM)

- Composite video output (COMPOSITE) (BNC) × 1

- S-video output connector (S VIDEO) (S connector) × 1

These output the final program (PGM) video. You can switch to NTSC or PAL (page 43).

- RGB output connectors (RGB) (D-sub 15-pin) × 2

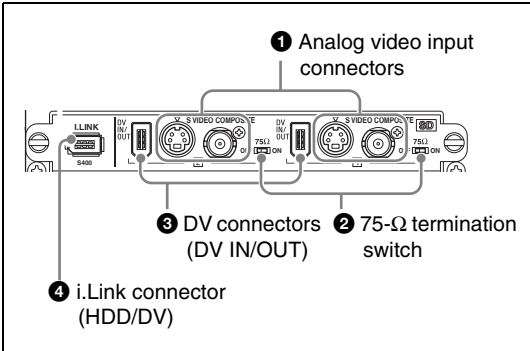
These output the final program (PGM) video as analog RGB signals. Connect a projector or external display.

The following screen sizes can be output (page 43).

- XGA (1024 × 768) 60 Hz/75 Hz
- SXGA (1280 × 1024) 60 Hz



#### 4 SD video interface module (BKAW-570)



- 1 Analog video input connectors**  
**Composite video input connectors (COMPOSITE) (BNC) × 2**  
**S-video input connectors (S connector) × 2**  
 Input analog video signals.

- 2 75-Ω termination switch**  
 Set this switch to the OFF position when using a loop-through connection for a video monitor or the like by connecting a branch connector to the composite video input connector (COMPOSITE).

#### Note

The factory default setting is ON.  
 Use the end of a sharp implement such as a pen to operate the switch.

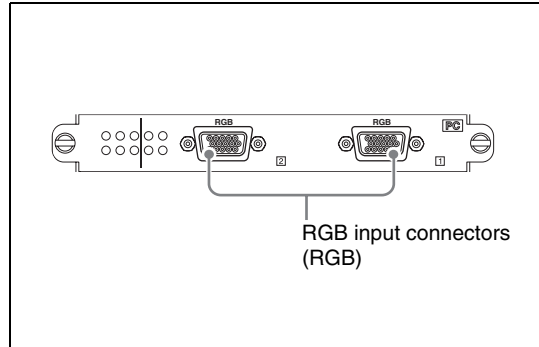
- 3 DV connectors (DV IN/OUT) (i.LINK 6-pin) × 2**  
 Input and output digital video audio signals.

#### Note

Only one of the Composite/S Video/DV inputs can be used for each of IN1 and IN2.

- 4 i.LINK connectors (HDD/DV) (i.LINK 6-pin) × 1**  
 These connectors are provided for future functional expansion.

#### 5 PC video interface module (BKAW-550)

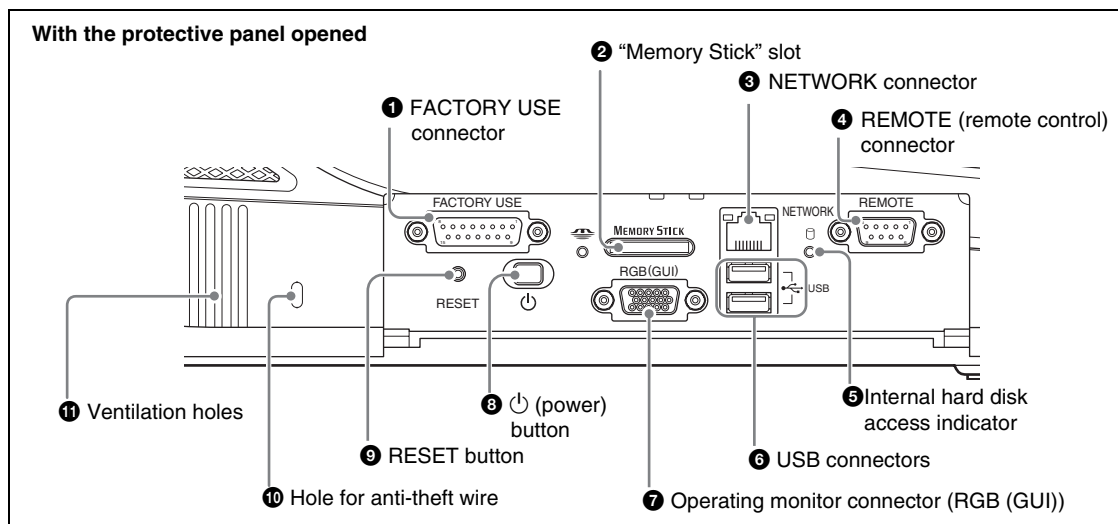


#### RGB input connectors (RGB) (D-sub 15-pin) × 2

Input analog RGB signals from a computer or other source. The following image size and frequency combinations are supported.

- XGA (1024 × 768) 60 Hz 75 Hz
- SXGA (1280 × 1024) 60 Hz

## Side Panel



### 1 FACTORY USE connector

This connector is provided for future functional expansion.

### 2 “Memory Stick” slot

This slot takes a “Memory Stick.” Use it for upgrading operating software, importing graphics files, and so on.

While the “Memory Stick” is being accessed, the access indicator to the left of the slot lights.

### 3 NETWORK connector (RJ-45)

Connect an external network adaptor or router. This supports 10Base-T and 100Base-TX Ethernet.

The green indicator lights while the network is active.

An amber LED lights while the unit is connected by 100Base-TX.

### Caution

#### When making Ethernet connections

For safety, do not connect the Ethernet connector to circuits which may be subjected to excessive voltage.

### ATTENTION

#### Lors des connexions Ethernet

Pour la sécurité, ne raccordez pas le connecteur Ethernet à des circuits qui pourraient être soumis à une tension excessive.

### ACHTUNG

#### Beim Erstellen von Ethernet-Verbindungen

Aus Sicherheitsgründen nicht mit einem Ethernet-Anschluss an Schaltkreise verbinden, die zu starke Spannung haben könnten.

### 4 REMOTE (remote control) connector

This connector is provided for future functional expansion.

### 5 Internal hard disk access indicator

This indicator lights while the internal hard disk is being accessed.

### 6 USB connectors (USB) (USB compatible)

Use these connectors to connect a USB keyboard. You can also use these connectors to connect a USB flash memory device, and install upgrades. For information on which keyboards can be used, consult your dealer or your Sony service representative.

### Caution

These do not support input from a USB camera. It also does not support a USB mouse.

### 7 Operating monitor connector (RGB (GUI)) (D-Sub 15-pin)

This connector outputs the operation screen to an external display at WXGA (1280 × 800) size, at 60 Hz.

For information on which devices can be used, consult your dealer or your Sony service representative.

### 8 (power) button

This button powers the unit on or off. If you hold down the power button for at least 4 seconds, this forces a shutdown.

After a forced shutdown, the settings of the unit may not be preserved.

**9 RESET button**

This button is provided for future functional expansion.

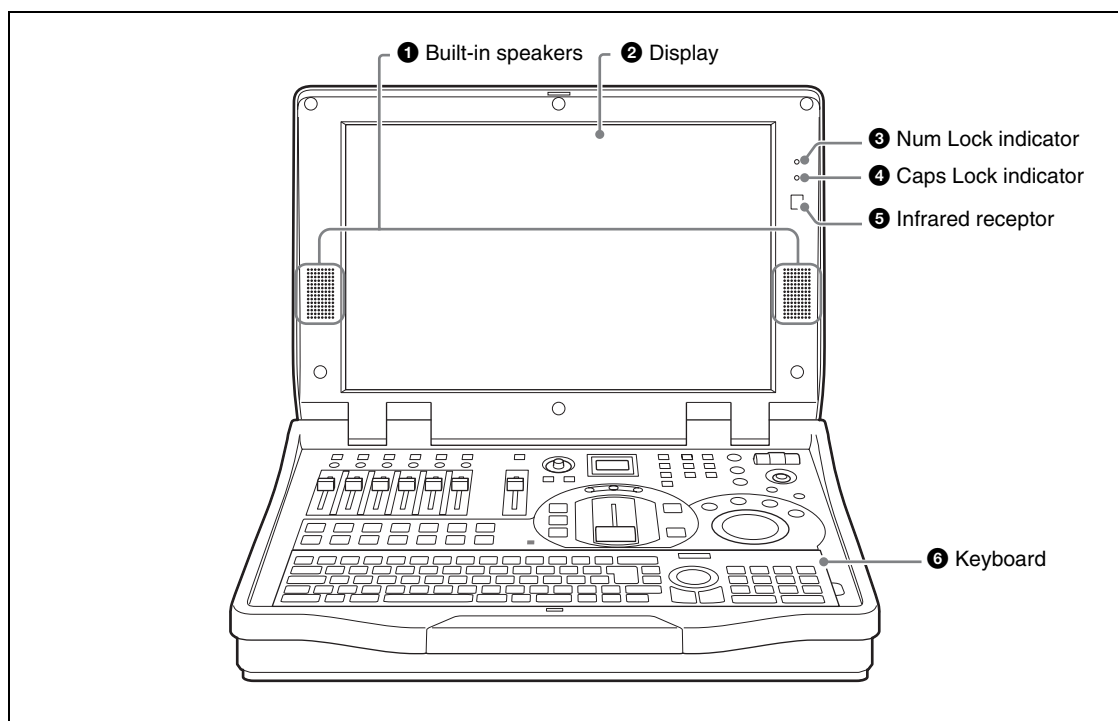
**10 Hole for anti-theft wire**

This hole accepts a standard anti-theft wire (3 mm × 7 mm).

**11 Ventilation holes****Caution**

Be careful not to obstruct the ventilation holes. If the ventilation holes are obstructed, the unit may overheat, leading to fire or breakdown.

## Other Parts

**1 Built-in speakers**

You can monitor the audio using these speakers. There is no output from the built-in speakers when a headphone is connected to the headphone connector.

**2 Display**

This shows the operation screen (page 20).

**3 Num Lock indicator**

This lights green when the unit is in Num Lock mode.

**4 Caps Lock indicator**

This lights green when the unit is in Caps Lock mode.

**5 Infrared receptor**

This accepts signals from the keyboard supplied with this unit (page 30).

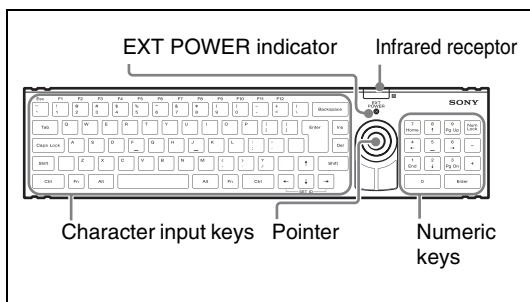
**6 Keyboard**

Use this for text and numeric input.

You can also use the keyboard for menu operations (page 24).

While the keyboard is mounted to the unit, the EXT POWER indicator on the keyboard lights green.

When using Esc and the F1 to F12 keys, hold down the Fn key and press the required key in the topmost row.



# Operation Screen



## 1 Menu display

This displays the setting menus (page 23), the INT menu (pages 57, 82), and the camera control guide and camera preset menu (pages 66, 67).

## 2 Guidance object indication

The color of the guidance object indication has the following significance.

**Amber:** when a video subject to camera control (page 66) or INT is specified with the NEXT selection buttons, (with KEY button off).

**Green:** when a video subject to camera control or INT is specified with the NEXT selection buttons, (KEY button lit).

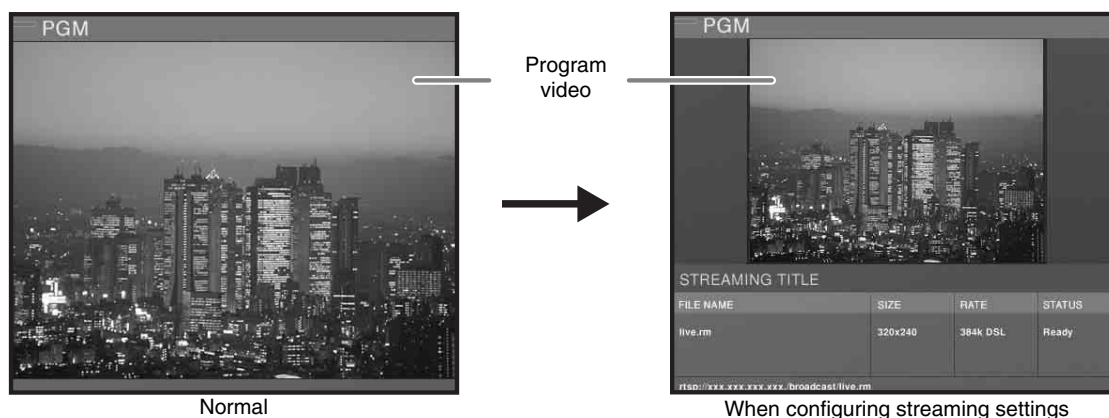
**Off:** when other than a video subject to camera control or INT is specified with the NEXT selection buttons.

## 3 Audio level meter

When monitoring the any of the PGM/AUX1/AUX2/MIX audio outputs or Pre Fader Listen (PFL) result, this shows the audio level. An indication below the meter shows which of PGM/AUX1/AUX2/MIX or PFL is being monitored. When the level exceeds the meter range, the uppermost indicator lights red.

## 1 PGM viewer

This shows a program output.



### Program video

The program output video is shown at  $480 \times 360$  pixels, 30 fps (25 fps for PAL). During streaming, the size is  $320 \times 240$  pixels.

### Caution

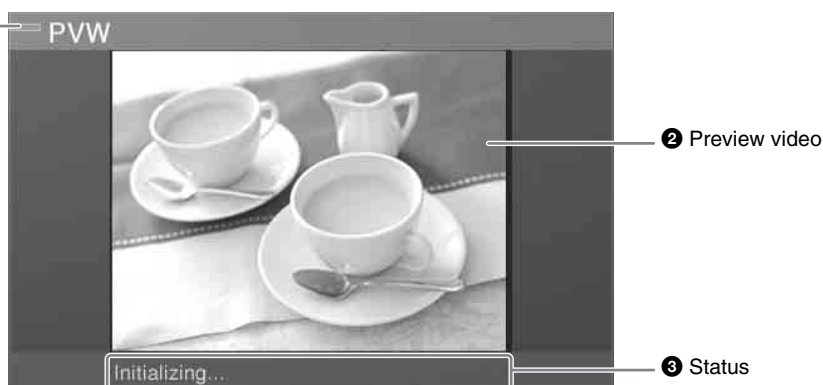
- Video displayed on the PGM viewer lags several frames behind the video output from the PGM video output connectors.
- In any of the video viewers displayed on the operation screen (PGM/PVW/source) the video may deteriorate, but this is an artifact of the display system. There is no effect on the video output from the program video output connectors.

## 2 PVW viewer

This shows a preview of the video.

This allows you to check the next video selected for video inputs, before actually switching the program output.

① What the preview is showing



② Preview video

③ Status

### ① What the preview is showing

**Amber:** when showing the video selected by the NEXT selection button.

**Green:** when showing the video selected by the NEXT selection button when the KEY button is lit (video with a key inserted).

### ② Preview video

Normally the video selected with the NEXT selection buttons is shown at  $320 \times 240$  pixels, 15 fps (12 to 13 fps for PAL).

### ③ Status

Displays the status when using a remote control to operate a camera supporting the VISCA protocol or when calling up an INT graphics file.

#### VISCA-compatible camera

Displays the camera's status.

**No Response:** Communication cannot be established with the camera.

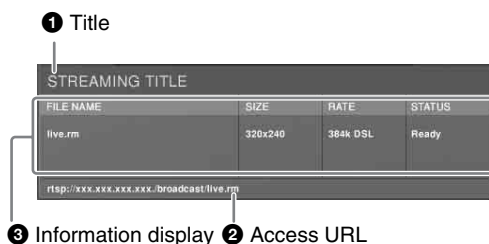
**Initializing:** Appears at system startup and during camera reset.

**INT**

**Loading:** while file is loading

**3 Streaming display**

This shows the settings and status of the streaming broadcast.

**1 Title**

This shows the streaming title.

**2 Access URL**

This appears when the unit is used as a server for a broadcast. Audience members can view the broadcast by accessing this URL.

**3 Information display**

This shows the following information:

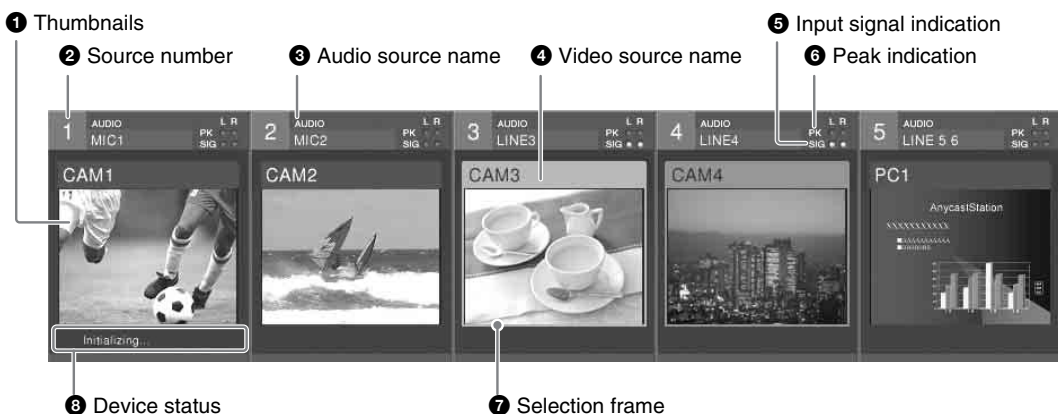
**FILE NAME:** the file name of the broadcast

**SIZE:** video size set in the setting menu

**RATE:** transfer rate set in the setting menu

**STATUS:** the status of the server or encoder

Initializing	Starting server or encoder
Ready	Server started up, and encoder ready
Starting	Encoder connecting to server
Running	Encoding
Error	An error occurred

**4 Source viewer****1 Thumbnails**

These show the video assigned to the selection buttons at 160 × 120 pixels, at 10 fps (8 to 9 fps for PAL).

**2 Source number**

This is the number (1 to 6 and INT) assigned to the source (video or audio).

These correspond to the PGM selection button, the NEXT selection button, and the audio channel fader numbers.

**3 Audio source name**

This shows the name of the audio signal assigned to the channel fader (page 43).

**4 Video source name**

For source numbers 1 to 6, this displays the name of the video signal assigned to the selection button (page 42).

For the INT viewer, this displays the color matte and color bars, or the graphics file name selected in the INT menu.

### 5 Input signal indication

If the input level of the audio assigned to a channel fader is -60 dBFS or more, this lights green, and you can check that there is an audio input.

For stereo you can check left and right channels separately; for monaural both channels are shown the same.

### 6 Peak indication

If the input level of the audio assigned to a channel fader is -8 dBFS or more, this lights red.

For stereo you can check left and right channels separately; for monaural both channels are shown the same.

### 7 Selection frame

Depending on the selection state, the frame color changes.

**Red:** video selected with PGM selection button

**Amber:** video selected with NEXT selection button

**Green:** video selected with NEXT selection button when the KEY button is lit (video with a key inserted)

### 8 Device status

Displays the status when using a remote control to operate a camera supporting the VISCA protocol or when calling up an INT graphics file.

#### VISCA-compatible camera

Displays the camera's status.

**No Response:** Communication cannot be established with the camera.

**Initializing:** Appears at system startup and during camera reset.

### INT

**Loading:** while file is loading

### 5 Effect display

This shows video transition effect types and patterns, and transition time (page 54).

## Menu Operations

This unit includes setting menus, which are used to make various operational settings, and ACCESS menus, which are used to make adjustments to the video and audio being input to this unit.

This section describes the basic operations common to these menus.

### Displaying setting menus and ACCESS menus

#### Setting menus

Press the MENU button, to display the top menu in the menu display.

Top menu



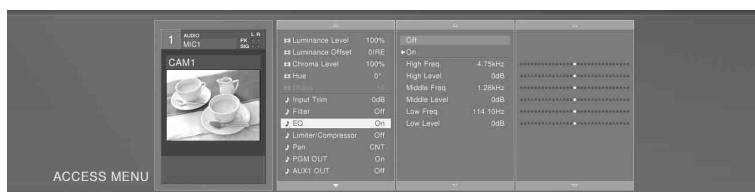
When you select and confirm an item in the top menu, submenus appear, three levels deep.

Sub-menu



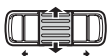
## ACCESS menu

Press the ACCESS button corresponding to the number of input you want to adjust, to display the ACCESS menus, three levels deep, in the source viewer together with the viewer for that number.



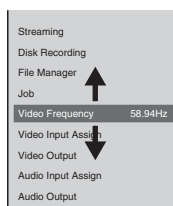
## Menu operations

### Selecting a menu item



Turn the jog roller up or down.

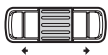
You can also use the ↑ and ↓ keys on the keyboard.



### Confirming an item and proceeding to the next layer

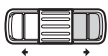


Press the ENTER button.  
or



Press the jog roller.  
or

Press the → button by the jog roller.



You can also use the → key or ENTER key on the keyboard.

Pan / Tilt	Enable	Disable
Zoom	Enable	Disable
Focus	Auto	
Iris	Auto	
White Balance	Auto	

### Returning to the higher level



Press the ← button by the jog roller.

You can also use the ← key on the keyboard.

Pan / Tilt	Enable	Disable
Zoom	Enable	Disable
Focus	Auto	
Iris	Auto	
White Balance	Auto	

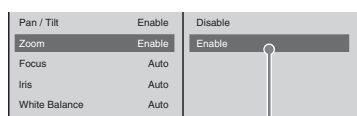


## Confirming a selection



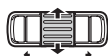
Press the ENTER button.  
or  
Press the jog roller.

You can also use the ENTER key on the keyboard.



Confirmation

## Slider operation



Turn the jog roller up or down.  
You can also press ↑ or ↓ on the keyboard.



## Entering numeric or text values

### Moving the cursor to the next item:



Press the ← or → button by the jog roller.

You can also press the ← or → keys while holding down Ctrl on the keyboard.



### Entering numeric or text values:

Enter with the keyboard.

### Confirmation:



Press the ENTER button.  
or  
Press the jog roller.



You can also use the ENTER key on the keyboard.

## Closing a menu

**For a setting menu:** Press the MENU button or ESC button.

**For an ACCESS menu:** Press the same ACCESS button used to display, or the ESC button.

### Notes

- While a setting menu is displayed, pressing the ACCESS button clears the setting menu.
- While an ACCESS menu is displayed, pressing the MENU button clears the ACCESS menu.



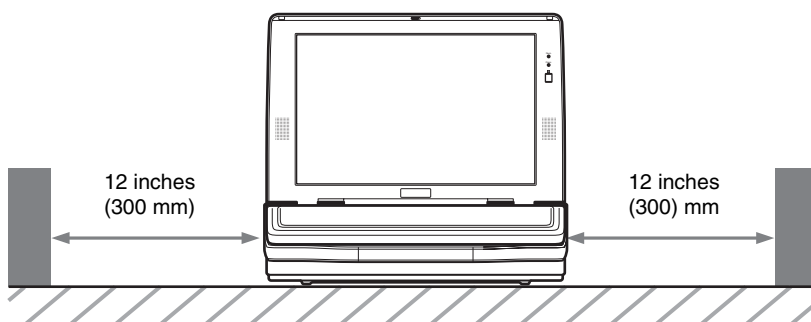
## Installation/Default Settings

This section describes the procedure for installing the unit, connecting the power cord, starting up the system, and setting the date, time, and video output signal format.

### Installing the Unit

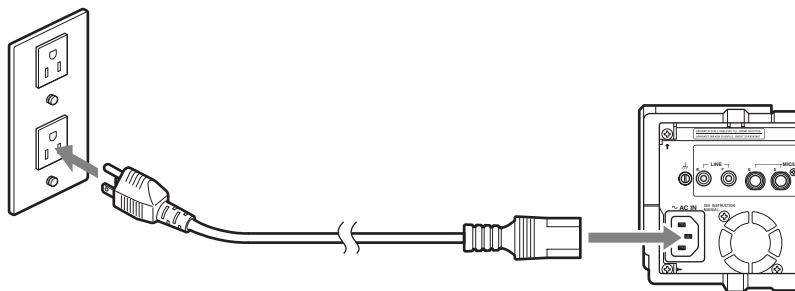
Install the unit in a level place. The unit weighs about 17.7 lbs (8 kg). Check that the installation location is strong and spacious enough to accommodate the unit before installing.

There are ventilation holes on both sides of the unit. To ensure adequate air flow, there must be a space of at least 12 inches (300 mm) on each side of the unit.



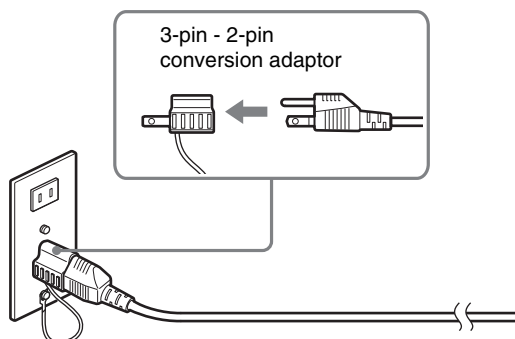
### Connecting the power

Connect the power cord to the power inlet on the unit and the wall outlet.



**Note**

Use a 3-pin - 2-pin conversion adaptor, if required.

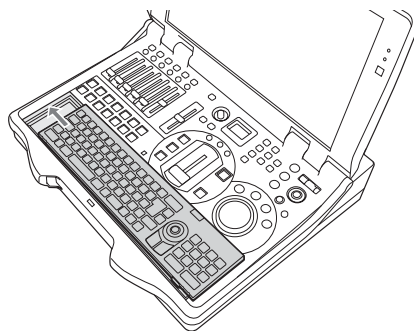


**Caution**

Connect the grounding lead of the 3-pin/2-pin adaptor to the ground terminal. If grounding is not possible, consult your dealer or your Sony service representative.

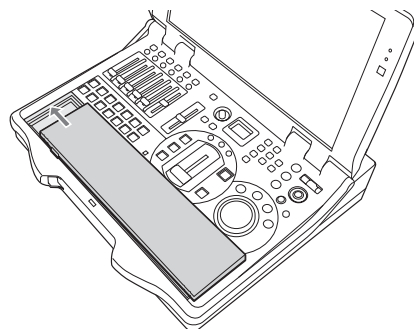
## Fitting a Keyboard

To install the keyboard in this unit, align it with the keyboard space, with the keys upward, and slide in the direction shown by the arrow. Power is supplied to the keyboard from the main unit, and the EXT POWER indicator on the keyboard lights.



**Note**

When not using the keyboard, you can insert it upside down. In this case, no power is supplied to the keyboard.

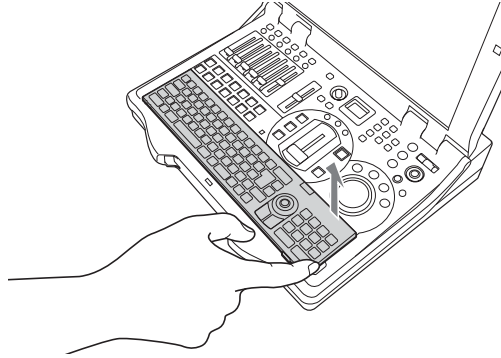


## Using the keyboard away from the unit

You can use the keyboard away from the unit. In this case, it is necessary to insert a pair of standard batteries (CR2032) to power the keyboard.

### Detaching the keyboard

Using the groove locating at the right of the keyboard space, lift the keyboard out.



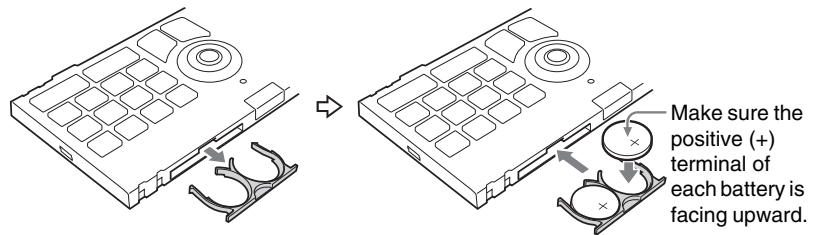
### Inserting batteries in the keyboard

- 1 Detach the keyboard from the main unit.
- 2 Detach the battery holder from the keyboard.

#### Caution

To remove the battery holder, use the end of a sharp implement such as a pen.

- 3 Load two batteries (CR2032) in the battery holder, and insert in the keyboard.



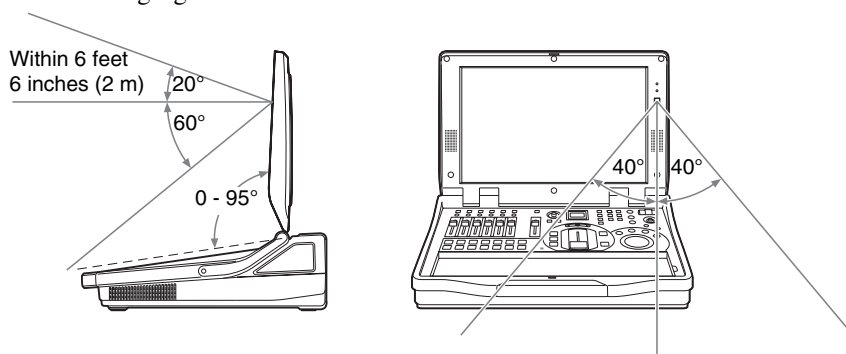
#### Caution

If batteries are inserted incorrectly, this may lead to electrolyte leakage or other damage. Note the following carefully.

- Check that the polarity is correct.
- Do not use new and old batteries together, or batteries of different types.
- Do not attempt to charge the batteries.
- When not using the keyboard for a long period, remove the batteries.
- If a battery should leak, remove any spilled fluid from the battery holder, before inserting a new battery.


## Infrared transmitting range

The range over which the keyboard can operate with infrared control is shown in the following figure.



## Starting and Closing Down the Unit

### Starting

Press the  (power) button on the side panel.  
The startup screen appears.




When the startup completes, the operation screen appears.

#### Caution

Do not close the display while the unit is running.

### Closing down

Press down the  (power) button on the side panel.  
This closes down the operating software, and powers off.

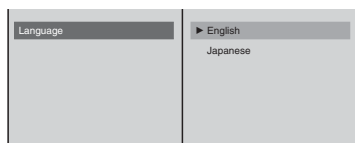
#### Caution

If you hold down the power button for at least 4 seconds, this forces a shutdown.  
After a forced shutdown, the settings of the unit may not be preserved.

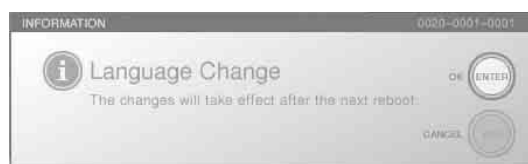
## Selecting the Keyboard Language

Set the language to correspond to the keyboard being used.  
The default setting is “English.”

- 1 Press the MENU button.
- 2 In the top menu, select [Language].
- 3 Select the appropriate language from the list, and confirm.



The operation screen appears as shown below.

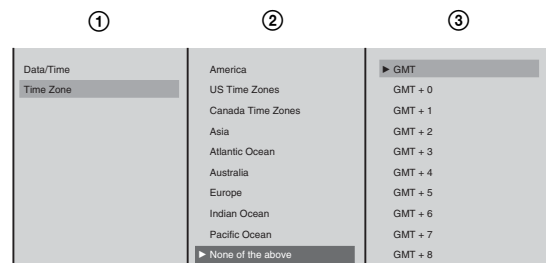


- 4 Confirm the message that appears, and press the ENTER button.
- 5 Press the MENU button to close the menu.
- 6 Restart the system.

## Setting the Time Zone

Set the time zone for your geographical location.

- 1 Press the MENU button.
- 2 In the top menu, select [Date/Time].
- 3 ① Select [Time Zone], and confirm; ② select the area, and confirm; ③ select the region, and confirm.



- 4 Press the MENU button to close the menu.

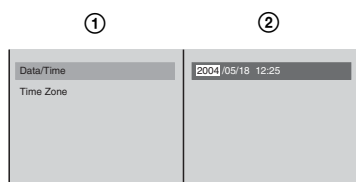
### Note

The notation system for displaying time zone data in relation to GMT is based on the form POSIX minutes-west-of-GMT in which the hour decreases as you move east and increases as you move west.

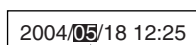
## Setting the Date and Time

Set the internal clock.

- 1 Press the MENU button.
- 2 In the top menu, select [Date/Time].
- 3 ① Select [Date/Time], and confirm; ② enter the date and time in the input box, and confirm.



Using the arrow buttons on the jog roller (or the ← and → keys while holding the Ctrl key on the keyboard), select the item to change and enter a numeric value with the keyboard.



Each whole value between the separators (/, :, or space) is selected.

The date and time set in [Local Time] appears at the upper left of the operation screen.



- 4 Press the MENU button to close the menu.

### Caution

If this unit is operated for a long period, the clock may drift out of its correct setting. Resetting the clock at regular intervals is recommended.

### Note

This operation cannot be performed during a streaming broadcast.

## Adjusting the Display Brightness

Adjust the brightness of the display on which the operation screen is shown.

- 1 Press the MENU button.
- 2 In the top menu, select [LCD Backlight].
- 3 Move the slider to adjust the brightness.



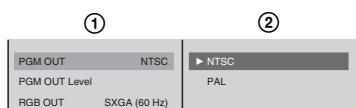


- 4 Press the MENU button to close the menu.

## Selecting the Video Output Signal Format

Select the format of the signal output from the PGM output connectors (COMPOSITE/S VIDEO), SD video interface module DV connectors, and the reference output connector on the rear panel.

- 1 Press the MENU button.
- 2 In the top menu, select [Video Output].
- 3 ① Select [PGM OUT], and confirm; ② select the signal format, and confirm.



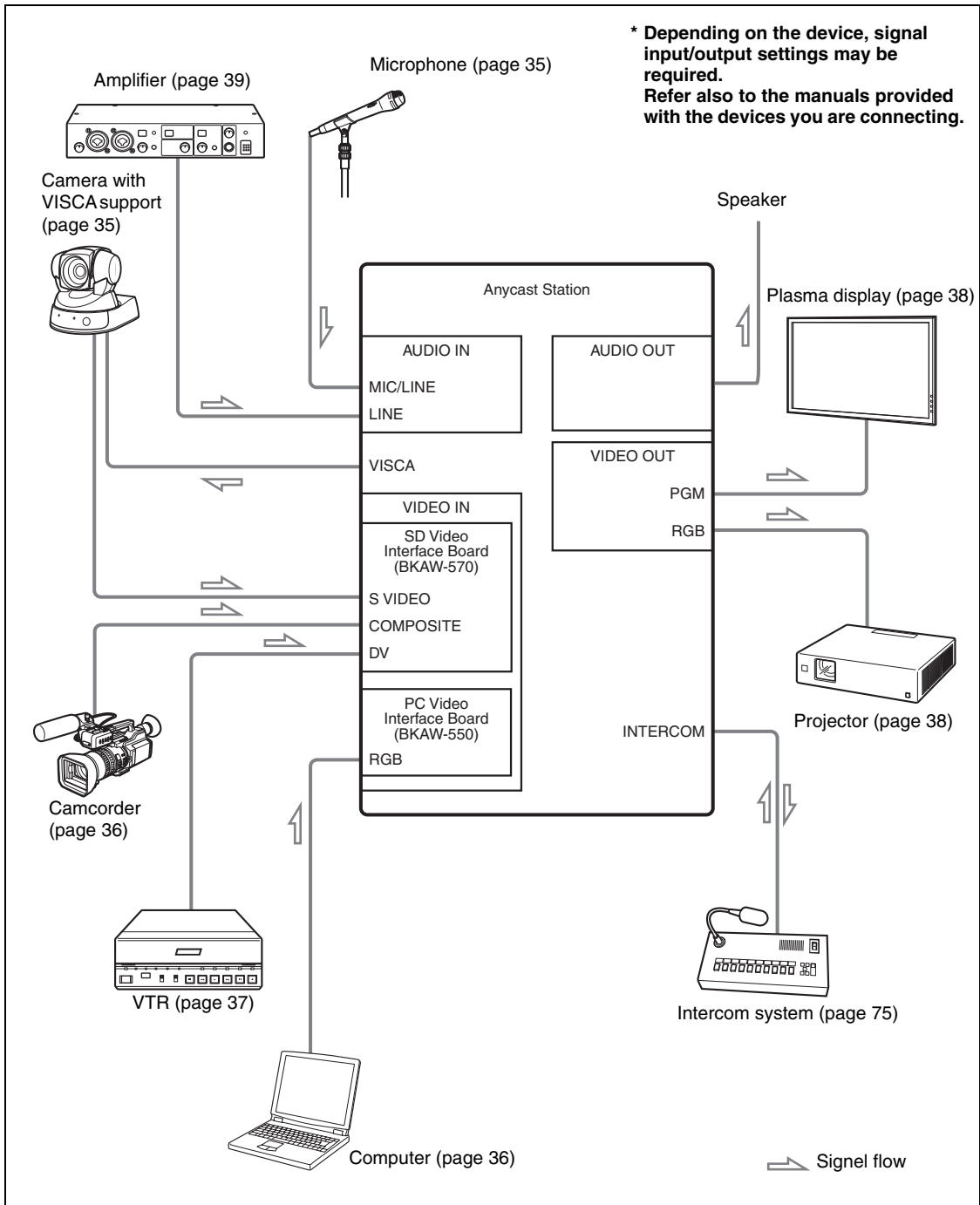
- 4 Press the MENU button to close the menu.

### Note

Video input in a different signal format than this setting can still be displayed (i.e., displaying a PAL video input when set to “NTSC” or vice versa), but the video quality cannot be guaranteed.

# Connections

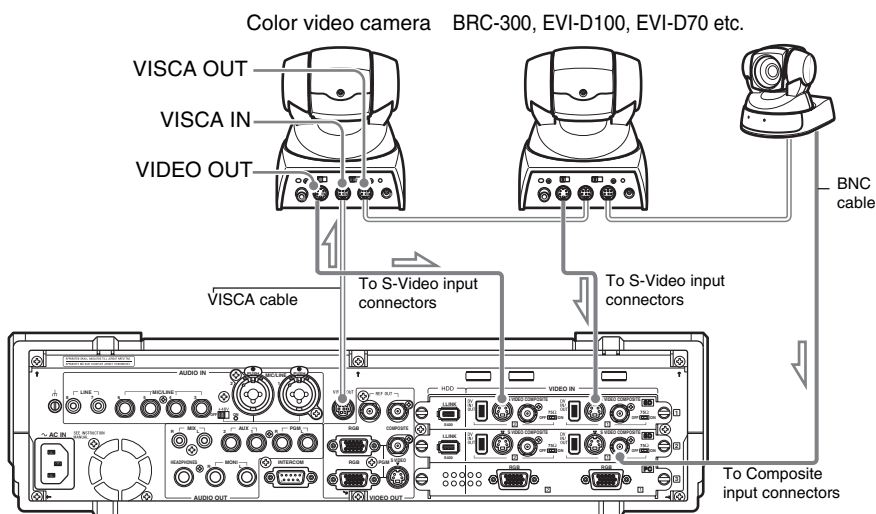
This section describes how to connect devices for video and audio input and output. The following figure shows an example system configuration and signal flow. Refer to the pages indicated for details of how to make connections. In addition, after connecting each device, you must configure settings on the unit for each input and output signal. Refer to page 42 for details on the settings of each input and output signal.



**Caution**

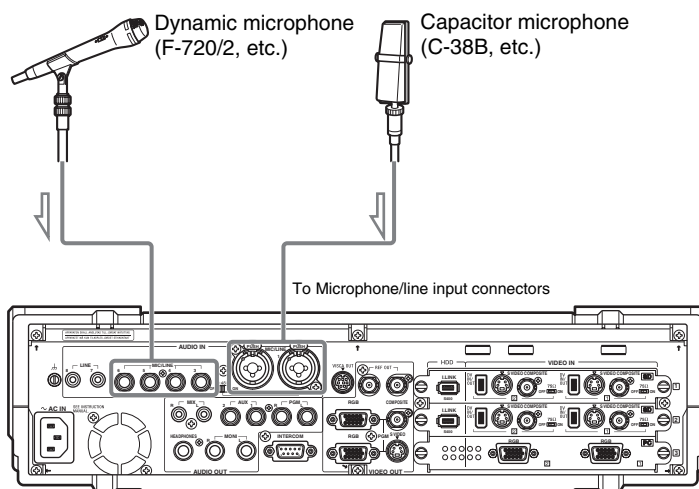
Use the shortest possible cable type (especially with unregulated RGB). Shorter cables are recommended because, in general, using long cables to connect devices increases the risk of signal noise. Even when connecting this unit to another, it is best to use the shortest cables possible.

## Connecting a Camera with VISCA Support

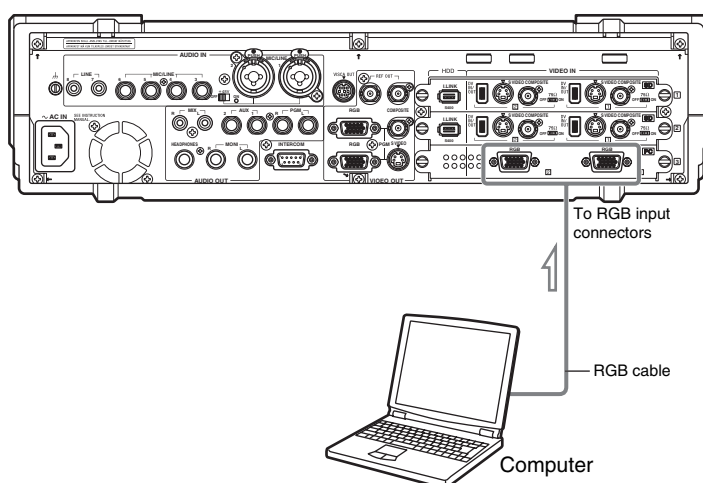
**Note**

- VISCA cables up to 15 m (50 ft) are recommended to operate correctly.
- When connecting a BNC cable, an RCA-BNC adaptor is required.

## Connecting a Microphone



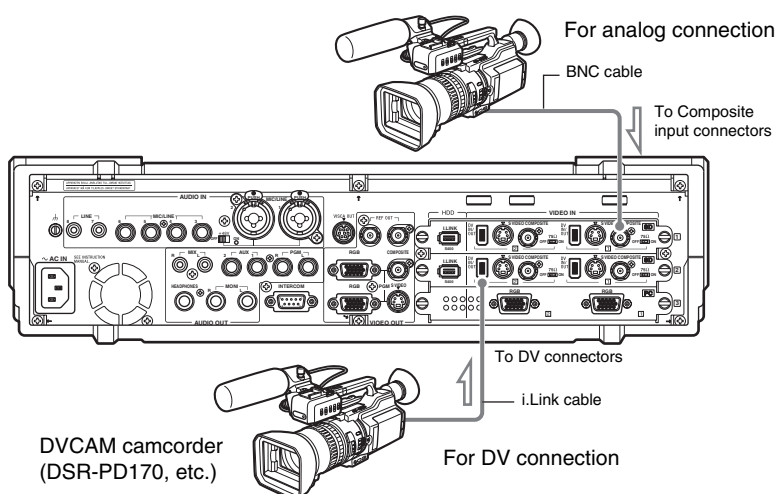
## Connecting a Computer (RGB Input)



### Note

To reduce the effects of external noise, use a cable with an attached ferrite core.

## Connecting a Camcorder



### Note

i.LINK cables between 80 cm and 3.5 m (2.5 to 11.5 ft) are recommended.

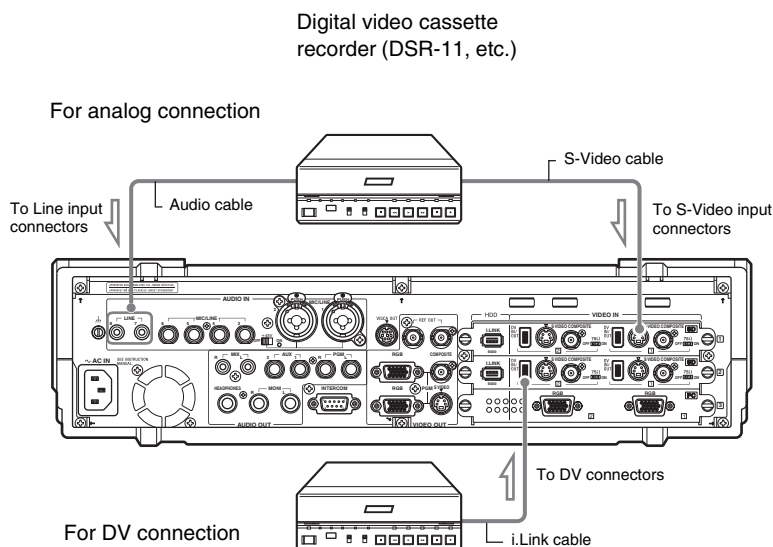
### Caution

- The frequency precision of the reference output signal is within 50 ppm. When building a system that includes devices such as a camera with a Gen Lock input, be sure to test it thoroughly before use.
- The color frame of the program output signal does not reflect the color frame sequence of the reference output signal.

- If video or audio is not output or signal noise occurs when connected to another DV device, the problem can often be resolved by reconnecting the cables or turning the DV device or the unit off and then on again.

## Connecting a VTR

### When inputting from a VTR

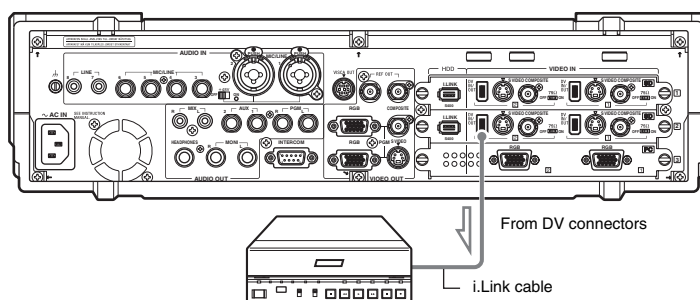


#### Note

i.LINK cables between 80 cm and 3.5 m (2.5 to 11.5 ft) are recommended.

### Recording in DV Format on a VTR

You can record the program output from this unit in DV format on a VTR by connecting the DV connectors on the SD interface module with those on the VTR using an i.LINK cable.



Depending on your VTR model, you may need to configure the signal input/output settings. Refer also to the operating instructions of the device you are connecting.

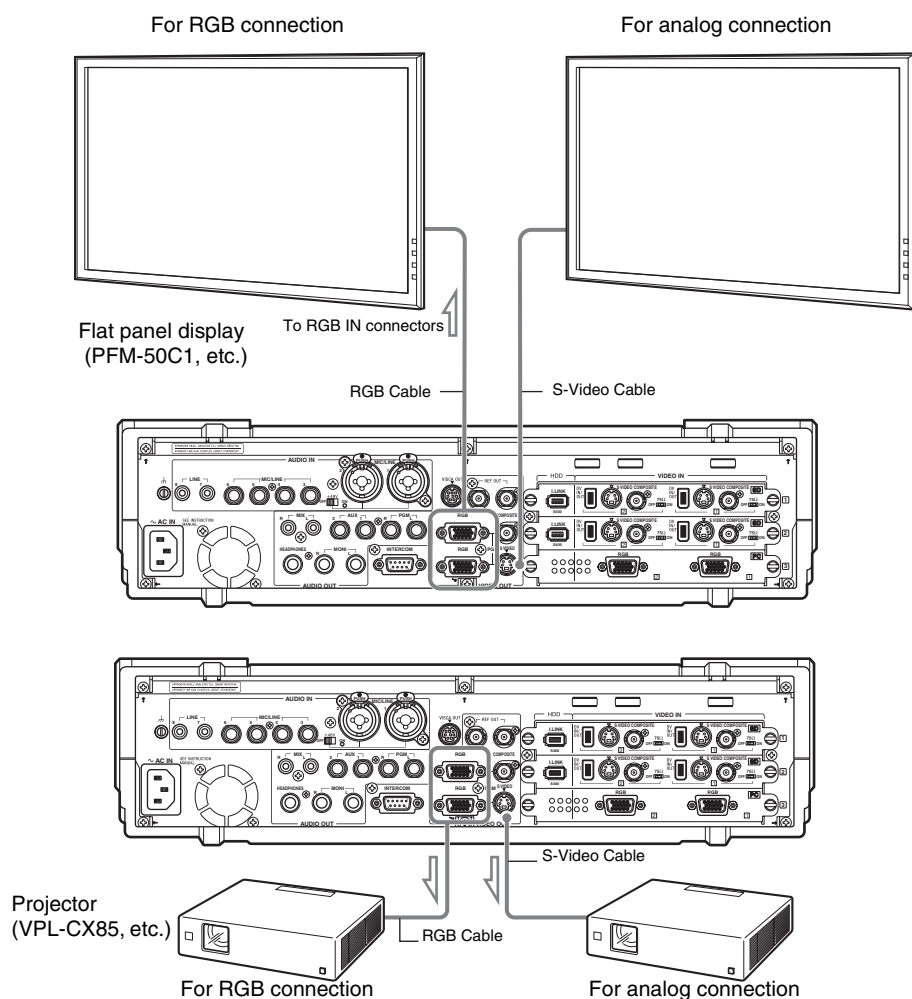
### Caution

The DV connectors can be used for both input and output. When using the connectors only for output to a VTR, you should prevent them from being used for input from the VTR by assigning the input connector to which the VTR is connected to a signal type other than DV (Composite or S-Video) using the “Video Input Assign” option in the settings menu (page 42).

### Notes

- This setup outputs a DV format signal, but recording on the VTR cannot be performed from the unit.
- The sampling frequency for audio that can be output is only “16bit 48kHz 2ch”.
- For more information on assigning input connectors, refer to “Assigning video input signals to the selection buttons” (page 42).
- If video or audio is not output or signal noise occurs when connected to another DV device, the problem can often be resolved by reconnecting the cables or turning the DV device or the unit off and then on again.

## Connecting a Plasma Display/Projector



The video quality of video projected with a plasma display or projector connected to the program (PGM) signal output connector differs as shown below.

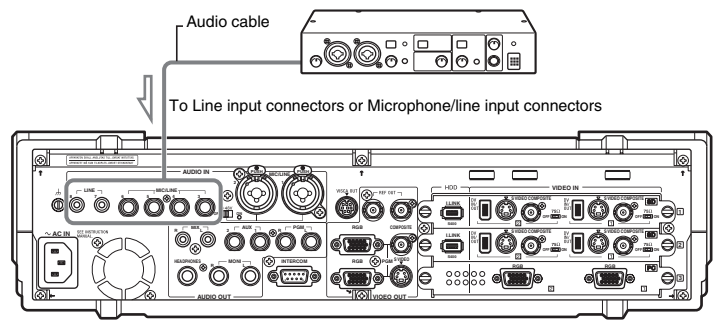
PGM signal output connector in use	Video containing movement	RGB video containing small text, etc.
Composite video output connector or S-Video output connector	Smooth	Standard video quality (slightly blurry)
RGB output connector	Depending on the setup, movement may be slightly choppy*.	Clear

\* This phenomenon occurs when the original frame rate of the projected video is not an exact multiple of the RGB output frame rate or of the signal processing rate of the plasma display or projector.

Notes

- For more information on setting the clock phase, refer to “Adjusting the Clock Phase of RGB Signals” (page 82)
- To reduce the effects of external noise, use a cable with an attached ferrite core.

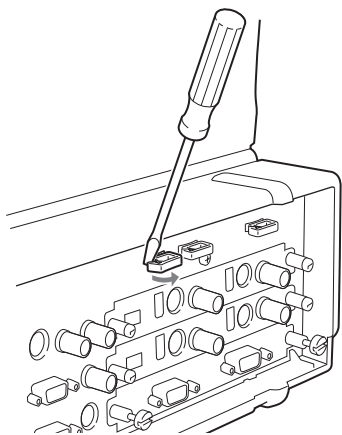
Connecting an Amplifier



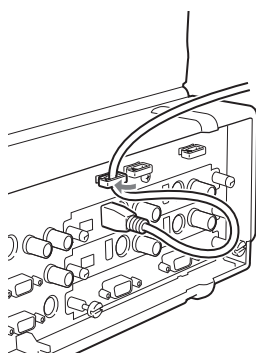
Preventing Accidental Cable Disconnection

Use the cable clip as necessary to secure cables and prevent accidental disconnection.

- 1 Using a flat head screwdriver, open the lever compartment as illustrated below.



- 2 Pass the cables through the cable clip.  
Allow some slack when routing the cables to prevent them from bending sharply.
- 3 Close the lever compartment.

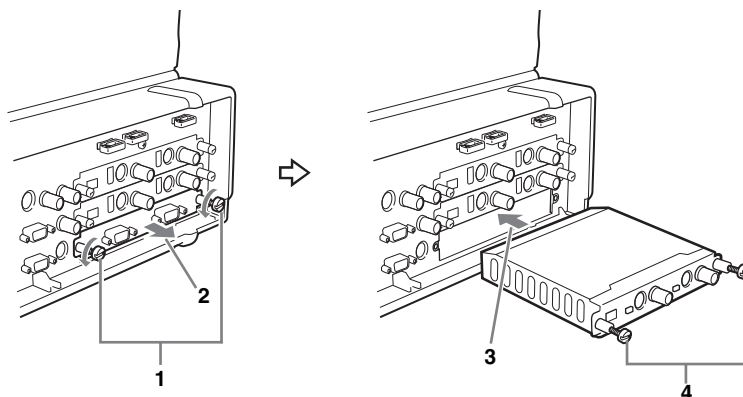


## Installing Option Boards

The following option boards are available for this unit.

- BKAW-550  
PC video interface module
- BKAW-570  
SD video interface module

To install an option board, first remove the interface module fitted to the unit as standard, and install the new interface in the slot.



- 1 Loosen the two screws fixing the interface module fitted as standard.
- 2 Pull out the interface module.
- 3 Insert the option board into the slot.
- 4 Tighten the screws.

### Caution

When installing an option board, always turn the unit off first. If you install an option board with the unit powered on, this may damage the option board.

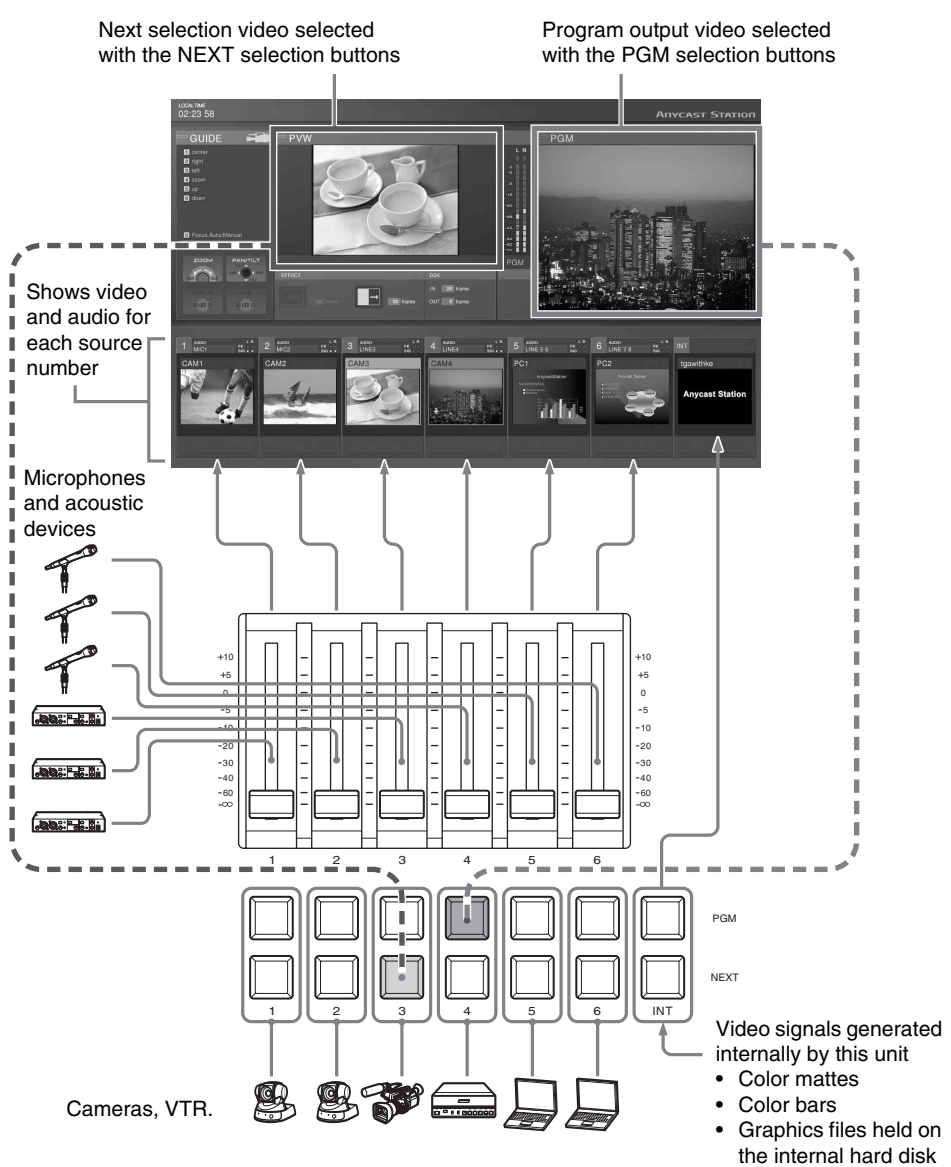


# Settings Related to Input Signals

These settings allow video and audio signals input from devices connected to the unit to be handled within the unit.

## Relation Between Input Signals and System Components

You can assign input video and audio signals to buttons on the front panel and channel faders, then operate these to carry out switching, mixing, and combining. The operation screen continuously displays information about the video and audio input to this unit, and the video and audio program output. The following figure shows the relation between the input signals and system components, and the display on the operation screen.



## Video Signal Related Settings

These are preparations for handling video signals or the unit.

### Assigning video input signals to the selection buttons

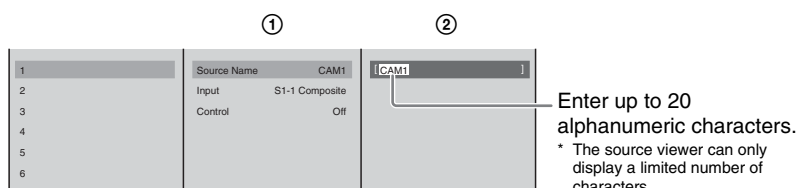
Assign video signals to the selection buttons 1 - 6 (PGM selection and NEXT selection buttons).

- 1 Press the MENU button.
- 2 In the top menu, select [Video Input Assign].
- 3 From the list select the number of the selection button, and confirm, then set the following items in the submenu.

#### Assigning a name for the video

Assign a name for the video. The name assigned here appears in the source viewer with the same number as the selection button.

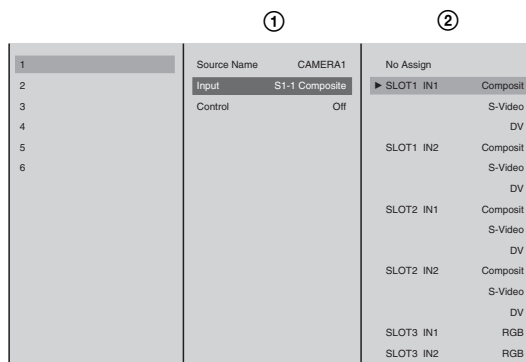
- ① Select [Source Name], and confirm; ② enter the name in the input box, and confirm.



#### Specifying a video input connector

Specify the video input to be assigned to the selection button is input.

- ① Select [Input], and confirm; ② select the video input connector from the list, and confirm.



#### Caution

- You can only use one of the following from the same video input on the same interface module: Composite (Composite video input connector), S-Video (S-Video input connector), or DV (DV connector).
- **About the DV signal lock time**  
When switching the video input signal to a DV signal, it takes a while for the DV signal to lock. While locked, a gray video is displayed.

Notes

- The items in the list depend on the interface module installed in this unit.
- For details of [Control] in the menu ①, refer to “Registering Cameras to be Controlled” (page 66).

- 4 If required, repeat step 3 similarly for the remaining selection buttons.
- 5 Press the MENU button to close the menu.

Audio Signal Related Settings

These are preparations for handling audio signals on the unit.

Assigning audio input signals to channel faders

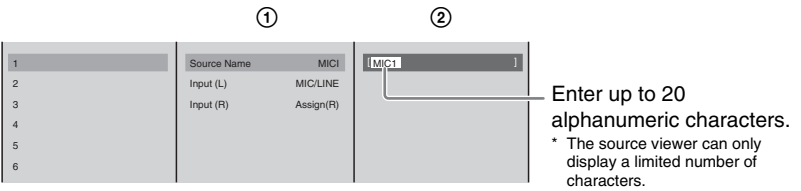
Assign the audio signals input to the audio input connectors on the rear panel to channel faders 1 to 6.  
If you assign different audio signals to the left and right channels (L/R) of the channel faders, they become binaural faders, and if you assign the same audio signal to both channels, they become monaural faders.

- 1 Press the MENU button.
- 2 In the top menu, select [Audio Input Assign].
- 3 Select the channel fader number from the list, and confirm, then set the following items in the submenu.

Assigning a name

Assign a name to the audio signal. The name assigned here appears in the source viewer with the same number as the channel fader.

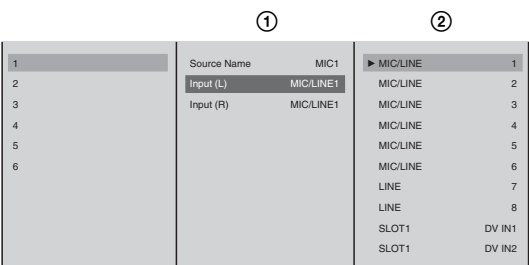
- ① Select [Source Name], and confirm; ② enter the name in the input box, and confirm.



Specifying an audio input connector

Specify the audio signal to be assigned to the channel fader. For stereo audio, specify the source for each of the left and right channels separately.  
For monaural audio, specify the same input for both left and right channels.

- ① Select [Input (L)], and confirm; ② select the audio input connector from the list, and confirm.

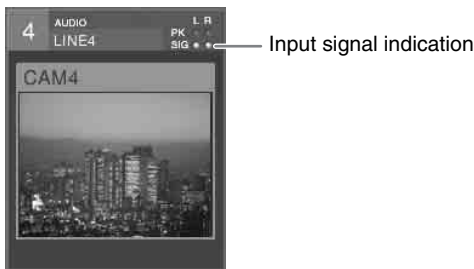


**Note**

If in [Input (L)] you select the DV input connector, the same input connector is automatically assigned to [Input (R)].

Similarly, select [Input (R)], and confirm; select the audio input connector from the list, and confirm.

When the input audio signal reaches the reference level, the input signal indication in the source viewer lights green and you can confirm that there is an audio input.



**4** Press the MENU button to close the menu.

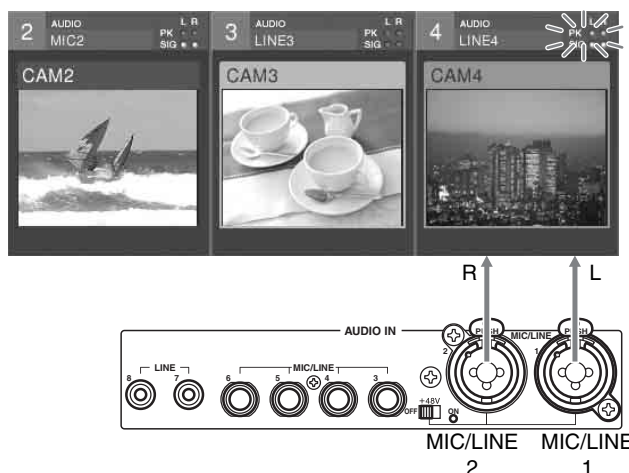
### Setting the MIC/LINE level of an audio input

**If the peak indication appears (when set to the default MIC/LINE level of “Middle (-20 dB)”)**

If the input audio signal is too loud, the peak indication in the source viewer lights red.

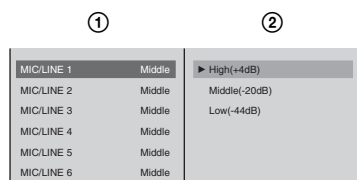
In this case, since the MIC/LINE level exceeds the standard input level, use the following procedure to adjust it.

Example: When the peak indication has lit with MIC/LINE 2 connected to R and MIC/LINE 1 connected to L, as illustrated below.



- 1 Press the MENU button.
- 2 In the top menu select [Audio MIC/LINE Level].
- 3 ① Select the number of the MIC/LINE input connector to which is connected the target audio signal, and confirm; ② select [High(+4dB)], and confirm.

In this example, both [MIC/LINE 1] and [MIC/LINE 2] are set to [High(+4dB)].



- 4 Press the MENU button to close the menu.

### If no input signal indication appears (when set to the default microphone/line level of “Middle (-20 dB)”)

If no input signal indication appears in the source viewer even though an audio signal is input, the microphone/line level is not reaching the reference level. Using the same procedure as detailed in “If the peak indication appears” above, select the number of the microphone/line input connector, and at step 3-②, select [LOW (-44dB)], and confirm.



## Video Switching

This section describes how to switch the video signals input to the unit, and output the final video (output program) from the PGM output connectors. With this unit, you can also apply some video effects.

### Note

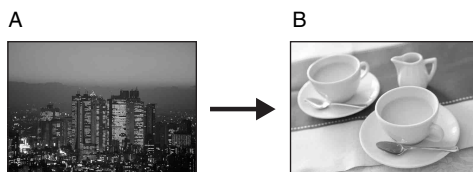
First, make the settings described in “Video Signal Related Settings” (page 42).

## Basics of Video Switching

This section describes only the most basic switching operations. See the relevant sections for details of switching and effect operations.

### Cut switching

This is the most basic and commonly used type of switching. The video changes instantaneously from A to B. For details, refer to “Changing the Video with a Cut” (page 48).

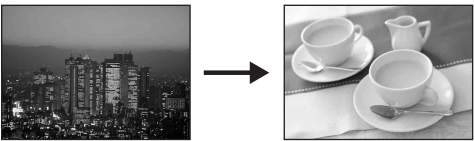


### Switching with a transition effect

In a transition effect, the image gradually switches from one video to another through the application of one of various effects. For details, refer to “Changing the Video with a Effect Transition” (page 50).

# Changing the Video with a Cut

This switches the video instantaneously, with no added effects. This is the most basic form of switching.

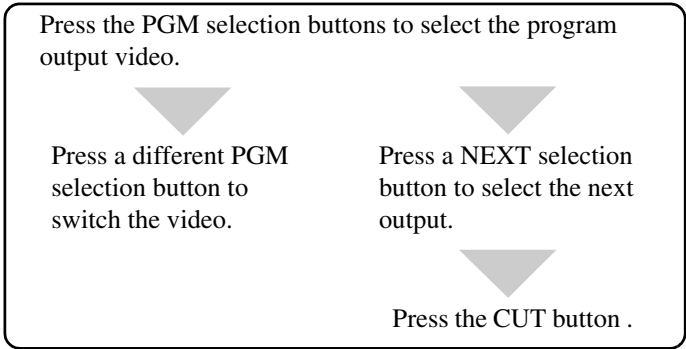


## Basic operation for a video cut

There are two methods of making a cut, as follows.

- Switching directly by pressing a PGM selection button
- Checking the next video in the PVW viewer, then pressing the CUT button

The following diagram shows the flow of operations in carrying out a video cut.



## Switching directly by pressing a PGM selection button

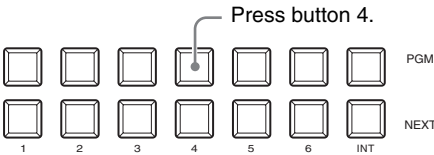
To switch from one video to another, you can simply press the PGM selection button to which the new video is assigned.

**1** In the source viewer, select the video for program output.



Example: You may select video 4.

**2** Press the PGM selection button with the same number as the selected video.



The PGM selection button you pressed lights red, and the selected video appears in the PGM viewer.

The same video as shown in the PGM viewer is now output from the PGM output connectors.





A red frame appears around the source viewer for the selected video.

- 3 Determine on the next video, then repeat the procedure in step 2.

### Switching with the CUT button after checking the next video in the PVW viewer

To switch while checking the new video in the PVW viewer, use the CUT button.

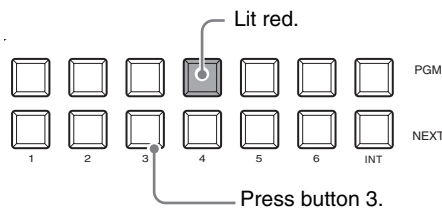
- 1 In the source viewer, select the video you want to switch to (the next program output).



Example: You may want to switch to video 3.

Current program output video

- 2 Press the NEXT selection button with the same number as this video.



The NEXT selection button you pressed lights amber, and the selected video appears in the PVW viewer.

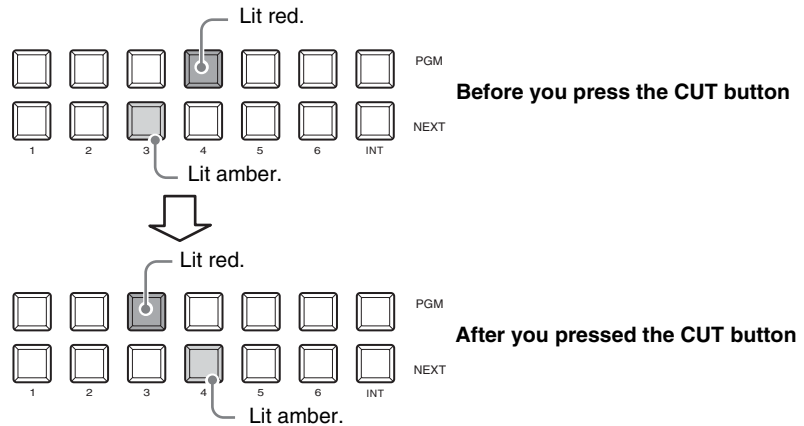


An amber frame appears around the source viewer for the next video.

### 3 Press the CUT button.

This interchanges the video in the PGM viewer and PVW viewer, and switches the program output video.

At the same time, the lit PGM selection button and NEXT selection button interchange, and the colors of the frames in the source viewer also interchange.



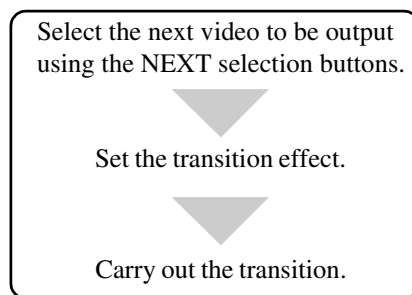
Each press of the CUT button interchanges the program output video and the NEXT selection video.

## Changing the Video with a Effect Transition

Instead of an instantaneous cut, you can gradually switch from one video to another through the application of one of various effects.

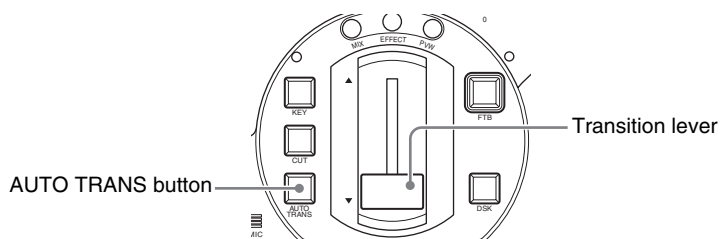
### Basic transition effect operations

The basic procedure for applying an effect to a transition is as follows.



There are two ways of executing a transition:

- Automatic execution with the AUTO TRANS button
- Manual execution using the transition lever



### AUTO TRANS button

Pressing the AUTO TRANS button carries out the transition automatically, using the preset transition time.

### Transition lever

Moving the transition lever in the direction shown by the LED indicators ( $\Delta$   $\nabla$ ) progresses the transition in sync with the lever movement.

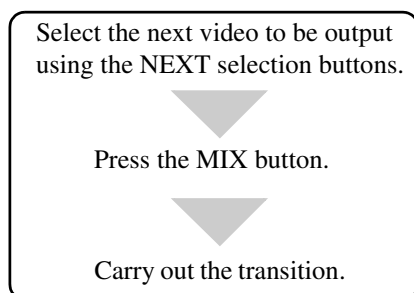
## Switching with a dissolve

In a dissolve, one video image fades into another.

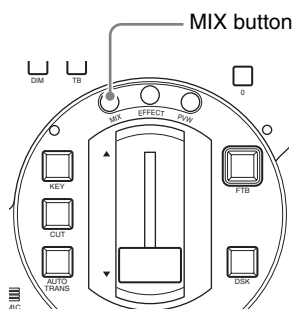


### Basic operation for a dissolve

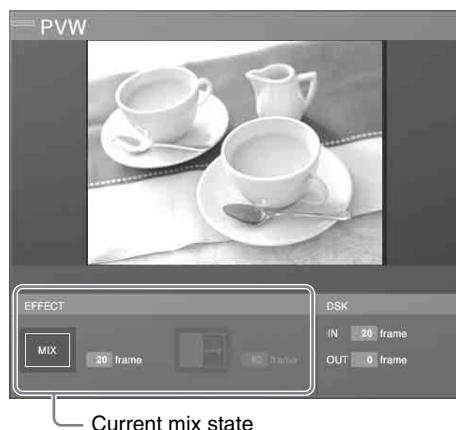
The basic procedure for a dissolve is as follows.



- 1 Determine the next program output video, and select this with the NEXT selection button.  
The selected video appears in the PVW viewer.
- 2 Press the MIX button.



The MIX button lights amber, and the effect indication on the operation screen shows the current mix state (progress of the dissolve).



### Notes

- The mix state shows the current transition time setting.
- You can still change the transition time at this point. To change the setting, follow the procedure in “Changing the Transition Time” (page 54).

- 3 Carry out the transition with the AUTO TRANS button or transition lever. The NEXT selection video dissolves into the program output video.



Each press of the AUTO TRANS button, or operation of the transition lever, carries out a dissolve transition from the program output video to the NEXT selection video.

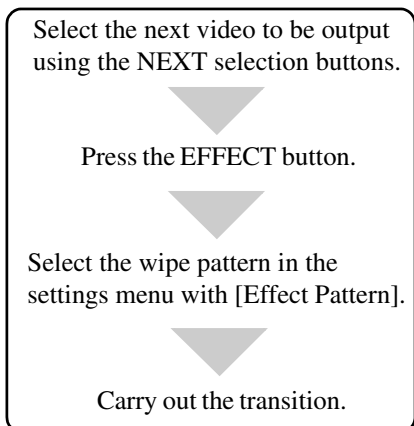
## Switching with a wipe

In a wipe, two video images occupy the display simultaneously, with the area occupied by one growing until it wipes out the other. You can choose from sixteen different wipe patterns.

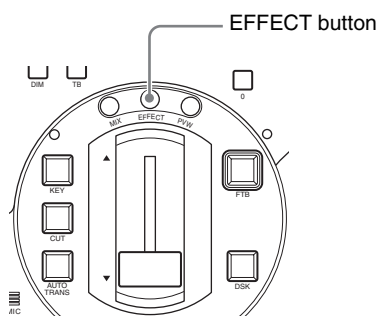


### Basic operation for a wipe transition

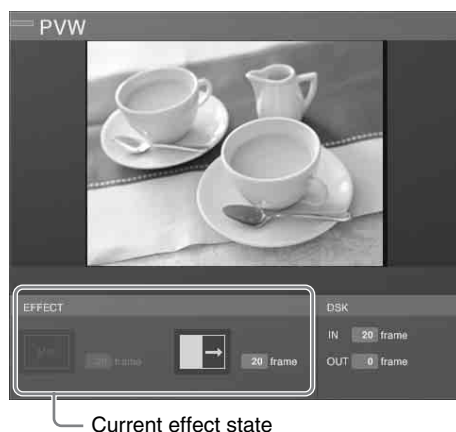
The basic procedure for a wipe transition is as follows.



- 1** Determine the next program output video, and select this with the NEXT selection button.  
The selected video appears in the PVW viewer.
- 2** Press the EFFECT button.



The EFFECT button lights amber, and the effect indication shows the current effect state.



#### Notes

- The current effect state shows the transition time and effect pattern settings.
- You can change the transition time. To change the setting, follow the procedure in “Changing the Transition Time” (page 54).

- You can change the effect pattern. To change the setting, follow the procedure in “Changing the Effect Pattern” (page 54).

- 3 Carry out the transition with the AUTO TRANS button or transition lever. The program output video changes to the NEXT selection video by a wipe transition.



Each press of the AUTO TRANS button, or operation of the transition lever, the program output video changes to the NEXT selection video by a wipe transition.

#### Note

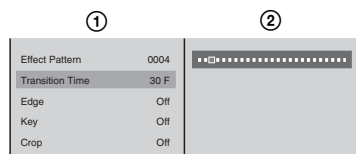
It is also possible to apply an edge effect to the wipe pattern. For details, refer to “Applying Edge Effects” (page 65).

## Changing the Transition Time

Before carrying out a transition with the AUTO TRANS button, set the transition time.

- 1 Press the MIX button or EFFECT button.  
The current settings appear in the effect display.
- 2 Press the MENU button.
- 3 In the top menu, select [Video Effect].
- 4 ① Select [Transition Time], and confirm; ② move the slider to set the transition time.

The transition time is set in frame units.



- 5 Press the MENU button to close the menu.  
The set transition time appears in the effect display.

## Changing the Effect Pattern

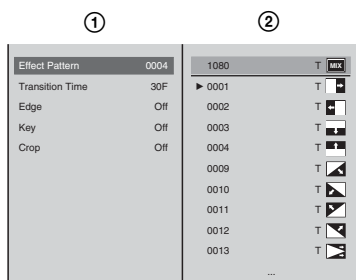
- 1 Press the EFFECT button.  
The current settings appear in the effect display.



### Note

Here you can also press the EFFECT button once more to recall the [Effect Pattern] menu, and skip from step 2 below as far as ① within step 4.

- 2 Press the MENU button.
- 3 In the top menu, select [Video Effect].
- 4 ① Select [Effect Pattern], and confirm; ② select the wipe pattern from the list, and confirm.



- 5 Press the MENU button to close the menu.  
The selected effect pattern appears in the effect display.

## Using Fade-to-Black (FTB)

This fades the video in from or out to a black screen.

Press the FTB button.

This fades out the program output to a black screen, except for any superimposed logo.



Press the FTB button once more to fade in the video from the black screen.



### Note

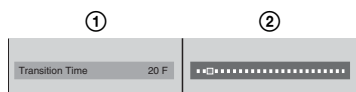
While the screen is black, the PGM selection buttons change to amber.

## Fading in a different video after fading out

- 1 After fading to a black screen, select a different video with the PGM selection buttons.
- 2 Press the FTB button.  
This fades in the newly selected video.

## Setting the Fade to Black transition time

- 1 Press the MENU button.
- 2 In the top menu, select [Fade To Black].
- 3 ① Select [Transition Time], and confirm; ② move the slider to set the transition time.

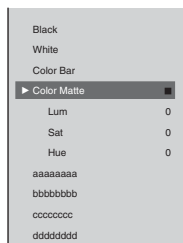


- 4 Press the MENU button to close the menu.

## Using Color Bars and Color Mattes

The Internal Color Bar is provided for adjustment and test transmission. The Internal Color Matte is provided for a background.

- 1 Select the internal (INT) source using the NEXT buttons.  
The INT source selection menu appears in the menu display.
- 2 Select the color bars or color matte you want to show, and confirm.



### Note

This unit can output the following 2 color bars for each video output signal format setting.

- With NTSC: SMPTE color bar (75%)
- With PAL: EBU color bar (100%)

The selected internal video signal appears in the “INT” source viewer.

### Note

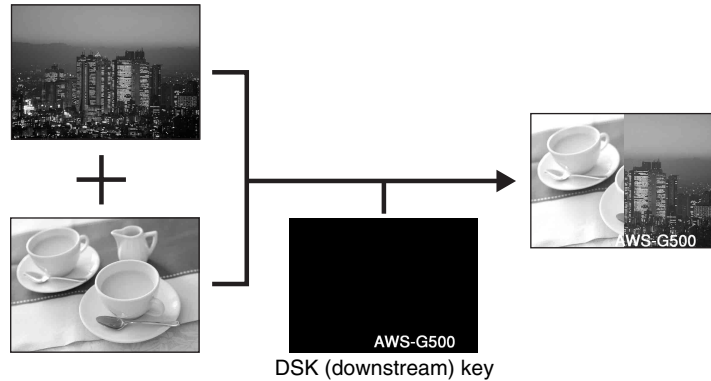
You can change the color of the color matte. For details, refer to “Adjusting Color Matte” (page 82).



## Using the Downstream Key (DSK) Function to Add Text or an Image

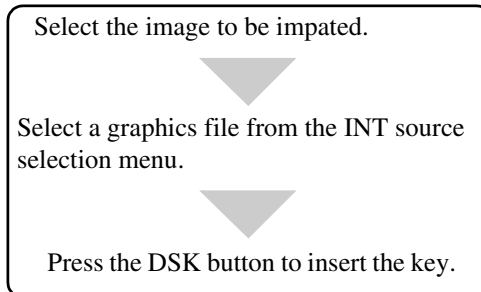
You can add text or an image to video that already includes an effect or combination.

This is useful for adding subtitles, for example.



### Basic downstream key operations

The basic procedure for downstream keying is as follows.



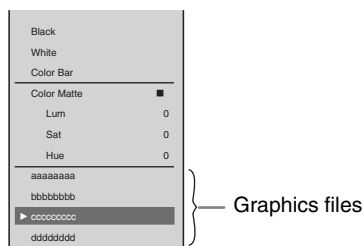
### Inserting a downstream key

In order to use a downstream key for text or graphics, it must first be imported onto the internal hard disk of this unit. You can use the alpha channel of a graphics file in targa format as the key source, which allows high-quality downstream keying.

*For details on importing a graphics file, refer to “Importing Graphics Files” (page 90).*

- 1** Press INT in the NEXT selection buttons.  
The INT source selection menu appears.

- 2 Use the jog roller to select a graphics file displayed in the lower part of the INT source selection menu, and confirm.



The selected graphics file appears in the “INT” source viewer.



#### Note

While the graphics file is being read in, the message “Loading...” appears at the bottom of the PVW viewer and in the device status in the source viewer.

- 3 Press the DSK button.

DSK button lights red, and the graphics file image appears in the PGM viewer.



If you press the DSK button once more, the inserted image is removed. Each press of the DSK button alternately inserts or removes the image.

#### Note

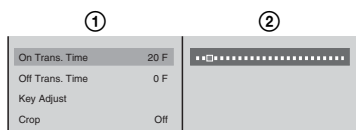
If you change the video to a black screen using FTB, no downstream key is output. In this case, the DSK button lights amber.

### Setting the downstream key transition times

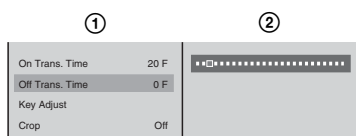
You can set the DSK transition times which are the times taken for the text or image to be gradually inserted, or to be gradually removed. These are set in frame units.

- 1 Press the MENU button.
- 2 In the top menu, select [DSK].

- 3 ① Select [On Trans. Time], and confirm; ② move the slider to set the time until the image appears.



- 4 ① Select [Off Trans. Time], and confirm; ② move the slider to set the time to disappear.



- 5 Press the MENU button to close the menu.

The DSK transition time setting appears in the DSK display of the effect display in the operation screen.



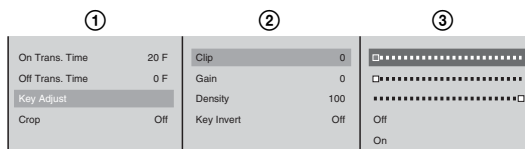
### Adjusting the downstream key

You can adjust the parameters for inserting text or image, or crop unwanted portions.

- 1 Press the DSK button to insert the image.
- 2 Press the MENU button.
- 3 In the top menu, select [DSK].
- 4 In the submenu, set the following adjustment items.

#### Adjusting the outline of the text or image

- ① Select [Key Adjust], and confirm; ② select the item to adjust, and confirm; ③ adjust the sliders.



The items you can adjust are as follows.

**[Clip]:** Adjusts the threshold level for keying.

**[Gain]:** Adjusts the sharpness of the key outline.

**[Density]:** Adjusts the density of the text or image to be inserted.

#### Note

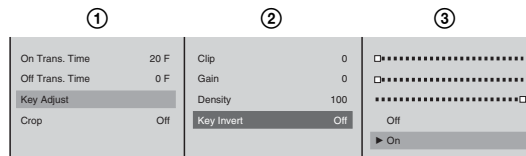
If you have recalled and adjusted a graphics file, the adjusted values of the graphics file change as follows depending on the next file recalled:

- When a file with no alpha channel is recalled: adjusted values remain unchanged.
- When a file with an alpha channel is recalled: values return to their default settings.

### Inverting the key

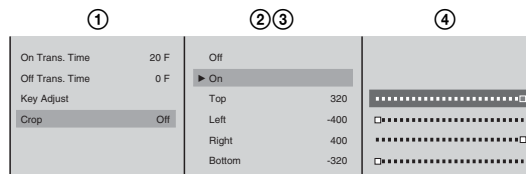
By inverting the key, you can use an image of black lettering on a white background as the key.

① Select [Key Adjust], and confirm; ② select [Key Invert], and confirm; ③ select [On], and confirm.



### Cropping unwanted portions of the text or image

① Select [Crop], and confirm; ② select [On], and confirm; ③ select the side (top, bottom, left, or right) to be displayed, and confirm; ④ move the slider to crop.



**5** Press the MENU button to close the menu.

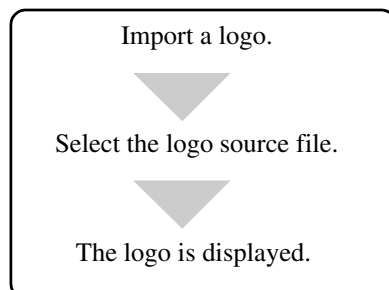
## Showing a Logo on the Screen

For copyright protection purposes, you can superimpose a logo on the video. When the logo is enabled, the logo is superimposed on the program output video.



### Basic operation for showing a logo

The basic procedure for showing a logo is as follows.

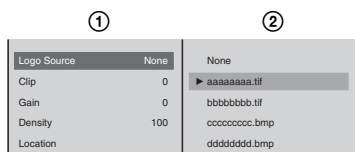


## Showing a logo in the video

To show a logo, first it is necessary to import the logo file to the internal hard disk of this unit.

For details on importing a logo file, refer to “Importing Logo Files” (page 91).

- 1 Press the MENU button.
- 2 In the top menu, select [Logo].
- 3 ① Select [Logo Source], and confirm; ② select the logo file from the list, and confirm.



The image is inserted in both the PGM viewer and PVW viewer.

### Note

By selecting a logo file from the list, it always appears in the program output video. If you do not want to show the logo, select [None].

- 4 Press the MENU button to close the menu.

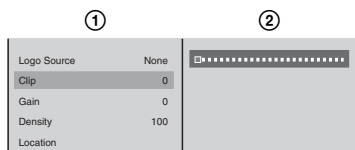
## Adjusting the logo display

Adjust the parameters for logo insertion, and set the logo position.

- 1 Show the logo.  
For details of the operation, refer to “Showing a logo in the video” (page 61).
- 2 Press the MENU button.
- 3 In the top menu, select [Logo].
- 4 In the submenu, set the following adjustment items.

### Adjusting the outline of the logo

- ① Select one of [Clip], [Gain], and [Density], and confirm; ② adjust the slider.



The items you can adjust are as follows.

**[Clip]:** Adjusts the threshold level for the logo key.

**[Gain]:** Adjusts the sharpness of the outline.

**[Density]:** Adjusts the density of the text to be inserted.

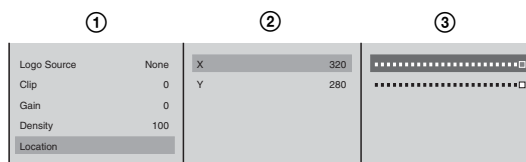
### Note

When you have recalled a logo file and made adjustments, the logo file adjustment values for the logo file depend on the next recalled file as follows:

- When a file with no alpha channel is recalled: the adjustments are maintained as is.
- When a file with an alpha channel is recalled: the adjustments are returned to their default values.

### Specifying the position of the logo display

① Select [Location], and confirm; ② select [X] or [Y], and confirm; ③ specify the position with the sliders.



The meaning of these items are as follows.

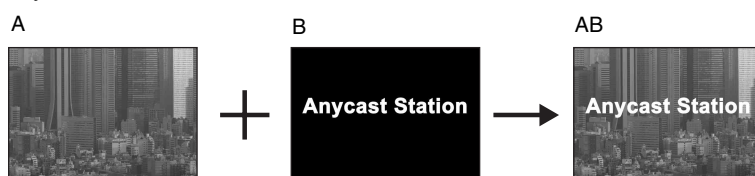
[X]: Specifies the horizontal position.

[Y]: Specifies the vertical position.

5 Press the MENU button to close the menu.

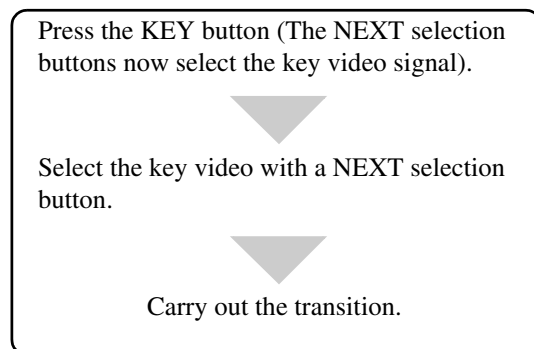
## Using Luminance Keying

Video A and video B images are combined by comparing the components of brightness (luminance) to cut unneeded portions of the video B image. Generally, bright lettering is drawn on a black background, and this is used as the key.



### Basic operation for luminance keying

The basic procedure for luminance keying is as follows.



1 Press the KEY button.

The KEY button, NEXT selection buttons, and MIX button light green and are now used for keying video.

- 2 Select the video for keying with the NEXT selection button.  
A green frame appears around the selected video in the source viewer.



- 3 Apply the video effect using the AUTO TRANS button, CUT button, or transition lever.  
This keys the NEXT selection into the program output video.



The [KEY ON] indicator on the operation screen lights red.



Press the AUTO TRANS button or CUT button once more, or operate of the transition lever in the opposite direction, to remove the combined video effect.

The [KEY ON] indicator on the operation screen also turns off.  
Each press of the AUTO TRANS button or CUT button or operation of the transition level alternately inserts or removes the video effect.

#### Note

You can change the transition time. To change the setting, follow the procedure in “Changing the Transition Time” (page 54).

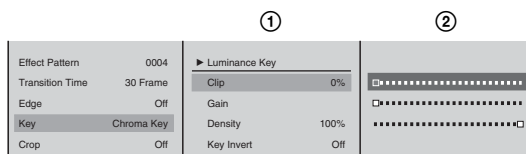
## Adjusting the Combined Video

- 1 Perform keying.
- 2 Press the MENU button.

- 3 In the top menu, select [Video Effect].
- 4 Select [Key], and confirm, then make the following settings in the submenu.

### Sharpening the outline of the key

- ① Select one of [Clip], [Gain], and [Density], and confirm; ② adjust the slider.



The meaning of these items are as follows.

**[Clip]:** Adjusts the threshold for background cutout.

**[Gain]:** Adjusts the sharpness of the outline.

**[Density]:** Adjust the density of the video to be combined.

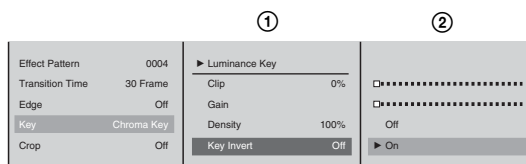
### Note

If you have recalled and adjusted a graphics file, the adjusted values of the graphics file change as follows depending on the next file recalled:

- When a file with no alpha channel is recalled: adjusted values remain unchanged.
- When a file with an alpha channel is recalled: values return to their default settings.

### Inverting the luminance key

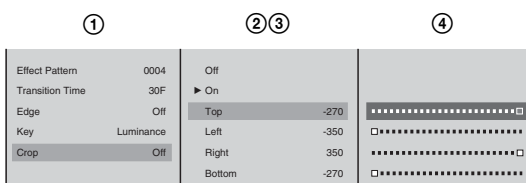
- ① Select [Key Invert], and confirm; ② select [On], and confirm.



- 5 Press the MENU button to close the menu.

## Cropping Unwanted Portions From the Video Being Combined

- 1 Carry out a keying effect.
- 2 Press the MENU button.
- 3 In the top menu, select [Video Effect].
- 4 ① Select [Crop], and confirm; ② select [On], and confirm; ③ select the side (top, bottom, left, or right) to crop, and confirm; ④ move the slider to crop.





5 Press the MENU button to close the menu.

## Applying Edge Effects

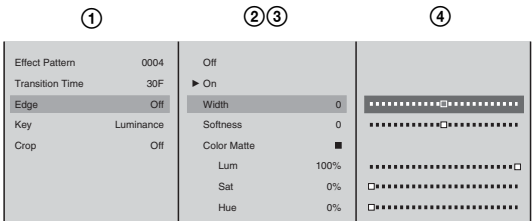
It is possible to apply edge effects when using a wipe effect.



Edge

For a wipe

- 1 First set the effect pattern.
- 2 Press the MENU button.
- 3 In the top menu, select [Video Effect].
- 4 ① Select [Edge], and confirm; ② select [On], and confirm; ③ select the item to be set, and confirm; ④ adjust the slider.



The meaning of these items are as follows.

**[Width]:** Adjusts the width of the border.

**[Softness]:** Adjusts the blurriness of the edge.

**[Color Matte]:** Changes the color of the border. Select [Lum] (luminance), [Sat] (saturation), or [Hue], and adjust the slider.

# Controlling Cameras

This unit is equipped with a VISCA controller. VISCA (Video System Control Architecture) is a technology used for connecting a video device to a controller, and controlling the video device from the controller. In this unit, you can remotely control a camera supporting VISCA protocol connected to the VISCA connector.

The remote control operations available include the following.

- Pan
- Tilt
- Zoom
- Focus
- Aperture (iris) control
- White balance adjustment

## Note

The controllable range depends on the camera you are using.

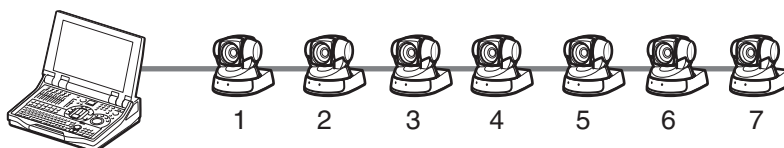
## Registering Cameras to be Controlled

By registering a camera supporting the VISCA protocol with this unit you can control it from the unit.

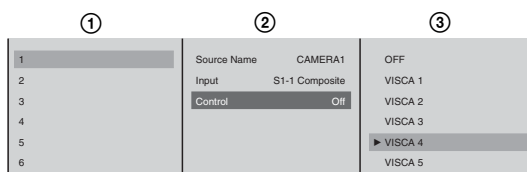
You can connect up to seven cameras supporting VISCA protocol to this unit in a daisy-chain, and control the cameras from this unit at addresses VISCA 1 to VISCA 7 in sequence. In this unit, you control a camera by specifying one of these addresses.

## Caution

The maximum number of simultaneous video signal inputs to this unit is six (when all of the rear panel interface modules are all SD video interface modules).



- 1** Connect the camera(s) supporting VISCA protocol to this unit.  
*For camera connection, refer to page 35.*
- 2** Assign the input signal from the camera to a selection button.  
Refer to “Assigning video input signals to the selection buttons” (page 42).
- 3** ① Select the number of a selection button assigned to a camera supporting the VISCA protocol, and confirm; ② select [Control], and confirm; ③ select the camera address, and confirm.



- 4** Press the MENU button to close the menu.

## Controlling Camera Manually

Control a camera manually supporting the VISCA protocol from this unit. With the default settings of this unit, focus and iris settings are set to auto, and white balance setting is set to “no operation”. To control these manually, you need to set them in the menu.

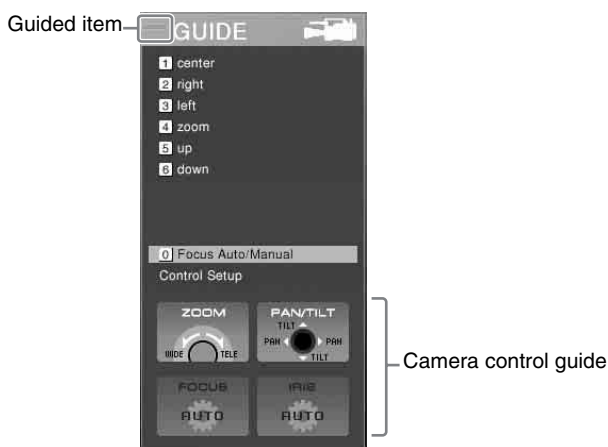
### Carrying out manual control

- 1** Press the NEXT selection button to which the camera video is assigned.

**Note**

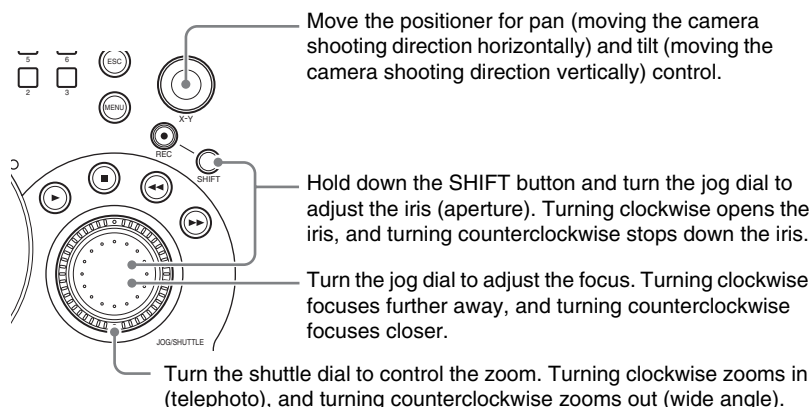
To control the camera, follow the procedure in “Registering Cameras to be Controlled” (page 66).

A guide to operations appears in the camera control guide.



If the focusing and iris control are set to auto, then “[AUTO]” appears. To change the settings manually, refer to “Setting the Camera Control” (page 71).

- Following the guide, control the camera, using the front panel buttons and dials.



## Storing a Camera Preset

The camera preset function allows you to save the state of the camera supporting VISCA protocol to one of the numeric buttons on the front panel. Then by pressing the numeric button, you can automatically set the camera to the saved state.

For example, during a lecture relay, you can store settings for standard shots, such as a speaker close-up, speaker full-body shot, guest panel, or audience view, simplifying the work of switching among these views.

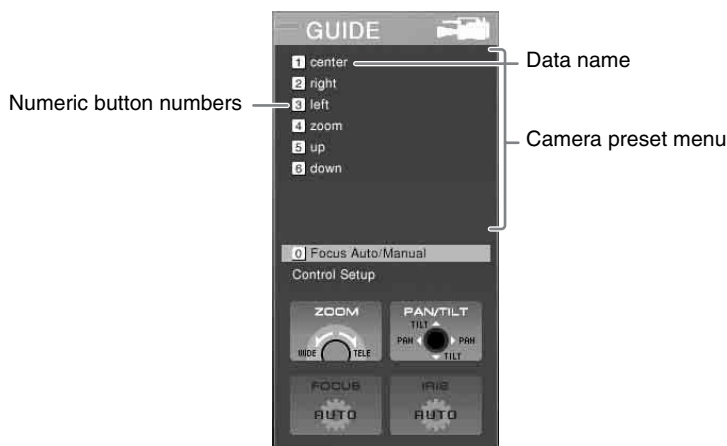
In the camera preset, you can save the pan, tilt, zoom, and focus settings, the aperture (iris) status, the white balance adjustment, the control mode (auto/manual, etc.).

### Caution

If the camera you are using is an EVI-D100/EVI-D100P, set the camera BACK UP switch to the ON position before storing.

### Storing a camera preset

- Press the NEXT selection button to which the camera video is assigned. A camera preset menu appears in the menu display.



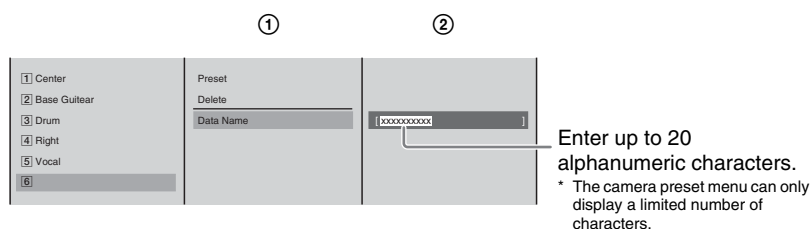
- 2 Control the camera to determine the shot.
- 3 With the jog roller, select the camera preset menu number (from 1 to 6), and confirm.

The camera preset settings menu appears.

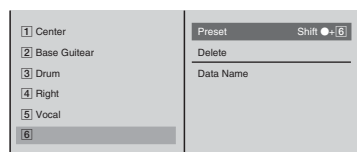
- 4 Set the following items as required.

#### Applying a name to the preset

- ① Select [Data Name], and confirm; ② enter the name in the input box, and confirm.



- 5 Select [Preset], and confirm.

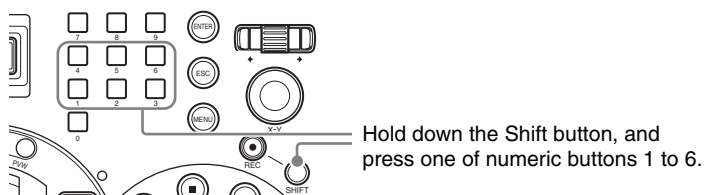


This saves the preset in the numeric button.

The saved preset appears in the camera preset menu.

#### Note

Even if the camera preset menu is not displayed, you can register a camera preset by holding down the Shift button and pressing any numeric button (between 1 and 6).



## Recalling a preset

- 1 Press the NEXT selection button to which the camera video is assigned.
- 2 Using the numeric buttons on the front panel, press the number in which the preset is saved.

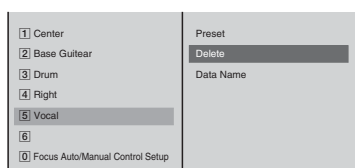
The numeric button lights amber, and the camera is set to the preset state.

The selected number appears in amber.

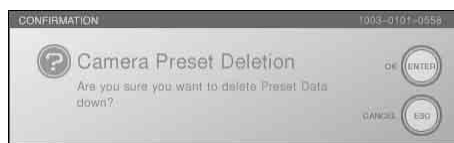


## Deleting a saved preset

- 1 Press the NEXT selection button to which the camera video is assigned.  
A camera preset menu appears in the menu display.
- 2 Select the number of the preset you want to delete with the jog roller, and confirm.  
The camera preset settings menu appears.
- 3 Select [Delete], and confirm.



A confirmation message appears, as follows.



- 4 Press the ENTER button.  
This deletes the preset, and the number changes to gray.

## Setting the Camera Control

To change the default settings of this unit, or to enable pan, tilt and zoom for a ceiling-mounted camera, use the following procedure.

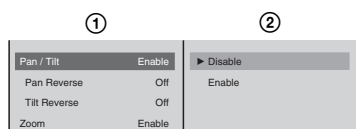
- 1 Press the NEXT selection button to which the camera video is assigned.  
A guide menu appears in the menu display.
- 2 With the jog roller, select [Control Setup], and confirm.  
The submenu appears.



- 3 Set the following items in the submenu.

### Disabling remote control of pan and tilt, or zoom

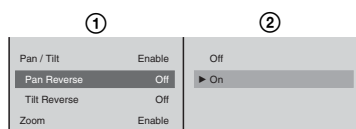
- ① Select [Pan/Tilt] or [Zoom], and confirm; ② in the submenu select [Disable], and confirm.



### Reversing directions for ceiling-mounted cameras

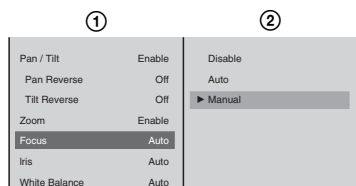
When a camera is ceiling-mounted, you can reverse the pan and tilt directions.

- ① Select [Pan Reverse] or [Tilt Reverse], and confirm; ② select [On], and confirm.



### Enabling manual focus and iris control

- ① Select [Focus] or [Iris], and confirm; ② select [Manual], and confirm.

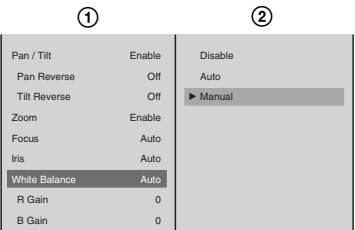


**Note**

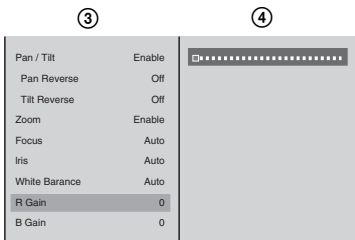
You can switch the auto focus and manual focus by pressing “0” of the numeric keys.

**Manually controlling white balance**

① Select [White Balance], and confirm; ② set [Manual], and confirm.



③ Select [R Gain] or [B Gain], and confirm; ④ move the slider to adjust the values.



**Note**

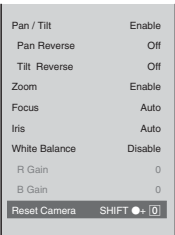
When not using control from this unit, select [Disable].

**4** Press the MENU button to close the menu.

# Resetting the Camera

After starting up this unit, carry out this procedure after powering the camera supporting the VISCA protocol off and on again, or disconnecting and reconnecting the VISCA cable.  
Perform this operation even if “No Response” appears as the camera status.

- 1 Press the NEXT selection button to which the camera video is assigned.  
A camera preset menu appears in the menu display.
- 2 With the jog roller, select [Control Setup], and confirm.
- 3 In the submenu, select [Reset Camera], and confirm.





**Note**

You can also reset the camera by holding down the Shift button and pressing the numeric 0 button.

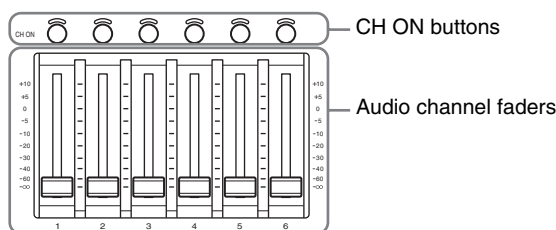


# Audio Mixing

This section describes how to perform mixing on the audio signals input to the unit, and output the final audio (output program) from the PGM output connectors.

First assign the audio signals to channel faders, as described in “Audio Signal Related Settings” (page 43).

- 1 Press the CH ON button on the front panel to select the channels that you want to mix.



- 2 Adjust the levels with the audio channel faders, and carry out mixing.

## Note

For audio input/output signal fine adjustment settings, refer to “Video/Audio Signal Adjustments and Settings” (page 81).

## Adjusting the PGM output audio level

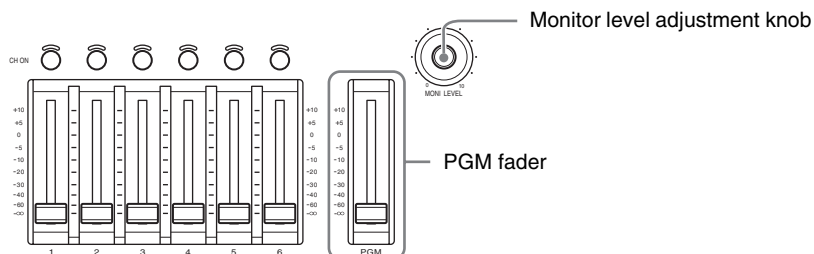
Use the PGM fader on the front panel to adjust the level of audio from the PGM output connectors.

## Adjusting the monitored audio levels

Adjust the levels of the built-in speakers, headphones, and devices connected to the monitor output connectors with the monitor level adjustment knob on the front panel.

## Note

For the selection of audio to be monitored, refer to “Monitoring Output Audio” (page 79).



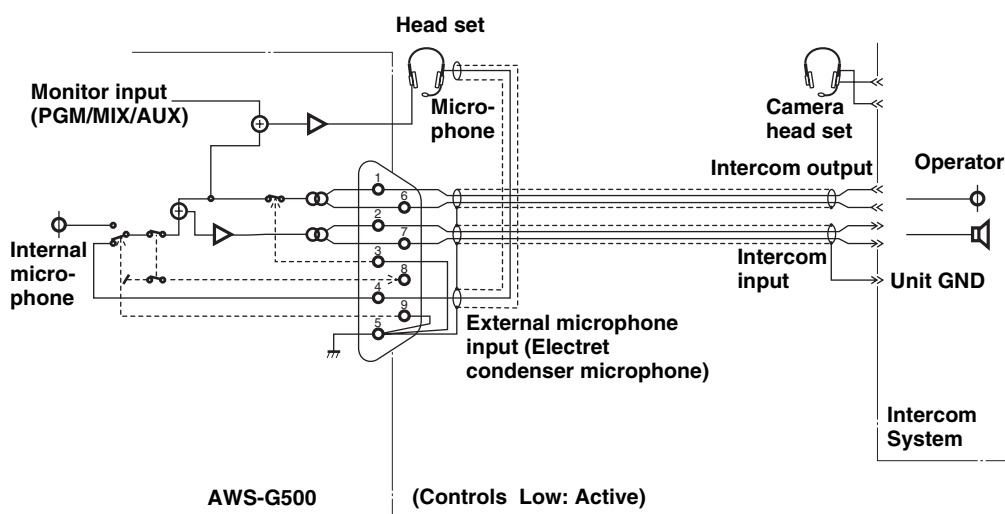
# Using the Intercom Function

Connecting an external intercom system requires a connection operation by the customer.

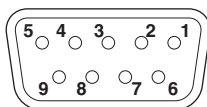
An intercom system allows the operator to confer with camera operators and others in remote locations. You can use the built-in speakers of this unit and the front panel microphone.

## Connecting the Intercom System

Connect the intercom system to the INTERCOM connector on the rear panel. The following shows a connection example of an intercom system.



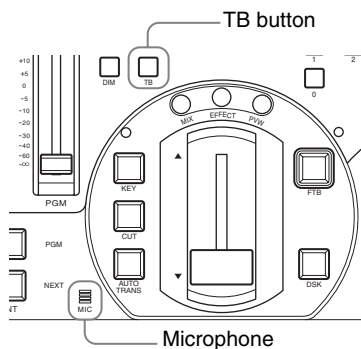
When using a headset, connect the microphone connector to the INTERCOM connector, and connect the headphone connector to the HEADPHONES connector.



Pin No.	I/O	Signal name	Description
1	I	AUDIO IN (H)	INTERCOM AUDIO SIGNAL INPUT (H)
2	O	AUDIO OUT (H)	INTERCOM AUDIO SIGNAL OUTPUT(H)
3	I	CONTROL IN	INTERCOM RECEIVE CONTROL (LOW ACTIVE)
4	I	MIC IN (+)	ELECTRET CONDENSER MICROPHONE INPUT
5	-	GND	GROUND
6	I	AUDIO IN (C)	INTERCOM AUDIO SIGNAL INPUT (L)
7	O	AUDIO OUT (C)	INTERCOM AUDIO SIGNAL OUTPUT (L)
8	O	CONTROL OUT	TB CONTROL (LOW ACTIVE)
9	I	CONTROL IN	EXT MIC ACTIVE CMD (LOW ACTIVE)

## Speaking on the Intercom System

- 1 Connect the external intercom system.
- 2 Press the TB (Talk Back) button, and speak into the front panel microphone (or headset microphone).



This transmits on the external intercom system.

You can listen on the external intercom system using the built-in speakers of this unit or headphones.

- 3 Press the TB button to finish conversation.

### Note

While the TB button is lit, the DIM button lights. The relationship between the state of the TB button and the built-in speakers, headphones, and monitor output is as follows.

### Monitoring state when using the intercom

Monitor output connector connection	TB button state	Internal speakers		Headphone output		Monitor output
		Output to be monitored <sup>*1</sup>	Sound from the intercom system	Output to be monitored <sup>*1</sup>	Sound from the intercom system	Output to be monitored <sup>*1</sup> only is output continuously.
Yes	On (lit)	Mute	Attenuated output <sup>*2</sup>	Attenuated output <sup>*2</sup>	Output	
	Off	Mute	Output	Output	Output	
No	On (lit)	Attenuated output <sup>*2</sup>	Attenuated output <sup>*2</sup>	Attenuated output <sup>*2</sup>	Output	
	Off	Output	Output	Output	Output	

<sup>\*1</sup> This indicates whichever of PGM, AUX1, AUX2, and MIX is selected for [Audio Monitor] in the [Audio Utility] setting menu.

<sup>\*2</sup> The audio attenuation ("DIM") function reduces the output level by 20 dB from the normal value.

# Monitoring Audio

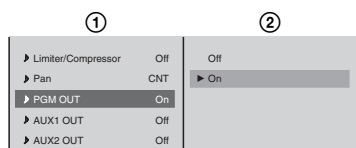
Use the internal speakers or the connected headphones to monitor the audio input to the unit or the audio output from the unit.

## Determining the Audio Signal Output Destinations

Select which output destinations to which the audio assigned for each channel fader should be routed. For the output destination, you can select the PGM output connectors, AUX output connectors, or MIX output connectors.

### Output from the PGM output connectors

- 1 Press the ACCESS button in the same column of the channel fader to which the audio you want to be the program output is assigned.
- 2 ① In the top menu, select [PGM OUT]; ② select [On], and confirm.



- 3 Press the ESC button to close the ACCESS menu.

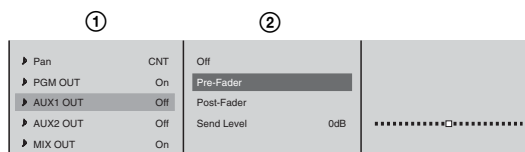
#### Note

You can also close the menu by pressing the same ACCESS button again.

### Output from the AUX output connectors

This unit has two sets of AUX output connectors (AUX1, AUX2), and you can create a mix balance with levels different from those of the PGM/MIX output.

- 1 Press the ACCESS button in the same column of the channel fader to which the audio you want to be the AUX output is assigned.
- 2 ① In the top menu, select [AUX1 OUT] or [AUX2 OUT]; ② in the submenu, select [Pre-Fader] or [Post-Fader], and confirm.



The significance of the items is as follows.

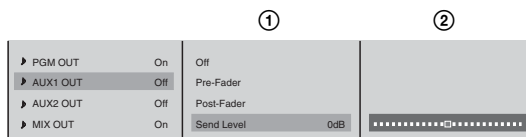
**[Pre-Fader]:** Output the audio before adjustment by the channel faders. In this case, the audio is output even when the CH ON button is Off.

**[Post-Fader]:** Output the audio after adjustment by the channel faders.

### Note

In either case, when adjusting with the ACCESS menu, the output includes these adjustments (excluding pan).

- 3 After selecting [Pre-Fader] or [Post-Fader] and confirming, ① select [Send Level], and confirm; ② adjust the output level with the slider.



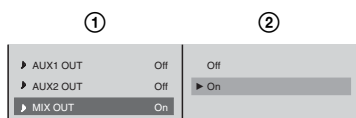
Press the ESC button, to close the ACCESS menu.

### Caution

The AUX output connectors output the audio of mixing the left and right audio channels.

## Output from the MIX output connectors

- 1 Press the ACCESS button in the same column as the channel fader to which the audio you want to be the MIX output is assigned.
- 2 ① In the top menu, select [MIX OUT]; ② select [On], and confirm.

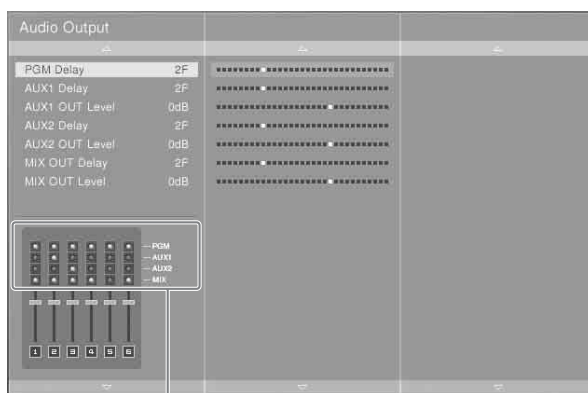


- 3 Press the ESC button to close the ACCESS menu.

## Displaying the Audio Signal Output Destinations

Check where the output destinations are set.

- 1 Press the MENU button.
- 2 In the top menu, select [Audio Output].
- 3 Check the output destination display.  
The display lights green when set to [ON] in the audio signal output destination settings (page 77).



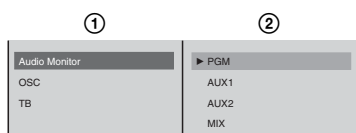
Output destination indication

## Monitoring Output Audio

You can select one audio output from this unit (program (PGM) output, AUX output, or MIX output), and listen to it on the internal speakers, speakers connected to the monitor output connectors, or headphones connected to the HEADPHONES connector.

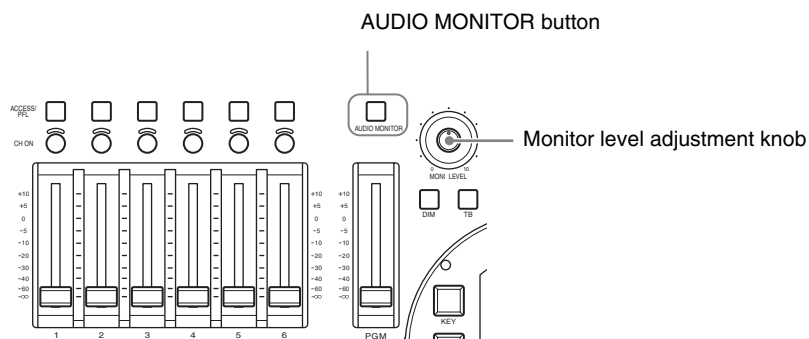
Output sound level can be monitored using the audio level meters on the operation screen.

- 1 Press the MENU button.
- 2 In the top menu, select [Audio Utility].
- 3 ① Select [Audio Monitor], and confirm; ② select the output to be monitored.

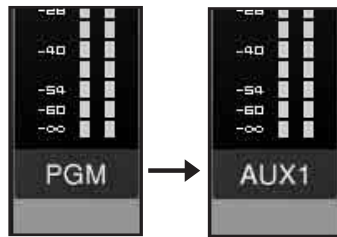


### Notes

- Use the monitor level adjustment knob to adjust the level.
- Each time you press the AUDIO MONITOR button, the monitoring cycles through the following sequence. The output destination indication below the audio level meters also changes.



PGM → AUX1 → AUX2 → MIX → PGM ...



---

## Monitoring the Audio of a Particular Channel Only

Use the Pre-Fader Listening (PFL) function to check the audio on a channel without the channel fader adjustments. You can do this, for example, on the internal speakers.

Hold down the ACCESS button for the channel you want to monitor for at least 0.5 seconds. While the button is held down, the audio for that channel is monitored.

When you release the ACCESS button, the monitoring is ended.

### Notes

- If you press another ACCESS button for at least 0.5 second during PFL, the sound of the subsequently specified channel is added.
- This does not affect the program output, AUX output, or MIX output.



# Video/Audio Signal Adjustments and Settings

This section describes adjustments to the video and audio signals.

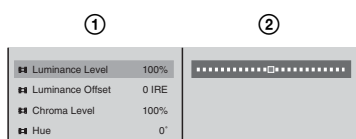
The image quality and sound quality of the inputs to this unit vary depending on factors such as the shooting conditions. This unit therefore has functions to adjust the video and audio of each input to this unit separately.

When using the ACCESS menu to adjust the video input, we recommend outputting the program video to an external monitor and confirming the results as you make adjustments.

## Adjusting Analog Video Input Signals

The image quality of an analog video signal input from a composite input or S-video input connector may be adjusted.

- 1 Press the ACCESS button in the same column as the selection button for the video you want to adjust.
- 2 ① In the top menu, select the desired item; ② adjust with the sliders.



The items you can adjust are as follows.

**[Luminance Level]:** Adjusts the luminance.

**[Luminance Offset]:** When inputting video with a 7.5 IRE setting to this unit, select [7.5 IRE].

**[Chroma Level]:** Adjusts the saturation.

**[Hue]:** Adjusts the hue.

### Note

When applying an offset to the program output video, refer to “Applying an Offset to the Program Output Video” (page 82).

### Caution

- The adjustment values given here are for reference only. Actual values may not match these theoretical values during operation.
- If the input signal is PAL, moving the jog roller causes the numeric values and sliders on the display to change, but [Luminance Offset] is fixed at [0 IRE] and [Hue] at [0°].

- 3 Press the ESC button to close the ACCESS menu.

### Note

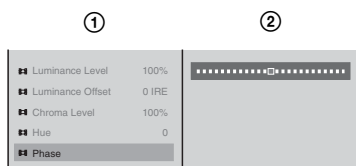
You can also close the menu by pressing the same ACCESS button again.

## Adjusting the Clock Phase of RGB Signals

Of the video signals assigned to the selection buttons, adjust the RGB signals input to the RGB input connectors.

Perform this adjustment to display small characters clearly.

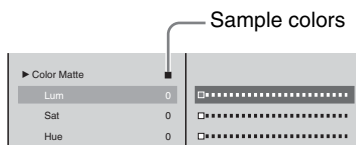
- 1 Press the ACCESS button in the same column as the selection button for the RGB signal you want to adjust.
- 2 ① In the top menu, select [Phase], and confirm; ② adjust with the slider.



## Adjusting Color Matte

Adjust the colors used for color matte, used as single-color backgrounds and so on.

- 1 Press INT in the NEXT selection buttons.  
The INT source selection menu appears.
- 2 ① Select the item (displayed under [Color Matte]) to be adjusted, and confirm; ② adjust with the sliders.  
As you move the sliders, the sample colors shown in the menu change, so you can check while making the adjustment.



The items you can adjust are as follows.

**[Lum]:** Adjusts the luminance.

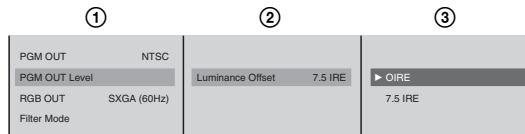
**[Sat]:** Adjusts the saturation.

**[Hue]:** Adjusts the hue.

## Applying an Offset to the Program Output Video

You can apply a 7.5 IRE offset to the program output video.

- 1 Press the MENU button.
- 2 In the top menu, select [Video Output].
- 3 ① Select [PGM OUT Level], and confirm; ② select [Luminance Offset] from the submenu, and confirm; ③ select [7.5 IRE], and confirm.



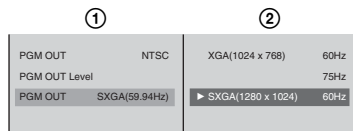
### Note

Because there is no offset function for PAL, this setting is only enabled when [PGM OUT] is set to [NTSC].

## Setting the Resolution and Frequency of the RGB Output Signal

Set the format of the signal output from the RGB output connectors on the rear panel.

- 1 Press the MENU button.
- 2 In the top menu, select [Video Output].
- 3 ① Select [RGB OUT], and confirm; ② select the combination of image size and frequency, and confirm.



- 4 Press the MENU button to close the menu.

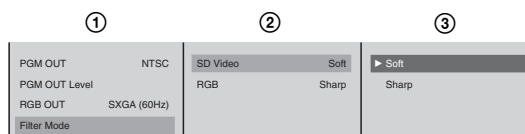
### Note

We recommend that you set this to 60 Hz when the video output signal is NTSC format, and 75 Hz when the signal is PAL format.

## Applying Filters to the Program Output Video

Adjust this setting when the program output video appears blurry or the picture flickers.

- 1 Press the MENU button.
- 2 In the top menu, select [Video Output].
- 3 ① Select [Filter Mode], and confirm; ② select [SD Video] or [RGB] from the submenu, and confirm; ③ select [Soft] or [Sharp], and confirm.



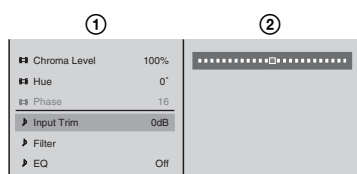
### Note

Select [Sharp] when the picture is blurry and [Soft] when the picture flickers.

## Adjusting the Audio Input Signal Levels

You can adjust individual channels of the audio signals input to this unit.

- 1 Press the ACCESS button for the channel fader to which the audio you want to adjust is assigned.
- 2 ① In the top menu, select [Input Trim]; ② adjust with the sliders.



- 3 Press the ESC button to close the ACCESS menu.

### Note

You can also close the menu by pressing the same ACCESS button again.

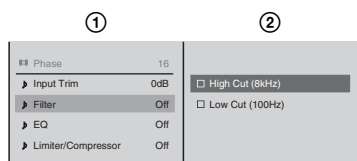
## Cutting High Frequency or Low Frequency

This cuts high frequencies or low frequencies.  
Use these settings to suppress noise.

### Notes

- To cut high frequencies select [High Cut], and to cut low frequencies select [Low Cut].
- You can set both [High Cut] and [Low Cut].

- 1 Press the ACCESS button in the same column as the channel fader to which the audio you want to adjust is assigned.
- 2 ① In the top menu, select [Filter]; ② select [High Cut (8kHz)] or [Low Cut (100Hz)].



- 3 Press the ESC button to close the ACCESS menu.

## Adjusting the Equalizer

You can adjust the audio quality by using the equalizer to set frequencies in the high, middle, and low audio ranges.

- 1 Press the ACCESS button in the same column as the channel fader to which the audio you want to adjust is assigned.
- 2 ① In the top menu, select [EQ]; ② select [On], and confirm.

①		②	
Input Trim	0dB	Off	
Filter		On	
EQ	Off	High Freq.	XXkHz
Limiter/Compressor	Off	High Level	XXdB
Pan	CNT	Middle Freq.	XXkHz
PGM OUT	On	Middle Level	XXdB
AUX1 OUT	Off	Low Freq.	XXkHz
AUX2 OUT	Off	Low Level	XXdB

- 3 ① Select an adjustment item from the list, select [On], and confirm; ② adjust with the slider.

①		②	
Input Trim	0dB	Off	
Filter		On	
EQ	Off	High Freq.	XXkHz
Limiter/Compressor	Off	High Level	XXdB
Pan	CNT	Middle Freq.	XXkHz
PGM OUT	On	Middle Level	XXdB
AUX1 OUT	Off	Low Freq.	XXkHz
AUX2 OUT	Off	Low Level	XXdB

The items you can adjust are as follows.

**[High Freq.]**: Adjusts the center frequency of the high-frequency band.

**[High Level]**: Adjusts the level of the high-frequency band.

**[Middle Freq.]**: Adjusts the center frequency of the middle-frequency band.

**[Middle Level]**: Adjusts the level of the middle-frequency band.

**[Low Freq.]**: Adjusts the center frequency of the low-frequency band.

**[Low Level]**: Adjusts the level of the low-frequency band.

- 4 Press the ESC button to close the ACCESS menu.

## Using the Limiter or Compressor

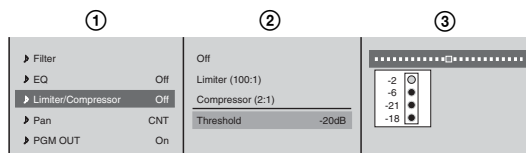
Use the limiter or compressor when inputting audio with large level differences. The limiter restricts the peak components of an audio signal with large level differences. It also compresses the sound exceeding a certain threshold volume so that the threshold level is not exceeded, thus preventing excess outputs. The compressor gently compresses the level of audio at and above the threshold level, thus smoothing out an audio signal with large level differences.

- 1 Press the ACCESS button in the same column as the channel fader to which the audio you want to adjust is assigned.

- 2 ① In the top menu, select [Limiter/Compressor]; ② select [Limiter] or [Compressor], and confirm; ③ with the threshold slider set the level at which the limiter or compressor takes effect.

**Note**

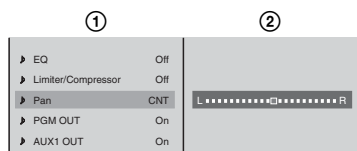
A gain reduction meter appears to the right of the menu, and shows the current compression.



- 3 Press the ESC button to close the ACCESS menu.

## Adjusting the Audio Left and Right Channel Balance

- 1 Press the ACCESS button in the same column as the channel fader to which the audio you want to adjust is assigned.
- 2 ① In the top menu, select [Pan]; ② adjust the left and right channel balance with the slider.



- 3 Press the ESC button to close the ACCESS menu.

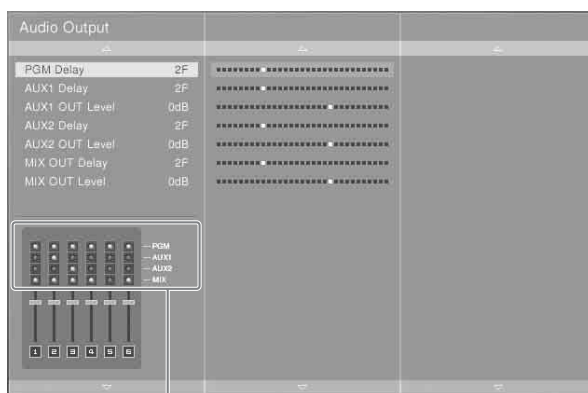
## Adjusting the Output Levels for Each Destination

Adjust the output audio level for each destination.

- 1 Press the MENU button.
- 2 In the top menu, select [Audio Output].  
The [Audio Output] menu appears.

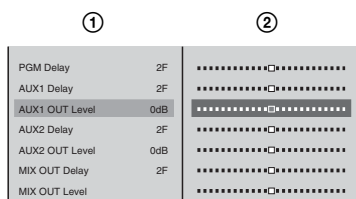
**Note**

This menu graphically displays the output destination for each channel set in “Determining the Audio Signal Output Destinations” (page 77).



Output destination indication

- 3** ① Select the item you wish to adjust the level, and confirm; ② adjust with the slider.



The items for which you can adjust the level are as follows.

**[AUX1 OUT Level]:** Sets the output level for the audio output from the AUX1 connector.

**[AUX2 OUT Level]:** Sets the output level for the audio output from the AUX2 connector.

**[MIX OUT Level]:** Sets the output level for the audio from the MIX output.

**Note**

Adjust the audio level output from the PGM audio output connectors using the PGM fader on the front panel (page 74).

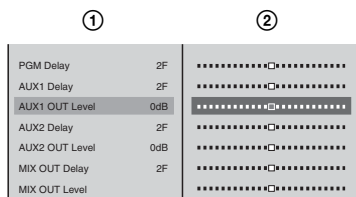
- 4** Press the MENU button to close the menu.

## If the Output Video Is Delayed with Respect to the Audio

If the output video is delayed with respect to the audio, by delaying the audio you can resynchronize it with the video.

- 1** Connect monitor devices to the PGM video output connectors.
- 2** Connect devices to the PGM/AUX/MIX audio output connectors.
- 3** Press the MENU button.
- 4** In the top menu select [Audio Output].  
The [Audio Output] menu appears.

- 5 ① Select the item connected to the connector in step 2, and confirm;  
 ② while watching the video connected in step 1, adjust it with the slider.



The items for which you can adjust the delay time are as follows.

**[PGM Delay]:** Sets the delay time for the program output audio in frame units.

**[AUX1 Delay]:** Sets the delay time for the audio output from the AUX1 connector in frame units.

**[AUX2 Delay]:** Sets the delay time for the audio output from the AUX2 connector in frame units.

**[MIX OUT Delay]:** Sets the delay time for the audio from the MIX output in frame units.

#### Cautions

- Adjusting the delay time may cause noise to occur.
- Video displayed on the PGM viewer lags several frames behind the video output from the PGM video output connectors.

- 6 Press the MENU button, to close the menu.

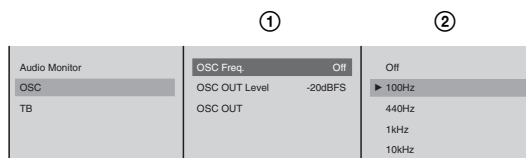
## Adjusting the Output Using the Oscillator Signal

This is for setting the output oscillator signal for use during adjustment.

- 1 Press the MENU button.
- 2 In the top menu, select [Audio Utility].
- 3 Select [OSC], and confirm, and set the oscillator signal output.

#### Setting the oscillator signal frequency

① Select [OSC Freq.], and confirm; ② select the frequency from the submenu, and confirm.



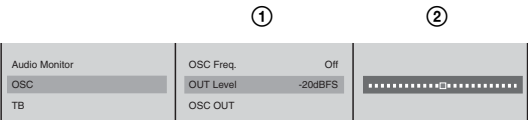
#### Note

When a selection other than [Off] is made, the DIM button lights, and the levels of the internal speakers, the headphones, and monitor outputs are automatically reduced.



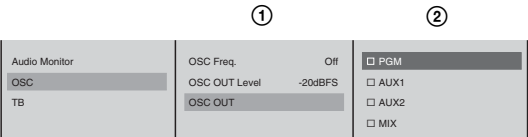
### Setting the oscillator signal output level

① Select [OUT Level], and confirm; ② adjust the output level with the slider.



### Setting the oscillator signal output destination

① Select [OSC OUT], and confirm; ② select the output destination to output the oscillator signal, and confirm.



#### Note

You can select multiple output destination.

- 4 Press the MENU button to close the menu.

# Internal Hard Disk File Operations

Using the [File Manager] menu, you can carry out the following file operations.

- Importing graphics files and logo files from a “Memory Stick”
- Deleting graphics files imported to this unit
- Checking the remaining capacity of the internal hard disk

## Importable Files

You can import graphics files in the sizes listed below. Depending on the size of a graphics file, it may be resized on import.

### Import results by file size for CG and LOGO files

Sizes allowed	Import results
720 × 540 (CG)	Resized to 1280 × 960, and centered vertically
960 × 720 (CG)	Resized to 1280 × 960, and centered vertically
1024 × 768 (CG)	Resized to 1280 × 960, and centered vertically
1280 × 1024 (960) (CG)	Not resized (used as is)
160 × 120 (LOGO)	Not resized (used as is)

### Importable file types and extensions

File type	File extension
Targa	.tga .vda .icb .vst
Tiff	.tif .tiff
BMP	.bmp
JPEG	.jpeg .jpg .jpe

#### Caution

If you create a graphics file with Microsoft PowerPoint for use in downstream keying or luminance keying, save it in BMP format.

## Importing Graphics Files

By importing a graphics file to the internal hard disk, you can use it for downstream keying or luminance keying.

- 1 Insert the “Memory Stick” holding the graphics file in the “Memory Stick” slot in the side panel.

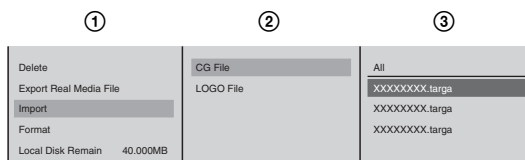
#### Cautions

- Use a “Memory Stick” that has been formatted using this unit.
- The graphics file must have been placed in the designated folder MSSONY/PRO/LPS/ANYCAST/CG for graphics files.

*For details of “Memory Stick” formatting, refer to page 94.*

- 2 Press the MENU button.

- 3 In the top menu, select [File Manager].
- 4 ① Select [Import], and confirm; ② select [CG File], and confirm; ③ select the graphics file to be imported, and confirm.



### Caution

Characters other than alphanumeric characters cannot be displayed correctly.

This imports the graphics file.

When the import is completed, a completion message appears.

- 5 Press the ENTER button.
- 6 Press the MENU button to close the menu.

### Notes

The imported graphics file can be used in “Using the Downstream Key (DSK) Function to Add Text or an Image” (page 57) or “Using Luminance Keying” (page 62).

## Importing Logo Files

By importing a logo file to the internal hard disk, you can display an image (logo) for the purpose of copyright protection.

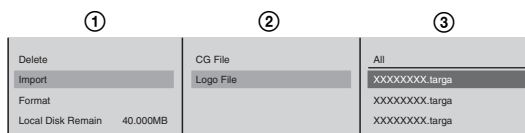
- 1 Insert the “Memory Stick” holding the logo file in the “Memory Stick” slot in the side panel.

### Cautions

- Use a “Memory Stick” that has been formatted using this unit.
- The logo file must have been placed in the designated folder MSSONY/PRO/LPS/ANYCAST/LOGO for logo files.

*For details of “Memory Stick” formatting, see page 94.*

- 2 Press the MENU button.
- 3 In the top menu, select [File Manager].
- 4 ① Select [Import], and confirm; ② select [Logo File], and confirm; ③ select the logo file to be imported, and confirm.



### Caution

Characters other than alphanumeric characters cannot be displayed correctly.

This imports the logo file.

When the import is completed, a completion message appears.

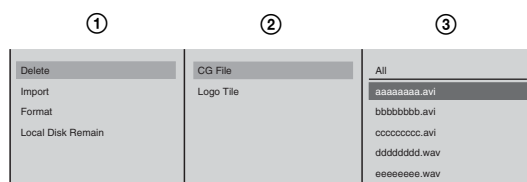
- 5 Press the ENTER button.
- 6 Press the MENU button to close the menu.

### Notes

The imported logo file can be used in “Showing a Logo on the Screen” (page 60).

## Deleting Files

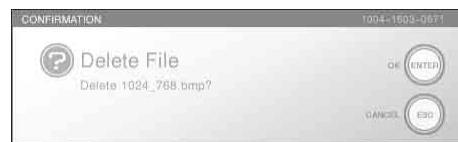
- 1 Press the MENU button.
- 2 In the top menu, select [File Manager].
- 3
  - ① Select [Delete], and confirm;
  - ② select [CG File] or [Logo File], and confirm;
  - ③ select the file to be deleted, and confirm.



### Notes

- The file names are arranged in alphabetical order.
- If you select [All] at step ③, all files are deleted.

The following confirmation message appears.



- 4 Press the ENTER button.  
This deletes the file.
- 5 Press the MENU button to close the menu.

# Checking the Internal Hard Disk Remaining Capacity

- 1 Press the MENU button.
- 2 In the top menu, select [File Manager].  
In the [File Manager] menu, the remaining capacity is shown as [Local Disk Remain].



# Formatting a “Memory Stick”

Format a “Memory Stick” so that it can be used with this unit.

In this unit, use the following “Memory Stick” types.

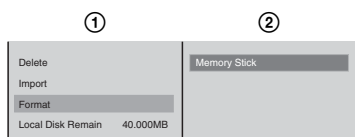
“Memory Stick” type	Use for reading/ writing on this unit
“Memory Stick” “Memory Stick” (with memory select function) “Memory Stick Duo”	Yes
“Memory Stick” (Magicgate/high-speed data transfer support) “Memory Stick Duo” (Magicgate/high-speed data transfer support)	Yes*
Magicgate “Memory Stick” Magicgate “Memory Stick Duo”	Yes*

\* It is not possible to read or write data that requires the Magicgate function.

## Cautions

- Operation with all types of Memory Stick media is not guaranteed.
- It is not possible to use “Memory Stick PRO” or “Memory Stick PRO Duo” in this unit.

- 1 Insert the “Memory Stick” in the “Memory Stick” slot on the side panel.
- 2 Press the MENU button.
- 3 In the top menu, select [File Manager].
- 4 ① Select [Format], and confirm; ② [Memory Stick], and confirm.



The following message appears.



**5** Press the ENTER button.

The formatting begins.

When the formatting ends, the following message appears.



**6** Press the ENTER button.

The message disappears.

**Note**

Formatting a “Memory Stick” on this unit automatically creates the following directory structure on the “Memory Stick”.

```
MSSONY/PRO/LPS/ANYCAST/INSTALL
                                /JOB
                                /LICENCE
                                /CG
                                /LOGO
                                /REAL
                                /EDL
```

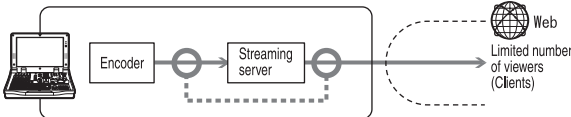
# Streaming

You can encode the program output into Real Media streaming file format (.rm) within this unit, and broadcast it on the network.

## What Is Streaming?

Streaming is one of the transmit multimedia data. Video and audio data is sent across a network, and may be played in real time.

To carry out live streaming with this unit, the program video and audio is encoded in the format used by Real Player, and transmitted.

Transmission method	Features
Using this unit as the server	<ul style="list-style-type: none"> <li>The results of encoding are sent to the streaming server in the unit, and the viewers access this unit to view the live contents.</li> </ul>  <ul style="list-style-type: none"> <li>Since viewers directly access this unit, the number of viewing clients and the data transfer rates are limited by the network linking this unit to the viewers.</li> <li>There is no cost for a streaming server.</li> </ul>

### Caution

You cannot encode the program output into a format other than Real Media streaming file format (.rm). If you want to encode into another format, you need to input the program output of this unit into another encoder and encode it.

## Configuring the Network Settings

With the network environment set up, make the network settings for this unit. Ask your network administrator for further information about your network.

- 1 Connect a network cable to the NETWORK connector of this unit.

### Caution

In order to meet EMC standards, use an STP (shielded twisted pair) type Ethernet cable.

- 2 Press the MENU button.
- 3 In the top menu, select [Network].
- 4 Set the following items in the submenu.



### Entering the host name

① Select [Host Name], and confirm; ② enter the host name in the input box, and confirm.

The screenshot shows a menu with 'Apply' at the top. Below it, 'Host Name' is highlighted. Other options include 'IP Setting', 'DNS Setting', and 'MAC Address'. To the right of the menu, a text input field contains 'XXXXXXXXXX'.

Not more than 15 characters  
The first character must be a letter.

### Setting the IP address

① Select [IP Setting], and confirm; ② make a selection, and confirm.

The screenshot shows the 'IP Setting' menu. 'Manual' is selected under the 'DHCP' section. The 'Off' section is also visible. To the right, there are three input fields for IP Address, Subnet Mask, and Default Gateway, each with a placeholder 'XXX.XXX.XXX.XXX'.

**[Off]:** if IP address not set

**[DHCP]:** if address automatically obtained from DHCP server

**[Manual]:** to input address manually

When [Manual] is selected, enter the following items, and confirm.

Input the default gateway if required.

**[IP Address]:** Enter the IP address.

**[Subnet Mask]:** Enter the subnet mask.

**[Default Gateway]:** Enter the default gateway address.

### Making DNS settings

① Select [DNS Setting], and confirm; ② make a selection, and confirm.

The screenshot shows the 'DNS Setting' menu. 'Manual' is selected under the 'DHCP' section. The 'Off' section is also visible. To the right, there are three input fields for Domain Name, Primary DNS, and Secondary DNS, each with a placeholder '...'.

**[Off]:** if DNS not set

**[DHCP]:** if address automatically obtained from DHCP server

**[Manual]:** to input address manually

When [Manual] is selected, enter the following items, and confirm.

**[Domain Name]:** Enter the domain name. Enter from 3 to 63 alphanumeric characters. The first character must be a letter.

**[Primary DNS]:** Enter the address of the primary DNS server.

**[Secondary DNS]:** Enter the address of the secondary DNS server (Enter as required).

**5** Select [Apply], and confirm.

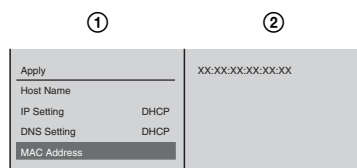
A network setting update message appears.

### Note

If the network settings are not changed, [Apply] is grayed out, and cannot be selected.

### Displaying the MAC address

Select [MAC Address] to display the MAC address of the internal network card.



- 6 Press the MENU button to close the menu.

# Setting Live Streaming Transmission

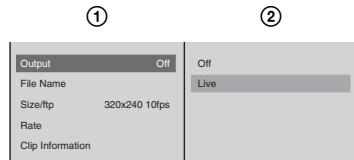
## Setting the menu

These settings make it possible for the program output from this unit to be encoded in Real Media streaming file format (.rm), and transmitted by live streaming.

- 1 Press the MENU button.
- 2 In the top menu, select [Streaming].
- 3 Set the following items in the submenu.

### Selecting live transmission

- ① Select [Output], and confirm;
- ② select [Live], and confirm.



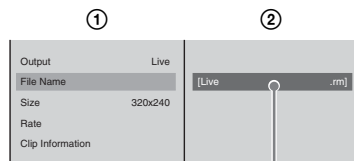
### Caution

When the above operation is done, the PGM viewer on the operation screen becomes smaller.



### Entering the file name

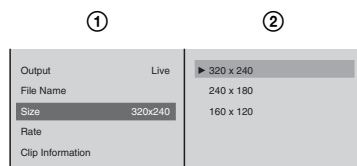
- ① Select [File Name], and confirm;
- ② enter the file name in the input box, and confirm.



Not more than 20 characters

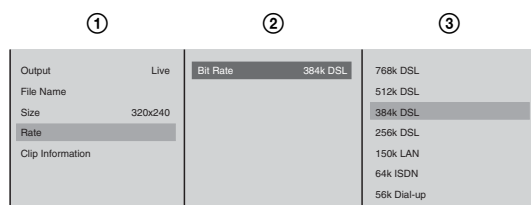
## Setting the video size

① Select [Size], and confirm; ② select the size of video to be output, and confirm.



## Setting the transfer rate

① Select [Rate], and confirm; ② select [Bit Rate], and confirm; ③ select the transfer rate, and confirm.

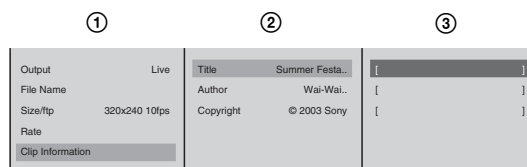


### Note

- The actual transfer rates are as follows.
  - 768k DSL→700 kbps(Video:603.5 kbps Audio:96.5 kbps)
  - 512k DSL→450 kbps(Video:353.5 kbps Audio:96.5 kbps)
  - 384k DSL→350 kbps(Video:285.9 kbps Audio:64.1 kbps)
  - 256k DSL→225 kbps(Video:180.9 kbps Audio:44.1 kbps)
  - 150k LAN→150 kbps(Video:118.0 kbps Audio:32.0 kbps)
  - 64k ISDN→50 kbps(Video:39.0 kbps Audio:11.0 kbps)
  - 56k Dial-up→34 kbps(Video:26.0 kbps Audio:8.0 kbps)
- The following are recommended for combinations of video size and transfer rate:
  - 320 × 240→384k DSL
  - 240 × 180→256k DSL
  - 160 × 120→150k DSL

## Entering content information

① Select [Clip Information], and confirm; ② select the item to set, and confirm; ③ enter the information in the input box, and confirm.



The items you can set are as follows.

**[Title]:** Enter a title of not more than 50 characters.

**[Author]:** Enter an author name of not more than 100 characters.

**[Copyright]:** Enter an owner name of not more than 100 characters.

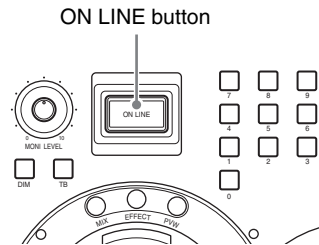
# Starting and Stopping Streaming

## Starting streaming

- 1 Make the settings described in “Configuring the Network Settings” (page 96) and “Setting Live Streaming Transmission” (page 99).

- 2 Press the ON LINE button.

The ON LINE button lights red, and a transmission starts.



### Caution

Be sure to have a client computer available to check that a signal is being transmitted, using Real Player.

## Stopping streaming

Hold down the ESC button, and press the ON LINE button.

The ON LINE button goes off, and transmission ends.

### Note

It is not possible to stop while the status is shown as “Starting.” Once it shows “Running” you can stop.

## Settings Required for Viewing Streaming

This section describes how to configure settings on the computer for viewing material streamed from this unit. Perform these settings on network-ready computers.

### Downloading Real Player

Download Real Player from the Web site (<http://www>) of RealNetworks, Inc.

### Viewing streamed material from the unit

- 1 Start Real Player.
- 2 Click [Open] on the [File] menu.
- 3 Enter the URL of the display area on the unit used for streamed material “rtsp://xxx. xxx. xxx. xxx/broadcast/xxx.rm”.
- 4 Press the Enter key.

**Note**

Select [Preferences] on the [Tools] menu in Real Player, and configure your connection settings in accordance with your network environment.

### Guidelines for number of Real Player connections depending on transfer rate

The following table shows the number of Real Player connections possible for each transfer rate.

The figures are guidelines only, and depend on the operating conditions of the network.

Transfer rate	768k/512k	384k/256k	150k/64k/56k
Number of Real Player connections	5	10	20

### When video/audio deteriorates or stops during streaming

Streaming video/audio deteriorates or stops primarily due to network traffic, the player software or settings, or insufficient processing power in the computer running the player software.

If such problems occur, check the above.

### When the message “Please wait for a while and reconnect” appears

If you attempt to connect to the unit with Real Player when the server is running (such as when making network settings or when making settings for [Live] in [Output] under [Streaming] on the settings menu) but the streaming encoder is not running (the ON LINE button has not been pressed), the standby clip “Please wait for a while and reconnect” appears in the player.



## Placing Streaming Links in a Web Site

This section describes how to offer streaming material to viewers using a Web page.

Perform these settings on network-ready computers.

- 1 Open a text editor such as Notepad, and enter the URL for the streaming content in Real Media format as shown below.  
rtsp://IP address of the unit (Helix Server)/broadcast (path)/specified filename.rm  
Example: rtsp://192.168.0.45/broadcast/live.rm
- 2 Save the file with the extension “.ram”.

**Note**

This file becomes the metafile of the Real Media format.

- 3** Upload to the Web server the metafile saved in step 2.
- 4** Insert a link to the metafile in the Web page on which you want to publish the stream.





## Maintenance

This section describes how to check the operating software version, and upgrade.

### Checking the Operating Software Version

You can check the version number of the operating software and hardware constituting this unit and the interfaces modules installed in this unit, as well as the unit's serial number.

- 1 Press the MENU button.
- 2 In the top menu, select [Version], and then check the displayed version information.

The items you can check are as follows.

**Application Software:** you can check the version number of the operating software.

**Effect Board:** You can check the firmware and hardware version of the effects board.

**Audio Board:** You can check the firmware and hardware version of the audio board.

**Interface Modules 1 to 3:** You can check the firmware and hardware version of the rear panel interface modules.

**Panel:** You can check the firmware version of the front panel.

**Serial No. XXXXX**

#### Caution

The interface module version only appears when the module is installed.

- 3 Press the MENU button to close the menu.

# Upgrading the Operating Software

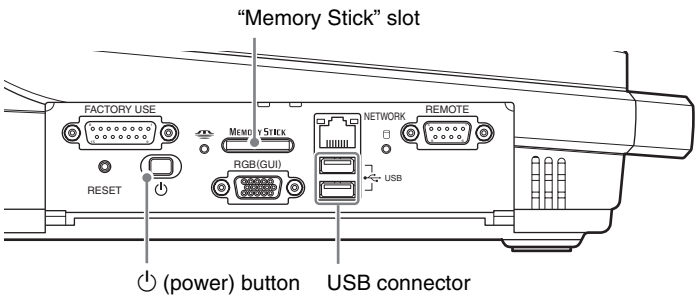
This section describes how to upgrade when there are improvements to the operating software and hardware firmware.

## Information on upgrades

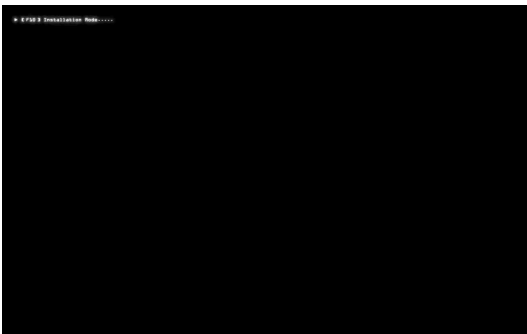
Information on software upgrades is available from the Anycast Station portal site operated by Sony.  
The following site also provides links to the portal site and information on upgrades.  
<https://www.ecspert.sony.biz/ecsite/>

## Upgrade procedure

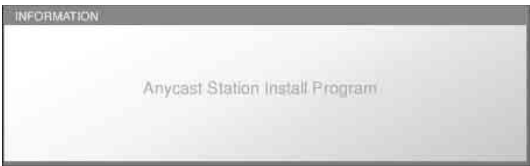
- 1 Insert a “Memory Stick” or USB flash memory holding the installation program in the “Memory Stick” slot or USB connector on the side panel.
- 2 Press the ⏻ (power) button on the side panel.  
This powers on the unit.



- 3 After the startup screen, press the F10 (Fn+0) key on the keyboard while the message is displayed indicating that function key input is possible.



The following screen appears.



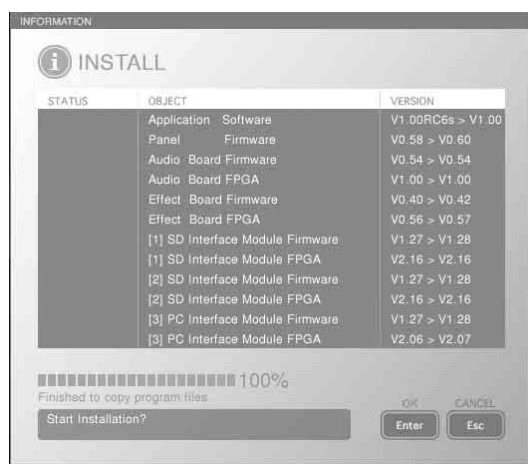
### Caution

If the following warning message appears even though the media is correctly inserted, use the following procedure.



- ① Press the Esc key on the keyboard to delete the message.
- ② Turn off the power to the unit.
- ③ Remove the media, then power on this unit.
- ④ Press the F10 key on the keyboard, as described in step 3 of the procedure for upgrading.
- ⑤ After the above warning message has appeared, insert the media, and press the Enter key on the keyboard.

Next the “INSTALL” screen appears, and a message “Copying Program files...”



- 4 Check that the progress indication has reached 100%, and press the keyboard ENTER key.

The installation starts.

Installation does not begin if you click the Enter button on the front panel.



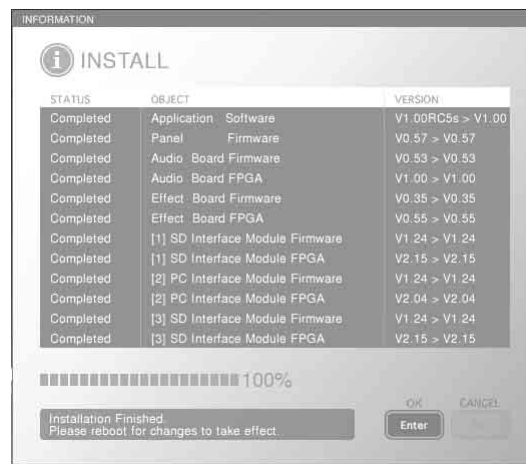
### Note

In the “STATUS” column, an asterisk (\*) blinks while the operating software is being installed. When installation ends successfully, “Complete” is displayed, and if installation has failed, “Error” is displayed instead.

### Caution

Do not turn the unit off or remove a “Memory Stick” or USB flash memory from the unit while data is being read or written; otherwise the file may be destroyed.

When the installation completes, the following message appears.



- 5 Check the installation completed message, then press the keyboard ENTER key.

This powers off the unit.

When you next power on the unit, the operating software starts.

### Caution

- During the installation, if the “STATUS” indication shows “Error”, repeat the installation process from the beginning. If this does not clear the problem, consult your dealer or your Sony service representative.

- Users who purchased the optional BKAW-550/BKAW-570 should install the optional equipment and then perform the same version upgrade.

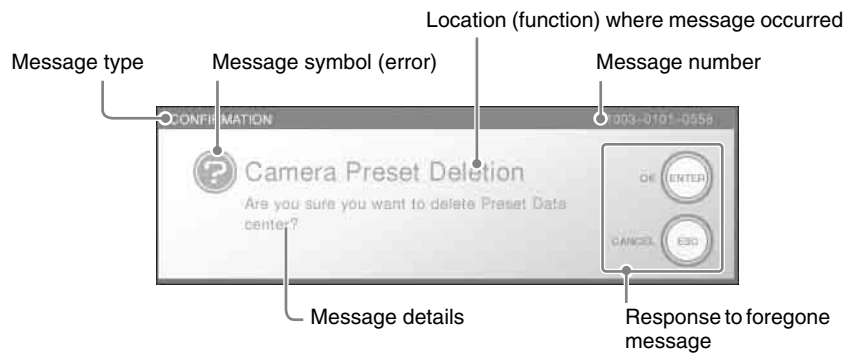


# Messages

If any problem occurs during operation of this unit, a message appears. Before asking your dealer for help, use the information in this section to try to solve the problem. If this is not successful, make a note of the displayed message number, and consult your dealer or your Sony service representative.

## Message Structure

The messages that appear during operation of this unit consist of the following parts.



To select [OK], press the ENTER button or Enter key on the keyboard.

To select [Cancel], press the ESC button or Esc key on the keyboard.

## Message types

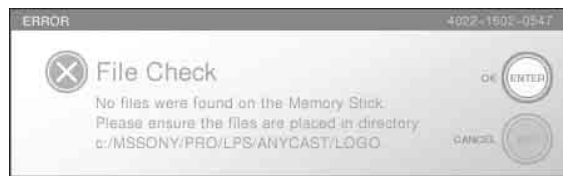
The significance of the message type is as follows.

### Error message

Message type: ERROR

Message number: 4XXX-YYYY-ZZZZ (begins with 4)

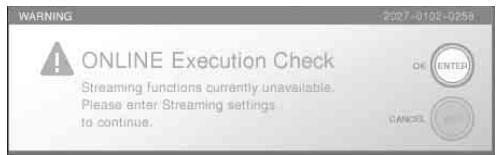
As a result of an operation, an error occurred.



**Warning message**

message type: WARNING  
message number: 2XXX-YYYY-ZZZZ (begins with 2)

This appears when a preliminary check before carrying out an operation discovered a problem.



**Confirmation message**

Message type: CONFIRMATION  
Message number: 1XXX-YYYY-ZZZZ (begins with 1)

This type of message requests user confirmation, and can be cancelled.



**Informational message**

Message type: INFORMATION  
Message number: 0XXX-YYYY-ZZZZ (begins with 0)

This provides information to the user.



# List of Messages

If a message on this list is displayed and still appears after trying the operation again, consult your dealer or your Sony service representative.

Number	Message text
2003	Audio Signal (SPDIF) from MPU Board is unlocked.
4001	An error occurred during formatting.
4005	An error occurred while deleting the file.
4007	An error occurred while importing.
4008	An error occurred while opening CG file.
4010	An error occurred while applying Network Settings.
4012	Unable to start due to Hardware Fault.
4013	
4014	
4016	
4017	
4020	
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4048	
4069	

If the following message appears, immediately turn off the power to the unit and consult your dealer or your Sony service representative.

Number	Message text
4045	A fault has developed with the internal fan.
4046	To avoid damage please shutdown the system as soon as possible.



# Troubleshooting

Check this section before consulting your dealer or your Sony service representative. If the unit still does not function properly, consult your dealer or your Sony service representative.

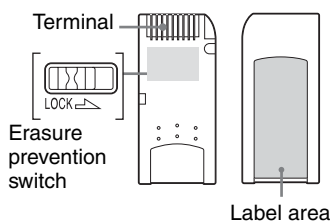
Problem	Possible causes	Possible solutions	See page
<b>Video-related</b>			
Video does not appear in the source viewer.	The connected device is not turned on.	Turn the connected device on.	—
	The cables are not connected properly.	Check that the cables are connected properly.	34
	The input signal is not assigned correctly.	Check that the input signal is assigned correctly.	41
Video does not appear in the PGM viewer.	The FTB button is lit.	Turn off the FTB button.	55
The PGM does not switch.	The [KEY ON] indicator on the operation screen is lit red.	While the KEY button on the front panel is lit green, press the CUT button.	62
<b>Audio-related</b>			
No sound is emitted from the speakers or headphones (the audio level meter does not move).	The connected device is not turned on.	Turn the connected device on.	—
	The cables are not connected properly.	Check that the cables are connected properly.	34
	The input signal is not assigned correctly.	Check that the input signal is assigned correctly.	41
	The CH ON button is not lit.	Turn on the CH ON button.	74
	The audio channel fader has been left turned down.	Turn up the audio channel fader.	74
	The PGM fader has been left turned down.	Turn up the PGM fader.	74
	The monitor destination is set to AUX.	Set the monitor destination displayed below the audio level meter to PGM.	79
No sound is emitted from the speakers or headphones (the audio level meter moves).	The monitor output level is turned down.	Turn up the monitor output level with the monitor level adjustment knob.	74
	The TB button or the DIM button is lit.	Turn off the TB button or the DIM button.	76
No sound is emitted from the internal speakers.	A device is connected to the monitor output connector.		
<b>DV input</b>			
Noise occurs in the video or audio. No video or audio is output.	The signal is not being received clearly.	Disconnect and then reconnect the cables. After reconnecting the cables, restart the connected DV device and the unit.	—

Problem	Possible causes	Possible solutions	See page
<b>Luminance keying and downstream keying</b>			
Keying does not work.	Keying is hidden because of the Crop setting.	Change the Crop setting.	64
	Keying is hidden because of the Clip, Gain, or Density settings.	Change the values set for Clip, Gain, or Density.	59, 63
Keying adjustments do not take effect.	A keying source created with PowerPoint was saved in Tiff format.	Save keying sources created with PowerPoint in BMP format.	90
Luminance keying does not disappear when the KEY button is pressed.	The KEY button is not an On/Off button for luminance keying.	Make the KEY button light green, and perform a transition, such as with the CUT button.	62
Keying does not disappear when the DSK button is pressed.	Luminance keying is being performed.	Make the KEY button light green, and perform a transition, such as with the CUT button.	62
Keying does not disappear when a transition is performed with the KEY button lit.	Downstream keying is being performed.	Turn off the DSK button.	58
<b>Logos</b>			
Keying does not work.	Keying is hidden because of the Clip, Gain, or Density settings.	Change the values set for Clip, Gain, or Density.	61
<b>Camera controls</b>			
The camera cannot be controlled.	The VISCA cables are not connected properly.	Check that the VISCA cables are connected properly (to the VISCA connector on the unit and the VISCA IN connector on the camera).	34
	The camera has not been registered for control.	Register the camera for control.	66
	The NEXT selection button assigned to the video feed from the camera you want to control is not selected.	Select the NEXT selection button assigned to the video feed from the camera you want to control.	68
	The camera status is No Response.	Reset the camera.	72
The camera preset disappears.	The backup switch on the camera (EVI-D100/EVI-D100P) is not set to ON.	Set the backup switch on the camera (EVI-D100/EVI-D100P) to ON before saving the preset.	68
<b>Streaming media</b>			
The video message "Please wait for a while and reconnect" appears in Real Player.	The ON LINE button has not been pressed.	Press the ON LINE button.	102
	The file name is wrong.	Check that the file name set on this unit and the file name set in Real Player are the same.	99, 101, 102
The ON LINE button does not turn off.	Only the ON LINE button is pressed.	Hold down the ESC button and press the ON LINE button.	102

# “Memory Stick” Media

## Notes on using “Memory Stick” media

- When you set the “Memory Stick” erasure prevention switch to “LOCK”, data cannot be recorded, edited, or deleted.



The position and shape of the write-protect switch may differ between the various types of “Memory Stick”.

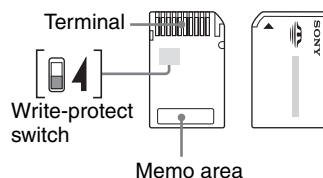
- Do not remove the “Memory Stick” while it is reading or writing data.
- Data may be damaged if:
  - The “Memory Stick” is removed or the AWS-G500 is turned off while reading or writing.
  - You use the “Memory Stick” in a location subject to the effects of static electricity or electric noise.
- We recommend that you back up important data recorded on the “Memory Stick”.
- Do not affix anything other than the supplied label to the “Memory Stick” label area.
- Affix the label so that it does not stick out beyond the label area.
- When storing or carrying a “Memory Stick”, keep it in its original case.
- Do not touch the terminal of the “Memory Stick” with anything, including your fingers or metallic objects.
- Do not strike, bend, or drop the “Memory Stick”.
- Do not disassemble or modify the “Memory Stick”.
- Do not allow the “Memory Stick” to get wet.
- Do not use or store the “Memory Stick” in locations subject to:
  - Extreme heat, such as in a closed car parked in the sun.
  - Direct sunlight.
  - Humidity or corrosive substances.

## About data

- When you set the “Memory Stick” erasure prevention switch to “LOCK”, data such as images and mails cannot be recorded, edited, or deleted. Be sure to unlock the switch before transferring or copying data on the AWS-G500 to the “Memory Stick”, or erasing data on the “Memory Stick”.
- We recommend that you make a backup copy of important data on another “Memory Stick” or on a hard disk using a computer.

## Notes on using “Memory Stick Duo”

- Use a pointed object, such as a ballpoint pen, to move the “Memory Stick Duo” write-protect switch.
- Do not write forcefully on the “Memory Stick Duo” memo area.



## Notes on using the Memory Select function

- You cannot use multiple memory blocks simultaneously or continuously.
- Never operate the Memory Select switch when the “Memory Stick” is inserted in the slot of the AWS-G500, as it may cause damage. Sony Corporation assumes no liability for failure resulting from such operation.
- Make sure that the Memory Select switch is properly positioned to the side. When the switch is not positioned properly, the AWS-G500 may be damaged or malfunction.
- Before inserting the “Memory Stick” in the slot of the AWS-G500, make sure that the memory you want to use is already selected.
- A “Memory Stick” with the Memory Select function allows the user to select the internal memory of the “Memory Stick” with the selector switch. Care must be taken in the following cases as the supported devices only detect the selected memory:

- Formatting is only processed for the selected memory.
- The remaining memory is only indicated for the selected memory.
- Errors are only displayed for the selected memory and are detected separately from the unselected memory.

# Specifications

## General

Power Requirements	AC 100 V to 240 V, 50/60 Hz
Power Consumption	1.6 A-0.8 A
Operating Temperature	5°C to 40°C (41 to 104°F)
Dimensions (w × h × d)	424 × 114 × 339 mm
Mass	Approximately 17 lb 10 oz (8.0 kg)

## Video Signals

### VIDEO INPUTS (standard configuration)

Composite	BNC type × 4 Video: 1.0 Vp-p, 75 Ω Sync negative
S-video	DIN type × 4 Y: 1.0 Vp-p, 75 Ω Sync negative C: 0.286 Vp-p at burst, 75 Ω (NTSC) C: 0.3 Vp-p at burst, 75 Ω (PAL)
DV IN*	i.Link IEEE 1394 6-pin Type × 4 IEC 61883-2 equiv.
RGB	D-Sub Shrink 15-pin Type × 2 (Female) XGA (1024 × 768, 60 Hz, 75 Hz), SXGA (1280 × 1024, 75 HZ 60 Hz) VESA (DMT) compliant

### VIDEO OUTPUTS

Composite	BNC type × 1 Video: 1.0 Vp-p, 75 Ω Sync negative
S-video	DIN type × 1 Y: 1.0 Vp-p, 75 Ω Sync negative C: 0.286 Vp-p at burst, 75 Ω (NTSC) C: 0.3 Vp-p at burst, 75 Ω (PAL)
DV OUT*	i.Link IEEE 1394 6-pin Type × 4 IEC 61883-2 equiv.

RGB	D-Sub Shrink 15-pin Type × 2 (Female) XGA (1024 × 768 60 Hz, 75Hz) SXGA (1280 × 1024 60Hz)
REF OUT	BNC Type × 2 Sync: 0.286 Vp-p, 75 Ω (NTSC) Sync: 0.3 Vp-p, 75 Ω (PAL) C: 0.286 Vp-p at burst, 75 Ω (NTSC) C: 0.3 Vp-p at burst, 75 Ω (PAL)

DV OUT*	i.LINK: IEEE 1394 (6 pins) × 4 IEC 61883-2 compliant Audio standard level: -20 dBFS Sampling rate: 16 bit 48 kHz 2ch
HEADPHONES	1/4" Stereo Phone Jack Type × 1 70 mW × 2 / Impedance: 47 Ω
INTERCOM	D-Sub 9-pin Type (Female) / Original Parallel I/O

\* DV IN/OUT connectors

## Recorder Port (Provided for future functional expansion.)

HDD (in exfactory configuration)	i.LINK: IEEE 1394 6-pin Type × 2 HDD IF: SBP2
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## Audio Signals

### AUDIO INPUTS

#### Analog Inputs 1-2

XLR/TRS Combo Type × 2
Ref. Level: +4 dBu, -20 dBu, -44 dBu
Mic. Power: +48 V

#### Analog Inputs 3-6

TRS Type × 4 / Ref. Level: +4 dBu, -20 dBu, -44 dBu
--

#### Analog Inputs 7-8

Pin × 2 / Ref. Level: -10 dBu
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DV IN*	i.LINK: IEEE 1394 (6 pins) × 4 IEC 61883-2 compliant Audio standard level: -20 dBFS Sampling rate: 12 bit 32 kHz 4ch (uses only ch 1 and 2) 16 bit 48 kHz 2ch
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### AUDIO OUTPUTS

PGM OUT	TRS Type × 2 / Ref.: +4 dBu / Impedance: 150 Ω
MIX OUT	Pin Type × 2 / Ref.: -10 dBu / Impedance: 470 Ω
AUX OUT	TRS Type × 2 / Ref.: +4 dBu / Impedance: 150 Ω
MONITOR OUT	TRS Type × 2 / Ref.: +4 dBu / Impedance: 150 Ω

## Other Interfaces

NETWORK	RJ-45 Type × 1, 10 Base-T/ 100 Base-TX
USB	USB A type × 2, USB equiv.
RGB(GUI)	D-Sub Shrink 15-pin × 1 (Female), WXGA 1280 × 800 60 Hz

### REMOTE

(Provided for future functional expansion.)
D-Sub 9-pin (Male) × 1, RS-232C

### FACTORY USE

(Provided for future functional expansion.)
D-Sub 15-pin × 1 (Male), Original Parallel I/O

### MEMORY STICK

"Memory Stick" Slot  
"Memory Stick Pro" and  
"Memory Stick Pro Duo" are  
not supported.

### VISCA

DIN 8-pin type × 1, RS-232C  
Sony VISCA camera  
commands are supported.

### LCD

15.4" High Brightness LCD,  
WXGA (1280 × 800 60 Hz)

### Speaker

Built-In Speaker × 2,  
Size: 20 × 40 mm

## SUPPLIED ACCESSORIES

Pin to BNC connector (× 4)
Battery: CR2032
Operating instruction (× 1)
Keyboard (× 1) 85 keys + Pointer / Infrared communication
Powered from AWS-G500: +5 V
Battery operation: CR2032 or 2032 H × 2

## OPTIONAL ACCESSORIES

**BKAW-550 PC Video Interface Module**  
(mounted in slot 3 of this unit)

**RGB** D-Sub Shrink 15-pin  
Type × 2 (Female),  
XGA (60 Hz, 75 Hz),  
SXGA (60 Hz, 75 Hz)

**BKAW-570 SD Video Interface Module**  
(mounted in slots 1 and 2 of this unit)

**Composite** BNC type × 2  
Video: 1.0 Vp-p, 75 Ω,  
Sync negative

**S-video** DIN type × 2  
Y: 1.0 Vp-p, 75 Ω,  
Sync negative  
C: 0.286 Vp-p at burst, 75 Ω,  
(NTSC)  
C: 0.3 Vp-p at burst, 75 Ω,  
(PAL)

**DV IN/OUT** i.LINK: IEEE 1394 6-pin Type  
× 2

**HDD** IEC 61883-2 equiv.  
i.LINK: IEEE 1394 6-pin  
Type × 2  
HDD IF: SBP2

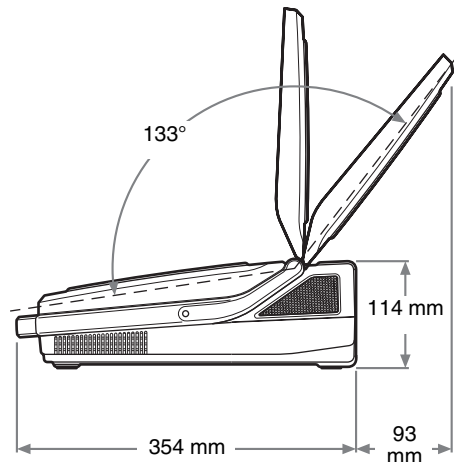
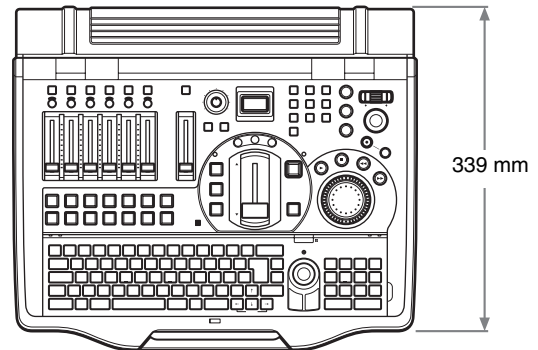
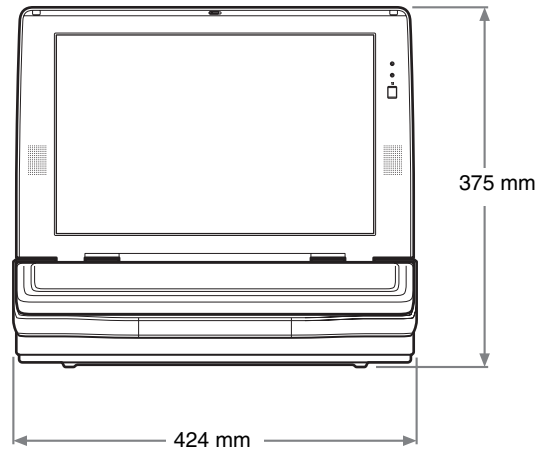
**Recommended power code**

**NA** Part No. 1-551-812-11

**Europe** Part No. 1-782-929-22

Design and specifications are subject to change  
without notice.

## Dimensions



# Glossary

## Black burst signal

A reference signal used to achieve external synchronization (GenLock).

## Color bars

A test signal which displays vertical colored stripes on a monitor. Used to adjust the hue and saturation of colors on video cameras and monitors.

## Color matte

A color signal generated by this unit. The hue, saturation, and luminance of color mattes can be adjusted.

## Compressor

A function which smoothly limits audio signals exceeding a certain threshold. Used to even out audio signals which contain large differences in amplitude.

## Default gateway

A router or computer on a network which serves as an entrance to an outside network. Other computers in the network access the outside network via the default gateway.

## Delay

A function which delays audio to bring it into synchronization with video, used when video is input later than the corresponding audio.

## DHCP (Dynamic Host Configuration Protocol)

A protocol for automatically assigning IP addresses to clients when they connect to a network, and recovering the addresses when they disconnect.

## Dimmer

A function which slightly dims a picture or slightly lowers audio levels.

## DNS (Domain Name System)

A system which allows Internet domain names to be translated into IP addresses.

## Domain name

An identifier assigned to a group of computers and networks on the Internet. Domain names are delimited by periods (.), and arranged from the left in the order top level domain, second level domain, third level domain, and so forth.

## Downstream key (DSK)

A function which allows pictures to be composed by taking video to which an effect has already been applied and adding further images and text. It is called downstream key because this processing is done at the very end of the processing stream.

## EMC (Electro-Magnetic Compatibility)

The properties of an electrical device of electromagnetic non-interference and electromagnetic immunity. Electromagnetic non-interference means that when the device operates it does not impair the operation of other devices, and does not act as a source of interference over a certain level that would be harmful to human health. Electromagnetic immunity is the property of electromagnetic susceptibility such that the device can operate without interference from electromagnetic radiation and so forth emitted by other devices.

## Encode

To use compression technology to create streaming files with appropriate bitrates for different bandwidths.

## Equalizer (EQ)

A function which controls specific audio frequencies in the high, mid, and low regions. Used to strengthen or delete specific frequencies in order to improve the audio.

## Fade to black (FTB)

An effect in which video fades out to a black screen.

## Filter

A function which removes high or low frequencies. Used to remove cable noise and other kinds of noise.

## FTB (Fade to Black)

See Fade to black

## GUI (Graphical User Interface)

A user interface which, unlike traditional text-based interfaces, is designed around graphical elements such as buttons and menus.

## Intercom

A network that allows staff members to talk to each other during program production.

## Host name

A name assigned to a computer on a network to make it easier to identify. Usually consisting of alphanumeric characters, although conventions differ according to the system. The most commonly used types are the terminal identifiers to the left of Internet domain names.

## i.LINK

The high-speed serial bus standard IEEE 1394.

Also called FireWire. Allows connections between computers and peripherals, and also direct connections between digital devices such as digital cameras.

## IPv6

The next-generation Internet Protocol, the successor to the current IPv4 protocol.

## IRE (International Radio Engineers)

A measure of the brightness level of video on the grayscale, ranging from 0 to 100. The brightness level of black is sometimes set at 0 IRE and sometimes set at 7.5 IRE.

## Limiter

A function which prevents audio levels from exceeding a specified threshold. Used to suppress peaks in audio with large differences in amplitude.

## Logo

A permanently visible mark shown in video for the purpose of copyright protection.

## Luminance key

A method of composing a picture by deleting video which contains components of a specified luminance (brightness). Typically used to extract bright characters from a dark background, so that only the characters can be added to the composed picture.

## Mix

A type of transition effect. A new picture is mixed into an old picture, eventually replacing the old picture.

## Monitor

To listen to audio and view video. Or a device for viewing and listening.

## Motion JPEG2000

An extension to the JPEG2000 image compression format that enables video recording. It provides picture quality comparable to the DV format, with file sizes that are smaller than DV. It is noted for high compression ratios in scenes with rapid movement, which are problematic for the MPEG format.

## Oscillator

A transmitter that oscillates at a fixed frequency, such as a sine wave. This unit is equipped with an internal audio oscillator.

## Pan

In audio, to adjust the right/left balance.

In video, to move the camera to the left and right.

## PFL (Pre-Fader Listen)

Monitoring audio before level adjustments with the audio channel faders. Used to check the input audio. On this system, pan and level control are not applied to PFL audio, even if trim, filter, EQ, pan, and level control settings have been made.

## Post-Fader

Audio signals after the application of all adjustments except pan.

## Pre-Fader

Audio signals before the application of any adjustments with audio channel faders. All other adjustments are the same as those for Post-fader. Pre-fader audio can be output from the AUX output connector.

## Preset

A function which allows a set of electrical settings to be saved and reproduced as a single set of data. This system has a camera preset function.

## Program (PGM) signal output

The final video and audio signals output from this system, after the application of effects. The video seen by viewers.

## RCA pin

A connector used on consumer audio equipment. Connectors come in color-coded pairs (often white for left and red for right). Also used for video signals (color yellow).

## RGB

An output signal format which displays pictures by using the three primary colors: Red, Green, and Blue.

## STP (Shielded Twisted Pair cable)

A type of cable for communications. Copper wires are twisted in pairs, and then shielded.

## Streaming

Real-time playback of audio and data received over a network. Compared to “download” playback, which starts after all the data has been received, streaming allows playback of data received up to now. Formats which enable streaming include RealMedia, Windows Media, and Quick Time. This system supports the RealMedia streaming file format (.rm).



**Subnet mask**

An IP address, which indicates the address of a device in a network, has two components: a network address (the address of the network) and a host address (the address of an individual computer). A subnet mask is a value used to specify how many bits in the IP address are reserved for the network address. A subnet is a smaller network created by dividing a large network into two or more parts.

**Superimpose**

A type of special effect in video editing, used to display text and pictures over other pictures.

**Talk back (TB)**

To pass along instructions, for example from a director. In this system, when you talk into the microphone on the front panel, your voice is output to the connected intercom system, allowing you to converse with other people on the intercom system.

**TB (Talk Back)**

See Talk back.

**Threshold**

The level at which a limiter or compressor is activated.

**Thumbnail**

An image which has been reduced in size for the purpose of displaying a list of many images.

**Tilt**

To move a camera up and down.

**Transition**

To switch from one video to a different video over a certain time interval. Transitions can be used together with text and image keys to compose and erase pictures.

**Transition effect**

Gradually switching from one video to another through the application of one of various effects. This systems supports two type of transition effects: mix and wipe.

**Trim**

To adjust the input level of audio signals. These adjustments are performed at the input stage, before level adjustments with the audio channel faders.

**TRS**

A jack used in headphones and other devices.

**VISCA**

A protocol developed by Sony which allows video equipment to be connected to computers.

**Wipe**

A type of transition effect. A new picture moves in to replace an old picture, as if wiping the old picture away.

**XLR**

A 3-pin connector, often called a Cannon connector. A locking mechanism keeps the connector securely connected even when the cable is pulled. Very stable despite its simple structure, and often used on microphones to suppress handling noise.



# Index

## Symbols

- +48V switch ..... 15
- “Memory Stick” slot ..... 18

## Numerics

- 75-W termination switch .... 17

## A

- ACCESS buttons ..... 11
- ACCESS menu ..... 24
- Adjusting Analog Video Input Signals ..... 81
- Adjusting Color Matte ..... 82
- Adjusting the Audio Left and Right Channel Balance .... 86
- Adjusting the equalizer ..... 85
- Adjusting the Output Levels for Each Destination ..... 86
- Adjusting the Program Output Video Image Quality ..... 82
- Analog video input connectors ..... 17
- Audio channel faders ..... 12
- Audio level meter ..... 20
- AUDIO MONITOR button . 12
- Audio Signal Related Settings ..... 43
- AUTO TRANS button . 14, 51
- AUX output connector (AUX) 1/2 (TRS, balanced) ..... 16

## B

- BKAW-550 ..... 40
- BKAW-570 ..... 40

## C

- Cable clip ..... 15
- Camera Preset ..... 68
- camera supporting VISCA protocol ..... 66
- CH ON buttons ..... 12
- channel faders ..... 43
- Closing down ..... 30

- Color Bars ..... 56
- Color Mattes ..... 56
- Compressor ..... 85
- Connecting a Camera With VISCA Support ..... 35
- Connecting a Computer ..... 36
- Connecting a Microphone .. 35
- Connecting a Plasma Display/Projector ..... 38
- Connecting a VCR ..... 37
- Connecting an Amplifier .... 39
- Connections ..... 34
- Controlling Cameras ..... 66
- Cropping ..... 64
- Cut ..... 48
- CUT button ..... 13, 49
- Cut switching ..... 47
- Cutting High Frequency or Low Frequency ..... 84

## D

- Deleting Files ..... 92
- Determining the Audio Signal Output Destinations ..... 77
- DIM button ..... 12
- Dimensions ..... 118
- DSK button ..... 13
- DV connectors (DV IN/OUT) ..... 17

## E

- Edge ..... 65
- EFFECT button ..... 13, 53
- Effect display ..... 23
- ENTER button ..... 11
- ESC button ..... 11
- Example Applications ..... 10

## F

- FACTORY USE connector 18
- fade in ..... 55
- fades out ..... 55
- Fade-to-Black ..... 55

- Front Panel ..... 11
- FTB ..... 55
- FTB button ..... 13

## G

- Ground terminal ..... 15

## H

- Headphone connector (HEADPHONES) (standard phone jack) ..... 16

## I

- Importing Graphics Files .... 90
- Importing Logo Files ..... 91
- Indicators ..... 13
- Input/Output Signals ..... 41
- Installing the Unit ..... 27
- Intercom ..... 75
- Intercom interface connector ..... 15

## J

- Jog dial ..... 14
- Jog roller ..... 12

## K

- KEY button ..... 13
- Keyboard ..... 28

## L

- Limiter ..... 85
- Line input connectors (LINE) 7/8 (RCA) ..... 16
- Luminance Keying ..... 62

## M



- “Memory Stick” ..... 115
- “Memory Stick Duo” ..... 115
- MENU button ..... 12
- Menu operations ..... 24
- Microphone ..... 12







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