



## COLOR VIDEO MONITOR

BEDIENUNGSANLEITUNG : FARB-VIDEO-MONITOR

MANUEL D'INSTRUCTIONS : MONITEUR VIDEO COULEUR

MANUALE DI ISTRUZIONI : MONITOR VIDEO A COLORI

INSTRUCCIONES : MONITOR DE VIDEO A COLOR

使用说明书：彩色视频监视器

# TM-H150CG

## INSTRUCTIONS

ENGLISH

DEUTSCH

FRANÇAIS

ITALIANO

ESPAÑOL

中文

### For Customer Use:

Enter below the Serial No. which is located on the rear of the cabinet.  
Retain this information for future reference.

### Pour l'usage du client:

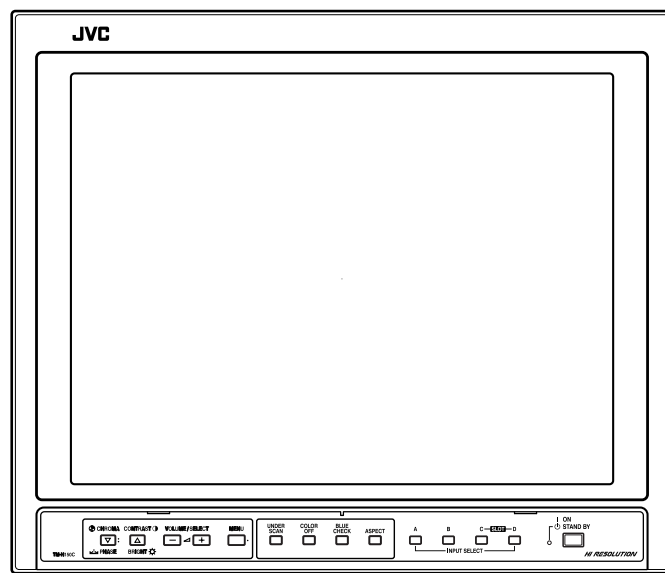
Enter ci-dessous le numéro de série qui est situé sur l'arrière du coffret.  
Conserver cette information pour une référence ultérieure.

### Model No. :

Numéro de modèle :

### Serial No. :

Numéro de série :



**INSTRUCTIONS**

**COLOR VIDEO MONITOR**

**TM-H150CG**

ENGLISH

Thank you for purchasing this JVC color video monitor. Before using it, read and follow all instructions carefully to take full advantage of the monitor's capabilities.

# SAFETY PRECAUTIONS

In order to prevent any fatal accidents caused by misoperation or mishandling the monitor, be fully aware of all the following precautions.

## WARNINGS

To prevent fire or shock hazard, do not expose this monitor to rain or moisture. Dangerous high voltages are present inside the unit. Do not remove the back cover of the cabinet. When servicing the monitor, consult qualified service personnel. Never try to service it yourself.

## WARNING : THIS APPARATUS MUST BE EARTHED.

Improper operations, in particular alternation of high voltage or changing the type of tube may result in x-ray emission of considerable dose. A unit altered in such a way no longer meets the standards of certification, and must therefore no longer be operated.

This monitor is equipped with a 3-blade grounding-type plug to satisfy FCC rule. If you are unable to insert the plug into the outlet, contact your electrician.

## FCC INFORMATION (U.S.A. only)

**CAUTION:** Changes or modification not approved by JVC could void the user's authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## Notice (U.S.A. only)

This product utilizes both a Cathode Ray Tube (CRT) and other components that contain lead. Disposal of these materials may be regulated in your community due to environmental considerations. For disposal or recycling information please contact your local authorities, or the Electronics Industries Alliance: <<http://www.eiae.org>>

## PRECAUTIONS

- Use only the power source specified on the unit.  
(120 V AC/220 – 240 V AC, 50 Hz/60 Hz)
- When not using this unit for a long period of time, or when cleaning it, be sure to disconnect the power plug from the AC outlet.
- Do not allow anything to rest on the power cord. And do not place this unit where people will tread on the cord. Do not overload wall outlets or power cords as this can result in a fire or electric shock.
- Avoid using this unit under the following conditions:
  - in extremely hot, cold or humid places,
  - in dusty places,
  - near appliances generating strong magnetic fields,
  - in places subject to direct sunlight,
  - in badly ventilated places,
  - in automobiles with doors closed.
- Do not cover the ventilation slots while in operation as this could obstruct the required ventilation flow.
- When dust accumulates on the screen surface, clean it with a soft cloth.
- Unplug this unit from the AC outlet and refer servicing to qualified service personnel under the following conditions:
  - when the power cord is frayed or the plug is damaged,
  - if liquid has been spilled into the unit,
  - if the unit has been dropped or the cabinet has been damaged,
  - when the unit exhibits a distinct change in performance.
- Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Always refer servicing to qualified service personnel.
- When replacement parts are required, have the service personnel verify in writing that the replacement parts he/she uses have the same safety characteristics as the original parts. Use of manufacture's specified replacement parts can prevent fire, shock, or other hazards.
- Upon completion of any servicing or repair work to this unit, please ask the service personnel to perform the safety check described in the manufacturer's service literature.
- When this unit reaches the end of its useful life, improper disposal could result in a picture tube implosion. Ask qualified service personnel to dispose of this unit.

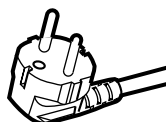
## POWER CONNECTION

The power supply voltage rating of this product is AC 120 V (For U.S.A. and Canada only) and AC 220 – 240 V (For European countries or United Kingdom), the power cord attached conforms to the following power supply voltage and countries. Use only the power cord designated to ensure Safety and EMC regulations of each countries.

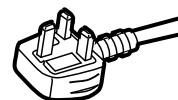
### Power cord



Power supply voltage : AC 120 V  
Countries : U.S.A. and Canada



AC 220 – 240 V  
European countries



AC 220 – 240 V  
United Kingdom

### Warning:

- Do not use the same Power Cord for AC 120 V as for AC 220 – 240 V. Doing so may cause malfunction, electric shock or fire.

### Note for the United Kingdom power cord only

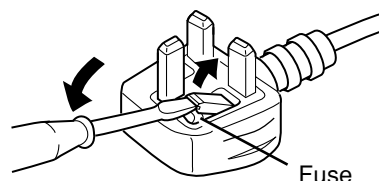
The plug on the United Kingdom power cord has a built-in fuse. When replacing the fuse, be sure to use only a correctly rated approved type, re-fit the fuse cover.

(Consult your dealer or qualified service personnel.)

#### How to replace the fuse

Open the fuse compartment with the blade screw driver, and replace the fuse.

(\* An example is shown in the illustration.)



## SCREEN BURN

- It is not recommended to keep a certain still image displayed on screen for a long time as well as displaying extremely bright images on screen. This may cause a burning (sticking) phenomenon on the screen of cathode-ray tube. This problem does not occur as far as displaying normal video playback motion images.

### ■ Supplementary Explanation

= Information for monitor operation =

This monitor uses a high precision CRT (cathode ray tube). Please follow the procedures below.

\* For stable operation of the CRT, approximately 30 minutes running time is required from the time the power is turned on.

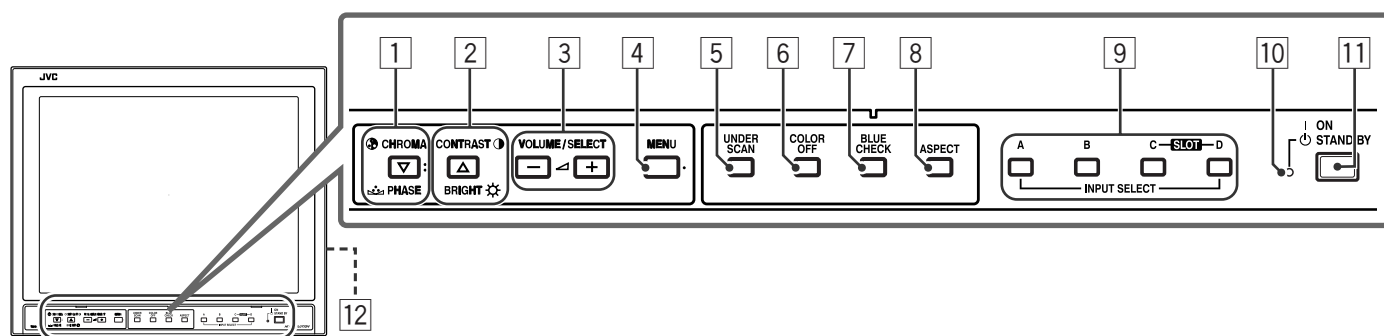
\* When the monitor is installed, it can be easily affected by surrounding magnetic fields, which can generate irregular color on the screen. When it is difficult to eradicate, degauss from outside using a degausser, etc.

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# Controls and Features

## Front Panel



### 1 CHROMA (🌈: Chroma)/PHASE (🌀: Phase) button\*

Press this button to activate the Chroma (picture color density) adjustment mode or the Phase (picture hue) adjustment mode. Each time you press the button, the adjustment modes change.

#### Chroma ⇄ Phase

Adjust the value with the VOLUME/SELECT (–/+) buttons while the level bar appears on the screen.

(–40 to +40)

- CHROMA is not adjustable when the RGB signal, black-and-white signal, or no signal is input (except the component signal).
- Adjusting CHROMA to “–40” is chroma off.
- PHASE is adjustable only when the NTSC signal is input.

▽ button (while the menu screen is displayed)  
Selects the items on the menu screen.

### 2 CONTRAST (🔆: Contrast)/BRIGHT (☀️: Brightness) button\*

Press this button to activate the picture contrast adjustment mode or picture brightness adjustment mode. Each time you press the button, the adjustment modes change.

#### Contrast ⇄ Brightness

Adjust the value with the VOLUME/SELECT (–/+) buttons while the level bar appears on the screen.

(–40 to +40)

△ button (while the menu screen is displayed)  
Selects the items on the menu screen.

\* While adjusting the picture,

- The adjustment level bar disappears if no operation has been done for about 10 seconds.
- The adjustment level bar also disappears if you press MENU button.
- “NO EFFECT” will appear for about 3 seconds if the function you select has no effect.

### 3 VOLUME/SELECT (–/+) buttons

Adjusts the volume.

These buttons are also used to select the items on the menu screen while the menu screen is displayed.

- Pressing + or – button displays the VOLUME level bar on the screen. Pressing + or – button while the level bar appears on the screen allows you to adjust the volume. (00 to 50)
- The VOLUME level bar disappears if no operation has been done for about 10 seconds.
- The VOLUME level bar also disappears if you press MENU button.

### 4 MENU button

Displays MENU.

➔ For details, see page 10.

#### NOTE:

To display SET-UP MENU, press the ▽ button while holding down the MENU button.

### 5 UNDER SCAN button

Reduces the screen size to display the entire image.

- The button lights while this function is activated.
- Pressing the button again restores the screen to normal size.

### 6 COLOR OFF button

Cuts color signals to display a black and white image.

Use this function to check noises in the luminance signal or to check the white balance adjustment.

- The button lights while this function is activated.
- Pressing the button again restores the normal screen.

#### NOTE:

This function is not available to the RGB signal.

## 7 BLUE CHECK button

Displays only the blue signals.

- The button lights while this function is activated.
- Pressing the button again restores the normal screen.

By using this function with the standard color-bar currently used, you can check if CHROMA (picture color density) or PHASE (picture hue) is adjusted properly.

Also you can check if "COMPO. LEVEL" (the adjustment level of the component signal) is adjusted properly for the component signal or the SDI signal.

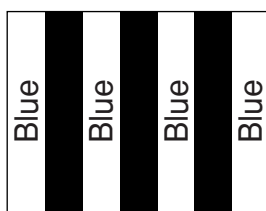
### NOTE:

This function is not available to the RGB signal.

### 1 Display the standard color-bar currently used on the screen.

### 2 Press the BLUE CHECK button.

The following display appears on the screen.



### 3 If the brightness of the blue bars on the left and right sides are the same, CHROMA (picture color density) is adjusted properly.

- For the component signal or the SDI signal, if the brightness of the blue bars on the left and right sides are the same, "COMPO. LEVEL" is adjusted properly.

### 4 If the brightness of two blue bars in the middle are the same, PHASE (picture hue) is adjusted properly.

- PHASE should be checked only when the NTSC signal is being input.

**If the brightness of each blue bar is different, make the following adjustment in the blue checking state:**

**When the composite signal or the Y/C (S-video) signal is being input:**

By using the CHROMA/PHASE button and the VOLUME/SELECT (–/+) buttons, adjust CHROMA or PHASE so that brightness of the blue bars on the left and right sides are the same.

**When the component signal or SDI signal is being input:**

Press the MENU button to display MENU, select "COMPO. LEVEL" by pressing the  $\Delta/\nabla$  buttons.

Then, adjust "COMPO. LEVEL" by pressing the VOLUME/SELECT (–/+) buttons so that brightness of two blue bars in the middle are the same.

- Be sure to adjust CHROMA for the composite signal or the Y/C (S-video) signal before adjusting "COMPO. LEVEL."
- If you change the CHROMA adjustment for other signal formats than the component signal after "COMPO. LEVEL" has been adjusted, you need to adjust "COMPO. LEVEL" again.

## 8 ASPECT button

Changes the aspect ratio from 4:3 to 16:9.

- The button lights while the aspect ratio is 16:9.
- Pressing the button again returns the aspect ratio to 4:3.

## 9 INPUT SELECT buttons

Select an input to display.

**A:** Select the video signal input to the VIDEO A terminal and the audio signal input to the AUDIO A terminal.

**B:** Select the video signal input to the VIDEO B terminal and the audio signal input to the AUDIO B terminal.

- ➔ When both an Y/C (S-video) signal and a composite signal are input to the VIDEO B terminal, the Y/C signal has priority over the composite signal.

### C/D (SLOT):

Select the signal input to the input card installed in the input card slot on the rear panel.

- ➔ For details about how to select the input signal through the input card, see pages 7 and 8.

- The corresponding button of the input currently selected lights up.

## 10 Power lamp

**Unlit:** The main power is off.

**Orange:** The main power is on and the monitor is in stand-by mode.

**Green:** The monitor is on.

## 11 Stand-by button

Turns on and off the monitor when the main power is on.

### NOTE:

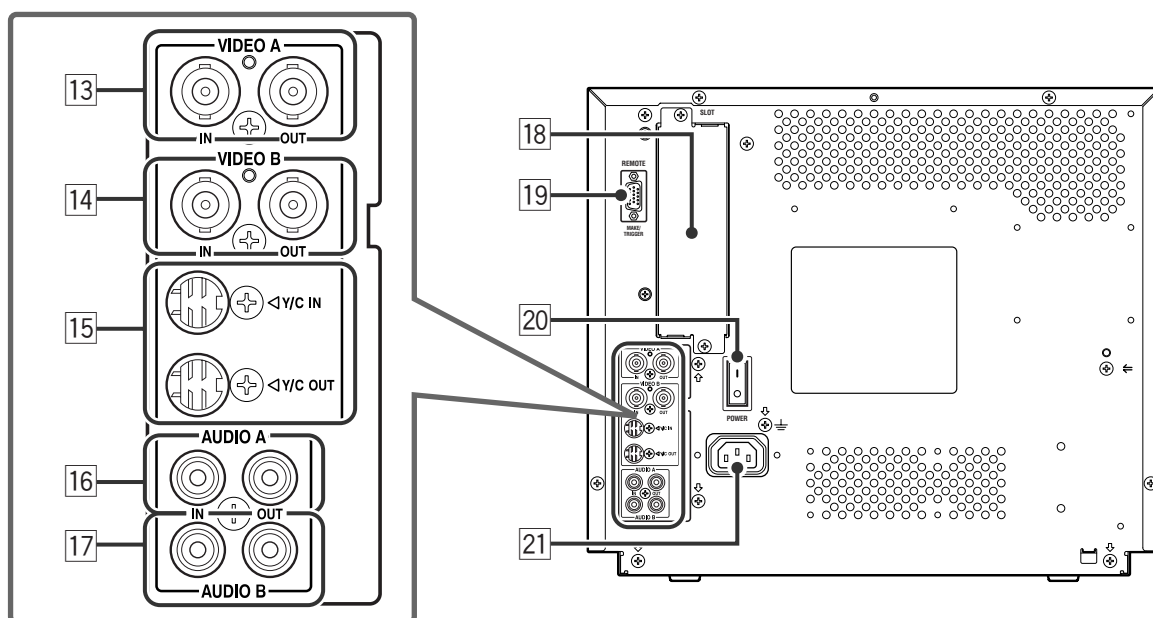
You can set the delay time between when the stand-by button is pressed and when the monitor actually turns on. See "RUSH DELAY" on page 12.

## 12 Speaker

A built-in speaker is on the side panel.

# Controls and Features (cont'd)

## Rear Panel



### 13 VIDEO A terminal

Input (IN) and output (OUT) terminals for composite signals.

- The IN and OUT terminals are bridge-connected (auto termination).

#### NOTE:

Use the AUDIO A terminals for the corresponding audio signals.

### 14 VIDEO B terminal

Input (IN) and output (OUT) terminals for composite signals.

- The IN and OUT terminals are bridge-connected (auto termination).

#### NOTE:

Use the AUDIO B terminals for the corresponding audio signals.

### 15 VIDEO B (Y/C IN, Y/C OUT) terminal

Input (IN) and output (OUT) terminals for Y/C (S-video) signals.

- The Y/C IN and Y/C OUT terminals are bridge-connected (auto termination).

#### NOTES:

- Use the AUDIO B terminals for the corresponding audio signals.
- When both an Y/C (S-video) signal and a composite signal are input to the VIDEO B terminal, the Y/C signal has priority over the composite signal.

### 16 AUDIO A terminal

Input (IN) and output (OUT) terminals for analog audio signals.

- The IN and OUT terminals are bridge-connected (auto termination).

#### NOTE:

Use the VIDEO A terminals for the corresponding video signals.

### 17 AUDIO B terminal

Input (IN) and output (OUT) terminals for analog audio signals.

- The IN and OUT terminals are bridge-connected (auto termination).

#### NOTE:

Use the VIDEO B terminals for the corresponding video signals.

### 18 Input card slot

When using the input card (not supplied), install the card to this slot.

### 19 REMOTE (external control) terminal

Terminals for controlling the monitor by an external control.

➔ For details, see page 15.

### 20 Main power switch

Turns on and off the main power.

- I: ON    O: OFF

#### NOTE:

When turning on the main power, the power lamp lights up as follows:

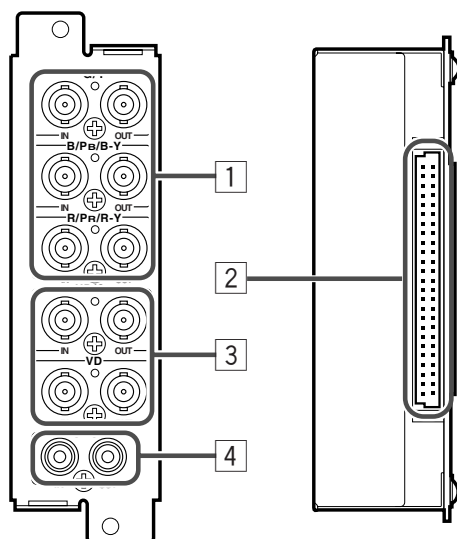
- Orange: The monitor is in stand-by mode.
- Green: The monitor is on.

### 21 AC inlet

Connect the supplied AC power cord to this inlet and an AC outlet (120 V AC/220 – 240 V AC, 50 Hz/ 60 Hz).

# Input Card (option)

## ■ Component/RGB Input Card (IF-C01COMG)



■ Acceptable signal formats when installed on this monitor:  
525/60i, 625/50i

• G on SYNC cannot be used with the RGB input.

### 1 Component/RGB signal input/output terminals

Input (IN) and output (OUT) terminals for the component (color difference) or the RGB signal.

**To select Component signal:** Press the INPUT SELECT C button.

**To select RGB signal:** Press the INPUT SELECT D button.

• The IN and OUT terminals are bridge-connected (auto termination).

### 2 Connection terminal

Attach to the connection terminal of the input card slot on the monitor.

### 3 Synchronized signal input/output terminals

Input (IN) and output (OUT) terminals for the vertical, horizontal or complex synchronized signals.

• The IN and OUT terminals are bridge-connected (auto termination).

#### NOTE:

These terminals are available only to the RGB input.

### 4 Audio signal input/output terminals

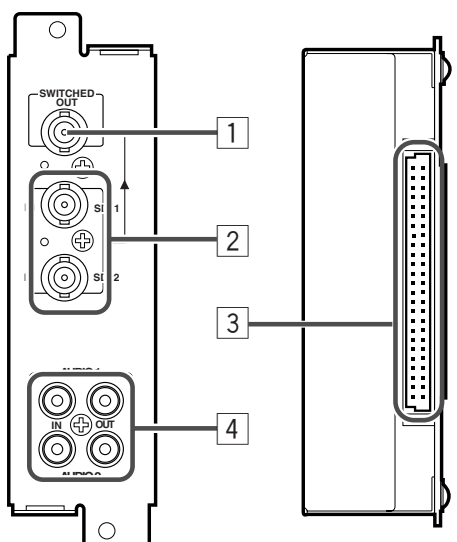
Input (IN) and output (OUT) terminals for the analog audio signals.

• The IN and OUT terminals are bridge-connected.

#### NOTE:

You cannot connect both the component signal outputs and the RGB signal outputs at a time.

## ■ SDI Input Card (IF-C01SDG)



■ Acceptable signal formats when installed on this monitor:  
525/60i, 625/50i

### 1 SWITCHED OUT terminal

Output (OUT) terminal for the re-clocked signal. The input signal from the input terminal currently selected (SDI 1 or SDI 2) is re-clocked and output from this terminal.

#### NOTES:

- No signal is output from the SWITCHED OUT terminal when the main power is turned off.
- Even when the input signal is switched from the SDI Input Card, the SWITCHED OUT terminal still outputs the SDI 1 or SDI 2 re-clocked signal which is selected last time. The re-clocked signal from SDI 1 is output from the SWITCHED OUT terminal when the monitor is in stand-by mode.

### 2 D1 SDI signal input terminal (SDI 1, SDI 2)

Accepts the SMPTE259M D1 SDI signal. The audio signal of the EMBEDDED AUDIO signal cannot be decoded (only the video signal can be decoded).

**To select SDI 1:** Press the INPUT SELECT C button.

**To select SDI 2:** Press the INPUT SELECT D button.

### 3 Connection terminal

Attach to the connection terminal of the input card slot on the monitor.

### 4 Audio signal input/output terminals (for both SDI 1 and SDI 2)

Input (IN) and output (OUT) terminals for the analog audio signals.

• The IN and OUT terminals are bridge-connected.

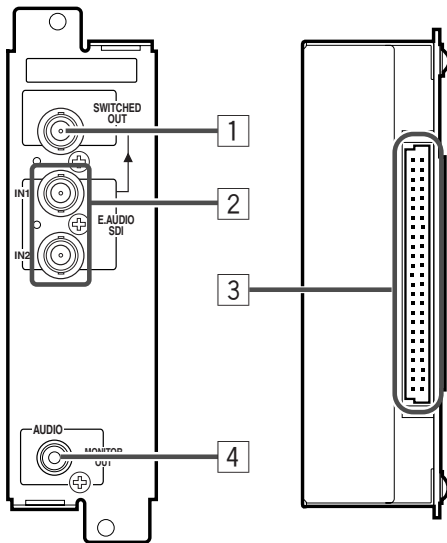


# Controls and Features (cont'd)

## Input Card (option) (cont'd)

### ■ SDI Input Card (IF-C21SDG/IF-C51SDG)

The EMBEDDED AUDIO signal is acceptable. (IF-C51SDG is also equipped with an AUDIO LEVEL METER function.)



(This illustration is IF-C21SDG.)

### ■ Acceptable signal formats when installed on this monitor:

525/60i, 625/50i,  
EMBEDDED AUDIO (8ch)

#### 1 SWITCHED OUT terminal

Output (OUT) terminal for the re-clocked signal. The input signal from the input terminal currently selected (IN1 or IN2) is re-clocked and output from this terminal.

##### NOTES:

- No signal is output from the SWITCHED OUT terminal when the main power is turned off.
- Even when the input signal is switched from the SDI Input Card, the SWITCHED OUT terminal still outputs the IN1 or IN2 re-clocked signal which is selected last time. The re-clocked signal from IN1 is output from the SWITCHED OUT terminal when the monitor is in stand-by mode.

#### 2 D1 SDI and EMBEDDED AUDIO signal input terminals

Accepts the SMPTE259M D1 SDI signal. Also accepts the EMBEDDED AUDIO signal whose sampling frequency is 48 kHz and the channel range is 1 to 8.

**To select IN1 :** Press the INPUT SELECT C button.

**To select IN2 :** Press the INPUT SELECT D button.

- ➔ To select the EMBEDDED AUDIO channels and to set the AUDIO LEVEL METER function (only for IF-C51SDG), set the DIP switches on the input card correctly. For details, refer to the instruction manual supplied with the input card.

#### 3 Connection terminal

Attach to the connection terminal of the input card slot on the monitor.

#### 4 Audio signal output terminal

Outputs the analog audio signal after decoding the EMBEDDED AUDIO signal. The input signal from the input terminal currently selected (IN1 or IN2) is output from this terminal.

- ➔ This terminal outputs the same audio signal as the audio sound output from the speaker.

##### NOTES:

- No signal is output from the audio signal output terminal when the monitor is in stand-by mode.
- Even when the input signal is switched from the SDI Input Card, this terminal still outputs the audio signal from the IN1 or IN2 which is selected last time.

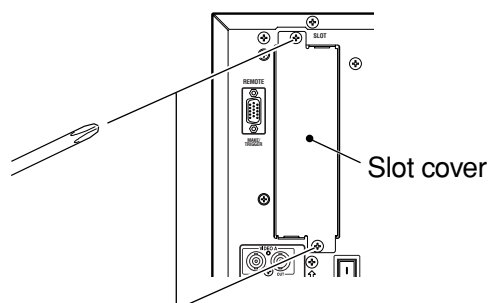
## IMPORTANT

- Do not use any other input card than the input cards listed on pages 7 and 8. Using other input cards may cause malfunction or damage the monitor. Such malfunction or damage caused by using other input cards cannot be warranted.
- If any equipment is not connected to a bridged output (OUT) terminal, be sure not to connect any cords to the bridged output (OUT) terminal. Connecting a cord to a bridged output (OUT) terminal will cause the terminating resistance switch to open (auto terminate function).
- When making a bridge connection, connect the input (IN) and output (OUT) terminals on the monitor to separate video components. (For example, if both the input (IN) and output (OUT) terminals are connected to the same VCR, resonance may occur except during playback. This is caused by that the same video signal circulates between the VCR and the monitor. This is not a malfunction.)

# Preparation

## Installing the Input Card

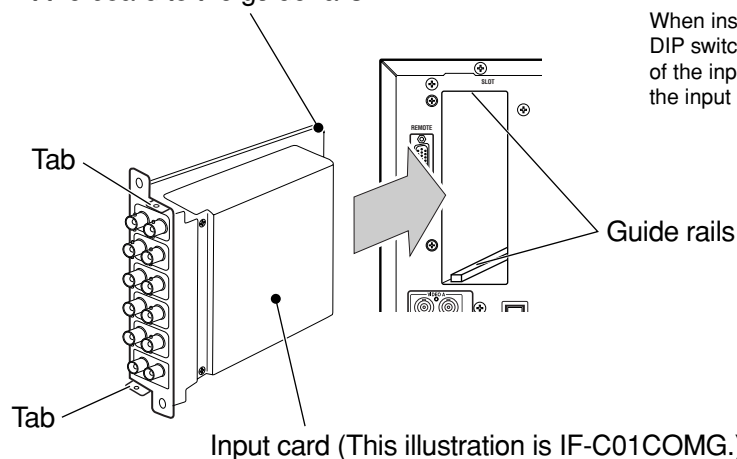
- 1 Turn off the main power switch on the rear panel of the monitor and unplug the AC power cord from the AC outlet.
- 2 Unscrew the screws and remove the slot cover from the input card slot on the rear panel of the monitor.



- 3 Insert the input card's circuit board (green-colored) into the slot, fitting the board to the guide rails on the top and bottom of the slot.

Hold the tabs on the input card when inserting the input card.

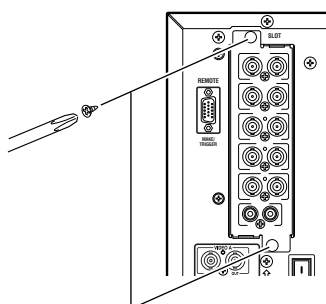
Fit the board to the guide rails.



### NOTE:

When installing IF-C21SDG/IF-C51SDG, you need to set the DIP switches on the input card correctly to use the functions of the input card. Refer to the instruction manual supplied with the input card and set the DIP switches beforehand.

- 4 Push in the input card so that its front panel touches the rear panel of the monitor.
- 5 Secure the Input Card by using the screws removed in step 2.



### NOTES:

- The input card or the monitor may be damaged if you do not turn off the main power of the monitor before installing the input card.
- Do not touch the terminals or the patterns on the circuit board of the input card.
- Attach the slot cover when the input card slot is not in use.

# Basic Menu Operations

## (MENU, SET-UP MENU)

### ■ About the Menu Screens

This monitor features MENU which contains the functions normally used and SET-UP MENU which contains the initial settings of the monitor.

## MENU

Items	Functions
APERTURE	Adjusts the picture aperture level.
ADJ. BAR POSI.	Selects the level bar position on the screen which appears when adjusting picture or volume.
COLOR TEMP.	Selects the color temperature.
COLOR SYSTEM	Selects the color system.
COMPO. LEVEL <sup>1)</sup>	Adjusts the component level of the monitor for the component signal or the SDI signal.
RUSH DELAY	Sets the delay time between when the stand-by button is pressed and when the monitor actually turns on.

<sup>1)</sup> Appears only when the component signal input or the SDI signal input is selected (when INPUT C or INPUT D is selected and other signals than RGB is input).

## SET-UP MENU

Items	Functions
PICTURE SUB ADJ.	The standard value ("00") of the picture adjustment is initially set at the factory. You can adjust the standard value as your initial setting. CONTRAST: Adjusts contrast. BRIGHT: Adjusts brightness. CHROMA <sup>2)</sup> : Adjusts color density. PHASE <sup>2)</sup> : Adjusts hue.
H. POSITION	Adjusts the horizontal position of the screen.
V. POSITION	Adjusts the vertical position of the screen.
WHITE BALANCE	Adjusts the white balance. R. CUTOFF: Adjusts the cut-off point of the red signal. G. CUTOFF: Adjusts the cut-off point of the green signal. B. CUTOFF: Adjusts the cut-off point of the blue signal. R. DRIVE: Adjusts the drive level of the red signal. B. DRIVE: Adjusts the drive level of the blue signal.
CONTROL LOCK	Prohibits the monitor operations except turning on/off the monitor and adjusting volume. The menu operations are also prohibited.
STATUS DISPLAY	Selects to display or not to display the color system of the current input on the screen.
REMOTE SYSTEM	Selects the method of the external control connected to the REMOTE terminal.
INPUT REMOTE <sup>3)</sup>	Sets how to change the input when operating the monitor by the external control.

<sup>2)</sup> May not appear depending on the type of input signal.

<sup>3)</sup> Appears only when "REMOTE SYSTEM" is set to "MAKE."

## ■ Displaying the menu screens

### To display MENU

Press the MENU button on the front panel.

### To display SET-UP MENU

Press the  $\nabla$  button while holding down the MENU button on the front panel.

- To go back to the previous menu, press the MENU button.
- To exit from the menu screen, press the MENU button several times.

#### NOTE:

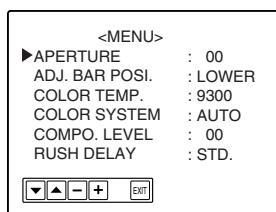
The menu screen will disappear if no operation has been done for about 5 minutes.

## ■ Menu Operation Procedure

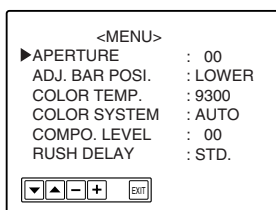
Example: When adjusting "APERTURE" to "+10."

### 1 Press the MENU button.

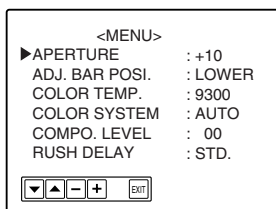
MENU appears on the screen.



### 2 Press the $\Delta/\nabla$ button to select "APERTURE."



### 3 Press the VOLUME/SELECT ( $-\triangle+$ ) buttons to adjust "APERTURE."



### 4 Press the MENU button to exit from MENU.

## ■ Initializing the Settings

You can initialize the following settings of the monitor:

MENU, SET-UP MENU, picture adjustment, volume level

### 1 Press the stand-by button to turn off the monitor (on stand-by).

### 2 While holding down both the MENU button and the $\nabla$ button, press the stand-by button to turn on the monitor.

#### NOTE:

Keep pressing both the MENU button and the  $\nabla$  button until "<SET-UP MENU> RESET" appears on the screen.

"<SET-UP MENU> RESET" appears on the screen.

<SET-UP MENU> RESET  
Are you sure?  
"Yes" then <+>  
"No" then <MENU>

### 3 Press the VOLUME/SELECT (+) button to initialize the settings.

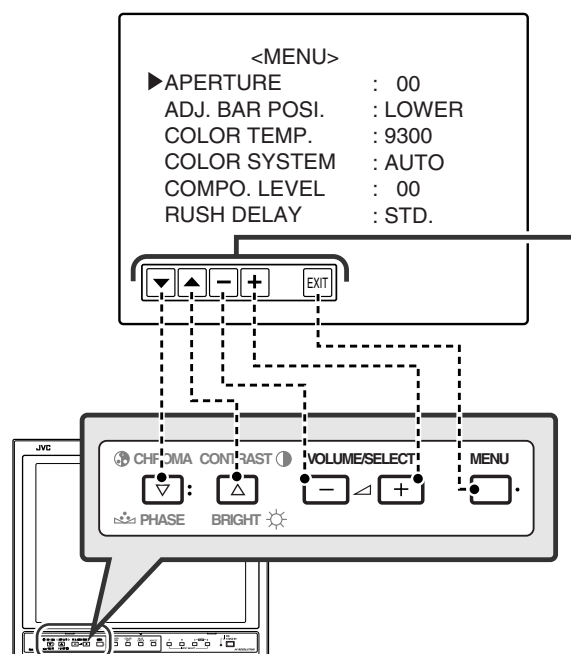
The settings are initialized and "<SET-UP MENU> RESET" disappears.

- To cancel to initialize, press the MENU button.

#### Initial settings

	Functions (Items)	Initial settings
MENU	APERTURE	00
	ADJ. BAR POSI.	LOWER
	COLOR TEMP	9300
	COLOR SYSTEM	AUTO
	COMPO. LEVEL	00
	RUSH DELAY	STD.
SET-UP MENU	PICTURE SUB ADJ.	
	CONTRAST	00
	BRIGHT	00
	CHROMA	00
	PHASE	00
	H. POSITION	00
	V. POSITION	00
	WHITE BALANCE	
	R. CUTOFF	00
	G. CUTOFF	00
	B. CUTOFF	00
	R. DRIVE	00
	B. DRIVE	00
	CONTROL LOCK	OFF
	STATUS DISPLAY	ON
	REMOTE SYSTEM	MAKE
	INPUT REMOTE	A-D
Picture Adjustment	CHROMA	00
	PHASE	00
	CONTRAST	00
	BRIGHT	00
Volume	VOLUME	20

# How to Use MENU



Function display of the button varies depending on the selected item.

Buttons	Displays	Functions
▽	▼	Selects the items in forward rotation.
△	▲	Selects the items in reverse rotation.
VOLUME/SELECT(+)	+	Increases the value (up to the maximum).
	▶	Selects the setting (value) in forward rotation.
VOLUME/SELECT(-)	-	Decreases the value (up to the minimum).
	◀	Selects the setting (value) in reverse rotation.
MENU	EXIT	Exits from MENU.

## Function, Contents, and the Adjustment Range of Each Item

### APERTURE

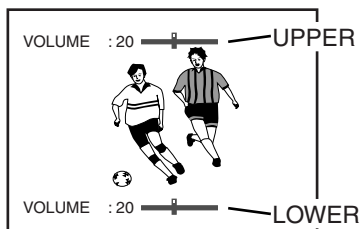
Adjusts the picture aperture level.

- 00 ⇄ +40

### ADJ. BAR POSI.

Selects the level bar position on the screen which appears when adjusting picture or volume.

- UPPER
- LOWER



### COLOR TEMP.

Selects the color temperature.

- 9300
- 6500

### COLOR SYSTEM

Selects the color system.

- AUTO: Selects NTSC or PAL automatically depending on the input signal.
- NTSC: Keeps the NTSC color system.
- PAL: Keeps the PAL color system.

#### NOTE:

Normally select "AUTO." If the input signal is unstable, select "NTSC" or "PAL."

### COMPO. LEVEL

Adjusts the component level of the monitor for the component signal or the SDI signal.

- -40 ⇄ +10

#### NOTE:

When inputting the component signal or the SDI signal, check if "COMPO. LEVEL" is adjusted properly for the standard color bar currently used. For details, see page 5.

### RUSH DELAY

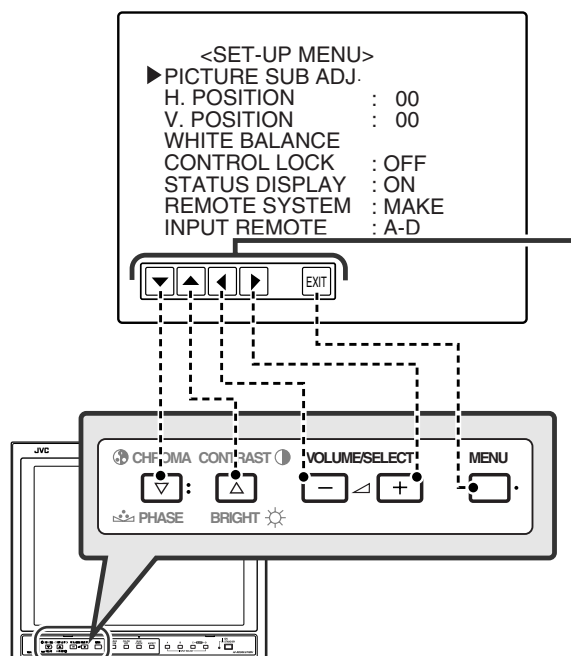
Sets the delay time between when the stand-by button is pressed and when the monitor actually turns on.

- STD.: Power turns on about 1 second after the stand-by button is pressed.
- SLOW: Power turns on about 3 seconds after the stand-by button is pressed.

#### NOTE:

It is recommended to apply "SLOW" to some of the monitors if you need to turn on multiple monitors at the same time. You can control the rush current of the entire system.

# How to Use SET-UP MENU



Function and display of the button varies depending on the selected item.

Buttons	Displays	Functions
▽	▼	Selects the items in forward rotation.
△	▲	Selects the items in reverse rotation.
VOLUME/ SELECT(+)	+	Increases the value (up to the maximum).
	▶	Selects the setting (value) in forward rotation.
VOLUME/ SELECT(-)	-	Decreases the value (up to the minimum).
	◀	Selects the setting (value) in reverse rotation.
MENU	EXIT	Returns to or exits from SET-UP MENU.

When setting "WHITE BALANCE":

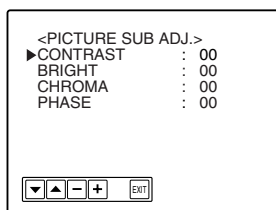
Buttons	Displays	Functions
▽	R•B	Selects the color to adjust the drive level.
	R•G•B	Selects the color to adjust the cut-off point.
△	DISP	Turns on/off the on screen display.
VOLUME/ SELECT(+)	CUTO	Adjusts the cut-off point.
	+	Increases the value (up to the maximum).
VOLUME/ SELECT(-)	DRV	Adjusts the drive level.
	-	Decreases the value (up to the minimum).
MENU	EXIT	Returns to SET-UP MENU.

## Function, Contents, and the Adjustment Range of Each Item

### PICTURE SUB ADJ.

The standard value ("00") of the picture adjustment is initially set at the factory. You can adjust the standard value as your initial setting.

- Select "PICTURE SUB ADJ." on SET-UP MENU, then press the VOLUME/SELECT (+) button to display the setting menu illustrated on the right.



#### NOTES:

- You can adjust the items in "PICTURE SUB ADJ." separately for each video input. Select the video input you want to adjust beforehand.
- Only "CONTRAST" and "BRIGHT" appear on the screen when the RGB signal is input. When the signal with PAL color system is input, "PHASE" does not appear.

#### ■ CONTRAST

- 10 ⇄ 00 ⇄ +10

#### ■ BRIGHT

- 10 ⇄ 00 ⇄ +10

#### ■ CHROMA

- 10 ⇄ 00 ⇄ +10

#### ■ PHASE

- 10 ⇄ 00 ⇄ +10

### H. POSITION

Adjusts the horizontal position of the screen.

#### NOTE:

You can adjust "H. POSITION" separately for each video input. Select the video input you want to adjust beforehand.

- 05 ⇄ 00 ⇄ +05

- : Moves the screen to the left.
- +: Moves the screen to the right.

### V. POSITION

Adjusts the vertical position of the screen.

#### NOTE:

You can adjust "V. POSITION" separately for each video input. Select the video input you want to adjust beforehand.

- 05 ⇄ 00 ⇄ +05

- : Moves the screen downward.
- +: Moves the screen upward.

# How to Use SET-UP MENU (cont'd)

## WHITE BALANCE

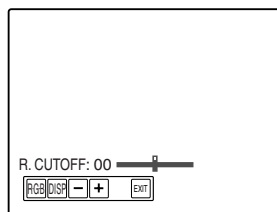
Adjusts the white balance.

### NOTE:

You can adjust the items in "WHITE BALANCE" separately for each color temperature (6500 or 9300). Select the color temperature you want to adjust beforehand.

### Cut-off adjustment

- Select "WHITE BALANCE" on SET-UP MENU, then press the VOLUME/SELECT (+) button to display the setting display for the cut-off adjustment.



(When "R. CUTOFF" is selected.)

#### ■R. CUTOFF

Adjusts the cut-off point of the red signal.

- -20 ⇄ 00 ⇄ +20

#### ■G. CUTOFF

Adjusts the cut-off point of the green signal.

- -20 ⇄ 00 ⇄ +20

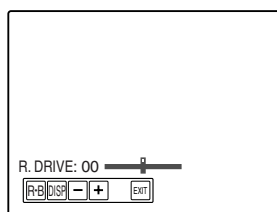
#### ■B. CUTOFF

Adjusts the cut-off point of the blue signal.

- -20 ⇄ 00 ⇄ +20

### Drive level adjustment

- Select "WHITE BALANCE" on SET-UP MENU, then press the VOLUME/SELECT (-) button to display the setting display for the drive level adjustment.



(When "R. DRIVE" is selected.)

#### ■R. DRIVE

Adjusts the drive level of the red signal.

- -20 ⇄ 00 ⇄ +20

#### ■B. DRIVE

Adjusts the drive level of the blue signal.

- -20 ⇄ 00 ⇄ +20

### NOTE:

You can turn off the on screen display during the adjustment of the white balance by pressing the  $\Delta$  button.

## CONTROL LOCK

Prohibits the monitor operations except turning on/off the monitor and adjusting volume. The menu operations are also prohibited.

- ON: Activates this function.
- OFF: Deactivates this function.

### NOTES:

- When "CONTROL LOCK" is set to "ON," "CONTROL LOCK ON!" appears on the screen if you try to operate the monitor.
- You can deactivate this function on SET-UP MENU when "CONTROL LOCK" is set to "ON."

## STATUS DISPLAY

If "COLOR SYSTEM" is set to "AUTO," you can display the color system (NTSC or PAL) of the current input signal when turning on the monitor or when changing the input.

- ON: Displays the color system (NTSC or PAL) of the current input signal.
- OFF: Does not display the color system (NTSC or PAL) of the current input signal.

### NOTE:

The color system does not appear on the screen when the component signal, RGB signal, or black-and-white signal is input.

## REMOTE SYSTEM

Selects the method of the external control connected to the REMOTE terminal.

➡ For details, see page 15.

- MAKE (make contact system)
- TRG. (trigger system)

## INPUT REMOTE

Sets how to change the input when operating the monitor by the external control.

➡ For details, see page 15.

- A-D
- A/B

### NOTE:

"INPUT REMOTE" appears on the screen only when "REMOTE SYSTEM" is set to "MAKE."

# How to Use the External Control

## About the External Control

This monitor has the REMOTE (remote) terminal that is used for the operation by an external control.

You can select the following control methods according to the setting of "REMOTE SYSTEM" in SET-UP MENU:

- **MAKE** (make contact system): Controls the function by short-circuiting the corresponding pin terminal to the GND pin terminal, or disconnecting (opening) it.
- **TRG.** (trigger system): Controls the function by inputting the pulse signal instantaneously to the corresponding pin terminal.

### NOTES:

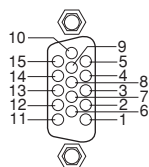
When selecting "MAKE" (the make contact system), you can select how to change the input by the external control as follows:

**A-D (4-pin control):** Changes the input by short-circuiting any one signal line of INPUT A to INPUT D.

**A/B (1-pin control):** Selects INPUT A or INPUT B by short-circuiting and opening only 2nd pin terminal. In this setting, you cannot change the input to INPUT C or INPUT D by the external control.

- Opening: Changes the input to INPUT A
- Short-circuiting: Changes the input to INPUT B

## How to Use the REMOTE Terminal



REMOTE terminal

No.	Functions to be controlled	Opening	Short-circuiting	
1	Not in use	—	—	
2	Changes the input to INPUT A	Invalid	Valid	*1
3	Changes the input to INPUT B	Invalid	Valid	*2
4	Changes the input to INPUT C	Invalid	Valid	*2
5	Changes the input to INPUT D	Invalid	Valid	*2
6	Not in use	—	—	
7	Not in use	—	—	
8	COLOR OFF	Off	On	
9	Not in use	—	—	
10	ASPECT	Off (4:3)	On (16:9)	
11	UNDER SCAN	Off	On	
12	Not in use	—	—	
13	Not in use	—	—	
14	External control	Invalid	Valid	*3, 4
15	GND			

\*1 The 2nd pin terminal works to change the input between INPUT A (opening) and INPUT B (short-circuiting) when "INPUT REMOTE" in SET-UP MENU is set to "A/B."

\*2 These pin terminals are not in use when "INPUT REMOTE" in SET-UP MENU is set to "A/B." Do not connect these pin terminals in such a case.

\*3 The 14th pin terminal (External control) should be controlled by the make contact system even when selecting "TRG." (the trigger system).

\*4 Short-circuiting the 14th pin terminal (External control) enables operating other functions listed above by the external control.

## Operation

1. Short-circuit the 14th pin terminal (External control) to the 15th pin terminal (GND) so that the monitor can be controlled by the external control.

2. **When selecting "MAKE" (the make contact system),** operate each function by short-circuiting the corresponding pin terminal to the 15th pin terminal (GND) or opening it.

**When selecting "TRG." (the trigger system),** operate each function by Pulse control, that is short-circuiting the corresponding pin terminal to the 15th pin terminal (GND) for about 1 second.

### NOTES:

**When selecting "MAKE" (the make contact system):**

- You cannot use the following buttons on the front panel:  
UNDER SCAN, COLOR OFF, ASPECT, INPUT SELECT  
"REMOTE ON!" appears on the screen if one of those buttons is pressed.
- When more than one terminal of INPUT A to INPUT D are selected (short-circuited), inputs are given the alphabetical priority (A, B, C, D). (We recommend using an interlock switch which turns off a switch when another switch is turned on.)

**When selecting "TRG." (the trigger system):**

- You can use the buttons on the front panel.
- You can operate only one function at a time. (We recommend using a switch which turns on only while it is pressed down.)



# Troubleshooting

Solutions to common problems related to your monitor are described here. If none of the solutions presented here solve the problem, unplug the monitor and consult a JVC-authorized dealer or service center for assistance.

Problems	Points to be checked	Measures (Remedy)	Reference pages
<b>No power supply</b>	Is the power plug loosened or disconnected?	Firmly insert the power plug.	—
	Is the main power turned OFF?	Turn the main power switch on.	6
<b>No picture with the power on</b>	Is the signal cable disconnected?	Connect the signal cable firmly.	6-8
	Is the power of the connected component ON?	Turn on the power of the connected component and set it correctly.	—
	Is the signal output from the connected component?		
	Is the input selected correctly?	Select the correct input with the INPUT SELECT buttons.	5
	Is the input signal adapted to the monitor's specification?	Check if the input signal format is acceptable to the monitor or the input card.	6-8, 19
<b>No sound</b>	Is the audio cable disconnected?	Connect the audio cable firmly.	6-8
	Is the audio signal output from the connected component?	Set the connected component correctly.	—
	Is the volume output set to minimum?	Adjust the volume with the VOLUME/SELECT (–/+) buttons.	4
<b>Wrong color</b>	Has the picture adjustment been changed?	Set each picture adjustment to the standard level (00). Or, set each item in "PICTURE SUB ADJ." in SET-UP MENU to the standard level (00). (Or initialize the settings of the monitor.)	4, 11, 13
	Has the WHITE BALANCE setting been changed?	Set each item in "WHITE BALANCE" in SET-UP MENU to the standard level (00). Or, initialize the settings of the monitor.	11, 14
	Are any cables disconnected from the component/RGB input card?	Connect each signal cable firmly.	7
	Has the correct signal been input to the component/RGB input card? Has the correct INPUT been selected on the monitor?	Select INPUT C when the component signal is input. Select INPUT D when the RGB signal is input.	5, 7
	Has the correct color system been selected?	Set "COLOR SYSTEM" in MENU to "AUTO."	12
	Has "BLUE CHECK" or "COLOR OFF" been activated?	Press the BLUE CHECK button or the COLOR OFF button to deactivate the functions.	4, 5
<b>Unnatural picture</b>	Has "CONTRAST" or "BRIGHT" been changed?	Adjust CONTRAST or BRIGHT by using the front panel buttons. Or, adjust "CONTRAST" or "BRIGHT" in "PICTURE SUB ADJ." in SET-UP MENU.	4, 13
<b>Shaking picture</b>	Is the monitor close to a motor, transformer or any other device generating a strong magnetic field? (a fan, fluorescent light, laser printer, another monitor, etc.)	Move the monitor away from the device until the picture stops shaking. Connect the power plug to another AC outlet away from the former one.	—

Problems	Points to be checked	Measures (Remedy)	Reference pages
<b>Irregular color</b>	Is the monitor placed or moved close to a speaker or any other device incorporating a magnet? Has the position of the monitor been changed with the power on?	Move the device away from the monitor and turn off the monitor. Wait at least 30 minutes, then turn on the monitor.	—
<b>Wrong picture position</b>	Has the picture position been changed?	Adjust "H. POSITION" or "V. POSITION" in SET-UP MENU.	13
	Has the UNDER SCAN or ASPECT button been pressed?	When the UNDER SCAN or ASPECT button is lit, press the button to deactivate the function.	4, 5
<b>Front panel buttons do not function</b>	Has the CONTROL LOCK function been set to "ON"?	Set the CONTROL LOCK function to "OFF."	14
	Has the monitor's setting been changed to enable control by the external control connected to the REMOTE terminal?	Change the setting of the external control so that the monitor can be operated by the buttons on the front panel.	15

**The following are not malfunctions:**

- When a bright still image (such as a white cloth) is displayed for a long period, it may appear to be colored. This is due to the structure of the cathode ray tube and will disappear when another image is displayed.
- You may sometimes experience a mild electric shock when you touch the picture tube. This phenomenon is due to a normal buildup of static electricity on the CRT and is not harmful.
- The monitor emits a strange sound when the room temperature changes suddenly. This is only a problem if an abnormality appears on the screen as well.
- If two or more monitors are placed close each other, their images may shake or be distorted. This phenomenon is due to mutual interference; it is not a malfunction. Move the monitors away from each other until the interference disappears or turn the power off on any monitor that is not being used.

# Specifications

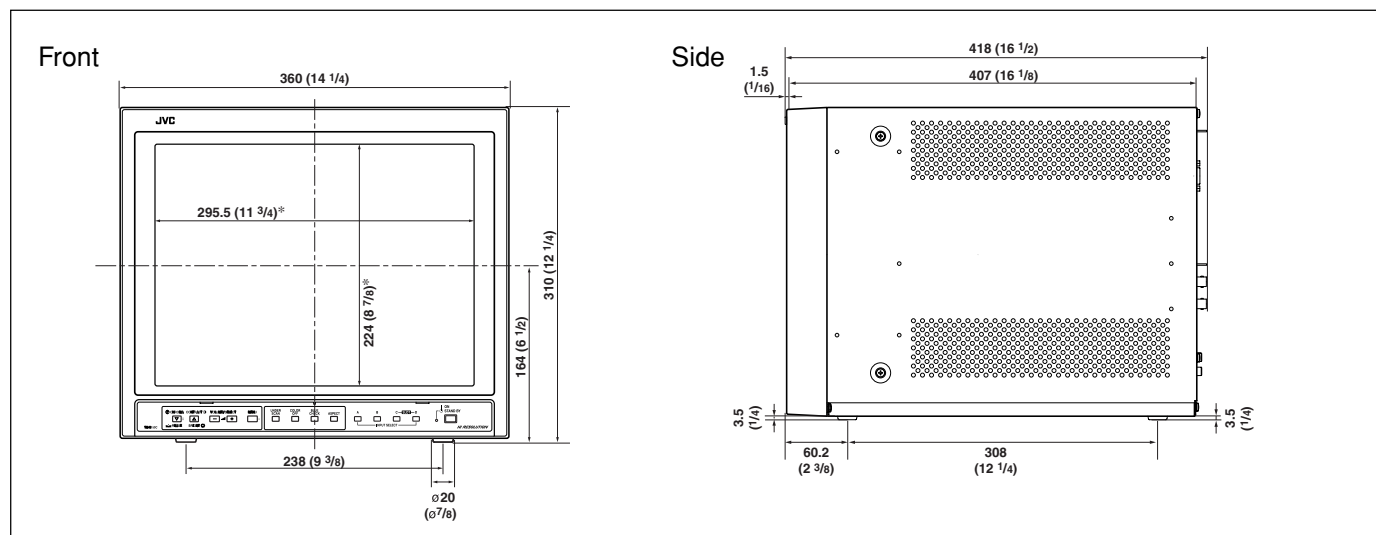
<b>MODEL</b>		<b>TM-H150CG</b>
<b>Type</b>		Color video monitor
<b>Color system</b>		PAL, NTSC (3.58)
<b>Picture tube</b>		39 cm (15") measured diagonally, 90° deflection, in-line gun, trio-dot type (phosphor dot-trio pitch 0.27 mm)
<b>Effective screen size</b>		Width: 285.5 mm (11 3/16") Height: 214 mm (8 3/8") Diagonal: 356 mm (14")
<b>Scanning frequency</b>		H: 15.734 kHz (NTSC), 15.625 kHz (PAL) V: 59.94 Hz (NTSC), 50 Hz (PAL)
<b>Horizontal resolution</b>		750 TV lines or more (Y/C input mode)
<b>Input terminals</b>	<b>VIDEO A</b>	Composite video: 1 line, BNC connector x 2, 1 V(p-p), 75 $\Omega$ , negative sync (bridge connection possible, auto termination)
	<b>VIDEO B</b>	Composite video: 1 line, BNC connector x 2, 1 V(p-p), 75 $\Omega$ , negative sync (bridge connection possible, auto termination)
		Y/C-separated: 1 line, mini-DIN 4-pin connector x 2 Y: 1 V (p-p), 75 $\Omega$ C (BURST): 0.286 V (p-p), 75 $\Omega$ (NTSC) 0.3 V (p-p), 75 $\Omega$ (PAL) (bridge connection possible, auto termination)
	<b>AUDIO A</b>	1 line (monaural), RCA pin x 2, 0.5 V(rms), high-impedance (bridge connection possible)
	<b>AUDIO B</b>	1 line (monaural), RCA pin x 2, 0.5 V(rms), high-impedance (bridge connection possible)
	<b>REMOTE</b>	Point-of-contact connection, 1 line D-sub connector (15-pin, 3-line)
<b>Audio power output</b>		1 W
<b>Built-in speaker</b>		8 cm round x 1, impedance of 8 $\Omega$
<b>Environmental conditions</b>		Operation temperature: 5°C – 40°C (41°F – 104°F) Operation humidity: 20 % – 80 % (non-condensing)
<b>Power requirements</b>		120 V/220 – 240 V AC, 50 Hz/ 60 Hz
<b>Power consumption</b>		1.2 A (120 V AC)/0.8 A (220 – 240 V AC)
<b>Dimensions</b>		Width: 360 mm (14 1/4") Height: 310 mm (12 1/4") Depth: 418 mm (16 1/2")
<b>Weight</b>		16 kg (35.2 lbs) (not including input card)
<b>Accessory</b>		AC power cord

- Illustrations used in this manual are for explanatory purposes only. The appearance of the actual product may differ slightly.
- Dimensions and weight are approximate.
- E. & O. E. Design and specifications subject to change without notice.

## ■ Dimensions

Unit : mm (inch)

• Asterisks (\*) are used to indicate the screen dimensions.



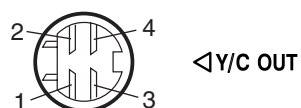
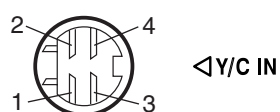
## ■ Acceptable Signal Formats

○: Acceptable    –: Not acceptable

Input Signals	When an input card (not supplied) is installed				Terminals on the rear of the monitor
	IF-C01COMG	IF-C01SDG	IF-C21SDG	IF-C51SDG	
NTSC (3.58 MHz)	–	–	–	–	○
PAL	–	–	–	–	○
Black-and-White (50 Hz/60 Hz)	–	–	–	–	○
480/60i (525i)	○	○	○	○	–
576/50i (625i)	○	○	○	○	–
EMBEDDED AUDIO	–	–	○	○	–
Analog audio	○	○	–	–	○

➔ For details about each input card, see pages 7 and 8.

## ■ Y/C (Mini DIN 4 pin) terminals



Pin No.	Signal
1	GND (Y)
2	GND (C)
3	Y
4	C

### 3.2.3 FACTORY SETTING VALUE (USER MODE)

#### ■ INITIAL SETTING VALUE OF THE SET-UP MENU

Setting item	Setting content / Range		Initial setting value
PICTURE SUB ADJ.	CONTRAST	-10 ~ 00 ~ +10	00
	BRIGHT	-10 ~ 00 ~ +10	00
	CHROMA	-10 ~ 00 ~ +10	00
	PHASE (NTSC)	-10 ~ 00 ~ +10	00
H. POSITION	-05 ~ +05		00
V. POSITION	-05 ~ +05		00
WHITE BALANCE	CUTOFF (R / G / B)	-20 ~ +20	00
	DRIVE (R / B)	-20 ~ +20	00
CONTROL LOCK	→ ON → OFF →		OFF
STATUS DISPLAY	→ ON → OFF →		ON
REMOTE SYSTEM	→ MAKE → TRG. →		MAKE
INPUT REMOTE	→ A-D → A/B →		A-D

#### ■ INITIAL SETTING VALUE OF THE MENU

Setting item	Setting content / Range	Initial setting value
APERTURE	00 ~ +40	00
ADJ. BAR POSI	→ LOWER → UPPER →	LOWER
COLOR TEMP	→ 9300 → 6500 →	6500
COLOR SYSTEM	→ AUTO → NTSC → AUTO → PAL →	AUTO
RUSH DELA	→ STD. → SLOW →	STD.

#### ■ INITIAL SETTING VALUE OF FRONT PANEL CONTROLS

Control item (Front panel)	Initial setting value	
INPUT SELECT	A	
ASPECT	OFF	
BLUE CHECK	OFF	
COLOR OFF	OFF	
UNDER SCAN	OFF	
MENU	OFF	
VOLUME	20	
CONTRAST	00	
BRIGHT	00	
CHROMA	00	
PHASE	NTSC : 00	PAL : NO EFFECT

## 4.7 BASIC OPERATION OF SERVICE MENU

### 4.7.1 SERVICE MENU ITEMS

With the SERVICE MENU, various settings can be made, and they are broadly classified in the following items of adjustments.

- It is no requirement for adjustment **portion** of the DEFLECTION BLOCK and CONTROL BLOCK

<b>SIGNAL BLOCK</b>	This block adjusts the data of the various signal circuit controls.
<b>WHITE BALANCE BLOCK</b>	This block adjusts the data of the WHITE BALANCE adjustment.
<b>DEFLECTION BLOCK</b>	This block adjusts the data of the DEFLECTION circuit.
<b>CONTROL BLOCK (Don't adjust)</b>	This block adjusts the whole of the systems.

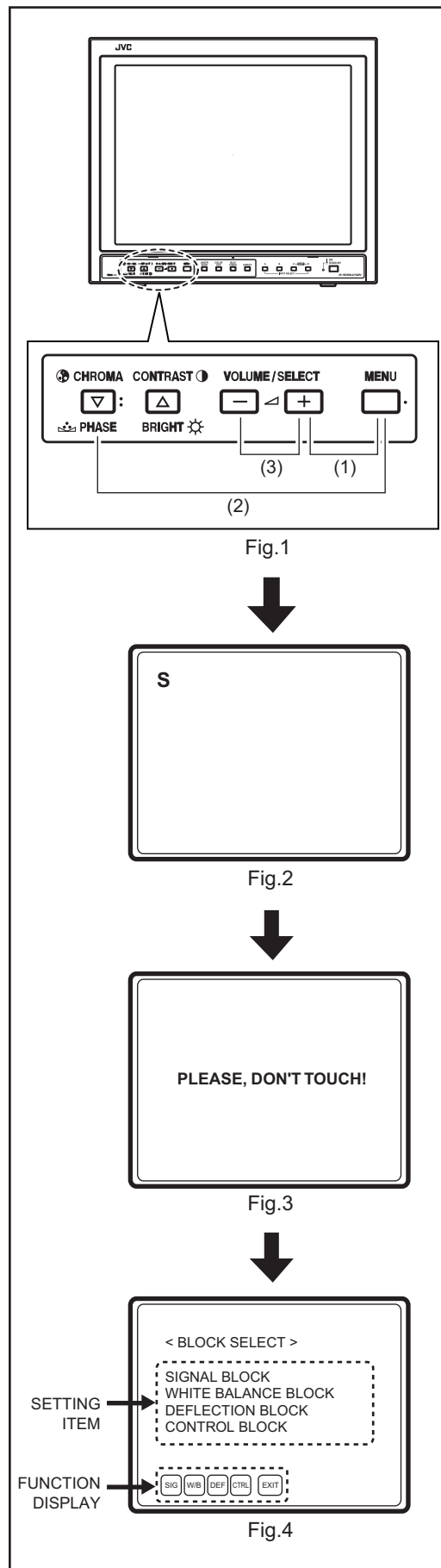
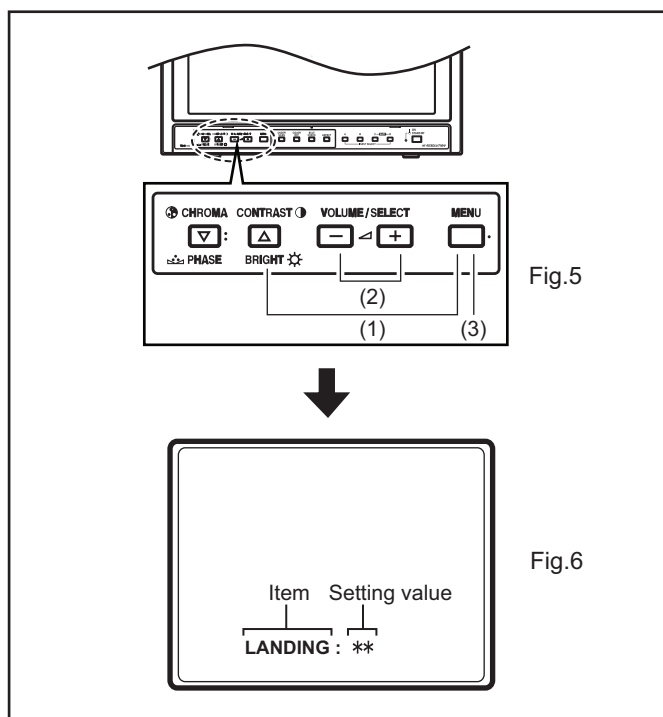
### 4.7.2 HOW TO ENTER THE SERVICE MENU

- (1) Press [MENU] and [VOLUME/SELECT (+)] button simultaneously (Fig. 1).  
The letter "S" appears at the upper left of the screen (Fig. 2).
  - (2) While displaying the letter "S", press [MENU] and [CHROMA /PHASE] button simultaneously (Fig.1).  
The screen display "PLEASE, DON'T TOUCH" (Fig. 3).
  - (3) While displaying the letters, press [VOLUME/SELECT (+ / -)] button to display the SERVICE MENU as shown in Fig. 4.
  - (4) Press the [MENU] button, then return to the normal screen.
- If displaying the letters steps or state continues for more than 5 seconds without a further operation, the display extinguishes and the mode is released.

### 4.7.3 LANDING CORRECTION PROCEDURE

Landing correction is used only when uneven coloring is conspicuous.

- Input the white signal
  - (1) Press [MENU] and [CONTRAST/BRIGHT] button simultaneously (Fig. 5). < LANDING > is displayed on the screen (Fig. 6).
  - (2) Adjust to the state where irregular color is not most conspicuous with [VOLUME/SELECT(+ / -)] buttons (fig.5).
  - (3) If adjustment is completed, return with [MENU] button (Fig.5).



### 3.2.4 SERVICE MENU SETTING ITEMS (SERVICE MODE)

#### SIGNAL BLOCK

Item	Contents
S01	BRIGHT
S02	CONTRAST
S03	CHROMA(PAL)
S04	CHROMA(NTSC)
S05	PHASE(NTSC)
S06	CHROMA
S07	BRIGHT
S08	CONTRAST
S09	BRIGHT
S10	CONTRAST
S11	PHASE(PAL)
S12	PHASE
S13	CONT TRACKING

#### WHITE BALANCE BLOCK

Item	Contents
W01	R CUTOFF
W02	G CUTOFF
W03	B CUTOFF
W04	R DRIVE (6500K)
W05	B DRIVE (6500K)
W06	R DRIVE (9300K)
W07	B DRIVE (9300K)
W08	R CUTOFF
W09	G CUTOFF
W10	B CUTOFF
W11	R DRIVE (6500K)
W12	B DRIVE (6500K)
W13	R DRIVE (9300K)
W14	B DRIVE (9300K)
W15	R CUTOFF
W16	G CUTOFF
W17	B CUTOFF
W18	R DRIVE (6500K)
W19	B DRIVE (6500K)
W20	R DRIVE (9300K)
W21	B DRIVE (9300K)
W22	R CUTOFF
W23	G CUTOFF
W24	B CUTOFF

### 3.2.5 LANDING MENU SETTING ITEMS

Item	Input signal	Contents
- - -	PAL / NTSC	LANDING

#### DEFLECTION BLOCK

Item	Aspect ratio Scan size	Vertical frequency	Contents
D01	4:3 NORMAL SCAN	50Hz	HORIZONTAL POSITION
D02			HORIZONTAL SIZE
D03			VERTICAL POSITION
D04			VERTICAL SIZE
D05			VERTICAL LINEARITY
D06			VERTICAL S-CORRECTION
D07			SIDEPIN PARABOLA
D08			SIDEPIN CORNER
There are many mode of the DEFLECTION BLOCK except for above DA1~DA8 (4:3 / 60Hz) DB1~DB8 (16:9 / 50Hz) DC1~DC8 (16:9 / 60Hz) DD1~DD8 (UNDER SCAN / 50Hz) DE1~DE8 (UNDER SCAN / 60Hz) DF7~DF8 (16:9 UNDER SCAN / 50Hz)			

#### CONTROL BLOCK (Don't change the values, because all fixed)

Item	Contents
C01	DESTINATION
C02	BRIGHT POINT
C03	UPPER
C04	CONTRAST POINT
C05	LOWER
C06	CHROMA POINT
C07	UPPER
C08	PHASE POINT
C09	LOWER
C10	OSD HORIZONTAL POSITION
C11	OSD VERTICAL FREQUENCY 50Hz
C12	OSD VERTICAL FREQUENCY 60Hz
C13	HORIZONTAL CENTER (RGB)
C14	HORIZONTAL CENTER (COMPONENT)
C15	BRIGHT SERVICE
C16	SHARPNESS CENTER
C17	HVT H
C18	HVT V
C19	HVT H (UNDER SCAN)
C20	HVT V (UNDER SCAN)
C21	V-S.CORRECTION
C22	TRAPEZOID
C23	HOUR METER
C24	RUSH DELAY
C25	DEGAUSS DELAY TIME
C26~C33	SLOT IDENTIFY
C34	LANDING ENABLE
C35	LANDING START

#### 4.8 INITIAL SETTING VALUE OF SERVICE MENU

It is no requirement for adjustment of the  part of the tables. Don't change the values.

##### [SIGNAL BLOCK]

Item	Input signal	Contents	Variable range	Initial value
S01	VIDEO	BRIGHT	000 ~ 255	137
S02		CONTRAST	000 ~ 127	059
S03		CHROMA(PAL)	000 ~ 127	064
S04		CHROMA(NTSC)	000 ~ 127	062
S05		PHASE(NTSC)	000 ~ 127	060
S06	COMPONENT	CHROMA	000 ~ 127	080
S07	RGB	BRIGHT	000 ~ 127	076
S08		CONTRAST	-128 ~ 000 ~ +127	-001
S09	VIDEO	UNDER SCAN BRIGHT	-128 ~ 000 ~ +127	000
S10		UNDER SCAN CONTRAST	-128 ~ 000 ~ +127	-009
S11		PHASE(PAL)	000 ~ 127	062(FIXED)
S12	COMPONENT	PHASE	000 ~ 127	063(FIXED)
S13	VIDEO	CONT TRACKING	000 ~ 031	016(FIXED)

##### [WHITE BALANCE BLOCK]

Item	Input signal	Contents	Variable range	Initial value
W01	VIDEO	R CUTOFF	000 ~ 255	050
W02		G CUTOFF	000 ~ 255	050
W03		B CUTOFF	000 ~ 255	050
W04		R DRIVE (6500)	000 ~ 127	062
W05		B DRIVE (6500)	000 ~ 127	048
W06		R DRIVE (9300)	000 ~ 127	078
W07		B DRIVE (9300)	000 ~ 127	066
W08	COMPONENT	R CUTOFF	-128 ~ 000 ~ +127	000
W09		G CUTOFF	-128 ~ 000 ~ +127	000
W10		B CUTOFF	-128 ~ 000 ~ +127	000
W11		R DRIVE (6500)	-128 ~ 000 ~ +127	000
W12		B DRIVE (9300)	-128 ~ 000 ~ +127	000
W13		R DRIVE (6500)	-128 ~ 000 ~ +127	000
W14		B DRIVE (9300)	-128 ~ 000 ~ +127	000
W15	RGB	R CUTOFF	-128 ~ 000 ~ +127	000
W16		G CUTOFF	-128 ~ 000 ~ +127	000
W17		B CUTOFF	-128 ~ 000 ~ +127	000
W18		R DRIVE (6500)	-128 ~ 000 ~ +127	000
W19		B DRIVE (9300)	-128 ~ 000 ~ +127	000
W20		R DRIVE (6500)	-128 ~ 000 ~ +127	000
W21		B DRIVE (9300)	-128 ~ 000 ~ +127	000
W22	VIDEO	UNDER SCAN R CUTOFF	-128 ~ 000 ~ +127	000
W23		UNDER SCAN G CUTOFF	-128 ~ 000 ~ +127	000
W24		UNDER SCAN B CUTOFF	-128 ~ 000 ~ +127	000



[DEFLECTION BLOCK]

Item	Aspect ratio/ Scan size	Vertical frequency	Contents	Variable range	Initial value
D01	4:3 NORMAL	50Hz	HORIZONTAL POSITION	000 ~ 031	012
D02			HORIZONTAL SIZE	000 ~ 063	040
D03			VERTICAL POSITION	000 ~ 127	041
D04			VERTICAL SIZE	000 ~ 127	058
D05			VERTICAL LINEARITY	000 ~ 031	025
D06			VERTICAL S-CORRECTION	000 ~ 063	040
D07			SIDE PIN PARABOLA	000 ~ 063	030
D08			SIDE PIN CORNER	000 ~ 031	018
DA1	4:3 NORMAL	60Hz	HORIZONTAL POSITION	-032 ~ 000 ~ +031	+002
DA2			HORIZONTAL SIZE	-064 ~ 000 ~ +063	-4
DA3			VERTICAL POSITION	-128 ~ 000 ~ +127	+002
DA4			VERTICAL SIZE	-128 ~ 000 ~ +127	000
DA5			VERTICAL LINEARITY	-032 ~ 000 ~ +031	-1
DA6			VERTICAL S-CORRECTION	-064 ~ 000 ~ +063	000
DA7			SIDE PIN PARABOLA	-064 ~ 000 ~ +063	+001
DA8			SIDE PIN CORNER	-032 ~ 000 ~ +031	+001
DB1	16:9 NORMAL	50Hz	HORIZONTAL POSITION	-032 ~ 000 ~ +031	000
DB2			HORIZONTAL SIZE	-064 ~ 000 ~ +063	000
DB3			VERTICAL POSITION	-128 ~ 000 ~ +127	000
DB4			VERTICAL SIZE	-128 ~ 000 ~ +127	-28
DB5			VERTICAL LINEARITY	-032 ~ 000 ~ +031	000
DB6			VERTICAL S-CORRECTION	-064 ~ 000 ~ +063	000
DB7			SIDE PIN PARABOLA	-064 ~ 000 ~ +063	-11
DB8			SIDE PIN CORNER	-032 ~ 000 ~ +031	000
DC1	16:9 NORMAL	60Hz	HORIZONTAL POSITION	-032 ~ 000 ~ +031	000
DC2			HORIZONTAL SIZE	-064 ~ 000 ~ +063	000
DC3			VERTICAL POSITION	-128 ~ 000 ~ +127	000
DC4			VERTICAL SIZE	-128 ~ 000 ~ +127	-27
DC5			VERTICAL LINEARITY	-032 ~ 000 ~ +031	000
DC6			VERTICAL S-CORRECTION	-064 ~ 000 ~ +063	-1
DC7			SIDE PIN PARABOLA	-064 ~ 000 ~ +063	-12
DC8			SIDE PIN CORNER	-032 ~ 000 ~ +031	-1
DD1	4:3 UNDER SCAN	50Hz	HORIZONTAL POSITION	-032 ~ 000 ~ +031	000
DD2			HORIZONTAL SIZE	-064 ~ 000 ~ +063	-7
DD3			VERTICAL POSITION	-128 ~ 000 ~ +127	000
DD4			VERTICAL SIZE	-128 ~ 000 ~ +127	-3
DD5			VERTICAL LINEARITY	-032 ~ 000 ~ +031	000
DD6			VERTICAL S-CORRECTION	-064 ~ 000 ~ +063	000
DD7			SIDE PIN PARABOLA	-064 ~ 000 ~ +063	-19
DD8			SIDE PIN CORNER	-032 ~ 000 ~ +031	-1
DE1	4:3 UNDER SCAN	60Hz	HORIZONTAL POSITION	-032 ~ 000 ~ +031	000
DE2			HORIZONTAL SIZE	-064 ~ 000 ~ +063	-6
DE3			VERTICAL POSITION	-128 ~ 000 ~ +127	000
DE4			VERTICAL SIZE	-128 ~ 000 ~ +127	-2
DE5			VERTICAL LINEARITY	-032 ~ 000 ~ +031	000
DE6			VERTICAL S-CORRECTION	-064 ~ 000 ~ +063	000
DE7			SIDE PIN PARABOLA	-064 ~ 000 ~ +063	-20
DE8			SIDE PIN CORNER	-032 ~ 000 ~ +031	-2
DF7	16:9 UNDER SCAN	50Hz	SIDE PIN PARABOLA	-064 ~ 000 ~ +063	+007
DF8			SIDE PIN CORNER	-032 ~ 000 ~ +031	000
DG7	16:9 UNDER SCAN	60Hz	SIDE PIN PARABOLA	-064 ~ 000 ~ +063	+008
DG8			SIDE PIN CORNER	-032 ~ 000 ~ +031	+001

**[CONTROL BLOCK]**

Item.	Contents		Variable range	Initial value
C01	DESTINATION		000 ~ 129	001(US/EU)
C02	BRIGHT POINT	UPPER	000 ~ 255	016
C03		LOWER	000 ~ 255	026
C04	CONTRAST POINT	UPPER	000 ~ 127	016
C05		LOWER	000 ~ 127	026
C06	CHROMA POINT	UPPER	000 ~ 127	040
C07		LOWER	000 ~ 127	040
C08	PHASE POINT	UPPER	000 ~ 127	040
C09		LOWER	000 ~ 127	040
C10	OSD HORIZONTAL POSITION		000 ~ 010	000
C11	OSD VERTICAL FREQUENCY 50Hz		000 ~ 010	004
C12	OSD VERTICAL FREQUENCY 60Hz		000 ~ 010	002
C13	HORIZONTAL CENTER (RGB)		-128 ~ 000 ~ +127	+007
C14	HORIZONTAL CENTER (COMPONENT)		-128 ~ 000 ~ +127	+002
C15	BRIGHT SERVICE		000 ~ 127	000
C16	SHARPNESS CENTER		000 ~ 127	028
C17	HVT H		000 ~ 007	007
C18	HVT V		000 ~ 007	003
C19	HVT H (UNDER SCAN)		000 ~ 007	004
C20	HVT V (UNDER SCAN)		000 ~ 007	002
C21	V-SS.CR		000 ~ 015	005
C22	TRAPEZOID		000 ~ 127	068
C23	HOUR METER		001 ~ 650	001
C24	RUSH DELAY		000 ~ 255	032
C25	DEGAUSS DELAY TIME		000 ~ 255	011
C26	SLOT IDENTIFY		000 ~ 255	000
C27	SLOT IDENTIFY		000 ~ 255	066
C28	SLOT IDENTIFY		000 ~ 255	000
C29	SLOT IDENTIFY		000 ~ 255	001
C30	SLOT IDENTIFY		000 ~ 255	000
C31	SLOT IDENTIFY		000 ~ 255	000
C32	SLOT IDENTIFY		000 ~ 255	000
C33	SLOT IDENTIFY		000 ~ 255	000
C34	LANDING ENABLE		000/001	000
C35	LANDING START		000/001	000

**4.9 INITIAL SETTING VALUE OF LANDING MENU**

Item	Contents	Variable range	Initial value
- - -	LANDING CORRECTION	-08 ~ 00 ~ +08	00

