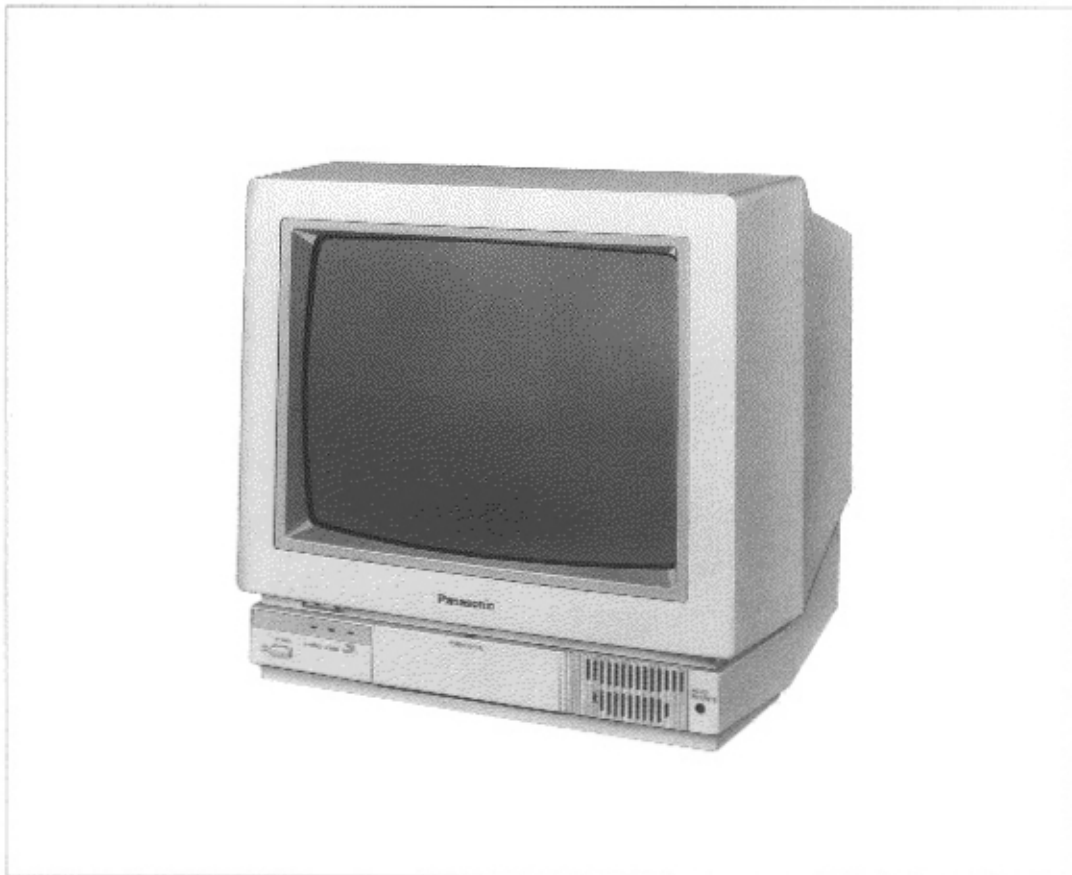


Operating Instructions

Color Video/Data Monitor

Model No. **DT-1300MS**



Panasonic®

Read these instructions completely before operating this unit.

TQB510197

Dear Panasonic Customer:

Welcome to our Panasonic family of customers. It is our desire that you receive many years of enjoyment from your new Color Video/Data Monitor. In keeping up with the state of the art, we have built quality, reliability and performance into your unit.

However, for the best performance, a Color Video/Data Monitor should be suitably positioned in the viewing area and properly adjusted.

This instruction booklet provides all the necessary operating information. We hope it will help you to get the most enjoyment out of your new product, and that you will be pleased with your Panasonic Color Video/Data Monitor.

The serial number of this product may be found on its front. You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid in identification in the event of theft or loss.

Model number: **DT-1300MS** Serial number: _____

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IMPORTANT SAFETY NOTICE

WARNING: To prevent damage which may result in fire or shock hazard, do not expose this appliance to rain or moisture.

Power Supply: This Color Video/Data Monitor is designed to operate on 120 V (50/60Hz), AC house current only.



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



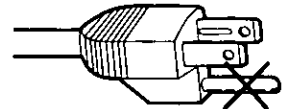
The lightning flash with arrowhead within a triangle is intended to tell the user that parts inside the product are a risk of electric shock to persons.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL



The exclamation point within a triangle is intended to tell the user that important operating and servicing instructions are in the papers with the appliance.

CAUTION: This equipment is equipped with a three-pin grounding-type power plug. Do not remove the grounding pin on the power plug. This plug will only fit a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician. Do not defeat the purpose of the grounding plug.



Do not remove

WARNING: 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.

CAUTION: Any unauthorized changes or modifications to this equipment would void the users authority to operate.

Precautions

Do not attempt to disassemble the monitor.

To prevent electric shock, do not remove the screws or cover. There are no user-serviceable parts inside. Refer servicing to qualified service personnel.

Do not use this monitor beyond its temperature and humidity range.

(a) This unit is designed for indoor use. Ambient temperature must not exceed the range of 32°F~104°F (0°C~+40°C).

(b) Avoid using the monitor when the humidity is either above 80% or less than 20%.

(c) Do not block the ventilation slits on the rear cover. If rack mounted, allow ventilation space or force to cool the unit.

Locate this monitor in a place where it will not be directly subjected to steam or smoke.

Set the monitor in a level, stable condition.

Placing the monitor on its side, facing upward, or upside down will make it impossible to guarantee performance; furthermore, this will have a damaging influence on the internal parts and could be the cause of fire or breakdown.

Do not allow the CRT screen to be in the path of direct sunlight or that of illumination light.

A clear picture cannot be obtained when light enters the CRT screen.

Items that produce magnetic fields such as magnets and speaker systems should not be brought close to this monitor.

Do not subject the monitor to strong vibrations or impacts

This can cause breakage of the CRT or damage it.

Do not insert sharp objects into the monitor.

They may cause a fire, accident or failure.

If the unit does not operate properly, turn off the power switch and remove the power plug from the outlet.

Remove the AC power cord from wall outlet when the monitor is not in use for a prolonged period.

Video Cabling — 75 ohm coaxial cable must be used and the correct termination provided to assure good picture quality. Cable attenuation should also be considered on long cable runs and adequate video signal levels made available.

Features

This device is a Multi-scanning Color Video/Data Monitor newly developed for computer information display and other multiple purpose signal sources.

This new Color Video/Data Monitor can present a high-fidelity computer screen to meet various needs in our highly information oriented society.

Wide-range computer compatibility

- Compatibility with all PC signals which satisfy the range shown below.

Horizontal scanning frequency (f_H):	15 ~ 50kHz	
Vertical scanning frequency (f_V):	50 ~ 100 Hz	
Horizontal blanking time:	15.0 ~ 36.0 kHz 5.0 μ s. (Typical)
	37.0 ~ 50 kHz 4.0 μ s. (Typical)
Vertical blanking time:	0.45 ms. (Typical)	
- It can adjust automatically and continuously to the input signal when driven with any standard IBM PC/XT/AT color graphics adaptor, IBM PS/2 or compatible board.

Superb resolution and bright picture

- High resolution: RGB 1120 \times 768 dots.
Video 600 TV lines. (S-VIDEO)
*RGB character reproduction: equivalent to 4000 characters.
CRT 0.28 mm dot-pitch.

Equipped with many adjustment functions for RGB input

- For each input mode, image size and horizontal position adjustments can be made.
- RGB input terminal is equipped with a loop-through output terminal for easy connection of additional system components.

Supports superimpose function for text broadcasts

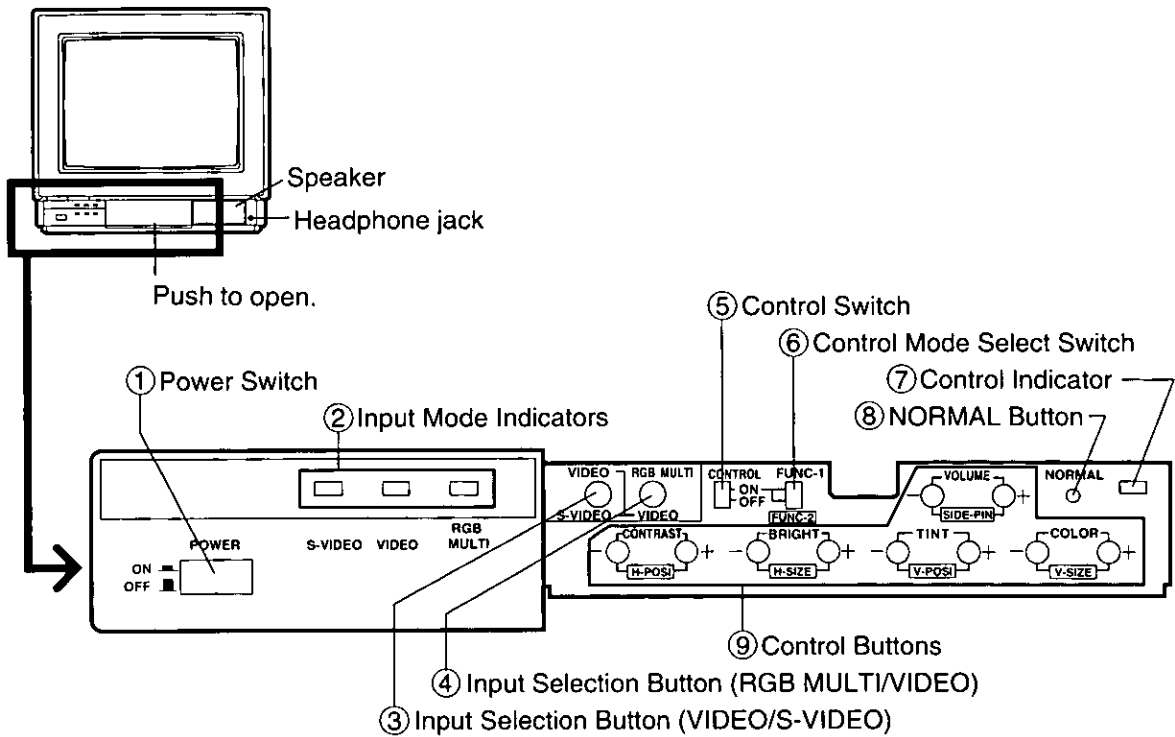
- During RGB mode operation, externally controlled superimpose inputs can be used.

3-mode preset memory

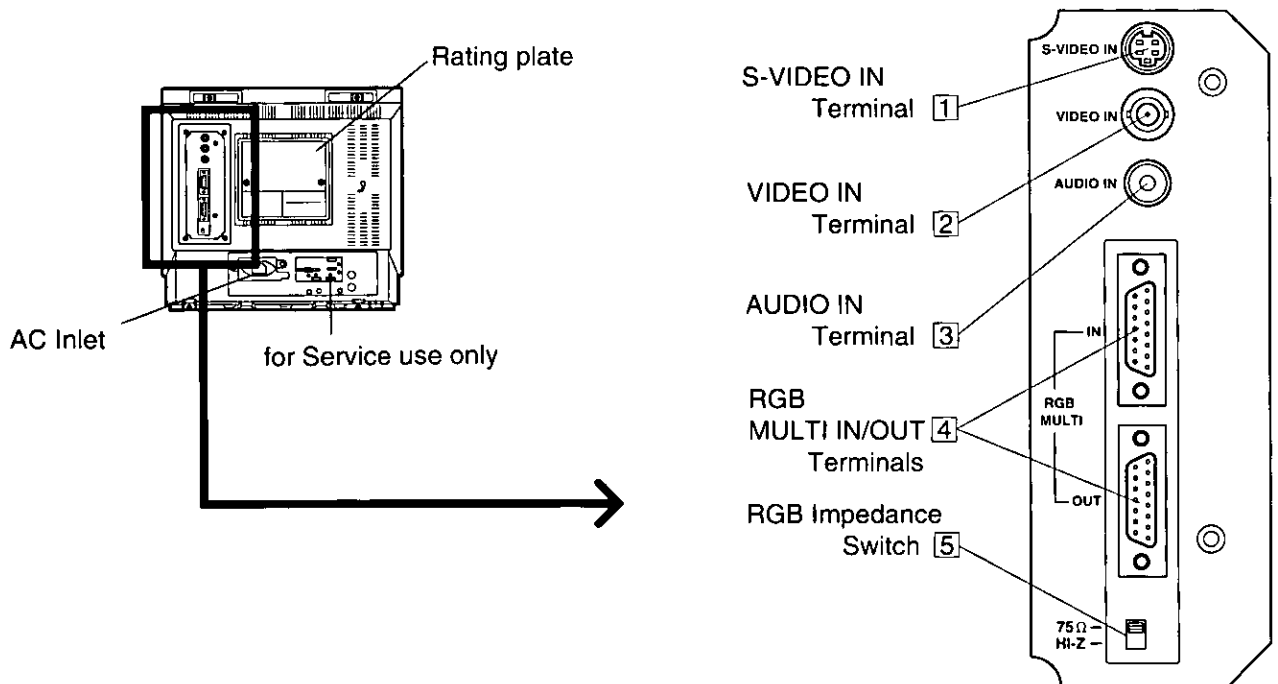
- H/V-position and H/V-size settings memorized for two RGB input modes, and contrast, brightness, tint, and color settings for one Video input mode.
- The two RGB memories can be switched with the AV control signals: Hi/Low.
For the switching mode, see page 10.

Locations

Front Controls



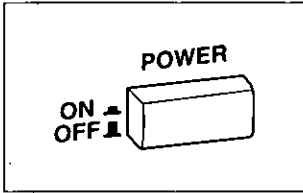
Rear Terminals



Operations

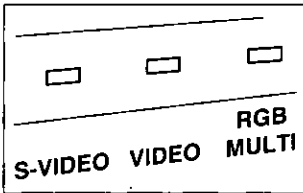
Front Controls

① Power Switch



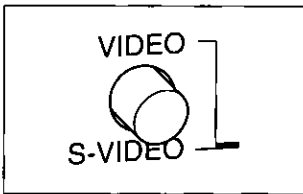
Push this switch to turn the monitor ON/OFF.
When the power is ON, one of the Input Mode Indicators light.

② Input Mode Indicators



When the power is ON, the selected input mode is indicated.

③ Input Selection Button (VIDEO/S-VIDEO)



Push this button to select S-VIDEO or VIDEO input.

- This function is only available when VIDEO input was selected with Input Selection Button (RGB MULTI/VIDEO).
- Selected input mode is shown on the Input Mode Indicators ②.

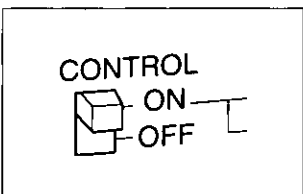
④ Input Selection Button (RGB MULTI/VIDEO)



Push this button to select VIDEO or RGB MULTI input.

- Selected input mode is indicated on the Input Mode Indicators ②.
- When the RGB MULTI is selected, it is able to select RGB or VIDEO signal within the RGB terminal by using YS signal through the RGB terminal.
- When the VIDEO is selected, VIDEO or S-VIDEO input will appear due to the condition of the Input Selection Button (VIDEO/S-VIDEO).
(see page 9 ~ 10)

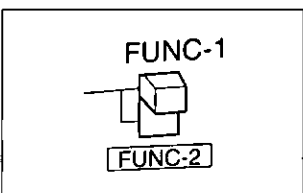
⑤ Control Switch



Set this switch to OFF position to prevent unexpected changes of the adjustments.

ON ... All controls can be operated.
OFF .. Only power on/off and input selection can be operated.

⑥ Control Mode Select Switch

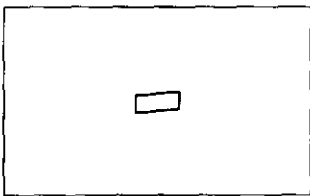


Set this switch to determine which adjustments will be done.

FUNC-1 Picture and Volume
FUNC-2 Size, Position and Side-pincushion

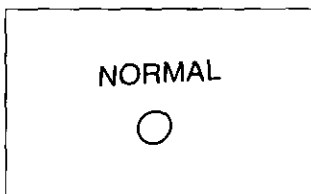
Operations

⑦ Control Indicator



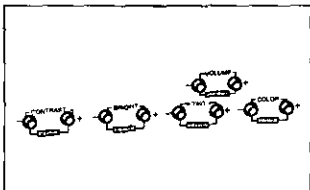
While a control adjustment is being made, this indicator blinks.
When the adjustment level reaches the max/min, this indicator stays lit.

⑧ NORMAL Button



Push this button to return the adjustment level to the factory presets.
Use an adjustment screwdriver or tool to push this button.
In the control off condition, this has no effect.

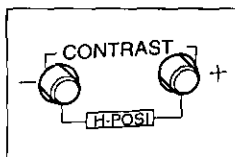
⑨ Control Buttons



By using each +/- buttons, the adjustment can be done in 64 steps.
The adjustment levels are memorized for each input mode.
In the control off condition, these adjustment have no effect.

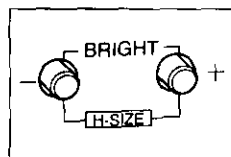
● Function-1 Picture and Volume

Set the Control Mode Select Switch to FUNC-1 position.



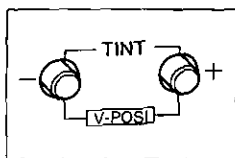
Contrast adjustment

- ... Decrease
+ ... Increase



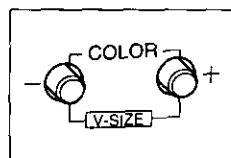
Brightness adjustment

- ... Dark
+ ... Bright



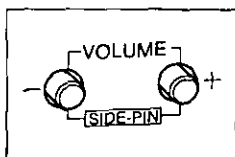
Tint adjustment
(ineffective at RGB)

- ... Red
+ ... Green



Color adjustment
(ineffective at RGB)

- ... Low color
+ ... High color

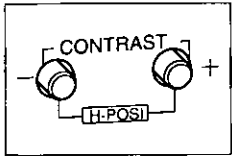


Volume Control

- ... Decrease
+ ... Increase

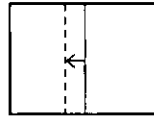
● Function-2 Size, Position and Side-pincushion

Set the Control Mode Select Switch to the **FUNC-2** position.

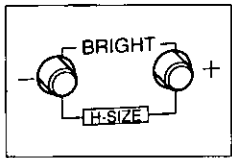
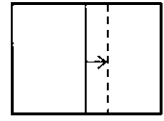


Horizontal position adjustment
(ineffective at VIDEO)

- ...

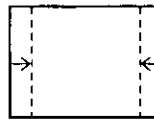


+ ...

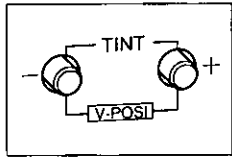


Horizontal size adjustment

- ...

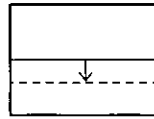


+ ...

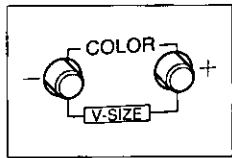
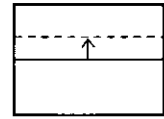


Vertical position adjustment

- ...

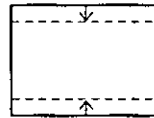


+ ...

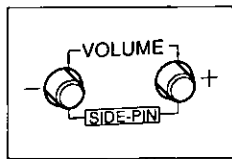
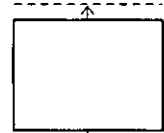


Vertical size adjustment

- ...



+ ...



Side-pincushion adjustment

- ...



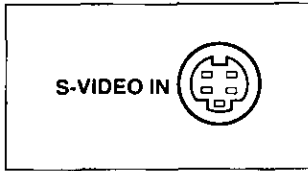
+ ...



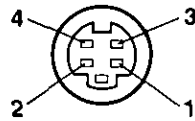
Operations

Rear Terminals

1 S-VIDEO IN Terminal (4pin)



Luminance signal and chrominance signal input terminal.



Pin No.	Function	Pin No.	Function
1	GND (Luminance)	3	Chrominance
2	Luminance	4	GND (Chrominance)

2 VIDEO IN Terminal (BNC)



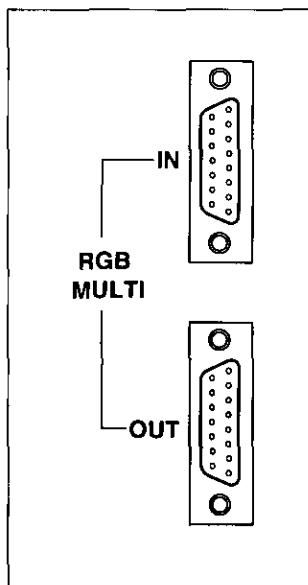
Video signal input terminal.

3 AUDIO IN Terminal (RCA phono)



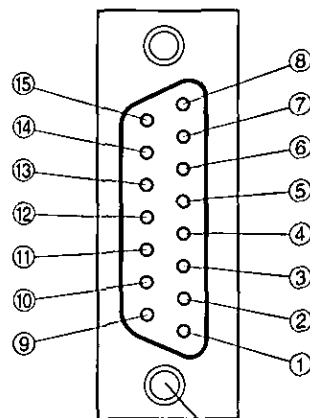
Monaural audio signal input terminal.

4 RGB MULTI IN/OUT Terminals (D sub 15 pin)



RGB signal, external control signal, VIDEO signal or AUDIO signal (monaural) can be input/output.

Pinlayout

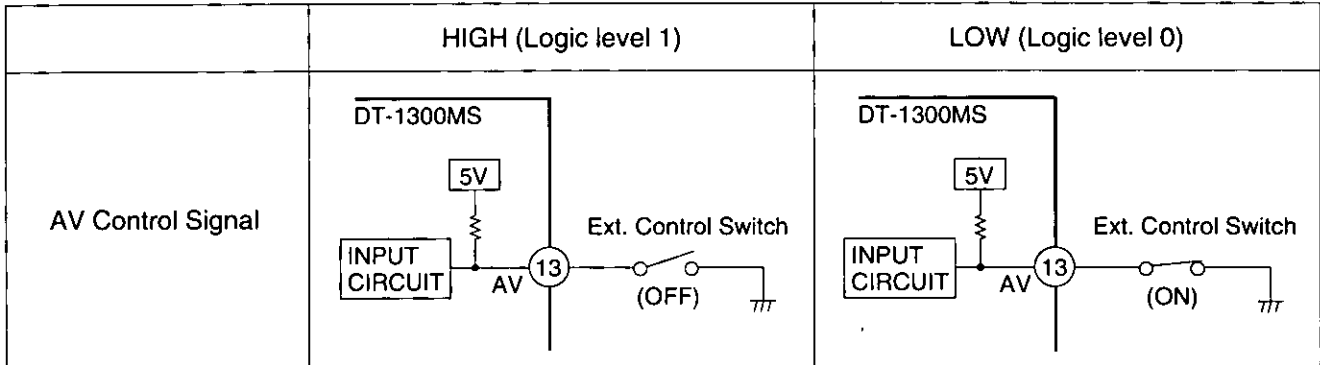


- ① R IN (0.7Vp-p 75Ω)
- ② GND
- ③ G IN (0.7Vp-p 75Ω)
- ④ GND
- ⑤ B IN (0.7Vp-p 75Ω)
- ⑥ GND
- ⑦ YS IN
(High level: 1~3 V
or no connection)
(Low level: 0 V or
connect to GND)
- ⑧ GND
- ⑨ Video IN (1Vp-p 75Ω)
- ⑩ Audio IN (0.5Vrms 22kΩ)
- ⑪ (N/C)
- ⑫ GND
- ⑬ AV control IN
(High level: 3~5 V
or no connection)
(Low level: 0 V or
connect to GND)
- ⑭ H. Sync or
Composite Sync IN
(0.3~5Vp-p Hi-Z)
- ⑮ V. Sync IN
(0.3~5Vp-p Hi-Z)

Note:
Use 4-40 UNC screws for fixing the
connector to the RGB terminals.

■ **Input selection by AV control signal (pin ⑬)**

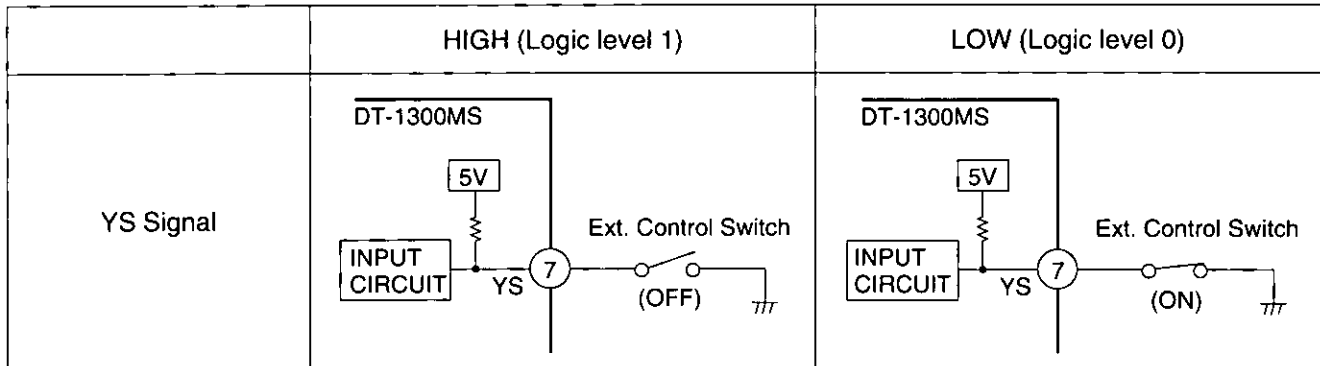
RGB terminal's AV control signal (pin ⑬) is HIGH (logic level 1) when not in use (not connected), and it becomes LOW (logic level 0) when connected to ground (GND). (see page 12)



■ **Input selection by YS signal (pin ⑦)**

RGB terminal's YS signal (pin ⑦) is HIGH (logic level 1) when not in use (not connected), and it becomes LOW (logic level 0) when connected to ground (GND).

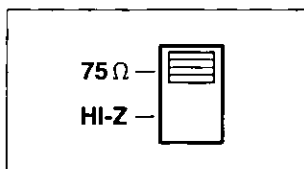
The signal in RGB terminal can be switched to RGB MULTI or VIDEO by controlling the YS signal when the Input Selection Button (RGB MULTI/VIDEO) is set to RGB MULTI.



Control Signal (HIGH=1, Low=0)	Receiving Mode
YS 1	RGB signal (①, ③ and ⑤ pin's signal of D sub 15 pin) of RGB MULTI IN
YS 0	Video signal (⑨ pin's signal of D sub 15 pin) of RGB MULTI IN

(Note) Condition: AV = High.

5 RGB Impedance Switch



Set this switch to Hi-Z position when both of RGB IN/OUT Terminals are used.
Set this switch to 75Ω position when using just the RGB IN Terminal.

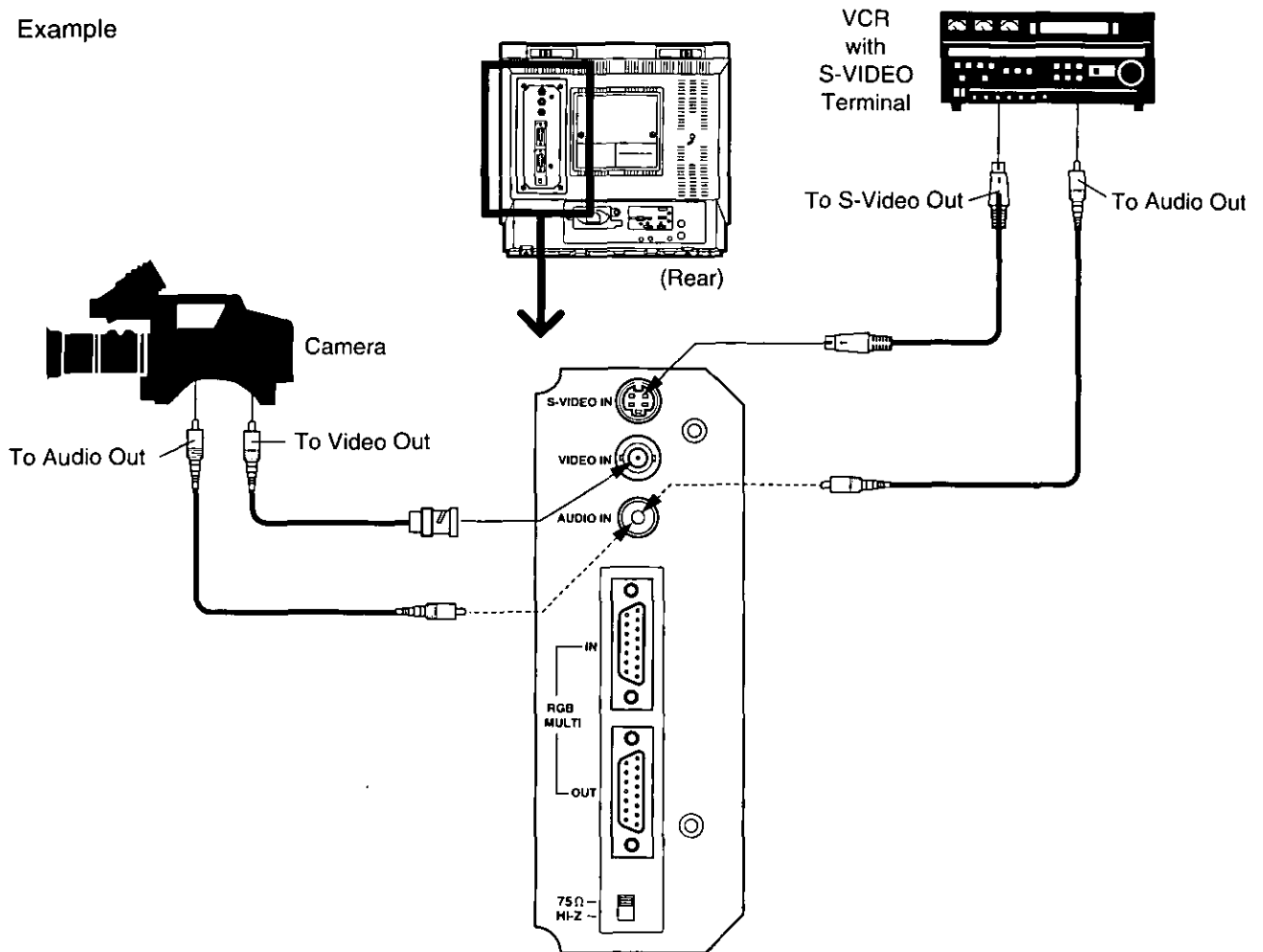
Connections

Note:

- Refer to these connecting instructions as follows together with the operating manual of the apparatus that is to be connected to this set.
- The user must purchase the appropriate cables for connecting the equipment of his choice.

1. VIDEO/S-VIDEO mode connection

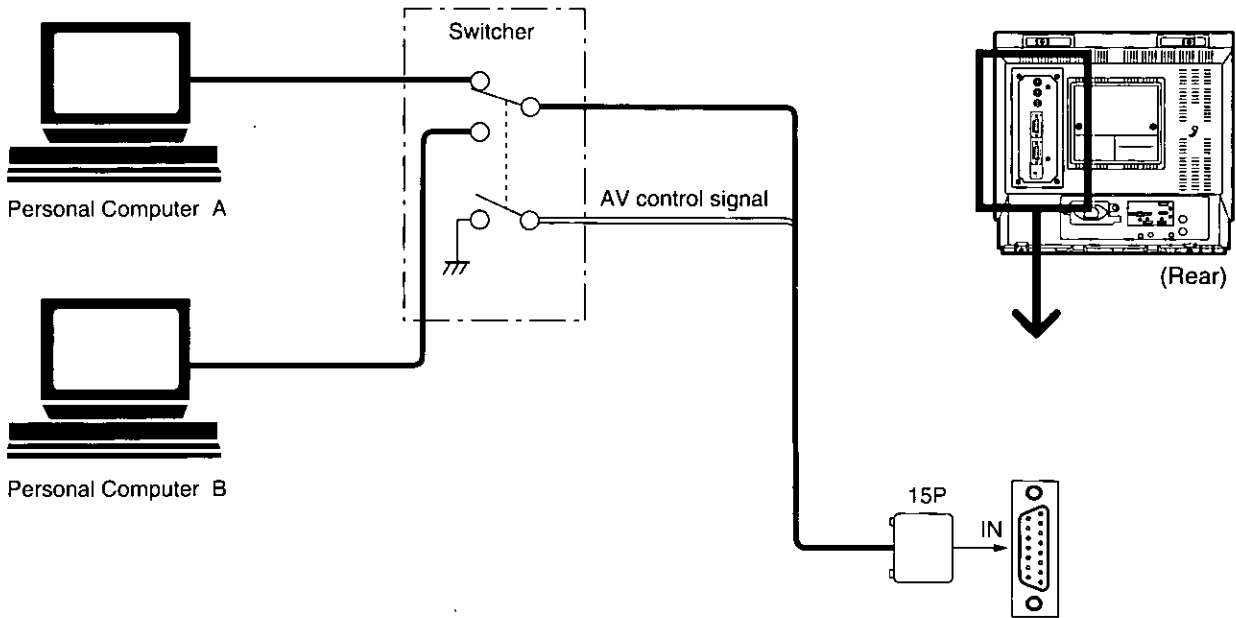
Example



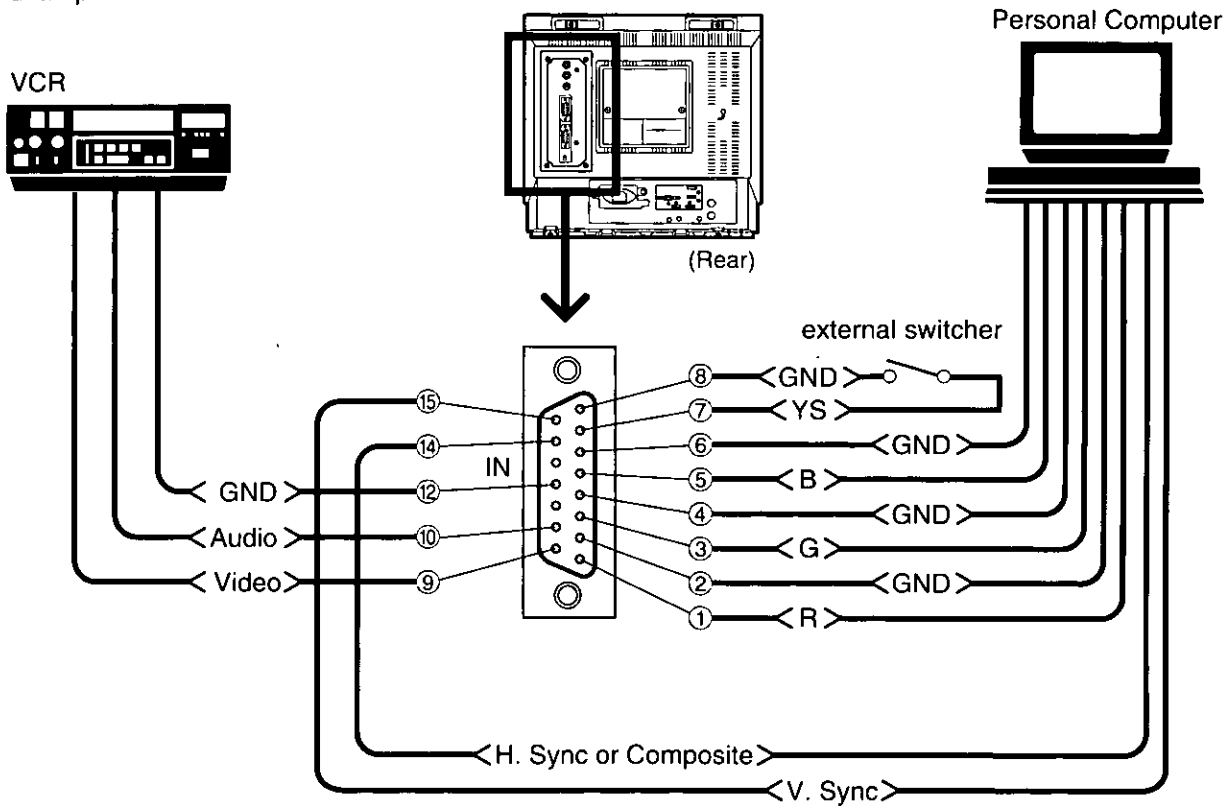
- To select the S-Video or Video input, push the Input Selection Button (VIDEO/S-VIDEO)
- When connecting both Video and S-Video signal cables, the Audio signal cable must be switched to whichever Video signal being used because there is only one Audio input.
- For stereo signal input, use a stereo/monaural compatible cable.

2. RGB MULTI mode connection

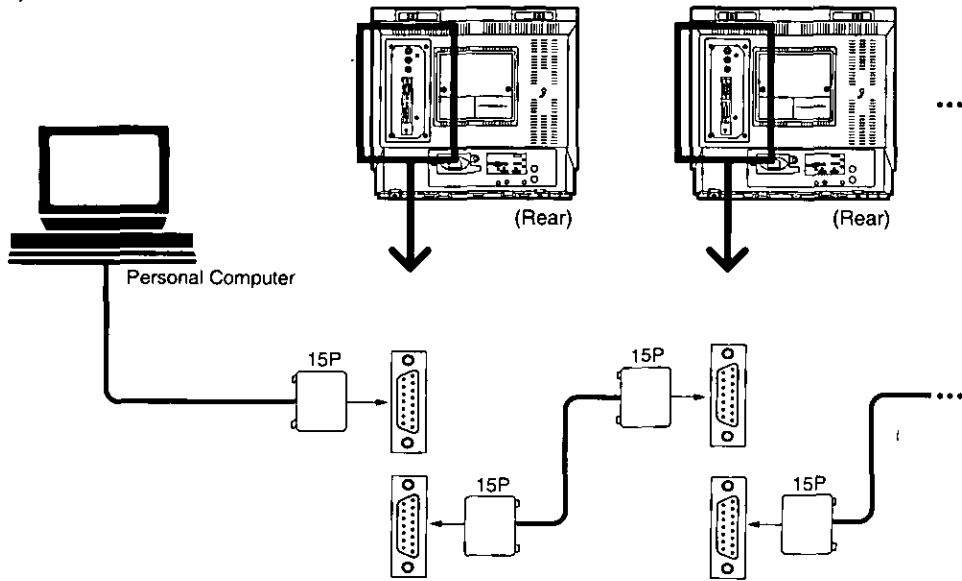
Example 1: for 2 units of PC



Example 2: for PC with VCR



Example 3: for Multi monitor



Notes:

- When the RGB OUT Terminal is used, set the RGB Impedance Switch to Hi-Z position.
- If you want to make the bridge connections by VIDEO IN/OUT, please use RGB MULTI IN/OUT Terminals (pin ⑨ of D sub 15 pin, please see the pin layout in page 9).
- Please use the shield cable for D sub 15 pin.

● How to use the superimpose function

RGB signal title, etc., can be superimposed to VIDEO signal screen by connecting VIDEO and RGB signals to the RGB terminal. (The background of superimposed characters cannot be halftones, due to the fact that this monitor cannot receive the YM signal.)

Getting ready

- (1) Connect VIDEO signal to pin ⑨.
 - (2) Connect AUDIO signal for RGB to pin ⑩.
 - (3) Connect RGB signals (text broadcast signals, etc.) for superimposing to pins ①, ③ and ⑤.
 - (4) Connect YS signal to pin ⑦.
- * Do not connect sync signal to pin ⑭.

Operation

RGB signals can be superimposed while VIDEO signal and AUDIO signal are being input to pin ⑨ and pin ⑩, respectively, by setting the Input Selection Button (RGB MULTI/VIDEO) to RGB MULTI.

CAUTIONS

1. The input signal for superimposing must be RGB signal of 15.75kHz horizontal scanning frequency.
2. When VIDEO signal and RGB signal are being input from separate equipment, a TBC with GENLOCK must be connected.

Specifications

Power Source:	120V AC, 50/60Hz	Color System:	NTSC
Max. Amps:	1.6A	Dimensions:	
CRT:	14" diagonal	Width;	15-7/16 (392 mm)
	90-degree deflection	Height;	14-13/32 (366 mm)
	0.28 dot pitch	Depth;	16-5/32 (410 mm)
Speaker Output:	1.5W (10% THD) Impedance 8Ω	Weight:	27.6 lbs (12.5 kg)
Horizontal Frequency:	15~50kHz (automatic follow)	Operating Temperature:	32°F~104°F (0°~40°C)
Vertical Frequency:	50~100 Hz (automatic follow)	Operating Humidity:	20~80%
Resolutions:		Accessory:	AC Power cord (TSX3164)
Video;	600 TV lines (S-VIDEO)	Safety regulations:	UL 1492 Listed
RGB;	1120 × 768 dots	EMC regulations:	Complies with FCC rules Part 15
Frequency Response:			
Y/C input;	8MHz		
RGB input;	30MHz		
Terminals:			
VIDEO IN;	BNC type connector 1 Vp-p, 75Ω termination		
S-VIDEO IN;	Mini Din 4 Pin type connector Y signal: 1.0Vp-p C signal: 0.286Vp-p 75Ω termination		
AUDIO IN;	RCA type connector 0.5 Vrms		
RGB IN/OUT;	D-Sub 15 pin type connector R; 0.7Vp-p, 75Ω G; 0.7Vp-p, 75Ω B; 0.7Vp-p, 75Ω HD; 0.3~5V POSI/NEGA VD; 0.3~5V POSI/NEGA YS; High - 1~3V or no connection Low - Connect to GND AV; High - 3~5V or no connection Low - Connect to GND Video; 1Vp-p 75Ω Audio; 0.5Vrms		
Head Phones;	8Ω Mini headphones jack		

◆ Specifications are subject to change without notice.

Panasonic®

Professional/Industrial Video

Panasonic Broadcast & Television Systems Company
Division of Matsushita Electric Corporation of America

HEADQUARTERS:

50 Meadowland Parkway, Secaucus, New Jersey 07094

EASTERN ZONE:

50 Meadowland Parkway, Secaucus, NJ 07094 (201) 348-7620

CENTRAL ZONE:

9041 West Grand, Ave. Franklin Park IL 60131 (708) 452-2280

SOUTHERN ZONE:

Dallas Region: 4500 Amon Carter. Blvd., Ft Worth, TX 76155 (817) 685-1117

Atlanta Region: 1854 Shackleford Ct., Suite 115, Norcross, GA 30093 (404) 717-6841

WESTERN ZONE:

Seattle Region: 1200 Westlake Ave. N., Suite 508, Seattle, WA 98109 (206) 285-8883

Los Angeles Region: 6550 Katella Ave., Cypress, CA 90630 (714)373-7275