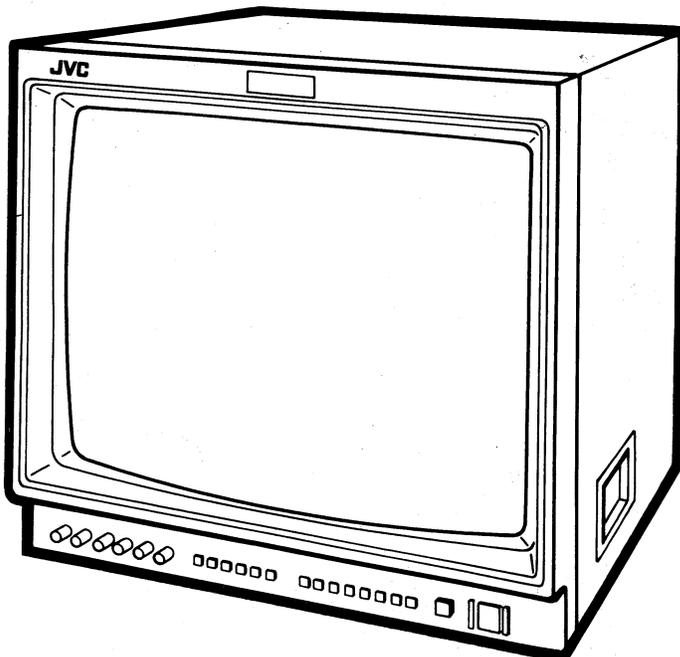


JVC | Instruction Book

LM Neil
OR

COLOR VIDEO MONITOR **VM-R190SU**



For Customer Use:

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

Model No. **VM-R190SU**

Serial No. _____

Thank you for purchasing a JVC color video monitor. Your new monitor will provide superior quality picture and incorporates many useful functions.

To ensure a complete understanding of the monitor and to extend its service life, please read all instructions in this booklet and keep it in a safe place for future reference.

FEATURES

- Multi-standard compatibility for a wide range of professional applications; accepting composite video, component video and both RGB analog and TTL signals in addition to external sync input.
- 19-Inch medium-high-resolution CRT, together with a comb filter for pictures with a horizontal resolution of more than 600 lines.
- Multi-function and superior flexibility with numerous facilities required by professional users including a tally lamp, remote control connector, etc.
- Mountable in a standard EIA rack with optional rack mount adapter RK-19U. (For mounting, refer to the instruction manual of the RK-19U.)

CONTENTS

Safety Precautions	2
Controls and Connectors	
(Front Panel)	4
(Rear Panel)	6
Connections	8
Connections Outline Diagram	9
Specifications	10

SAFETY PRECAUTIONS

**CAUTION**
RISK OF ELECTRIC SHOCK
DO NOT OPEN

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 lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated 'dangerous voltage' within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

 The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

In order to prevent any fatal accidents caused by misoperation or mishandling of 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, contact qualified service personnel. Never try to service it yourself.

CAUTION

For connection to a computer via the TTL connector, use the ferrite-core shielded cable (JVC Part No. CH20212-00JPG). Ask your local dealer about obtaining this cable.

INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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 the receiving antenna.
- ... Relocate the computer with respect to the receiver.
- ... Move the computer away from the receiver.
- ... Plug the computer into a different outlet so that computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems"

This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

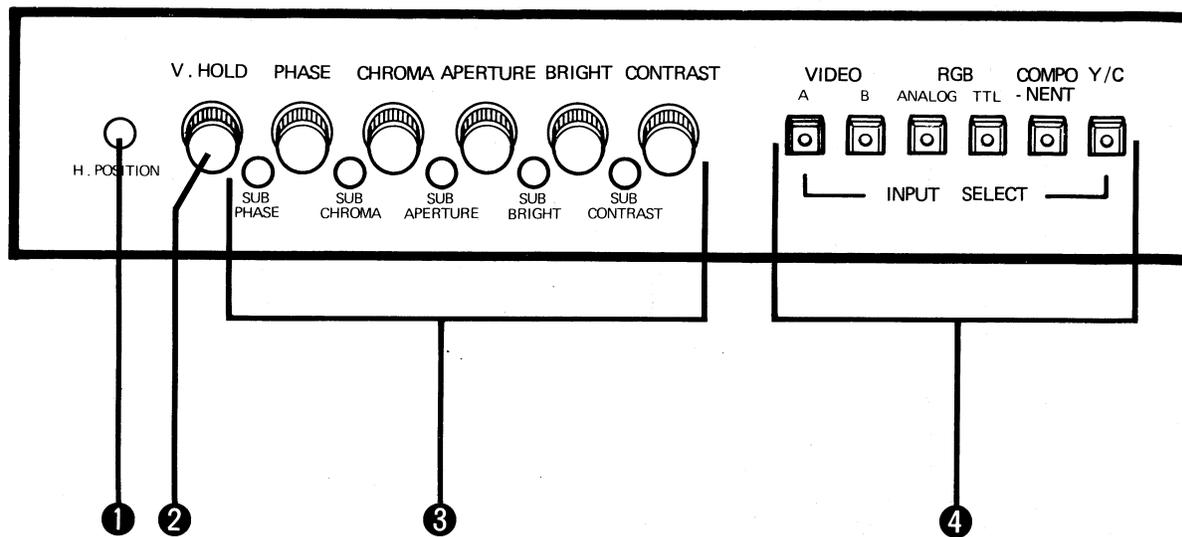
This monitor is equipped with a 3-blade grounding-type plug to satisfy FCC rule. If you are unable to insert the plug into the outlet, contact your electrician.

PRECAUTIONS

- Use only the power source specified on the rating label located on rear of the cabinet.
- 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 locate 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, and
 - in badly ventilated places.
- Do not cover the ventilation slots while in operation as this could obstruct the required ventilation.
- When dust accumulates on the screen surface, clean 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 plug is damaged.
 - If liquid has been spilled into the unit.
 - If the unit does not operate normally following the operating instructions.
 - 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 uses have the same safety characteristics as the original parts. Use of manufacturer's specified replacement parts can prevent fire, shock, or other hazards.
- Upon completion of any servicing or repair 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.

CONTROLS AND CONNECTORS

(FRONT PANEL)



1 H. POSITION control screw

Turn to adjust the horizontal position of the picture. Use a screwdriver to turn it.

2 V. HOLD control

Turn to adjust the vertical synchronization of the picture.

3 Picture controls

Use to optimize the picture. The center click position of each control is its standard setting. This standard setting can be varied (preset) by setting the SUB control screws at the side of the controls. Use a screwdriver to turn the SUB controls.

● PHASE control

Turn to adjust the picture hue. Adjust with reference to skin color.

● CHROMA control

Turn to adjust the color density of the picture to your preference.

● APERTURE control

Turn to adjust the contours to your preference.

● BRIGHT control

Turn to adjust the picture brightness to your preference.

● CONTRAST control

Turn to adjust the picture contrast to your preference.

4 INPUT SELECT switches

Press the switch corresponding to the required input mode, for signals from the corresponding input connector on the rear panel.

Switch setting	Corresponding input connector(s)
VIDEO A	VIDEO A connector
VIDEO B	VIDEO B or VTR*
RGB ANALOG	R/G/B
RGB TTL	TTL
COMPONENT	Y/R-Y/B-Y, MII or BETACAM**
Y/C	Y/C

* Connect to either connector as these connectors are internally connected in parallel.

** Connect to one of those connectors as they are internally connected in parallel.

5 SYNC switch

Switches synchronization between internal and external. When set to the EXT position, input a sync signal to the SYNC connector on the rear panel.

INT (): For internal sync

EXT (): For external sync

Note: If switching is to be done using the REMOTE/TALLY connector, set to INT ().

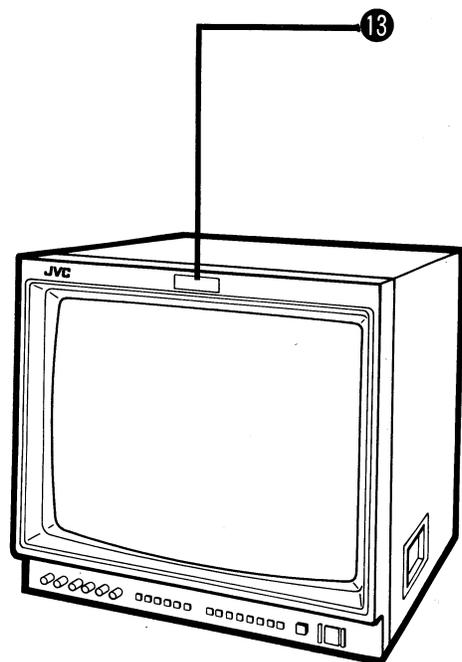
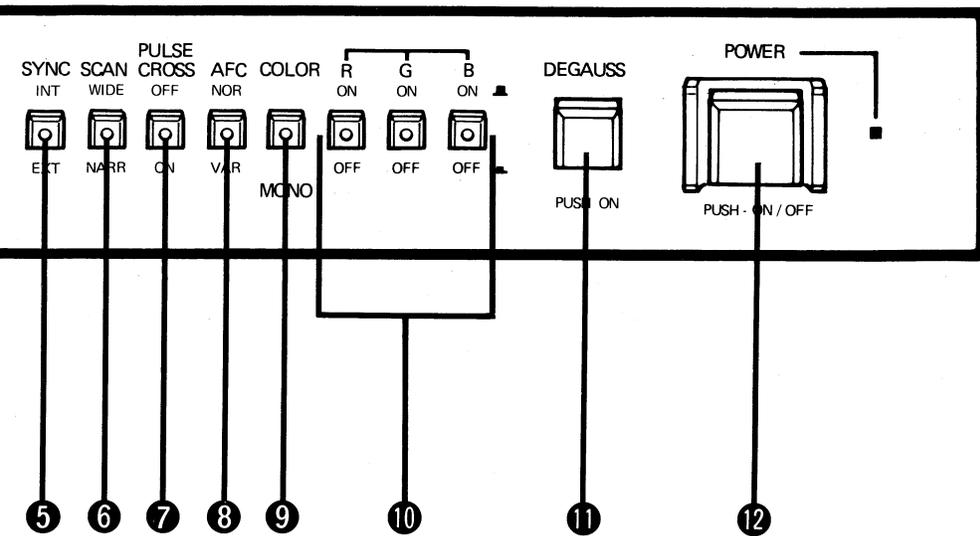
6 SCAN switch

Switches between overscan and underscan.

WIDE (): For overscan

NARR (): For underscan

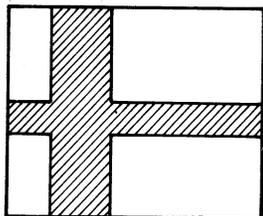
Note: If switching is to be done using the REMOTE/TALLY connector, set to WIDE ().



7 PULSE CROSS switch

To check the retrace period (sync signal) by delaying the phase of the input signal.

- OFF (): For normal picture
- ON (): For retrace period check display



8 AFC switch

Switches the AFC time constant of the horizontal sync circuitry to correct the skewed portion of the picture.

- NOR (): For normal (standard) condition
- VAR (): Fast or slow condition

Note: The "VAR" condition can be switched between "fast" (when shipped) and "slow". For details, consult your local dealer.

9 COLOR/MONO switch

Switches picture between color and monochrome for checking white balance, etc.

- COLOR (): For a color picture
- MONO (): For a monochrome picture

Note: If switching is to be done using the REMOTE/TALLY connector, set to COLOR ().

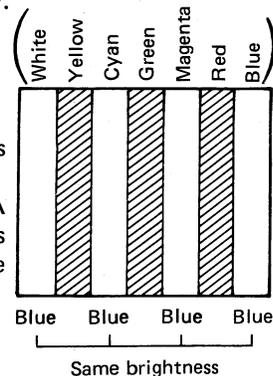
10 R/G/B switches

To output or eliminate individual colors (R (red), G (green) and B (blue)) in the output, for checking each color or for adjustment of hue or color density.

- ON (): Color on
- OFF (): Color off

Hue/color density adjustment

- Input a color bar signal.
- Turn the R and G color outputs off. (Only B will be displayed.)
- Turn the PHASE and CHROMA controls so that all color bars shown in the diagram have the same brightness.



11 DEGAUSS switch

Press to demagnetize the CRT when color patches are observed.

Degaussing

Keep this switch depressed for approx. 10 seconds. To use this switch a second time, wait more than 10 minutes.

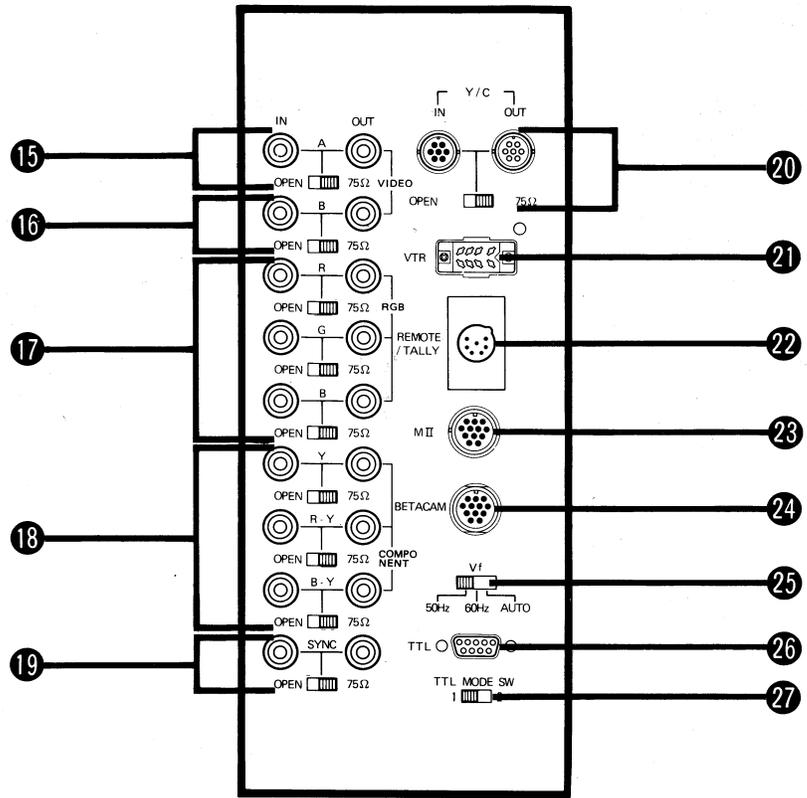
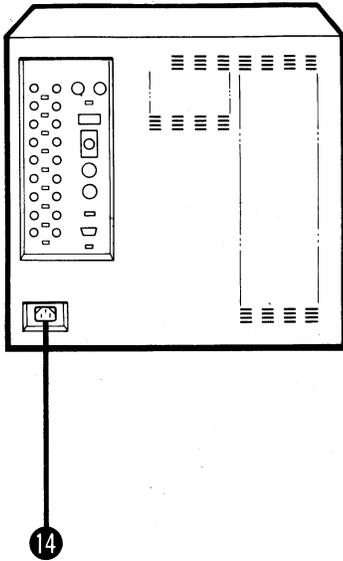
12 POWER switch/indicator

Press to turn the power on. The indicator lights. Press again to turn the power off.

13 Tally lamp

Lights when a tally signal is input to the REMOTE/TALLY connector on the rear panel. (For operation, see 22 "REMOTE/TALLY connector" on page 7.)

(REAR PANEL)



14 Power input connector

Connect to an AC outlet with the provided power cord.

15 VIDEO A IN/OUT connectors/Termination switch

Input connector for composite video signal and bridge-connected signal output connector.

IN: When inputting a composite video signal
OUT: For bridged connection

Termination switch

75 Ω: When there is only an input signal
OPEN: For bridged connection

16 VIDEO B IN/OUT connectors/Termination switch

Input connector for composite video signal and bridge-connected signal output connector.

IN: When inputting a composite video signal
OUT: For bridged connection

Termination switch

75 Ω: When there is only an input signal
OPEN: For bridged connection

Note: This connector is internally connected in parallel with the VTR connector. Therefore, do not connect equipment to both connectors at the same time.

17 R/G/B IN/OUT connectors/Termination switches

Input connectors for R/G/B analog signals and bridge-connected signal output connectors.

IN: When inputting R, G and B analog signals
OUT: For bridged connection

Note: Set the SYNC switch as follows depending on the sync signal.

Sync signal	SYNC switch
Sync on green	INT (<input checked="" type="checkbox"/>)
No signal (Sync signal input to the SYNC connector)	EXT (<input type="checkbox"/>)

Termination switch

75 Ω: When there are only input signals
OPEN: For bridged connection

18 Y/R-Y/B-Y IN/OUT connectors/Termination switches

Input connectors for component video signals and bridge-connected signal output connectors.

IN: When inputting Y/R-Y/B-Y component video signals
OUT: For bridged connection

Note: This connector is internally connected in parallel with the MII and BETACAM connectors. Therefore, do not connect equipment to those connectors at the same time.

Termination switch

75 Ω: When there are only input signals
OPEN: For bridged connection

19 SYNC IN/OUT connectors/Termination switch

Input connectors for sync (composite video) signal and bridge-connected signal output connector. Use when the video signal to be input does not contain a sync signal or in external genlock applications.

IN: When inputting a sync signal

OUT: For bridged connection

Termination switch

75 Ω: When there is only an input signal

OPEN: For bridged connection

20 Y/C IN/OUT connectors/Termination switch

Input connector for Y/C separate video signals (S-VHS format) and bridge-connected signal output connector.

IN: When inputting Y/C separate video signals

OUT: For bridged connection

Termination switch

75 Ω: When there are only input signals

OPEN: For bridged connection

21 VTR connector

Input connector for composite video signal from equipment that is provided with the same type of 8-pin VTR output connector.

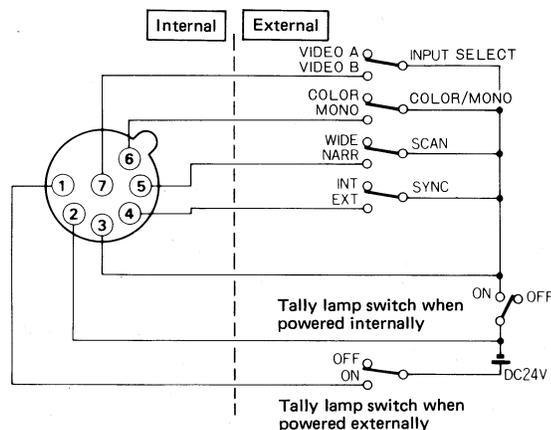
Notes:

- This connector is internally connected in parallel with the VIDEO B. IN connector. Therefore, do not connect equipment to both connectors at the same time.
- Bridged output is not possible.

22 REMOTE/TALLY connector

For remote operation of the input switching between VIDEO A/B, the settings of the SYNC, SCAN, COLOR/MONO switches, and lighting of the tally lamp.

[Connection diagram]



Notes:

- For switching the tally lamp's power source between internal and external, consult your local dealer.
- When using this connector, the front-panel controls should be set as follows:

INPUT SELECT switch: VIDEO A
SYNC switch: INT (■)
SCAN switch: WIDE (■)
COLOR/MONO switch: COLOR (■)

23 MII connector

Input connector for MII format component video signals.

Note: This connector is internally connected in parallel with the Y/R-Y/B-Y and BETACAM connectors. Therefore, do not connect equipment to these connectors at the same time.

24 BETACAM connector

Input connector for BETACAM format component video signals.

Notes:

- This connector can be used only when the internal circuitry is switched to BETACAM. The circuitry is switched to MII when the monitor is shipped from the factory. To use this connector (BETACAM), consult your local dealer.
- This connector is internally connected in parallel with the Y/R-Y/B-Y and MII connectors. Therefore, do not connect equipment to these connectors at the same time.

25 Vf switch

Use to set the vertical scanning frequency. Normally, set to "AUTO" for automatic detection of 50 or 60 Hz. If signals are unstable, set to "50 Hz" or "60 Hz".

26 TTL connector

Input connector for RGB TTL signals. Connect a computer with a horizontal scanning frequency of 15.75 kHz.

Note: Set the TTL MODE switch depending on the computer connected. See " 27 TTL MODE switch" below.

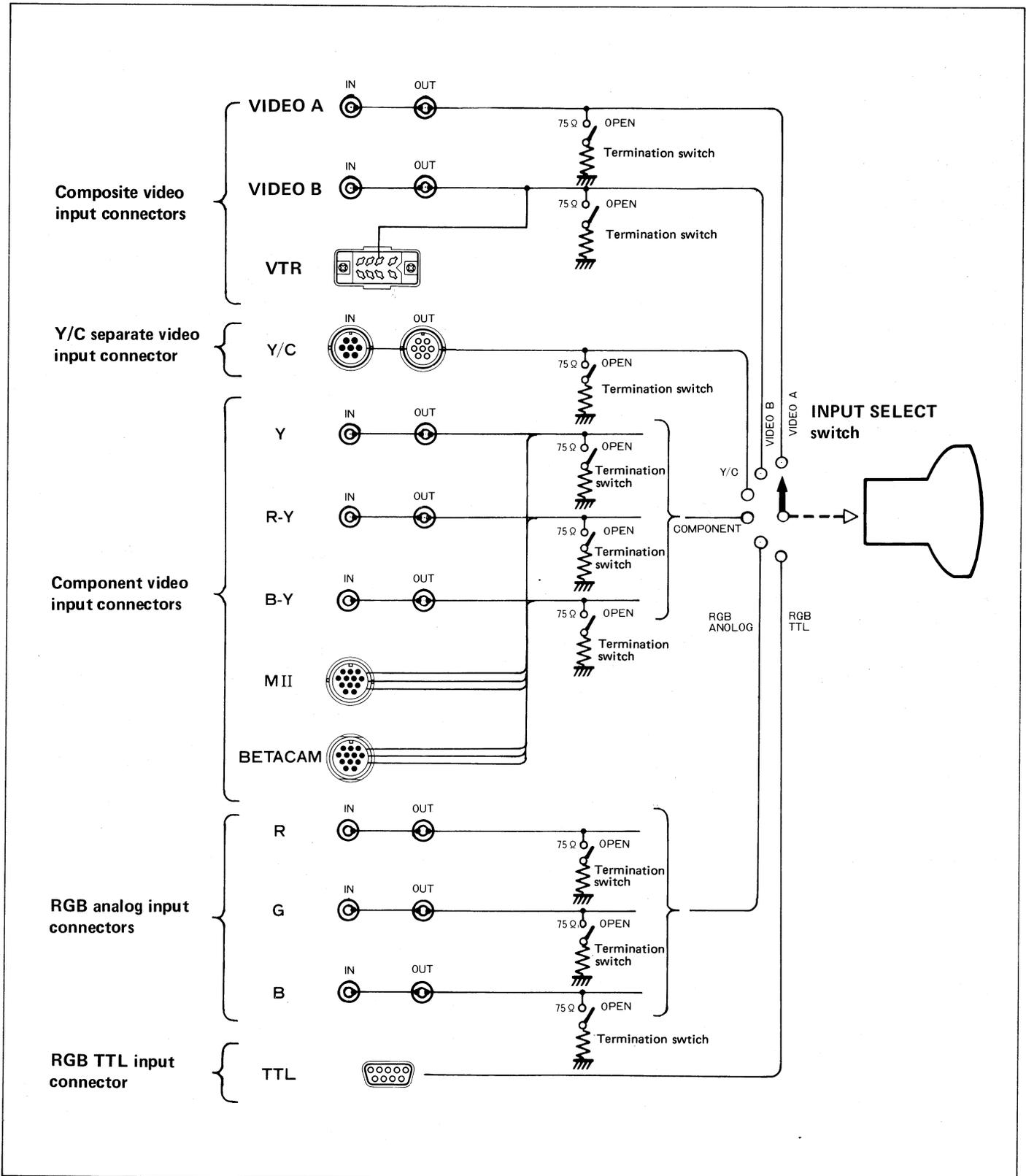
27 TTL MODE switch

Set according to the computer connected to the TTL connector.

- 1: When connected to an IBM (with CGA) or an IBM-compatible computer
- 2: When connected to a computer other than the above.

CONNECTIONS OUTLINE DIAGRAM

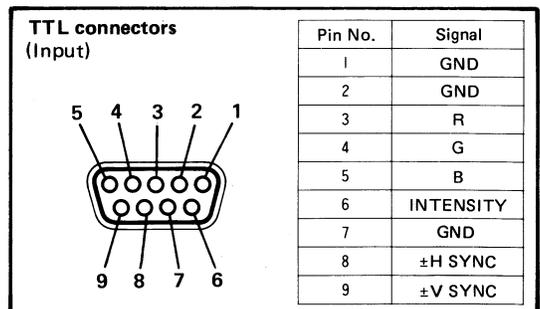
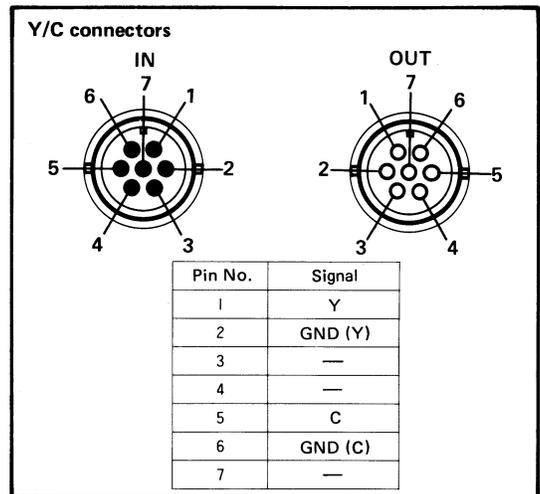
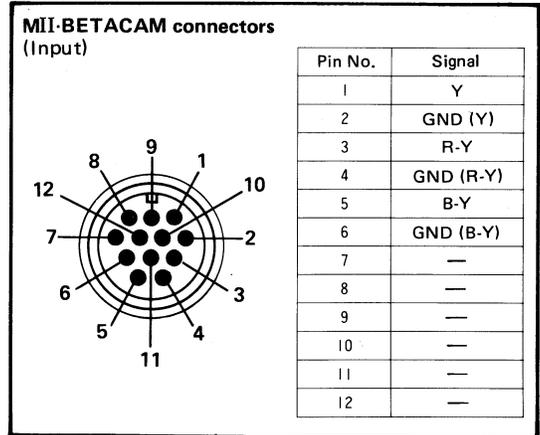
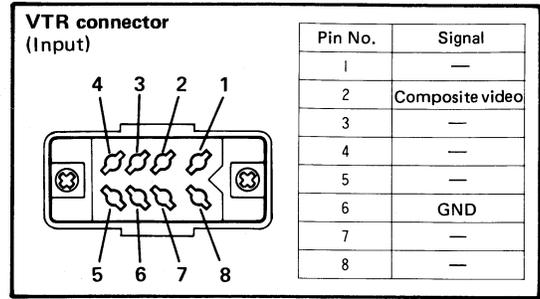
The following is an outline of the circuitry and connections, showing concepts, it is not a circuit diagram.



SPECIFICATIONS

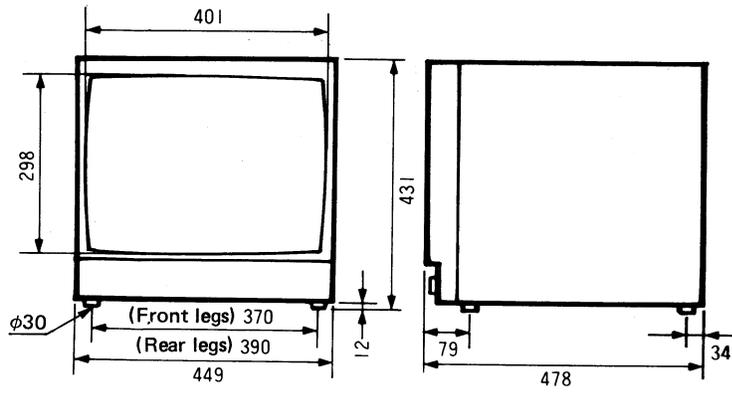
- Type** : Color video monitor
- Color system** : NTSC system
- CRT** : 19" (measured diagonally), 90° deflection, in-line gun medium-high resolution CRT, tri-dot pitch 0.4 mm
- Screen size (HxV)** : 399 x 296 mm
- Scanning frequency** : (H) 15.75 kHz
(V) 50/60 Hz
- Horizontal resolution** : More than 600 lines
- Power requirement** : AC 120 V, 60 Hz
- Power consumption** : Max. 1.35 A, Avg. 86 W
- Composite video input (VIDEO A/B)** : BNC x 4 (2 with bridged output), 1.0 Vp-p, 75 ohms, negative sync
Termination switch provided
- (VTR)** : 8-pin VTR connector x 1, 1.0 Vp-p, 75 ohms, negative sync
- Y/C separate video input** : 7-pin connector x 2 (1 with bridged output)
Y: 1 Vp-p, 75 ohms, negative sync
C: 0.286 Vp-p (burst), 75 ohms
Termination switch provided
- Component video inputs (Y/R-Y/B-Y)** : BNC x 6 (3 with bridged output)
Y: 1 Vp-p, 75 ohms, negative sync
R-Y/B-Y: 0.7 Vp-p, 75 ohms
Termination switch provided
- (MII)** : 12-pin connector x 1,
Y: 1 Vp-p, 75 ohms, negative sync
R-Y/B-Y: 0.7 Vp-p, 75 ohms
- (BETACAM)** : 12-pin connector x 1
Y: 1 Vp-p, 75 ohms, negative sync
R-Y/B-Y: 0.7 Vp-p, 75 ohms
- R.G.B. analog input** : BNC x 6 (3 with bridged output)
R/G/B: 0.7 Vp-p, 75 ohms
Sync on green 1 Vp-p, 75 ohms, negative
- R.G.B. TTL input** : 9-pin D-sub connector x 1
- Sync input** : BNC x 2 (1 with bridged output)
1 - 4 Vp-p, 75 ohms, negative;
(VBS) 1 Vp-p, 75 ohms, negative sync
Termination switch provided
- External control connector (REMOTE/TALLY)** : 7-pin connector x 1
- Weight** : 83.8 lbs (33.3 kg)
- Accessory** : Power cord (approx. 2 m) x 1

Pin Assignment



Design and specifications subject to change without notice.

Dimensions (Unit: mm)



JVC

JVC PROFESSIONAL PRODUCTS COMPANY

DIVISION OF US JVC CORP.

41 Slater Drive, Elmwood Park, N.J. 07407

JVC CANADA INC.

21 Finchdene Square, Scarborough Ontario M1X 1A7