SONY.

COLOR VIDEO PROJECTOR

VPH-1030Q1/2030Q1

OPERATING INSTRUCTIONS   page 2

Before operating the set, please read this manual thoroughly,
and retain it for future reference.

**Installation and preliminary adjustments should be performed by
qualified Sony personnel.**

OWNER'S RECORD

The model and serial numbers are located at the right side.
Record these numbers in the spaces provided below. Refer to
them whenever you call upon your Sony dealer regarding this pro-
duct.

Model No. _____ Serial No. _____

MODE D'EMPLOI   page 20

Avant la mise en service de l'appareil, lire attentivement ce
mode d'emploi et le conserver pour toute référence
ultérieure.

**Installation et réglages préliminaires doivent être accomplis par un
personnel Sony compétent.**
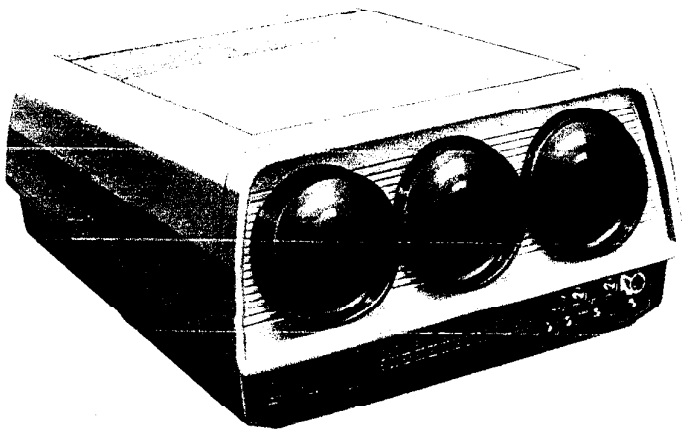
MULTISCAN

This instruction manual covers the VPH-1030Q1 (for 100" projection)* and the VPH-2030Q1 (for 200" projection). The difference between the two models are clearly described in the text.
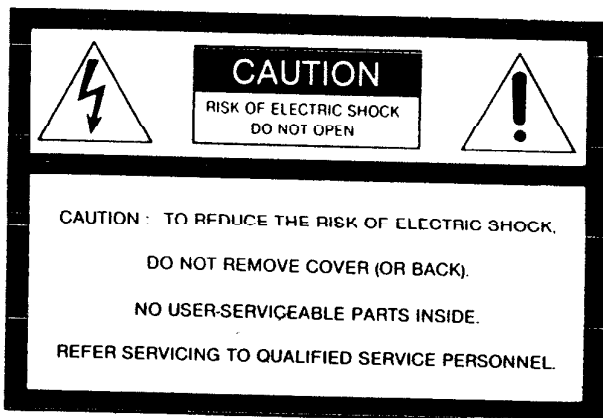
*The VPH-1030Q1 is convertible for 72" projection. For conversion, please consult the qualified Sony dealer.

CONTENTS

WARNING

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

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.

This symbol 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.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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 equipment with respect to the receiver
Move the equipment away from the receiver
Plug the equipment into a different outlet so that equipment 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 U.S. Government Printing Office, Washington, DC 20402, Stock NO. 004-000-00345-4.

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

Projection System Installation Instructions
WARNING: USE OF PROPER HARDWARE AND ACCESSORIES IS REQUIRED AS SPECIFIED. PROPER INSTALLATION ACCORDING TO INSTRUCTIONS IS REQUIRED. IMPROPER INSTALLATION MAY RESULT IN SERIOUS PERSONAL INJURY.

PRECAUTIONS

On safety

● Check that the operating voltage of your set is identical with the voltage of your local power supply.
If voltage adaptation is required, consult your Sony dealer or qualified personnel.
● Should any liquid or solid object fall into the cabinet, unplug the set and have it checked by qualified personnel before operating it any further.
● Unplug the set from the wall outlet or set the POWER switch to OFF if it is not to be used for several days.
● To disconnect the cord, pull it out by the plug. Never pull the cord itself.

On installation

- Allow adequate air circulation to prevent internal heat build-up. Do not place the set on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
  Be aware that room heat rises to the ceiling; check that temperature near the installation location is not excessive.
- Do not install the set in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust or humidity, mechanical vibration or shock.

On illumination

To obtain a clear picture, the screen should not be exposed to illumination or sunlight directly from the front.

Ceiling mounted spot lighting is recommended.
Use a construction as illustrated over light-scattering illumination such as fluorescent lamps.

Cover the windows that face the screen with opaque draperies.
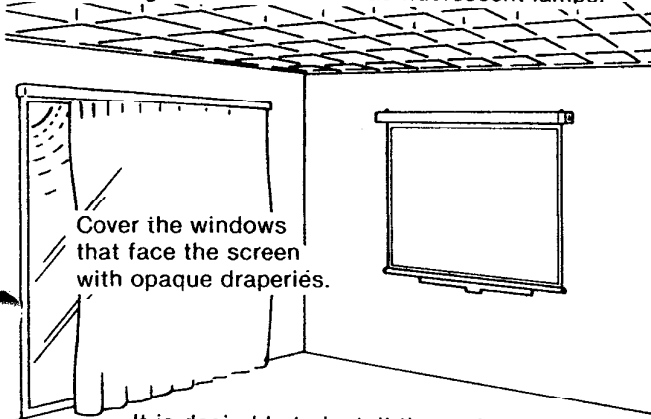
It is desirable to install the projector in a room whose floor and walls are not of light-reflecting material.
If the floor and walls are of reflecting material, it would be desirable to change to a dark carpet and wall paper.

On cleaning

- To keep the cabinet looking brand-new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use strong solvents, such as thinner or benzine, or abrasive cleansers, since these will damage the cabinet.
- Avoid touching the lens. To remove dust on the lens, use a soft dry cloth. Do not use a damp cloth, detergent solution, or thinner.

On repacking

Save the original shipping carton and packing material; they will come in handy if you ever have to ship your set. For maximum protection, repack your set as it was originally packed at the factory.

FEATURES

Multiscan projector
The projector accepts 15 kHz – 32 kHz horizontal scanning frequencies and 50 Hz – 100 Hz vertical scanning frequencies, and detects the frequencies automatically. In addition to VCRs, video cameras and TVs having the standard scanning frequency of 15.75 kHz, high-resolution picture from microcomputers can be projected.

Fine-detailed picture
Newly-developed picture tubes incorporating a large-neck gun, a new phosphor screen and a colored coolant filter and hybrid F 1.0 lenses provide high resolution and brightness.

Sync on Green
When analog RGB signals are input through the RGB 2 connector, if a sync signal is input through the green input together with the green signal, this sync signal is used to control the picture.
If, however, a sync signal is input through the H. sync or composite sync input, this sync signal is used.
The following table indicates which sync signal has priority:

Signals input through the H. sync or composite sync input	Signals input through the green input	Sync signal with priority
Sync signal included	Sync signal included	The one input through the H. sync or composite sync input
Sync signal included	Sync signal not included	
Sync signal not included	Sync signal included	The one input through the green input

Various installation possibilities
The projector is designed to be installed on desk, floor or ceiling and can be used with either a flat screen or curved screen.

Portable single unit
The power supply and control sections are incorporated in one compact, easy-to-transport unit.

Illuminated control panel
When the panel cover is open, the control panel where the user controls are located is illuminated for easy operation in dim or dark places.
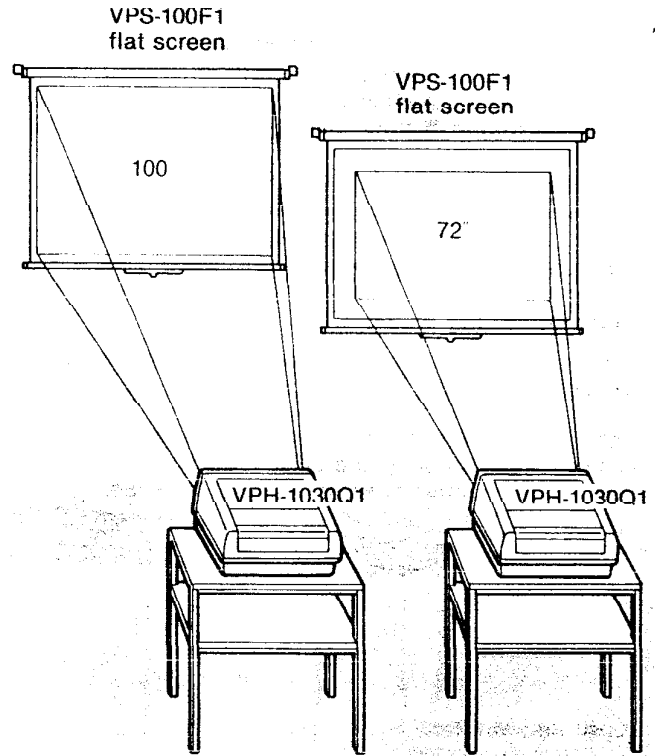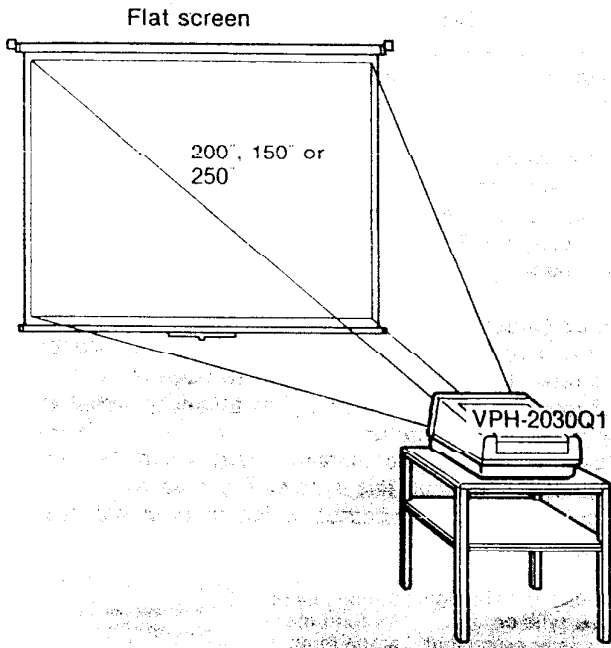
Other features
- PAL, SECAM, NTSC or NTSC4.43* color system is selected automatically.
- Both digital and analog RGB connectors allow connection of microcomputers, video cameras or special adaptors for future videotex/teletext.
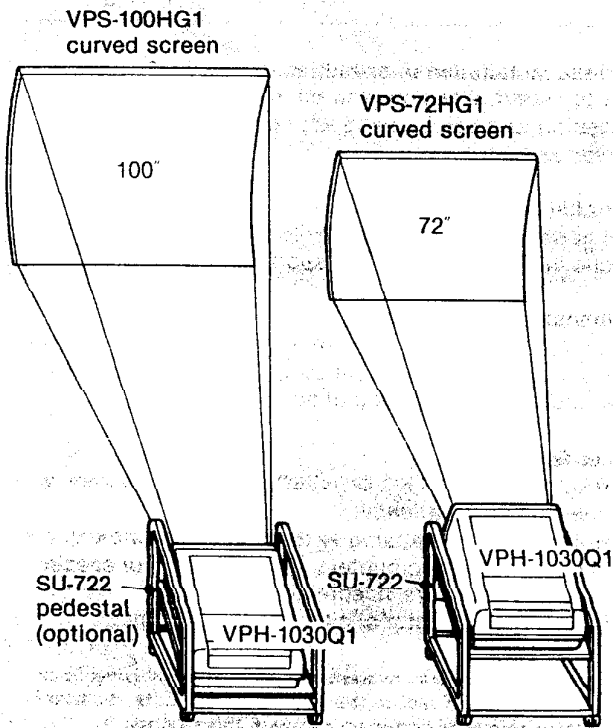- Digital RGB selector allows 16-color display.

* A signal of NTSC4.43 system is obtained by playing back NTSC-recorded video tapes with a video tape recorder/player specially designed for use with this system.
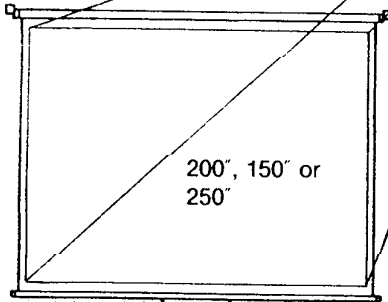
INSTALLATION POSSIBILITIES

Desk

Flat screen
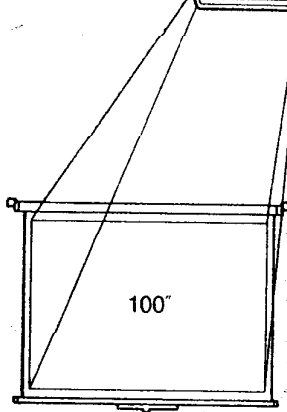
200", 150" or 250"

VPH-2030Q1

VPS-100F1
flat screen

100

VPS-100F1
flat screen

72"

VPH-1030Q1

VPH-1030Q1

Floor

VPS-100HG1
curved screen

100"

VPS-72HG1
curved screen

72"

VPH-1030Q1

SU-722
pedestal
(optional)

SU-722

VPH-1030Q1

4

PSS-722
suspension
support
(optional)

VPH-2030Q1

200″, 150″ or
250″

Flat screen

PSS-722

VPH-1030Q1

PSS-722

VPH-1030Q1

72″

100″

VPS-100F1
flat screen
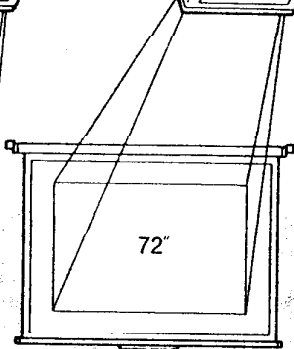
VPS-100F1
flat screen

PSS-722

VPH-1030Q1

PSS-722

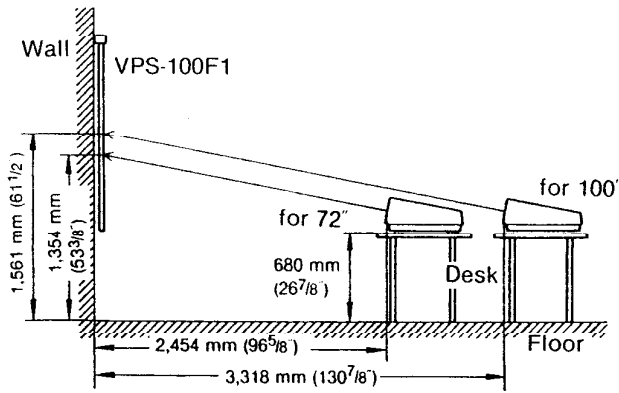VPH-1030Q1

72″

100″
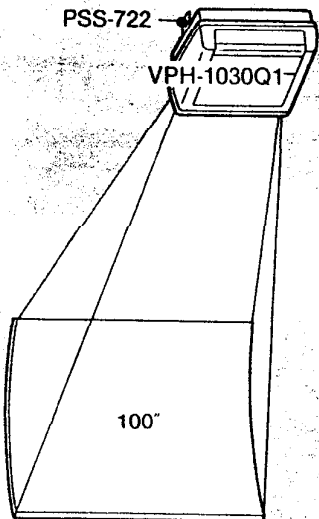
VPS-72HG1
curved screen
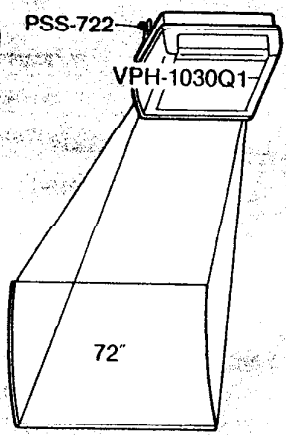
VPS-100HG1
curved screen

INSTALLATION DIAGRAMS

For the same type of installation in another place, no readjustment is required, although the projector should be placed in the proper position.

VPH-1030Q1

Desk

Wall — VPS-100F1

1,561 mm (61½")
1,354 mm (53⅜")
for 100"
for 72"
680 mm (26⅞")
Desk
Floor
2,454 mm (96⅝")
3,318 mm (130⅞")

Tolerance in length: ±1%

Ceiling

3,573 mm (140¾")
2,712 mm (106⅞")
PSS-722
PSS-722
Ceiling
1,012 mm (39⅞")
805 mm (31¾")
for 72"
for 100"
VPS-100F1
Wall

Tolerance in length: ±1%

Floor

Wall — VPS-100HG1

2,099 mm (82¾")
1,864 mm (73½")
VPS-72HG1
for 72"
for 100"
SU-722
SU-722
2,892 mm (113⅞")
Floor
3,766 mm (148⅜")

Tolerance in length: ±1%

3,713 mm (146¼")
2,772 mm (109¼")
PSS-722
PSS-722
Ceiling
1,440 mm (56¾")
1,108 mm (43¾")
VPS-72HG1
for 72"
for 100"
Wall
VPS-100HG1
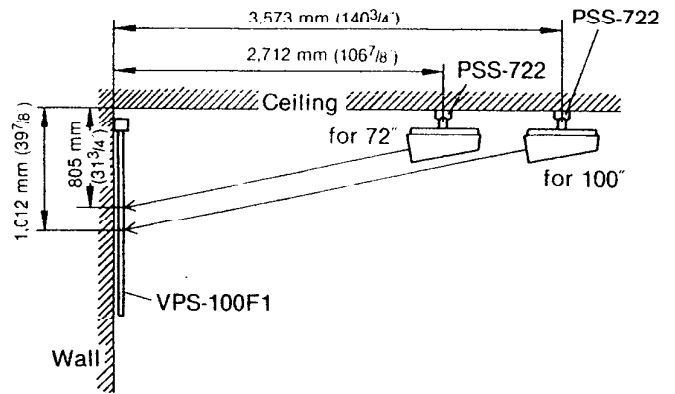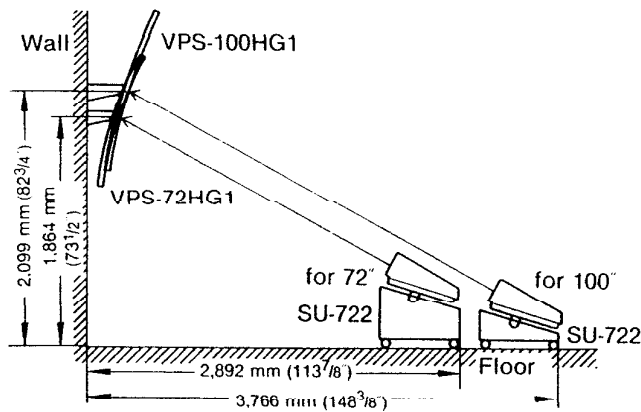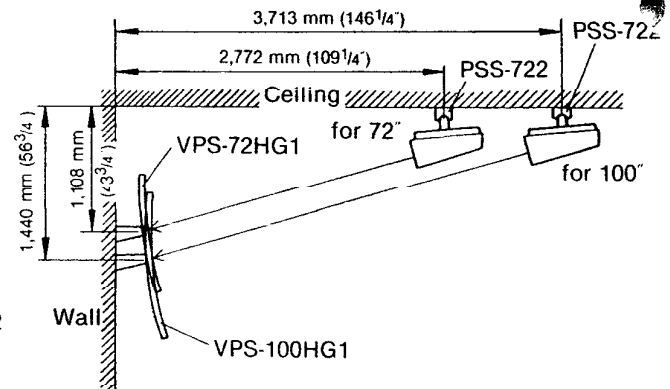
Tolerance in length: ±1%

VPH-2030Q1

Decide the length and height according to the size of the screen to be used.

For a screen not described in the tables, set the length approximately 1.6 times screen width.

| Floor |

Wall

Center of the screen

Height

360 mm (14¼")

— Length — Floor

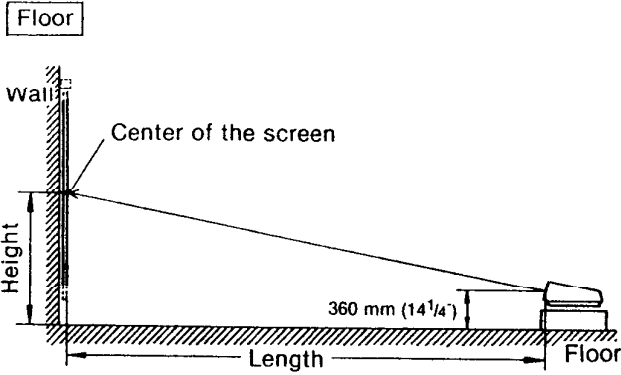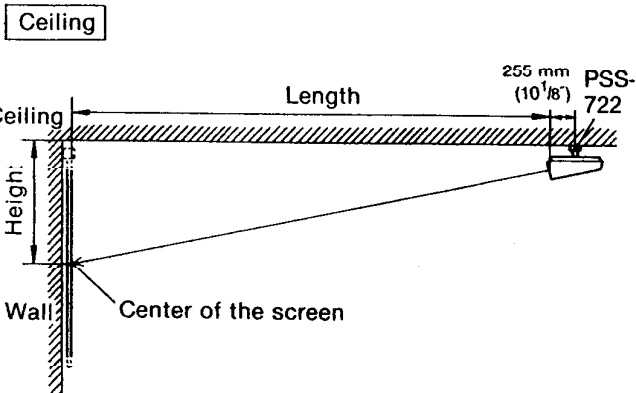| Screen size	150 inches	200 inches	250 inches
Length mm	4850 (191")	6410 (252½")	7960 (313½")
Height mm	1400 (55⅛")	1730 (68⅛")	2070 (81⅝")

Tolerance in length: ±1%

| Ceiling |

Ceiling

Length

255 mm (10⅛") PSS-722

Height

Wall

Center of the screen

Screen size	150 inches	200 inches	250 inches
Length mm	4850 (191")	6410 (252½")	7960 (313½")
Height mm	1350 (53¼")	1680 (66¼")	2020 (79½")

Tolerance in length: ±1%

When the PSS-10 projector suspension support (optional) is used in combination with the PSS-722

The PSS-10 allows you to adjust the distance between the ceiling and the projector.

Ceiling

PSS-10

$L = 933$ to $1,443$ mm

($36\frac{3}{4}$" to $56\frac{7}{8}$")

L

Adjustable at 30 mm intervals

PSS-722

Lens center
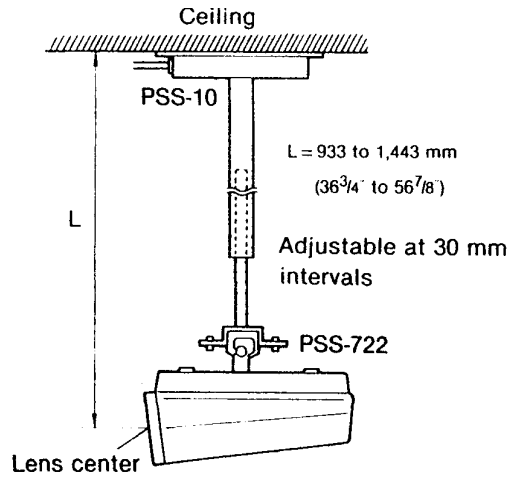
To transport the projector, use the VLC-1030 carrying case (optional).

LOCATION AND FUNCTION OF CONTROLS

Bottom

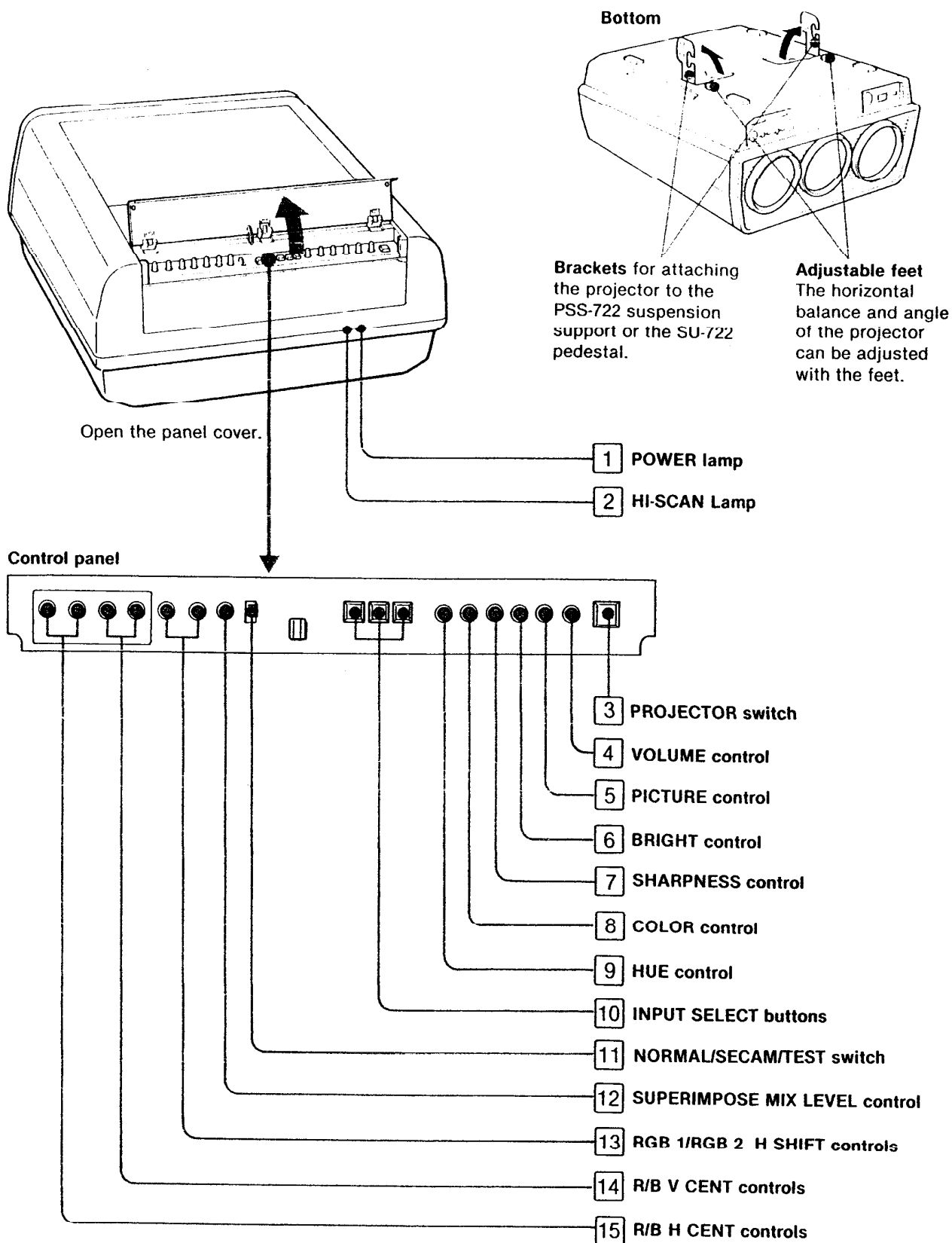**Brackets** for attaching the projector to the PSS-722 suspension support or the SU-722 pedestal.

Adjustable feet The horizontal balance and angle of the projector can be adjusted with the feet.

Open the panel cover.

| 1 | POWER lamp |
| 2 | HI-SCAN Lamp |

Control panel

3	PROJECTOR switch
4	VOLUME control
5	PICTURE control
6	BRIGHT control
7	SHARPNESS control
8	COLOR control
9	HUE control
10	INPUT SELECT buttons
11	NORMAL/SECAM/TEST switch
12	SUPERIMPOSE MIX LEVEL control
13	RGB 1/RGB 2 H SHIFT controls
14	R/B V CENT controls
15	R/B H CENT controls

8

The control panel is illuminated when the panel cover is open.

1 POWER lamp
Lights when the PROJECTOR switch is depressed (▢ ON)

2 HI-SCAN lamp
Lights when the horizontal scanning frequency of the RGB input signal is higher than 15.75 kHz.

3 PROJECTOR switch
Depress to turn the projector on (▢ ON). The green POWER lamp lights. To turn off, press the switch again (▢ OFF).

4 VOLUME control
Adjusts the volume.

5 PICTURE control
Adjusts the contrast, color intensity and brightness simultaneously in the proper ratio.

6 BRIGHT (brightness) control
Adjusts the brightness.

7 SHARPNESS control
Adjusts the sharpness. Clockwise rotation makes the picture sharp; counterclockwise rotation makes it soft.

8 COLOR control
Adjusts the color intensity. Clockwise rotation makes the picture vivid; counterclockwise rotation makes it pale.

9 HUE control
This control is effective only for a program of the NTSC or NTSC4.43 color system. Use to obtain the most natural skin tones. Clockwise rotation makes the skin tones greenish; counterclockwise rotation makes them purplish.

10 INPUT SELECT buttons
Press to select the program source to be projected.
LINE: For inputs from the TO VPR-722 connector or the VIDEO IN/AUDIO IN connectors.
RGB 1: For inputs from the RGB 1 connector and AUDIO IN (RGB 1) jack.
RGB 2: For inputs from the RGB 2 connector.

11 NORMAL/SECAM/TEST switch
Normally, set to NORMAL to project inputs from the VIDEO IN or RGB 1 or 2 connector.
Set to SECAM when the color of a picture from SECAM color sources is disturbed.
Set to TEST to display the built-in cross-hair pattern on the screen for easier adjustments of the projector's position and registration.
When this switch is set to TEST, brightness is fixed.

12 SUPERIMPOSE MIX LEVEL control
Adjusts the contrast of the superimposed picture connected to the RGB 2 connector.

13 RGB1/RGB2 H SHIFT (horizontal shift) controls
Adjust the horizontal position of the picture input from the RGB 1 connector and RGB 2 connector, if necessary.
When superimposing the video picture and the data from the connected microcomputer, this control does not function, but the correct horizontal position will be obtained automatically.
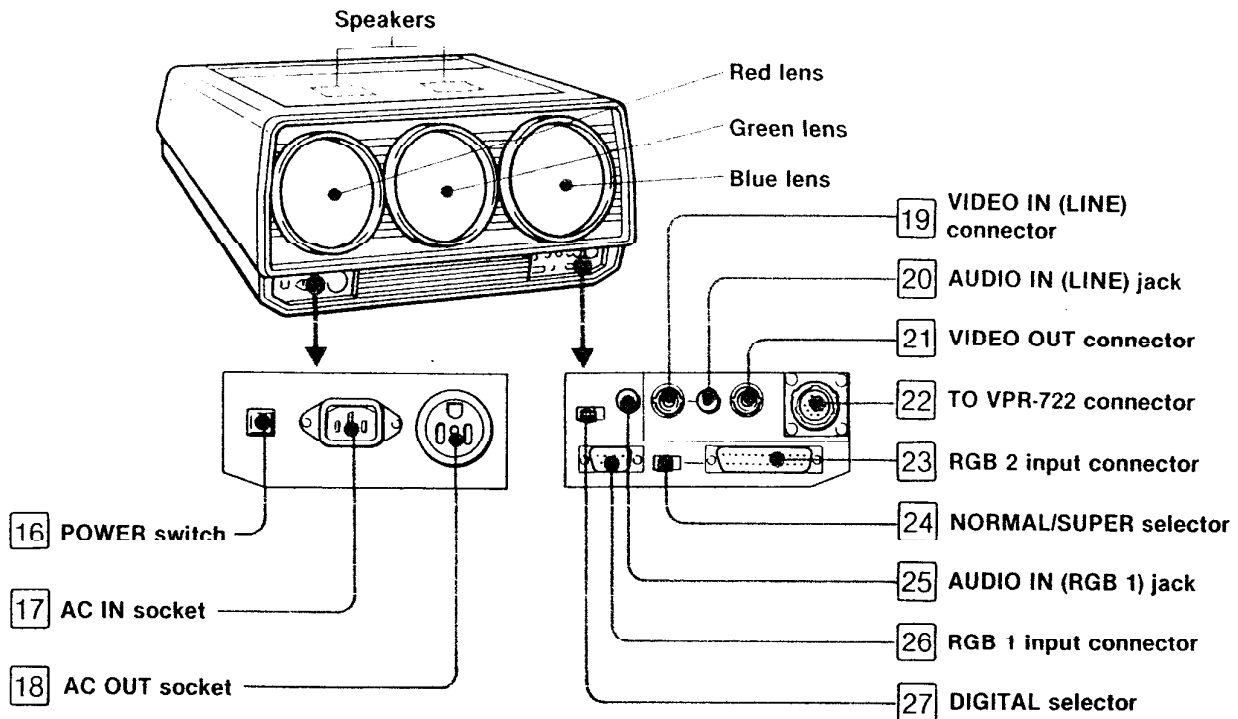
14 R/B V CENT (vertical centering) controls
Adjust vertical registration of red and blue when the NORMAL/SECAM/TEST switch is set to TEST.

15 R/B H CENT (horizontal centering) controls
Adjust horizontal registration of red and blue when the NORMAL/SECAM/TEST switch is set to TEST.

Notes
● Controls 7, 8 and 9 do not function for RGB inputs.
● 3 through 10 do not function when the VPR-722 remote controller is connected to the TO VPR-722 connector. The same controls on the VPR-722 are operative.

9

Speakers

Red lens

Green lens

Blue lens

|19| VIDEO IN (LINE) connector

|20| AUDIO IN (LINE) jack

|21| VIDEO OUT connector

|22| TO VPR-722 connector

|23| RGB 2 input connector

|24| NORMAL/SUPER selector

|25| AUDIO IN (RGB 1) jack

|26| RGB 1 input connector

|27| DIGITAL selector

|16| POWER switch

|17| AC IN socket

|18| AC OUT socket

|16| **POWER switch**
Depress to turn the power on (⊐ ON). When the remote controller is connected, power will be supplied to the controller.

|17| **AC IN socket**
Connect the supplied ac power cord here and to an ac outlet.

|18| **AC OUT socket**
Supplies ac power to external equipment.

|19| **VIDEO IN (LINE) connector** (BNC)
Connect to the video line output of a video tape recorder, video camera, TV, TV tuner, etc.

|20| **AUDIO IN (LINE) jack** (phono)
Connect to the audio line output of a video tape recorder, video camera, TV, TV tuner, etc.

|21| **VIDEO OUT connector** (BNC)
The video signal input from the TO VPR-722 connector or the VIDEO IN connector is output here. When both connectors are used, the signal from the TO VPR-722 connector is output.

|22| **TO VPR-722 connector** (14-pin, male)
To remotely control the projector, for instance, when it is installed on the ceiling, connect the optional VPR-722 remote controller here using the optional CCQ connecting cable.

|23| **RGB 2 input connector** (25-pin, male)
Connect to the analog or digital RGB multioutput connector of a microcomputer.

|24| **NORMAL/SUPER (superimpose) selector**
Normally, set to the NORMAL position. Set to SUPER when superimposing the data from the microcomputer connected to the RGB 2 connector on the picture from the TO VPR-722 or VIDEO IN connector.

|25| **AUDIO IN (RGB 1) jack** (phono)
Connect to the audio output of an audio source, if necessary.

|26| **RGB 1 input connector** (9-pin, male)
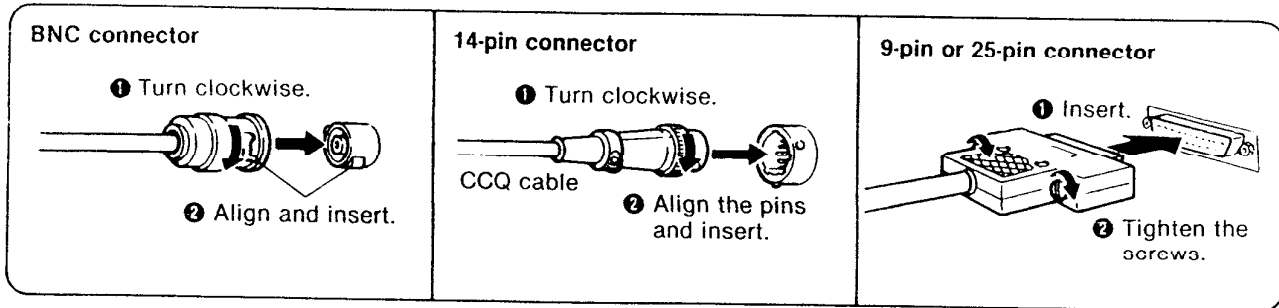Connect to the digital RGB output connector of a microcomputer.

|27| **DIGITAL selector**
Normally set to 2. When the microcomputer provided with the intensity output is connected, set to 1 for 16-color display.
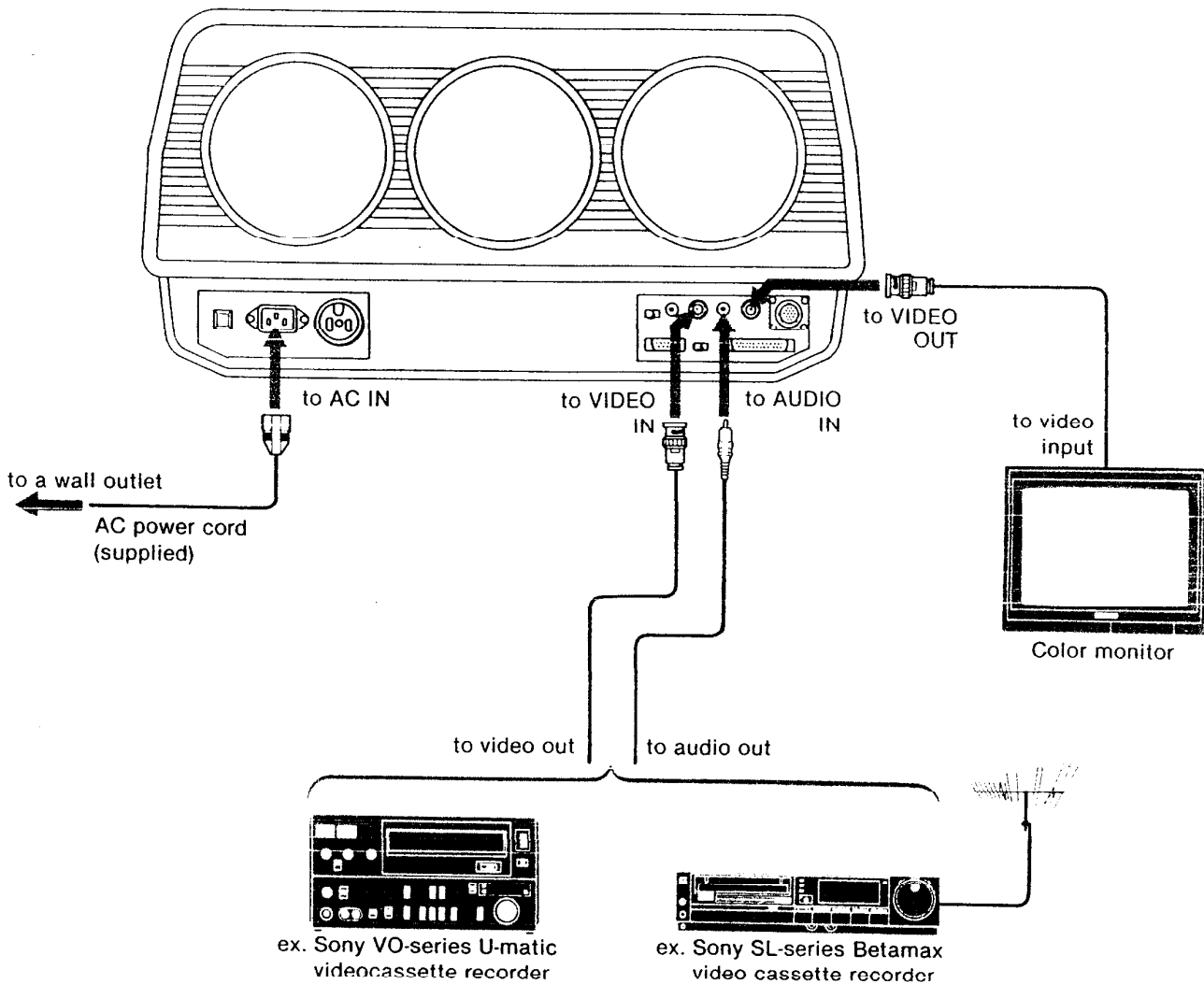
SYSTEM CONNECTIONS

Connecting notes

● First make sure that the power to each piece of equipment is turned off.

● Use suitable connecting cables according to the equipment to be connected. For RGB connection, use the optional shielded cables recommended in this manual.

● The cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.

● For connection to the VIDEO IN and TO VPR-722 connectors, the connecting cable may be extended to max. 50 m (164 feet ½ inch). If the connecting cable is too long (longer than 50 m), picture quality may be impaired somewhat.

● To disconnect the cable, pull it out by grasping the plug. Never pull the cable itself.

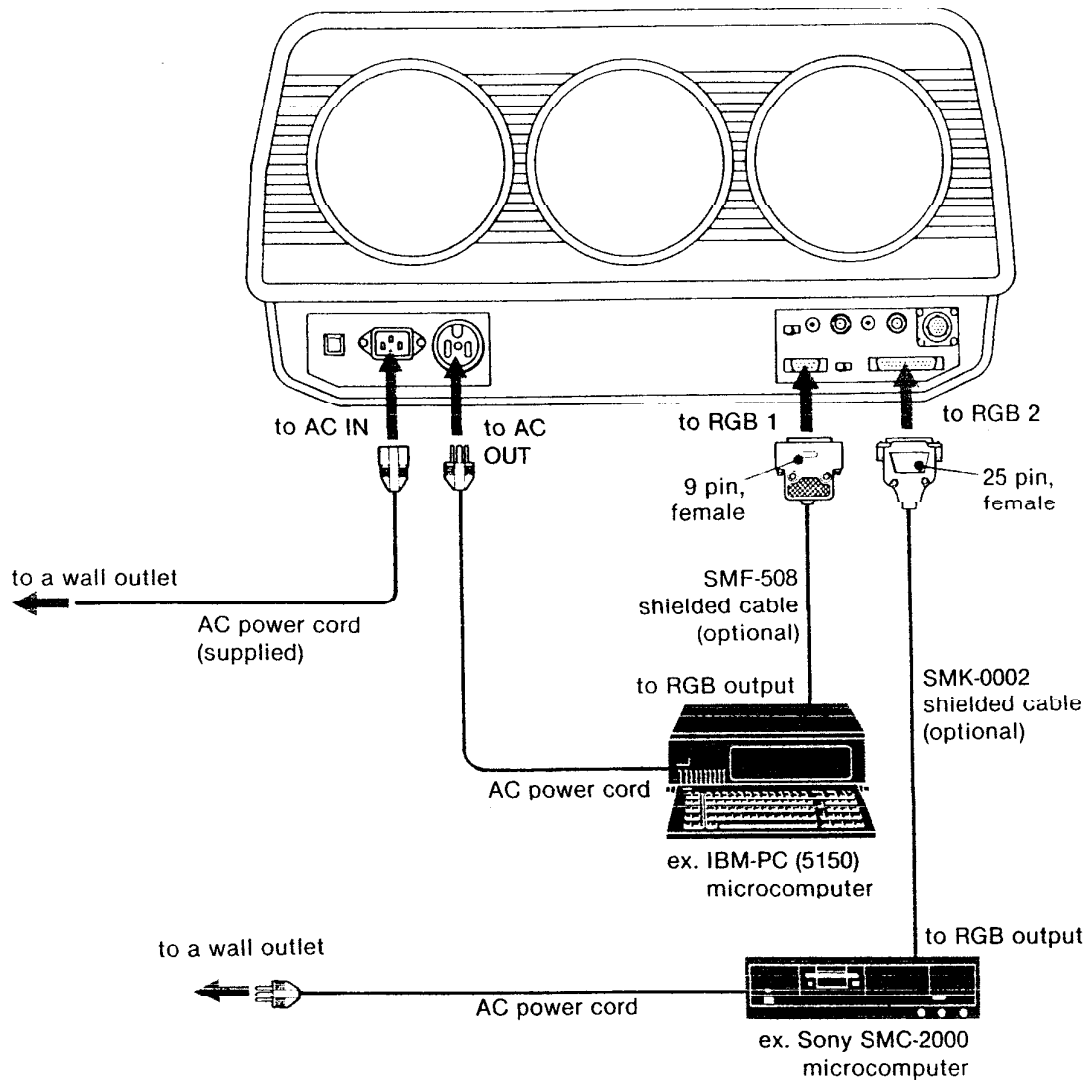● Read the instruction manual of the equipment to be connected.

BNC connector	14-pin connector	9-pin or 25-pin connector
❶ Turn clockwise.	❶ Turn clockwise.	❶ Insert.
CCQ cable		
❷ Align and insert.	❷ Align the pins and insert.	❷ Tighten the screws.

CONNECTING A VIDEO TAPE RECORDER WITHOUT USING THE REMOTE CONTROLLER

to VIDEO OUT

to AC IN   to VIDEO IN   to AUDIO IN

to video input

to a wall outlet

AC power cord (supplied)

Color monitor

to video out   to audio out

ex. Sony VO-series U-matic videocassette recorder

ex. Sony SL-series Betamax video cassette recorder

To project the picture input from the VIDEO IN connector

CONNECTING A MICROCOMPUTER

to AC IN

to AC OUT

to RGB 1

9 pin, female

to RGB 2

25 pin, female

to a wall outlet

AC power cord (supplied)

SMF-508 shielded cable (optional)

to RGB output

SMK-0002 shielded cable (optional)

AC power cord

ex. IBM-PC (5150) microcomputer
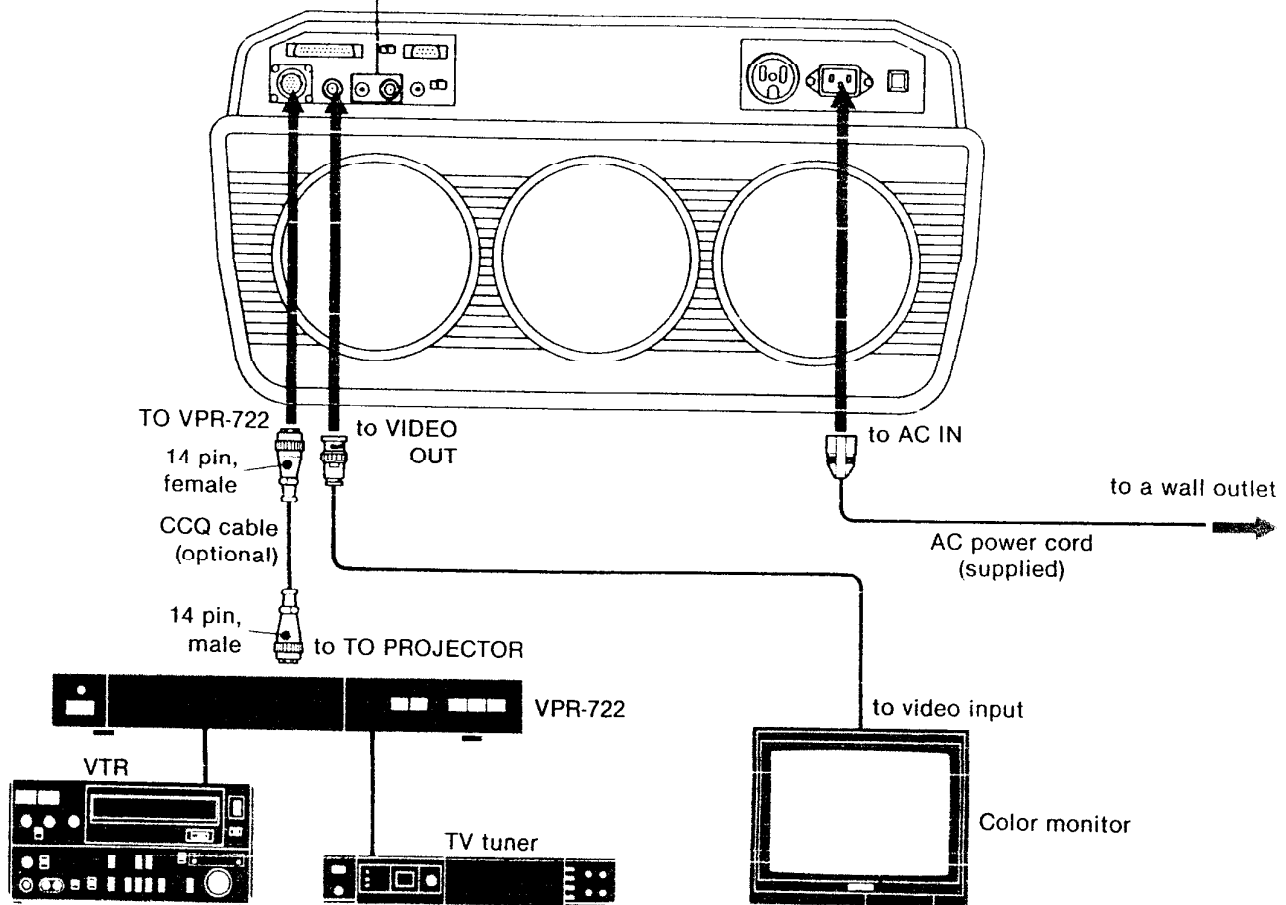
to a wall outlet

to RGB output

AC power cord

ex. Sony SMC-2000 microcomputer

- To project the picture input from the RGB 1 connector or RGB 2 connector, press the RGB 1 or RGB 2 INPUT SELECT button respectively.
  Adjust the horizontal position of the picture with the RGB 1/RGB 2 H SHIFT controls, if necessary.
- When the microcomputer connected to the RGB 1 connector is provided with the intensity output, set the DIGITAL selector to 1 for 16-color display.
- To perform superimposing of the data from the microcomputer connected to the RGB 2 connector, set the NORMAL/SUPER selector to SUPER. (The signal from the microcomputer should be synchronized and processed for superimposition.) Adjust the contrast of the superimposed picture with the SUPERIMPOSE MIX LEVEL control, if necessary.
- If your microcomputer is equipped with a video output, connect it to the VIDEO IN connector and press the LINE INPUT SELECT button.

> To avoid interference with radio or TV reception, always use the supplied AC power cord and the optional connecting cable as described in the connection configuration above. This is indispensable to comply FCC Rule Part 15 Subpart J, regulating to radio or TV reception caused by computing device.

USING THE REMOTE CONTROLLER

Use the optional VPR-722 remote controller when the projector is installed on the ceiling or at a distance from your seat. Power on/off, program selection and picture adjustments can be remotely controlled.

The VIDEO IN/AUDIO IN connectors will be disconnected when the remote controller is connected to the TO VPR-722 connector.
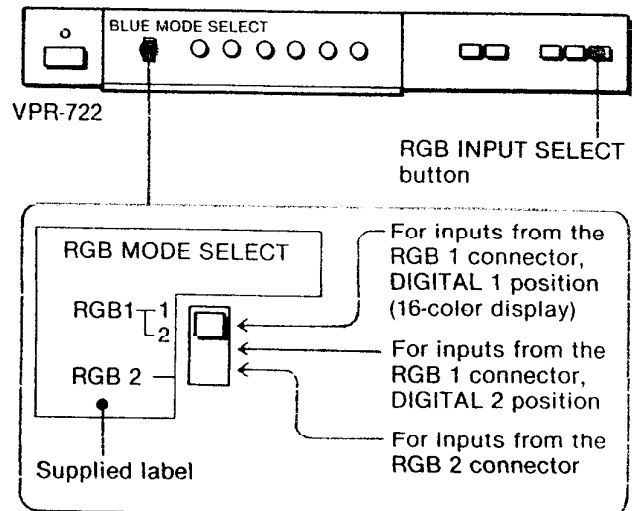

TO VPR-722
14 pin, female
CCQ cable (optional)
14 pin, male — to TO PROJECTOR

to VIDEO OUT

to AC IN

to a wall outlet

AC power cord (supplied)

VPR-722

VTR

TV tuner

to video input

Color monitor

For details on the connections, see the Instruction manual of the VPR-722.

When the remote controller is connected, the PROJECTOR switch, INPUT SELECT buttons and controls for picture adjustments on this unit do not function. Keep the POWER switch on the projector ON and operate these functions with the remote controller.

Note on the BLUE MODE SELECT switch
When the VPR-722 is connected to this unit, the BLUE MODE SELECT switch on the VPR-722 functions as the RGB MODE SELECT switch. Attach the label supplied with this unit to the BLUE MODE SELECT switch.

To project the signals connected to the RGB 1 or RGB 2 connector, first press the RGB INPUT SELECT button and set the RGB MODE SELECT switch as follows.

BLUE MODE SELECT

VPR-722

RGB INPUT SELECT button

RGB MODE SELECT

RGB1 ⌐1
     └2
RGB 2

Supplied label

For inputs from the RGB 1 connector, DIGITAL 1 position (16-color display)

For inputs from the RGB 1 connector, DIGITAL 2 position
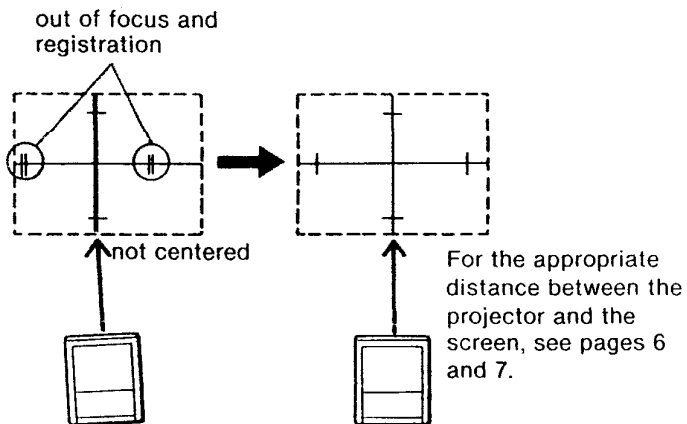
For inputs from the RGB 2 connector

POSITION AND REGISTRATION ADJUSTMENTS

Installation and preliminary adjustments should be performed by qualified Sony personnel.

If the projector is installed on the desk or on the floor using the pedestal, it can be easily moved but it may be necessary to readjust the registration.
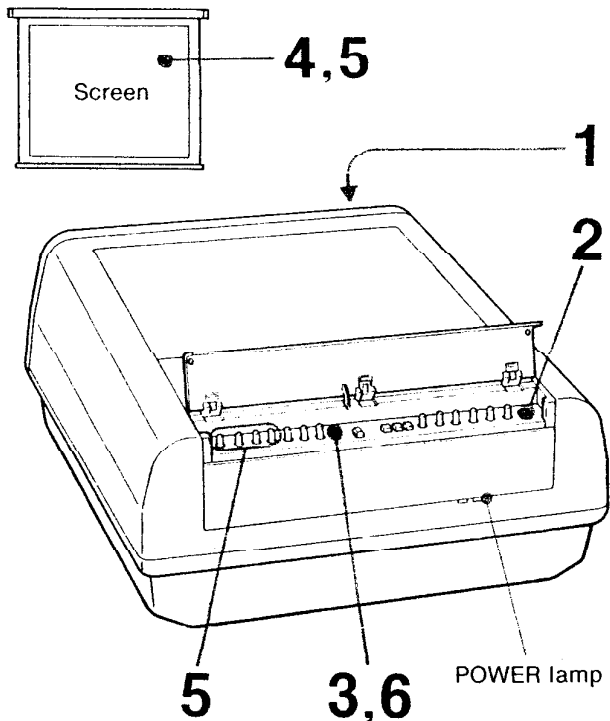
1 Depress the POWER switch (ON).
2 Depress the PROJECTOR switch (ON).
  When the remote controller is used, turn the PRO-JECTOR switch on the remote controller on.
  The green POWER lamp will light.
3 Set the NORMAL/SECAM/TEST switch to TEST.
  The built-in cross-hair pattern will be displayed.
4 **Check that the test pattern is centered and focused on the screen.**
  If not, move the projector slightly so that the pattern is displayed clearly.

out of focus and registration

not centered

For the appropriate distance between the projector and the screen, see pages 6 and 7.

5 **Check that the red, green and blue lines converge so that the pattern is seen as white.**
  If not, adjust the registration with the R/B H CENT and R/B V CENT controls.

Turn these controls so that the red and blue vertical lines converge with the green line.

R   B
└H CENT┘

Clockwise rotation moves the respective line to the right.

Turn these controls so that the red and blue horizontal lines converge with the green line.

R   B
└V CENT┘

Clockwise rotation moves the respective line upward.

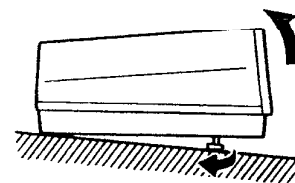6 After the adjustment is complete, set the NORMAL/SECAM/TEST switch to NORMAL.

How to adjust the feet
The horizontal balance and angle of the projector can be adjusted with the feet, if necessary. The feet are factory-adjusted to the shortest length for a flat base.
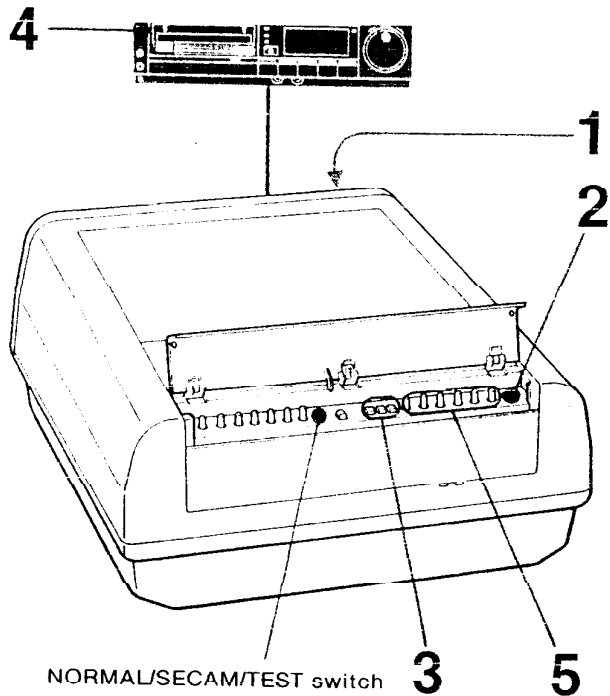
Turn either foot to obtain horizontal balance.
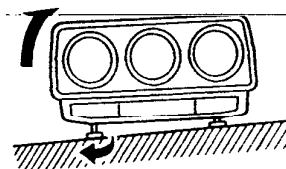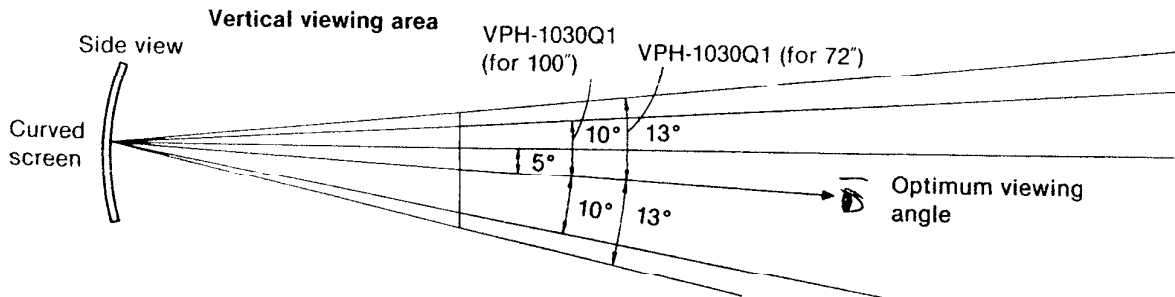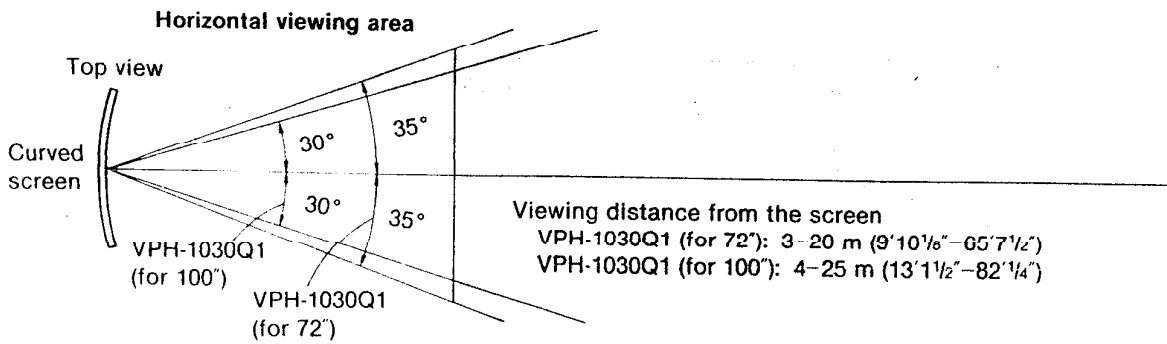
Turn both feet to adjust the angle.

14

OPERATION

NORMAL/SECAM/TEST switch

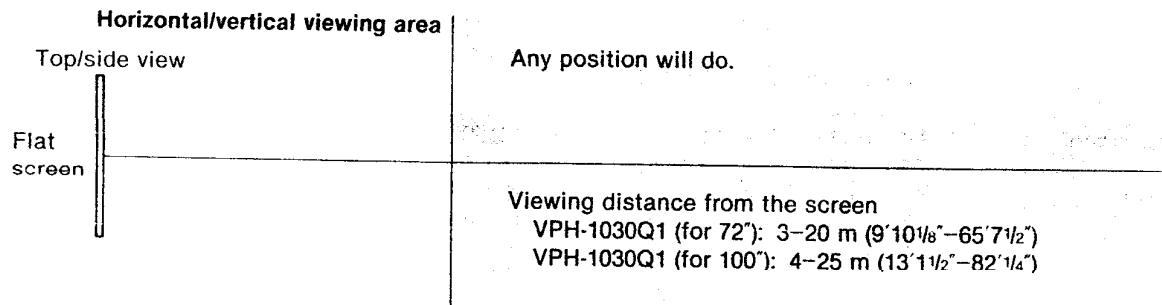Make sure that the NORMAL/SECAM/TEST switch is set to NORMAL.

1 Depress the POWER switch (ON).
2 Depress the PROJECTOR switch (ON).
3 Select the program to be projected by pressing the appropriate INPUT SELECT button.
4 Turn on the connected equipment.
  The picture will be projected on the screen and the sound will be heard from the speakers.
5 Adjust the picture and sound to your preference.

When the remote controller is connected, steps 2, 3, 4 and 5 should be performed on the controller.

NOTICE ON VIEWING AREA

Horizontal/vertical viewing area

Top/side view

Flat screen

Any position will do.

Viewing distance from the screen
VPH-1030Q1 (for 72"): 3–20 m (9'10 1/8"–65'7 1/2")
VPH-1030Q1 (for 100"): 4–25 m (13'1 1/2"–82'1/4")

Horizontal viewing area

Top view

Curved screen

30°   35°
30°   35°

VPH-1030Q1 (for 100")
VPH-1030Q1 (for 72")

Viewing distance from the screen
VPH-1030Q1 (for 72"): 3–20 m (9'10 1/8"–65'7 1/2")
VPH-1030Q1 (for 100"): 4–25 m (13'1 1/2"–82'1/4")

Vertical viewing area

Side view

Curved screen

VPH-1030Q1 (for 100")   VPH-1030Q1 (for 72")

10° 13°
5°
10° 13°

Optimum viewing angle

SPECIFICATIONS

Optical

Projection system	3 picture tubes, 3 lenses, direct projection system
Picture tube	5.5-inch high-brightness monochrome tubes, with coolant sealed
Projection lens	High-performance hybrid lenses F 1.0/130 mm
Projected picture size	**VPH-1030Q1 (for 100˝):** 100 inches measured diagonally
	VPH-1030Q1 (for 72˝): 72 inches measured diagonally
	VPH-2030Q1: 200 inches measured diagonally
Light output	300 lm

General

Color system	PAL, SECAM, NTSC and $NTSC_{4.43}$ systems, switched automatically
Resolution	900 TV lines (RGB inputs) 570 TV lines (video input)
RGB inputs	Character display capacity: 4050 characters at 24 kHz (5 × 7 dots, 90 letters × 45 lines)
	Graphic display capacity: 1024 × 500 dots
	Horizontal frequency: 15 kHz to 32 kHz
	Vertical frequency: 50 Hz to 100 Hz
Test signal	Cross-hair test pattern generator is incorporated.
Speaker	8 cm (3⅛ inches) dia., 2 units, total 3 W
Inputs	LINE

VIDEO IN: BNC connector
   Composite video input, 1 Vp-p ±2 dB, sync negative, 75 ohms terminated
AUDIO IN: phono jack
   -5 dBs (436 mV rms)
   Impedance: more than 47 k ohms

RGB 1

RGB 1: D-sub 9-pin connector
   Digital signal (TTL level)
   See "Pin assignment".
AUDIO IN: phono jack
   -5 dBs (436 mV rms)
   Impedance: more than 47 k ohms

RGB 2

RGB 2: D-sub 25-pin connector
   See "Pin assignment".

Output	VIDEO OUT: BNC connector Composite video output, 1 Vp-p ±2 dB, impedance 75 ohms, selected video output
	With the remote controller: video signal from the controller
	Without the remote controller: video signal from the VIDEO IN connector
TO VPR-722 connector	14-pin connector See "Pin assignment".
Power requirements	120 V ac, 50/60 Hz
Power consumption	215 W max., 2.9 A max.
Dimensions	Approx. 532 × 280 × 597 mm (w/h/d) (21 × 11⅛ × 23⅝ inches) with the brackets pushed down, incl. projecting parts and controls
Weight	Approx. 30 kg (66 lb 2 oz)
Accessories supplied	AC power cord (1)
	Spacer for 72˝ projection (only for the VPH-1030Q1) (4)
	Label of the RGB MODE SELECT switch for the VPR-722 (1)

Design and specifications subject to change without notice.

OPTIONAL ACCESSORIES

Remote controller VPR-722
Projector pedestal SU-722
Projector suspension support PSS-722, PSS-10
Screen VPS-100F1 (100˝ flat)
        VPS-72HG1 (72˝ curved)
        VPS-100HG1 (100˝ curved)
Carrying case VLC-1030
CCQ cables
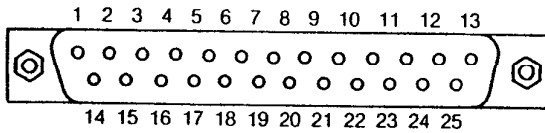Shielded cable SMF-0002, SMF-508

Signal assignment

RGB 1 connector
(D-sub 9-pin)

```
   1  2  3  4  5
  ( o  o  o  o  o )
     o  o  o  o
   6  7  8  9
```
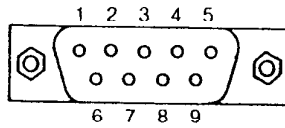
Digital signal (TTL level)

Pin No.	Signal assignment
1	Ground
2	Ground
3	Red input
4	Green input
5	Blue input
6	Intensity input
7	No connection
8	H. sync or composite sync input (positive/negative)
9	V. sync input (positive/negative)

RGB 2 connector (D-sub 25-pin)

```
   1  2  3  4  5  6  7  8  9  10 11 12 13
  ( o  o  o  o  o  o  o  o  o  o  o  o  o )
     o  o  o  o  o  o  o  o  o  o  o  o
   14 15 16 17 18 19 20 21 22 23 24 25
```

| Pin No.	Signal	Signal level
1*	IBM select	High state (5V): IBM mode Low state (ground): 3 Bit normal mode
2	Audio select	High state (5V or open): Audio input from pin 13 Low state (ground): Audio inputs from the AUDIO IN jack (LINE mode)
3	H.sync or composite sync input	Open state is selected at pin 9: Analog signal (1Vp-p, 75 ohms terminated, Negative) Low state is selected at pin 9: Digital signal (TTL level, Positive/Negative acceptable)
4	Blue input	High state is selected at pin 9: Analog signal (0.7Vp-p, 75 ohms terminated, Positive) Low state is selected at pin 9: Digital signal (TTL level, Positive)
5	Green input	High state is selected at pin 9: Analog signal (Green signal: 0.7Vp-p, 75 ohms terminated, Positive/Green with sync signal: 1Vp-p, 75 ohms terminated, Positive) Low state is selected at pin 9: Digital signal (TTL level, Positive)
6	Red input	(Same as Pin 4)
7,8	Not used	
9*	Analog/digital mode select	High state (open): Analog mode Low state (ground): Digital mode
10	RGB/VIDEO mode select	High state (5V or open): RGB input from micro-computer Low state (ground): Composite video signal from VIDEO IN connector
11	V.sync input	Positive/Negative: Digital signal (TTL level)
12	Blanking input	High state (5V or open): RGB inputs from a micro-computer only Low state (ground): Composite video input from VIDEO IN connector This control signal makes it possible to superimpose. You can select two switches (NORMAL/SUPER). By selecting SUPER mode, superimposition can be made.
13	Audio input	Input level −5dBs, input impedance more than 47 k ohms
14	Sync mode select	High state (open): Sync signal input from RGB 2 connector Low state (ground): Sync signal input from the VIDEO IN connector
15–24	Ground	
25*	Luminance signal	Digital signal (TTL level, Positive)

∗Examples for microcomputer connections

Microcomputer \ Pin No.	1	9	25
SMC-70/SMC-70G	—	High state	—
IBM computer	High state	Low state	IBM luminance signal
TTL 3BIT computer	Low state	Low state	—

TO VPR-722 connector (14-pin)
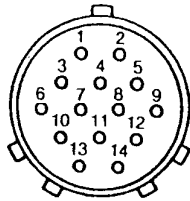
Pin No.	Signal	Pin No.	Signal
1	Ground	8	Input select
2	+28V ⎓60mA	9	Audio (incl. volume control)
3	Hue 1	10	Brightness
4	Hue 2	11	Sharpness
5	Hue 3	12	Color
6	Video	13	Picture
7	Ground (video)	14	Power ON: 12V OFF: 0V

Timing chart

15.75 kHz scanning frequency

24 kHz scanning frequency
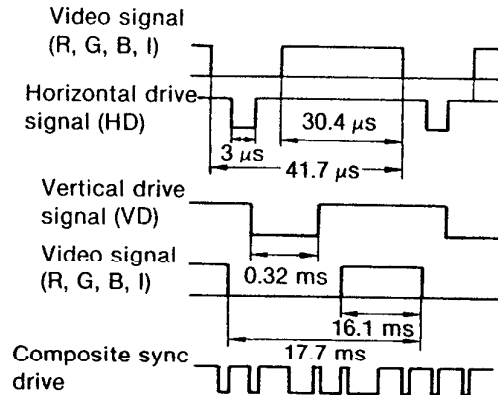
Note

If the input signals are not the recommended ones, the dimensions of the character display area may change or the picture may be decentered due to the timing of the connected microcomputer. This is not a fault of the monitor.

18
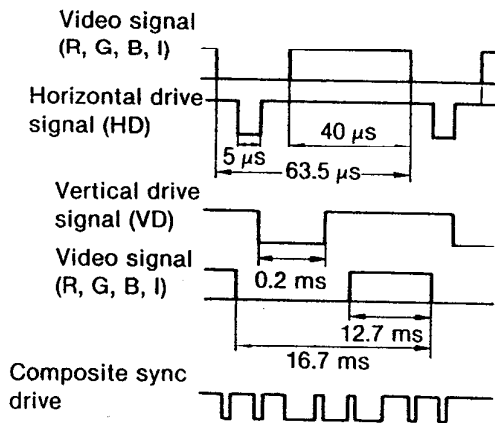
6 Slightly raise the cabinet and pull it toward you to remove.
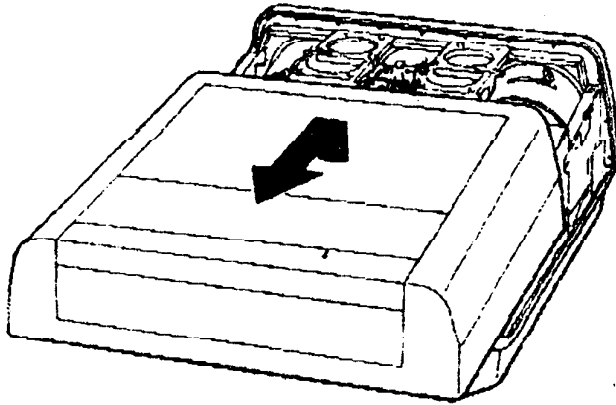
Illumination
To obtain a clear picture, the screen should not be exposed to illumination or sunlight directly from the front.

Ceiling mounted spot lighting is recommended. Use a construction as illustrated over light-scattering illumination such as fluorescent lamps.

Cover the windows that face the screen with opaque draperies.

It is desirable to install the projector in a room whose floor and walls are not of light-reflecting material. If the floor and walls are of reflecting material, it would be desirable to change to a dark carpet and wall paper.

POLARITY CHANGE
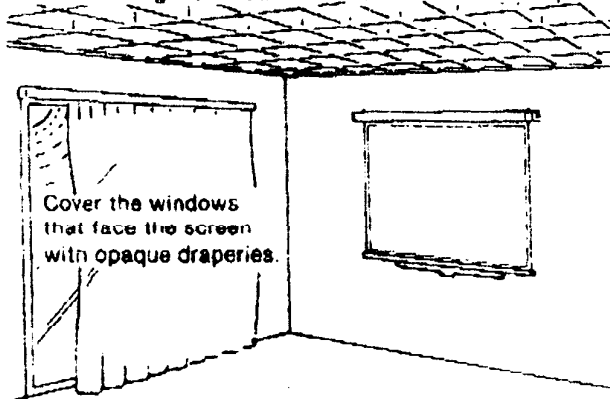
The projector is preadjusted at the factory for use on desk or floor with the bracket side down.
When the projector is installed on the ceiling with the bracket side up, the polarity should be changed.

1 Make sure that the power is not connected.
2 Open the cabinet. (See page 10).
3 Raise the DB circuit board to expose the DA circuit board.
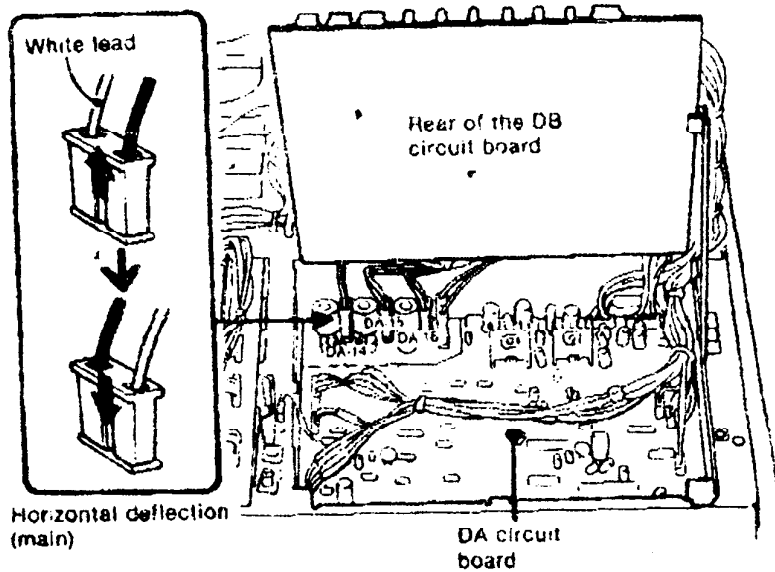
❶ Loosen the two screws.
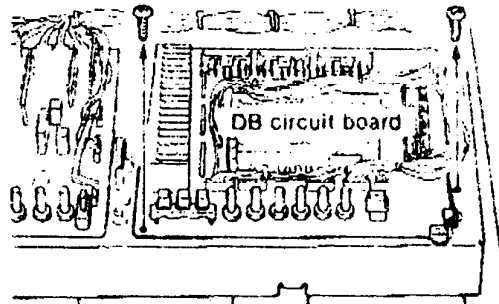
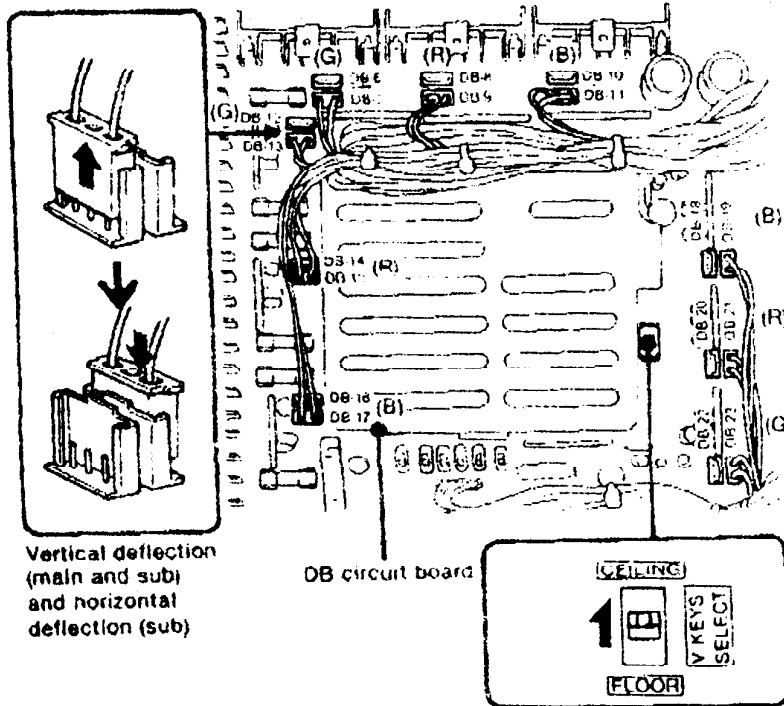❷ Pressing the stay to the right, raise the DB circuit board.
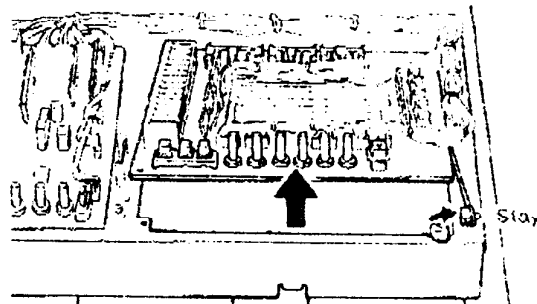
❸ Support the DB circuit board with the stay.

11
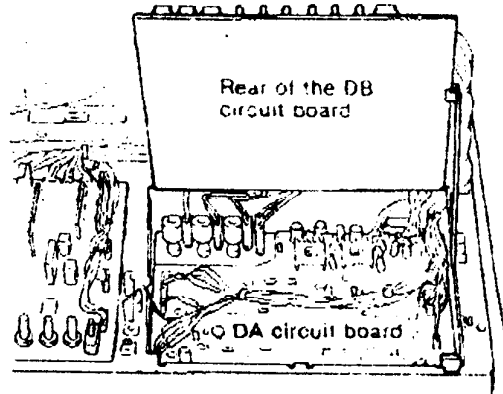
4 Reverse the polarity of connectors DA-14, 15 and 16.

White lead

Horizontal deflection
(main)

DA circuit
board

Rear of the DB
circuit board

5 Replace the DB circuit board
6 Move the connectors from receptacles DB-7, 9, 11, 13,
15, 17, 19, 21 and 23 to receptacles 6, 8, 10, 12, 14, 16,
18, 20 and 22 respectively.

Vertical deflection
(main and sub)
and horizontal
deflection (sub)

DB circuit board

CEILING

V KEYS SELECT

FLOOR

7 Set the V KEYS SELECT switch to the CEILING position.

Note
Check that the connectors are inserted firmly, then proceed to lens focus adjustment with the projector's cabinet removed.

12

LENS FOCUS ADJUSTMENT

The lens focus is preadjusted at the factory for 100" flat screen (VPH-1030Q1) or for 200" flat screen (VPH-2030Q1). For other type screens, the lens focus should be adjusted.

1 Open the top panel. (See page 10).
2 Install the projector in the correct position on the floor or ceiling.
3 Connect the supplied power cord to the AC IN socket and to an ac outlet, depress the POWER switch on the connector panel and the PROJECTOR switch. The green POWER lamp will light.
4 Set the NORMAL/SECAM/TEST switch to TEST, the HATCH/W/B switch to HATCH and CR/ME switch to ME (mesh).
A cross hatch pattern will be displayed.
5 Check the following:

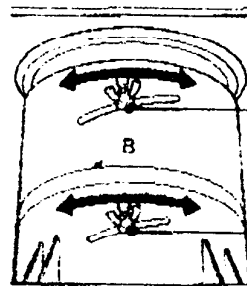Does the screen fit inside the white frame? ➡ If not, adjust the position of the projector.
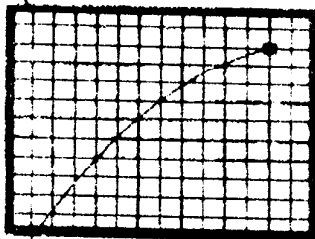
Does a white marker appear here? ➡ If not, the polarity change has not been properly made. Check the steps on page 12.
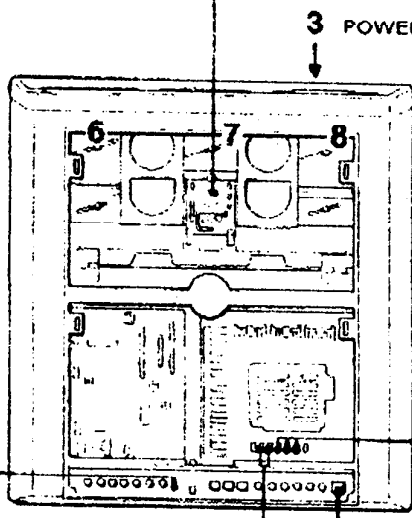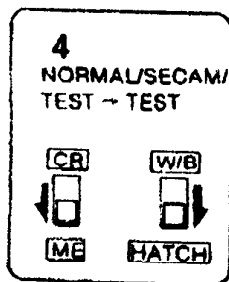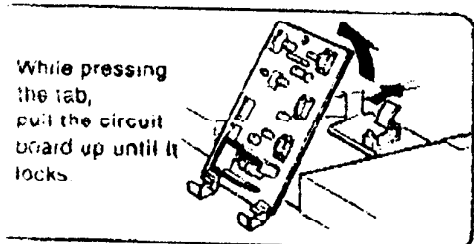
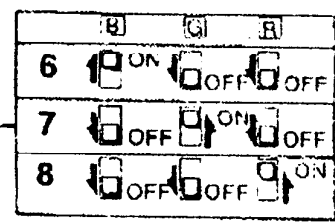6 Set the G (green) and R (red) switches to OFF, then adjust the focus of the blue lens.

2) Loosen the screw, adjust the focus on the corners, then tighten the screw.

1) Loosen the screw, adjust the focus on the center, then tighten the screw.

7 Set only the G switch to the ON position and the R and B switches to OFF, then adjust the focus of the green lens.
8 Set only the R switch to the ON position and the G and B switches to OFF, then adjust the focus of the red lens.
9 Replace the top panel. (Reverse the steps given on page 10.)

Proceed to registration adjustment.

Caution
Take care not to touch portions of the projector other than those indicated below because dangerous high voltages are present. To change the polarity, first turn the POWER switch off.

While pressing the tab, pull the circuit board up until it locks.

3 POWER → ON

4 NORMAL/SECAM/TEST → TEST

[CR]
[ME]

[W/B]
[HATCH]

	B	G	R
6	ON	OFF	OFF
7	OFF	ON	OFF
8	OFF	OFF	ON

3 PROJECTOR → ON

13

REGISTRATION ADJUSTMENT

Use a small screwdriver to adjust the controls through the holes

POWER → ⌐ ON

Controls for registration adjustment (See page 15.)
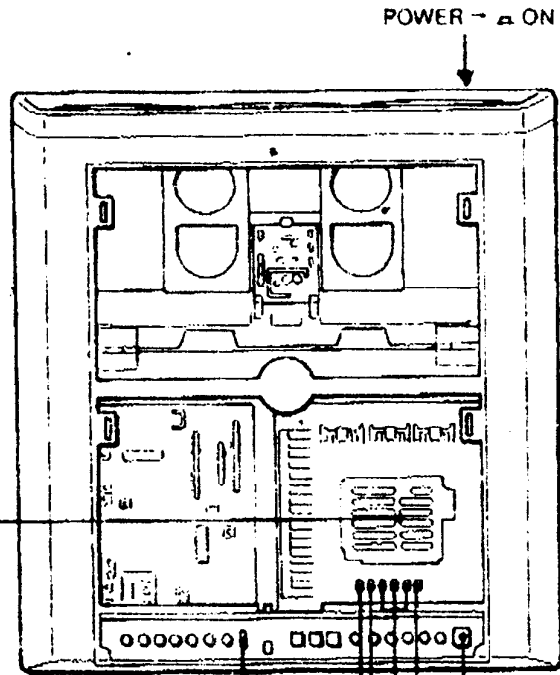
NORMAL/SECAM/TEST → TEST

PROJECTOR → ⌐ ON

CR		W/B		ON
				OFF
ME		HATCH		TILT
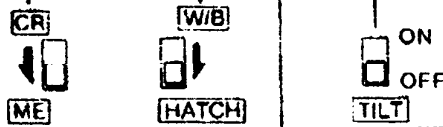
| B	G	R	
OFF	ON	ON	Setting for adjusting the registration of the red and green pictures
ON	ON	OFF	Setting for adjusting the blue and green pictures

Preparations
- Keep the G switch at ON and set the B and R switches to OFF. A green cross hatch pattern will be displayed.
- Check the position of the projector, polarity and lens focus referring to page 13.

Vertical registration of the red and green pictures
1 Set the B switch to OFF and the G and R switches to ON.
2 Set the TILT switch to OFF (control panel side).
3 Adjust the RV CENT control so that the red horizontal lines and the green horizontal lines converge in the middle of the screen.
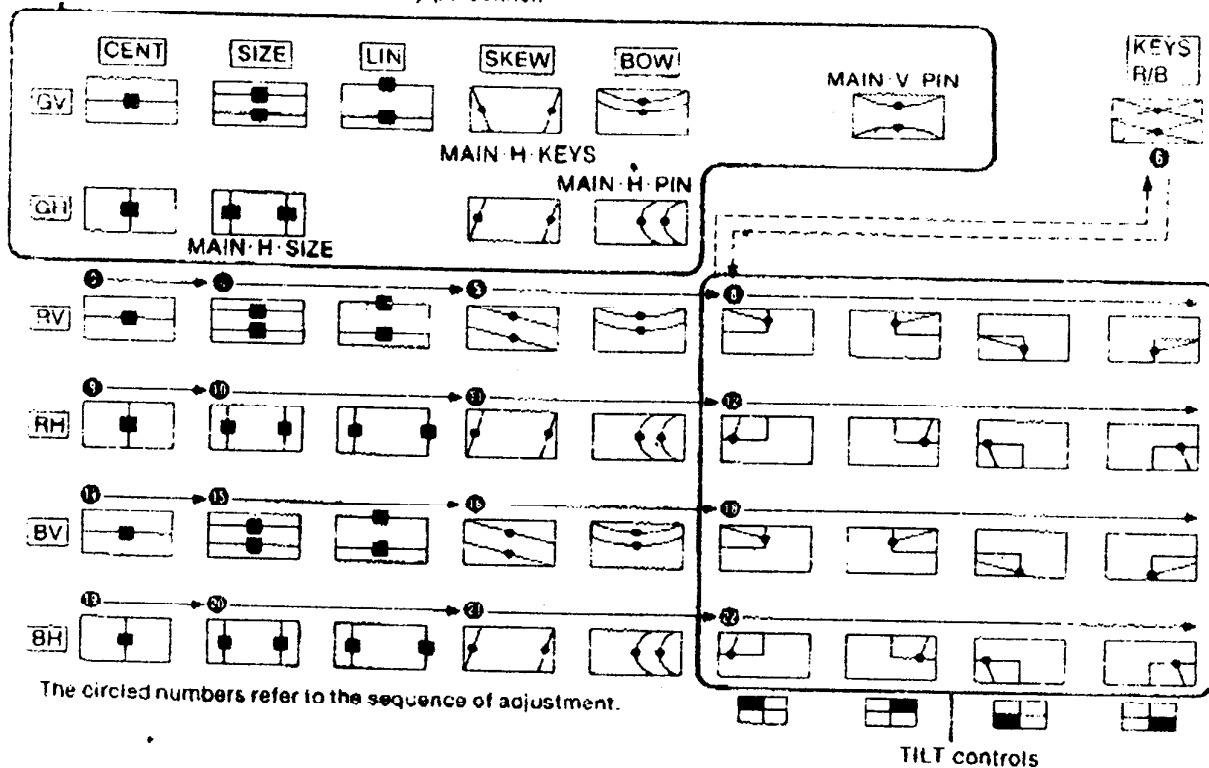
4 Adjust the RV SIZE and RV LIN controls so that the red horizontal lines and the green horizontal lines converge at the TOP and BOTTOM of the screen.
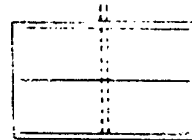
⌐ Observe the horizontal lines in this part.

(Repeat steps 3 and 4 as necessary.)

14

These controls are used for the reference green picture readjustment. If readjustment is necessary, consult the qualified Sony personnel.


The circled numbers refer to the sequence of adjustment.

TILT controls

5 Adjust the RV SKEW and RV BOW controls so that the red horizontal lines and the green horizontal lines converge in the middle of the screen.
6 Adjust the KEYS R/B control so that the red horizontal lines at the top and bottom of the screen are parallel.
7 Set the TILT switch to ON (lens side).
8 Adjust the RV TILT controls so that the red horizontal lines and the green horizontal lines converge in the corners of the screen.

Horizontal registration of the red and green pictures
9 Adjust the RH CENT control so that the red vertical lines and the green vertical lines converge in the middle of the screen.
10 Adjust the RH SIZE and RH LIN controls so that the red vertical lines and the green vertical lines converge at the right and left sides of the screen.

Observe the vertical lines in this part
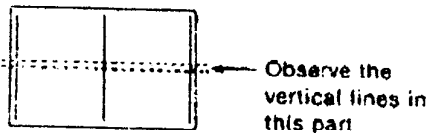
(Repeat steps 9 and 10 as necessary.)

11 Adjust the RH SKEW and RH BOW controls so that the red vertical lines and the green vertical lines converge in the middle of the screen.
12 Adjust the RH TILT controls so that the red vertical lines and the green vertical lines converge at the corners of the screen.

Proceed to the following adjustments in the same manner as with red and green registration, setting the R switch to OFF and the B and G switches to ON.

Vertical registration of the blue and green pictures
13 Set the TILT switch to OFF.
14 Adjust the BV CENT control.
15 Adjust the BV SIZE and BV LIN controls. (Repeat steps 14 and 15 as necessary.)
16 Adjust the BV SKEW and BV BOW controls.
17 Set the TILT switch to ON.
18 Adjust the BV TILT controls.

Horizontal registration of the blue and green pictures
19 Adjust the BH CENT control.
20 Adjust the BH SIZE and BH LIN controls. (Repeat steps 19 and 20 as necessary.)
21 Adjust the BH SKEW and BH BOW controls.
22 Adjust the BH TILT controls.

When registration is complete
Set the switches to the following positions.
R, G, B switches → ON position
HATCH/W/B switch → HATCH
CR/ME switch → CR (cross) OR MESH
TILT → ON position
NORMAL/TEST → NORMAL

Replace the top panel. (Reverse the steps given on page 10.)

15