

SONY®

カラービデオプロジェクター
COLOR VIDEO PROJECTOR

VPH-2020QJ / 2020Q1 / 2020QM

取扱説明書 2 ページ

お買いあげいただき、ありがとうございます。
この取扱説明書をよくお読みになり、正しくお使いください。
お読みになったあとは、後日お役に立ちますので、「保証書」、
「サービス窓口のしおり」とともに、大切に保存してください。

OPERATING INSTRUCTIONS page 14

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.**

MODE D'EMPLOI page 26

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

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

BEDIENUNGSANLEITUNG Seite 38

Vor der Inbetriebnahme lesen Sie diese Anleitung sorgfältig
durch, und bewahren Sie sie zum späteren Nachschlagen auf.

**Aufstell- und Abgleicharbeiten sind von einem Sony-Fachmann
durchzuführen.**

OWNER'S RECORD

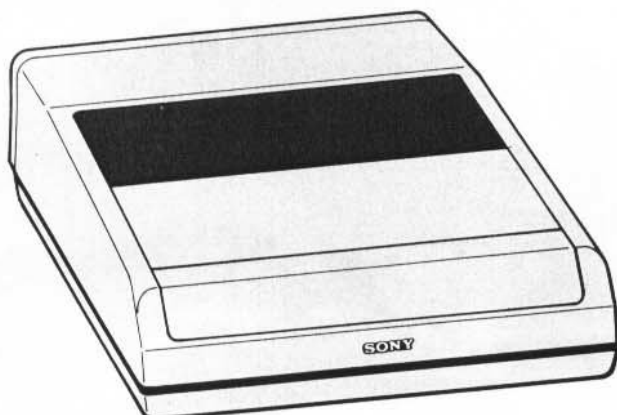
The model and serial numbers are located at the
left side. Record these numbers in the spaces pro-
vided below. Refer to them whenever you call upon
your Sony dealer regarding this product.

Model No. VPH-2020Q1 _____ Serial No. _____

WARNING

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

Dangerously high voltages are present
inside the set. Do not open the cabi-
net. Refer servicing to qualified per-
sonnel only.



HI-RESOLUTION 900

This instruction manual covers the VPH-2020QJ, 2020Q1 and 2020QM. The differences between the models are shown below.

Model name	VPH-2020QJ	VPH-2020Q1	VPH-2020QM
Operating voltage preadjusted at the factory	100V ac	120V ac	220-240V ac
AC power cord plug	provided	provided	not provided

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FEATURES

● Sharp 900-line Resolution

The newly developed picture tubes, colored coolant filter, double focus lens system, and hybrid lens offer dramatically sharp 900-line resolution.

● Bright 300-lumens Image

The newly created electronic gun and new phosphoric elements create unsurpassed brightness.

● High Contrast picture

The coated screens and lenses minimize light reflections to render a high contrast picture.

● Various installation possibilities

The projector is designed to be installed on the desk, floor or ceiling.

● Portable single unit

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

● The PAL, SECAM, NTSC, or NTSC_{4.43}* color system is selected automatically.

● RGB IN connectors allow a microcomputer, video camera or a special adaptor for future videotext/teletext having analog RGB outputs to be connected.

● A BLUE MODE SELECT switch is provided for easier-to-view display of RGB sources.

*A signal of NTSC_{4.43} system is obtained by playing back NTSC-recorded video tapes with a video tape recorder/player specially designed for use with this system.

WARNING

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

Dangerously high voltages are present inside the set. Do not open the cabinet. Refer servicing to qualified personnel only.

INFORMATION for the users of the VPH-2020Q1

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.

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.

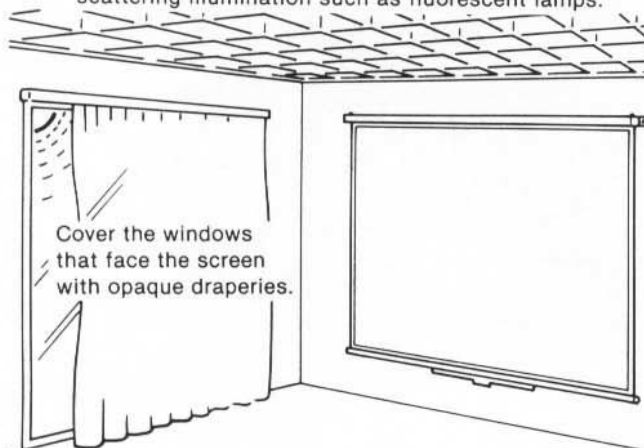
On installation

- 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

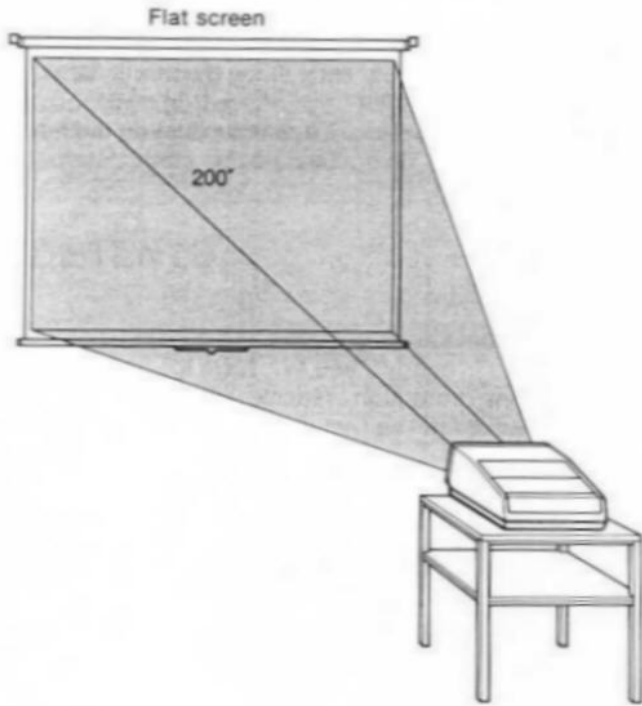
- To keep the cabinet looking brand-new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use strong solvents, such as thinner or benzine, or abrasive cleansers, since these will damage the cabinet.
- Avoid touching 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.

INSTALLATION POSSIBILITIES

Desk



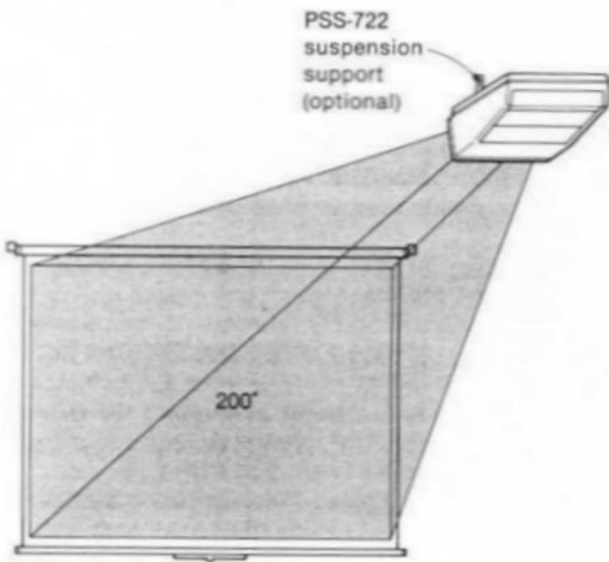
For the same type of installation and for the same size of the screen in another place, no readjustment is required, although the projector should be placed in the proper position.

Adjust the height and length according to the screen size.

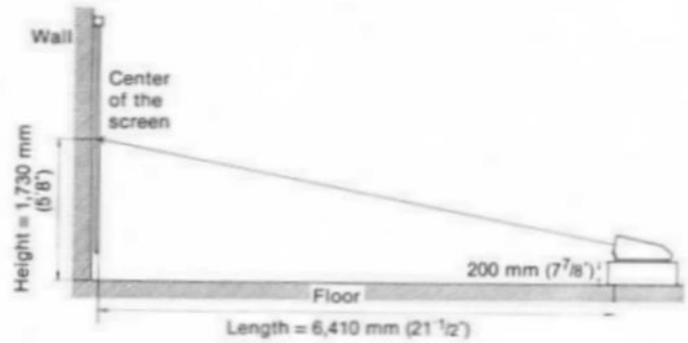
	Screen size		
	150"	200"	250"
Height	1,400 mm (4'7")	1,730 mm (5'8")	2,070 mm (6'9 1/2")
Length	4,850 mm (15'11")	6,410 mm (21' 1/2")	7,960 mm (26' 1 1/2")

For other size screens, the length should be approximately 1.6 times screen width.

Ceiling



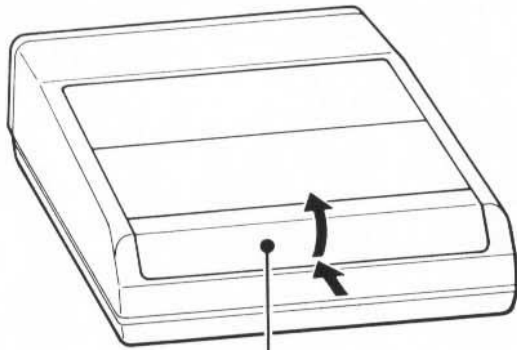
e.g. 200" screen



To transport the projector, use the VLC-722 carrying case (optional).

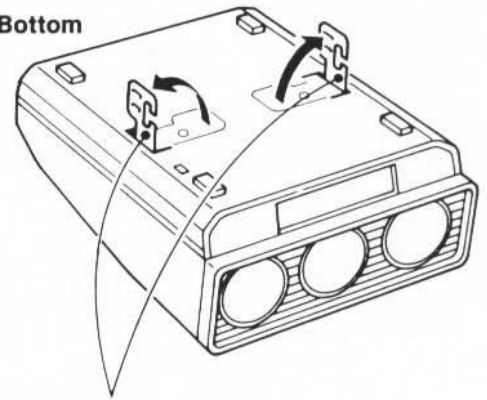


LOCATION AND FUNCTION OF CONTROLS

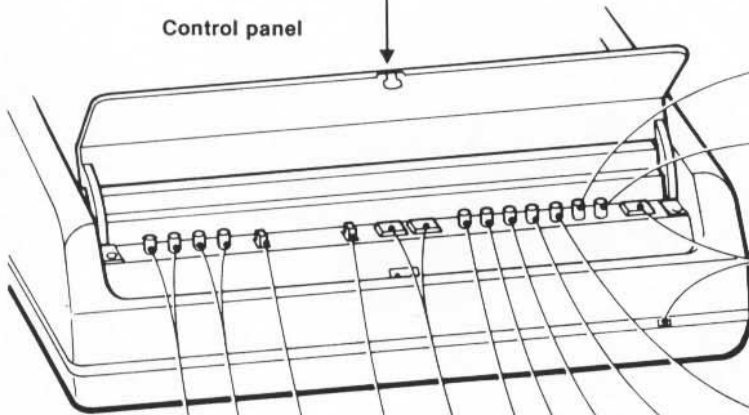


Push to open.

Bottom



Brackets for attaching the projector to the PSS-722 suspension support.



Control panel

- ① PICTURE control
- ② VOLUME control
- ③ PROJECTOR switch and pilot lamp
- ④ BRIGHT (brightness) control
- ⑤ SHARPNESS control
- ⑥ COLOR control
- ⑦ HUE control
- ⑧ V (vertical) HOLD control
- ⑨ INPUT SELECT buttons
- ⑩ BLUE MODE SELECT switch
- ⑪ NORMAL/TEST switch
- ⑫ V CENT (vertical centering) controls
- ⑬ H CENT (horizontal centering) controls

1 PICTURE control

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

2 VOLUME control

Adjusts the volume.

3 PROJECTOR switch

Depress to turn the projector on. The green pilot lamp will light. To turn off, press the switch again.

4 BRIGHT (brightness) control

Adjusts the brightness.

5 SHARPNESS control

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

6 COLOR control

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

7 HUE control

This control is effective only for a program of the NTSC or NTSC_{4,43} color system. Use to obtain the most natural skin tones. Clockwise rotation makes the skin tones greenish; counterclockwise rotation makes them purplish.

8 V (vertical) HOLD control

If the picture rolls vertically, adjust this control until the picture stabilizes.

9 INPUT SELECT buttons

Press to select the program source to be projected.

LINE: For inputs from the LINE IN connectors

RGB: For inputs from the RGB IN connectors

If audio signals are connected to the LINE IN, the sound will be heard.

10 BLUE MODE SELECT switches

This switch is effective only for RGB inputs.

Usually set to NORMAL. Set to BB (blue background) to change the black background of the display to blue, and to CB (clear blue) to lighten blue part of the display.

The display should become easier to view.

11 NORMAL/TEST switch

Usually set to NORMAL to project inputs from the LINE IN or RGB connectors.

Set to TEST to display the built-in cross-hair pattern on the screen for easier adjustments of the projector's position and registration.

12 V CENT (vertical centering) controls

Adjust vertical registration of red and blue.

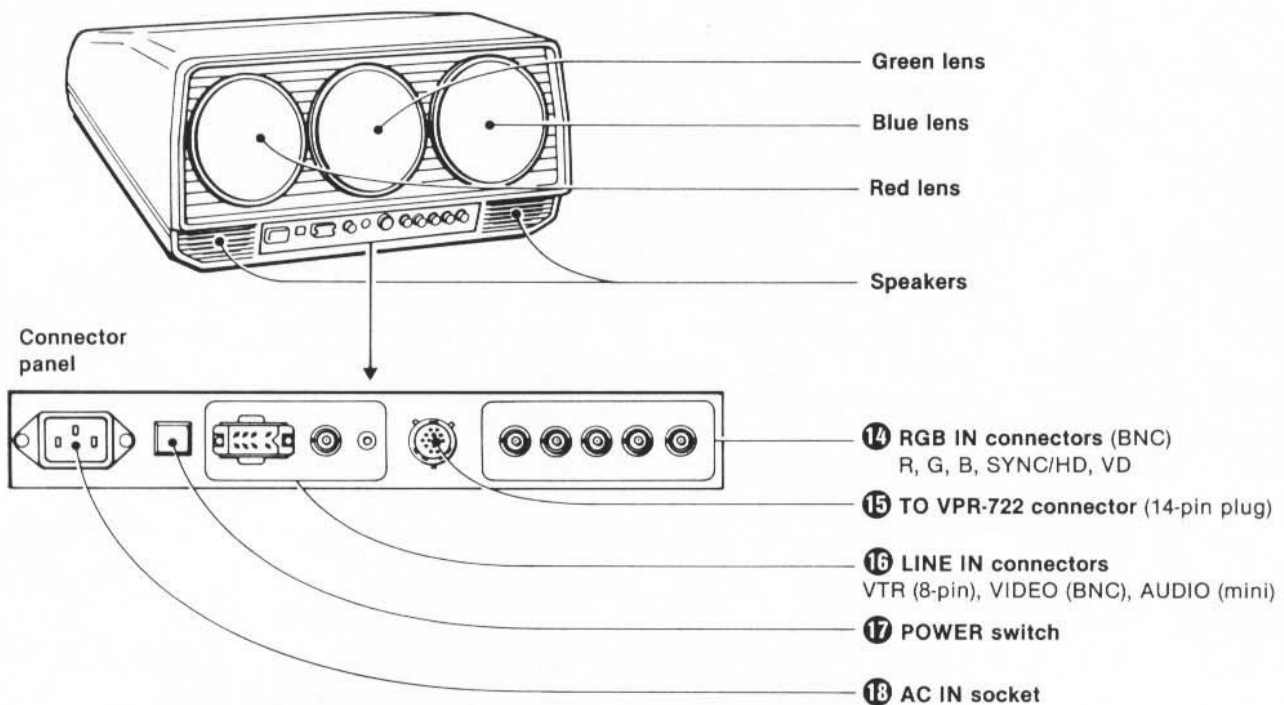
13 H CENT (horizontal centering) controls

Adjust horizontal registration of red and blue.

Notes

5 6 7 controls do not function for RGB inputs.

1 through **10** do not function when the VPR-722 remote controller is connected to the REMOTE connector. The same controls on the VPR-722 are operative.



14 RGB IN connectors (BNC)

Allow a character generator, microcomputer, video camera or a special adaptor for future videotext/teletext having analog RGB outputs to be connected.

R, G, B: to RGB outputs

SYNC/HD: to a composite sync or horizontal sync output

VD: to a vertical sync output

15 TO VPR-722 connector (14-pin plug)

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.

16 LINE IN connectors

Allow a video tape recorder, video camera, color receiver/monitor, etc. having video/audio line outputs to be connected.

VTR (8-pin): to an 8-pin TV connector on a VTR

VIDEO (BNC): to a video line output

AUDIO (mini): to an audio line output

Caution: Use either the VTR or VIDEO/AUDIO connectors, but not both simultaneously.

Do not connect a TV tuner or a color receiver/monitor equipped with an 8-pin connector to the VTR connector, because signal assignment is different.

17 POWER switch

Depress to turn the power on. When the VPR-722 remote controller is used, power will be supplied to the controller.

18 AC IN socket

Connect the supplied ac power (mains) cord here and to an ac (mains) outlet.

WARNING for the customers in the United Kingdom
THIS APPARATUS MUST BE EARTHED

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow: Earth

Blue: Neutral

Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol \perp or coloured green or green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

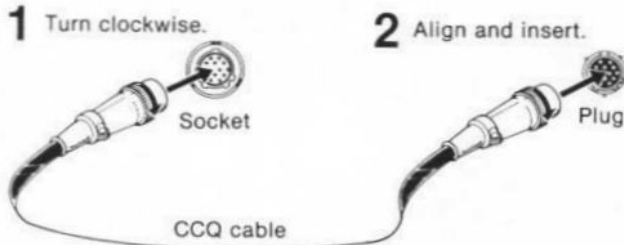
SYSTEM CONNECTIONS

CONNECTING NOTES

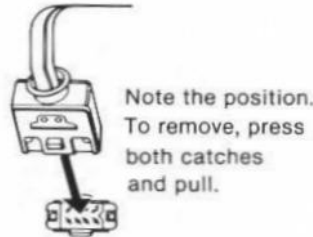
- First make sure that the power to each piece of equipment is turned off.
- Use suitable connecting cables according to the equipment to be connected.
- The cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.

- The cable may be extended to max. 50m. If the connecting cable is too long (longer than 50 m), picture quality may be degraded 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.

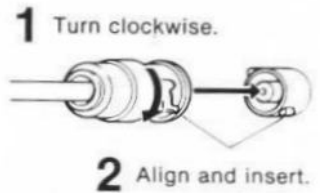
14-pin connector



8-pin connector

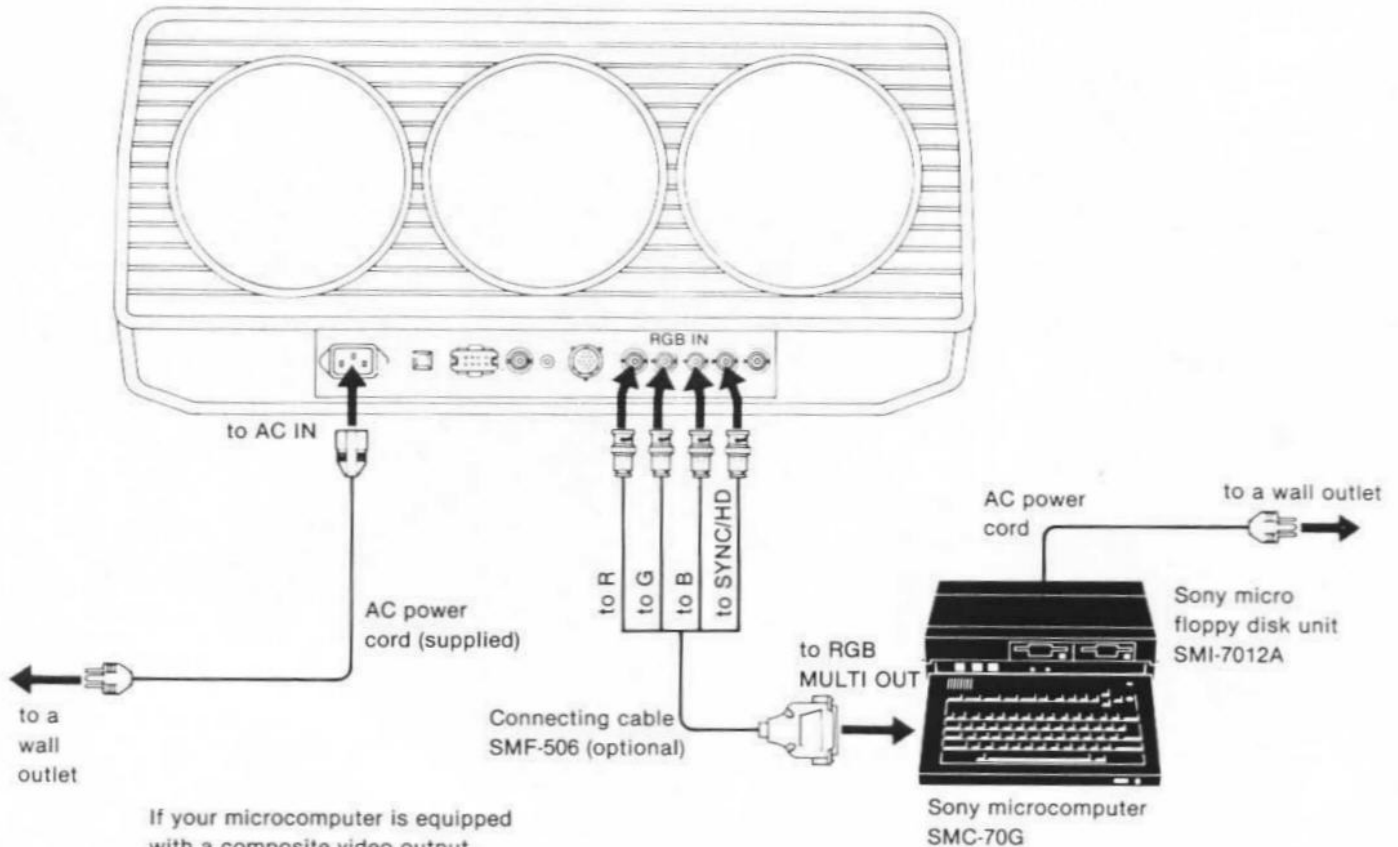


BNC connector



Using the VPH-2020Q1 projector with a Sony microcomputer

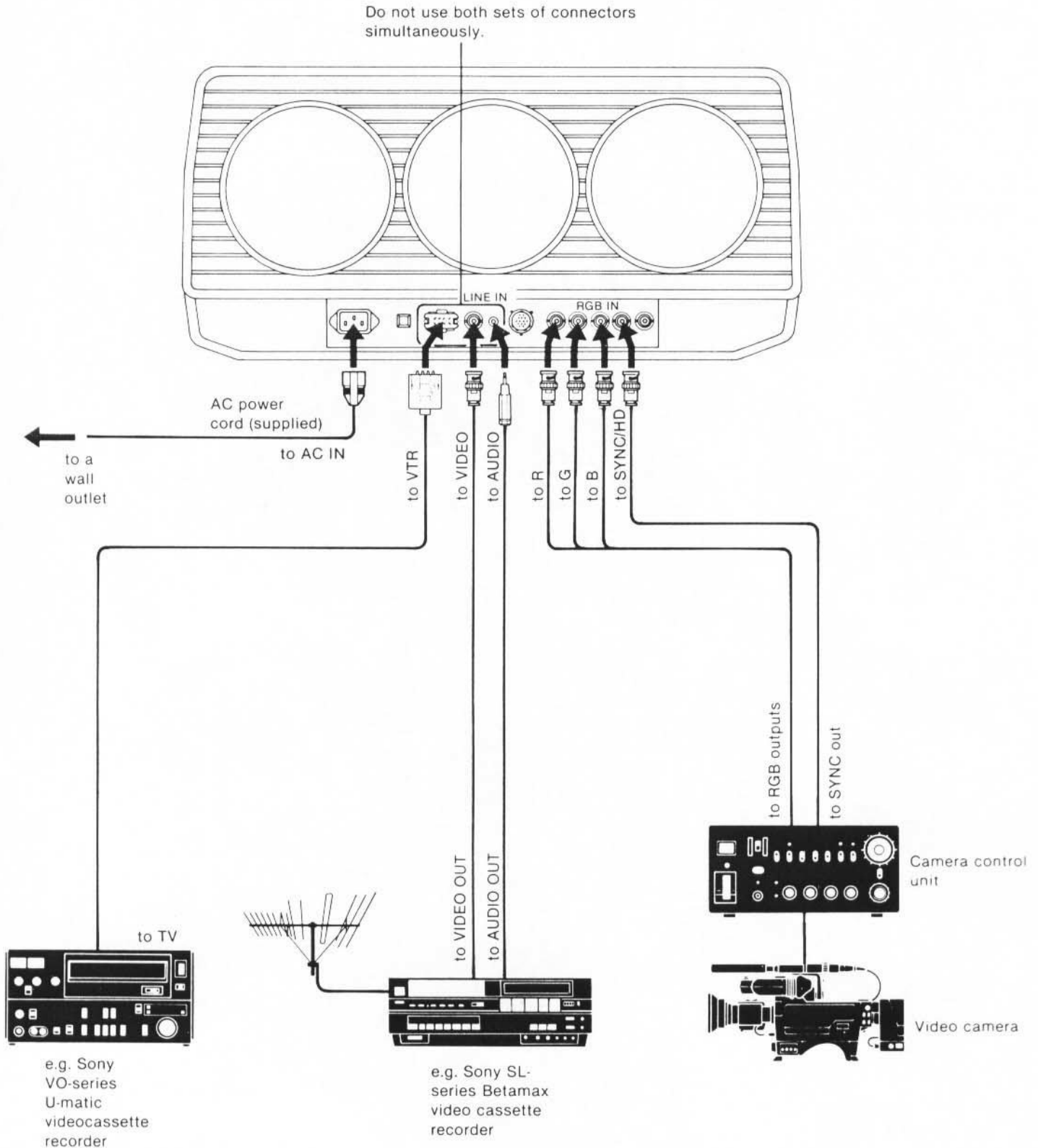
To avoid interference with radio or TV reception, always use the supplied AC power cord and the optional connecting cable as described in the connection configuration below. This is indispensable to comply with FCC Rule Part 15 Subpart J, regulating interference to radio or TV reception caused by computing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



If your microcomputer is equipped with a composite video output, connect the output to the VIDEO LINE IN connector on the projector.

EXAMPLES OF CONNECTIONS

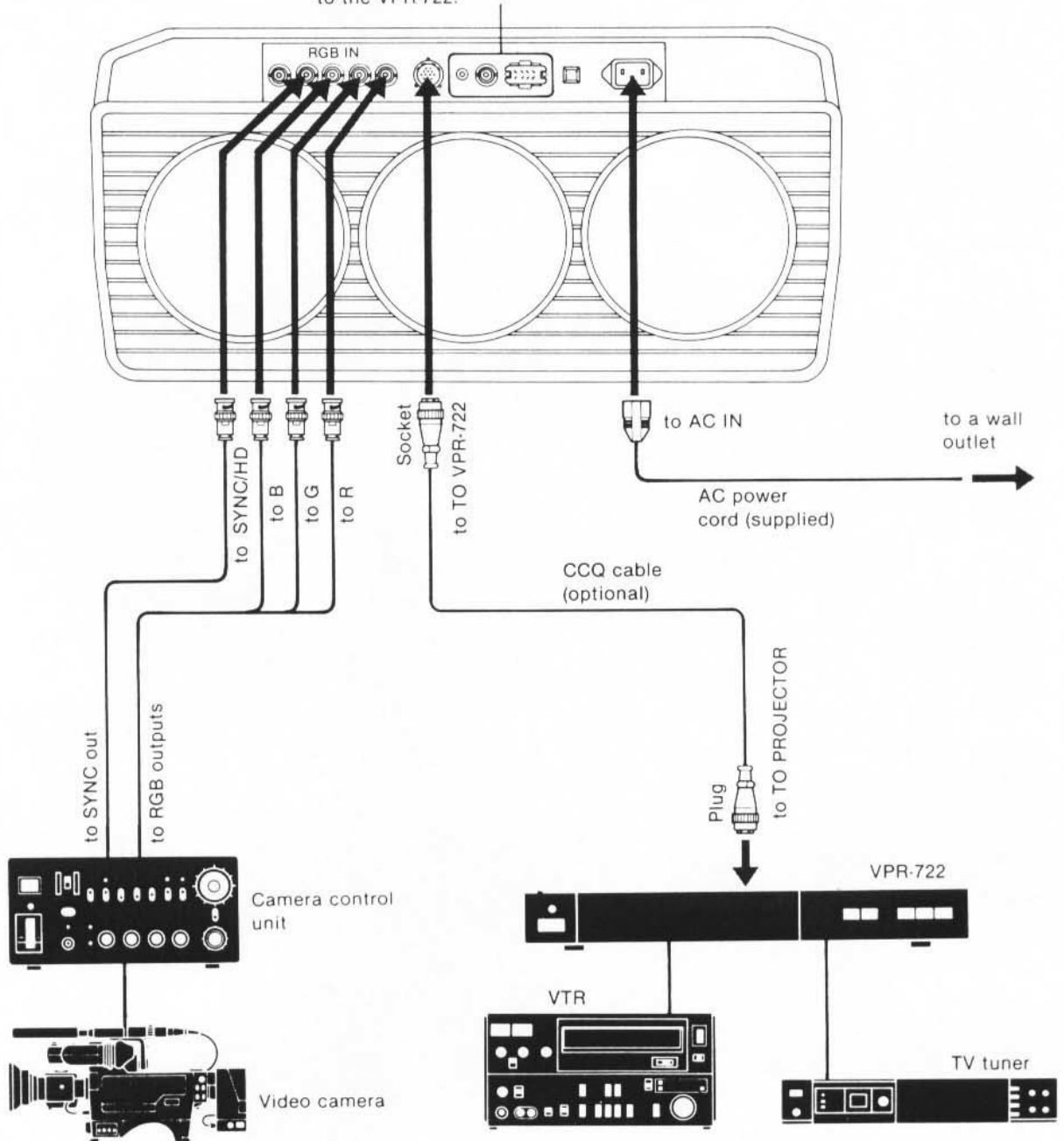
Using the projector without the VPR-722 remote controller



Using the projector with the VPR-722 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 LINE IN connectors will be disconnected automatically when the VPR-722 is connected. Connect a VTR, TV tuner, video camera, etc. to the VPR-722.

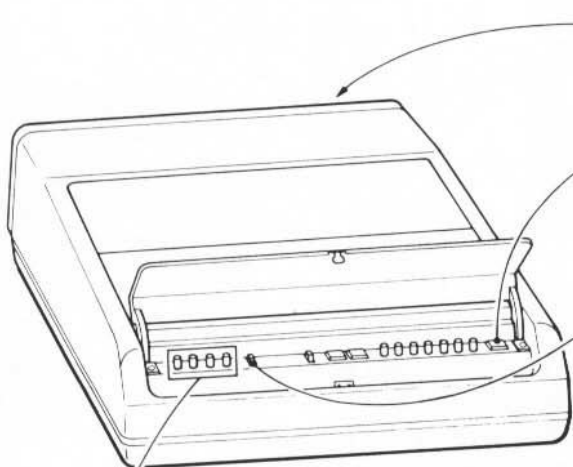


For details on the connections, see the instruction manual of the VPR-722.

POSITION AND REGISTRATION ADJUSTMENTS

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

If the projector is installed on the desk, it can be easily moved but it may be necessary to readjust the registration if it is.



- 1** Turn the **POWER** switch on.
- 2** Turn the **PROJECTOR** switch on.
When the VPR-722 remote controller is used with the projector, turn the VPR-722's **PROJECTOR** switch on. The green pilot lamp will light.
- 3** Set the **NORMAL/TEST** switch to **TEST**.
A built-in cross-hair test 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.

- 5** Check that the red, green and blue lines converge so that the pattern is seen as white.
If not, adjust the registration as follows:

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



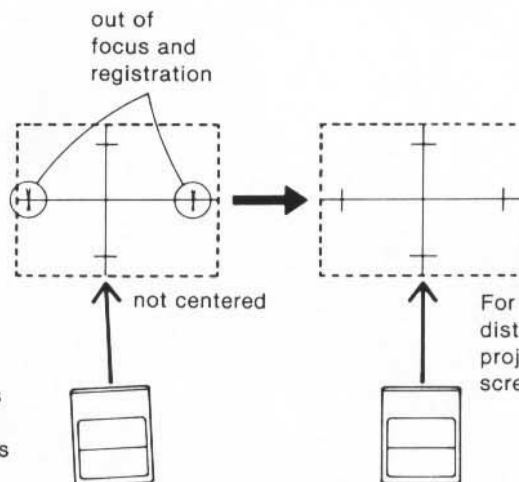
Clockwise rotation moves the respective line to the right.

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



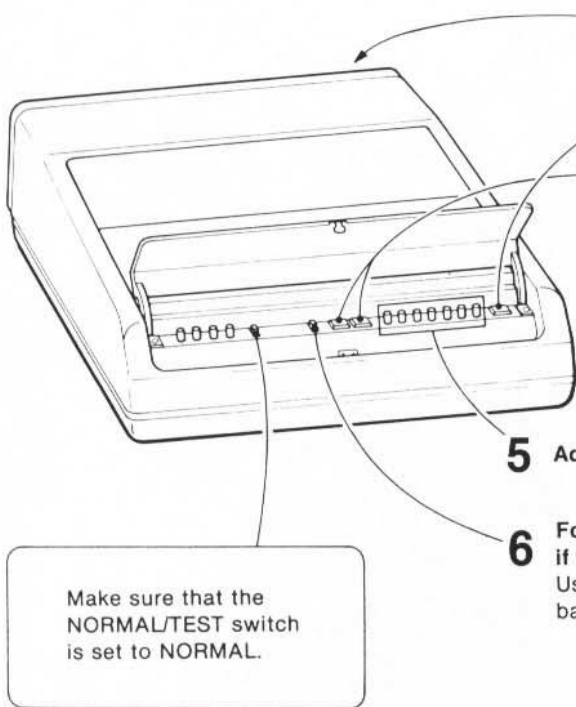
Clockwise rotation moves the respective line upward.

Repeat the adjustment until the pattern appears white.



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

OPERATION



- 1** Turn the POWER switch on.
- 2** Turn the PROJECTOR switch on.
- 3** Select the program to be projected by pressing the LINE or RGB 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.
- 6** For RGB programs, use the BLUE MODE SELECT switch, if required.
Usually set to NORMAL. Set to BB to change the black background to blue, and to CB to lighten blue part of the display.
BB: Blue signals are added to all parts of the display.
CB: Red and green signals are added to blue part of the display.

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

When the VPR-722 remote controller is connected, steps 2, 3, 5 and 6 should be performed on the controller.

SPECIFICATIONS

Optical

Projection system	3 picture tubes, 3 lenses, direct projection system
Picture tube	5.5-inch high-brightness mono-chrome tubes, with coolant sealed
Projection lens	High-performance hybrid lenses F 1.0/130 mm
Projected picture size	200 inches (standard) 150–250 inches (adjustable) measured diagonally
Light output	300 lumens
Throwing distance	Approx. 6,410 mm (21'1/2" inches) Horizontal length from projector to screen for 200 inch screen

General

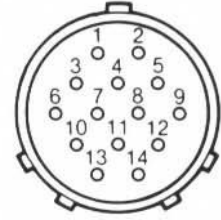
Color system	PAL, SECAM, NTSC and NTSC _{4,43} systems, switched automatically
Resolution (typical value)	Center: 900 TV lines (RGB inputs) 520 TV lines (for video line inputs, NTSC)
RGB inputs	Character display capacity: 2000 characters (80 letters × 25 lines) Horizontal frequency: 15.75 kHz Vertical frequency: 60 Hz
Test signal	Cross-hair/crosshatch test pattern generator is incorporated.
Speaker	Approx. 5 × 9 cm (2 × 3 ⁵ / ₈ inches), 2 units
Power requirements	VPH-2020QJ: 100V ac, 50/60 Hz VPH-2020Q1: 120V ac, 50/60 Hz VPH-2020QM: 220–240V ac, 50/60 Hz
Power consumption	VPH-2020QJ: 130W (max.) VPH-2020Q1: 165W (max.) VPH-2020QM: 155W (max.)
Dimensions	Approx. 508 × 258 × 592 mm (w/h/d) (20 × 10 ¹ / ₄ × 23 ³ / ₈ inches) with the brackets pushed down, incl. projecting parts and controls
Weight	Approx. 27 kg (59 lb 10 oz)

Inputs

Signal	Connector	Signal level	Remarks
Video input	[VTR] 8-pin (pins 2&6)	1V (p-p)±0.2 V	PAL/SECAM/NTSC/NTSC _{4,43} 75 ohms sync negative
	[VIDEO] BNC connector		
	[RGB IN] 5 BNC connectors		
Audio input	[VTR] 8-pin (pins 1&5)	-5 dBs (436 mV rms)	47 kilohms
	[AUDIO] minijack		

TO VPR-722 connector

14-pin plug
For connecting the VPR-722 remote controller



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

Accessory supplied AC power cord (1)

Optional units/accessories

- Remote controller VPR-722
- Projector suspension support PSS-722, PSS-10
- Carrying case VLC-722
- CCQ cables
- Connecting cable SMF-506

While the information given is true at the time of printing, small production changes in the course of our company's policy of improvement through research and design might not necessarily be indicated in the specifications. We would ask you to check with your appointed Sony dealer if clarification on any point is required.