

SONY

3-758-843-22(1)

Color Video Projector

VPH-1001Q/1001QM

VPH-1044Q/1044QM

English

Français

Deutsch

Installation Manual for Dealers

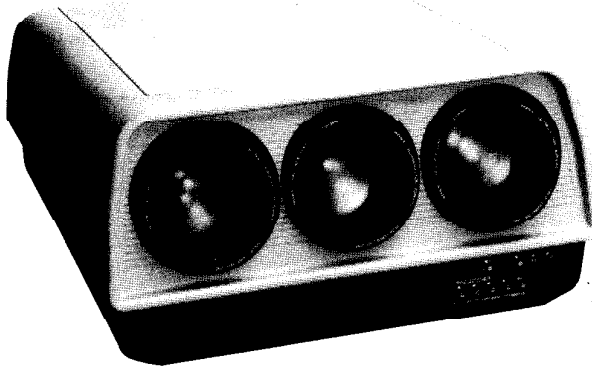
Before operating the unit, please read this manual thoroughly and retain it for future reference.

Manuel d'installation du concessionnaire

Avant la mise en service de cet appareil, prière de lire attentivement ce mode d'emploi que l'on conservera pour toute référence ultérieure.

Installationsanleitung für Händler

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



The photo is the VPH-1044Q/1044QM.
La photographie représente le VPH-1044Q/1044QM.
Das Foto zeigt den VPH-1044Q/1044QM.

Super Bright

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Before Installing

Illumination

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

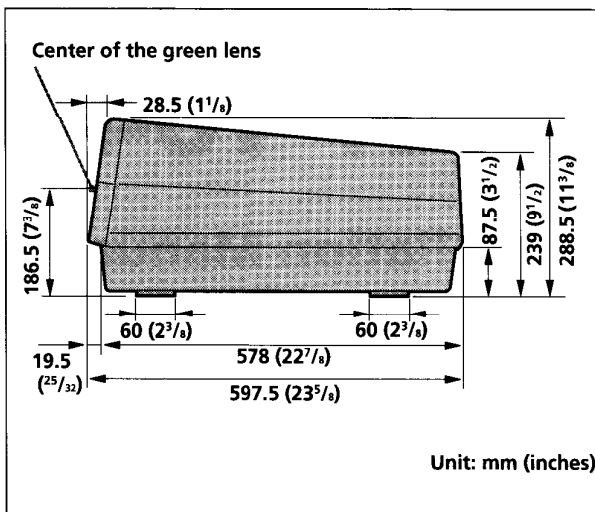
- Ceiling mounted spot lighting is recommended. Use a construction over lightscattering illumination such as fluorescent lamps.
- Cover the windows that face the screen with opaque draperies.
- It is desirable to install the projector in a room whose floor and walls are not of light-reflecting material. If the floor and walls are of reflecting material, it would be desirable to change to a dark carpet and wall paper.

Caution

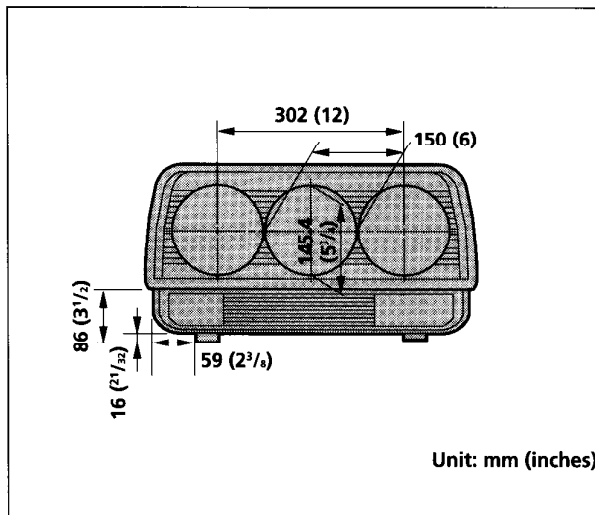
Take care not to touch portions of the projector other than those indicated in this manual because dangerous high voltages are present. To change the polarity, first turn the MAIN POWER switch off.

Projector Dimensions

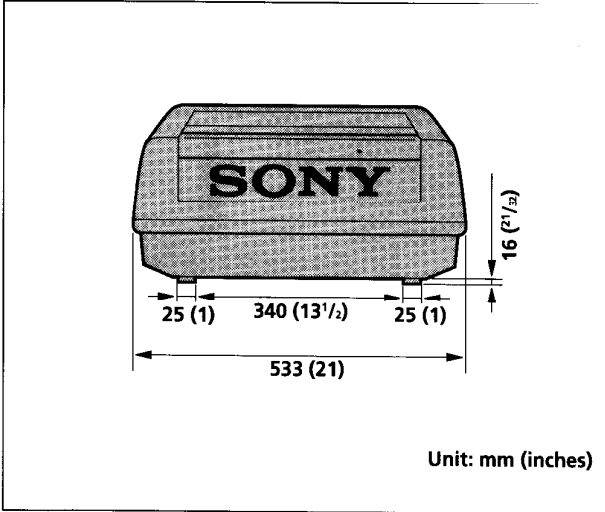
Side



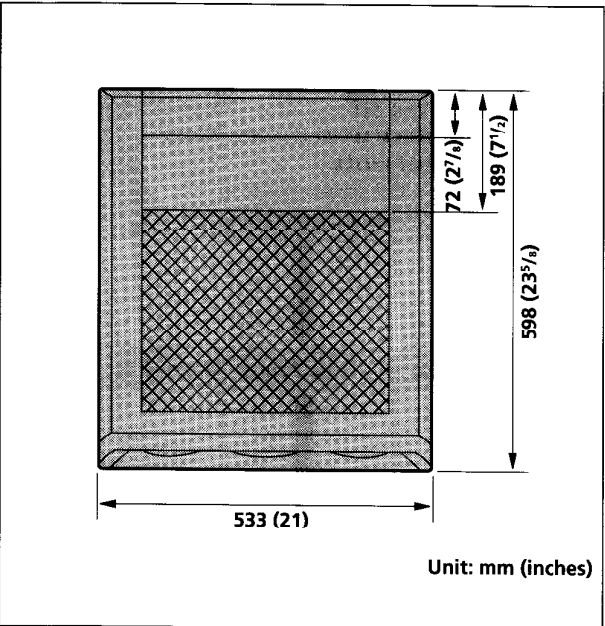
Front



Rear

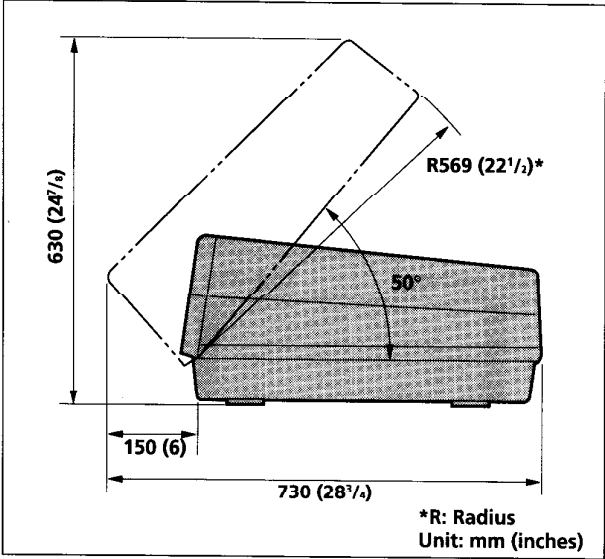


Top



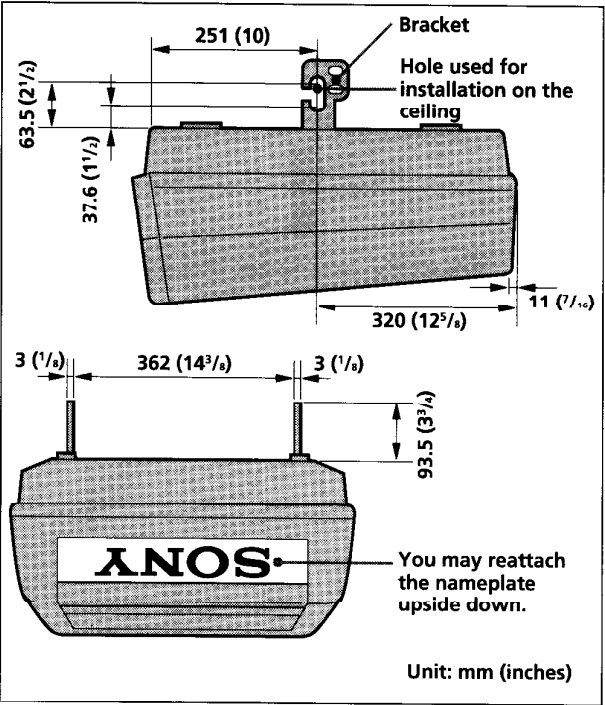
Necessary Clearance for Maintenance

When you install the projector, be sure to provide the clearance around it as shown for maintenance service.



Necessary Dimensions for Ceiling Installation

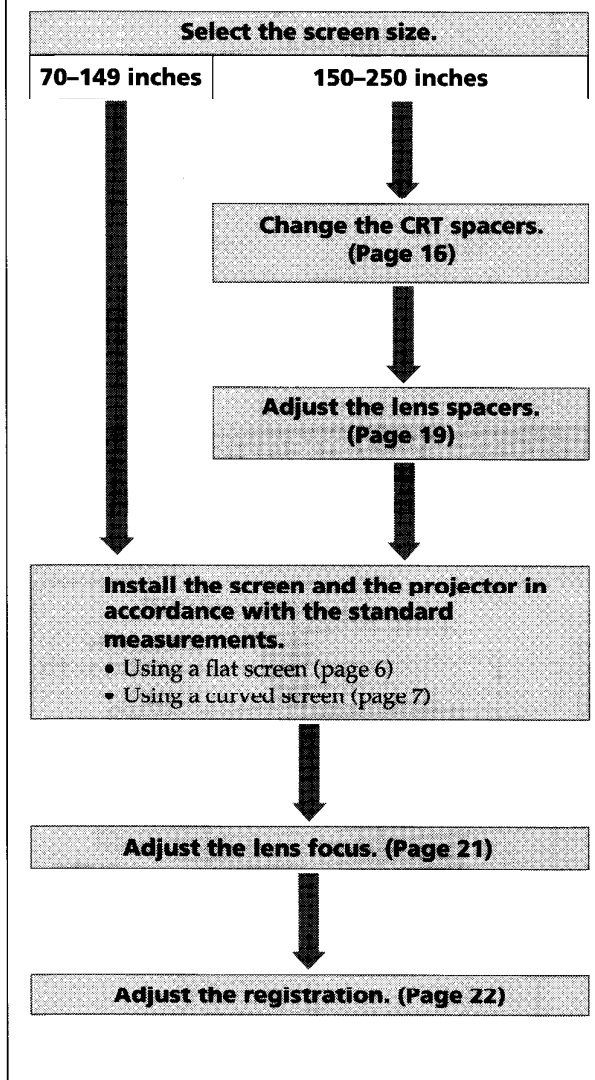
Raise the brackets at the bottom.



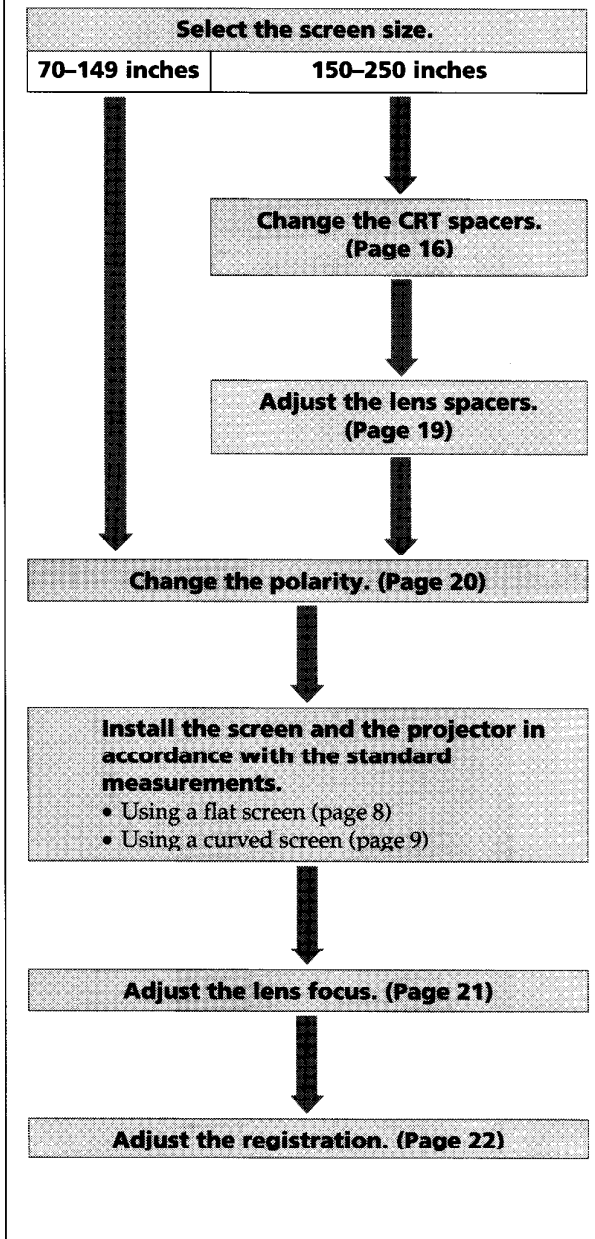
Installation Procedures

This projector is adjusted at the factory for projection on a 100-inch front projection type screen when the projector is installed on the floor/desk. If you install the projector under other conditions, modifications of some parts in the projector are required. Therefore, installation procedures vary depending on the screen size, installation method and type of screen.

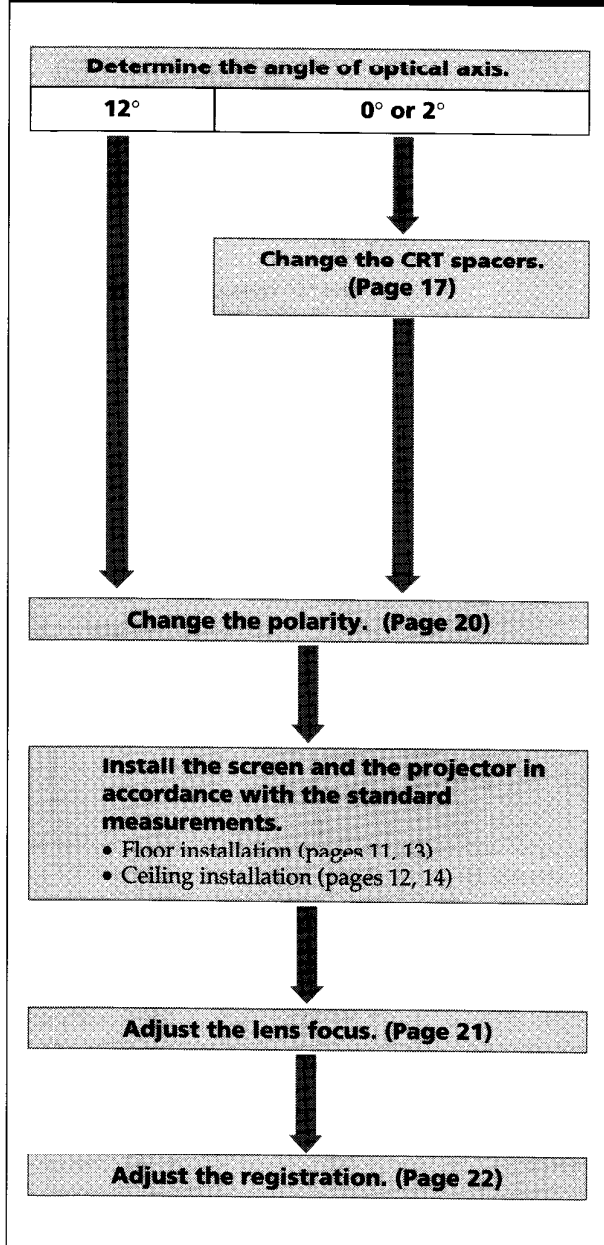
Floor Installation Using Front Projection Type Screen



Ceiling Installation Using Front Projection Type Screen



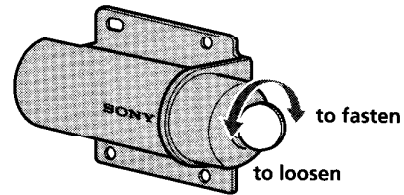
Floor or Ceiling Installation Using Rear Projection Type Screen



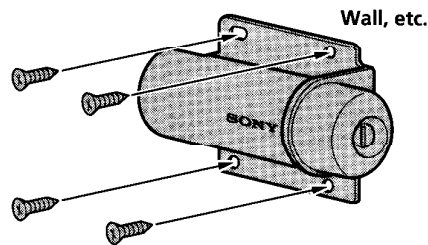
Installing the Remote Control Receiver

For wireless remote control operation, install the supplied remote control receiver within the operable range with the **SONY** mark facing toward the Remote Commander.

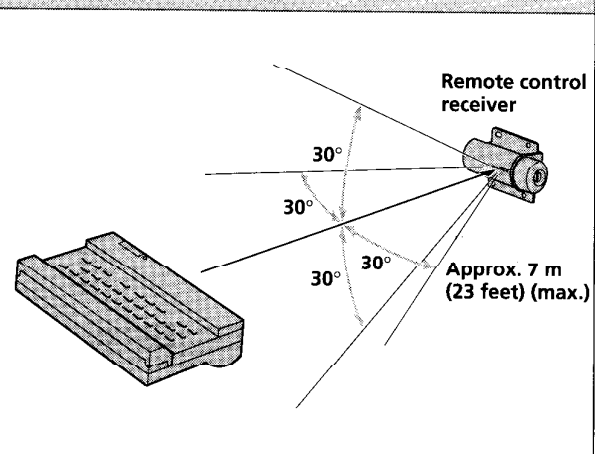
- 1 Turn the mounting bracket fastening screw counterclockwise to loosen the bracket, move the bracket to the appropriate position and fasten it by turning the screw clockwise.



- 2 Secure the mounting bracket using the supplied screws.



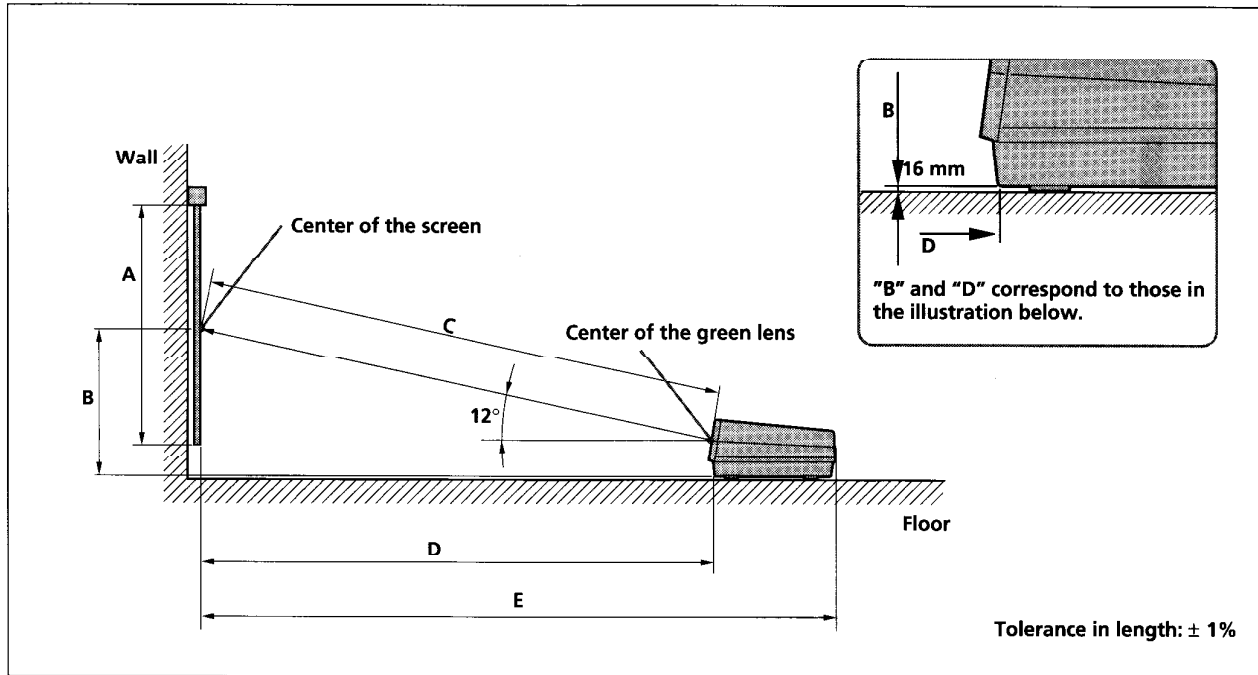
Operable range of the Remote Commander



Installation Diagrams

Floor Installation Using Front Projection Flat Screen

Be sure that the projector is parallel to the floor.



| Screen size (inches) | Length mm (inches) | | | | |
|----------------------|---|---|--|--|--|
| | A | B | C | D | E |
| 70 | 1,067 (42 ¹ / ₈) | 674 (26 ⁵ / ₈) | 2,406 (94 ³ / ₄) | 2,363 (93 ¹ / ₈) | 2,934 (115 ⁵ / ₈) |
| 72 | 1,097 (43 ¹ / ₄) | 685 (27) | 2,480 (97 ³ / ₄) | 2,441 (96 ¹ / ₈) | 3,012 (118 ⁵ / ₈) |
| 80 * | 1,219 (48) | 740 (29 ¹ / ₄) | 2,734 (107 ³ / ₄) | 2,681 (105 ⁵ / ₈) | 3,252 (128 ¹ / ₈) |
| 100 ** | 1,524 (60 ¹ / ₈) | 873 (34 ³ / ₈) | 3,368 (132 ⁵ / ₈) | 3,301 (130) | 3,872 (152 ¹ / ₂) |
| 120 *** | 1,829 (72 ¹ / ₈) | 1,006 (39 ⁵ / ₈) | 4,004 (157 ¹¹ / ₁₆) | 3,923 (154 ¹ / ₂) | 4,494 (177) |
| 150 | 2,286 (90 ¹ / ₈) | 1,214 (47 ⁷ / ₈) | 4,961 (195 ³ / ₈) | 4,857 (191 ¹ / ₄) | 5,428 (213 ³ / ₄) |
| 180 | 2,743 (108 ¹ / ₈) | 1,414 (55 ³ / ₄) | 5,918 (231 ¹ / ₈) | 5,793 (228 ¹ / ₈) | 6,364 (250 ⁵ / ₈) |
| 200 | 3,048 (120 ¹ / ₁₆) | 1,544 (60 ⁷ / ₈) | 6,555 (258 ¹ / ₈) | 6,417 (252 ³ / ₄) | 6,988 (275 ¹ / ₄) |
| 250 | 3,810 (150 ¹ / ₈) | 1,884 (74 ¹ / ₄) | 8,142 (320 ⁵ / ₈) | 7,967 (313 ³ / ₄) | 8,538 (336 ¹ / ₄) |

* Sony screen VPS-80FH

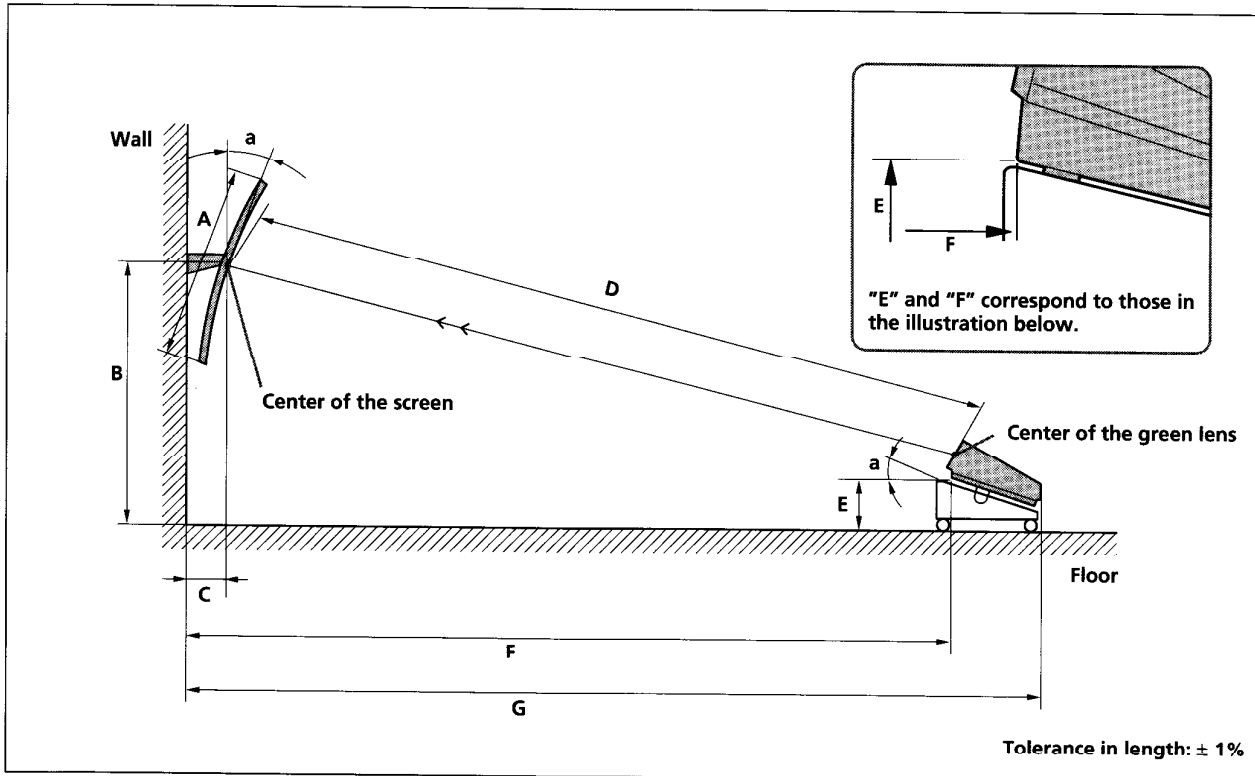
** Sony screen VPS-100FH

*** Sony screen VPS-120FH

Necessary modifications of parts (only for use of the 150- to 250-inch screens)

- CRT spacer change (page 16)
- Lens spacer adjustment (page 19)

Floor Installation Using Front Projection Curved Screen



| Screen size (inches) | Length mm (inches) | | | | | | | Angle (°) |
|----------------------|--|--|--|---|---|---|---|-----------|
| | A | B | C | D | E | F | G | a |
| 72* | 1,125 (44 ³ / ₈) | 1,886 (74 ³ / ₈) | 185 (7 ³ / ₈) | 2,487 (98) | 537 (2 ¹ / ₈) | 2,330 (91 ³ / ₄) | 2,931 (114 ³ / ₄) | 16.5 |
| 100** | 1,600 (63) | 2,107 (83) | 305 (12 ¹ / ₈) | 3,368 (132 ⁵ / ₈) | 304 (12) | 3,205 (126 ¹ / ₄) | 3,806 (149 ⁷ / ₈) | 17.0 |

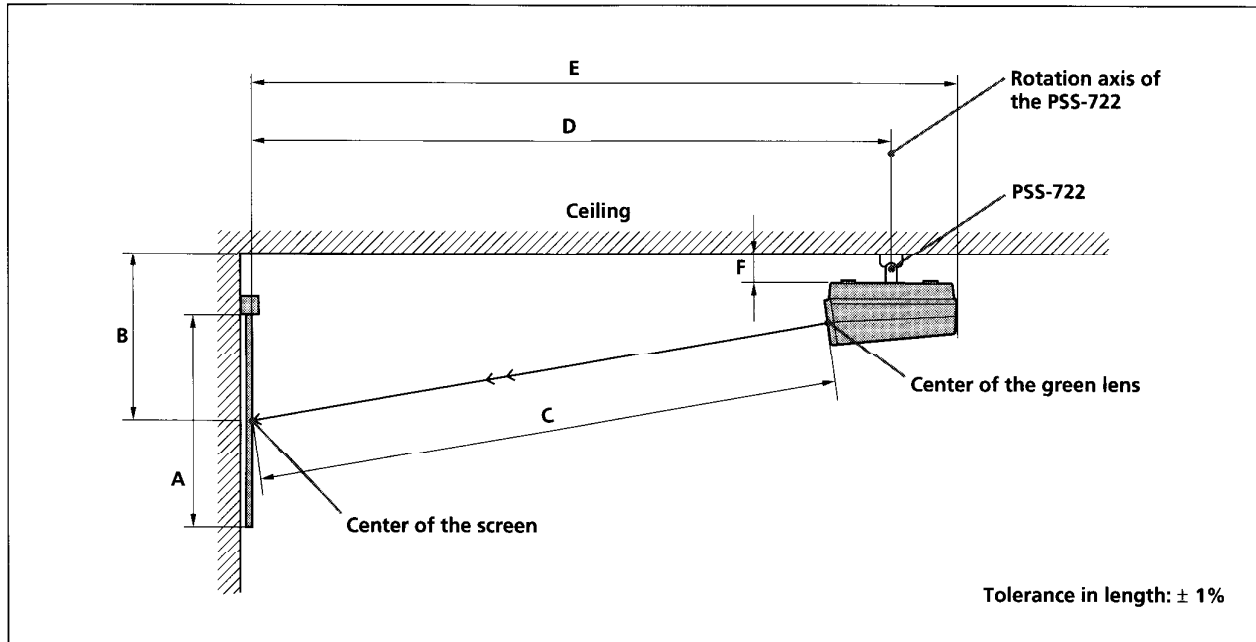
* Sony screen VPS-72HG1

** Gony screen VPS-100HG1

Installation Diagrams

Ceiling Installation Using Front Projection Flat Screen

Be sure that the projector is parallel to the ceiling. Use the Sony PSS-722 projector suspension support.



| Screen size (inches) | Length mm (inches) | | | | | |
|-------------------------|---|--|--|--|--|--------------------------------------|
| | A | B | C | D | E | F |
| 70 | 1,067 (42 ¹ / ₈) | 813 (32 ¹ / ₈) | 2,406 (94 ³ / ₄) | 2,614 (103) | 2,934 (115 ⁵ / ₈) | 139 (5 ¹ / ₂) |
| 72 | 1,097 (43 ¹ / ₄) | 824 (32 ¹ / ₂) | 2,480 (97 ³ / ₄) | 2,692 (106) | 3,012 (118 ⁵ / ₈) | 139 (5 ¹ / ₂) |
| 80 * | 1,219 (48) | 879 (34 ⁵ / ₈) | 2,734 (107 ³ / ₄) | 2,932 (114 ³ / ₄) | 3,252 (128 ¹ / ₈) | 139 (5 ¹ / ₂) |
| 100 ** | 1,524 (60 ¹ / ₈) | 1,012 (39 ⁷ / ₈) | 3,368 (132 ⁵ / ₈) | 3,552 (139 ⁷ / ₈) | 3,872 (152 ¹ / ₂) | 139 (5 ¹ / ₂) |
| 120 *** | 1,829 (72 ¹ / ₈) | 1,145 (45 ⁵ / ₈) | 4,004 (157 ¹¹ / ₁₆) | 4,174 (164 ³ / ₈) | 4,494 (177) | 139 (5 ¹ / ₂) |
| 150 | 2,286 (90 ¹ / ₈) | 1,350 (53 ¹ / ₄) | 4,961 (195 ³ / ₈) | 5,108 (201 ¹ / ₈) | 5,428 (213 ³ / ₄) | 136 (5 ³ / ₈) |
| 180 | 2,743 (108 ¹ / ₈) | 1,550 (61 ¹ / ₈) | 5,918 (231 ¹ / ₈) | 6,044 (238) | 6,364 (250 ⁵ / ₈) | 136 (5 ³ / ₈) |
| 200 | 3,048 (120 ¹ / ₁₆) | 1,680 (66 ¹ / ₄) | 6,555 (258 ¹ / ₈) | 6,668 (262 ⁵ / ₈) | 6,988 (275 ¹ / ₄) | 136 (5 ³ / ₈) |
| 250 | 3,810 (150 ¹ / ₈) | 2,020 (79 ⁹ / ₁₆) | 8,142 (320 ⁵ / ₈) | 8,218 (323 ⁵ / ₈) | 8,538 (336 ¹ / ₄) | 136 (5 ³ / ₈) |

* Sony screen VPS-80FH

** Sony screen VPS-100FH

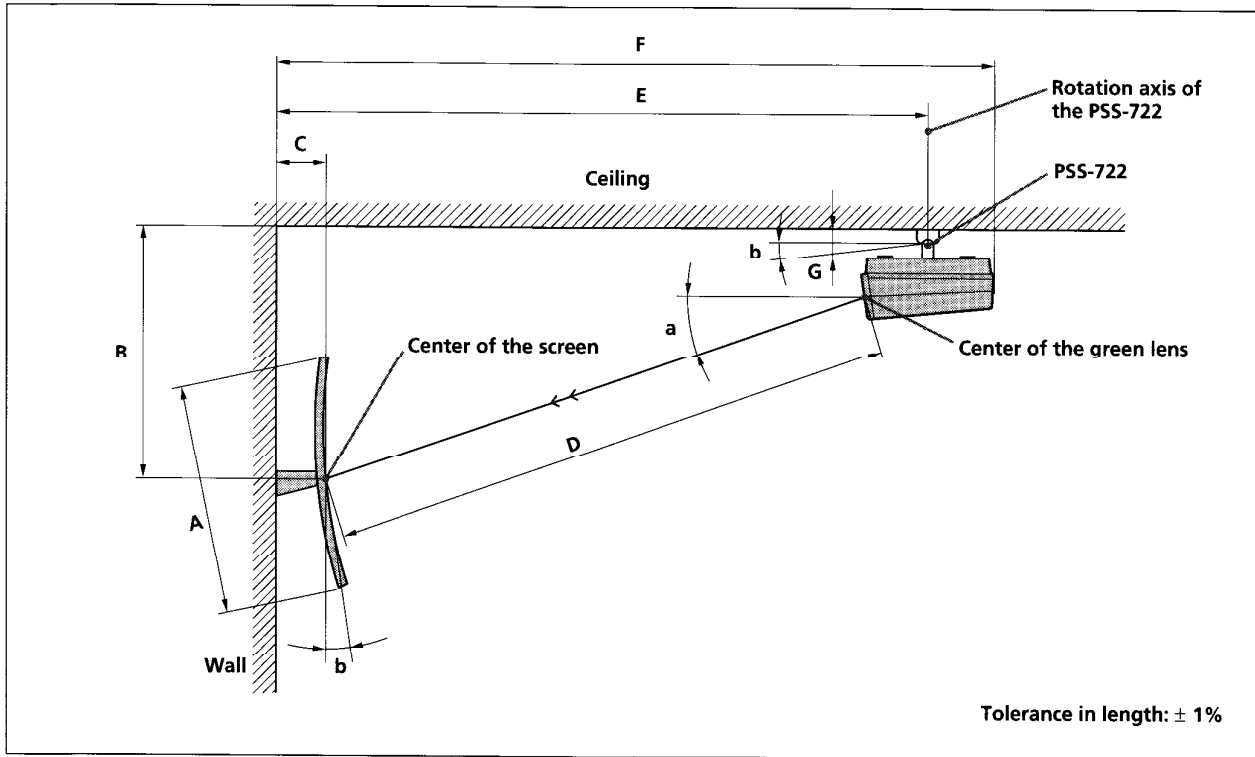
*** Sony screen VPS-120FH

Necessary modifications of parts

- CRT spacer change (only for use of 150- to 250-inch screens)(page 16)
- Lens spacer adjustment (only for use of 150- to 250-inch screens)(page 19)
- Horizontal and vertical deflection changes (page 20)

Ceiling Installation Using Front Projection Curved Screen

Use the Sony PSS-722 projector suspension support.



| Screen size (inches) | Length mm (inches) | | | | | | | Angle (°) | |
|-------------------------|--|--|--|---|---|---|---|-----------|-----|
| | A | B | C | D | E | F | G | a | b |
| 72 * | 1,125 (44 ³ / ₈) | 1,123 (44 ¹ / ₄) | 185 (7 ³ / ₈) | 2,480 (97 ³ / ₄) | 2,772 (109 ¹ / ₄) | 3,107 (122 ³ / ₈) | 166 (6 ⁵ / ₈) | 18.5 | 6.5 |
| 100 ** | 1,600 (63) | 1,440 (56 ² / ₄) | 305 (12 ¹ / ₈) | 3,368 (132 ² / ₈) | 3,713 (146 ¹ / ₄) | 4,041 (159 ¹ / ₈) | 252 (10) | 19.0 | 7.0 |

* Sony screen VPS-72HG1

** Sony screen VPS-100HG1

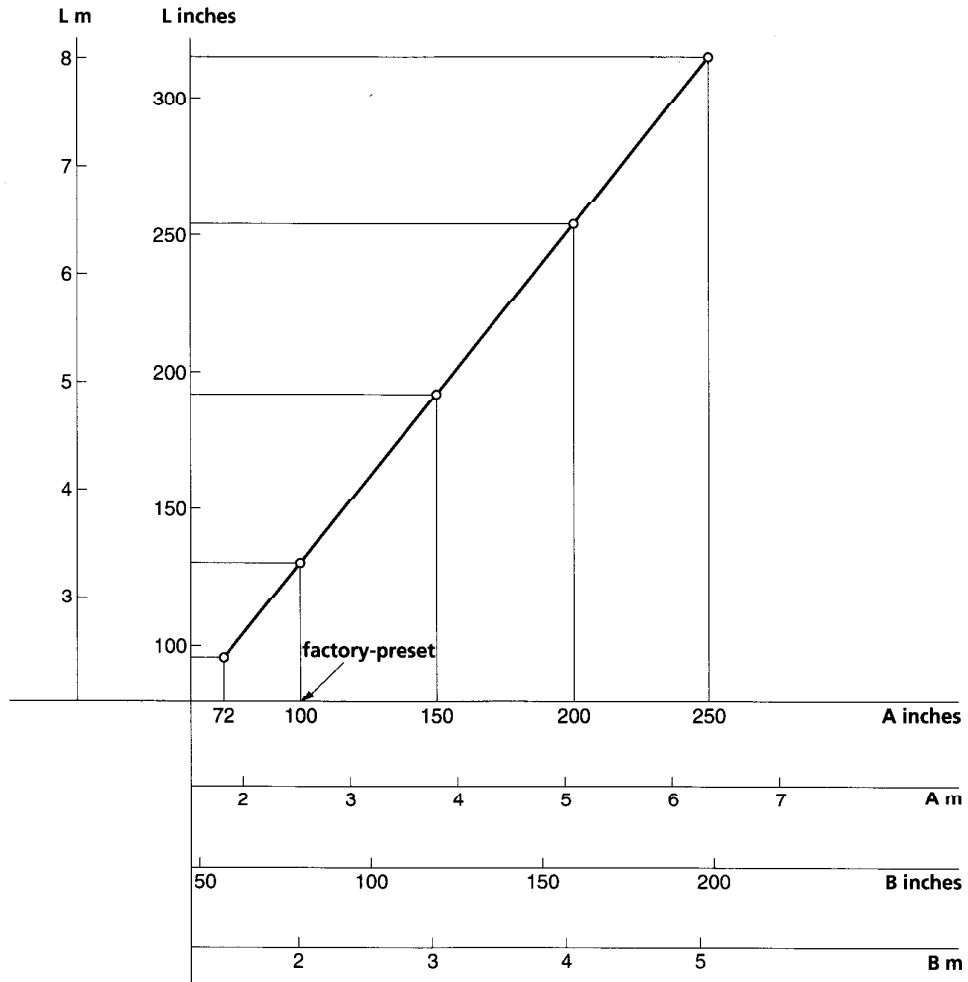
Necessary modifications of parts

- Horizontal and vertical deflection changes (page 20)

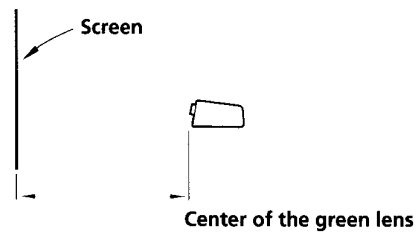
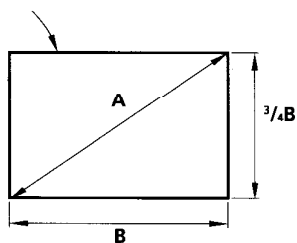
Installation Diagrams

When the Screen Size is Not Described in the Diagrams

When using the front projection screen for floor and ceiling installations, use the following graph to decide the distance between the screen and the projector (L).

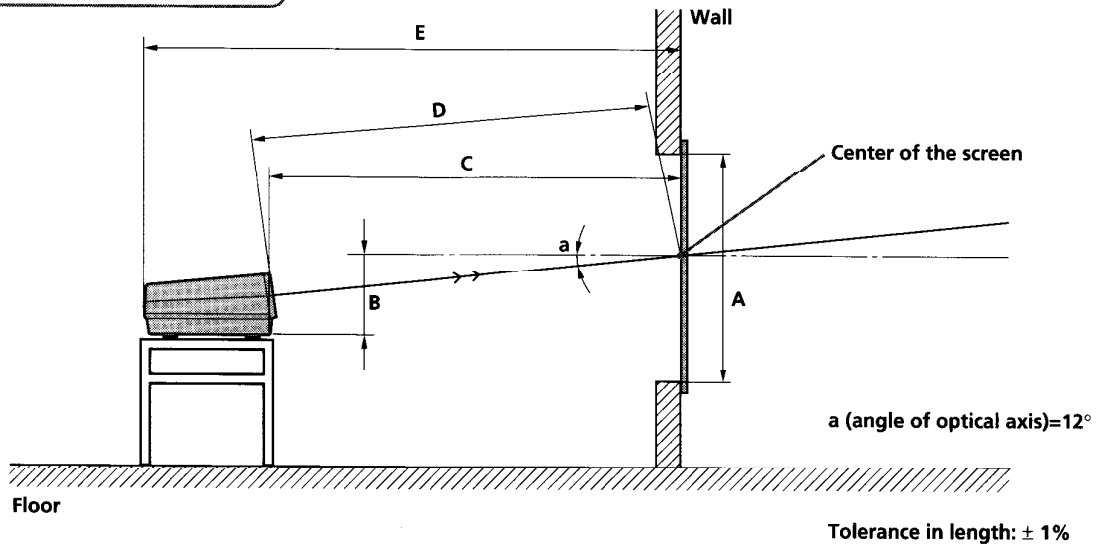
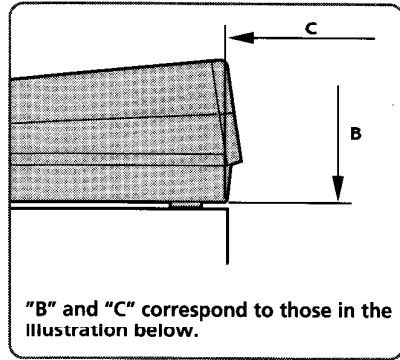


Viewable area of the screen



Installation Using Rear Projection Screen

Level installation on the floor (when the angle of optical axis is 12°)



| Screen size (inches) | Length mm (inches) | | | | |
|----------------------|---|---------------------------------------|---|--|--|
| | A | B | C | D | E |
| 70 * | 1,067 (42 ¹ / ₈) | 690 (27 ¹ / ₄) | 2,363 (93 ¹ / ₈) | 2,406 (94 ³ / ₄) | 2,934 (115 ⁵ / ₈) |
| 100 | 1,524 (60 ¹ / ₈) | 889 (35) | 3,301 (130) | 3,368 (132 ⁵ / ₈) | 3,872 (152 ¹ / ₂) |

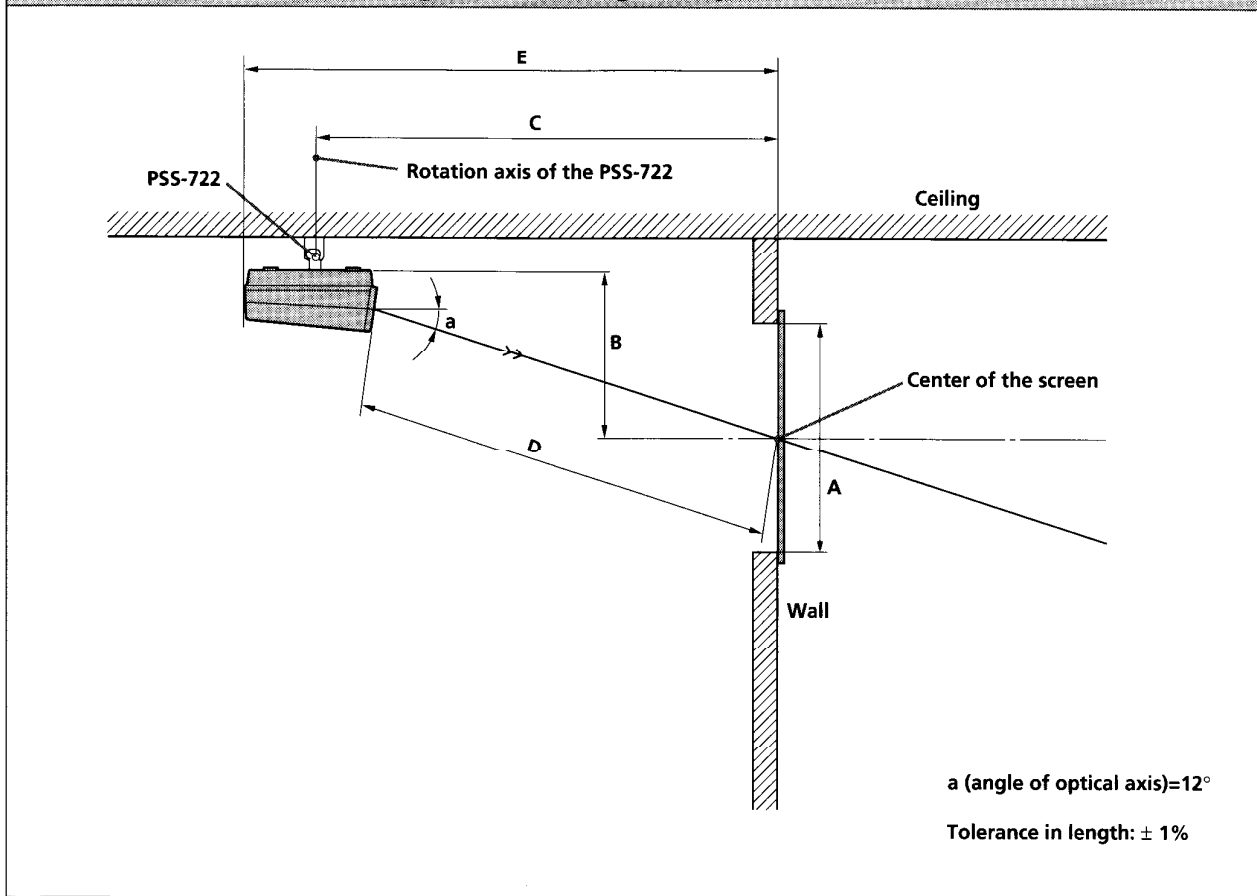
* Sony screen VPS-700R

Necessary modifications of parts

- Horizontal deflection change (page 20)

Installation Diagrams

Level installation on the ceiling (when the angle of optical axis is 12°)



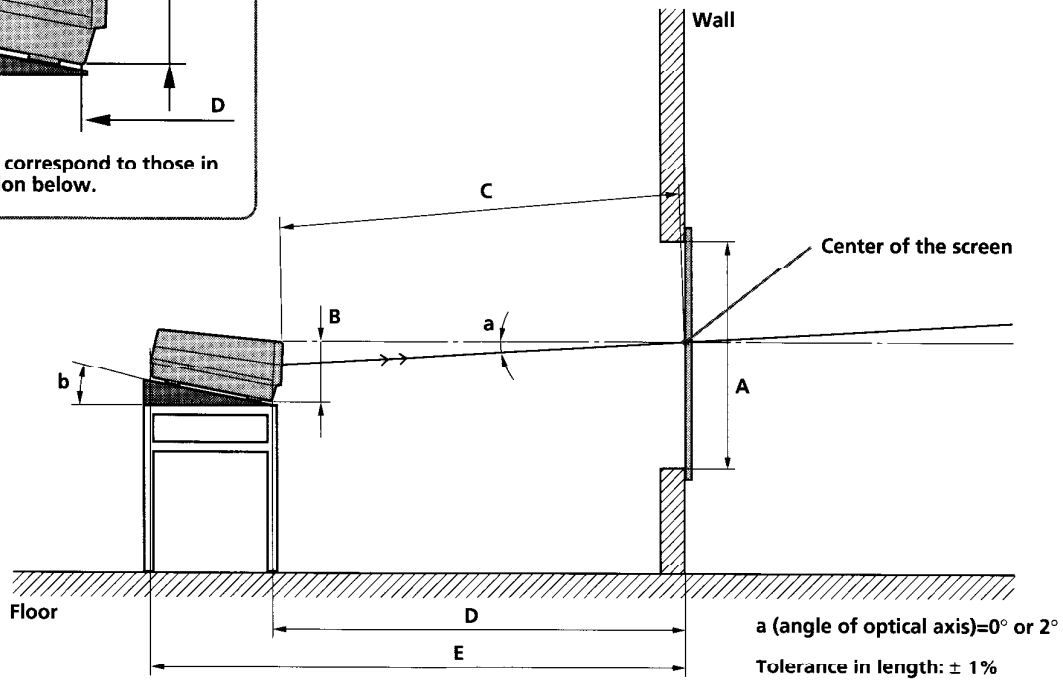
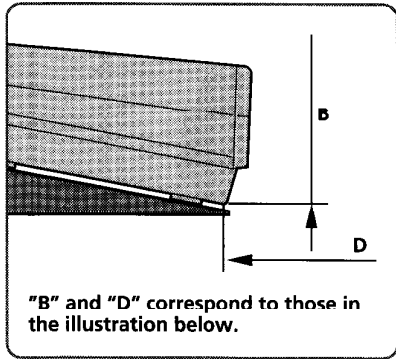
| Screen size (inches) | Length mm (inches) | | | | |
|----------------------|---|---------------------------------------|--|--|--|
| | A | B | C | D | E |
| 70 * | 1,067 (42 ¹ / ₈) | 674 (26 ⁵ / ₈) | 2,614 (103) | 2,406 (94 ³ / ₄) | 2,934 (115 ⁵ / ₈) |
| 100 | 1,524 (60 ¹ / ₈) | 873 (34 ³ / ₈) | 3,552 (139 ⁷ / ₈) | 3,368 (132 ⁵ / ₈) | 3,872 (152 ¹ / ₂) |

* Sony screen VPS-700R

Necessary modifications of parts

- Vertical deflection change (page 20)

Level projection, floor installation (when the angle of optical axis is 0° or 2°)



| Screen size (inches) | Length mm (inches) | | | | | Angle (°) | |
|----------------------|---|---------------------------------------|--|---|--|-----------|----|
| | A | B | C | D | E | a | b |
| 70* | 1,067 (42 ¹ / ₈) | 165 (6 ¹ / ₂) | 2,397 (93 ³ / ₄) | 2,439 (96 ¹ / ₈) | 2,982 (116 ³ / ₄) | 0 | 12 |
| | 1,067 (42 ¹ / ₈) | 676 (26 ⁵ / ₈) | 2,450 (95 ¹ / ₄) | 2,433 (95 ⁷ / ₈) | 2,982 (116 ³ / ₄) | 2 | 10 |
| 100 | 1,524 (60 ¹ / ₈) | 167 (6 ⁵ / ₈) | 3,368 (132 ⁵ / ₈) | 3,402 (134) | 3,954 (155 ³ / ₄) | 0 | 12 |
| | 1,524 (60 ¹ / ₈) | 715 (28 ¹ / ₄) | 3,411 (135 ¹ / ₂) | 3,402 (134) | 3,951 (155 ⁵ / ₈) | 2 | 10 |

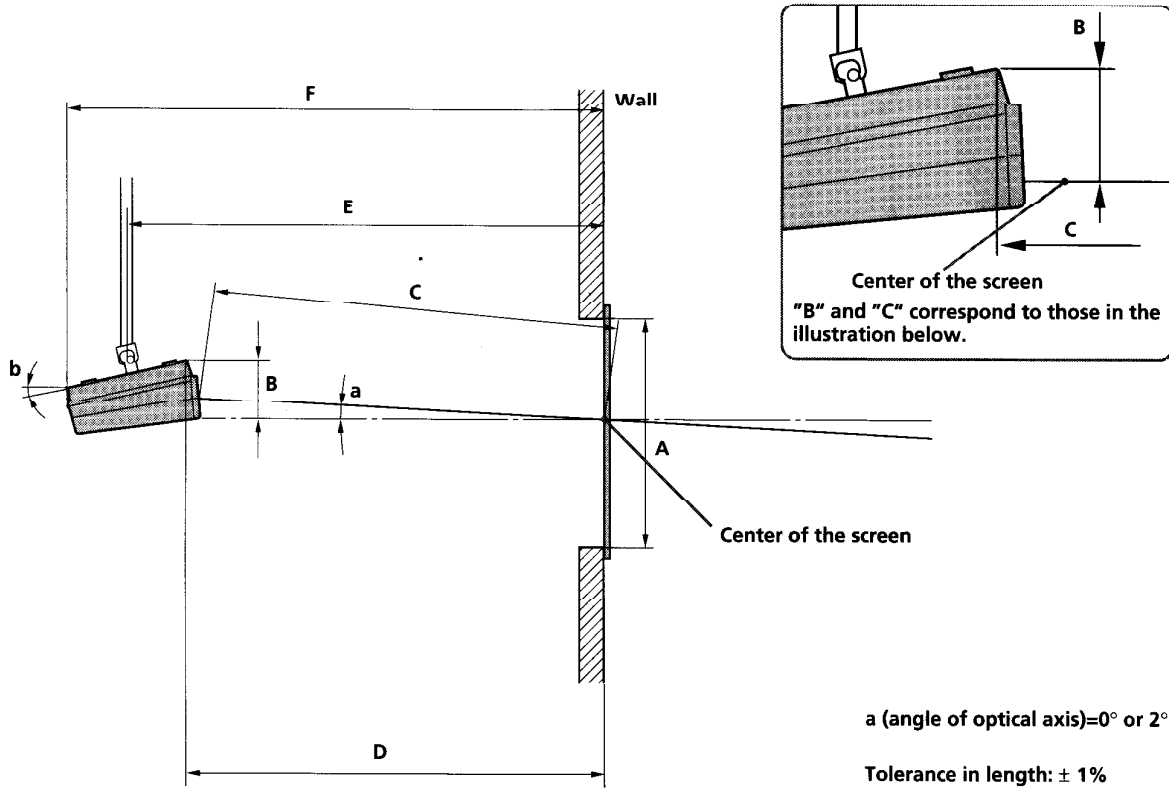
* Sony screen VPS-700R

Necessary modifications of parts

- CRT spacer change (page 17)
- Horizontal deflection change (page 20)

Installation Diagrams

Level projection, ceiling installation (when the angle of optical axis is 0° or 2°)



| Screen size (inches) | Length mm (inches) | | | | | | Angle (°) | |
|----------------------|---|---------------------------------------|--|---|--|--|-----------|----|
| | A | B | C | D | E | F | a | b |
| 70* | 1,067 (42 ¹ / ₈) | 165 (6 ¹ / ₂) | 2,397 (94 ¹ / ₂) | 2,439 (96 ¹ / ₈) | 2,698 (106 ¹ / ₄) | 2,982 (116 ³ / ₄) | 0 | 12 |
| | 1,067 (42 ¹ / ₈) | 676 (26 ⁵ / ₈) | 2,450 (96 ¹ / ₂) | 2,433 (95 ⁷ / ₈) | 2,691 (106) | 2,982 (116 ³ / ₄) | 2 | 10 |
| 100 | 1,524 (60 ¹ / ₈) | 167 (6 ⁵ / ₈) | 3,368 (132 ⁵ / ₈) | 3,402 (134) | 3,669 (144 ¹ / ₂) | 3,954 (155 ³ / ₄) | 0 | 12 |
| | 1,524 (60 ¹ / ₈) | 715 (28 ¹ / ₄) | 3,441 (135 ¹ / ₂) | 3,402 (134) | 3,661 (144 ¹ / ₄) | 3,951 (155 ⁵ / ₈) | 2 | 10 |

* Sony screen VPS-700R

Necessary modifications of parts

- CRT spacer change (page 17)
- Vertical deflection change (page 20)

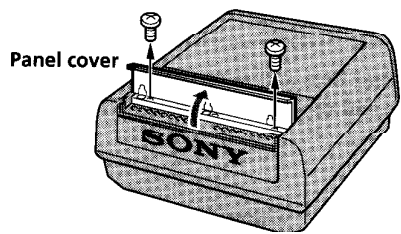
Modifications of Parts

When modifying certain parts in the projector, such as changing polarity, open the top panel, remove the cabinet, or detaching the lens block.

Opening the Top Panel

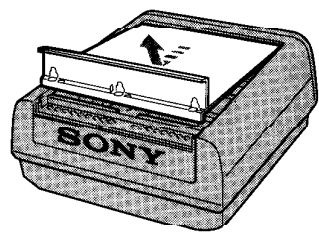
Use a medium size Phillips head screwdriver.

1 Open the control panel cover and remove the two screws.



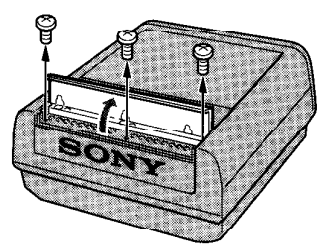
Panel cover

2 Pull the top panel slightly toward you and remove it.

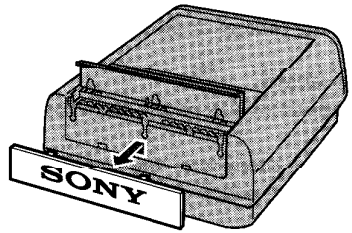


Removing the Cabinet

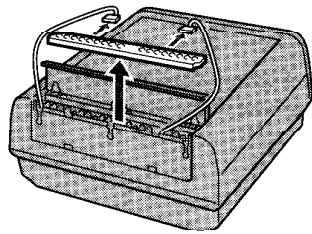
1 Open the control panel cover and remove the three screws on the control panel.



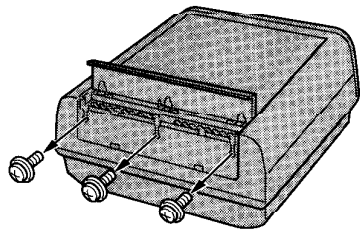
2 Slide the nameplate upward and pull it toward you to remove.



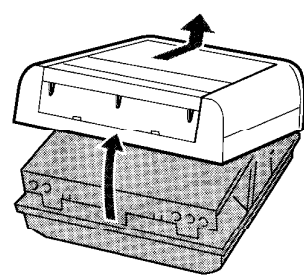
3 Remove the two connectors from the control panel and remove the control panel.



4 Remove the three screws.



5 Raise the cabinet and slide it away from you to remove.



Modifications of Parts

To reinstall the cabinet

Caution

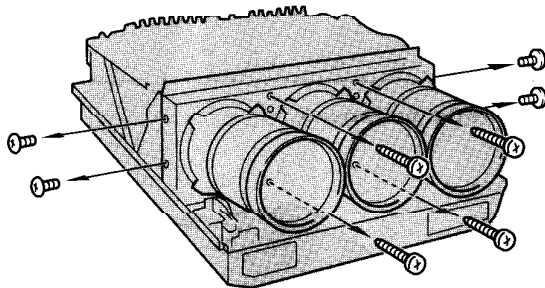
Make sure that the cables inside the projector are not caught when replacing the cabinet or the control panel.

- 1 Replace the cabinet.
- 2 Tighten the three screws on the nameplate attachment portion.
- 3 Connect the two connectors to the control panel, then replace the control panel.
- 4 Insert the nameplate.
- 5 Tighten the three screws on the control panel.

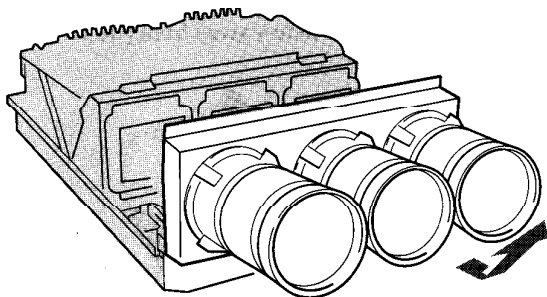
Detaching the Lens Block

- 1 Remove the cabinet.

- 2 Remove the 4 screws from the sides and the 4 screws from the lens base of the projector.



- 3 Pull the lens block out toward you.

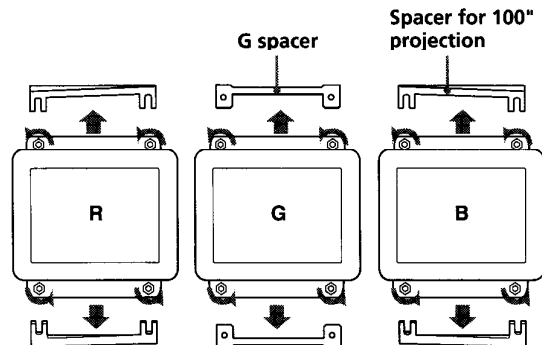


Changing the CRT Spacer

To change the CRT spacers for 150- to 250-inch projection

Use an 8 mm nutdriver.

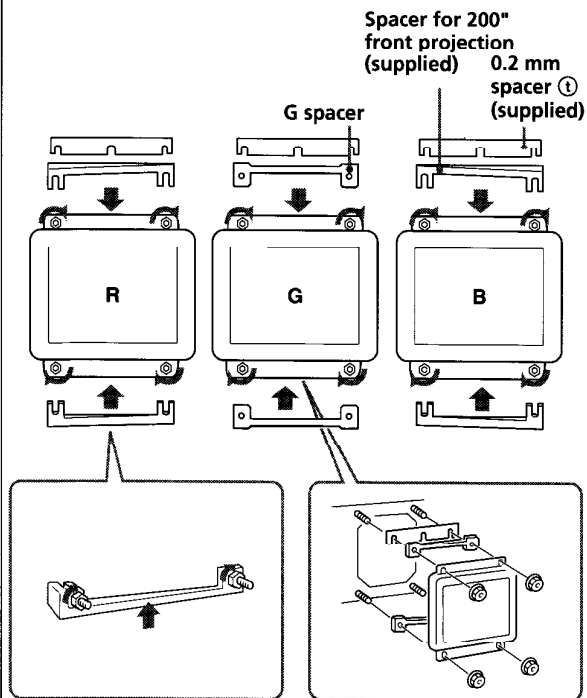
- 1 Remove the cabinet. (See "Removing the cabinet".)
- 2 Detach the lens block. (See "Detaching the lens block".)
- 3 Loosen the four nuts and remove the two spacers from the top and the bottom of each CRT.



4 Insert the supplied spacers for 200" front projection, 0.2 mm spacers (Ⓜ) and G spacers as follows:

Red and blue CRTs: A spacer for 200" and a 0.2 mm spacer for the top, a spacer for 200" for the bottom. Insert the spacer for 200" front projection with the thinner end toward the center CRT.

Green CRT: The G spacer removed in step 3 and a 0.2 mm spacer for the top, the G spacer removed in step 3 for the bottom



5 Tighten the four nuts of each CRT securely for accurate lens angles.

6 Reinstall the lens block, the cabinet and the top panel.

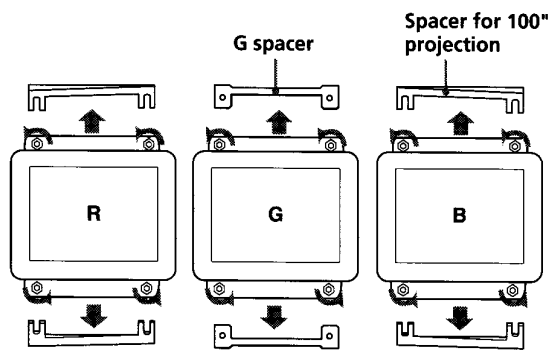
To change the CRT spacers for rear projection

Use an 8 mm nutdriver.

1 Remove the cabinet. (See "Removing the cabinet".)

2 Detach the lens block. (See "Detaching the lens block".)

3 Loosen the four nuts and remove the two spacers from the top and the bottom of each CRT.



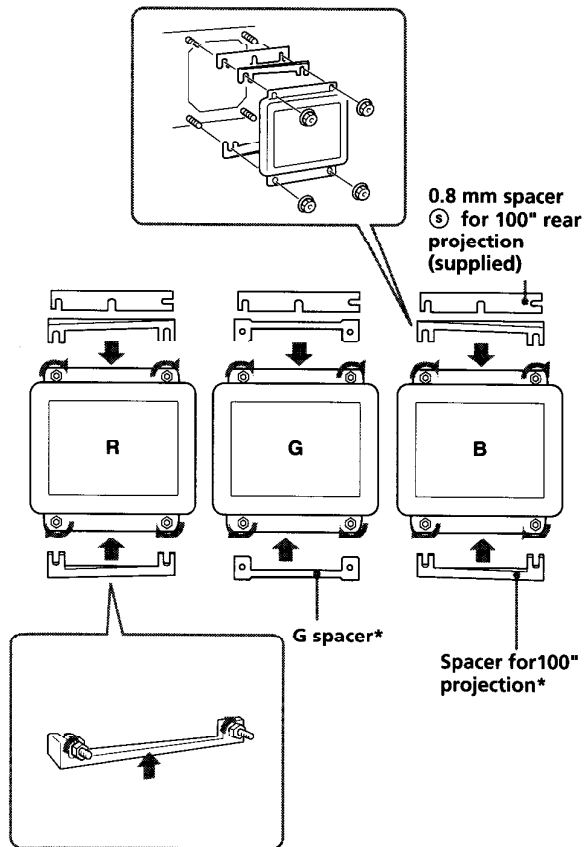
Modifications of Parts

4 Insert the supplied 0.8 mm spacers (S) for 100" rear projection, 0.2 mm spacers (I), the spacers for 100" projection and G spacers as follows:

When the angle of optical axis is 0°

Blue and red CRTs: A 0.8 mm spacer (S) and the spacer for 100" removed in step 3 for the top, the spacer for 100" removed in step 3 for the bottom

Green CRT: A 0.8 mm spacer (S) and the G spacer removed in step 3 for the top, the G spacer for the bottom

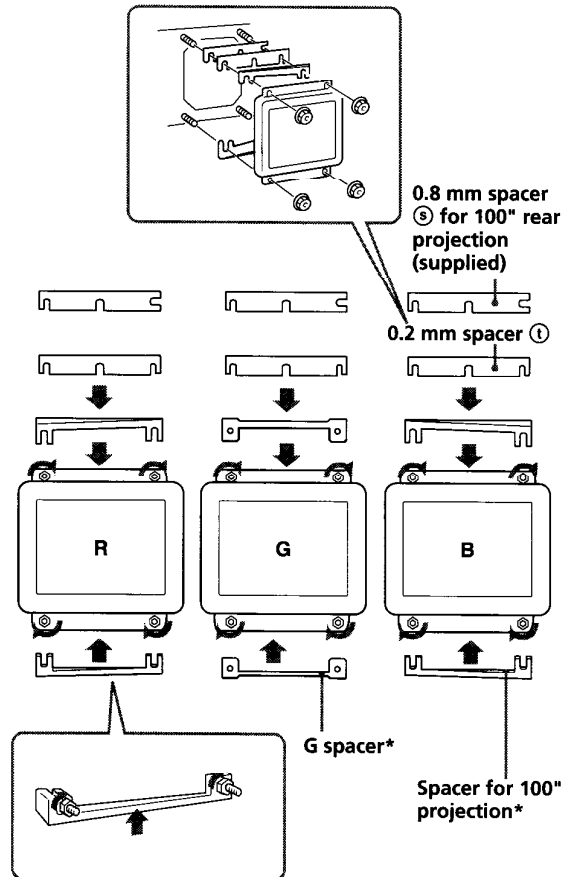


* Spacers removed in step 3

When the angle of optical axis is 2°

Red and blue CRTs: A 0.8 mm spacer (S), a 0.2 mm spacer (I) and the spacer for 100" removed in step 3 for the top, the spacer for 100" removed in step 3 for the bottom

Green CRT: A 0.8 mm spacer (S), 0.2 mm spacer (I) and the G spacer removed in step 3 for the top, the G spacer removed in step 3 for the bottom



* Spacers removed in step 3

5 Tighten the four nuts of each CRT securely for accurate lens angles.

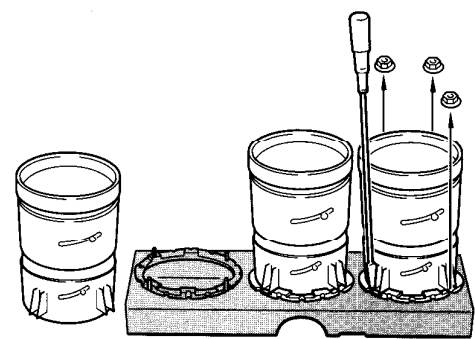
6 Reinstall the lens block, the cabinet and the top panel.

Adjusting the Lens Spacer for 150- to 250-inch Projection

1 Remove the cabinet.

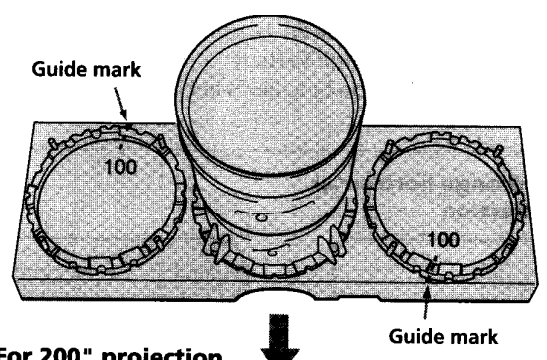
2 Detach the lens block.

3 Detach the red and blue lenses from the lens base. Remove the four nuts of each lens to detach.

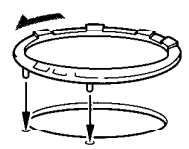


4 Adjust the positions of the lens spacers.

For 100" projection

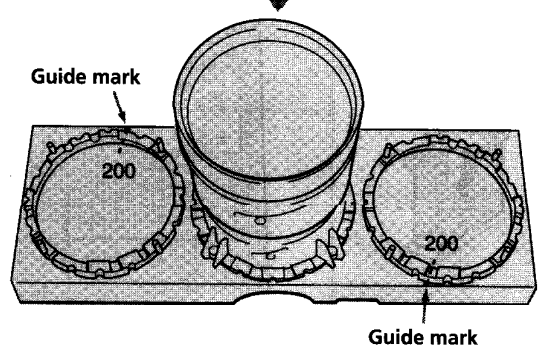


For 200" projection



Turn the ring so that the figure 200 is aligned with the guide mark.

Align and insert.



Modifications of Parts

Changing the Polarity

The projector is preset at the factory for use in front projection when installed on the floor/desk. When the projector is installed on the ceiling or used in rear projection, change the polarity. Horizontal and/or vertical deflection should be changed depending on the type of installation.

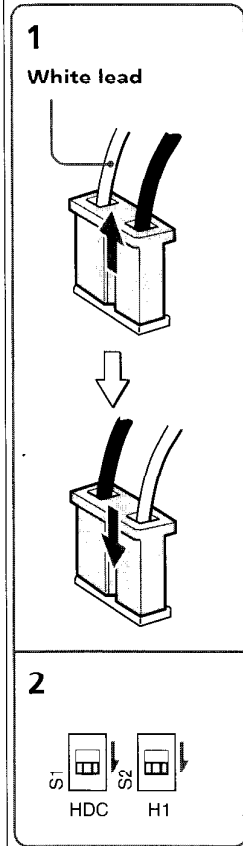
Front projection, ceiling: Horizontal and vertical

Rear projection, floor/desk: Horizontal

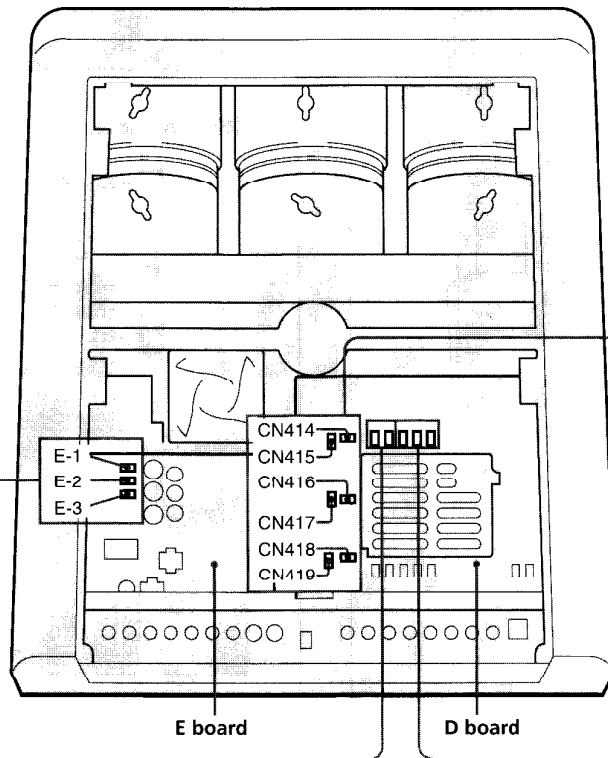
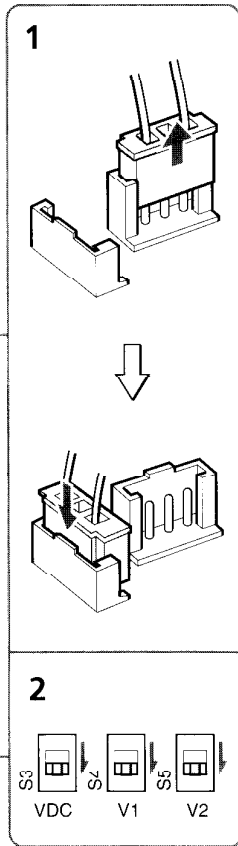
Rear projection, ceiling: Vertical

In case that the projected picture is not correct after changing the polarity, try to change the polarity again while watching the picture.

To change horizontal deflection



To change vertical deflection



Preparation

- Turn off the power.
- Open the top panel. (See page 15).

Changing the horizontal deflection

- 1** Reverse the polarity of connectors E-1, E-2 and E-3 on the E board.
- 2** Set the S1 and S2 switches on the D board to the control panel side position.

Changing the vertical deflection

- 1** Move the connectors on the D board from the receptacles CN414, CN416 and CN418 to receptacles CN415, CN417 and CN419, respectively.
- 2** Set the S3, S4 and S5 switches on the D board to the control panel side position.

Note

Make sure to insert the connectors firmly.

Lens Focus Adjustment

The lens focus is adjusted at the factory for a 100" flat screen. For other types of screens, you should adjust the lens focus.

5-2

1 TEST

2 BAR HATCH BAR

5-1

| For: | B RAS | G RAS | R RAS |
|------------|-------|-------|-------|
| blue lens | ↑ ON | ↓ OFF | ↓ OFF |
| green lens | ↓ OFF | ↑ ON | ↓ OFF |
| red lens | ↓ OFF | ↓ OFF | ↑ ON |

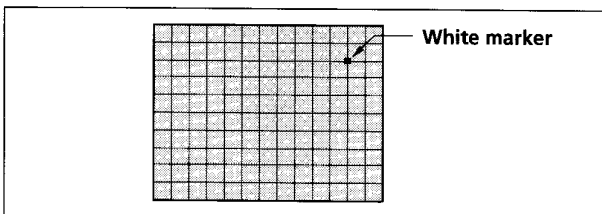
English

Preparation

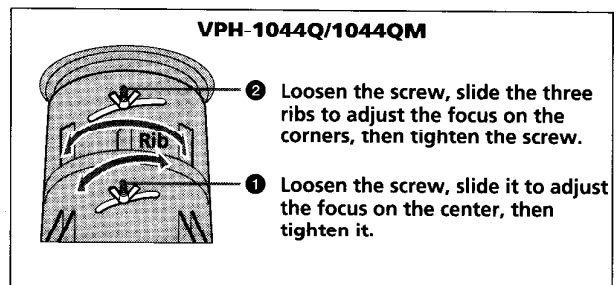
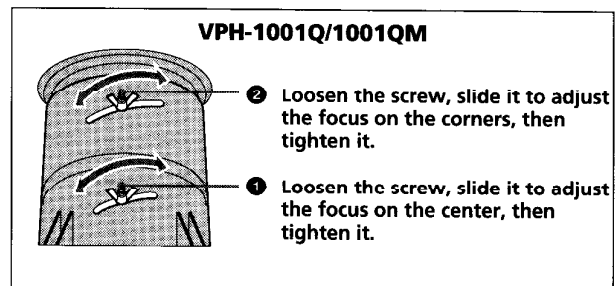
- 1 Install the projector in the correct location.
- 2 Open the top panel. (See page 15.)
- 3 Connect the supplied power cord (mains lead) to the AC IN socket and to an AC outlet.
- 4 Press down the MAIN POWER switch. Press the POWER button on the control panel, if necessary.

Adjusting the Lens Focus

- 1 Press the TEST button on the control panel.
- 2 Set the BAR switch to HATCH. A cross hatch pattern is displayed.
- 3 Check that the cross hatch pattern is displayed inside the screen. If not, adjust the location of the projector.
- 4 Check that a white marker is displayed at the upper right as illustrated below. If not, correct the polarity. (See page 20.)

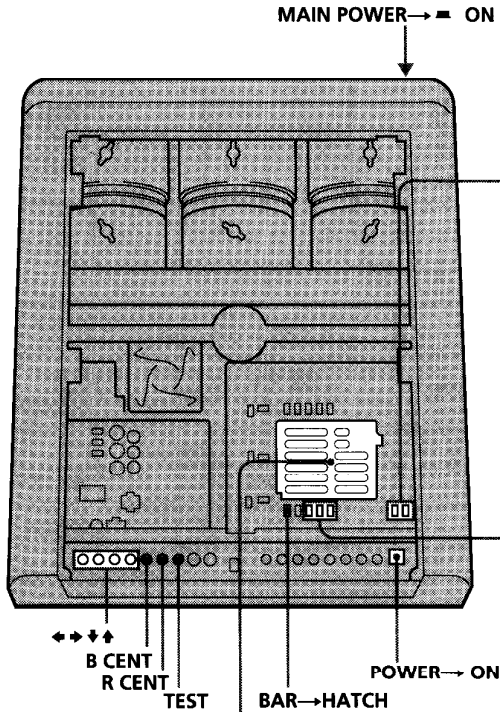


- 5 Adjust the lens focus.
 - 1 Set the B RAS, G RAS and R RAS switches as illustrated above.
 - 2 Adjust the focus of blue, green and red lenses as follows:



Registration Adjustment

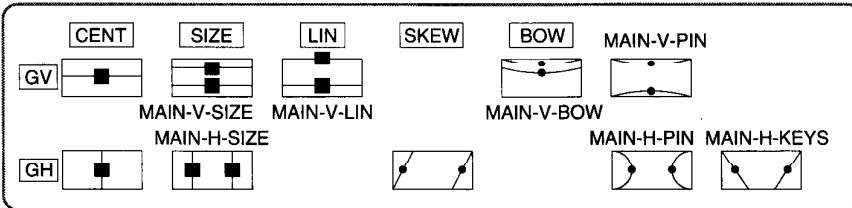
Use a small screwdriver to adjust the controls through the holes.



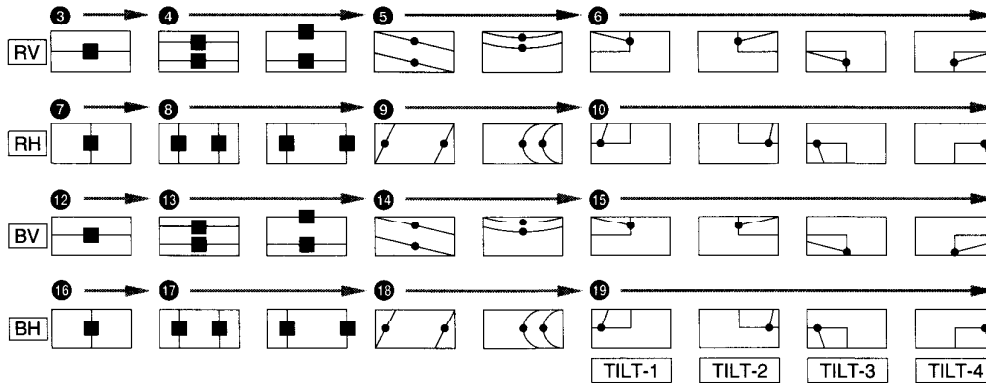
| Screen size | MODEL SELECT | SIZE SELECT |
|---------------------|--------------|-------------|
| 72" (70"-85") | 100 | 150/72 |
| 100" (85"-125") | 100 | NORMAL |
| 150" (125"-175") | 200 | 150/72 |
| 200" (175"-250") | 200 | NORMAL |

| To adjust: | B RAS | G RAS | R RAS |
|-------------------|-------|-------|-------|
| Red registration | OFF | ON | ON |
| Blue registration | ON | ON | OFF |

Controls for registration adjustment



These controls are used for the reference green registration adjustment. If necessary, consult qualified Sony personnel.



The circled numbers correspond to the step numbers (circled numbers) in the adjustment procedure on the next page.

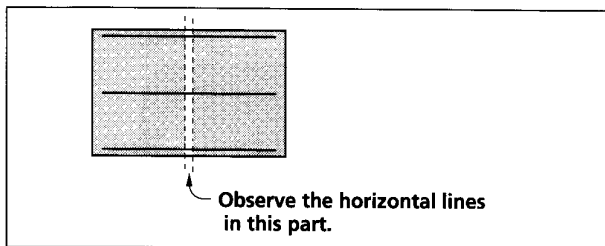
Preparations

- 1 Press the TEST button on the control panel to display the cross hair pattern.
- 2 Set the G RAS switch to ON and the B RAS and R RAS switches to OFF.
A green cross hatch pattern is displayed.
- 3 Check the location of the projector, polarity and lens focus.
- 4 Set the MODEL SELECT and SIZE SELECT switches to appropriate positions according to the screen size.

Adjusting the Red Registration

Vertical registration adjustment

- 1 Set the B RAS switch to OFF and the G RAS and R RAS switches to ON.
Green and red hatch patterns are displayed.
- 2 Press the R CENT button on the control panel and set the H and V adjustment levels to "00" with the arrow buttons.
- 3 Adjust the RV CENT control so that the red and green horizontal lines converge in the center of the screen.
- 4 Adjust the RV SIZE control (and the RV LIN control, if necessary) so that the red and green horizontal lines converge at the upper and lower sides of the screen.

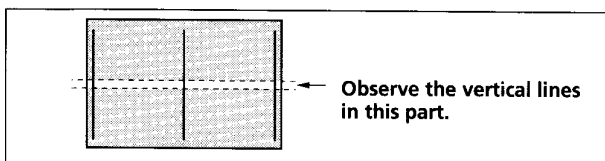


(If necessary, repeat steps 3 and 4.)

- 5 Adjust the RV SKEW and RV BOW controls if the red and green horizontal lines do not converge in the middle of the screen.
- 6 Adjust the RV TILT-1 through TILT-4 controls so that the red and green horizontal lines converge on the corners of the screen.

Horizontal registration adjustment

- 7 Adjust the RH CENT control so that the red and green vertical lines converge in the center of the screen.
- 8 Adjust the RH SIZE control (and the RH LIN control, if necessary) so that the red and green vertical lines converge at the right and left sides of the screen.



(If necessary, repeat steps 7 and 8.)

- 9 Adjust the RH SKEW and RH BOW controls so that the red and green vertical lines converge in the middle of the screen.
- 10 Adjust the RH TILT-1 through TILT-4 controls so that the red and green vertical lines converge on the corners of the screen.

Adjusting Blue Registration

Proceed to the following blue registration adjustment in the same manner as with red registration adjustment. Set the R RAS switch to OFF and the B RAS and G RAS switches to ON.

Vertical registration adjustment

- 11 Press the B CENT button on the control panel and set the H and V adjustment levels to "00" with the arrow buttons.
- 12 Adjust the BV CENT control to adjust the center of the screen.
- 13 Adjust the BV SIZE control, and the BV LIN control if necessary, to adjust the upper and lower sides of the screen.
- 14 Adjust the BV SKEW and BV BOW controls to adjust the middle of the screen, if necessary.
- 15 Adjust the BV TILT-1 through TILT-4 controls to adjust the corners.

Horizontal registration adjustment

- 16 Adjust the BH CENT control to adjust the center of the screen.
- 17 Adjust the BH SIZE control, and the BH LIN control if necessary, to adjust the right and left sides of the screen.
- 18 Adjust the BH SKEW and BH BOW controls to adjust the middle of the screen.
- 19 Adjust the BH TILT-1 through TILT-4 controls to adjust the corners.

When the Registration Adjustment is Complete

- 1 Set the R RAS, G RAS and B RAS switches to ON, and the BAR switch to BAR.
- 2 Press the TEST button on the control panel to return to the normal display.
- 3 Reinstall the top panel. (See page 16.)