SONY
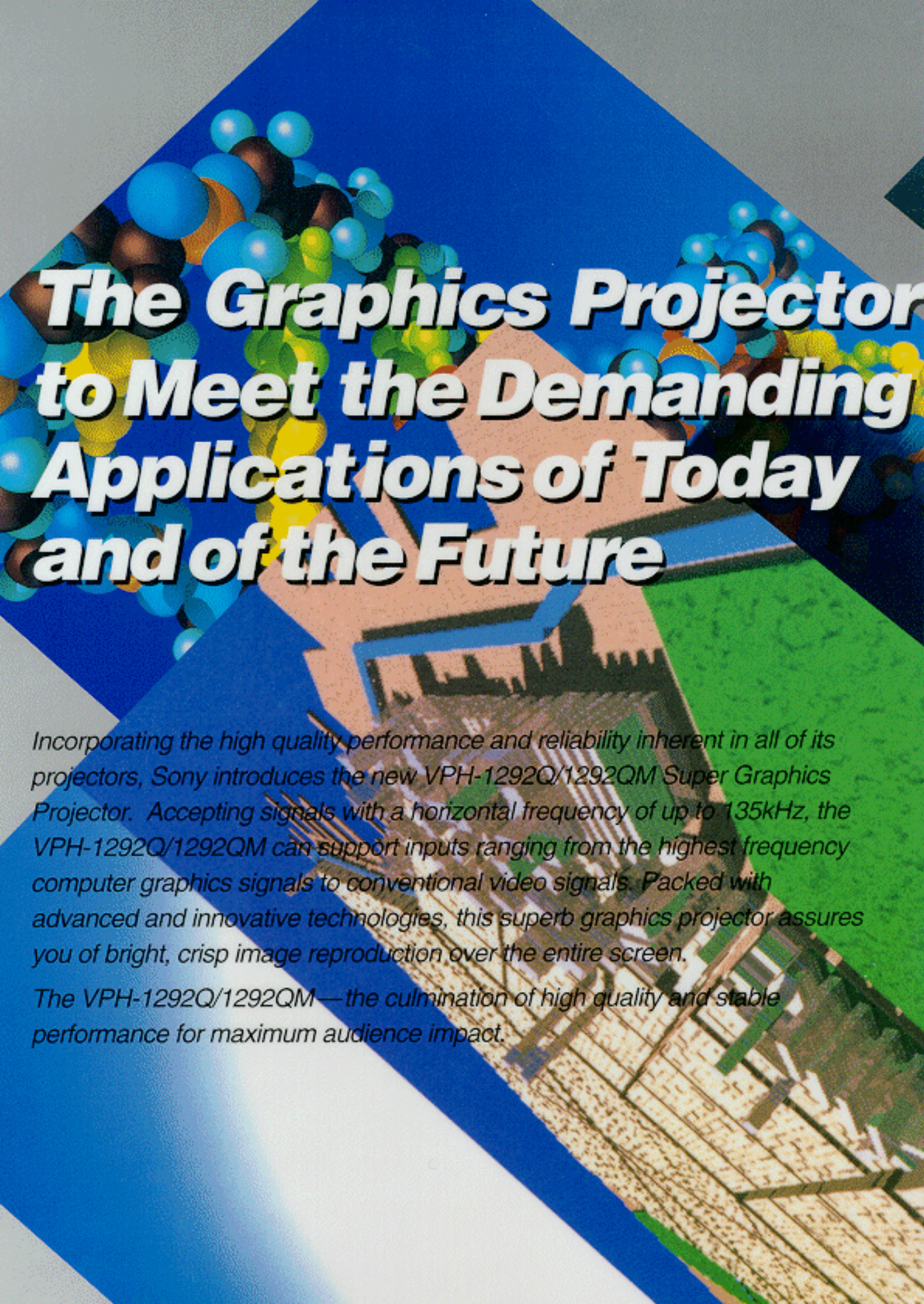
## Multiscan Projector
VPH-1292Q/1292QM

SuperGraphics

The Graphics Projector to Meet the Demanding Applications of Today and of the Future

Incorporating the high quality performance and reliability inherent in all of its projectors, Sony introduces the new VPH-1292Q/1292QM Super Graphics Projector. Accepting signals with a horizontal frequency of up to 135kHz, the VPH-1292Q/1292QM can support inputs ranging from the highest frequency computer graphics signals to conventional video signals. Packed with advanced and innovative technologies, this superb graphics projector assures you of bright, crisp image reproduction over the entire screen.

The VPH-1292Q/1292QM—the culmination of high quality and stable performance for maximum audience impact.
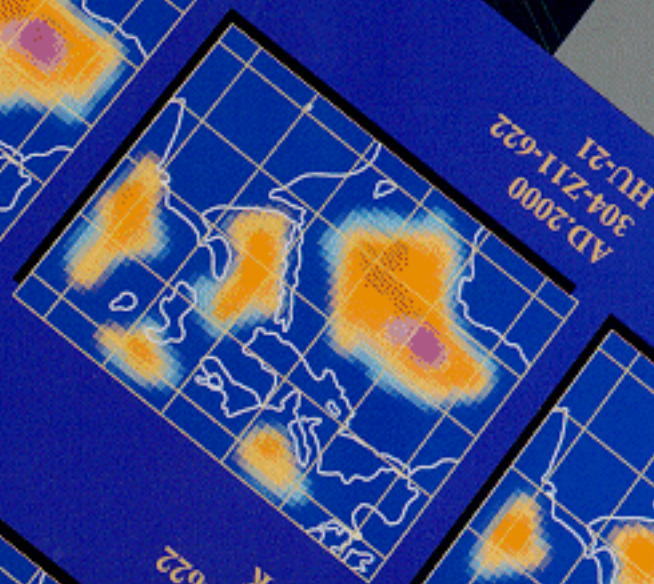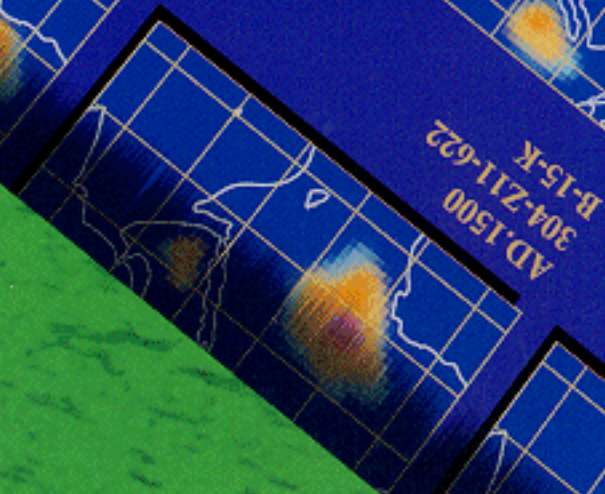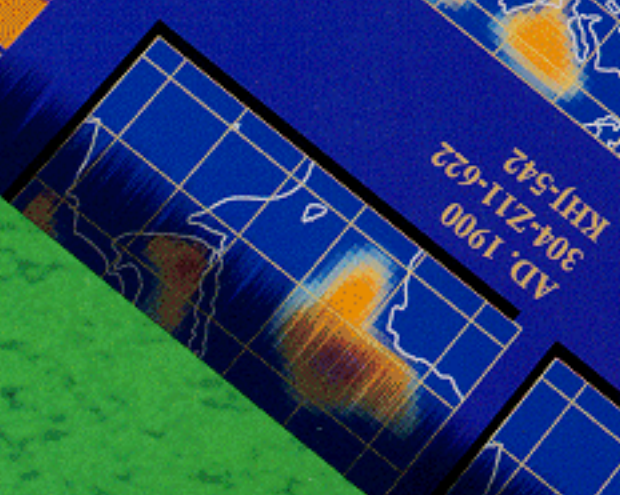
Features
Superior Picture Performance

High brightness

Bright image reproduction is assured with the VPH-1292Q/1292QM. Thanks to the combination of Sony's newly developed 9-inch electromagnetic focus CRTs and circuits, the projector has a high light output of 225 ANSI lumen.

High resolution

Precise picture reproduction is attained with the combination of new, universal optical coupled, 9-inch electromagnetic focus CRTs and hybrid HACC lenses. A high, 2000x1600 dot resolution is assured. (Measured at fH: 94kHz, fV: 60Hz) The VPH-1292Q/1292QM features a wide RGB bandwidth of 120MHz with a new CRT drive circuit*, thus making possible the uncompromising reproduction of the highest frequency computer graphic images.

* New CRT drive circuit

With the conventional circuit, it was not possible to achieve a 120MHz RGB bandwidth while maintaining high brightness. Incorporating the new CRT drive circuit—Cathode and G1 dual-drive circuit—the projector is able to attain a high RGB bandwidth of 120MHz with high brightness.

HACC Lens *(without C lens)*

Glass   Acrylic

9-inch Electromagnetic Focus CRTs

High contrast and flexible projection size with Universal Optical Coupling

Universal Optical Coupling technology is incorporated in the VPH-1292Q/1292QM. This technology allows the reproduction of high contrast images. With this flexibility of design, the projector can reproduce images in various sizes with simple adjustments.

For easy and flexible optical adjustment, Sony developed a unique ring spacer. By simply dialing this ring spacer, the angle between the lens and CRT is optically adjusted to project focused images in various setting conditions.

Universal Optical Coupling

C lens   liquid   CRT
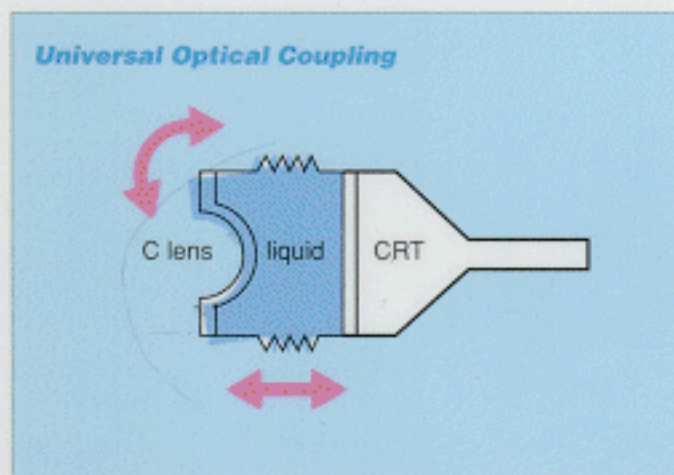
Excellent color reproduction

Because of the CRT phosphors and decoder circuitry, the projector can reproduce bright pictures with rich color saturation. In addition, the red and green lenses are color coated to enhance color reproduction.

Accurately focused images

Incorporating innovative technologies such as the electromagnetic focus feature, the VPH-1292Q/1292QM provides sharp image reproduction over the entire screen. Axis Quadrupole/Diagonal Quadrupole (AQP/DQP) technologies also mean that beam spot distortion which is likely to occur on the screen edges can be corrected. In this way, clear and detailed images are achieved from corner to corner.
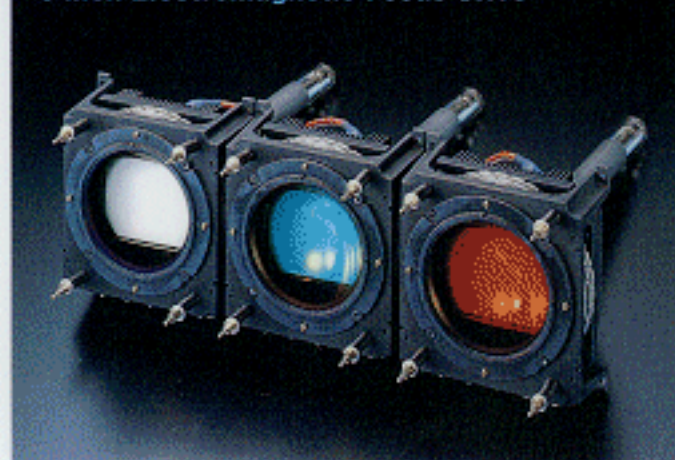
Multiscan Capability

Signals with a horizontal frequency of 15 to 135kHz and a vertical frequency of 38 to 150Hz can be reproduced with superb quality. Even if the horizontal frequency of the input signal changes from one end of this range to the other, the VPH-1292Q/1292QM handles the change with the minimum of disturbance.
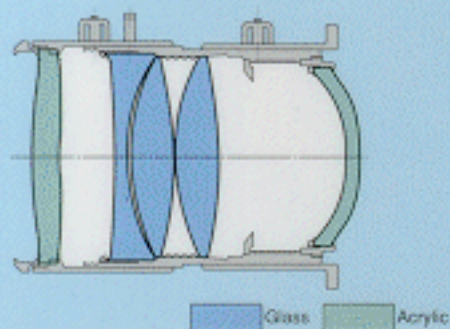
System Expandability and Versatility

As well as Y/C and composite video input, the projector has two slots for optional interface boards from the Sony IFB Series*. By inserting your choice of IFB boards, the VPH-1292Q/1292QM can connect directly to various equipment according to applications. The IFB Series include double scanning and index boards for system flexibility.

The VPH-1292Q/1292QM projection system can be greatly expanded by combining these optional IFB interface boards with SIC signal interface cables, a PC signal interface switcher and an IFU interface unit. For example, with the combination of a PC signal interface switcher and IFB interface boards, several input sources can be connected simultaneously. A single wired/wireless remote control unit RM-PJ1292 can control the entire display system for easy operation and flexibility.

Double Scan Board IFB-3000

* IFB-11 is supplied with the VPH-1292Q/1292QM.

Convenient Operating Functions

Remote control capability

As well as from the control unit of the projector, the VPH-1292Q/1292QM can be remotely operated from the supplied remote control unit — the RM-PJ1292. The RM-PJ1292 controls all the projector's adjustments and operations. Adjustment status and information on the input signals are displayed on-screen for reference during operation. In addition, an optional remote control unit RM-1270S is available for easy access to simple operations such as input selection and power on/off — ideal in situations such as presentations and conferences. To extend the remote control range of both the RM-PJ1292 and RM-1270S, an optional infrared remote control satellite RM-PJ10 is also available. By connecting the RM-PJ10 to the projector, wireless remote control can be achieved in a variety of applications such as rear projection and a projection wall.

Memory function

With ease of use in mind, the VPH-1292Q/1292QM has been designed to store various set-up and picture condition data such as RGB size/shift, blanking, picture control level and white balance for each input signal. Precise registration data and magnetic focus adjustment can also be stored. These data are memorized in one of the eight memory blocks which are allocated according to the horizontal frequency. With these sophisticated memory features, the VPH-1292Q/1292QM provides superb picture reproduction of various signals with the utmost simplicity.

Handles for mobility

Two types of handles are available for moving and installing the VPH-1292Q/1292QM. These handles can easily be taken out when needed and replaced when not in use. Two sets of grips can be inserted on the front and rear of the projector. These grips can be attached at desired angles, thus allowing greater flexibility in installing the projector.

Standard Handles

Two Sets of Detachable Grips

Remote Control

Infrared Remote Control Unit
RM-PJ1292*
- Wired/wireless remote control unit for the VPH-1292Q/1292QM
- Full remote operation
- Function keys can be illuminated for operation in dark rooms

* Supplied with the VPH-1292Q/1292QM.

Infrared Remote Control Unit
RM-1270S*
- Wireless remote control unit for the VPH-1292Q/1292QM and PC-1271/1271M
- Power on/off and input selection operation

* Supplied with the PC-1271/1271M.

Infrared Remote Control Receiver
RM-PJ10
- Remote control satellite
- Extends the operating range of RM-PJ1292 and RM-1270S

Interface Board
IFB Series

IFB Series interface boards can be fitted into the VPH-1292Q/1292QM projector, the PC-1271/1271M signal interface switcher and the IFU-1271/1271M interface unit.

Analog RGB Input (5 x BNC)
IFB-11*
* Supplied with the VPH-1292Q/1292QM.

Analog RGB Input (D-sub 9-pin)
IFB-20

Digital RGB Input (D-sub 9-pin)
IFB-30
- Monochrome/8 color/16 color/64 color mode switchable

Index Board
IFB-101
- Index control for up to 100 projectors with the RM-PJ1292
- Direct power-on function
- Power-on delay function

Composite/Y/C Input
(Loop-through BNC/Loop-through 4-pin mini DIN)
IFB-1000

Component (Y/R-Y/B-Y) Input (3 x BNC)
IFB-1200

HD (Y/P$_B$/P$_R$) Input (3 x BNC)
IFB-1300
- Sharpness adjustment available

Double Scan Board
(BNC x 3 /4-pin mini DIN x 3 /3 x BNC)
IFB-3000*
- Double scan board
- Digital frame memory for improved picture reproduction
- Dot interface is prevented for clearer image reproduction

* Occupies 4 slots. Fitted in the PC-1271/1271M.

Multi-cable 14/14pin, 2/5/10/25/50m
CCQ-BRS

Multi-cable 14/14pin, 1/5/15/25/50m
SIC-M

100-inch Flat Screen **VPS-100FH**
120-inch Flat Screen **VPS-120FH**

Projector Suspension Support
PSS-1270

Signal Interface Cables
SIC Series

SIC Series signal interface cables are designed to connect IFB Series interface boards with various signal sources. Using a SIC cable, a signal can be simultaneously connected to a local monitor as well as to the projector or signal interface switcher.

SIC-10
- 5 x BNC ◄────► 5 x BNC
  (R,G,B,HD/HV,VD)   (R,G,B,HD/HV,VD)

SIC-20A/20B
- Analog RGB
- D-sub 9-pin ◄────► D-sub 15-pin (female)
  (female)   ► D-sub 15-pin (male)

SIC-21
- Analog RGB
- D-sub 9-pin ◄────► D-sub 9-pin (female)
  (female)   ► D-sub 9-pin (male)

SIC-22
- Analog RGB with digital sync
- D-sub 9-pin ◄────► D-sub 15-pin
  (female)   High Density (female)
             ► D-sub 15-pin
   High Density (male)

SIC-30
- Analog RGB input
- D-sub 9-pin ◄────► D-sub 9-pin (female)
  (female)   ► D-sub 9-pin (male)

Signal Interface Switcher
PC-1271/1271M

- Provides eight slots for optional interface boards. By using two PC-1271/1271M switchers, a maximum of 16 inputs can be connected simultaneously.
- Remote control capability with the RM-PJ1292 and RM-1270S*¹. The switcher can also be controlled with a custom-made remote control unit via the REMOTE 2 (D-sub 25-pin).
- Switcher can be connected to the projector by connecting a CCQ-BRS or SIC-M multi-cable*² (50m) via the REMOTE 1. Incorporates a cable length compensation switch to maintain the RGB bandwidth of 70MHz when using the multi-cable. A 100MHz RGB bandwidth is guaranteed for Monitor OUT.
- When one of the input selection switchers is selected, the front panel of the chosen interface board automatically illuminates.
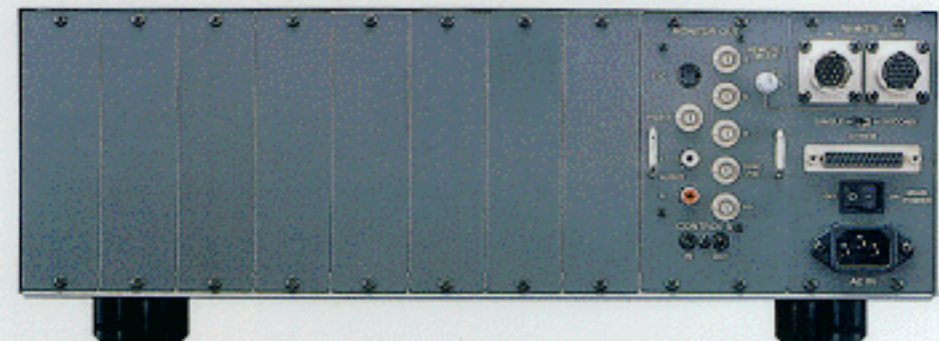
- When power is turned on, the PC-1271/ 1271M reconnects the channel used immediately before the power was turned off.
- Mountable in an EIA 19-inch rack with the supplied rack mount kit.

*¹ The RM-PJ1292 is supplied with the VPH-1292Q/1292QM. The RM-1270S is supplied with the PC-1271/1271M.
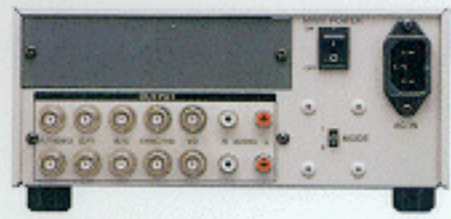
*² These cables are not available in some areas. For details, please consult your nearest Sony office.

Signal interface unit
IFU-1271/1271M

- Distributes an input signal from the IFB board into two outputs with 100MHz bandwidth.
- The IFU-1271/1271M converts signals from digital signal level to analog signal level (TTL to 0.7Vp-p) for output.

Specifications

Multiscan Projector
VPH-1292Q/1292QM

Optical

Projection system:	3 picture tubes, 3 lenses, direct projection system
Picture tube:	New 9-inch (phosphor size 7.7-inch) high luminance, optical coupled, electromagnetic focus tubes
Projection lens:	High performance multi-coated HACC lens, F1.15/ 167mm, optical resolution 10lp/mm
Screen coverrage:	90 to 300-inch measured diagonally, factory preset to 120-inch
Light output:	ANSI lumen*¹: 225lm (fH: 135kHz, fV: 50Hz) 190lm (fH: 15kHz, fV: 60Hz) Color temperature: 6500°K All white: 300lm
Throwing distance:	90-inch: 2514mm (99 1/8 inches) 120-inch: 3278mm (129 1/8 inches) 200-inch: 5543mm (218 1/4 inches) 250-inch: 6867mm (270 1/2 inches) 300-inch: 8294mm (326 5/8 inches)

General

Color system:	NTSC, PAL, SECAM, NTSC 4.43 automatically selected
RGB bandwidth:	120MHz (-3dB)
Resolution:	700TV lines (video) 2000 x 1600 pixels (RGB, measured at fH: 94kHz, fV: 60Hz)
Scanning frequency:	Horizontal: 15 to 135kHz Vertical: 38 to 150Hz
Test signals:	Cross hair, Hatch (coarse), Hatch, Hatch (invert), Dot pattern, Window, H pattern, H pattern (invert), All white, Pluge
Power requirements:	VPH-1292Q: AC 100 to 240V*², 50/ 60Hz VPH-1292QM: AC 220 to 240V, 50/60Hz
Power consumption:	Max. 850W
Heat dispersion	3071.2 BTU
Mass:	92kg (202 lb 13 oz)
Operating temperature:	0 to 40°C (14 to 104°F)
Operating humidity:	35 to 85%

Inputs

Video

Video*³ :	BNC, 1Vp-p±2dB, sync negative, 75 Ω
Y/C*³:	4-pin mini DIN Y(luminance): 1Vp-p±2dB, sync negative, 75Ω C(chrominance): Burst 0.286Vp-p±2dB (NTSC), 75Ω 0.3Vp-p±2dB (PAL), 75Ω

Input A: (supplied with an IFB-11)

R/B:	BNC, 0.7Vp-p±2dB positive, 75Ω
G/ Sync on G:	BNC
	G: 0.7Vp-p±2dB positive,75Ω
	G with sync: 1Vp-p±2dB, sync negative,75Ω
Sync:	HD: BNC
	Composite sync: 0.6 to 8Vp-p, high impedance, sync positive/negative
	Horizontal sync: 0.6 to 8Vp-p, high impeadance, sync positive/negative
	Width: Wider than the horizontal period (1H)
	VD: BNC
	Vertical sync: 0.6 to 8Vp-p, high impedance, sync positive/negative
	Width: Wider than the horizontal period (1H)
Audio	Not applicable

Input B: (open for an optional IFB Series input module)	
Control S:	Loop-through mini jack
Remote 1:	14-pin (from the PC-1271/1271M)

Outputs

Video out:	BNC, 1Vp-p±2dB, 75Ω
Remote 2:	D sub 9-pin (RS-422 port)

Safety Regulations

VPH-1292Q:	UL-1950, CSA-1950, DHHS, DNHW, FCC, DOC
VPH-1292QM:	EN-60950(S. D, N, El, SEV), EN-60555, PTB, BZT, CE

Accessories

Supplied accessories

Interface board IFB-11
Wired/wireless remote control unit RM-PJ1292
Remote control cable for RM-PJ1292 (15m)
AA size battery x 3 (for RM-PJ1292)
Four grips (for mobility)
Hexagon wrench
AC power cord
Operation manual

Optional accessories

Interface board:	IFB-11/ 20/ 30/ 101/1000/1200/1300/ 3000*¹
Signal interface cable:	SIC-10/ 20A/ 20B/ 21/ 22/ 30
Signal interface switcher:	PC-1271/1271M
Interface unit:	IFU-1271/1271M
Multi cable*¹:	CCQ-BRS cable (14/14pin, 2/5/10/25/50m) SIC-M cable (14/14pin, 1/5/15/25/50m)
Infrared remote control unit :	RM-1270S
Infrared remote control receiver :	RM-PJ10
Suspension support :	PSS-1270
100-inch flat screen*¹:	VPS-100FH
120-inch flat screen*¹:	VPS-120FH

Dimensions

746 (29 3/8)   1000 (39 3/8)   386 (15 1/8)   Unit: mm (inch)

*¹ ANSI lumen is a measuring method of American National Standard 1T7.215.
*² 120V operation when using the projector in the North America region.
*¹ The Y/C input has priority over the video input.
*¹ The IFB-3000 should be installed in the PC-1271/1271M.
*¹ Some items are not available in some areas. For the details, please consult your nearest Sony offices.

Rear Panel Connector Section

Signal Interface Switcher
PC-1271/1271M

General

RGB bandwidth:	100MHz for Monitor out 70MHz for Remote 1 out
Power requirements:	PC-1271: AC 120V, 50/ 60Hz PC-1271M: AC 220 to 240V, 50/ 60Hz
Power consumption:	Approx. 60W
Dimensions:	424 (W) x 133 (H) x 290 (D) mm (16 3/4 x 5 1/4 x 11 1/2 inches)
Mass:	8kg (17 lb 10 oz)

Inputs

Input 1 to 8 (open for optional IFB Series input modules)

Remote 1:	14-pin (male), from a second PC-1271/1271M
Remote 2:	D-sub 25-pin (female), from an external control unit
Control S:	Loop-through mini jack

Outputs

Monitor out

Video*[1]:	BNC 1Vp-p, sync negative, 75Ω
Y/C*[1]:	4-pin mini DIN Y(luminance): 1Vp-p±2dB, sync negative, 75Ω C(chrominance): Burst 0.286Vp-p±2dB (NTSC), 75Ω 0.3Vp-p±2dB (PAL), 75Ω
R/B:	BNC, 0.7Vp-p±2dB, 75Ω
G/Sync on G:	BNC G: 0.7Vp-p,75Ω G with sync: 1Vp-p±2dB, sync negative,75Ω
HD/VD/HV:	BNC 1Vp-p, positive/negative, 75Ω
Audio:	Phono x 2*[2] -5dBu, impedance 1kΩ (stereo or monaural selectable)
Remote 1:	14-pin (female), to VPH-1292Q/1292QM or PC-1271/1271M

Accessories

Supplied accessories

Wireless remote control unit: RM-1270S
AA size battery x 2 (for RM-1270S)
Rack mount kit with screws (for 19-inch EIA
standard rack)
Operation manual

Optional accessories
Interface board: IFB-11/20/30/101/1000/1200/1300/3000
Signal interface cables:
SIC-10/20A/20B/21/22/30

*1 The Y/C input has priority over the video input.
*2 Not applicable for VPH-1292Q/1292QM.

Signal Interface Unit
IFU-1271/1271M

General

RGB bandwidth:	100MHz (-3dB)
Power requirements:	IFU-1271: AC 120V, 50/60Hz IFU-1271M: AC 220 to 240V, 50/60Hz
Power consumption:	10 W
Dimensions:	180(W) X 105(H) X 165(D)mm (7 1/8 X 4 1/4 X 7 3/8 inches)
Mass:	3kg (6 lb 9.8 oz)

Inputs

Open for an optional IFB Series input module

Output

Out:	5 x BNC (x2) Phono x 2 (stereo or monaural selectable)*

Accessories

Supplied accessories
AC power cord
Operation manual

Optional accessories
Interface board:
IFB-11/20/30/101/1000/1200/1300
Signal interface cables:
SIC-10/20A/20B/21/22/30

*Not applicable for VPH-1292Q/1292QM.

Installation Examples

Floor Installation

Screen Size (inch)	90	100	120	150	180	200	250	300
A (Screen V Size)	1372	1524	1829	1829	2286	3048	3810	4572
B	886	947	1071	1285	1485	1618	1939	2284
C		*28	**32					
D (TD)	2587	2847	3373	4285	5137	5702	7065	8533
E	2514	2767	3278	4165	4993	5542	6867	8294
F (Center hole for installation)	2762	3015	3526	4412	5240	5790	7114	8541
G	3446	3699	4210	5097	5925	6474	7799	9226

Ceiling Installation

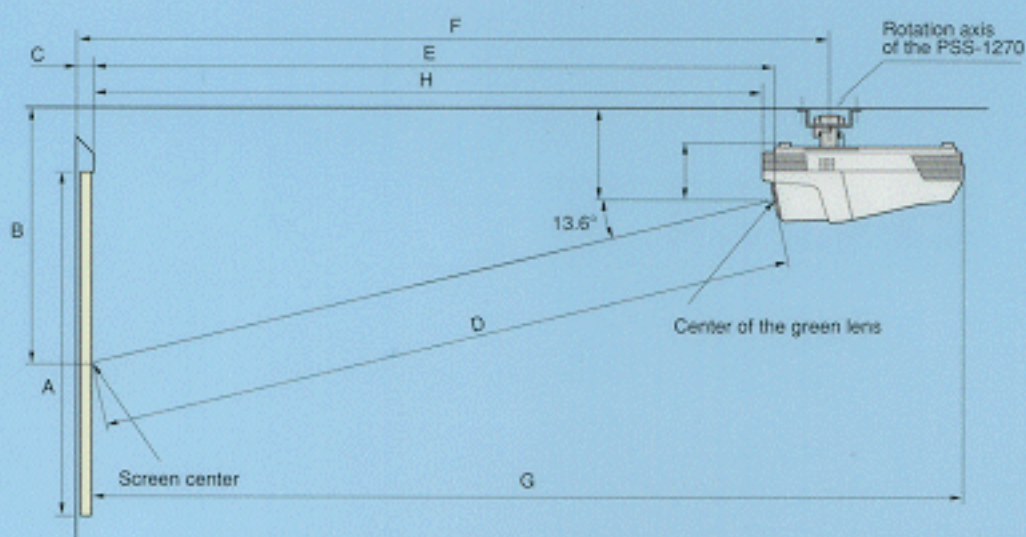| Screen Size (inch)	90	100	120	150	180	200	250	300
A (Screen V Size)	1372	1524	1829	1829	2286	3048	3810	4572
B	1048	1109	1233	1447	1647	1780	2101	2446
C		*28	**32					
D (TD)	2587	2847	3373	4285	5137	5702	7065	8533
E	2514	2767	3278	4165	4993	5542	6867	8294
F (PSS-1270)	2787	3040	3551	4437	5265	5815	7139	8566
G	3446	3699	4210	5097	5925	6474	7799	9226

Rear Projection Installation

(When the angle of optical axis is -2 degree)

Screen Size (inch)	90	100	120	150	180	200	250	300
A (V Size)	1372	1524	1829	1829	2286	3048	3810	4572
B (H cent)	113	104	85	54	24	5	-43	-94
C (L hole)	2878	3136	3658	4563	5407	5968	7320	8777
D (X lens)	2568	2826	3348	4253	5097	5658	7010	8467
E (L max)	3539	3797	4319	5224	6069	6630	7982	9439
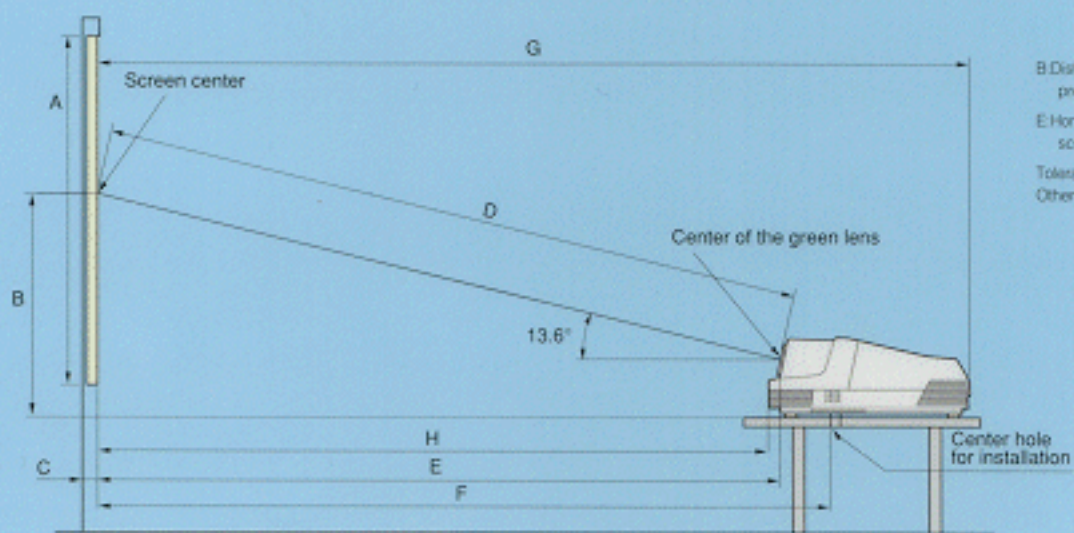
B:Distance between the bottom surface of the
 projector and the center of the screen.

E:Horizontal distance between the center of the
 screen and the center of the green lens.

Tolerance in length B: ±5%
Other measurements: 0 to +5%

E:Horizontal distance between the center of the
 screen and the center of the green lens.

Tolerance in length B: ±5%
Other measurements: 0 to +5%

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