

**TAXAN**

DLP® Data Projector  
PS200 Series | PV100 Series



# True Color

Innovation in DLP® Projectors

Astonishing progress in the DLP® colour advantage

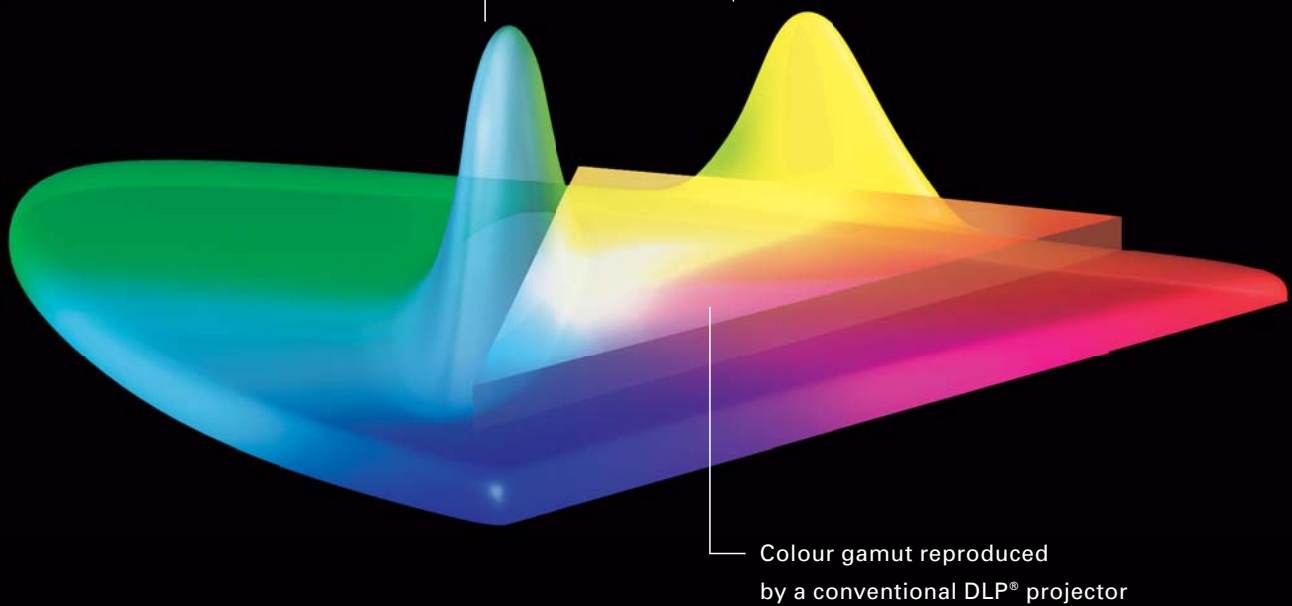


2008, TAXAN adopts BrilliantColor™ across its entire range of new products, for the ultimate in colour reproduction.

# BrilliantColor™ sets the new standard for colour reproduction by DLP® projectors.

With the adoption of BrilliantColor™, C (Cyan) and Y (Yellow) segments are added to the conventional RGB (primary colours of light) + W (White) four-segment colour wheel. The result is dramatically improved reproduction of yellow and light blue hues.

The contrast of white clouds against a clear blue sky, the fine detail of flower petals in a verdant meadow, or the colour of translucent green leaves bathed in sunlight are all reproduced with much greater fidelity.



This figure shows the colour gamut of projectors using conventional DLP® and BrilliantColor™. The triangular portion in the middle is the colour range of conventional DLP®, while the area around it is the extended range made possible by adopting BrilliantColor™. BrilliantColor™ is the general term for new technology that is revolutionizing colour reproduction by DLP® projectors. It encompasses a variety of component technologies including Variable Illumination adopted by TAXAN.

**2008 is the year of giant strides in colour reproduction,  
as TAXAN projectors advance toward True Color.**

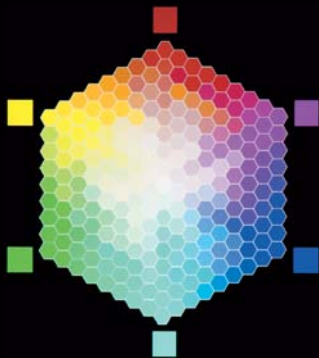


All along, the goal of TAXAN has been to provide an experience that satisfies every customer, and above all else, to achieve major advances in faithful colour reproduction, capability demanded of any projector. TAXAN with the adoption of BrilliantColor™ has turned the ideal into reality.

# More vivid, more faithful colour than ever, thanks to BrilliantColor™.

(Tests performed at the Kaga Components in-house testing facility)

## TAXAN KG-PS232Xh with BrilliantColor™ (standard mode)



BrilliantColor™ makes it possible to reproduce subtle halftone hues, as shown here. The addition of “C” and “Y” segments in particular enables beautiful display of the vivid blue and yellow colours common in natural scenery. With the excellent balance of hues and chrominance, projected images are shown in their natural coloration.

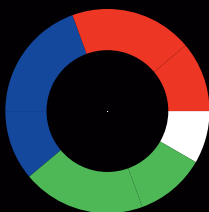
Using BrilliantColor™, a high contrast ratio is maintained while clearly rendering fine coloration in the high-brightness colour range.



## Dramatically improved colour reproduction

Projectors using conventional DLP® technology generally employ a four-segment colour wheel (RGB+W). BrilliantColor™ adopts a six-colour wheel, and TAXAN adds C (Cyan) and Y (Yellow), which are used as primary colours in printing. This broader colour range enables far more realistic colour reproduction, especially of yellow and light blue hues.

Four-segment colour wheel

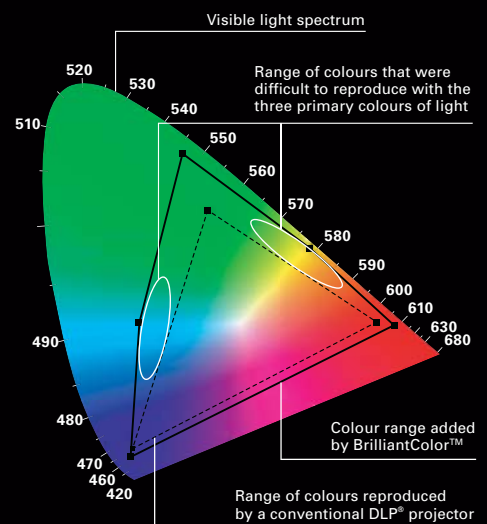


R G B W

Six-segment colour wheel



R G B W Y C



This figure shows the colour gamut when conventional DLP® and BrilliantColor™ are combined. Reproduction is notably improved in the yellow and light blue ranges.

In the tests described here, the colour reproduction characteristics of different projection technologies were compared and evaluated in our testing facilities. While some idea of the results can be given here, it should be noted that the actual colours seen with the eye differ from those in photographs and printing, due to differences in lighting and colour reproduction ability.

## Features of different projection technologies as learned from the tests

Projector technologies can generally be classified into DLP® and LCD types. The tests described here evaluated the TAXAN KG-PS232Xh with BrilliantColor™, a conventional DLP® projector, and an LCD projector. Image data was projected using each of the projectors in the same environment, the ability of each to reproduce colours was compared, and the results were captured accurately with a digital camera.



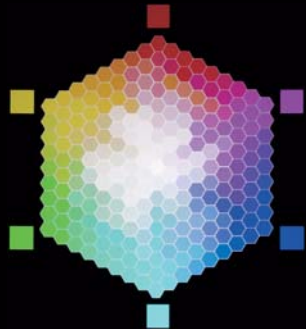
Tests being carried out

## Conventional DLP® projector

Our U5 Series (presentation mode)



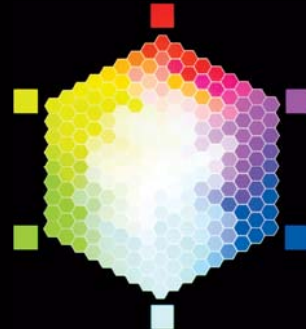
The high contrast makes it well suited to business scenarios, where text and figures are the main content. In "Presentation mode", in particular, customers have expressed a desire for improved reproduction of light colours, yellows and light blues. Where better colour reproduction is needed, we recommend use of "Graphics mode".



## A typical LCD projector



LCD technology is known for its vivid colours. Typically, light from the projector lamp is separated into RGB colours, then reassembled by a prism. Yellows and greens are emphasized, as are light blues. The colour palette and primary colour gradations show clearly in the projected images.

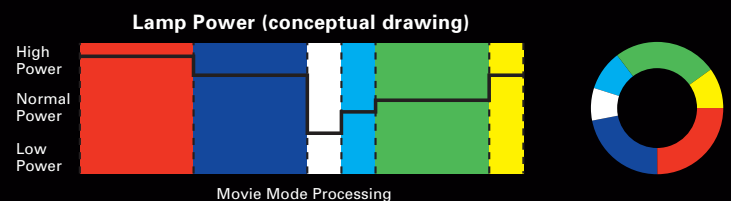


## Variable Illumination, optimizing colour reproduction for different purposes

The PS200/PV100 Series offers a wide choice of software-based colour modes. Each mode is achieved by adjusting the illumination on different segments of the colour wheel (Variable Illumination). Users can choose the optimal colour balance for each particular purpose.

The PS200/PV100 Series is equipped with a mode-selection feature that works by changing the balance of illumination directed at each colour wheel segment. In "Presentation mode", brightness is enhanced by emphasizing RGB segments, while in "Graphics mode" the Y and C segments are highlighted to emphasize colour reproduction. These and other colour modes can be selected for different kinds of presentation situations.

● How Variable Illumination works



Standard mode



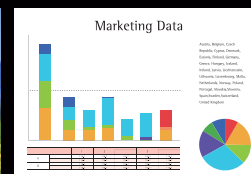
Well-balanced colour reproduction suitable for all kinds of situations.

Graphics mode



With excellent reproduction of yellows and blues, this mode is best for scenic photos.

Presentation mode



Choose this mode for presentations featuring figures and graphs, or when in brightly lit rooms.

Movie mode



Motion-filled presentations are shown with full cinematic impact.



Our flagship model takes advantage of BrilliantColor™ for unprecedented life-like colour reproduction.

# PS 200 Series



KG-PS 232Xh **3000** **1.9** **XGA**  
lm kg

KG-PS 232X **2500** **1.9** **XGA**  
lm kg

## Adopts BrilliantColor™ for more faithful colour reproduction

The PS200 Series makes full use of BrilliantColor™. Halftone reproduction and brightness are vastly improved, enabling projection of high-clarity images while maintaining high contrast. Pictures and text can be displayed clearly even in brightly lit rooms.

## A simple two-step operation

Thanks to the auto focus feature, the projector is ready to use right after the power button has been pressed and the screen size adjusted by the zoom ring. After the presentation ends, the cooling fan continues to operate when the power is turned off, and even when the power cord has been removed, for quick pack-up procedures.

### Step 1



Press the power button.

### Step 2



Decide the screen size.

## Auto focus instantly brings images into sharp view

An auto focus sensor mounted on the front of the projector automatically measures the distance to the screen and focuses the projector accordingly, so presentations can get started right away.



Automatically measures distance to screen



Instantly adjusts focus

## Connect two PCs at the same time

With two computer input connectors, two PCs can be hooked up to the projector simultaneously. Input can be switched on the go, without plugging and unplugging. This feature allows a wide variety of presentation possibilities, such as using one PC for slides and one for video.



## The functions needed for starting up presentations quickly

Thanks to the quick start feature, the projector is ready for use in about 18 seconds after switching on. A keystone correction feature automatically adjusts for perpendicular nonalignment. Presentations can be started right away, without the need for troublesome preparations. After use, the cooling fan continues operating after the power is turned off, even when the power cord has been unplugged, allowing fast takedown.



Automatic keystone correction



## Main functions

Auto focus/Auto keystone correction (vertical)/Quick start/Quick off/Auto source/Auto adjustment/Sliding lens shutter/One-touch height adjustment/Presentation timer/Colour mode switching/Digital zoom/Blank/Freeze/Eco mode/Front ventilation/DVD progressive input support/HDTV broadcast support/Component signal support/Line doubler/Security password/Security slot

## Lens shutter with image muting

A lens shutter is used in place of a lens cap. Besides protecting the lens, the shutter can be used to pause and resume presentations without turning off the power.



Shutter open



Shutter closed

## Quiet operation, with low-noise fan

Operation is exceedingly quiet, meaning presentations can be enjoyed without the distraction of fan noise.



## Designed for both ease of use and attractive appearance

Usability is emphasized throughout. An example is the use of large buttons on the top of the projector for all the main operations, with icons clearly indicating their functions.



## A new interface for greater usability

Two menu levels are provided, based on frequency of use, for improved usability. Descriptions are displayed for each menu item, enabling operations to be performed without confusion.



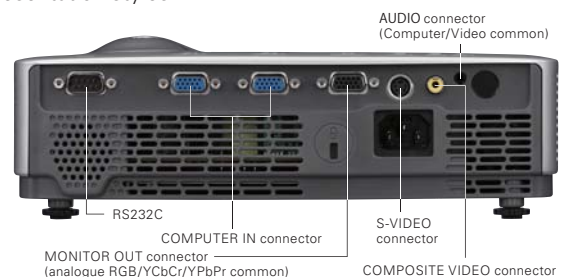
## Buttons laid out for easy operation

Buttons are provided for direct control of commonly used features, such as screen blanking and colour mode switching, making convenient functions readily available. Moreover, these direct-operation buttons are located at the lower part of the remote control while the buttons for menu screen operations are at the upper part. Separating buttons visually in this way makes their operations easier to recognize and remember.



## Connectors enabling extended features

An array of connectors on the back panel supports a variety of presentation styles.





Value model with optimum cost performance,  
taking full advantage of BrilliantColor™.

# PV100 Series



KG-PV131X 2000 lm 1.9 kg XGA

KG-PV131S 2000 lm 1.9 kg SVGA



## Adopts BrilliantColor™ for more faithful colour reproduction

The PV100 Series makes full use of BrilliantColor™. Halftone reproduction and brightness are vastly improved, enabling projection of high-clarity images while maintaining high contrast. Pictures and text can be displayed clearly even in brightly lit rooms.

## The long-life lamp provides 4,000 hours of use

There is no need to worry about lamp failure even during long presentations. In addition, the trouble and cost of lamp replacement is minimized.



## Connect two PCs at the same time

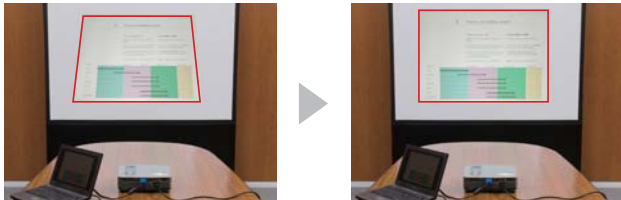
With two computer input connectors, two PCs can be hooked up to the projector simultaneously. Input can be switched on the go, without plugging and unplugging. This feature allows a wide variety of presentation possibilities, such as using one PC for slides and one for video.



Photo: PS200 Series model

## The functions needed for starting up presentations quickly

Thanks to the quick start feature, the projector is ready for use in about 18 seconds after switching on. A keystone correction feature automatically adjusts for perpendicular nonalignment. Presentations can be started right away, without the need for troublesome preparations. After use, the cooling fan continues operating after the power is turned off, even when the power cord has been unplugged, allowing fast takedown.



Automatic keystone correction

## Lens shutter with image muting

A lens shutter is used in place of a lens cap. Besides protecting the lens, the shutter can be used to pause and resume presentations without turning off the power; plus there is no need to worry about misplacing the lens cap.



Photo: PS200 Series model

## Quiet operation, with low-noise fan

Operation is exceedingly quiet, meaning presentations can be enjoyed without the distraction of fan noise.



### ■ Main functions

Auto keystone correction (vertical)/Quick start/Quick off/Auto source/Auto adjustment/Sliding lens shutter/One-touch height adjustment/Presentation timer/Colour mode switching/Digital zoom/Blank/Freeze/Front ventilation/DVD progressive input support/HDTV broadcast support/Component signal support/Line doubler/Security password/Security slot

## Designed for both ease of use and attractive appearance

Usability is emphasized throughout. An example is the use of large buttons on the top of the projector for all the main operations, with icons clearly indicating their functions.



## A new interface for greater usability

Two menu levels are provided, based on frequency of use, for improved usability. Descriptions are displayed for each menu item, enabling operations to be performed without confusion.



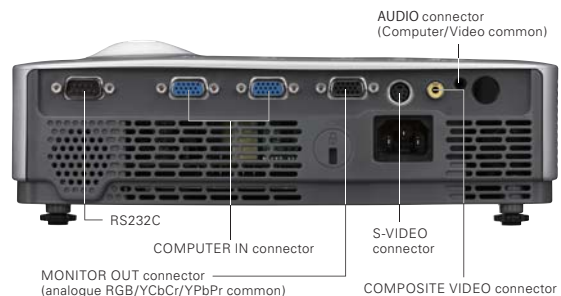
## Buttons laid out for easy operation

Buttons are provided for direct control of commonly used features, such as screen blanking and colour mode switching, making convenient functions readily available. Moreover, these direct-operation buttons are located at the lower part of the remote controller while the buttons for menu screen operations are at the upper part. Separating buttons visually in this way makes their operations easier to recognize and remember.



## Connectors enabling extended features

Connectors on the rear panel are provided for COMPUTER IN connector (x2), MONITOR OUT connector, RS232C, S-VIDEO connector, and COMPOSITE VIDEO connector, thereby allowing a wide variety of presentation styles.



## Enjoy movies and home videos on a large screen

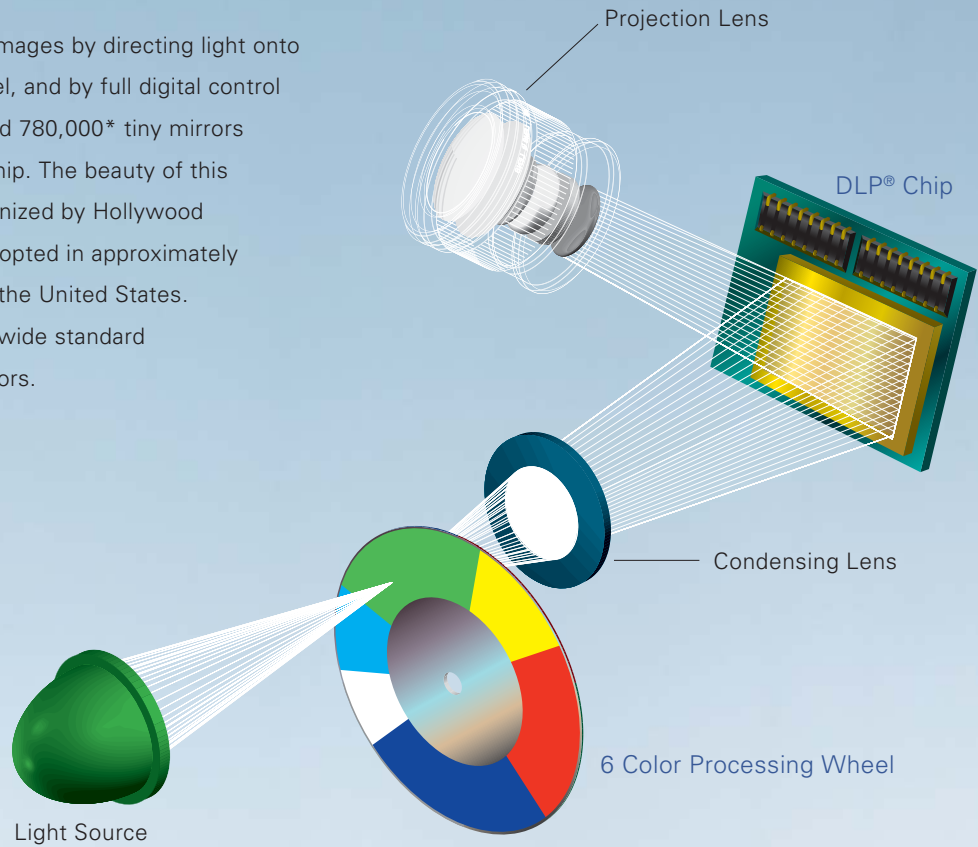
Two video input connectors are provided, for S-Video and COMPOSITE video, and by using the projector to show DVD or video movies you can enjoy the large-screen impact of a cinema.



## Imaging technology with Hollywood's stamp of approval DLP®, the choice for those who won't compromise on image quality.

DLP® technology displays images by directing light onto a fast-spinning colour wheel, and by full digital control of the on/off state of around 780,000\* tiny mirrors embedded into the DLP® chip. The beauty of this technology has been recognized by Hollywood movie creators, and it is adopted in approximately 6,000 cinemas throughout the United States. DLP® can be called a worldwide standard imaging system for projectors.

\*Approximately 780,000 in XGA mode, or 480,000 in SVGA mode.

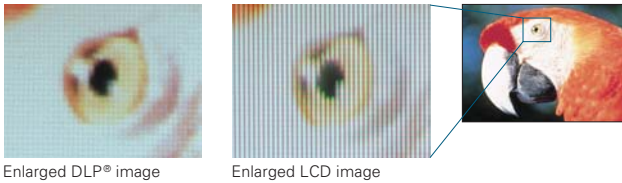


**Compact, lightweight design for easy transportation**

Among 3000lm class projectors, the KG-PS232Xh is exceptionally compact, thanks to the structurally simple DLP® optics and the high-density packaging technology refined over years of developing mobile projectors. Weighing just 1.9kg, this projector is ideal for both in-company meetings and presentations outside the office.

**With no gaps between picture elements, images are exquisitely smooth**

The DLP® chip precisely controls each micron-level picture element. Because there is less than a one-micron gap between elements, the eye sees no gaps between them. The result is images with unbelievable smoothness.



**Displays high-clarity images free of colour drift and unevenness**

DLP® generates colour using a single chip and a single colour filter rotating at high speed. It is able to display single-colour backgrounds without colour drift or migration, as well as showing small text and colour figures with high clarity.

**For smooth display of video action, DLP® excels**

DLP Cinema® projector technology was developed for digital movie theaters. The DLP® based on this boasts extremely fast response time to projected data. It is able to show fast-moving video images smoothly without blurring, for greater enjoyment of sports and action movies.

Comparison of movie projection



**Photographs are unbelievably clear**

DLP® faithfully reproduces all color gradations, keeping the smallest details visible even in shadowed portions of images.



**Image quality remains constant over long-term use**

The simple structure of a DLP® imaging system makes it nearly impervious to dust and grime, for long-term use without deterioration. Stable image quality is maintained, without the changes seen in LCD systems or the burn-in that affects CRT and plasma displays.

Projection image of DLP®



Image of 1,872 hour continuous projection



Image of 5,208 hour continuous projection

Projection image of LCD



Image of 1,872 hour continuous projection



Image of 5,208 hour continuous projection

\*Evaluation test report by Munsell Color Science Laboratory(MCSL) at Rochester Institute of Technology in January, 2004

**Black text is really black**

The high contrast means the black colours of text and figures important in business presentations are clearly displayed.

Higher contrast ratio projector



Lower contrast ratio projector

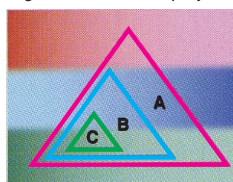


Contrast ratio influences the range of tonal gradation a projector can express.

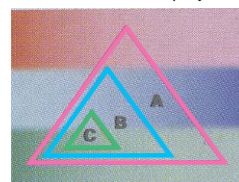
**Colors stay vivid when photographs and charts are combined**

Thanks to the high contrast, colour graphs are clearly displayed even when they are combined with colour photos.

Higher contrast ratio projector



Lower contrast ratio projector



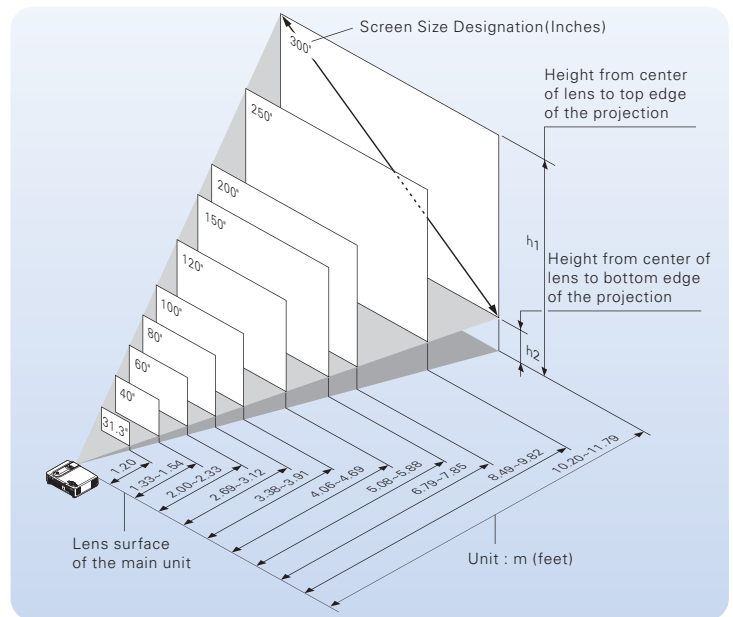
Different hues of the same colour are clearly reproduced.

# Projector Positioning

## Screen size and projection distance

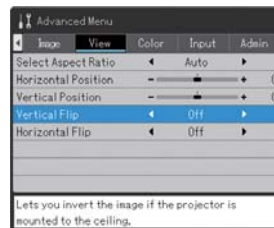
The information here can be used to estimate the screen size in relation to projection distance when positioning a projector. Images can be focused at distances of 1.20m to 11.79m from the front of the lens. Position the projector within this range.

Screen Size Designation (Inches)	Screen Size Width x Height (m)	Wide - Tele (m)	Height h1 (m)	Height h2 (m)
31.3"	0.64x0.48	—~1.20	0.53	0.05
40"	0.81x0.61	1.33~1.51	0.67	0.06
60"	1.22x0.91	2.00~2.33	1.00	0.09
80"	1.63x1.22	2.69~3.12	1.35	0.13
100"	2.03x1.52	3.38~3.91	1.68	0.16
120"	2.44x1.83	4.06~4.69	2.02	0.19
150"	3.05x2.29	5.08~5.88	2.53	0.24
200"	4.06x3.05	6.79~7.85	3.36	0.31
250"	5.08x3.81	8.49~9.82	4.20	0.39
300"	6.10x4.57	10.20~11.79	5.04	0.47



## Mounting from the Ceiling

When a projector is ceiling mounted, the image must be inverted vertically and horizontally. Perform this setting on the menu using the cursor buttons (◀▶).



Vertical flip : OFF  
Horizontal flip : OFF



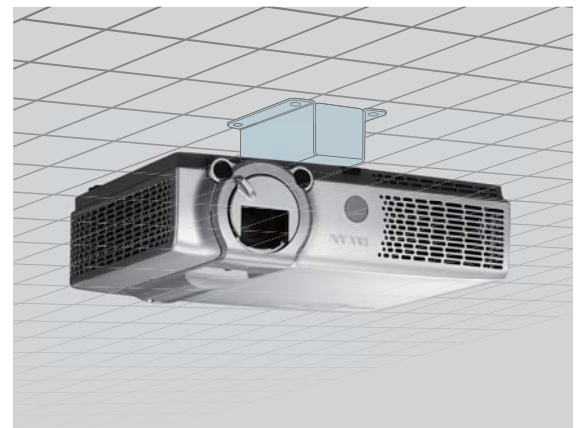
Vertical flip : OFF  
Horizontal flip : ON



Vertical flip : ON  
Horizontal flip : ON



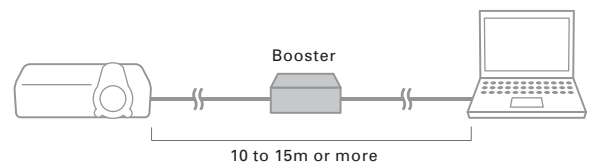
Vertical flip : ON  
Horizontal flip : OFF



A PS200 Series model

## When a long cable is used

When the distance between the projector and computer requires a computer cable longer than 10m, it is possible that there will be significant noise, and the screen images will not be displayed in some cases, due to RGB signal attenuation. Measures to be taken in such cases include use of a signal booster or a low-attenuation cable.



## Ambient Lighting

The ability of a projector to reproduce colours accurately is greatly affected by ambient lighting. Presentations should, to the extent possible, be given in rooms with minimal outside light.

\*The photos are not actual projector images.

In a darkened room



In a room with fluorescent lighting



Although dependent somewhat on the type of fluorescent lamp, the blue colour of those typically used in offices has a major effect on projected images.

In a sunlit room



Sunlight on the screen results in an overall fading of colours.

# Description of Main Features

## Setup-related Features

### ● Quick start

The projector is ready for use a mere 18 seconds after the power is turned on, enabling presentations to be started immediately.

### ● Quick off

An internal power supply keeps the cooling fan operating to cool down the lamp even after the power is turned off and the cord is removed. The projector can be packed up and carried away as soon as a presentation is finished.

### ● Automatic detection

The projector automatically detects the input source, such as a computer or video deck.

### ● Auto adjustment

Factors such as RGB signal phase, clock frequency, and resolution are adjusted automatically.

### ● Colour mode selection

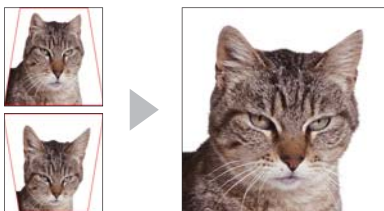
The optimal coloration can be chosen for different types of presentations. Blackboard mode, for example, automatically adjusts the colour for projection on a blackboard.

### ● Auto focus (PS200 Series only)

An infrared sensor on the front of the projector determines the distance from the screen and adjusts focus accordingly.

### ● Auto keystone correction

Trapezoidal distortion when the projector is not in perpendicular alignment with the screen is corrected automatically.



Vertical keystone correction is made automatically  
\*The photos are not actual projector images

### ● One-touch height adjustment

Adjustment of projected images to the proper height is accomplished simply by pressing a button on the front adjuster foot of the projector.

### ● Lens shutter

A TAXAN-original lens shutter is adopted in all models. The bother of removing and replacing a lens cover is eliminated, along with worries about losing the cover.



## Projection-related Features

### ● Auto power-off

The projector shuts down automatically after a preset interval (5 to 20 minutes) when no signal is being sent to the projector from an input source.

### ● Eco mode (PS200 Series only)

A low-power eco mode is available, for reducing power use by the projector. Using this mode extends lamp life.

### ● Blank

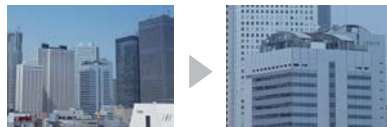
Both the screen images and sound can be muted during a presentation, such as when the presenter wishes the audience to concentrate on a spoken explanation or on written materials that have been handed out.

### ● Freeze

A pause feature can be used during a presentation both for pausing video images and for pausing PC screen images, such as while searching for other material on the PC.

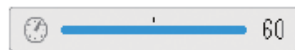
### ● Digital zoom

Images projected on the screen can be zoomed in and out digitally. This feature can be used to enlarge small text making it more readable.



### ● Presentation timer

A presentation timer can be set in 10-minute intervals, between 10 and 60 minutes. The remaining time is displayed at the lower right of the screen, helping the presenter allot time effectively.



### ● Front ventilation

Heat is discharged from the front of the unit, so as not to discomfort the people seated around the projector.

### ● Low-noise design

By designing the projector for efficient heat discharging, noise is kept to well below the 40dB level typical in a library. The audience can concentrate on the presentation without being bothered by fan noise.

## Image-related Features

### ● DVD progressive input (480p, 576p) support

By using a component video cable, DVD progressive input is supported. 16:9 wide screen display is also supported.

### ● HDTV (1080i, 720p) support

Digital HDTV broadcasts can be projected on the screen. 16:9 wide screen display is also supported.

### ● Component signal support

High image quality content such as movies and sports can be enjoyed by connecting a DVD recorder or digital HDTV tuner.

### ● Line doubler

In order to improve the quality of interlaced video signals, processing is performed to fill in the missing lines (those not scanned on the first pass). The higher resolution achieved results in smoother display of video images.

## Security-related Features

### ● Security password

A password can be set to protect the projector from unauthorized use. When a password is set, only persons knowing the password can start up the projector.



### ● Security slot

To prevent theft, a wire lock can be attached to a desk or the like and inserted in the security slot provided on the projector.

## Other Functions

### ● Monitor output

While images are being projected on the screen,\* they can be output to another projector or to a display monitor.

\*Only signals input via COMPUTER IN.

### ● RS232C connector

An RS232C connector (D-sub 9-pin) is provided for remote control of the projector from a PC.

## Specifications

Model		KG-PS232Xh	KG-PS232X	KG-PV131X	KG-PV131S	
Projection method		1-chip DLP®				
DLP®	Chip size	0.55"				
	Pixels	786,432 / XGA (1024×768)			480,000 / SVGA (800×600)	
Projection lens		1:1.15 Manual Zoom / Auto Focus F2.45-2.62, f=18.7-21.5mm		1:1.15 Manual Zoom / Manual Focus F2.45-2.62, f=18.7-21.5mm		
Light source (high pressure mercury lamp)		230W		200W		
Screen size	Minimum	31.3" (projection distance 1.2m)				
	Maximum	300" (projection distance 10.20m)				
Colour reproduction		Full colour (16,770,000 colours)				
Brightness	Normal mode	3000lm	2500lm	2000lm	2000lm	
	Eco mode	approximately 20% less brightness		—	—	
Noise	Normal mode	33dB		30dB		
	Eco mode	30dB		—		
Contrast ratio (Full on / off)		2000:1				
Audio output		Mono 0.5W				
Scanning frequency (Horizontal / Vertical)		15-80kHz / 50-85Hz				
RGB I/O	RGB input terminal	Mini D-Sub 15pin (RGB / YCbCr / YPbPr)×2				
	RGB output terminal	Mini D-Sub 15pin (RGB / YCbCr / YPbPr)×1				
	Resolutions	VGA (640×480)	Expansion / True		Expansion / True	
		SVGA (800×600)	Expansion / True		True	
		XGA (1024×768)	True		Compression	
SXGA (1280×1024)		Compression		—		
Video I/O	Input signal	NTSC3.58, NTSC4.43, PAL, PAL_N, PAL_M, PAL60, SECAM, YCbCr (NTSC, PAL), YPbPr (480p, 576p, 1080i, 720p)				
	Input terminals	RCA (COMPOSITE Video)×1 / Mini DIN 4pin (S-Video)×1 / Mini D-Sub 15pin (RGB / YCbCr / YPbPr)×2				
Audio input terminal		3.5mm Stereo Mini Jack (RGB / Video)×1				
Other terminals		Mini D-sub 9pin (RS232C)×1				
Use environment		Temp.:5-35°C, 41-95°F / Humidity:10-85% (but no condensation)				
Power		AC100V-240V, 50 / 60Hz				
Power consumption		Normal mode:300W Eco mode:245W Standby:10W or less		Normal mode:245W Standby:10W or less		
Dimensions (not including protruding parts)		260×58×210m (W×H×D)				
Weight		1.9kg				
Supplied accessories		Remote control (including two AA batteries), Power cable (1.8m / 5.9feet)×1, Ferrite core×3 RGB signal cable (Mini D-Sub 15-pin, 2m / 6.6feet)×1, Soft Case×1, User's manual (CD-ROM edition)×1 Startup Guidex1, Safety and Support Service Guidex1, Security Sheet×1, Security Label×1				

## Optional Accessories

Description	Code
PV100 Series Lamp	KG-LPV1200
PS200 Series Lamp	KG-LPS2230
Ceiling mount for PS200/PV100 Series	KG-BRPS2

URL :  
[www.taxan-projector.com](http://www.taxan-projector.com)

## KAGA COMPONENTS CO.,LTD.

2-2-9 Hongo, Bunkyo-ku Tokyo 113-0033, JAPAN  
 PHONE : +81-3-4455-3178 FAX : +81-3-3814-4544