

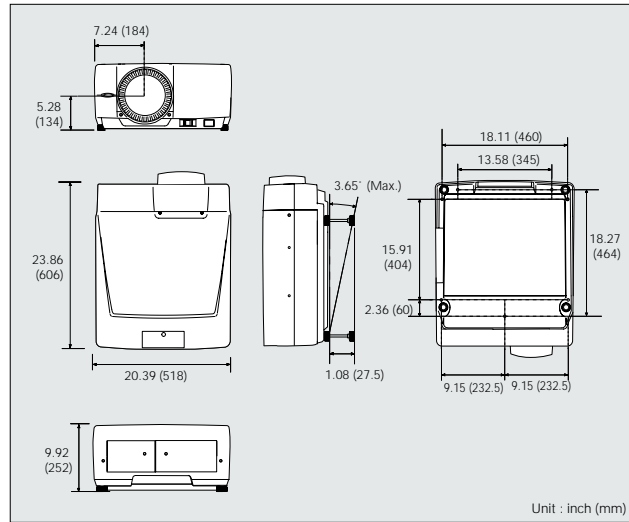
## Multimedia LCD Projector

## PLC-XF60/EF60

### The Solution to Professional Demands



#### External dimensions



#### Dedicated options

**Installation example**

Mounting hardware for low ceilings  
**POA-CHS401**

**Installation example**

Mounting hardware for high ceilings  
**POA-CHL401**

**Replacement Filter POA-FIL-140**

**Smoke Resistant Box POA-SR-140**

**Bumper Frame POA-BF-140**

\*Appearance may change due to modification.

#### Specifications

Model number	PLC-XF60	PLC-EF60
System	3-color LCD shutter projection system	
Optics	Dichroic mirror separation/prism synthesis system	
LCD panel	Size	1.4-inch x 3, 4:3 aspect ratio
	Drive system	Polysilicon active matrix TFT
	Number of pixels	2,359,296 pixels: 786,432 (1,024 x 768) x 3
	Configuration	Stripe
Lens	Optional	
Lamp	300W UHP x 2	
Projection size	30 to 500 inches diagonally	
Throw distance	Differs depending on installed lens	
Color reproduction	Full color (1,070 million colors)	
Brightness*1 *2	6,500 lumens	5,800 lumens
Uniformity*1	90%	
Contrast ratio*1 *3	1,300:1 (full on/full off)	
Audio output	3 W + 3 W (stereo)	
Speaker	Ø2.8 cm x 2	
Scanning frequency	H-sync: 15-120 kHz, V-sync: 48-120 Hz, Dot clock: 230 MHz or less	
Resolution RGB	1,024 x 768 dots (Dot resizing for 1,600 x 1,200 - 1,280 x 1,024)	1,400 x 1,050 dots (Dot resizing for 1,600 x 1,200)
Computer compatibility	UXGA/SXGA/XGA/SVGA/VGA/Mac	
Color system	PAL/SECAM/NTSC/NTSC 4.43/PAL-M/PAL-N	
Input terminals	Input 1	Image: DVI-D x 1 (HDCP compatible*4), mini D-sub 15-pin x 1 Audio: Stereo mini jack x 1
	Input 2	Image: BNC x 5 (RGBHV/YCbCr/Video) Audio: Stereo mini jack x 1
	Input 3	Image: RCA x 3 (Y/Cb/Video), S-Video x 1 Audio: RCA x 2 (R/L (mono))
	Input 4	MVP slot 1 (Warp & blending board installed) Image: DVI-D x 1, Serial port: D-sub 9-pin x 2 (in/out)
	Input 5	Open
Output terminals	Image: Mini D-sub 15-pin x 1 (analog RGB)	
Communication terminals	USB port: Type A x1, type B x 1 Serial port: D-sub 9-pin x 2 (in/out) Wired remote jack: Stereo mini jack x 1	
Exclusive terminal	For Smoke Resistant Box	
Fan noise	39 dB (Eco mode)	
Operating temperature	5-35 C	
Power supply	AC 100-240 V, 50/60 Hz, auto voltage	
Power consumption	900 W	
Dimensions (W x H x D)	20.39" x 9.92" x 23.86" (518 x 252 x 606 mm)	
Weight	54.3 lbs (without lens) (24.7 kg)	
Standard accessories	Owner's manual, warranty card, AC power cord (3 m, x 1), wired remote control cable (x 1), wireless/wired remote control(x 1), AA-size dry batteries (x 2) supplied, PIN code label, DVI cable (x 1), VGA cable (x 1), lens attachment (x 1), light shield (x 2), application software CD-ROM, dust cover	

\*1 The figures are averages of all products at the time of shipment, and are indicated in accordance with JIS X6911: 2003 Data Projector Specifications Format. The measurement method and conditions are described in Appendix 2.  
\*2 In 2 lamp mode, with the LNS-W04 installed.  
\*3 In High Contrast mode, lamp mode: Auto.  
\*4 DVI input images may not appear depending on the change of HDCP specifications.  
All trademarks and registered trademarks are the property of their respective trademark owners.



#### Safety Precautions

- Do not install the LCD projector in areas exposed to water, humidity, dust, oil or smoke or in close proximity to heat sources. Make sure the heat vents are not blocked. Fire, electrical shock or unit malfunction may result if the above precautions are neglected. Do not look through the lens while projecting as damage to the eyes could result. Take special care when children are close by. Do not look at the laser beam coming out of the remote control unit or direct the laser beam toward a person. Direct contact with the laser beam may cause damage to the eyes.

#### Remarks

- LCD panel manufacturing requires extremely high-precision technology with pixels having a 99.99% quality control rating. However, there does exist a 0.01% or smaller possibility of dead pixels or constantly lit pixels. Please note that product colors in the brochure may differ slightly from those of actual products. All screen pictures in the catalog are simulated. Product appearance and specifications subject to change without notice. Please be aware that extended, continuous use of an LCD projector may cause the optical components to wear more quickly.

Further details regarding this product can be accessed at <http://www.sanyo-lcdp.com/english/>

**\* Caution:** please consult the instruction manual to ensure safe and proper operation of the product.

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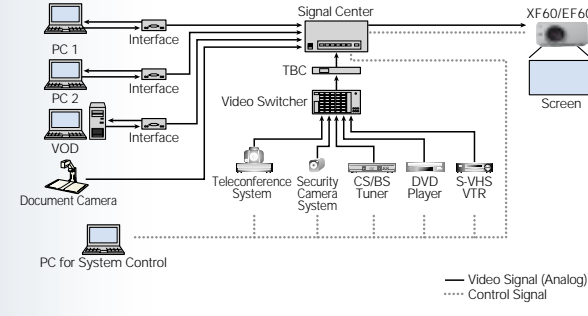
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SML048



Conventions and Other Events



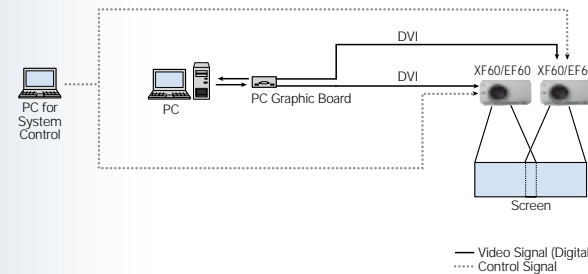
Project crisp, sharp images from a variety of sources - PCs, document cameras, VTRs and more. With the XF60/EF60's high output and brightness, there's no need to dim the room lights - so viewers can read handouts and take notes comfortably during the presentation. Using a PC gives you total control over image source switching, for easy, flexible large-screen presentations.



Theaters and Halls



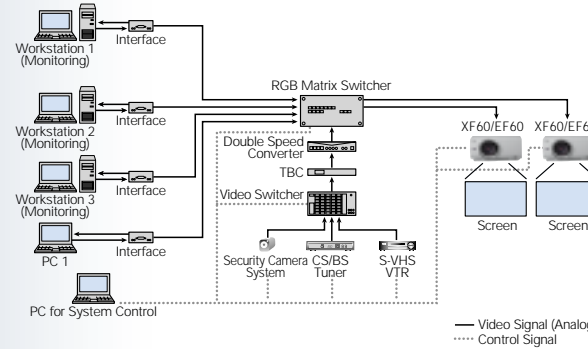
You can use the simple blending function to input signals from a split source separately to two PLC-XF60 or PLC-EF60 projectors, and display them onto a special screen as a single image. The warp function also lets you project images onto a curved screen. These functions make it easy to create impressive, high-resolution visual effects in halls, theaters, and other large venues.



Monitor Control



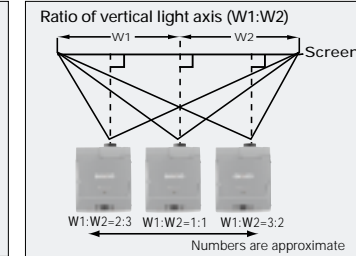
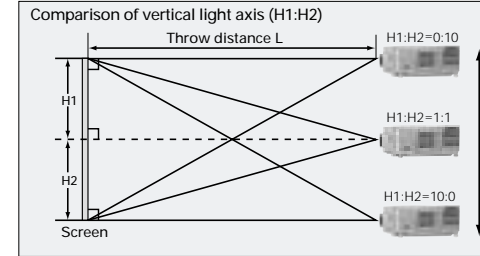
You can configure a large-screen monitor system by using multiple XF60/EF60s in a rear projection system to project images onto a multi-screen display. Use it to reproduce complex visual information, such as network control schematics, maps, and images from surveillance cameras. Using a system control PC makes it easy to operate and manage this kind of system.



Optional Lenses

Product name	Wide fixed lens 1 LNS-W01Z	Wide zoom lens LNS-W02Z	Wide fixed lens 2 LNS-W03	"1.4" S standard zoom (1.8"Wide zoom") LNS-W04	Standard zoom lens 2 LNS-S02Z	Standard zoom lens 3 LNS-S03	Semi-long zoom lens LNS-M01Z	Long fixed lens LNS-T01	Long zoom lens LNS-T02	Long zoom lens LNS-T03				
Product number	LNS-W01Z	LNS-W02Z	LNS-W03	LNS-W04	LNS-S02Z	LNS-S03	LNS-M01Z	LNS-T01	LNS-T02	LNS-T03				
Focal length	45mm	52-68mm	30mm	58-76mm	76-97mm	97-131mm	125-162mm	253mm	158-221mm	224-325mm				
F value	F2.5	F2.5-F2.9	F2.6	F1.7-2.3	F2.0-F2.3	F1.7-F2.7	F2.0-F2.6	F2.0	F2.0-F2.6	F2.2-F2.5				
Lens aperture	175mm	120mm	175mm	122mm	116mm	137mm	95mm	158mm	130mm	169mm				
Lens weight	5.8kg	2.5kg	3.1kg	2.8kg	1.9kg	3.7kg	1.9kg	3.8kg	3.1kg	7.3kg				
Projection light axis	H1:H2 W1:W2	10:0-0:10 2:3-3:2	10:0-0:10 2:3-3:2	1:1 2:3-3:2	10:0-0:10 2:3-3:2	8:-1:-1:8 2:3-3:2	10:0-0:10 2:3-3:2	10:0-0:10 2:3-3:2	10:0-0:10 2:3-3:2	10:0-0:10 2:3-3:2				
Zoom/focus	Fixed/manual	Motor driven	Fixed/manual	Motor driven	Motor driven	Motor driven	Motor driven	Fixed/manual	Motor driven	Manual				
Lens memory	—	—	—	—	—	—	—	—	—	—				
Twin stack support	—	—	—	—	—	—	—	—	—	—				
Throw	Throw (mm)	Wide (mm)	Stack (mm)	Tele (mm)	Throw (mm)	Wide (mm)	Stack (mm)	Tele (mm)	Wide (mm)	Stack (mm)	Tele (mm)	Wide (mm)	Stack (mm)	Tele (mm)
30-inch type	874	1028	1190	1365	575	1101	1444	1497	1416	1938	2611	—	—	—
40-inch type	1193	1401	1616	1850	790	1514	1966	2037	1958	2620	2611	—	—	—
50-inch type	1513	1774	2042	2335	1004	1927	2489	2577	2500	3302	3315	—	—	—
60-inch type	1832	2146	2469	2820	1218	2340	3011	3117	3041	3983	4019	—	—	—
70-inch type	2151	2519	2895	3305	1433	2754	3533	3657	3583	4665	4723	—	—	—
80-inch type	2471	2891	3321	3790	1647	3167	4055	4197	4125	5347	5427	—	—	—
90-inch type	2790	3264	3748	4275	1861	3580	4577	4737	4666	6029	6131	—	—	—
100-inch type	3109	3637	4174	4760	2075	3993	5099	5276	5208	6711	6835	—	—	—
110-inch type	3429	4009	4601	5245	2290	4407	5621	5816	5750	7392	7538	—	—	—
120-inch type	3748	4382	5027	5730	2504	4820	6143	6356	6291	8074	8242	—	—	—
130-inch type	4067	4755	5453	6215	2718	5233	6665	6896	6833	8756	8946	—	—	—
140-inch type	4386	5127	5840	6700	2932	5647	7187	7436	7374	9438	9650	—	—	—
150-inch type	4706	5500	6306	7185	3147	6060	7709	7976	7916	10119	10354	—	—	—
160-inch type	5025	5872	6732	7670	3361	6473	8231	8516	8458	10801	11068	—	—	—
170-inch type	5344	6245	7159	8155	3575	6886	8754	9056	8999	11483	11762	—	—	—
180-inch type	5664	6618	7585	8640	3789	7300	9276	9596	9541	12165	12465	—	—	—
190-inch type	5983	6990	8012	9125	4004	7713	9798	10136	10083	12846	13169	—	—	—
200-inch type	6302	7363	8438	9610	4218	8126	10320	10676	10624	13528	13873	—	—	—
230-inch type	7260	8481	9717	11065	4861	9366	11886	12296	12249	15574	15985	—	—	—
250-inch type	7899	9226	10570	12035	5289	10192	12930	13376	13332	16937	17393	—	—	—
280-inch type	8856	10344	11849	13490	5932	11432	14496	14996	14957	18982	19504	—	—	—
300-inch type	9495	11089	12702	14460	6361	12259	15541	16076	16041	20346	20912	—	—	—
330-inch type	10453	12207	13981	15915	7004	13499	17107	17696	17666	22391	23023	—	—	—
350-inch type	11091	12952	14834	16885	7432	14325	18151	18775	18749	23755	24431	—	—	—
380-inch type	12049	14070	16113	18340	8075	15565	19717	20395	20374	25800	26543	—	—	—
400-inch type	12688	14816	16966	19310	8503	16392	20761	21475	21457	27164	27950	—	—	—
410-inch type	13007	15188	17392	19795	8718	16805	21283	22015	21999	27845	28654	—	—	—
420-inch type	13326	15561	17818	20280	8932	17218	21806	22555	22540	28527	29358	—	—	—
430-inch type	13646	15933	18245	20765	9146	17631	22328	23095	23082	29209	30062	—	—	—
440-inch type	13965	16306	18671	21250	9361	18045	22850	23635	23624	29891	30766	—	—	—
450-inch type	14284	16679	19097	21735	9575	18458	23372	24175	24165	30573	31470	—	—	—
460-inch type	14604	17051	19524	22220	9789	18871	23894	24715	24707	31254	32174	—	—	—
470-inch type	14923	17424	19950	22705	10003	19284	24416	25255	25249	31936	32877	—	—	—
480-inch type	15242	17797	20377	23190	10218	19698	24938	25795	25790	32618	33581	—	—	—
490-inch type	15562	18169	20803	23675	10432	20111	25460	26335	26332	33300	34285	—	—	—
500-inch type	15881	18542	21229	24160	10646	20524	25982	26875	26873	33981	34989	—	—	—

Ratio of light axis of image throw



Ratio of projection light axis (H1:H2, W1:W2) can be electronically changed. Range of change differs according to lens.

- \*1 The approximate projection distance has been calculated based on lens specifications. A maximum 5% differentiation may occur due to minute lens size/shape variations.
- \*2 The "stacking point" is a recommended distance best for projection when using 2 stacked units. Due to minute lens size/shape variations, best results may not be achieved when unit is positioned away from the recommended stack point area.
- \*3 Short lenses (LSN-W01Z/W02Z/W03) cannot be used for stack projection.
- \*4 Optional lenses are provided with dedicated tools for lens changing.



Real XGA Projector 6500lm PLC-XF60



Real SXGA+ Projector 5800lm PLC-EF60

Resolution	High Contrast Optical System	DRIT*1	3D AUCC*2	12bit Digital Gamma Correction	3D Digital Progressive	3D Digital Y/C Separation	3D Digital I/R	Ghost Canceler	Intelligent Sharpness Control	3-Z/2-2 Pulldown	DVI(HDCP) Compatible	Auto Picture Control	Color Management System	Multiple-Lamp System	Fail-Safe Function	LENS SHIFT U/D,RL	Digital KEYSTONE	Digital Zoom	LENS Exchange	LENS MEMORY	Easy Stackable	360-Degree Tilt Angle	MVP*3 System	Mechanical Shutter System	WARP & BLENDING	My Menu Function	Optional Filter Box compatible	Monitor Out	USB-Key Security	Built-in Speaker	Filter Warning LED	USB Mouse*4 Control	Power Management System	Eco Mode	Wireless/Wired Remote Control	Multi Language
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PLC-XF60	XGA																																							
PLC-EF60	SXGA+																																							

# Performance You Would Expect in Projectors One Class Above

After carefully analyzing professional needs, SANYO has used its advanced technologies to develop a projector series that offers an ideal solution to high-level applications.



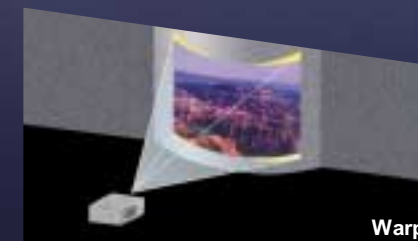
## 3-LCD Projector

Designed specifically for professional use, these high-performance projectors are at the top of their class in every essential presentation requirement: image quality, operating ease, installation flexibility and maintenance.

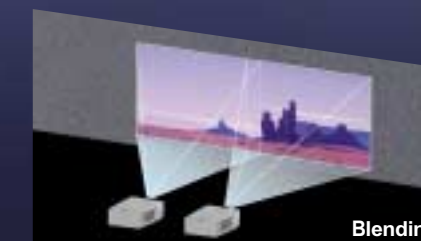
PLC-XF60/EF60

### Warp & Blending

The PLC-XF60/EF60 projects images onto a screen with a curved surface, letting you easily construct an advanced theater system.



Warp



Blending

### Single Intake and Exhaust Vents

Air is drawn in through one vent and exhausted from another. You get simpler maintenance, with only one filter to replace.



### Front Interface Panel

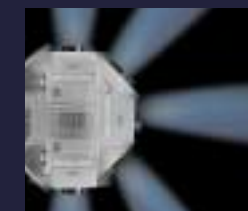
Slots for optional boards and other terminals are right on the front panel for easy access. You don't need extra space behind the unit\*.



\* A minimum space is required.

### 360-Degree Tilt Angle

The PLC-XF60/EF60 can project images while it is tilted 360 degrees around its horizontal axis in either direction—for more flexible setup.



### Touch Pad on Unit Top

The touch pad on top makes it easy to access and adjust settings. You can also operate the PLC-XF60/EF60 with a USB-connected mouse.



### RF Remote Control with Touch Pad

The PLC-XF60/EF60's RF remote control unit features a handy touch pad for easy operation, even in dark rooms.



### Progressive Scan IC

The newly developed progressive scan IC improves image quality. 2-3 pulldown compatibility also provides outstanding images from film sources.

### Mechanical Shutter System

A new shutter mechanism provides complete blackness when no image is being projected.

## Performance

### 6500 Lumens Brightness

The PLC-XF60/EF60 is equipped with XGA / SXGA+ LCD panels with micro lenses. The two UHP lamps combine with the industry's most advanced optical engine to deliver class-leading brightness of 6500 lumens.

\* 5800 lumens for the PLC-EF60



### 1300:1 Contrast Ratio

The new mechanical shutter system helps SANYO's high-performance optical system achieve its best-in-class contrast ratio of 1300:1\*.

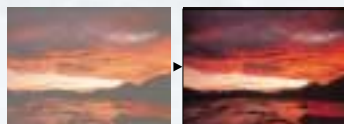
This is one more reason for the PLC-XF60/EF60's crisp, high-quality images. \*In High Contrast mode

### Progressive Scan IC

A newly developed progressive scan IC improves image quality, and a SANYO original cross-color separation circuit helps achieve superior diagonal resolution. Also offering 2-3 pulldown compatibility (HDTV compatibility), the PLC-XF60/EF60 delivers high-quality image projection from film sources.

### 12-Bit Digital Gamma Correction

This gamma correction control function achieves smoother gradation characteristics by adjusting the gradation according to the image being input.



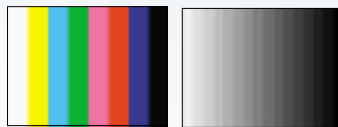
### Mechanical Shutter System

A new shutter mechanism clicks into place to block the lamp light the instant you turn off the image. It also prevents overlapping images when you are using several projectors on a single screen.

### Built-In Test Pattern

A built-in test pattern lets you make precise, detailed adjustments during setup, even when there's no external signal source available.

It also eliminates the need to connect and reconnect equipment when making adjustments with a twin-stack setup.



### Color/Gamma Correction

The CD-ROM supplied with the PLC-XF60/EF60 includes software for color correction and gamma correction. You can make precise, detailed adjustments to assure that the projected images have the superior quality needed in the most demanding professional applications.

## Usability

### Touch Pad on the Top

A touch pad on the top of the main unit lets you perform almost all operations available on the remote control. You'll find the touch pad especially convenient when making adjustments during system setup.

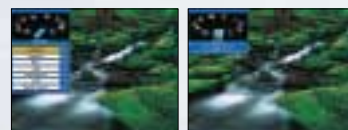


### Lens Memory

The lens position, zoom and focus settings can be stored in memory for instant recall. \* Supports only the standard lens (LNS-W04)

### New Graphical User Interface (GUI)

The PLC-XF60/EF60 introduces a new on-screen display designed for easier operation. With a customizable "My Menu" function and control possible via a USB mouse, you can get the flexibility to handle any operating conditions.



### RF Remote Control with Touch Pad

Because the PLC-XF60/EF60 uses an RF (radio frequency) remote control system rather than a conventional infrared system, you can get a much wider remote control range. The remote control unit also has a touch pad. Compared with units that have illuminated buttons, the touch pad is easier to operate in dark settings where it's difficult to see your fingertip.



### Input Search

With this function On, PLC-XF60/EF60 automatically starts input signal search when turning on the projector.

### Custom Startup

A company logo mark or other image can be captured and used as the startup image.

### Selectable Background

The PLC-XF60/EF60 can be set to display blue, black or a custom logo (captured image) when there is no input signal.

## Flexibility

### Front Interface Panel

The optional board slots and other connection terminals are set right on the front panel for easy access and extra layout flexibility. You can set up your PLC-XF60/EF60 system without worrying about how much space\* there is behind the unit. A terminal cover (with strap) is also provided. \* A minimum space is required.

### Rigid, Stackable Cabinet

The PLC-XF60/EF60 features an extremely rigid cabinet that lets you stack one unit atop another without special hardware. This improved rigidity makes it easy to set up a twin projection system or to stack a backup unit.



### Vertical/Horizontal Lens Shift

The lens can be shifted between 10:0 and 0:10\* vertically and between 3:2 and 2:3\* horizontally. This makes the PLC-XF60/EF60 much easier to set up than our previous two-lamp projectors. \* With the LNS-W04



### Keystone Correction

The PLC-XF60/EF60 provides keystone correction of +/-20 degrees horizontally and +/-35 degrees vertically.



Note: Horizontal keystone is ineffective with the PLC-EF60

### 360-Degree Tilt Angle

The PLC-XF60/EF60 can project images while the main unit is tilted 360 degrees around the horizontal axis in either direction. This gives you more setup flexibility - for example, you can set up with the screen on the ceiling or floor.



### Optional Lenses

SANYO offers a wide selection of optional lenses. This lets you find the right lens for any particular application, and it gives you the system layout and setup flexibility you need to handle a variety of conditions.

## Easy Maintenance

### Single Intake and Exhaust Vents

Air enters through a single vent on one side and exits through a single vent on the opposite side. This improves dust resistance. Because there's only one filter to replace, maintenance is easier too. The optional Smoke Resistant Box attaches easily for projector use in harsh environmental conditions.



### Filter Warning

An LED on the main unit lights up to indicate when the filter needs replacement. This helps prevent a clogged filter from causing serious equipment problems.



### Easy-Replaceable Lens Mount

The bayonet-mount system lets you change lenses quickly and easily.



### Optional Long-Life Lamp

The optional long-life lamp\* offers an extended life expectancy of about 10,000 hours. \* Available soon.

### USB Memory Backup

Image adjustment settings can be stored in the optional USB memory.\* You can then copy the stored data to another PLC-XF60/EF60 for use as a backup projector. You can also copy the user setting list. \* POA-USB01

### Security Functions

The 4-digit PIN code lock function prevents unauthorized use of the projector. The optional USB memory\* can also be used as a protect key. \* POA-USB01

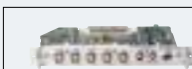


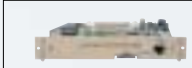


### Warning Log

Errors that occur in the main unit are logged in memory. This stored information can help reduce troubleshooting time and effort.

### Two Interface Board Slots

The front panel has two slots for interface boards. Both slots support the Multi Versatile Platform (MVP), so you can expand functions in the future. Input 4 supports both digital and analog (a Warp & Blending board comes as standard equipment). Input 5 is digital.



			
Product name Item code	5-BNC Board POA-MD16VD1	DVI Board POA-MD18DVI	Dual-SD Board POA-MD17SDID
			
Product name Item code	Network Board POA-MD19NET	Faroudja Board POA-MD09VD3	Mini D-sub15 Board POA-MD04VGA

