

THE (EASY) PROJECTOR BUYER'S GUIDE

Five things to know before you whip out that credit card, plus all of the latest models compared.

by Rich Malloy

Never have projectors been more affordable. And never have there been so many varieties from which to choose. In the past few months alone, a slew of new models with some amazing capabilities has appeared. The net result is that buying a projector is quite easy—but the challenge is buying the right one.

1 Know Your Types

Projectors come in all sizes and shapes, but naturally for our audience we concentrate on only the three most mobile types. Portables, weighing between four and six pounds, are best suited for general mobile business applications. They offer a good amount of power and features, yet often carry very affordable price tags. Ultraportables weigh between two and four pounds. These are of course targeted at highly mobile business users, and despite their lightness, offer a good amount of power. A new category, which we call Palm-size, applies to projectors that weigh less than two pounds. These models are so small they can run on batteries, but their output cannot hold a candle to their larger brethren. The Palm-size units are thus suited only to very specialized applications, such as slideshows in very dark rooms without AC power.

2 DLP vs. LCD

Not so long ago, DLP projectors were becoming so popular that they threatened to put the older LCD projectors on the endangered species list. Digital light processing (DLP) projectors use a single Texas Instruments chip that contains thousands of microscopic movable mirrors. Color is provided by a spinning color wheel that spins in sync with the micro-mirror chip. DLP projectors tend to be smaller and lighter than LCD projectors.

LCD projectors use an older and simpler image engine. They compose images via three tiny LCD panels, one for each of the primary colors. Because there are three panels available, LCD projectors tend to offer better color accuracy. Recently, new polysilicon LCD technologies have breathed new life into these models, and many major manufacturers such as Epson, Hitachi, and Sony have offered nothing but LCD projectors.

The most obvious difference between LCD and DLP projectors is their contrast ratios, where DLP models usually have a substantial edge. Note, however, that enhanced contrast is useful only in rooms that are very dark, a condition that might arise in a well-appointed home theater but rarely in business environments.

3 The Right Resolution

As with cameras and displays, the more pixels a projector has, the more expensive it will be. Of course, more pixels yield higher-quality images, but bear in mind that the typical PowerPoint slideshow will rarely benefit from increased resolution. There are, however, two areas where you will benefit from plenty of pixels. First, life will be easier for you if the resolution of your projector matches that of

your laptop. This is especially important if you like to present with your notebook's screen on. A projector can emulate the resolution of your laptop, and vice versa, but you'll get the sharpest picture on both devices if the respective resolutions match each other. The second factor is HDTV. To get the best 720p HDTV picture, you'll need XGA resolution.

A complicating issue here is the increasing popularity of widescreen notebooks. Getting the resolution of a notebook with a 16:9 aspect ratio to match a typical 4:3 projector is not particularly easy. Fortunately, manufacturers such as Optoma are starting to offer widescreen projectors. Jon Grodem, senior product manager for front projection at Optoma, told us that "all the user has to do is plug it in and it works, and it looks good. They don't have to start fiddling and adjust all their property settings." Grodem expects that Windows Vista will further spur demand for wide aspect-ratio projectors.

Most new business projectors with XGA resolution will do a surprisingly good job of showing giant HDTV images. But don't expect these models to be quite as good as entertainment-oriented projectors that cost two or three times as much. These expensive models have, among other things, special circuitry to handle full-motion video.



4 How Bright Is Bright Enough?

Aside from steadily decreasing prices, the most prominent change in projectors in the past few years has been their vastly increased light output. Most new portable and ultraportable projectors—even budget models—can beam out 2000 lumens or more. Such luminosity is more than sufficient in most business environments. But if you need more light, both Optoma and InFocus have just begun selling 3000-lumen projectors for less than \$1,300. Indeed, the only models for which brightness is still a factor are the new Palm-size models that use LED lamps. Here the brightness is so low that it's difficult to measure easily. But in a dark enough setting, even these models can be useful.

5 Bells & Whistles

In an effort to differentiate their projectors, manufacturers offer a variety of special features. These include HDTV compatibility, wireless connectivity options, powersaving modes for longer lamp life, and connectors for memory cards or USB drives.

At the same time, however, ever-shrinking price tags are causing bargain projectors to shed features faster than Simon Cowell can think of insults. One frequent omission is a full-featured remote control equipped with both a laser pointer and a set of buttons for navigating through a slideshow. If your projector does not have one of these, you'll probably have to purchase a remote, such as the excellent Logitech Cordless 2.4-GHz Presenter (\$79.95).

One of the best new features for projectors is an alternate input port. Some older models feature a CompaqFlash memory card slot, but a growing number of new devices sport USB Type B connectors, which enable presenters to present from a USB memory drive without any need for a laptop. In what is surely a harbinger of the future, the new ViewSonic PJ258D has a dock for a video iPod, enabling it to display movies without a laptop. ■

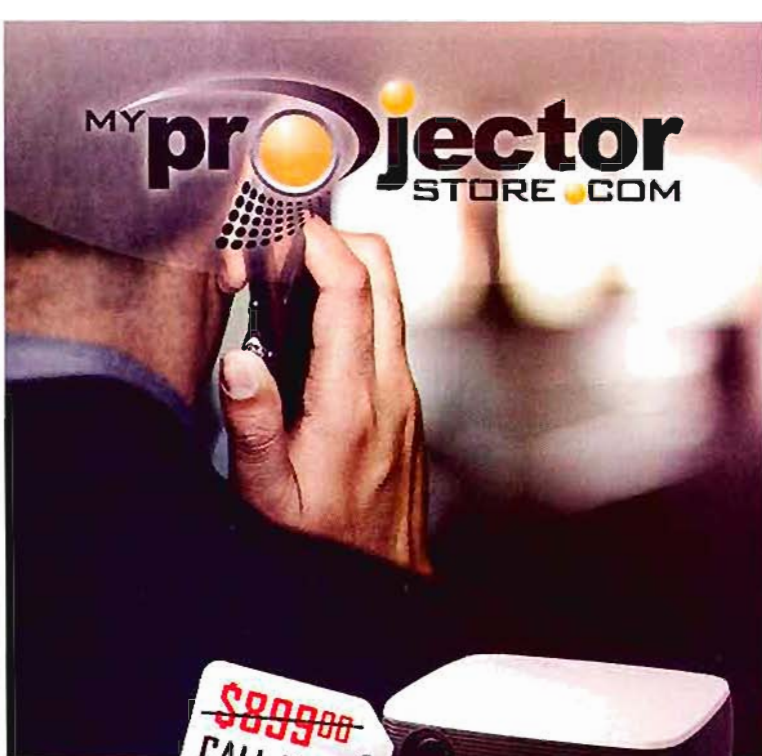
Don't Forget the Lamp

If you use a projector for any length of time, you will probably need to buy a replacement lamp. These tiny devices are amazingly expensive, most cost more than \$300. In your cost analysis, be sure to factor in the cost of these lamps and their expected lifetimes. Also, look for projectors that offer a warranty on the lamps that is longer than the standard 90 days.

Is Wireless Worth It?

One of the most exciting features for projectors is wireless connectivity. This enables presenters to share a projector and to leave the heavy, bulky VGA cable back at the office. To date, however, setting up a wireless connection has often been difficult, and wireless standards such as 802.11g do not have sufficient bandwidth to deliver full-motion video.

According to Edgar Jimenez, product manager at Epson, a wireless projector isn't just for cutting the cord. In some classrooms equipped with wireless projectors, a teacher can walk around the room while projecting a presentation and annotating it on a Tablet computer. In one test case, the teacher would hand the Tablet to a series of children to let them try to solve a problem on their own. The system was such a hit, said Jimenez, that "some of them, the lower-grade schoolchildren, would cry if they didn't get a chance to work on the Tablet."



Getting things done,
is only a projector
away.

SONY
VPL-EX3

2,000 ANSI Lumens
XGA (1024 x 768)
Lightweight



The VPL-EX3 is an economical multi-purpose projector. Ideal for small businesses, home offices and entertainment purposes. Weighing just 6.4 lbs, it is compact and light enough to be carried anywhere. The projector is feature rich with native XGA resolution, 2000 ANSI Lumen Brightness, 6 selectable picture modes, and 3 selectable black level adjustment modes. So, don't just be happy with your projector, become the driving force behind happy-er boardroom results.

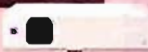
Boardroom

VPL-FX41
3,500 Lumens
XGA (1024 x 768)



Portable

VPL-CX86
3,000 Lumens
XGA (1024 x 768)



Ultra Lightweight

VPL-CS21
2,100 Lumens
SVGA (800 x 600)



Boardroom

VPL-FX52L
6,000 Lumens
XGA (1024 x 768)



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To learn more, contact us online or call us at:
(866) 813-5949

sales@myprojectorstore.com

39 PROJECTORS COMPARED

Category	Company	Projector	Price	Type	Weight (lbs)	Native Resolution (pixels)	Brightness (lumens)	Contrast Ratio	Special Features
Palm-size	Boxlight Corp. www.boxlight.com	BumbleBee	\$799	LED	1	800 x 600	150	100:1	Optional battery, SD Card slot
	Mitsubishi Digital Electronics America www.mitsubishi-presentations.com	PK-20	\$799	LED	1	800 x 600	25	1000:1	10,000-hour lamp, battery operated, SD Card reader
		PK-10	\$699	LED	1	800 x 600	250 Lux	1000:1	10,000-hour lamp, battery operated
	Toshiba America Information Systems Inc. www.ToshibaDirect.com.com	TDP-FF1AU	\$699	LED	1.1	800 x 600	400 Lux	100:0:1	Battery and 23-inch folding screen included
Ultraportable	Boxlight Corp. www.boxlight.com	TravelLight 2	\$1,599	DLP	2.5	1024 x 768	2100	2000:1	Password security, fan speed control, Auto Keystone feature
	Epson America, Inc. www.epson.com	PowerLite 1715c	\$1,999	3LCD	3.9	1024 x 768	2700	500:1	Wireless connectivity up to 30 fps; Epson Instant Off, USB 2.0
		PowerLite 1710c	\$1,799	3LCD	3.8	1024 x 768	2700	500:1	Epson Instant Off, USB 2.0
		PowerLite 1705c	\$1,499	3LCD	3.9	1024 x 768	2200	500:1	Wireless connectivity up to 30 fps; Epson Instant Off, USB 2.0
		PowerLite 1700c	\$1,299	3LCD	3.8	1024 x 768	2200	500:1	Epson Instant Off, USB 2.0
	Hitachi America Ltd. www.hitachi.us/digitalmedia	CP-X253	\$1,795	PolySi LCD	3.9	1024 x 768	2000	500:1	Transition detector
	Mitsubishi Digital Electronics America www.mitsubishi-presentations.com	XD80	\$1,895	DLP	2.9	1024 x 768	1500	2000:1	Dual-mode color wheel
	NEC Corporation of America www.necvisualsystems.com	NP40	\$899	DLP	3.5	1024 x 768	2200	1500:1	Autofocus
	Optoma Technology www.optomausa.com	EP7150	\$1,299	DLP	2.7	1024 x 768	2000	2000:1	Rapid shutdown, laser pointer, USB
	Panasonic Projector Systems Company www.panasonic.com/projectors	PT-PTSD	\$1,199	LCD	2.9	800 x 600	1500	400:1	SD Card slot, automatic startup, Daylight View technology
ViewSonic Corp. www.viewsonic.com	PJ258D	\$999	DLP	3.9	1024 x 768	2000	2000:1	Can play video from iPods	
	PJ356	\$899	LCD	3.9	1024 x 768	2000	500:1	USB port for flash drive	
Portable	BenQ Inc. www.benq.us	MP611C	\$749	DLP	5.9	800 x 600	2100	2000:1	Wall-color adjustment
		MP721C	\$999	DLP	5.9	1024 x 768	2200	2000:1	Wall-color adjustment
		MP721	\$1,499	DLP	5.9	1024 x 768	2500	2000:1	Wall-color adjustment
	Boxlight Corp. www.boxlight.com	Raven X8	\$749	DLP	4.5	800 x 600	2000	2000:1	Video Deinterlacing with 3:3 pull down
	Costo Inc. www.coslousa.com	XJ-35	\$1,899	DLP	4	1024 x 768	2000	1800:1	USB port, optional USB wireless adapter
	Dell Computer Corp. www.dell.com	1800MP	\$849	DLP	4.6	1024 x 768	2100	2000:1	2 VGA inputs for easy transition between presenters
	Hitachi America Ltd. www.hitachi.us/digitalmedia	CP-RS57	\$1,595	PolySi LCD	5.1	800 x 600	2000	500:1	
		CPX1	\$1,795	PolySi LCD	3.8	1024 x 768	2000	500:1	Transition detector, USB storage
		CP-RX61	\$1,995	PolySi LCD	5.1	1024 x 768	1600	500:1	Optical zoom
	InFocus www.infocus.com	IN24+	\$649	DLP	6	800 x 600	2200	2000:1	
		IN26+	\$799	DLP	6	1024 x 768	2200	2000:1	
		IN36	Under \$1,300	DLP	5.2	1024 x 768	3000	1000:1	
	Mitsubishi Digital Electronics America www.mitsubishi-presentations.com	SD430	\$999	DLP	4.7	800 x 600	2500	2000:1	
		XD205R	\$1,049	DLP	5.3	1024 x 768	2000	2000:1	Anti-theft security hook
		XD430	\$1,395	DLP	5.7	1024 x 768	2500	2000:1	4,000-hour lamp life, instant shutdown
		XL9	\$1,095	LCD	5.9	1024 x 768	2000	350:1	5,000-hour lamp life
	Optoma Technology www.optomausa.com	EP770	\$1,299	DLP	5.3	1024 x 768	3000	2000:1	Single 0.7-inch DDR DMD DLP Technology by Texas Instruments
		EP749	\$1,099	DLP	4.4	1024 x 768	2500	2200:1	(720p, 1080i) HDTV-compatible
	Panasonic Projector Systems Company www.panasonic.com/projectors	PT-LB50NTU	\$2,700	LCD	4.2	1024 x 768	2000	400:1	Wireless LAN, Daylight View Technology, One-Touch Auto Everything Setup
		PT-LB60NTU	\$3,399	LCD	5.7	1024 x 768	3200	400:1	Daylight View Technology, One-Touch Auto Everything Setup
ViewSonic Corp. www.viewsonic.com	PJ558D	\$999	DLP	5.4	1024 x 768	2500	2000:1		
	PJ506D	\$699	LCD	5.9	800 x 600	2000	2000:1		
	PJ556D	\$899	LCD	5.9	1024 x 768	2000	2000:1		