

# Big screen technology

## What it is

**B**IG SCREENS RUN the gamut depending on boardroom requirements. Products range from small size projector systems that deliver big screens sized 30 to 33 inches to plasma screen televisions in sizes up to 50 inches.

## Applications

Most boardrooms require big screens that have computer inputs and are compatible with digital input signals to provide any visual display whether it comes via satellite, digital cable, DVD or camcorder.

Boardrooms typically rely on data-grade front projection systems using large electronic screens that drop out of the ceiling. Projector cases weigh up to six pounds and are highly portable. The size of the screen depends on the so-called throw ratio – meaning the distance at which the projector must be positioned to throw off the image.

“If you are looking for something for a boardroom, the LCD projector system is the single most popular selection for data-grade applications,” says Doug Wright, a certified member of the Custom Electronic Design and Installation Association, a US-based group dedicated to creating a high level of standard among dealers and installers in the audio-visual market. Wright owns Burlington, Ontario-based Home Theatre Excellence. “That is a perfect application, and it makes sense because these all come with their own small carrying cases. You can put it in its case, take it to the next room, then the room beside that, when you need it.”

Wright recommends the Panasonic units. Retailing for upwards of \$2,200, they provide strong name recognition with a quality product that is durable and competitively priced.

Sharp is the preferred brand for Toronto's Bay Bloor Audio, where James Marshall, manager of custom installation, says the company's warranty and customer support are key strengths and the most crucial qualities for any buyer. Sharp's projection systems retail at \$2,500 and up.

## What about television?

Large-screen LCD and plasma screen televisions up to 50 inches still carry fairly high price tags. With more pixels on a large screen, the 50-inch models provide good resolution. “A 50-inch size means everyone can read it once something is up on the screen,” says Marshall. “Anything smaller and it loses the visual impact.”

Plasma screen technology delivers the thin screen capable of being hung on a wall. It still suffers from some “burn in” – images remain burned into the screen. “This can be a real problem if you are dealing with organizations that work a lot with (Microsoft) PowerPoint,” Marshall adds.

The top name in the plasma screen market is Pioneer, whose Elite series comes with a three-year warranty and has one of the best pictures in the market. A 50-inch Pioneer Elite generally sells

for about \$10,000. But Pioneer, one of the world's largest manufacturers of plasma screens, turns out a high yield rate – meaning the lowest number of failures off the assembly line. Plasma technology still suffers from a less than perfect yield rate. According to Marshall, Pioneer also makes plasma panels for Sony Corp., which then adds its own electronics and casings.

“The technology uses a different type of phosphor to create the image, which gives better and surer colour rendition, better performance in high brightness situations. So in a boardroom you will get better colour saturation, better colour contrast,” Marshall says.

## Vendors

Pioneer Elite, Sharp and others have a preferred list of dealers, which are included on their websites.

- Pioneer: [www.pioneerelectronics.com](http://www.pioneerelectronics.com)
- Panasonic: [www.panasonic.ca](http://www.panasonic.ca)
- Sony: [www.sony.ca](http://www.sony.ca)
- Sharp: [www.sharp.ca](http://www.sharp.ca)
- NEC/Fujitsu: [www.fujitsu.com/ca/en/](http://www.fujitsu.com/ca/en/)
- LG Electronics: [www.lg.ca](http://www.lg.ca)

## Up and coming

Two new technologies are on the horizon that will gradually replace LCDs. Intel Corp. is working on a liquid crystal on silicone chip, which could be used to produce large displays flexible enough to be hung on a wall using nails, but recently delayed the release of the technology until a better version is ready. And Eastman Kodak has invented a new light emitting diode, which is already being applied to hand-held communication devices. The technology will use less power and be cheaper to mass produce. *MM*

## Glossary

**L**iquid Crystal Display (LCD) uses a liquid crystal for each pixel on glass panels. Light passes through the panels moving towards the lens and is modulated by the crystals as it passes.

Digital Light Processing (DLP) uses a tiny mirror for each pixel to reflect light. DLP modulates the image by tilting the mirrors towards or away from the lens.

Liquid Crystal on Silicon (LCOS) combines LCD and DLP, using liquid crystals applied to a reflective mirror substrate. The liquid crystals open and close, modulating the light and creating the image.

Plasma technology uses thin wires imbedded in the plasma substrate and energizes tiny phosphor dots – the material that provides the visible light of red, green or blue – causing them to glow.

Organic Light Emitting Diode (OLED) was invented by Eastman Kodak and is just in the earliest stages of replacing LCD in hand-held communication devices. The display is emitted from a device with carbon-based films between charged electrodes. Voltage stimulates the OLED cell, creating an eletro-luminescent light. The screens are considered much lighter, thinner and faster than LCDs, use less power and are cheaper to make.

*Marlene Orton is an Ottawa-based freelance journalist.*