



Gas plasma

- **Price range** £2,000 to £20,000 for screen sizes ranging from 40in-60in.
- **Overview** Plasma TVs are generally brighter, offer better colour saturation and cost less per inch than LCD TVs. These displays are a good choice if you want a wall-hanging screen for television and film viewing that can perform well in strong room lighting - particularly if cost is not a great concern. Those who use their PCs a lot - and especially gamers - should look elsewhere.
- **Main features** Sleek and sexy, these wall-mountable panels are the embodiment of futuristic television. Top-of-the-line plasma screens can deliver gorgeous pictures. And because they are only a few inches thick and (unlike some LCDs) can be viewed from all side angles without loss of image quality, they are extremely versatile. Although the big down side to plasma has been price, some 42in plasma models have dropped below the £2,000 mark. Be warned, however: with plasma screens you tend to get what you pay for.

Plasma displays in general struggle to produce deep black tones and the images in some inexpensive plasma displays can look washed out. You'll pay more for higher contrast and resolution but, if you can't afford to go for both, a high-contrast, low-resolution picture will usually appear to have more detail and better colour saturation than a low-contrast, high-resolution image. It sounds obvious, but try to spend some time looking at your prospective display before you reach for your credit card. Also bear in mind that display controls and signal quality strongly influence the quality of the image.

Almost all plasma displays are widescreen units with a 16:9 aspect ratio. Like CRTs, they use phosphors to generate light. Phosphor burn-in can therefore be an issue if you watch a lot of TV or play games in a narrower 4:3 aspect ratio. This is most likely to occur only when the same image, such as a sign, is continuously displayed on the screen. Burn-in produces lingering, permanent or semi-permanent ghosts of static images that have been displayed for long periods of time.

Stretch modes, which allow any image to fill the screen, can help at the expense of distorting the picture somewhat. And many plasma displays now come with other features designed to prevent burn-in. You can substantially reduce the risk (and extend display life) by using moderate brightness and contrast control settings.

- **Pros** Large (anywhere from 40in-60in), gas plasma flat-screens can be viewed from almost any angle. Excellent brightness and image accuracy. Lightweight and slim
- **Cons** Images can look noisy and overly digitised at times. Plasma screens generate a substantial amount of heat and some manufacturers rely on fans to keep them cool, so be wary of noisy whirring. No good for heavy PC uses or for gamers

So you've gone digital. You've got your Sky+ PVR (personal video recorder) or maybe a Media Center PC, a DVD player and more digital channels than you know what to do with. But what's this? You're viewing all this stuff through a hulk of a display based on a technology that recently celebrated its 50th birthday. It's time for something wider and something much, much thinner.

With Dell moving into LCD TVs and Currys advertising 42in gas plasma displays for less than two grand, flat-screen TVs look like becoming one of the biggest must-haves of 2004. But how do you decide between the two technologies?

Both have their up and down sides. The ultimate deciding factor, generally, is size. Plasma TVs tend to be bigger - 40in or more - while LCDs larger than this size are extremely rare. So if you want something smallish, spacesaving (maybe your work area and living space is the same), cute and demure, it's LCD. If you fancy something high on the 'wow factor' that hangs on your wall like a beautiful painting it's got to be gas plasma.

LCD TV

- **Price range** £400 up to £3,000
 - **Overview** Liquid crystal displays have been around for several years, but it's only in recent months that they have actually begun to completely displace bulky desktop CRTs. Not content with ousting their distant CRT cousins in the PC realm, their ability to double up as both TV and monitor has opened up the home theatre market as well.
- For viewing text, they offer a crisper, brighter image than plasma screens - key if your TV will be doubling up as a PC monitor or if you use it as part of a Windows Media Center setup.

Slow response times on some older models may frustrate users who play fast-action games. Good for flat-panel TVs in screen sizes smaller than the available plasma models.

- **Details** LCD TVs currently top-out at 40in diagonal (larger screens are coming in the next few years). Since plasmas start at 37in, LCD is the only choice



for smaller flat-panel displays. LCDs with screens measuring 30in and up are almost all wide-screen, 16:9 displays. Prices are expected to drop as the supply of larger LCD panels grows.

• **How does it work?** Much like plasma screens, LCD displays sandwich millions of tiny cells (or pixels) between two sheets of glass. Each cell contains a minuscule amount of extremely heat-sensitive liquid. This liquid is electrically activated by millions of tiny transistors. When this reaction takes place in conjunction with red, green and blue phosphorescent subpixels, it gives off the light to create the image we see onscreen.

- **Pros** Vibrant and rich colours with excellent image sharpness. Great for doubling up TV and PC usage
- **Cons** Fast-moving video can reveal problems with lag. Glass makes them heavier than plastic plasmas