



Labs

Affordable 17in LCD monitors

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PRODUCT	COMPANY NAME	PRICE	RATING	AWARD
AOC LM 727	AOC	£164	4	labs winner
Iiyama ProLite E435S-W	Iiyama	£185	4	
Sony SDM-S73	Sony	£193	4	
Belinea 10 17 35	Maxdata	£175	3	
CTX S762G	CTX	£185	3	
GNR TG700H	GNR	£189	3	
NEC AccuSync LCD72VM	NEC	£184	3	
Relisys TL795A	Relisys	£167	3	
BenQ FP71G	BenQ	£172	2	
Philips 170S5FS	Philips	£175	2	

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With the release of the Mac mini, Apple has finally come up with a Mac that has true mass-market appeal. To keep the cost as low as possible, the mini doesn't include a keyboard, mouse or monitor, which means you're going to have to go out and buy these if you don't already have them. To this end, this issue's Labs concentrates

on the most expensive of these items, the monitor. We asked manufacturers to submit their best sub-£200 flat-screen monitors, and it transpired that all of the models we received were 17in displays.

Choosing the right monitor on a budget is problematic on two levels. First, Apple doesn't provide its own solution for the budget-conscious: its entry-level 20in Cinema Display costs a cool £699. The second and more onerous dilemma is that other manufacturers produce a wide range of inexpensive monitors, so choosing the one that has the best balance of price and quality can be difficult.

The sub-£200 price point we have set for this round-up embraces most manufacturers' entry-level 17in displays. All the monitors in this test have a maximum resolution of 1280 x 1024 pixels, allowing you work on multiple documents without feeling cramped.

While the displays are a decent size, you'll need to make some compromises if you don't want your monitor to cost the earth. The most obvious of these is a lack of frills. You won't find any extra-cost features such as integrated USB hubs in the displays in this line-up. However, three of the models do boast digital DVI video connections instead of, or as well as, analogue VGA connectors - something we weren't expecting to see in such low-cost models.

You may be disappointed if you need professional-level colour. These screens have a tendency to fill in shadow detail in images and, more importantly, the inability to correct the problem means they're not really suitable for professional graphics work. We were specifically looking for monitors that bucked this trend and were either good from the outset or allowed a suitably wide range of adjustments. The few that managed this were marked up as appropriate. That's not to say these products are incapable of reasonable colour reproduction. All of them are perfectly adept at both browsing and tweaking photographs, as well as playing DVDs and games - as we would expect of products in this price range.

We were also particularly interested in the maximum viewing angles provided by our test subjects - that is, the distance you can move, both sideways and vertically, before the display changes noticeably. On more expensive monitors maximum viewing angle is less of an issue than in this group of products, where just moving your head slightly in any direction could, for example, change contrast and hue to a surprising degree. We knocked points off displays that exhibited this problem more severely than others.

Finally, a note on pricing. The prices quoted in this Labs are the best we could find online using a variety of search engines including Kelkoo, Price Runner and Froogle. It's always worth shopping round online, and particularly so for monitors, as the difference in pricing between some sales outlets can be fairly extreme.

Modern LCD screens all look and feel very similar. That's not to say they perform identically, but you do need to spend some time with a screen to be able to pick up both where it's lacking and where it excels. With such subtle differences between products, we had to be particularly thorough. As such, we tested each individually and then sitting alongside its competition. Where a monitor featured both DVI and VGA connections, we tested both of these and then against other monitors. Because assessing monitors is so subjective, two of the MacUser team made the final judgements on each screen.

We set up each display to make sure we obtained the best possible screen image. Each was first reset to its factory defaults, and we then installed any available colour profiles. If there was an auto-config option, we then applied this to the screen. Finally, we calibrated each monitor to our taste using the option in the Color tab of OS X's Displays preference pane.

First, we tested how each product performed in a real-world situation. We assessed text and graphic performance using Tiffs, Jpegs, PDFs and Word documents. We wanted to see crisp, black text that didn't fill in or become clumpy at smaller point sizes, and images that retained a good range of tones and contrast. Finally, we assessed the performance of both games and DVD playback. The former tested the quality of the monitors' built-in speakers (if they had any), and the latter checked to see how well each display coped with fast-moving action sequences.

Overall, of the monitors handled the real-world tests well. It was only when we came to our three more technical tests that some displays started to struggle.

The first of these involved a motion submarining test. This uses a custom-made application that moves a black bar horizontally and vertically across the screen. It shows how good a monitor's pixel response time is. A perfect result would show no blurring of the bar as it moves. Next, we used a colour image to check colour gradients. We wanted to see a smooth progression between colours without banding.

Finally, we used a simple pattern showing 5% greyscale steps from pure white to pure black. Problems tended to show at the light and dark ends of the scale as the devices lost the ability to differentiate between similar extreme

shades. This last test is also a good measure of the angle of view, as the different tones may shift as you move position. While all of the monitors in this Labs suffered from this to a degree, the tonal shift was minimal in the best ones.