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## Monitors

Great Value Meets Great Price, Finally!

By Donald Jenner

It seemed as if it would never happen. While every other element in the personal computer mix dropped in price, monitors stayed relatively costly. At long last, really good monitors - bright, fine-pitch, large-screen quality displays for professional use - are available at prices that are lower than the rest of the computer system to which they will be attached.

Case in point: ViewSonic is just introducing its PS790. This 19" monitor (18" viewing area) is rich in features. It uses a new CRT with a wider-angle electron gun; this means the tube can be smaller, which makes for a shorter depth to the case, and less space to be given up on the desktop. This largish-screen monitor will fit where smaller 15" and 17" monitors fit. The CRT sports a sharp .25 dot pitch (.22 horizontal; .13 vertical). It displays 1280x1024 pixel resolution at the relatively high refresh rate of 88Hz; that is effectively flicker-free. Maximum resolution is 1600x1280. The ViewSonic PS790 has high-end features; the price tag is equally attractive at US\$949. list.

Viewsonic is not alone in wanting your business, and seeking it through serious value-pricing strategies. Other tier-one players (ViewSonic has clearly achieved that level) such as NEC, Hitachi and Mitsubishi and tier-two players (e.g., ViewSonic's "value" line, Optiquest; Panasonic; Sceptre) have monitors that command attention on the strength of price, and hold it through features that command attention.

The monitors considered here are all large-screen - 21" or 19" models. For folks whose budget, or workspace, doesn't extend to that, all of these companies have comparable 17" models with similar features, at equally attractive (if not more so, due to a larger market) prices.

To prepare for this story, we did a quick survey at a local large-computer-store. We checked the latest from Sony, Panasonic, ViewSonic and NEC in particular.

The first surprise: The NEC models were neither cutting edge nor over-priced. Only the P1150, 21" model, at US\$1,300, offered the combination of features needed in a CAD environment: Using an aperture grille CRT, the P1150 is bright and sharp, and with a flicker-free 88Hz frequency at 1280x1024 pixel resolution, this was a nice monitor. On the other hand, it represented no special advance in technology over other monitors NEC has offered over the last few years.

Sony, as usual, was Sony. The latest Multiscan professional-series monitors, such as the 21" (19.8" viewable) GDM-500PS, use a short-neck Trinitron CRT. "Shortneck" translates into a smaller chassis, and a smaller footprint for a full-size display. The color was vivid. The display was flicker-free at even its highest resolution (1600x1280 pixel resolution). At US\$1,500., this was one of two fairly pricey monitors considered. The value is in Sony's attention to details - more preset resolutions, for example.

Panasonic has long been a value-leader in monitors. Both as private-branded products and as branded models, Panasonic offers very good value. For example,

the monitor supplied by Intergraph with the TD225 which holds pride of place on my ever-crowded test-bench is a Panasonic 17" monitor. It is clean, crisp and easy on the eyes. [Intergraph also uses Hitachi monitors in some cases, according to one employee.] Other vendors commonly use Panasonic monitors, and local builders frequently supply Panasonic monitors with their better products. Surprisingly, while the 17" models were attractively priced, Panasonic's larger-screen models were strictly mid-range, in one case actually a bit more costly than comparable NEC branded models. The quality is there, but the prices need to be looked at carefully, beyond 17" models.

Several monitor makers were not represented in this store's offerings; we checked them out at other places. Two merit special attention from graphics-using professionals: One is tier-one Mitsubishi; the other is a parvenu tier-two vendor, Sceptre.

Mitsubishi makes one of the finest aperture-grille CRTs around. It offers a finer mesh, with consequently sharper image. The company's latest offering, priced competitively at CN\$2,000., is the new Diamond Plus 100e. Using the latest short-necked Diamondtron monitor, Mitsubishi claims better corner focus and convergence. Like other high-end products, this new Diamond Plus monitor delivers the greatest possible frequency even at its highest resolution. Like Sony, while the price is not low, there is a degree of attention to detail that enhances the value. The Diamond Plus 100e offers most of the features of the more costly Diamond Pro series model 1010 (price: CN\$2,700).

[On the other hand, value seekers may want to look at ViewSonic's Optiquess line. Optiquess is the company's value-priced line of monitors and one of the larger-screen monitors sports Mitsubishi's Diamondtron CRT at a price about 25 percent lower than Mitsubishi's, and with few compromises.]

Sceptre is the new player - at least to me. I became familiar with them in the context of my recent Wintel notebook inquiry, and I have been impressed with the quality of the products offered at aggressive prices. For the purposes of this story, I paid particular attention to the company's 19" (18" viewable) Dragon Eye model D97A. These are thoroughly first-class products. Using a conventional shadow-mask CRT, the company claims slightly better than average scan frequency (e. g., 1280x1024 at 90Hz), assuring flicker-free viewing. With a .26 dot pitch CRT, the images are crisp and clean and plenty bright. There is another feature that may prove very popular: While most monitors these days offer on-screen controls you cycle through by hitting one or another button, Sceptre DragonEye monitors access things through two flat knobs. That is, rather than hitting a button three or four times, simply dial the command you want, then dial the modification. This is both faster and more intuitive. As to value, the D97A comes with a price tag of CN\$1,183.

Hitachi also commands attention, not only because the company produces superior products, but because they are willing to educate their market. Log on to the Internet, to Hitachi's web-site (<http://www.hitachi.com>). Follow along to the monitors section, and click on the "How to Buy a Color Monitor" option at the bottom of the screen. This takes you to a short form; click on a couple of boxes and Hitachi will show you their notion of what you should be considering - from their own product list, of course. Look at the suggestions. The general categories will guide comparison-shopping, a good idea when buying what is a large part of the interface to your computer system.

Hitachi not only makes great monitors under their own label; they private-brand as well. You may actually have an Hitachi monitor. You are even

more likely to have an Hitachi CRT in some other vendor's box, since Hitachi is one of the major manufacturers of CRTs. While at the web-site, run the little show that explains the latest in CRT technology - slanted to Hitachi's advantage, naturally, but not excessively so, and education is good. So, with relatively simple research, CAD-using pros can now be reasonably certain they can find a very high quality, large-screen feature-rich display, without having to hock their businesses to buy it.