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Samsung Extiva DVD-N2000

NUON DVD Player

Some day, all DVD players will rock this hard.

by Chris Chiarella

Remember all that DVD hype a few years ago? "With DVD, you can choose which aspect ratio, angle, and version of the film you want to watch, all while the player

you say "porno"?), and seamless branching, which allows standard and extended cuts of a movie on the same side and layer of a disc, only became popular earlier this year. So, we've had to wait for the features that would supposedly blow away mainstream consumers and home theater buffs alike.



A. Hidden behind a plastic cap on front of the Extiva, there's a pair of ports for connecting game controllers.

B. The DVD-N2000 has all the connections you need—including component, S-video, composite, and optical/coaxial digital audio outs.

makes you a cup of coffee and presses your shirts." Truth be told, most DVD players are basically glorified VCRs (except they can't record yet) with vastly superior picture and sound, plus a few convenient features similar to those found on a CD player. Laserdisc fans are accustomed to extensive supplements and alternate audio tracks, so where are all those sexy bells and whistles that would really set DVD apart?

Part of the delay has been on the software side. Multiangle discs are still few and far between (can

Enter NUON technology, the brainchild of VM Labs. Their 128-bit NUON media processor (which can also be incorporated into digital set-top boxes and satellite receivers) can handle more than 1.5 billion individually programmed instructions per second, performing comparably to a Pentium II operating at between 500 and 1,000 megahertz. By comparison, few DVD players have anything greater than 32-bit processors, and most are much below that. While the NUON processor's strengths are 3-D graphics and digital video, the most demanding uses will be future TV applications, including Web browsing, e-mail, and video telephony.

VM Labs is not manufacturing their own DVD players. Rather, they are licensing their technology

to other manufacturers. Samsung has released the first NUON-enhanced deck here in the United States, the Extiva DVD-N2000. Features-wise, the Extiva has just about everything you could ask for: an onboard Dolby Digital decoder, DTS output, and even HDCD decoding for people who insist that DVD players don't make good CD players. (A quick demo confirmed what I already knew about the HDCD format: The increase in detail and dynamic range is a true revelation.) The Extiva also packs high-speed 24-bit/96-kilohertz audio digital-to-analog converters to play back the best-sounding

HIGHLIGHTS

- All the outputs anyone could ask for: component, S-video, raw DTS, decoded Dolby Digital, and even a headphone jack with level control
- Plays NUON videogames in addition to DVD movies and CDs
- More convenience and "gee whiz!" features than any other player on the market

DVDs. There are optical and coaxial digital audio outputs, two pairs of analog audio outs, two composite video outs, plus S-video and component video outs.

The advantages of the NUON experience become evident almost immediately upon playing a disc.

Samsung Extiva DVD-N2000 NUON DVD Player

The setup mode allows you to customize the picture, sound, subtitles, and more while the movie is playing, without stopping and routing through a separate setup menu.

Unmistakable graphics let you optimize reproduction for your particular speaker configuration from the 11 choices provided. Touching the display key on the remote brings up the SmartMatrix system, which allows the user to view and select from just about every aspect of the DVD: chapter, title, soundtrack, angle, etc.—all while the movie continues to play in a respectably sized window in the middle of the screen. This represents more on-the-fly control than we've ever had before.

C. The DVD-N2000's SmartMatrix system lets you view and select from almost any aspect of a DVD while it continues to play onscreen.

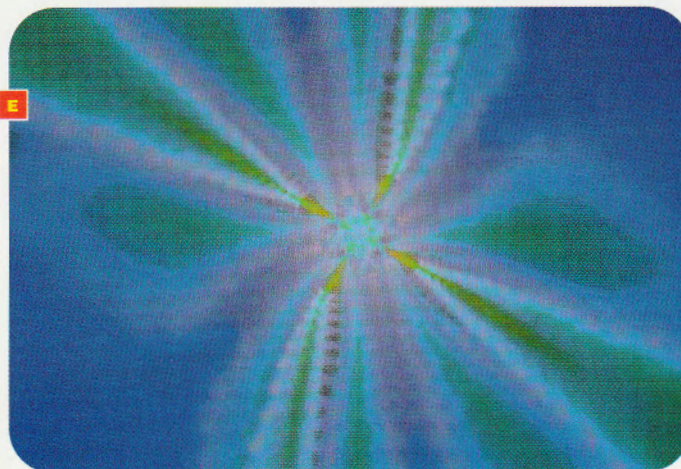
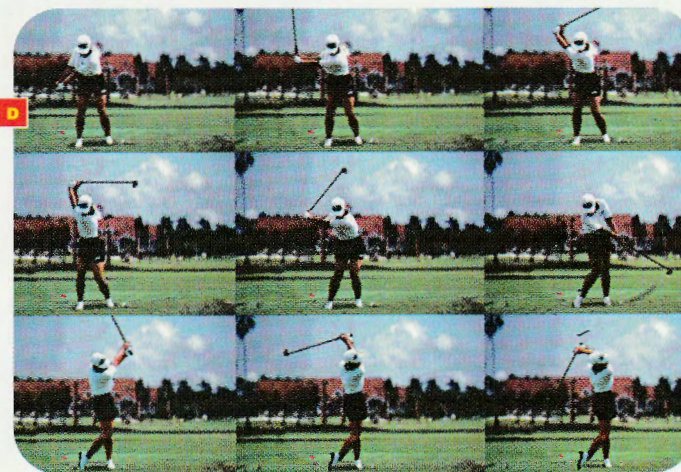
D. Here's the story... of a feature called ActionCapture... which lays out successive video frames for your review.

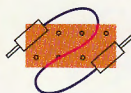
E. Far out, man. The Virtual Light Machine feature creates some groovy-colored visual interpretations of your CDs.

The FineMotion scanning and slow motion provide the smoothest searching I've ever seen, and this is also the first DVD player that offers reverse slow motion, previously impossible because of the memory demands on the hardware. ActionCapture strobe creates a *Brady Bunch*-style layout of successive frames that continually cycle forward—handy when you're looking for a particular image. When you find the one you want, SnapShot allows you to adjust the color, brightness, contrast, and gamma (light/dark), which was another Extiva exclusive at press time. The analog video outputs can then send the image to a PC or printer. For multiangle discs, the AngleView display system also generates thumbnail views of available alternate angles along the bottom of the screen, while the current angle plays full-screen.

One of my favorite features is the MediaMacro zoom-and-pan function. Remember the Voigt Kampff machine Harrison Ford used in *Blade Runner* to analyze crime-scene photos? Now, we too

can magnify any area of the screen up to 20 times. Want to see what the characters are eating? Wonder what that sign on the wall says? Want to fully appreciate how good





Samsung Extiva DVD-N2000 NUON DVD Player

(or bad) the production design is? All this freedom can be yours in startling clarity, thanks to the onboard filters that keep the image sharp even at maximum zoom. Most of the distortion I noticed was the actual grain from the original film! I did notice, though, that zoom picture quality varies somewhat, depending on the disc chosen.

F. The remote's joypad looks cooler than it really is and requires a certain level of precision to use effectively.

Video performance is aided greatly by the black-level control, and the surround sound in Dolby Digital (with both onboard and outboard decoders) or DTS is better than most I've auditioned with my reference system. Spatializer N-2-2 creates a somewhat convincing surround effect when you only have two speakers, and music is also clean, natural, and lifelike, even on non-HDCD discs. To further enhance audio playback, the Virtual Light Machine (VLM) offers assorted screens of wildly colored light that move with the beat. It's nothing you're bound to see on MTV anytime soon, but it's a nice little bonus and fun for parties. You can also choose to view the spectrum analyzer while you listen.

The front panel is an almost-symmetrical array of keys and lights. There's a gold-plated headphone jack with a level control, a jog/shuttle knob, and precious few buttons. Hiding behind a removable plastic cap is a pair of ports for connecting game controllers (one MediaStick gamepad is included). That's right: The Extiva also plays entertainment and educational software for the NUON format. Not a lot of titles were available

for review at launch, but a full version of Infogrames' *Ballistic* (an extremely fun and challenging game of colored balls and survival) arrives in the box. Time will tell just how many new games we'll be able to play on our DVD decks, while most of the Hollywood studios are also considering NUON-enhanced versions of their movies on DVD, for superior style and interactivity.

The unified remote control is dominated by an eight-direction "joypad" that looks cooler than it really is. Tighter than similar multifunction controls that tend to slip, the joypad still requires a certain level of precision to use effectively, which is difficult when you're in a hurry. But I must say that setting up the remote to operate my television (most major brands are represented on a short list of codes in the manual) was the quickest, easiest time I've had.

The Extiva's wonders do come at a price, though. I'm not referring to its bargain \$399 buy-in but to its surprising occasional compromise in video playback. My beloved *Saving Private Ryan* D-Day DTS demo froze and broke up into unpleasant pixelization, something I've never witnessed on that disc before. On the other hand, the tricky layer change on *The Matrix* and the late chapters on

the original pressing of *Boogie Nights*, both of which have given me problems in the past, played flawlessly. So, while I rate this player well above average, I cannot rank it as a true videophile unit.

With everything else this deck offers (it certainly does more right out of the carton than any other player on the market), an integrated DTS decoder would have been welcome, too. Not essential, but something to think about for the next generation. Announced additions for future models include an Internet browser with a keyboard and the ability to play CDs containing MP3 music tracks, as well as CD-R and CD-RW discs.

The DVD-N2000's shortcomings are clearly minimal. Samsung has made good on the promise of



Extiva DVD-N2000 NUON DVD Player \$399

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DVD, creating a spectacularly equipped DVD player, doing it first, and doing so at a highly competitive price. Other NUON-enhanced players will follow, but for now the Extiva is the undisputed king of the hill.

Samsung Extiva DVD-N2000 NUON DVD Player

