



## SONY PCM-D50 A Better Handheld Recorder

by Richard Leiter

### PROS

Built-in mics are standouts for open, clean sound. Pristine A-to-D conversion. Very transparent limiting, speed control, and noise reduction. Pre-record captures sound five seconds before recording starts. Elegant design. Rugged construction. Big 4GB internal memory. At this price it does more than it should.

### CONS

Doesn't record MP3s, though it does play them back. Can't act as battery charger. Memory expansion only via Sony's proprietary format.

### INFO

\$599 list/approx. \$500 street,  
[pro.sony.com](http://pro.sony.com)

In 1984, when everybody and their dog wore Walkmans like iPods, Sony came out with a Walkman Professional that was slightly bigger and cost more. At first I thought this was a dumb idea: The whole point of the Walkman was to be small and cheap. Then I tried the Walkman Pro and I saw the light. It had more features that you really did need but didn't know it, and it felt better, looked better, and just sounded better.

The PCM-D50 holds its head similarly high in a world where over a dozen smaller, cheaper, lighter devices do more or less the same thing. Why spend the extra shekels? The answer is: If you simply need audio snapshots, don't. But if you

need sound quality high enough to burn a commercial-release CD right from a location recording, or to capture broadcast-quality sound for video or voiceover, the PCM-D50 is more than worth it, and actually not *that* far above the price median for field recorders.

### LOOK AND FEEL

The PCM-D50 is a scaled-down version of Sony's \$2,000 PCM-D1. Like its classy sibling, the PCM-D50 looks and feels like quality incarnate. The substantial heft and brushed aluminum case suggest a precision that the unit's performance confirms. The LCD screen is sharp and well laid out, with a backlight button. Operation is logical

and effortless. If you're tech-savvy and in a hurry, you could sidestep the manual – but don't. A few clever features aren't obvious, and we'll get to those in a bit.

What are obvious are the tiny but robust switches that control things like a low-cut filter, the limiter, Sony's Digital Pitch Control, and the selection of mic input versus line/optical in. It's like flying business class to have switches for these, as opposed to scrolling through a menu in a dark, loud club just to do something simple like attenuate the mics 20dB. On the subject of convenience, the biggest control is a side-mounted thumbwheel for record levels, and it moves with just the right resistance.

## OPERATION

The controls follow the tape deck paradigm, with a second "page" of deeper functions via a Menu button. In Menu mode, the FF and FR (fast-forward and fast-rewind) buttons scroll through items, and Play becomes Enter. Other than that, operation is obvious. Given the PCM-D50's hi-def focus, it records only in WAV format, but can play back MP3s imported from a computer, so long as you follow Sony's filename specs.

You can select one of seven bit depth/sample rate combos, from 16-bit/22.05kHz, which records about 13 hours to the internal 4GB flash memory, all the way to a luminous 24-bit/96kHz, which still gives you almost two hours. Some competing handhelds, while less expensive, require more memory to log this kind of time. You can expand memory only with Sony Memory Sticks, and only two types of those are fast enough to support the PCM-D50's higher-res rates: Memory Stick Pro-HG and Memory Stick Pro Duo High-Speed. SanDisk is also making memory cards in this format now.

## EXTRA GOODIES

The PCM-D50 has "Super Bit Mapping" for 16-bit recording – it's a noise-reducing way of squeezing 20 bits worth of data into 16 bits. It was hard to tell if it worked at first, but only because the PCM-D50 has so little self-noise. I did notice incremental

improvements when recording dense polyphonic material (e.g., orchestras). The analog-to-digital and digital-to-analog conversion is impeccable, but a couple of unexpected features really kill.

First is the limiting system, which records another stereo track 12dB below the main track. If a section distorts, it automatically boosts the clean track's level and splices a section into the distorted track. It works perfectly, with neither the pumping sound you might get from a compressor, nor any audible glitches from the splice.

Another "business class" perk is pre-recording. This captures audio five seconds before you actually start recording, so you never miss the beginning of a great song, take, or quote. It does this by constantly recording into a five-second buffer, as long as you're in record-standby mode. Start recording (press Play), and it grafts the buffer's contents onto the beginning of your file, effectively being an audio time machine.

## IN USE

It would be nice if you could just throw the PCM-D50 on a chair and burn the next Grammy-winning CD from the results. As with many precision tools, though, you'll need to work a bit harder than that for optimum results. Here's why.

Unless you use external mics, all the sound comes in through the two built-in cardioid condenser mics. You can move these into any position from a 120-degree spread to a 90-degree X-Y pattern. Because the mics are pretty directional, you get a strong sense of stereo field, as well as changes in character based on the distance to the sound source. Getting a balanced stereo image and degree of intimacy that I liked required quite a bit of mic positioning and level tweaking, which was made easier by having some sort of support for the PCM-D50. Sony makes a table tripod (\$69.95) that screws into a threaded hole; I rigged up a mic stand and boom. The mics are the best built-ins I've heard on anything (except perhaps the PCM-D1), but unless your record level and proximity are just right, you do lose a little headroom, so the sound breathes a bit less than it would

## NEED TO KNOW

**What is it?** Stereo handheld digital recorder with movable mics and unique features – like recording stuff that happened before you pressed Record.

**It records what happened in the past? How?** It actually starts recording into a five-second buffer when you put it in standby. When you hear something great, press Play, and it grabs the last five seconds of history.

**Did they really build a better limiter?** In limiter mode, the PCM-D50 records an additional signal at 12dB below the set recording level. If you distort, it seamlessly replaces the bad patch with the undistorted signal.

**Can I slow down tracks to learn riffs?** Digital Pitch Control can slow playback up to 75 percent, and speed it up 100 percent, without affecting pitch.

**How's the battery life?** Exceptional – standard Energizers lasted about 24 hours in our tests. It takes four AAs, rechargeable or not.

if you used, oh, Neumann U87s through high-end preamps. But hey, this thing costs far less than *one* of those mics, and it's the size of half a deli sandwich. That I *can* nitpick to this extent is a testament to the PCM-D50's flexibility and sonic sensitivity.

## CONCLUSIONS

If you just want to grab an MP3 of your latest piano vocal, transcribe spoken words, or capture band practices for review, many less expensive options out there do a darned good job. But high-quality live CDs will be tracked using just a PCM-D50, if they haven't been already. The only field recorders to offer higher resolution are Korg's MR series (reviewed July '07), which do 1-bit DSD format. Mics matter, though and the PCM-D50's are better than the MR-1's; the half-rack MR-1000, which has XLR mic inputs but no built-in mics, sells for well over \$1,000. Bottom line: Of the small handful of handhelds that can truly claim to be audiophile-grade, Sony has delivered the bang-for-buck leader. ☑