

# Four Reasons the LaserWriter Mattered

Twenty-five years later, we look back at Apple's first laser printer

BY BENJ EDWARDS

**T**wenty-five years ago Apple released the LaserWriter, its first laser printer. Few today remember that Apple's hefty printing machine had as much of an impact on the way the world used computers as the Macintosh itself. The \$6995 LaserWriter was part of a 1985 Apple marketing initiative christened the "Macintosh Office" that included a new network technology called AppleTalk, the printer, a file server, and a high-end Unix workstation. In light of this anniversary, here are four reasons the LaserWriter mattered:

## 1. It Assured Apple's Graphic Design Dominance

For the graphic designer in 1985, the Macintosh represented a quantum leap in the way one could dynamically manipulate graphics and text. But without a means to turn those designs into print, the Mac alone could be dismissed as a fancy toy.

Enter the LaserWriter, which allowed a user to print typography at an enormous range of point sizes in four professional fonts. No matter what the size, the text came out razor sharp on paper. In addition, the LaserWriter could output perfect curves, lines, and half-toned artwork anywhere on a printed page.

For the first time, a designer could mock up a complete page of text and graphics on a computer and then produce a quick professional hard copy without significant expense.

## 2. It Launched PostScript

The Apple LaserWriter was the world's first printer to use PostScript, a page-description language created by Adobe Systems. The genius of PostScript was in the way it could compress information. Apple's networking standard, AppleTalk, could push data at 230,400 bits per second. That was plenty fast enough to transmit PostScript code to the LaserWriter. Due to speed and memory concerns, Hewlett-Packard limited its first LaserJet to no more than six square inches of graphics per page—in other words, a 2-inch by 3-inch rectangle. The LaserWriter could output a full page of graphics at the user's discretion.

## 3. It Was the First Network Printer

If your office bought a \$6995 printer (that's \$14,090 in 2010 dollars), wouldn't you want to share it among employees? Apple thought so—which is why it designed the primary interface for the LaserWriter around its new AppleTalk networking standard. As a result, 30 to 40 Macs could share the same LaserWriter over Apple's low-cost computer network.

Unlike networked printers before it, the LaserWriter didn't have to be tethered to one computer. It wasn't until a full six years later, in 1991, that the HP LaserJet IIISi duplicated this network

functionality for the first time on the IBM PC side.

## 4. It Empowered the Little Guy

For those of us who grew up with desktop publishing all around us, it's hard to fathom the trouble and expense people went to just to produce a single page of laid-out, pasted-up typography in the world before the LaserWriter. It took dozens of hours to typeset a single page of text in the 1970s and early 1980s. The machines that were involved—typically photo typesetters—sold for tens of thousands of dollars. With the LaserWriter and a Mac, one person could sit down, input text into a computer-designed page layout, and have a hard copy in a few minutes. The launch of the LaserWriter effectively marked the beginning of the desktop publishing era—the era in which virtually anyone could design and print professional-looking publications with a personal computer.



PRODUCT WATCH

### HARDWARE

**Lok-It Secure Flash Drive**, from Systematic Development Group ([www.lok-it.net](http://www.lok-it.net)): Portable flash drive comes with full PIN entry keypad on USB stick (4GB, \$62).

**WorkForce 520**, from Epson ([www.epson.com](http://www.epson.com)): Scan, copy, fax, and print with this all-in-one inkjet. Features 802.11b/g/n wireless networking, 10/100 ethernet, and USB 2.0 (\$130).

### SOFTWARE

**TextFlow Desktop 1.0**, from Nordic River ([www.nordicriver.com](http://www.nordicriver.com)): Compare Microsoft Word and Open Office files with this collaborative document editor (\$99).

**VPN Tracker 6.2.1**, from Equinix ([www.equinix.com](http://www.equinix.com)): Virtual private network software can now be used with VPN devices from WatchGuard Technologies (\$99, \$129, and \$269 versions).



# REVIEWS

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## HARDWARE

### Dell 3330dn

Dell's 3330dn monochrome laser printer may not look exceptional, with its compact footprint, low price, and rather basic feature set. But it offers impressive speed and print quality, plus plenty of connectivity and other ways to grow. The Dell printed 18 pages per minute (ppm) for plain text, and 4.3 ppm for a document with mixed text and color graphics (printed as grayscale). Text quality was perfect, but graphics quality was marred by noticeable banding and a limited midrange of grays that made round objects and shadowy areas look too dark or too flat. For a printer this fast, the 250-sheet standard input tray and 150-sheet output tray seem unduly small. You can add a 550-sheet input tray for \$100. The 3330dn ships with a standard-capacity, 7000-page toner cartridge that, when purchased separately, costs \$160—or 2.3 cents per page ([macworld.com/6158](http://macworld.com/6158)). **4.5/5**; \$599; Dell, [www.dell.com](http://www.dell.com)



### HP Officejet 6000 Wireless

HP's Officejet 6000 Wireless color inkjet printer offers good performance and plentiful features, plus cheap inks. The Officejet 6000 Wireless ranked in the middle of the pack on most of our speed and quality tests. On the Mac, plain-text speed was 7.45 ppm, versus 1.47 ppm for a mixed text and graphics PDF file and 0.77 ppm for a full-page color photo. Text quality was just a hair shy of crisp. Color prints tended to have a more sepia or yellowish tinge, though they still looked natural. Our grayscale image seemed a little greenish and grainy. The inks are reasonably priced. Standard-size (HP 920) cartridges ship with the unit and will cost



you 4.8 cents per black-ink-only page and 14.7 cents per full-color page. This is a good inkjet printer for small offices on a budget with low- to mid-volume printing needs ([macworld.com/6159](http://macworld.com/6159)).

**4.5/5**; \$120; Hewlett-Packard, [www.hp.com](http://www.hp.com)

### Iomega iConnect Wireless Data Station

Do you have lots of USB storage devices lying around that you wish you could access across your home network? For a very reasonable \$100, Iomega's iConnect will let you do that and more, with up to four drives. The iConnect is basically a network-attached-storage (NAS) box without drive bays. It has a DLNA Certified UPnP media server for streaming music and video across the network, handles bit torrents, and even allows you to attach printers and cameras to any of its four USB ports. The iConnect offers wireless connectivity, but that feature is disabled by default; to enable it, you must initially connect via the gigabit ethernet port. Setting up a Time Machine backup is a bit tricky. Initially, none of the drives we attached to the iConnect could be used for Time Machine backups; we first had to enable a single drive via the backups tab in iConnect's browser. If you don't need remote FTP access, the iConnect is a great way to get started with network storage and media serving ([macworld.com/6160](http://macworld.com/6160)).

**4.5/5**; \$100; Iomega, [go.iomega.com](http://go.iomega.com)



### Oki C610dn

Oki's C610dn color LED printer offers good performance and economy. In our tests, it printed text at a pace of 17.2 ppm. A four-page PDF file of mixed text and graphics and a full-page



color photograph each took around a minute to finish. The C610dn ships with starter-size, 2000-page cyan, magenta, yellow, and black toner supplies. Based on Oki's estimates, printing in black costs 1.1 cents per page. A four-color page would cost just 9 cents—a bargain. These economical consumables are a highlight, but the printer does have its drawbacks. For starters, the installation process is tedious and confusing. The setup guide's instructions for the Mac are outdated and peppered with factual errors. Oki says that updated documentation should be available online soon. Given its reasonable purchase price, speed, and affordable consumables, this printer could serve most small or medium-size workgroups competently ([macworld.com/6161](http://macworld.com/6161)).

**4.5/5**; \$699; Oki Data Americas, [www.okidata.com](http://www.okidata.com)



## SOFTWARE

### Less Accounting

Less Accounting is the only Web-based application that offers a complete set of accounting tools and the basic set of features necessary to run a small business. You can choose one of five package options, ranging from a basic free account to a \$3600-per-year account that provides an actual human bookkeeper who

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