

# Buying A Used Laser Printer

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Used business-class laser printers can provide fast and extremely economical printing.

## 1 Home Versus Business Printers

Most manufacturers have two lines: home printers and business printers.

Home printers are cheap to buy and expensive to run, with high per-page costs and cheap construction.

Business printers are just the opposite: expensive to buy, but cheap to run. Better build quality provides reliability, and cheap toner makes for lower per-page costs. Business printers also provide features that just aren't available on home printers, like multiple high-capacity paper trays, or printing on 11x17 paper.

## 2 Why Buy Used?

It's similar to buying a used car: let the original buyer take the hit in depreciation. But the situation is better than with cars. There are only a few parts to wear, and most of them can be easily replaced. The average office printer is only lightly used anyway, and will be capable of printing tens or hundreds of thousands of additional pages without any repair. How far can these printers go? A client's LaserJet 4050 has printed over a million pages, with only rollers and fusers replaced when necessary. Of course it also went through a lot of toner and paper during that time!

## 3 Testing

Testing is easy: print a self-test page from the printer's control panel. Self-test pages will also usually show information on installed options. A multiple-page document printed from an attached computer will test the paper feed mechanisms. If possible, test accessories like network interfaces or duplexers.

## 4 Prices

Prices should be based on a printer's age, with the LaserJet 4 models typically being available for less than \$50. That compares well with the price of a cheap new "home" laser. Higher end models will cost only a fraction of their new price, and are usually better options than new mid-level printers.

## 5 Brands

The large majority of business lasers found in the United States are made by Hewlett Packard. Parts and supplies are widely available from HP and from other suppliers. Other brands are much less common.

## 6 What Can Go Wrong

There are a few common places for laser printers to wear: pads, rollers, and fusers are the most common.

A *separation pad* on each paper tray lets the printer pull in the top sheet from a stack of paper. If the printer feeds in multiple pages, the separation pad is not getting enough traction on the paper. Sometimes cleaning is enough to fix that. If not, a new separation pad is inexpensive (\$5 or so) and often can be replaced without tools.

*Rollers* are used in multiple places to help feed paper through the printer, and usually have a lightly-textured rubber "tire". When the texture wears off the tire, it can slip. Again, these rollers are inexpensive and can often be replaced without tools.

*Fusers* are electrical heating components that fuse the dry toner powder onto the paper. After thousands of pages, fusers can wear out. A fuser is a pretty major part, but still can be replaced at less than the cost of another printer.

Examples: for an HP LaserJet 4050, a separation pad is \$3, a typical roller is \$4, and a fuser is \$150. According to HP, a fuser should last about 200,000 pages, although my experience suggests more like 180,000 pages. That's 360 reams of paper at 500 sheets each. Few office printers see anything like that kind of use. The page count is included on the printer self-test page. Some printers allow the page count to be reset, so a low page count doesn't necessarily prove low usage.

## 7 Preferred Models

### LaserJet 4, 4M, 4+, 4M+, 5, 5M, 5+, 5M+

These are rugged older printers, often available for less than \$50. Not overly fast, but tough and reliable. Rollers sometimes wear and cause paper to fold accordion-style at the back. A JetDirect network interface can be added to the MIO slot. Halogen bulb fusers mean there's a warm-up before the first page is printed.

### LaserJet 4000, 4050, 4100, 4200, 4300

Good, fast, reliable, and easy-to-repair printers. Many parts can be replaced without tools. "Instant-on" fusers start printing in 15 seconds, excellent print quality.

### LaserJet 5SI, 8000, 8100

These are very large, heavy printers that can print up to 11x17 sizes all day long. Very reliable, good print quality, excellent for shared office use or large print jobs.

### LaserJet 5000

Another large 11x17-capable printer. The 5000's 1200DPI output is very sharp and good for high-quality prints.

Table 1: Model Name Letter Codes

C	color
D	duplexer (automatic printing on both sides of the paper)
L	stapler/stacker
M	as a prefix: Multifunction printer/scanner/copier as a suffix: PostScript language ("Mac"); only used on older models
N	network interface included (JetDirect)
P	personal printer, not designed for heavy use
S	stacker for output
T	extra paper tray

A LaserJet 8000TN would have come from the factory with an extra paper tray ("T") and network interface ("N"). Most options can be removed; check for their presence before purchase.

## 8 Models To Avoid

The HP LaserJet 5L and LaserJet 6L are top-feed printers with a design flaw. The flaw results in them feeding in multiple sheets of paper at the same time. These are technically "home" printers. HP lost a class-action suit on these printers, then produced other top-feed printers that had similar problems. Avoid top-feed printers, unless they're free. Maybe even then.

## 9 Where To Look

Local thrift stores.

Local newspaper classified ads.

Yard sales.

Auctions.

<http://www.craigslist.org> or other online classified postings for your area.

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