Rescuing Throwaway Inkjet Printers

By Steven Pacenka

Inkjet manufacturers make the most profit from single use ink cartridges and practically give away their printers to addict users to their proprietary cartridges. The trigger to throw away is when you need a $35 cartridge and see a whole new printer on sale for $50. Why do the manufacturers do this? That $35 cartridge with its 30 milliliters of ink represents a price of thousands of dollars per gallon. You need to spend over and over and over again, using up two or more cartridges to print one 500 sheet ream of paper. They and the office supply chain love getting your nickel or dime per page you print. To keep you addicted, that new $50 loss-leader printer will have the latest features, including ways to prevent you from using ink cartridges refilled by anyone except the printer manufacturer.

FLR's eCenter and predecessor Babbage's Basement have opposed this throwaway approach by refurbishing and selling two or three rescued inkjet printers per week for most of the last decade. At this rate we have passed the thousand mark in little Ithaca.

A successful rescue of any computer hardware requires giving confidence to the buyer. We strive to become confident ourselves and to give confidence. Each printer undergoes nearly a half hour of testing and prep. Confident efficiency includes four elements:

1. Cull quickly by recognizing unviable models for us and the customer.
2. Completely test paper feed, ink cartridge motion, and interface to computer.
3. Provide demo prints.
4. Use pricing that is based on how much ink is provided.

We use Linux to eliminate the time needed to install and uninstall printer driver software. We evaluate ink cartridges by using specialized software that can assess ink levels, or by weighing them to compare empty and full weights. We unclog them using software cleaning commands, hot water, solvents to match the ink, or an ultrasonic cleaner. We stay abreast of which kinds of cartridges can be owner-refilled or bought as refilled, avoiding printers that use the newest non-refillable cartridges or cartridges that "expire" according to the calendar.

The printers that have been able to survive our test regime most often have been Hewlett Packard and Canon inkjets, particularly most of the HP Deskjet 800, 900, 5000, and 6000 series. HP PSC 1210, 1315, and 1610 have done well too. Canon PIXMAs are interesting because they have a separate printhead (jet nozzle assembly) that lasts a while and can be removed easily for cleaning. Unfortunately we scrap all Dell and Lexmark inkjets, because they do not have Linux drivers for testing. An advantage to HP (of the mentioned series) is that each cartridge provides new ink spray nozzles, thus a print still looks sharp on a printer that has printed 10,000 pages. The older models have available refilled ink cartridges and sometimes self-refill kits, that can bring the ink cost down to a penny per page instead of 5-10 cents. (This great price difference must be why HP puts out new printers frequently that use different cartridge types, to stay ahead of the refilling industry.)

Why would someone want a rescued printer that was economically uncompetitive with a new one for the original owner? They may want a backup or replacement for their similar printer, especially if both use the same ink cartridges. They may want to keep an ability to refill their own ink cartridges or to buy refilled ones. The rescued printer may work well with their older computer -- new printers may not have "drivers" available for their older operating system, or the driver software for a new printer may be very bloated to accommodate the "features" of the newer printers which are tending toward printer/scanner/copier/fax combinations.

If you have thought twice about the cost to society of throwing away your throwaway printer, and still concluded that it is best to get rid of it, please give us a chance to put it in someone else's hands. If it is an HP, Canon, or recent Epson, the chances are good that we ca get it back into use.   -- SP

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