# 6 Output devices: printers

## A

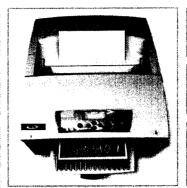
#### Technical details

A printer is a device that prints your texts or graphics on paper.

The output on paper or acetate sheets is called **printout** or hard copy.

A program in your computer, called the **printer driver**, converts data into a form that your printer can understand.

A **print spooler** stores files to be printed when the printer is ready. It lets you change the order of documents in the queue and cancel specific print jobs.



The output quality, or **resolution**, is measured in **dpi** or dots per inch.

The speed of your printer is measured in pages per minute (ppm).

In a network, users can share a printer connected to a **print server**, a computer that stores the files waiting to be printed.

### В

## Types of printers

A dot-matrix printer uses a group, or matrix, of pins to create precise dots. A print head containing tiny pins strikes an inked ribbon to make letters and graphics. This impact printing technology allows shops, for example, to print multi-part forms such as receipts and invoices, so it's useful when self-copying paper is needed. It has two important disadvantages: noise and a relatively low resolution (from 72 to 180 dpi).



A dot-matrix printer

An ink-jet (also called bubble-jet) printer generates an image by spraying tiny, precise drops of ink onto the paper. The resolution ranges from 300 to 1,200 dpi, suitable for small quantities or home use.

A standard ink-jet has a three-colour cartridge, plus a black cartridge. Professional ink-jets have five-colour cartridges, plus black; some can print in wide format, ranging from 60 cm up to 5 metres (e.g. for printing advertising graphics).

Some ink-jet based printers can perform more than one task. They are called **multi-function printers** because they can work as a scanner, a fax and a photocopier as well as a printer. Some units accept memory cards and print photos directly from a camera.



An ink-jet printer and ink cartridges

A laser printer uses a laser beam to fix the ink to the paper. A laser works like a photocopier; a powder called toner is attracted to paper by an electrostatic charge and then fused on by a hot roller.

Laser printers are fast and produce a high resolution of 1,200 to 2,400 dpi, so they are ideal for businesses and for proofing professional graphics work.

Lasers use a page description language or PDL which describes how to print the text and draw the images on the page. The best-known languages are Adobe PostScript and HP Printer Control Language.

A professional imagesetter is a typesetting printer that generates very high-resolution output (over 3,540 dpi) on paper or microfilm. It's used for high-quality publications.

A plotter is a special type of printer which uses ink and fine pens held in a carriage to draw detailed designs on paper. It's used in computer-aided design, maps, 3-D technical illustrations, etc.



A plotter