

Thermal vs. Inkjet Printing

Why thermal technology?

- **Low running costs:** No ink or toner, the cost per page will remain the same regardless of how much print is on the page.
- **Reliable:** Thermal print technology is inherently reliable – using a very limited number of moving parts and operating under a wide range of environmental conditions.
- **Print quality:** Thermal technology uses precise temperature and contact with the paper to place a pixel (printed dot) onto a page. This means precise placement of every dot producing high print quality character and graphic images.
- **Easy to maintain:** There are no consumables such as ink, toners or drums to replenish. There are no scheduled maintenance parts.
- **Easy to use:** Once a printer has been configured, virtually the only steps are feeding paper and turning the printer on and off. Some thermal printers can be automated by using the Power-on / Auto-off features, and even the paper feeding can be automated using roll paper.
- **Versatile:** Thermal printers can be installed in a vehicle, on a cart, or be portable... even wearable. A thermal printer is not sensitive to orientation, performing as well upside-down as it does right-side-up.
- **Supplies that meet the customer's needs:** Paper, the only supply necessary, is available in cut sheet and continuous-roll paper formats with archive-ability characteristics of up to 5 years.

Why inkjet printers are not mobile?

- Recommended uses of inkjet technology are generally limited to a home or office environment.
- Inkjet printers are known to have problems in mobile environments where temperature or pressure extremes occur. Cold ink or pressure variations can upset the printing process impacting print quality.
- The nozzles used in inkjet printers may become easily clogged in the extreme environments required for mobile printing.
- The many moving parts of the printer cannot withstand the harsh use of mobile users.
- Printer sizes have been reduced, but still do not lend themselves to a mobile form factor.
- Changing cartridges can be messy, if not challenging in mobile environments.
- Inkjet printer footprint (size) remains larger than thermal printers, making these challenging to carry and taking up significant space inside vehicles.
- Inkjet printers generally require AC power. This requires added expense for in-vehicle installations and limits mobility to locations near AC power outlets.

How are they being used in the mobile environment?



Brother PJ600 thermal A4 printer using vehicle mount



Inkjet printer

Thermal Printing FAQ

Q How will thermal paper handle hot and cold environments?

A Brother thermal paper is not affected by temperature until the temperature exceeds 140°F. The head temperature required to make a solid dark mark is approximately 225°F. That means if you leave thermal paper on your dashboard, with the windows rolled up, and the temperature is 100°F outside, it is likely that the thermal paper will begin to discolor. If the thermal paper was printed it should remain legible with only the background slightly discoloring.

Q How many years will thermal paper last when stored in normal environments?

A Depending on the grade of Brother thermal paper selected the legibility of the paper in a normal storage environment is up to 5 years.

Q How easy is it to purchase thermal paper?

A Brother thermal paper is available through the same resellers as the mobile printers and can usually be delivered within 48 hours, subject to availability.

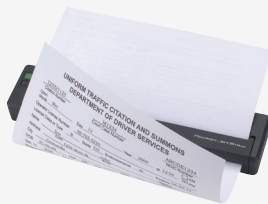
Q Does the paper curl?

A Brother offers cut sheet and roll paper. Brother cut sheet and thermal paper is delivered in flat stacks. The cut sheet paper does not curl and comes in boxes of 100 sheets.

However, the most popular paper is the Brother continuous roll paper. When this paper is delivered on rolls with the paper wound around a ½ inch core, this paper does have curl.

Brother Mobile Printer Paper

PJ600 Series



PJ622, PJ623, PJ662, PJ663

Paper Sizes:

- A4: 210mm x 297mm
- Roll Paper: 210mm x 30m

Paper Type:

- Cut sheet and Roll paper

MW Series



MW-145BT, MW260

Paper Sizes:

- Brother A6 paper: 105mm x 148mm
- Brother A7 Paper: 105mm x 74mm

Paper Type:

- C211S & C11 thermal paper
- C251S & C51 carbon copy paper

RJ Series



RJ-4030, RJ-4040

Paper Sizes:

- Receipts roll: 102mm x 27.7m
- Die cut labels: 102mm x 152mm

Paper Type:

- Label rolls or paper rolls