

# Tips and Tricks

# Inkjet Cartridges

When manufacturing our products we place great emphasis on consistent high quality and functionality. Despite this, it can sometimes be the case that the printed image looks different from what you wanted it to. Here you will find a few tips which you can use to improve the printed image. We assume that you have already followed the instructions in the user manual.

## General tips for inkjet printers:

### What is the correct printer driver?

Please follow the instructions in your manual for this and preferably use the printer driver that was supplied with your device. You will find more tips regarding this on the relevant printer manufacturer's website.

### Blurred edges when printing:

**Possible cause:** The sharpness of edges when printing depends on the interaction between paper and ink. If you print with inks that have a high surface tension you get a printout with sharp edges. One disadvantage of these inks is their relatively slow drying time as they are poorly absorbed into the paper and therefore stay on the surface for a long time. Inks with a lower surface tension dry very quickly on the paper but they run into the capillaries of the paper and can therefore cause the edges of characters to blur slightly, among other things. This effect is known as "bleeding". KMP inks are matched with those of the original manufacturer in this respect.

**Solution:** In order to achieve optimum results with your printer on normal paper, we recommend you test different paper manufacturers. For high-quality printouts we recommend special inkjet paper which you can get from your KMP retailer.

### Horizontal streaks on printout:

**Possible causes:**

**1. Air in the print head:** This is probably the most common cause of printing problems. When changing cartridges, or for other reasons, air bubbles can enter the print head ducts. These prevent the necessary pressure build-up in the ducts (as a result of heating or vibration). As a consequence, no ink is printed onto the paper and white streaks appear. This effect is also known as "banding".

**Solution:** In order to improve printing results, most printers have a print head cleaning function. Ink is flushed through the nozzles using

negative pressure, in order to reestablish the ink flow. You may have to repeat the cleaning several times to achieve the desired result.

**2. Blocked nozzles:** If a printer is not used for a long period, dried ink residues can form on the print head nozzles, which block the print head.

**Solution:** Carry out print head cleaning to remove these residues. If you cannot achieve a satisfactory result, the KMP nozzle cleaner, which you can get from your KMP retailer, could help.

**3. Defective print head:** Print heads are put under a great deal of strain. In a thermal print head there are temperature fluctuations of several hundred degrees at a frequency of up to 10,000 Hertz (10,000 times per second). So print heads are subject to a certain amount of wear and tear. Print heads last a varying amount of time depending on the manufacturer and price. Epson, for example, uses high-quality Piezo print heads which are guaranteed to have a long lifespan. But if they do develop a defect, repair is complex and expensive in comparison with other printers.

**Solution:** For printers that have a print head that is separate from the ink tank (for example Epson and most Canon devices) the only option is to change the print head. However, on HP devices the print head and ink tank form a single unit. Here the print head is replaced every time the cartridge is changed.

## Abnormal colours:

### Possible causes:

**1. For major colour variations:** It is possible that the print head is worn. If, for example, areas that should actually be green appear light blue on paper, this indicates that no yellow ink is being printed onto the paper.

**Solution:** Perform a nozzle test to check whether the print head is okay (you usually find the nozzle test under "utilities" in your printer driver software).

If the nozzles do not work, several print head cleaning cycles may solve the problem. If this is unsuccessful, the print head must be replaced.

**2. For slight colour variations:** Here it should be noted that the colour reproduction with scanners, monitors and printers depends on the

device and they are all based on completely different technologies. For this reason, certain colour variations between devices are unavoidable.

**Solution:** Most printer drivers have an integrated colour management system, which can be used to minimise variations (for example by changing the contrast, brightness and saturation figures). As already described under "blurred edges when printing", the paper you use can also play a role. Test different types of paper to get the best result possible.

## No ink on the paper:

**Possible cause:** If the printer is not used for a long period a dried up print head could be the reason for this.

**Solution:** Several print head cleaning cycles or the use of the KMP nozzle cleaner may remedy this. **Caution:** Never use harsh cleaning agents or solvents for cleaning, as these could destroy the print head.

If these steps do not work it could be that the cleaning mechanism or the seal to the nozzles is defective. You can find out how to check this in the manufacturer-specific tips.

## There is no ink on the paper after changing the cartridge:

**Possible cause:** If a printer no longer works after changing the cartridge, the reason could be insufficient ventilation of the cartridge. With most cartridges you have to remove a tab or similar to provide ventilation. Under some circumstances residue from the tab can prevent ventilation. This can mean the pressure cannot equalise and the ink does not come out of the cartridge.

**Solution:** Remove any tab residues from the cartridge.

If these tips do not solve the problem, please read the manufacturer-specific tips.

## Combining original and KMP inks

It is possible to use both a mixture of original and KMP cartridges and to replace original cartridges with KMP products or vice versa. It is also

possible to mix inks in the print head when changing cartridges without adversely affecting the print quality.

## Where do I take empty cartridges for recycling?

Do not just throw the cartridges away after use, send them back to us. Many cartridges can be remanufactured. Important: Do not try to tape up the nozzles.

Our products come with a collection bag. Simply put the cartridges in this leak-proof bag, seal it and pop it into the nearest post box. Or take your **empty printer cartridges to a collection system, such as at your local retailer, for recycling.**

## Manufacturer-specific tips: For Epson printers

### Unscheduled cartridge replacement:

With many older Epson printers, there is no provision for the user changing the cartridge outside the intervals stipulated on the status display.

**Solution:** Switch on the printer and push the paper feed button and hold it for three seconds. The print head will move into the cartridge changing position. After changing the cartridge press the paper feed button again briefly or press the cleaning button, and the print head will move back into its original position.

For newer printers the cartridge change can be initiated either by using the printer software on the PC or using the maintenance menu on the printer. You will usually find the option to change the cartridge in the driver software under "features", or on the printer itself usually under "maintenance" or "ink".

### Horizontal streaks on the printout after changing the cartridge:

**Possible cause:** The most common reason is air in the print head.

**Solution:** If you find streaks on your printout after changing the cartridge, carry out one or two print head cleaning cycles and then a

nozzle test (see operating manual). If the print head cleaning does not result in any significant improvement, leave the printer switched on for one hour. The air in the nozzles should then escape. Print another nozzle test to check the result.

## There is no ink on the paper after changing the cartridge:

**Possible cause:** If a printer no longer works after changing the cartridge, the reason could be insufficient ventilation of the cartridge. The ventilation opening is in the form of a small hole under the tab that you removed before using the cartridge. Under some circumstances residue from the tab can prevent ventilation. This can mean the pressure cannot equalise and the ink does not come out of the cartridge.

**Solution:** Remove any tab residues from the cartridge.

## Status message after inserting a cartridge with a chip

**Cause:** For legal reasons, manufacturers of compatible products cannot use the item numbers of the original manufacturer. For this reason, after inserting some KMP cartridges you will be advised that you are not using original ink cartridges with an item number. You will be asked whether you want to continue using the installed ink cartridge.

**Solution:** Answer "yes" to this question. You will then only see this message again the next time you change the cartridge.

## Cartridge with chip is not detected:

### Possible causes:

**1. Contamination:** If there are contaminants present then no contact can be made between the chip and the printer's electronics.

**Solution:** Remove the cartridge from the printer and check the contacts for contaminants. If necessary, clean the chip with a soft, lint-free cloth. Insert the cartridge again. Please also check whether the

right colour has been inserted into the corresponding part of the print head.

**2. Chip defective:** If the microchip is not working, the cartridge will not work either. In this case, your KMP retailer will be happy to exchange the cartridge.

**3. Cartridge does not sit in the print head correctly:** Remove the cartridge from the printer and reinsert it. Please press down firmly as KMP cartridges do not have a clip due to patenting laws.

## Does the KMP cartridge have the same capacity as the original cartridge?

The page yield is determined according to ISO/IEC 24711 and is written on the KMP packaging. It can therefore be directly compared with the original manufacturer's information.

### How the fill level is measured:

With older printers a switch is activated when the cartridge is inserted, which alerts the printer that there is a certain amount of ink available.

Newer printers identify the cartridge and the fill-level from a chip on the cartridge. For each document printed, the ink used is deducted from the existing level and the current ink level is calculated. Some ink is also used during print head cleaning and when the printer is switched on, which is also deducted from the existing level. So the fill-level is purely a calculated value.

## Manufacturer-specific tips: For HP printers:

### The printer does not detect the cartridge:

**Possible cause:** There is a circuit board on the back of the cartridge with several contacts. If these contacts get contaminated, the printer could fail to detect the cartridge.

**Solution:** Clean the contacts with a tissue or eraser and try again. Also check the contacts on the cartridge carriage in the printer. If you find contaminants here too, disconnect the printer from the power supply and clean these contacts.

## For black cartridges:

### ***No ink on the paper:***

**Possible cause:** If the print head moves over the paper without adding any ink, the print head could have dried up.

**Solution:** Remove the cartridge from the printer and place it with the nozzles on a tissue soaked in water or KMP nozzle cleaner. **Caution:** Ink will come out. In order to avoid soiling your furnishings, it is best to put the cartridge on a plate or in a bowl. After a short period of time a black stain should form on the tissue as the dried ink dissolves. Leave the cartridge on the tissue for half an hour. Then clean the print head with a clean tissue. Put the cartridge back in the printer and try printing again.

### ***Streaky printout:***

#### **Possible causes:**

**1. For white lines in the printout:** The print head nozzles could be clogged.

**Solution:** See above "*no ink on the paper*".

**2. For thin, irregular lines on the paper:** The cartridge contacts could be contaminated. If fluff or hairs soaked with ink end up near to the paper on the paper feeder, this could also lead to streaks on the printout.

**Solution:** See above "*no ink on the paper*".

Disconnect the printer from the mains. If necessary also check and clean the cartridge carriage in the printer.

## **Ink runs out:**

#### **Possible causes:**

**1. Occasionally small droplets form on the cartridge:** There is no negative pressure in the cartridge or it is too low.

**Solution:** Print out one or more entirely black pages. This will cause

some negative pressure to build up in the cartridge again, stopping the leak.

**2. Heavy ink leakage:** Inside the cartridge there are bags which are responsible for generating negative pressure. If these bags are leaking, the negative pressure in the cartridge is lost and the ink leaks. Cracks in the cartridge may cause a similar problem.

**Solution:** The cartridge is defective. In this case, your KMP retailer will be happy to exchange the cartridge.

## For colour cartridges:

### Abnormal colours:

**Possible cause:** It is possible that the print head is worn. If, for example, areas which should actually be green appear light blue on the paper, this indicates that no yellow ink is being sprayed onto the paper.

**Solution:** Check whether the print head is okay. To do this, remove the cartridge from the printer and gently brush the nozzles on a white paper tissue. Now three distinct streaks in cyan (light blue), magenta (light red/pink) and yellow should be visible. If no streaks are visible, repeat the process with a damp tissue.

*For DIY enthusiasts:* If you are unsuccessful using the previous method, place the cartridge in a cup containing 5 mm of warm water, for one minute. You can add a drop of washing-up liquid to the water. Then take the cartridge out, brush the nozzles on a tissue once again and check the result.

If the colours on the tissue are green instead of yellow, orange instead of magenta, dark blue instead of cyan, or otherwise differently coloured, there is colour mixing in the cartridge. In order to eliminate this, print several full pages of the abnormal colour. If this does not lead to any improvement, the cartridge is defective and cannot be refilled.

## No ink on the paper, but the cartridge is detected by the printer.

**Possible cause:** If the cartridge is detected by the printer but no ink is being printed onto the paper, it is possible that the nozzle plate has detached from the print head. This is a chrome plate on the underside of the cartridge. If this plate has detached from the cartridge, the

cartridge is irreparable and must be disposed of. In this case, your KMP retailer will be happy to exchange the cartridge.

## Compatible HP cartridges with chip

See manufacturer-specific tips for Canon printers (single-ink cartridges ...)

## Manufacturer-specific tips: For Canon printers:

### Cartridges with integrated print head

These cartridges have no fill-level indicator. Please refer to the information slip in the packaging.

### Single-ink cartridges with and without chip

These cartridges have no fill-level indicator: Please refer to the information slip in the packaging.

#### ***Streaky printout:***

Please check whether the ventilation hole in the cartridge is open. It is on the top of the cartridge. If necessary prick it with a pin and then carry out a print head cleaning cycle.

### Cartridge is not detected:

#### **Possible causes:**

- 1. Cartridge inserted in wrong carriage compartment:** Please check whether the right colour has been inserted into the corresponding part of the print head.
- 2. Chip defective:** If the microchip is not working the cartridge will not work either. In this case, your KMP retailer will be happy to exchange the cartridge.
- 3. Cartridge does not sit in the print head correctly:** Remove the cartridge from the printer and reinsert it. Please press down firmly, as

KMP cartridges do not have retaining clips on the front due to patenting laws.

## Manufacturer-specific tips: For Samsung and Lexmark printers:

The technology of these printer manufacturers is very similar, and therefore so are the problems that can arise when printing. The system is constructed in such a way that both the tanks and the print head can be changed easily.

### Streaky printout:

**Possible cause:** Samsung and Lexmark printers have bubble jet print heads which are relatively cheap but wear out quickly. A streaky printout is generally not due to the cartridge, but to a damaged or dirty print head.

**Solution:** First carry out the cleaning functions available through the printer driver. If this does not have the desired effect, please remove the print head as described in the manual and clean it with a damp tissue.

If this does not improve the printed image, the best solution is to buy a new print head. Of course, you can use the installed cartridges again in the new print head.

### No ink on the paper after changing the cartridge:

**Possible cause:** In these cartridges there are one or more foam or felt pads. It is possible that the foam or felt in the cartridge has shifted so that contact cannot be made between the cartridge and print head. This means no ink is transferred.

**Solution:** The felt or foam on the cartridge's ink outlet should lie flat against the opening. If this is crooked or sitting far behind the opening, you can straighten it out with tweezers. Put the cartridge back in the printer and try printing again.

