



# GMG ColorProof

## Best Practices: Mimaki UJF-706

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## **Imprint**

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## 1. Mimaki UJF-706

**Note** To access the printer via USB, you need to install the latest printer driver provided by the printer manufacturer on the same computer you installed GMG ColorProof on. The printer driver can be downloaded from the website of the manufacturer.

**Note** A Windows print spooler is not supported by the Mimaki UJF-706.

### Printer features

- ◀ The **Mimaki UJF-706** is a UV curing flatbed printer with a **large print area** (70 x 60 cm) designed for **prototyping, proofing** and personalized short-run production with the ability to print on flexible and rigid media up to 15 cm thickness such as metal, tin, glass, styrene, shrink foil, PET or OPP.
- ◀ Printing **CYMKLcLm** (with Light Cyan and Light Magenta), **White** and **Clear** ink, at resolutions up to 1200 dpi, the **UJF-706** allows for superb detail, vibrant colors and rich special effects with gloss finishes. Due to a sophisticated print head arrangement, white and full color inks can be printed **simultaneously** without slowing down the printing speed. All inks can be applied in **multiple layers** enabling three-dimensional printing.
- ◀ Equipped with a **Spray Suppressor System**, which prevents satellite ink drops, the **UJF-706** ensures higher print reliability and quality.
- ◀ The **UV lamp** allows printing on heat-sensitive and pressure sensitive media such as **shrink foils** without any risk of damage.
- ◀ Sheet by sheet or optional roll-to-roll functionality
- ◀ Of the two available **UV inks** for hard and for flexible print applications, GMG ColorProof only supports the **hard ink type**, as it reflects a **wider gamut** and can be used with **clear** ink (which is not the case with the flexible ink).

### White and Clear ink channels

- ◀ The white and clear inks are handled as spot colors in GMG ColorProof. Per default, the clear ink is mapped to the **White** channel. You can fine-tune the behavior of the spot color channel by adjusting the **Area Coverage** or by using a spot color **gradation** (sgf) file.

### Available Proof Standards and Calibration Sets

GMG proof standards and calibration sets for **UJF-706** printers are available for the following print media:

- ◀ **Luminor 25 S10 Clear Foil** (with curing intensity set to 50%)

If you want to use a different print medium, you need to add the print medium in the **System** view (**System > Media**) and assign the printer to the medium. You can then proceed to the next step and create a calibration set and a proof standard for the new printer-medium combination. All these steps are explained in detail in our printer-specific **Starter Kits**.

See also:

- GMG-ColorProof-5\_Tutorial\_StarterKit\_Mimaki UJF-706\_en.pdf

### Media Handling

The **Mimaki UJF-706** offers an optional roll unit to support roll media. Roll media is, however, used just like sheet media, with a fixed size (maximum and default size = 70 x 60 cm). To feed the roll media, you can enable an automatic feed after each job (**Job > Printer Settings > Advanced > Paper Feed after Printing**). You can furthermore specify a **Spacing between Jobs** in millimeters, so that the print medium is advanced by the job length plus the defined spacing before the print head returns to the starting point and prints the next job.

## 1.1 Multiple Layers—Multiple Color Modes

### Available Color Modes

Color Mode	Description	Front/Reverse
<b>CMYKLcLm Only</b>	Prints <b>only</b> CMYK, Light Cyan and Light Magenta. Combined with <b>White Only</b> or <b>Clear Only</b> , this color mode is ideal for <b>front printing</b> .	Front
<b>CMYKLcLm   White</b>	Prints CMYK, Light Cyan, Light Magenta and White in one pass. CMYKLcLm is printed as undercoat, overprinted by White. This color mode can be used for <b>reverse printing</b> . The job is automatically <b>mirrored</b> (vertically).	Reverse
<b>CMYKLcLm   Clear</b>	Prints CMYK, Light Cyan and Light Magenta with clear ink in one pass.	Front
<b>Clear Only</b>	Prints <b>only</b> clear ink with as many <b>Overprint</b> passes as defined.	Front
<b>White Only</b>	Prints <b>only</b> high density white ink (ideal for printing an undercoat on transparent media in a low resolution to print high resolution CMYK on top of it). You can fine-tune the behavior of the White channel by adjusting the <b>Area Coverage</b> in percent or by using a spot color <b>gradation</b> (sfg) file.	Front
<b>CMYKLcLm Reverse Print</b>	Prints <b>only</b> CMYK, Light Cyan and Light Magenta. This color mode can be used for <b>reverse printing</b> . The job is automatically <b>mirrored</b> (vertically).	Reverse
<b>White   CMYKLcLm</b>	Prints White, CMYK, Light Cyan and Light Magenta in one pass. White is printed as undercoat, overprinted by CMYKLcLm.	Front
<b>White Reverse Print</b>	Prints <b>only</b> high density white ink (ideal for printing an undercoat on transparent media in a low resolution to print high resolution CMYK on top of it). Together with a <b>CMYK Reverse Print</b> color mode, this color mode can be used for <b>reverse printing</b> on transparent media. The job is automatically <b>mirrored</b> (vertically). You can fine-tune the behavior of the White channel by adjusting the <b>Area Coverage</b> in percent or by using a spot color <b>gradation</b> (sfg) file.	Reverse
<b>UV Curing Only</b>	This mode has been added to provide you with the possibility to harden the inks <b>after</b> printing. <b>UV Curing Only</b> does not send any color data to your printer, it just starts the curing with the defined curing intensity. You can define multiple curing passes in one job by defining multiple job copies ( <b>Job &gt; Printer Settings &gt; Printer tab &gt; Number of Copies</b> ).	

### Automatic multi-pass printing

The larger the number of **Passes**, the higher the print quality, but also the longer the time the job needs to be printed.

You can define up to **9 Overprints** making the print head print over the same print line for the defined number of times. This setting is especially useful for printing a gloss finish—the higher you layer the clear ink with multiple **Overprint** passes, the potentially glossier the effect.

### Double speed printing

When activating the **Fast Print** mode, the printing speed is approximately doubled. This feature depends on the selected number of **Passes** and is for technical reasons not available if the **minimum** number of passes has been selected. Please note that enhanced printing speed naturally lowers the print quality.

## 1.2 Printing a Matte or Gloss Surface

Depending on the **Curing Mode** and **Curing Intensity**, you can print different surface effects. You can either make use of the curing settings you might already have defined on your printer (**Printer Settings > Advanced > Default Settings from Printer**) or define them in GMG ColorProof (> **Custom**). The **Curing Intensity during Printing** can be defined in percent.

The following table describes the two basic surface effects you can achieve with UV curing turned **on** or **off**.

Surface Effect	Description
Matte	Basically, a matte finish is automatically achieved whenever the ink is cured during printing (which is the case with most color modes). If UV inks are cured just after being applied to the print medium, they immediately solidify, 'sitting on top' of the print medium. This gives the visual impression of a matte effect.
Gloss	A gloss finish can be achieved by turning the UV curing <b>off</b> during printing (> <b>Curing Mode: None</b> ). This way, the inks are not instantly hardened and can settle for a while to form a level surface, which gives the visual impression of a gloss effect. The UV curing can only be turned off with the color mode <b>Clear Only</b> . The higher you layer the clear ink with multiple <b>Overprint</b> passes, the potentially glossier the effect. Alternatively, you can define several job copies ( <b>Job &gt; Printer Settings &gt; Printer tab &gt; Number of Copies</b> ) to layer the clear ink.

### 1.3 Job Example

All inks printed in one pass form one layer. To use the potential of the printer and print several layers, you need to set up the same number of jobs. In the following example, you will learn how to create a job and print two layers with a gloss finish.

#### How to print CMYK with a white undercoat and a gloss finish

1. Open the input file in the **Manual Job Manager**, selecting the correct printer and print medium, for example **Luminor 25 S10 Clear Foil**.
2. Under **Color Management > Proof Output**, select a **Proof Standard** and **Proof Mode**.
3. Under **Job > Printer Settings > Printer**, select a **Calibration Set** with Color Mode **White Reverse** in a resolution of your choice from the drop-down list.
4. Under **Color Management > Channels**, select the Option **Add Coating Channel** and define the **Intensity** for the **White** ink.  
(An **Intensity** of 100% is the highest density for White ink.)
5. Click **OK** to print the job.
6. While the job is printing, **duplicate** it in the **Jobs** list, put the duplicated job on **Hold** (so that it is not immediately printed) and open the duplicated job in the **Manual Job Manager**.
7. Under **Job > Printer Settings > Printer**, select a **Calibration Set** with Color Mode **CMYKLcLm** in a resolution of your choice from the drop-down list.
8. Click **OK** to print the job.
9. To cover the job with a nice glossy coat of varnish, again **duplicate** the job in the **Jobs** list and open the duplicated job in the **Manual Job Manager**.
10. Under **Job > Printer Settings > Printer**, select a **Calibration Set** with Color Mode **Clear Only** from the drop-down list.
11. On the **Advanced** tab, check to ensure **UV Curing > Curing Mode** is set to **None**.  
A gloss effect can only be achieved with UV curing turned off during printing.
12. Click **OK** to print the job.
13. To harden the inks **after** printing, **duplicate** the job in the **Jobs** list again and open the duplicated job in the **Manual Job Manager**.
14. Under **Job > Printer Settings > Printer**, select a **Calibration Set** with Color Mode **UV Curing Only**.  
(Depending on the print medium, a gloss effect is best achieved with a high intensity level.)
15. Click **OK** to print the job.  
After all three layers have been printed, you will have a brilliant CMYK print with increased opacity by applying a white undercoat and a gloss finish.

