



# Mimaki CJV150, CJV300

This document bridges the gap between the Fiery XF documentation and the Mimaki CJV150 and CJV300 documentation. Refer to the Installation section before you connect the printer to a computer.

The Operation section has information on profile generation and everyday use. Please refer also to the Operation Manual.

## Installation

For a CJV150 or CJV300 printer, select the Fiery XF driver that matches the ink configuration in the printer:

Fiery XF Model	Description	Supported
Mimaki CJV150-107 Sublimation BMYK Mimaki CJV150-130 Sublimation BMYK Mimaki CJV150-160 Sublimation BMYK Mimaki CJV300-130 Sublimation BMYK Mimaki CJV300-160 Sublimation BMYK	Double BMYK set for higher speed and uninterruptible ink supply  B: Blue Ink type: Sublimation dye ink (Sb)	Yes
Mimaki CJV150-107 Sublimation BMYKbm Mimaki CJV150-130 Sublimation BMYKbm Mimaki CJV150-160 Sublimation BMYKbm Mimaki CJV300-130 Sublimation BMYKbm Mimaki CJV300-160 Sublimation BMYKbm	BMYKbm set for finest detail and less grain  B: Blue, b: Light blue Ink type: Sublimation dye ink (Sb)	Yes
Mimaki CJV150-75 Solvent CMYK Mimaki CJV150-107 Solvent CMYK Mimaki CJV150-130 Solvent CMYK Mimaki CJV150-160 Solvent CMYK Mimaki CJV300-130 Solvent CMYK Mimaki CJV300-160 Solvent CMYK	Double CMYK set for higher speed and uninterruptible ink supply  Ink type: Solvent ink (SS/BS/ES)	Yes
Mimaki CJV150-75 Solvent CMYKcmW Mimaki CJV150-107 Solvent CMYKcmW Mimaki CJV150-130 Solvent CMYKcmW Mimaki CJV150-160 Solvent CMYKcmW Mimaki CJV300-130 Solvent CMYKcmW Mimaki CJV300-160 Solvent CMYKcmW	CMYKcm, plus White Ink type: Solvent ink (SS/ES)	Yes

Fiery XF Model	Description	Supported
Mimaki CJV150-75 Solvent CMYKcmWS Mimaki CJV150-107 Solvent CMYKcmWS Mimaki CJV150-130 Solvent CMYKcmWS Mimaki CJV150-160 Solvent CMYKcmWS Mimaki CJV300-130 Solvent CMYKcmWS Mimaki CJV300-160 Solvent CMYKcmWS	CMYKcm, plus White, plus Silver Ink type: Solvent ink (SS/ES)	Yes
Mimaki CJV150-75 Solvent CMYKOcmk Mimaki CJV150-107 Solvent CMYKOcmk Mimaki CJV150-130 Solvent CMYKOcmk Mimaki CJV150-160 Solvent CMYKOcmk Mimaki CJV300-130 Solvent CMYKOcmk Mimaki CJV300-160 Solvent CMYKOcmk	CMYK, plus Orange + Light cmk Ink type: Solvent ink (SS)	Yes
Mimaki CJV150-75 Solvent CMYKOkW Mimaki CJV150-107 Solvent CMYKOkW Mimaki CJV150-130 Solvent CMYKOkW Mimaki CJV150-160 Solvent CMYKOkW Mimaki CJV300-130 Solvent CMYKOkW Mimaki CJV300-160 Solvent CMYKOkW	CMYK, plus Orange + Light k, plus White Ink type: Solvent ink (SS)	Yes
Mimaki CJV150-75 Solvent CMYKOkWS Mimaki CJV150-107 Solvent CMYKOkWS Mimaki CJV150-130 Solvent CMYKOkWS Mimaki CJV150-160 Solvent CMYKOkWS Mimaki CJV300-130 Solvent CMYKOkWS Mimaki CJV300-160 Solvent CMYKOkWS	CMYK, plus Orange + Light k, plus White, plus Silver Ink type: Solvent ink (SS)	Yes

From the computer viewpoint, the Mimaki CJV150/CJV300 is a special USB device. The latest driver is downloadable from <http://www.mimaki.co.jp/>. The driver also contains the MAPS3 function.

- 1 Follow the instructions in the Mimaki USB Driver Install Guide before you connect the printer. Mimaki USB Driver version 4.1.3 or later is recommended.
- 2 Install Fiery XF and the latest Fiery XF service pack that supports the Mimaki CJV150/CJV300 printer. The minimum requirement is Fiery XF 6.2. Orange is supported from Fiery XF 6.4.
- 3 To configure the Fiery XF output device:
  - On the Device tab, go to the Information pane and select the Device type, e.g. “Mimaki CJV300-130 Solvent CMYK”.
  - On the Device tab, go to the Connection pane. Under “Print via port”, select the printer.

## Operation

### Settings

You can access the ink layers settings in Color Tools via the “Media type” setting.

You can set the number of passes in Color Tools via the “Print mode” setting.

You can select “Waveform” in Color Tools via the “Dot size” setting.

You can select a resolution in the range of 360x360 dpi to 1440x1440 dpi.

Note that ink consumption may be higher in higher resolutions.

### Creating profiles

In System Manager, select the Linearization device. On the Special tab, open the Special Printer Settings pane. Under “Contour cutting” select the “Print only” print mode, and make sure that “Enable printer cut marks” is not selected.

Always check the control panel settings – they may override the RIP settings or otherwise affect print quality.

Drying time and the overall ink consumption are extremely important, especially in fast print modes. Observe the following recommendations:

- If your printer has light inks, reduce the starting point of norm ink. Setting it to 1/2 of the Color Tools setting (e.g. from 38% to 19%) is a good start.
- When creating a profile, increase the black length, e.g. to 16.
- When printing a narrow image, you get considerably less ink drying time between passes than when printing a wide image. If your print speed is very fast or you are printing white, you should make your printing width consistent:
  - In the Fiery XF output device setting, make sure that “Logical seek” is set to Off.
  - When creating a media profile, the media width should correspond to the width used for production (not more, and not considerably less).
  - In the Fiery XF output device setting, consider setting a drying time for each scan.

### Printing with white and silver metallic inks

This section applies only to models with white or silver metallic inks, e.g. Mimaki CJV300-160 Solvent CMYKcmW printers.

#### Print speed and quality issues

The spot color adds another 100% of ink. Although the print speed is slower, you can easily run into quality issues. Use as much of the media width as possible, and follow the hints given in the “Creating profiles” section above. In particular, make sure to keep the printing width consistent.

For spot color printing, the CJV printers offer two approaches:

- 2-layer printing: The print head is split into two bands - one for process colors and one for the spot color.
- Pulled-back layer printing: The document is printed in two layers - a process color layer and a spot color layer. Each layer is printed completely. The substrate is pulled back between the prints to allow the bottom layer to dry before the top layer is applied.

The pros and cons of these two modes and how to use pulled-back printing are explained in Mimaki's CJV150/300 Metallic Color Printing Guide (CJV150\_CJV300\_Metallic\_Color\_Guide\_D202798\_V1.2.pdf).

### Linearization, media profiles

There is no specific linearization available for printer spot colors. The spot color simply uses its own linearization curve. As far as profiles are concerned, the printer is still a CMYK device. Five-channel profiles that include a mix of CMYK and spot color are not supported.

For white printing, always select the WF3 dot size for a feed resolution (Y) of less than 720 dpi.

### Printer-specific separations

Separated file formats, e.g. PS, PDF, EPS, support spot colors. For Fiery XF, the spot color name WHITE\_INK has a special meaning. It is a pre-defined printer-specific internal spot color. During job processing, it goes directly to the printer, by-passing color management. It is possible to specify it directly in the document. Alternatively, you can use Color Editor to set up an alias, by mapping one of the job's separations to WHITE\_INK (or METALLIC\_INK for silver). You can then select the \*.cxf file in the color settings of the job.

### Print settings for White ink

You can find the settings for White ink on the Special Printer Settings pane for the output device (System Manager) or for the job (Job Explorer).

- Print modes for White ink

Name	Meaning
Spot color WHITE_INK	The spot color of this name or alias from a separated document prints White. This is the default mode.
Inked image	Every pixel which does not have CMYK = 0,0,0,0 on the printer side adds White.
Bounding box	Every pixel in the image rectangle adds White. This is the recommended mode during linearization and profile creation.
White_INVERSE	Same as "Spot color WHITE_INK" but channel inversed.
Ink chroma map	Reduces the amount of White for darker colors.
Off	White off, even when it comes from the separated document.

The options "Inked image" and "Bounding box" work regardless of whether the file is separated or not.

- White ink coverage

White ink coverage is an option that configures the amount of white ink relative to black.

### Print settings for Silver Metallic ink

You can find the settings for Silver Metallic ink on the Special Printer Settings pane for the output device (System Manager) or for the job (Job Explorer).

- Print modes for Silver Metallic ink

Name	Meaning
Spot color METALLIC_INK	The spot color of this name or alias from a separated document prints Silver Metallic. This is the default mode.
Inked image	Every pixel which does not have CMYK = 0,0,0,0 on the printer side adds Silver Metallic.
Bounding box	Every pixel in the image rectangle adds Silver Metallic. This is the recommended mode during linearization and profile creation.
Off	Silver Metallic ink off, even when it comes from the separated document.

The options “Inked image” and “Bounding box” work regardless of whether the file is separated or not.

- Metallic ink coverage

Metallic ink coverage is an option that configures the amount of Silver Metallic ink relative to black.

### Printing order

Since White and Silver Metallic are opaque, printing order is important.

Setting	Meaning
Color on white	Prints White as the foundation color, then prints the other colors on top. This setting is for printing on dark or metallic materials.
White on color	Prints White on top of other colors. This is for printing transparencies from the back.
White only	Prints White, but no other color channels.
Color White Color	Prints three layers with white in the middle.
Color on Metallic	Prints Metallic Silver as the foundation color, then prints the other colors on top.
Metallic on color	Prints Silver Metallic on top of other colors.
White Color Metallic	Prints three layers with White as the base, color in the middle, and Silver Metallic on top.
White Metallic Color	Prints three layers with White as the base, Silver Metallic in the middle, and color on top.

Setting	Meaning
Color Metallic White	Prints three layers with color as the base, Silver Metallic in the middle, and White on top. This is for printing transparencies from the back.
Metallic Color White	Prints three layers with Silver Metallic as the base, color in the middle, and White on top. This is for printing transparencies from the back.
Color Metallic Color	Prints three layers with Silver Metallic in the middle.
Metallic only	Prints Silver Metallic, but no other channels.

### **Pulled-back layer printing**

This enables pulled-back layer printing. Each layer is printed separately – the media is pulled back before starting to print the next layer. If this setting is not selected, all layers are printed in a single run.

### **Option support**

#### **Media length correction**

In Fiery XF you enter the target length and the actual length. The MEDIA COMP value is then

$$( \text{target\_length} / \text{actual\_length} - 1 ) * 10000$$

This formula gives an exact MEDIA COMP value, although the corrected media length may be slightly inaccurate. For example, if you enter a target length of 100.60 cm and an actual length of 100.00 cm, the MEDIA COMP value will be +60.

## Print & Cut

### Workflow settings

**Crop Marks**

**Grommet Marks**

**Cut**

Send to cut server after printing

Device manufacturer:  
None

Device type:  
Colex SharpCut

Cut marks type:  
Optiscout

Number of cut marks  
 2  2

Minimum distance between cut marks  
 200,00  200,00 mm

Cut mark color:  
Black without background

Print between layout elements

Bleeding:  
0 mm  Cut image  Add frame

Export path:  
C:\...\Server\Output

IP address: 127.0.0.1 Port: 0

**Contour cutting**

Material: Mactac 5929  
Thickness: 0,000000 mm  
Width: 609,60 mm  
Height: 50000,00 mm

Extract contour path from EPS/PDF

Contour colors:

Contour source	Method	Mode	
Bounding Box	Register	Standard	✓
Regmark	Register	Standard	✓
Crease	Register	Standard	✓
Kiss Cut	Register	Standard	✓

### Cut device / Cut data export path

If you do not want to use the CJV150/CJV300 for cutting, you can set up a different cutter in Cut Server.

### Contour cutting

Separated file formats, e.g. PS, PDF, EPS, support spot colors.

- Select “Extract contour path from EPS / PDF” to activate contour cutting. If this check box is not selected, contour data are ignored.

- In the “Contour colors” list you define the spot color names to be detected as cut paths. Color names that are not detected as cut paths are treated as ordinary spot colors.
- In your graphics program (e.g. Illustrator), define a spot color layer with a known cut path name. This layer must contain only line data – the lines to be cut. Line thickness is ignored.
- Cutting performance depends on your design. The cutter will cut the lines exactly like you have drawn them. It can sort the paths but it will not smooth complicated paths (e.g. staggered lines from outlining a bitmap) or connect lines to a path.

The following table explains how the behavior depends on settings and job file:

Behavior	Reason
Contour cutting	“Extract contour path from EPS/PDF” is selected, and line data are defined in a spot color that is in the list
Only a rectangle is cut around the job	<ol style="list-style-type: none"> <li>1. “Extract contour path from EPS/PDF” is not selected.</li> <li>2. The job is not separated. This is a common mistake when generating PS, PDF, EPS files.</li> <li>3. Cut data is interpreted as color raster image. In this case, you will find the color in the spot color list of the job.</li> </ol>
Job fails with “Unknown spot color”	The spot color is listed in the spot color list of the job.

## Output device settings

The settings described below can be found On the Special Printer Settings pane for the output device.

### Cut -> Mode

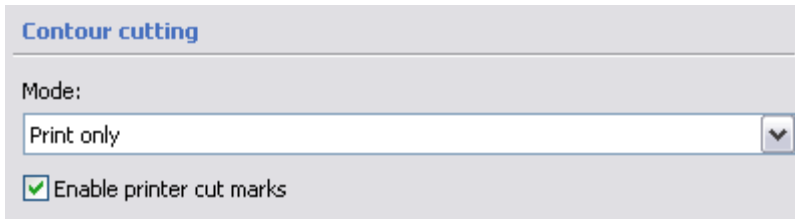
This is the horizontal cutter that cuts through. Here, it has four settings (instead of just on / off):

Settings	Description
Autocut off	Off
Autocut after contour cutting	Cutting is done as the final step after contour cutting. This is best for “Print & Cut” operation.
Autocut after printing, later contour cutting	Cutting is done immediately after printing. The sheet created this way is later inserted for contour cutting. Additional bottom space is added for proper operation. This is best for “Print” contour cutting mode, followed later by “Cut only” operation.
Autocut after printing, no contour cutting	Cutting is done immediately after printing. No additional bottom space is added. This is best for “Print” contour cutting mode if you do not intend to do contour cutting later.



## Contour cutting -> Mode

There are three “Mode” settings:



Settings	Description
Print only	Automated workflow or the Print button or context menu entry just prints. After printing, the Print & Cut button or context menu entry just cuts. Use this setting if you want to print and cut in separate procedures.
Print & Cut	Printing and contour cutting are done as a fully automated process.
Cut only	Only cutting is done.

The “Enable printer cut marks” check box lets the printer driver generate cut marks. In “Cut only” mode, the printer scans the cut marks for best accuracy. This is recommended if cutting is not done as part of a fully automated “Print & Cut” procedure.

## Printer settings (control panel)

### Step size

Fiery XF uses a step size of 0.025 mm. If the contour cut is too small by a factor of 2.5, refer to the Operation manual for instructions on how to set the step size.

### Check mark detection

The printer driver generates Type 2 check marks. The line length is at least 10 mm. Refer to the Operation manual for more information on cutting out data with register marks.

To cut as a separate operation:

- 1 In the printer’s menu, select cut mark detection for 1pt, 10mm, TYPE 2.
- 2 Insert a sheet for cutting, and press the appropriate printer button to detect the first register mark (TP1). Then set the printer remote.
- 3 In Fiery XF, click Print & Cut in the toolbar.

### Sorting

The printer can improve performance by sorting cut data. Refer to the Operation manual for more information on changing the cutting order.