XF640

Technote

RIP SOFTWARE - VERSION 11 - CALDERA 2017

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Drivers:

- Roland-XF640: Eco-solvent 2xCMYK

- Roland-XF640-FPG-4C: Water-based 2xCMYK

- Roland-XF640-FPG-6C: Water-based CMYKcm*

- Roland-XF640-FPG-8C: Water-based CMYKcmOG *

- Roland-XF640-WBASE-4C: Water based 2xCMYK for custom water-based inks.

    * Driver supports custom **NColor** modes (NColor key required) and ink channel reordering.

It is very important to use the correct driver according to the printer's ink setup, because the print modes are not the same. Do not use 4 color driver to print in CMYK mode on a 6- or 8-colors printer. The output will not be correct. It is OK to print with CMYK mode on a 6- or 8-color driver.
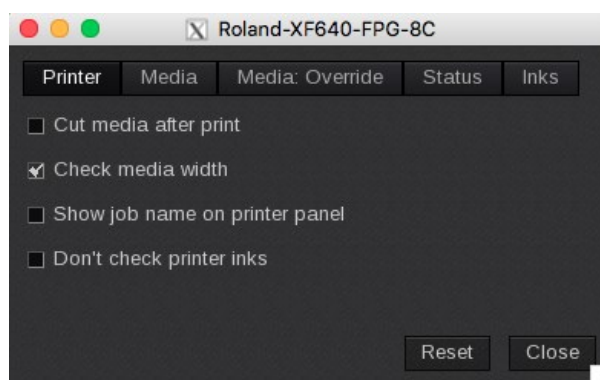
Drivers History

XF640

Supported since **Version 9.10** and **Version 9.20** for the WBASE-4C

Version 10 History

| Release	Date	Comments
A (V10.1)	12/2015	*(except for the WBASE-4C) Added support for MAX3 EcoSOL inks.*

Printer settings

Printer

- **Cut media after print**: it enables the embedded cutter and automatically cuts the job after the print.
- **Check media width**: a warning is shown if the media width is smaller than the printed document.
- **Show job name on printer panel**: if enabled, it displays the job name on the printer panel screen. When disabled, the printer panel shows the current print mode.
- **Don't check printer inks**: doesn't display a warning if the printer inks do not match the selected print mode. When disabled, a warning is shown when a required ink is missing in the printer.
- **Reset**: This *Reset* button allows you to come back to the original (default) options. Advanced ones are also concerned by this action.

Media
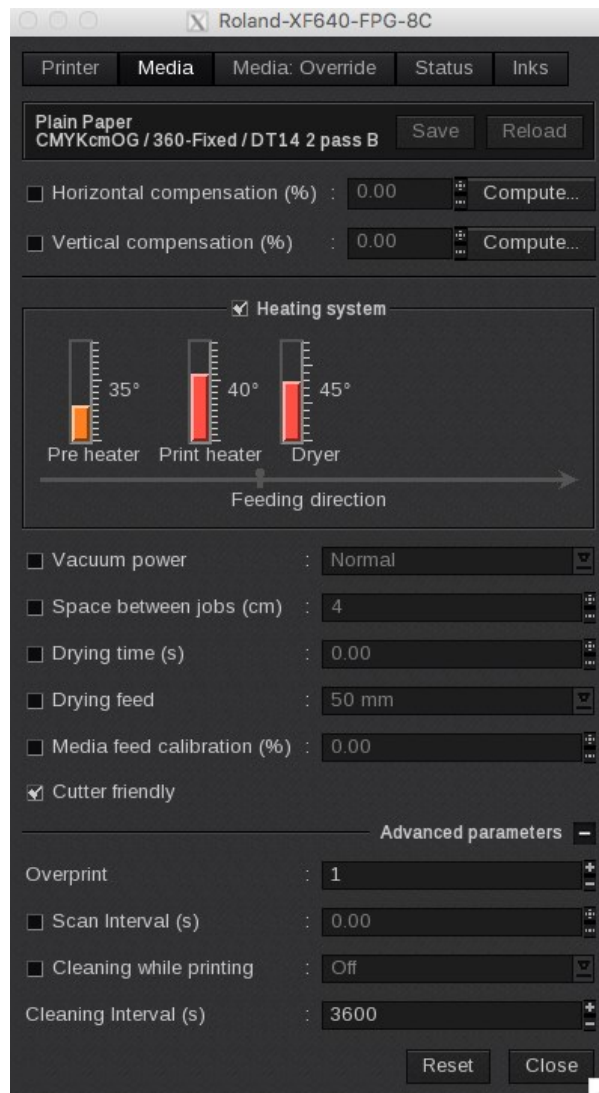
- **Information**: at the top of the window, you are able to see information about your media. There you have access to two actions:
    - **Save**: when you click on this button, the current media settings are saved to the selected media profile (printer, media, resolution, mode) so there will be applied for any new job using the same print configuration. If you don't save, the changes you made are only applied to the current job.
    - **Reload**: will revert back to default as set during profiling or the last saved changes.
- **Horizontal compensation** (%): we recommend not to modify this. Any deviation is likely to be mechanical on the printer's side.
- **Vertical compensation** (%): this can be useful if you detect an increase or decrease in the length due to heating or media tension which is common when printing on vinyl or textiles for example. To calculate the compensation, click **Compute** and follow the software's instructions.
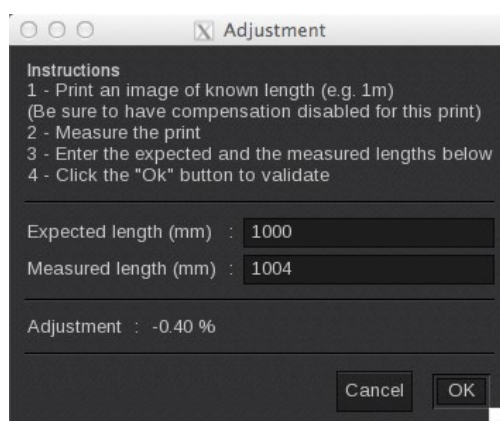
Disabling the checkbox of any of the following options will cause to use parameter value as set on the printer panel.

- **Heating system**: set the **Pre heater**, the **Print heater** and the **Dryer** temperature levels in Celsius Degrees. The range goes from *30°* to *40°* for **Pre heater** and **Print heater** and *30°* to *55°* for the **Dryer**. You can turn it off by taking the temperature below *30°* to *OFF*.
- **Vacuum power:** you can choose the vacuum power. Use a predefine state: *normal*, *strong* or *off*; or select a percentage.
- **Space between jobs**: Space is expressed in centimeters.
- **Drying time (s)**: Duration allowed to the drying after the print (in seconds).
- **Drying feed**: function that performs feed to the top of the dryer to promote drying after printing has finished.
- **Media feed calibration (%)**: this specifies the distance-correction value in the media-feed direction.
- **Cutter friendly**: indicates if the media supports cutting or not.

Advanced parameters

- **Overprint**: this performs overprinting or the number of passes specified by the parameter.
- **Scan interval (s)**: specifies the minimum time to pause the head movement between passes (slows down the print and improves drying).
- **Cleaning while printing**: performing cleaning during printing, indicate the degree of cleaning to perform. It can remove potential clogging or condensation on the head during print.
- **Cleaning Interval (s)**: time interval of **Cleaning while printing** (from *0* to *60000 seconds*).

Only for the Roland-XF640-WBASE-4C:
- **Head operation**: Select **Head 1 + 2** or **Head 1** or **Head 2**. It allows to select printing with both heads or selecting only the **Head 1** or the **Head 2**. It is useful of one of the head have clogged nozzles but print operation is slower.

Media: Override

The driver allows to override some of the print mode parameters. This is an advanced feature without any foolproof mechanisms. If you force values that are out of range, the printer will reject the job with *Data Error* message.

Changing some parameters can be useful when the default print mode setting gives unsatisfactory results, like misaligned dots or apparition of patterns between head passes.

Concerned parameters can be overwritten in <u>Media Override</u> tab. Each parameter override must be enabled first. When disabled, the print modes use their own predefined default value. Please note that the predefined value is never displayed anywhere in the interface. However, all currently used values are printed in the annotations, with "**More details**" option enabled.
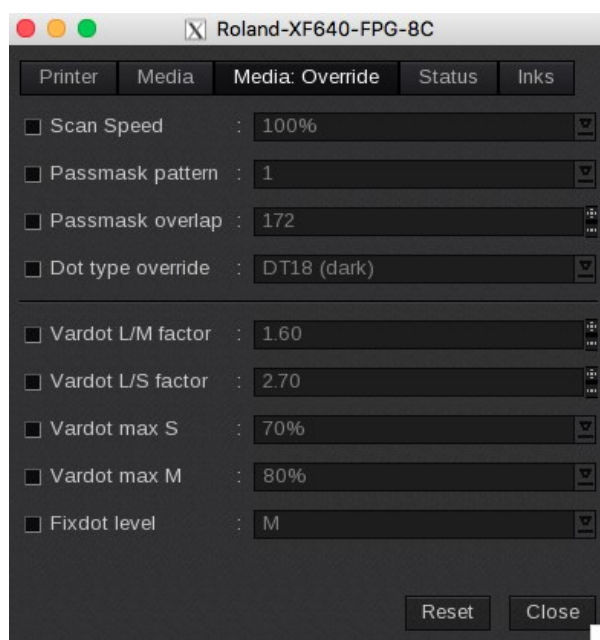
- **Scan Speed**: scan speed can only be reduced by specifying the amount in % (in steps of 10%). The value 100% corresponds to the predefined value of selected print mode.
- **Passmask pattern**: This defines the RIPC pass mask pattern. If the default value is not satisfactory, the correct value should be determined by comparing prints using different values. The value "Off" disables the RIPC feature.

Warning: sometimes print modes have RIPC disabled by default (most often the fastest modes or fixed-dot modes). In that case, overriding the pattern only will not work. You will have to override also the Passmask overlap parameter.

- **Passmask overlap** : This parameter overrides RIPC pass overlap. Enable this override only if you know what you are doing.

Using different values from the predefined one affects profoundly the print mode, notably the real number of passes of the print mode.

- **Dot type override**: this parameter overrides the dot type. It can be useful for custom inks. Please refer to the "Custom inks" on page 9 for more details.

We do not recommend you to change the Vardot settings. It is reserved for an advanced usage only.

- **Vardot L/M factor**: factor between *Large* and *Medium* dots
- **Vardot L/S factor**: factor between *Large* and *Small* dots
- **Vardot max S**: maximum percentage of *Small* dots
- **Vardot max M**: maximum percentage of *Medium* dots
- **Fixdot level**: choice of the fixdot level between *Small*, *Medium* or *Large*

Status

- **Status**: Global state of the printer: *Ready*, *Not available*, *Printing*. All data are coming from the printer, if it is *not available*, nothing can be displayed.
- **Inks**: *Ink* levels
- **Heaters**: temperature level of the *Pre heater*, the *Print heater* and the *Dryer*.
- **Media**: Info about the media loaded on the printer
- **Misc**: complementary info about the printer (*model*, *serial number*, *firmware version*)
- *Refresh*: button to refresh the tab.

Inks
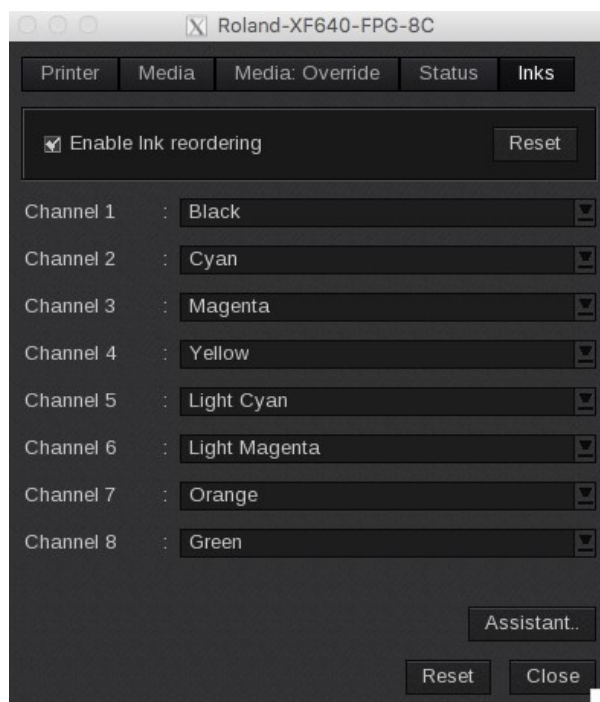
- **Enable Ink reordering**: If you see that the colors of your print seem mixed, you can enable the ink reordering. For each channel, specify the right color.
- **Assistant**: use the **Assistant** to help you setting the right colors. Sometimes the ink order does not match the cartridge order.
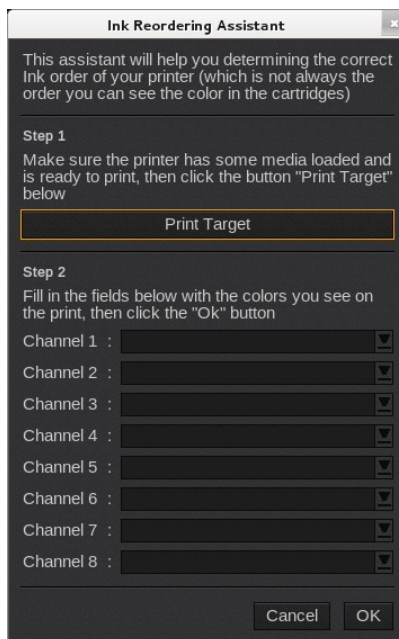
As said on the pop-up window, first **Print the Target** then set the colors as seen on the print and click **OK**. It will automatically reorder the Inks accordingly.

Printer specificities

Custom inks

The drivers are made to be used with original Roland inks (Max2 eco-solvent and water-based FPG). We noticed few incompatibilities with some third-party inks. In that case the customer has to fine-tune the driver parameters by forcing different dot type. This requires repetitive test prints using different dot type values to pick the best quality. Please note that this requires firmware 1.80 or newer. Also not all of the dot type values are compatible with all print modes. If a setting causes a data error on the printer, the dot type is not compatible with selected print mode.

We tested Next Subly water-based sublimation inks. This particular ink type causes precision problems with very small droplets in fast print modes. The best **Dot type override** for this ink is DT18, which has the biggest small droplets. DT25 is also OK. All other dot types are not suited for fast print modes with this particular ink set.
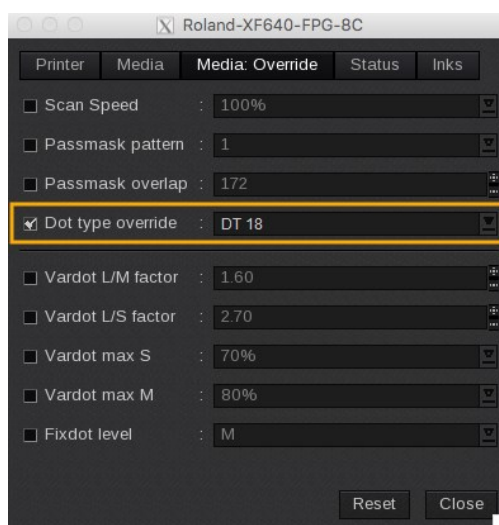
Different approach is to disable usage of small droplets and printing only with middle and large-sized droplets. This might increase the grain in light and mid-density areas but will produce much sharper edges. This can be achieved by setting **Vardot max S to 0%** in the Media: Override tab.
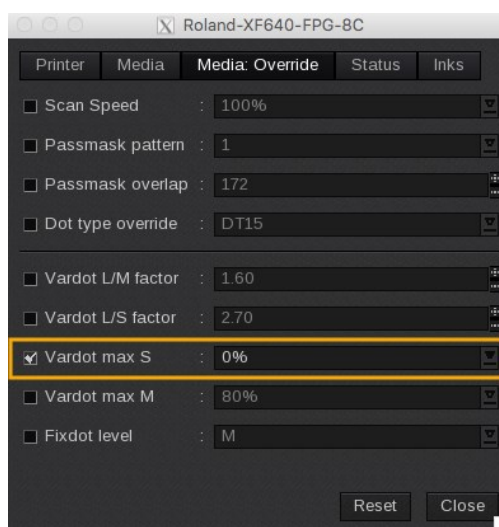
Print modes

XF640 (Eco-solvent)

Resolution	Passes	Dot Type	Scan speed	Feed Speed	Passes/line	Passmask overlap
360	1	25	812	150	1	N/A (*)
540x360	2	25	1083	90	2	N/A (*)
	4	25	1083	60	2	172
360x720	4	20	1016	60	1	172
720-fixed	8	22	1016	60	4	N/A (*)
720	5	20	1016	60	2	69
	6	20	1016	60	2	115
	8	20	1016	30	2	172
720x1440	9	22	1016	30	2	38
	12	22	1016	30	2	115
	16	22	1016	30	2	172
1080-fixed	9	22	1016	60	3	N/A (*)
1440-fixed	16 (A)	22	508	30	2	172
	16 (B)	22	508	30	4	N/A (*)

N/A (*): Mode does not use RIPC (Roland Intelligent Pass Control).

XF640-FPG-4C

Resolution	Passes	Dot Type	Scan speed	Feed Speed	Passes/line	Passmask overlap
360-fixed	1 DT14	14	1016	150	1	N/A (*)
	1 DT16	16	812	150	1	N/A (*)
540x360	2	16	1083	90	2	N/A (*)
	3	16	1083	60	2	115
360x720	4	14	1016	60	1	172
720-fixed	8	16	1016	30	4	N/A (*)
720	5	14	1016	60	2	69
	9	14	1016	30	4	38
720x1440	9	14	1016	30	2	38
	12	14	1016	30	2	115
1080-fixed	9	14	1016	30	3	N/A (*)
1440-fixed	16	16	508	30	4	N/A (*)

N/A (*): Mode does not use RIPC (Roland Intelligent Pass Control).

XF640-FPG-6C

Resolution	Passes	Dot Type	Scan speed	Feed Speed	Passes/line	Passmask overlap
360-fixed	2 DT14	14	1016	150	1	N/A (*)
	2 DT16	16	812	150	1	N/A (*)
540x360	4	16	1083	90	2	N/A (*)
	6	16	1083	60	2	115
360x720	8	14	1016	60	1	172
720-fixed	16	16	1016	30	4	N/A (*)
720	10	14	1016	60	2	69
	18	14	1016	30	4	38
720x1440	18	14	1016	30	2	38
	24	14	1016	30	2	115
1080-fixed	18	14	1016	30	3	N/A (*)
1440-fixed	32	16	508	30	4	N/A (*)

N/A (*): Mode does not use RIPC (Roland Intelligent Pass Control).

XF640-FPG-8C

Resolution	Passes	Dot Type	Scan speed	Feed Speed	Passes/line	Passmask overlap
360-fixed	2 DT14	14	1016	150	1	N/A (*)
	2 DT16	16	812	150	1	N/A (*)
540x360	4	16	1083	90	2	N/A (*)
	6	16	1083	60	2	115
360x720	8	14	1016	60	1	172
720-fixed	16	16	1016	30	4	N/A (*)
720	10	14	1016	60	2	69
	18	14	1016	30	4	38
1080-fixed	18	14	1016	30	3	N/A (*)

N/A (*): Mode does not use RIPC (Roland Intelligent Pass Control).

PRINTER SPECIFICITIES

XF640-WBASE-4C

Resolution	Passes	Dot Type	Scan speed	Feed Speed	Passes/line	Passmask overlap (Head 1+2)	Passmask overlap (Head 1 or 2)
360-fixed	1	14	1016	150	1	N/A (*)	N/A (*)
	1 (slower)	18	812	150	1	N/A (*)	N/A (*)
360	1	18	812	150	1	N/A (*)	N/A (*)
	2	18	1083	90	2	N/A (*)	N/A (*)
	3	18	1083	90	2	115	60
540x360	2	18	1083	90	2	N/A (*)	N/A (*)
	3	18	1083	60	2	115	60
	4	18	1083	60	2	172	90
720x360	2	14	508	150	1	172	90
360x720	2	14	1016	90	1	N/A (*)	N/A (*)
	2 (slower)	18	812	90	1	N/A (*)	N/A (*)
	3	14	1016	90	1	115	60
	3 (slower)	18	812	90	1	115	60
	4	14	1016	60	1	172	90
	4 (slower)	18	812	60	1	172	90
540x720	4 (slower)	14	677	90	1	172	90
720-fixed	8	18	1016	30	4	N/A (*)	N/A (*)
720	2	14	508	90	1	N/A (*)	N/A (*)
	3	14	508	90	1	115	60
	4	14	508	90	1	172	90
	5	14	1016	60	2	69	36
	6	14	1016	60	2	115	60
	6 (slower)	18	812	60	2	115	60
	8	14	1016	30	2	172	90
	9	14	1016	30	4	38	20
1440x720-fixed	9	14	1016	60	4	38	20
720x1080-fixed	6	14	1016	60	2	N/A (*)	N/A (*)
	6 (slower)	14	508	60	1	172	90
1080-fixed	9	14	1016	30	3	N/A (*)	N/A (*)
1080	9	14	677	60	2	115	60
720x1440	9	14	1016	30	2	38	20
	12	14	1016	30	2	115	60
	16	14	1016	30	2	172	90
1080x1440-fixed	12	14	677	30	2	115	60
1440-fixed	16 (A)	14	508	30	2	172	90
	16 (B)	14	508	30	2	172	90

N/A (*): Mode does not use RIPC (Roland Intelligent Pass Control).

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