

EJ640

Technote

RIP SOFTWARE - VERSION 11 - CALDERA 2016



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Drivers:

- Roland-EJ640-ESOL-4C: Eco-solvent 2xCMYK
- Roland-EJ640-ESOL-7C: Eco-solvent CMYKcmk(*)
- Roland-EJ640-WBASE-4C: Water-based 2xCMYK
- Roland-EJ640-WBASE-8C: Water-based CMYKcmOG(*)

(*) 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 7 or 8 colors printer. The output could be incorrect.

Driver History

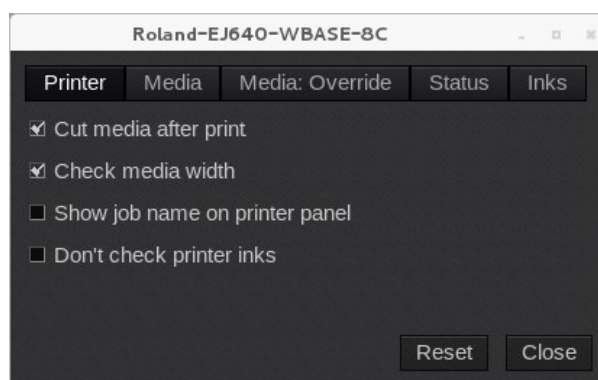
Supported since **Version 10.2**

Version 10 History

Release	Date	Comments
A (V10.2)	11/2016	Cartridge levels in the status tab did not match the cartridge color.

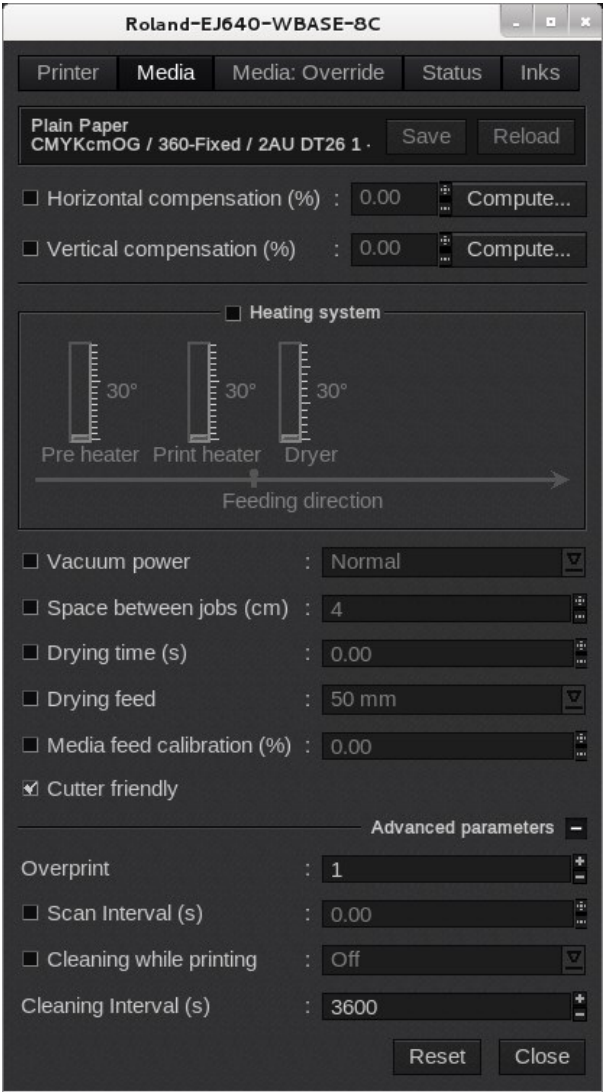
Printer settings

Printer

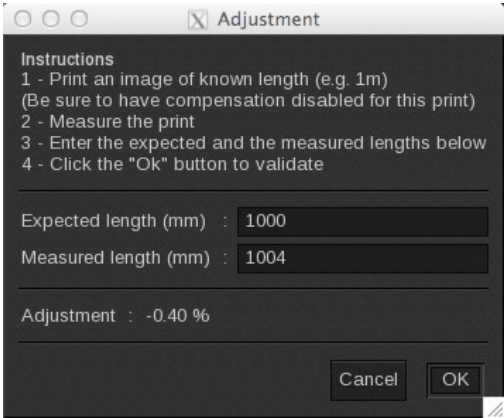


- **Cut media after print:** it enables the embedded cutter and automatically cut the job after the print.
- **Check media width:** a warning is made if the media width is smaller than the printed document.
- **Show job name on printer panel:** if enabled, it displays the job name on the printer panel screen. When disabled, the printer panel shows the current print mode.
- **Don't check printer inks:** don'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.

Media



- **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 textile 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.

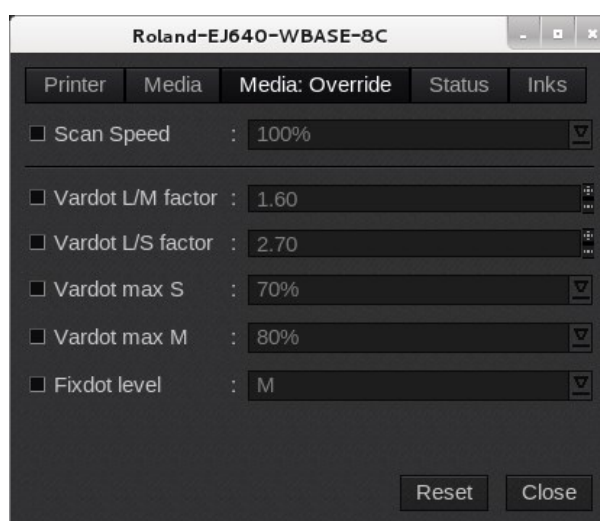
- **Heating system:** set the **Pre heater**, the **Print heater** and the **Dryer** temperature levels in Celsius Degrees. The range goes from **30°** to **40°**. You can turn it off by taking the temperature below **30°** to **OFF**.
- **Vacuum power:** you can choose the vacuum power. Use a predefined state: **normal**, **strong** or **off**; or select a percentage.
- **Space between jobs:** Space is expressed in centimeters
- **Drying time (s):** indicate the time in seconds of the pause at the end of the job (max 3600 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.
- **Overprint:** this performs overprinting or the number of passes specified by the parameter.
- **Scan interval (s):** specify the minimum time between scan.
- **Cleaning while printing:** performing cleaning during printing, indicate the degree of cleaning to perform.
- **Cleaning Interval (s):** time interval of **Cleaning while printing** (from **0** to **60000 seconds**).

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 **Media Override** 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.

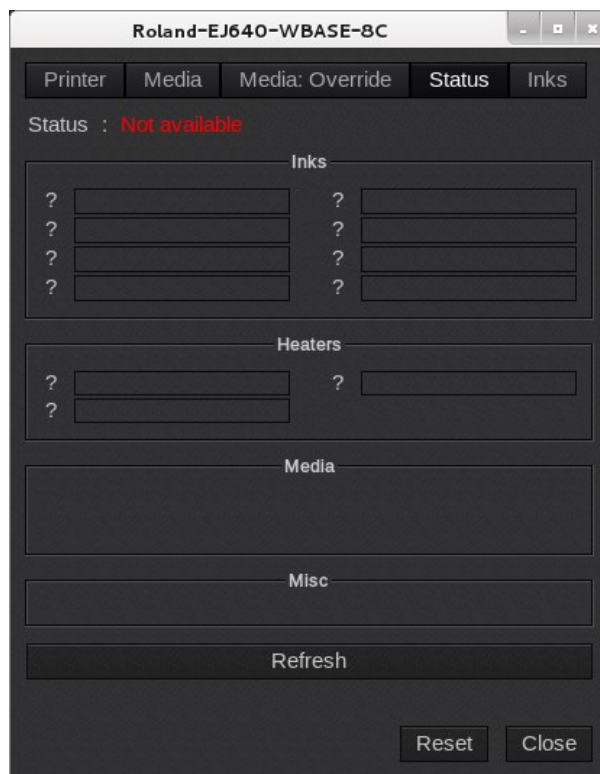


- **Scan Speed:** scan speed can only be reduced by specifying the amount in % (in steps of 10%). The value 100% corresponds to the predefined value of selected print mode. (see the tables under the **Printer Specifications** section).

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**

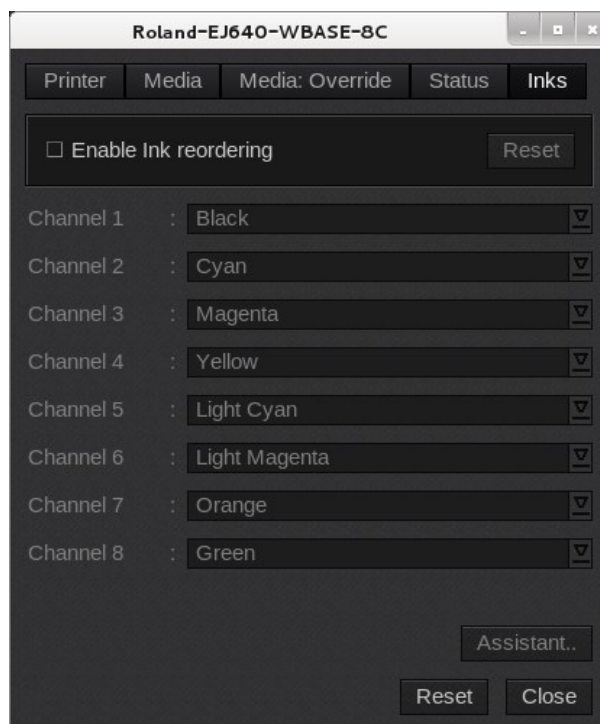
Status



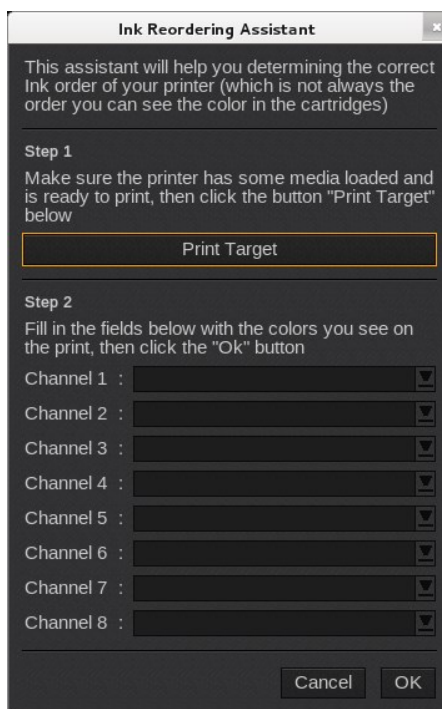
- **Status:** Global state of the printer: Ready, Not available, Printing. All data are coming from the printer, if it is not available, nothing can be displayed.
- **Inks:** Inks levels
- **Heaters:** temperature level of the Pre heater, the Print heater and the Dryer.
- **Media:** Info about the media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

Inks

This tab is only available for Roland-EJ640-ESOL-7C and Roland-EJ640-WBASE-8C models.



- **Enable Ink reordering:** If you see that the colors of your print seems mixed, you can enable the ink reordering. For each channel, specify the right color.
- **Assistant:** use the Assistant to help you set the right colors. Sometimes the ink order does not match the cartridge order.

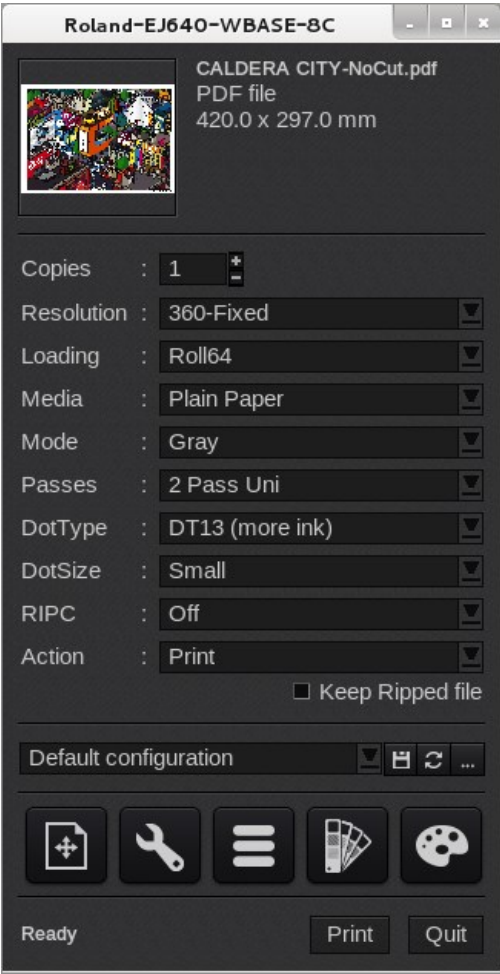


As said on the pop-up window, first **Print the Target** then set the colors as seen on the print and click **OK**. It will automatically reorder the Inks accordingly.

Printer specificities

Print modes

Roland EJ-640 driver features an advanced print mode selection using 4 distinct selectors: **Resolution, Pass number & print direction, Dot type, Dot size and Passmask pattern (RPC)**. The print mode to use depends on used substrate and inks. The customer has to determine the print mode to use by testing different combination of the print mode selectors.



Please note that all print modes are NOT linearized nor profiled by default thus the output will not be optimal from the scratch.

Print mode tables are specified below for reference. “Fixed” in the resolution name refers to a fixed-dot 1 bit per pixel modes. All other modes are 2 bits per pixel.

Roland-EJ640-ESOL-4C & Roland-EJ640-WBASE-4C:

Resolution	Passes	Scan Speed	Feed Speed	Passes/Line	Passmask overlap
360-Fixed	1	1016	150	1	N/A ^(*)
	1 (slower)	812	150	1	N/A ^(*)
360	1	812	150	1	N/A ^(*)
	2	1083	90	2	N/A ^(*)
	3	1083	60	2	115
540x360	2	1083	90	2	N/A ^(*)
	3	1083	60	2	115
	4	1083	60	2	172
720x360	2	508	90	1	172
360x720	2	1016	90	1	N/A ^(*)
	2 (slower)	812	90	1	N/A ^(*)
	3	1016	60	1	115
	3 (slower)	812	60	1	115
	4	1016	60	1	172
	4 (slower)	812	60	1	172
540x720	4	677	60	1	172
720-Fixed	8	1016	30	4	N/A ^(*)
720	2	508	90	1	N/A ^(*)
	3	508	60	1	115
	4	508	60	1	172
	5	1016	60	2	69
	6	1016	60	2	115
	6 (slower)	812	60	2	115
	8	1016	30	2	172
	9	1016	30	4	38
720x1080	6 (slower)	508	60	1	172
	6	1016	60	2	N/A ^(*)
	8	1016	30	2	86
	9	1016	30	2	115
	10	1016	30	2	138
	12	1016	30	2	172
1440x720-Fixed	9	1016	30	4	38
720-1080-Fixed	6 (slower)	508	60	1	172
	6	1016	60	2	N/A ^(*)
1080-Fixed	9	1016	30	3	N/A ^(*)
1080	9	677	30	2	115
720x1440	9	1016	30	2	38
	10	1016	30	2	69
	12	1016	30	2	115
	14	1016	30	2	148
	16	1016	30	2	172
1080x1440-Fixed	12	677	30	2	115
1440-Fixed	16	508	30	2	172
	16 (slower)	508	30	4	N/A ^(*)

N/A^(*): Mode does not use RPC (Roland Intelligent Pass Control) by default

PRINTER SPECIFICITIES

Roland-EJ640-ESOL-7C & Roland-EJ640-WBASE-8C:

Resolution	Passes	Scan Speed	Feed Speed	Passes/Line	Passmask overlap
360-Fixed	2	1016	90	1	N/A ^(*)
	2 (slower)	812	90	1	N/A ^(*)
360	2	812	90	1	N/A ^(*)
	4	1083	60	2	N/A ^(*)
	6	1083	60	2	115
540x360	4	1083	60	2	N/A ^(*)
	6	1083	60	2	115
	8	1083	30	2	172
720x360	4	508	60	1	172
360x720	4	1016	60	1	N/A ^(*)
	4 (slower)	812	60	1	N/A ^(*)
	6	1016	60	1	115
	6 (slower)	812	60	1	115
	8	1016	30	1	172
	8 (slower)	812	30	1	172
540x720	8	677	30	1	172
720-Fixed	16	1016	30	4	N/A ^(*)
720	4	508	60	1	N/A ^(*)
	6	508	60	1	115
	8	508	30	1	172
	10	1016	30	2	69
	12	1016	30	2	115
	12 (slower)	812	30	2	115
	16	1016	30	2	172
	18	1016	30	4	38
720x1080	12 (slower)	508	30	1	172
	12	1016	30	2	N/A ^(*)
	16	1016	30	2	86
	18	1016	30	2	115
	20	1016	30	2	138
	24	1016	30	2	172
1440x720-Fixed	18	1016	30	4	38
720-1080-Fixed	12 (slower)	508	30	1	172
	12	1016	30	2	N/A ^(*)
1080-Fixed	18	1016	30	3	N/A ^(*)
1080	18	677	30	2	115
720x1440	18	1016	30	2	38
	20	1016	30	2	69
	24	1016	30	2	115
	28	1016	30	2	148
	32	1016	30	2	172
1080x1440-Fixed	24	677	30	2	115
1440-Fixed	32	508	30	2	172
	32 (slower)	508	30	4	N/A ^(*)

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

Recommended Ink Print modes

EJ INK CMYK Mode:

Resolution	Passes	Dot type	Dot size	Passmask pattern
360	1	46	Variable	N/A ^(*)
540x360	2	46	Variable	N/A ^(*)
	3	46	Variable	1
	4	46	Variable	1
360x720	4	41	Variable	1
720	5	43	Variable	1
	5	41	Variable	1
	6	43	Variable	1
	6	41	Variable	1
	8	43	Variable	1
	8	42	Variable	1
720x1440	9	43	Variable	1
	10	43	Variable	1
	12	43	Variable	1
	14	43	Variable	1
	16	43	Variable	1

N/A^(*): Mode does not use RIP (Roland Intelligent Pass Control) by default

EJ INK CMYKcmk Mode:

Resolution	Passes	Dot type	Dot size	Passmask pattern
360	2	46	Variable	N/A ^(*)
540x360	4	46	Variable	N/A ^(*)
	6	46	Variable	1
	8	46	Variable	1
360x720	8	41	Variable	1
720	10	43	Variable	1
	10	41	Variable	1
	12	43	Variable	1
	12	41	Variable	1
	16	43	Variable	1
	16	42	Variable	1
720x1440	18	43	Variable	1
	20	43	Variable	1
	24	43	Variable	1
	28	43	Variable	1
	32	43	Variable	1

N/A^(*): Mode does not use RIP (Roland Intelligent Pass Control) by default

PRINTER SPECIFICITIES

Pigment FPG CMYK Mode:

Resolution	Passes	Dot type	Dot size	Passmask pattern
360-Fixed	1	14	Large	N/A ^(*)
540x360	2	16	Variable	N/A ^(*)
	3	16	Variable	1
360x720	4	14	Variable	1
720	5	14	Variable	1
	6	14	Variable	1
	8	14	Variable	1
720x1440	10	14	Variable	1
	12	14	Variable	1

N/A^(*): Mode does not use RIP (Roland Intelligent Pass Control) by default

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