

# RT640

## Technote

RIP SOFTWARE - VERSION 11 - CALDERA 2017



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### Drivers:

- Roland-RT640-4C: 2xCMYK sublimation (\*)
- Roland-RT640-8C: CMYKcmOV sublimation(\*)

(\*) 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 an 8 colors printer. The output could be incorrect.**

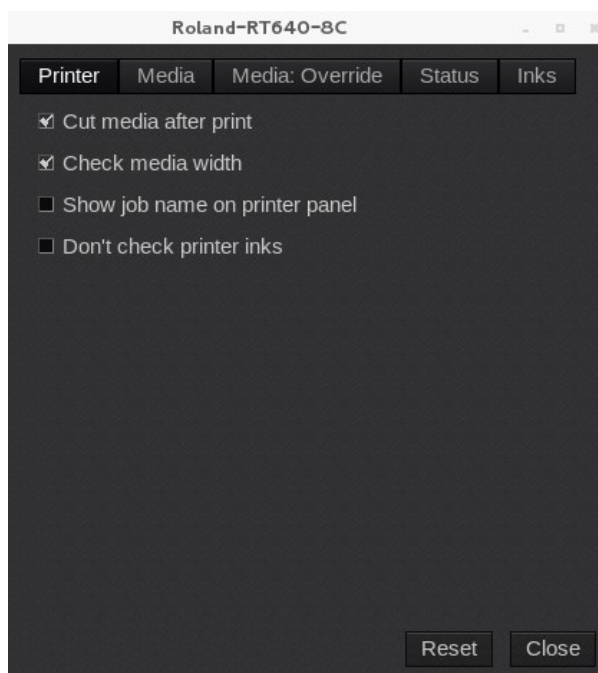
### Driver History

Roland-RT640-4C and Roland-RT640-8C

Supported since **Version 10.0**

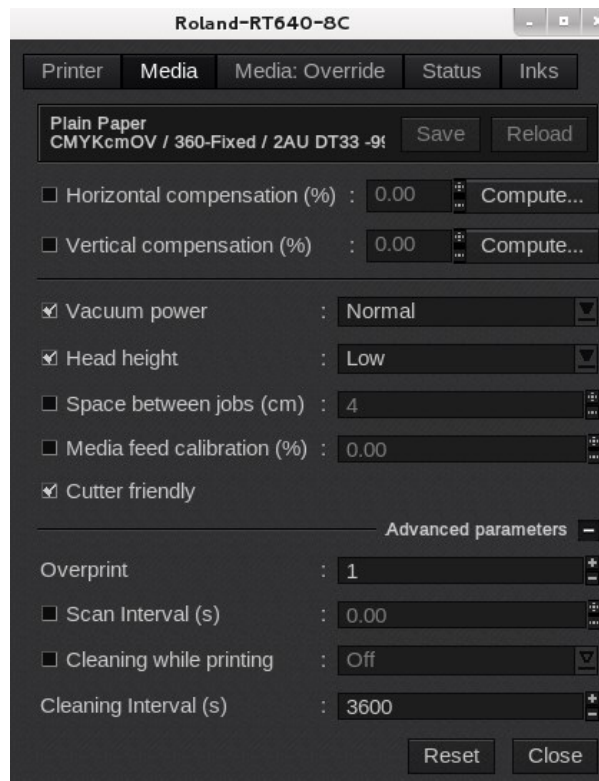
# Printer Settings

## Printer

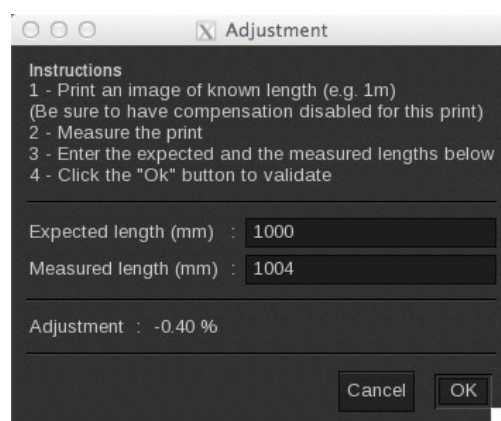


- **Cut media after print:** it enables the embedded cutter and automatically cut the job after the print.
- **Check media width:** a warning is made if the media width is smaller than the printed document.
- **Show job name on printer panel:** if enabled, it displays the job name on the printer panel 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



- **Information:** in the top of the window, you are able to see information about your media. You can **Save** the configuration or **Reload** a new one.
- **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.

- **Vacuum power:** you can choose the vacuum power. Use a predefined state: **normal**, **strong** or **off**; or select a percentage.
- **Head height:** Select **Low** or **Height** to adjust the gap between the head and the plate.
- **Space between jobs:** Space is expressed in centimeters
- **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):** specify the minimum time between scan.

**Cleaning while printing:** performing cleaning during printing, indicate the degree of cleaning to perform.

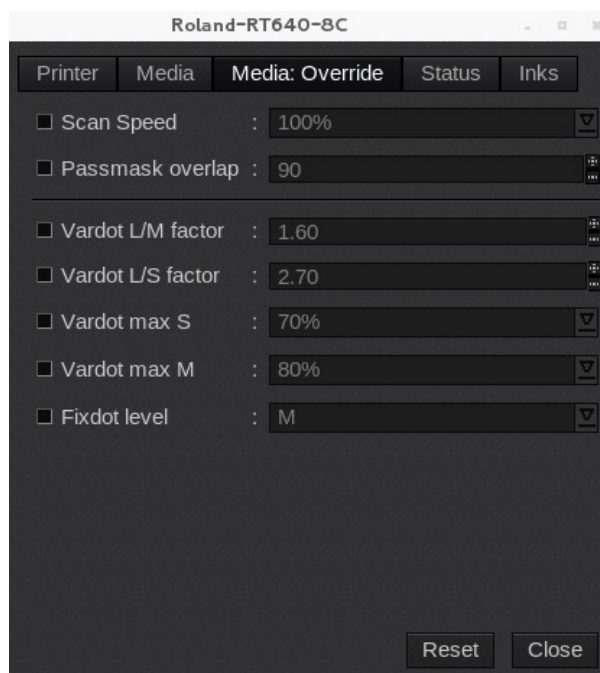
**Cleaning Interval (s):** time interval of **Cleaning while printing** (from 0 to 60000 seconds).

## 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.



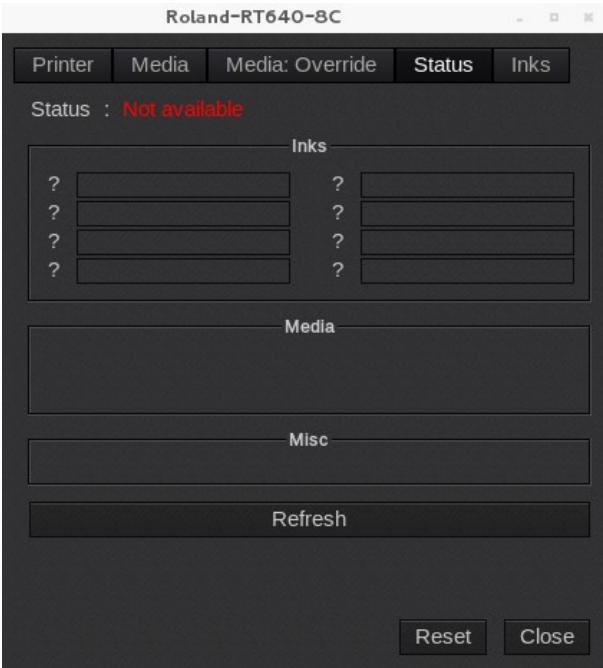
- **Scan Speed:** scan speed can only be reduced by specifying the amount in % (in steps of 10%). The value 100% corresponds to the predefined value of selected print mode. (see the tables under the **Printer Specifications** section).
- **Passmask overlap :** This parameter overrides RIPC pass overlap. **Enable this override only if you know what you are doing.**

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

**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

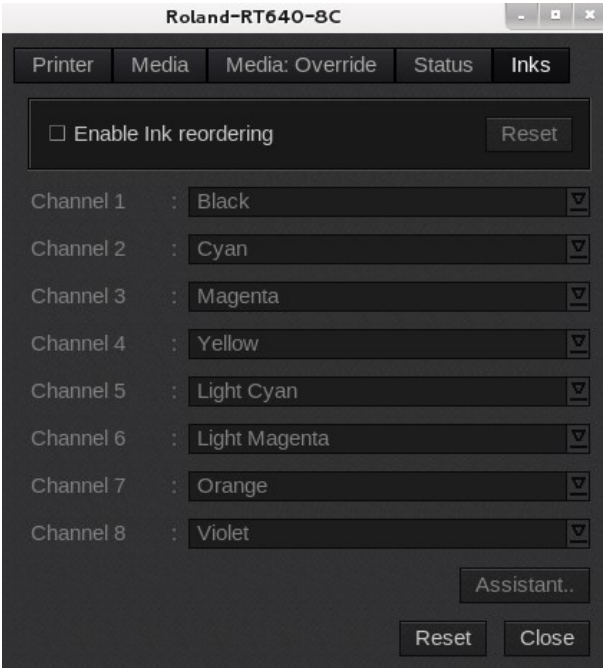
## Status



- **Inks:** Information about Inks levels
- **Media:** Information about the media loaded on the printer
- **Misc:** Complementary info about the printer
- **Refresh:** Button to refresh the tab.

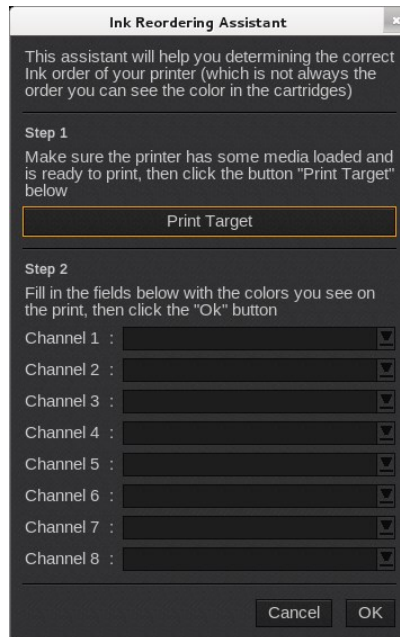
## Inks

The Inks tab is only available for the Roland-RT640-8C driver.



- **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.

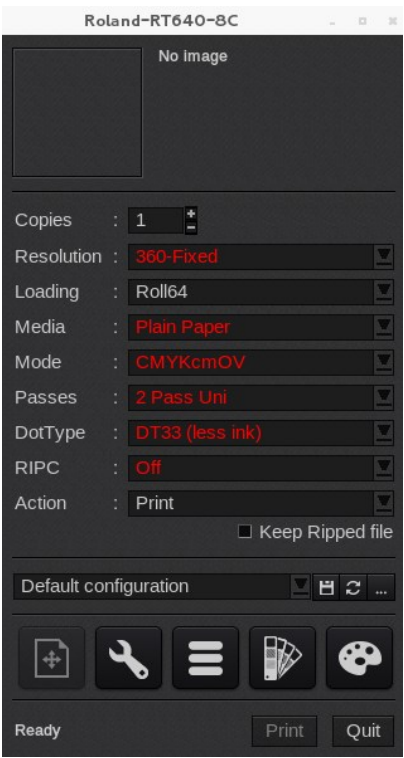


As said on the pop-up window, first **Print the Target** then set the colors as seen on the print and click **OK**. It will automatically reorder the Inks accordingly.

# Printer specifications

## Print modes

Roland RT-640 driver features an advanced print mode selection using 4 distinct selectors: **Resolution, Pass number & print direction, Dot type, Dot size and Passmask pattern (RIPC)**. 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. Whereas *Feed speed* and *Passes per line* parameters cannot be changed, *Scan speed* and *Passmask overlap* can be modified in Media Override in media parameters. However, we strongly recommend to select a print mode which has the desired value combination from the start. Especially for *Passmask overlap*, which affects the number of passes of a print mode.

**Passmask overlap (RIPC):** The value in the table is the default value. The actual value can be overridden in Media Override in media parameters. Please note that the default value shown in the interface does not reflect the actual value. The modes with “N/A” as value do not use RIPC feature thus overriding the value has no effect.

**Scan speed :** The value can be lowered in Media Override in media parameters by indicating the amount in %. Please note that it is not possible to raise the value above the default value of the print mode.



## Roland-RT640-4C:

Resolution	Passes	Scan speed	Feed speed	Passes / line	Passmask overlap	Estimated throughput (m <sup>2</sup> /h)
360-Fixed	1 pass	1016	50	1	N/A	56.8
	1 pass (slower)	812	50	1	N/A	45.3
360	1 pass	812	50	1	N/A	48.5
540x360	2 pass	1016	32	2	N/A	32.6
	3 pass	1016	32	2	60	22.3
360x720	2 pass	1016	32	1	N/A	32.7
	2 pass (slower)	812	32	1	N/A (1)	24.21
	3 pass	1016	16	1	60	18.4
	4 pass	1016	16	1	90	16
540x720	4 pass	1016	16	2	N/A	16
	5 pass	1016	16	2	36	12.8
	6 pass	1016	16	2	60	10.8
	8 pass	1016	16	2	90	8.1
720-Fixed	8 pass	1016	10	4	N/A	8
720	4 pass	1016	16	2	N/A (1)	14.85
	5 pass	1016	16	2	36	13
	6 pass	1016	16	2	60	10.8
	8 pass	1016	10	2	90	8
	9 pass	1016	10	4	20	7.1
1080x720	6 pass	677	10	2	60	7.6
	8 pass	677	10	2	90	5.7
1440x720	6 pass	508	10	2	60	5.9
	8 pass	508	10	2	90	4.4
	10 pass	508	10	4	36	3.6
720x1080	8 pass	1016	10	2	45	8
	10 pass	1016	10	2	72	6.4
	12 pass	1016	10	2	90	5.4
	18 pass	1016	10	4	60	3.6
	24 pass	1016	10	4	90	2.7
1080-Fixed	9 pass	847	10	3	N/A	6.1
720x1440	10 pass	1016	10	2	36	6.4
	12 pass	1016	10	2	60	5.4
	16 pass	1016	10	2	90	4
	18 pass	1016	10	4	20	3.6
	24 pass	1016	10	4	60	2.7
	32 pass	1016	10	4	90	2
1440-Fixed	16 pass	812	10	4	N/A	3.3

(1): mode uses nozzles 8-172

# PRINTER SPECIFICATIONS

## Roland-RT640-8C:

Resolution	Passes	Scan speed	Feed speed	Passes / line	Passmask overlap	Estimated throughput (m <sup>2</sup> /h)
360-Fixed	2 pass	1016	50	1	N/A	32.7
	2 pass (slower)	812	50	1	N/A	27.1
540x360	3 pass	540	32	1	60	12.7
	4 pass	1016	32	2	N/A	16
	5 pass	1016	32	2	36	12.9
	6 pass	1016	32	2	60	10.7
360x720	6 pass	1016	16	1	60	10.7
	8 pass	1016	16	1	90	8
540x720	8 pass	1016	16	2	N/A	8
	10 pass	1016	16	2	36	6.4
	12 pass	1016	16	2	60	5.4
	16 pass	1016	16	2	90	4
720-Fixed	16 pass	1016	10	4	N/A	4
720	8 pass	1016	16	2	N/A (1)	7.32
	10 pass	1016	16	2	36	6.4
	12 pass	1016	16	2	60	5.4
	16 pass	1016	10	2	90	4
	18 pass	1016	10	4	20	3.6
1080x720	12 pass	677	10	2	60	3.8
	16 pass	677	10	2	90	2.9
1440x720	10 pass	508	10	2	28 (2)	2.7
	12 pass	508	10	2	49 (2)	2.2
	20 pass	508	10	4	30 (3)	1.4
720x1080	16 pass	1016	10	2	45	4
	20 pass	1016	10	2	72	3.2
	24 pass	1016	10	2	90	2.7
	36 pass	1016	10	4	60	1.8
	48 pass	1016	10	4	90	1.3
1080-Fixed	18 pass	847	10	3	N/A	3
720x1440	24 pass	1016	10	2	50 (3)	2.2
	32 pass	1016	10	2	77 (4)	1.7
	36 pass	1016	10	4	17 (5)	1.5
1440-Fixed	32 pass	812	10	4	N/A (5)	1.4

(1): mode uses nozzles 8-172

(2): mode uses nozzles 21-160

(3): mode uses nozzles 16-165

(4): mode uses nozzles 14-167

(5): mode uses nozzles 13-172

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