

TurboPrint for Linux
Software Manual
Version 3
(Document Revision 2608)

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1. License terms

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If you are using TurboPrint trial version, you may use it for test purposes up to 30 days.

With a personal license key you have the non-exclusive right to use TurboPrint only on a single computer (multi user license: on the number of licensed computers). A license is required for every computer where TurboPrint is installed.

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2. Welcome to TurboPrint!

We are happy to welcome you as a user of TurboPrint, our innovative enhanced quality printer driver & RIP software.

New in version 3:

TurboPrint Composer

The most important new feature in TurboPrint 3 is the new Composer application. Composer is a standalone application that can be used to compile images and PDF documents for printing, with an automatic wizard to assist with the layout. When printing via TurboPrint Composer, potential color management errors during the transfer of print data from the graphics program to the printer driver are avoided, as the entire workflow from document creation to printing runs within the Composer. The soft proof function allows you to simulate the printed colors on screen beforehand.

TurboPrint Composer also serves as a preview tool when printing documents—you can edit all printed pages by cutting out sections, scaling, removing pages, or adding graphics after the fact. Composer provides you with a clear overview of all print settings, and you can save and retrieve your own print presets.

Print Preview via Composer

By activating the "Preview Jobs" option in TurboPrint Monitor, you can send all print jobs to Composer, which also allows you to edit the print pages afterwards and adjust the print settings.

Hotfolder

With the new hot folder, documents from applications can be forwarded directly to TurboPrint Composer by saving or copying them to this file folder, where they can be customized for printing.

Other key features:

Intelligent printer drivers

No need to adjust settings like brightness, color saturation, color balance etc. Simply choose your printer, paper type and print quality – the rest is done by TurboPrint's intelligent printer drivers (of course expert users can control all settings manually).

Our drivers support nearly all features of your printer like special print media, CD/DVD printing on certain printers, photo inks and highest print resolution.

Color management

A highlight of TurboPrint is the new integrated color management – it is easy to use and ensures perfect colors. You can choose the document color space, adjust the light source and correct color & grey balance.

Improve your photo quality

Using the color profiles that are included with TurboPrint (and additional color profiles

either from ZEDOnet's profiling service or your own ICC profiles) each shade of color is perfectly matched in the printout.

It is also possible to add ICC profiles for your scanner or digital camera for perfect color matching from your input device to printer output!

Printer status monitor

Be always informed on what your printer is doing. TurboPrint comes with a new printer status monitor that continually shows printer status, remaining ink and print jobs – even over a network connection, if the printer is attached to a Linux printer server where TurboPrint is installed.

Panel applet

Many Linux distributions allow you to install the TurboPrint applet in the start bar/control panel, which provides quick access to the most important TurboPrint programs and continuously informs you about printer activity and any errors.

Color profiling service

Using our profiling service you can further improve print quality – especially if you are using compatible ink cartridges or print media that are not directly supported by our drivers. We create individual color profiles at a very affordable price – no expensive hard- & software is required!

TurboPrint can print a color chart page with approx. 800 color patches. The ZEDOnet profiling service will measure the color chart with a spectrophotometer and send you an individual color profile by e-mail.

With an individual color profile, color reproduction becomes more accurate. It also ensures the best print quality on third party paper and ink.

Ink management

TurboPrint not only matches document colors to printed colors, it also allows you to control the mix of inks applied to the paper. TurboPrint's intelligent ink saving mode can reduce ink consumption by 25-50% without producing pale looking pictures. This is done by limiting the maximum amount of ink used in saturated colors and by using more black ink in dark areas instead of mixing dark shades with color inks. With photo printers, TurboPrint can also reduce photo ink consumption and use the darker (and more economic) regular inks instead.

Sublimation printing on textiles and other materials

TurboPrint is the ideal software for sublimation printing. With sublimation printing, the color reproduction differs significantly from printing with normal inks on paper. An individual color profile is recommended as there are several suppliers of sublimation ink and transfer paper and the color reproduction also depends on the printed material. With our color measurement service you can also create color profiles for sublimation.

Screen printing and DTF printing (TurboPrint Studio XL)

Screen printing mode is a special printing mode for black and white printing on film

with high opacity for subsequent exposure. This mode is ideal for printing films for screen printing, PCB creation, cliché printing, etc. DTF printing is a special textile printing mode that also uses the special color white. TurboPrint supports DTF printing for some Epson printer models.

We wish you a lot of fun and the best printing results with TurboPrint!

3. Installation and printer setup

3.1 Installing / uninstalling TurboPrint

TurboPrint is available in three different installation packages: ".deb", ".rpm", or ".tgz". Download the package that is compatible with your distribution. Ubuntu / Mint / Debian Linux uses the Debian package format (".deb"), while Fedora / SuSE / Red Hat use RPM packages.

If your package manager doesn't support any of these formats, or if you have trouble installing the correct package, you can always install it using the ".tgz" package, as it includes its own installation script.

Installation via the ".tgz" package

First, the TurboPrint archive needs to be extracted. On most Linux distributions, simply right-click the archive and select "Extract" from the context menu. Alternatively, you can left-click (you may need to double-click) to launch the archive manager. There, you can select the option to extract the archive.

The extracted files should then be located in a separate directory named "turboprint-<version>".

This directory contains an installation script called "setup.sh". Please start this script by right-clicking it and selecting "Run as a Program" or, depending on your Linux distribution, "Actions -> Run in console".

The graphical interface of the TurboPrint installer should now appear.

The rest of the installation process is guided through the installation program.

Installation via command line (Terminal)

If your Linux system does not have a graphical interface, you can also perform the installation from the command line. The TGZ archive can be extracted using the command line command

```
tar -xzf turboprint-3.xx.tgz
```

(replace „xx“ by the actual version number).

Enter the command

```
cd turboprint-3.xx
```

to change into the installation directory and enter

```
./setup.sh
```

to start the installation script.

If you should need to remove TurboPrint later, the command

```
./uninstall.sh
```

starts the script that uninstalls TurboPrint.

The TurboPrint Installation Program

The "Setup Mode" should be set to "Install" - "Uninstall" is used to uninstall the TurboPrint software from your system.

In the next step, you can select a license key, which will then activate TurboPrint as a full version. If you already have a TurboPrint license key, click "Select License Key File" to activate it.

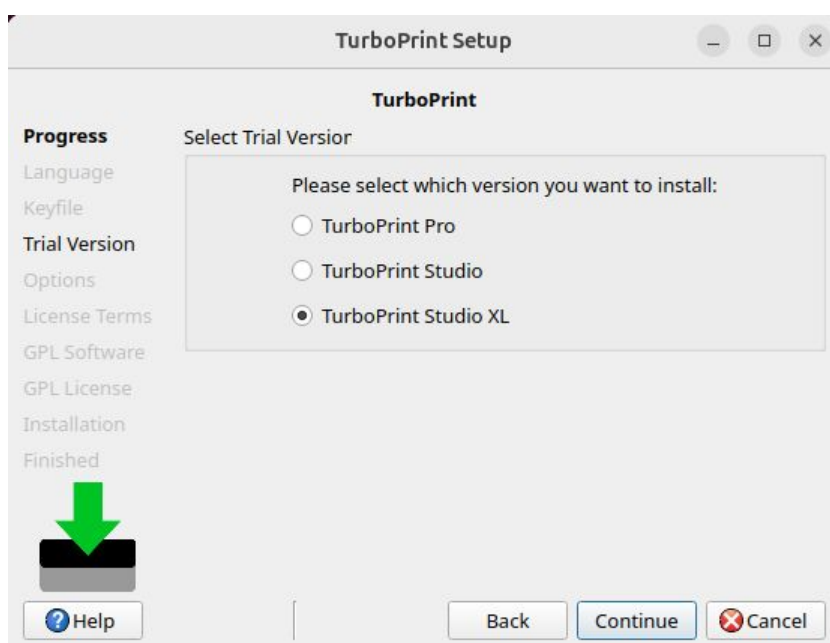
Without a license key, TurboPrint runs as a trial version. TurboPrint is available in three different editions. You can choose the type of trial version:

TurboPrint Pro is ideal for home users, offering excellent color management for RGB documents and images. The Composer loads JPG photos and PNG images and PDF documents.

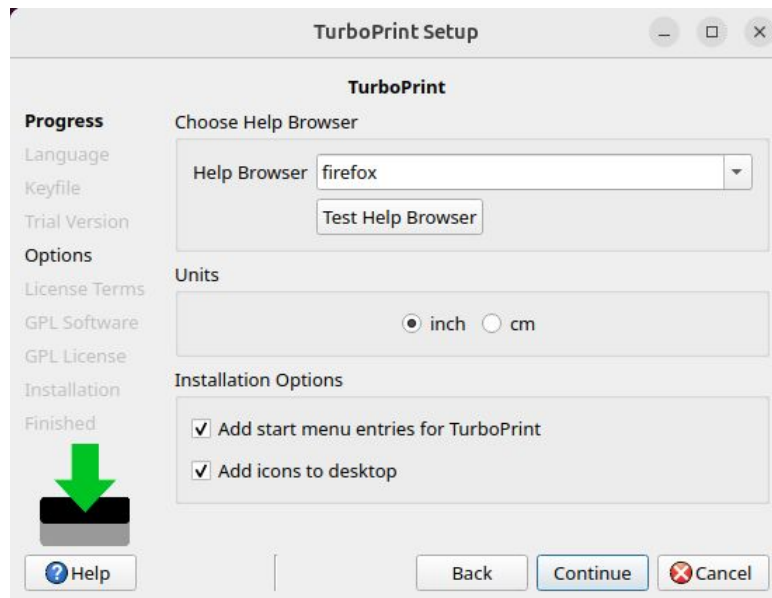
TurboPrint Studio is the advanced version for ambitious photographers and professional users such as graphic designers, desktop publishing, prepress, and architectural firms. It offers support for ICC color profiles, CMYK printing, proofing, and is also suitable for sublimation printing. In the Studio version, the Composer also loads TIFF images as well as EPS documents.

TurboPrint Studio XL is the largest version, supporting large-format printers beyond A3+ and offering screen printing and DTF printing capabilities.

To try a different trial version later, repeat the installation and select the desired edition. The total trial period is limited to 30 days. Even after this time, you can still print with TurboPrint, but a "TurboPrint" logo will be printed on every page.



On the next menu page of the installer, basic installation settings can be adjusted:



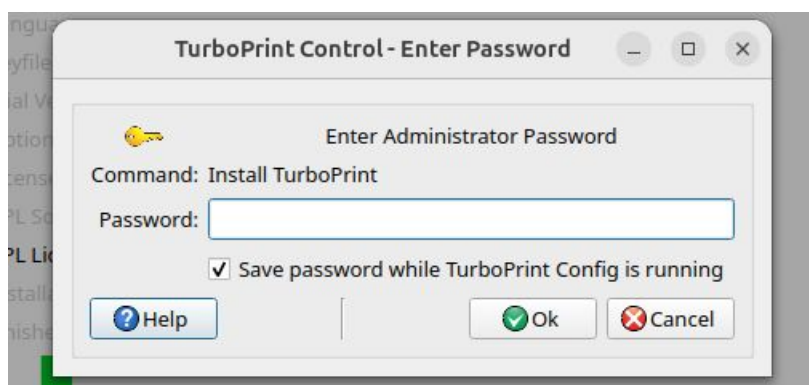
WEB Browser for online help system: If the default web browser "Firefox" is not available on your Linux system, you can also choose a different browser. Either select a name from the drop down list or enter the command line name of the browser of your choice.

Note: To test if the name is correct, you can also enter it in a terminal window. If the web browser window does not open, the name is incorrect and TurboPrint's online help system will not function.

After that the license terms will be displayed – read them thoroughly and press "OK" to start installation.

On the following menu page, optional components are offered under the GPL license. These include the PostScript interpreter "Ghostscript" and the "BJNP Backend" for Canon network printers. It is recommended that you install these as well.

Setting up the printers in the system requires elevated privileges, so authorization is now necessary. Enter your administrator password. Depending on your Linux distribution, this will either be your user password (you must be a user with administrator rights) or the "root" password.

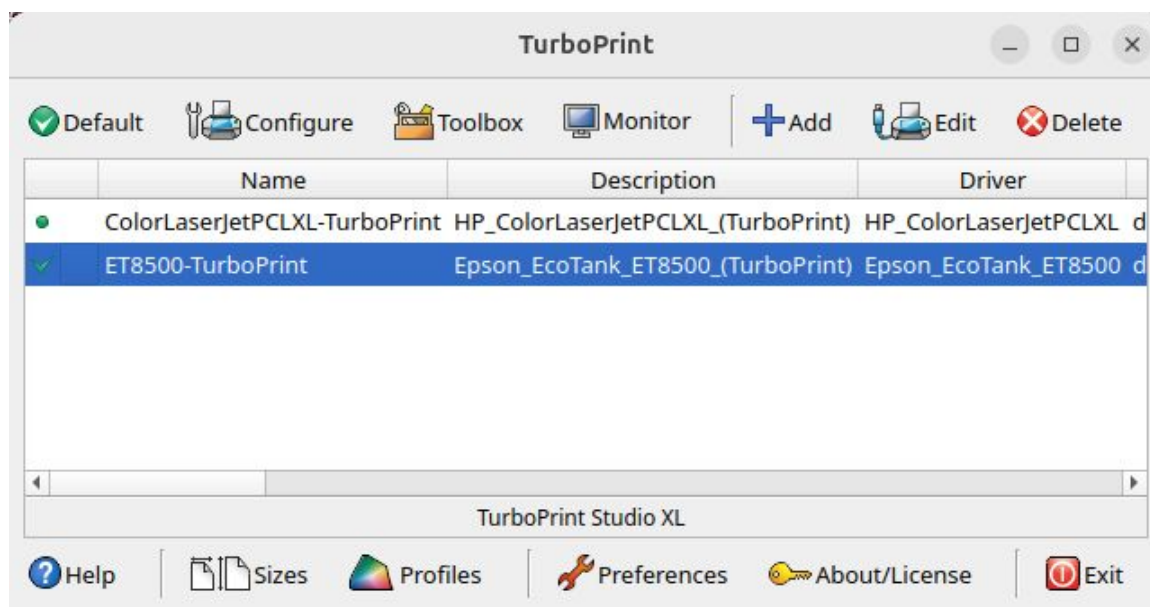


The installation will now begin – a log of the ongoing installation steps will appear on the screen.

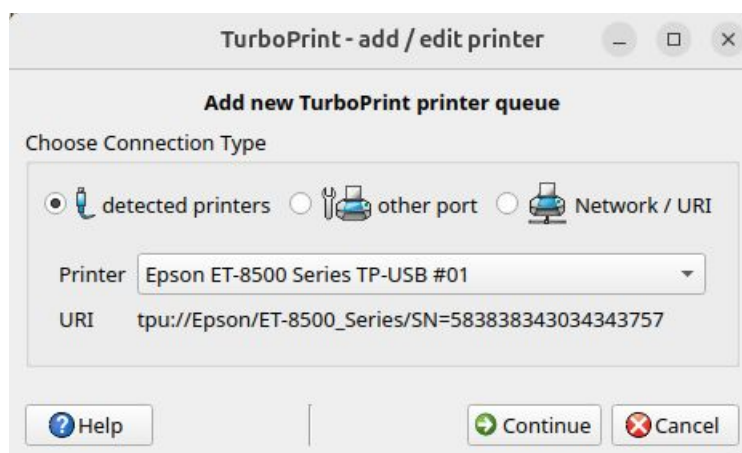
3.2 Setting up a printer

Before your printer can be used with TurboPrint, it must be set up in the TurboPrint Toolbox.

Start the control center with the icon "TurboPrint". The main window looks as follows, however the list of printers will be empty first:



Press the button "Add" to add a new printer. The dialog "Add / Edit Printer" will open:

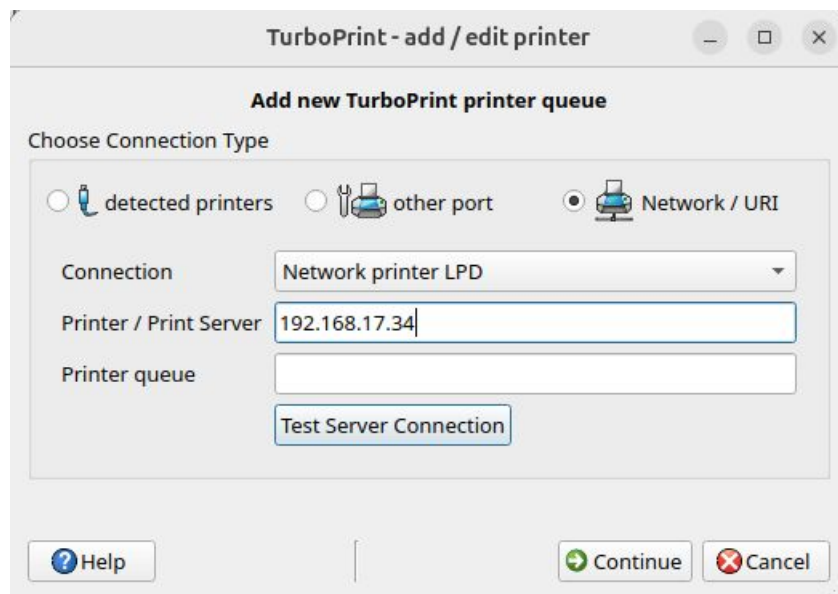


The option "**detected printers**" shows printers that have been detected by Linux. These include printers connected via USB and network printers that are automatically detected. If your printer is listed twice, please select the entry that ends on "TurboPrint-USB". After selecting the connection, verify in the next step that the correct printer driver is selected.

The option "**other port**" lists additional printers, such as printers shared from other Linux computers on the local network.

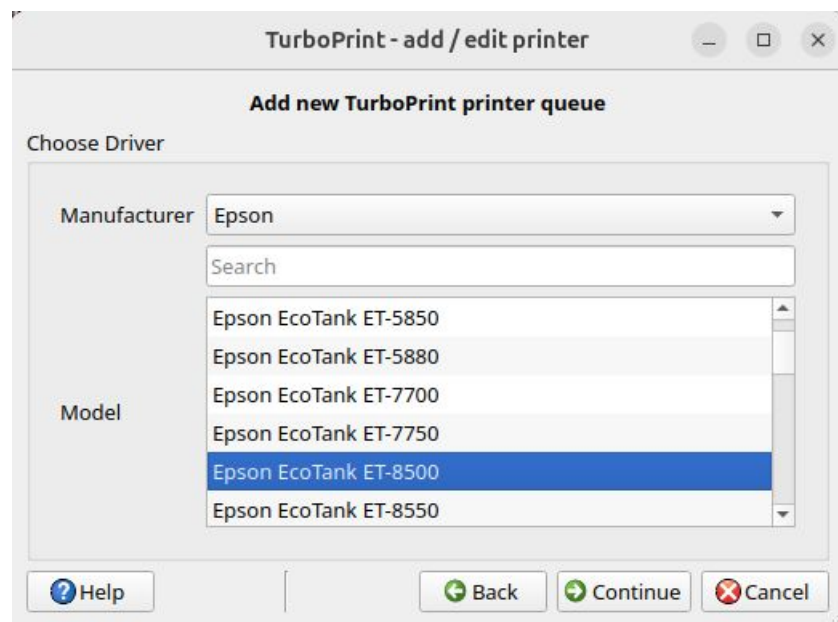
To install printers that were not listed, e.g., network printers that are not automatically detected, please use the option "**Network / URI**".

There, select a network protocol and enter the printer's IP address or network name. Most printers accept the "LPD" and "Socket / Jetdirect" network protocols.



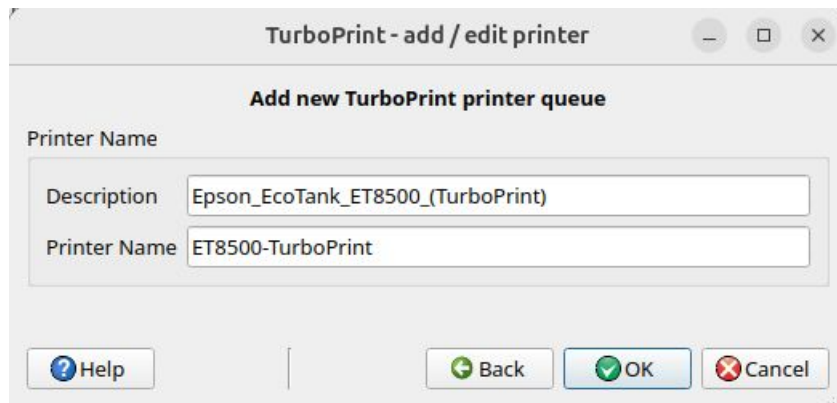
Information on configuring printer connections can be found in [Chapter 5. Network Printers LPD and Socket / Jetdirect](#)

Selecting the Appropriate Printer Driver

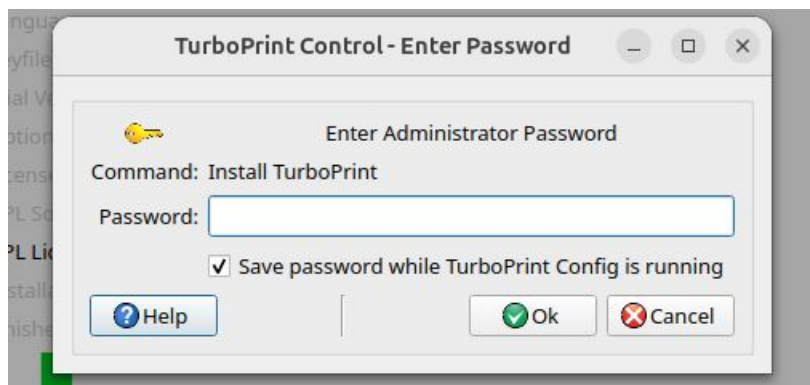


In the "Driver Selection" window, first select the "Manufacturer" and then the appropriate printer model from the list below.

Clicking "Next" opens a new dialog where you enter the desired name for the print queue ("**Description**") and a corresponding short name ("**Printer Name**"). The short name is primarily used for printouts from the command line.

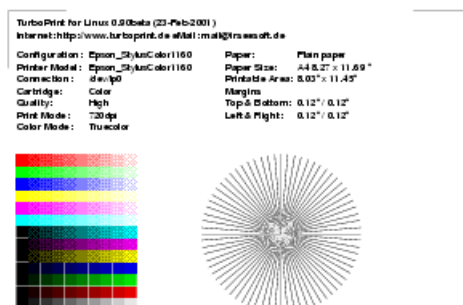


Setting up printers in the system requires elevated privileges, so authorization is now necessary. Please enter your administrator password. Depending on your Linux distribution, this will either be your user password (you must be a user with administrator rights) or the "root" password.



After entering the password, a dialog box will appear offering to print a test page. This allows you to immediately test whether all settings are correct. You can also print the test page later from the printer toolbox.

If you selected to print the test page, the printer should start printing the test page after a few seconds, which should look like this:



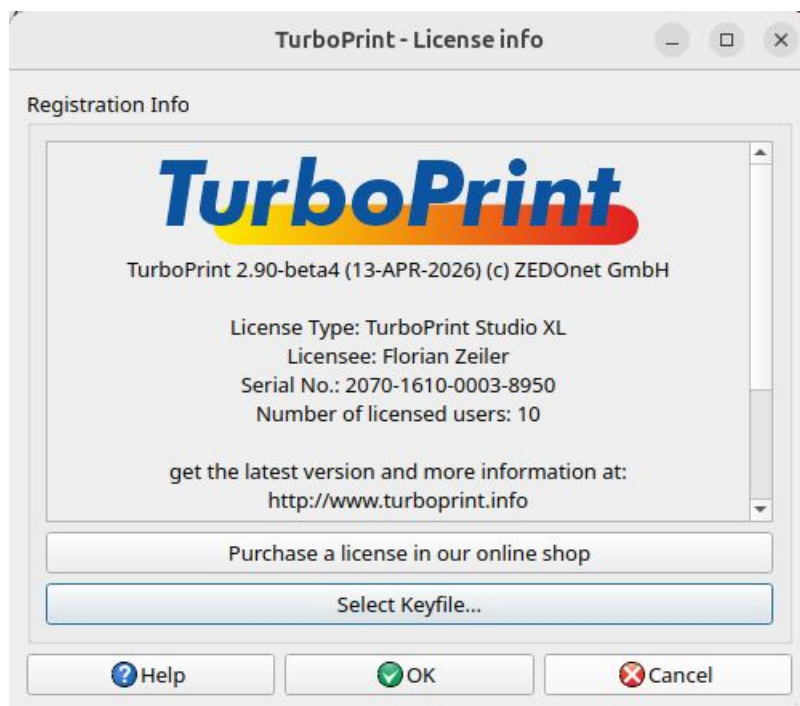
If nothing happens or only text is printed, please read chapter [18.Problems and solutions](#).

3.3 Licensing TurboPrint

After the trial period TurboPrint must be activated with a license key file – otherwise a "TurboPrint" logo will be added on every printed page.

A license key can be purchased on our web site www.turboprint.info. To activate TurboPrint with a license key file, start TurboPrint Control (desktop icon or start menu entry "TurboPrint Control" or command "turboprint" in a terminal window) and select the option "About / license". In the license info dialog, click "Load license key file". A file selection dialog will open where you can select the key file. After selecting the file click on "Open".

If the key file was accepted, your name and license type will be displayed in the window.



Another possibility is to start the registration process by double clicking the license key file - the dialog shown above will display your TurboPrint license information.

4. TurboPrint Control Center

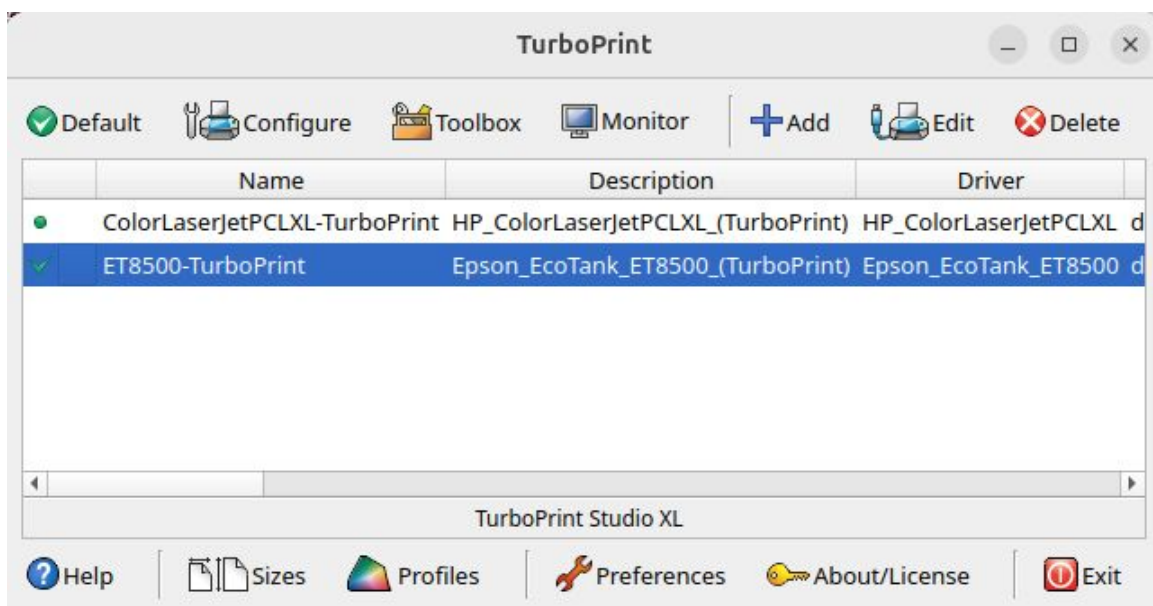
Using the TurboPrint Control Center, you can

- add or remove printers
- execute maintenance tasks (nozzle cleaning, head alignment, etc.)
- manage color profiles, print color charts for profile creation
- add user defined page formats
- change default settings like the hotfolder directory
- create a log file archive (important for printing problems)

You can open TurboPrint Control either with the desktop icon, by searching the app "TurboPrint Control" in the start menu or from command line by entering "turboprint" in a terminal window.

TurboPrint Control main window

The main window shows a table of all TurboPrint printers that have been set up.



List of printers

You can add a TurboPrint printer, or select an installed printer and execute a maintenance job or manage a printer's color profiles or page sizes.

To add a TurboPrint printer press "Add". A detailed description can be found in chapter ["5. Setting up a printer"](#).

Printer specific functions

- **Configure** - change printer default settings (chapter [9. Print dialog settings of TurboPrint](#))
- **Toolbox** - perform maintenance functions like test page, nozzle check, cleaning, head alignment (chapter ["6. Printer Toolbox - Maintenance Functions"](#))
- **Monitor** - view printer status including ink levels and show the print queue with documents that are being printed
- **Edit** - change the connection or rename the printer
- **Delete** - remove the printer
- **Sizes** - define custom page sizes and adjust CD print settings (chapter ["7. Custom page size editor"](#))
- **Profiles** - opens the color profile administration (chapter ["8. "Profiles" - color profile administration"](#))

Settings (symbol "Wrench")

In this dialog you can change the hotfolder directory and create a ZIP archive with log files.

Licensing TurboPrint

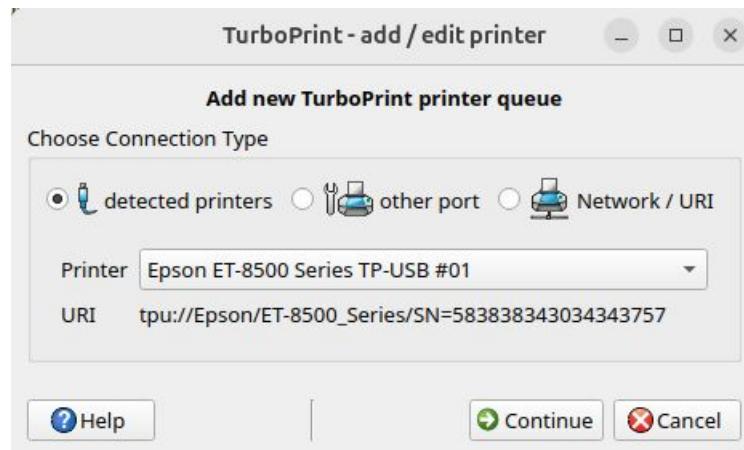
With the button "About / License" you can display license information and activate TurboPrint with a personal license key file.

5. Setting up a printer

This chapter describes printer setup with TurboPrint Control. You can open TurboPrint Control either with the desktop icon, by searching the app "TurboPrint Control" in the start menu or from command line by entering "turboprint" in a terminal window.

Press the button "Setup Printer" to add a new printer.

5.1 Selecting the printer port



When selecting the printer port, a distinction is made between:

- **detected printers** - for printers currently connected via USB or automatically detected on the local network. If your printer is listed twice, please select the entry that ends on "TurboPrint-USB".
- **other port** - lists additional printers, e.g., printers shared from other Linux computers on the local network
- **Network / URI** - for manually setting up printers by selecting a network protocol or by specifying a "URI" (device address of the Linux print spooler CUPS)

Network printer / URI

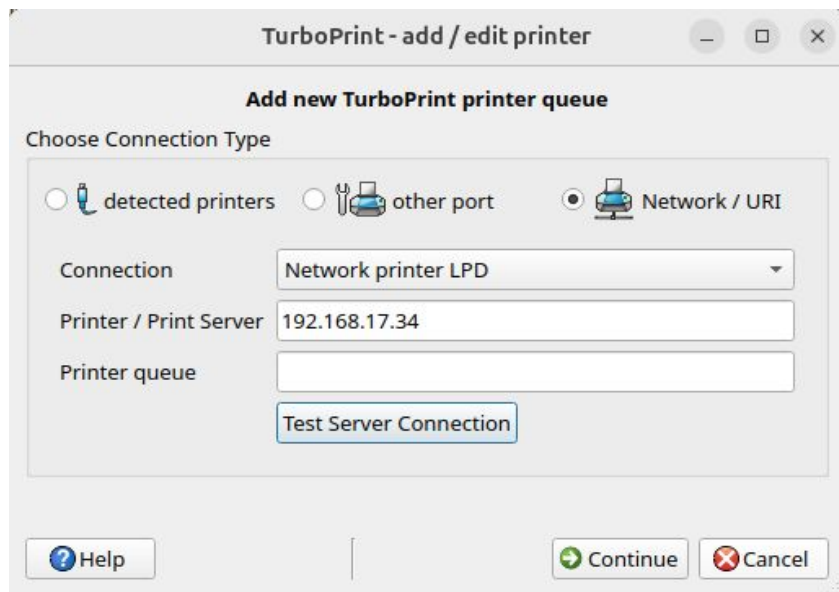
Here you can configure TurboPrint for a Wi-Fi or network printer. With "Connection" you can select the network protocol:

Note:

Most network printers support multiple protocols, usually Socket/Jetdirect, LPD, and sometimes IPP. If in doubt, try "Network printer Socket/Jetdirect" first.

Network Printers LPD and Socket / Jetdirect

These protocols work for most printers with a built-in network interface or Wi-Fi and for routers with a printer port.



TurboPrint - add / edit printer

Add new TurboPrint printer queue

Choose Connection Type

☐ detected printers ☐ other port ☒ Network / URI

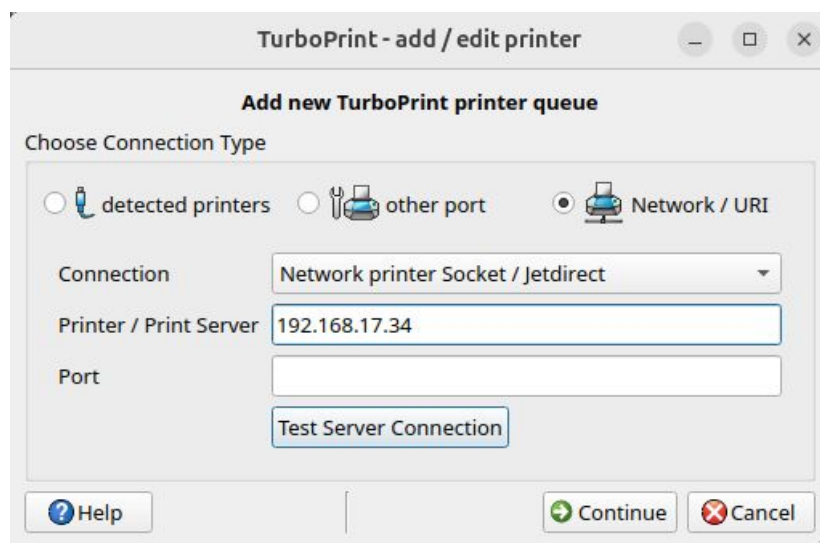
Connection: Network printer LPD

Printer / Print Server: 192.168.17.34

Printer queue:

Test Server Connection

Help Continue Cancel



TurboPrint - add / edit printer

Add new TurboPrint printer queue

Choose Connection Type

☐ detected printers ☐ other port ☒ Network / URI

Connection: Network printer Socket / Jetdirect

Printer / Print Server: 192.168.17.34

Port:

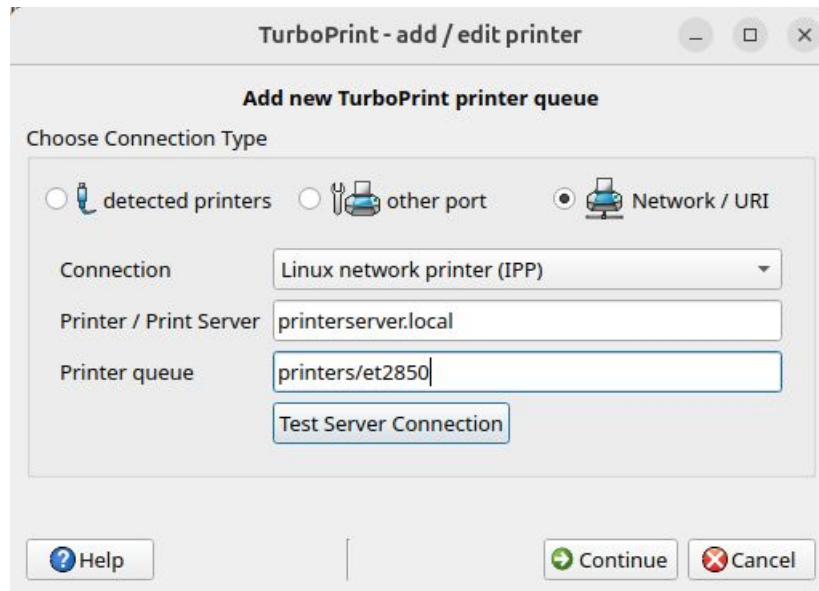
Test Server Connection

Help Continue Cancel

Under "Printer / Print Server," enter the IP address or network name of the printer or router. The "Printer Queue" or "Port" field can usually be left blank (except for routers with multiple printer ports).

Linux Network Printers (IPP)

Printers using the IPP protocol or printers shared from another Linux PC or Apple Mac. Here, you must enter the network name under "Printer / Print Server" and the share name under "Print Queue." For printers with a built-in network interface, the printer name can be left blank. On Linux and Mac, the printer name must be prefixed with "printers/".



CUPS URI

With this connection type, the connection can be specified directly via the CUPS device address. This is particularly useful for connections that are not otherwise offered in TurboPrint.

For example, the CUPS device address could be:

`"ipp://servername/printers/printername"`

This would connect the printer "printername" on the server "servername" using the "IPP" protocol.

Detailed documentation can be found in the CUPS printing system's online help:

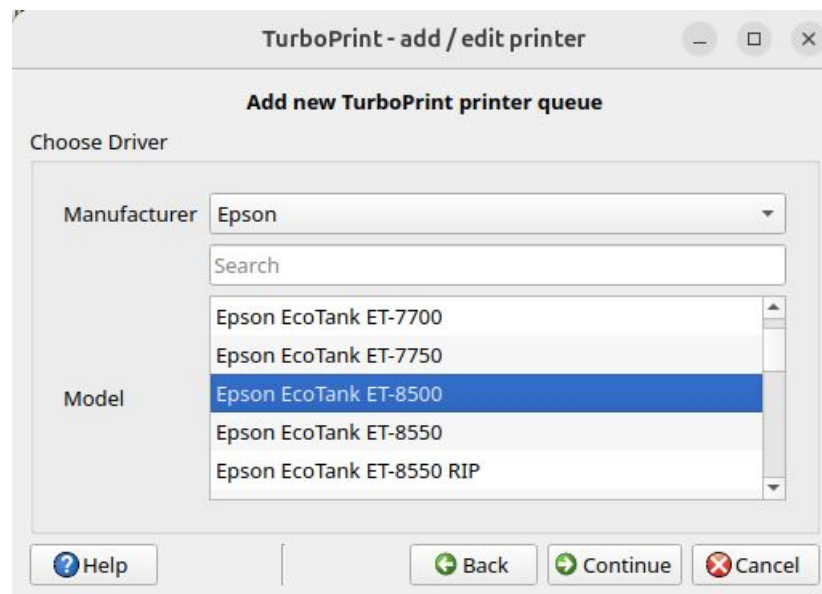
`http://localhost:631/`

After selecting the connection and entering the necessary parameters, click "Next".

5.2 Selecting the printer driver

Please select the manufacturer of your printer with the selector "Printer model", then select the model name of your printer in the list below.

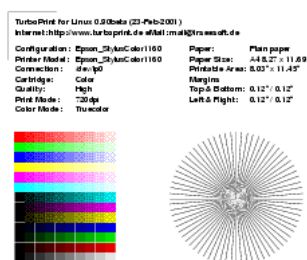
In the "Search" field below the manufacturer selection, you can enter a part of the printer name to easily find models in long lists. The selection list will then be filtered accordingly. For example, if you enter "8500", only printers with this number in their name will be listed.



For some printers there are two drivers available and the second driver ends on "HQ" or "RIP". The driver with the ending "HQ" or "RIP" must be selected for screen printing and DTF printing.

Clicking "Next" opens a new dialog where you enter the desired name for the print queue ("**Description**") and the corresponding "Short Name" ("**Printer Name**"). The short name is primarily used for printouts from the command line.

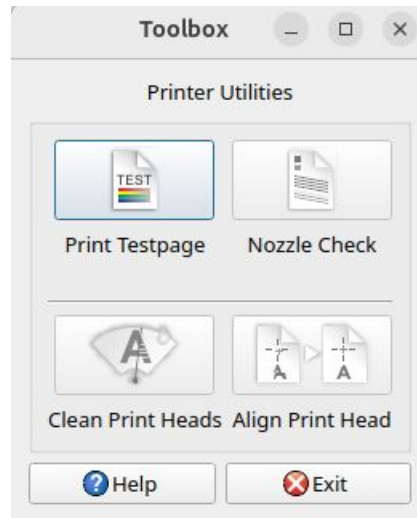
After successful printer setup, a dialog box will appear offering to print a test page – this allows you to immediately check if all settings are correct. You can also print the test page later from the "Toolbox" dialog. If you selected to print the test page, the printer should begin printing it after a few seconds. The test page should look like this:



If the printer doesn't print (or doesn't print correctly) read chapter ["16. Problems and solutions"](#).

6. Printer Toolbox - Maintenance Functions

The dialog "Toolbox..." offers printer maintenance functions.



Depending on the printer the following functions are available:

- **Print Testpage**
- **Nozzle Check**
- **Clean Print Heads**
- **Align Print Head**

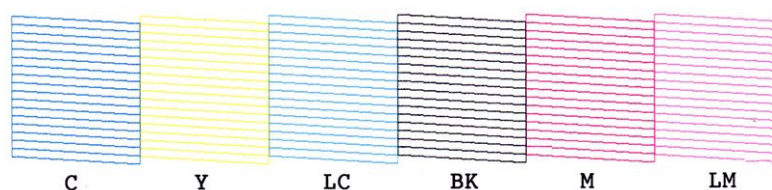
After selecting one of these buttons the selected maintenance job is performed or an additional menu with some further choices will be displayed (e.g. clean black or color print head)..

6.1 Print Testpage

It is recommended to print a test page after adding a printer - or if printing from applications does not work properly. The "test and status page" also contains important information on printer setup.

6.2 Nozzle Check

Use this function to check if the print head is working properly. A sheet of A4 or Letter sized paper is required. For each ink color a test pattern is printed.



Each nozzle of the print heads prints a line. If one or several lines are missing or “smeared”, the toolbox function “Clean Print Heads” should be executed.

6.3 Clean Print Heads

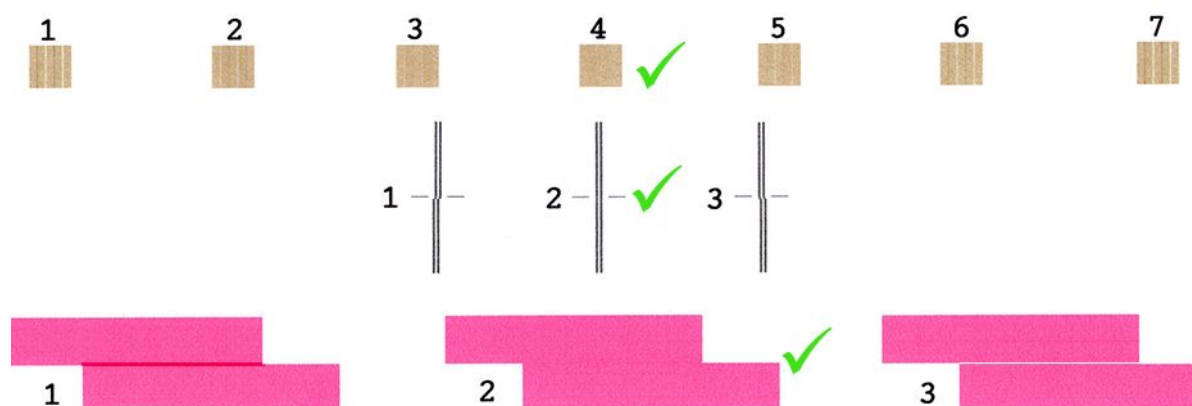
Starts automatic head cleaning. It is normal that ink nozzles get clogged from time to time, so print quality is reduced (e.g. "banding"). In this case print a “Nozzle Check” page and start print head cleaning if necessary.

Important:

Cleaning consumes some ink, so this function should only be executed if necessary.

6.4 Align Print Head

Align the black & color print heads and / or align bidirectional printing. The alignment procedure depends on the printer model. Usually a page with several lines of test patterns is printed. For each line, the number of the best aligned pattern must be entered (e.g. choose the field where two lines align best or where the least “banding” is visible).



7. Custom page size editor

New printer specific page formats can be defined in this dialog. This is especially important with large format printers and / or roll paper for efficient paper usage.

It is also possible to adjust the printable area of CDs / DVDs – you can specify the CD/DVD diameter and the area around the center hole that cannot be printed on.

Moreover you can set a scale factor (e.g. enlarge from A5 to A4 size) or enter offsets to adjust print position on the page.

You can reach the custom page size editor from the TurboPrint control center program with the button “**Sizes**”.

TurboPrint - Edit custom page sizes

Printer queue: Epson_EcoTank_ET8500_(TurboPrint)

Name	Size	Type
CD/DVD	1.58-4.65	CD
Banner 8.5x100in	8.50x100.00	normal

Name: Banner 8.5x100in

Type: ☒ normal ☐ borderless ☐ CD

Page Size: 8.50 100.00
width height

Margins: 0.12 0.12 0.12 0.12
left top right bottom

Scaling: 100.00 %

Offset: 0.00 0.00
left top

Reset to defaults

Unit of measure: ☒ inch ☐ cm

Info

Max. values
Page width: 8.50
Page height: 129.00
Print width: 8.26

min. margins
top: 0.12
left: 0.12
right: 0.12
bottom: 0.12

Scaling: 10...1000

Buttons: Add, Delete, Duplicate, Help, OK, Cancel

All user defined sizes are shown in the list on the left. Page size, margins, scaling and offsets are displayed (or entered) in the middle of the dialog window. An information field on the right shows maximum paper size and minimum margins. The unit of measure can be switched to either “inch” or “cm” (1 inch = 2,54 cm) on the bottom right.

7.1 Adding a new page size

Use the button “+” to add a new page size. A new list entry named “new format” will appear – you can change the name by double clicking on the list entry. Choosing a significant name will make it easier to find the size in the application's page setup later.

Three different page types can be chosen:

- **normal**
- **borderless** (only for printers capable of borderless printing)
- **CD** (only for printers that can print on CDs)

Page format “normal” and “borderless”

Please make sure that the correct “**Unit of measure**” = “inch” or “cm” is selected.

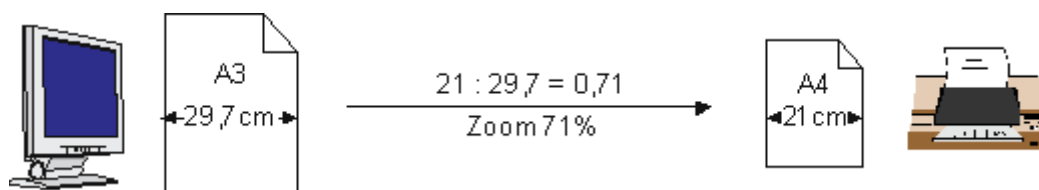
For regular page sizes please enter the dimensions of the paper. The printable area is defined by the left, right, top and bottom margins. For technical reasons most printers leave a small margin at the paper edges, which means that margins must not be smaller than the minimum margins listed in the table on the right.

Some printers can print “**borderless**” but only for certain standard page sizes or certain print widths. One reason is that only for certain sizes ink absorbers are present that prevent ink from getting into the printer mechanics. This means that even for those printers only certain borderless custom page sizes can be defined.

Scaling:

This setting is for scaling print size. For example an A3 sized document can be printed on an A4 printer without having to reformat the document – or an A4 document can be automatically enlarged and printed on A3 paper.

The scale factor can be defined in percent, “100%” means that no scaling is performed. Page size and margins always refer to the actual print size.



Example: Define a custom page format that reduces A3 documents to A4 size

Enter 21.0 x 29.7 cm (or 8.27 x 11.69 inch) – the actual print size is A4. Page margins are left at minimum. The scale factor is calculated as print size divided by document size:

$$21\text{cm} / 29.7\text{cm} = 0.707 \Rightarrow \text{“71%” is the correct scale factor}$$

In the application program the dimensions of the new page format will be A3.

If no scaling is desired, enter 100%.

Offset

On some printers paper is not exactly positioned due to mechanical tolerances. Thus the printout may not be positioned exactly as defined by the driver (e.g. printout is shifted to the left or right). Use the “Offset” fields to correct the print position.

The “left” offset specifies how much the printout should be shifted to the right. E.g. 0,1cm means the printout will start 0,1cm further to the right.

This correction is not visible in the application program, only the printer is affected.

Please note that specifying an offset will increase unprintable margins. Moving the printout to the right (left) will increase the unprintable right (left) margin. Accordingly moving to the bottom (top) will increase the unprintable bottom (top) margin.

CD printable

For CDs / DVDs the diameter of the inner circle (center hole) and outer circle can be specified. Also an offset can be specified to adjust the printout horizontally & vertically.

A negative value in the field “**left**” or “**top**” will shift the printout to the left or top, a positive value will shift to the right or bottom.

Deleting a custom page size

Pressing the button “-” will delete the currently selected custom page size. No warning will be shown. However, you can undo all changes by leaving the custom page size dialog with the “Cancel” button.

Duplicate

This button duplicates the currently selected page size.

Reset to defaults

Pressing this button will reset page dimensions to maximum values for this printer. Page margins will be reset to minimum values.

Select “OK” to confirm your changes in the custom page size menu. “Cancel” will discard all changes since entering the page size menu.

8. "Profiles" - color profile administration

The button "Profiles" on the main window of the TurboPrint control center program opens the color profile administration menu.

In TurboPrint's profile administration there are two categories of profiles: **Printer profiles** describe the color conversion for a certain printer, type of paper and ink. **Color spaces** describe colors in documents and how they should be interpreted / printed (on any printer as far as possible).

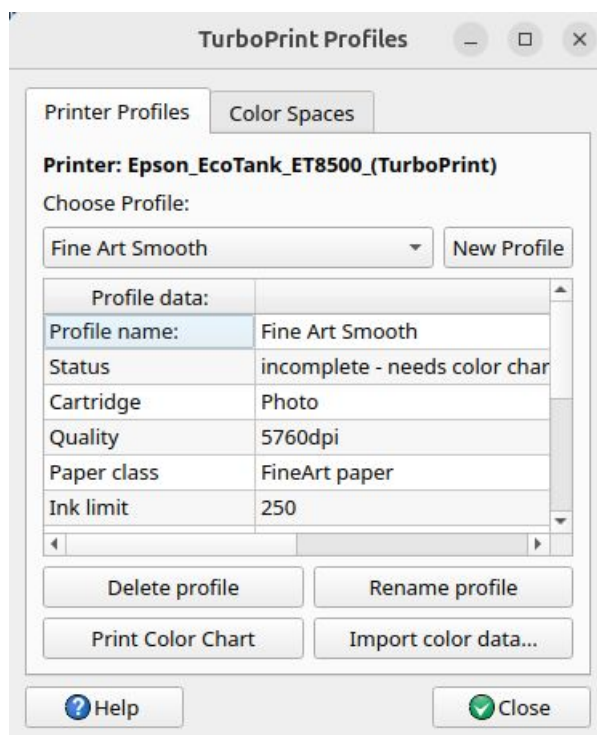
Important note on importing ICC profiles:

It doesn't make sense to import standard ICC profiles that are available from paper manufacturers or printer manufacturers. Such profiles are for use with the manufacturer's printer driver only – and thus do not produce correct colors using other drivers. The reason is that ink mixing (Black vs CMY inks), rastering technique and base linearisation of TurboPrint is not identical with the manufacturer's printer driver. Thus already the unprofiled output is different and the ICC profile will not match properly.

For accurate colors, the color chart that is measured for a color profile must be printed with TurboPrint.

8.1 Index card "Printer Profiles"

Here you can find the list of TurboPrint color profiles that you have added to your printer. Only profiles that were created individually for this printer are listed, so initially the list is empty.



List of Printer Profiles

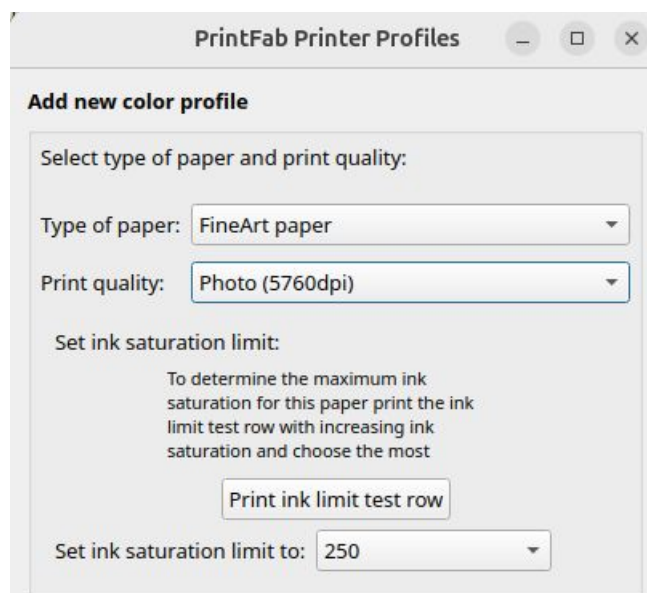
In the drop down list "Choose profile" you can find the profiles that have been added for the current printer. The following information is shown for the selected profile in the table below:

- **Profile name** with this name the profile is listed in the print dialog's "Media type" or "Paper type" selector
- **Status** "incomplete" after creation of a new profile entry, "complete" when color profile data have been assigned using "Import color data".
- **Cartridge** additional print options (only available for some printers)
- **Quality** print quality for which the profile was made
- **Paper class** type of paper, e.g. plain paper, glossy photo paper etc.
- **Ink limit** the maximum ink saturation
- **Color data** name of color profile and type (ICC / ZEDOnet)
- **Driver** name of printer driver
- **User** name of user the profile was created for
- **Paper manufacturer, Paper, Ink manufacturer, Ink** additional information on profile

"New Profile"

First create a new profile entry with the button "New profile". This entry is "empty", i.e. it doesn't yet contain color correction tables. The new entry can be used to create a new profile using our ZEDOnet profile creation service. If you have the necessary equipment (spectrometer, profile creation software), you can also create and add your own ICC profile.

In the following dialog please select the type of profile you want to create:



The screenshot shows a window titled "PrintFab Printer Profiles" with standard window controls. Inside, the "Add new color profile" section is active. It contains two dropdown menus: "Type of paper:" set to "FineArt paper" and "Print quality:" set to "Photo (5760dpi)". Below these is a section titled "Set ink saturation limit:" with explanatory text: "To determine the maximum ink saturation for this paper print the ink limit test row with increasing ink saturation and choose the most". There is a button labeled "Print ink limit test row" and a final dropdown menu "Set ink saturation limit to:" set to "250".

In the section “**Select type of paper and print quality**” choose the desired print parameters for the new profile. It is important to choose these settings carefully because color reproduction changes slightly with print quality, maximum ink saturation, type of paper, etc.

The setting “**Cartridge**” is only available for some printers. It is used to control printer specific settings like “color” or “photo” print cartridge inserted, gloss optimizer on/off, “matte black” or “glossy black” ink used. Choose the setting that shall also be used for later prints with this profile.

The setting “**Type of paper**” controls some printer specific options like print head distance, usage of pigmented or dye black ink, printing speed, dry time, etc.

The following **types of paper** can be selected:

- **Plain paper** for normal paper, e.g. copy paper / (color-) laser paper
- **Matte inkjet paper** for matte coated inkjet paper (not for satin / semimatte photo paper)
- **Glossy paper** for high quality photo papers (glossy, semi-matte / semi-glossy satin or pearl), use this setting also for **FineArt Baryta**
- **Transparency** for projectors, film for silk screen exposure
- **Fine Art paper** thick, matte paper often with a rough texture like rag or canvas (not for satin / semimatte Fine Art paper like Baryta)
- **Other paper** for a paper that does not match any choice above

You must also select the “**Print quality**” (print resolution) you want to print with on the chosen paper. In many cases you will select the highest quality. A profile can be used with all resolutions but the best results will be achieved with the resolution at which the profile chart was printed.

The “**Ink saturation limit**” specifies how much ink can be applied to the paper. The default (“300%” for CMY/RGB printers, “250%” for all other printers) will give good results in most cases.

Depending on the paper, a different level of ink is needed to achieve maximum color saturation. The more ink is applied, the more saturated colors can be printed. However, if too much ink is applied the inks will flow (“bleeding”).

Therefore you can determine the maximum ink level for the chosen paper by printing a line with increasing ink levels. This can be done with the “**Print ink limit test row**” button. You can use the same sheet of paper for this test row that you will use later for printing the color chart.

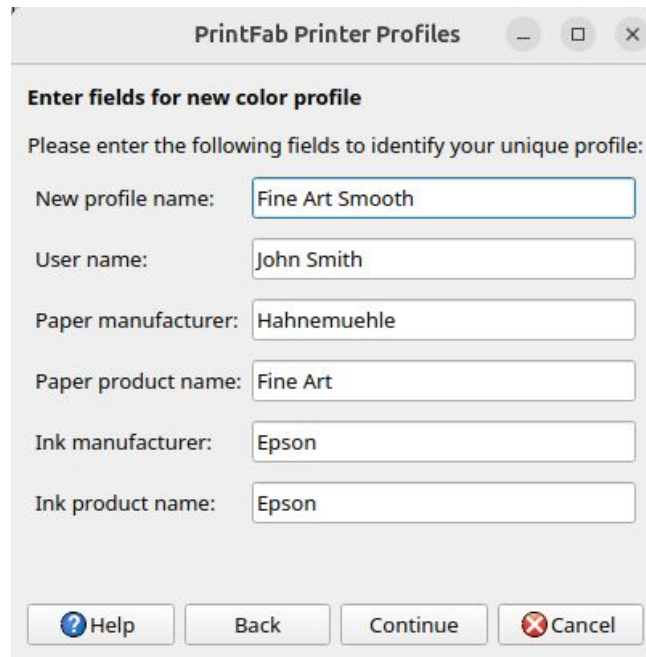
In the printed ink limit test row, find the box with the highest ink level where the ink does not flow and dries within a few minutes. Set the “ink saturation limit” control to the value printed in this box.

Attention:

If the value you choose is too high, the colors of your profile chart will bleed and the chart cannot be measured. If the paper transport rolls of your printer smear the printed boxes of your profile chart, you will need to reduce the ink saturation limit and reprint it.

Since the maximum amount of ink cannot be increased later during printing (but can be reduced at any time), you should choose the higher value if in doubt.

Press "continue" to get to the next dialog page.



Enter a name for your profile and supply information on paper and ink. The profile name will be visible in the print dialog later – choose a significant name so that you will be able to choose the correct profile. Information on paper and ink will be visible in the profile management menu.

Press “Continue” and you will see a summary of all profile information.

“OK” will finally create a new entry in TurboPrint’s list of printer profiles.

Important:

- The new profile doesn't yet contain any color correction data. Only when you import ZEDOnet or ICC color correction data the “empty profile” will be completed and usable for printing with correct colors.
- The next step will be printing a color profile chart (see below).

Profile actions

Delete profile

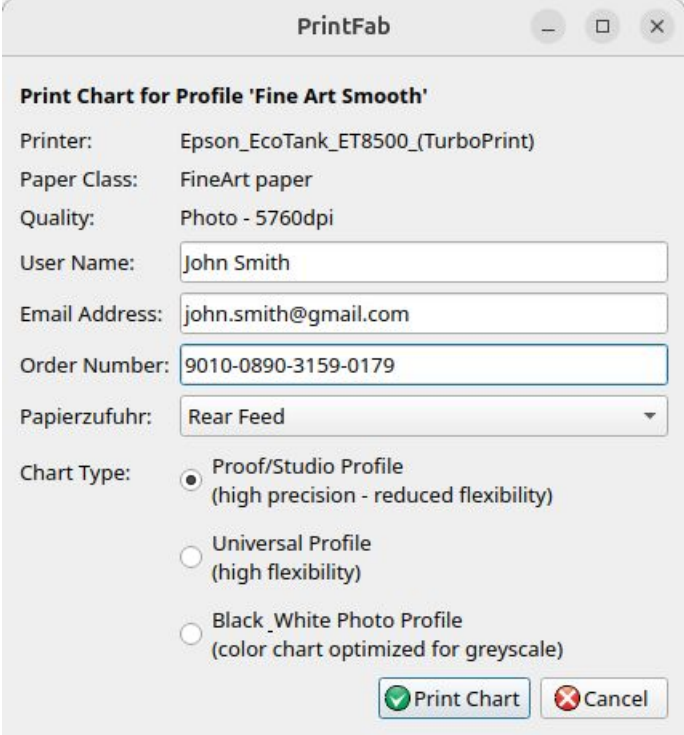
The currently selected profile will be removed from TurboPrint's list of printer profiles.

Print color chart (for ZEDOnet profile creation service)

With this function you can print a color chart for the ZEDOnet profile measurement service. (If you want to create an ICC profile with your own measurement equipment read the next section).

We offer a low cost measuring-service for users of TurboPrint. Send us your printed color chart by mail, and we will measure it and return your individual color profile by email.

Some information will be requested before the color chart can be printed:



The screenshot shows a window titled "PrintFab" with a close button. Inside, the title bar reads "Print Chart for Profile 'Fine Art Smooth'". The form contains the following fields and options:

- Printer: Epson_EcoTank_ET8500_(TurboPrint)
- Paper Class: FineArt paper
- Quality: Photo - 5760dpi
- User Name:
- Email Address:
- Order Number:
- Papierzufuhr:
- Chart Type:
 - ☒ Proof/Studio Profile (high precision - reduced flexibility)
 - ☐ Universal Profile (high flexibility)
 - ☐ Black _White Photo Profile (color chart optimized for greyscale)

At the bottom right are two buttons: "Print Chart" (with a green checkmark icon) and "Cancel" (with a red X icon).

Enter your **name** and the **email address** where we shall send the profile data.

In the next line enter the **order number**. To be able to offer the profile measurement service at a low price we have set up an internet order system where you purchase an order number first (at www.printfab.net/en_shop_tp_profile.phtml).

By indicating this order number you prove that the measuring fee is already paid and ensure that you will be sent your individual profile by email without any further requests.

For test prints you can enter the number "9010-0890-3159-0179".

You can choose between three **Chart types**:

- **Proof / studio** for higher color precision (recommended)

Profiles created with this chart type only support a limited number of “ink control” settings in the print dialog (with photo printers the usage of bright cyan and bright magenta cannot be set individually). These charts contain more color shades but less combinations of photo inks and the corresponding regular inks (e.g. photo magenta and magenta).

- **Universal profile** for higher ink control flexibility

With this profile all ink control settings are available in the print dialog.

- **Black and white photo profile**

This is a color profile that is optimized for printing black-and-white photos, the chart contains mainly colors that are close to gray.

Now insert the sheet of paper that you want to profile. If you already printed the ink saturation row, make sure that you rotate the sheet so that it will be printed on the blank section (i.e. insert the paper with the blank section leading – so the test row would be overprinted last)

Start the printout by pressing “**Print chart**”. It will take some time until the printer starts printing since the color chart must be calculated first.

Let the printed page dry for at least two hours and do not touch it.

Notes on sublimation printing

It is very important that you send in the printed object (T-shirt, coated aluminum plate, etc.) and not the transfer paper. The object must be flat and at least A4/Letter size. It is no problem that the printout is mirrored in the transfer press.

Unfortunately, ceramic cups are not suitable for creating color profiles because they have too little surface area and are round. Alternatively you can print on a white plate coated for sublimation with an area of at least 20x25cm / 8x10inches. When sublimating onto aluminum, place the aluminum plate on top of the transfer paper in the press.

Submitting the profile chart

Put this color profile chart (do not fold it) in a robust envelope and mail it to:

ZEDOnet GmbH
- TurboPrint color profiles -
Sedanstrasse 8
D-87600 Kaufbeuren
Germany

Please send your profile chart as a regular letter without a customs declaration, otherwise shipment is delayed and there are tax fees.

Since all information needed is printed on the profile sheet, you do not need to include

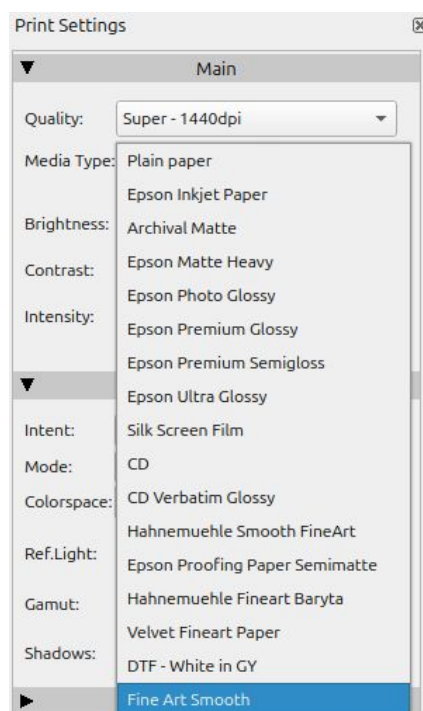
an accompanying letter. Usually within 7 days after your chart arrives, we will send the calculated TurboPrint profile to the email address you specified.

Import color data

Imports color correction data for the currently selected profile entry. Files from ZEDOnet profile creation service or user-created ICC profiles are accepted. Choose your profile data file in the file selection dialog.

Application programs may have to be closed and opened again before the new profile is available in the print dialog.

The new profile will be shown in the “Media Type” selection of the print settings at the end of the list:



Important

It doesn't make sense to import standard ICC profiles that are available from paper manufacturers or printer manufacturers. Such profiles are for use with the manufacturer's printer driver only – and thus do not produce correct colors using other drivers. The reason is that ink mixing (Black vs CMY inks), rastering technique and base linearisation of TurboPrint is not identical with the manufacturer's printer driver. For accurate colors, the color chart that is measured for a color profile must be printed with TurboPrint.

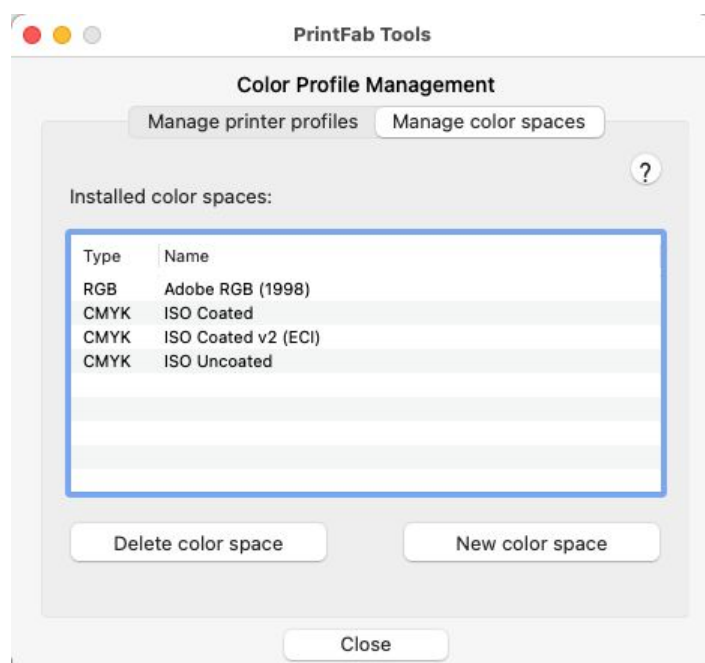
Rename profile

Change the name of the profile which is shown in the print dialog as “Paper”.

8.2 Index card "Color Spaces"

(only available in TurboPrint Studio)

Color spaces are required to interpret the colors of a document. The TurboPrint driver must be set to the same color space that is used in a document or application program. Some common color spaces are already predefined in TurboPrint. Additional color spaces can be added as ICC profiles using this dialog.



Select **"New Color Space"** to add an ICC color profile. Color profiles for RGB devices (e.g. monitor, scanner, digital camera) and CMYK devices (e.g. offset printing) can be imported and used for printing RGB or CMYK documents.

Select your ICC profile in the file selection dialog - TurboPrint will display the profile name, copyright and profile type (RGB / CMYK). Press "OK" to install the profile.

After adding the profile, an additional RGB or CMYK color space will be available in the print settings (index card "Color") and also in applications that offer TurboPrint settings in the print dialog. Please note that the correct "Color Mode" must be selected (Color RGB / CMYK Proof) to have the new color space listed. An application program may have to be restarted before the new color space will be available.

The button **"Delete Color Space"** removes the selected color space from the list.

8.3 Creating individual color profiles

Individual color profiles can either be created inexpensively by the ZEDOnet profile creation service, or by yourself if the necessary measurement equipment is available.

First create a new profile entry with appropriate settings (e.g. Paper class, print quality) in TurboPrint's profile administration (as explained in section ["8.1 Index card \"Printer Profiles\"](#)).

After that print a "color chart" – a page that contains a large number of color patches that will be measured with a spectrophotometer later:

a) Printing color charts for the ZEDOnet profile creation service

The necessary color chart can be printed with the ["Print color chart"](#) button in the "Profiles" dialog of the TurboPrint control center.

b) Printing color charts for creating ICC profiles with own measurement equipment

If you have the necessary measurement equipment available, you can create your own profiles and use them with TurboPrint. A detailed description can be found in the next chapter.

8.4 Creating ICC color profiles with a spectrophotometer

If you have access to a spectrophotometer (e.g. EyeOne, ColorMunki, Spyder) and color profiling software, you can create your own color profiles for TurboPrint. The following steps are necessary:

Creating a new profile entry in TurboPrint

Open the TurboPrint Control Center, dialog "Profiles", tab "Printer profiles". Add a new printer profile entry with the button "New Profile". Among others, the following settings must be made (the complete description can be found in chapter ["8.1 Index card "Printer Profiles"](#)):

Cartridge - e.g. matte black or photo black

Type of paper - e.g. coated inkjet paper or (semi) glossy photo paper

Print quality - select a print resolution and quality

Ink saturation limit - limit ink amount, if necessary

On the next dialog page a "profile name" can be specified.

The new profile will be visible as an additional "Paper" / "Media Type" in the printer driver settings dialog.

Printing the profile color chart

The next step is to print a profile color chart that is supplied with your profiling software. Depending on the software, RGB profiles and maybe also CMYK profiles can be created. Usually there are TIFF profile color chart files or an option to export a chart file or to print the color chart directly. The section "Differences between RGB and CMYK profiles" further below explains which profile type is suitable for which purpose.

It is best to print the profile chart using **TurboPrint Composer**; please select the print settings as described below.

TurboPrint driver settings

Tab "Main":

Media Type - select the profile entry that you just added (at the end of the list)

Tab "Color":

Color Mode - select "Color (RGB)" or "CMYK Proof" depending on the profile chart type

Intent - "No correction"

Creating the ICC profile

The printed chart will now be measured with the spectrophotometer and an ICC profile will be created - follow the instructions of your color profile creation software.

Using the profile

The resulting ICC profile can be used either in TurboPrint (recommended) or in an application software that supports ICC profiles. It is important that color management is done either in the TurboPrint driver or in the application software - otherwise the profile will be applied twice and colors will be wrong.

We will explain the two color management methods for the software Photoshop.

Color management in TurboPrint (recommended)

Import the ICC profile in the "Profiles" dialog of TurboPrint Control Center, (tab "Printer profiles" -> button "Import color data").

In the Photoshop print dialog, select "Photoshop Manages Colors". As "Printer Profile", choose the document profile - this means that Photoshop doesn't perform printer color management. Photoshop may show a color management warning which can be ignored.

In the TurboPrint driver settings, make the following settings:

Tab "Main":

Paper - select the profile entry that you added

Tab "Color":

Color Mode - select "Color (RGB)" or "CMYK Proof" depending on the *document* type

Intent - e.g. "Perception" or "Perception Photo" for RGB photo printing, "Colorimetric relative" for CMYK proof printing

Color Space - select the color space of the *document* to be printed, e.g. "sRGB" or "ISO Coated"

Please note that some features like printer color simulation in TurboPrint Preview and "ink save mode" can be used only when color management is done by TurboPrint.

Color management in Photoshop

Add the ICC profile to the Windows color profiles folder (usually done by the profiling software).

In the Photoshop print dialog, select "PhotoShop manages colors" and "Printer profile" = *Name of the ICC profile you created*

In the TurboPrint driver settings, use the same settings as when printing the ICC profile chart:

Tab “Main”:

Paper - select the profile entry that you added

Tab “Color”:

Color Mode - “Color (RGB)” or “CMYK Proof” depending on the profile chart type

Intent - “No correction”

Differences between RGB and CMYK profiles

Depending on the profile creation software, you can create RGB and/or CMYK profiles. Both types of profiles can be used for printing correct colors with RGB **and** CMYK documents. TurboPrint calculates the necessary conversion automatically.

Each profile type has its pros and cons:

- **RGB profiles** need less color patches than CMYK profiles for achieving the same color accuracy. If your profile creation software only offers CMYK color charts with less than 500 patches, prefer printing an RGB chart.
- Only with **CMYK profiles** the generation of black can be determined by your profile creation software. With RGB profiles, TurboPrint always uses its standard way of generating black.

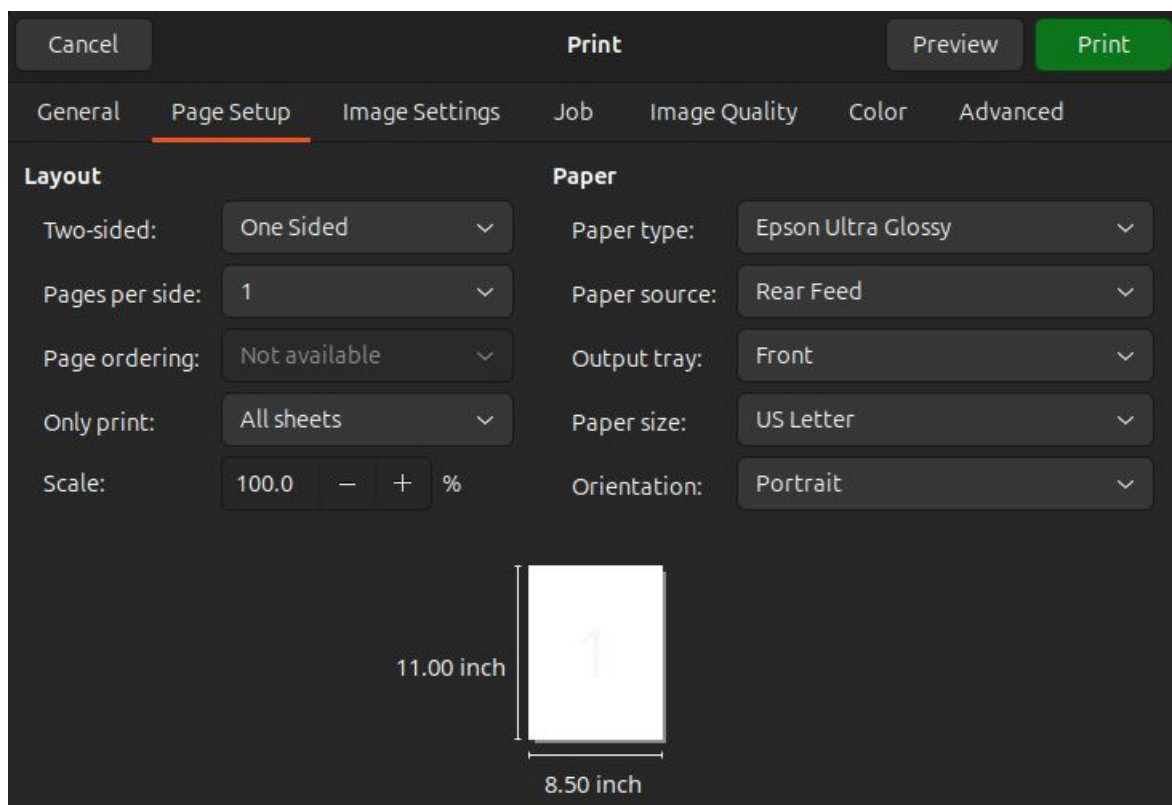
9. Print dialog settings of TurboPrint

9.1 TurboPrint settings in the application print dialog

In most applications, printing is initiated via the "File" menu, under "Print...".

A peculiarity of Linux is that the print dialog, and especially the driver settings, do not look the same in every program (as they do in Windows or macOS). This is because each programmer is free to use the print dialog provided by, for example, GNOME or KDE, or to program their own. Furthermore, Linux printer drivers currently cannot provide the application with its own (and therefore uniform) user interface for driver settings.

As an example, the GNOME print dialog, used in programs such as GIMP, Firefox, the GNOME text editor, and the GNOME image viewer, is shown here:



The default settings, such as paper type, paper size, paper feed, output tray, print quality, and color mode, can be found on the "Page Setup," "Print Quality," and "Color" tabs.

If the required page size is not available, you can define your own size using TurboPrint Toolbox – see chapter ["7. Custom page size editor"](#) on page 23.

The specific TurboPrint settings can be found on the "Advanced" tab:

The image shows a screenshot of the TurboPrint 'Print' dialog box, specifically the 'Advanced' tab. The dialog has a dark theme. At the top, there are buttons for 'Cancel', 'Print', 'Preview', and 'Print' (highlighted in green). Below these are tabs for 'General', 'Page Setup', 'Image Settings', 'Job', 'Image Quality', 'Color', and 'Advanced' (which is selected and underlined). The 'Advanced' tab is divided into three sections: 'General', 'Color', and 'Color Advanced'. Each section contains several settings, each with a label and a dropdown menu. The 'General' section includes 'Dithering' (set to 'Error Diffusion'), 'Mirror Output' (set to 'Off'), and 'Duplex Adjust' (set to 'Original printout position'). The 'Color' section includes 'RGB Color Space' (set to 'Apple RGB (bright)'), 'CMYK Proof Profile' (set to 'Euro'), 'Color Rendering Intent' (set to 'Perception'), 'Shadow Adjustment' (set to '100% default'), 'Adjust Brightness' (set to '100% default'), 'Adjust Contrast' (set to '100% default'), and 'Ink Intensity' (set to '100% default'). The 'Color Advanced' section includes 'Intensity Yellow' (set to '100% default'), 'Intensity Magenta' (set to '100% default'), 'Intensity Cyan' (set to '100% default'), 'Intensity Black' (set to '100% default'), 'Reference Light' (set to 'D65 sRGB Default'), 'Grey Tone A Green-Red' (set to '100 neutral'), 'Grey Tone B Blue-Yellow' (set to '100 neutral'), and 'Color Intensity' (set to '100% default').

Section	Setting	Value
General	Dithering:	Error Diffusion
	Mirror Output:	Off
	Duplex Adjust:	Original printout position
Color	RGB Color Space:	Apple RGB (bright)
	CMYK Proof Profile:	Euro
	Color Rendering Intent:	Perception
	Shadow Adjustment:	100% default
	Adjust Brightness:	100% default
	Adjust Contrast:	100% default
	Ink Intensity:	100% default
Color Advanced	Intensity Yellow:	100% default
	Intensity Magenta:	100% default
	Intensity Cyan:	100% default
	Intensity Black:	100% default
	Reference Light:	D65 sRGB Default
	Grey Tone A Green-Red:	100 neutral
	Grey Tone B Blue-Yellow:	100 neutral
	Color Intensity:	100% default

Here you can check the current print settings and change them if necessary.

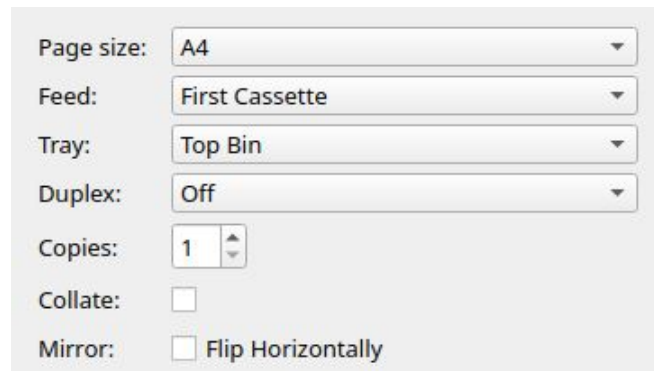
You can make changes to the basic settings via the TurboPrint Control Center, the "Configure" dialog, or via the printer monitor, the "Configure" button.

The following sections explain all TurboPrint print settings.

9.2 TurboPrint default print settings

The TurboPrint menu with the print settings can be accessed via the TurboPrint Control Center or via the printer monitor (Configure button). The settings are divided into sections, which are described below.

9.3 Layout and main print options



The screenshot shows a settings window with the following options:

- Page size: A4 (dropdown menu)
- Feed: First Cassette (dropdown menu)
- Tray: Top Bin (dropdown menu)
- Duplex: Off (dropdown menu)
- Copies: 1 (spin box)
- Collate: ☐ (checkbox)
- Mirror: ☐ Flip Horizontally (checkbox)

Pagesize

The paper size, e.g. Letter, A4, etc.

- Page sizes of photo papers are sometimes identified by their measurement in inches (e.g. 4x6" = 10x15 cm) – the actual size is shown above the selection.
- Additional paper sizes can be added with the „Custom Page Size Editor“ (see chapter ["9. Custom page size editor"](#)).

borderless

This option is only available if borderless printing is possible with the selected page size.

Note: Borderless printing is not supported by all printers

When printing borderless the document is slightly enlarged in order to let it overlap the page borders a little bit. This ensures that even with minor mechanical deviations of the printer no white margins will be visible at any border.

The level of enlargement can be selected with the „Overprint borderless“ slider in the section "Options". Position „min“ means no enlargement at all.

Hint: If even in the „max“ position there is still a white margin visible at one border, you can define a new borderless page size in the „Custom Page Size Editor“ where you can edit printing position and enlargement individually.

Feed

The input feed (e.g. manual or automatic).

Tray

The output tray (only for printers that support different output trays).

Duplex

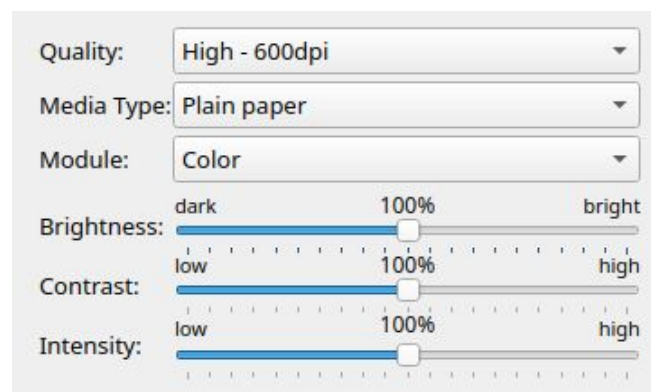
Activate "Duplex" mode if you want the printer to use both paper sides. You can choose between „portrait“ and „landscape“ format – depending on which side the pages should be turned over later.

Copies

If you need several copies, enter the desired number of printouts ("1" means no copies).

Mirror

The printout will be mirrored (left and right swapped). This setting is activated automatically for "backprint" and "t-shirt transfer" media.



The image shows a screenshot of a printer settings window. It contains several dropdown menus and three sliders. The 'Quality' dropdown is set to 'High - 600dpi'. The 'Media Type' dropdown is set to 'Plain paper'. The 'Module' dropdown is set to 'Color'. Below these are three sliders: 'Brightness' with labels 'dark' and 'bright', 'Contrast' with labels 'low' and 'high', and 'Intensity' with labels 'low' and 'high'. All three sliders are currently set to the 100% mark in the center.

Quality

Almost every printer offers several print modes. Generally, the higher the print quality the longer the printout will take. So you will probably choose a lower print quality for draft and test printouts and one of the highest qualities for the final printout.

Media Type

Specify the medium you want to print on (i.e. the type of paper or a different media type like transparency, printable CD, etc.). Internally, TurboPrint chooses the appropriate color profile for this medium and adapts other printing parameters like printing speed, amount of ink, interleaving, etc.

To achieve a good color quality it is very important that you set the correct media type. As an alternative you can select a similar medium, e.g. "Inkjet Paper" for any matte coated inkjet paper or "Glossy" for any glossy or semi-glossy coated photo paper. But keep in mind that you can only obtain exact colors if the paper is supported directly.

Adding new papers

You can further improve the color quality – especially if your preferred paper is not sup-

ported directly – with an individual TurboPrint color profile for your printer and your preferred paper by the ZEDOnet profile measuring service. Read more about individual color profiles in the description of the TurboPrint printer profiles section ["8. "Profiles" - color profile administration"](#).

Mode

This setting is only available for certain printers to control printer specific options, e.g.

- black or color print head inserted in the printer
- 4-color printhead or 6-color photo printhead used
- matte black or photo black ink cartridge used
- gloss optimizer on or off
- normal or economy print mode

Brightness

Use this slider to render the printout lighter or darker. The higher the value the brighter your printouts will get and vice versa.

Only intermediate colors will be changed, black and white will remain unchanged - i.e. pure black will be printed as pure black, white as pure white. If you also want to brighten the black parts of a printout you can reduce the contrast with the control described next.

Contrast

Use this slider to increase or decrease the contrast of your printout. With a decreased contrast white will stay unchanged, i.e. only dark colors will become brighter. With an increased contrast bright colors will become brighter and dark colors will become darker.

Intensity

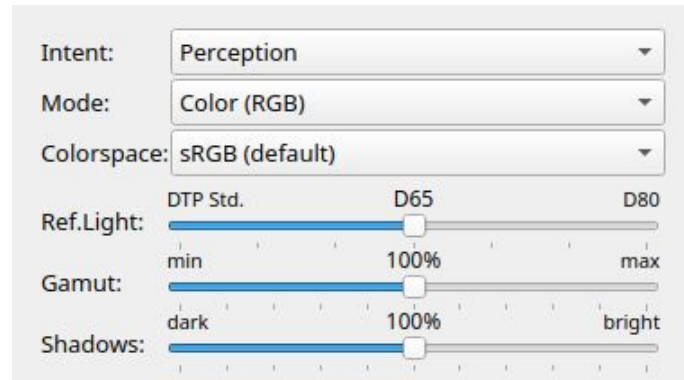
Increases / decreases the amount of applied ink. Hence the complete printout will become paler (move slider to „low“) or more intense.

A lower saturation is good print test prints and in cases where too much ink is applied. You can easily save ink with this slider, however this will result in visibly paler printouts – to save ink without that impact, preferably use the „ink control“ sliders.

A higher saturation can be used to get intenser colors on certain media that need a higher ink usage (e.g. some transparencies or printable CDs).

Attention: Inks might flow on the paper if too high saturation levels are used.

9.4 Color



Intent (Rendering intent)

As the color spaces of your computer display and your printer are different (printers normally cannot reproduce as luminous colors as displays can) an exact reproduction of all colors is not possible. Therefore you need to find a compromise and with the setting “Intent” you can specify your priorities.

- **Perception** – Standard setting

The color space of the document is reduced to fit into the printer’s color space. All colors are shifted homogeneously in a way that the overall perception of the image colors will not be changed. As it is mostly the very intense colors that cannot be printed, color saturation and contrast will have to be reduced slightly. Thus the color balance of the printout will be correct.

- **Perception Photo** – optimized for photographs

The color reproduction is optimized for digital photos. Contrast and color saturation are reduced as little as possible to achieve vivid and brilliant colors. As a consequence some details may be lost in very dark or very saturated parts of the image.

- **Perception Inksave** - optimized for low ink consumption

Color reproduction is also optimized for digital photos, but some additional steps taken to reduce ink consumption. Ink consumption is decreased only to a certain extent to keep the image quality as high as possible. Additionally all colors are reproduced a bit “cooler” to save yellow ink and very intense colors are printed a bit less saturated.

With this setting you save on average about 20%-35% of ink without a noticeable loss in print quality. (even in comparison with the original printer driver of the printer manufacturer).

- **Saturation**

The color reproduction is optimized for diagrams and charts but not suitable for digital images. The printer driver tries to achieve very luminous colors.

- **Colorimetric Absolute** (TurboPrint Studio only)

This setting is designed especially for printing CMYK documents in prepress production. All colors that can be printed will be reproduced exactly. However colors that cannot be printed must be reduced in saturation. Depending on the paper used, details could be lost - especially in darker or very luminous parts of the image.

When printing standard RGB documents with this intent, only a small part of the colors can be reproduced exactly (RGB color spaces are bigger than CMYK spaces and especially many dark colors cannot be reproduced exactly). Thus this intent is not useful for printing RGB documents; RGB pictures appear too dark in this mode.

- **Colorimetric Relative** (TurboPrint Studio only)

Same as above but additionally the white point of the document is adapted to the white point of the chosen paper. This intent should be used when printing with the „CMYK-Proof“ mode (see below).

- **Colorimetric Relative Blackpoint Compensation** (TurboPrint Studio only)

Same as "Colorimetric Relative" but additionally the black point of the document is adapted to the deepest black the printer can print of the chosen paper. This intent can be used when printing with the „CMYK-Proof“ mode on paper that cannot reproduce deep blacks.

- **No Correction** (for printing color charts)

Color management is switched off, printed colors will not match document colors. This setting should only be chosen to print a profile chart when creating an ICC color profile or if such an ICC profile has been activated in the application program, see chapter ["8.4. Creating ICC color profiles with a spectrophotometer"](#)

Note

With some printer drivers not all rendering intents are available as they are not yet provided with new TurboPrint color profiles. If there are no TurboPrint profiles available for your printer you can generate an individual color profile - see chapter ["8. Profiles" - color profile administration](#).

Mode (Color Mode)

Specifies whether the printout is done in grayscale or in color. You can choose between the following options:

- **Grayscale Fast** – default setting for B/W printers

This mode produces fast printouts without colors at a medium dithering quality. Use this mode with fast printers when printing larger documents.

- **Grayscale**

For printing grayscale documents with photos use this setting as the dithering quality is better than in the “grayscale fast” mode. Only black ink is used. The calculation of print jobs takes longer than in the “fast” grayscale mode.

- **Gray Photo**

Recommended setting for high-quality black & white photos. Brighter shades of gray are printed by mixing primary colors, thus looking less grainy. On some printers also grey photo ink is used. This is the only „Gray“ mode where “Color / Grey Tone” settings take effect (e.g. to achieve a sepia color balance).

- **Color - RGB** – default setting for color printers

This is the correct setting for printing most documents or photos in color. TurboPrint assumes that the colors of your document belong to an RGB color space (which you can specify with the “Color Space” control).

Special color modes of „TurboPrint Studio“

TurboPrint Pro offers two additional color modes for printing “proofs” in prepress production. These color modes are designed especially for printing PDF- and Postscript documents based on the CMYK color model.

Select **CMYK Proof** when printing documents that are already separated into the four standard colors “CMYK” for a print house. It is important that you also select the correct CMYK profile with the setting “Color Space”.

- **CMYK Proof** – only TurboPrint Studio

In “CMYK Proof” mode the black (“K”) color channel of the document is printed using black ink. Thus colors can be reproduced more exactly.

- **CMYK Proof (Mix Black)** – only TurboPrint Studio

In “CMYK Proof (Mix Black)” mode lighter shades of gray are printed by mixing primary colors. Thus shades of gray are looking less grainy.

Notes:

- Only few application programs allow printing in CMYK mode, e.g. CorelDraw, Adobe Acrobat, Illustrator, Indesign and Photoshop. Chapter ["17. Printing from Applications"](#) provides more information about printing from these programs.
- Automatic switching between RGB and CMYK mode is currently not possible. If a strong purple tint is visible in the blue tones (e.g. sky) when printing documents or the colors appear dull overall, this indicates that RGB files are being printed in "CMYKProof" mode.
- We recommend exporting CMYK documents in PDF or TIFF format and load them into TurboPrint composer for printing - see ["12. TurboPrint Composer"](#). TurboPrint composer automatically recognizes CMYK documents and prevents incorrect operation for printing.

Color Space (color profile of document)

This control specifies how the colors of a document will be interpreted. This is necessary because the color models "RGB" and "CMYK" do not describe colors clearly, but depend on the respective screen (RGB) or the printing inks and paper used (CMYK).

RGB-Profiles

- **sRGB** (default setting for mode "Color")
This is the most common RGB color space for digital photos on PCs and for digital cameras (Gamma value approx. 2.2)
- **Apple RGB**
Standard for display on previous Apple computers (gamma = 1.8)
The profiles "sRGB" and "AppleRGB" differ mainly in the brightness characteristic, the "gamma" value.
If prints appear too dark in the default setting (sRGB), please select "Apple RGB".
- **Adobe RGB** (only TurboPrint Studio)
This color space has a larger gamut and allows for more colorful hues than sRGB. AdobeRGB is sometimes used in professional cameras. Only select this setting if the application program supports the selection of a printer profile and if "AdobeRGB" was selected in the print dialog - otherwise the printouts will be too colorful.

Additional RGB color spaces can be added with the color profile administration menu by loading the appropriate ICC color profile (see chapter "8.2 Index card "Color Spaces"").

CMYK-profiles

(only TurboPrint Studio – available when printing documents in CMYK color mode)

The first three profiles are „generic“ profiles, which approximately reproduce the colors of printing presses of the corresponding region.

Additional ICC-profiles can be added with the color profile administration (e.g. a color profile provided by a printing house).

- **EURO** (default setting in color mode „CMYK Proof“)
color space compatible to the European standard for offset printing
- **USA**
color space compatible to the American standard for offset printing
- **JAPAN**
color space compatible to the Japanese standard for offset printing
- **ISO Coated v2 (ECI)**
European standard profile for offset printing - included with the kind permission of ECI, the European Color Initiative. The most current version and additional profiles are available on the web site www.eci.org.
This profile is a common standard in offset printing.

Reference Light

Choose for which illumination the colors of your printouts shall be optimized.

Technical background:

Colors look different when illuminated with different lighting, an effect that is also known as color metamerism. The red colors of a photo look more intense when viewed in artificial lighting (e.g. a desk lamp) than when viewed in daylight. That's why a photo may look correct in artificial light but pale when viewed in daylight - or vice versa, a picture that looks good in daylight may look reddish when viewed with a desk lamp. The intensity of this effect depends very much on the ink and is therefore not relevant for some printers.

This is also important for prepress simulation (proofing). Printouts with different printer models (and hence with different inks) can be nearly identical only at a certain type of illumination.

The illumination is specified by the color temperature. The settings range between D50 (good artificial light) and D80 (bluish daylight). The average daylight corresponds to D65.

Light with 5000K color temperature (D50) is the reference illumination for pre-press.

When printing digital photos better results are normally achieved with reference lighting set to D65 to D80 (warmer skin colors, prevention of blue color tones turning purple).

With ICC color profiles only measurement data for D50 light are available. If a different illumination is chosen an approximation will be used (chromatic adaption formula).

Gamut (Color Saturation)

Change the color intensity with this slider:

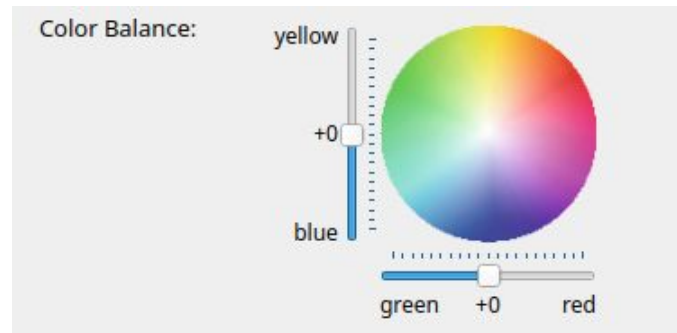
- **Higher intensity** => more vivid colors
- **Lower intensity** => less vivid colors

This setting is not effective with the rendering intents "Colorimetric Absolute" and "Colorimetric Relative" as these intents exclude any color space modification.

Shadows (reproduction of dark colors)

Here you can adjust the reproduction of shadow details in photos. Distinction of shadow details in printed documents is often only possible with good lighting. Increasing "Shadows" will cause dark colors to be printed brighter, thus increasing contrast in dark areas. Reducing "Shadows" will do the opposite. Brighter colors are not affected.

Color / Grey Tone



Use this control to change the color or gray balance. This setting relates to the CIELab color system which describes a color by three components:

- **L** = Brightness: 0 = black ... 100 = white
- **A** = color component 1: negative = green, positive = red
- **B** = color component 2: negative = blue, positive = yellow

With the slider “**A**” the color balance can be turned more greenish (negative values) or more reddish (positive values).

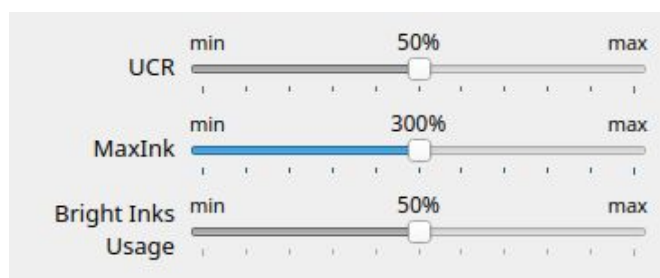
The slider “**B**” turns the color tuning more bluish (negative values) or yellowish (positive values).

The “Color/Grey Tone” setting is disabled when printing with the rendering intents “Colorimetric Absolut” or “Colorimetric Relative”.

Note

Tuning the color balance slightly bluish (e.g. B = -5) does not only comply with our viewing habits (e.g. most types of paper have bluish optical brighteners) but as a side effect also reduces ink consumption (yellow is the color consumed most when printing photos). This may be a reason why many manufacturer's printer drivers print slightly bluish.

9.5 Ink control and color correction



The controls of this menu page enable you to optimize the print quality or to reduce the ink consumption – whereas high quality and low ink consumption are not necessarily mutually exclusive. With TurboPrint you can save ink without a noticeable loss in print quality.

Black Level / UCR (under color removal)

The generation of greyscales with colored or black ink is influenced with this slider. The advantage of using more black ink is a lower ink consumption whereas mixing greyscales with more color leads to smoother and less grainy colors. Bright tones of gray are ideally generated with colored ink, whereas with darker gray tones, black ink is used increasingly instead of using colors. The “black level” control determines the usage of black ink when mixing colors.

In the default setting black ink is only used in darker gray tones to avoid visible black dots.

Shifting the slider upwards leads to black ink being used for brighter gray tones and further replaces more color by black ink in the darker gray tones. Each drop of black ink drop substitutes for three drops of colored ink – in this way a considerable amount of ink can be saved. As a drawback, your printout may be slightly rougher.

In contrast, shifting the slider downwards leads to even darker gray tones being printed using colors without using black ink. As a result you get finer gradations but the ink consumption will be higher.

Note:

- This control is only available if pure black ink can be used. Some printers only use pure black when printing on plain paper.
- This function is not supported when using ICC printer profiles.
- TurboPrint Studio: In “CMYK Proof” mode the mixing of black is performed according to the CMYK data of the source document as much as possible. When reproducing color tones that the printer cannot produce as prescribed there may be modifications of this precept – e.g. additional color may be added to black tones in order to obtain a deeper black.
- The setting “Black Level (UCR)” is not effective for the color mode “CMYK Proof”

mode. However it affects the “CMYK Proof (mixblack)” mode.

Bright Cyan / Bright Magenta / Photo Inks

(These controls are not available with ICC color profiles)

The use of the additional colors “bright cyan” and “bright magenta” of photo printers can be controlled with these sliders. You can reduce the use of the bright inks (values < 50) by replacing them with the corresponding dark inks. This results in a decreased total ink consumption but produces slightly grainier printouts. Conversely you can use more bright inks with values greater than 50.

When using printers with combined ink cartridges (several colors within the same cartridge) the consumption of all colors should be balanced – i.e. if significantly more bright cyan has already been consumed than dark cyan, you should shift the slider downwards to save bright ink (respectively upwards to save dark ink).

Depending on the internal color profile, there are either two sliders for controlling the usage of “bright cyan” and “bright magenta” separately, or a single “Photo Inks” slider that changes the usage of both inks concurrently.

Total Ink Maximum

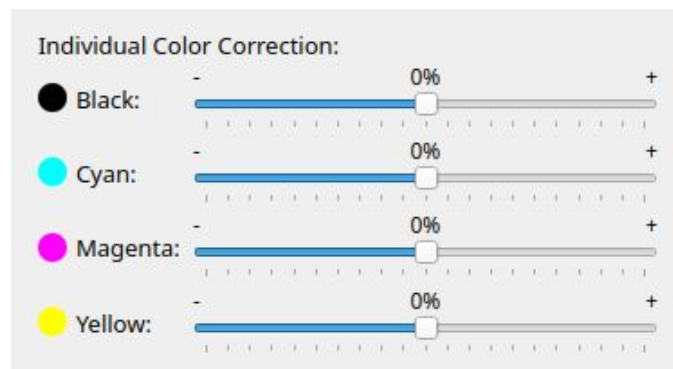
With this control you can limit the maximum amount of ink applied per printer dot. Its purpose is mainly to prevent an oversoaking of the paper and “bleeding” of the colors.

For example “300%” means that a maximum of 100% of the yellow, magenta and cyan inks may be applied at the same time. With “400%” an additional 100% of black ink may be applied.

Higher values cause a richer black (with higher ink consumption), lower values result in a lower ink consumption (with a lower intensity of black).

If excessive ink is applied resulting in smearing (“bleeding”), you can reduce the amount of applied ink by shifting this slider towards lower values. (You may also use the control “Color Saturation” of the “Main” index card).

Individual Color Correction



If necessary, use these controls to correct color reproduction by adjusting the intensities of black, cyan, magenta and yellow ink. This may be useful if you use different ink and / or paper. Of course, color reproduction can be corrected more accurately by creating an individual color profile.

- **Black**

Adjusts the amount of black ink. The higher the value, the more black ink is applied.

- **Cyan**

Adjusts the amount of cyan ink (light cyan ink is adjusted in the same way, if present).

- **Magenta**

Adjusts the amount of magenta ink (light magenta ink is adjusted in the same way, if present).

- **Yellow**

Adjusts the amount of yellow ink.

9.6 Index card “Screen Printing” (TurboPrint Studio XL only)

TurboPrint Studio XL offers a special black & white print mode with adjustable halftone raster for silk screen printing or PCB printing. In this mode documents are printed on transparent film that is used to expose the screen printing stencil. For many printers, ink volume can be set much higher than in regular print mode to achieve good coverage for good exposure results.

☒ activate Screen Printing Mode

Ink Saturation (Screen Printing)

min 220% max

☒ multi-black

☒ BK ☒ C ☒ M ☒ Y

☒ G2

Halftoning: TurboPrint

Halftone-Shape: 4

Presets:	LPI	Angle
☒ 1	51.0	44.0
☐ 2	50.0	15.0
☐ 3	50.0	75.0
☐ 4	50.0	0.0

Test Page Adjust Dot Gain

Check the box “Active Screen Printing Mode” to enable the screen printing mode.

Additionally, you should make the following settings on the index card "Main": Select "Paper" = "Transparent film" or "Silk screen film" (depending on the printer model) and select a high print quality.

The following screen printing settings are available:

Ink Saturation

Adjustment of ink amount. The default setting is 200% which is double the amount of ink used for regular printing on inkjet paper. With the TurboPrint Composer app you can print an [Ink Saturation Test Page](#) with different ink saturation settings to determine the appropriate ink amount for good results.

Multi Black

This is a special print mode for printers where one or several color cartridges have been replaced by black. Ink is printed from several black cartridges to achieve higher ink amounts and smoother printing. This is also helpful to disable one or more cartridges if ink is low or if certain print heads are clogged.

The checkboxes determine which ink cartridges are used to print black ink.

The ink amount that has been selected with the setting "Screen Ink Saturation" remains the same, i.e. the ink amount is distributed to the active ink cartridges and print heads.

Halftoning

Determines if halftoning is active and if halftone parameters are specified in TurboPrint or in the application

- **TurboPrint**

Raster shape, frequency and angle are specified in TurboPrint

- **App specified (Postscript)**

Halftone parameters from the application are used (for applications like CorelDraw or Illustrator that offer halftone settings in the print dialog)

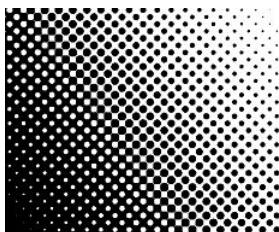
- **Off**

No halftoning. This option is for black&white designs. It can also be used to print images that have already been converted to a black&white halftone raster image in the application, e.g. in PhotoShop.

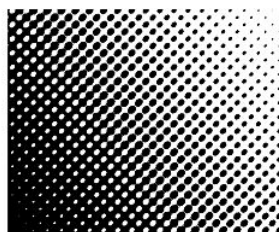
Halftone Shape

Select halftone raster shape - there are seven settings available from round dots over elliptical dots to line raster.

The setting "stochastic" selects stochastic screening which is "frequency modulated" in very bright and very dark areas, otherwise the dot spacing depends on the LPI setting. The "Angle" setting is ignored.



round



elliptical

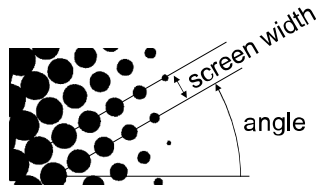


line



stochastic

Halftone LPI and Angle



LPI

Select halftone screen width in "lines per inch" (a higher number means smaller screen width and smaller dot size).

Angle

Adjustment of halftone screen angle.

Usage of special UV blocking inks

If black is not opaque enough for exposure even with a large amount of ink, a special "High Density Black" can be used. In rare cases, such ink can lead to blurred ("foggy") printing. In this case, it usually helps to select a larger "Drop Size" size in the section "Printer Features" -> "Special Settings Screen Printing".

Restriction of other print options in screen printing mode

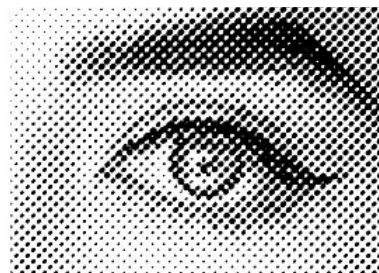
When screen printing mode is enabled, the index cards "Color", "Correction" and "Ink Ctrl" are hidden, as these settings are not relevant for screen printing.

On the **index card "Main"** the following settings are important for screen printing:

- **Paper** - the setting "Transparency" or "Silk Screen Film" (depending on the printer model) is recommended
- **Quality** - a high print quality is recommended
- **Brightness & Contrast** - with these settings the reproduction of the image brightness (by adjusting the raster dot size) can be controlled.
- The **"Brightness"** setting adjusts the gamma curve and thus affects mainly the medium brightness range.



Brightness 80%



Brightness 140%

- The **"Contrast"** setting affects all brightness levels. It is advisable to reduce the contrast if the print result is too dark or if details in dark image areas are lost.

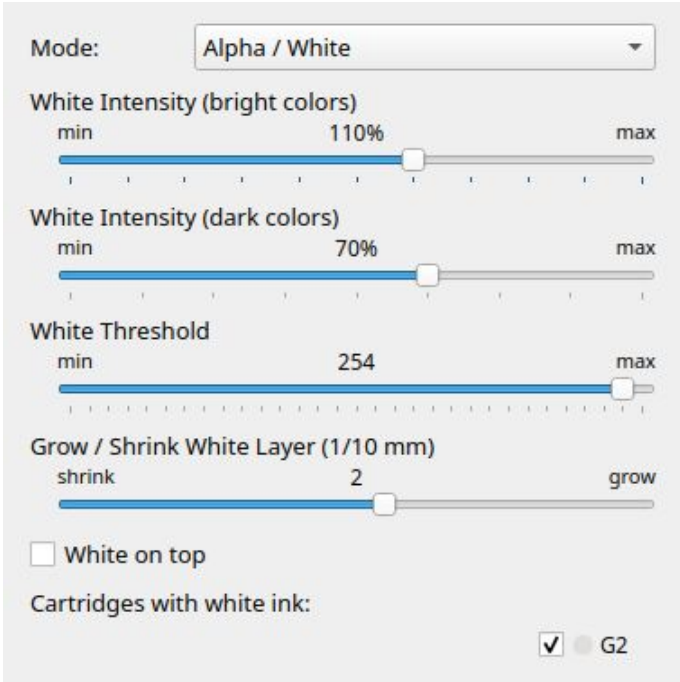
9.7 DTF Printing (TurboPrint Studio XL only)

Here you will find settings specifically for DTF printing with white ink (DTF = Direct To Film with subsequent transfer to textiles via a heat press). TurboPrint supports DTF printing with white ink for some Epson printer models.

Information on supported printers can be found at:

<https://www.printfab.net/dtf.html>

If the selected TurboPrint printer driver supports DTF printing, you will find a "Media Type" setting named "DTF..." under "Print Options". The following settings field is only activated when "DTF..." is selected.



The screenshot displays the DTF settings interface for TurboPrint Studio XL. At the top, a dropdown menu labeled "Mode:" is set to "Alpha / White". Below this are four horizontal sliders, each with a blue segment indicating the current value and a white knob. The first slider, "White Intensity (bright colors)", ranges from "min" to "max" with a value of 110%. The second slider, "White Intensity (dark colors)", also ranges from "min" to "max" with a value of 70%. The third slider, "White Threshold", ranges from "min" to "max" with a value of 254. The fourth slider, "Grow / Shrink White Layer (1/10 mm)", ranges from "shrink" to "grow" with a value of 2. Below the sliders is a checkbox labeled "White on top" which is currently unchecked. At the bottom, the text "Cartridges with white ink:" is followed by a checked checkbox and the label "G2".

For a detailed explanation, please refer to the TurboPrint Composer's description of the DTF settings in the [Description of DTF settings in TurboPrint Composer](#).

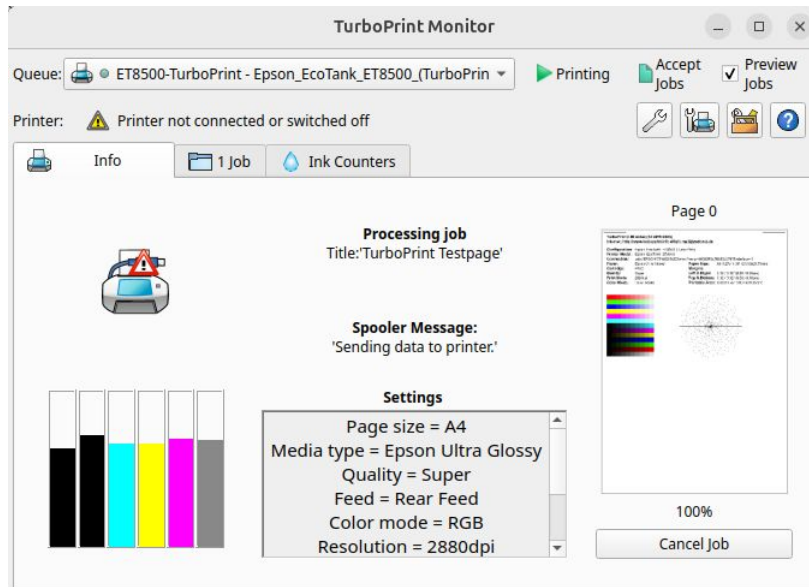
9.8 Additional Printer Features

Further printer specific features are arranged on this dialog, e.g. the enlargement factor for borderless printing, paper thickness, print direction, ink drying pause, etc.

Overprint borderless	min2%max
Minimum Drop Size	small (Increase with blurred print)
Print Length Correction	0.00 %
Page Width Correction	0.00 %
Print Direction	Default
Microweave Quality	Regular
Platen Gap	Default

10. TurboPrint Printer Monitor

TurboPrint's printer monitor gives you detailed information about your printer, e.g. the printer status ("idle" / "printing" / "paper out"), the remaining ink levels, information about the current print job (print settings and an optional preview), a list of all remaining print jobs and even information on the ink consumption.



Queue

To every installed printer one or more print queues are assigned. The drop-down list "Queue" shows all installed printers with their print queues. Select the print queue that you want to have monitored.

Even printers with non-TurboPrint drivers and network printers are listed. However, for technical reasons, not all status information will be available for those printers.

Print queue state

Next to the "Queue" drop-down list you find two buttons that show and control the state of the selected printer queue. The first button changes the general state ("Idle" / "Printing" / "Stopped"), the second one determines if new print jobs will be accepted.

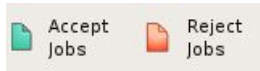
By clicking the buttons, you can change the print queue state. Depending on your Linux distribution, you might need to authorize this by entering the administrator password of the CUPS printing system.

The first queue state button controls if the print queue is activated. It can show one of the three following states:



Pressing the button in the "Printing" state changes the state to "Stopped" and cancels the current printout. The document will be printed again from start after changing the state back to active ("Idle" or "Printing").

The second queue state button divides if new print jobs will be accepted. Two states are possible:



Note: Depending on your Linux system, you might need to authorize changing the print queue state by entering an administrator name and password of the CUPS printing system.

CUPS administrators might have to be set up first in the CUPS printing system – your Linux user password might not be accepted. Read more about CUPS administrators in the documentation of your Linux distribution or the CUPS printing system (headword “lppasswd”)

Field “Printer“

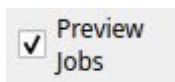
The “Printer” field shows the current status reported by the the printer. Of course these status messages are only available if the printer is connected and switched on.

A screenshot of a status message box. It contains the text 'Printer: ' followed by a red circle with a white exclamation mark icon, and then the text 'paper out'.

Note:

- if the printer is connected via USB interface, make sure that the printer is set up with the TP-USB backend driver – otherwise printer monitoring is disabled while printing (see [“3.2 Setting up a printer”](#)).
- Printer status messages might not be available for printers connected via parallel interface or via network.
- with certain printers status messages are not supported by TurboPrint

Preview Jobs



TurboPrint enables you to preview a print job before sending it to the printer. Thus you can check if the pages are rendered correctly and decide if they shall actually be printed. Especially when printing from web browsers printouts often look very different from what you expected. With the preview function you can avoid misprints and save paper and ink.

Activate the preview function with the “Print Preview” checkbox of TurboPrint Printer Monitor.

After a print job has been started, the TurboPrint Composer app opens with the print job which also allows you to edit the print pages afterwards and adjust the print settings.

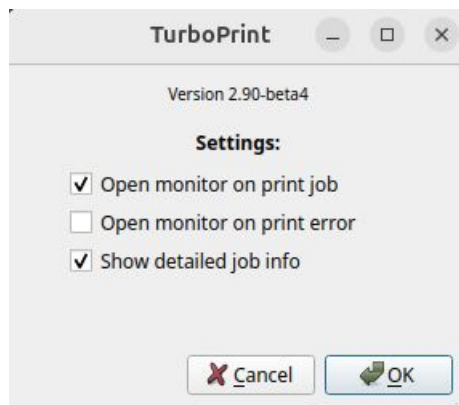
Tool buttons

Next to the printer status message box you find some buttons that open different tools: “monitor settings”, “printer settings” and “printer toolbox”.



Monitor-settings

This menu lets you configure some basic settings of the TurboPrint printer monitor:



Open monitor on print job

If this option is chosen, the printer monitor window is opened automatically when a print job is started by a TurboPrint driver.

Open monitor on print error

The printer monitor is opened automatically whenever any printer error occurs (e.g. If the printer runs out of paper).

Show detailed job info

You can decide how detailed settings of the current print are listed (“Info” card, field “Settings”).

If this option is deactivated, only page size, media type, quality and paper source are listed.

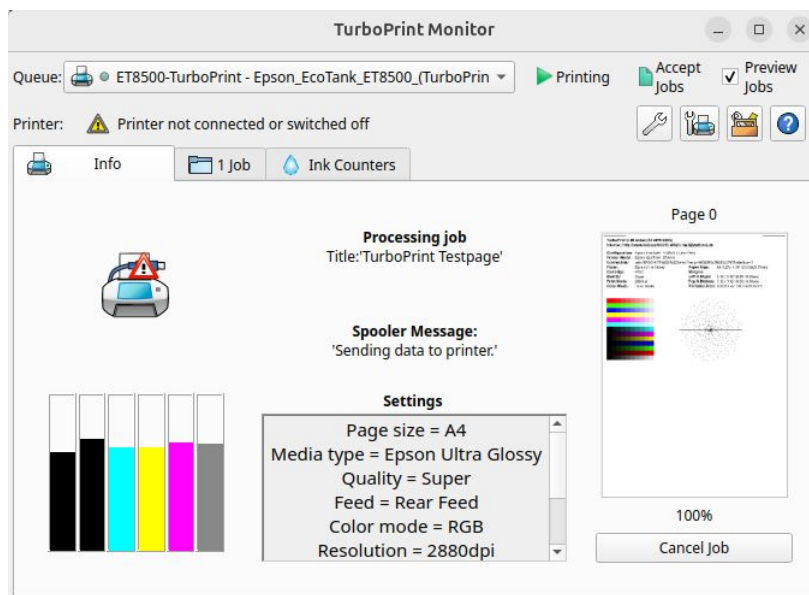
Printer settings

This button opens the print settings menu of the selected printer. You can find a detailed description of this menu in chapter [“9.Print dialog settings of TurboPrint”](#).

Printer toolbox

Opens the printer toolbox (test page, print head cleaning, etc.) - see chapter [“6.Printer Toolbox - Maintenance Functions”](#).

10.2 Index card “Info“



Left column – printer state and ink levels

If printer status messages are available, the printer status is shown by an animated printer symbol. The symbol can show different states:

- printer not connected / switched off
- idle
- printing
- paper out
- low ink warning
- ink out
- CD needed (when printing on printable CDs/DVDs)
- printer fault
- printer hardware error

Detailed printer status messages are shown in the printer status box (see above).

Below the printer symbol several bars are shown that indicate the remaining ink/consumable levels of the printer. When moving the mouse pointer over one of these bars a tool-tip window shows the ink name and the percentage of remaining ink.

Note:

- ink level reporting is not supported for all printers
- for some printers, ink levels are only shown when connected by USB, not through LAN / WiFi connection
- some printers report ink levels only qualitatively with levels like "ok", "low" and "empty". This can result in reported ink levels falling suddenly from 100% to 25%.

Middle column – current print job

Detailed information on the current print job is shown here:

State (e.g. "Processing job")

Document title (if set by the application)

Spooler messages – these are messages from the CUPS printing system, the printer driver or the interface driver ("backend") which transfers the printer data via network or a local interface to the printer.

Settings – print settings of the current job, e.g. page size, media type, print quality, etc.

Right column – current page

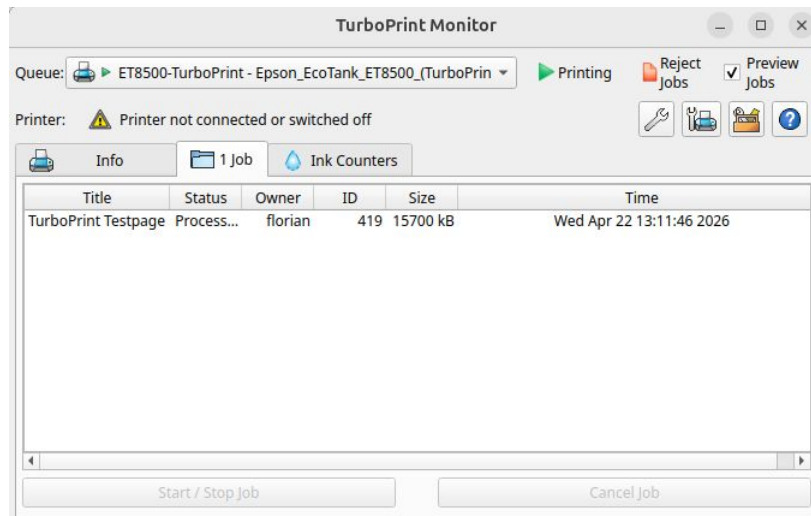
A small image with the page currently being printed is shown. Also listed is the current page number and a counter of the current page's printing progress (percentage).

Note: Print settings and page image are only shown if you are the owner (sender) of the current print job. Detailed information on print jobs of other users is not available (e.g. If the print job was initiated by a different user via the network).

You can cancel the print job with the "Cancel Job" button.

Note: Cancelling print jobs is often not sufficient if the printer is stuck in an error condition like "no paper" or "paper jam". The printer might still have some unprinted data in its buffer which is not cleared by cancelling the print job. A following print job might not be printed correctly then. We suggest to additionally reset the printer by switching it off and on again or by pressing the "Reset" or "Cancel" button on the printer (if existing).

10.3 Index card “Jobs“



The “Jobs” index card shows the current print job and all other waiting print jobs sent to the printer. The table lists the following information for each job:

Title – the document name – if available (set by the application)

Status – processing / held / pending

Owner – name of the user who launched the print job

ID – internal print job ID number

Size – document size in kb

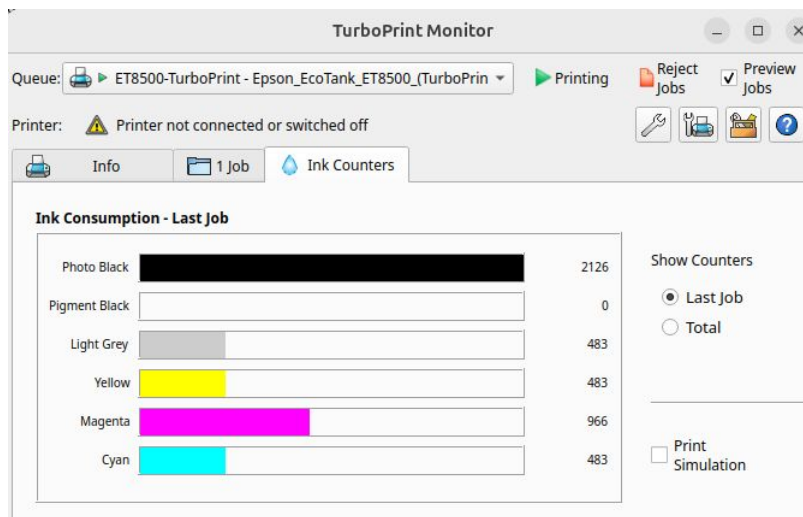
Time – time and date when the print job was sent to the queue

Pending print jobs (that are waiting to be processed) can be put on hold with the button “Start / Stop Job”. Of course you must first mark the print job in the list. This job will not be processed until it is put back into “pending” state again (press the same button again).

Jobs that are already being processed will be stopped and put on hold. However, when activated again, they will not resume at the last printed page but be completely restarted.

To remove a print job from the print queue, press the “Cancel Job” button.

10.4 Index card “Ink Counters”



TurboPrint calculates how much ink is used for every printout. As ink droplets are counted, this cannot be converted into milliliters of ink. However the ink consumption values can be used to compare how much ink is consumed of each color and to evaluate the effect of any ink saving measures.

This index card shows the ink consumption values of the last printout and total values of all previous printouts.

Set the switch “Show Counters” to “Last Job” if you want to see the values of the last job printed – consider that the job must have been finished completely before these numbers will be available. The job state is indicated on index card “Info”.

The “Total” option shows the total ink counters of all previous jobs.

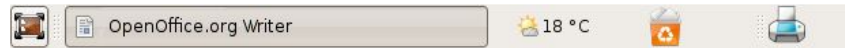
You can reset the ink counters with the TurboPrint control center program (button “Edit” printer → switch “Reset ink counters now”),

If you activate the “Print Simulation” option, the next document is only processed but not actually printed. Thus you can get a projection of the ink consumption with different settings without wasting ink and paper. The “Print Simulation” option is automatically disabled after the next print job.

You can use the ink counter values for optimizing your print settings. This is especially interesting when a printer is using combined color cartridges (one cartridge containing three or more different inks). The total ink counter values show which color will run out first – so you can react and reduce the consumption of this color with TurboPrint's ink control settings (see [“9.5. Ink control and color correction”](#)). This helps to extend the cartridge life and avoids throwing away cartridges with half of the other inks left.

11. Applet for TurboPrint Printer Monitor

Linux desktop environments like **Gnome** and **KDE** have a "Panel" in which small utility programs called "Applets" can be placed.



TurboPrint offers a printer monitor control panel applet that shows printer status and offers access to TurboPrint's control center.

The TurboPrint applet shows a printer symbol - different animations visualize the current printer status.

11.1 Universal Applet (Python3 + Appindicator3)

The universal miniprogram will start automatically if Python 3 and the library "AyatanaAppIndicator3" or "AppIndicator3" are installed on the computer.

11.2 Adding the KDE Applet

The printer monitor applet is added to the list of available panel applets by the TurboPrint installation program. To make it visible in the panel, you must add it manually. Click on the panel with the right mouse button and choose the pop up entry "Add Applet to Panel...". A list of available applets will be shown – choose "TurboPrint Printer Monitor Applet" from the list. After clicking on "Add to panel" the TurboPrint applet should be visible in the panel.

11.3 Applet Functions

The TurboPrint applet shows a printer symbol - different animations visualize the current printer status.

Left mouse button click

By clicking on the printer symbol with the left mouse button a list of current printer warnings and errors is shown. A click on a list entry opens the printer monitor for the corresponding printer.

Right mouse button click

Clicking on the printer symbol with the right mouse button brings up a context menu - the option "TurboPrint Control" starts the TurboPrint control center.

Double click left mouse button

A double click on the printer symbol opens the printer monitor.

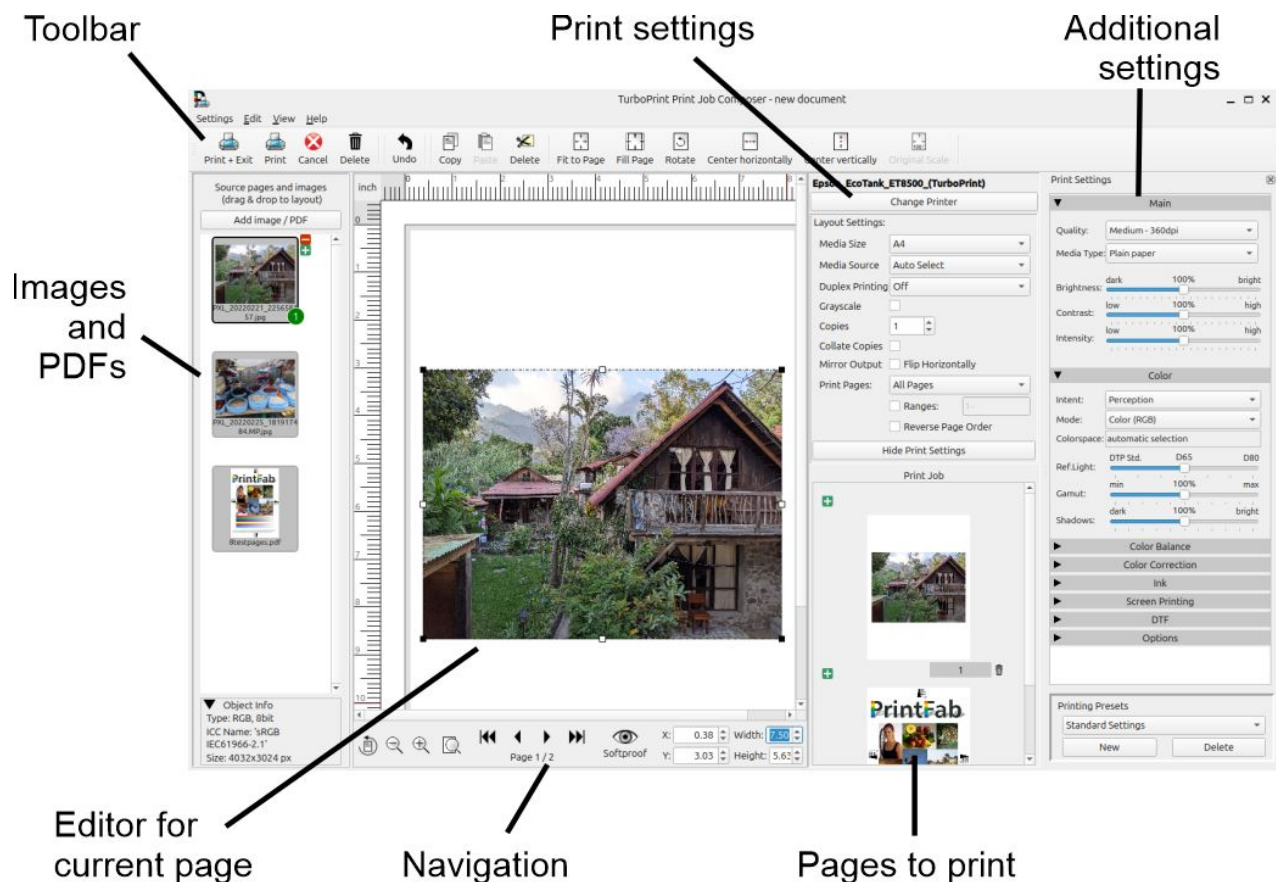
12. TurboPrint Composer

Use the desktop icon or the Applications menu to start TurboPrint Composer. It is a powerful layout application that can load and print images and PDF files directly. For example, you can have photos automatically arranged on pages or place them individually, crop images and much more.

When printing from an application program, incorrect color management can easily occur, because it is necessary to configure color settings in the application and in the TurboPrint driver. In TurboPrint Composer all steps from loading images or documents to converting them into the printing inks are done in one place. This ensures that all colors of the documents and images are interpreted correctly and printed in the best possible way.

12.1 User interface overview

The TurboPrint Composer window contains the following areas:



- toolbar at the top
- object area on the left with the loaded images and PDF pages
- editor for the current page in the middle
- the navigation panel below the editor
- the most important print settings to the right of the editor
- below that are the pages of the processed print job

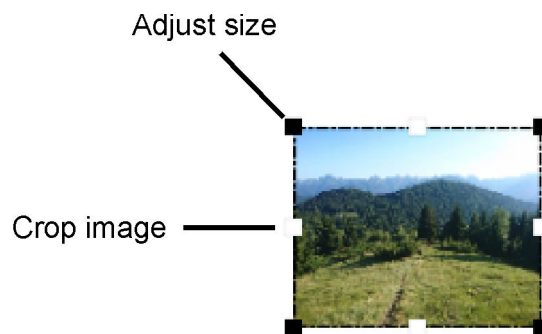
- all other TurboPrint print settings on the far right

Images can be loaded using the "Add images..." button or via drag & drop. They appear in the left column and can either be placed on the page using drag & drop or automatically arranged on printed pages using the layout wizard.

12.2 Manual page layout

You can use the mouse to drag & drop images from the area on the left into the editor and then scale or crop them. After an object is clicked in the editor, small black squares (handles) appear at the corners and in the middle of the sides of the frame which can be moved with the mouse.

When you move the corner handles, the print object is reduced or enlarged accordingly. The handles on the sides are used to crop the object - in this way you can select a section of it or cut off edges.



Alternatively, the position and size can also be entered numerically in the number field below the editor.

Unit of measurement

The unit of measurement can be set to centimeters or inches in the Settings pull-down menu.

12.3 Automatic page layout

You can access the layout wizard and the menu items “Create new (normal / Layout 2/1 / Layout 4/1)” via the “Edit” pulldown menu.

With automatic arrangement, all images or PDF documents from the object area on the left are arranged on pages. Individual objects can be omitted or arranged multiple times: If you click on an object in the left column, the symbols “+” and “-” as well as a number appear. The number indicates how often an object will be placed. You can adjust the number with “+” and “-”:

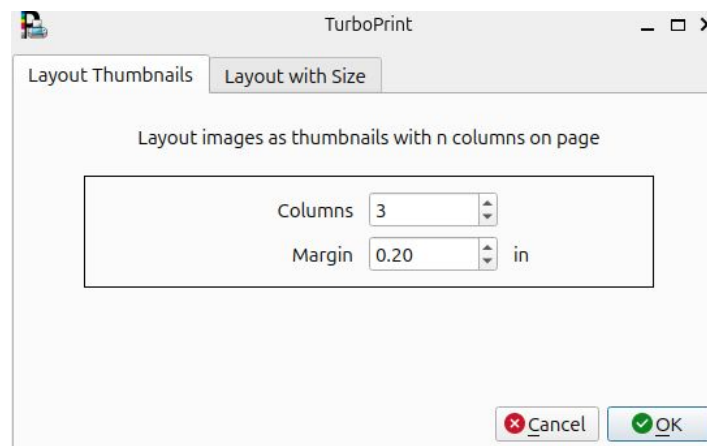


Layout Wizard

The layout wizard has two modes: The thumbnail layout and the fixed size layout.

Thumbnail layout

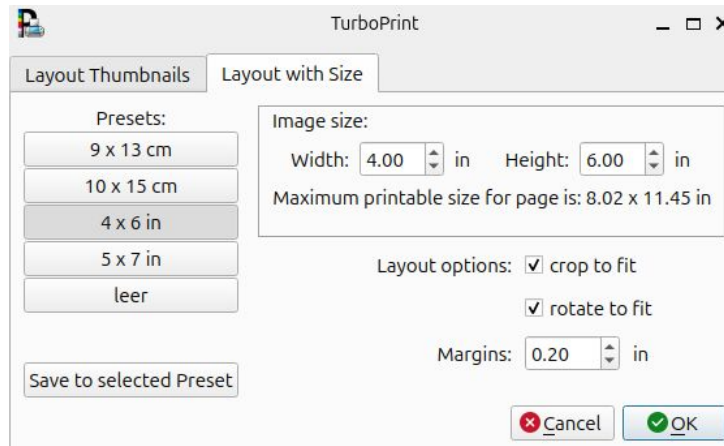
With the thumbnail layout, the images or PDF documents from the object area on the left are arranged in columns on print pages:



The number of columns and the column spacing is adjustable.

Fixed size layout

With the "Fixed Size Layout" you specify the print size. Then the placement is done so that the objects are arranged on pages using as little space as possible.



Objects whose aspect ratio does not correspond to the entered image size are reduced in size. If the "crop" option is selected, images will be cropped if necessary so that the specified image size is filled without a white border.

If the "rotate to fit" option is selected, images will be rotated as necessary so that the printed page is filled as well as possible. Otherwise, the original orientation (portrait or landscape) will be retained.

A minimum distance between objects can be set in the "Margins" input field.

Save new preset

First, select one of the five existing preset fields and then enter the desired values for size, options, and margins. By clicking on the "Save to selected preset" button, the values are saved and can be retrieved again by selecting the corresponding field. When saving, the name of the preset field can be changed.

Create new

The menu options "Relayout 1up", "Relayout 2up", and "Relayout 4up" are used to quickly arrange objects on print pages each containing one, two, or four images or pages of one PDF document per printed page.

12.4 Navigation and Toolbar

Soft proof (printing ink simulation on the screen)

In the navigation area below the editor field there is a "Softproof" button ("eye" symbol), that allows you to simulate on the screen how the print colors will appear. Changes to the print settings (e.g. "paper", "color space") then also change the color representation on the screen.

Change the depth order of objects on the page

If the objects overlap, you can use the options "to front", "move up", "move down", "to back" in the context menu (appears when you right click on an object) to change which objects are higher up and partially obscure the objects below.

Individual or all objects on the page in the editor can be removed with the "delete" button.

Insert new print pages, delete existing pages

You can add additional (initially blank) print pages using the corresponding "+" switch in the right column, in which all print pages of the edited print job are located. The new page will be inserted between the pages adjacent to the "+" button. Objects from the object area on the left can be placed on the new page via drag&drop.

Print document

Press the "Print" button to send the document to the printer - just as it is shown in the page thumbnails in the column "Print Job" on the right. All changes that you have made in the print job will be applied. If you just wanted to review the document without changing it, the document will be printed as sent from your application. The button "Print + Exit" sends the document to the printer and closes the Composer window after printing.

Discard print job

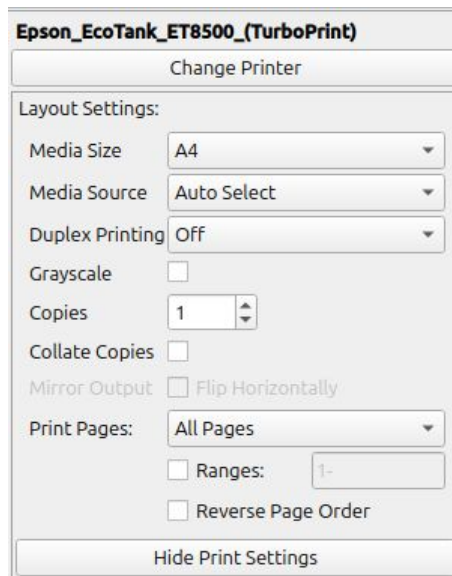
By clicking on "Cancel" the complete print job (and all changes that you made) will be discarded and the Print Job Preview program is closed.

Delete complete document

The "Delete" button in the toolbar removes the complete print job document and all print objects, thus you can start with a new print document.

12.5 Print settings

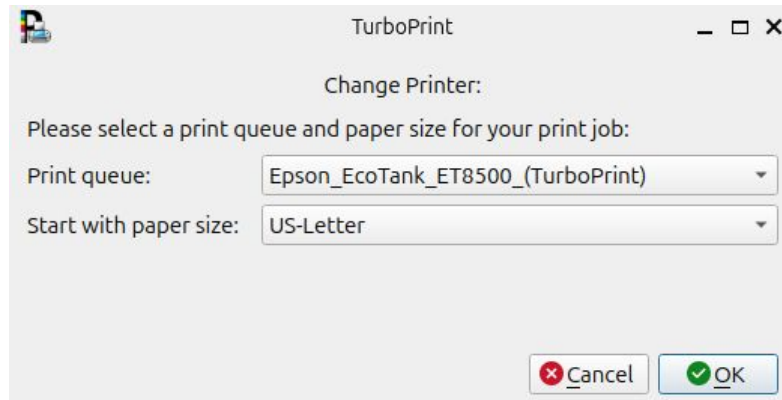
In this area you will find the most important print settings:



The screenshot shows the 'Epson_EcoTank_ET8500_(TurboPrint)' print settings window. It features a 'Change Printer' button at the top. Below it, the 'Layout Settings' section includes several options: 'Media Size' set to 'A4', 'Media Source' set to 'Auto Select', 'Duplex Printing' set to 'Off', 'Grayscale' with an unchecked checkbox, 'Copies' set to '1', 'Collate Copies' with an unchecked checkbox, 'Mirror Output' with an unchecked checkbox and 'Flip Horizontally' option, and 'Print Pages' set to 'All Pages'. There are also checkboxes for 'Ranges' (set to '1-') and 'Reverse Page Order'. A 'Hide Print Settings' button is at the bottom.

- **Select printer**

Use the "Select Printer" button to choose which TurboPrint printer to use for printing the document.

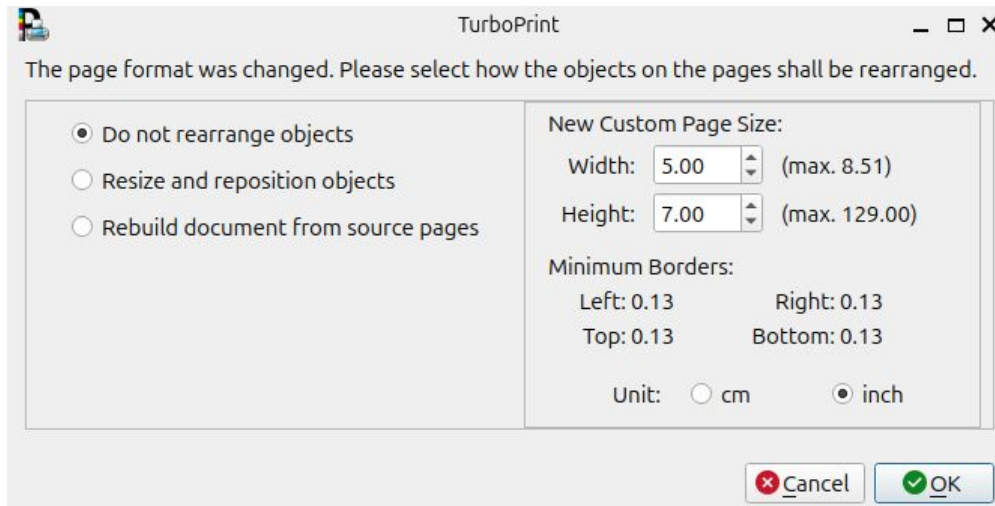


The screenshot shows the 'TurboPrint' window with the title 'Change Printer:'. It prompts the user to 'Please select a print queue and paper size for your print job:'. There are two dropdown menus: 'Print queue:' set to 'Epson_EcoTank_ET8500_(TurboPrint)' and 'Start with paper size:' set to 'US-Letter'. At the bottom right, there are 'Cancel' and 'OK' buttons.

- **Paper size**

When you change the paper size, you will be asked whether you want to adjust the size of all arranged objects accordingly or if you want to redistribute all existing objects across the pages (1 object per page, e.g. if your objects represent pages of a PDF document).

For "Custom" paper size, the size of the page must be entered.



- **Paper feed**

- **Output tray**

- **Duplex printing**

If your printer supports automatic duplex printing, you can choose whether to turn the pages on the long or short edge of the page.

If the printer does not offer automatic duplex printing, you can manually select to print front sides (odd pages) or back sides (even pages) with the "Print Pages" option (see below). Between printing the front and back pages, the stack of paper must be removed, turned over and reinserted into the paper feeder.

- **Grayscale** (print only with black ink)

- **Copies** (1-9999)

- **Sort**

If the "Sort" option is selected, all pages of a print job will be printed before the next copy is created. If the "Sort" option is switched off, copies of the first page are printed first, then those of the second, etc. Depending on the printer, this is a little faster.

- **Mirroring**

Mirrored print e.g. for sublimation printing.

- **Print Pages**

You can select whether all pages or only odd or even pages are printed (e.g. for manual printing of the back pages).

In the field "Ranges" you can specify a page ("2") or a page range like "2-3". You can also enter multiple ranges separated by commas, for example "1, 2-3, 7-".

- **Reverse page order**

The pages are printed backwards, starting with the last page.

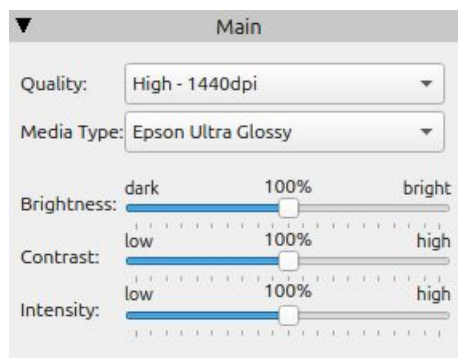
- **Show print settings**

Displays the list of all print settings on the right (if it was hidden) or hides it again.

12.6 Advanced print settings

All other print settings can be opened with the "Show print settings" button; they are displayed on the far right in the TurboPrint Composers window; individual areas can be expanded and collapsed again using the triangle symbol. The individual settings correspond to the print dialog options of the TurboPrint driver and are only briefly described here; the options are explained in more detail in the section about the print dialog settings.

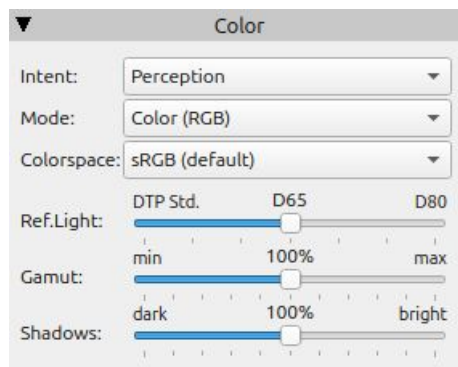
Main



- **Quality** - determines the print resolution and speed
- **Media Type** - paper type e.g. plain paper or photo paper
- **Brightness** - Correction of brightness. Only the middle brightness ranges are adjusted; white and black remain unchanged in the printout. To print the most intense colors brighter, use the "Saturation" setting.
- **Contrast** - Adjust the contrast
- **Intensity** Adjusts the ink saturation. Lower ink saturation helps, for example, to save ink or speed up the drying of the printout in duplex mode.

To adjust color saturation, i.e. to make colors more intense, use the "Color" -> "Gamut" setting.

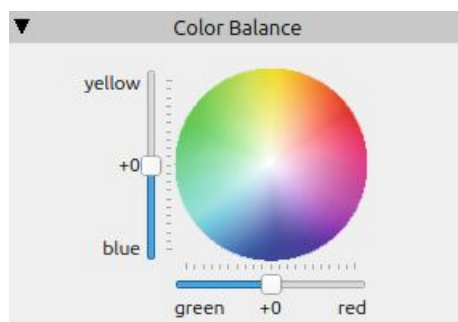
Color



- **Intent** - rendering intent for color management, the default setting is "Perceptual", "Photo optimal" prints with slightly higher contrast and "Saturation" prints intense colors slightly darker, this is recommended for example for diagrams or company logos.
- **Mode** - Color mode such as "Grayscale" or "Color (RGB)". The "Grayscale Photo" setting prints high-quality black and white photos; depending on the printer, gray ink or a mixture of CMY is used for lighter details. The "CMYK Proof" mode is required for the color-accurate reproduction of documents (e.g. used in pre-press) and can only be selected with TurboPrint Studio.
- **Colorspace** - Default color space for documents. TurboPrint usually automatically detects the color space of photos or PDFs, so it makes sense to keep the default setting "sRGB".
- **Ref. Light** - indicates the light under which the prints are normally viewed, the default setting is "D65" daylight. This setting is explained in more detail in Chapter 9.
- **Gamut** - increase or decrease color saturation
- **Shadows** - print dark areas in images slightly lighter or even darker

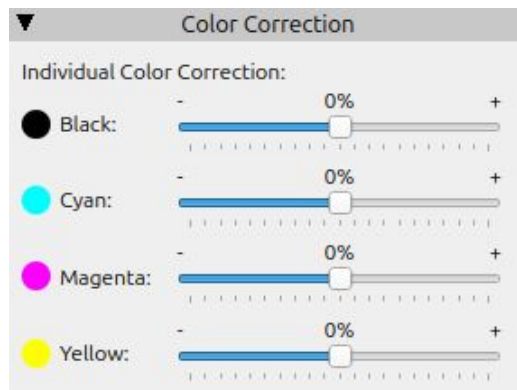
Color Balance

Setting the color balance or tint of black and white photos in "Grayscale Photo" mode.



Color Correction

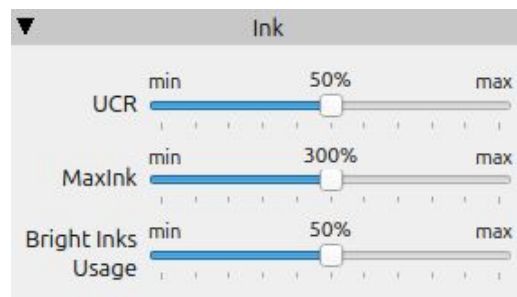
Color correction by adjusting ink amounts.



Ink

The ink control options are described in more detail in the main TurboPrint manual:

- **UCR** - Controls the addition of color inks (C+M+Y) when printing grayscale
- **Max Ink** - limits the maximum ink application
- **Bright Inks Usage** - controls the use of photo inks



Screen printing and film printing (TurboPrint "Studio XL" only)

TurboPrint Studio XL offers a special black & white print mode with adjustable halftone raster for printing films for silk screen printing or circuit board layouts. In this mode documents are printed on transparent film that is used to expose the screen printing stencil.

For many printers, ink volume can be set much higher than in regular print mode to achieve good coverage for good exposure results, you can find further information at <https://www.printfab.net/screenprinting.html>

Presets:	LPI	Angle
☒ 1	50.0	45.0
☐ 2	50.0	15.0
☐ 3	50.0	75.0
☐ 4	50.0	0.0

activate Screen Printing Mode - enable the screen printing mode

Ink Saturation - adjust the ink amount. With the button "Test Page" you can print a test page to determine the suitable ink amount.

multi-black - for printers where one or several color cartridges have been replaced by black. Ink is printed from several black cartridges to achieve higher ink amounts and smoother printing. The checkboxes determine which ink cartridges are used to print black ink.

Halftoning - determines if halftoning is active and if halftone parameters are specified in TurboPrint or in the application

- **TurboPrint** - raster shape, frequency and angle are specified in TurboPrint
- **Application specific** - halftone parameters from the application are used (for applications that offer halftone settings in the print dialog)
- **Off** - no halftoning, solid black & white printing

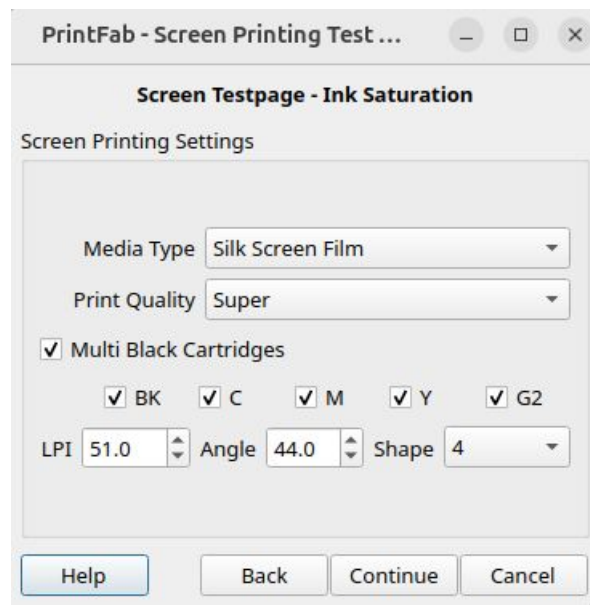
Presets - you can specify and choose between four presets of raster frequency and angle

Note on color separations

TurboPrint does not create color separations, color graphics are always interpreted as grayscale if screen printing mode is active. Color separations must be created with separate illustration software before.

Ink Saturation Test Page

Use the "Test Page" button to open the dialog to determine the correct amount of ink.



First select the media type (e.g. "transparent film" or "silk screen film" depending on the printer) and a good print quality.

If the printer has been converted to "Multi-Black" or "All-Black" ink cartridges, check the box next to "Multi Black Cartridges" and select all cartridges that should be used for multi-black printing.

Optionally you can change the halftone settings (LPI, angle, shape).

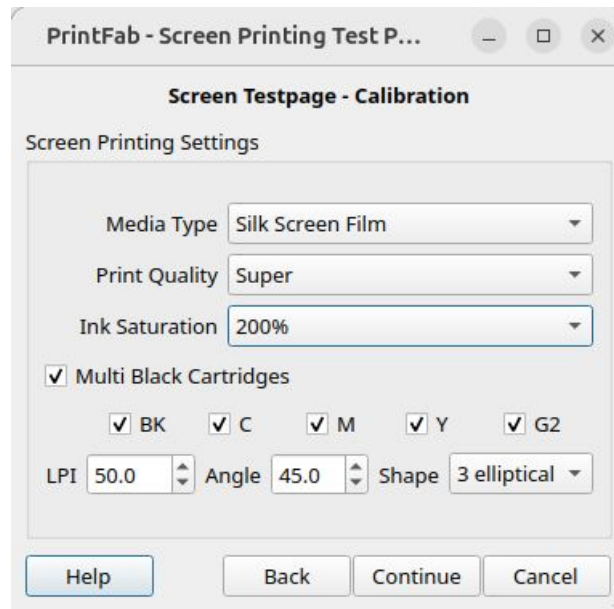
On the next page select the maximum amount of ink. It's best to start with 200%; if the amount of ink is too high, ink may not have dried by the time it reaches the printer's transport rollers.



Expose the film with the test page on the printing screen and determine the appropriate amount of ink. Black parts should wash out easily and details should be reproduced well.

Adjust Dot Gain Test Page

Click the button "Adjust Dot Gain" to open the dialog to determine the correct "Brightness" setting to compensate the dot gain of the print process. The "Brightness" setting in the section "Main" of the print options controls the gamma curve and mainly affects medium brightness values. The test page contains several comparison prints between fine and coarse halftone for different gamma values. You can determine the best brightness / gamma value by visual comparison.

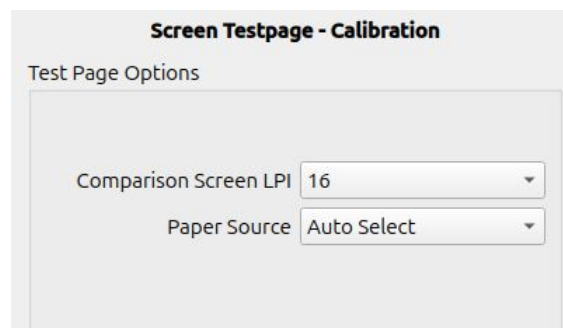


First select the media type (depending on the printer, e.g. "transparent film" or "screen printing film") and a good print quality.

Set the amount of ink as you determined using the test page to determine the amount of ink.

If the printer has been converted to "Multi-Black" or "All-Black" ink cartridges, check the box next to "Multi Black Cartridges".

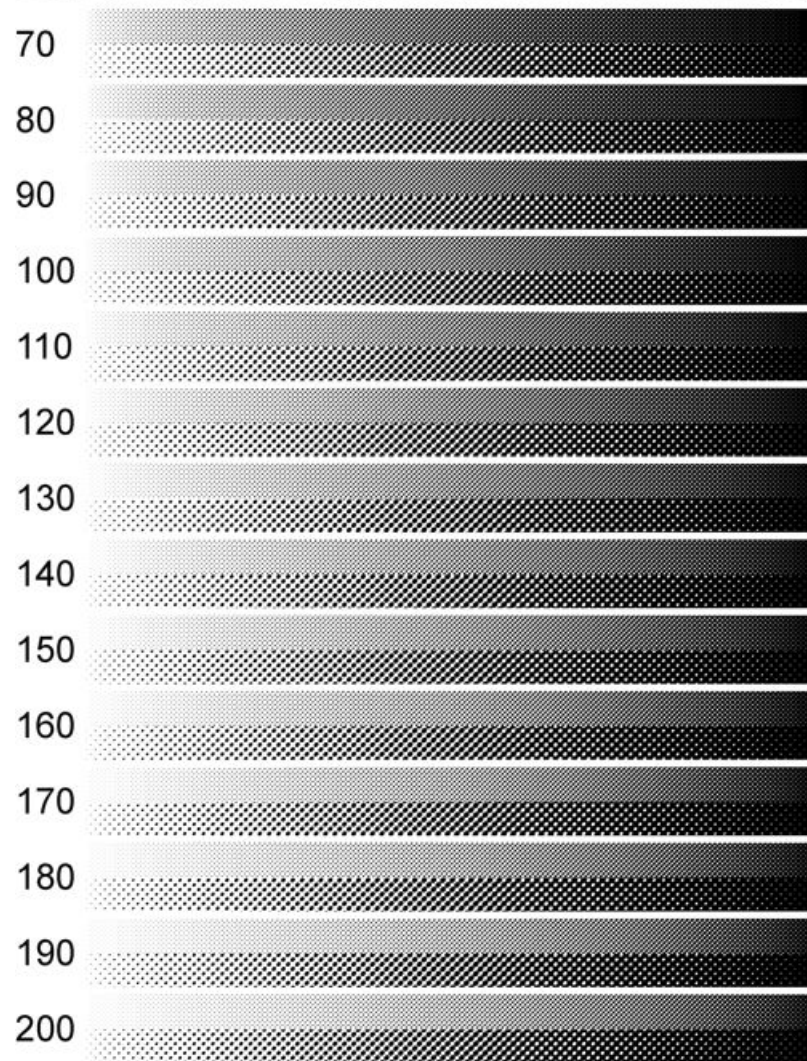
Optionally you can change the grid settings (LPI, angle, shape).



On the next page you can select the comparison halftone width.

The test page looks as follows:

PrintFab Brightness Adjustment Test for Screen Printing

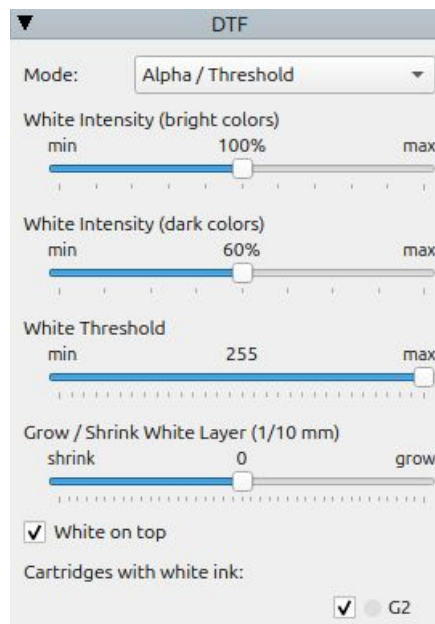


As a next step, you should then create a printing screen from the test page and use it to print onto fabric. Now you can determine the value for which the brightness of the fine and coarse halftone correspond best. Set this value as “Brightness” in the print settings for subsequent prints.

DTF – Printing with white ink (TurboPrint Studio XL only)

Here you can find settings specifically for DTF printing with white ink (DTF = Direct To Film with subsequent transfer to textile via a heat press). TurboPrint supports white ink DTF printing for some Epson printer models, information about supported printers can be found at <https://www.printfab.net/dtf.html>

If the TurboPrint driver for your printer is suitable for DTF, the media type "DTF ..." will be present in the print options. Only if the media type "DTF ..." is selected, the following settings can be accessed.



- **Mode** - determines where white is printed, see "Controlling the color white"
- **White Intensity** - Adjustment of the print intensity of white. The intensity can be set separately for light and dark colors.
- **White on top** - if this setting is active, white will be printed as the last / top color - this ensures that white is the background color after transfer in the heat press.
- **White Threshold** - see "Controlling the color white"
- **Cartridges with white ink** - here you can select which ink cartridges are used when printing white ink. Depending on the printer model, only certain cartridges are possible. This setting is helpful to disable a cartridge if ink is low or if a print head is clogged. The ink amount that has been selected with the setting "White Intensity" remains the same, i.e. the ink amount is distributed to the active ink cartridges and print heads. If all cartridges are turned off, white will not be printed.

Controlling the color white

There are the following print modes to determine where the color white is printed:

- **Alpha / Threshold** - for objects with a transparency mask, the mask determines where white is printed. Otherwise, automatic control occurs, see "Control white via threshold".

- **Alpha / White** - for objects with a transparency mask, the mask determines where white is printed. Otherwise, white is printed behind the entire object.
- **Threshold** - automatic control always occurs
- **All objects white** - white is printed behind all objects.
- **Full page white** - the entire page is backed with white

When printing directly from applications, the alpha channel is lost and the color white is automatically controlled instead, see "Control white via threshold".

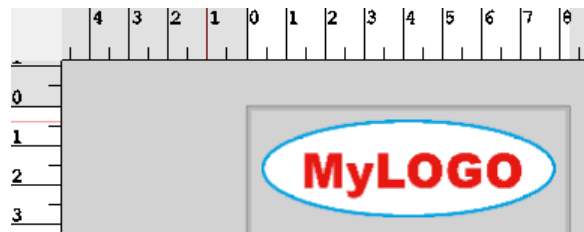
Control white via transparency mask (alpha channel)

In order to be able to specifically control the color white, image files in PNG or TIFF format with a transparency mask are required. The image's transparency mask (also called the alpha channel) determines the use of white:

Image area is transparent ⇒ no white is printed

Image area is not transparent ⇒ white is printed

To check whether the image contains a transparency mask and whether it was loaded correctly by TurboPrint Composer, deactivate the option "White background color" in the pulldown-menu "View". The page background in the page editor then becomes gray where there are no images or where they are transparent. The non-transparent areas of images remain white or colored:



Control white via threshold

When printing directly from applications such as Photoshop or when printing images without a transparency mask via the TurboPrint Composer, the color white is automatically controlled by comparing the image lightness to a threshold:

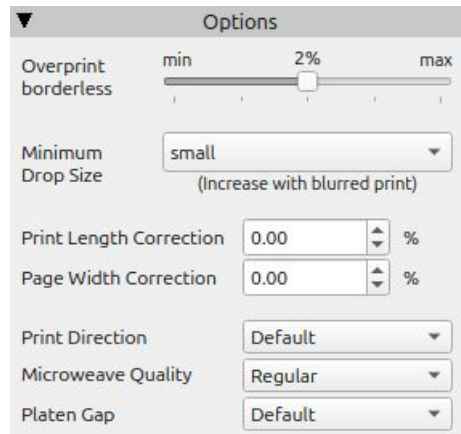
Image area is lighter than threshold ⇒ no white is printed

darker colors ⇒ white is printed

The lightness is computed as the average of the color intensities R, G and B.

Options

Borderless printing settings and printer-specific options



Overprint borderless

The set value specifies the enlargement factor of the page for borderless printing, so that the print can overlap slightly over the paper edges and thus compensate for slight tolerances in paper feeding / print positioning (no white edges).

Depending on the printer:

- **Head distance** – adjusts the distance of the print head from the paper
- **Print direction** – for Epson printers: Automatic, Bidirectional, Unidirectional
- **Microweave quality** – for Epson printers: Normal or higher quality with slower printing

Autorotate on Roll Paper (only for roll printers)

Setting of paper roll width and option to automatically rotate pages in portrait format if possible (optimization of paper consumption).

13. Print Preview with Composer

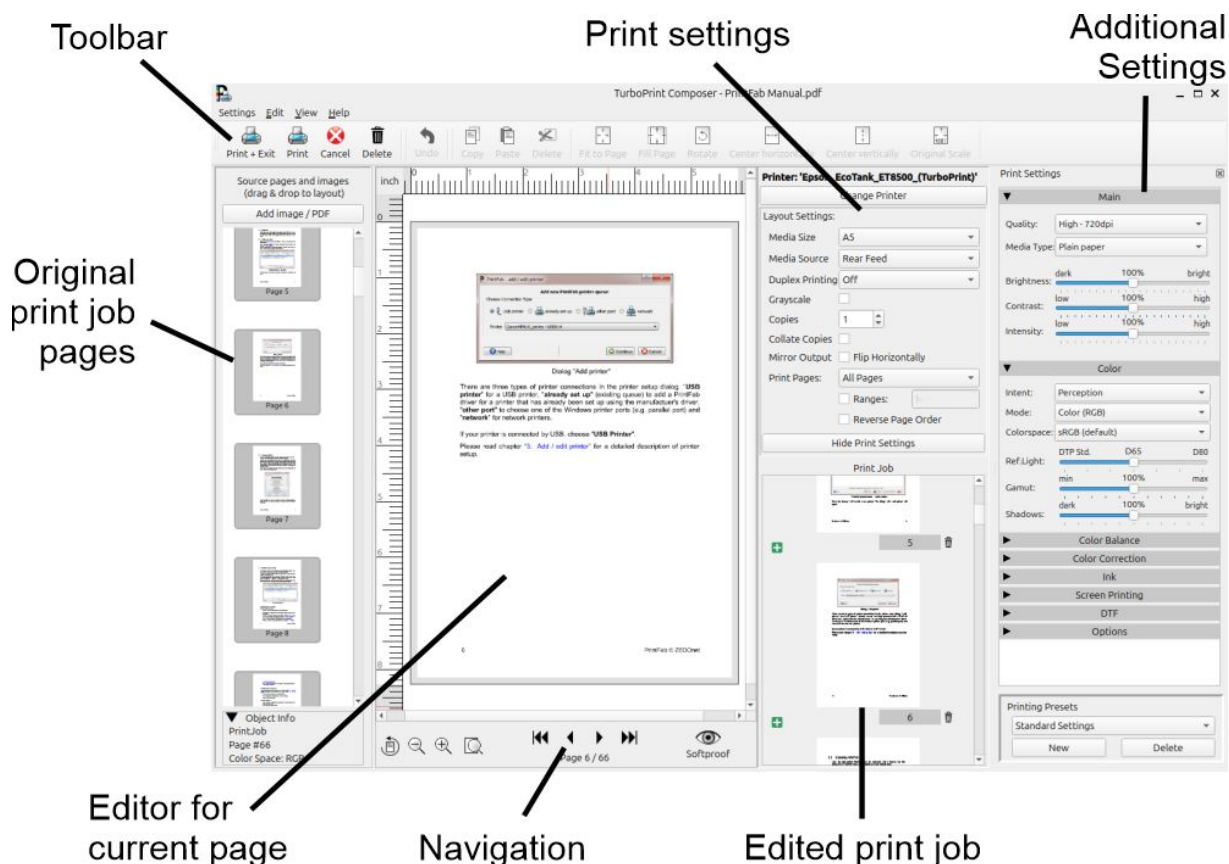
The preview function shows the complete print job on screen before it is sent to the printer. So you can preview each page and then decide whether it shall be printed or not. For this purpose, the print job is passed to the TurboPrint Composer (see chapter ["12.TurboPrint Composer"](#)).

With the integrated layout functions you can even modify the print job before actually sending it to the printer. You can scale, crop and move contents, delete or add pages. Further you can also cut out some snippets from different pages of the job and combine them on a new page – this can be convenient when printing web pages where you may want to remove ads or other navigation buttons and enlarge some special contents.

To activate the preview function, mark the checkbox „Print Preview“ on the first index card of the TurboPrint print settings dialog. After each print job that is sent, TurboPrint now displays this preview window. Only if you click the „Print“ button in the Print Job Preview window, the job is actually forwarded to the printer.

All functions of the TurboPrint Composer can be used, i.e. you can also place image files and PDF files on the pages of a print job.

The print preview window:



The window is split into the following 6 areas:

- Toolbar with buttons on the top
- Table with print settings
- left column: original pages of the print job
- right column: pages of the edited print job
- middle column: editor area where the currently selected page can be modified
- navigation area below the editor area

Function overview

A new print job (right column) is created out of the pages of the original print job (shown in the left column). Initially the new print job is just an unmodified copy of the original print job. Now you can modify each page as required, combine or delete and add pages.

For example, when printing web pages from the Internet browser, you can cut out advertising and only print the parts you want.

Change print settings

In the print settings table, you can click on entries (e.g. "Paper", "Resolution") to change them.

Softproof (simulate printed colors)

In the navigation area below the editor area there is a "softproof" button (symbol "eye") that lets you simulate printed colors. When it is enabled, changes to print settings (like "media type" and "color space") will also change the document colors in the preview window.

N-Up printing

In the pull down menu "Edit" you can find options to change the print layout to e.g. 2 or 4 pages per sheet. Use the "Layout Wizard" to make further selections for automatic arrangement.

Page editing

First select a page of the new print job in the right column. It will be displayed enlarged in the editor area in the middle of the window.

A copy of the original print job page is placed as a „print object“ on this page. Using the mouse you can select this object and move it. When the object is selected, small "handles" are displayed on the edges and borders of its frame.

When you move the handles on the edges, the object's size changes. Moving the middle handles of the frame results in cropping the object. Thus you can cut off parts of the page and just use snippets.

Objects can also be rotated by angles of 90 degrees (button „rotate“).

Combining pages

To combine snippets from different pages, select a page from the original print job (left column) and drag it into the editor field („drag & drop“). Thus a new print object is added to the page which can now be resized, cropped, etc. In the same manner you can add additional objects containing other pages.

Changing the order of print objects

If objects overlap each other, their order can be changed with the buttons “up”, “down“, “to back“, “to front“. These functions are also available in the context menu that shows up when clicking an object with the right mouse button.

The “delete” button removes selected objects in the editor.

Adding new pages, removing existing pages

To add additional pages to your print job, press the button “+” in the right column at the appropriate position where the page shall be inserted.

Then add print objects via drag&drop from the original print job in the left column.

A complete page (and all of its print objects) can be removed from the print job with the "Trashcan" button in the "Print Job" panel.

Print document

Press the “Print” button to send the print job to the printer. All changes that you have made in the print job will be applied. If you just wanted to review the document without changing it, the document will be printed as sent from your application. Additionally, the Print Job Preview window is closed.

Discard print job

By clicking on “Cancel” the complete print job (and all changes that you made) will be discarded and the Print Job preview is closed.

14. Silkscreen Film Printing (TurboPrint Studio XL only)

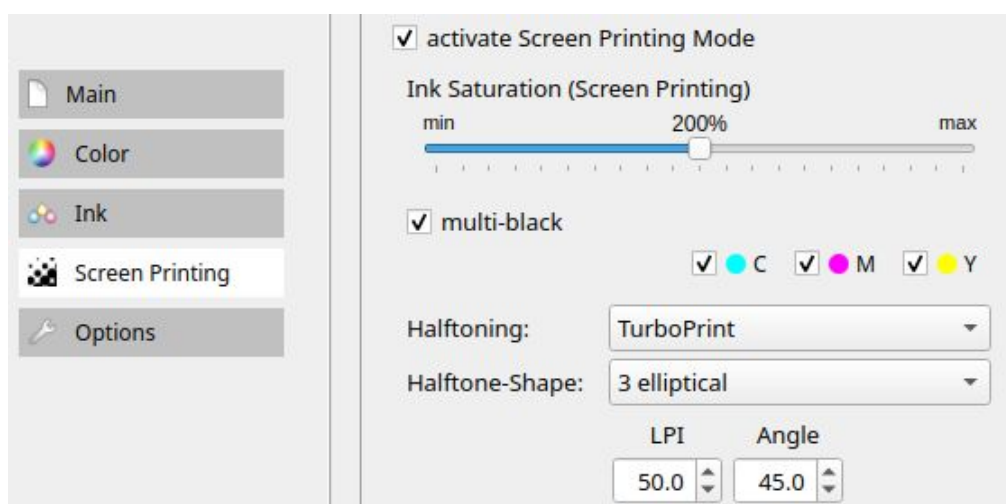
When printing films for screen printing exposure, it is highly important that black ink is printed opaque enough to block the UV light and thus to achieve a good result when the screen is exposed.

For this purpose, TurboPrint offers the possibility to significantly increase the amount of applied ink when printing with many Epson and Canon inkjet printers (compared to normal printing on paper). Especially with Epson printers, TurboPrint can multiply the amount of ink by making several passes of the print head at a slower paper feed rate. You can find a list of suitable printers and further information at

<https://www.printfab.net/screenprinting.html>

12.1 Settings for Screen Printing

The TurboPrint driver settings for screen printing can be found on the “Options” tab of the printing preferences. They are described in chapter ["9.6.Index card “Screen Printing” \(TurboPrint Studio XL only\)"](#).



When printing from the TurboPrint Composer app, the settings for screen printing can be found in the “Advanced Print Settings” on the right, section ["Screen printing and film printing \(TurboPrint "Studio XL" only\)"](#).

The screenshot shows the 'Screen Printing' settings panel. At the top, there is a dropdown menu labeled 'Screen Printing'. Below it, the 'activate Screen Printing Mode' checkbox is checked. The 'Ink Saturation (Screen Printing)' section features a slider ranging from 'min' to 'max', with a current value of '200%'. The 'multi-black' checkbox is also checked. Below this, there are checkboxes for color inks: BK (Black), C (Cyan), M (Magenta), Y (Yellow), and G2 (Grayscale), all of which are checked. The 'Halftoning' dropdown is set to 'TurboPrint', and the 'Halftone-Shape' dropdown is set to '3 elliptical'. A 'Presets' section contains a table with four rows, each with a checkbox, 'LPI' value, and 'Angle' value. The first preset is selected. At the bottom, there are two buttons: 'Test Page' and 'Adjust Dot Gain'.

Presets:	LPI	Angle
☒ 1	50.0	45.0
☐ 2	50.0	15.0
☐ 3	50.0	75.0
☐ 4	50.0	0.0

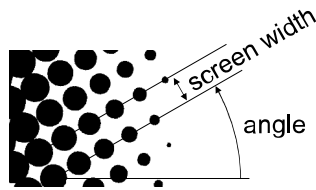
Adjustment of ink saturation

The amount of ink should be adjusted so that good UV opacity is achieved without ink running on the film. The TurboPrint Composer app lets you print an ["Ink Saturation Test Page"](#) to find the suitable ink quantity.

Adjustment of screen frequency and screen angle

The exposure process is based on a black-and-white process; intermediate tones are produced by means of a so-called halftone raster. The raster size and angle must be adjusted to suit the screen printing mesh and the inks.

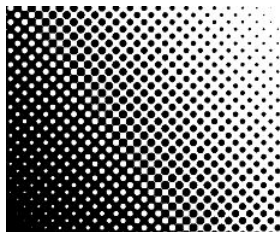
TurboPrint only supports printing of monochrome artwork and therefore just offers a single setting for the screen angle. For multicolor prints, color separation must be done beforehand with suitable publishing software.



The setting **LPI** specifies the screen width in "lines per inch" (a higher number means smaller screen width and smaller dot size).

The setting **Angle** adjusts the screen angle.

There are seven **Halftone Shape** settings available from round dots over elliptical dots to line raster.



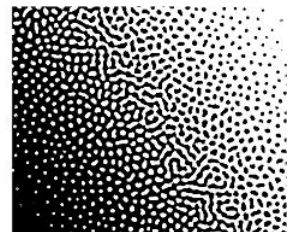
round



elliptical



line



stochastic

The setting "stochastic" selects stochastic screening which is "frequency modulated" in very bright and very dark areas, otherwise the dot spacing depends on the LPI setting. The minimum dot size also depends on the LPI setting – at 50 LPI the minimum dot size is approx. 12 micron and at 25 LPI the minimum dot size is approx. 25 micron. The "Angle" setting is ignored.

Optional Multi Black / All-Black ink set

The black coverage can be increased by using special inks. The black cartridge can be replaced by a "UV Black" with better opacity for UV light or all color cartridges can be replaced by an "All-black" ink set. This allows even more black ink to be applied and - if necessary - allows to compensate for failed printhead nozzles. The TurboPrint setting **Multi Black** selects which ink cartridges are used when printing with a printer that has been equipped with several black cartridges. The ink amount that has been selected remains the same, i.e. it is distributed to the active ink cartridges and print heads.

Printing documents without halftone or images that have already been screened

If you want to print black&white documents or images that have been converted to a halftoned black&white image, we recommend to switch off halftoning in TurboPrint.

To do this, select "Halftone screen mode" = "Single Black (no halftone)" or "Multi black (no halftone)" in the TurboPrint options in the print dialog.

When printing via TurboPrint Composer, select "Halftone" = "Off".

Adjustment of tonal values (brightness reproduction)

In the process from printing a design via printing on film to UV exposure to the actual silkscreen printing, there are several reproduction steps during which the printing intensity can change. When printing the film, for example, the halftone dots typically become slightly larger (dot gain), making the motive darker. To compensate, the TurboPrint brightness and contrast controls can be adjusted.

The TurboPrint Composer app lets you print an ["Dot Gain Test Page"](#) to find the suitable brightness value.

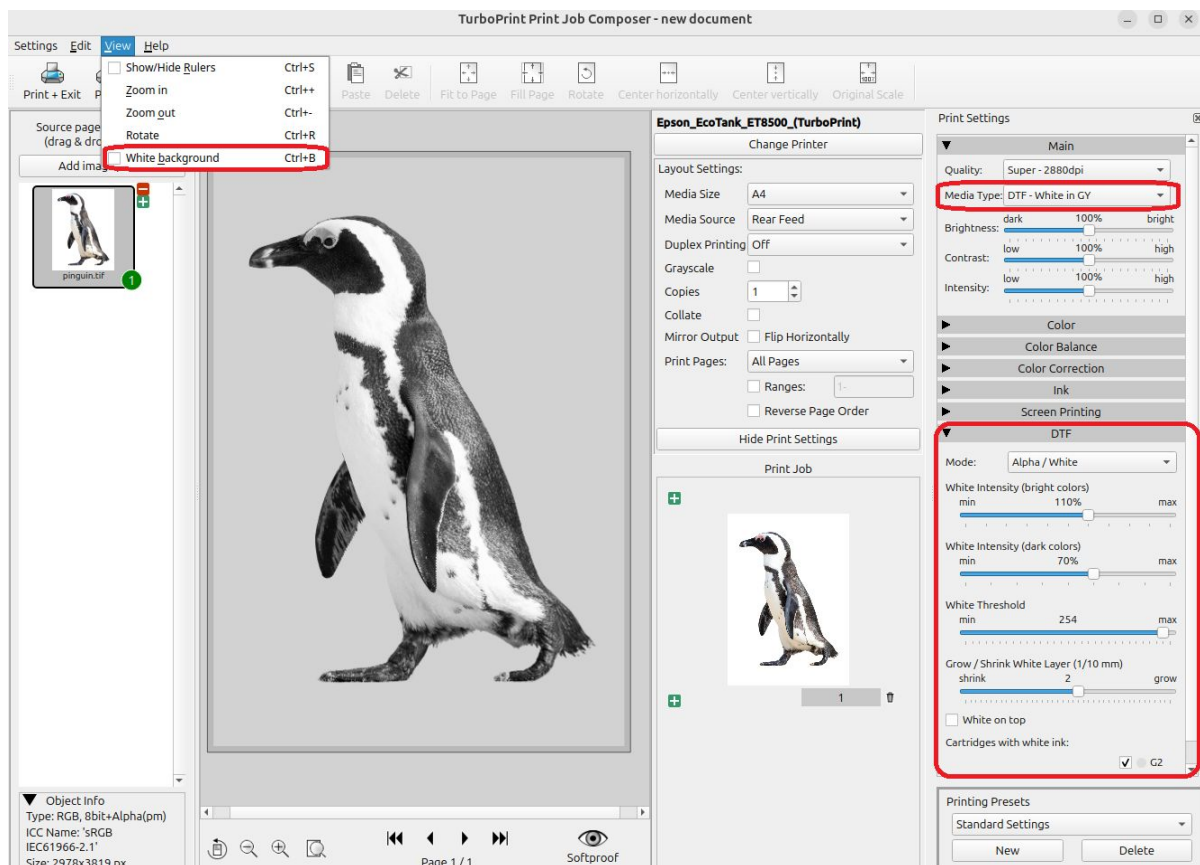
15. DTF - Textile printing (TurboPrint Studio XL only)

DTF printing (Direct To Film) is a textile printing process in which a motif is printed on a transfer film and then transferred to textile in a heat press. Special inks are used, usually including the extra color white, which makes it possible to print on dark textiles.

TurboPrint supports white ink DTF printing for some Epson printer models, information about supported printers can be found at <https://printfab.net/dtf.html>

15.1 Control the background color white in TurboPrint Composer

The spot color white can be controlled either via images with an alpha channel (transparency mask) or via an automatic threshold value. You can use software such as Photoshop, Illustrator or CorelDraw to create your artwork and save to PNG or TIFF with alpha. Then use TurboPrint Composer to arrange and print.



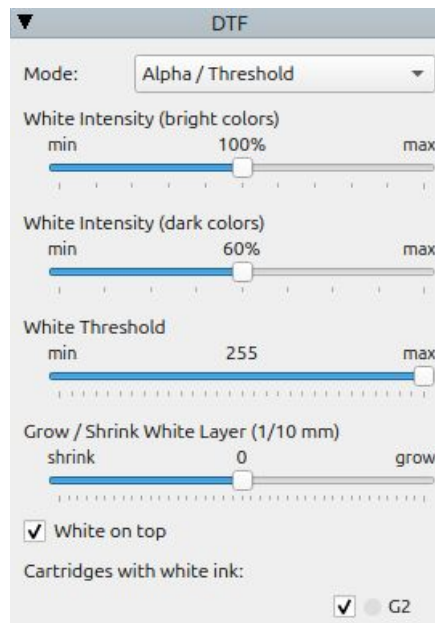
The image's transparency mask determines the use of white:

Image area is transparent ⇒ no white is printed

Image area is not transparent ⇒ white is printed

To check whether the image contains a transparency mask and whether it was loaded correctly by TurboPrint Composer, deactivate the option "White background" in the pull-down-menu "View". The page background in the page editor then becomes gray where there are no images or where they are transparent. The non-transparent areas of images remain white or colored.

In TurboPrint Composer, the settings for screen printing can be found in the “Advanced Print Settings” on the right, section “DTF”. The settings are only active if the TurboPrint driver supports DTF printing and the media type “DTF” is selected.



- **Mode** - determines where white is printed, see “Controlling the color white”
- **White Intensity** - Adjustment of the print intensity of white. The intensity can be set separately for light and dark colors.
- **White on top** - if this setting is active, white will be printed as the last / top color - this ensures that white is the background color after transfer in the heat press.
- **White Threshold** - see "Controlling the color white"
- **Cartridges with white ink** - here you can select which ink cartridges are used when printing white ink. This setting is helpful to disable a cartridge if ink is low or if a print head is clogged.

A detailed explanation can be found in the description of the settings ["DTF – Printing with white ink \(TurboPrint Studio XL only\)"](#) in the TurboPrint Composer.

15.2 Color profiling for DTF printing

Color profiling is almost the same as with normal printing, see chapter ["8.1 Index card Printer Profiles"](#). When creating the profile entry in the "Profiles" dialog of the TurboPrint app, select

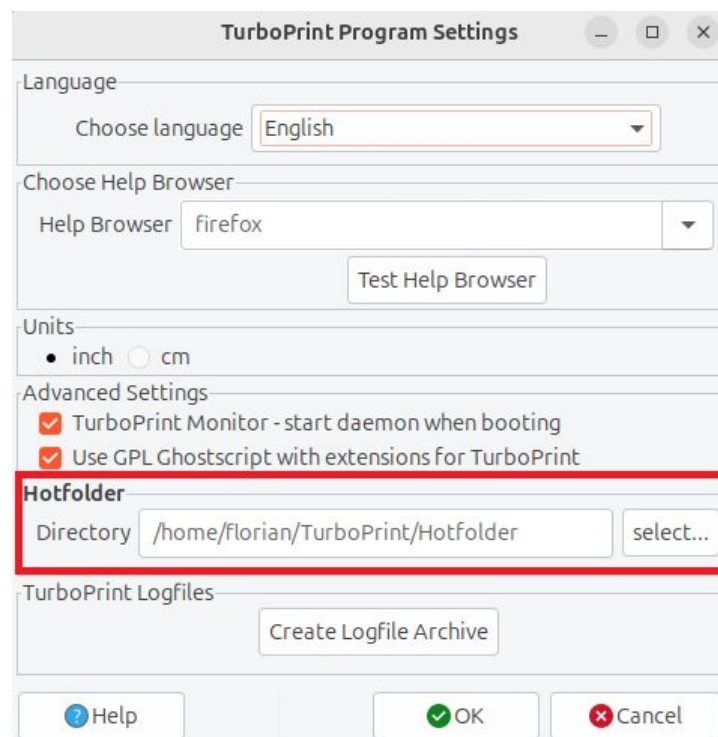
"Type of paper" = "DTF Printing"

16. Hotfolder

The TurboPrint Hotfolder is a special directory into which you can copy files that you want to print. The file type can be JPG, PDF, PNG or TIFF. As soon as a file is copied into the folder, the TurboPrint Composer application opens and the file is placed as an object on the page. If the TurboPrint Composer is already running, the file is only added as an object in the left column and can then be placed on the page using “drag & drop”.

The hotfolder is located in the user document directory

`/home/<user>/TurboPrint/Hotfolder`



You can change the hotfolder location in TurboPrint Control -> dialog "Preferences".

Attention:

Documents placed in the hotfolder are immediately moved to a temporary directory by the TurboPrint Composer and deleted after the composer has finished. To avoid losing any files, be sure to use the function **“Copy & Paste”** instead of **“Drag & Drop”** or **“Move File”**.

17. Printing from Applications

TurboPrint is compatible with virtually all applications that have a print function. Printing is usually initiated via the menu "File" -> "Print".

A description of the TurboPrint print settings can be found in chapter [9. Print dialog settings of TurboPrint](#).

17.1 Printing PDF documents

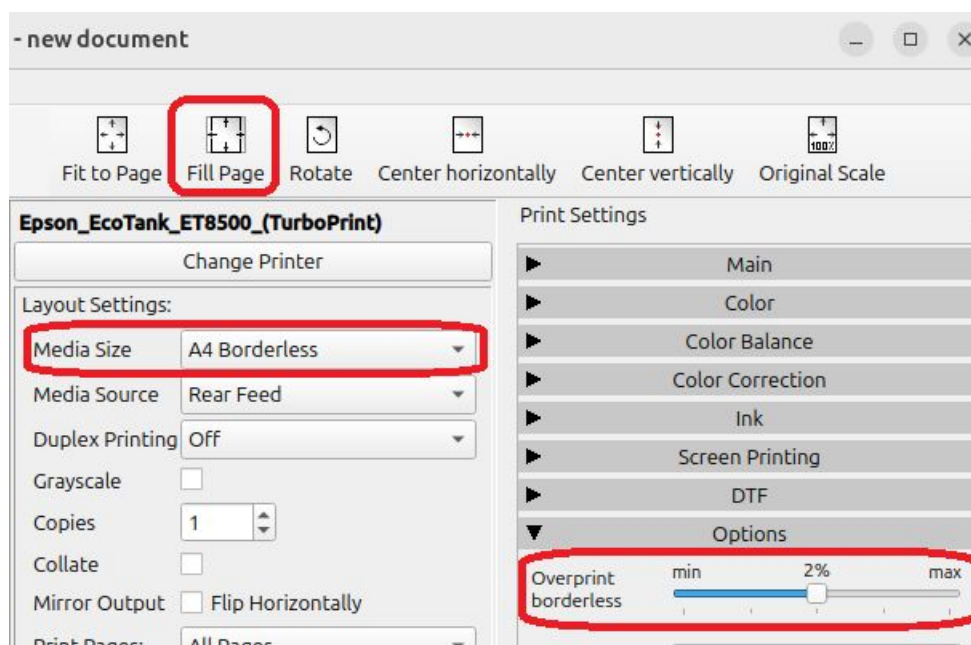
We recommend loading and printing PDF documents directly with [TurboPrint Composer](#). Alternatively, you can use any PDF viewer, such as Gnome Document Viewer.

17.2 Borderless Printing

For borderless printing, we recommend loading photos directly with [TurboPrint Composer](#).

First, select a borderless format, e.g., "A4 borderless." Under Print Settings/"Options," you will find the "Overprint borderless" slider. The selected value determines the page enlargement factor for borderless printing, allowing the print to overlap slightly on all sides and thus compensating for minor paper feed/print positioning variations (no white borders).

The "Fill Page" button enlarges the currently selected photo or document so that no white borders remain (rotate it appropriately beforehand if necessary).



When printing photos, you should pay particular attention to the following print settings:

Media type: If you are not printing on plain paper, select the paper you are using, e.g., inkjet paper or photo paper. Some paper types from the printer manufacturer are listed

by name. If the paper you are using is not listed, select a similar one.

Print quality: For photo printing, select a higher quality setting than for normal document printing. If prints appear grainy or streaky, select a higher quality setting. If the print quality is still unsatisfactory even at the highest setting, please check the printhead using the "Nozzle Test" function in the Toolbox – see section [6.3.Clean Print Heads](#).

If you want to print borderless directly from an application, it is important that all print margins are set to zero in the program, if possible.

In **GIMP**, the standard print dialog is not well suited for borderless printing. Instead, you can send the current image to TurboPrint Composer using the "Send to TurboPrint" menu item and then print it, see "[17.4.GIMP](#)".

In **LibreOffice**, for example, select "Format -> Page Setup" from the menu and enter the desired paper size, setting all margins to "0.00".

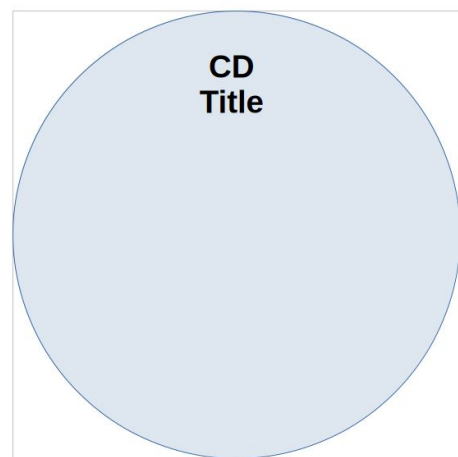
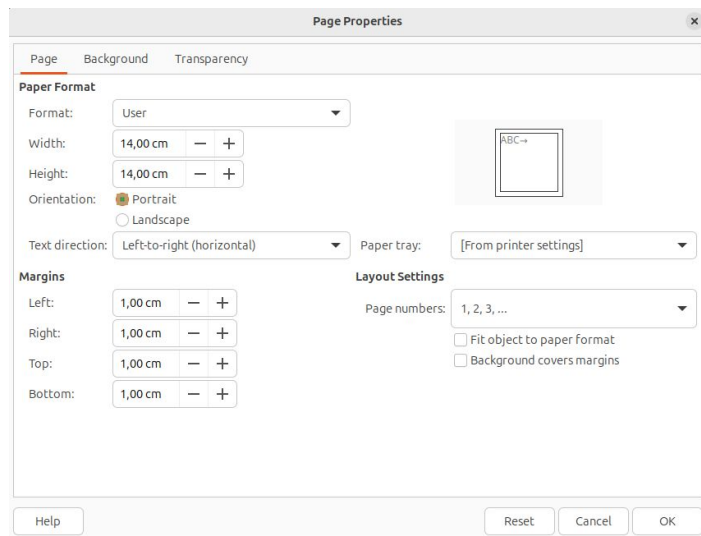
17.3 CD/DVD Printing

TurboPrint supports printing on CD / DVD printable media for most printers that offer this functionality. We recommend the application “LibreOffice Draw” to create the CD / DVD layout – or the image editor “GIMP” if you want to print a photo on a CD / DVD.

Designing the CD with LibreOffice Draw

First, you have to set up the page layout:

Enter 14cm as page width and height, then set all page margins to 1cm (left / right / top / bottom) so that a printable area of 12x12cm remains.



Now you can design your CD, e.g. add an image (“Insert” -> “Picture” -> “From file...”) or text (Toolbar -> Text Tool). The center hole and the outer margin will automatically be “masked out” when printing.

Making test prints to determine the correct print position

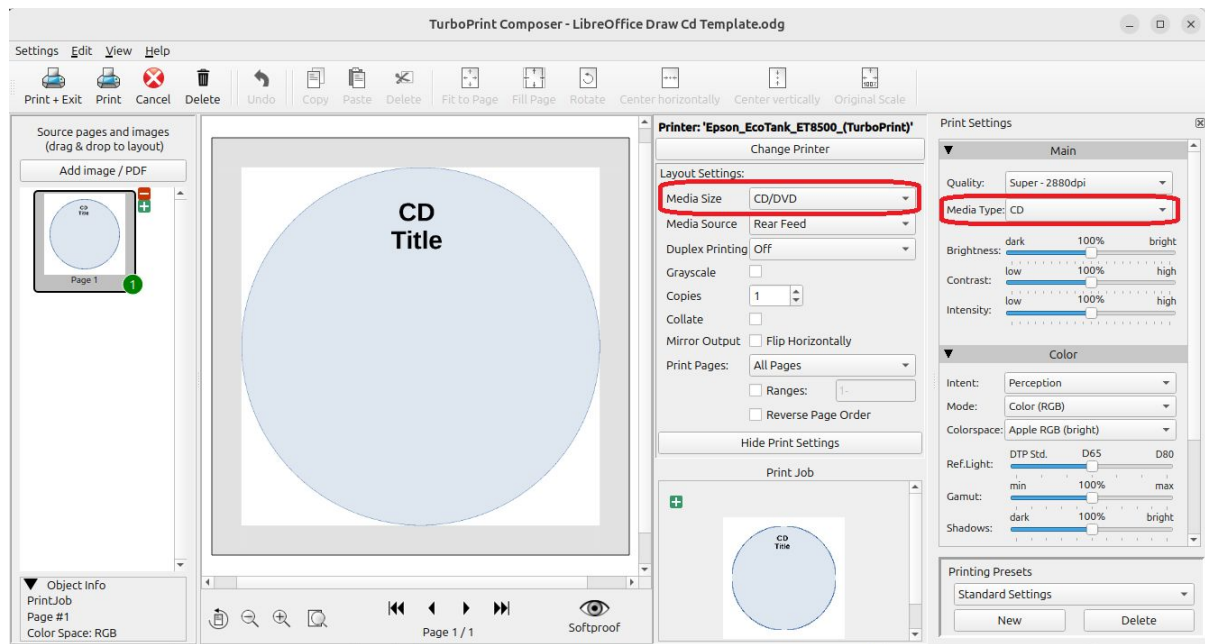
We recommend to print crosslines onto an old CD. Thus you can determine if any adjustments to the print position or the inner / outer margins are necessary.

Adjusting the CD layout in TurboPrint's pagesize editor

You can adjust the inner and outer margins and the print position for CD / DVD printing in TurboPrint Control Center, button “Sizes” – see chapter [“7. Custom page size editor”](#).

Print settings

When printing on CDs, please check the following print settings in Composer before printing:



Media Size – select “CD / DVD” (or a custom CD format that you created in the page size editor)

Media Type – select "CD"

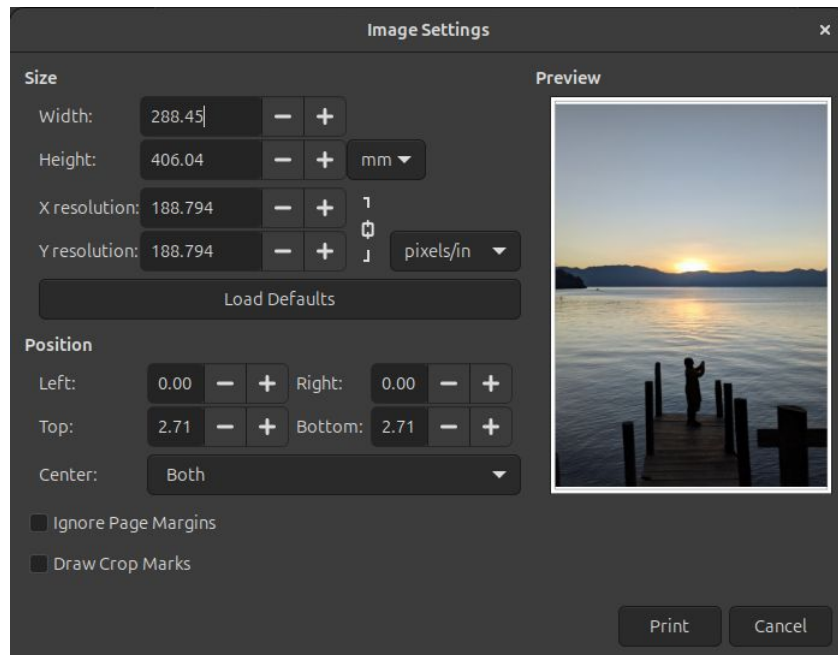
Print quality – a high print quality is recommended. If the printout has visible grain or banding even in the highest print quality mode, you should check if the print head is working properly by printing a “Nozzle test page” from TurboPrint control center, function “Toolbox” (see chapter “[6.2 Nozzle Check](#)”).

17.4 GIMP

With the image editing program GIMP, you can either print via the standard print dialog or use the "Send to TurboPrint..." plugin.

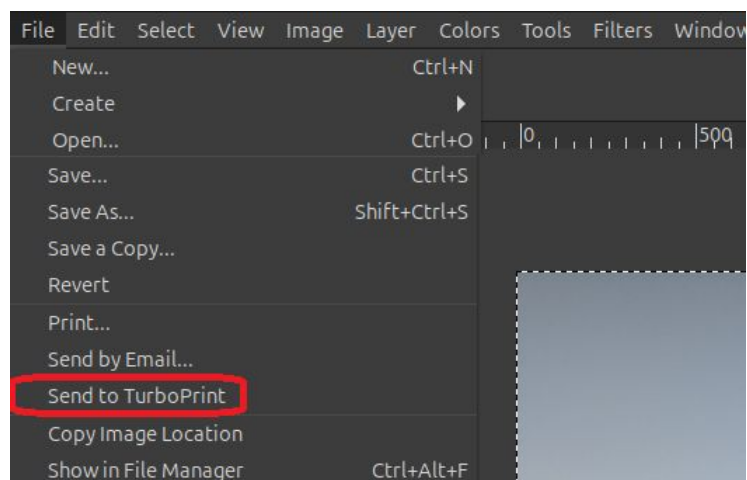
Printing via the GIMP print dialog

The standard print dialog is well-suited for normal printouts, but there are issues with borderless printing, as not all pages are printed borderless depending on the image format.



Printing via the plugin and TurboPrint Composer

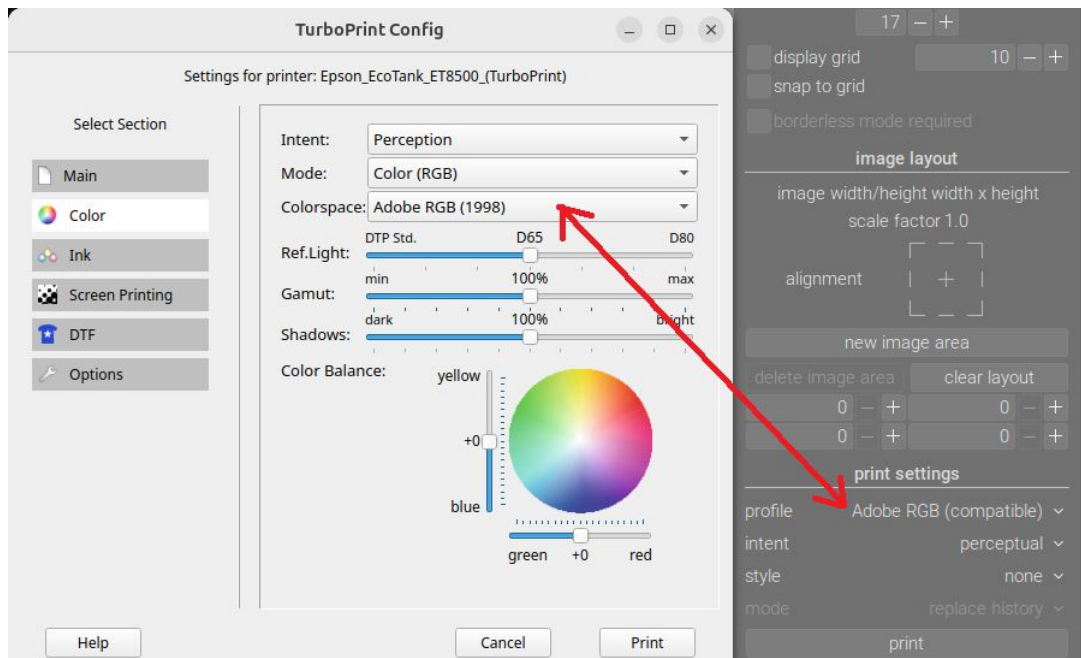
Using the menu item "File" -> "Send to TurboPrint...", the current image is sent to the TurboPrint Composer. The color profile is also transferred for color-accurate printing.



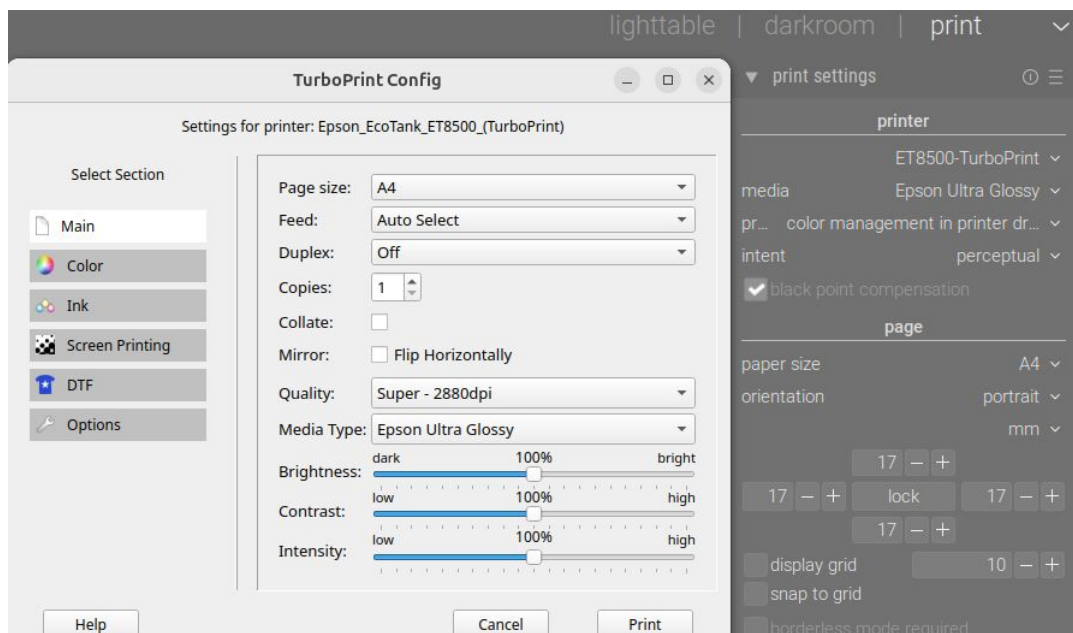
Note: For the TurboPrint plugin to be installed correctly for GIMP, TurboPrint must be installed after GIMP.

17.5 Darktable

In Darktable's print dialog, you can select the paper size and paper/media type. For the color profile, select "sRGB" in Darktable and also select "sRGB" in the TurboPrint settings. Alternatively, you can choose a different color space. It's important that the settings in Darktable and TurboPrint match:



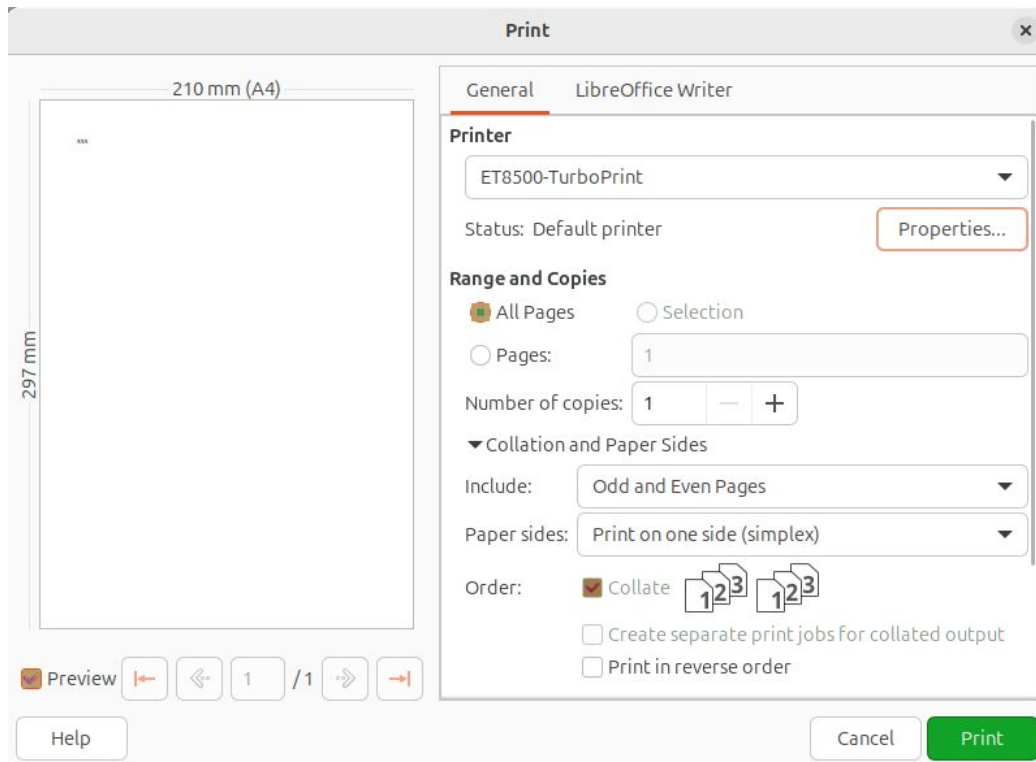
Before printing, Darktable opens TurboPrint's print settings dialog:



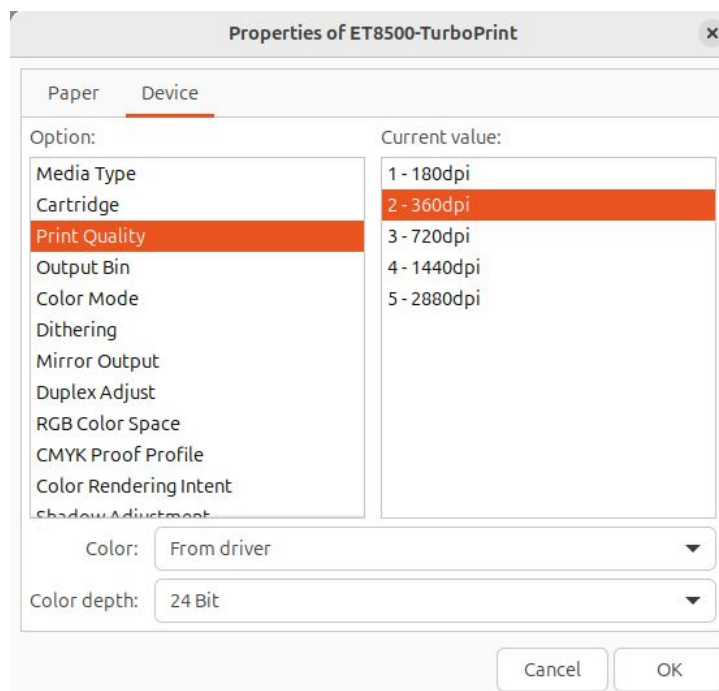
There, you can review and adjust the TurboPrint settings before printing.

17.6 LibreOffice

The print dialog is opened via the "File" -> "Print..." dialog:



The "Properties" button opens the dialog for TurboPrint settings on the "Device" tab:

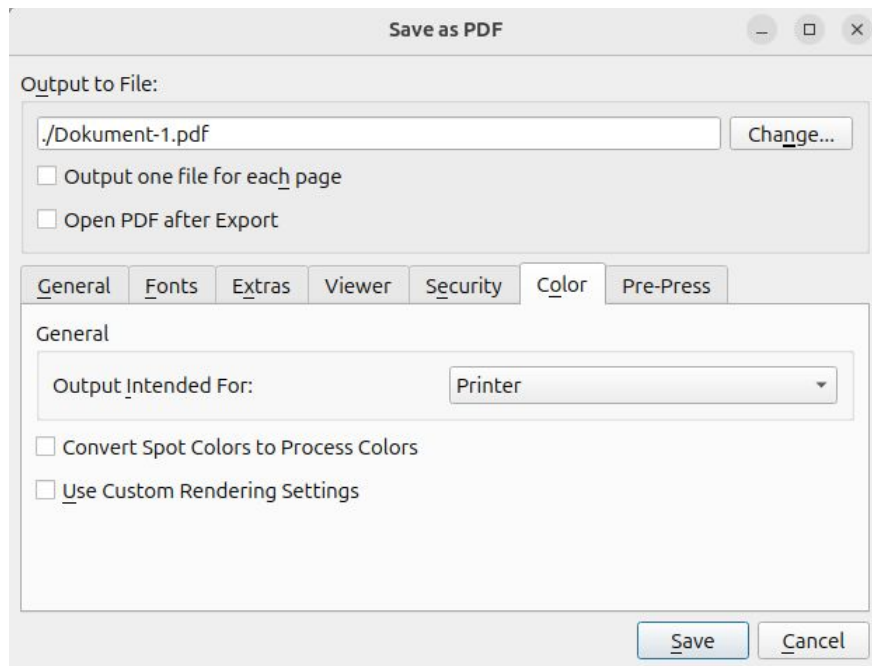


17.7 Scribus

The publishing program Scribus allows you to create brochures and other printed materials in the CMYK color space for distribution to printers via a PDF file. TurboPrint Studio enables color-accurate proof printing of such PDF files.

To print with TurboPrint, we recommend exporting a PDF from Scribus and then loading the PDF into TurboPrint Composer and printing from there.

On the "Color" tab, select "Output intended for" = "Printer" to prevent Scribus from converting objects in the CMYK color space to RGB.



Alternatively, you can save the document in the TurboPrint hot folder and then launch TurboPrint Composer, which will automatically load the document.

18. Problems and solutions

18.1 Feedback form

Please send your feedback on TurboPrint to our support team – use this form:

www.turboprint.info/feedback.html

18.2 Support forum

You can also visit our support forum to find solutions or post questions:

www.turboprint.info/support