

# HOW TO USE THE HEAT TRANSFER PRINTER

## What do you need with you?

- The image you want to print.
- The textile on which you want to print the image. The recommended option is cotton but polyester etc. can be used as well.
- Be sure to book the machine in advance to ensure its availability.

## Preparing the file

Before loading your image to the printer software TransferRIP, you have to prepare the file. The maximum image size is A3 and the easiest way to prepare your image is to do a layout in vector graphics app (Adobe Illustrator, Inkscape...) for that desired A4 or A3 size in portrait orientation. This can be done either on a computer with Illustrator here in Fablab or by downloading the free Inkscape software to your own computer. After you have changed the image to its printing size, save the file as format of your choice (Preferable options for the program is PNG, JPEG, PDF).

**Hint:** You can already put your INSTA heat press to warm up while you prepare your image for printing. Directions to how to do it can be found in the section “**Pressing your print on fabric**”.

## Using the printer software

### Step 1:

Open the TransferRIP at the computer next to the printer. Step 1 is choosing either a dark or light profile. Choose dark profile for coloured fabrics and light profile for white fabrics. Afterwards click Select.

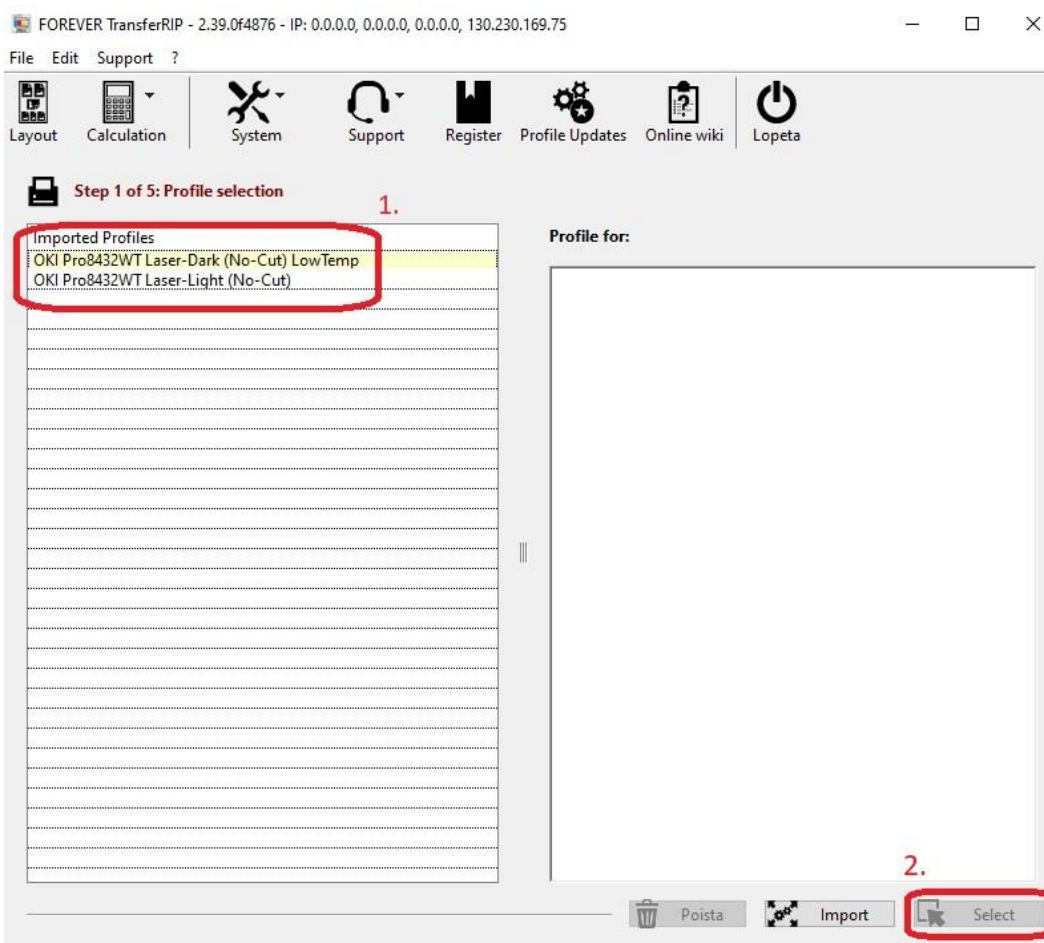


Figure 1: Profile selection (Step 1).

### Step 2:

Load your file to the software by clicking the load image icon in the lower right corner of the screen. Then select your image from the list above. A preview of that image should then appear below. Double click the image.

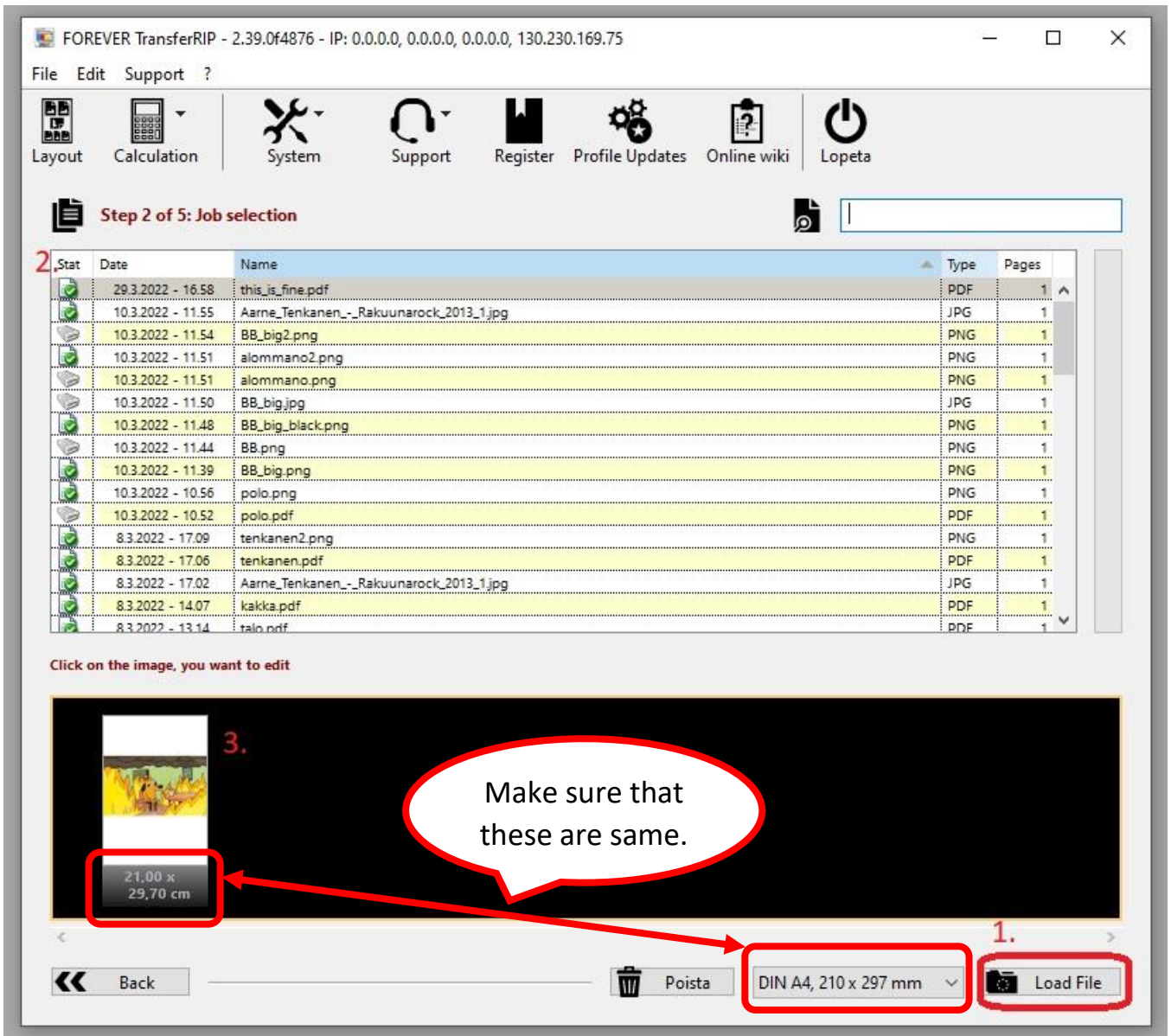


Figure 2: Loading your image.

### Step 3:

Now it is time to edit the image. You can adjust brightness, contrast etc.

Saturation is good to be something like 10. This will give you a brighter result.

Then we can move on to optional edits. If you have background color (or any other color) in your image that you do not wish for the final result, you can remove it by clicking Remove Color.

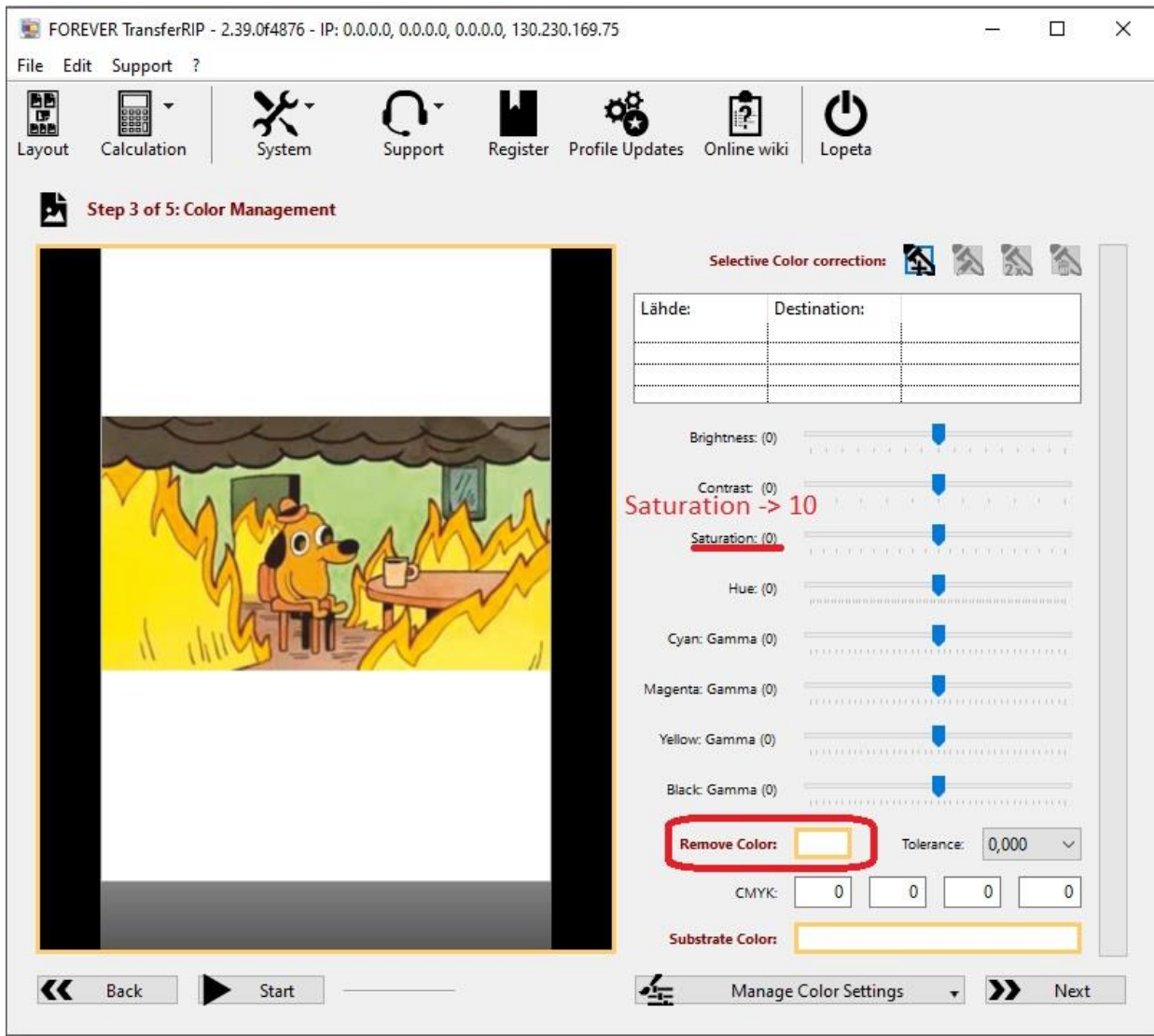


Figure 3: Editing the colours of the image.

A pop-up window will appear, and you can choose the color you would like to be removed by clicking it in your image (Figure 4). Then press save (tallenna).

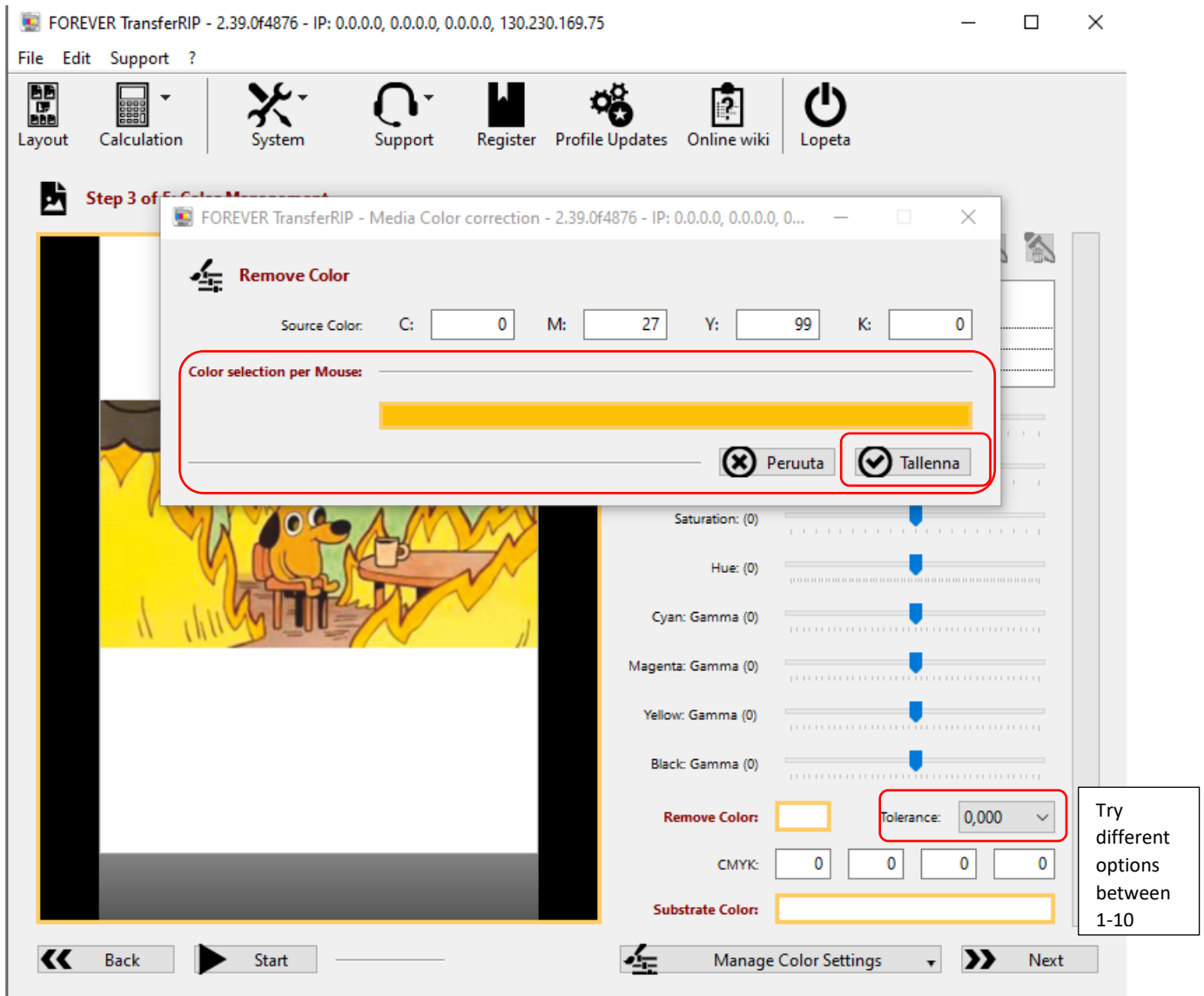


Figure 4: Removing colour from the image

The intensity of the deleted colour can be selected by trying different tolerance numbers between 1 and 10 next to the Remove Color box. Choose the level that looks the best in the preview of your image. The software offers a lot of other editing options for your image, which you are free to make as you like, but to keep these instructions easy to read they are not covered here. We recommend that you come in with as finalized picture as possible.

Finally, from the bottom of the screen you can change substrate color to match the color of the fabric you are going to print your image. This way you can see how the image will look like in the particular color (Figure 5).

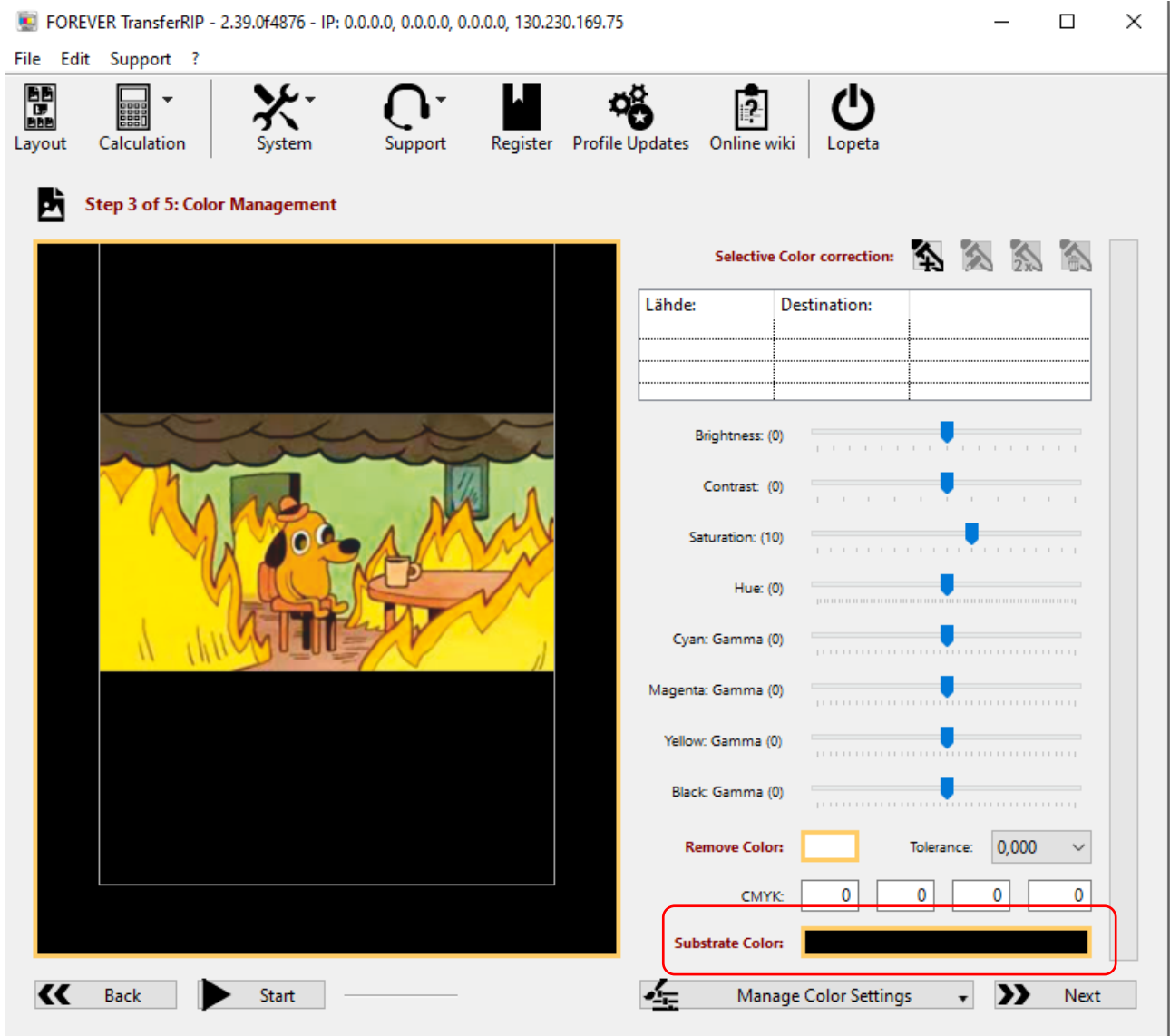


Figure 5: Changing the substrate colour

When you are happy with the results press Next.

## Step 4:

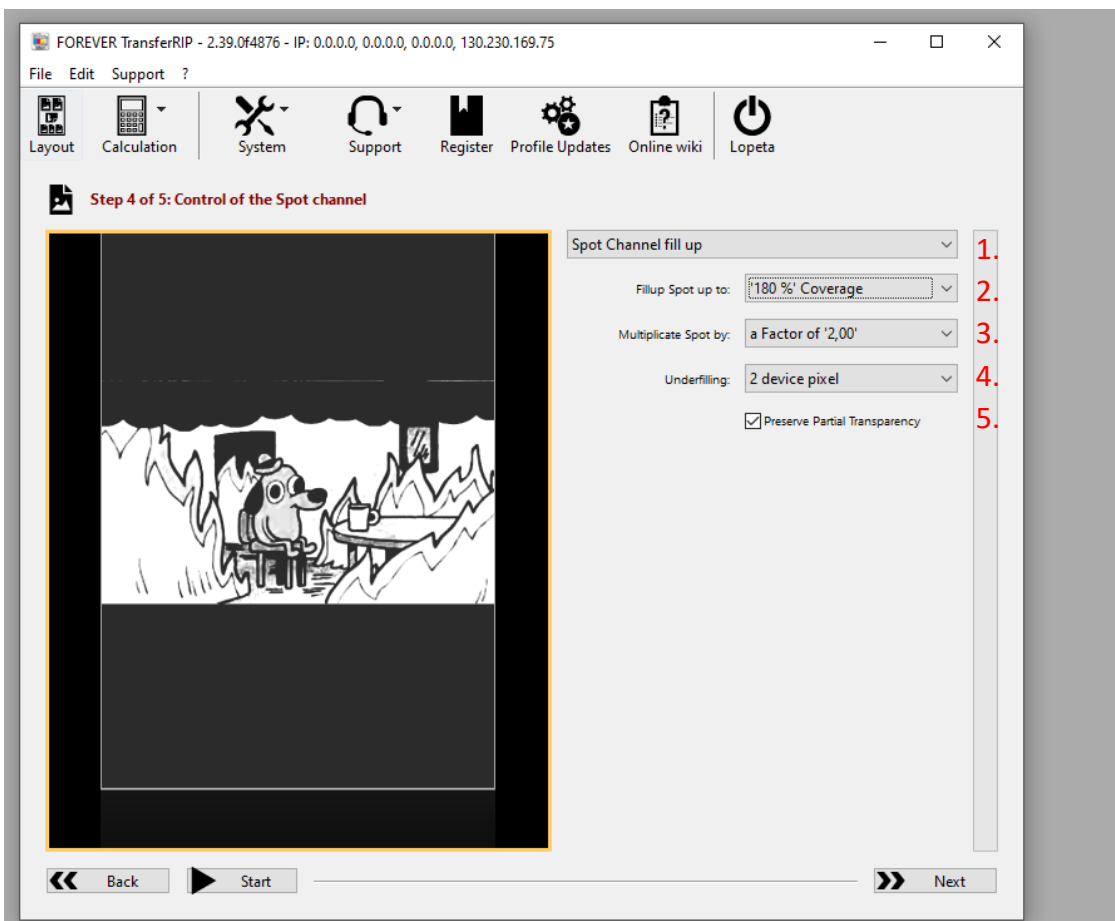


Figure 6: Control of the Spot channel

The next step is to control the spot channel.

1. First, choose Spot Channel fill up. If you choose no spot channel, printer will not print any white.
2. Fillup Spot up to box determines the amount of white in the image. The default is 150 % Coverage, but you can try different options to find your preferred outcome.
3. Next is Multiply Spot by a factor. '1,00' is the default, which works for most of the fabrics. For black/very dark fabrics, we recommend selecting '2,00', which will provide more white behind lighter colours and make the image brighter.
4. With underfilling you can avoid white edges around shapes. Usually, 1 or 2 device pixel is good.
5. Always preserve partial transparency.

When you are ready click Next.

## Step 5:

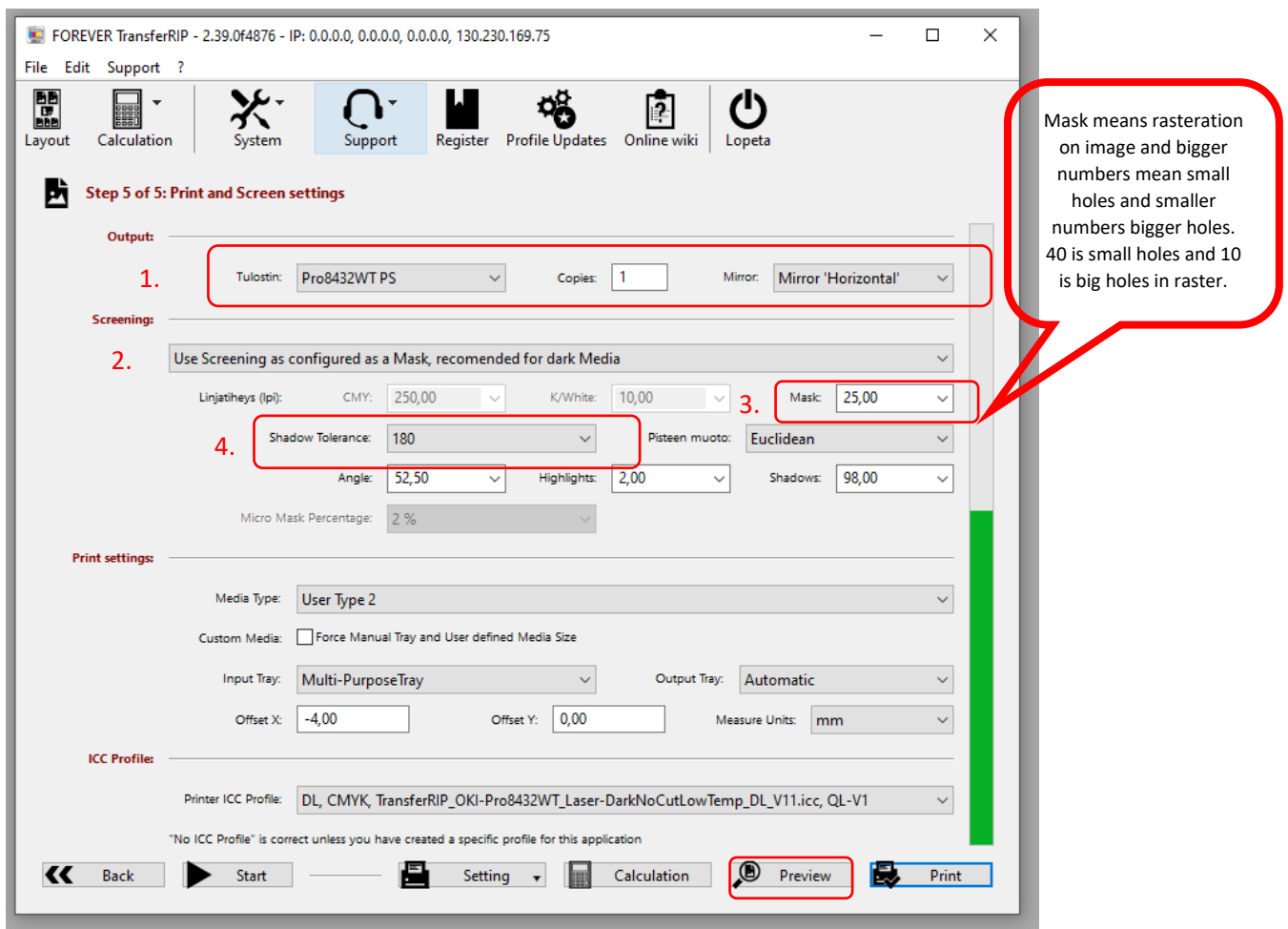


Figure 7: Printing settings

The last step is choosing some final settings and approving your preview image.

1. Check that correct printer is selected and that the image will be printed as a mirror image. This will ensure that the image is printed on the fabric facing the right way.
2. Next choose dark or light media depending on your fabric (Dark for black and coloured, light for white). If you don't want any rasteration, choose Use screening as configured.
3. Next choose mask. It means rasteration for your image and bigger numbers mean small holes in raster and smaller numbers bigger holes. For example, 40 is small holes and 10 is big holes in raster.
4. Shadow tolerance tells how much black color are taken away from the image. Bigger numbers take more black color off. If you like to remove black completely (in black fabrics) choose 180-210. Default is 100 which is okay for white fabrics.



Finally, choose preview.

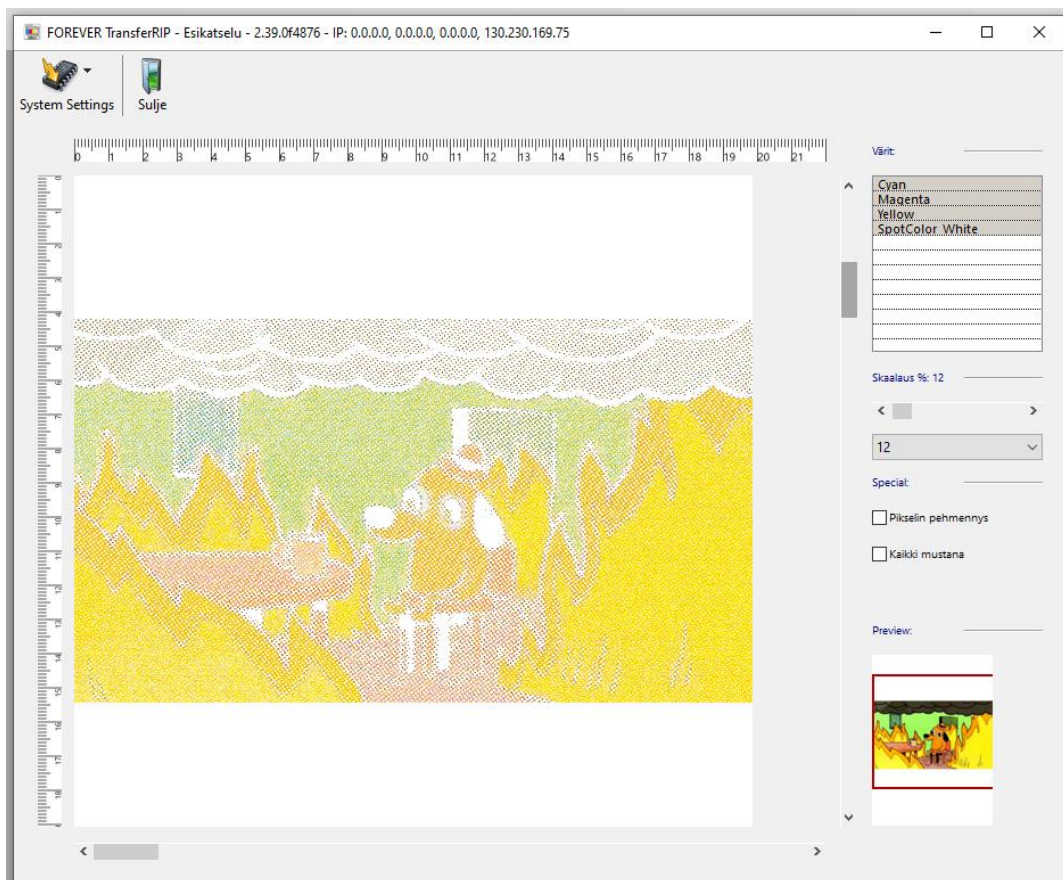


Figure 8: Final preview

In this example preview, you can see that all the black is removed because the black fabric will then provide that colour. If you are unhappy with your preview, you can always go back and change some settings. However, when you are happy with the result you can move on to printing.

## Using the printer

If you are not sure of outcome, print first on regular copy paper!

Turn on the printer from the bottom left of the machine. The staff of Fablab will provide you with the foils you need to print your image.

Open the front station of the printer for inserting the foil. Insert in portrait orientation the **matt side** of the **A-foil** facing up by carefully lifting the lid pointed in the figure 10:



Figure 9: Put the foil printing side up by carefully lifting the lid.

Press print in the printer software. The processing can take a while. The printer will notify it is ready to print your image when this screen shows up (figure 11):



Figure 10: Printer ready to print.

If the foil is on its place, you can press the **on line** button to start printing. The printed image will come out from the top.

## Pressing your print on fabric

Next you need to press your image with the heat press to get it stick to fabric. **Use the INSTA heat press**, which is also shown in the figures. First step is to turn it on.

Next set its temperature and timer. You can switch between time and temperature by pressing mode button on the left. If time/temp. is not correct you can change it by pressing set while lowering/increasing the temperature or time with the arrow keys. For **cotton** the temperatures and timers are:

- temperature to 150 °C and timer to 90 seconds  
**This temperature is for transferring B-foil to A-foil!**

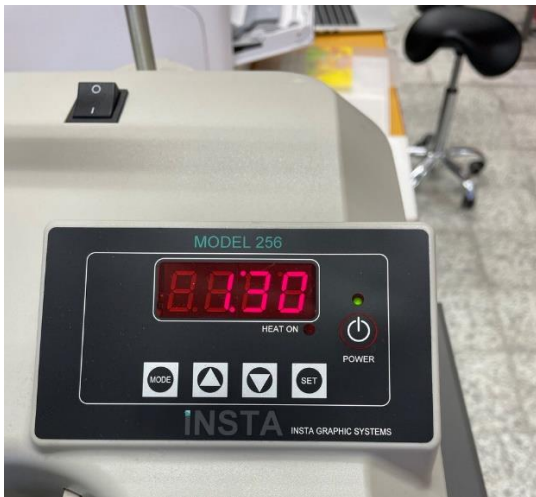


Figure 11: Settings for the heat press.

### Step 1

**Read all the instructions in this step before starting the work.**

Before pressing your image to textile, you need to transfer B-foil to A-foil

**Temperature to 150 °C and timer to 90 seconds.**

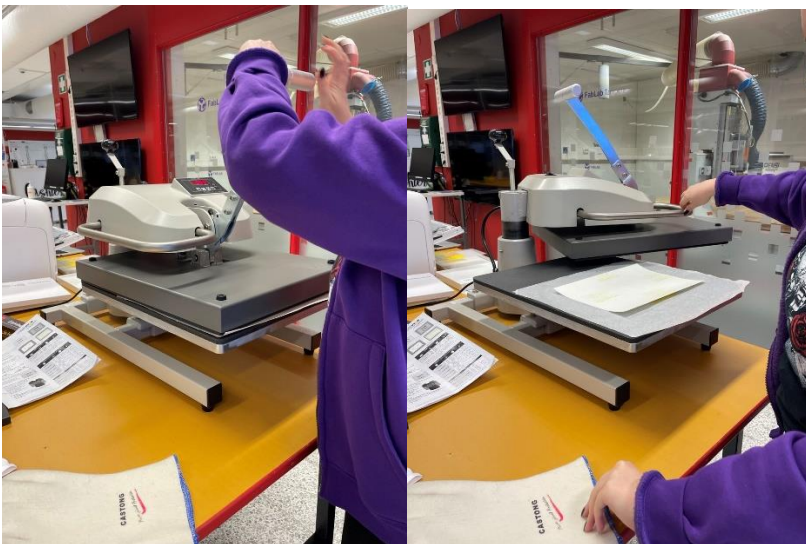
Press the lever of the heat press down to preheat the lower plate. Open the heat press by sliding the upper plate into right. Be careful as the top plate is very hot at this point. Place the A-foil in the middle of the lower plate **printed side facing up**. Then place the B-foil on top of the A-foil **text side facing up**. Then cover foils with baking paper (can be found next to heat press).



**IMPORTANT!!!!**  
**PRESS THE LEVER**  
**ALL THE WAY**  
**DOWN!**

*Figure 12: Setting for the first press. Lock the press down with the lever.*

Turn the press back into its place and press it down with the lever. The timer will automatically start to count time and the press will start to make noise when it is ready. Open the press by pulling the lever up and moving the upper plate aside.



*Figure 13: Open press by lifting the lever and sliding the top part to right.*

When you open the press, you have to work fast. **Do not remove the foils from the lower plate!** Remove as quickly as possible B-paper from A-foil with one rolling motion. Work in **SLOW, LOW AND FLUID MOTION.** (Figure 15).



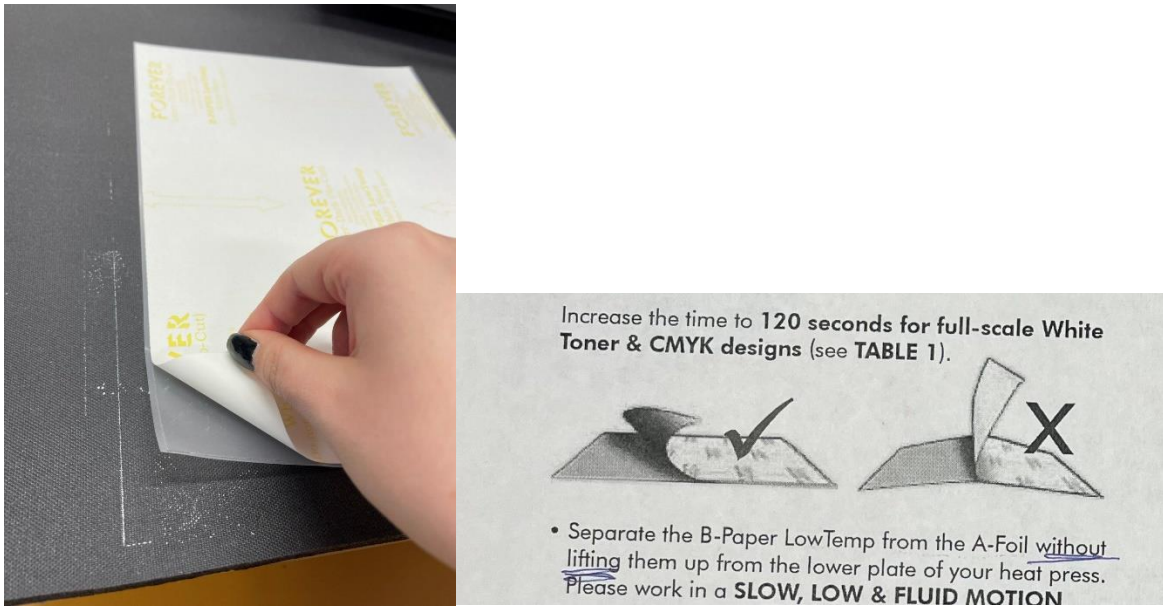


Figure 14: Remove the B-paper gently from the A-foil with one smooth motion.

When you have separated the foils, the image is ready to be pressed on the fabric. However, **cut extra foil off** from the sides so that possible white scratches won't be transferred into fabric as well.

## Step 2:

Now it is time to press the image to textile. Put your textile on the lower plate of the heat press and place baking paper between the textile and lower plate. Make sure that the fabric is clean and straighten out. Then place your print printing side down on the fabric and adjust its position to your liking. Lastly, put another piece of baking paper on top.



*Figure 15: Setting up your print for the press.*

Pressing your image to the fabric, temperature should be 150 °C and timer **30 seconds**. Set the timer as you did before.

**If you are using some other fabric material, please see appendix A and B, which have the TransferRIP own directions for pressing and will give you the correct temperature and pressing time for different materials.**

When everything is ready, turn the press back into its place and press it down with the lever. The timer will automatically start to count time and the press will start to make noise when it is ready. Open the press by pulling the liver up and moving the upper plate aside.

**Remove the A-foil after it is completely cold.**



*Figure 16: When the paper is ready for removal, remove it with smooth and low motion.*



*Figure 17: Freshly pressed image that has ripped slightly.*

After removal the image is glossy and not secured enough. To improve its washability and to get rid of the glossy look, the fabric needs to be repressed. For this, place the fabric again on the lower plate of the press and put baking paper both under and top of it. **Press for 30 seconds 150 °C.**

Open the press, take the fabric off and that is it! Enjoy your freshly customized textile.





Figure 18: Ready print.



Figure 19: Comparison of the print on white and black fabric.

Here next is the TransferRIP own directions for pressing the image. First one is for light profile and the next for dark profile.