Working with Artwork

OVERVIEW

Once the driver for the GTX is installed, and the printer is calibrated, we can move on to working with artwork in our graphics program. There are several important steps to take when setting up files before printing. In this section, we will go over artwork requirements for using the most common graphics programs along with the software that comes with the printer and importance of its use.

Before beginning to edit any artwork or bringing in an image, you will first need to: print color charts for any color matching items that you plan on performing, bring in the color palette for the printer into the program, and set up the workspace with proper color management settings.

Once we bring artwork images into our program that are above or at 300 dpi, we can then begin any editing specific to utilizing the printer. Here we will remove the background, match colors, convert the color profile, change the white level setting, clean up edges, and merge all layers. Afterwards, we will need to save the file as a .png format; if we are getting a file ready to print directly. We will then cover the driver settings including those that directly handle ink volumes.

KEY LEARNING OBJECTIVES:

- ☑ Go over settings from the manual
- ☑ Importing the color palette
- ☑ Setting up your program workspace for color management
- ☑ Printing the color charts
- ☑ Resizing artwork
- ☑ Changing key file settings
- ☑ Making white visible for a print
- ☑ Artwork preparation
- ☑ Matching Colors
- ☑ Knocking out basic backgrounds
- ☑ Cleaning up edges of artwork
- ☑ Dealing with Gradient artwork
- ☑ Not printing Black on a Black shirt
- ☑ Using Graphics Lab
- ☑ Saving project files for Graphics Lab
- ☑ Saving output presets for Graphics Lab
- ☑ Optimizing Artwork Colors
- ☑ Merging Artwork and Saving it out for later use
- ☑ What are Highlight and Mask Settings
- ☑ Driver Basic Tab Explained
- ☑ Driver Advanced Tab Explained

ADDITIONAL DOCUMENTATION:

GTX Maintenance - Adobe Photoshop Basic Artwork Setup for Printing

GTX Maintenance - Adobe Photoshop Color Management for Printing with GTX

GTX Maintenance - Adobe Photoshop Color Matching and Replacement for Printing with GTX

REVIEW THE USER MANUAL:

The user manual contains a lot of useful knowledge in this section we will point you to the areas that go over using the printer with Graphics Programs such Adobe Photoshop, Illustrator, Elements, and Corel Draw.   In addition; we will lead you to the section about how files are created, and how the printer interprets some file types.

- Where can I get the User Manual?
- Where the artwork information is in the manual.
- Basic file creation guidelines from the manual.

COLOR PALETTE BASIC:

One of the first things we need to do once we open our graphics program is load the appropriate color palette in case, we need to match colors of our artwork. These files are located within Useful Tools. We will go over the process of how to load the color palette for each of the options that are available for use with the printer.

- What is the color palette?
- What do I need the color palette for?
- Where do I get the color palette?
- How do I load the color palette for my specific program?

COLOR MANAGEMENT BASIC:

Along with the color palette, the color management settings that will drive the artwork program that will work best with the GTX need to be setup before we begin taking further steps. The reason we want to do this is so that we get the optimized color output that comes closest to the color from the ink set's color gamut or capability.

- What are color management settings?
- Why you need to set them?
- How to set these for the program that you will be using.

PRINT COLOR CHART:

We can print the color charts at any time using the files located in the Useful Tools folder. The color charts printed on the garments that you will be using are direct indicators of the colors that you can produce and how they will look when printed. The color chart serves a secondary purpose of matching colors using specific color chip charts. We will discuss how to get the color chart, printing them, and how to use them.

- What is a color chart?
- Where do I get the color charts?
- The color charts are in PDF format; How do I print the color charts?
- What can I do with the chart?

- Using the chart for color-matching and replacement.
- What is a chip chart?
- How to do get and use the chip chart?

STEPS TO FOLLOW FOR ARTWORK CREATION:

There are steps to follow for artwork creation when using a graphics program. We will go over the steps to follow for doing this with Adobe Photoshop in the sections to come. In this section we will give the brief overview of steps to be performed when creating these files with four common programs that are used to create artwork: Adobe Photoshop, Adobe Illustrator, Adobe Elements, and Corel Draw.

- Artwork Resolution size requirements.
- What will need to be done for creation with Adobe Photoshop.
- What will need to be done for creation with Adobe Illustrator.
- What will need to be done for creation with Adobe Elements.
- What will need to be done for creation with Corel Draw.

SUPPORTED FILE FORMATS TO USE WITH THE PRINTER:

The GTX printer is still a printer and can technically print a variety of documents and files when used. However, this serves no beneficial purpose for example to print a text document using this printer. The true thing to understand about file formats and this printer is that there are benefits to using certain file types with the printer and with Graphics Lab.

- Can the printer send files from other programs than those mentioned in this tutorial?
- What file formats are beneficial to use with the printer?
- What file formats can be problematic?
- When saving out files what types should I use?
- What file type works best with Graphics Lab?

CREATE THE TEMPLATE SIZE:

Before we bring artwork into the program, we should first create a template based off the platen size we are attempting to utilize. This gives us a true idea of the size relationship of what our artwork will be in the print area and if resizing of the image is needed before editing any further. In this tutorial we will demonstrate template creation with Adobe Photoshop.

- What is a template?
- Where can I create a template?
- What settings should I use when creating a template?
- Platen sizes that are available.
- Saving Templates.
- Running action scripts equivalent to template sizes.

INPUT THE ARTWORK:

Once we have our canvas size up in the program, we can import our artwork. The reason we choose to place or drag-and-drop is we want after creating a template versus using the import function. Bringing in artwork that is too small in resolution size can

cause very rough pixelated edges for artwork. We will go over the methods commonly used to input artwork into Adobe Photoshop in this tutorial.

- What is image resolution and why is this required?
- How to use **Place**, to add an image.
- Can I drag-and-drop artwork into the program directly to the canvas or background?
- What happens if I open an image without using a new file based on the template?

RESIZE THE ARTWORK:

Resizing artwork is a necessary step to take to ensure the artwork will be the size we want on our printing media. As mentioned previously, working with images that are very small in resolution can be problematic. Images should be at least 300 dpi to make them up bigger and still look good. We can then resize them to be a larger size to fit our garment or other media. We will go over how to perform the resizing operation within Adobe Photoshop to change the image size and items to be aware of when we do this.

- What resolution does an image need to be?
- How do I resize the image?
- What will happen when you resize an image, aside from changing its size?
- What is anti-alias?
- How can I correct anti-alias?
- Can I use an image that is less than 300 dpi?

CMYK TO RGB:

The GTX printer can print CMYK or RGB artwork, however the color profile will be off if you leave artwork as CMYK. Artwork should be changed over to RGB as one of the initial steps of using it with the printer. The printer will not print colors accurately if an image is left in CMYK color mode. The printer is an RGB printer and therefore the color management settings or color profiles for the program needs to be changed to reflect that. In this tutorial we will go over how to determine what the file type is and how to change it within Adobe Photoshop.

- Where you can find your image's file type?
- How to change this setting.
- Example of what will happen if the color mode is not converted to RGB.

KNOCK OUT THE BACKGROUND-PHOTOSHOP:

A lot of artwork and images are created on white or colored backgrounds. This is fine for viewing an image, however most apparel and printed media are not on a rectangle or square. In this tutorial, we will go over how to remove a background using one specific method. We will go over the tools available to remove the background within Adobe Photoshop and where we can find additional information to support removal of backgrounds using different techniques.

- Why and when to remove a background.
- How to remove the background with the Magic Wand Tool.
- What tools can be used to remove a background?
- What other methods can I use to remove a complex background?

EDGE CLEAN UP:

If we are removing a background, or the edges of our artwork have never been cleaned up it will create pixelated in the form of anti-alias and can cause the printer to interpret the data around the edges in a manner that cause droplets or outlines around the perimeter of the artwork. In this tutorial, we will go over the method to use in Adobe Photoshop to clean up and soften the edges of our artwork then saving it for use in Graphics Lab.

- Examples of using edge clean up and not using it.
- Another method to use for solid border edges such as line art.
- How to use the magic wand to delete and soften the edges.
- Saving the file for use with Graphics Lab.

WHITE/COLOR ADJUSTMENT-OPTIMIZING ARTWORK:

Sometimes artwork can appear dull and result in a dull print. You can change this with the artwork by adjusting the color balance within the program. Punching the color up is a subjective process where someone will have to decide what they feel looks best. Brother does provide an optimization action script for Adobe Photoshop if you would like to request that script and load it.

- How do I optimize the artwork?
- When would I perform this process?
- Is there a way to speed this process up?
- Loading the action script that Brother provides.
- Are there other ways to adjust vibrancy?

MERGING LAYERS:

Once our file is ready there are a couple of things we will still need to do; such as merge the layers and make white visible. We need to save out our files if this is an editable file format, we should save that format and save a merged version. Once we are ready to proceed, if we need to create a file that has a gradient, we are going to need to save a merged file out. In this section we will go over how to merge layers.

- Saving items in a smart manner to avoid losing time.
- Merging the file for output through another program.
- When do you need to merge layers?
- How to merge layers.

CONVERT 255 TO 254:

After we have our image ready and files saved we still need to convert white to a visible white that the printer picks up. To convert pure white to a white that is visible to the printer, we will need to adjust the levels of the artwork. The printer reads pure white or white with an RGB value of Red 255, Green 255, and Blue 255 as if it is an invisible background like how a desktop printer would treat paper. To get the printer to see that you intend for white ink to be laid down you will need to change this setting to 254 white. This minor adjustment will then be interpreted as white ink in this area.

- Why do I need to adjust 255 to 254 White?
- How to perform this adjustment using levels in Photoshop.

- A quick way to perform the adjustment without going to levels.

SAVING ARTWORK IN GENERAL AND FOR GRAPHICS LAB:

To save on time, if adjustments to artwork need to be made later, save your files in an organized fashion with dates. Performing this action can save you costly hours of reworking an image that you previously already made. Additionally, you will need to save your files to be a certain format for Graphics Lab. We must do this if our artwork contains fades and gradients. In this section, we will go over how to organize your files and how to save out your files for when needed for Graphics Lab.

- Why is it important to save my files in an organized manner?
- How and when should I save files to prevent time loss?
- How do I save the file out for using it with Graphics Lab?

INK VOLUME+WHITE VOLUME:

We are now ready to output a file or print the file directly; however, we need to understand the basic of adjusting ink volume settings. In this section, we will go over the controls within the driver for adjusting the ink volume and which setting adjusts ink volumes when printing with white ink.

- What is the Highlight setting?
- Example of what this controls.
- What is the Mask setting?
- Example of what this controls
- What is Minimum Whiteness?
- Example of what this controls.
- Link to a video explanation.

REVIEW PRINT DRIVER SETTINGS (MAIN):

In this tutorial we will go over the settings found within the driver. These items are important to understand as they control the volume of ink laydown, print area, which print mode and inks will be used, as well as whether to use the background color of the garment, and whether to use Color Multi-Pass.

- How to get to the main tab of the driver.
- What options are on the main tab.
- Location of the description of what the function does.
- Examples of what changing settings are for.
- Selecting the Machine Mode.
- Selecting the Platen Size.
- Selecting and Ink Type.
- What is the difference between each Ink Mode?
- Examples of each Ink Mode.
- Selecting the Print Mode.
- What is Normal Mode and Eco Mode?
- What is the difference between Normal and Eco Mode?
- Resolution setting – Why is this always set?
- White Ink Settings – Highlight and Mask.
- Color Ink Settings – Ink Volume.

- Color Ink Settings – Double Printing.
- Use Background Black Explained by example.
- Color Multi-Pass Printing – Explained by example.

REVIEW ADVANCED TAB SETTINGS:

The advanced tab of the driver expands with some more detailed settings. These items are more so for when you need to make very specific adjustments to try and get a certain effect. In this section, we will discuss what each of these settings does.

- What is the Transparent Color setting and the tolerance?
- What is Minimum Whiteness?
- What is the difference between Normal and Special?
- What does adjusting the Choke Width do?
- What does White/Color Pause do?
- What will happen if I adjust the Color Processing sliders?
- Examples of adjustments to Saturation, Brightness, and Contrast.
- What does Color Balance adjustments do?
- Examples of Color Balance adjustments.
- What does Uni-Directional Printing do?
- When would I need to use Uni-Directional printing?

CREATE AN ARX4 FILE:

Once we have input the settings that we want our artwork to be set at we can output our ARX4 file. This is a good way to get a view of what our file will look like on before we send it to the printer. With FileOuput selected as our printer, once we click on Print, it will send the image to FileViewer converting it to an ARX4 locked format. From here you save the locked file to use it over again or send it to the printer the one time and close the window to delete it.

- What is an ARX4 file?
- What happens when I select FileOuput and click Print?
- What happens when I select a Printer and click Print?
- Link referring to FileViewer details.
- Link referring to Printing – Auto-Job Delete.
- Link referring to Printing History.

OVERVIEW OF THE DESIGN APPLICATION SOFTWARE:

The software that comes with the printer is very useful when dealing with basic images and text that do not need editing or when dealing with artwork that has been edited but has fades and gradients. In this tutorial, we will go over the basic features of this program and what functions it can perform.

- Where is Graphics Lab located?
- Is Graphics Lab part of the driver package?
- Will Graphics Lab update if I update my driver?
- What files can be used in Graphics Lab?
- What are the functions along the top tool bar? – Diagram.
- How do I add an image?
- How to add effects to an image.

- How do I add text?
- How to add effects to text.
- Using the shirt color and preview function.
- How do I remove the grid or change measurement settings?
- Saving and Printing functions.

CREATING A TEMPLATE GTPL IN GRAPHICS LAB:

When you use the save button in Graphics Lab, it is not the same as saving out an ARX4 file. Instead it saves out its own project type file called a gtpl file. This file can be reopened later to resume editing artwork before printing.

- How to save a GTPL file.
- What is a GTPL file?

HOW TO CREATE AND SAVE PRESET VALUES-GRAPHICS LAB:

Inside Graphics Lab once we click print; right next to the Preset is a dropdown. This will state default; however, this can also be very useful for remembering Ink volumes you were successful with previously for specific brand and style garments. In effect, this allows you to create a list and save it so that you do not have to memorize setting for each brand and style that you wish to print on.

- What are Presets?
- Save time with Presets.
- Example of how making a Preset works.

FOR ADDITIONAL TECHNICAL SUPPORT INFORMATION:

GTX Support Videos

GTX Drivers/Firmware