iJetColor 1175 Operator Manual

iJetColor 1175 C

Printware LLC
1.1.2

iJetColor 1175 C

Support Team

https://www.ijetcolor.com/support

Support Resources

https://my1175c.ijetcolorwizard.com/

iJetColor Wizard

Table of Contents

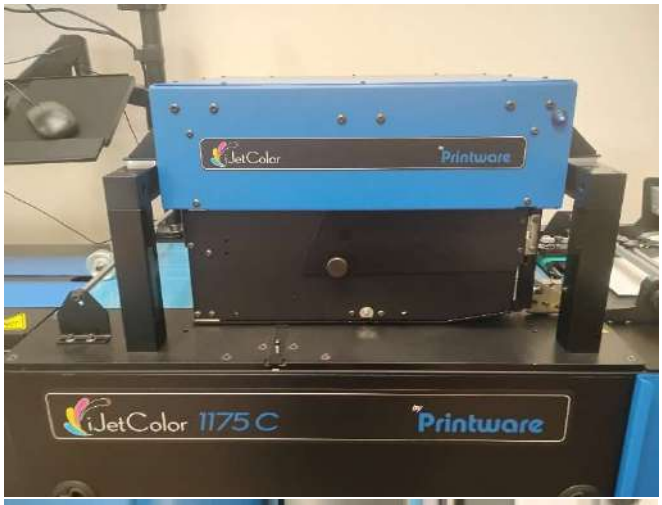
Section 1 - Installation Guide

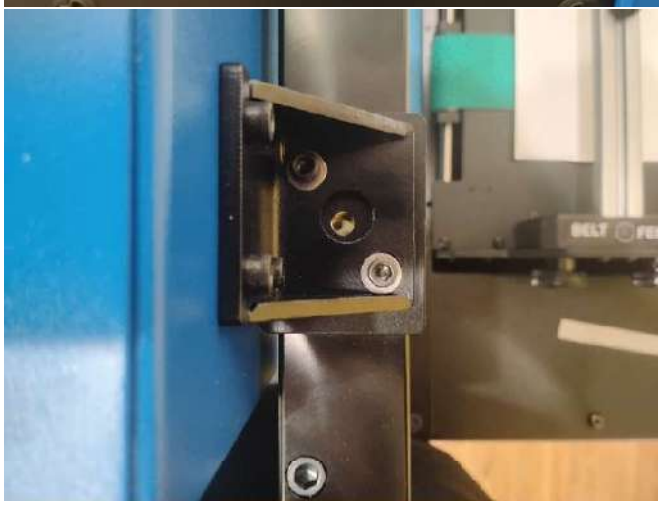
1.1 Printhead Set up and Cabling

Details on the machine set up can be found in Section 2.

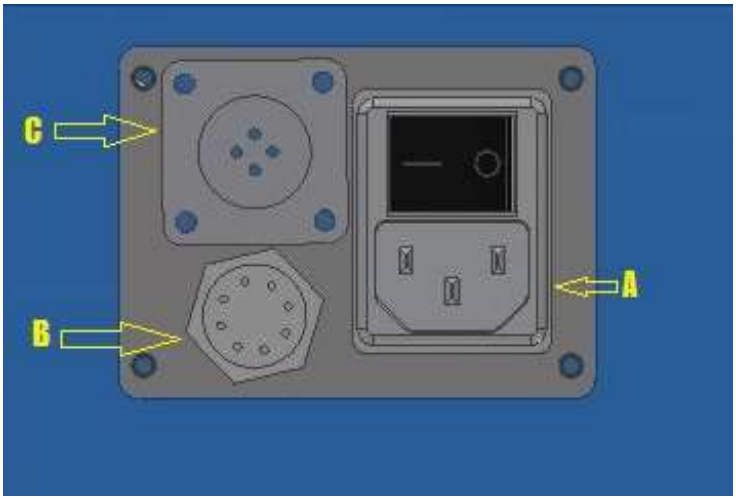
A quick overview of connecting the head and cables is pictured below:

1. Remove the printhead from the box and set it on the mounting arms. Line up the feet with the holes and insert the silver shoulder bolts.

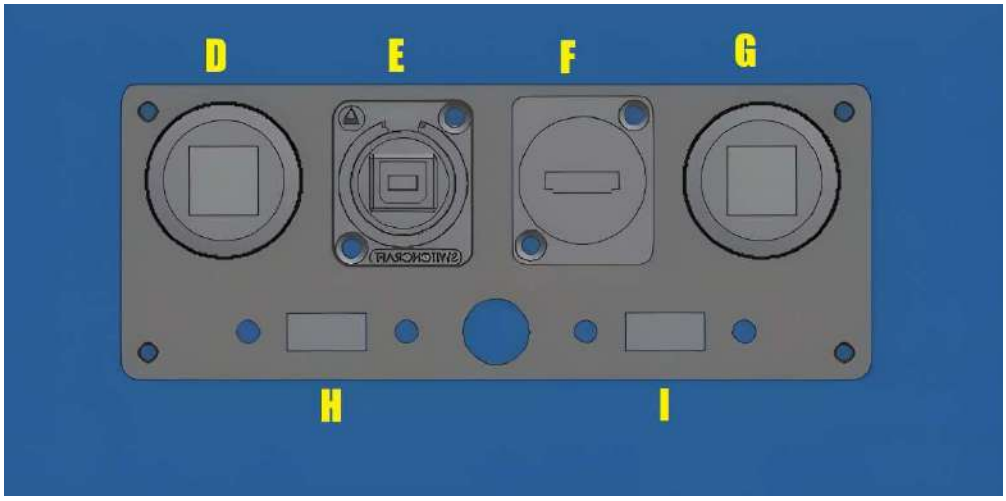




2. Insert the cables into the back of the head using the annotated diagram below:

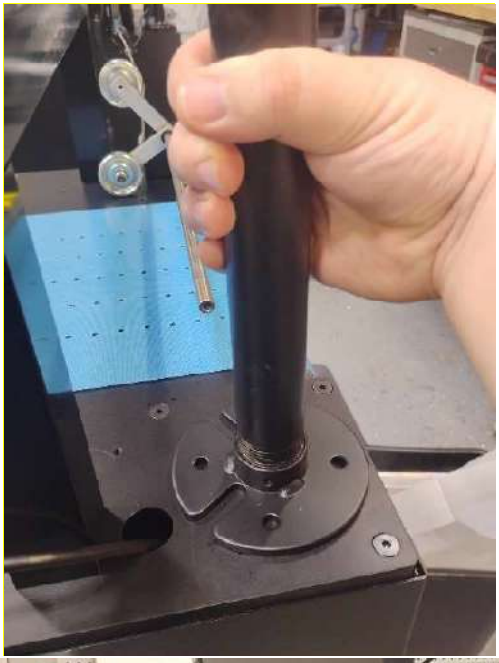


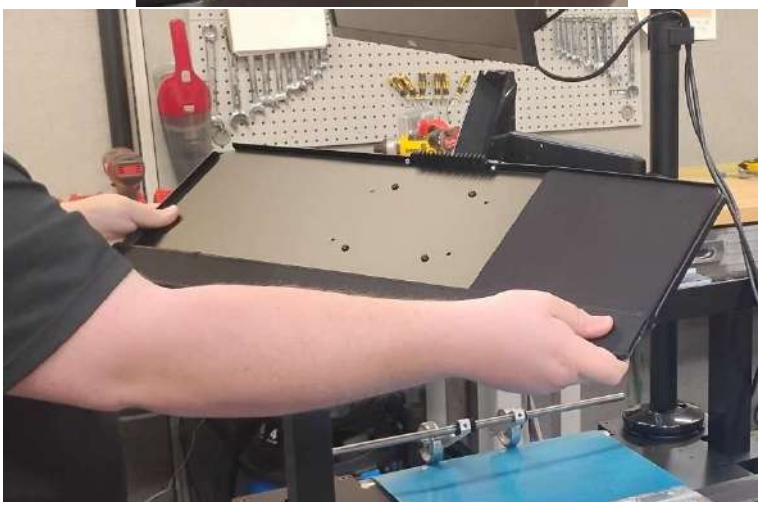
a. The power cable
b. The encoder cable
c. The feeder cable



d. Not used on the 1175C
e. USB (to RIP)
f. Not used on the 1175C
g. Ethernet (to RIP)
h. RIP – USB (to RIP)
i. Lift Controller (to RIP)

3. Attach the monitor mounting pole, then add first the keyboard arm, then the monitor arm. Tighten them in place using an M6 Allen wrench.





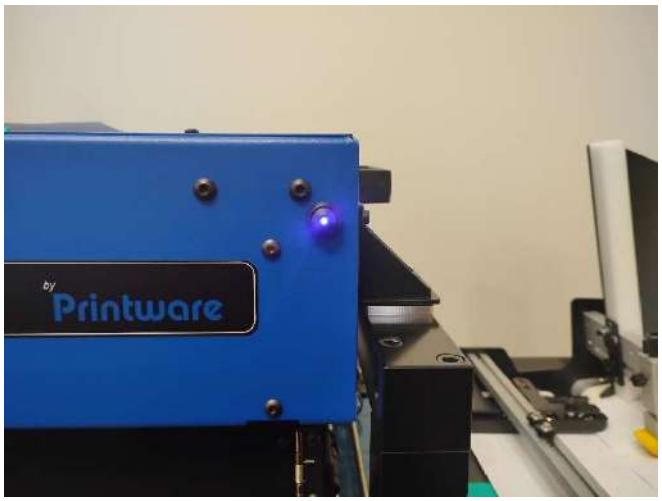
4. Insert the HDMI and power cables into the monitor.

1.2 Powering on the Printhead

To power on and off the printhead correctly, a few steps must be followed.

1. Turn on the main power switch for the base.

2. Turn on the power switch for the printhead.
3. Press the power button located on the front of the printhead. Ensure the LED is lit up to indicate the printhead is powered on.



To properly power down the printhead:

1. Press the power button located on the front of the printhead. After a couple of seconds, the LED should turn off. Once the LED turns off, you are safe to proceed to step two.
2. Turn off the rocker switch located on the back of the printhead to completely shut down the printhead.
3. You can now switch off the rocker switch on the base to kill all power to the tabletop.

1.3 Launching and Closing the Flow Software

The software for the Flow is two parts: Navigator Server and DFE. The DFE stands for Digital Front End and provides a graphical interface for printing. The DFE is dependent on the Navigator Server running to communicate with the printer.

The steps to launch the Flow software are as follows:

1. Launch the Navigator Server located on the RIP/PC Desktop background.
2. Launch the DFE located on the RIP/PC Desktop background. It will launch in your default web browser.

The steps to close the Flow software are as follows:

1. Close the DFE tab in the web browser.
2. Under the Navigator Server application, click on “File” in the upper left corner. Select “Exit” from the drop-down menu.
   Note: The Navigator Server will take roughly a minute to fully shut down the application. When shutting down, the server makes a backup of the DFE and all changes since launching. While it may appear that the server is not responding, do not force quite the application or no backup will be saved.

1.4 Introduction to The DFE (Digital Front End)

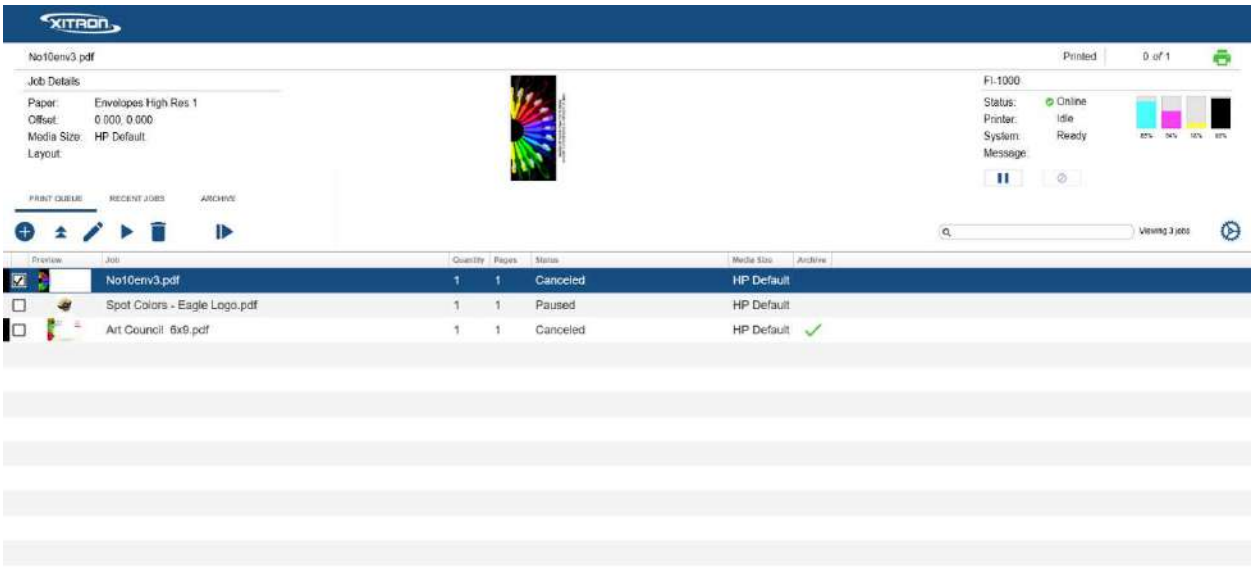
The Navigator Digital Front End is a print management system for digital printers. It supports web and sheet fed printers and printing presses from desktop to light industrial to heavy industrial.

Based on the fast and accurate Harlequin Host Renderer, the Navigator DFE can prepare your jobs. It helps you keep track of jobs, position them on paper, controls the color with several color management and calibration tools, and is ready to support a host of inkjet drive electronics and printheads from many manufacturers.

Here is an introductory look at the interface and the controls.

The main job screen is divided into two main sections:

1. The top third is feedback from the DFE and from the printer about the current print job.
2. The bottom 2/3 is the job queue.



The UI is designed to work just as well with a touch screen or a keyboard and mouse. Consult your sales representative for a recommendation of a compatible touch screen.

Looking at the top third of the main screen:

1. Feedback is always in front of the DFE operator.
2. On the left-hand side, you will find job data.
3. In the center is the thumbnail view of the current printing job.
4. On the right is feedback from the printer and printer controls.
   - Cancel or pause the running job.
   - Access the printer control panel.

The primary job ticketing is done through this interface, which pops up automatically when you submit a job:

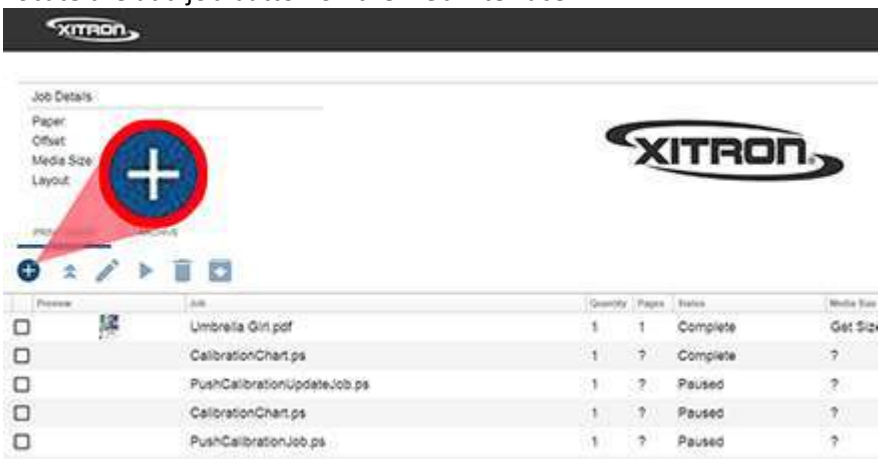
1.5 Adding Jobs to System

There are three ways to enter a job into the Navigator DFE:

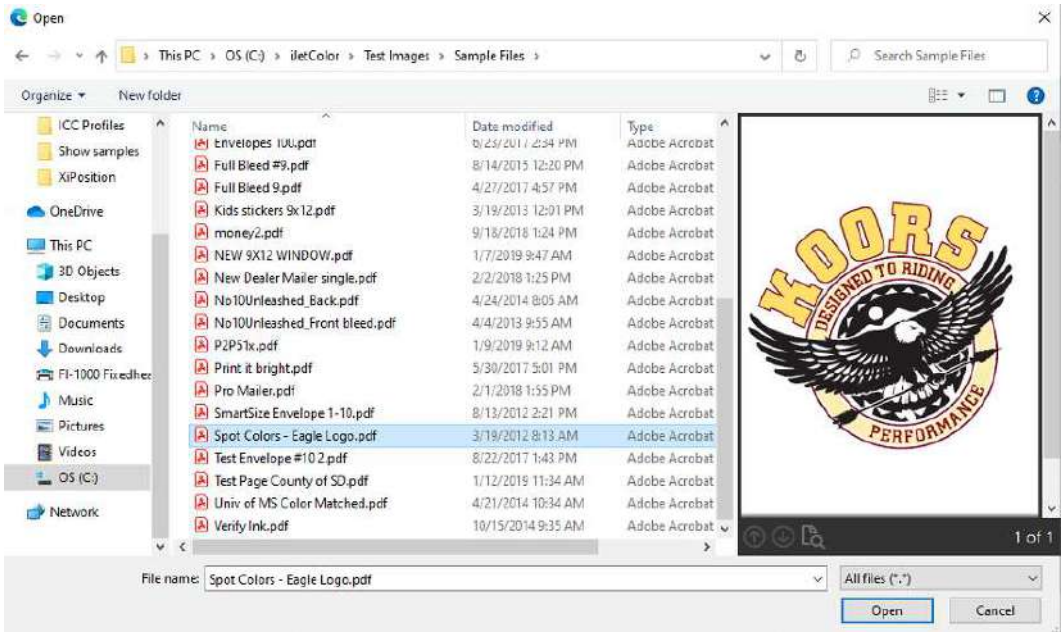
1. The Add Job Button
2. Drag and Drop
3. Hot Folder

***Add Job* button**

Locate the add job button on the web interface.

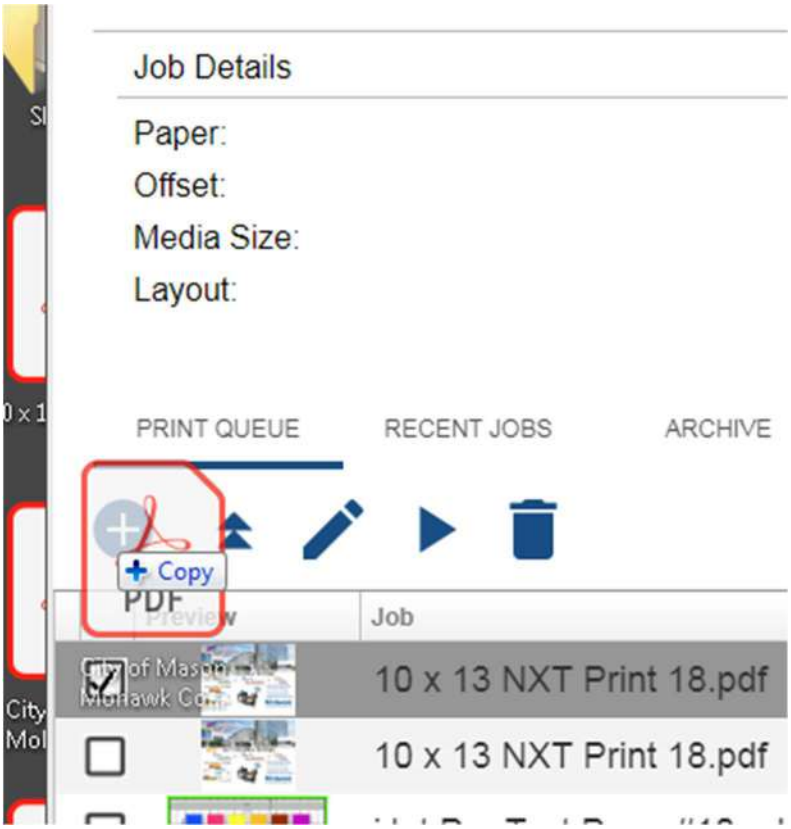


Select the + button. Navigate to your file in the pop-up window. Select your file, then select the OPEN button.

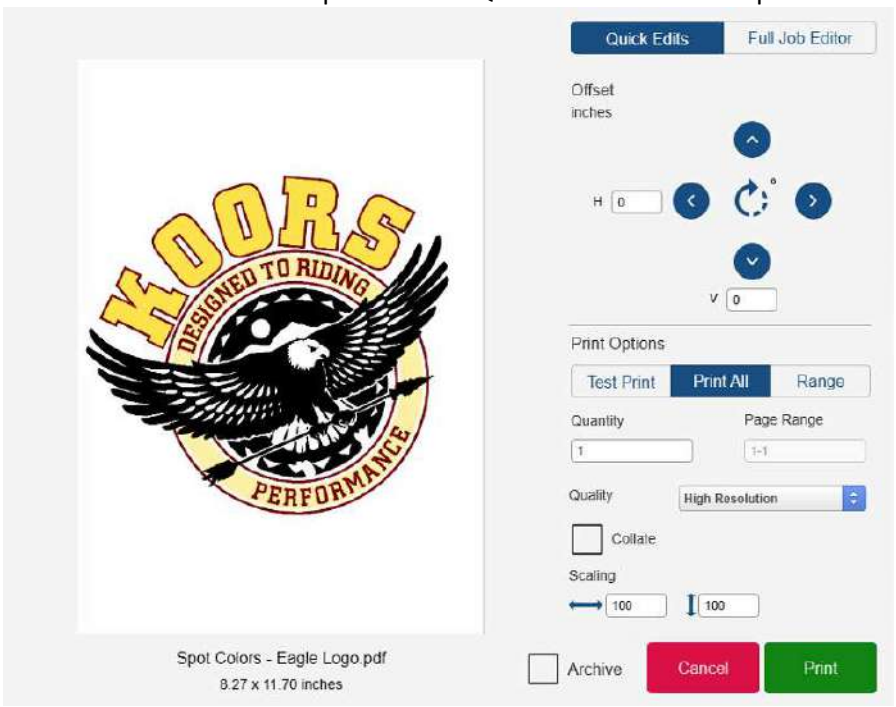


Drag and Drop

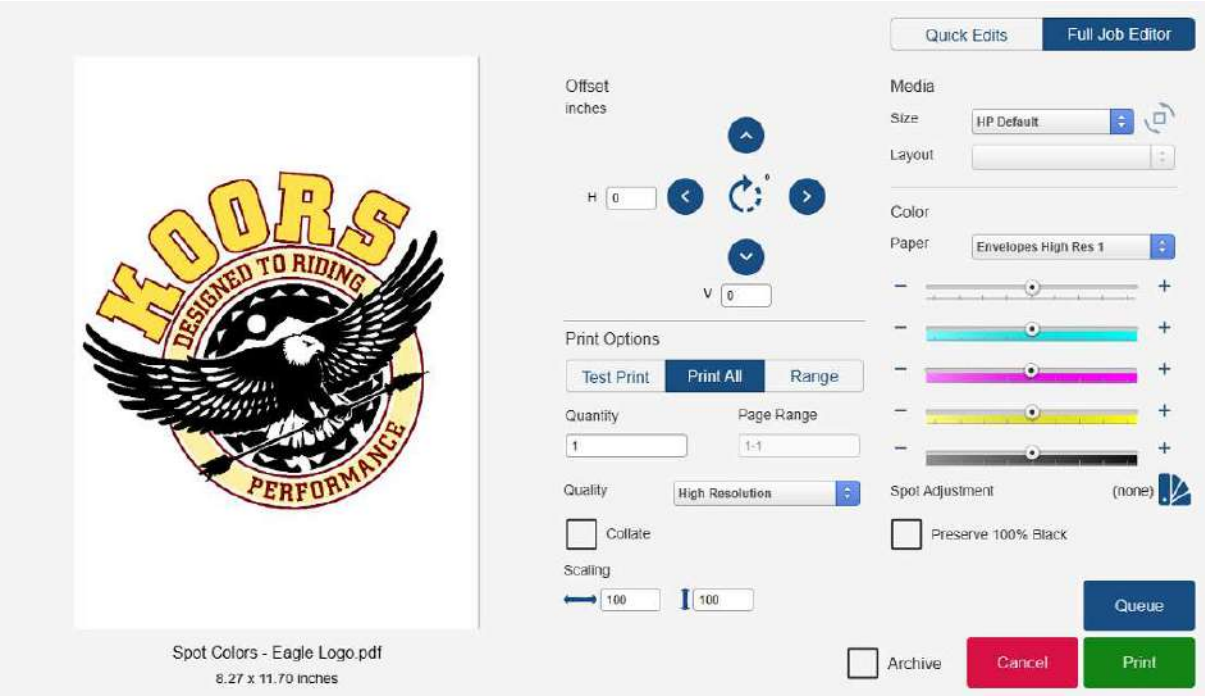
You may also simply drag a PDF right over the "Add Job" button. When the icon of the PDF says "Copy", you can drop it.



Whether you Drag and Drop or use the file navigation window, you'll come to the same job ticket window. After the file is uploaded the QUICK EDITS screen is opened.



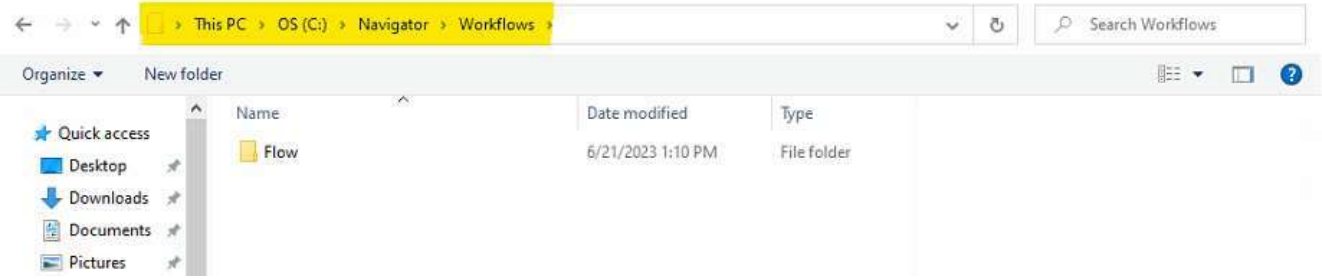
In this screen you can make various changes such as rotations, print range, collation, etc. You can also select the FULL JOB EDITOR at the top right.



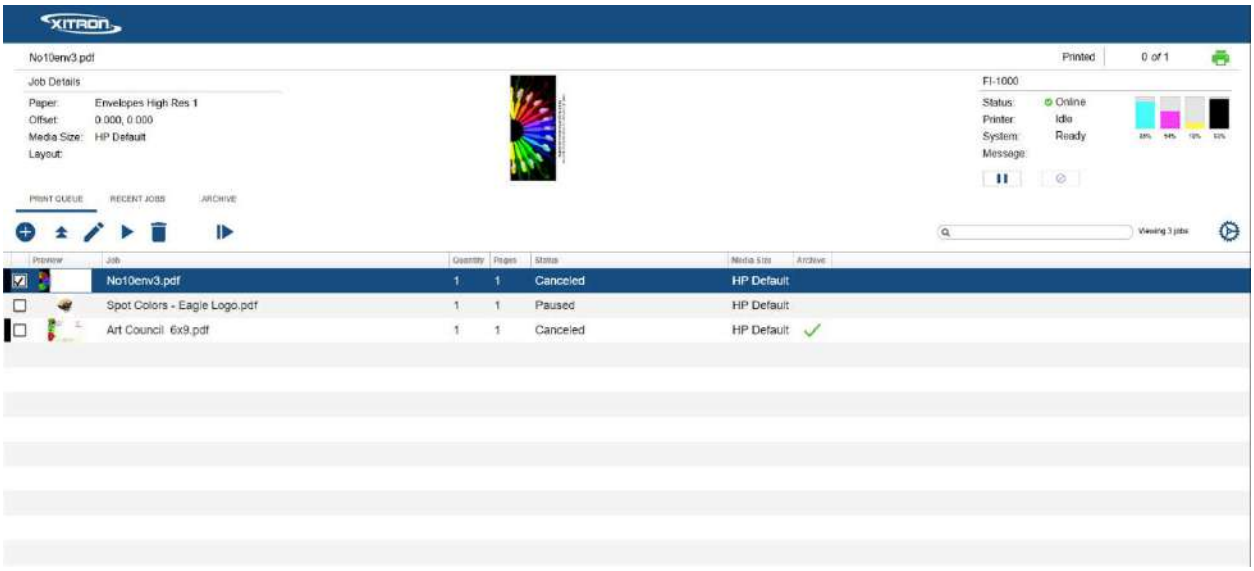
In this screen you can do the same changes as the QUICK JOB EDITOR as well as changing the Paper Profile, Overall Color Changes and Spot Color Adjustments. When you have made any necessary changes, select "Print" and your file will be sent to the printer.

Hot folder

You can save or copy or drag a PDF directly to the DFE folder at c:/Navigator/Workflows/Flow.



Files copied in this way will go directly into the queue on hold with default configuration settings.
Note: Be sure to drop the files into the *Flow* folder itself and not the parent folder *Workflows.*



You can either release the job to print or edit the job's settings before printing.
To edit the print settings first, highlight the job and click the Edit Job button.

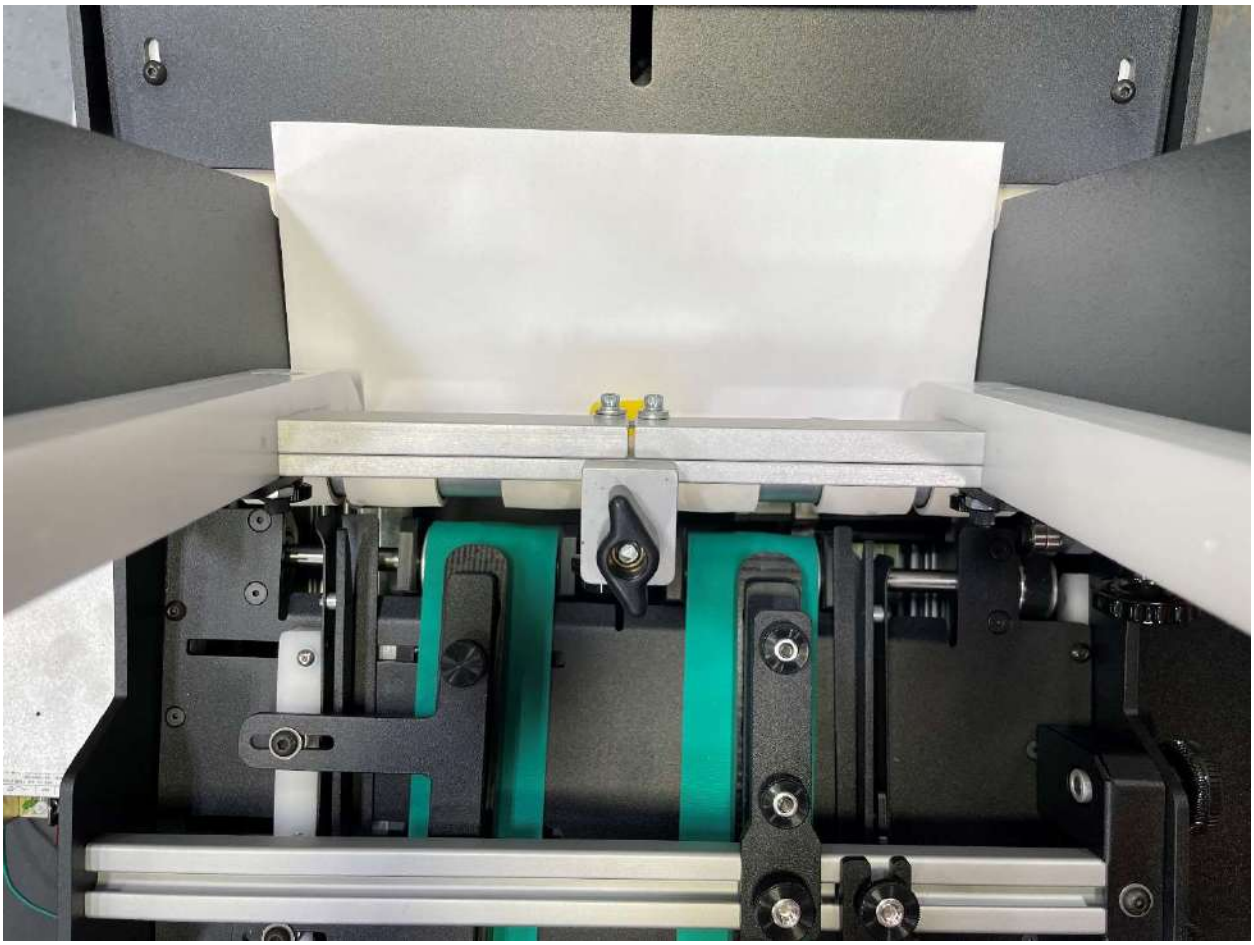
To simply print the job with default settings, highlight the job and click the Release button

1.5 Setting Up the Feeder

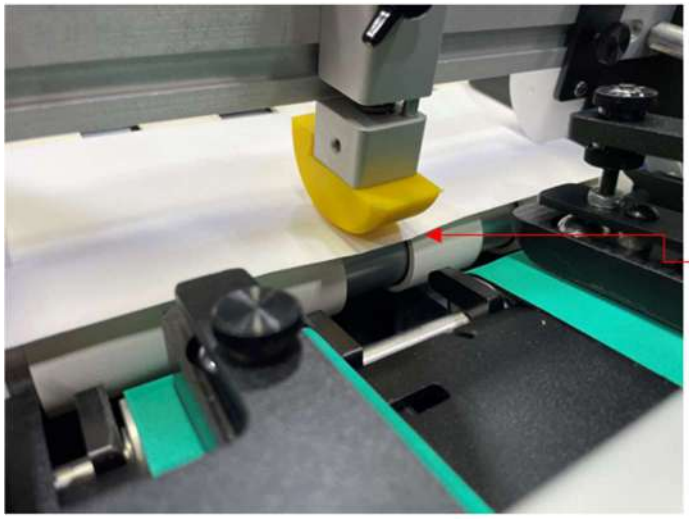
Please refer to Section 3.3 for a detailed walk through of the feeder.

To set-up the feeder:

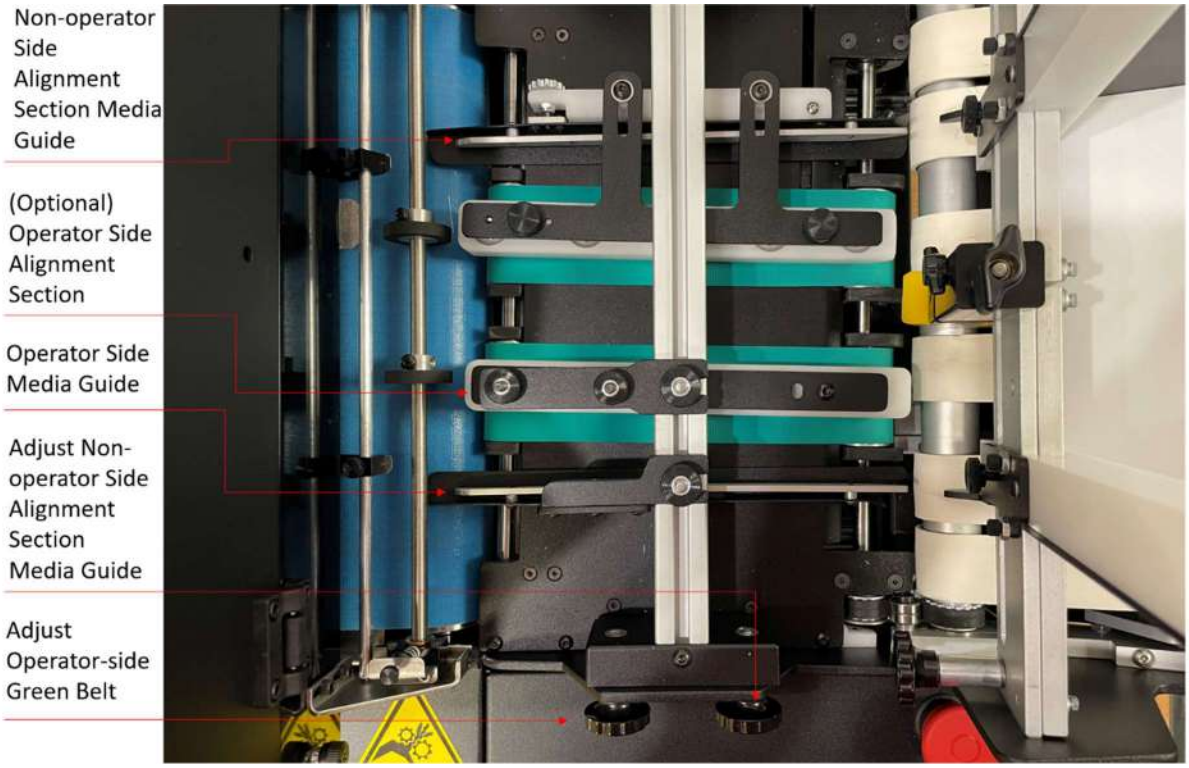
1. Adjust the paper guide fins to fit the media you wish to print. Ensure the side guides are tight but still have a 1/16th inch gap between the media.



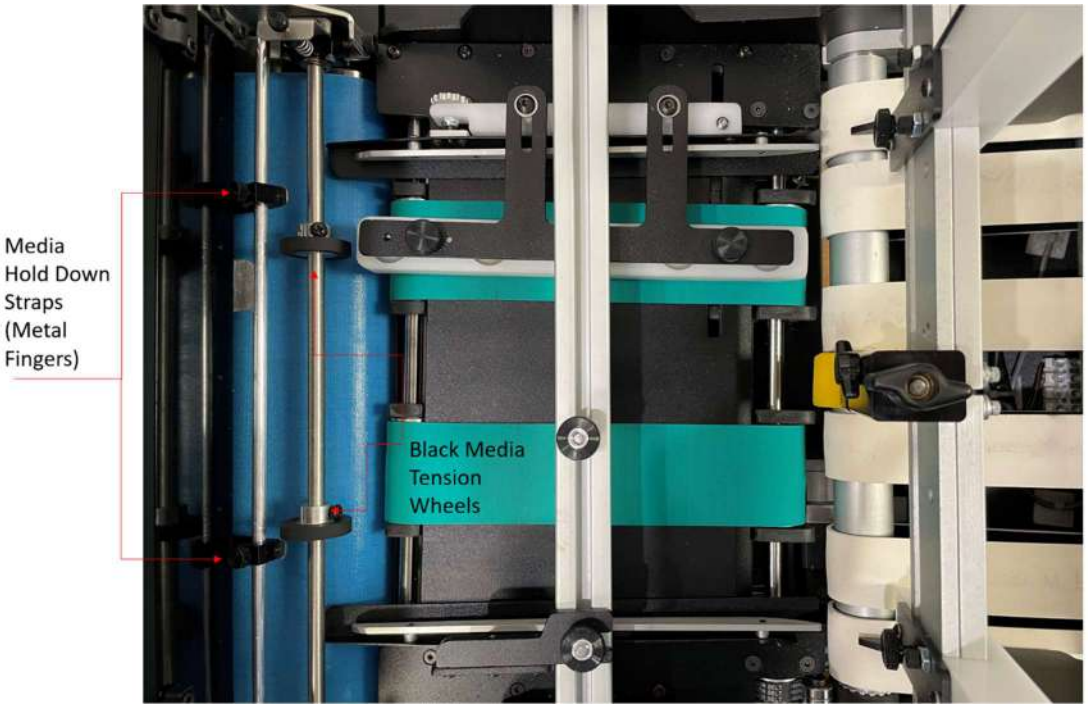
2. Slide the envelope under the yellow foot and adjust the sheet separator. Adjust until the envelope just beings to bow under the yellow foot.



3. Align the non-operator alignment section media guide and operator side media guide to the paper guide fins.



4. Adjust the media hold down straps and black wheels so they are evenly spaced, and the media passes below.



5. Use the Jog button located on the back of the feeder to ensure everything is running properly. Adjust if necessary.

Please refer to Section 3.3 for a detailed walk through of the feeder.

Section 2 – Operating the Printer

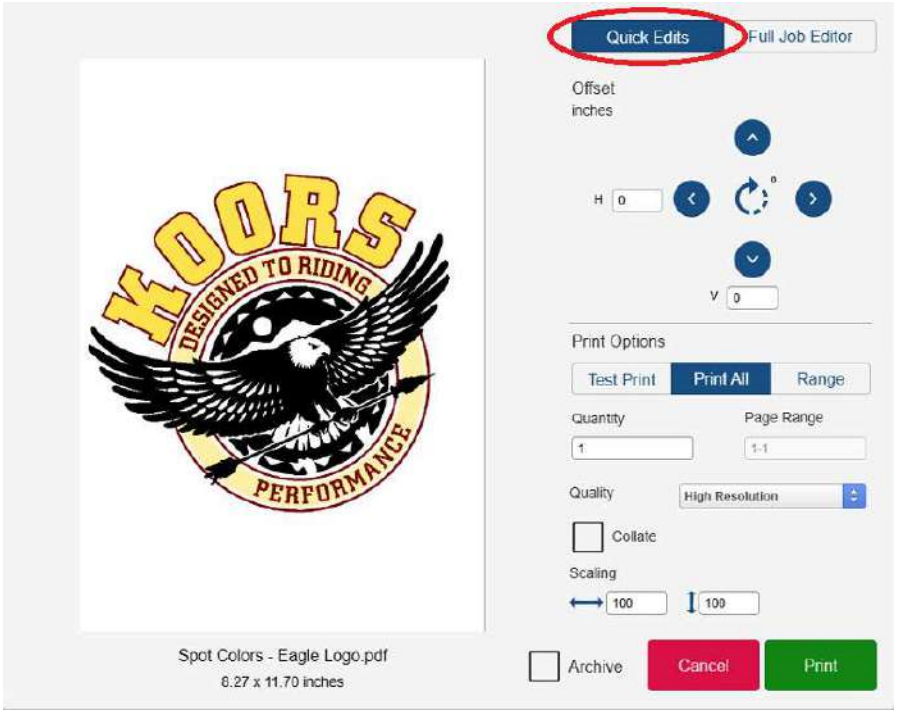
2.1 Advanced DFE (Digital Front End)

2.1.1 Editing existing jobs.

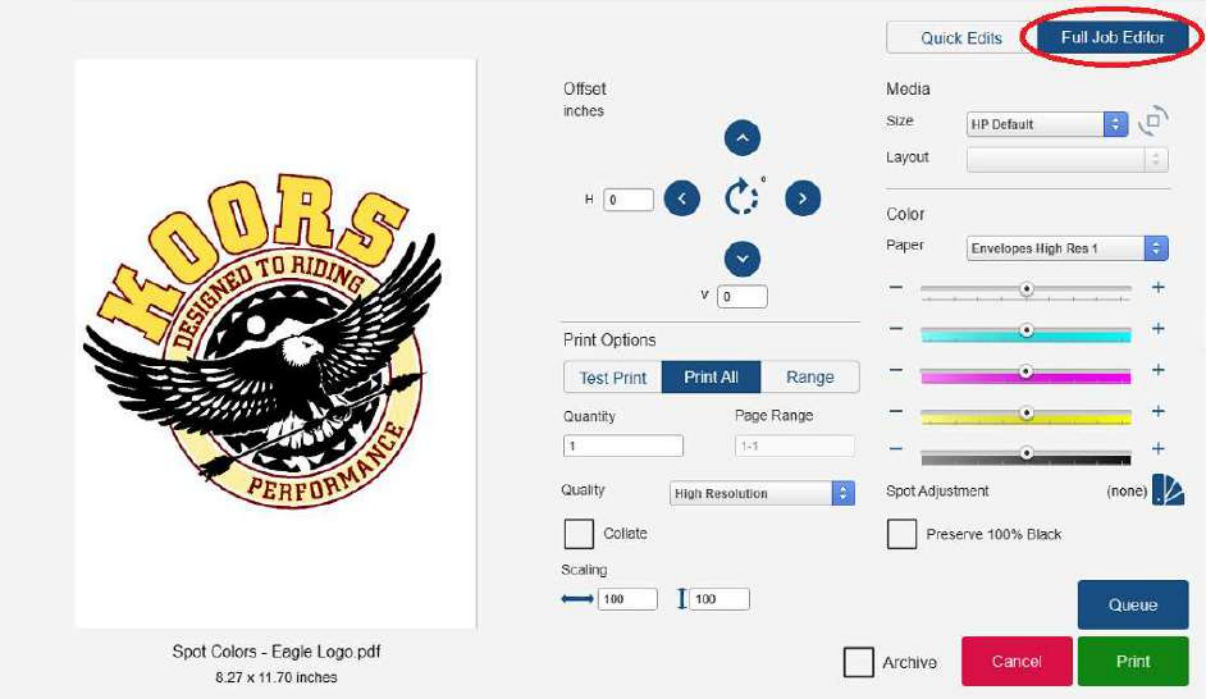
To edit an existing job in the Web Client, select the job, then click the Pencil to open the job ticket editor.

Note: Alternatively, you can double click on a job to open the edits menu.

Once selected, the Quick Edits pop-up come up



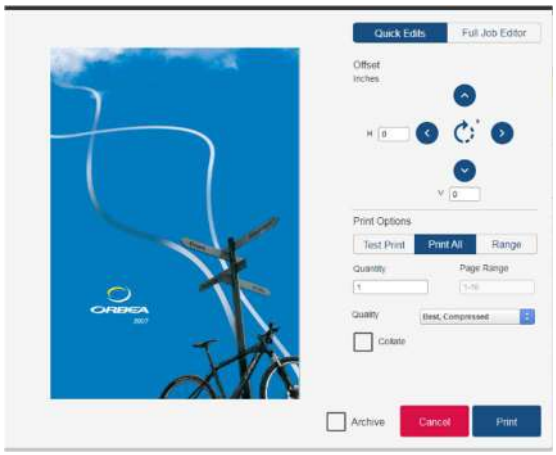
Make your changes here, or if needed select the Full Job Editor in the upper right

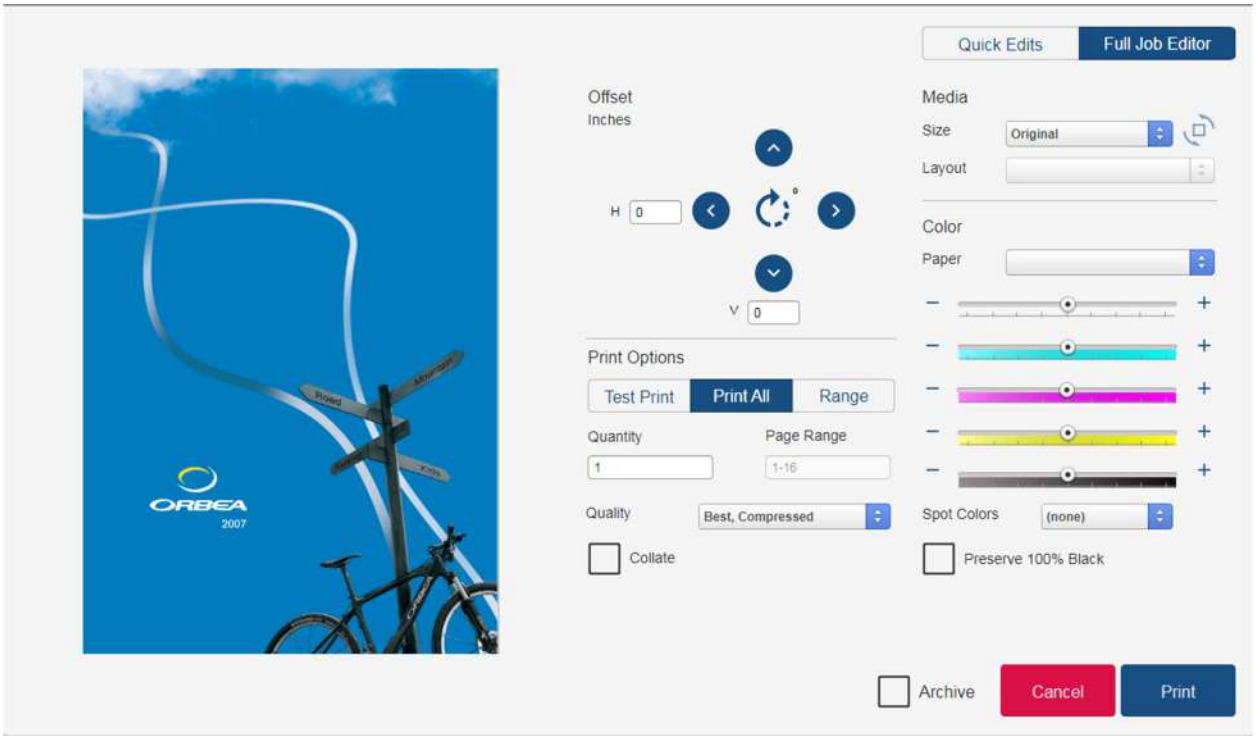


Make your changes and select print.

2.1.2 Job Tickets - More detail on printing jobs

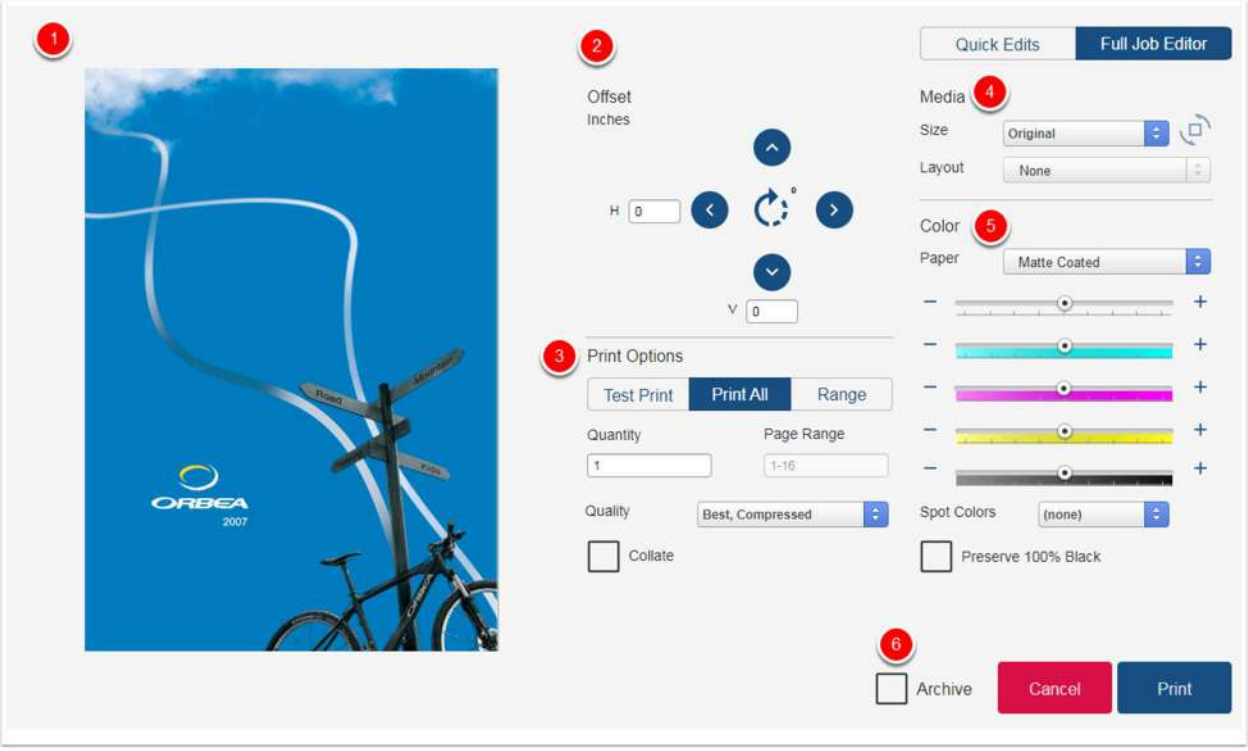
Depending on your preference, when a job is submitted it will open either the *Quick Edits* job editor or the *Full Job Editor*.
Examples follow.





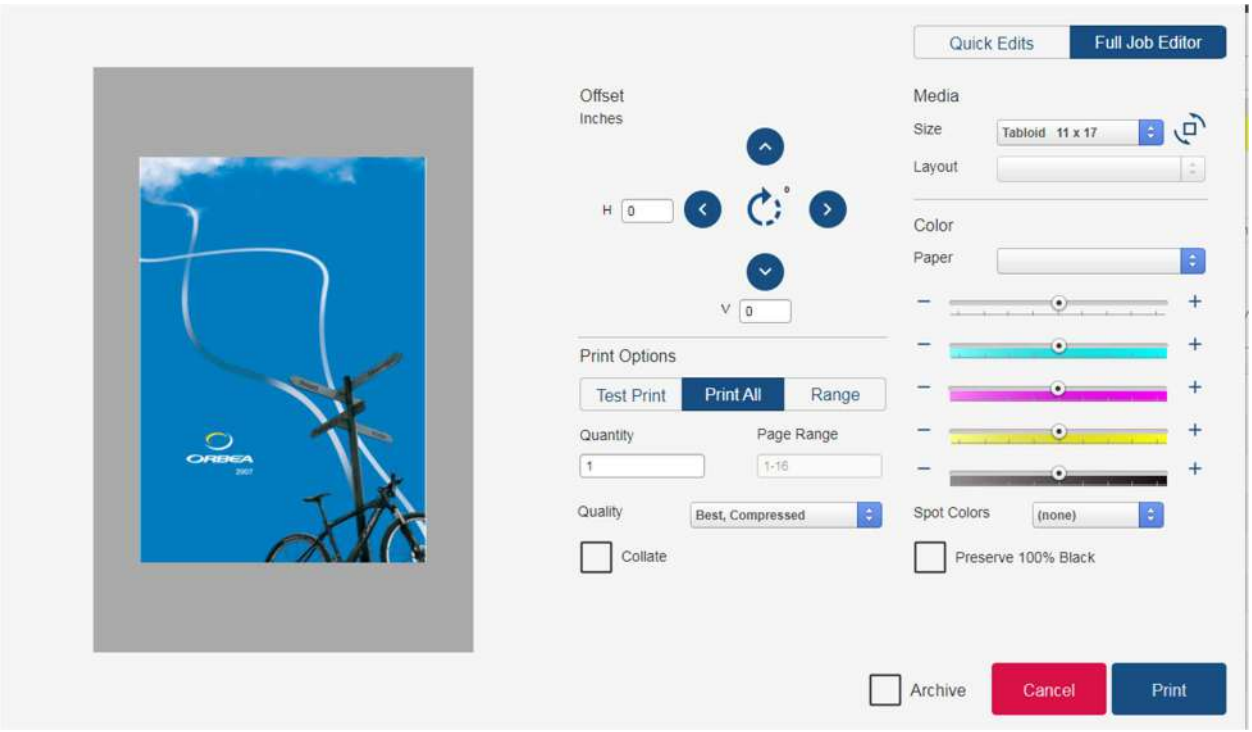
We'll use the Full Job Editor to **walk through the controls**.

1. Thumbnail preview of page 1 of the input PDF file.
2. rotate and move the PDF on the media
3. print options. page range, page order, copy count, quality
4. Media size, layout on media (imposition)
5. Color management
6. Archive on/off

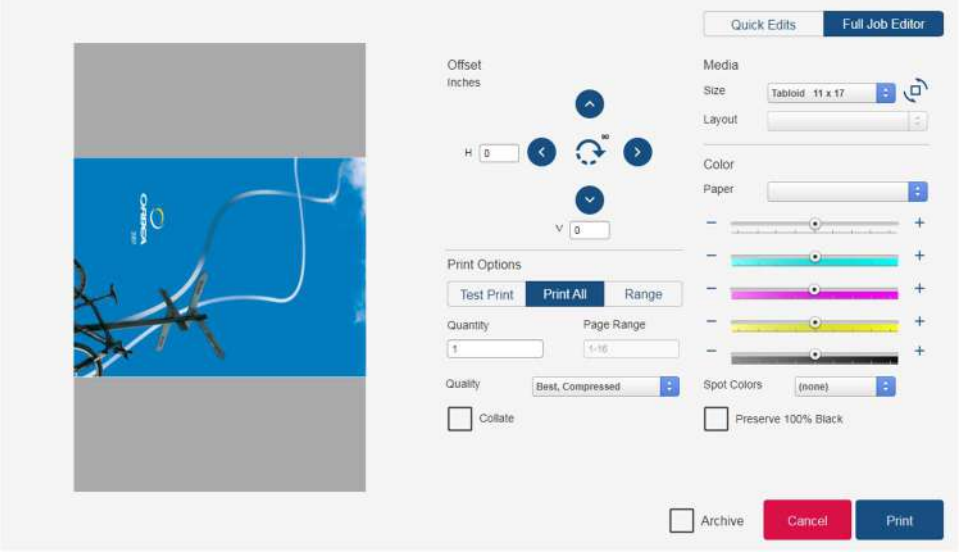


We will discuss 1, 2, and 4 together. **Positioning, Media, and the Thumbnail**.

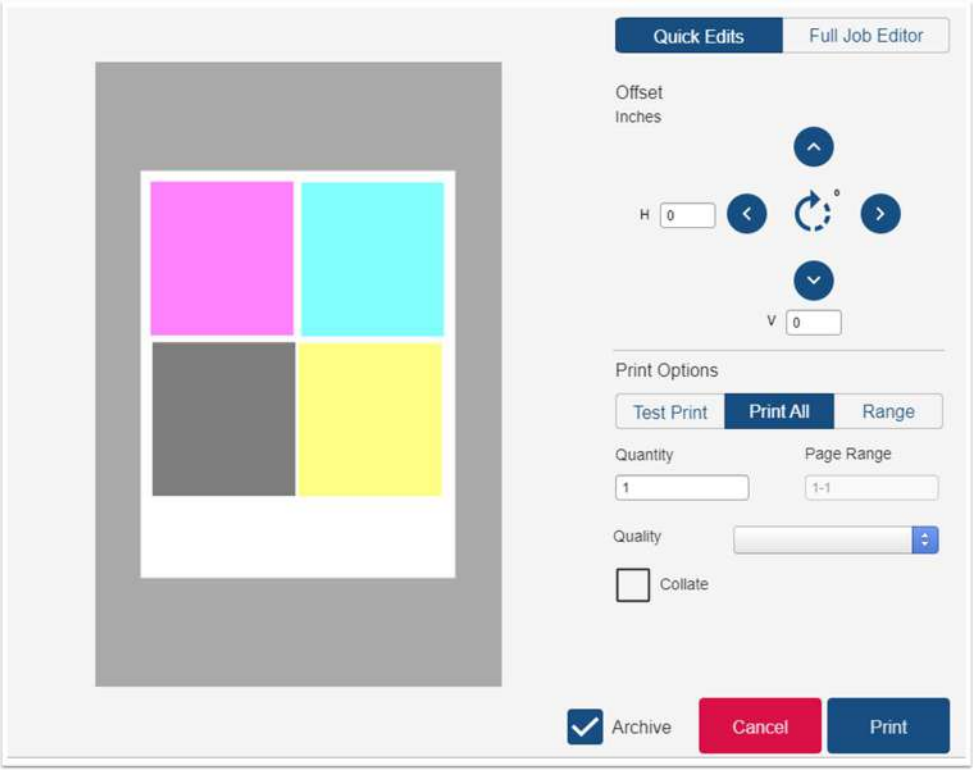
You have standard page size choices under *Media*. You can always just allow the software to pick up the original media size from the input PDF. If you wish to reposition the PDF onto a different media size, you can choose a new media size and do so.
e.g. 11x17 Tabloid. The job is positioned on a grey rectangle, representing the new media size, and shows your image position on that media.



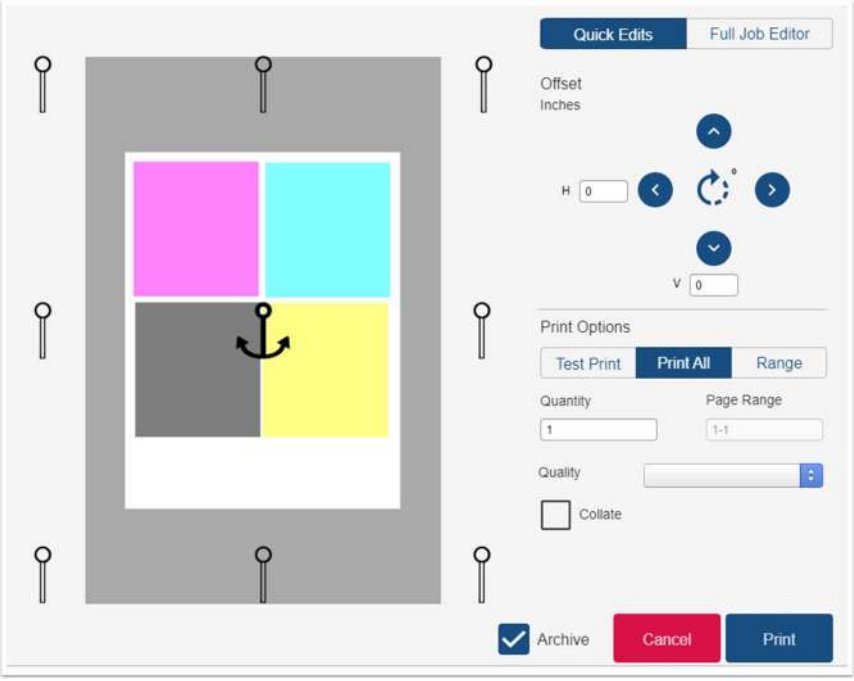
You can nudge it up or down, side to side with the arrow buttons or type in horizontal and vertical offsets in either positive or negative numbers. We will show you the changes you make in real time. For example, we will click the rotate button in the center of the positioning controls:



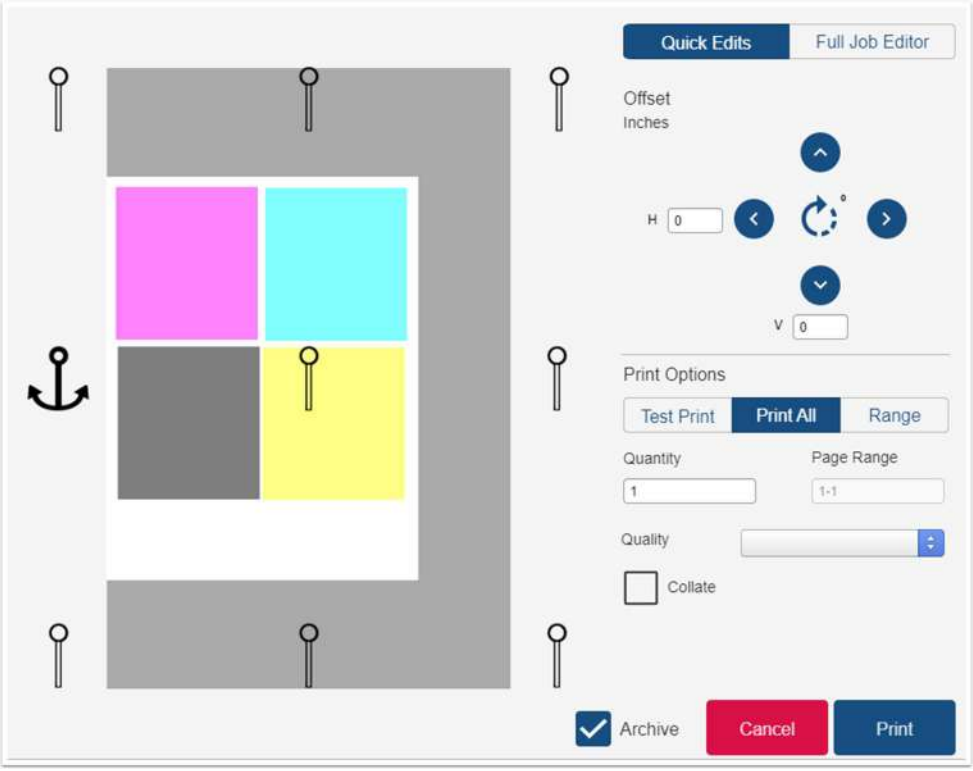
The *thumbnail* view window has some hidden controls.
First, here is a smaller job sitting on a larger media:



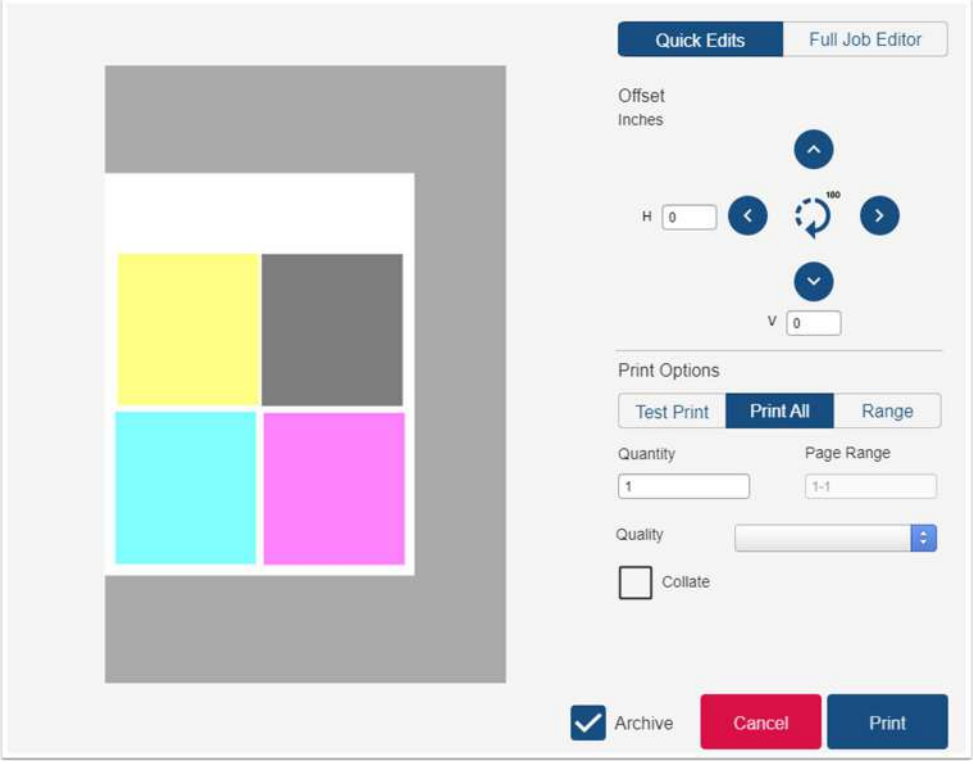
Now, when you click anywhere on the thumbnail, the anchor points appear.



The anchor points govern how the rotation and movements happen. The default is to be anchored at the center. Rotating the job means it rotates around the center point.
But if I change the anchor point to the left center, it changes the rotation and movement starting points.

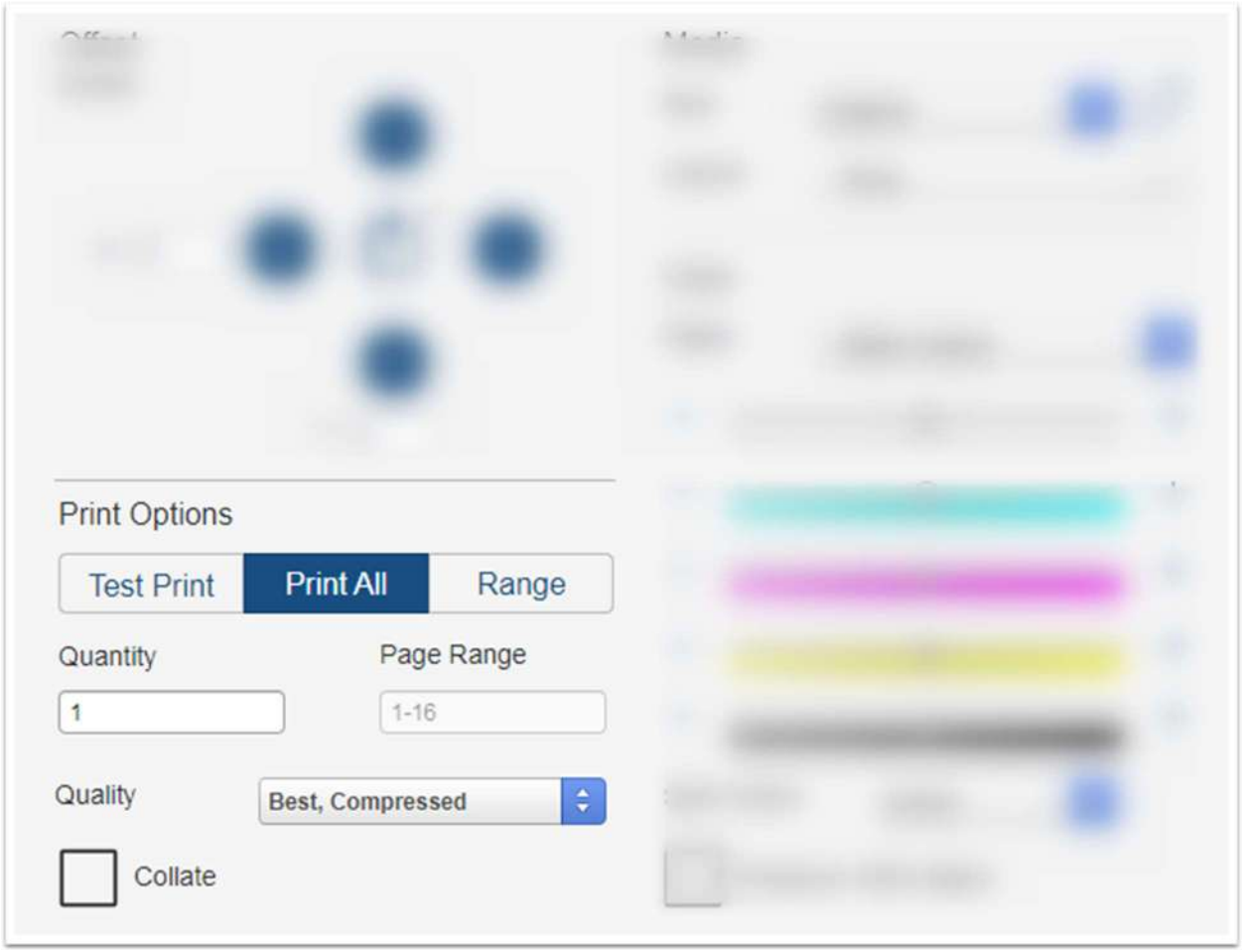


Right away the job moves to the new anchor point. That is the new zero point for the movements too.
If I rotate 180 degrees, the job will stay anchored to the left.



2.1.3 Print Options

Number 3 in the diagram above.



Test Print prints 1 copy of the first page. It is optional. It leaves the job in an incomplete, unprinted status so it can be printed in its entirety when you are satisfied. *Test Print* prints a proof so you can check positioning and color. If you are unsatisfied with the print, you can adjust and try again. If you are satisfied, then choose *Print All* or *Range*.
After you have done a *Test Print*, the job remains in the print queue until you have printed it using one of the other two options.

Print All automatically fills in the *Page Range* fields with all the pages in the job and sets quantity to '1'. You may change the quantity. After you set this, click *Print*. After this print completes the job will be removed from the print queue. You may find it in "*Recent Jobs*" if you need to reprint it for some reason.

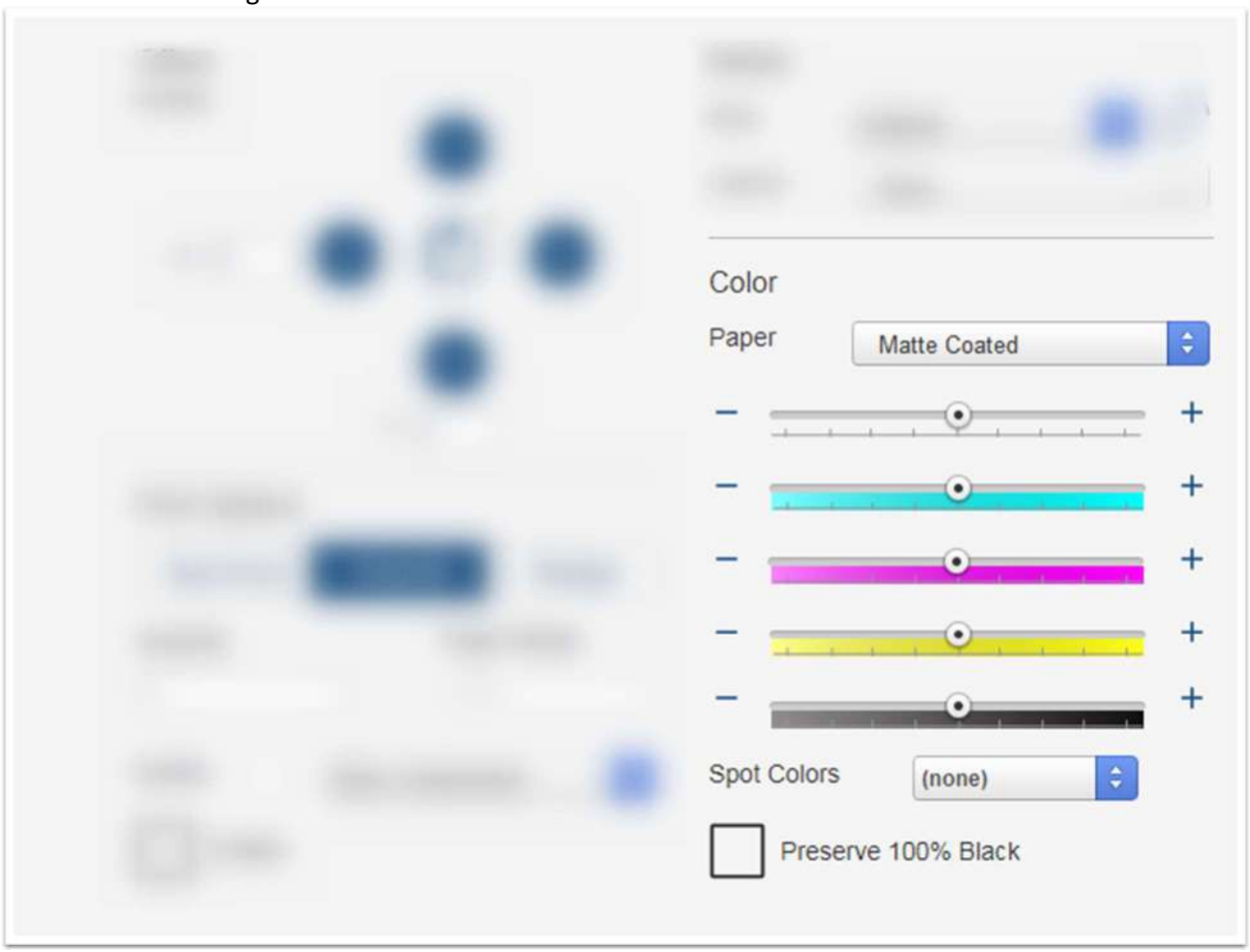
Range allows full control of quantity and page range. You may type commas and/or dashes into the *Page Range* field. e.g., an entry of "1, 5-8" will cause pages 1, 5, 6, 7, and 8 to be printed. "1-1" will cause only page 1 to be printed.

Quality will have choices dependent upon your printer. The iJetColor 1175p will have the options “High Resolution” (1200 dip output) and “Production” (600 dpi output)

Collate changes print order for multiple page jobs that are printed with multiple copy counts. e.g., If you print a 3-page job with a copy count of 2 then unchecking *Collate* will cause it to be printed in the order 1,1,2,2,3,3. If you print that same job with *Collate* checked it will print in the order 1,2,3,1,2,3.

2.1.4 Color

Number 5 in the diagram above.



The color controls, in order: Paper profile (ICC color management), Color sliders (global color adjustment), Spot Color Adjustment, and Black preservation. These are all discussed in detail in the Color Management chapter.

2.1.5 Archive and reprint

When you print a job, you have the option to check "Archive". If you do that the job ticket will be saved with the job and the job can be re-printed from the archive exactly as it was last printed.

Note: Jobs that have the archive checkbox selected only get moved to the “Archives” folder if the job is deleted. It is a safeguard against accidental deletion.

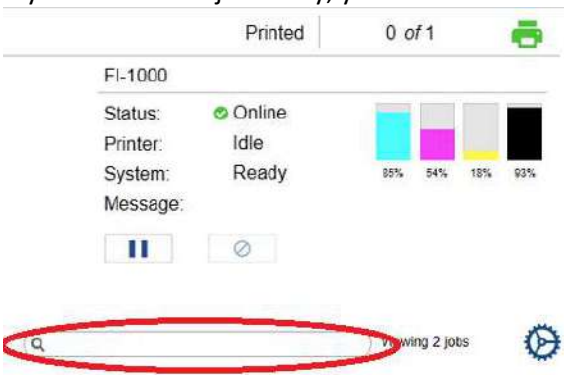
Below you will see a job in the queue, printing. It has the Archive checked, as you can see.

There are 3 places to find jobs. The *print queue*, *recent jobs*, and *archive*.

When a job is complete it will go to *recent jobs* for a while. It will eventually be deleted from here. The system keeps the last several jobs after they were printed in case something goes wrong in finishing. You can always reprint a job from *recent jobs* or from the *archive*.

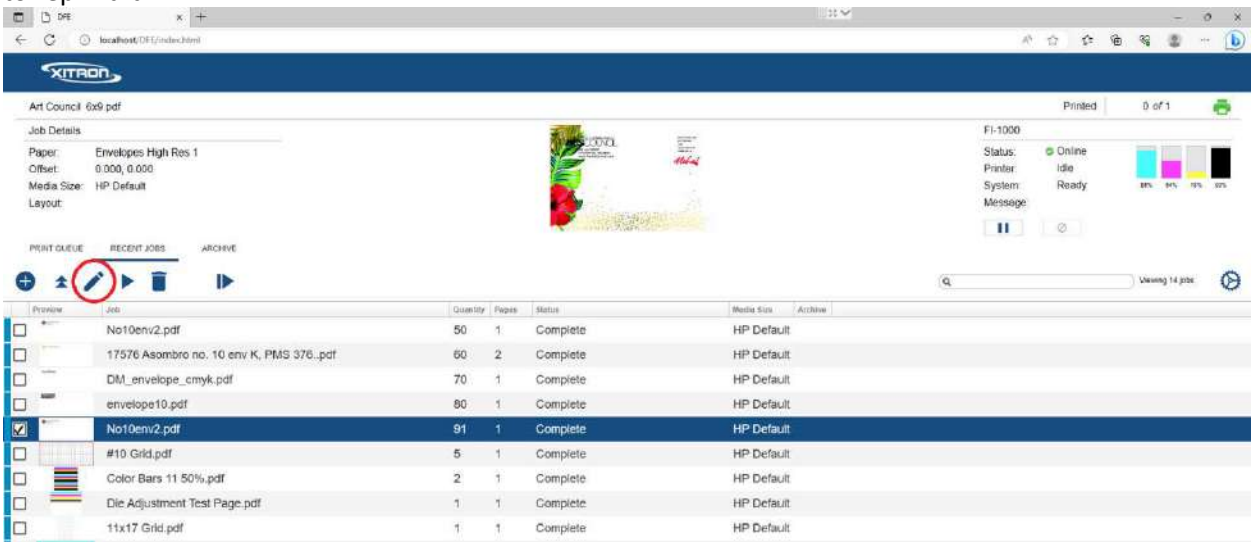
The path for jobs through the queues is this:
1. New jobs enter the Print Queue. When they are printed, they are removed from the Print Queue and go to Recent Jobs.
2. Completed jobs go to the Recent Jobs area. They will be deleted from here when more jobs are entered into the system. You may also delete them manually if you choose.
3. When a job is deleted from *recent jobs*, it either disappears or it goes to the archive. So, if you don't see your archived job in the *archive*, it's probably in *recent jobs*.

If you can't find a job easily, you can search for it in the search field:



To run a job from the archive, select the job and click or push the requeue button.

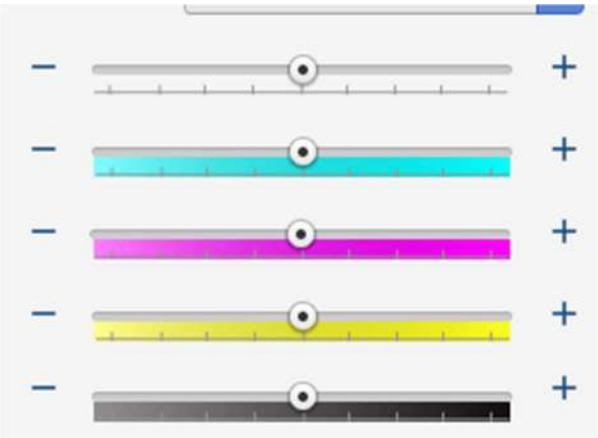
The recent jobs queue acts just like the print queue. If your job is in here, click the edit (pencil) button to reprint it.



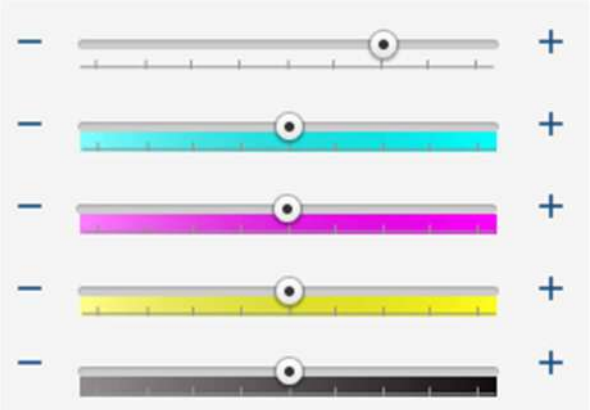
2.1.6 Global Color Adjustment

Global color adjustment is a simple curve adjustment on the mid-tones. Unlike ICC profiling, calibration, or spot color adjustment, global color adjustment is not scientific or targeted at particular elements in a job. It's more of a 'quick and dirty' tool and it affects the whole job.

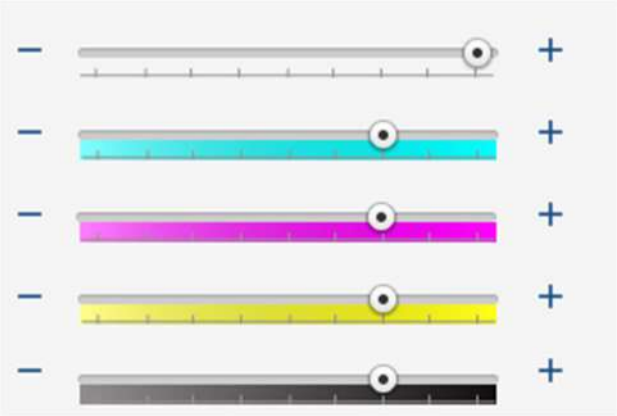
The interface consists of five sliders. One slider each for CMYK and one more for darkness/lightness. The darkness/lightness slider affects all 4 color channels together. You can stack changes. Examples follow.



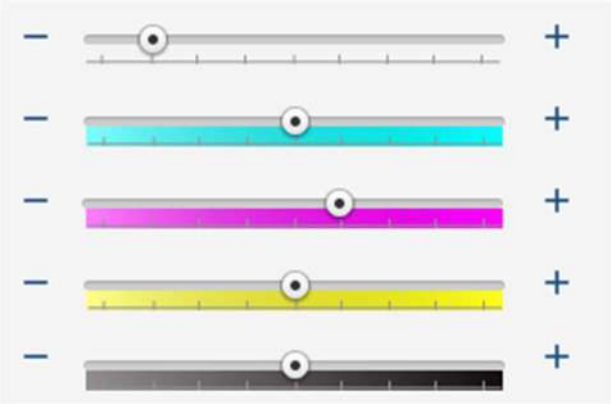
How do you get a job darker?



Even darker but still color balanced?



How to make it lighter and yet more magenta?



2.1.7 Spot Color Adjustment Tool

The Navigator DFE contains licensed Pantone libraries, so you get the best possible color match on your digital printer. To use those libraries, you need two things:

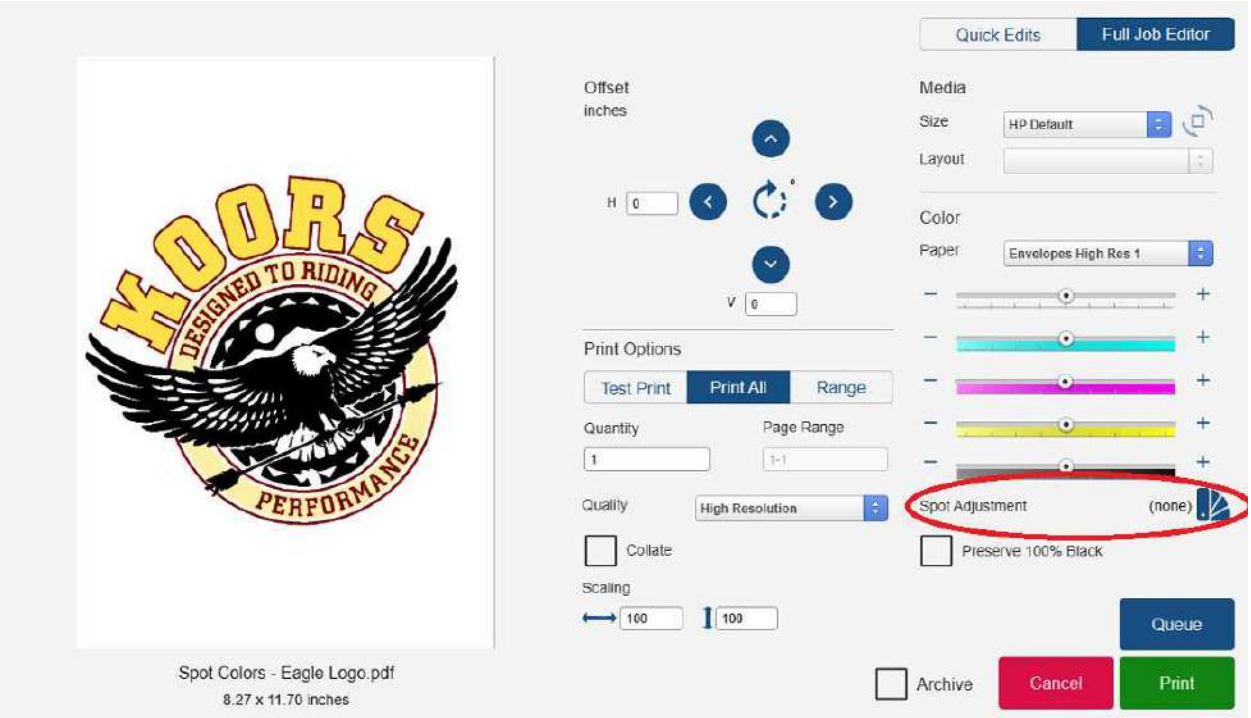
1. Input PDF files with defined spot color channels
2. A Paper profile configured with the "treat spot colors as CMYK" turned OFF.

What if you want to get a closer match on a new paper?
Or what if you need to match a previous printed process instead of being "accurate"?

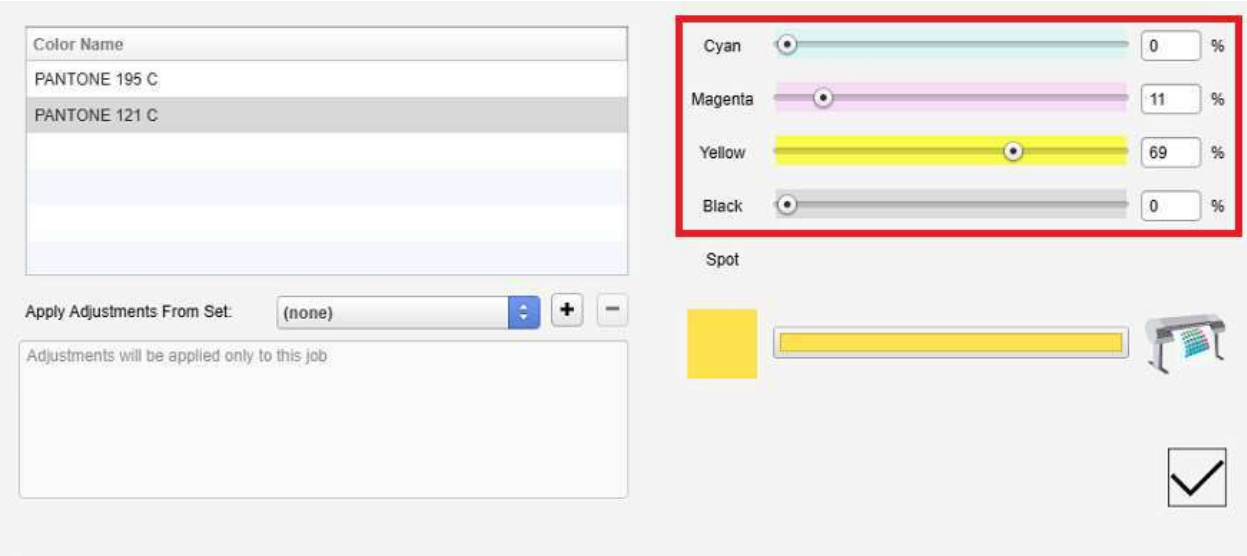
The spot color adjustment tool walks you through the process of printing patches to override those libraries and/or update them to contain new definitions. These new spot color recipes can be saved into separate color databases which may be automatically applied to selected jobs when appropriate. You may have as many spot color adjustment databases as desired.

This job has two spot colors. The spot color workflow might go something like this:
Bring the job in for the first time.
Click *Test Print*. (You will get 1 copy of page 1 printed out so you can check for color and positioning.

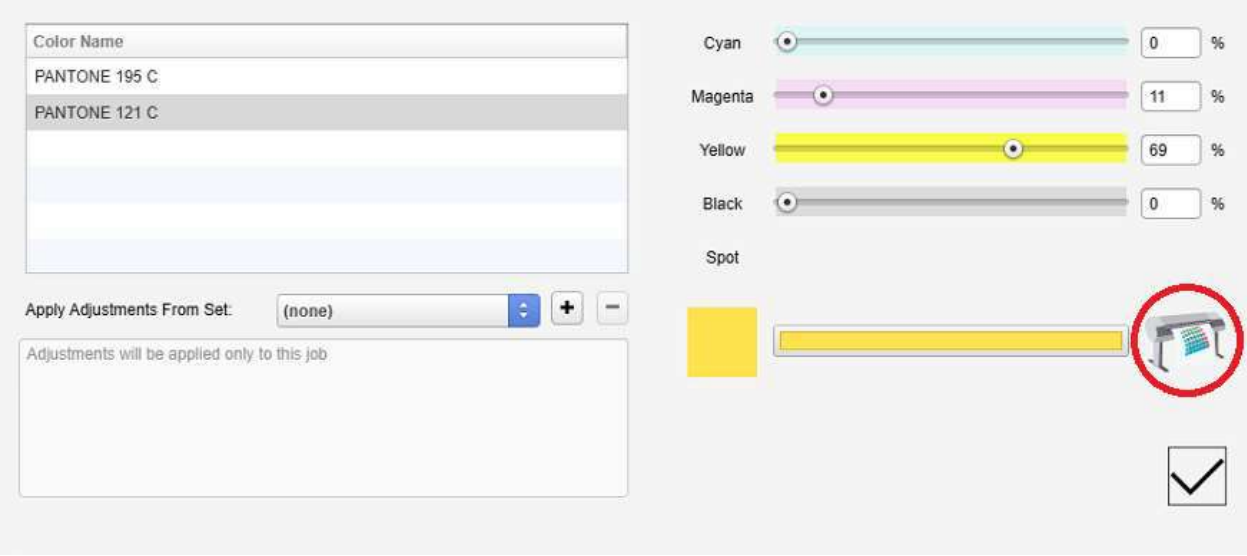
Should you decide that the spot colors need adjustment, edit the job, and click the blue button to the right of the *Spot Colors* database dropdown menu. If you are in printing, you'll recognize that as a representation of a Pantone fan deck:



We chose Pantone 121 for our adjustment. Notice the CMYK sliders. If you believed strongly in yourself, you might just slide those to change the color.
Note: You can also type values into the percentage boxes.

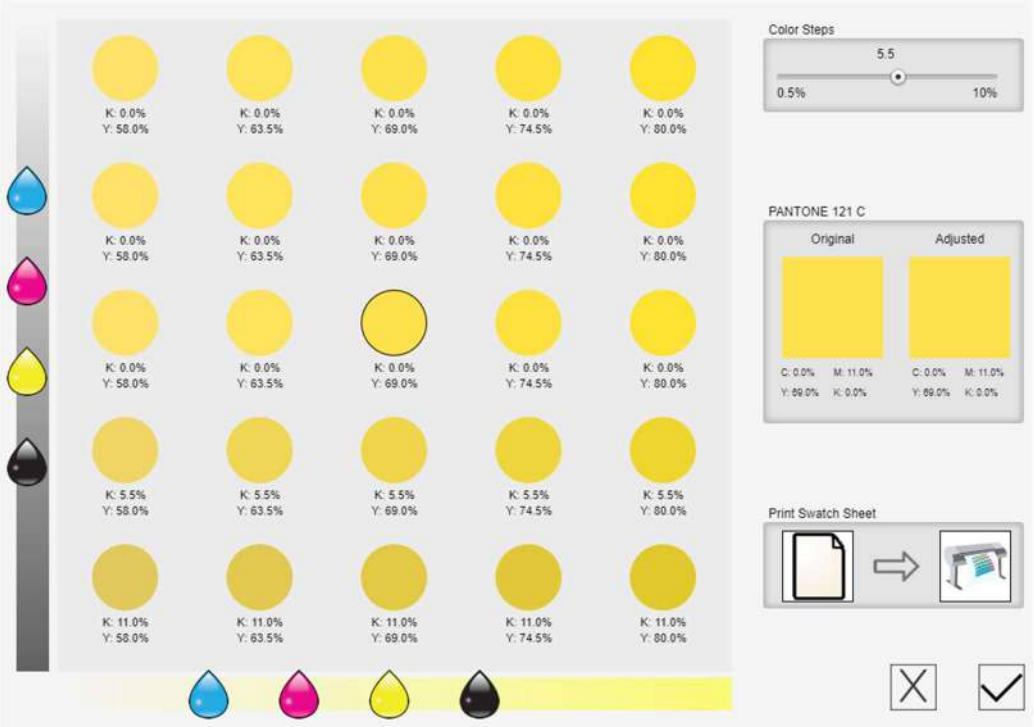


However, for more help selecting the new color recipe, click on the icon of the printer. That will give you a lot more help.

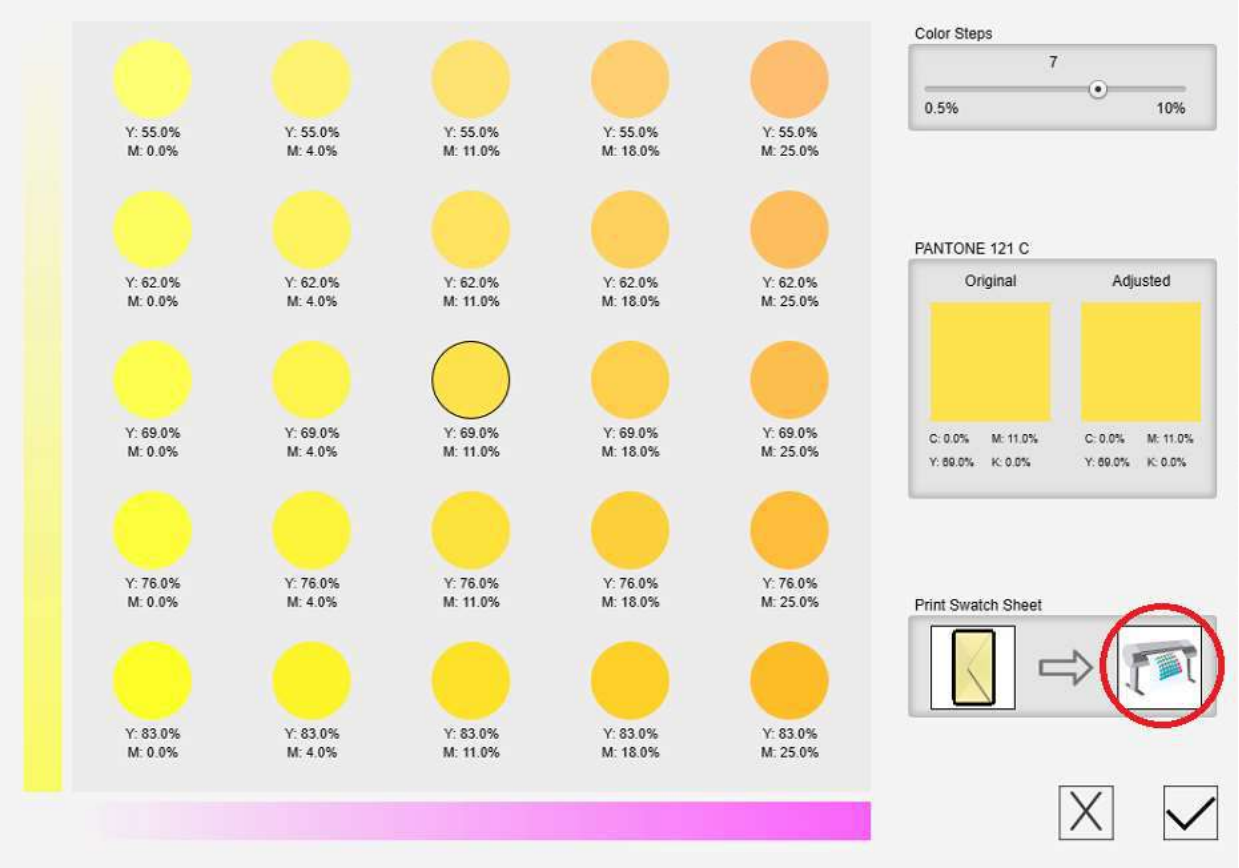


The swatch sheet page:

We suggest the most appropriate changes automatically, but there are some optional moves you could make concerning color choice, the degree of color change, paper size:



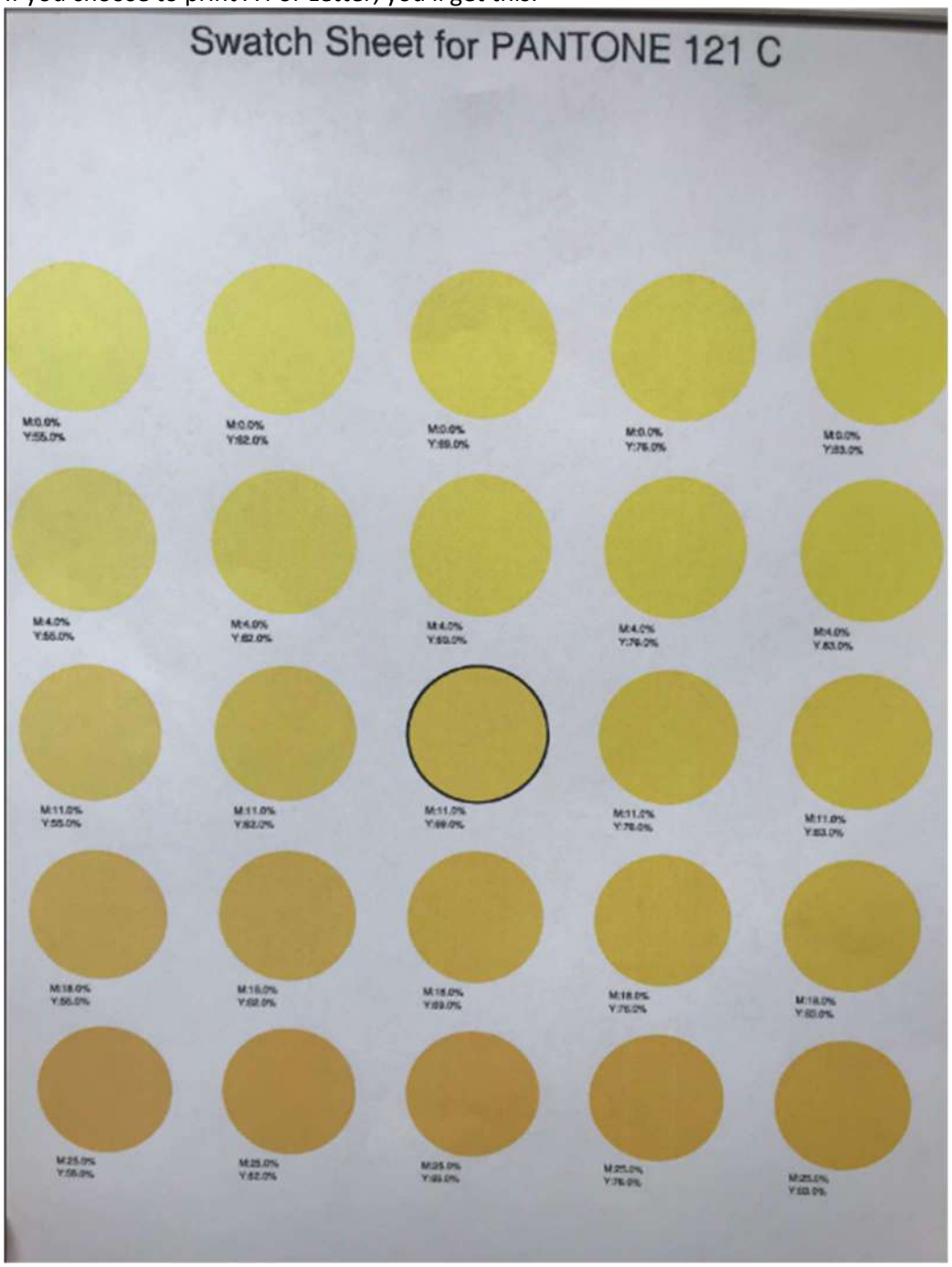
When you are happy with your swatch variety, print it.



Compare the swatches to printed material or read them with a spectrophotometer.
If you choose to print them envelope size, they will print on two envelopes.

The middle row prints on both envelopes. Overlap them and make your choices.

If you choose to print A4 or Letter, you'll get this:



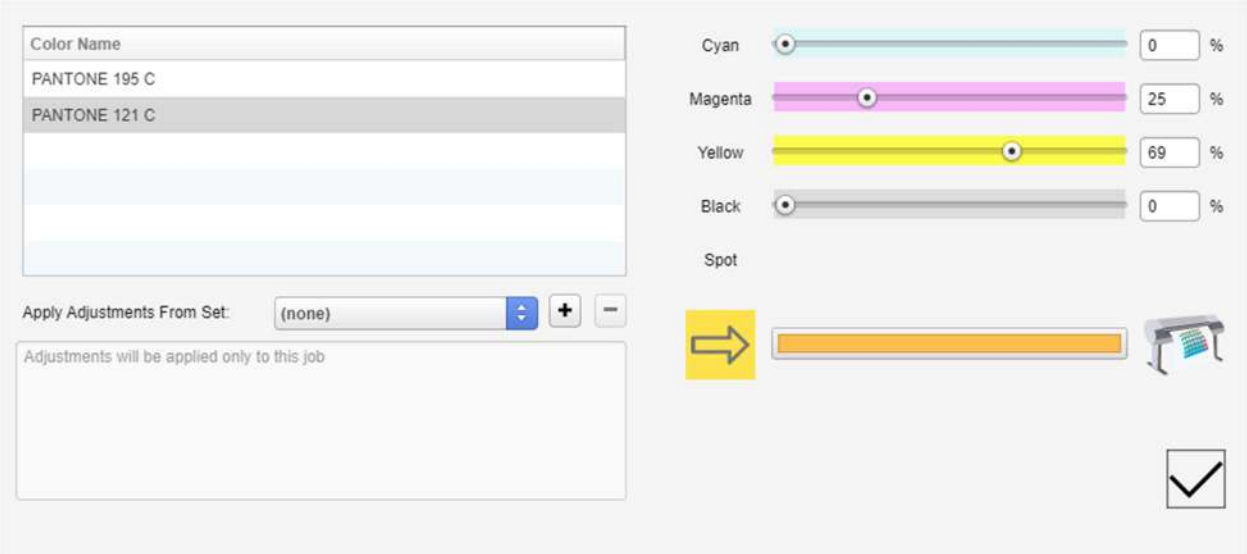
Here's how it works:

Whichever swatch you pick from the printed output, you click on the screen.

Go to the interface and point at the one you liked on the prints. That will become the new center. In the example case, I'm picking the bottom center.

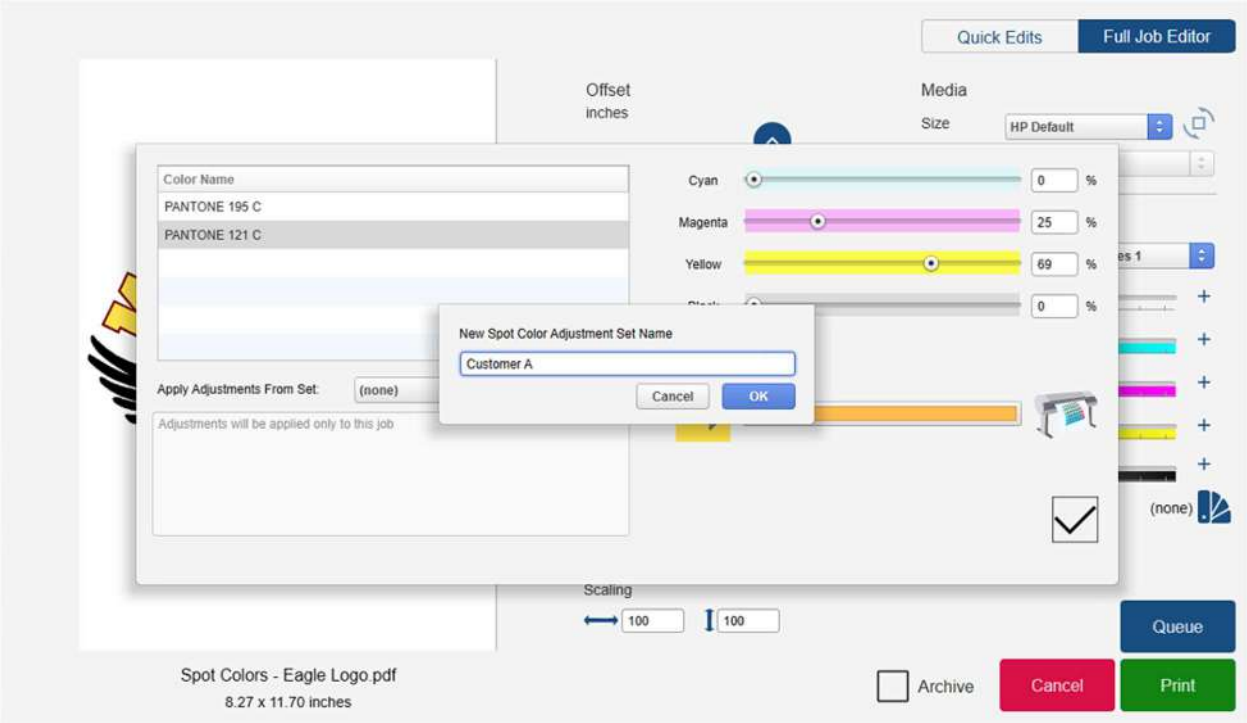
If you decide it's almost, but not quite, right, then adjust the color steps lower, and go again:

Once you are satisfied, click the check box. You'll come back to the color list and sliders. The original color has an arrow on it. The altered color is in the middle bar.

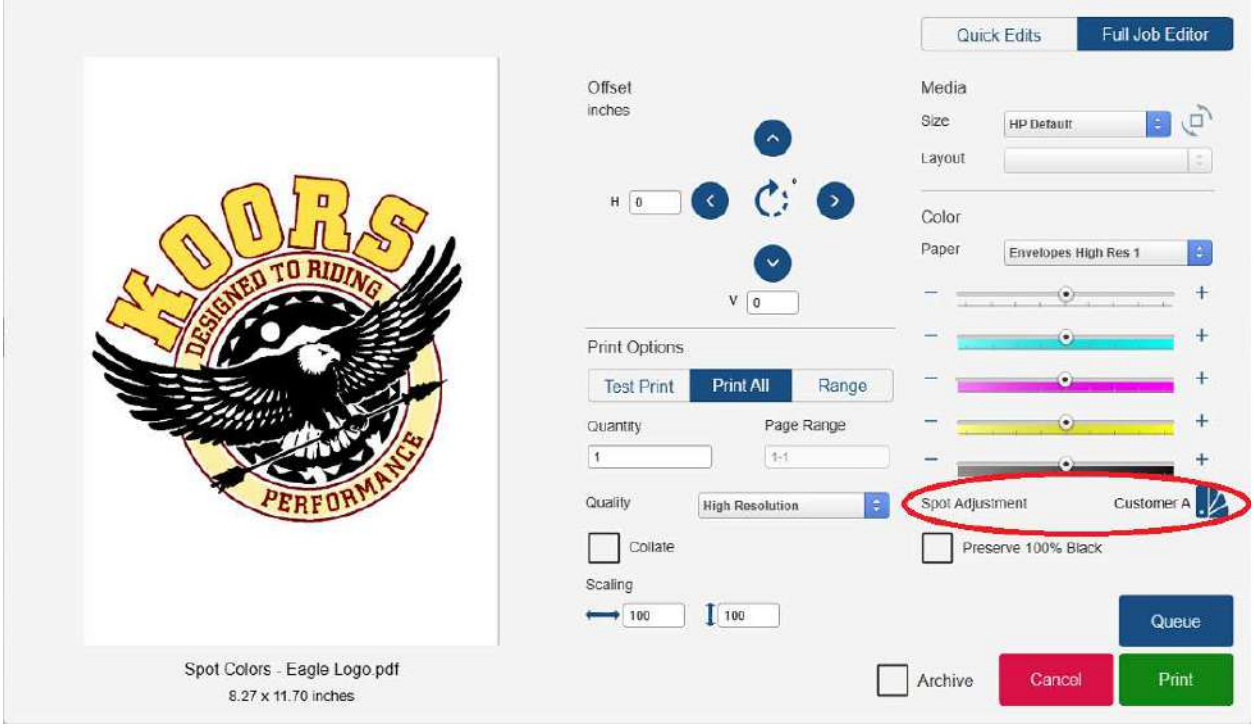


You can also save spot colors as a specific set. Selecting the Color Name, hit the “+” icon. You can then name the color. Once you name the color, save it. It will then show up in the dropdown menu. You can apply the saved color set to jobs with identical PMS spot colors in the Full Job Editor.

Note: When saving colors in a job as a set, all the colors in that specific job are added to the newly saved set.



Next time you run a job from this customer you can submit the job like the job ticket below and just hit "Print".

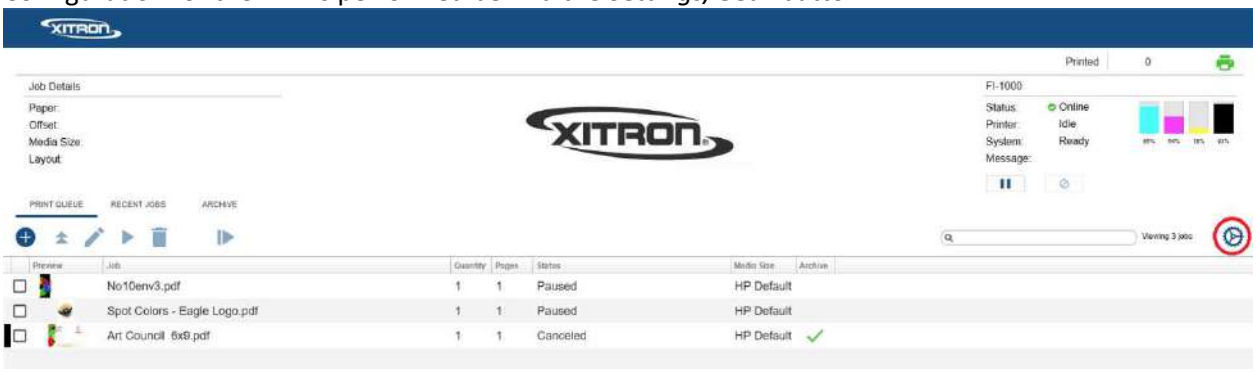


2.1.8 Preserve 100% Black

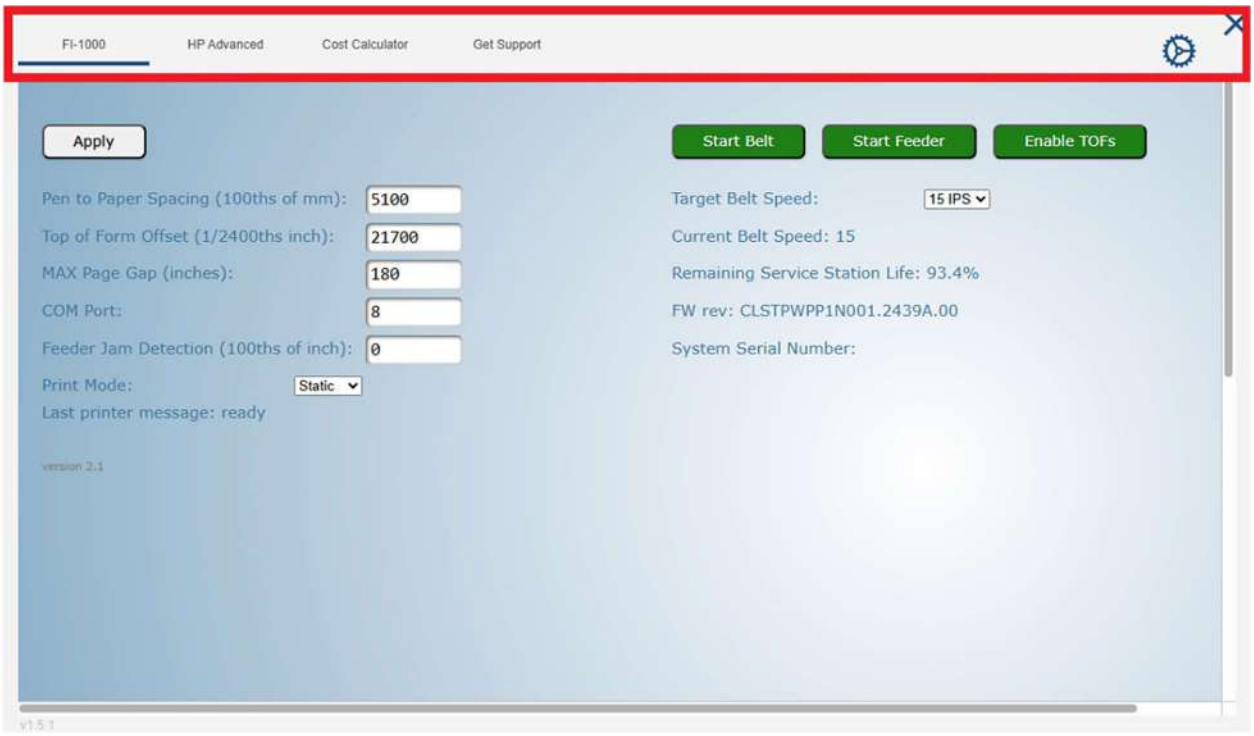
Under normal circumstances, the DFE will process any instance of 100% black in the artwork as a 4-color process black. This results in a deeper, darker black output. The “Preserve 100% Black” button, when checked, will cause the RIP to print instances of 100% black using only black ink. It is worth noting that this only applies to 100% black. Lesser grades of black will be 4-color output.

2.1.9 DFE settings, preferences, configuration

Configuration for the DFE is performed behind the *Settings/Gear* button.



There are 4 possible destinations in Settings; FI-1000, HP Advanced, Cost Calculator, Get Support, and the Gear icon.



FI-1000 tab

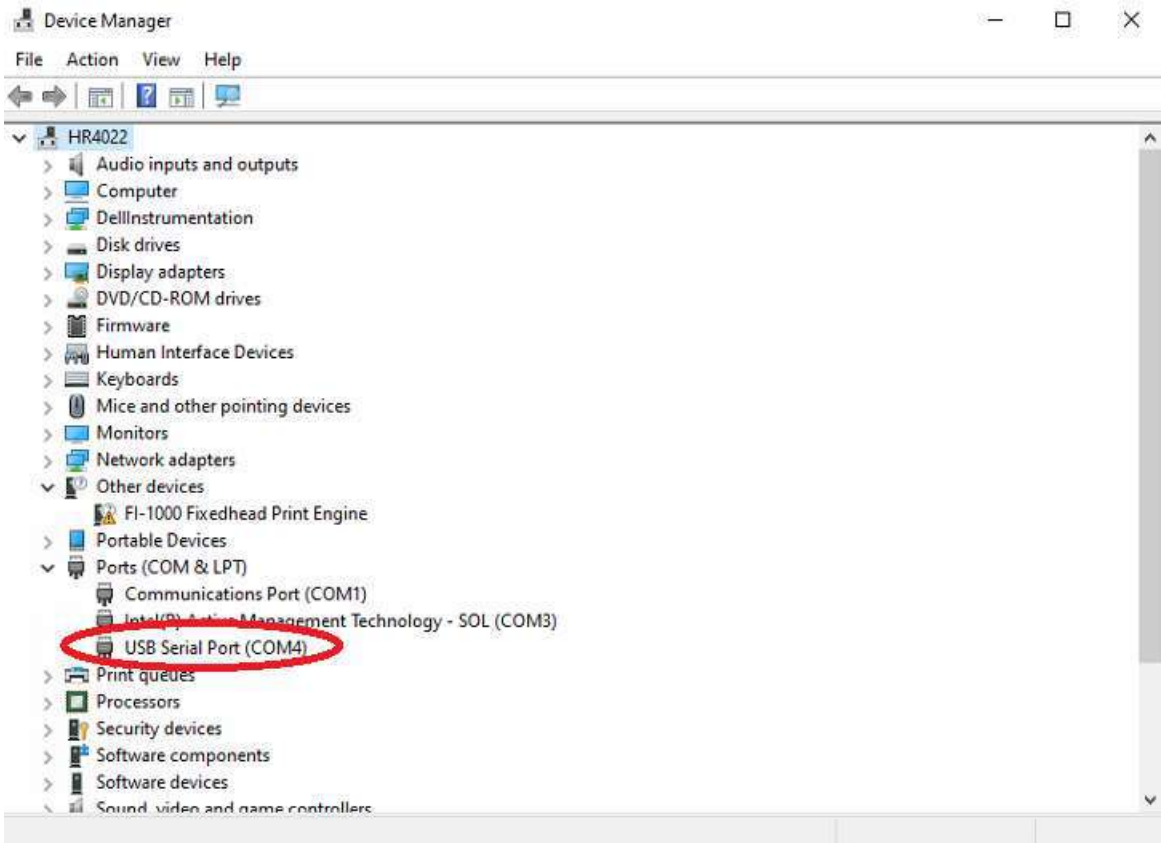
Contains settings related to the Print engine.

1. Pen to paper spacing – This is a setting that controls how far the print bar will lower when it prepares for printing. A higher value here will cause the print bar to lower further thus printing closer to the media. The typical setting for envelopes is 5100 by default.
   Note: The Min/Max range is 5050-5150.

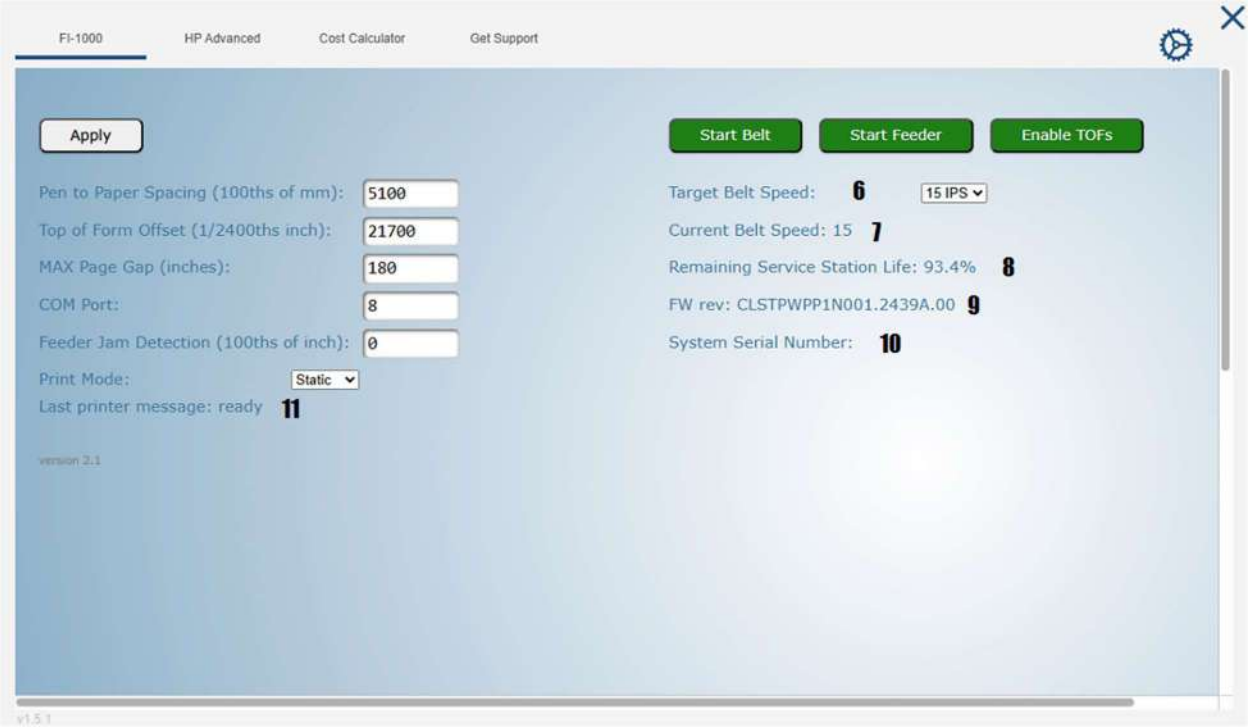
2. Top of Form Offset – This value will allow the user to change the lead edge gap between the edge of the stock and where the printing starts. If you increase this value, it will increase the gap (move the image further down the stock). Typical default setting is around 21600. Note: this value is in 2400ths of an inch.
   Note: When setting the Top of Form offset in the DFE, the default value is 21600 for TOF Sensor Rev A and 32000 for TOF Sensor Rev B. Sensor Rev A is an externally mounted sensor while sensor Rev B is mounted beneath the printhead itself.

3. MAX Page Gap and Feeder Jam Detection– These both denote the maximum gap between pages. Once that gap has expired, the job will error out, citing a jam. MAX Page Gap allows for wide gaps between pages before an error is thrown, whereas Feeder Jam Detection Deals in spans of hundredths of an inch, allowing for dramatically tighter tolerances, at the cost of jamming more easily. Between these two, the setting which is the shorted span of time will predominate. Feeder Jam Detection can be turned off entirely by setting it to 0.

4. COM Port – This is a setting for the USB Com port from the printhead. This setting should match the COM port (USB Serial Port) assigned in the **Device Manager**. If this is set improperly the belt speed will not be displayed correctly and the feeder will not feed on auto.



5. Print Mode: There are several available print modes on the iJetColor 175C: Normal, Static, and Roll-to-Roll. These each have to do with how the printhead processes jobs through its memory. Normal and Roll-to-Roll are primarily used for product development here at Printware, and will slow down production if used in the field. **The best option to select is Static.**



6. Target Belt Speed – This is the speed that the belt will get up to when turned on. The options are 12, 15, and 18 in/s, and can be selected from the dropdown menu.

7. Current Belt Speed – This is the speed of the belt in inches per second. Please note that the belt must be running, and a proper value displayed here for the printing to proceed.

8. Remaining Service Station Life – This is the estimated % left of the service station. Once this gets to 0% you will need to replace the service station.

9. FW Rev. – Displayed the current revision of firmware loaded on the print engine.

10. System Serial Number – Serial number of the main board of the printhead (if displayed).

11. Last Printer Message – Shows the last printer error. If it is a non-critical error, it can be cleared by clicking the “Press OK” button.

<u>On some older firmware versions, you may see the following options:</u>

Disable REST – Disables communication with the printhead. This is only used by service technicians. Should normally be unchecked.

Save PCL Files – Saves the PCL file created by the RIP to the hard drive. This is only used by service technicians. Should normally be unchecked.

Save TIFF Files - Saves the TIFF file created by the RIP to the hard drive. This is only used by service technicians. Should normally be unchecked.

HP Advanced

Contains functions related to the cleaning and maintenance of the print engine.

Before ever running a cleaning, ensure that the service station cloth is advancing and has clean cloth across the top edge of the sled. You may have to run the "Check Service Sled" several times to advance the cloth to a clean section.

1. Check Service Sled – This function will drive the service sled to the right wall of the print head. In doing this it will also advance the cleaning material. Sometimes this is beneficial if the cleaning material under the nozzles is saturated with ink, this will advance the material to clean wiping material.

2. Eject Service Sled – This function will eject the service sled for replacement. - See appropriate section in this manual for this procedure.

3. Install Service Sled – Allows you to install a new service sled. - See appropriate section in this manual for this procedure.

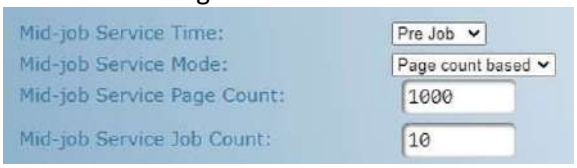
4. Calibrate Service Sled – After a new service sled is installed it must be calibrated. This sets the position of the sled properly so that the remaining service station life is reported correctly. Only run this command when installing a brand-new service sled as it always resets the life to 100%.

5. Mid-job Service – This is a light cleaning on the print nozzles. Use this if you are seeing lines on the output. Note: You can run the machine immediately after performing this cleaning.

6. Pen Recovery Level 0 – This will do a more aggressive clean on the print nozzles. Use this if two mid-job servicing do not correct your problem. Note: Do not run the machine for 10 minutes after preforming a Pen 0

7. Stall Recovery – If there is an error such as "Printbar Stall" or "Service Station Stall", stall recovery will clear the error and re-set the system. If the error is a mechanical failure this error will come back after the reset.

8. Mid Job Servicing



As you are printing a job the system will periodically stop the feed and do a mid-job servicing (Cleaning) the clean the nozzles of the printbar. A dirty and dusty stock will require more

frequent cleaning. The frequency of cleaning and the time at which this is performed is configurable. A good starting point is to do a “page count based” servicing every 2000 pages.

Mid-Job Service Time – Only used if the Mid-Job Service mode is set to “Job Count Based”.

Pre Job - Once the service interval for a job based servicing has been reached it will service the nozzles before the job starts printing.

Post Job - Once the service interval for a job based servicing has been reached it will service the nozzles after the job has been printed.

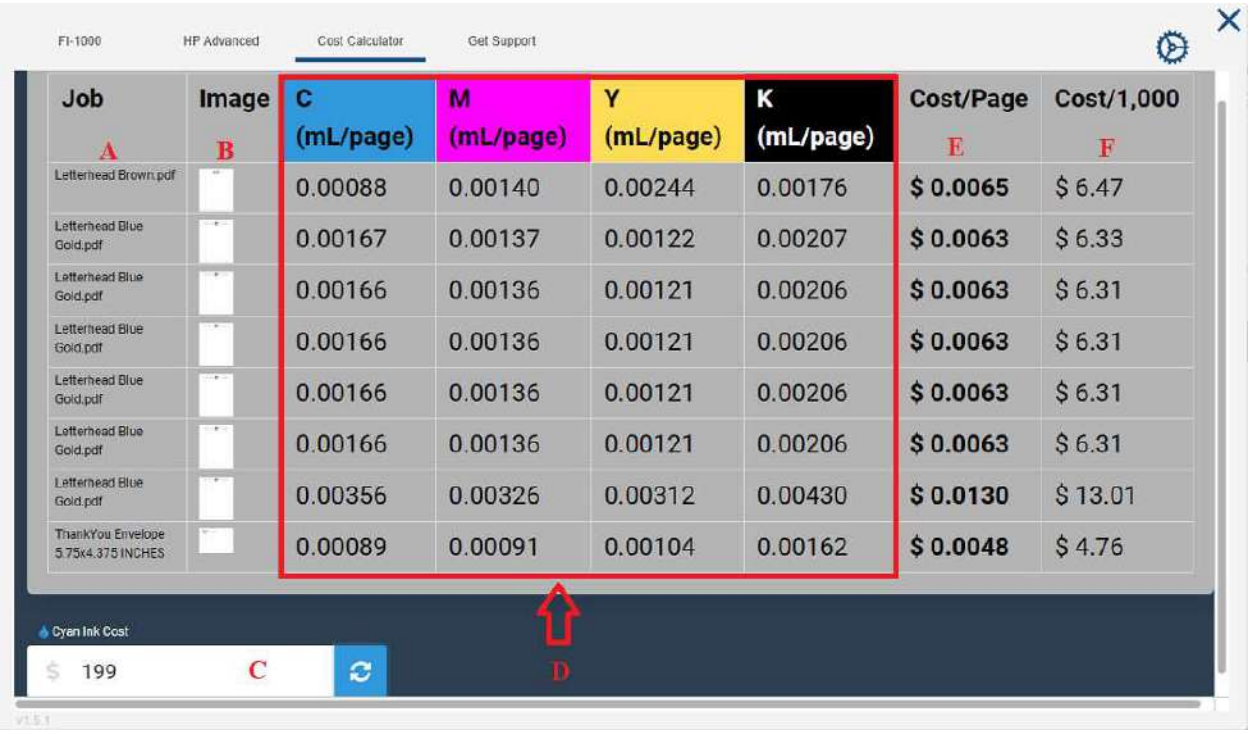
Mid-Job Service Mode – Options are “Page Count Based” and “Job Count Based”

Page count based will initiate the servicing after a specified number of pages had been reached.
Job count based will run the servicing after a specified number of jobs have been run.

Mid-Job Service Page Count – Specifies the number of pages to be printed before the servicing.

Mid Job Service Job Count – Specifies the number of jobs to be printed before the servicing.

Cost Calculator



The cost calculator can be used to determine the combined ink and printhead cost of running a print job after the job has been run. Its elements are described below:

A. **Job Name –** The first column provides the name of the print job.

B. **Thumbnail –** The second column shows a small thumbnail of the print job.

C. **Cyan Ink Cost –** In this section, the user can input what they pay for a cyan ink tank. This is used to determine the costs. If its value is modified, the light blue refresh button will need to be pressed to modify the table costs.

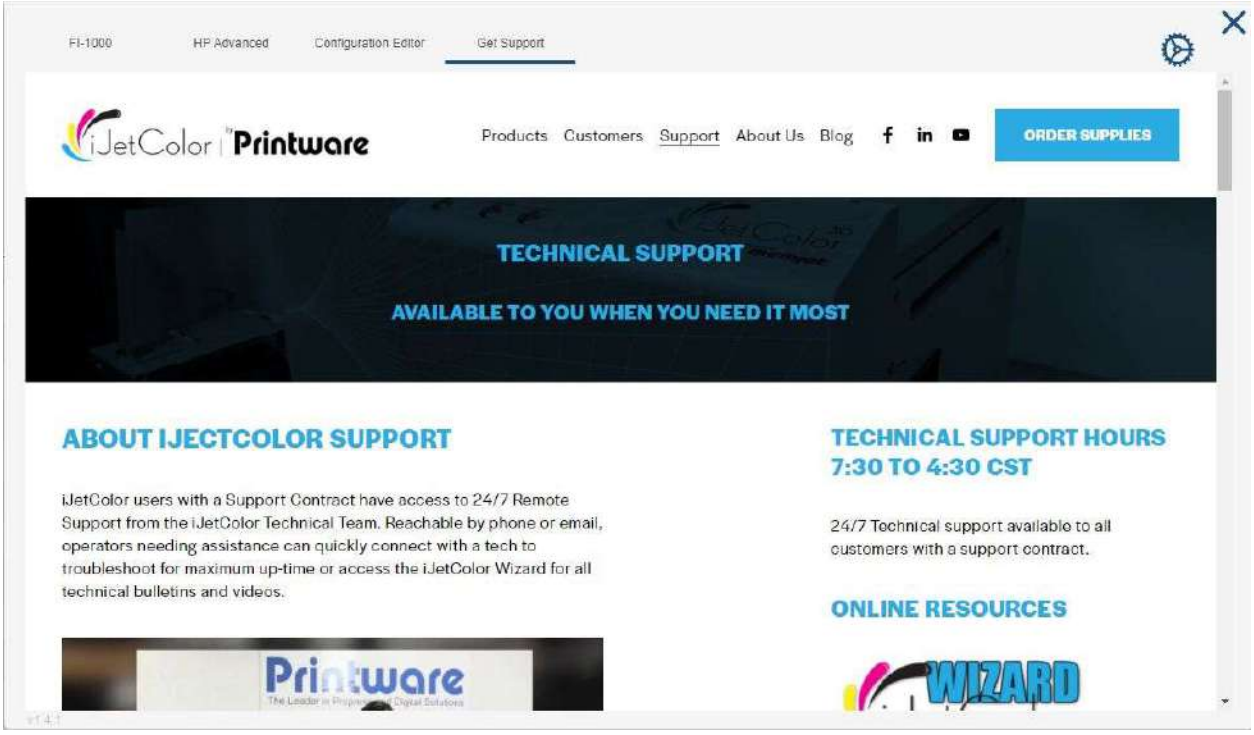
D. **C/M/Y/K Values –** These columns show the amount of ink used for a job, per page, in milliliters.

E. **Cost/Piece –** This column shows the cost per page for the print job.

More information can be found in Section 3.4, Job Cost Calculator.

Get Support

This tab brings you to the iJetColor support website. This has handy ways to contact our support technicians.



The gear icon

This icon lets you set some preferences for the web client.

Job Editor Starts In:
You can choose whether the job ticket editor uses the "Quick Edits" or the "Full Job Editor" by default. Or you can have it use whichever was the last one you used.

On Job Editor Print: Please ignore this option.

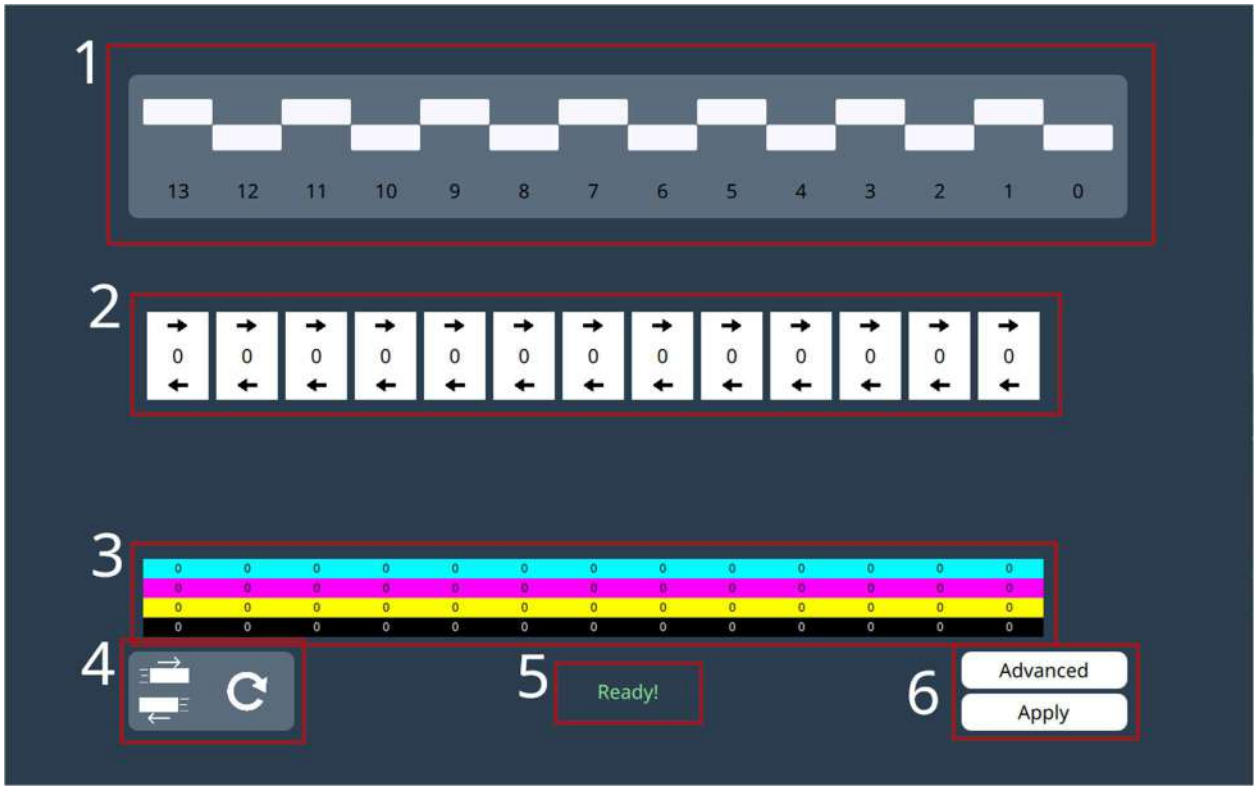
On-Screen Keyboard:
When toggled, the system is set to pop up a touch screen keyboard on screen when you enter a field (such as the search field) where input is required.

2.2 The Die Adjustment Tool

The Die Adjustment Tool is an application found in the “Tools” folder on the desktop of the RIP computer. Its chief purpose is to move each color on each die in order to eliminate lines and gaps in the resulting print. Ink is sprayed through nozzles onto the media. These nozzles are microscopic in size and a large number of them are grouped into rectangles in a zigzag pattern. Each of these rectangles is a die. Each die can move from side to side independently of the two dice next to it.

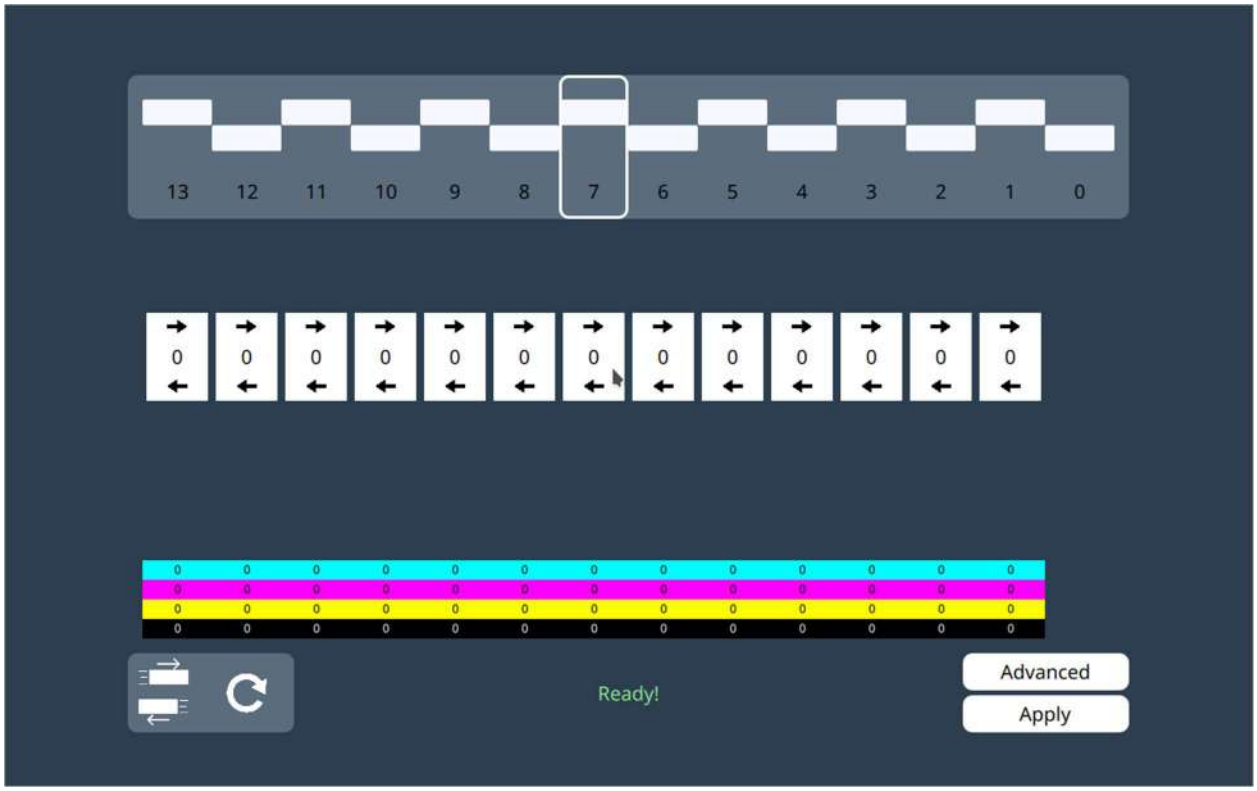
2.2.1 Basic Operation

1. Pictured below is the default window, which displays the basic menu.



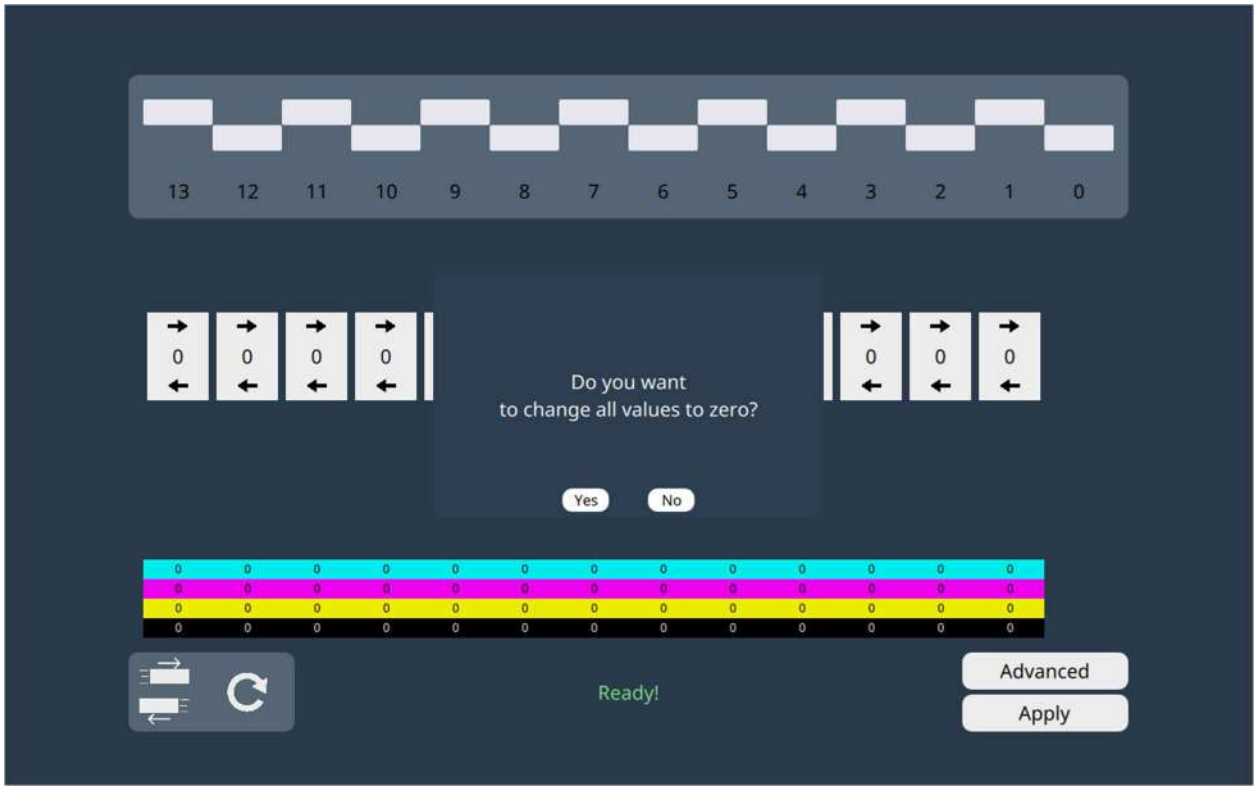
2. Box 1 shows all the dice with their corresponding numbers immediately below them. Die 0 is the furthest from the operator whereas die 13 is the closest to the operator.

3. Box 2 contains thirteen white rectangles. In each rectangle, there is a number which represents the location of the die relative to the die next to it. When hovering over one of these white rectangles, an outline will appear around the corresponding die in box 1 as shown in the picture below. The arrows pointing to the right will move a die to the right (away from the operator), and the arrows pointing to the left will move a die to the left (towards the operator). There is no rectangle that corresponds to die 0 because die 0 cannot be adjusted. It is assumed to be at the correct position by default.



4. Box 3 displays the die-to-die, color-to-color adjustments of each die.

5. Box 4 contains three buttons. The button on the right, or the reset button, resets all dice locations to zero. When pressed, a pop up will appear as shown below. To make the pop up disappear, press “Yes”, “No”, or the escape key on the keyboard. If “Yes” is pressed, all values will be reset to zero. There is no way to undo this action. If “No” or the escape key on the keyboard are pressed, no values will change and the pop up will disappear. The other two buttons will move all dice away from or towards the operator (left or right respectively). The button on the top with the arrow pointing to the right will move all dice to the right, or away from the operator. The button on the bottom with the arrow pointing to the left will move all dice to the left, or towards the operator. There is no confirmation for these last two buttons.



6. Box 5 contains the status and will display green for success, white while working, and red when there is an error.

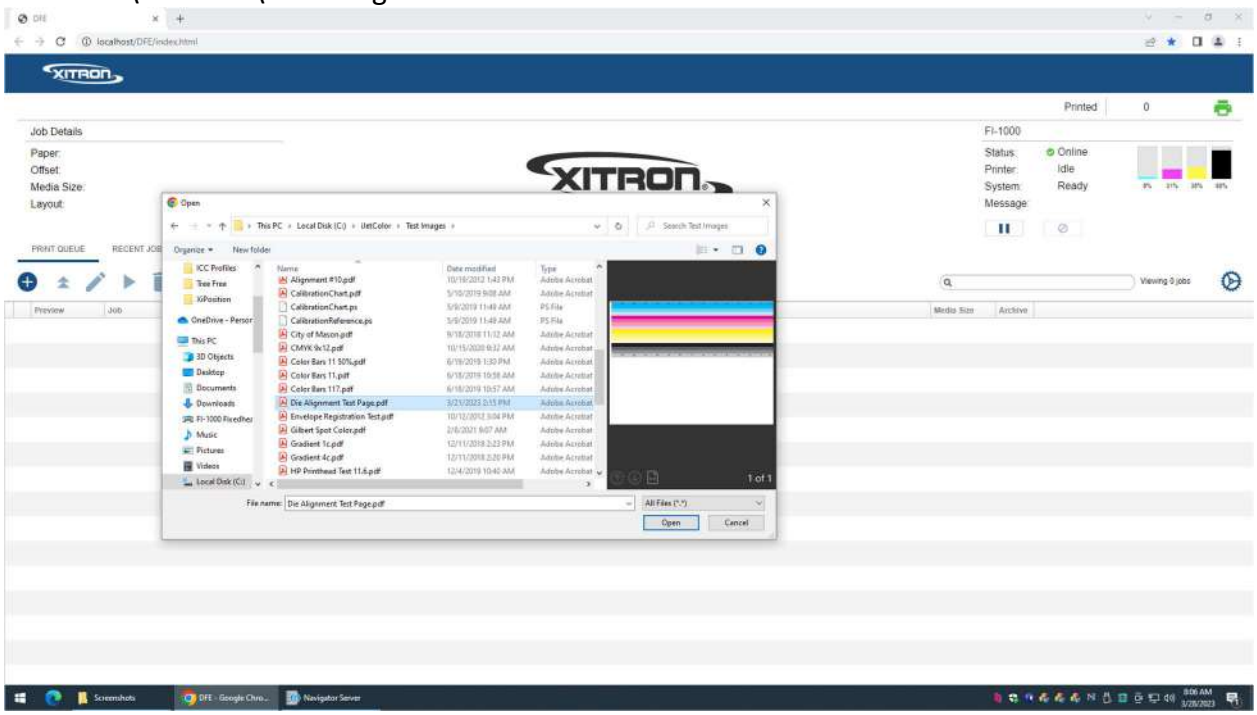
7. Box 6 contains two buttons. The “Advanced” button switches to the advanced die adjustment menu. The advanced menu is for Printware technicians only, and carries a strong risk of ruining the print quality if adjusted without proper guidance. For this reason, it is not covered in this manual. The “Apply” button will send the data to the printhead to make the necessary adjustments. The relevant data will be sent to the printhead only when “Apply” is pressed.

2.2.2 Adjusting the die gaps

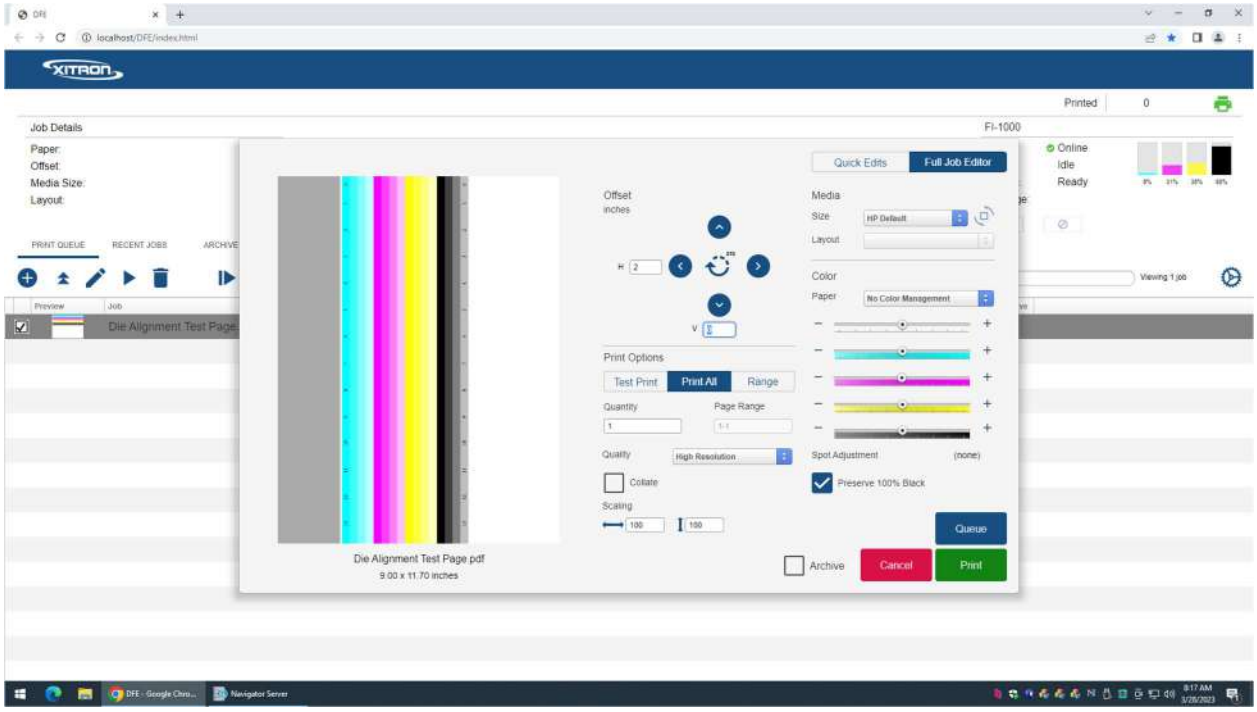
Here you will see how to adjust the dice to remove as many lines in the print as possible. Begin by opening the Die Adjustment Tool which is found in the Tools folder on the Desktop. When open, click the refresh button in the bottom left to change all numbers to 0. If the DFE displays the status of the printhead as online and ready, click Apply. The status (the text in the center bottom of the window) will turn white and display a working message. Wait until this text turns green and declares success before continuing. It should only take a few seconds.

3. The dice are numbered, but the gaps are not. But for the purposes of this document, if a gap/line is numbered, it is the gap/line on the right of the die of the same number. For example, line 1 is the gap between die 1 and die 0. Line 13 is the gap between die 13 and die 12.

4. Use the DFE to open Die Alignment Test Page.pdf, which is found in C:\iJetColor\Test Images.

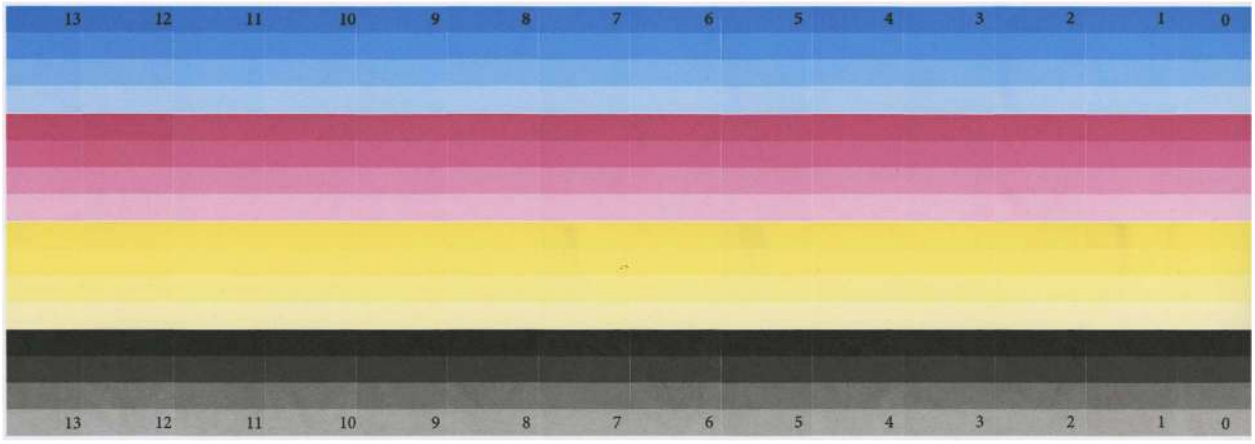


5. Add the job as follows:

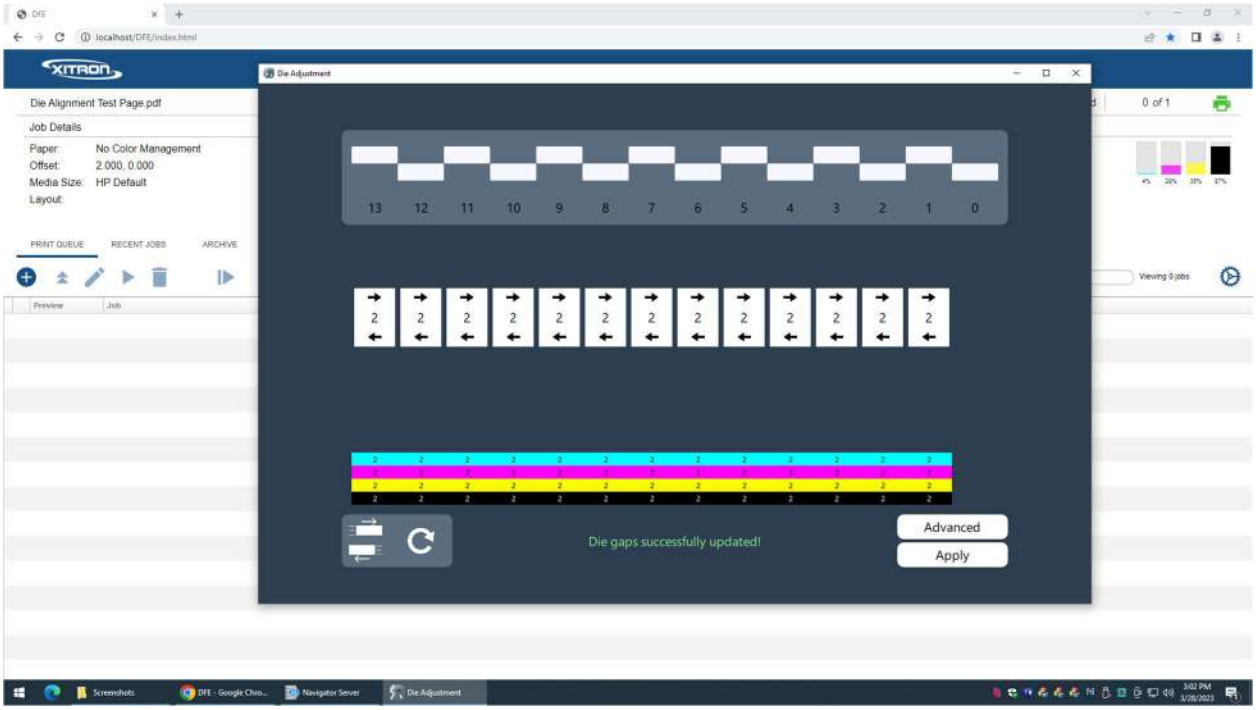


6. The job should be run with a 9x12 envelope with the flap side run against the fence on the alignment section. The cyan bars as shown in the image above should be printed on the leading edge of the envelope and offset horizontally by 2 inches. This offset should put the resulting print in the middle of the envelope. The color profile should always be No Color Management to avoid all four colors mixing together in each color bar. Print the job.

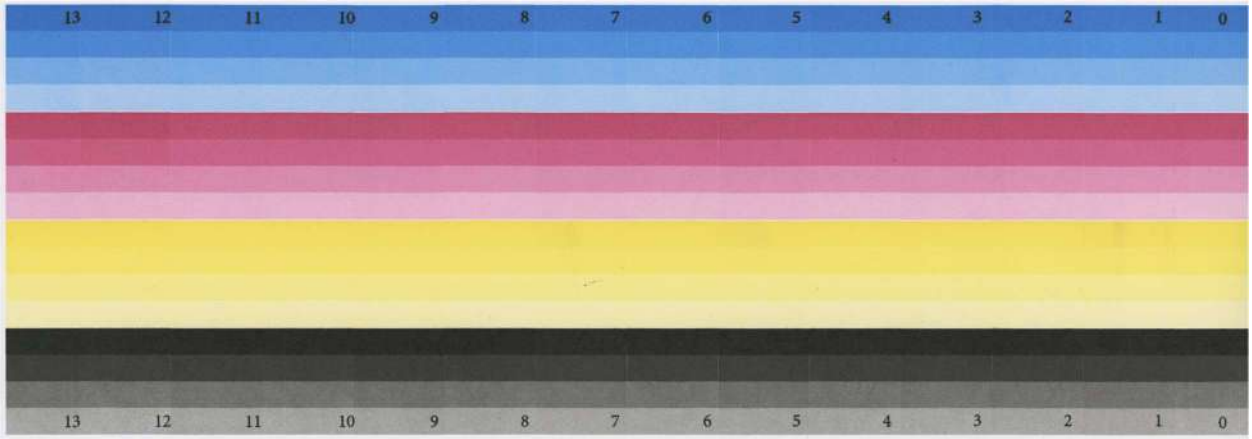
7. The result should look something like this:



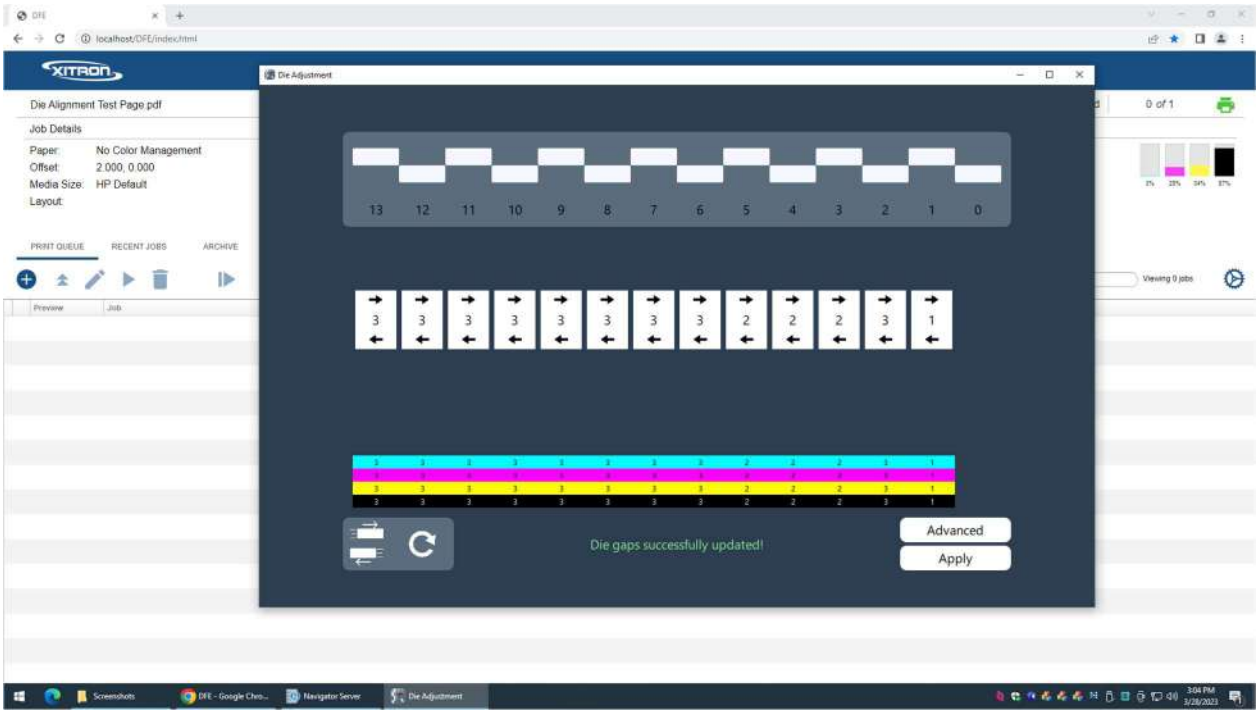
8. As you can see, all the gaps between the dice are noticeable. This means all dice should be moved right in the basic menu or up in the advanced menu. In the basic menu, click the die button in the bottom left rectangle that has an arrow immediately above it pointing to the right. Because all the gaps are so noticeable, go ahead and click that button twice. If the DFE shows the status of the printhead as online and ready, click Apply and wait a few seconds until it shows success before continuing. The numbers in the Die Adjustment Tool should now be as follows:



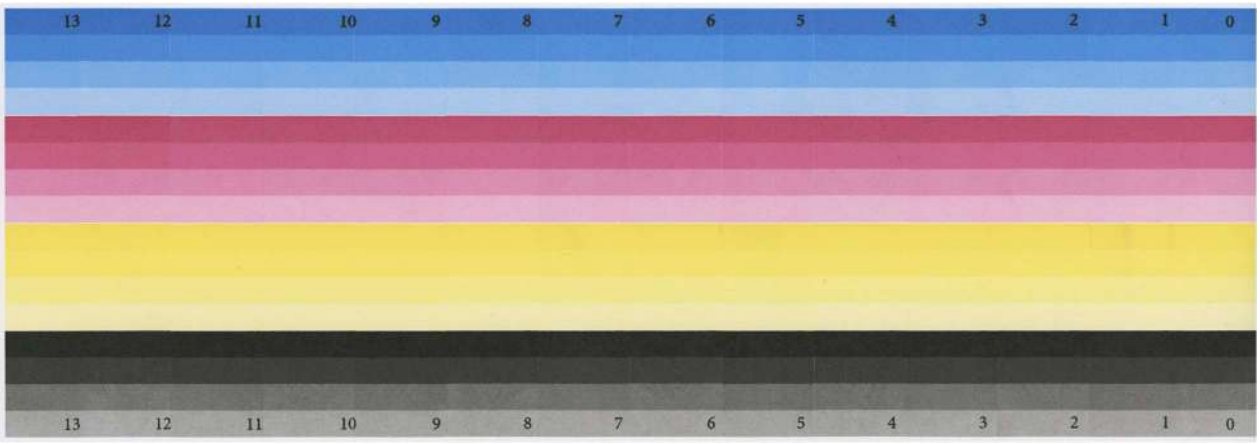
9. Print the Die Alignment Test Page again using the same job as you created before. The result may look something like this:

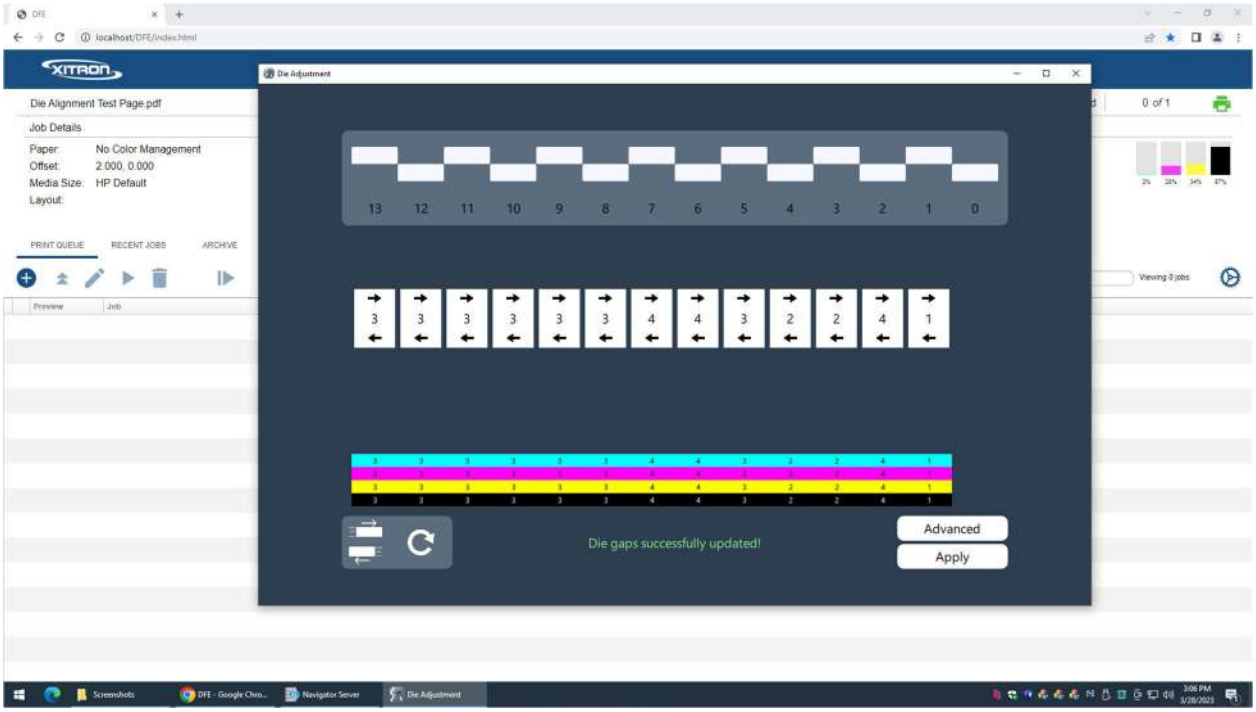


10. The gaps between all the dice are obviously much better. However, there are still some lines that need to be closed. Adjusting one die is easier than adjusting all four colors individually so stay in the basic menu and move a few dice. In order to know if a whole die should be moved, check the same gap in all four colors. Moving from right to left, the line 1 looks like an overlap instead of a gap. To fix this, move die 1 to the left. There is a small gap in cyan, magenta, black, and possibly yellow in line 2. Move die 2 to the right to close the gap. Most of the other gaps except line 3 are still very noticeable, so move dice 5 through 13 to the right but leave die 3 where it is. If the DFE shows the status of the printhead as online and ready, click Apply and wait a few seconds until it shows success before continuing. The numbers in the Die Adjustment Tool should now be as follows:


Die Adjustment
Die Alignment Test Page.pdf
Job Details
Paper: No Color Management
Offset: 2.000, 0.000
Media Size: HP Default
Layout:
PRINT QUEUE
RECENT JOBS
ARCHIVE
13 12 11 10 9 8 7 6 5 4 3 2 1 0
3 3 3 3 3 3 3 3 2 2 2 3 1
Die gaps successfully updated!
Advanced
Apply

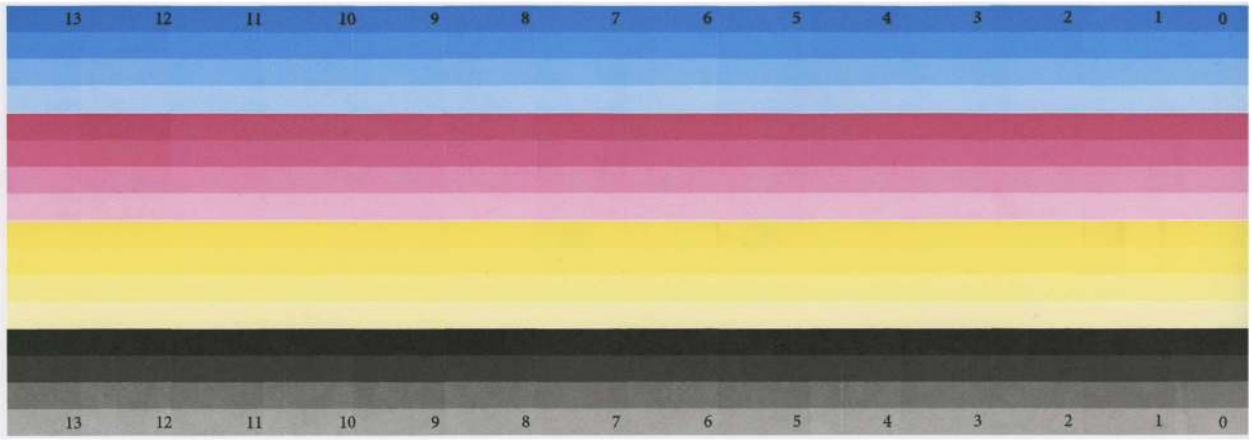
1. The result may be similar to the following image, though each use case will be different:





2. Moving from right to left, line 1 looks nice, so leave that for later. You may notice a line that looks like a gap in die 4. This is a normal streak that can appear often and is fixed by doing a mid-job service or a pen recovery. The most offensive lines are lines 2, 5, 6, and 7. To fix them, move dice 2, 5, 6, and 7 to the right as shown below:

3. The fourth print should look better than the third:
4.

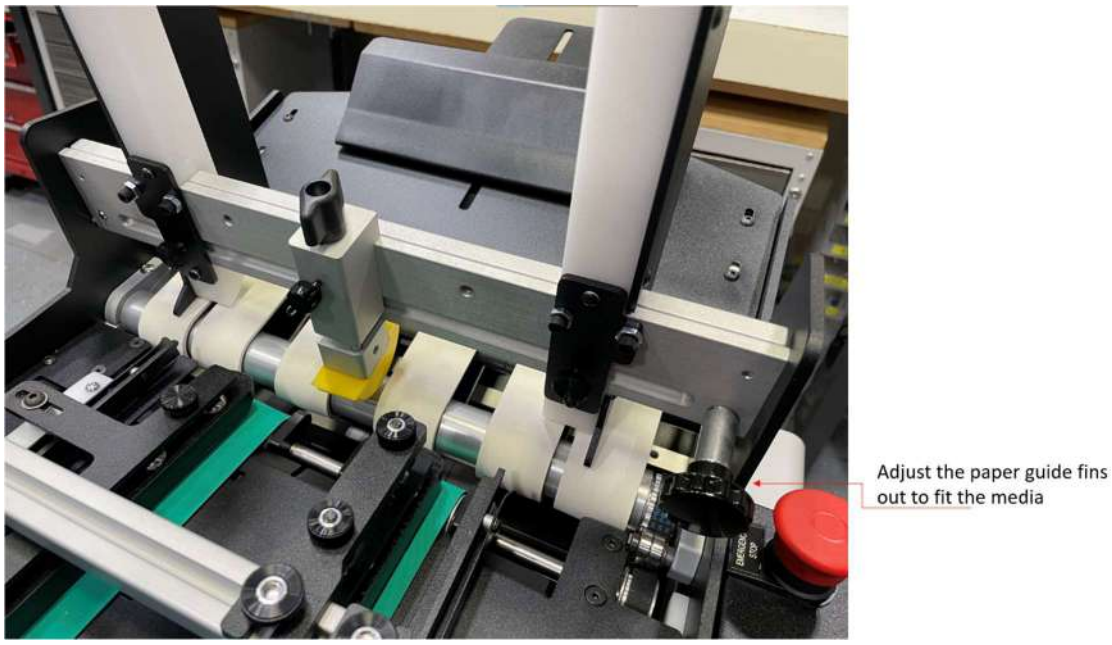


5. This is as good as this file will print through the basic menu. You should be able to notice that none of the dice have the same visible gaps or overlaps in all four colors.

2.3 Feeder Setup and Use

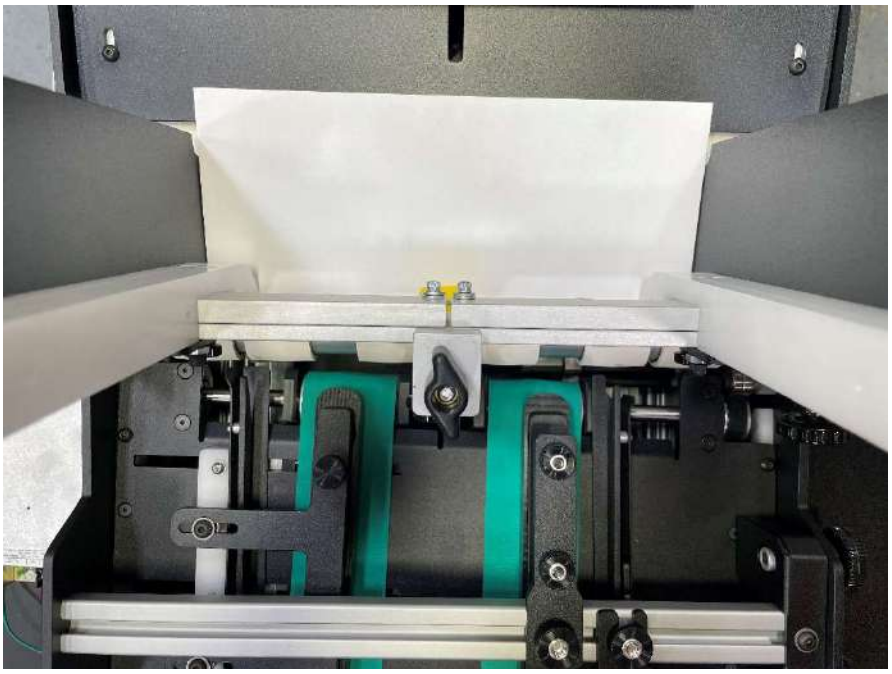
Setting up the feeder to run your envelopes consists of the following steps:
1. Adjusting the paper guides for the width of your envelopes
2. Adjusting the sheet separator.
3. Adjusting the position of the back wedge assembly (rear envelope support)
4. Testing the feeder
5. Adjusting the feeder speed to match the printer.

Step 1. Turn the paper guide adjustment knob on the front of the bridge to move the paper guides outward towards the side plates of the feeder.

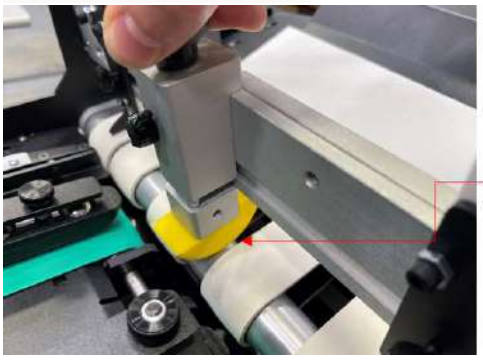


Step 2. Place an envelope between the paper guides on top of the feed belts (in the orientation you wish to run)

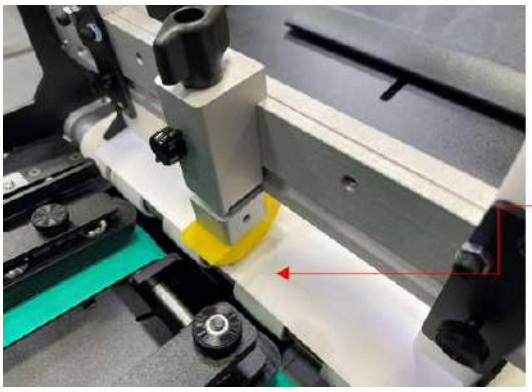
Step 3. Turn the paper guide adjustment knob to position the paper guides alongside your envelope edges. Do not press the guides too tightly against the envelope edges as this would restrict the movement of the envelopes when feeding. Leave about a 1/16th of an inch gap.



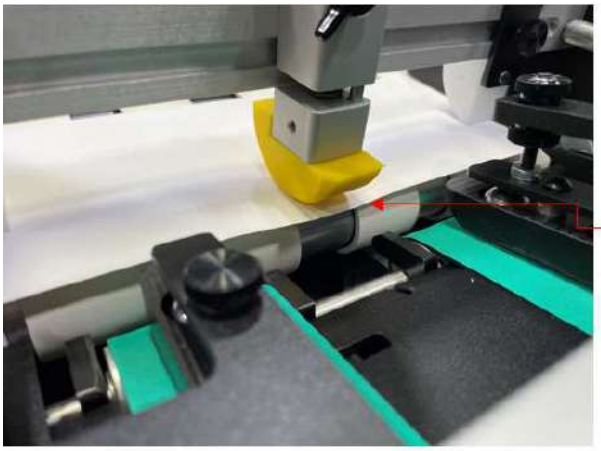
Step 4. Raise the separator tip by turning the adjustment knob on top of the separator assembly CLOCKWISE several turns.



Step 5. Place the lead edge of your envelope underneath the separator tip. Position the leading edge of the envelope just past the lowest point of the tip.

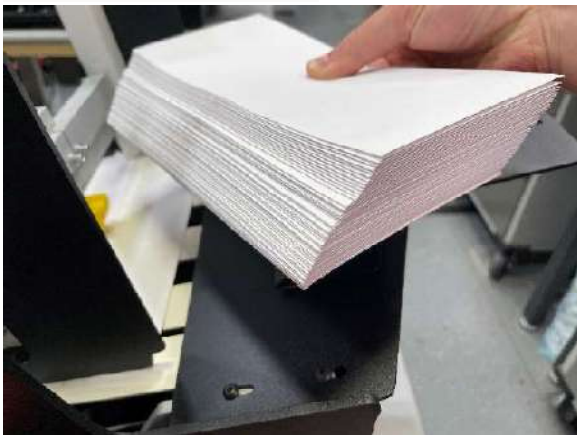


Step 6. Rotate the separator adjustment knob COUNTER CLOCKWISE until the envelope is buckled slightly downward between the white feed belts.



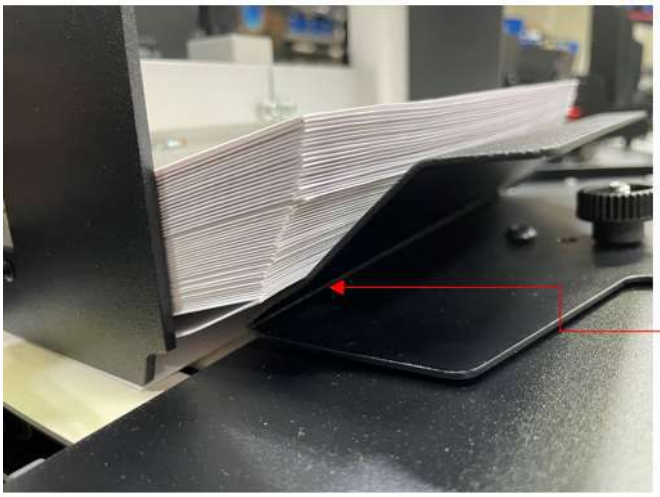
LEAVE THIS ENVELOPE IN POSITION AND PROCEED TO THE NEXT STEP

Step 7. Work a small stack of envelopes into a “shingled” stack as shown below with the bottom envelope forward.



Step 8. Place the shingled stack of envelopes on top of the single envelope in the hopper and carefully “tuck” them up against the white front guides. Try to assist the envelopes to follow the curvature at the bottom of the guides.

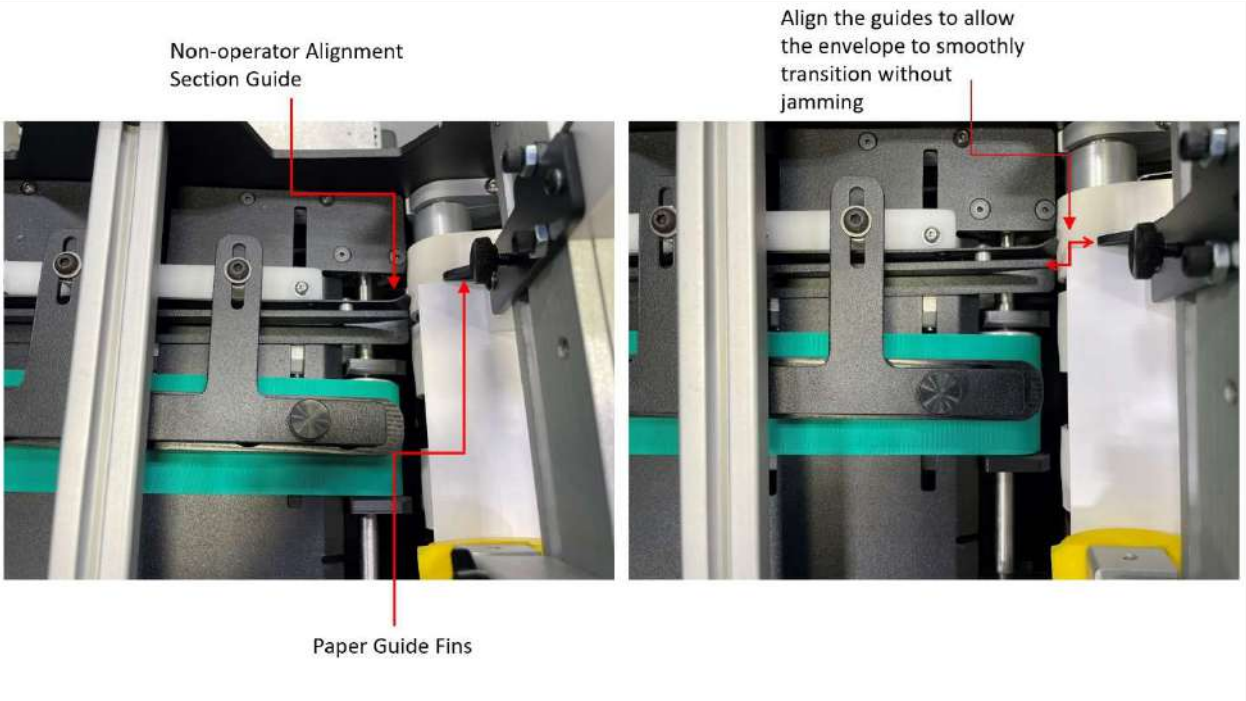
Step 9. While holding the trailing edge of the stack up off the belts, loosen the back wedge locking knob and slide the back wedge assembly forward until it is under the edge of the envelope stack.



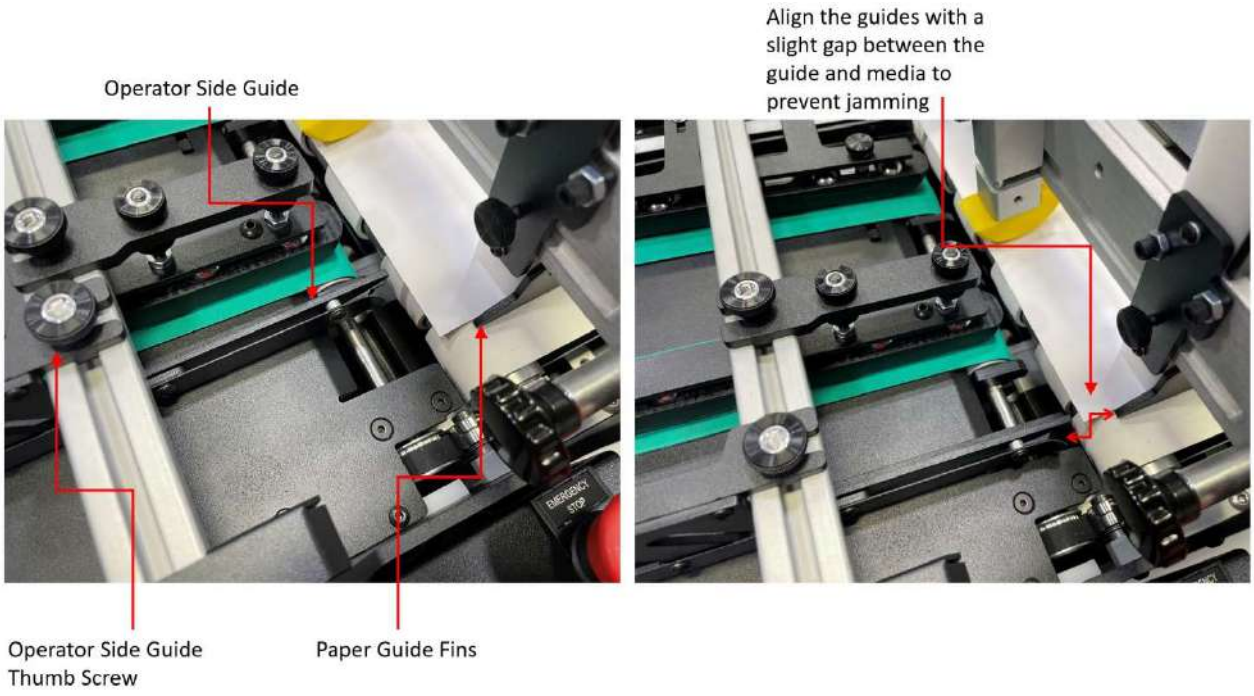
Position the back wedge assembly so that the trailing edge of the envelope stack is resting approximately in the bend of the ramp. Then tighten the locking knob.

NOTE: The position of the back wedge assembly is important and affects the envelope feeding and separation. Some experimentation is recommended for your envelopes to achieve the best results.

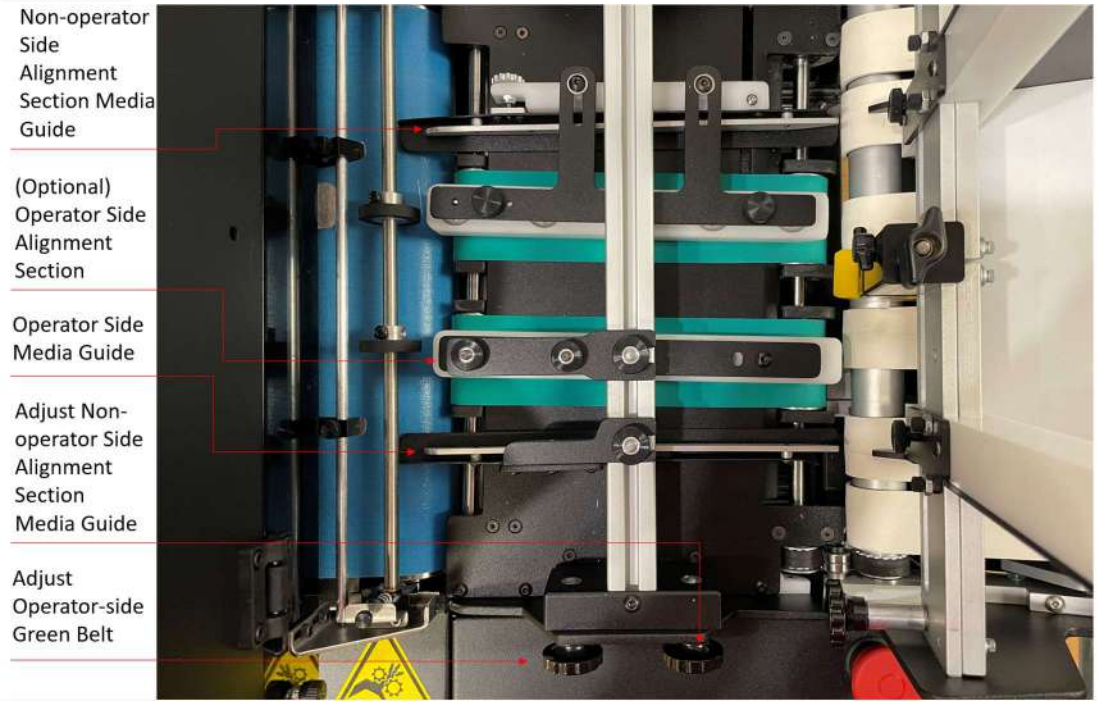
Step 10. Adjust the non-operator alignment section wall so that it lines up with the paper guide fins. You will use the right adjustment knob located on the front operator side to move the alignment section.



Step 11. Loosen the operator side thumbscrew and move the operator side guide. Leave a slight gap between the operator guide and the media to prevent stalling in the alignment section.



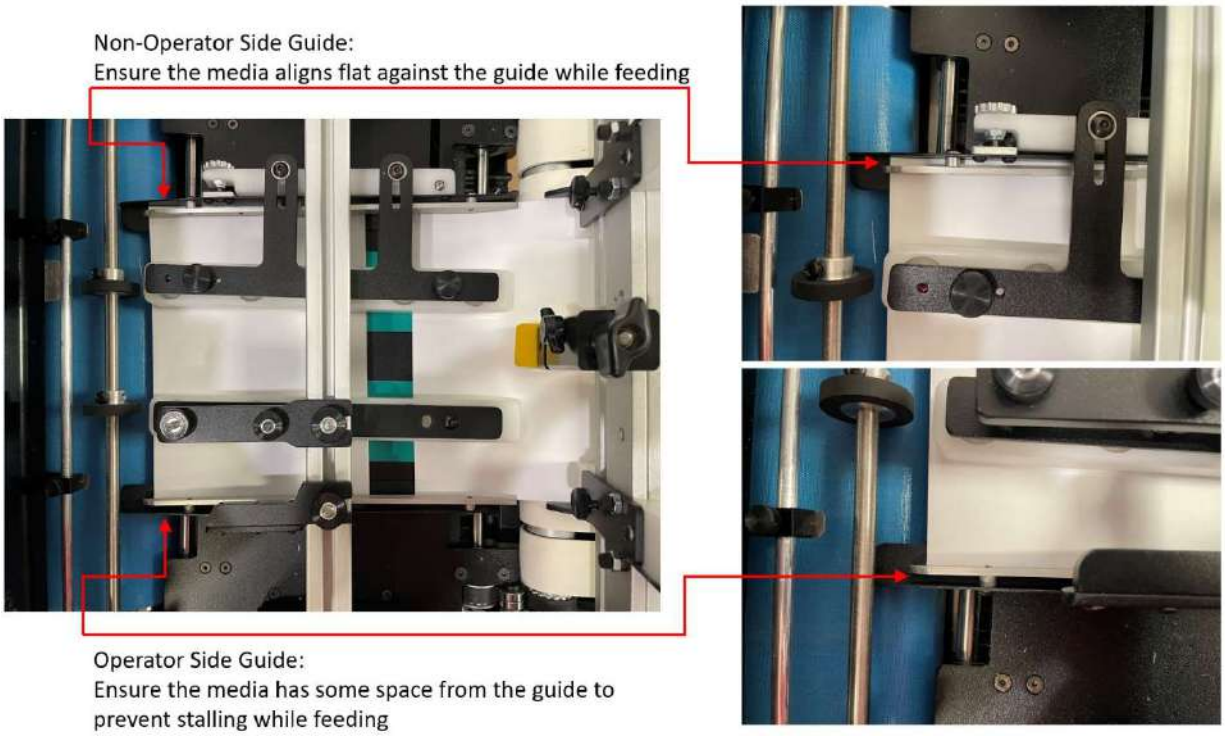
Step 12. Use the left adjustment knob located on the front of the feeder to move the operator side green belt. Position the operator side green belt so that it is fully under the media. The belt should sit about 1 inch from the edge of the media.
Note: Positioning the green belt fully under the media may not be possible with smaller envelopes.



Step 13 (Optional, generally not used). Install the optional second alignment section above the operator-side green belt. The second alignment section helps in holding down warped or curled media.

Step 14. Use the Jog Button located on the back of the feeder to feed an envelope into the green alignment section. Ensure that the media does not catch on the paper guide fins. You may have to reposition.

Step 15. While feeding, ensure that the media aligns flat against the non-operator side alignment guide. If the media is not flat against the guide, you will have to repeat step 10. The media should also have some space from the operator side guide. If there is not space between the media and the operator side guide, repeat step 11.

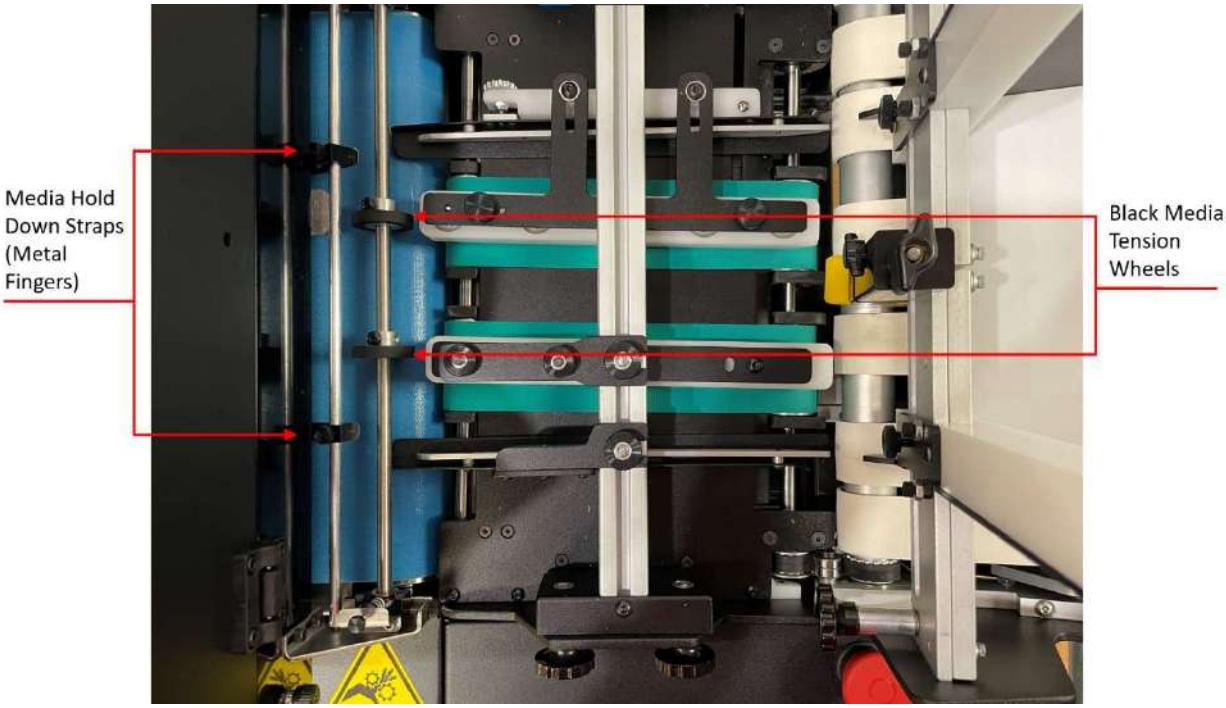


TESTING THE FEEDER

In the DFE go to the settings icon located on the middle right of the screen. Under the FI-1000 tab select “Start Belt” to run the main blue belt. With the main blue belt running, you can now test the feeder.
With a small stack of envelopes in the feed hopper, turn the potentiometer to off (all the way counterclockwise). In the DFE under FI-1000 tab select “Start Feeder” to provide power to turn on the feeder. Adjust the external speed potentiometer to a moderate speed to test feeding.

Alternatively, press the JOG button to run the feeder.

While the feeder is running, observe the envelopes as they travel from the feed hopper across the acceleration table. A consistent gap between envelopes of approximately ½” to 1” is desirable. If there is no gap between the envelopes as they advance on the acceleration table, you can reduce the feeder speed, Additionally, you can try lowering the separator a bit or moving the back wedge assembly in under the envelopes a bit more.



The main blue belt runs a bit faster than the feed section. To ensure all printing is consistent, position the black media wheels evenly apart. They can be moved by loosening the Philips set screw.

There are also metal fingers near the blue wheels which help hold down media under the printhead. Ensure that the metal fingers sit on the blue belt and are evenly spaced 1 inch to 1 ½ inch from the edges of the media.

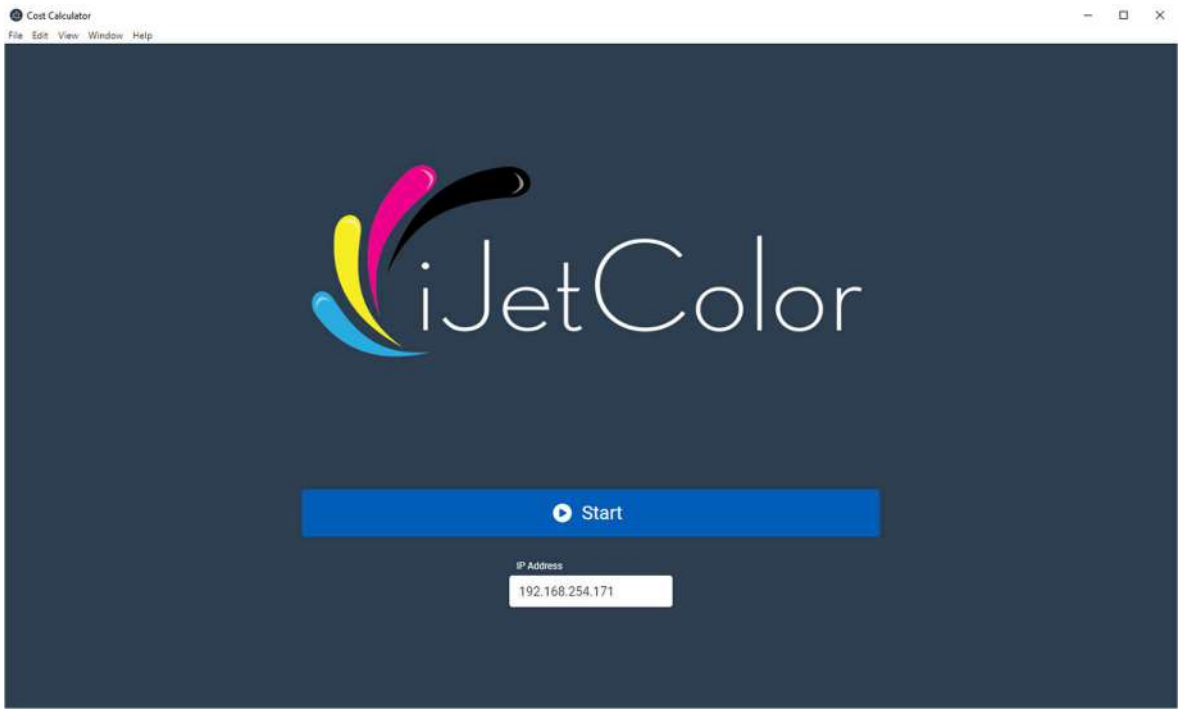
If the envelopes are feeding consistently, you are now ready to begin production.

2.4 Job Cost Calculator

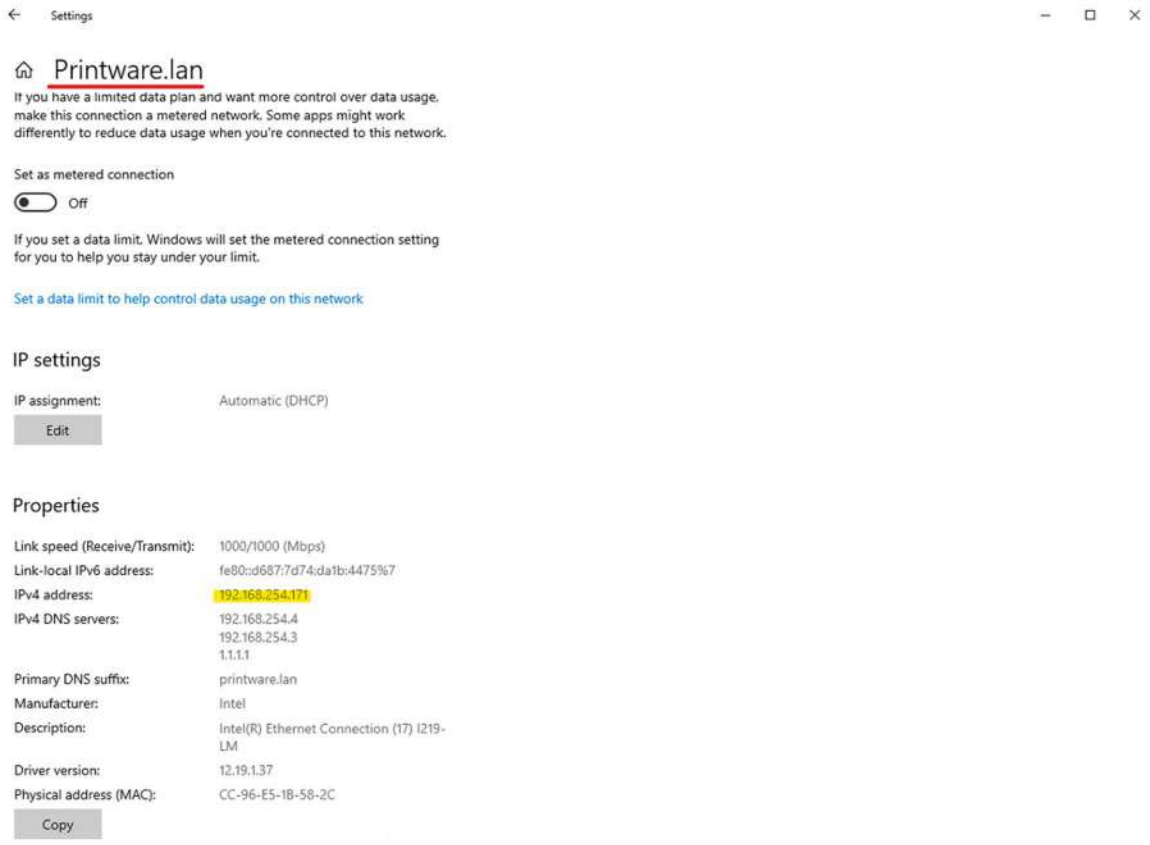
Cost Calculator Application:

Included on the RIP computer is a Cost Calculator Application. The application can be found on the Desktop Background.

After launching the application, you will see a Start screen. There is a Start button and an IP Address text field.

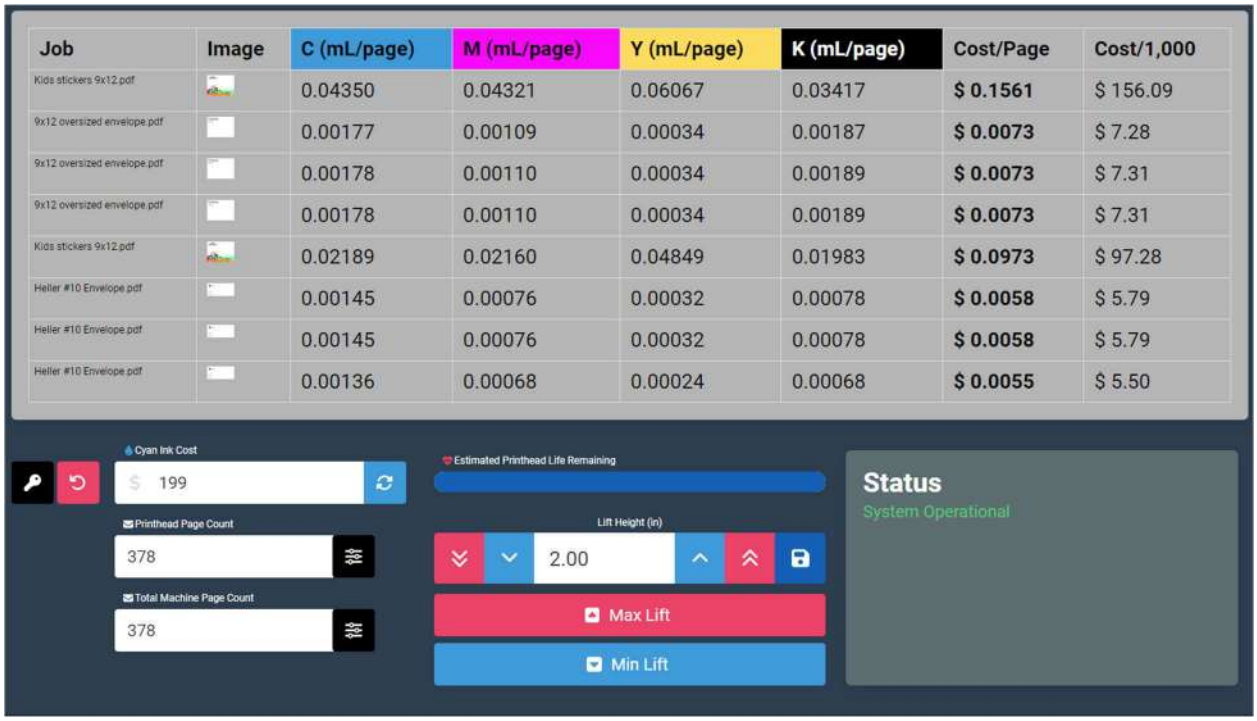


The IP Address must match the IP address of the RIP computer. The IP address of the RIP can be found in the Network and Internet Settings -> Ethernet. In this case, our network is Printware LAN, and the IP is 192.168.254.171



Once you ensure the IP address matches, you can hit the “Start” button. If you notice that the information displayed regarding recently printed jobs is incorrect, double check the IP address.

After hitting “Start”. You will see a screen similar to the one found in the DFE settings. The major additions are Printhead Page Count, Total Machine Page Count, and Estimated Printhead Life Remaining.



Printhead Page count – Total Impressions printed on the current printhead.

Total Machine Page Count – Total Impressions printed on the machine since installation.

Estimated Printhead Life Remaining – A bar that will empty out as the head nears the rated end of life. Full Blue bar = Full Printhead Life. Please bear in mind that the bar is merely an estimate based off the impressions that the manufacturer rates the print engine for. You may see life extend past the estimated life.

2.5 Setting the Lift Height

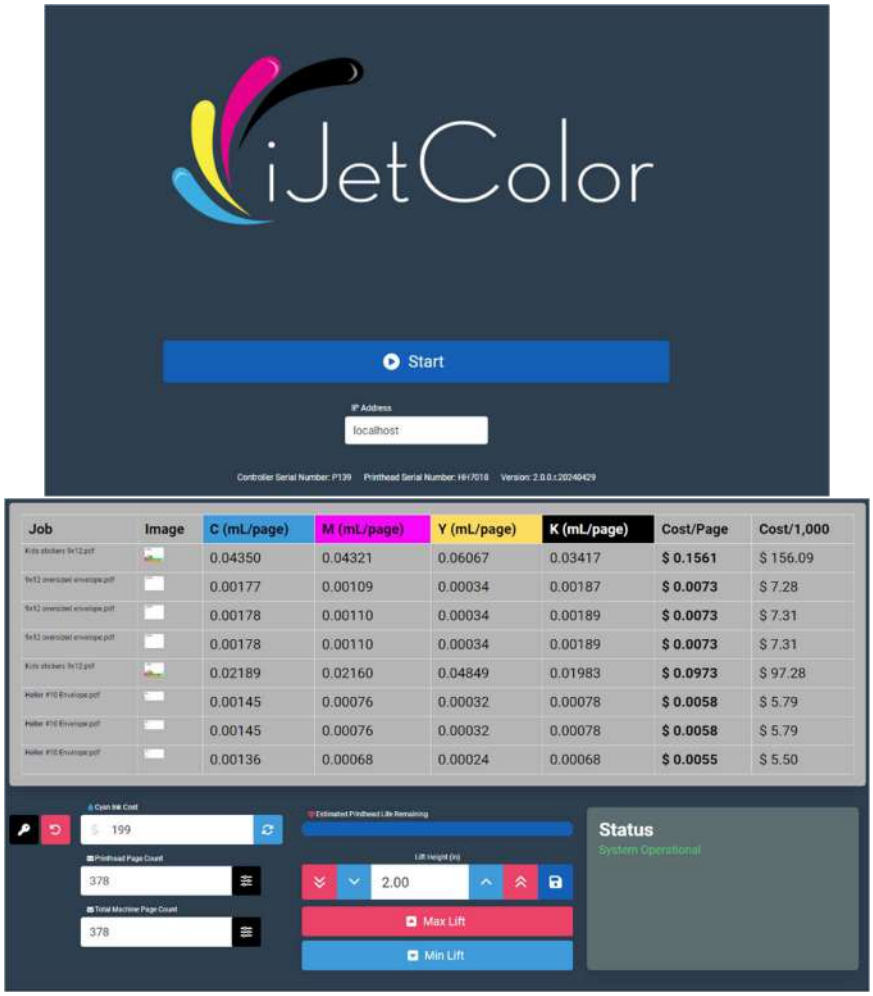
Changing the lift height will raise or lower the physical height of the printhead. You may need to change the lift height if you are printing on thicker stock or if you need to obtain access under the printhead for things such as clearing a jam or maintenance. If you dramatically change the print height, such as printing on enveloped then boxes, you may need to re-teach the infeed (TOF) sensor. This procedure is described in this manual under section 3.6.

Be aware that print quality may suffer if the lift height is set too high while printing. Typically, a proper lift height for envelopes and sheet stock is when the printhead head touches the table.

Here are some examples of print quality at different lift heights. This was printed on a typical #10 Envelope.

To set the lift height,

1. Locate the “Cost Calculator” standalone application, open it up, and hit “Start”



2. The controls of the lifter are as follows:

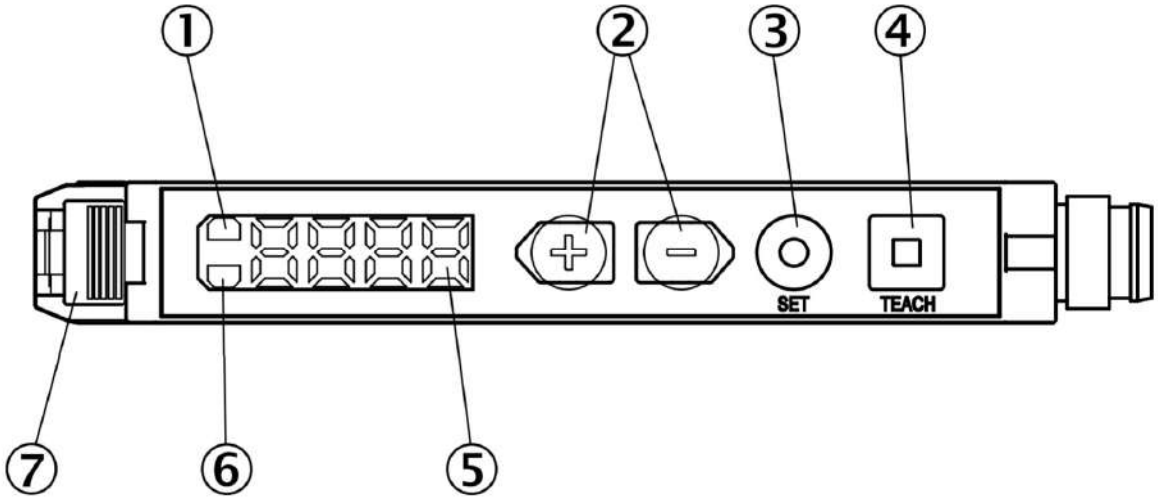
a. Instantly sets the height to its maximum value of 2 inches.
b. Instantly sets the height to its minimum value of 0 inches, which allows the head to sit on the tabletop.
c. The “Fine” height adjustment, changes height in increments of 0.01 inches.
d. The “Coarse” height adjustment, changes height in increments of 0.1 inches.
e. The save button, moves printhead to the set height.
f. The current lift height

2.6 Sensor Adjustment and TOF Adjustment

Changing the type of media or changing the printhead lift height may require you to “teach” the infeed (TOF) senor. If you change the stock or the printhead lift height and the system no longer prints, it’s a good bet that this procedure needs to be completed.

You can find the sensor control panel located on the non-operator side of the printhead.

Typically, if there is media underneath the sensor eye the orange LED (1 on diagram below) on the sensor body will be illuminated. This is a good way to verify if the sensor is triggering properly.

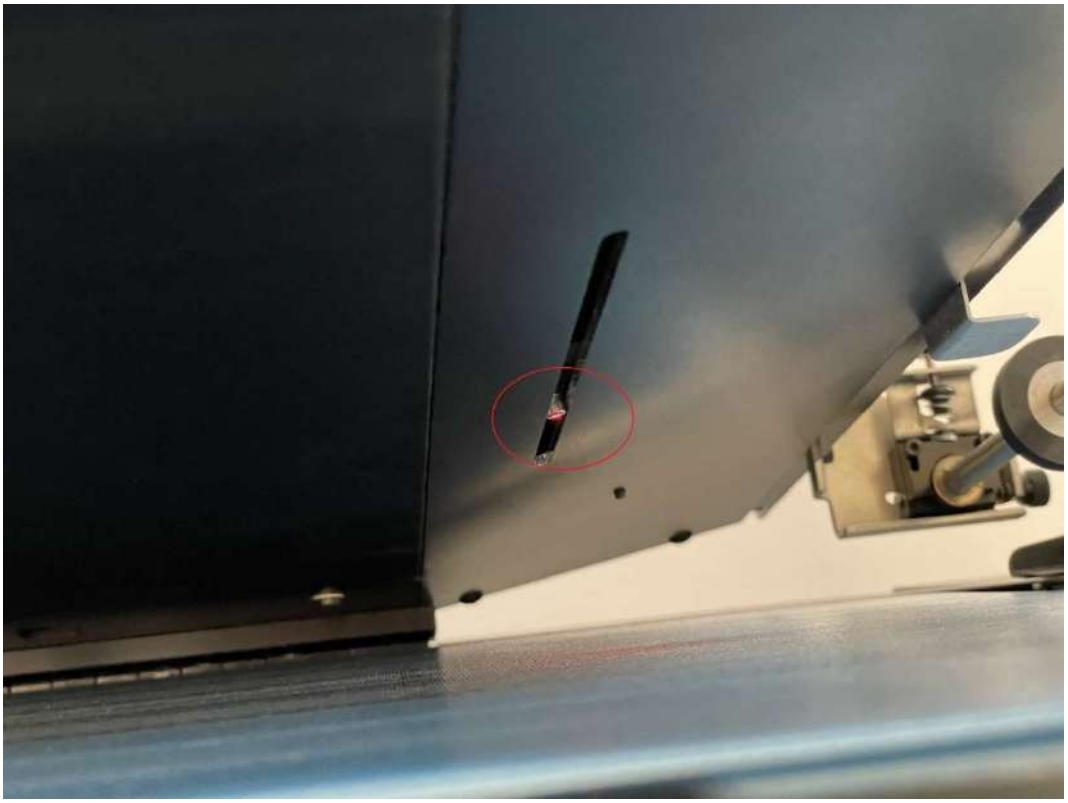


To "Teach" the sensor:

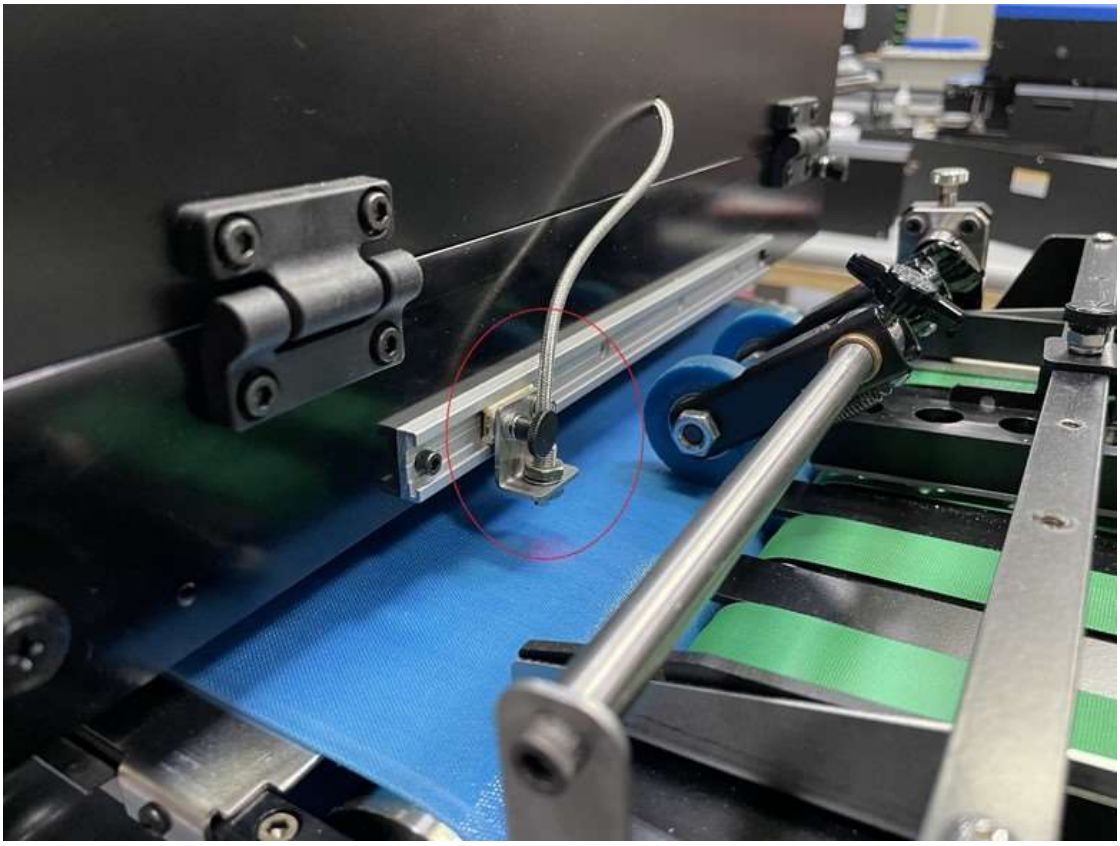
1. Make sure that the sensor is only detecting the belt (no stock under sensor).

2. Momentarily press the Teach Button (4 on the diagram above).
3. The display will now show “2-nd”.
4. Place one sheet of stock on the belt under the sensor.
5. Press the Teach button again.
6. If the calibration is successful, the display will show “good”.

Note: The sensor is located beneath the entry side of the printhead. It sits in a sliding bracket. Shown is the TOF sensor Rev B - Printhead is raised for a better view.



Note: On some models the TOF sensor is mounted externally as shown below. Sensor Rev A



If there is an error output during the teach-in: An error message is output if the input is faulty during the configuration. See the following table:

Err 1	Indicates that the light intensity of the teach-in value is too low.
Err 2	Indicates that the light intensity (saturation) of the teach-in value is too high.
Err 3	Indicates that the difference in light intensity between teach-in point 1 and teach-in point 2 is too low.

Top of Form in the DFE:

Note: When setting the Top of Form offset in the DFE, the default value is for TOF Sensor Rev A and TOF Sensor Rev B. Sensor Rev A is an externally mounted sensor while sensor Rev B is mounted beneath the printhead itself.


FI-1000
HP Advanced
Cost Calculator
Get Support
Apply
Start Belt
Start Feeder
Enable TOFs
Pen to Paper Spacing:
5120
Top of Form Offset:
32000
Default
Page Gap:
19500
COM Port:
4
Static Page Mode
Current Belt Speed: 0
Remaining Service Station Life: 96.4%
FW rev: CLSTPWPP1N001.2317A.00
System Serial Number:
Last printer message: ready
version 2.0
Sensor Rev A

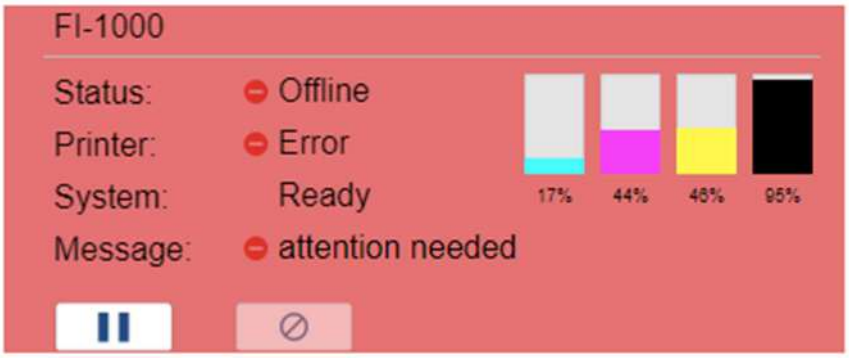

FI-1000
HP Advanced
Cost Calculator
Get Support
Apply
Start Belt
Start Feeder
Enable TOFs
Pen to Paper Spacing:
5120
Top of Form Offset:
21600
Default
Page Gap:
19500
COM Port:
4
Static Page Mode
Current Belt Speed: 0
Remaining Service Station Life: 96.4%
FW rev: CLSTPWPP1N001.2317A.00
System Serial Number:
Last printer message: ready
version 2.0
Sensor Rev B

2.7 Replacing Service Station Sled

The Service Station Sled has a roll-to-roll wiping material that cleans the printhead surface. This will remove foreign material such as paper fibers, dust, and excess ink. Regular maintenance (cleaning) of the print nozzles will ensure optimal print quality. Eventually the roll of wiping material will be used up and the entire maintenance tray will need to be replaced.

On your interface you will see an estimated % of the remaining service station life left. Once this gets to 0% it will need to be replaced. Please note that this value is only an estimate. It may be required to replace the sled before the value gets to 0%.

When the service station cloth is depleted, you will receive an "Attention needed Error" and the sled must be replaced. The printer will not print when in error because the printhead cannot be cleaned.



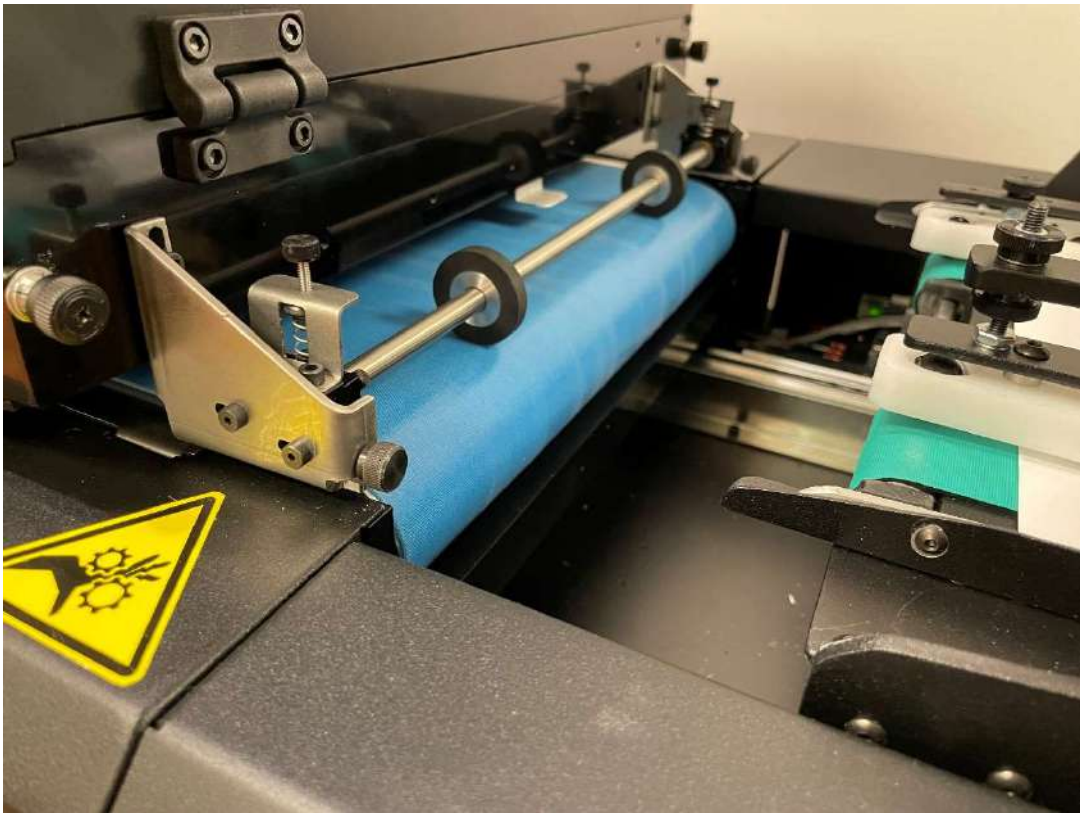
Note: Please always keep an extra service station on hand to reduce downtime and ensure smooth printing.

<u>Warning:</u> If the service station runs out and you do not have a replacement on hand, leave the old station in the printer until you are ready to swap stations. Doing so will ensure that the printhead remains capped and hydrated.

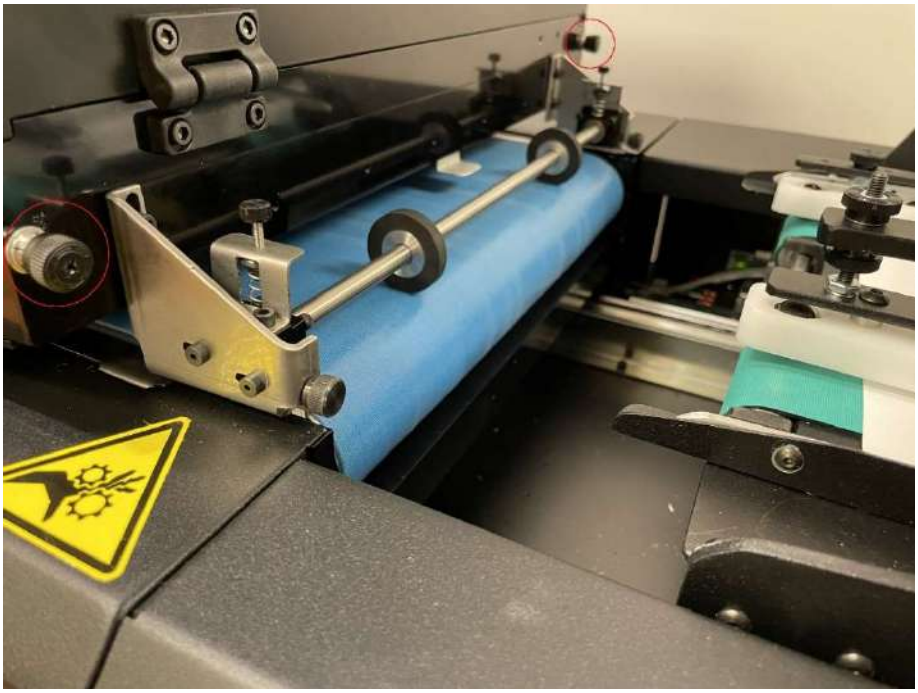
Never leave the printhead uncapped (no service station under it) for more than <u>three minutes</u> or serious damage may occur.

To replace your Service Station:

1. Pull the feeder away from the printhead.

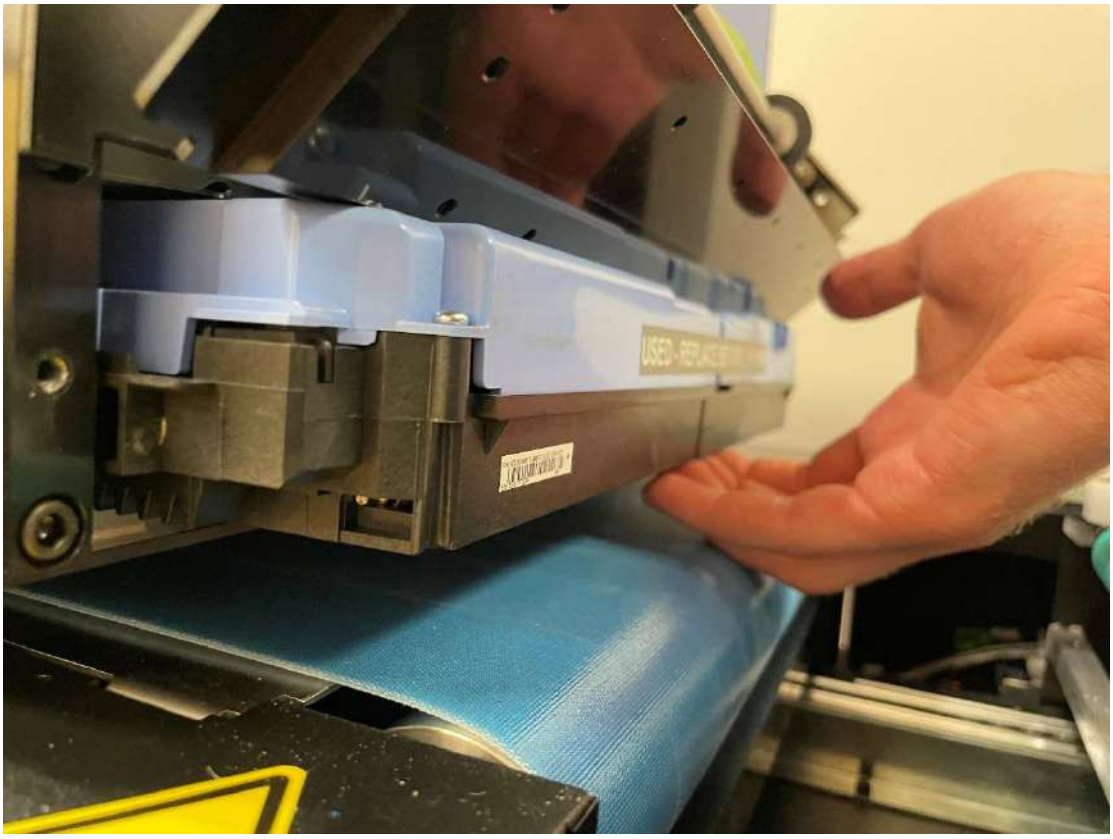


2. Loosen the two thumbscrews securing the maintenance tray door and open the door fully.



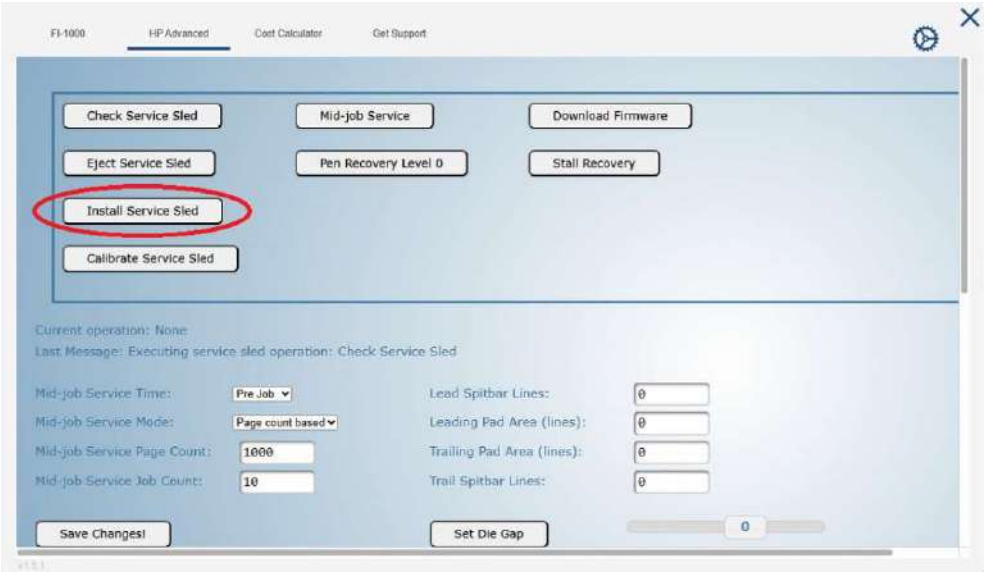
3. In the HP advanced tab on the main display click on the **"Eject Service Sled"** button. This will drive the service sled out of the printhead.

4. Pull the Service Station out of the printhead housing. It may be tight on the non-operator side, but it will come out.



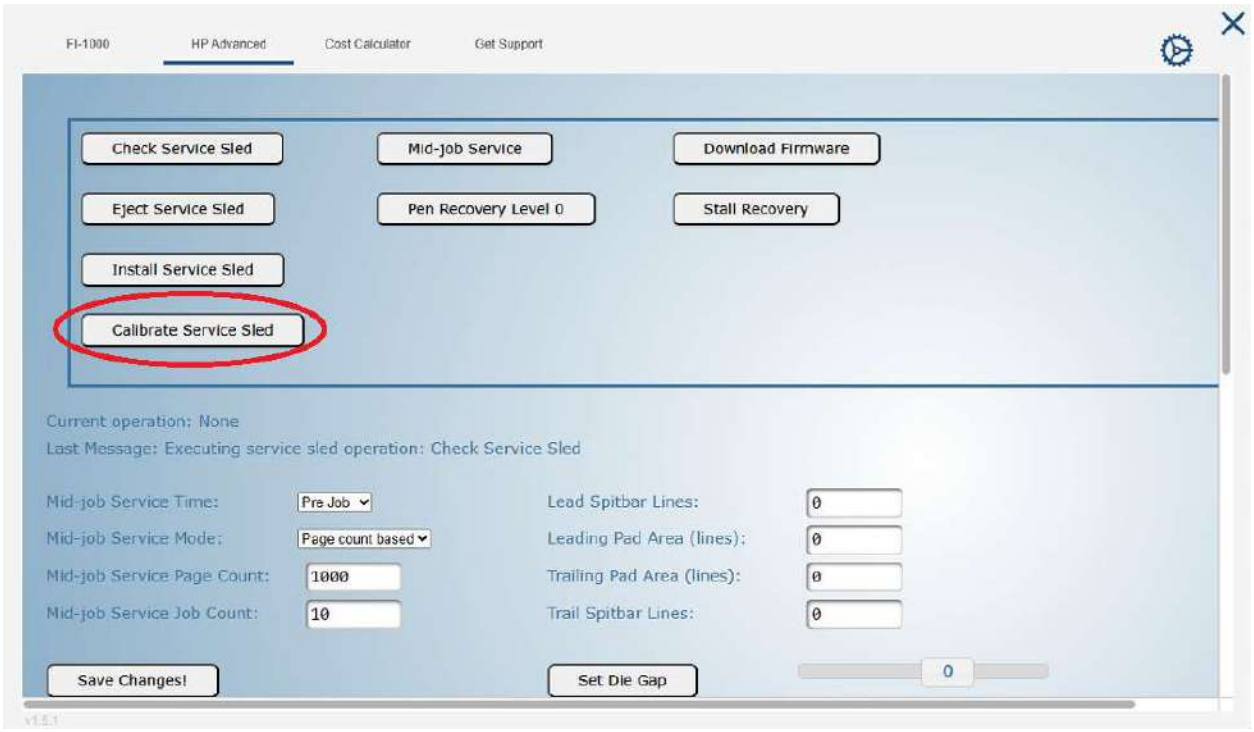
5. Slide the new maintenance tray into the opening and slide it in until it stops.

6. In the HP advanced tab on the main display click on the **“Install Service Sled”** button. This will pull the service station sled into the system. If the sled does not start pulling it in, slightly push the sled in to engage the gears. The sled should then be pulled in.



7. As soon as the sled is pulled in, close the door, and retighten the thumbscrews.

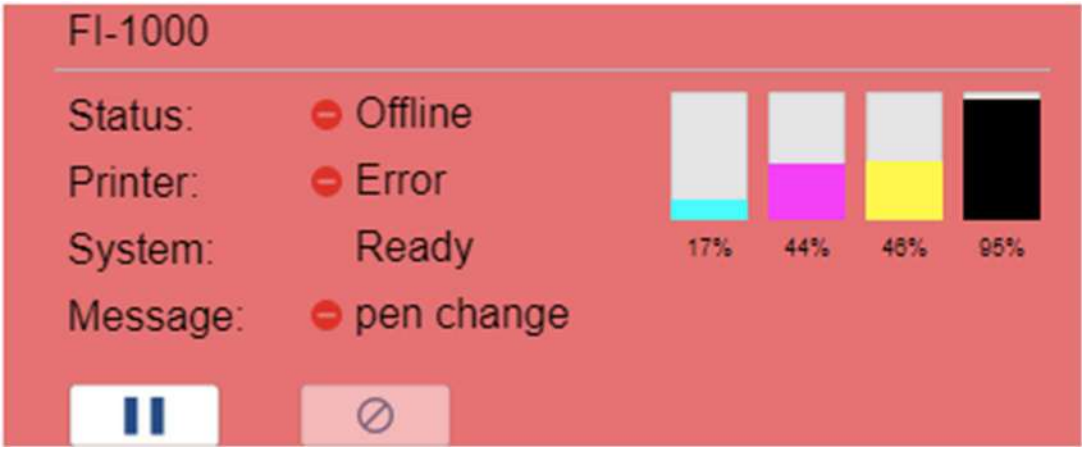
8. In the HP Advanced window, click on the “Calibrate Service Sled” button. This will set the % remaining to 100%. Note: To see the service station life update in the DFE, fully reboot the navigator server.



2.8 Replacing Ink Tanks

1. Open the ink door. The ink door is a spring loaded magnetic latching door. Pull to open.

2. After a few seconds, “Pen Change” should appear in the DFE. It is now safe to remove the ink.



3. Remove the used ink cartridge by pressing it in to unlatch it. Then pull out the cartridge.

4. Install the new ink cartridge by sliding the cartridge into the slot. Push in far enough so that the cartridge latches in.
5. Close the ink door.

   Note: You should notice the “Pen Change” error clear after a few seconds. If the error does not clear, shift the ink door slightly up or down. Doing so will ensure that the door sensor is tripped.

Section 3 – Operator Maintenance

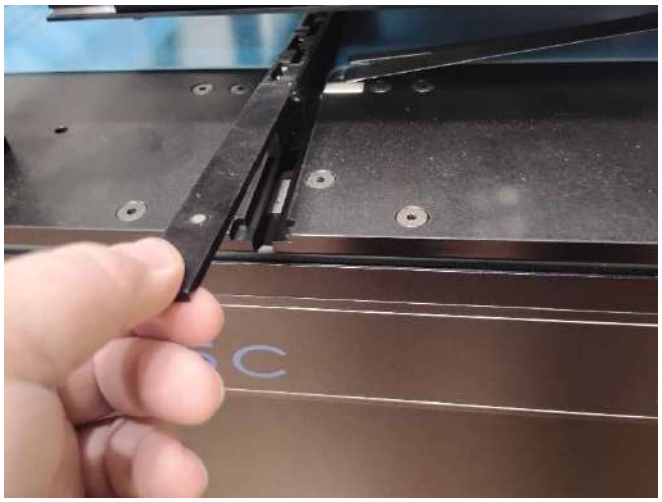
3.1 Cleaning the Print Platen and Waste Ink Tray

As you print with your printer, a small amount of ink is ejected because of overspray. To prevent ink from getting onto the blue belt, the printer features a waste container/print platen. The print platen itself has a sealed trough which stores the ink build up and must be cleaned periodically. Although it is difficult to say how often because there are many printing variables at work, it is recommended that it be cleaned weekly. Keep in mind that if you are printing large quantities or bleeds, more frequent cleaning may be necessary.

1. Begin by raising the head to its maximum height.

2. Locate and remove the thumbscrew at the operator-side of the print platen.

3. Lift out the platen.



4. Rinse off the platen in a sink, then dry off.

5. Reinstall the platen and reinsert the platen thumbscrew.

3.2 Printhead Replacement

The HP print engine in the printhead assembly is very durable and typically will last a long time. However, at some point the nozzles or other components in the HP print engine will wear out from use and thus need to be replaced. To make this a quick and painless replacement for the end user the entire printhead is replaced. Typically, the user will replace the entire printhead assembly and send the assembly back to Printware for repair and refurbishment.

Note: The printhead is industrially constructed as such it weighs 70 pounds. So, it will take two people capable of lifting the printhead to perform this task.

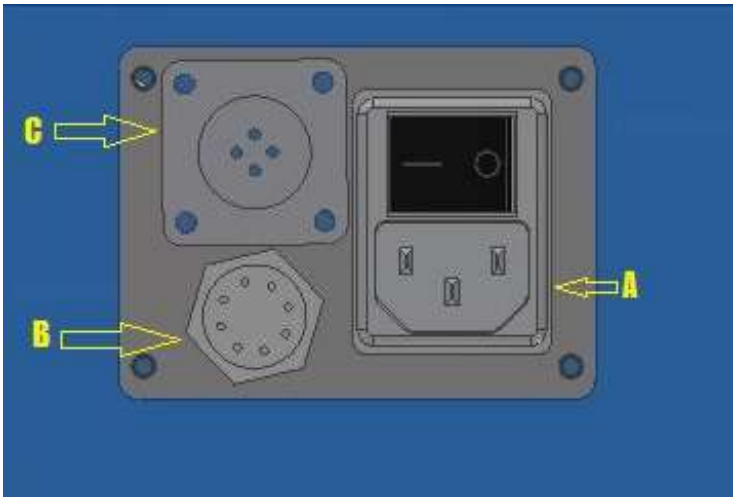
To replace the printhead:

1. Lower the lift height to the lowest position and remove the ink cartridges for use in the new printhead. (see section Replacing the Ink Tanks)

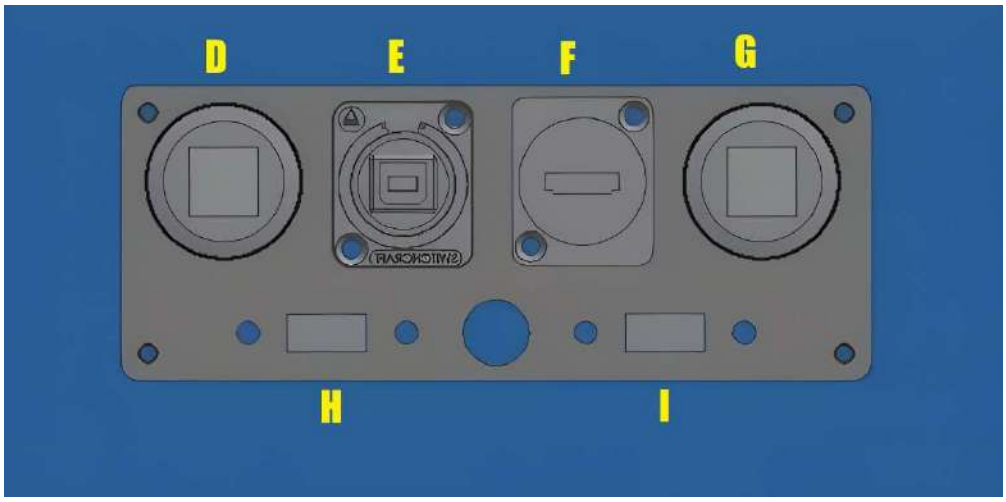
2. Raise the lift height to 2 inches. (see section Setting Lift Height)

3. Power off the printhead assembly using the main power switch on the back of the printhead.

4. Disconnect all cables on the back of the printhead. Pay attention to where they are connected so that re-connection will be easier.



   a. The power cable
   b. The encoder cable
   c. The feeder cable



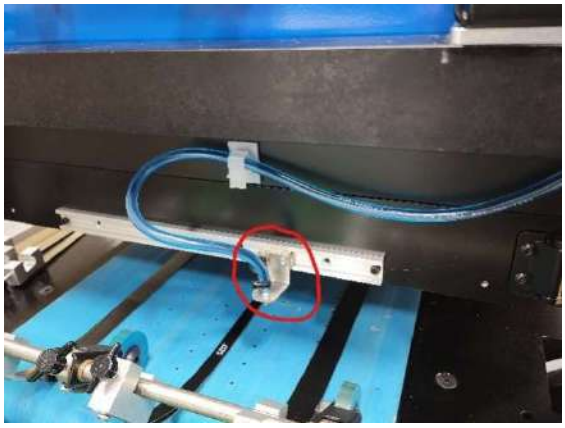
d. NOT USED ON THE 1175C
e. USB (to RIP)
f. NOT USED ON THE 1175C
g. Ethernet (to RIP)
h. RIP – USB (to RIP)
i. Lift Controller (to RIP)

5. Remove the four shoulder screws that secure the printhead to the frame. Save the screws for use with the new printhead. Remove by pushing them up from the bottom.

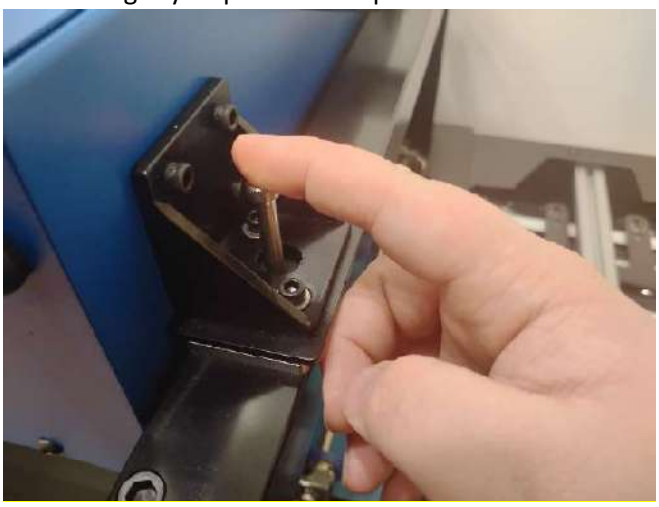
6. Being careful not to damage the infeed (TOF) sensor, lift the old printhead off of the conveyor mounting frame and carefully set on a table or cart. The printhead weighs 70 lb, so it will take *two people* capable of lifting the printhead to safely perform this task.

7. Unpack the new printhead.

8. With two people, lift the new printhead onto the conveyor mounting frame. Pay careful attention not to damage the infeed (TOF) sensor.



9. Install the four shoulder screws removed from when the old printhead was removed. You may have to slightly re-position the printhead to make the holes line up.



10. Connect all the cables on the back of the printhead.

11. Remove the thumbscrew from the service station door and open the door. Remove the two orange shipping braces. Close the service station door and secure with the thumbscrew.

12. Install both orange shipping braces in the old printhead and secure the door with the thumbscrew.

13. Power up the new printhead.

14. Package the old printhead for shipment back to Printware.