iJetColor Pro 1175p Training

iJetColor Pro 1175P

Inkjet Technology

iJetColor Pro 1175p Training Agenda

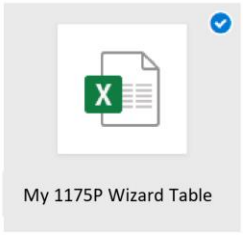
1. Overview
    a. Overview – discuss agenda.
    b. Discuss Support Tools (website, wizard etc.)
    c. Printhead overview
2. General use
    a. Basic Printing – Adding jobs, printing, canceling jobs, etc.
    b. Setting the lift height, pen to paper spacing, set die gaps – Optimize print quality.
    c. Sensor adjustment, TOF adjustment
    d. Replacing maintenance tray
    e. Replacing Ink Tanks
    f. Cleaning print platen and waste ink tray
3. Rip/MCI use and troubleshooting
    a. General Use
    b. Color Tools
    c. Spot Color Tool
    d. HP Tabs
    e. Job Cost
4. Printhead replacement
5. Feeder
    a. Setup and Use
    b. Belt Replacement
    c. Troubleshooting and maintenance
6. Conveyor
    a. General Use
    b. Replacing vacuum belt
    c. Troubleshooting and maintenance

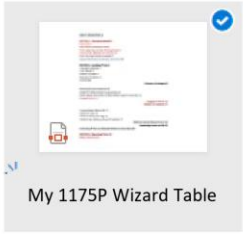
Support Resources

https://www.ijetcolor.com/support

Support Resources

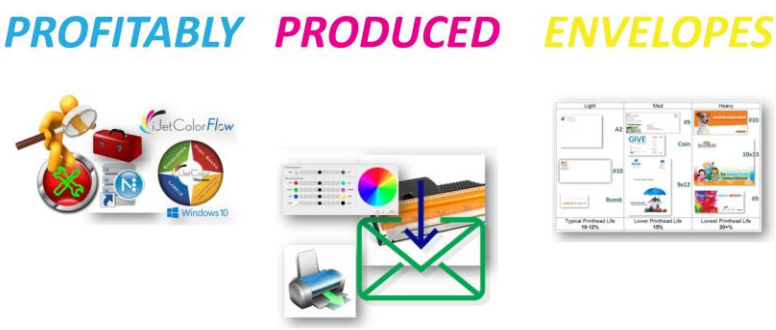
https://My1175P.iJetColorWizard.com * *Password Updated Quarterly*





Support Resources

https://ijetcolorcertification.memberportal.io/site/login/



2a. Introduction to The DFE (Digital Front End)

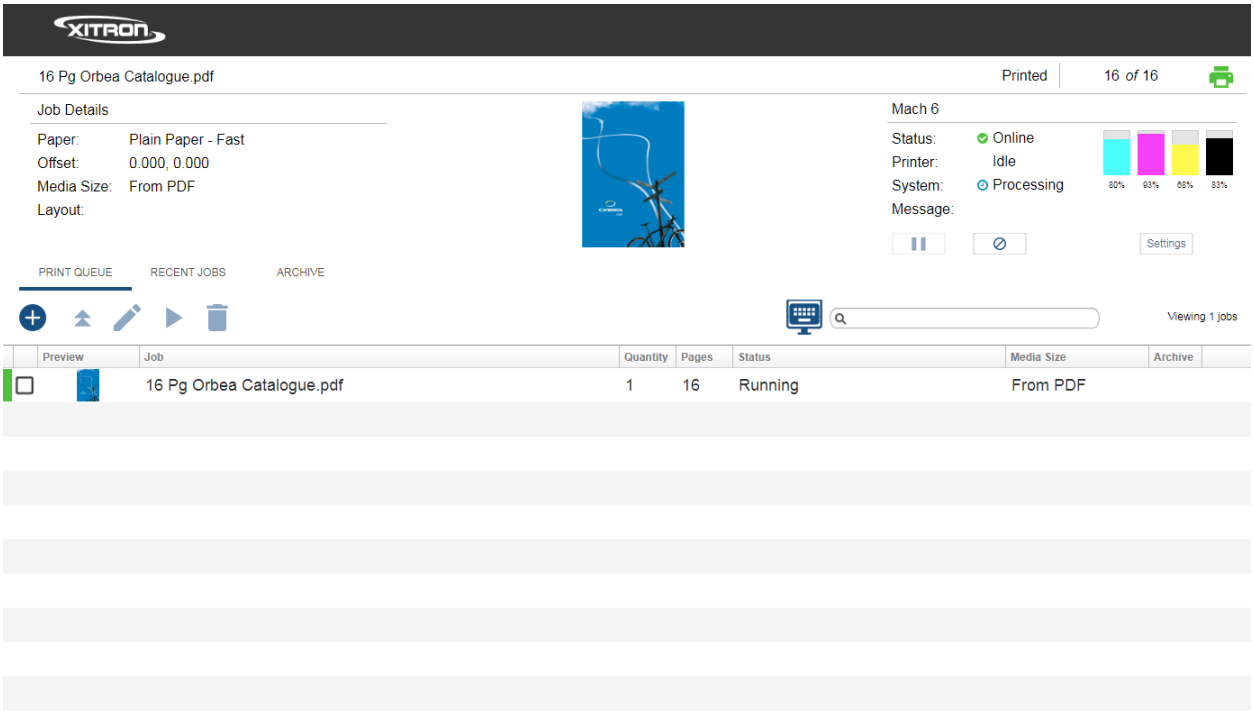
The Navigator Digital Front End is a print management system for digital printers. It supports web and sheet fed printers and printing presses from desktop to light industrial to heavy industrial.

Based on the fast and accurate Harlequin Host Renderer, the Navigator DFE can prepare your jobs, help you keep track of them, position them on paper, control 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.

Using a scalable RIP farm system allows for any printing speed to be matched.

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

The main job screen is divided into two main sections.
The top third is feedback from the DFE and from the printer about the currently printing job.
The bottom 2/3 is the job queue.

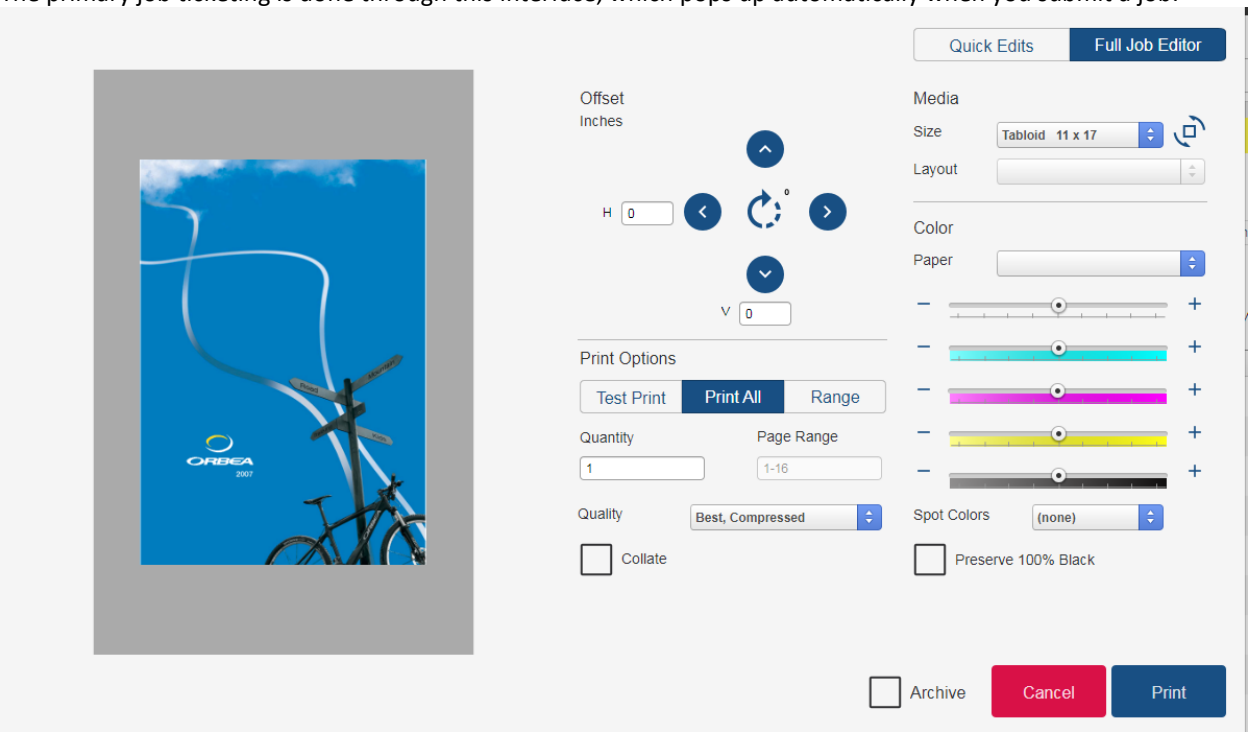


The UI is designed to work just as well with a touch screen or a keyboard and mouse. Consult your sales representative for a recommendation of a good, compatible touch screen.

Looking at the top third of the main screen. . .
Feedback is always in front of the DFE operator.
On the left hand side you will find job data.
In the center is the thumbnail view of the currently printing job.

On the right is feedback from the printer and printer controls. You can cancel or pause the running job. You can access the printer control panel.

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



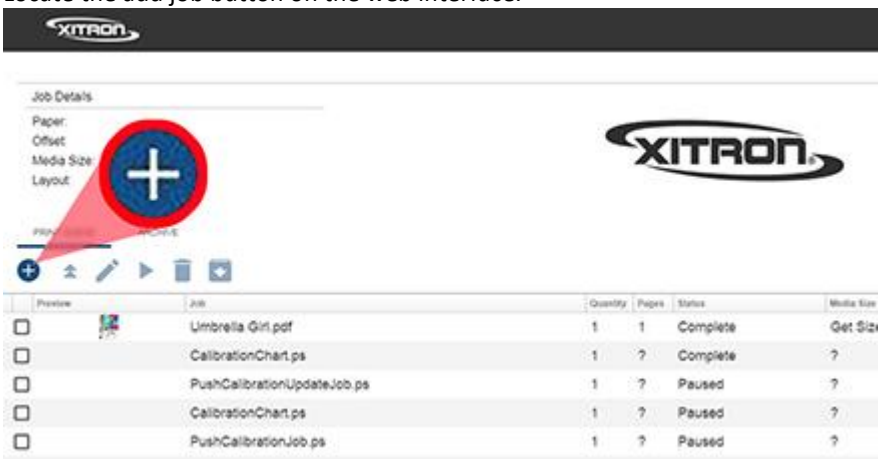
Quick start - Printing a job with Navigator DFE

There are three ways to submit a job to the DFE to be printed.

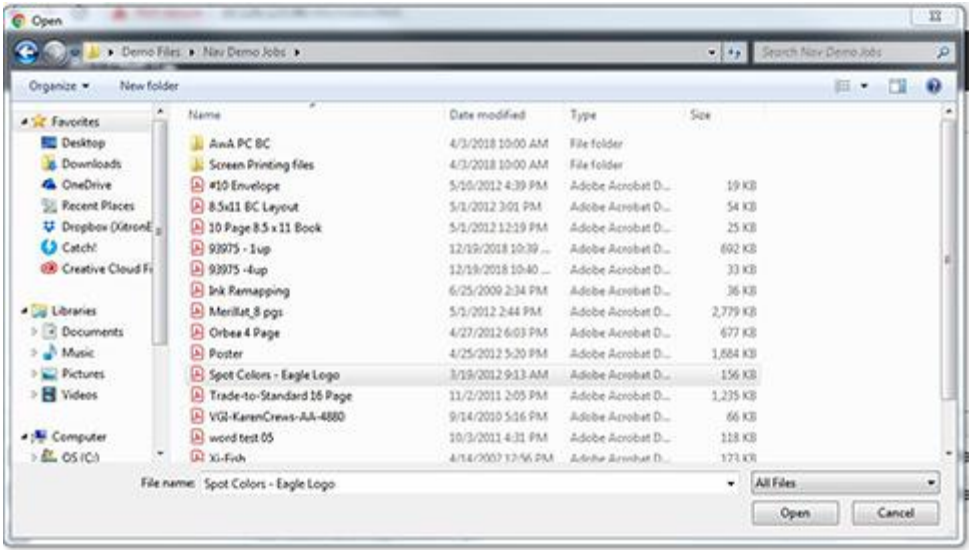
1. Click the "Add Job" button and navigate to a file.
2. Drag and Drop onto the DFE screen.
3. Hot folder input.

1. *Add Job* button

Locate the add job button on the web interface.

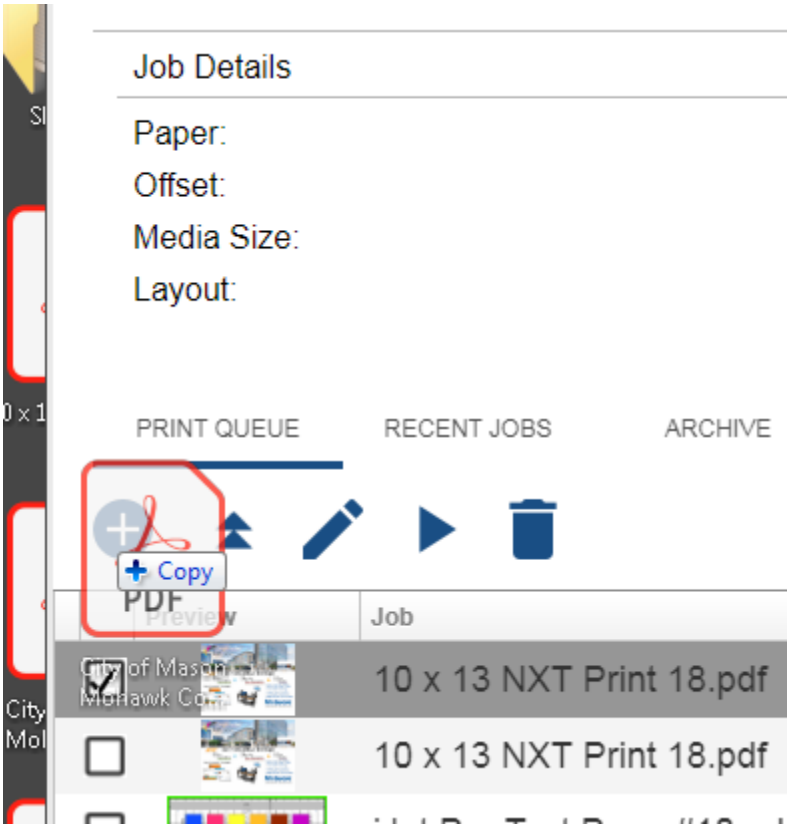


Select the + button. Navigate to your file in the pop-up window. Select your file, then select the OPEN button.

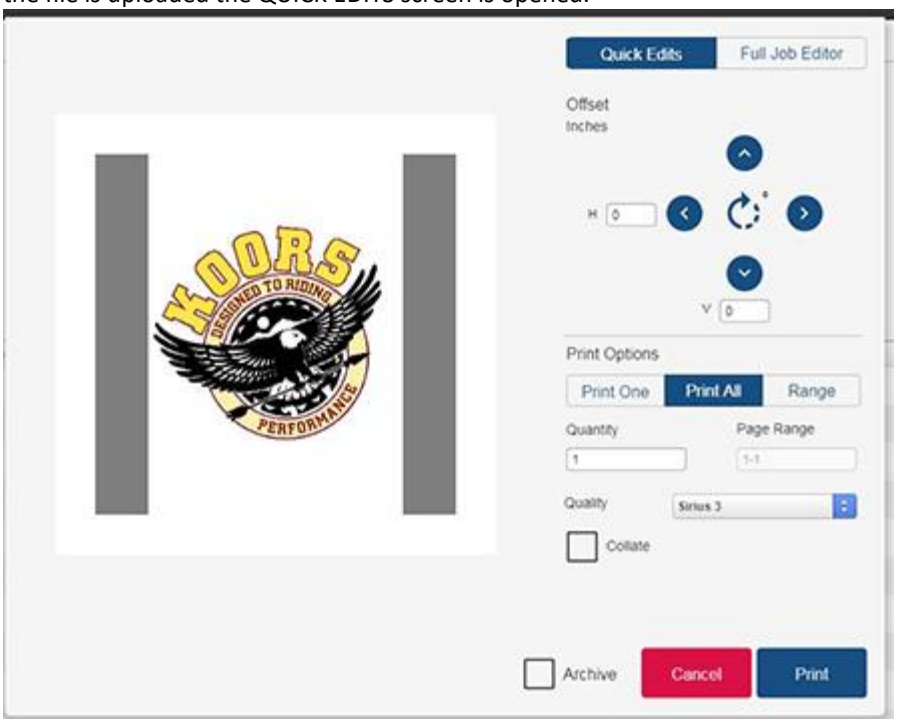


2. Drag and Drop

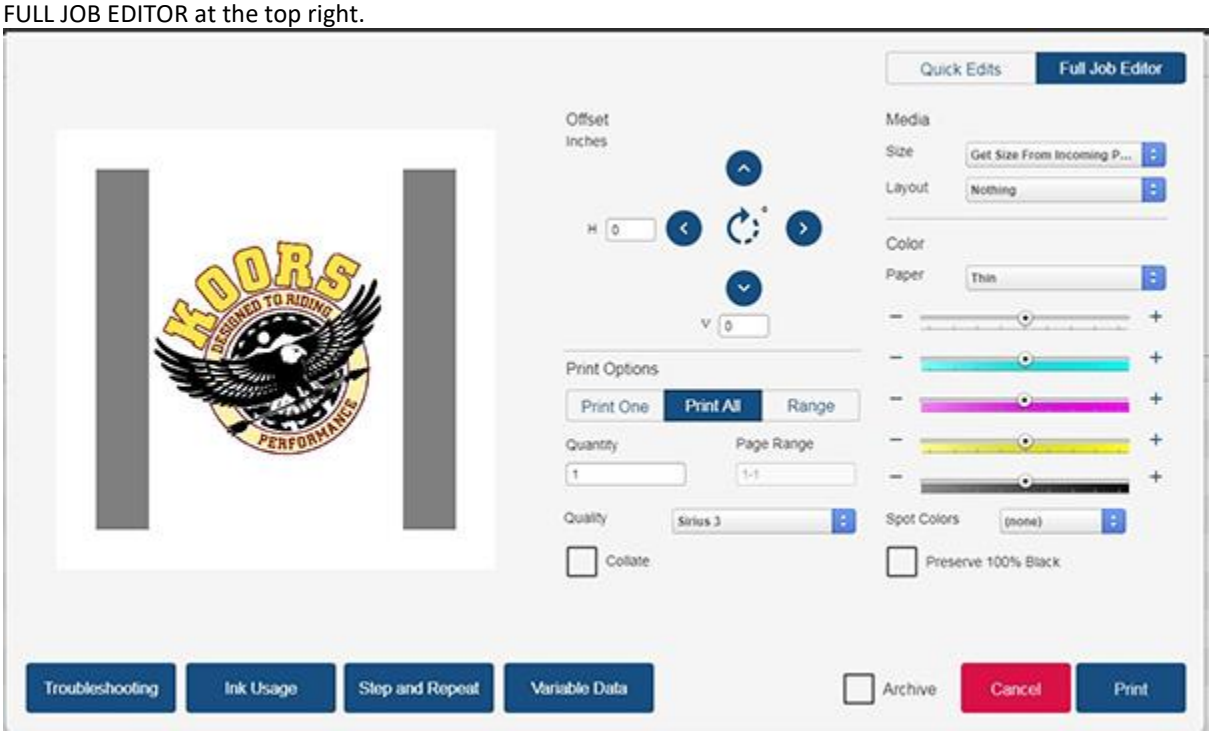
You may also simply drag a PDF right over the "Add Job" button. When the icon of the PDF says "Copy", you can drop it.



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.



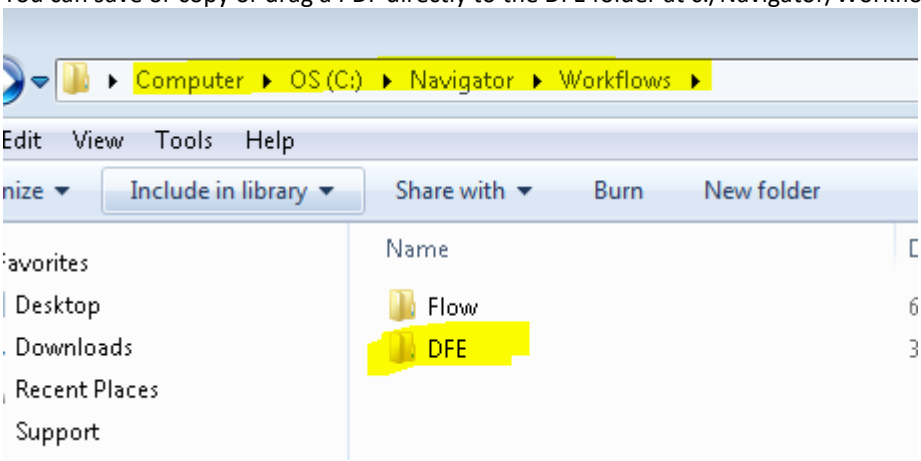
In this screen you can make various changes such as rotations, print range, collation, etc. You can also select the FULL JOB EDITOR at the top right.



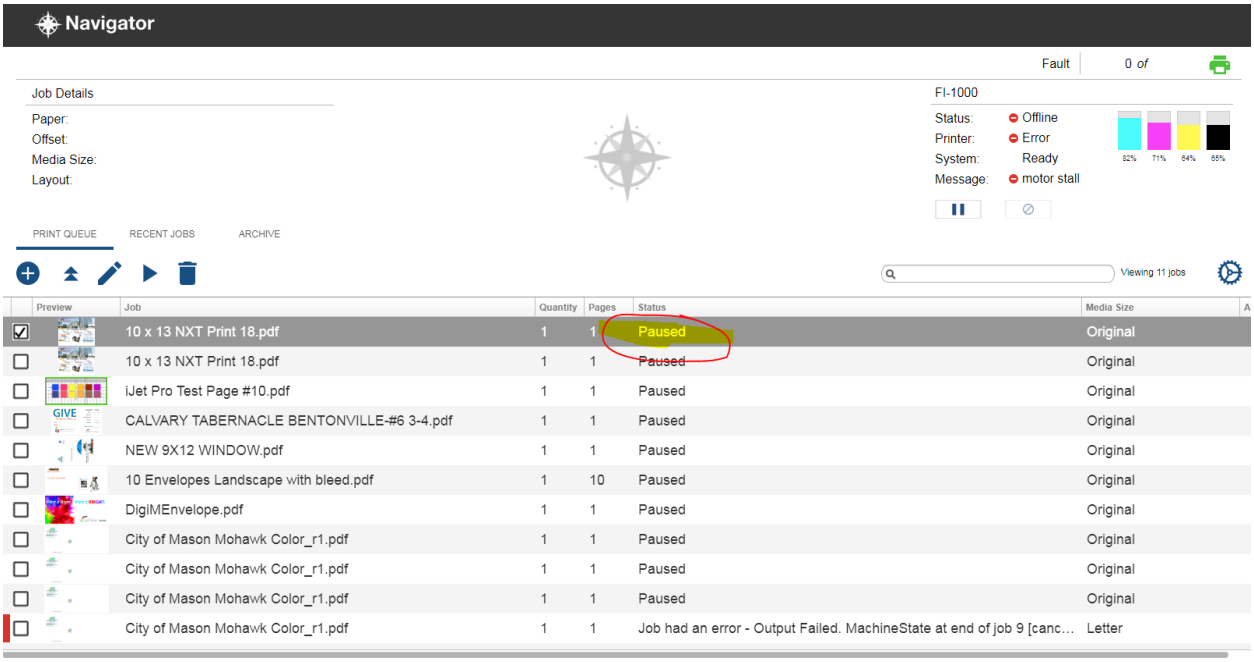
In this screen you can do the same changes as the QUICK JOB EDITOR as well as changing the Paper Profile, Overall Color Changes and Spot Color Adjustments. When you have made any necessary changes, select "Print" and your file will be sent to the printer.

3. Hot folder

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



Files copied in this way will go directly into the queue on hold with default configuration settings.



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.

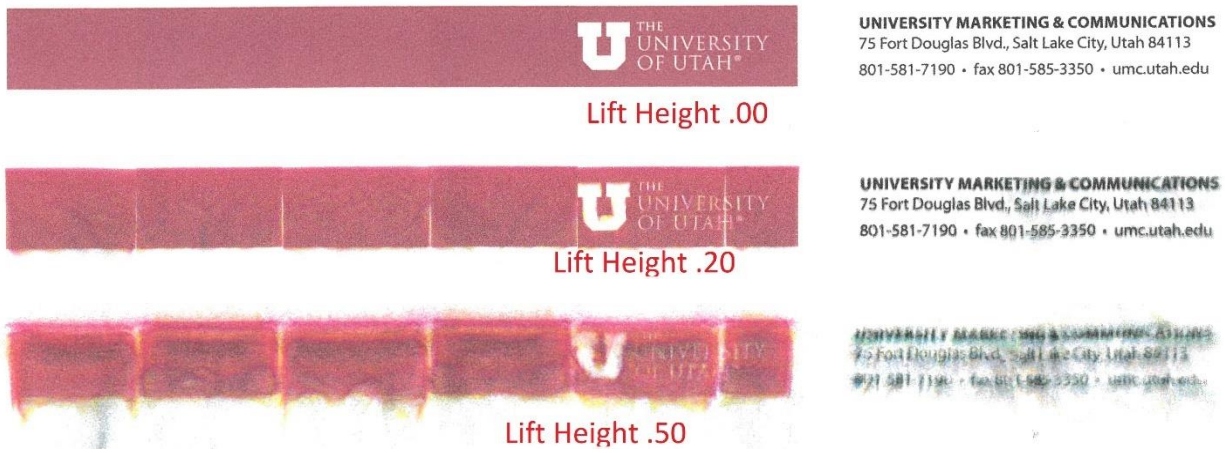
To simply print the job with default settings, highlight the job and click the Release button

2b. 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.

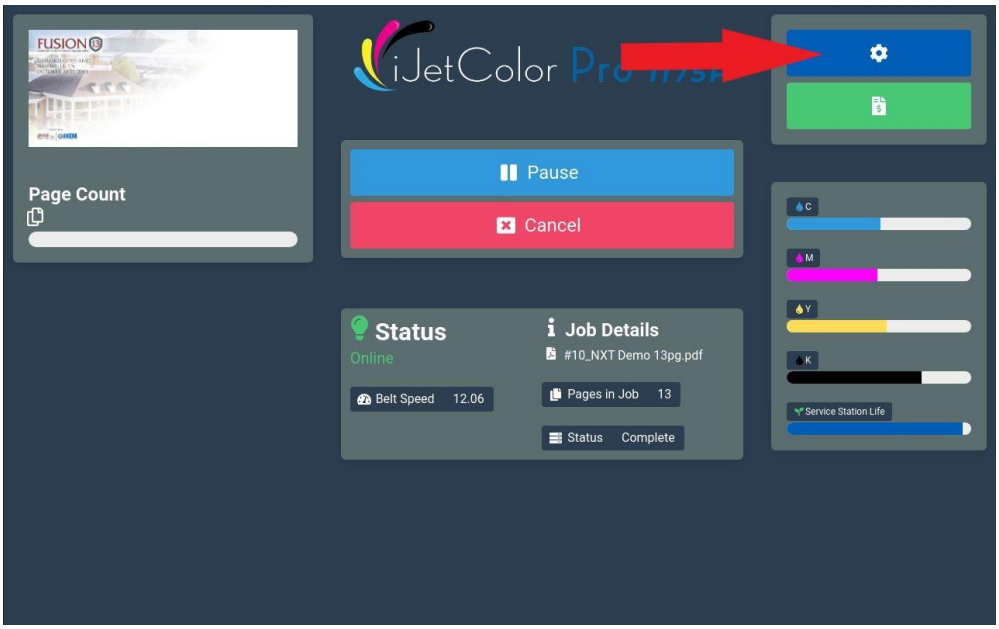
Be aware that print quality may suffer if the lift height is set too high while printing. Typically, a proper lift height for envelopes and sheet stock is 0.00

Here are some examples of print quality at different lift heights. This was printed on typical letter sized paper.

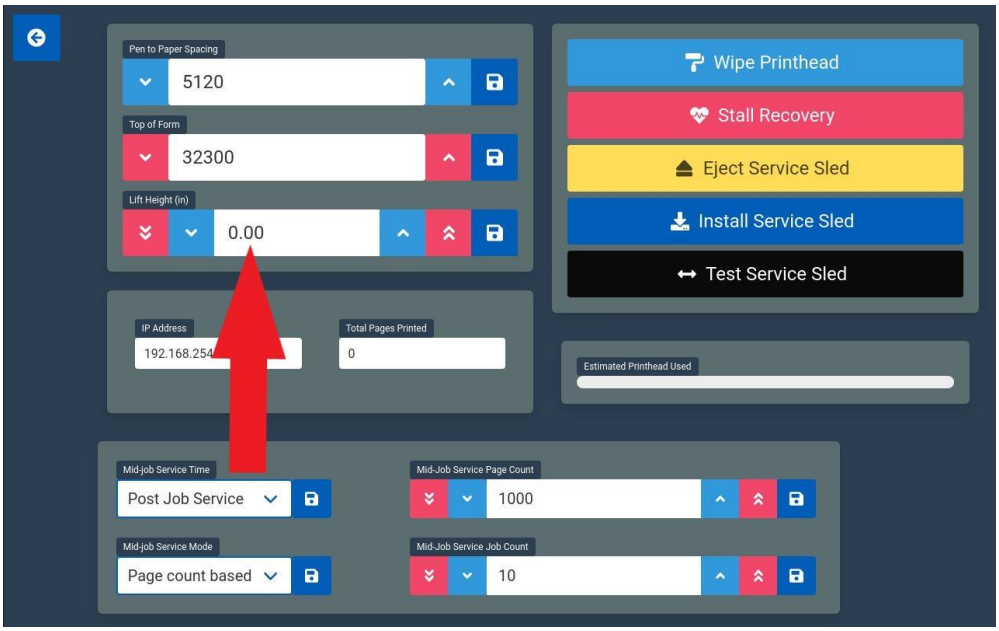


To set the lift height,

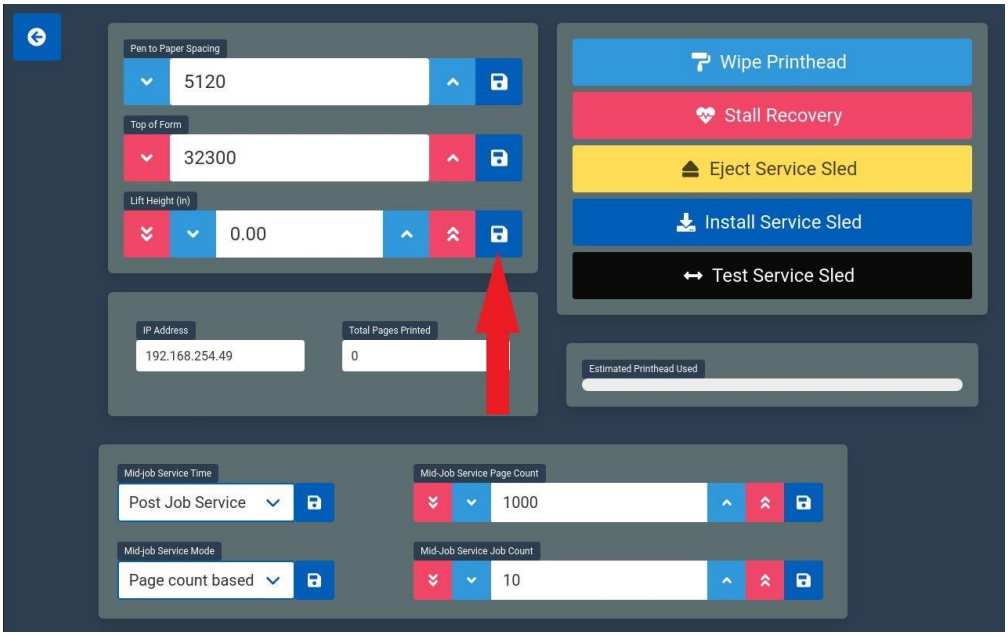
1. On the secondary (smaller) display click on the gear icon to enter the settings menu.



2. Using the arrow keys, increase or decrease the value to the desired height. Minimum is 0, and maximum is 2 inches. The red arrow keys will increase/decrease the value by .1" per click. The blue arrow keys will increase/decrease the value by .01" per click.



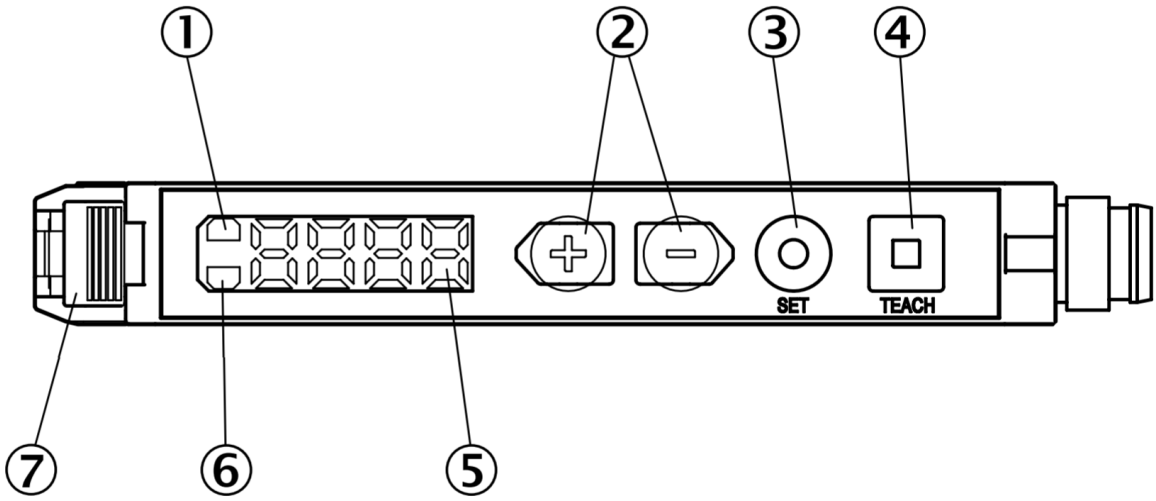
3. Press the save button to move the lift height to the value you set.



2c. 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.

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 wat 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”.

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.

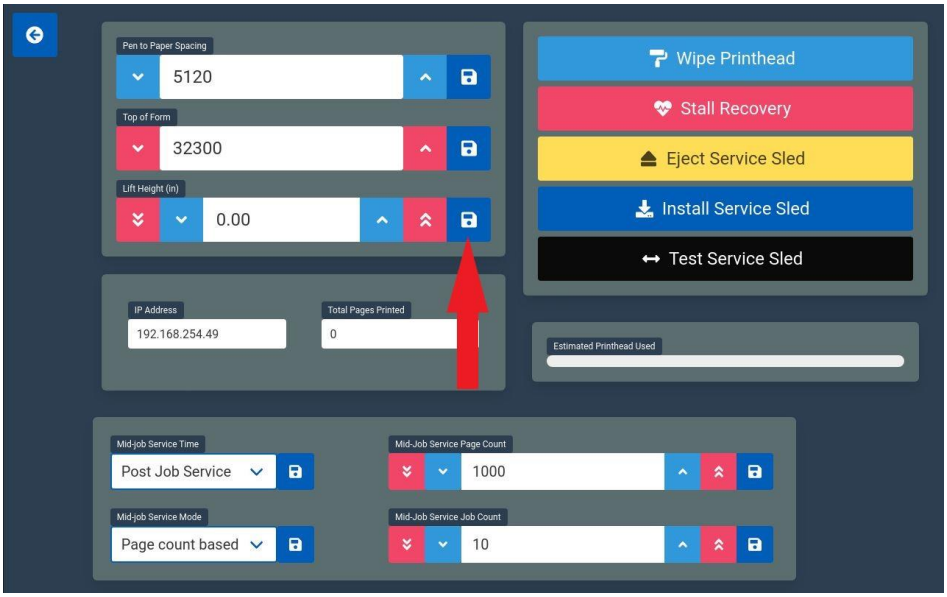
2d. Replacing the Maintenance Tray

The maintenance tray 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.

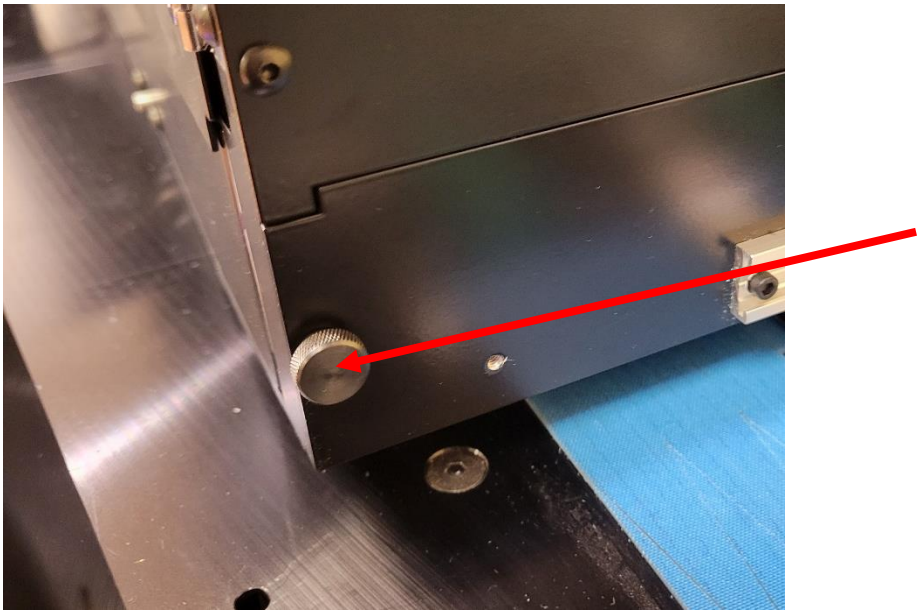
On your interface you will see an estimated % of the maintenance tray life left. Once this gets to 0% it will need to be replaced. Please note that this value is only an estimate. It may be required to replace the tray before the value gets to 0%.

To replace your Maintenance Tray:

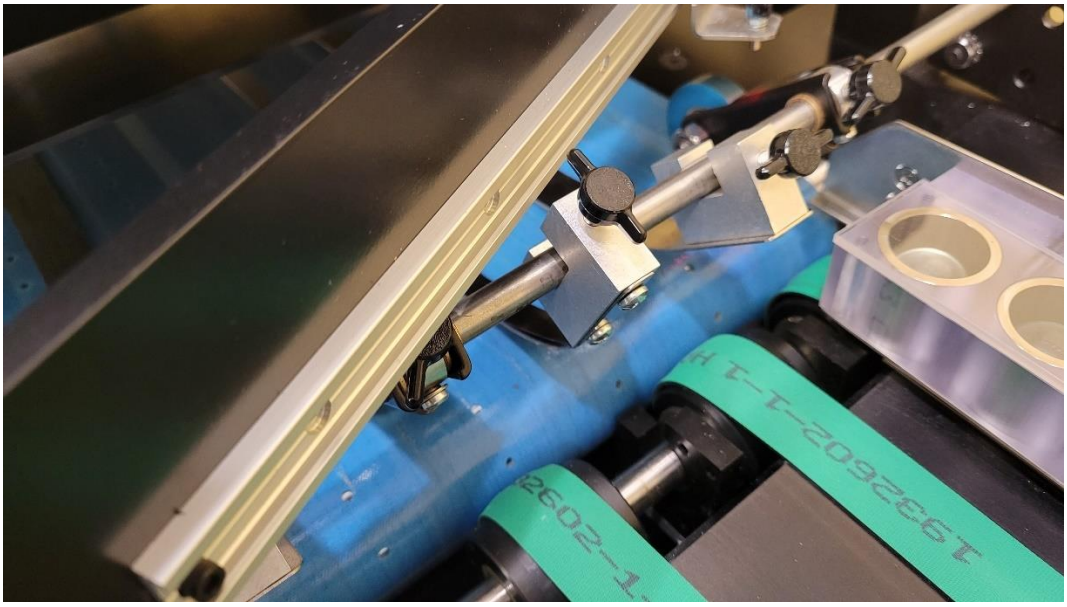
1. Using the secondary (smaller) display, raise the “Lift Height” to the maximum 2 inches. This will raise the printhead up far enough to be able to remove the service sled.



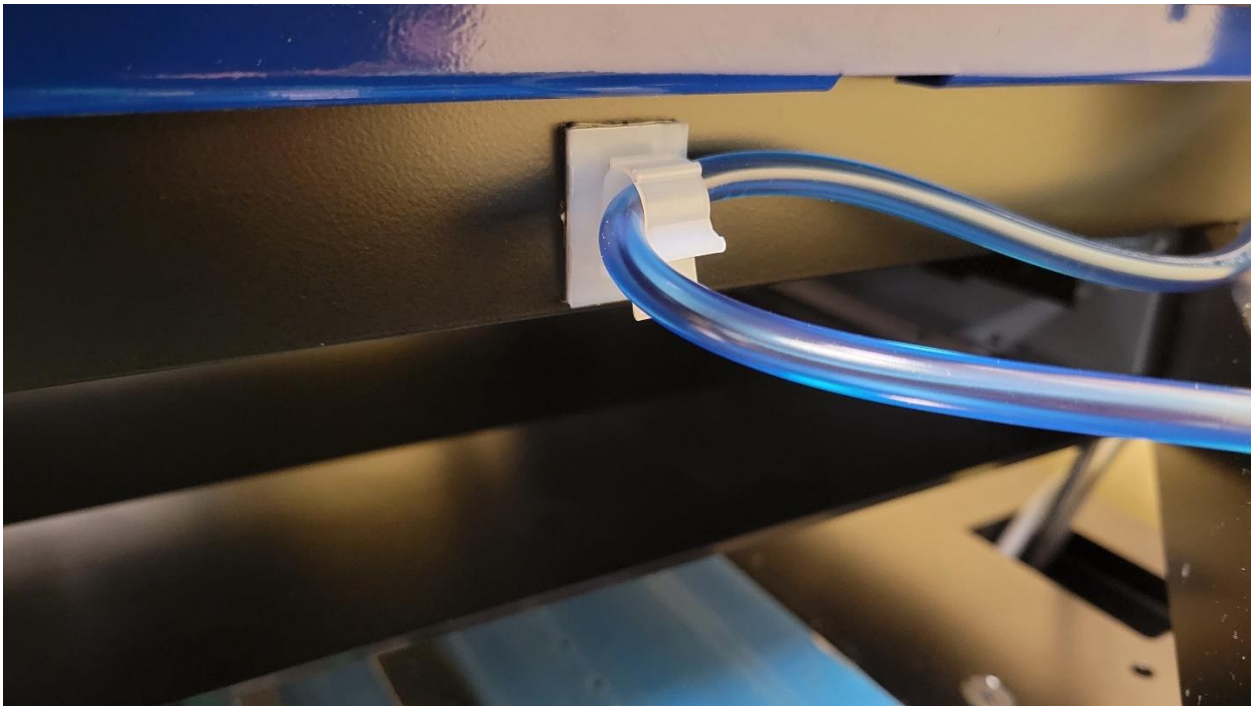
2. Remove the thumbscrew securing the maintenance tray door and open the door fully.



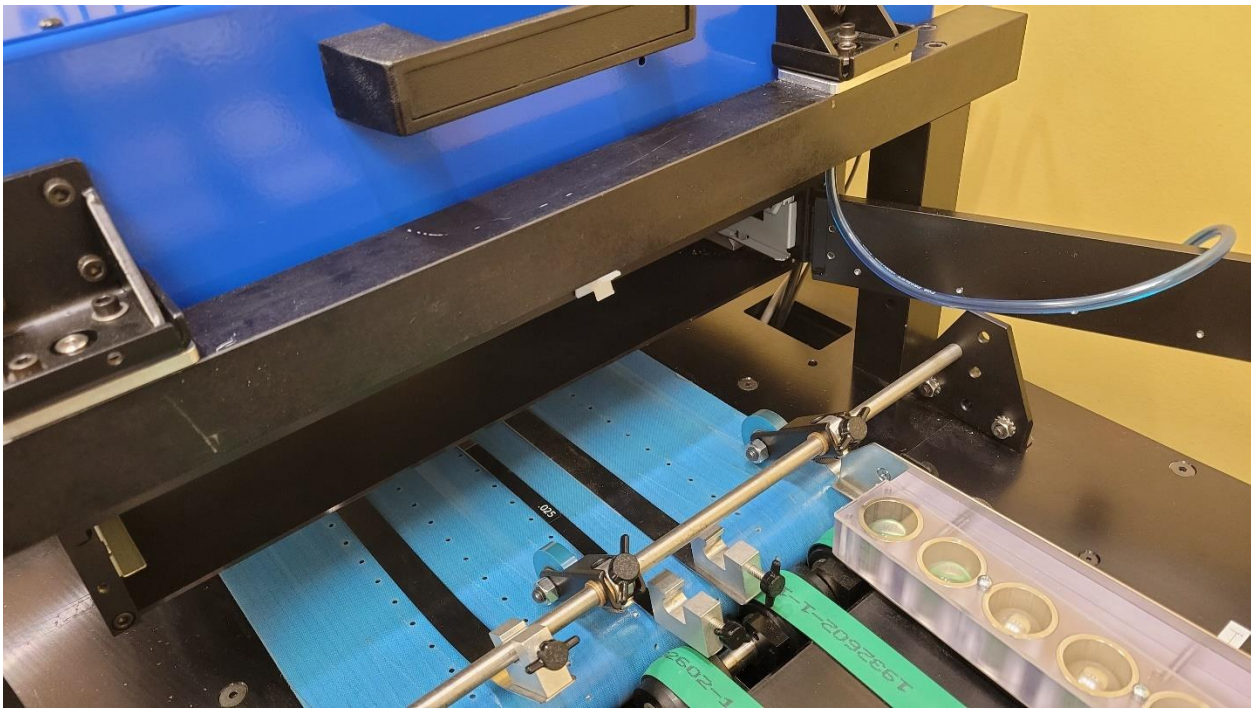
You may have to remove the hold down straps so that the door can clear them.



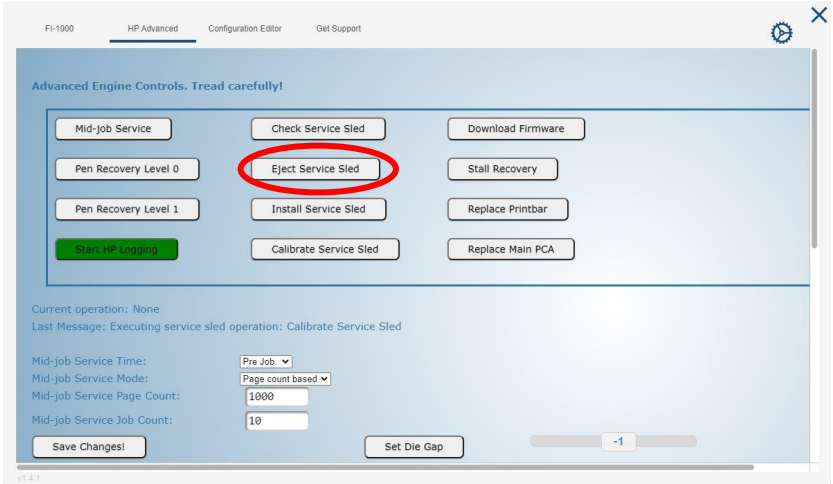
You may have the un-clip the sensor cable to that the door is able to open fully.

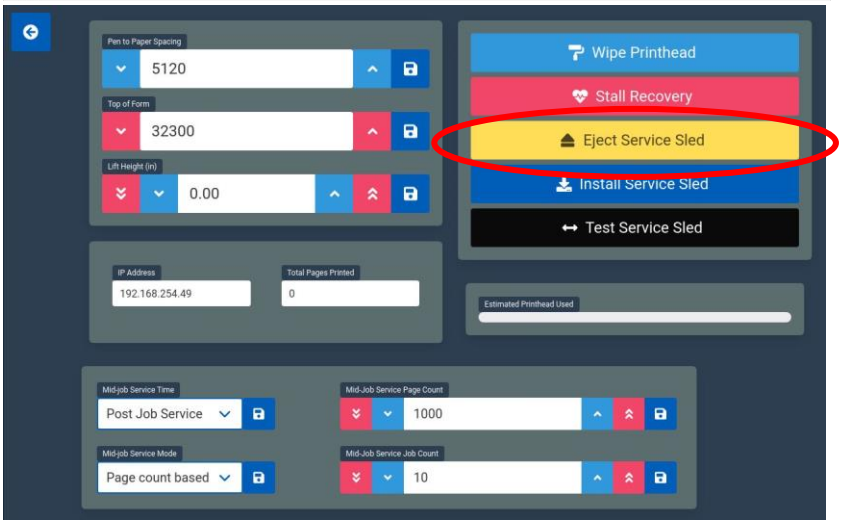


Open the door to the fullest extent possible.



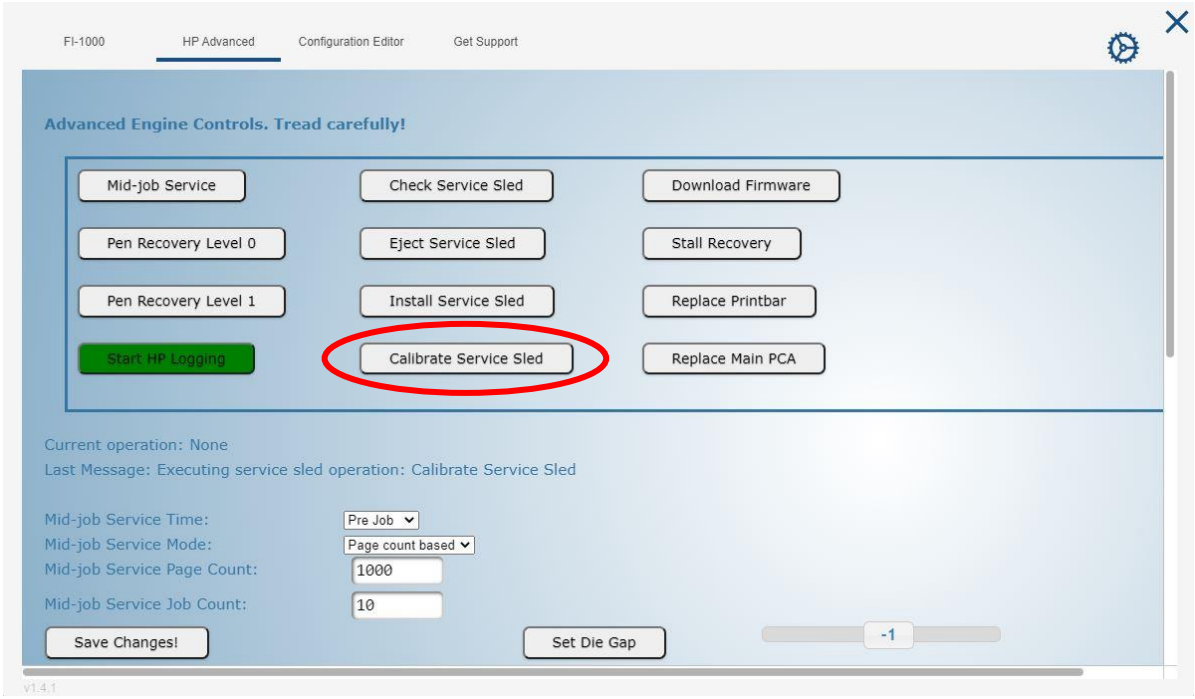
3. In either the HP advanced tab on the main display or the settings menu on the secondary display click on the **“Eject Service Sled”** button. This will drive the service sled out of the printhead.





4. Pull the maintenance tray out of the printhead housing. It will 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 either the HP advanced tab on the main display or the settings menu on the secondary display click on the **“Install Service Sled”** button. This will pull the maintenance tray into the system. If It does on start pulling it in, slightly push the sled in to engage the gears and then it should be pulled in.
7. As soon as the sled is pulled in, close the door and replace the thumbscrew.

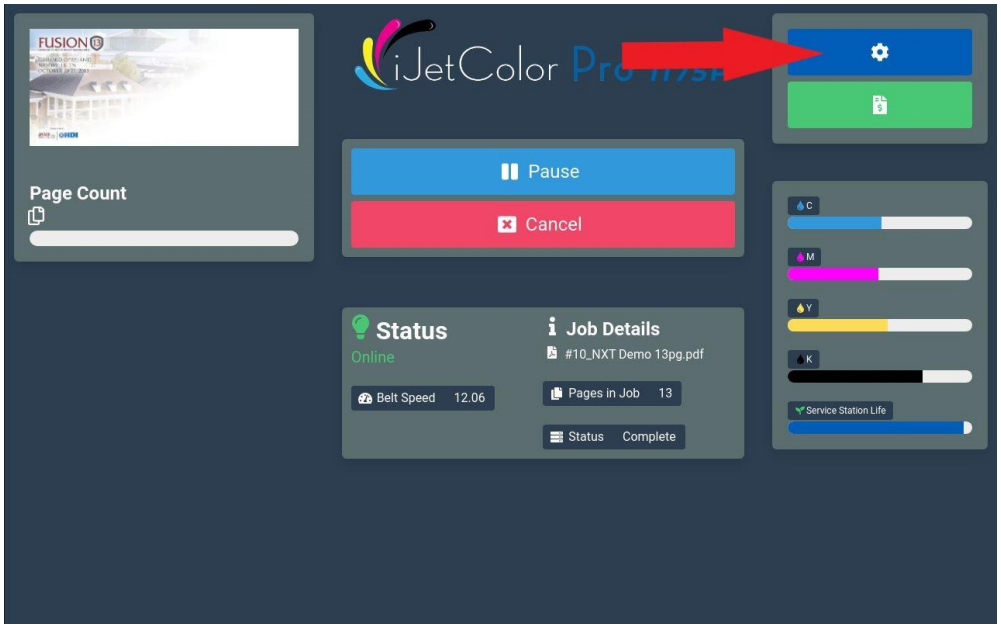
8. In the HP Advanced window, click on the “Calibrate Service Sled” button. This will set the % remaining to 100%



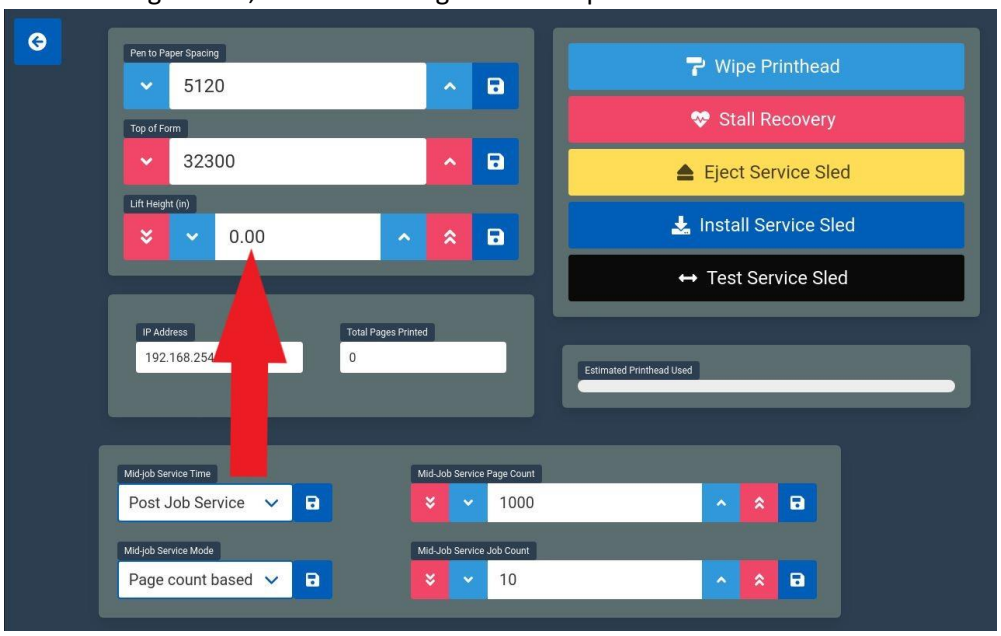
2e. Replacing Ink Tanks

1. Lower the print height.

   The print height needs to be lowered to the lowest position to be able to open the ink door. On the secondary (smaller) display click the gear icon to open the settings menu.



   In the settings menu, set the Lift Height to 0 and press the save button.



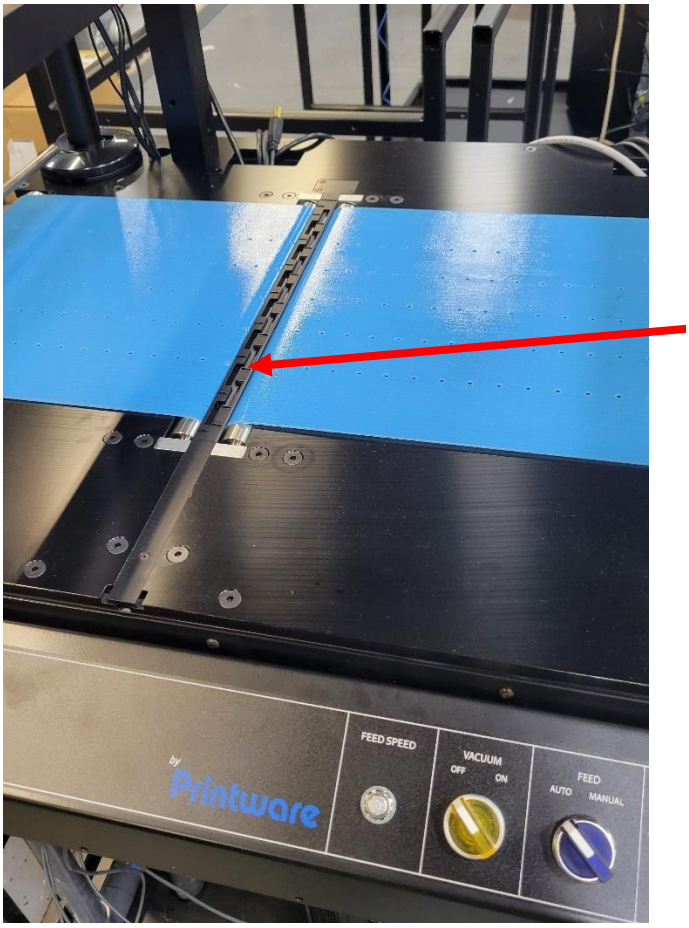
   The printhead height should move the lowest position possible.

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

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.

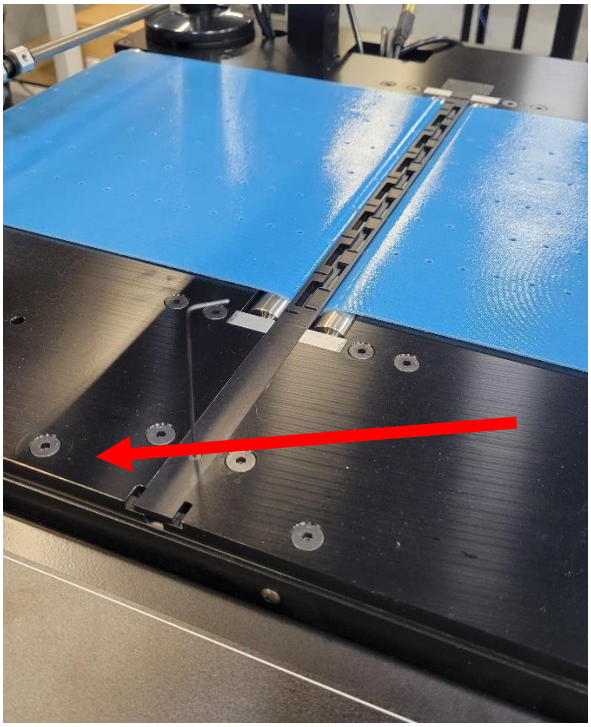
2f. Cleaning the Print Platen and Waste Ink Tray

As you print with your printer a small amount of ink is ejected into a waste container to prevent ink getting the belt. This waste ink system must be cleaned periodically. Its hard to say how often this will need to be done because there are many printing variables at work. As a rule of thumb, it is recommended that it be cleaned weekly, although cleaning more frequently may be necessary.

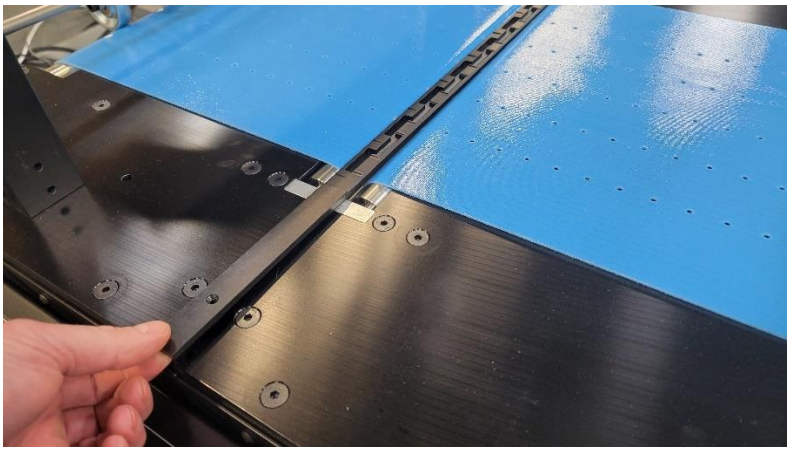


1. Using the secondary display, raise the lift height to 2 inches.

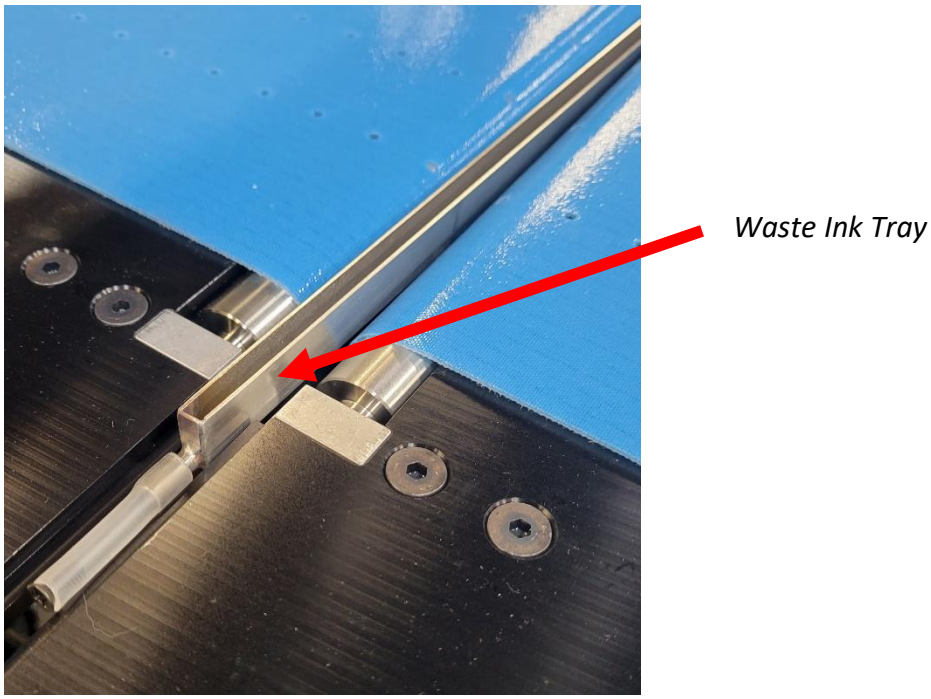
2. Using a 1/16 an allen wrench, remove the screw securing the print platen.



3. Raise the print platen slightly and pull toward you to remove the print platen.

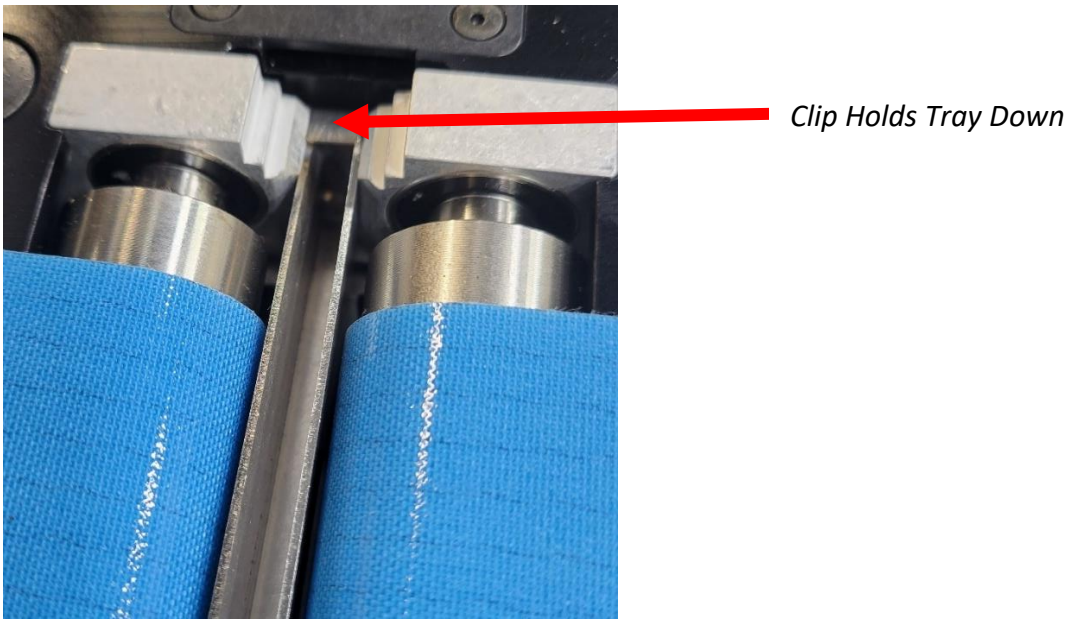


4. Next you will want to remove the waste ink tray. With the belt off and the front panel open, push up on the waste ink tray from beneath it. Then slide slightly towards yourself to remove it. You may also have to remove the ink hose.



5. Take the print platen and waste ink tray to the sink and rinse with warm water. Rinse until all of the ink has been removed.

6. Reinstall the waste ink tray. Make sure to push the tray back far enough so that the clip on the back of the tray is holding the tray down.



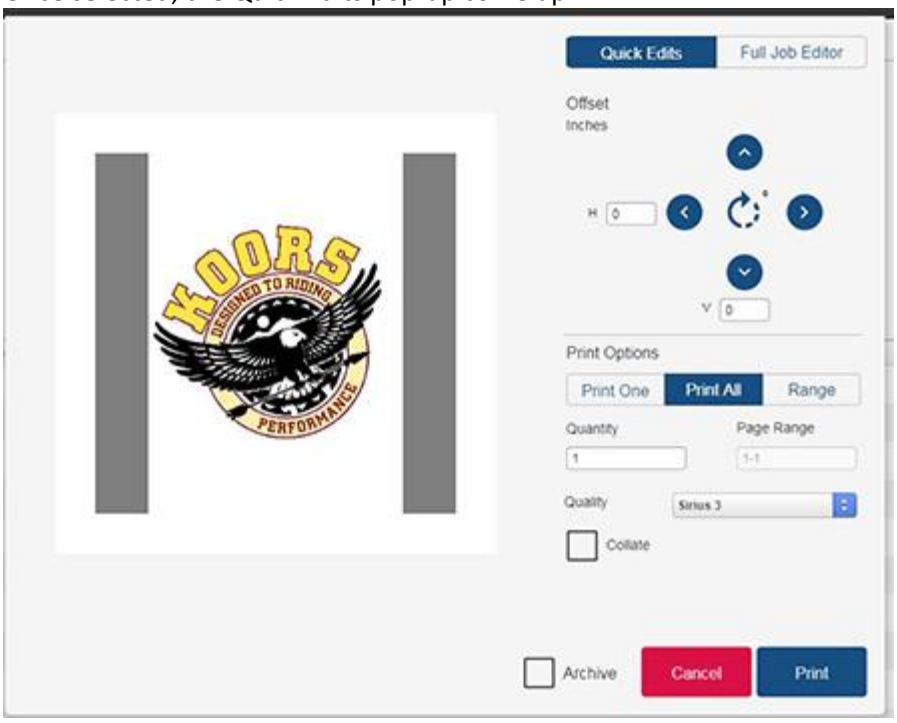
7. Reinstall the print platen in the reverse of the removal. Make sure to secure the hold down screw.

3a. Introduction to The DFE (Digital Front End)

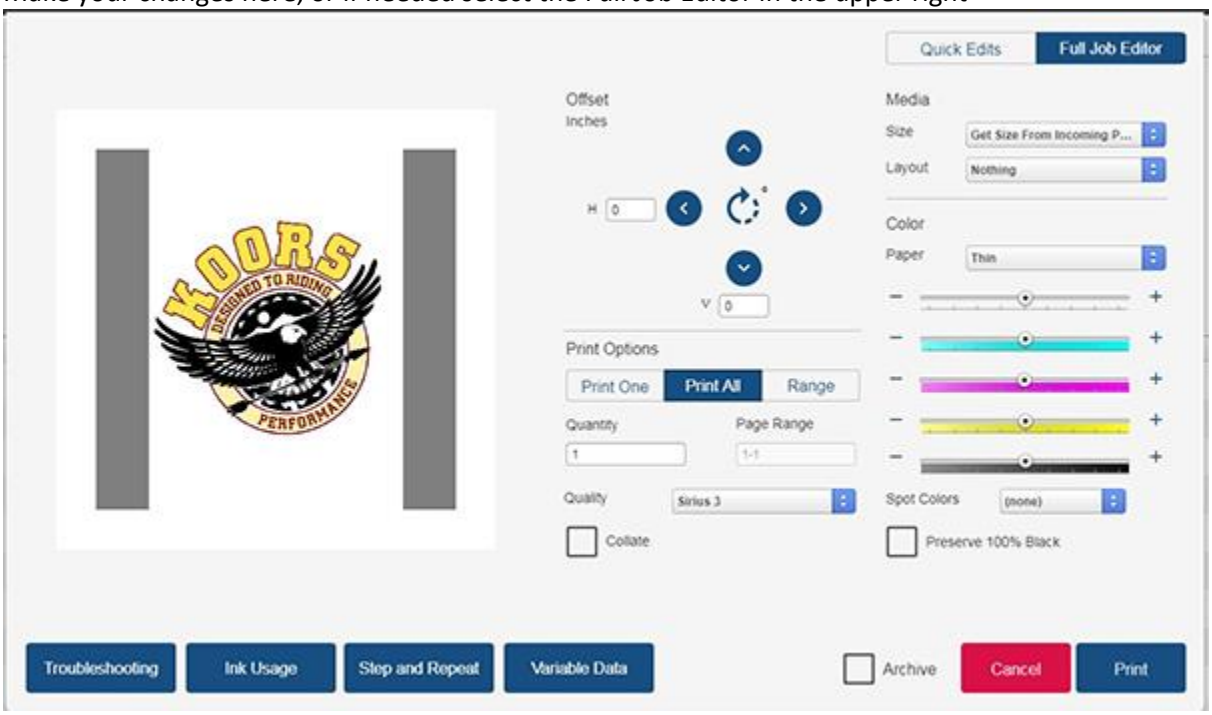
Editing existing jobs

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

Once selected, the Quick Edits pop-up come up



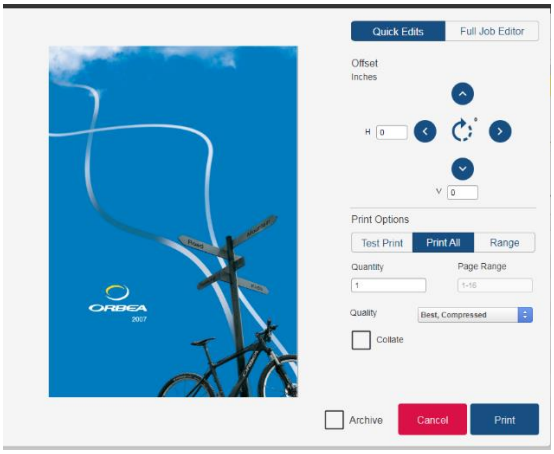
Make your changes here, or if needed select the Full Job Editor in the upper right

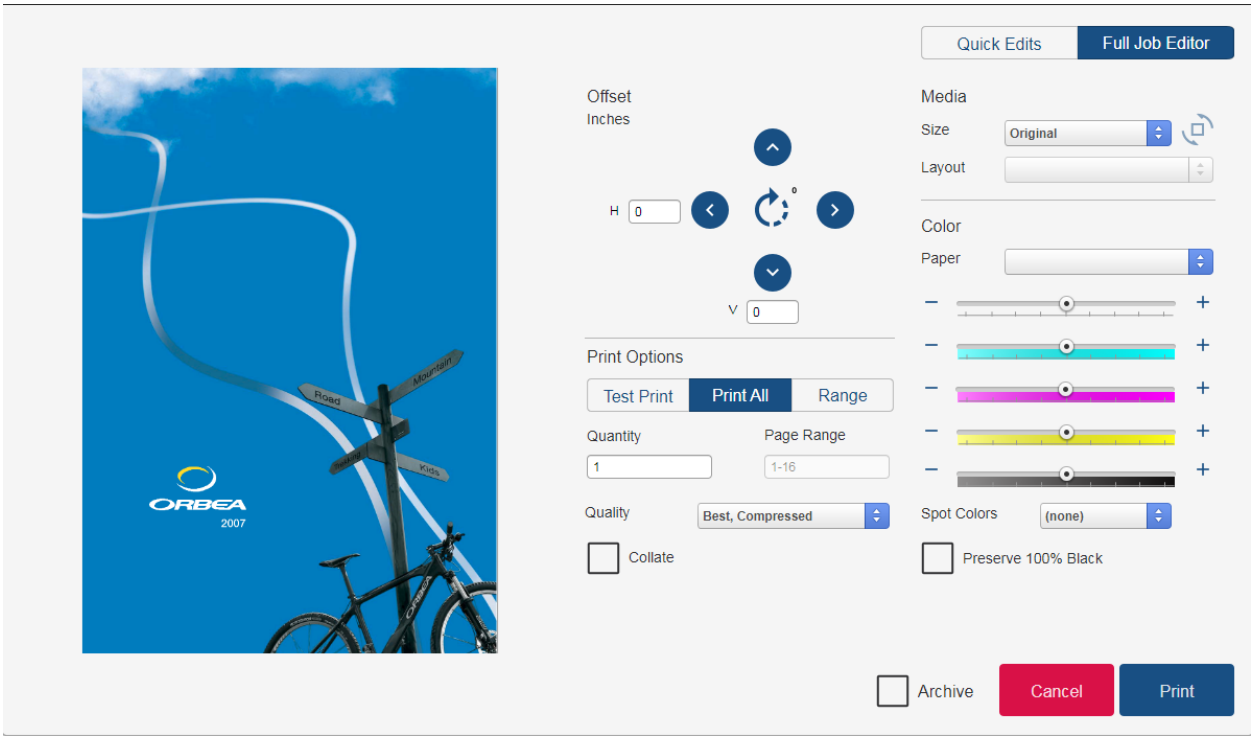


Make your changes and select print.

Job Tickets - More detail on printing jobs

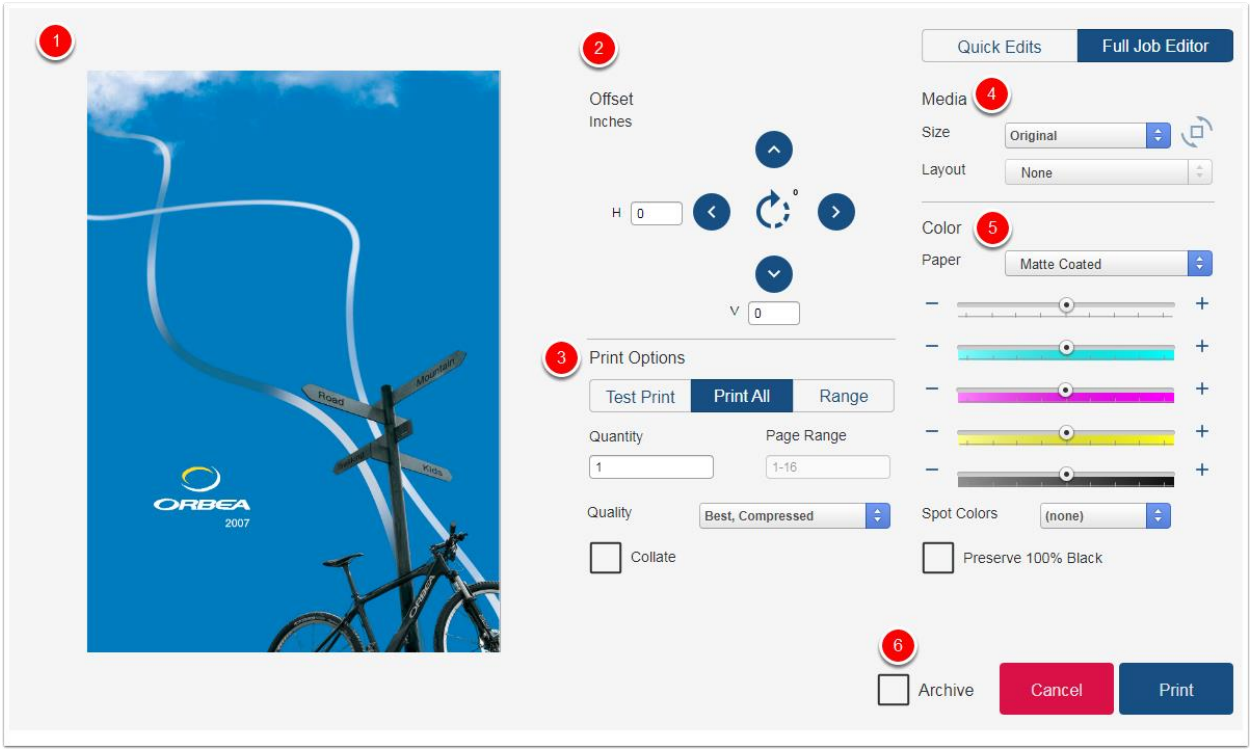
Depending on your preference, when a job is submitted it will open either the *Quick Edits* job editor or the *Full Job Editor*.
Examples follow.





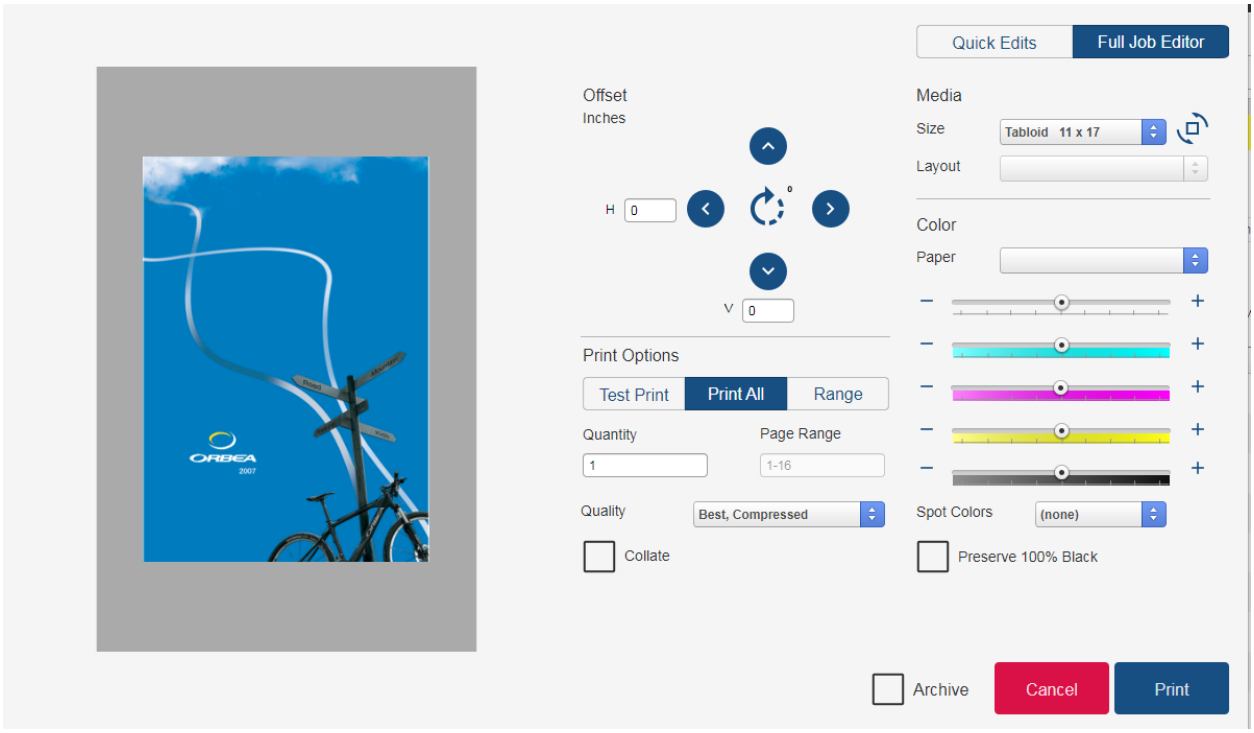
We'll use the Full Job Editor to **walk through the controls**.

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

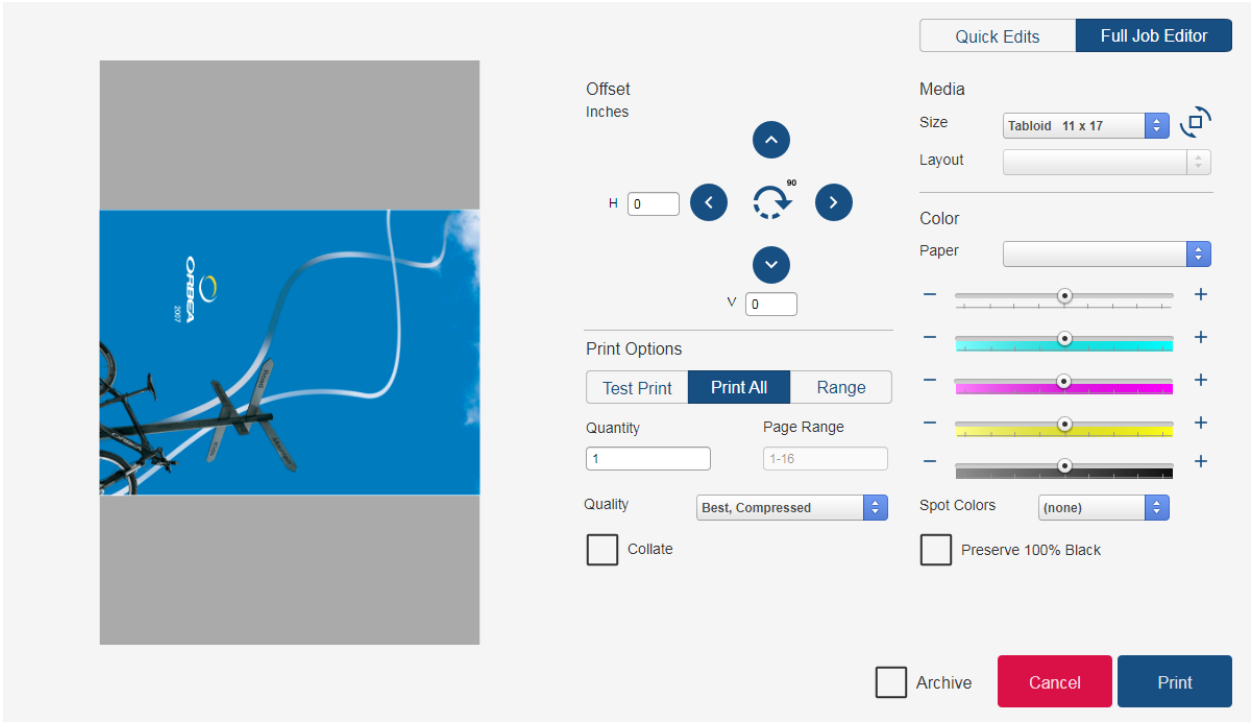


We will discuss 1, 2, and 4 together. **Positioning, Media, and the Thumbnail**.

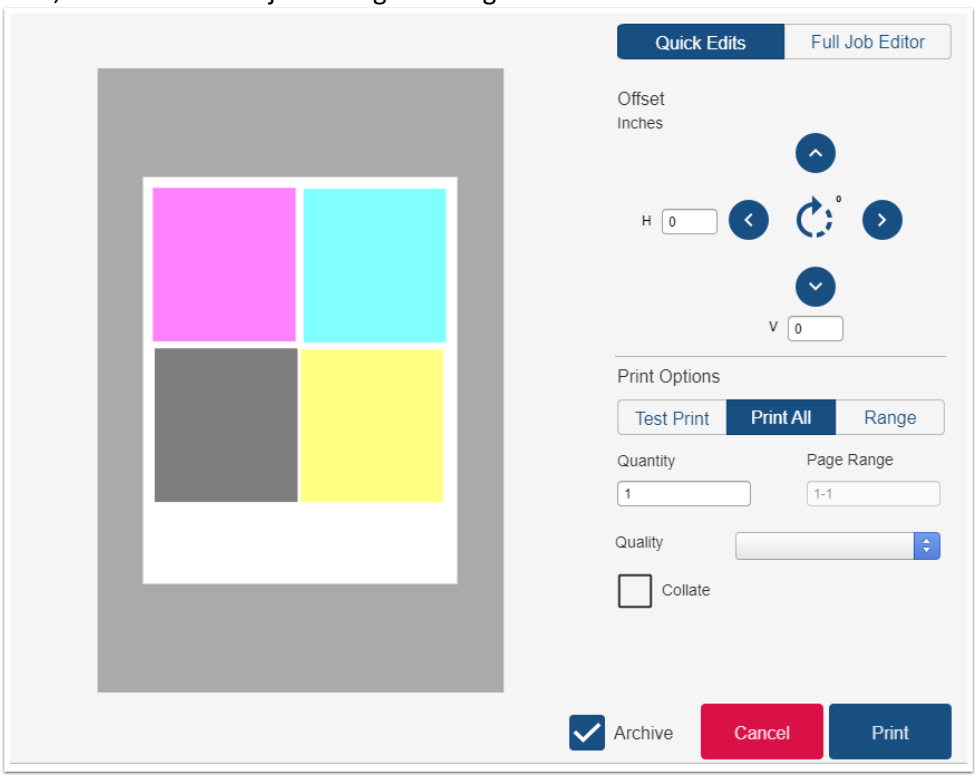
You have standard page size choices under *Media*. You can always just allow the software to pick up the original media size from the input PDF. If you wish to reposition the PDF onto a different media size, you can choose a new media size and do so.
e.g. 11x17 Tabloid. The job is positioned on a grey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



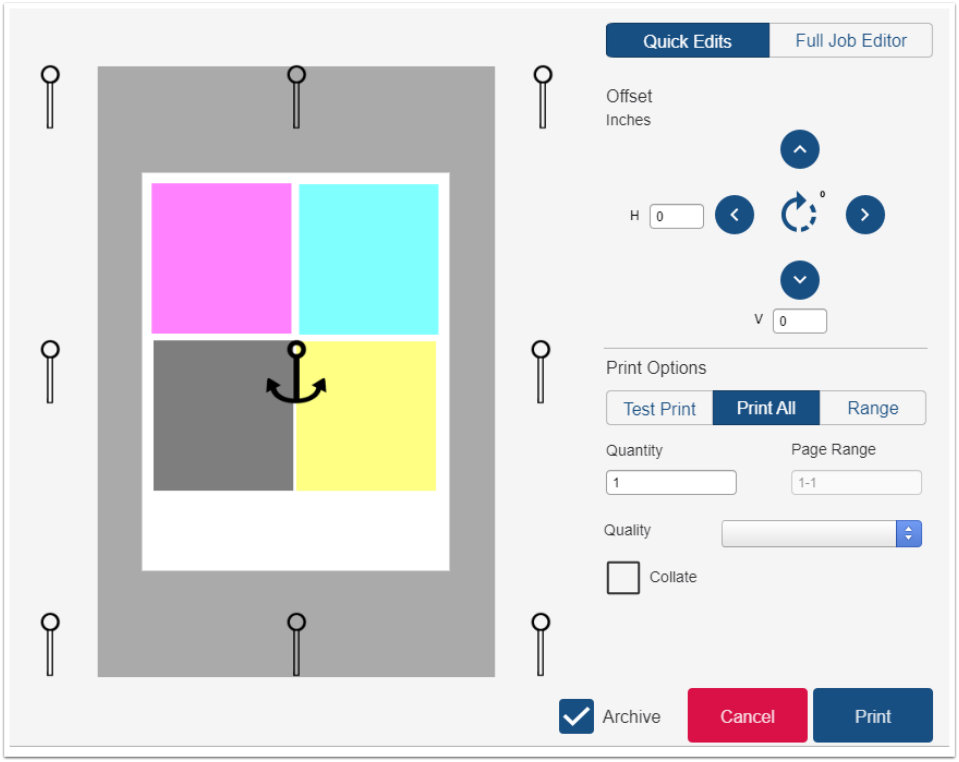
You can nudge it up or down, side to side with the arrow buttons or type in horizontal and vertical offsets in either positive or negative numbers. We will show you the changes you make in real time. For example we will click the rotate button in the center of the positioning controls:



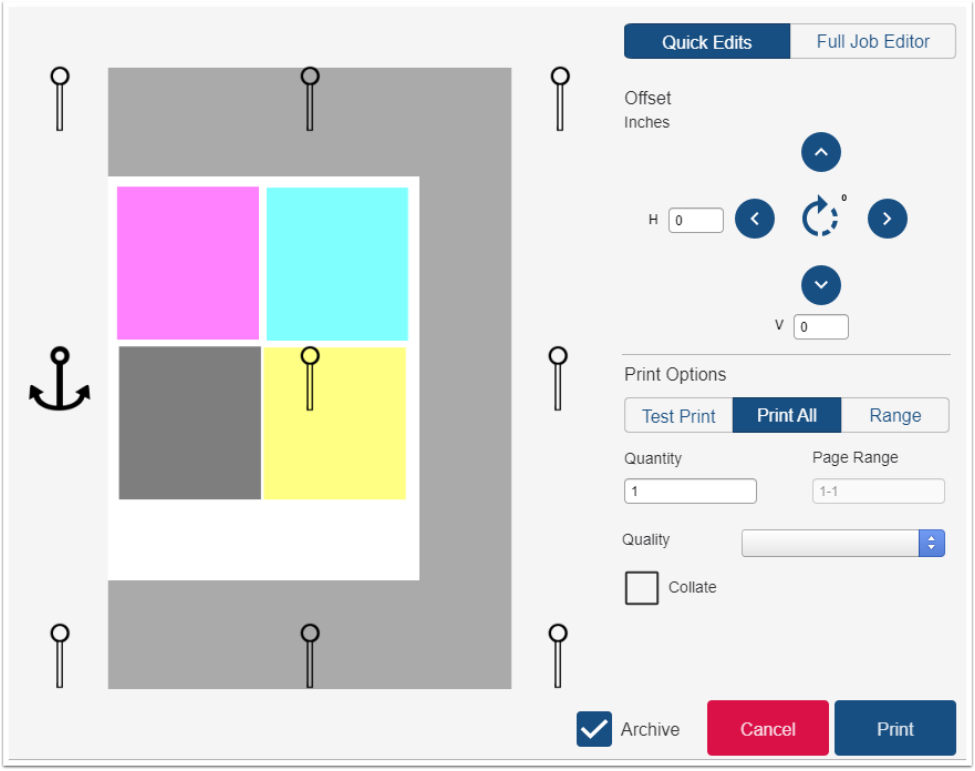
The *thumbnail* view window has some hidden controls.
First, here is a smaller job sitting on a larger media:



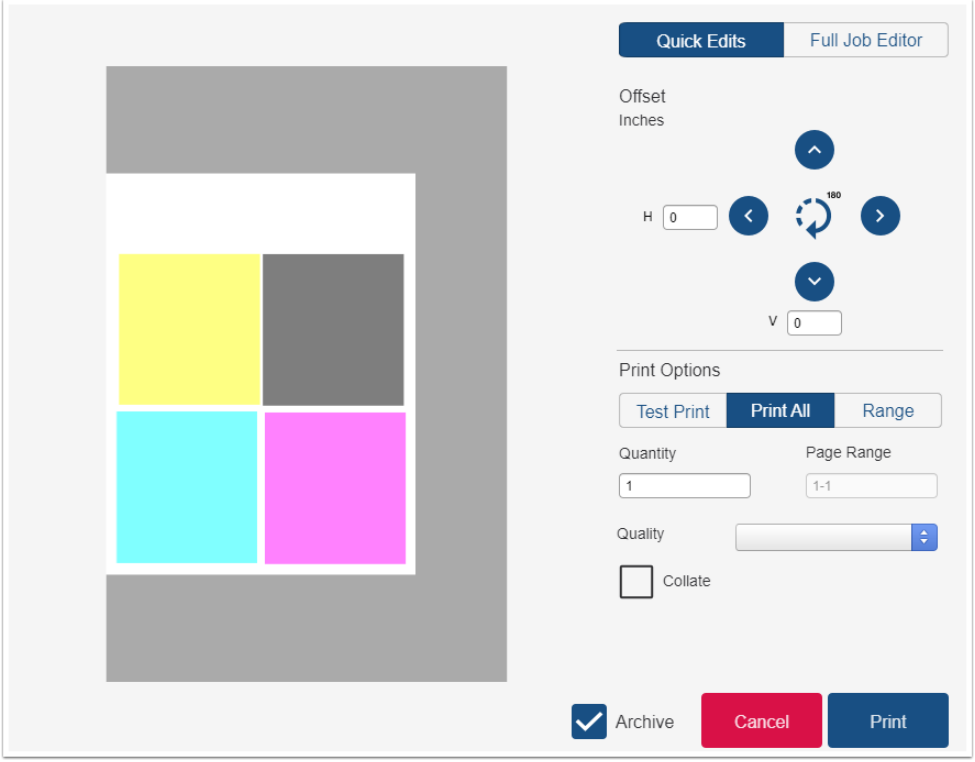
Now, when you click anywhere on the thumbnail, the anchor points appear.



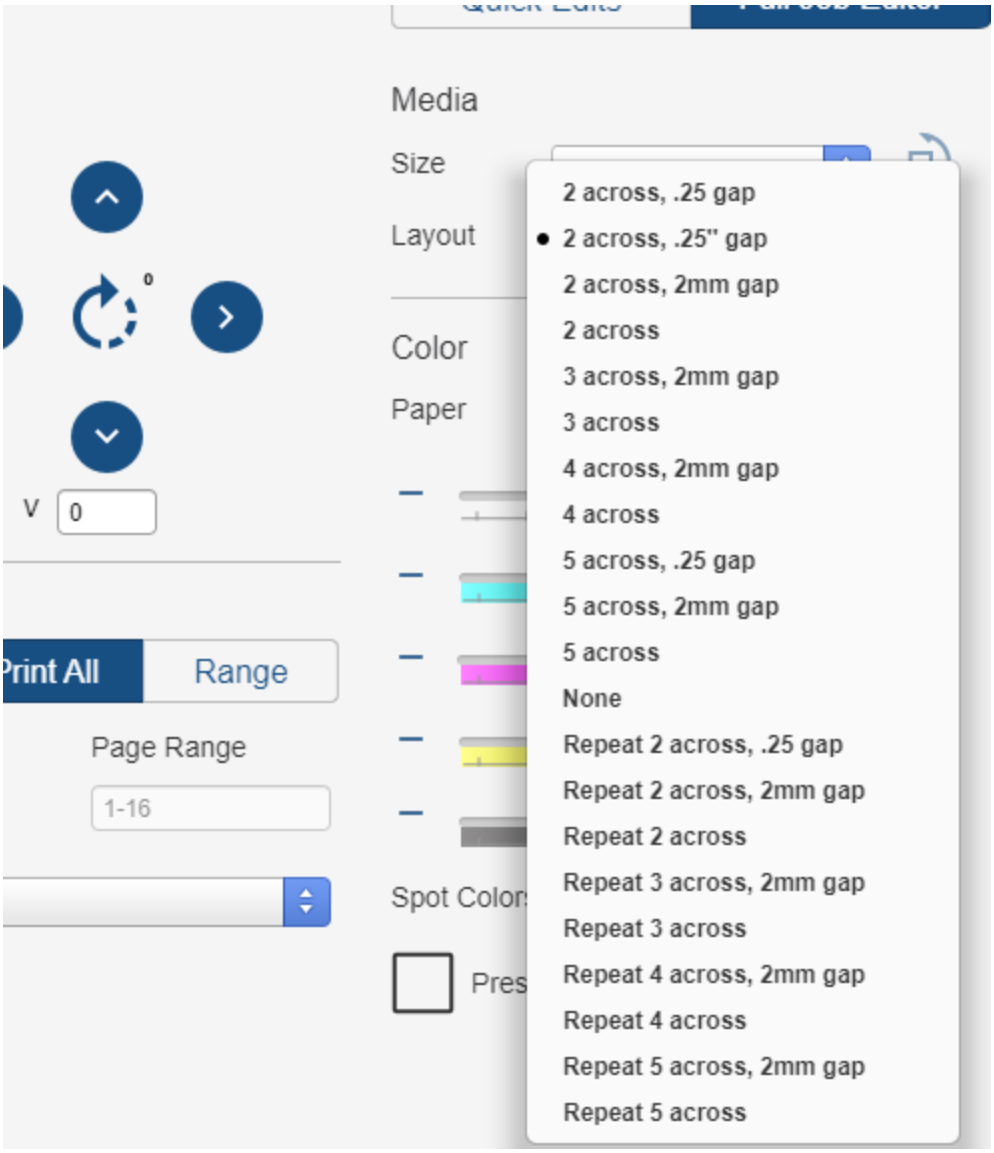
The anchor points govern how the rotation and movements happen. The default is to be anchored at the center. Rotating the job means it rotates around the center point.
But if I change the anchor point to the left center, it changes the rotation and movement starting points.



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.

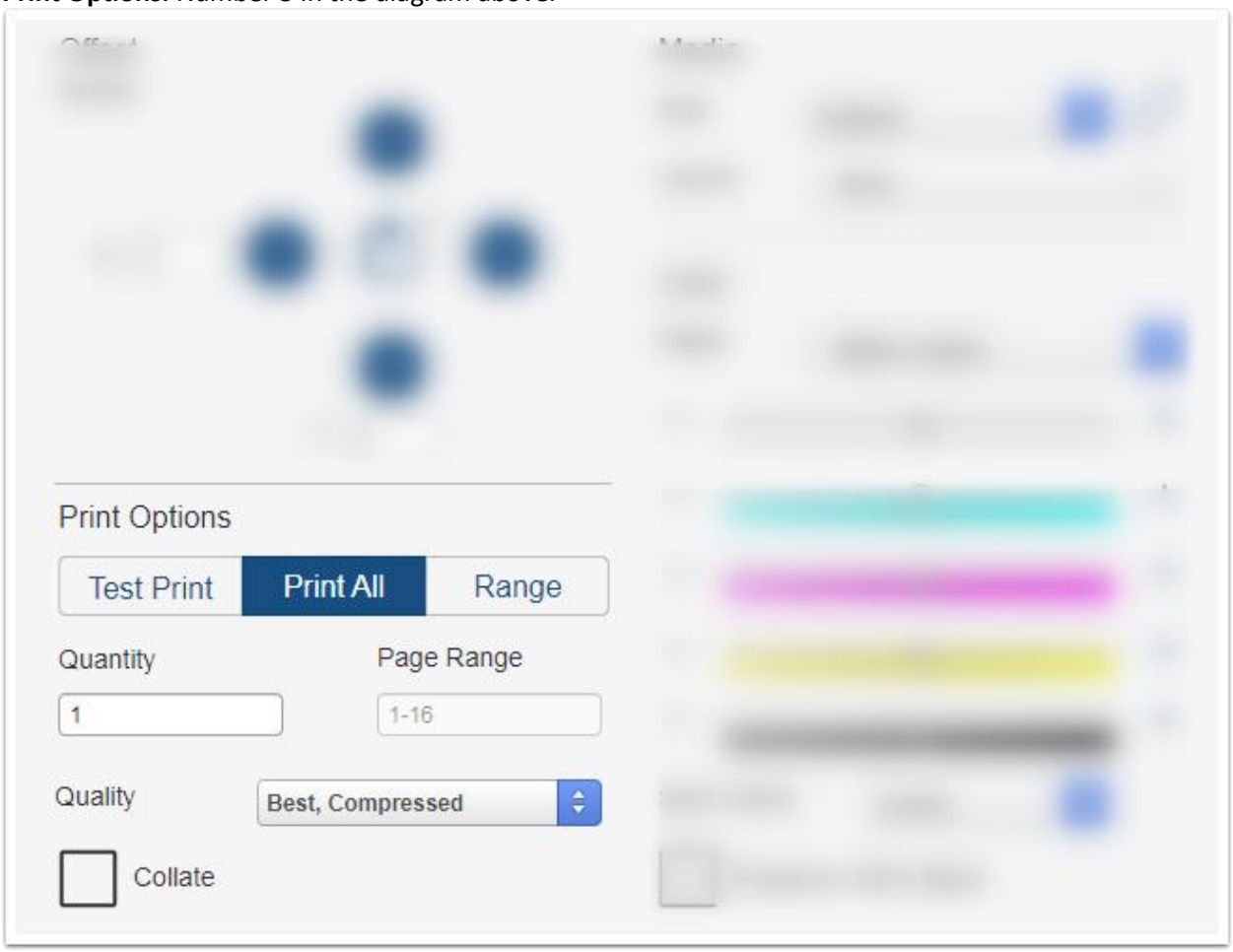


The *Layout* drop down menu gives you access to step and repeat and label imposition options. You can step labels across or you can repeat them as well. The product ships with many standard layouts built-in.



More can be added by our support team. We'll include an editor in an upcoming version.

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 make adjustments 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.

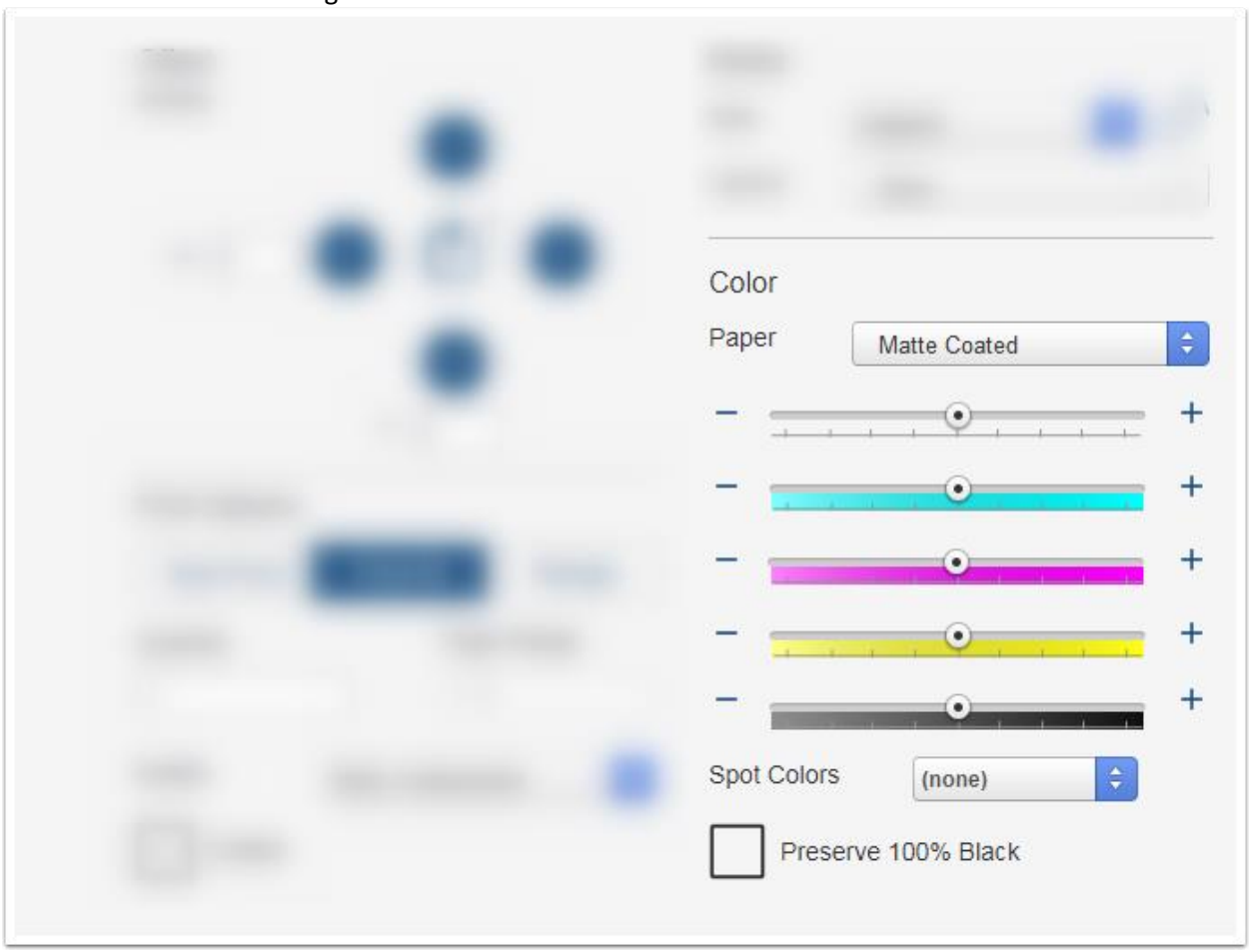
Print All automatically fills in the *Page Range* fields with all of the pages in the job and sets quantity to '1'. You many change the quantity. After you set this, click *Print*. After this print completes the job will be removed from the print queue. You may find it in "*Recent Jobs*" if you need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

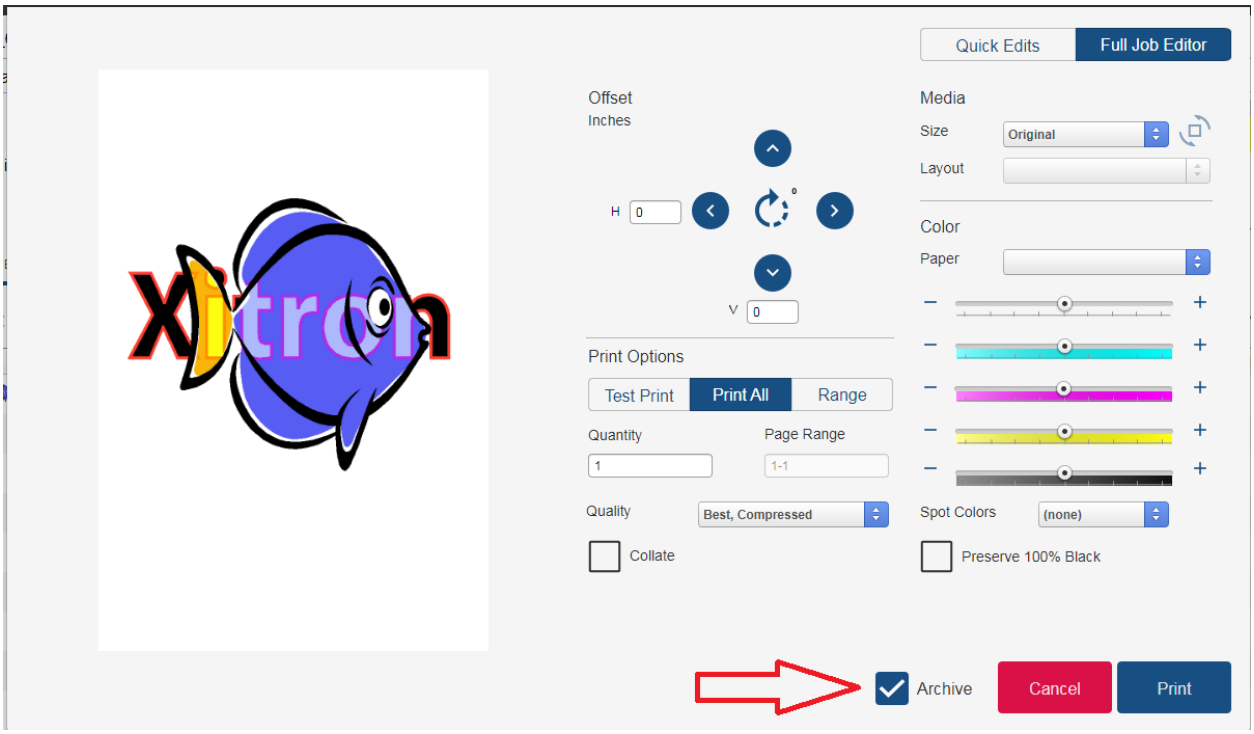
Color. Number 5 in the diagram above.



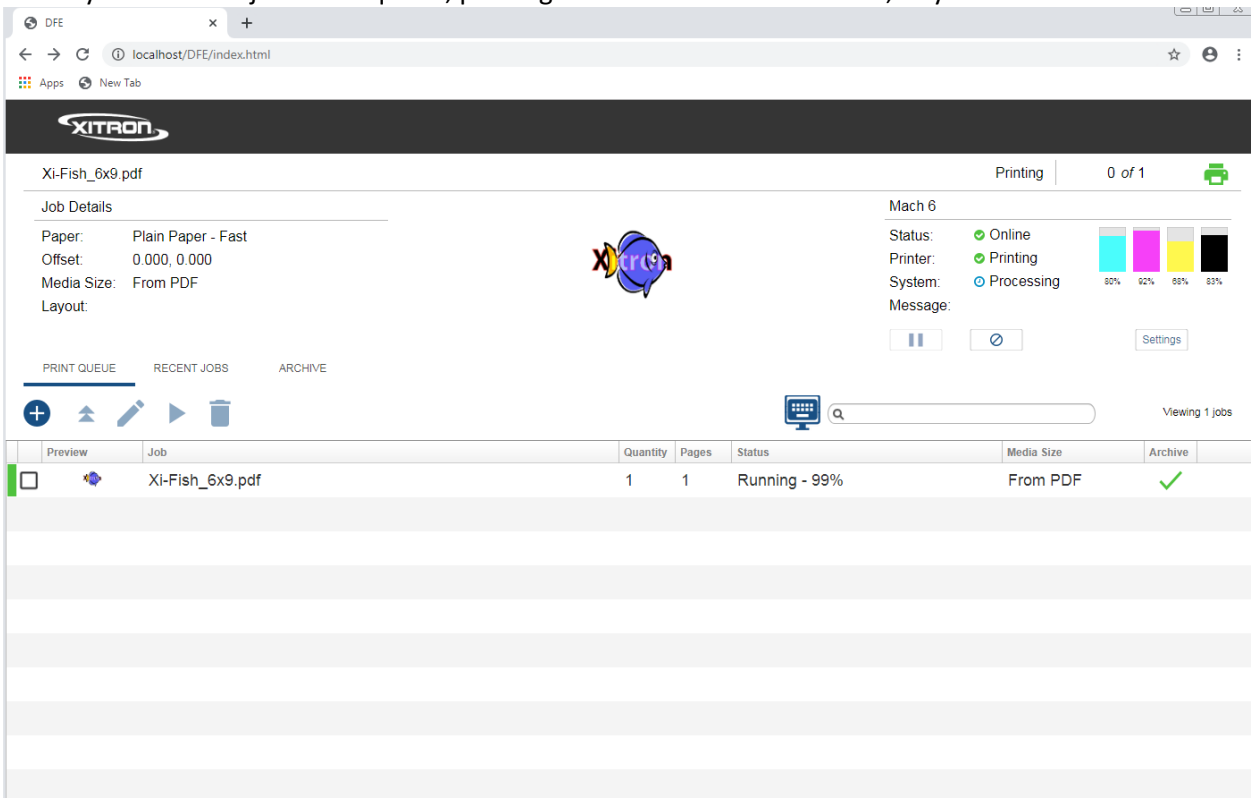
The color controls, in order: Paper profile (ICC color management), Color sliders (global color adjustment), Spot Color Adjustment, and Black preservation. These are all discussed in detail in the Color Management chapter.

Archive and reprint

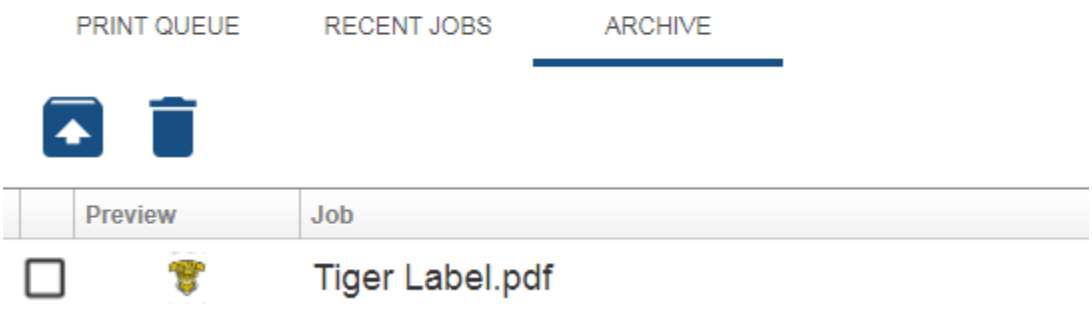
When you print a job you have the option to check "Archive". If you do that the job ticket will be saved with the job and the job can be re-printed from the archive exactly as it was last printed.



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*.

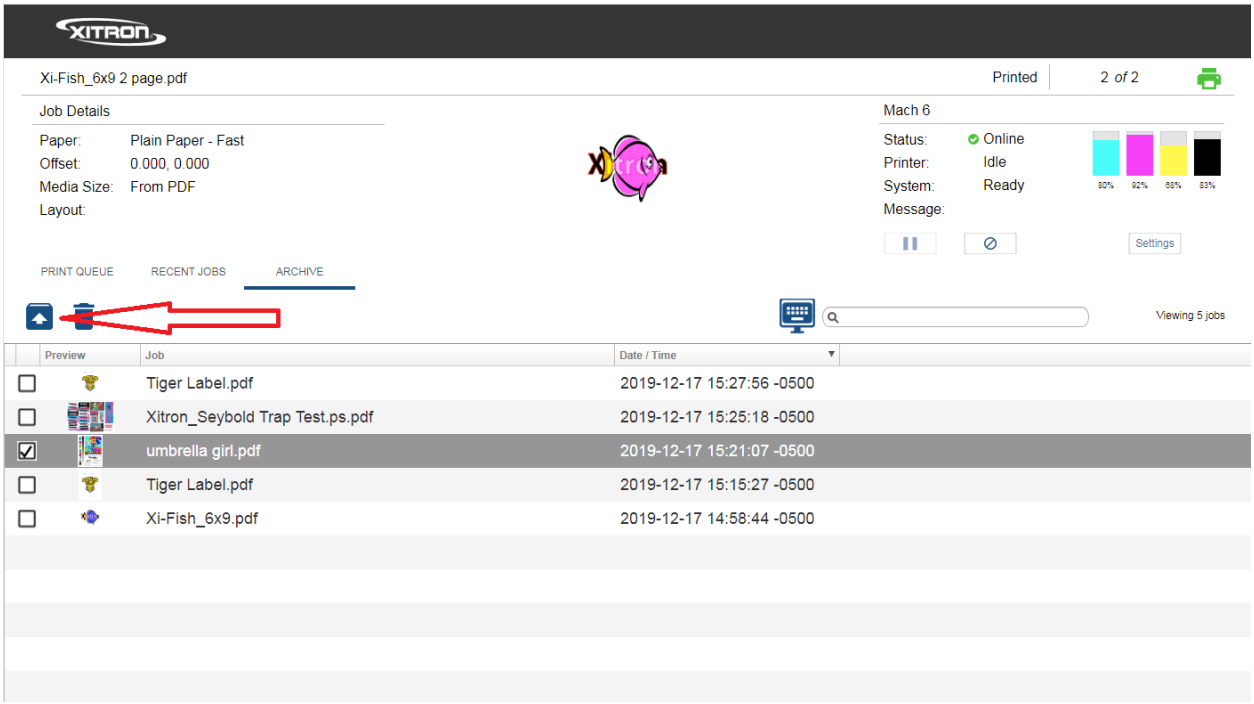


When a job completes it will go to *recent jobs* for a while. It will eventually be deleted from here. The system keeps the last several jobs after they were printed in case something goes wrong in finishing. You can always reprint a job from *recent jobs* or from *archive*.

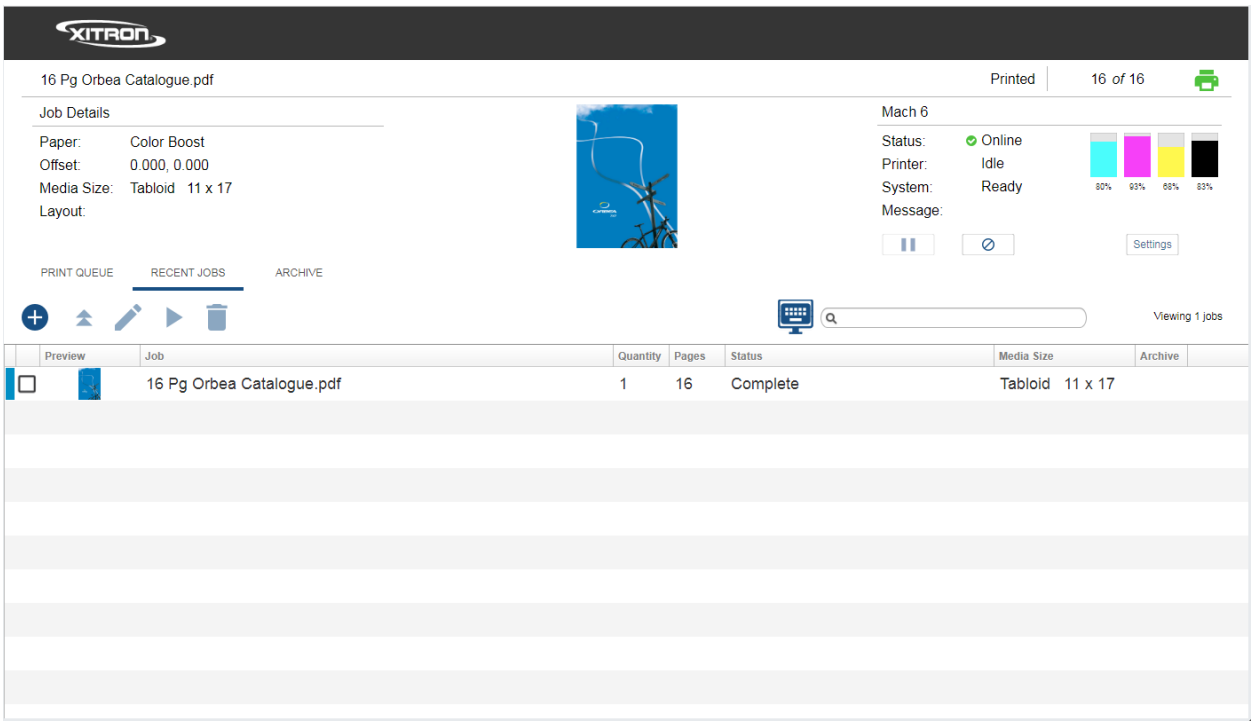
The path for jobs through the queues is this:
1. New jobs enter the Print Queue. When they are printed, they are removed from the Print Queue and go to Recent Jobs..
2. Completed jobs go to the Recent Jobs area. They will be deleted from here when more jobs are entered into the system. You may also delete 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.



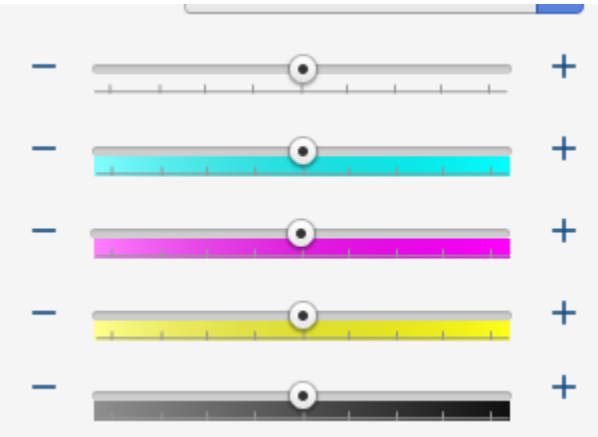
The recent jobs queue acts just like the print queue. If your job is in here, click the edit (pencil) button to reprint it.


16 Pg Orbea Catalogue.pdf
Printed
16 of 16
Job Details
Paper: Color Boost
Offset: 0.000, 0.000
Media Size: Tabloid 11 x 17
Layout:
Mach 6
Status: Online
Printer: Idle
System: Ready
Message:
80%
93%
68%
83%
Settings
PRINT QUEUE
RECENT JOBS
ARCHIVE
Viewing 1 jobs
Preview
Job
Quantity
Pages
Status
Media Size
Archive
16 Pg Orbea Catalogue.pdf
1
16
Complete
Tabloid 11 x 17

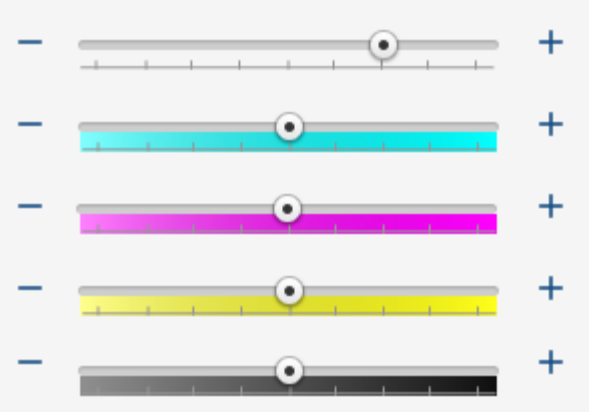
3b. Global Color Adjustment

Global color adjustment is a simple curve adjustment on the mid-tones. Unlike ICC profiling, or 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.

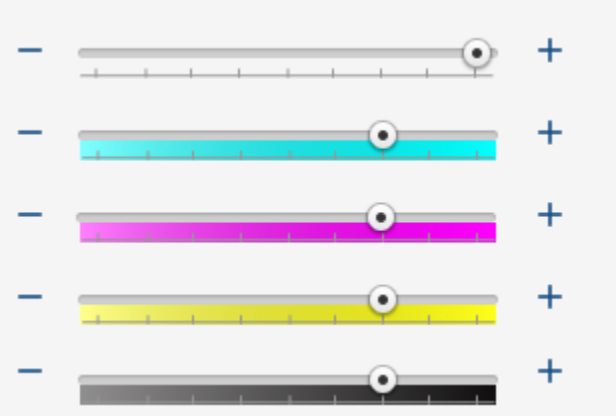
The interface consists of five sliders. One slider each for CMYK and one more for darkness/lightness. The darkness/lightness slider affects all 4 color channels together. You can stack changes. Examples follow.



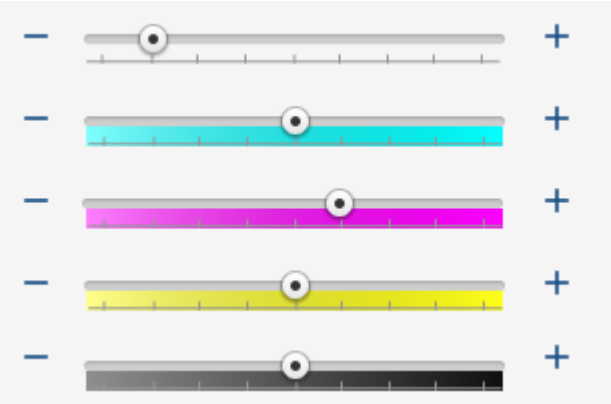
How do you get a job darker?



Even darker but still color balanced?



How to make it lighter and yet more magenta?



3c. Spot Color Adjustment Tool

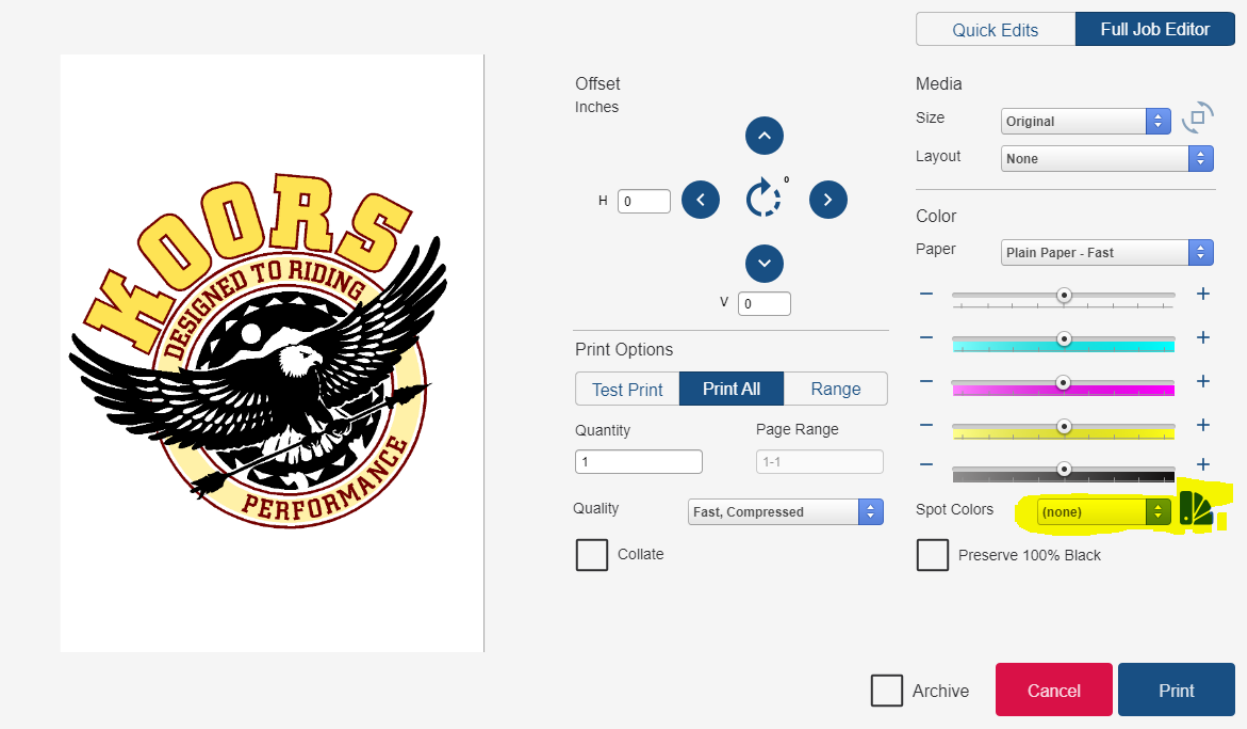
The Navigator DFE contains licensed Pantone libraries so you get the best possible color match on your digital printer. To use those libraries you need two things:

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

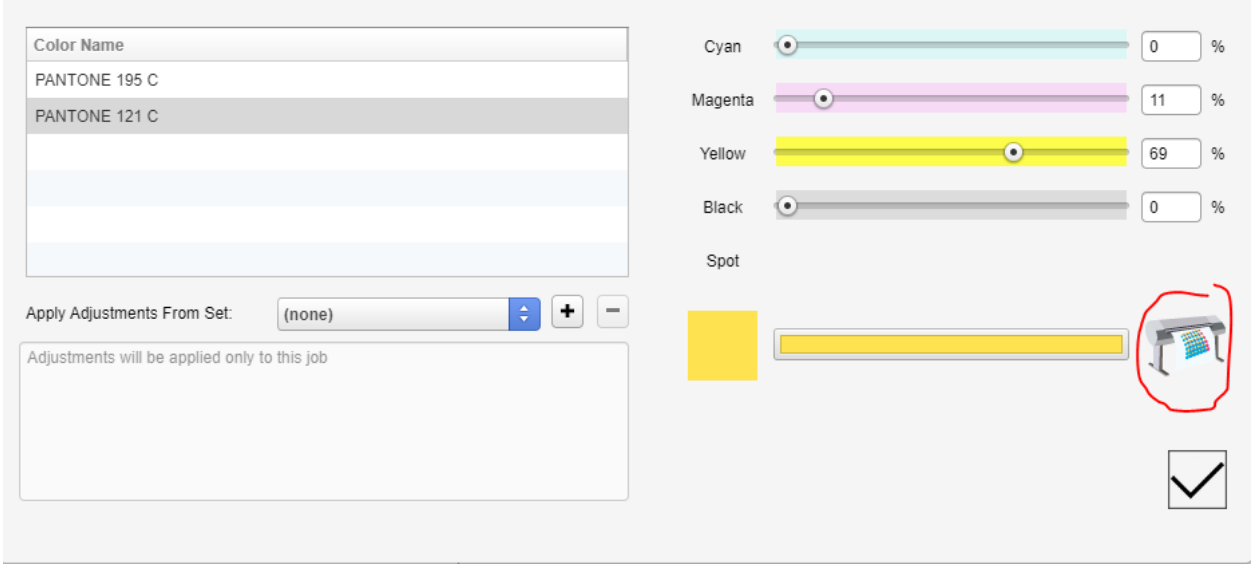
What if you want to get a closer match on a new paper?
Or what if you need to match a previous printed process instead of being "accurate"?

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:

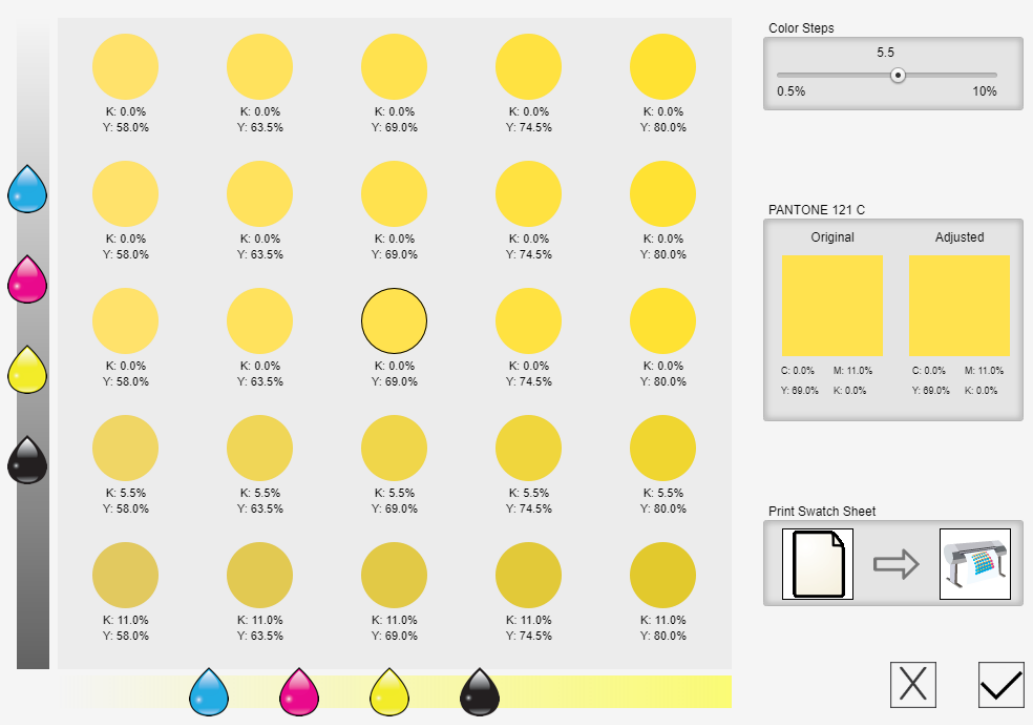


We chose Pantone 121 for our adjustment. Notice the CMYK sliders. If you believed strongly in yourself you might just slide those to change the color. However, for more help selecting the new color recipe, click on the icon of the printer. That will give you a lot more help.



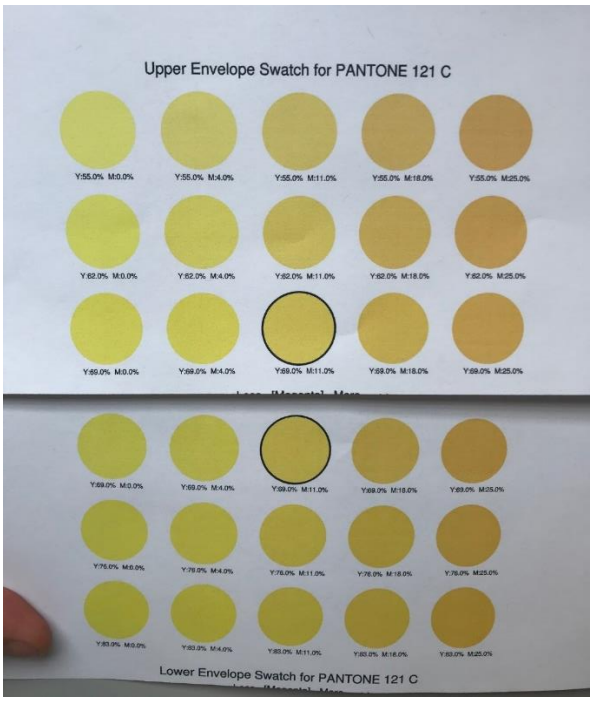
The swatch sheet page:

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:

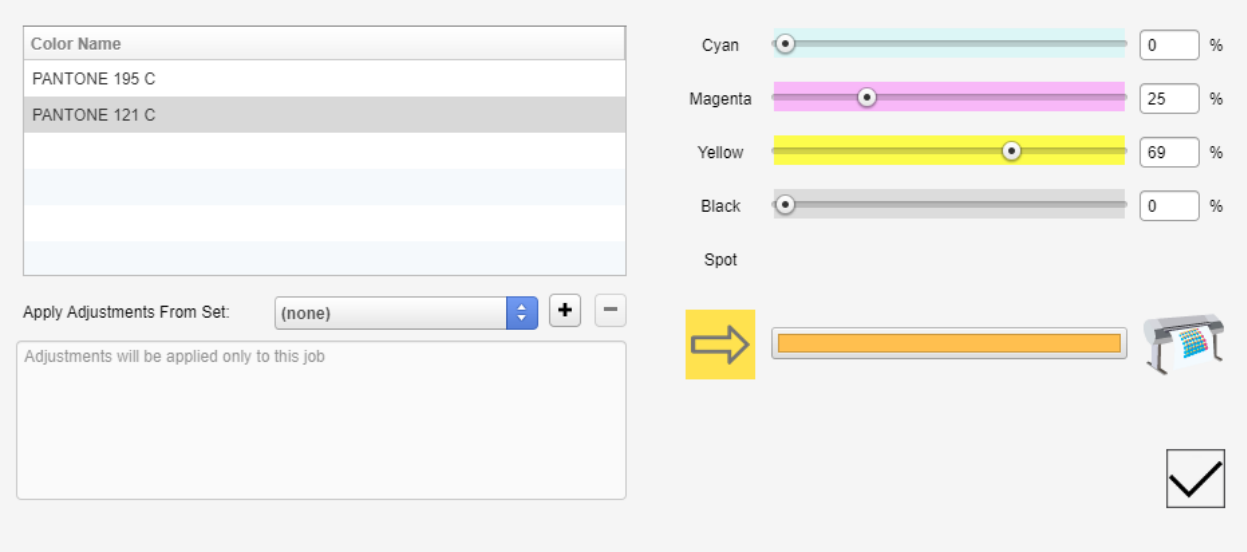
Here's how it works:

Whichever swatch you pick, you click.

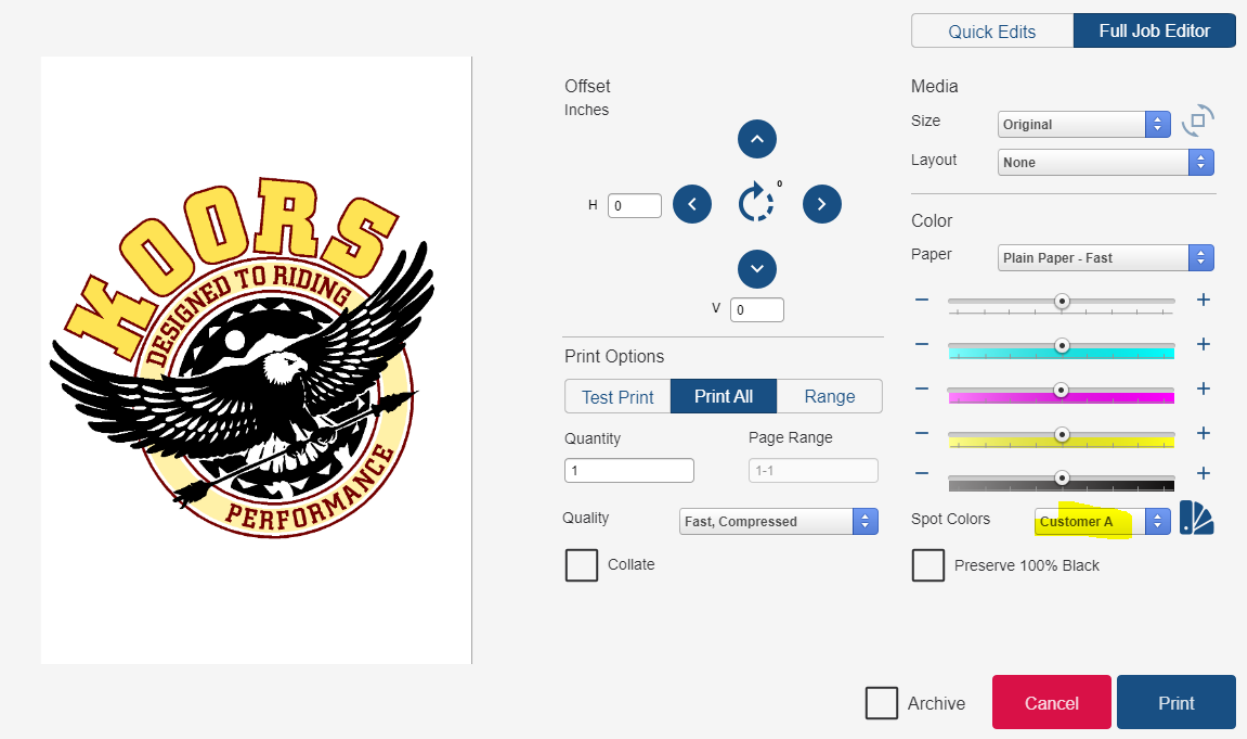
Go to the interface and point at the one you liked on the prints. That will become the new center. In the example case, I'm picking the bottom center.

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 the arrow on it. The altered color is in the middle bar.



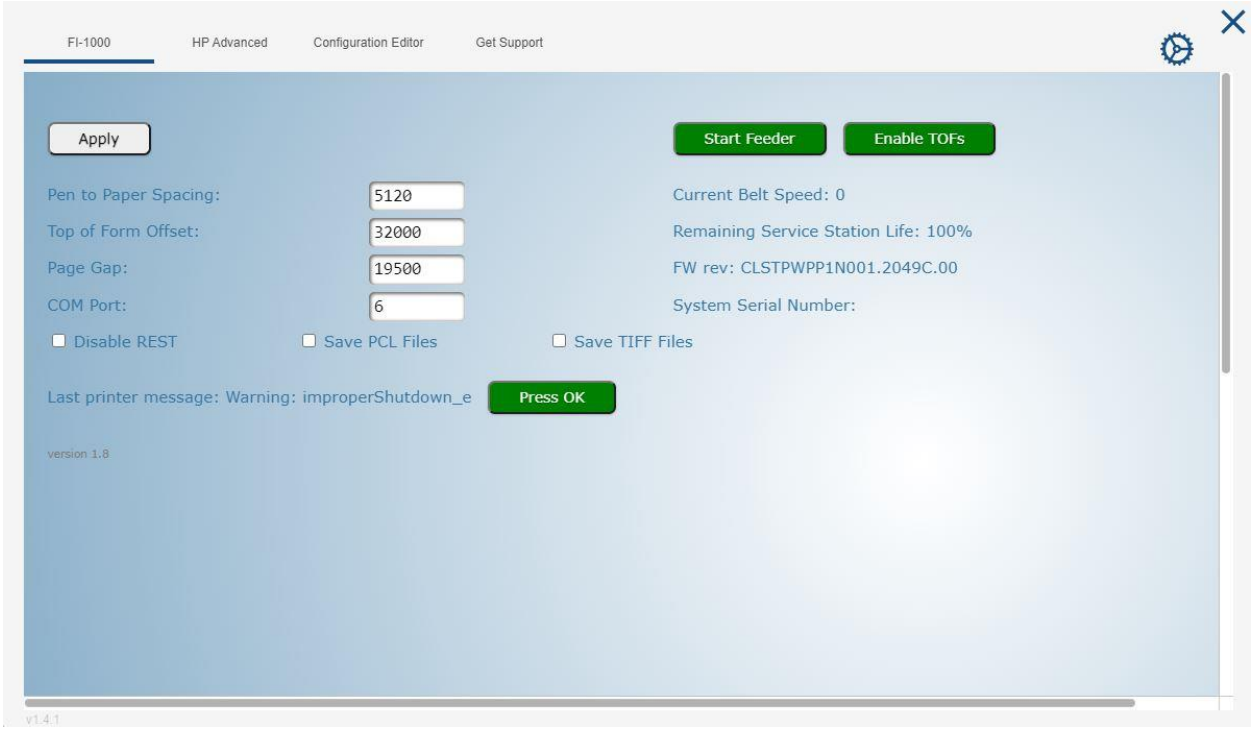
Next time you run a job from this customer you can submit the job like the job ticket below and just hit "Print".



3e. DFE settings, preferences, configuration

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

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



The FI-100 tab will have settings related to the Print engine

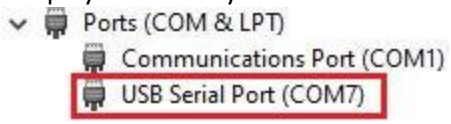
1. Pen to paper spacing – This is a setting that controls how far the print bar will lower when it prepares for printing. A higher value here will cause the print bar to lower further thus printing closer to the media. The maximum value allowed is 5180. Typical setting for envelopes is 5100-5150.

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 setting is around 32000. Note: this value is in 100ths of a mm

3. Page Gap – This is a maximum gap between sheets that the print system is expecting. If this is set too low and the gap exceeds this value the system will error. Typical setting is 19500.

4. Com Port – This is a setting for the USB Com port from the printhead. This setting should match the COM port assigned in the **device manager**. If this is set improperly the belt speed will not be displayed correctly.



5. 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.

6. 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.

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

8. System Serial Number – Serial number of the printhead system (if displayed)

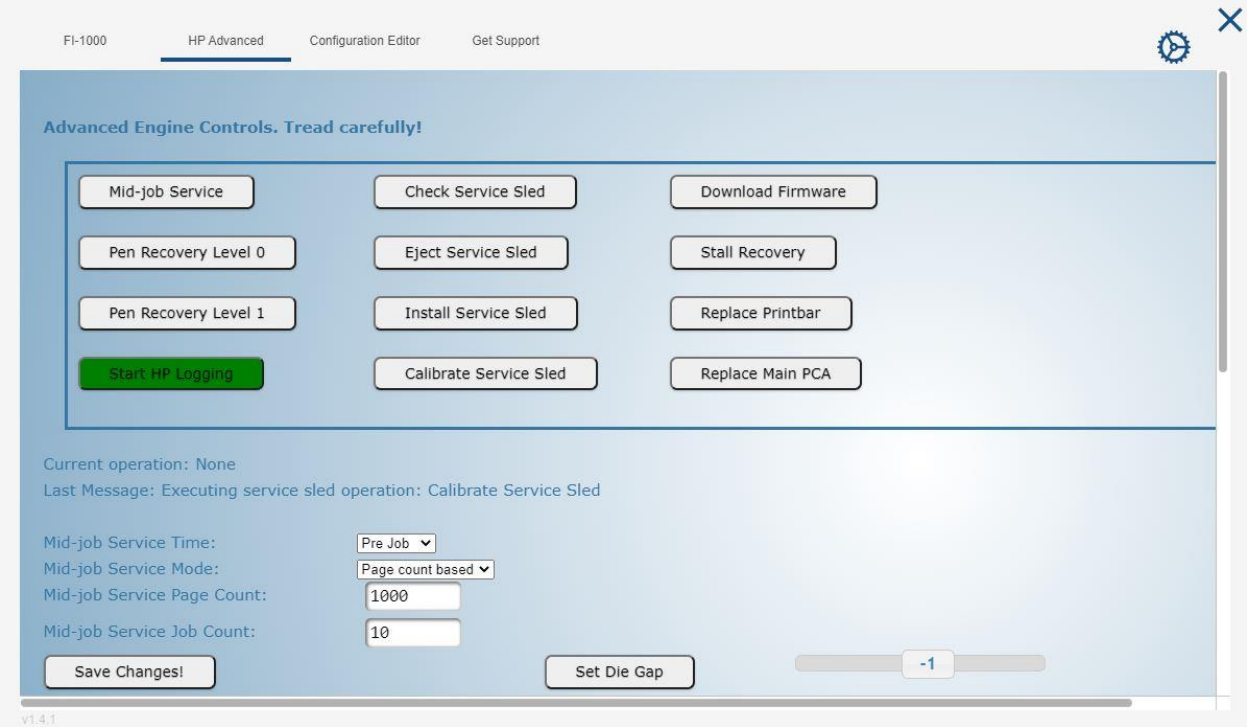
9. Disable REST – Disables the communication to the printhead. This is only used by service technicians. Should normally be unchecked.

10. 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.

11. 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.

12. 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.

The **HP Advanced** tab has function related to cleaning and maintenance of the print engine.



1. Mid-job Service – This is a light cleaning on the print nozzles. Use this if you are seeing lines on the output.

2. Pen Recovery Level 0 – This will do a more aggressive clean on the print nozzles. Use this if two mid-job servicings do not correct you problem.

3. Pen Recovery Level 1 – An even more aggressive cleaning of the print nozzles. You can use this as a last resort if two of each of the other cleaning levels do not fix your problem.

4. Start HP Logging – Used only by Technicians to gather log files.

5. 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.

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

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

8. 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.

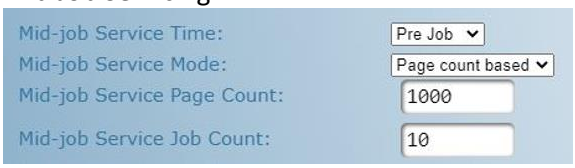
9. Download Firmware – Allows firmware updates. Typically, this is only used by service technicians.

10. Stall Recovery – If there is an error such as “Printbar Stall” this will clear the error and re-set the system. If the error is a mechanical failure this error will come back after the reset.

11. Replace Printbar – This is only performed by a service technician.

12. Replace Main PCA – If the main PCA board is replaced this button will re-set the PCA to system configurations.

13. 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.

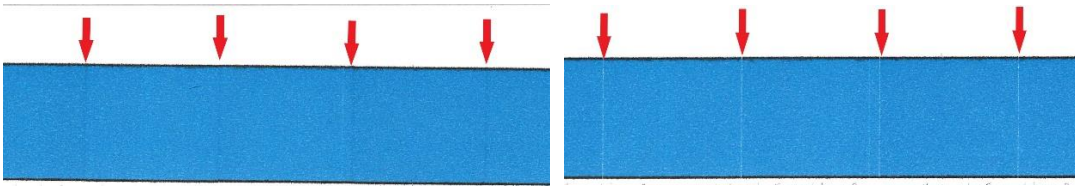
Mid-Job Service Mode – Options are “Page Count Based” and “Job Count Based”

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 job 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.

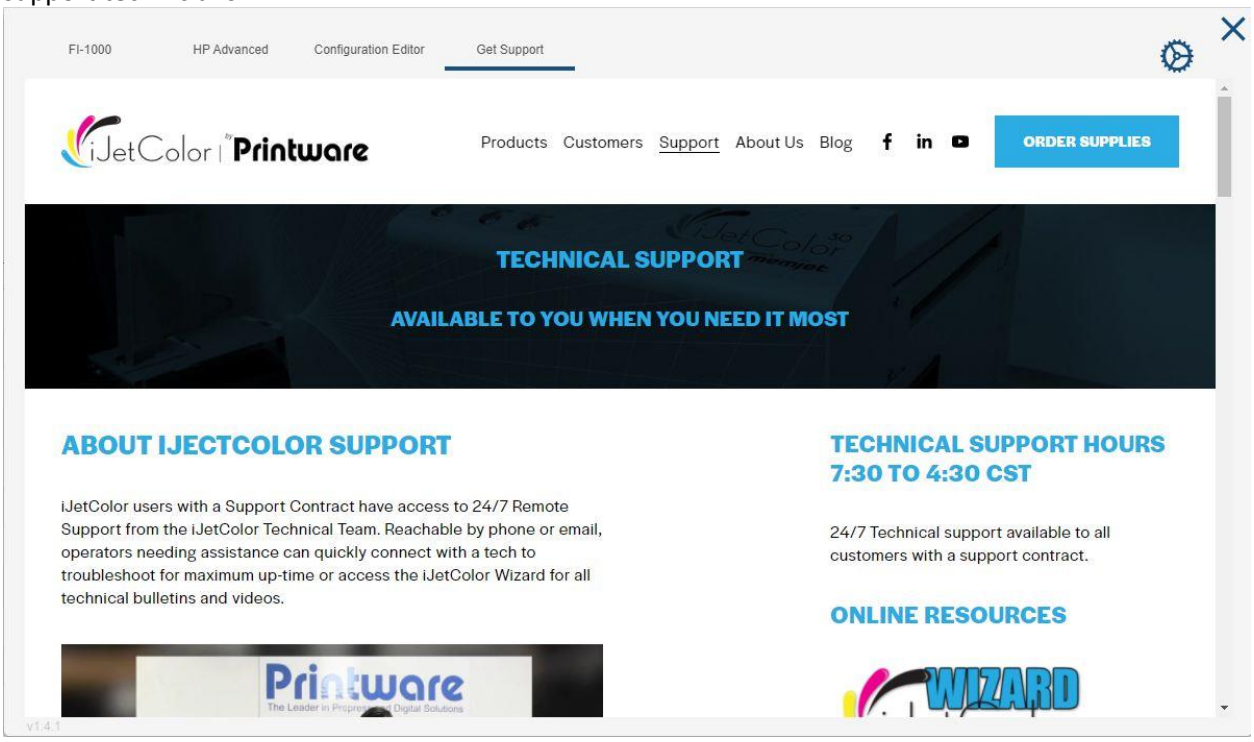
14. Set Die Gap – The printbar on the HP engine contains several sections of print nozzles. Each of these sections is called a die. The space between them is adjustable. If you are seeing evenly spaced white line on your image, you can adjust to make the die output closer to each other. If you are seeing dark evenly spaced lines on your print the dies are overlapping.



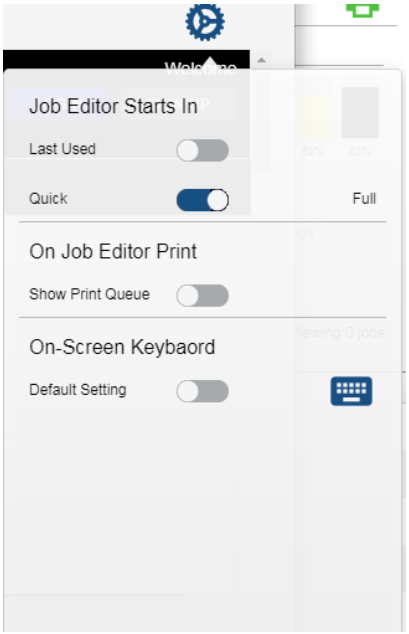
To eliminate white lines – Increase the die gap setting, then press the "Set Die Gap" button.
To eliminate dark lines – Decrease the die gap setting then press the "Set Die Gap" button.

Configuration Editor allows you to change calibration and color settings.
To learn how to re-calibrate se section "Device Calibration"

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



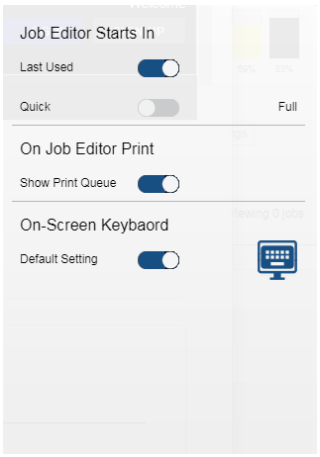
The gear icon lets you set some preferences for the web client.



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.

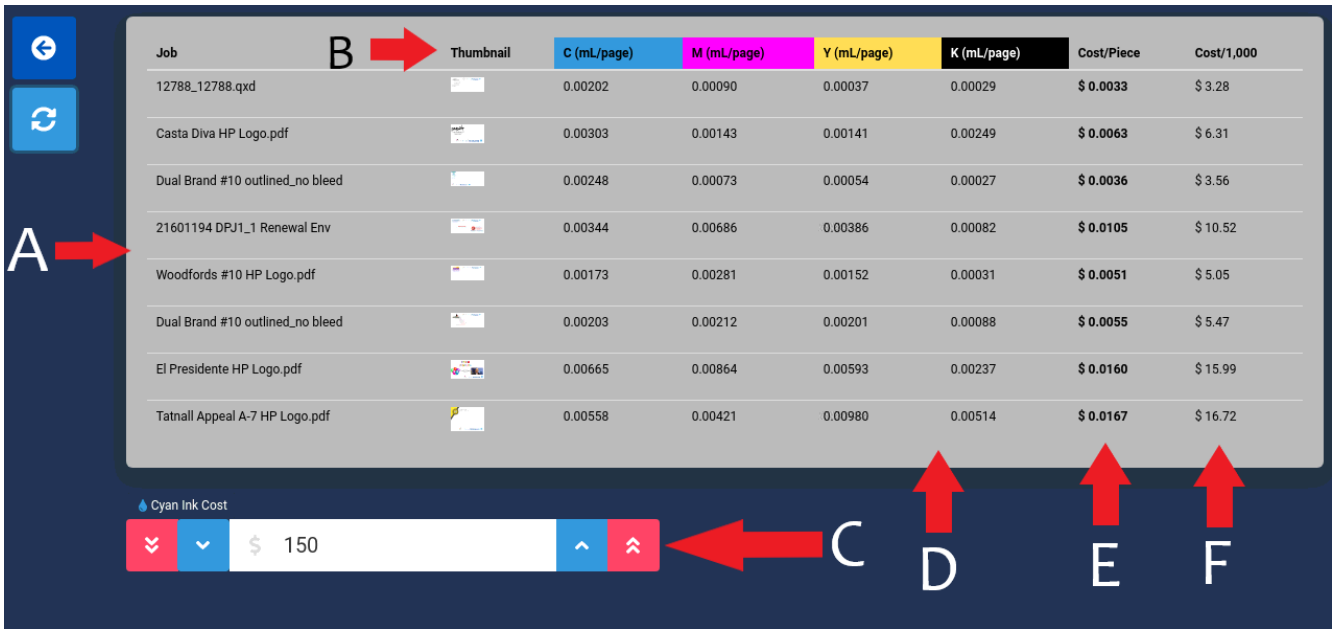
On Job Editor Print: please ignore this.

On-Screen Keyboard:
You can also set this on the main screen, next to the search field. When the icon shows only a keyboard then the system is set to expect input from a keyboard. When it shows a keyboard inside a monitor, 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.



Setting the keyboard input preferences can also be accomplished from the main screen. Just click or press the button to change the behavior back and forth.

3f. Job Cost Calculator



Machine Control Interface - Cost Calculator

The cost calculator on the machine control interface (smaller display) 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.

F. Cost/1,000 – This column shows the cost per 1,000 pages for the print job.

4. 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.

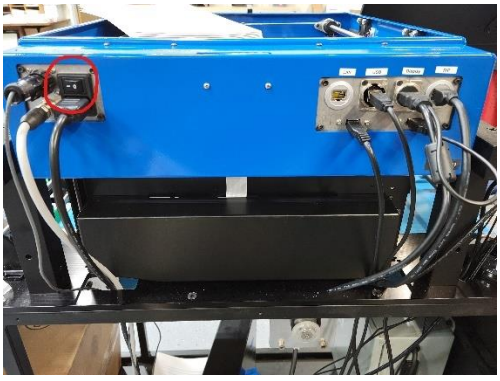
Note: The printhead is industrial constructed as such it weighs 70 pounds. So, it will take two people capable of lifting the printhead to perform this task.

To replace the printhead:

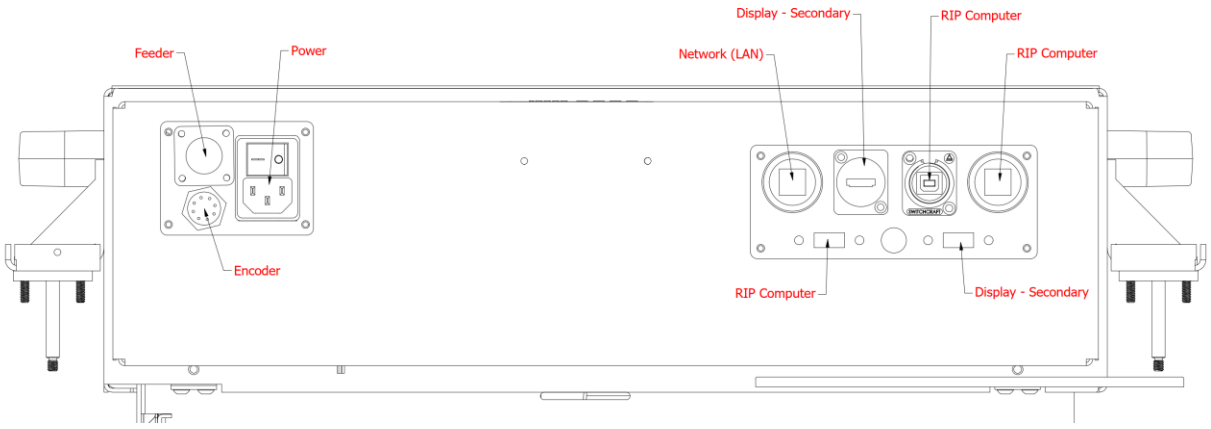
1. Lower the lift height to the lowest position and remove the ink cartridges for use in the new printhead. (see section Replacing the Ink Tanks)

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.

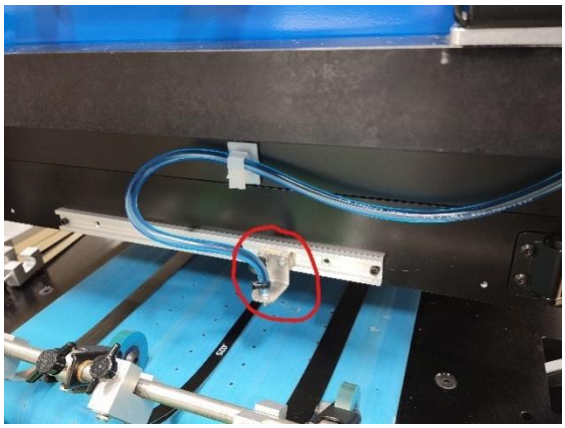


5. Remove the four shoulder screws that secure the printhead to the frame. Save the screws for use with the new printhead. Remove by bushing them up from the bottom.

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

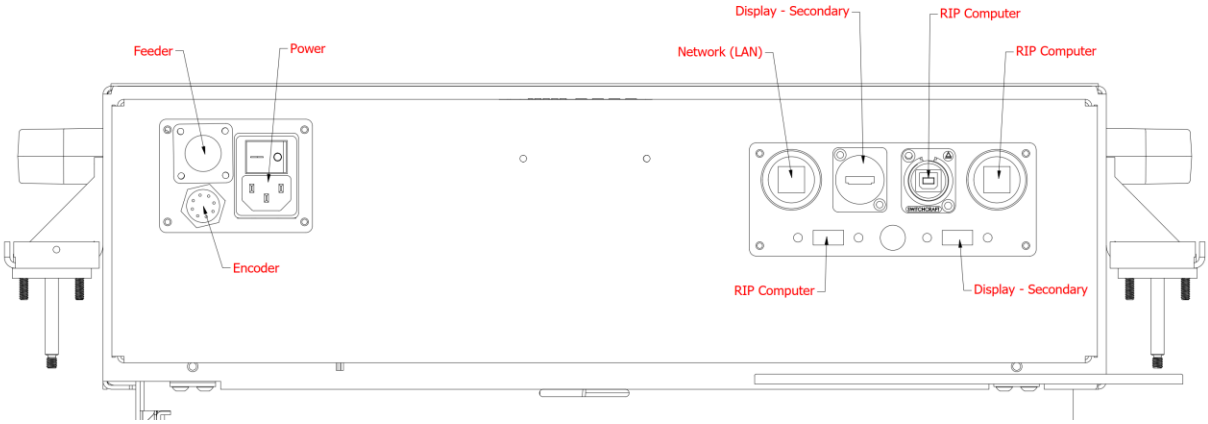
7. Unpack the new printhead.

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 of 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.



5. Feeder

FEATURES OF THEIJETCOLOR PRO FEEDER

Self-Centering Paper Guides: Can be adjusted for different envelope sizes in seconds. Locking knobs are included to secure guides after adjustment.

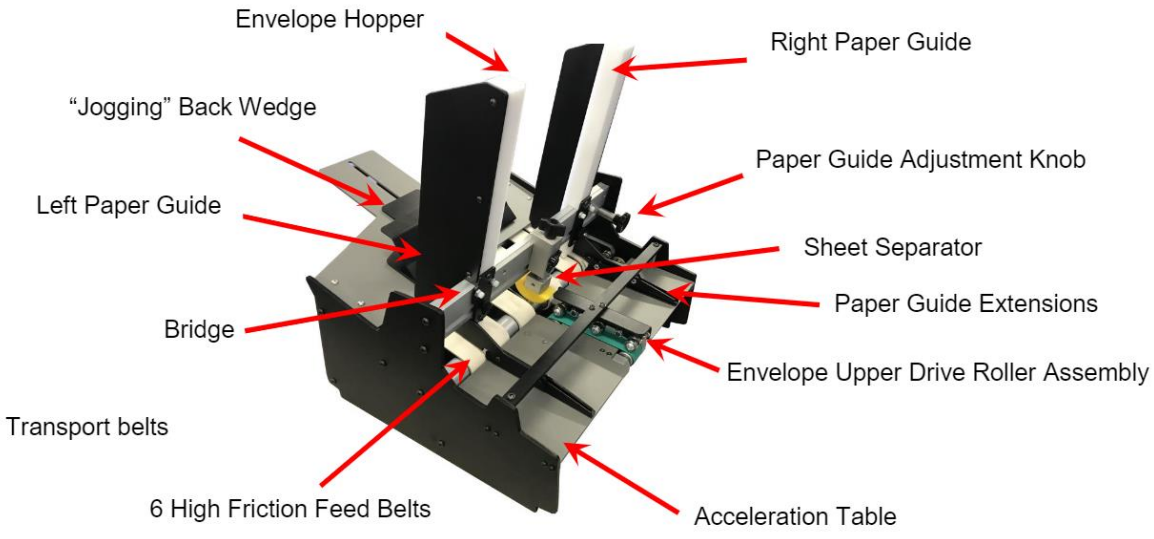
Integrated Acceleration Table: Creates consistent gaps between envelopes as they advance toward the printer. Delivers envelopes flat for easy transition between feeder and printer.

"Jogging" Back Wedge (rear envelope support): Jostles the envelope stack while running to aid in consistent feeding.

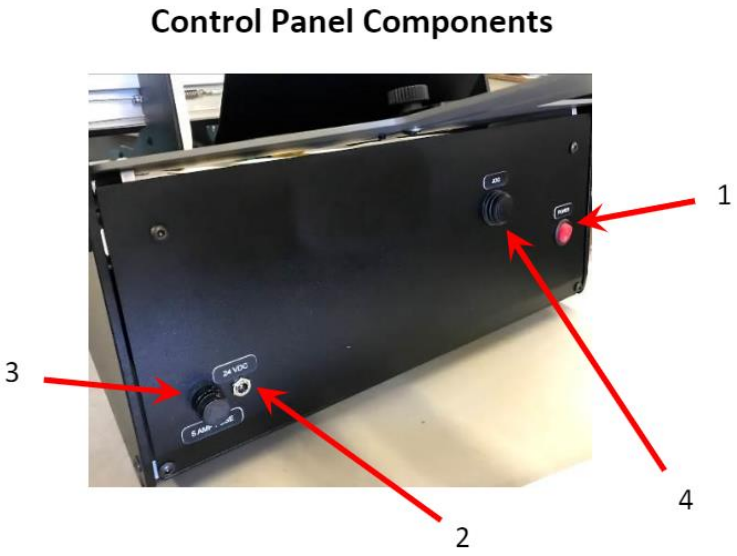
Six High Friction Feed Belts: Offers substantial surface area to grip and advance envelopes.

Buckle Separation Technology: This unique separation technique offers tremendous flexibility and ease of use while eliminating the traditional "nip point" separation common on other feeders. Buckle separation reduces jams and allows for variable thicknesses associated with envelopes.

Simple Service: The iJetColor Pro offers quick and easy feed belt changes to keep you up and running. The belts and separator tip can be replaced in minutes. The picture below illustrates the main components of the iJetColor Pro v5 feeder:



Control Panel Components



1. Main Power Switch
2. 24 vdc Power Inlet
3. Fuse holder (5 amp fuse)
4. Jog Button (Can be used to run motor when external speed potentiometer is not connected)

NOTE: The speed of the feeder is controlled by an external potentiometer (mounted on the printer control panel) The speed of the feeder should be set to match the speed of the printer transport belt. Set the speed of the feeder to maintain a gap between envelopes on the printer transport belt.

When the external speed potentiometer is not connected, the jog button can be pressed to run the feeder motor at top speed. This is useful for testing the feeder away from the printer.

Disconnect power and the external speed control when servicing the feeder.

Operational Notes

The iJetColor Pro feeder can run envelopes in either Portrait (lengthwise) or Landscape orientation. Landscape orientation is commonly used to offer higher production speeds. The setup instructions herein assume landscape orientation.

Proper setup and maintenance of the feeder will ensure the best results. The feed belts should be cleaned periodically using isopropyl alcohol and a lint-free cloth. Envelope flaps and paper dust will build up on the feed belts under heavy use, causing them to slip while feeding. Disconnect power to the feeder to clean the belts.

Before placing the feeder in-line with your printer, check to make sure that the feeder motor functions properly and that there is no damage to the machine. Inspect the feeder for damage before connecting power.

Connect the included 24 vdc power adapter to the feeder by inserting the cable end into the power inlet on the back plate of the feeder.

Connect the power adapter to the included power cord and plug the power cord into a standard grounded 120 vac power outlet.

With the external speed potentiometer disconnected, switch power to the feeder ON.

Ensure that there are no objects in the feed belt area and press the JOG button to start the motor. The feeder should run at maximum speed when the JOG button is pressed. Release the button to stop the motor.

**The jog button can be used to test the feeder with your envelopes if the external speed control is not connected. Alternately, the external speed control can also be used to test the feeder.

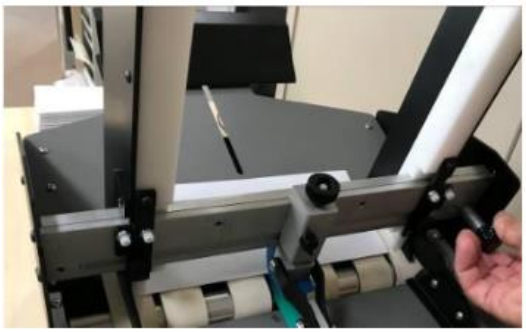
5a. Feeder Setup and Use

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.

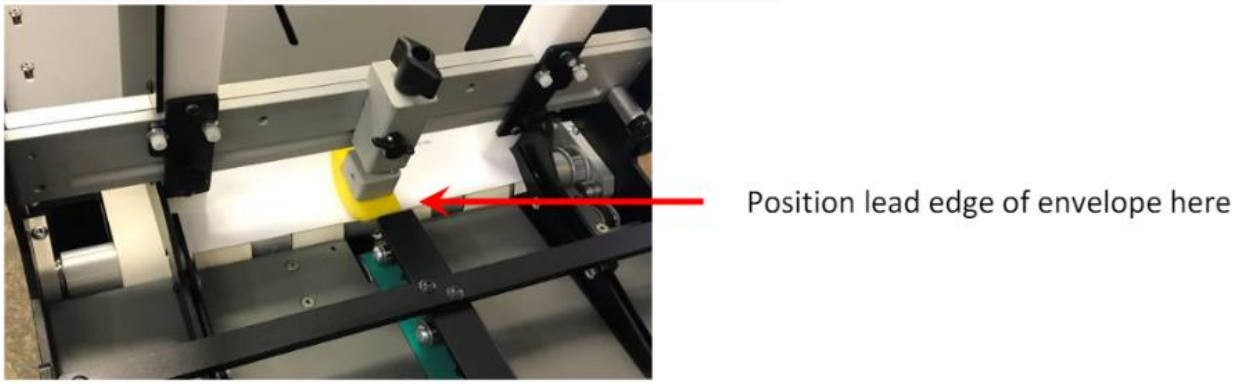
Step 2. Place and envelope between the paper guides on top of the feed belts (in the orientation you wish to run)

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.



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.



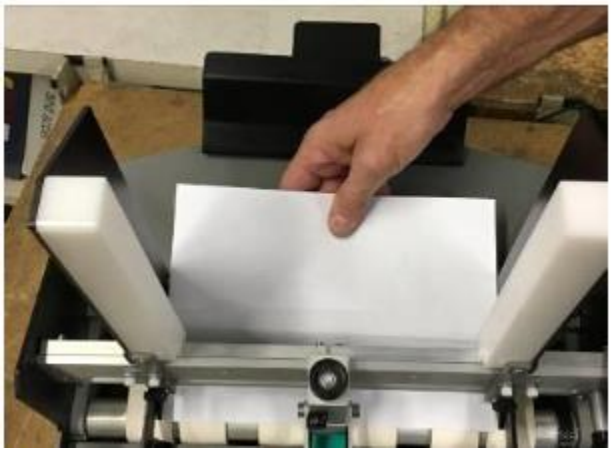
Step 6. Rotate the separator adjustment knob COUNTER CLOCKWISE until the envelope is buckled downward between the white feed belts. Buckle the envelope downward approximately 1/8” from level

Buckle the envelope downward here.
Note: The acceleration table transport rollers will partially obstruct your view.

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 Delrin 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.

Step 10. Position the back wedge assembly so that the trailing edge of the envelope stack is resting approximately in the middle 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.

TESTING THE FEEDER

With a small stack of envelopes in the feed hopper, switch power to the feeder on. Adjust the external speed potentiometer to a moderate speed to test feeding.

Alternatively, if the external speed control is not connected, press the JOG button to run the feeder.

NOTE When using the JOG button, the feeder will run at maximum speed.

While the feeder is running, observe the envelopes as they travel from the feed hopper across the acceleration table. As the description implies, the acceleration table runs a bit faster than the feed belts, creating a gap between envelopes. This helps ensure a smooth transition from the feeder onto the printer transport.

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 try lowering the separator a bit or moving the back wedge assembly in under the envelopes a bit more.

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

5b. Feeder Belt Replacement

The following instructions describe the procedure for replacing the feed belts. There are 6 feed belts on the iJetColor Pro envelope feeder.

To clean these belts, use isopropyl alcohol and a
lint free cloth. Cleaning the feed belts periodically will ensure sufficient friction for consistent feeding.

If, after cleaning the belts, they still do not offer sufficient friction, or are worn to a very smooth, slick condition, replace the belts.

TOOLS NEEDED:
1/8” allen wrench (Long T-handle is helpful)
3/32” allen wrench

Step 1. Disconnect power from the feeder by removing the power input from the back plate.

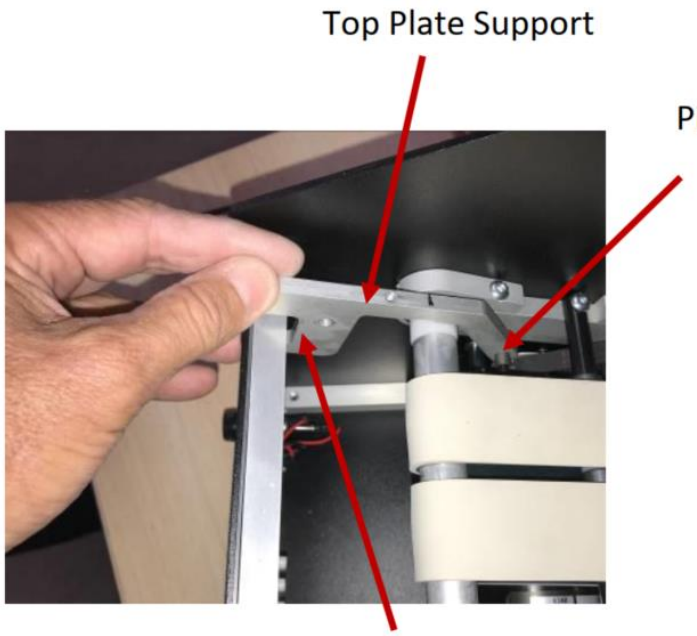
Step 2. Using a 1/8” allen wrench, remove the four button head screws securing the bridge to the side plate.

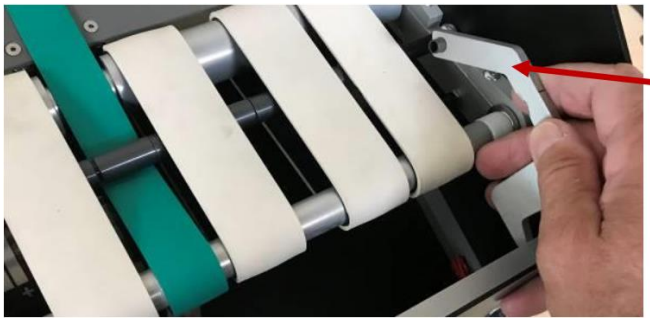
Step 3. Carefully remove the bridge from the feeder. Moving it towards the exit end of the feeder will be less likely to cause binding between the side plates.

Step 4. Using a 3/32” allen wrench, remove the four button head screws securing the top plate to the feeder. (Be careful to keep the screws from falling into the feeder).

Step 5. Remove the top plate from the feeder.

Step 6. Remove the top plate supports from the feeder. NOTE: There is a left and a right top plate support. Make note of the orientation for re-assembly later.
You will need to remove the pivoting end of the top plate support (with the gray bushing) toward the feed belt to release it from the pivot bolt.





Step 7. Using a 1/8” allen wrench, remove the button head bolts securing the rear shaft bearing caps on both ends of the shaft.

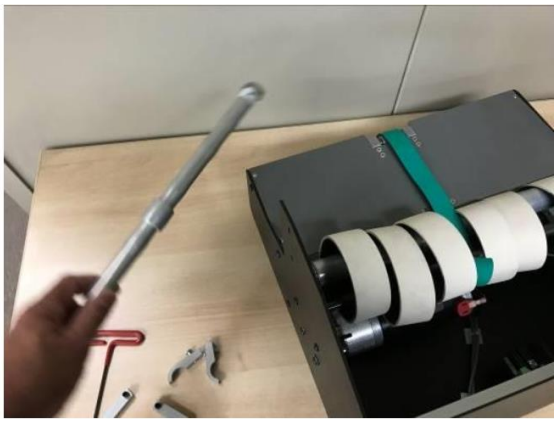
Step 8. Remove the bearing caps and set them aside

THE FOLLOWING STEPS ILLUSTRATE REMOVAL AND REPLACEMENT OF THE FEED BELTS. IT IS BEST TOHAVE THE BACK PLATE OF THE FEEDER FACING YOU

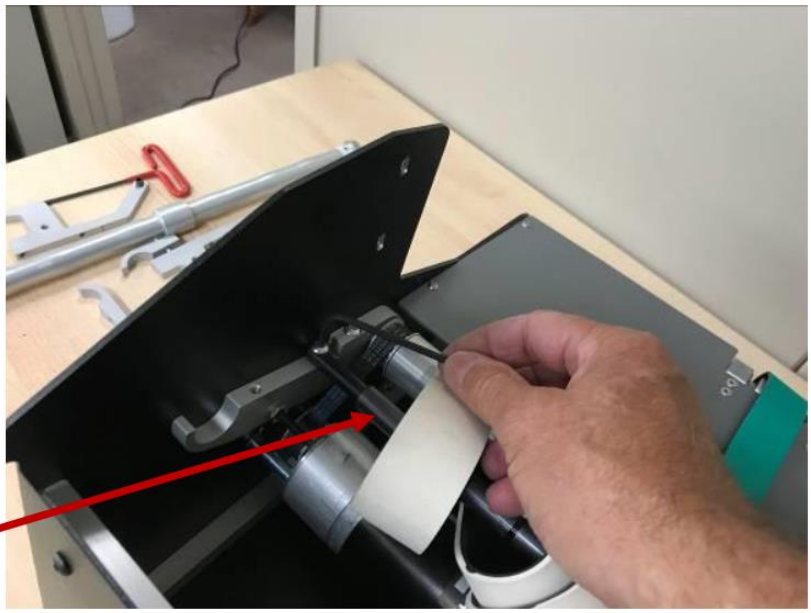
Step 9. Grasp the rear shaft towards one end and pull back and up to lift the shaft bearing out of the bearing block. **BE CAREFUL, THE BELTS WILL HAVE SOME TENSION**

NOTE: It is helpful to place your thumb behind the back plate and your fingers in front of the shaft and squeeze a bit to remove the shaft.

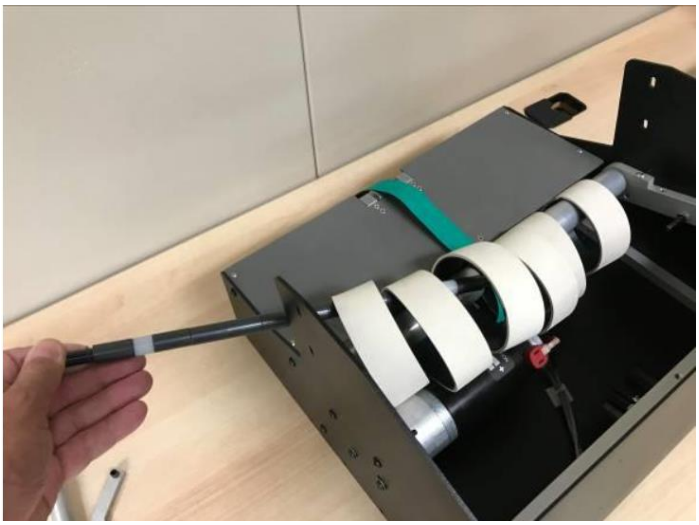
Step 10. Remove the rear shaft from the bearing blocks and slide it out of the belts in front of one of the side plates.



Step 11. Using the 1/8” allen wrench, remove the two button head screws securing the belt support shaft to the bearing blocks.

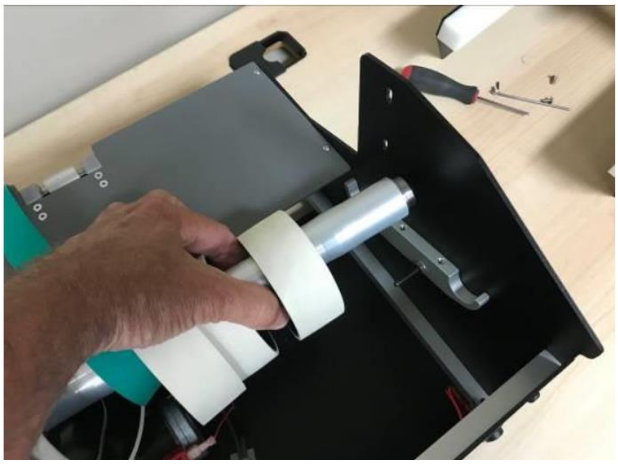


Step 11. Remove the belt support shaft from within the feed belts and set it aside

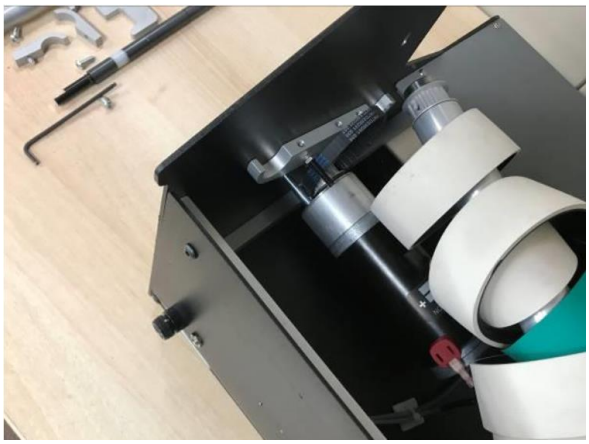


Step 12. With the 1/8” allen wrench remove the bearing caps securing the drive shaft to the bearing blocks. (The caps and bolts are identical to the ones removed earlier)

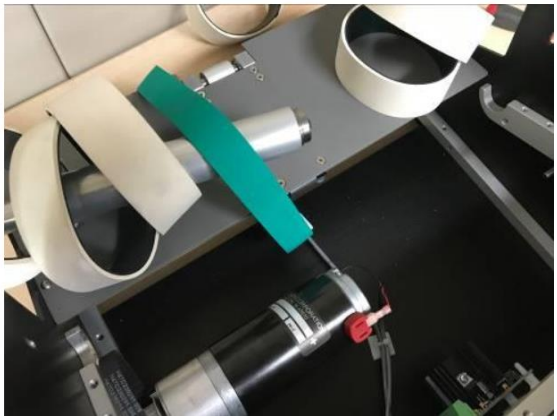
Step 13. Lift the right (opposite of motor) end of the drive shaft up out of the bearing block



Step 14. Pull the other end of the shaft out of the bearing block and remove the timing belt from the shaft pulley.

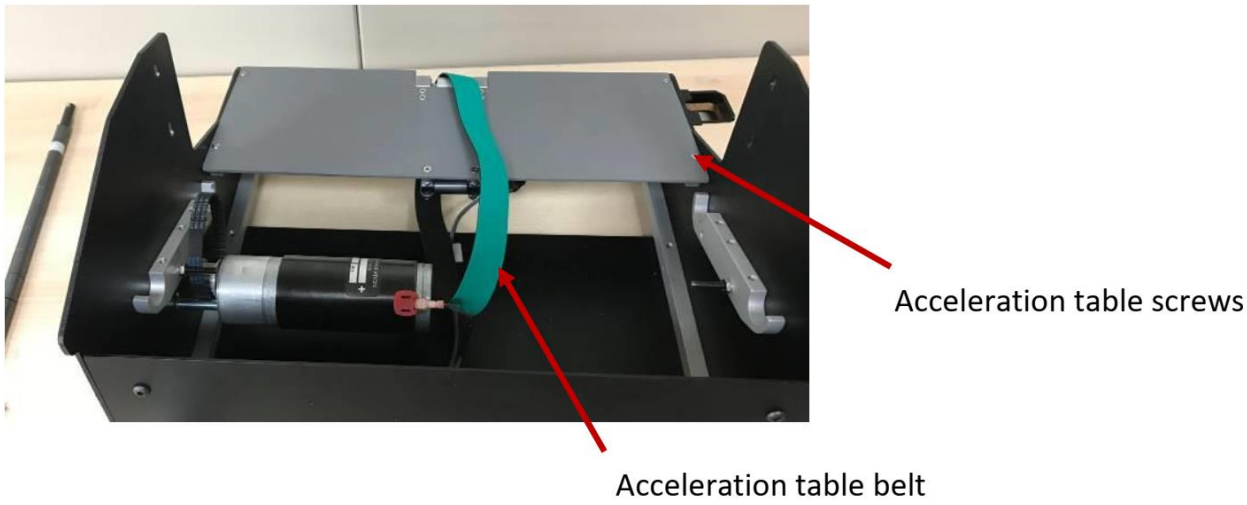


Step 15. Remove the feed belts from the drive shaft on both ends. The shaft may be removed from the feeder at this point if you wish.



Step 16. (optional) If you wish to replace the green acceleration table belt, this is the optimal time to do so. To remove the belt, simply remove the four button head screws securing the acceleration table to the feeder.

NOTE: Earlier versions of the feeder incorporated a slightly shorter acceleration table belt than the current version. If you need to order a replacement belt, please supply the machine serial number.



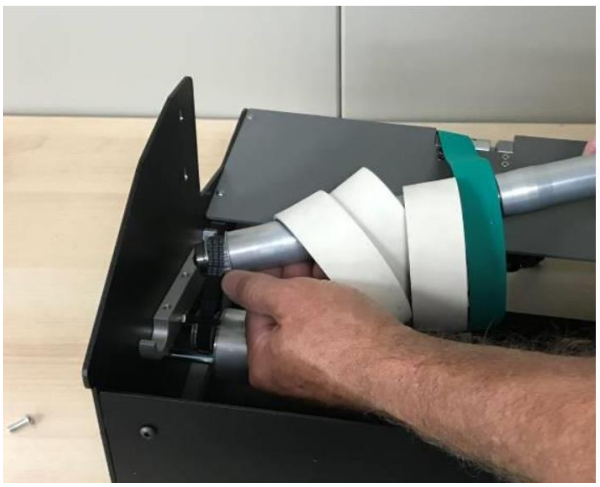
INSTALLING NEW FEED BELTS

Step 17. Place the drive shaft inside of the acceleration table belt with the pulley on the motor end.

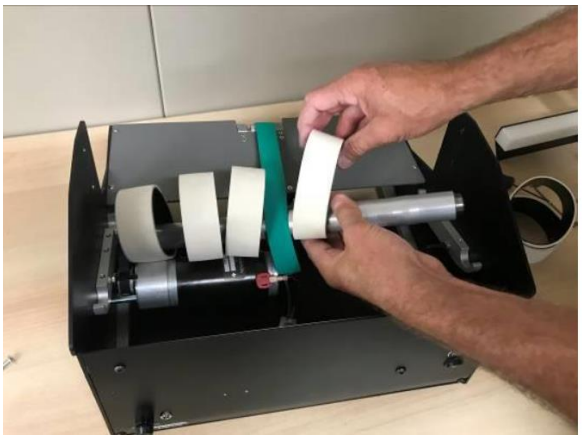
Step 18. Place three new feed belts onto the drive shaft on the pulley end as shown.

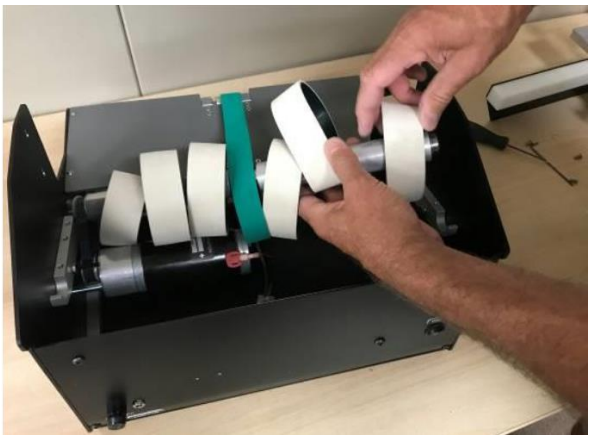
Step 19. Position the drive timing belt on the pulley and insert that end of the drive shaft into position in the bearing block.

NOTE: This step is easier if you move the opposite end of the shaft back towards the back plate to keep the timing belt tension loose.



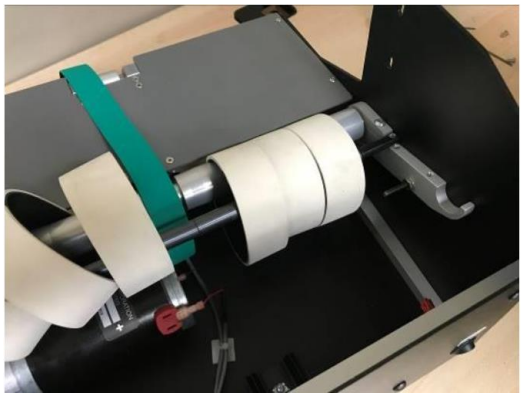
Step 20. Place three new feed belts on the opposite end of the drive shaft.



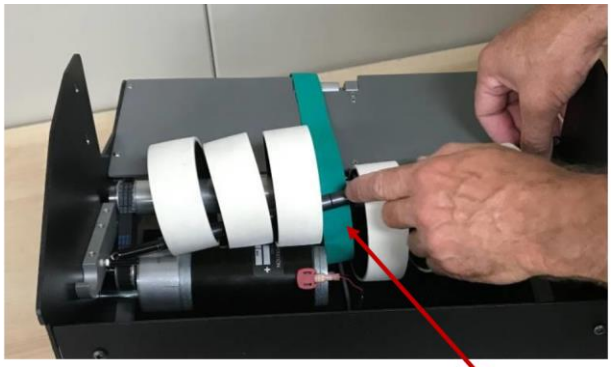


Step 21. Carefully space the belts out so that none are overlapping and then insert the end of the drive shaft into the bearing block.

Step 22. Ensure that the bearings on both ends of the drive shaft are seated properly in the bearing blocks and replace the two bearing caps on the drive shaft ends.
DO NOT OVERTIGHTEN THE BOLTS. “SNUG” IS SUFFICIENT

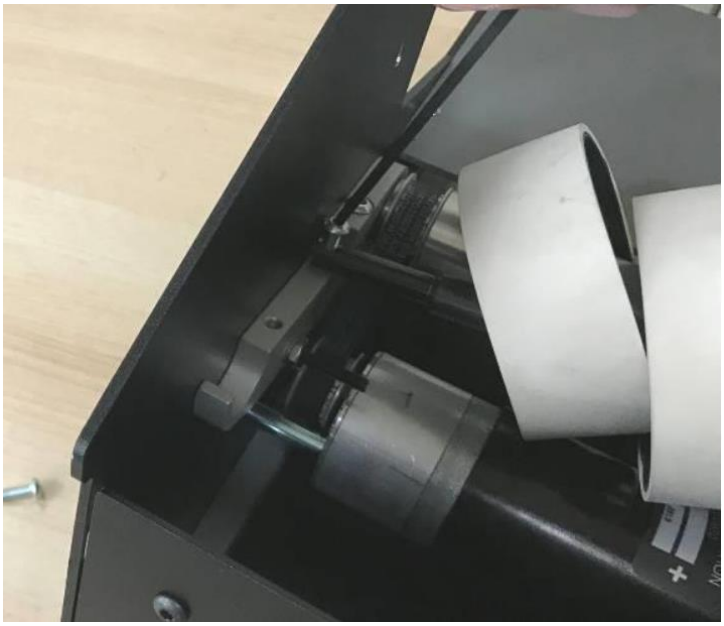


Step 23. Insert the belt support shaft into the feed belts (BUT NOT INTO THE GREEN ACCELERATION TABLE BELT) as shown below.

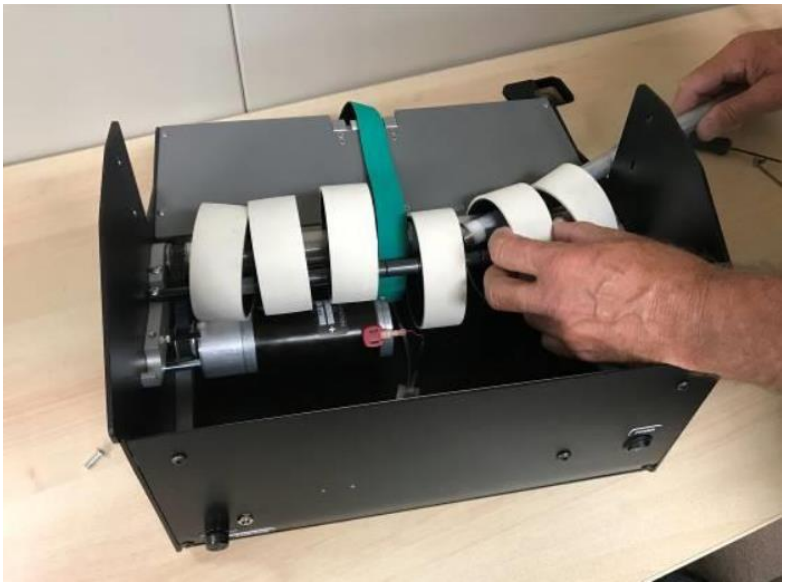


Belt support shaft DOES NOT go through green belt!

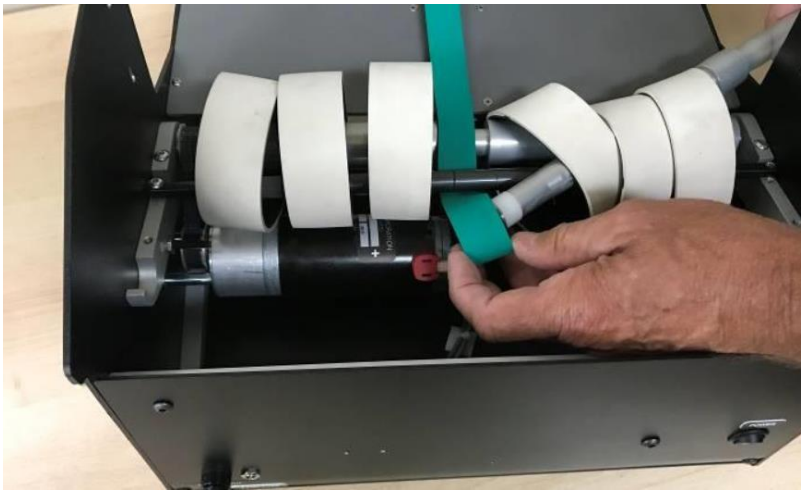
Step 24. **NOTE: The ends of the belt support shaft have a flat side. This flat side MUST face down!**
With the flat side of the ends of the shaft down against the bearing block, secure ONLY the motor end of the shaft to the bearing block with a button head screw. (the other screw will be replaced later)



Step 25. Insert the rear shaft into the three feed belts on the right, coming in from in front of the right side plate as shown here



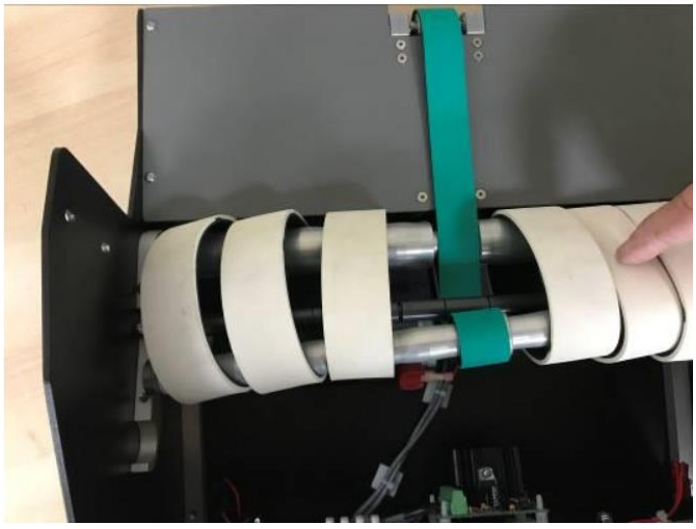
Step 26. Pull the green acceleration table belt below the belt support shaft and insert the end of the rear shaft into the acceleration table belt



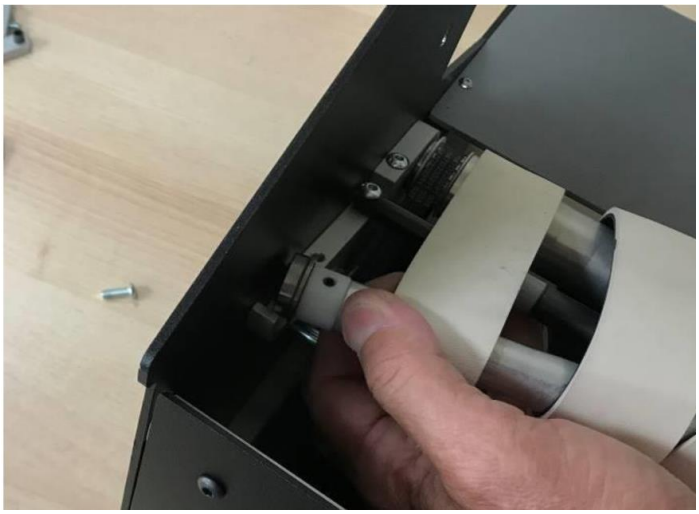
Step 27. Carefully maneuver the end of the shaft into the remaining feed belts. You will need to keep the acceleration belt in the middle of the shaft while working the shaft into the machine gradually.

Step 28. Center the shaft between the feeder side plates and position the acceleration table belt on the large diameter hub in the center of the shaft.

Step 29. While moving the shaft towards the back plate a bit to take up the feed belt slack, carefully position the feed belts over the crowns (high points) on the shaft. This does not need to be perfect at this time as the belts will self-align later. Ensure that no belts are overlapping



Step 30. While maintaining the feed belt spacing, place the bearing on the motor end of the rear shaft into the bearing block with the other end of the shaft towards the exit end of the feeder a bit to alleviate belt tension. The bearing will not seat fully into the bearing block until the shaft is straightened out in the next step



Step 31. While using your left hand to hold the motor end of the shaft in place, grasp the other end of the shaft with your right hand and pull it back so the bearings drop into the bearing blocks.

As shown in the picture here, placing your thumbs behind the back plate and fingers between the belts on the shaft, you will have more leverage to pull against the belt tension in a safe fashion.

Once the bearings drop into place in the bearing blocks, maintain downward pressure on the shaft with one hand so the belt tension does not "pop" the shaft out.

Step 32. While holding the shaft in place with one hand, place a bearing cap on one end of the shaft and secure with the button head screw and a 1/8” allen wrench.

Step 33. Bolt the bearing cap onto the opposite end of the rear shaft in a like fashion. Tighten both screws until snug (do not overtighten)

Step 34. Attach the non-motor end of the belt support shaft to the bearing block with the button head screw.

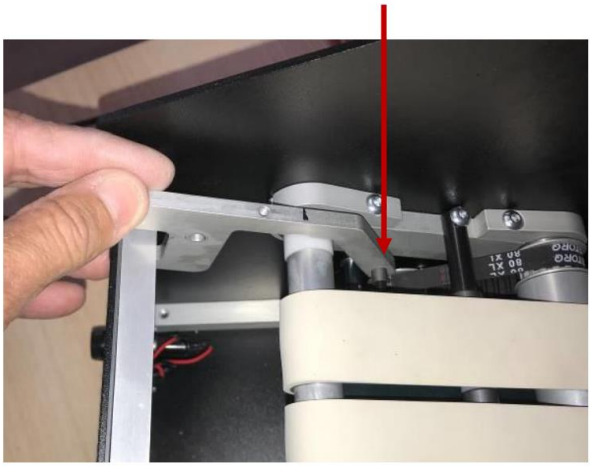
Step 35. Hold the feeder with one hand and manually push the feed belts toward the exit of the feeder using the palm of your other hand. This will allow the crowned rollers to align the belts.

Step 36. Position one of the top plate supports with the pivot end next to the outer feed belt and position the rear end of the support so that the two extensions capture the rear frame bar between them.

Rear extensions
Frame bar on back of feeder will be between these

Pivot end. The flanged (flat) side of bushing faces outward against bearing block

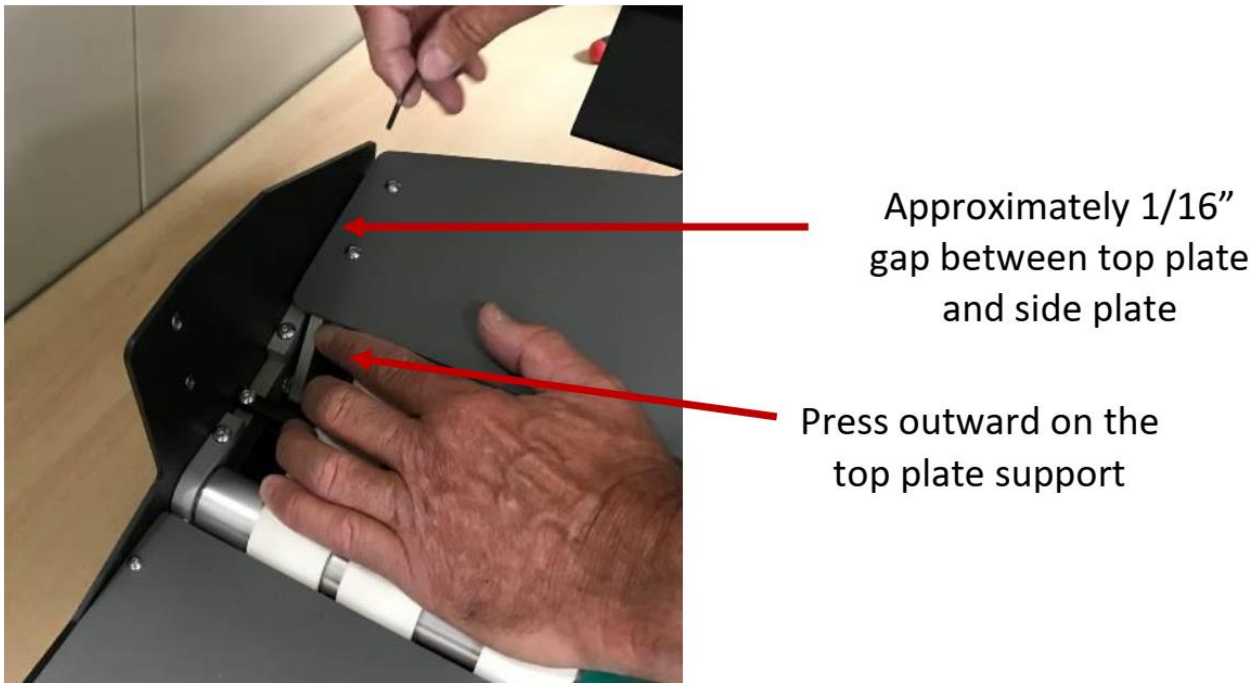
Bushing must be placed on pivot bolt protruding from bearing block



Step 37. With both top plate supports positioned in the feeder, place top plate on top of the top plate supports and line up the holes for the button head screws.

Step 38. Using the 3/32” allen wrench, attach the top plate to the supports with the button head screws. Install all four screws but LEAVE THE SCREWS A BIT LOOSE FOR NOW

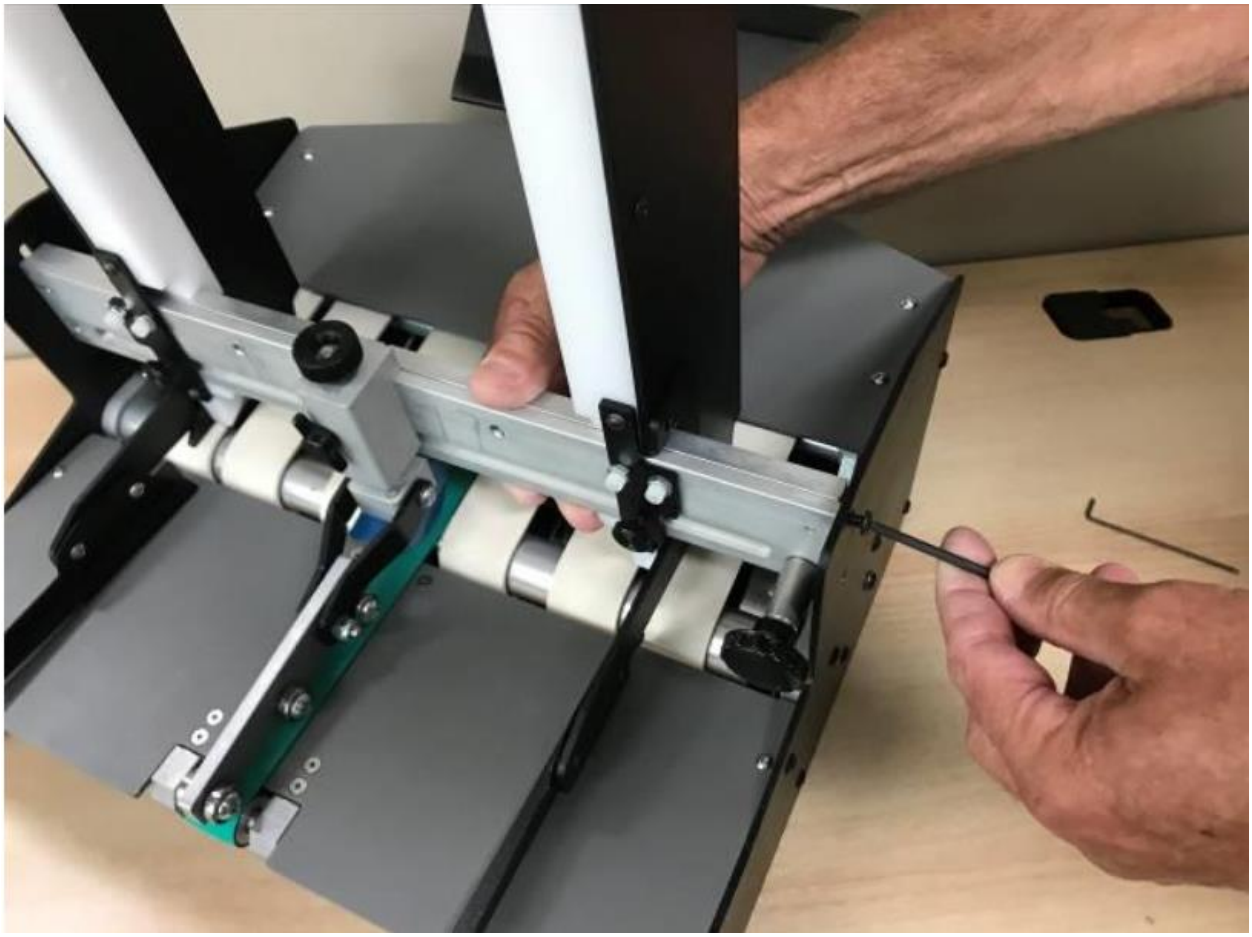
Step 39. With one hand, press one of the top plate supports outward up against the bearing block.
Position the top plate so that the edge does not rub the side plate and then tighten the two bolts on this end.



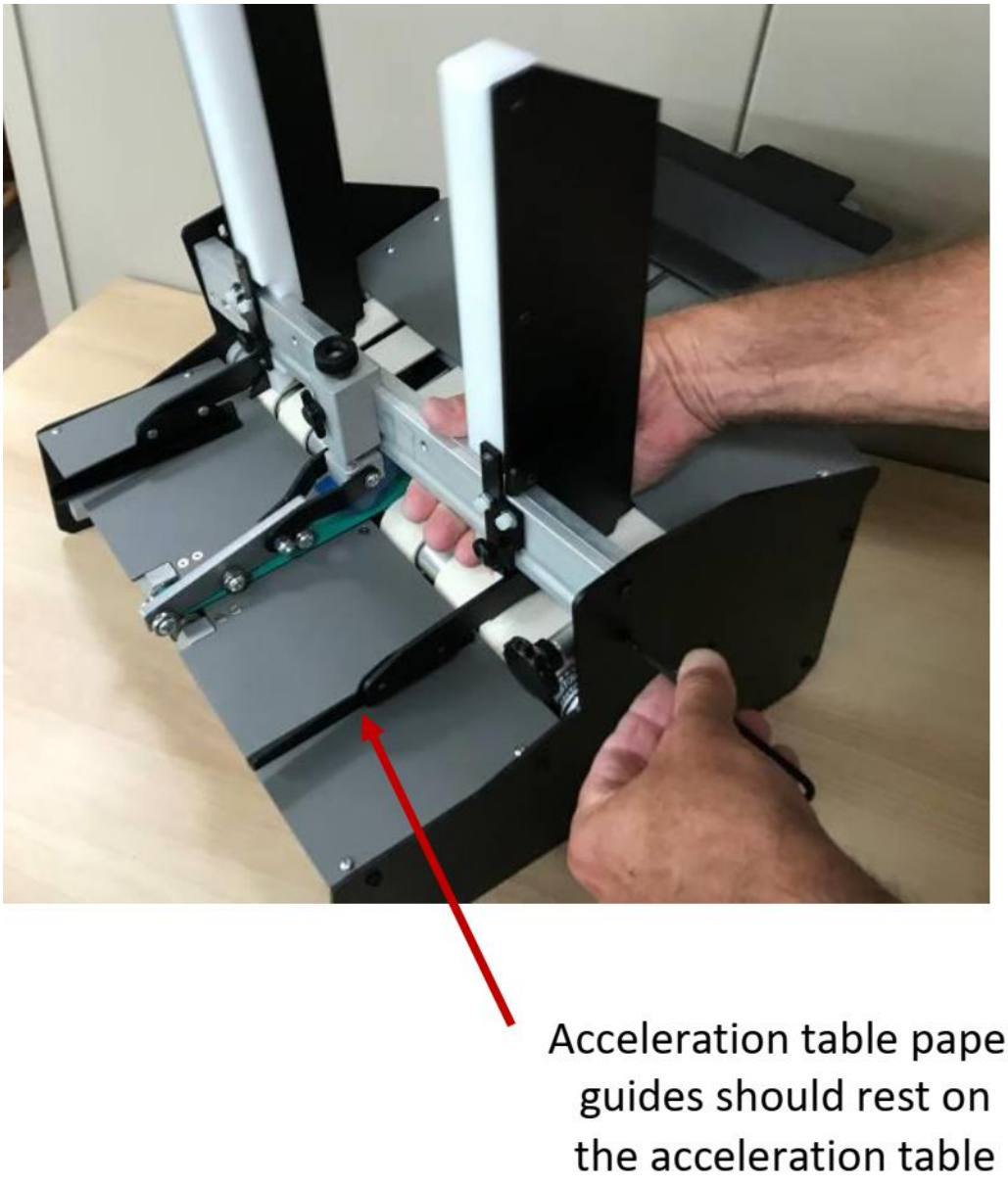
Step 40. On the opposite end of the top plate, press the top plate support outward while pushing the top plate in the opposite direction. (minimizes side to side play in top plate) While maintaining this position, tighten the two bolts.

Step 41. Place the bridge into position between the side plates. (moving it in from the exit end will minimize the chance of binding)

Step 42. Using the 1/8” allen wrench, attach the bridge to the side plates with the black button head screws removed in Step 2. DO NOT tighten any of the screws yet.



Step 43. With the bridge screws loose, pivot the top of the bridge towards the exit end of the feeder until the acceleration table paper guides are resting on the acceleration table. Then tighten the bridge screws.



Test the movement of the paper guides using the paper guide adjustment knob. If they drag on the acceleration table causing a bind, loosen the bridge screws and rotate the bridge to alleviate the drag.

6. Vacuum Conveyor

6a. General Use

Controls:

Emergency Stop – Pushing this button will stop all functions of the conveyor. Push this if the unit needs to be turned of quickly.

Feed Speed – This controls the media feed speed of the feeder. You should typically set this to give you approximately 1 inch cap between sheets.

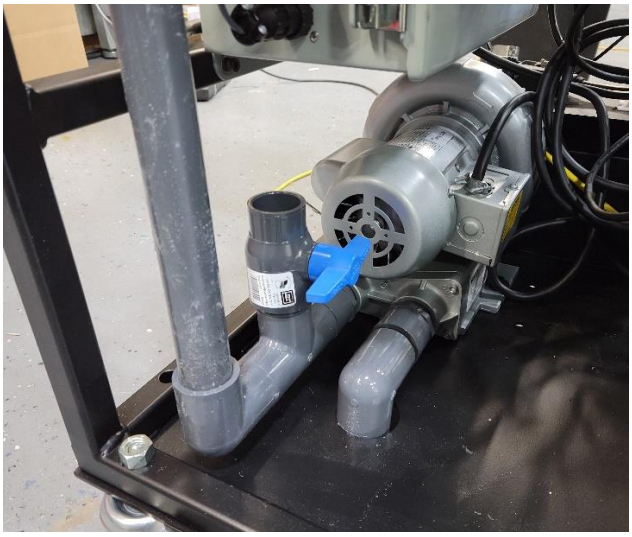
Vacuum – Turns the vacuum on or off.

Feed Auto/Manual – When set to "Auto" the feeder will only start feeding stock when the printhead sends the signal to print. When set to "Manual" The feeder will feed as long as the power switch is on.

Belt Speed –This is the speed of the vacuum belt. A setting of 1=6ips, 2=12ips, 3=18ips.

Belt Stop/Start – These buttons will stop and start the belt. You will have to turn on the belt with the start button to begin printing.

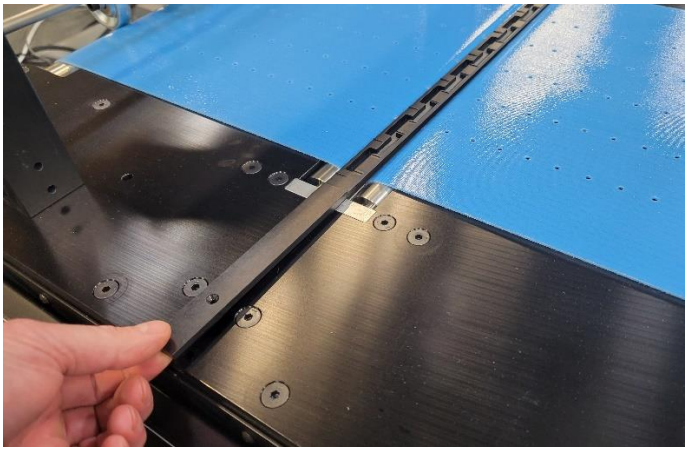
Adjusting the vacuum level – The level of vacuum can be adjusted. Normally full vacuum will work best but if a lower vacuum is needed, open the blue handled valve (counter clockwise) next to the vacuum pump.

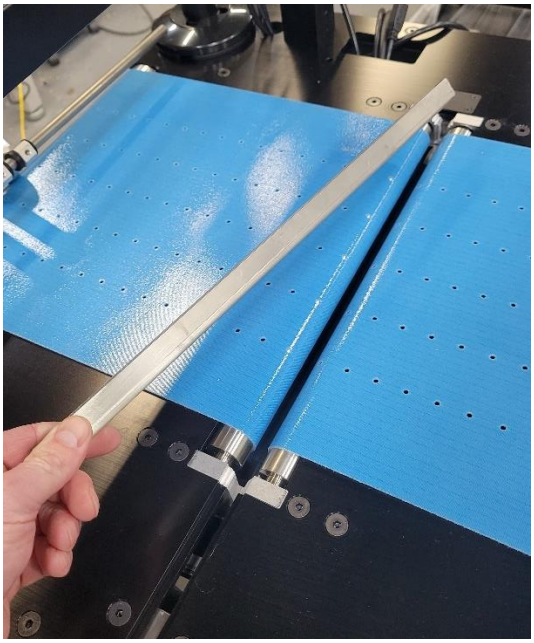


6b. Replacing the Conveyor Belt on an iJetColor Pro 1175P

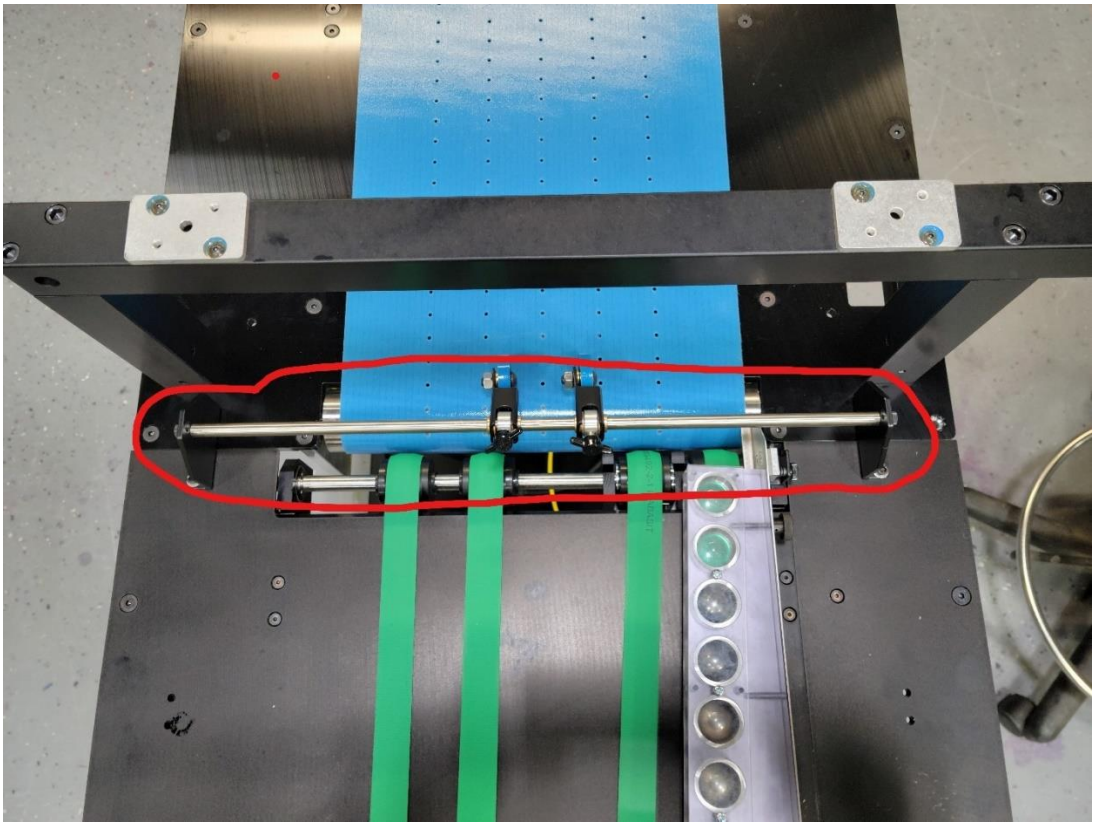
The main belt on the vacuum conveyor should last several years, however, at some point it may need replacement. Replacement of this belt can be time consuming and difficult for the novice. Please read through these instructions completely to make sure you will be able to complete the process. It is recommended that two people do this process.

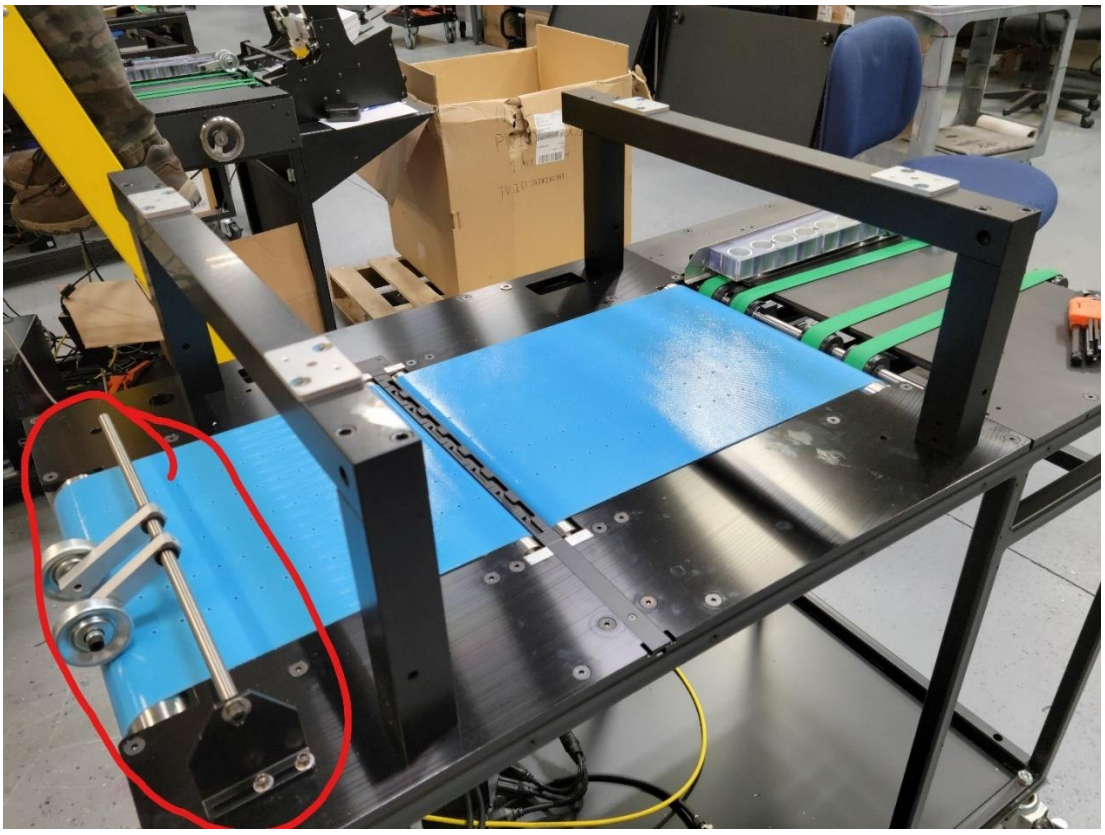
1. Several things first need to be removed from the tabletop so the belt may be removed.
    a. Remove the Printhead (refer to section “Printhead Replacement” for instructions on this step.
    b. Remove the front and back base panels.
    c. Remove the Monitor arms and shaft.
    d. Remove print platen and waste ink tray.





e. Remove the hold down strip and roller arms.

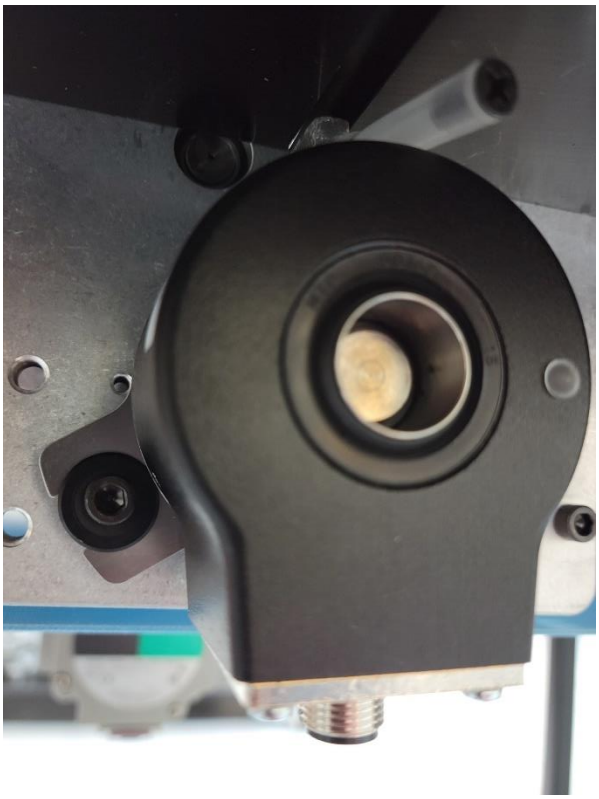




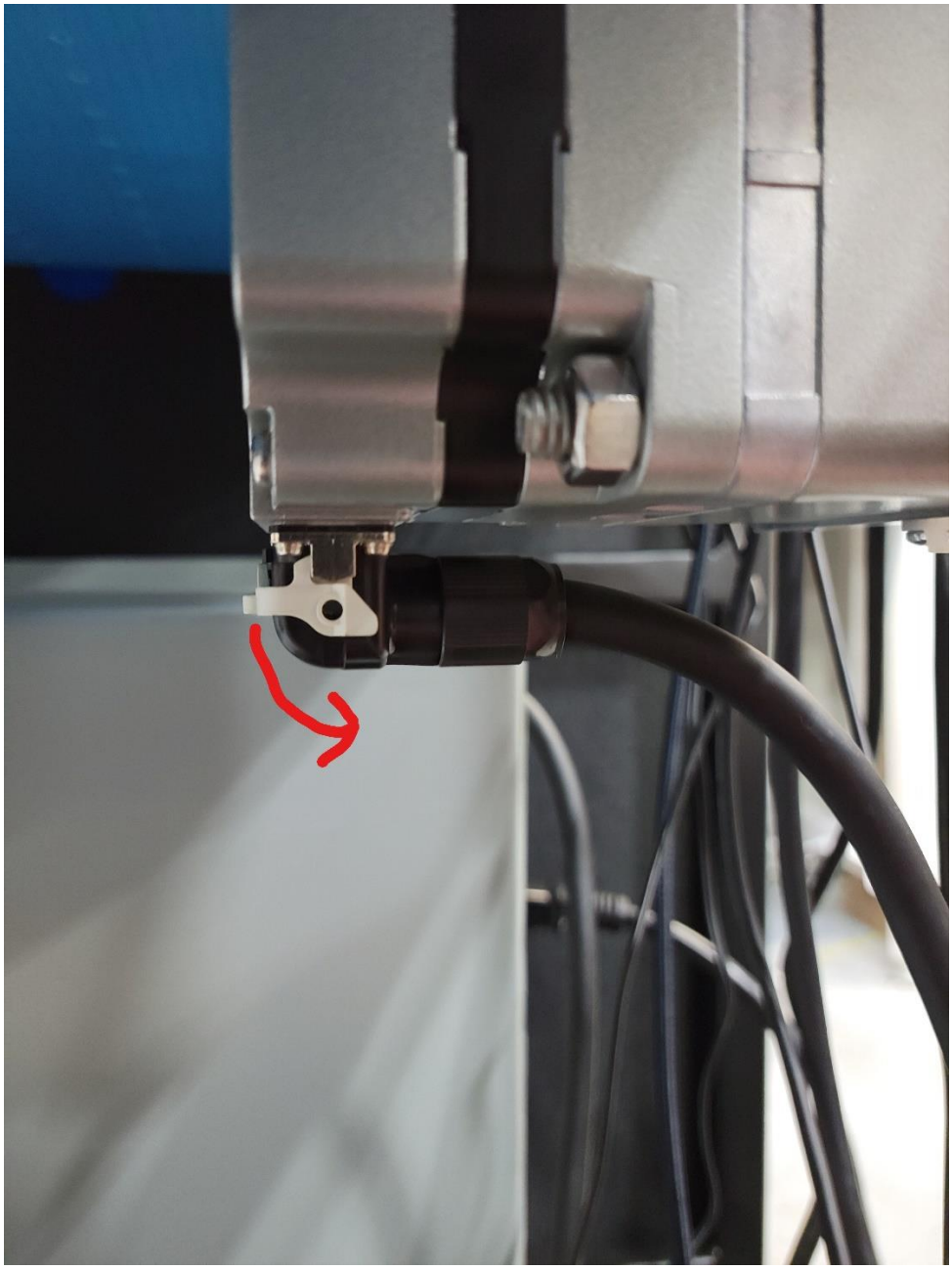
f. Remove the printhead mounting brackets by removing screws located on the bottom side of the table.

g. Disconnect the vacuum connection by loosening the rubber coupling. You may need to tap the tubing loose with a rubber hammer.

h. Disconnect encoder cable and remove the encoder.

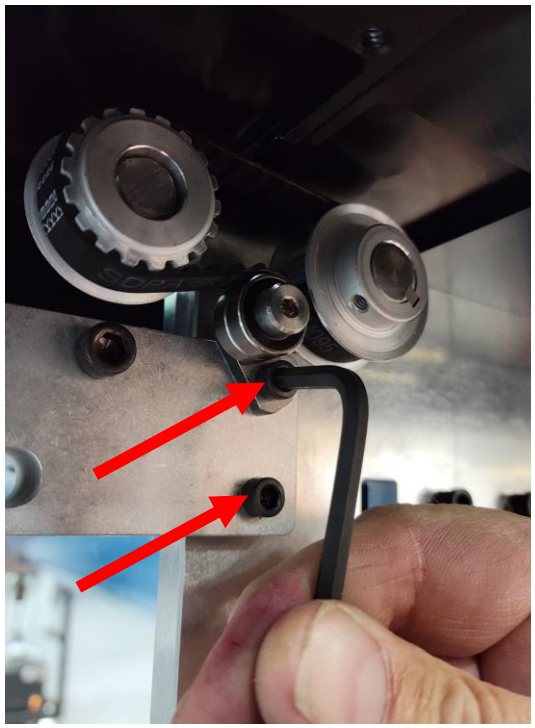


i. Disconnect the motor cable

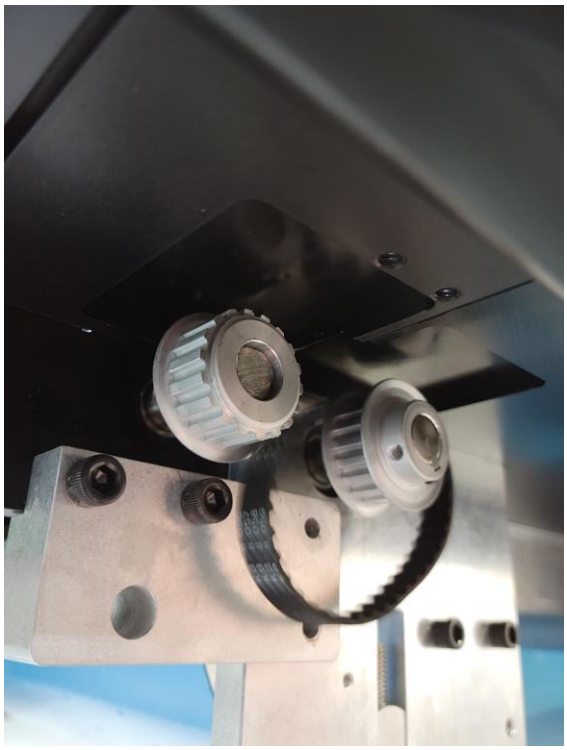


j. Remove alignment table belt and disconnect coupling.

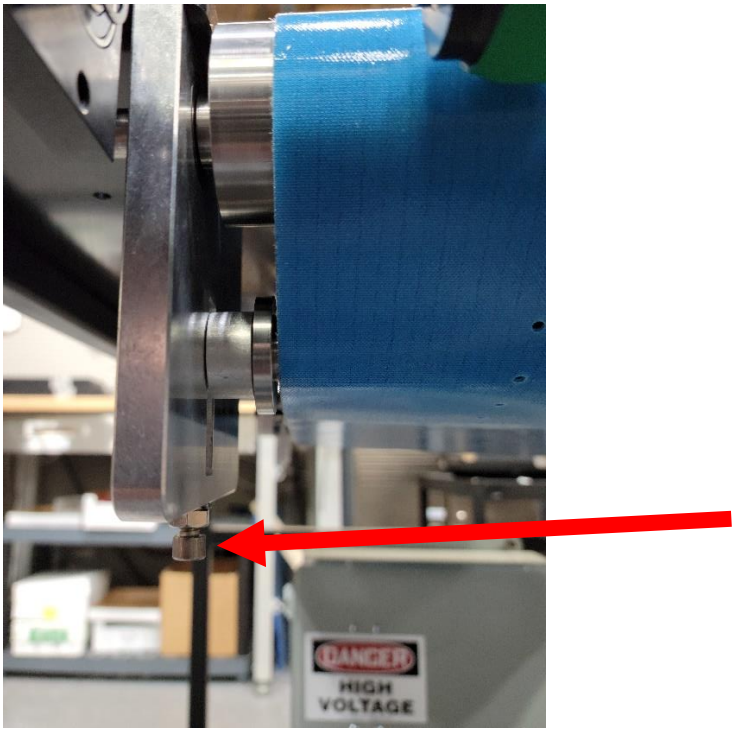
Remove two screws



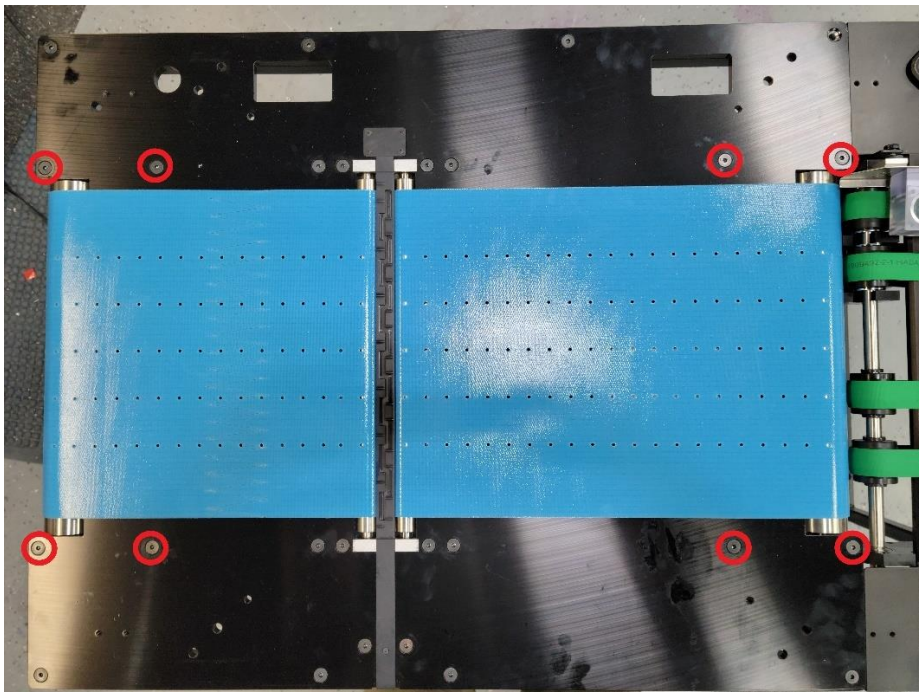
Slide Belt off of pulley



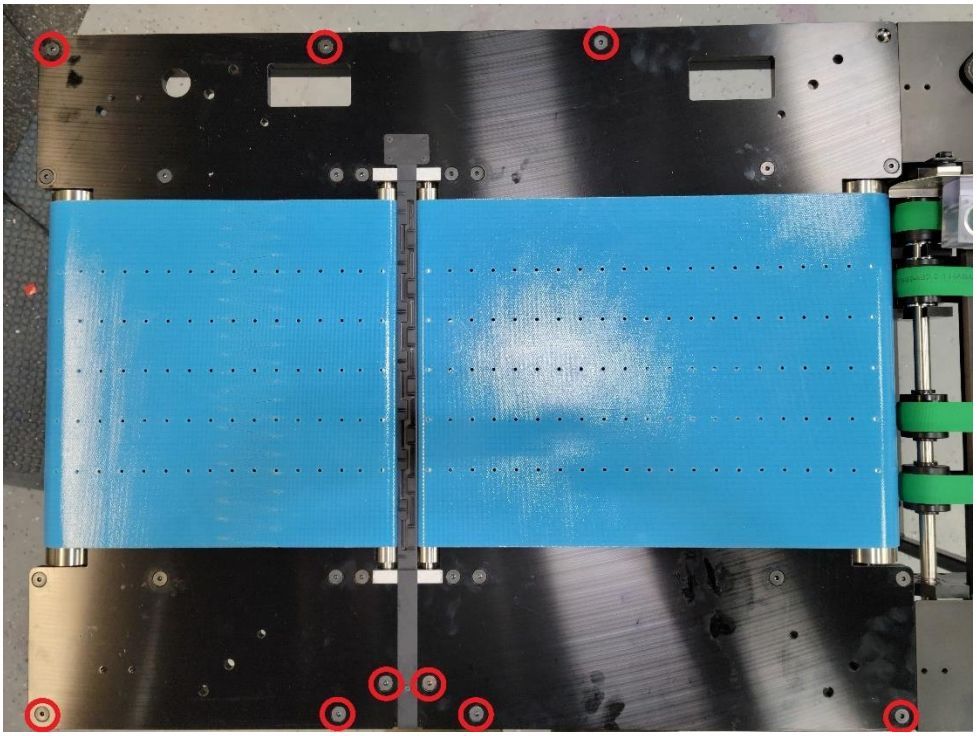
2. Loosen the belt tension by turning the four tensioner screws counter-clockwise several turns.



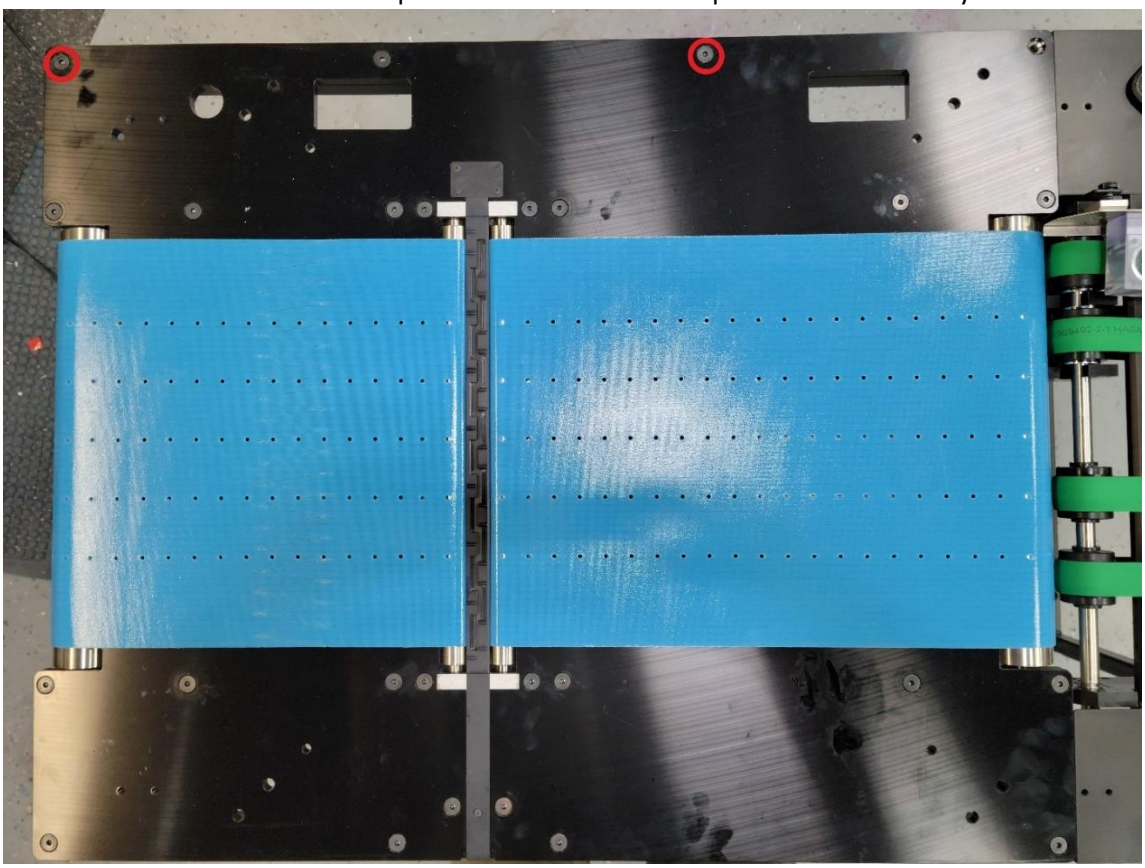
3. Remove the screws holding the entry and exit roller assemblies. Be careful not to let the roller assembly drop and be damaged. Remove the roller assembly and set aside.



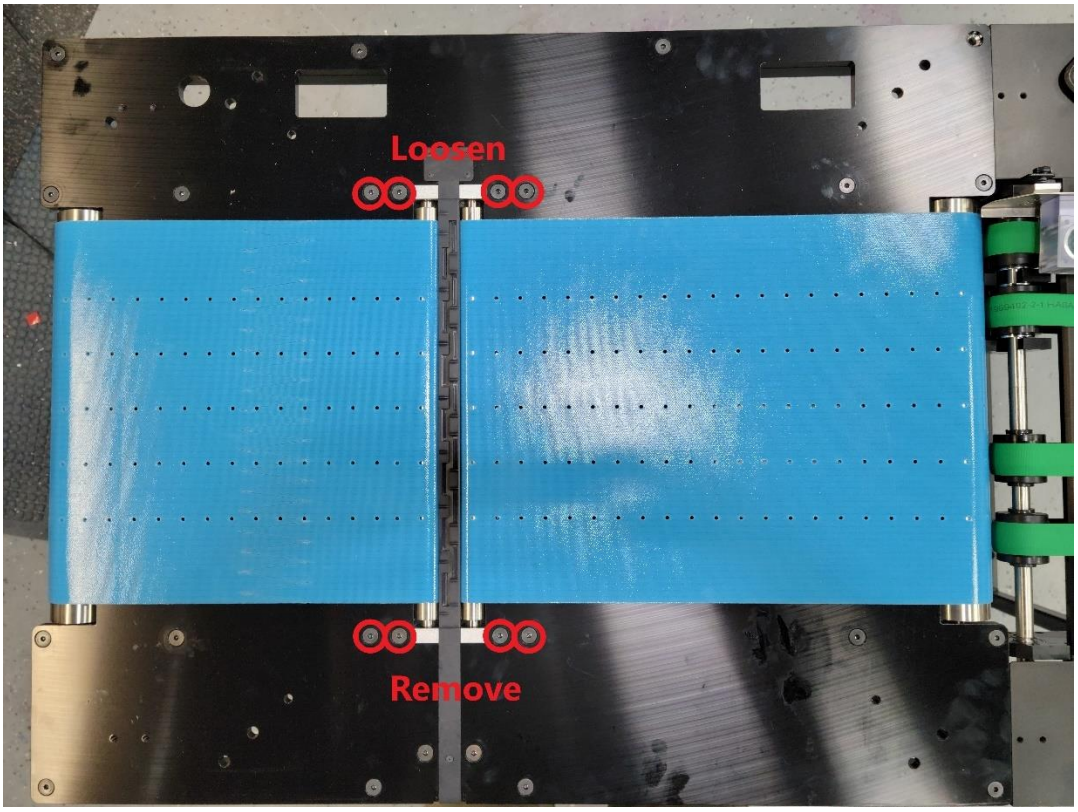
4. Remove the screws holding the tabletop to the frame.



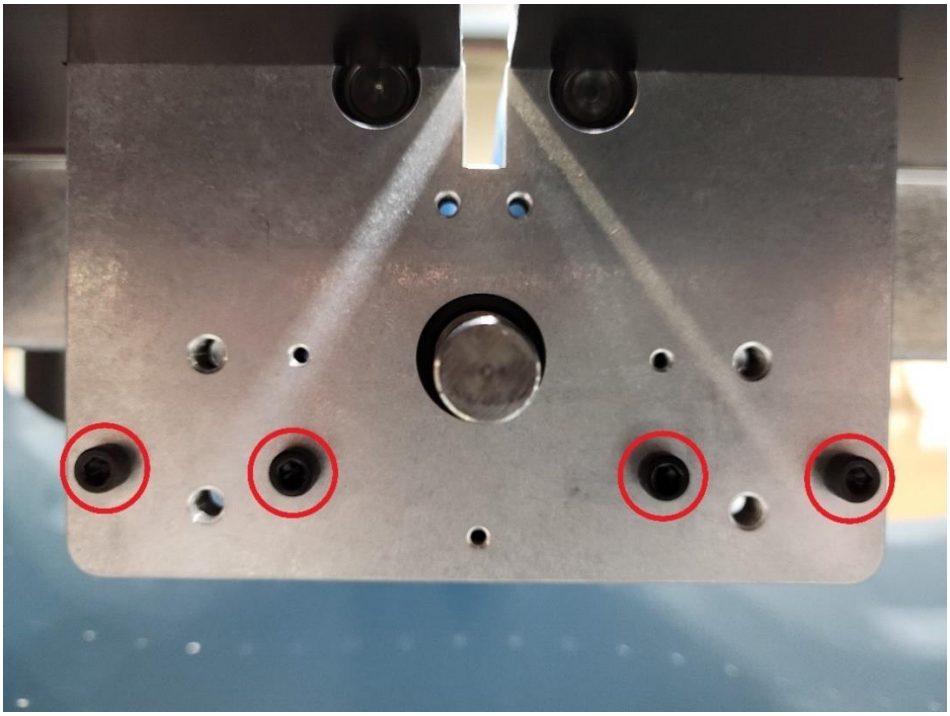
5. To protect the table top from accidentally falling off of the frame it is advised to pit two screws back into two holes on the non-operator side of the tabletop. Screw these in only two turns.

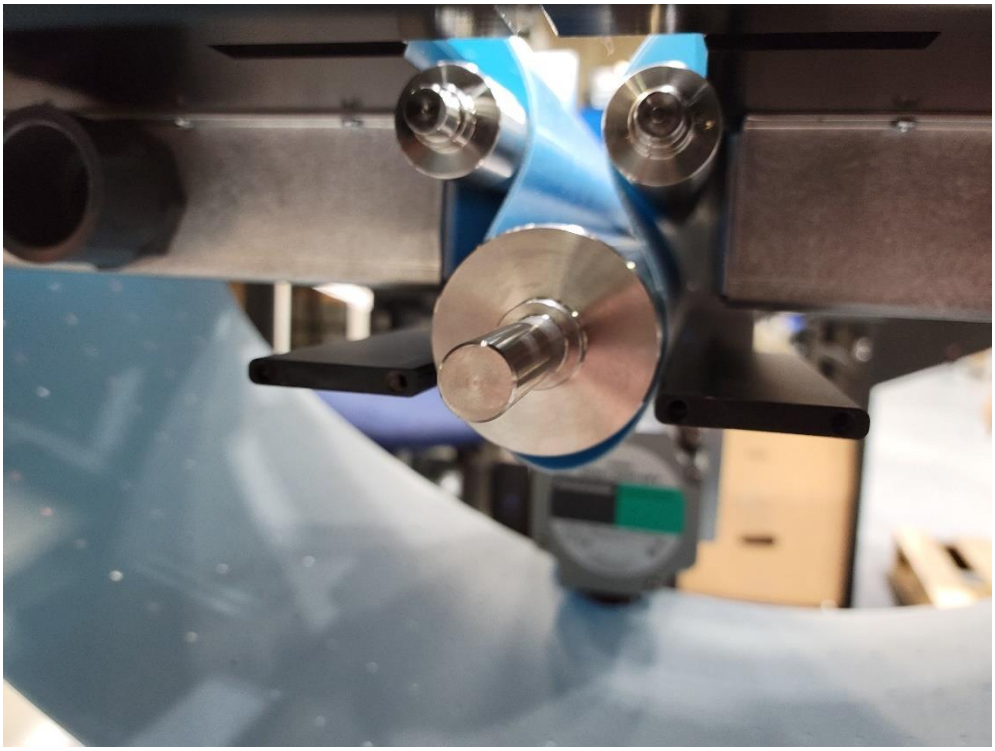


6. Remove the four operator side screws holding in the middle roller assembly then loosen the non-operator side four screws.

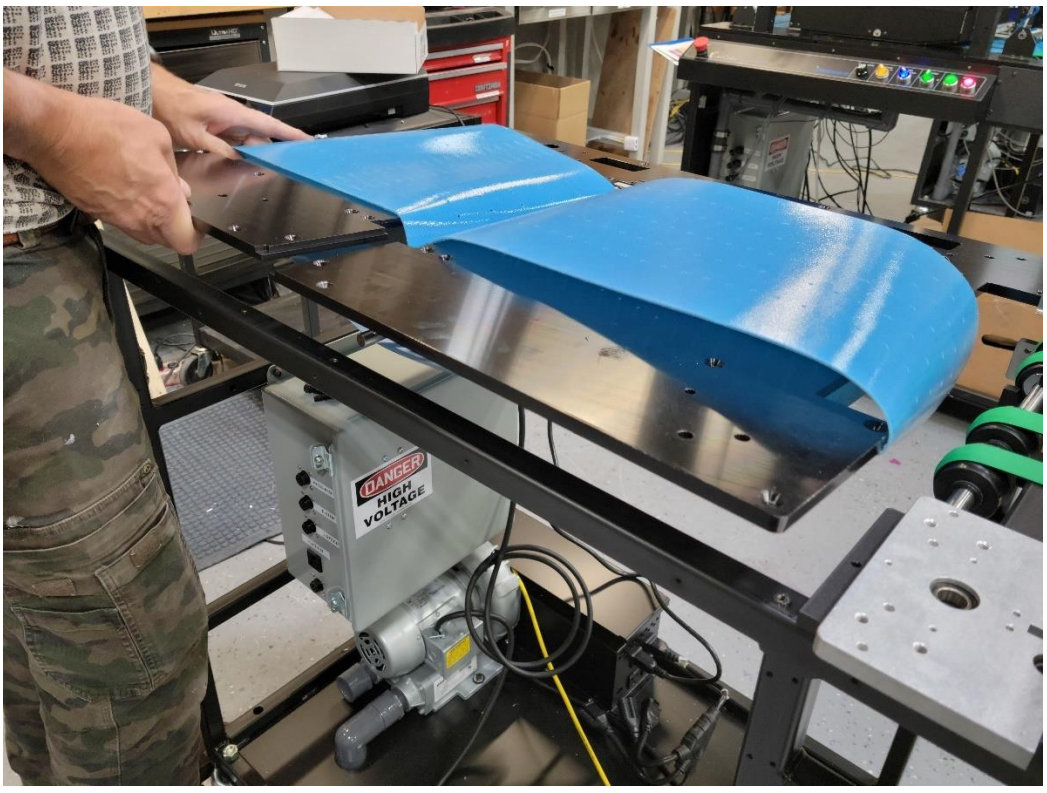


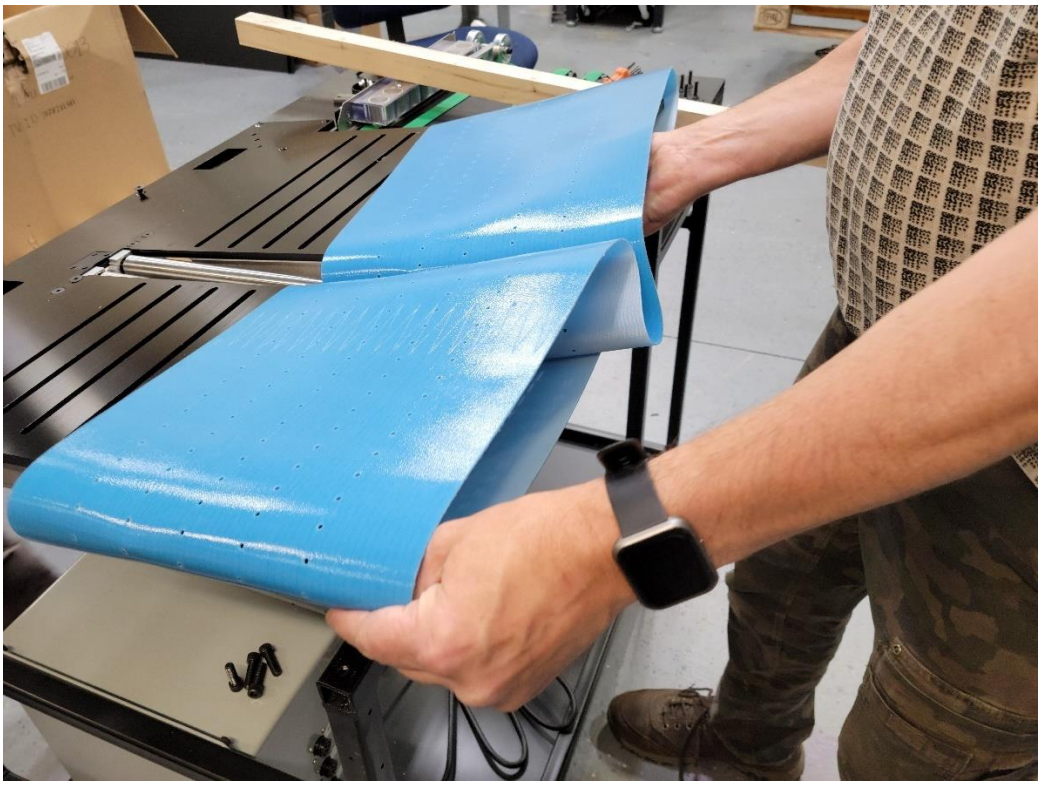
7. Remove the screws from the operator side of the middle drive bearing block then remove the operator side bearing block from the middle roller assembly.



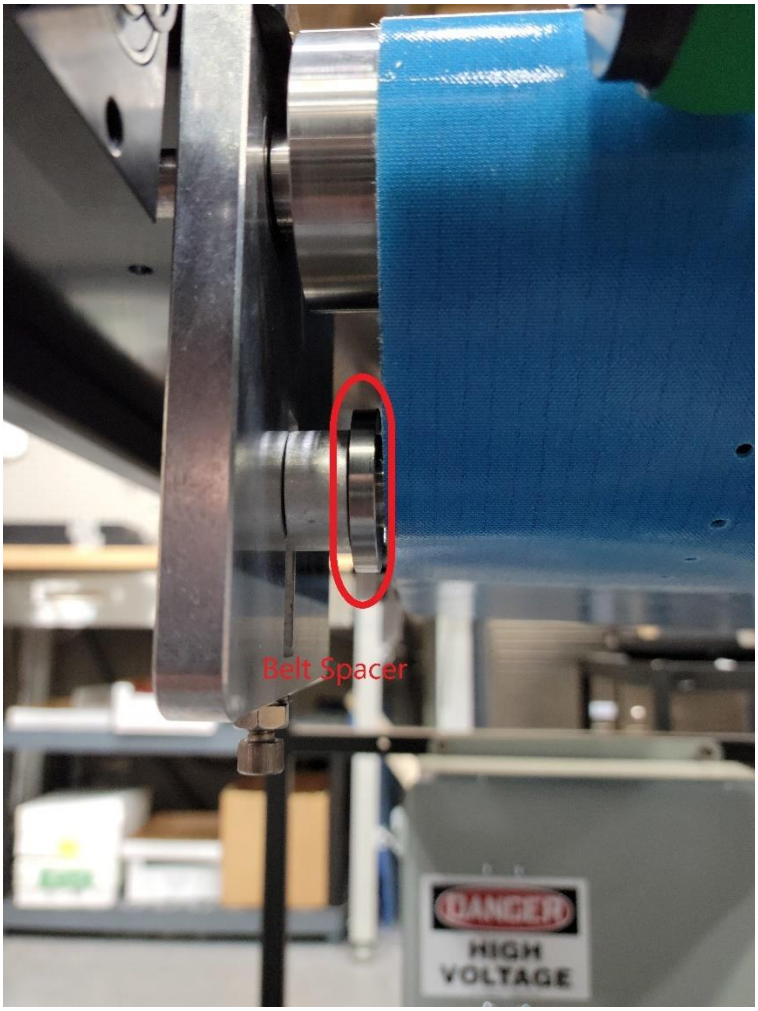


8. With two people, one person lifts up the operator side of the tabletop. The second person will remove the belt.





9. Install new belt making sure that the belt spacer is positioned on the sides of the belt.



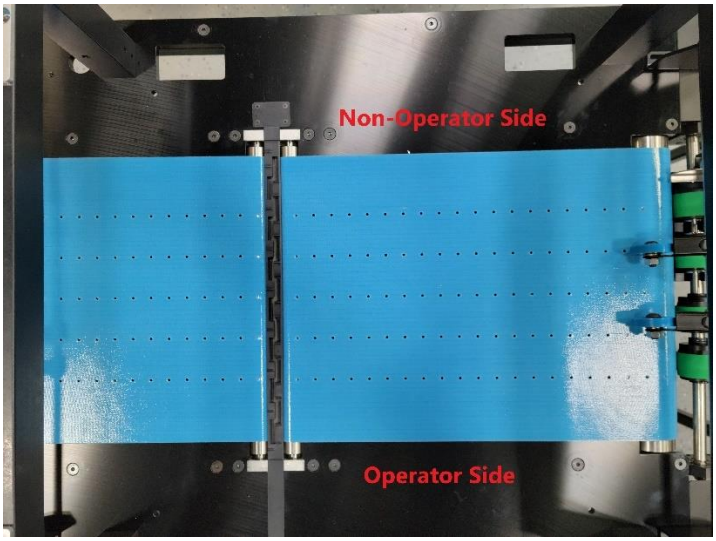
10. Reverse steps for re-assembly.
11.
12. Re-tension belts and adjust tracking as needed.

Vacuum Belt Routing

Belt Tracking

Occasionally, after the vacuum belt has been replaced, the belt will need to be tracked so that it will travel centered on the conveyor rollers. If the belt appears to be running to one side or the other of the rollers then the tracking should be adjusted.

1. Determine which direction the belt needs to move. Toward the operator side or the non-operator side of the conveyor.



2. There are four belt tension adjustment screws on the unit. You will need to remove the front covers of the base to access these screws.

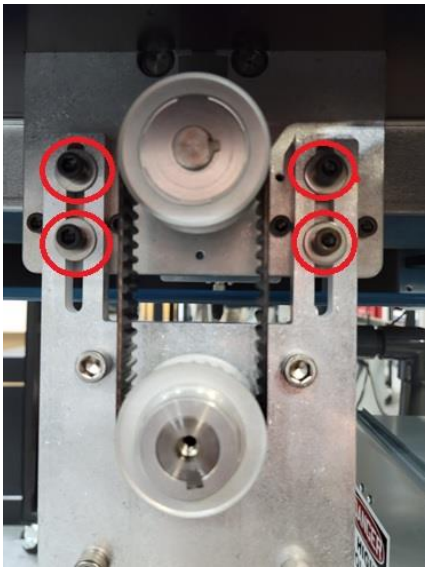
3. To move the belt **towards the operator side**, tighten (clockwise) the two screws on the non-operator side.
4. To move the belt **towards the non-operator side**, tighten (clockwise) the two screws on the operator side.
5. Small adjustments are recommended. Let belt run for a minute and see how centered it is running. Make more adjustments, as necessary.

Replacing Drive Belt

Normally the vacuum conveyor belt will last several years. If it does need replacement, it can be replaced easily.

1. Remove back panel.

2. Loosen the four allen head screws to loosen the tension on the belt.



3. Remover the old belt.
4. Install the new belt on both pulleys.
5. Pull the motor mount down to apply tension on the belt. While you are doing this tighten the four screws.

Vacuum Conveyor Drive Belt