Print Quality Optimizer

v2.3

Contents

Intent

The ink nozzles on the FI-1000 printhead are arranged into 14 dies. Each die can be moved along XY axes and the density of all 4 colors on each die can be adjusted. These settings can significantly increase or decrease print quality, so giving the operator total control over all these settings is important.

Installation

1. Copy “\\main\Common\Users\Joe\Code\Everest – Print Quality Optimizer\Current Build\Print Quality Optimizer” to “C:\iJetColor\”.
2. Open the folder when it has finished copying.
3. Create a shortcut to “PrintQualityOptimizer.exe” and put it in the Tools folder on the Desktop

Saving and Restoring Settings

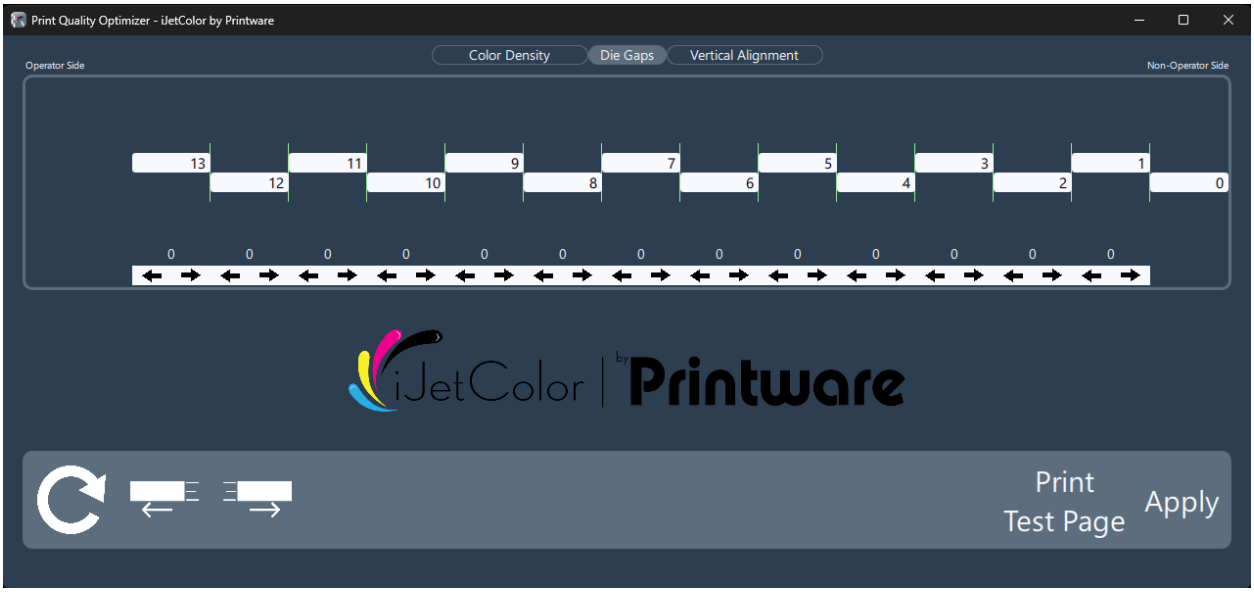
All settings are saved in a file named ‘dieValues’. This file is in the same folder as ‘PrintQualityOptimizer.exe’. In order to transfer settings saved in the factory to a customer, do the following:

1. Close the Print Quality Optimizer.
2. Copy ‘dieValues’ from the main drive to ‘C:\iJetColor\Print Quality Optimizer\’.
3. Open the Print Quality Optimizer.

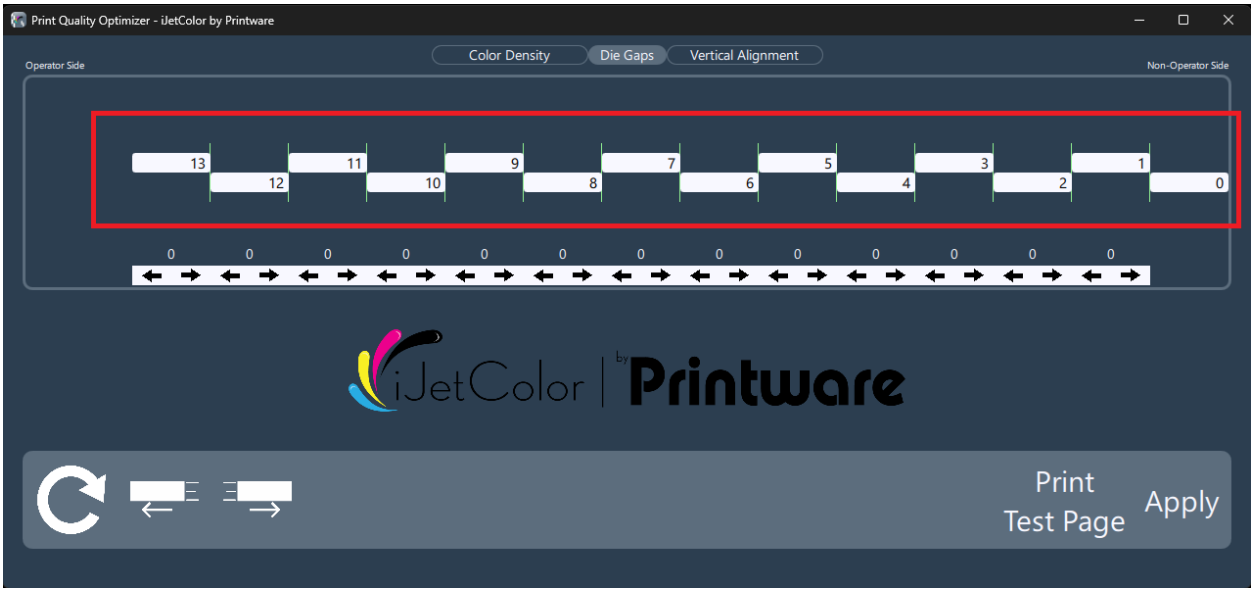
To save the settings from final test in the main drive, do the following:

1. Copy ‘C:\iJetColor\Print Quality Optimizer\dieValues’ to the calibration files folder on the main drive in ‘\\main\Common\HP Calibration Files\’.

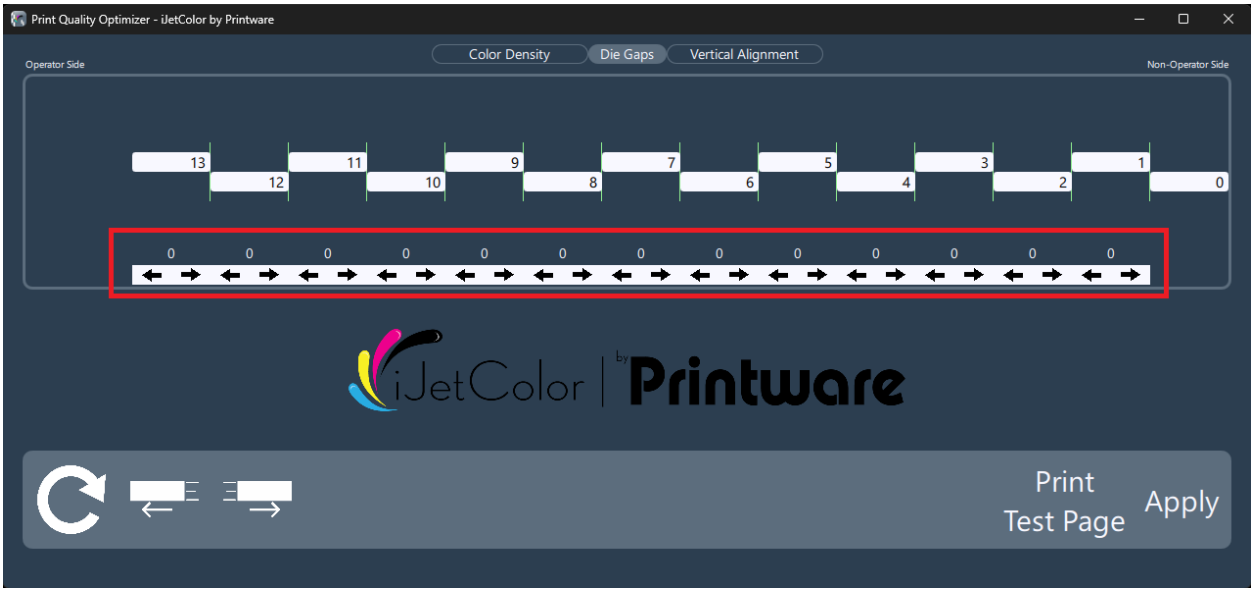
Application Overview



This is the default view of the application and appears when the application is opened.



The dies are physically arranged in a zigzag pattern on the printhead, so they are represented in the same zigzag pattern onscreen inside the red rectangle. The dies are numbered 0 to 13 with die 0 being the furthest on the non-operator side and 13 furthest on the operator side.

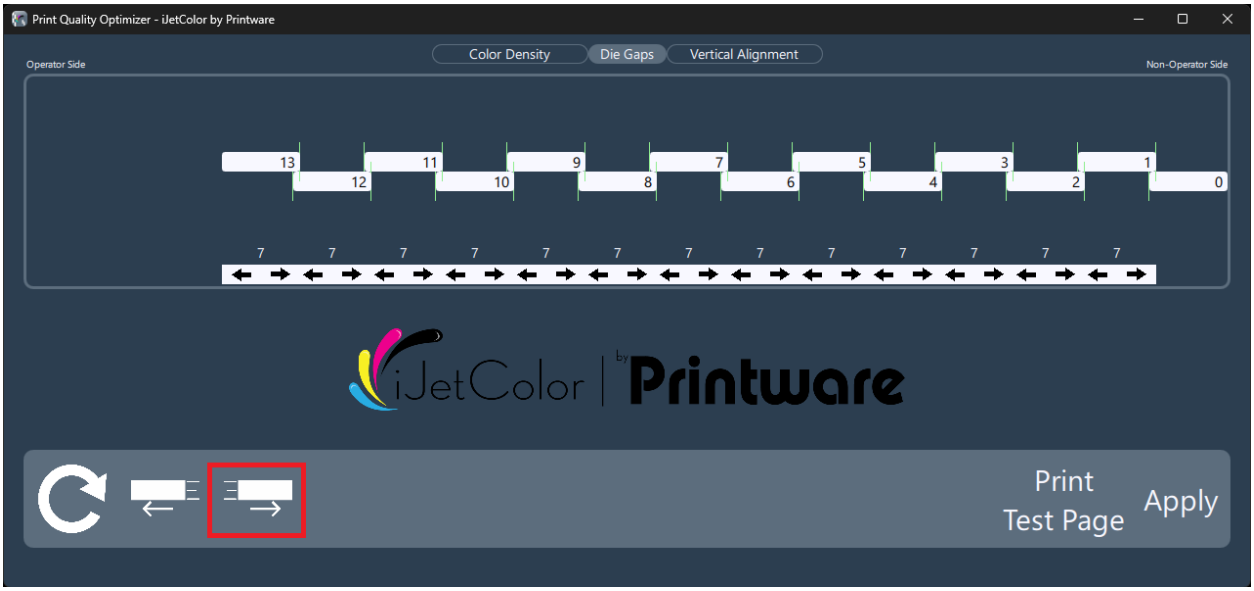


Each die in the die gaps menu, except die 0, can be moved to the left or right. This movement occurs with respect to the die immediately to the right of it. For example, moving die 4 to the left will increase the gap between dies 3 and 4, while the gaps between all other dies remain the same. If you move one die several notches one direction, you will notice all the dies to the left of it move the same distance in the same direction.

Die 0 cannot be moved. It is assumed to be perfectly aligned from the factory. All other dies are moved relative to it.

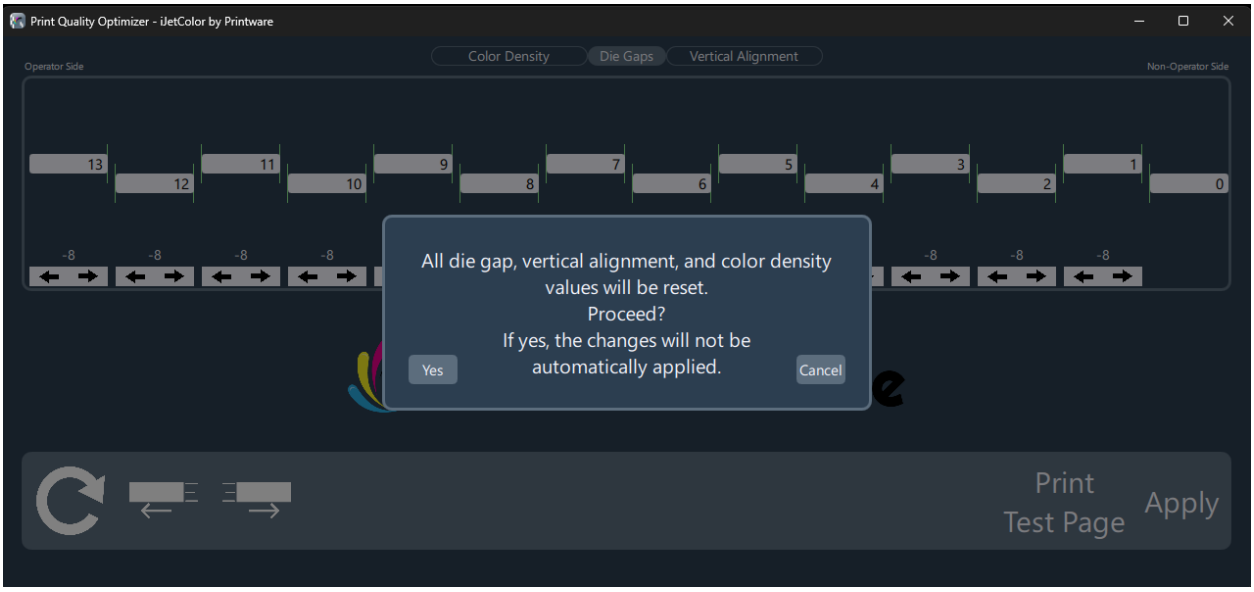
The buttons highlighted in the rectangle above will move the die immediately above to the right or to the left. Also notice the digits immediately above all these buttons. These digits represent the die gap. They are not a measurement, but a numerical representation. They are positive or negative. Positive numbers indicate that the die was moved to the right and will likely create an overlap. Negative numbers indicate that the die was moved to the left and will likely create a gap.

This button moves all dies, except die 0, to the left, thus creating gaps between all the dies. You will notice from the animation that die 13 moves closer to the operator side of the printer. This is what physically happens on the printhead. The resulting print may appear slightly wider than if all the dies were moved to the right.



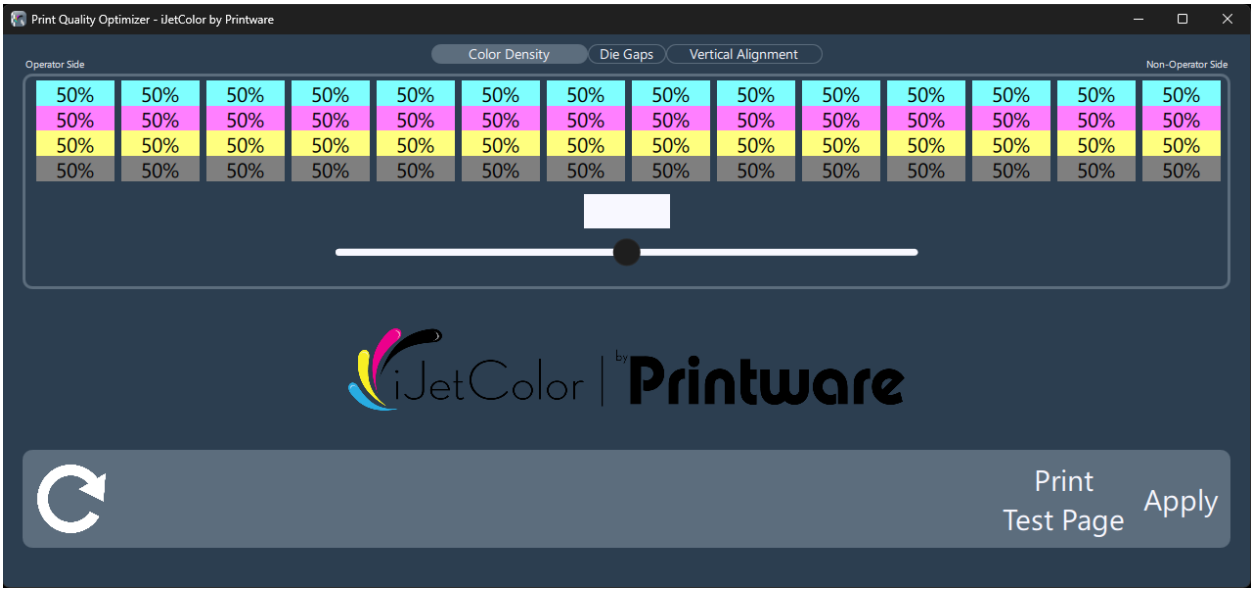
This button moves all dies, except die 0, to the right, thus creating gaps between all the dies. The resulting print, then, may appear slightly narrower than if all the dies were moved to the left.

The highlighted reset button will reset die gap and vertical alignment values to 0 and color density values to 50% for all colors and all dies.

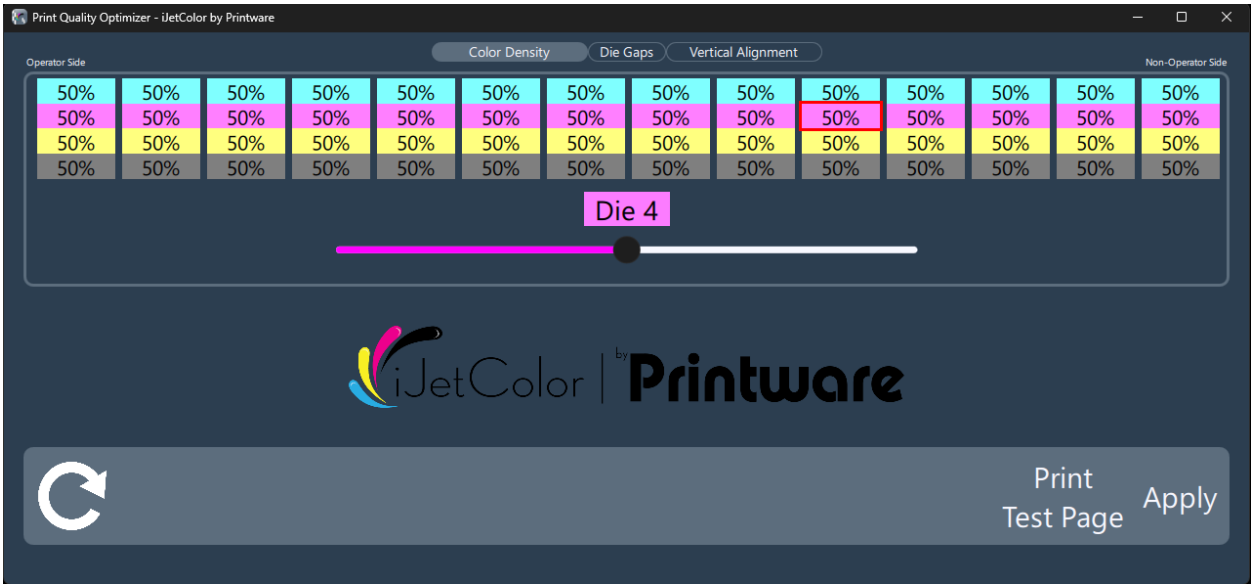


After clicking the reset button, the above popup will appear. This action cannot be undone. However, the changes will not be recognized by the printhead until the Apply button in the bottom right corner of the window is clicked. If the Cancel button inside the popup is clicked, no values will be changed.

To navigate to the color density and vertical alignment menus, select one of the highlighted tabs.



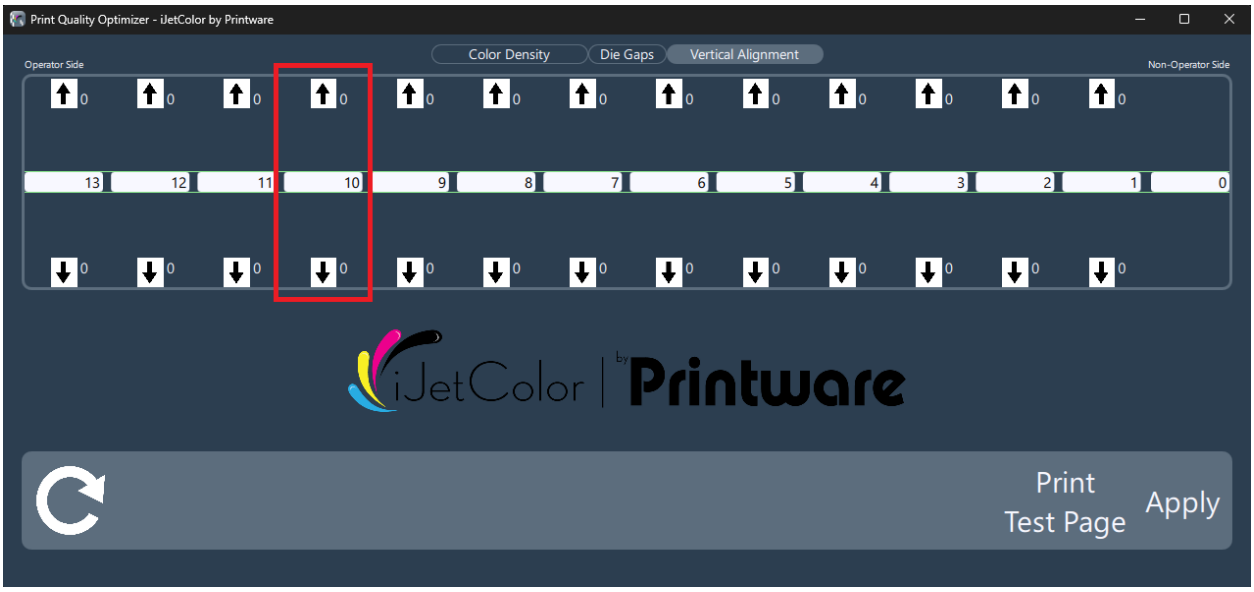
This is the default view of the color density menu. All density values default to 50%.



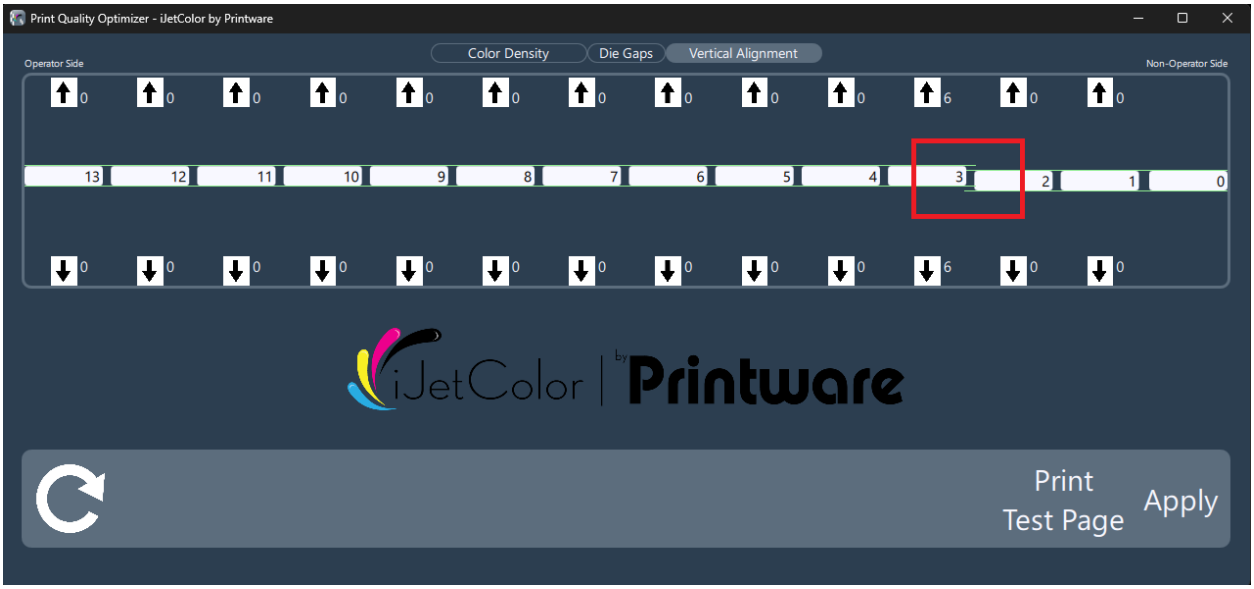
In the above image, magenta on die 4 has been selected for adjustment. There is a red rectangle around the color that has been selected. Moving the slider to the right will make the color more dense or darker (100%), and moving it to the left will make it less dense or lighter (0%). When a color is selected for adjustment, it will be highlighted with a red rectangle. The color of the slider will change to match the selected color.

This is the default view of the vertical alignment menu.

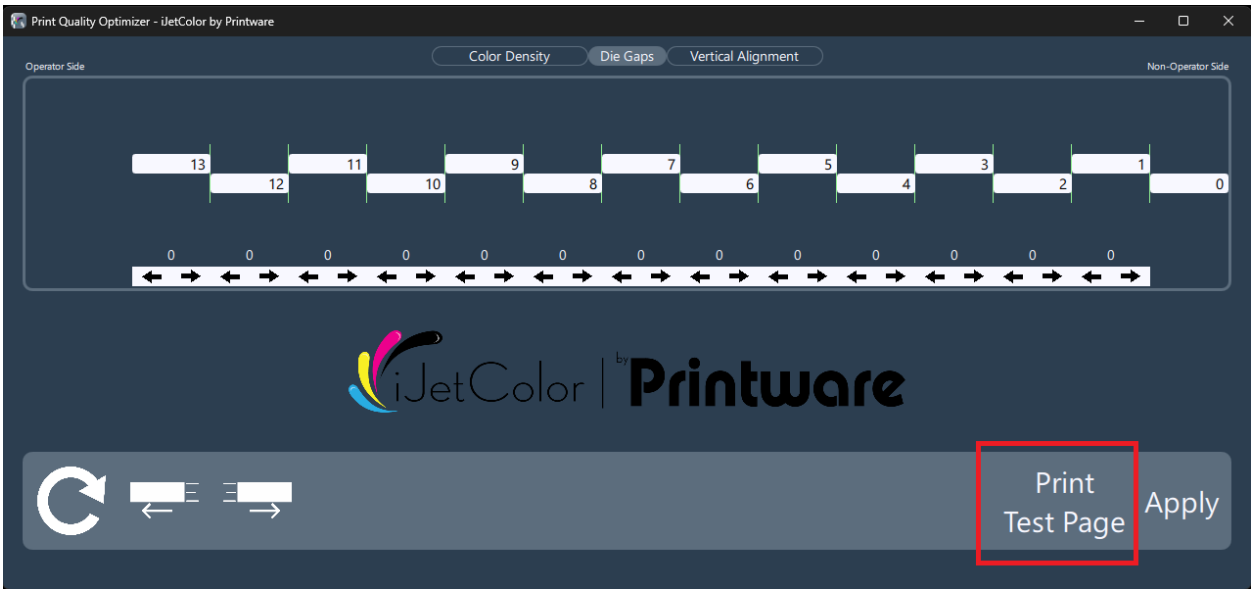
The buttons to move each individual die are highlighted in the red rectangles above. Die 0 is assumed to be perfectly aligned from the factory, so all dies are adjusted relative to it. Notice the small digits to the right of each button. These digits are a visual representation of the current alignment setting.



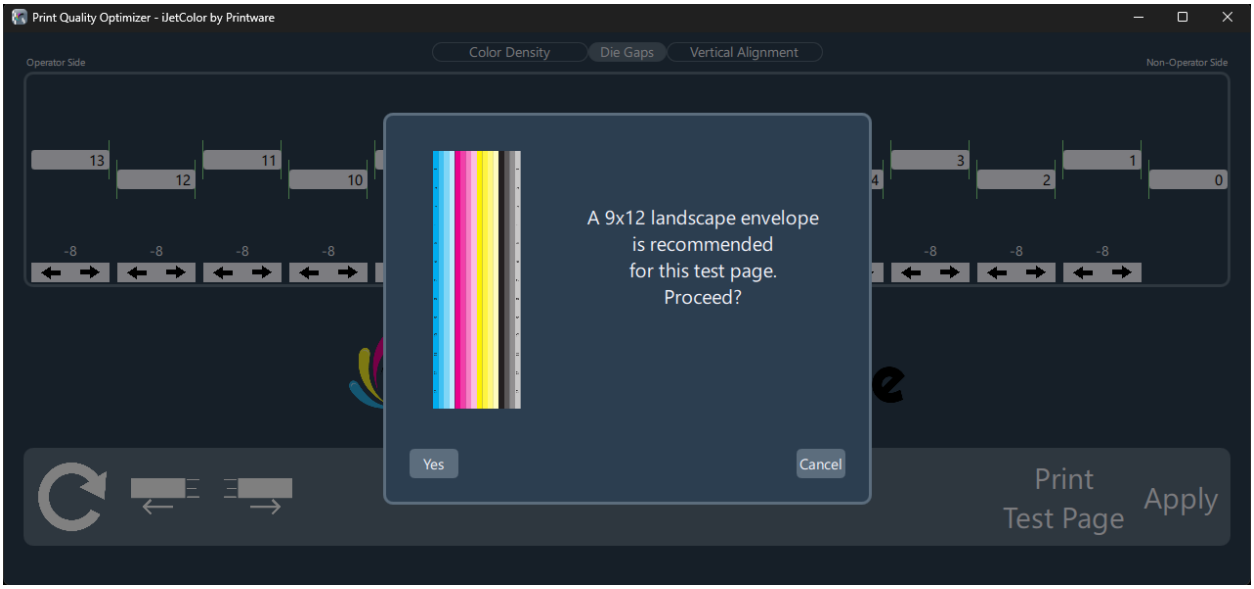
The controls for die 10 vertical alignment are highlighted in the red rectangle above. The button on the bottom will move the die down (toward the trailing edge of the media) and the button on the top will move the die up (toward the lead edge of the media). All the dies to the left of it will move the same distance in the same direction. The numbers immediately to the right of both buttons are the same and both represent the vertical alignment for that die.



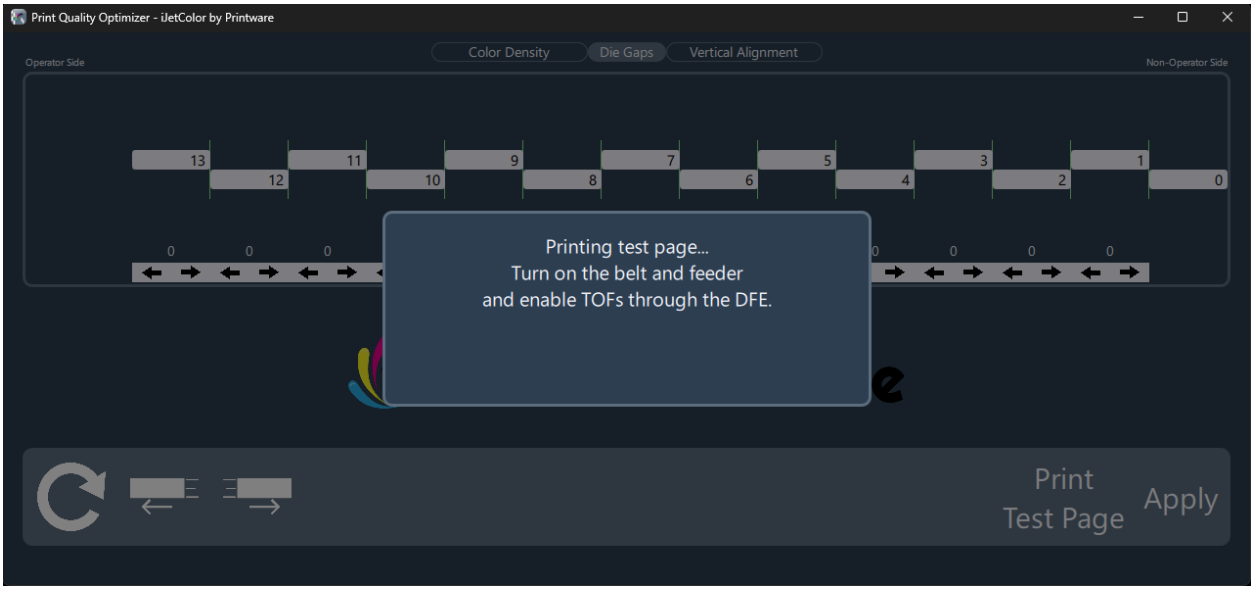
In the image above, die 3 has been moved up as far as it can be moved. Notice the offset value is 6 for die 3, but even though all the dies to the left of die 3 have also moved, their values are still 0 because the offset value is relative to the die to its right.



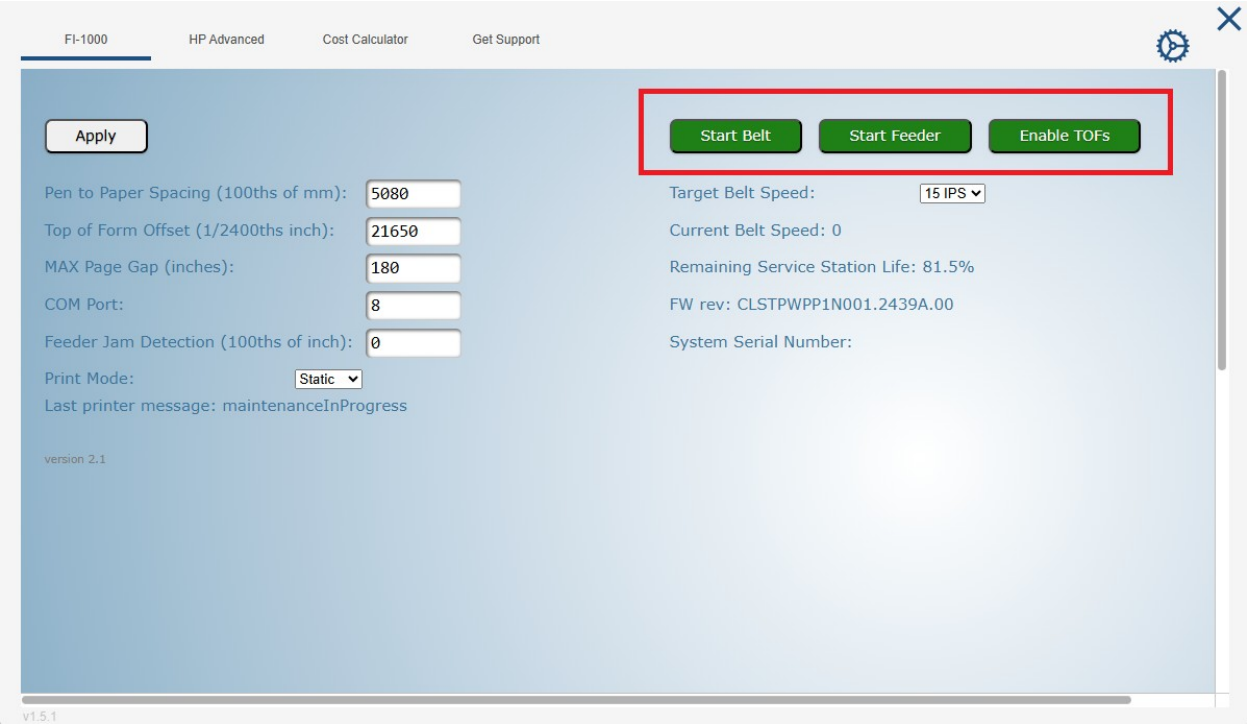
The highlighted button will send a job to the printer. This job has color bars for each color on each die to easily identify any necessary changes.



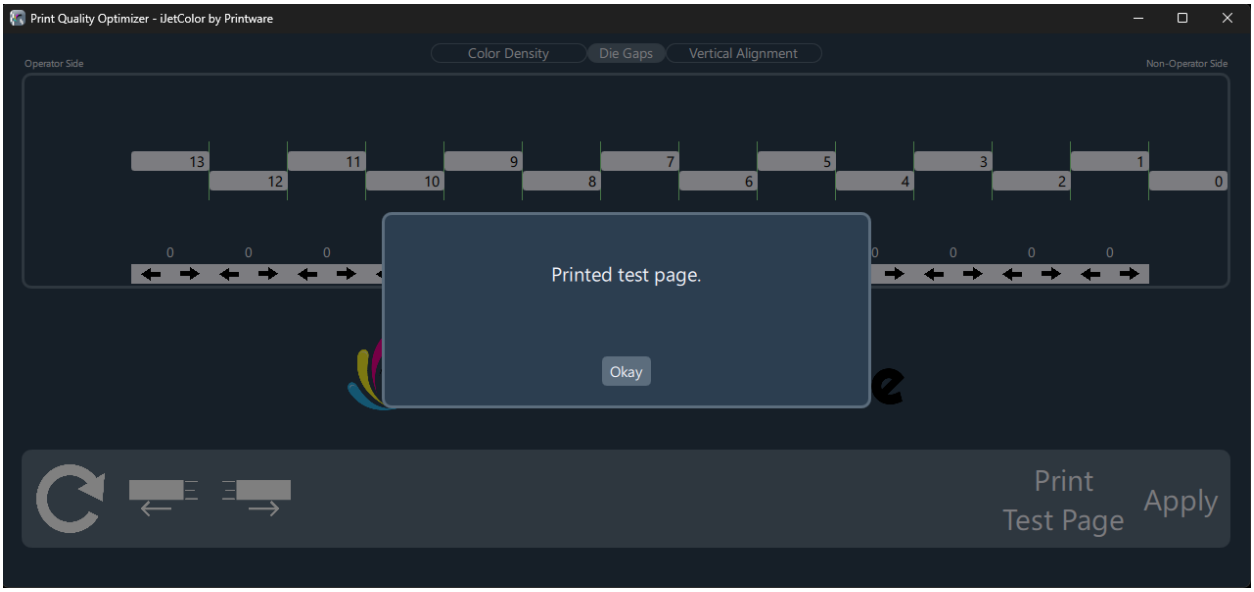
The above popup appears after clicking the print test page button. As stated, this job is designed to run on a 9x12 envelope in the landscape orientation.



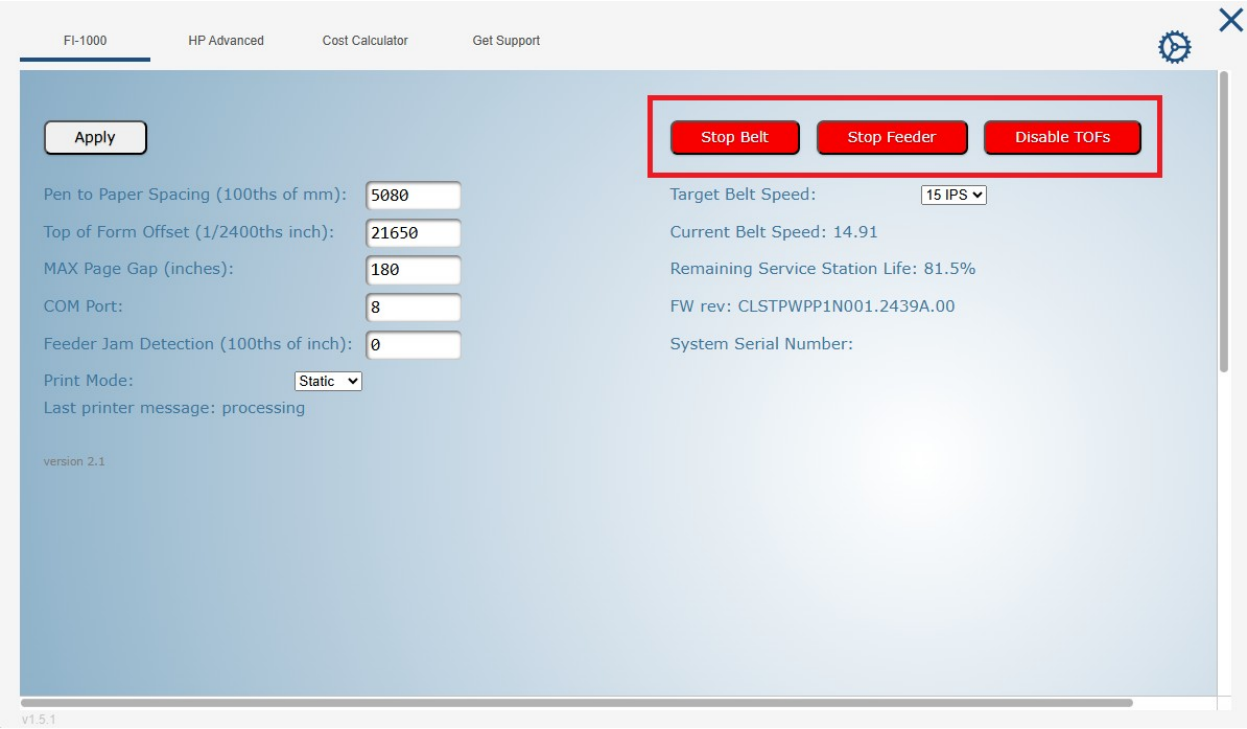
After the job has been sent to the printhead, this popup appears, instructing the operator to turn on the belt and feeder and enable TOFs. These operations are not done automatically.



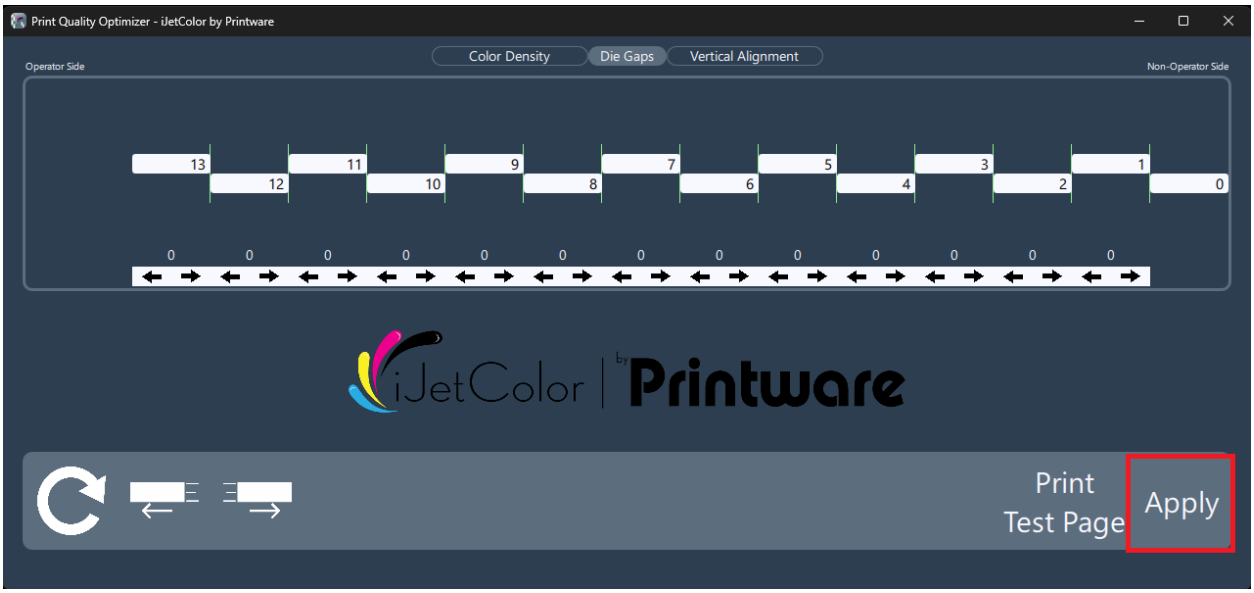
Start the belt, then feeder, then enable TOFs through the DFE. If feeding media by hand, there is no need to turn on the feeder.



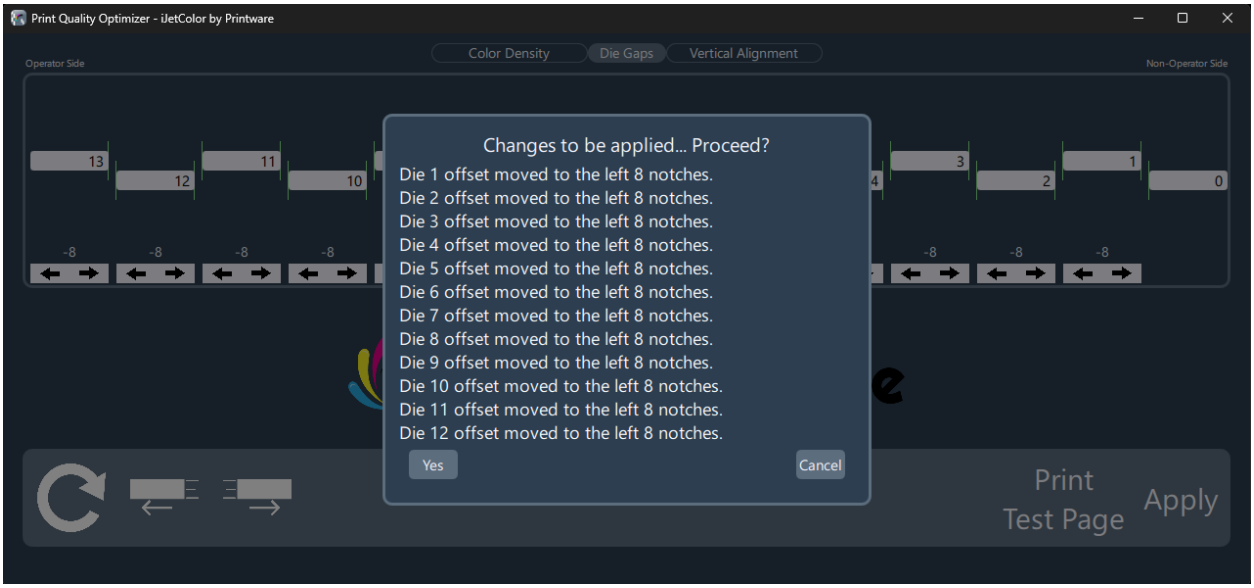
The above text appears when the job has finished.



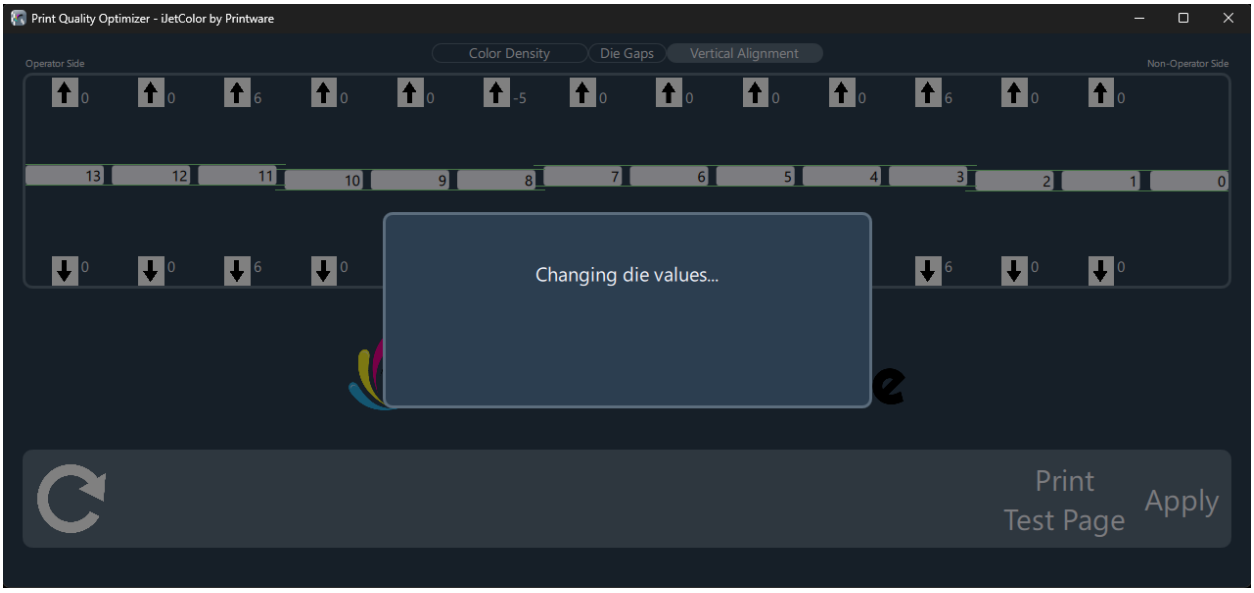
Now stop the belt and feeder and disable TOFs.



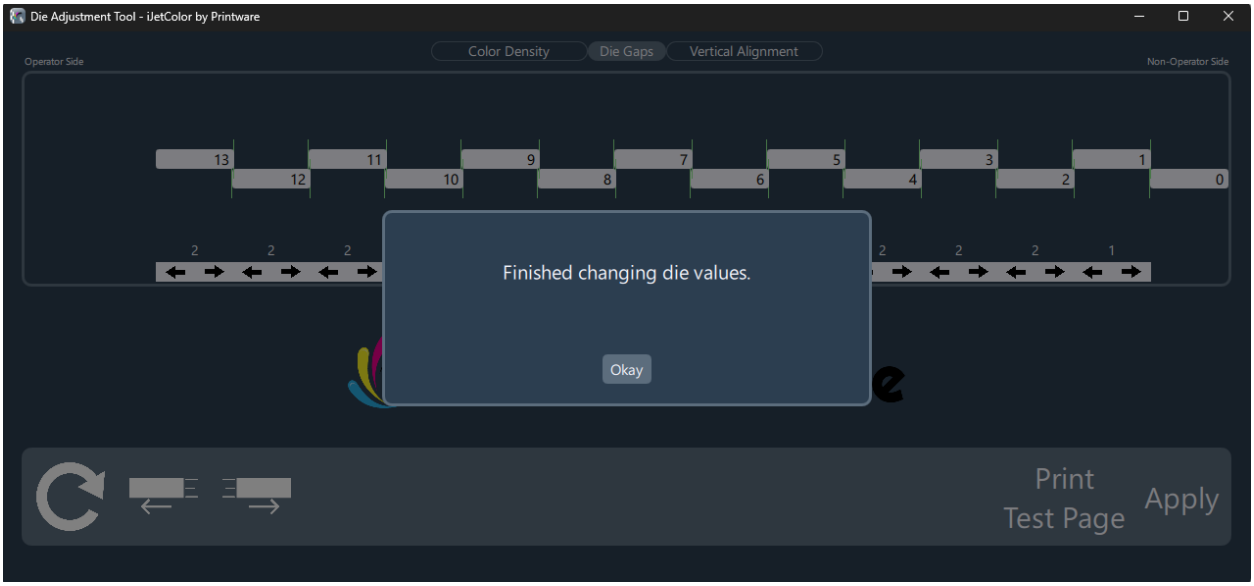
The highlighted button will display a list of all the changes to be applied to the printhead. The changes will include all the visible values for die gaps, vertical alignment, and color density.



This is an example of a list of changes to be made. This list is scrollable. In this case, all the dies have been moved to the left.



After clicking yes, this popup appears. All the values that were previously set are now being sent and applied to the printhead.



The values will be changed in several seconds and this confirmation message will appear.

License Information