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## KeySetter Connect

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Version 2.0 for Navigator Server 5.0, November 2011  
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YOUR BUSINESS. OUR DRIVE.

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Version 2.0  
November 17, 2011

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## Installation and Reference Manual

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## Foreword

Thank you for purchasing this quality Xitron product.

KeySetter Connect works in conjunction with Navigator Server and its KeySetter plug-in to pre-set a press's ink ducts specifically for each job, reducing make-ready times and ink and paper wastage. The ducts are set via an electronic connection to the press console.

You do not need any special programming or technical skills to install and use KeySetter Connect; however it is a good idea to fully read through this documentation in order to understand the procedures involved for successful use of this product. This manual guides you through the installation procedure and explains how to optimize the system to achieve the most accurate initial duct settings.

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## Manual Overview

This manual refers to KeySetter Connect 2.0, for use with Navigator 5.0 and above.

**Press Operators** will find it helpful to read to Chapter 1, “Using KeySetter Connect to Send Duct Settings to the Press Console” and Chapter 2, “Other KeySetter Connect Features”. Also, be sure to have the KeySetter Connect Quick Reference Card to hand.

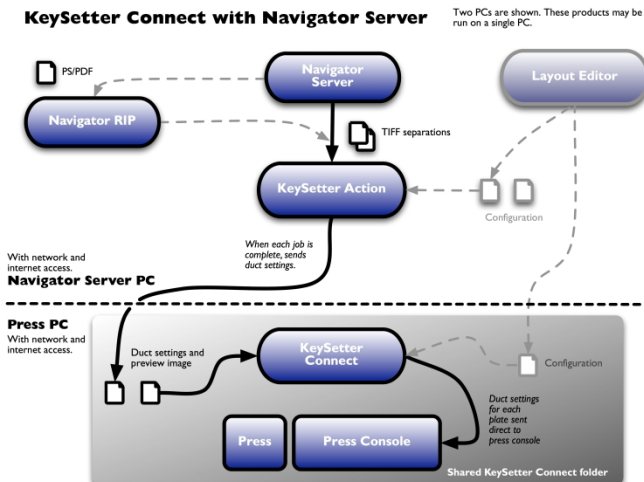
**Installation Engineers** should be familiar with the material in Chapters 1 and 2, and Chapter 3: “Optimizing KeySetter Connect”, and Chapter 4: “Installing and configuring KeySetter Connect”.

## Product Overview

KeySetter Connect integrates with the Navigator Server KeySetter Action, allowing duct setting predictions to be automatically calculated and sent to your press console for every plate. This reduces setup time and saves wasted materials for every job you run.

As illustrated in the diagram below, KeySetter Connect runs on a PC by the press console, and shows the press operator a queue of upcoming jobs, complete with preview image.

When running each job, the press operator simply selects the job and its paper type to send the duct key settings via an electronic connection into the press console.





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## Chapter 1: For the Press Operator

This chapter shows you how to use KeySetter Connect to send duct settings to the press console. It contains the following sections:

- 1.1, Launching KeySetter Connect.
- 1.2, Processing a job.
- 1.3, Setting the ductor value.
- 1.4, Viewing the preview and predicted color ink consumption.
- 1.5, Sending duct settings to a press.
- 1.6, A note about optimization curves.

Before you start using KeySetter Connect, please be aware that it calculates its prediction of the ideal duct settings for each color of each job via a correction curve which describes the behaviour of your duct keys.

There will be an initial period during which you can ‘train’ KeySetter Connect to know how your press behaves. This is known as the optimization phase.

**Because KeySetter Connect makes corrections purely to the duct key settings, via the correction curves, it is important to run all jobs for a particular paper type with the same ductor setting during the optimization phase. So it is important to adjust only the duct key settings and not the ductor (also known as dwell or**

sweep) setting, when adjusting the press to print each job correctly.

**For this reason, when installing KeySetter Connect, the installation engineer will ask you to decide upon a particular ductor value for each color.**

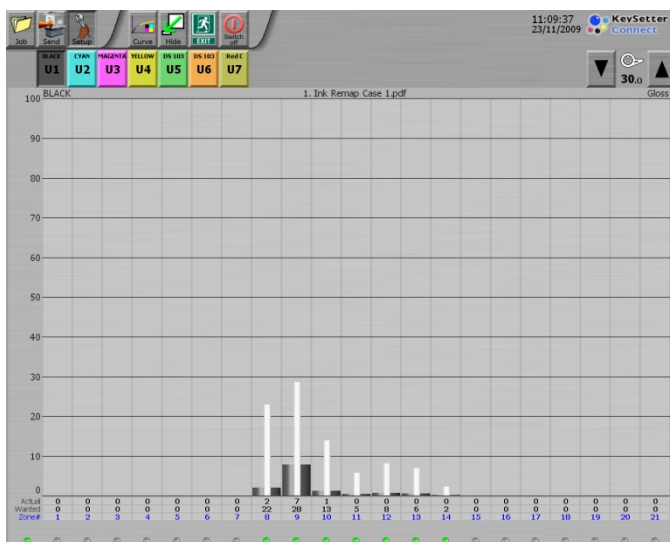
After KeySetter Connect has been optimized, and completed jobs are no longer being saved back to card, the ductor value may be adjusted to suit individual jobs if desired, but this should be done as little as possible, for best results.

You may decide later on to run another optimization, for instance if the press has been adjusted, or you're running a new paper type. Optimization is covered in detail in Chapter 3.

### **1.1 LAUNCHING KEYSSETTER CONNECT**

KeySetter Connect is normally launched when you log into Windows. To launch it by hand:

1. Select KeySetter Connect from the 'KeySetter Connect' program group (usually **Start > All Programs > KeySetter Connect vX.Y > KeySetter Connect**).
2. The KeySetter Connect program launches:

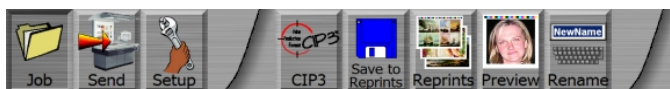


Notes: If this is not the first time you are using KeySetter Connect, details of the last processed job are shown in this main window. If the Windows taskbar is covering the KeySetter Connect window, you can change the taskbar settings to 'auto-hide' using the Windows Taskbar properties (usually available in the Start menu or Control Panel). Click on the KeySetter Connect logo in the top right-hand corner to view the software version.

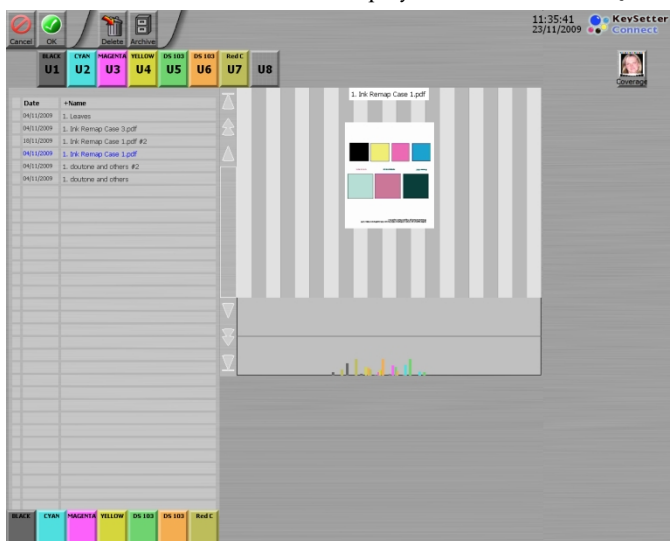
## 1.2 PROCESSING A JOB

To process a job in KeySetter Connect:

1. Click on the **Job** button. You will see the job menu at the top of the window:



2. Click on the **CIP3** button to display the list of available jobs:



3. Highlight the required job in the list. A preview of the job is shown on the right-hand side of the screen.

4. Underneath the preview, you will see the duct settings for the inks used in the job. Click on each individual ink color icon to show just the ink settings for that color.

5. Click on the **Coverage** button near the top right of the screen. You will see the 'Keys' button, with the first paper type alongside it, for example:



6. Click on the paper button to cycle through the three paper types. You will see the duct settings change to reflect the optimization curve for that particular paper/color applied.

*Notes: This will not assign the particular paper to the job. You will do that when you click the **OK** button. Refer to section 1.6 and chapter 3 for more information about optimization curves.*

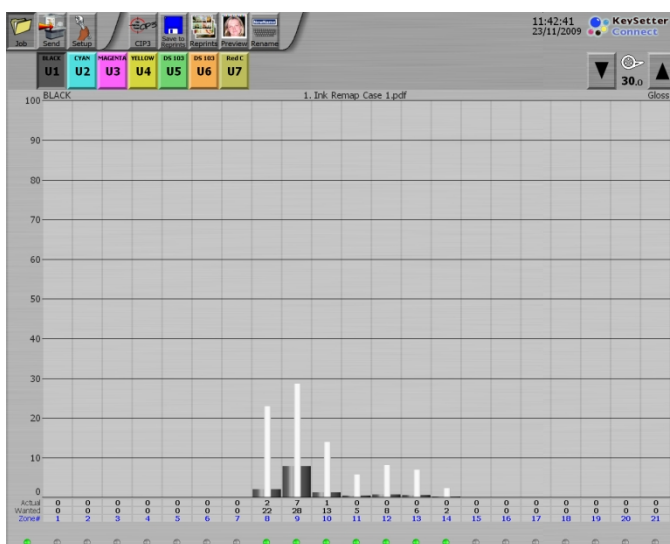
7. If you need to reassign inks to the units, then follow the instructions in section 2.6.


8. When you have finished, click on the **OK** button at the top of the screen.

9. Now, you will see the three paper type icons at the top of the window, for example:



10. Click on the required paper type icon. You are now returned to the main screen, which shows the job details:



11. The unit buttons along the top (  ) show the inks in the job and the order in which they will be printed on the press. Click on each separate unit button to view each color's ink keys profile.

12. The 'Actual' duct settings (shown as a colored bar) have been calculated by the KeySetter plugin. If no optimization curve is defined for the selected paper type and separation color, the 'Wanted' value will be the same as the 'Actual' value. However, if a curve has been defined for the selected paper type and separation color, the 'Wanted' value will reflect the curve settings.

*Note: Refer to section 1.6 and chapter 3 for more information about optimization curves.*

13. The LEDs at the bottom of the window are green where there is image data, and grey when there is no image data (although all duct settings, whether zero or not, are sent to the press console).

### 1.3 SETTING THE DUCTOR VALUE

*Warning: KeySetter Connect is designed for use with static ductor, dwell and sweep settings. If these are adjusted on the press, the settings created by KeySetter Connect may not be correct.*

*Small adjustments may be made to the ductor value, using either the control in KeySetter Connect, or directly on the press console. The default ductor values may be set in the optimization process, as described in section 1.6 and chapter 3.*

To set the ductor value for each unit:

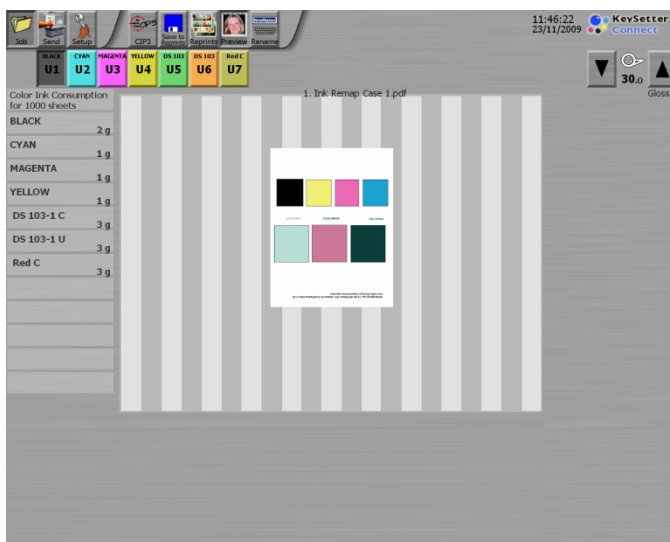
1. Click on the required unit then press the up / down arrows alongside the ductor icon until you reach the required value:



### 1.4 VIEWING THE PREVIEW AND PREDICTED COLOR INK CONSUMPTION

To view a preview of the current job and the predicted ink consumption for each color:

1. Click on the **Preview** button at the top of the main window:



The predicted ink consumption (in grams) for each color per 1000 sheets is shown on the left-hand side.

*Note: The ink consumption for varnish cannot be calculated. The ink consumption prediction is based on the plate and layout selected when the .CFG file was saved, from the Ink Coverage tab of the Layout Editor.*

2. Click on the **Preview** button again to swap back to the original display.

## 1.5 SENDING THE DUCT SETTINGS TO THE PRESS

When you are ready to send the duct settings to the press:

1. Click on the **Send** button. The duct settings are sent to the press card on the press console. While the data is being sent,



briefly, there will be a red cross displayed over the Send button. Afterwards, the heights of the colored bars in the histogram will adjust, to match the heights of the white bars.

*Note: When the job information has been sent, the job will be moved from the main file list to the Archived file list (please refer to “Archived files” in section 2.4 for more information about this). However, the current job will remain on the main screen until you select another job.*

*Note: Read/load the duct settings from the press card into the press console.*

*Note: During the Optimization phase, after running each job, you should save the job settings back to the press card, even if the duct settings were not changed on the press.*

2. If you are in the process of creating optimization curves (as described in the next section) then re-save the job settings from the press console back to the press card (after any changes to the duct settings have been made on the press).

*Note: depending on the model of press console, only the duct settings, but not the name of the job, may be stored on the card.*

You will see the new settings for the current job (including any changes made on the press) on KeySetter Connect’s main screen.

The job will be saved to the ‘Archive’ job list (this is described further in section 2.4) from where it can be re-sent to the press.

## **1.6 A NOTE ABOUT OPTIMIZATION CURVES**

When KeySetter Connect calculates the duct key settings to be sent to your press, it inspects the ink coverage of each duct zone on the plate, and then adjusts this with a correction curve. The correction curves describe the characteristics of your press's duct keys, which do not normally have a linear effect; for instance, if a key's range is 0 to 100, and it outputs a certain volume of ink when set to 25, it will not necessarily output twice as much ink when set to 50.

You can adjust the correction curves, as described in chapter 3 of this manual.

*Notes: There is a curve for each process color and one spot color, for each of the three defined paper types.*

*During installation, the engineer will have made initial optimization curves for your press.*

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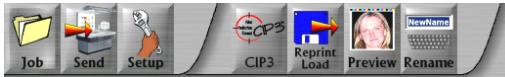
## Chapter 2: Other KeySetter Connect Features

This chapter describes more KeySetter Connect features. It contains the following sections:

- 2.1, The Job menu.
- 2.2, The Setup menu.
- 2.3, The CIP3 job screen.
- 2.4, File options.
- 2.5 Job preview and duct settings
- 2.6 Re-assigning inks to the press units.
- 2.7 Reprint Load.
- 2.8 Renaming a job.

### 2.1 THE JOB MENU

On KeySetter Connect's main screen, click on the **Job** button to display the 'Job' menu:



The 'Job' menu contains the following options:

**CIP3** This displays the list of jobs to be printed. Refer to section 1.2 for details on selecting a job for processing.

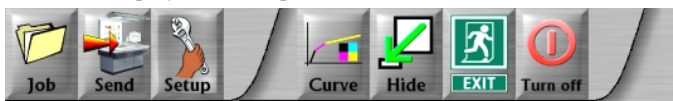
**Reprint Load** This button lets you re-send a job to the press console, and use the same duct values you used before. Refer to section 2.7 for more details about this.

**Preview** This button shows a preview of the current job and its ink consumption. Refer to section 1.4 for more details about this.

**Rename** This button lets you rename the currently loaded job. Refer to section 2.8 for more details about this.

## 2.2 THE SETUP MENU

On KeySetter Connect's main screen, click on the **Setup** button to display the 'Setup' menu:



The 'Setup' menu contains the following options:

**Curve** This option lets you set the optimization curve values. Refer to chapter 3 for more instructions about this.

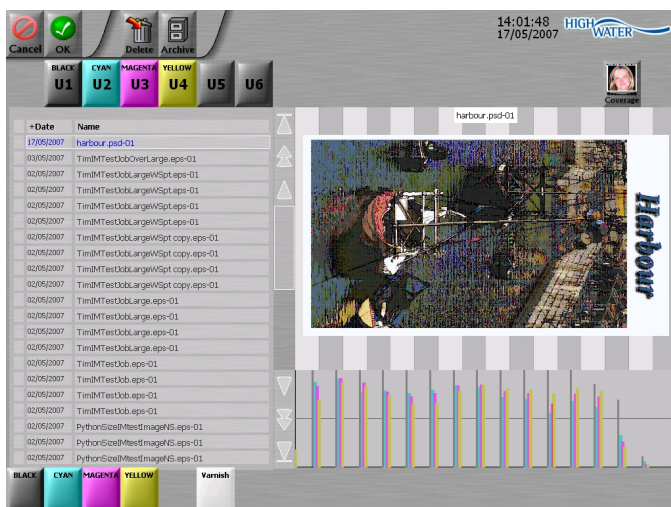
**Hide** This button minimizes the KeySetter Connect window.

**Exit** This button exits KeySetter Connect (you will be asked to confirm that you wish to exit the program).

**Turn off** This button switches off the computer (you will be asked to confirm that you wish to shut down the computer).

## 2.3 THE JOB LIST

Press the **CIP3** button in the **Job** menu on the main screen to see the job list:



The jobs shown in the list are those that have been processed via Navigator Server and KeySetter. Chapter 1 showed you how to select a job and send it to the press console. This section describes the other options available in this window. The job list can hold up to 100 pending jobs.

## 2.4 FILE OPTIONS

The following sub-sections describe how to select and delete a file, and the archived files list.

### SELECTING A FILE

Click on a file to select it. A preview of the file appears to the right and the duct settings are shown below the preview image.

### DELETING FILES

*Warning: Once a file has been deleted, it cannot be recovered.*


To delete files:

- **Either** select the file you wish to delete and click on the **Delete** button. You will be asked to confirm the deletion.
- **Or** select multiple files by clicking the box to the left of each filename (they will be highlighted with a green button):

Date	+Name
<input type="checkbox"/> 03/05/2007	TimIMTestJobOverLarge.eps-01
<input type="checkbox"/> 02/05/2007	TimIMTestJobLargeWSpt.eps-01
<input checked="" type="checkbox"/> 02/05/2007	TimIMTestJobLargeWSpt.eps-01
<input type="checkbox"/> 02/05/2007	TimIMTestJobLargeWSpt.eps-01
<input type="checkbox"/> 02/05/2007	TimIMTestJobLargeWSpt.eps-01
<input checked="" type="checkbox"/> 02/05/2007	TimIMTestJobLargeWSpt copy.eps-01
<input checked="" type="checkbox"/> 02/05/2007	TimIMTestJobLargeWSpt copy.eps-01
<input type="checkbox"/> 02/05/2007	TimIMTestJobLargeWSpt copy.eps-01

To delete the selected files, click on the **Delete** button. You will be asked to confirm the deletion.

## ARCHIVED FILES

When a job has been sent to the press console, it is moved to the 'Archive' folder. To view the archive folder, click on the **Archive** icon at the top of the job screen. The icon changes to show that you are viewing archived jobs: . Duct settings for archived jobs can be sent to the press card in just the same way as for jobs in the CIP3 list.

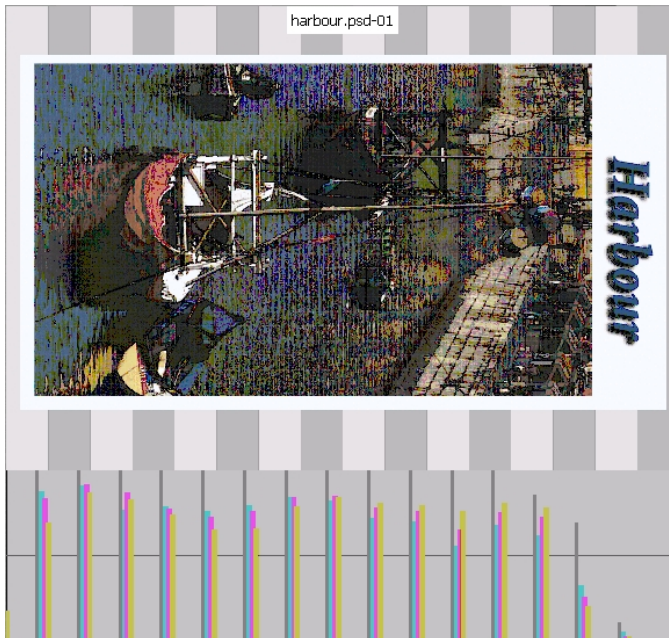
The Archive folder can contain up to 100 jobs; older jobs are removed.

You can delete archived jobs using the Delete button, or output them again by clicking on the OK button (then select the paper type, as usual).

*Note: When a processed job is moved to the archive list, any changes made to the job's settings (for example, the ductor values) are NOT saved.*

## 2.5 THE JOB PREVIEW AND DUCT SETTINGS

A preview of the selected job is shown on the right with the duct settings shown as a graph underneath, for example:




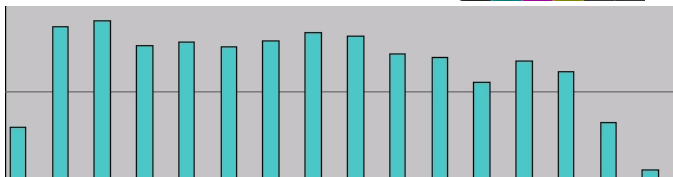
*Note: If possible, Pantone colors are represented by their actual color in the preview. Otherwise, any special or spot colors are shown as black in the preview.*

If the preview and duct settings obscure each other, click on:

- The duct settings graph to display all the duct settings.
- The preview image to display the whole preview.

## VIEWING DUCT SETTINGS FOR INDIVIDUAL COLORS

To view the duct settings for each individual color in the job, click on the appropriate unit color button (  ):



## OPTIMIZATION CURVES

You can view how the duct settings would differ with optimization curves applied to them (assuming the curves have been modified from their defaults, as described in section 18.3). To do this:

1. Click on the **Coverage** button near the top right of the screen. You will see a 'Keys' button, with the first paper type alongside it, for example:





2. Click on the paper button to cycle through the three paper types. You will see the duct settings graph change as the curve for that particular paper/color combination is applied.

*Note: This does NOT assign a particular paper to the job. You will do that when you click on the **OK** button.*

## 2.6 RE-ASSIGNING INKS TO THE PRESS UNITS

When you select a job in the job list, the press units displayed above the job list show what colors have been assigned to each press unit, for example:



Any units that have not been assigned a color are shown in grey with just their unit number (for example, **U6**).

The color buttons at the bottom of the screen show all the colors in the job, for example:



*Notes: If 'varnish' has been enabled (see section 4.5) you will also see an additional **Varnish** button. Pantone and other special colors are NOT shown in their respective colors.*

It is possible to reassign different colors to the units, if required. To do this:


1. At the top of the screen, click on the appropriate unit button then click on the required color for the unit at the bottom of the screen.

2. To clear a unit of its color, click on the unit button at the top of the screen then click on the same color button at the bottom of the screen.

3. When you have finished, click on **OK** then select the paper type, as usual. If the number of separations in a job is greater than the number of units on your press, it is necessary to assign the colors to the relevant press units in this way. If you wish to save the job back to the press card, for Optimization or Reprint purposes, it is necessary to use a different filename for the different passes on the press. For instance, when running a four-color job on a two-unit press, when you **Send** the duct settings for Unit 1 (Cyan) and Unit 2 (Magenta), use the Rename facility (see section 19.5) to append CM to the filename; then append 'YK' to the name you **Send** the duct settings for the yellow and black separations. This is so that two separate files will be stored on the KeySetter Connect PC, for the two passes through the press.

## **2.7 REPRINT LOAD**

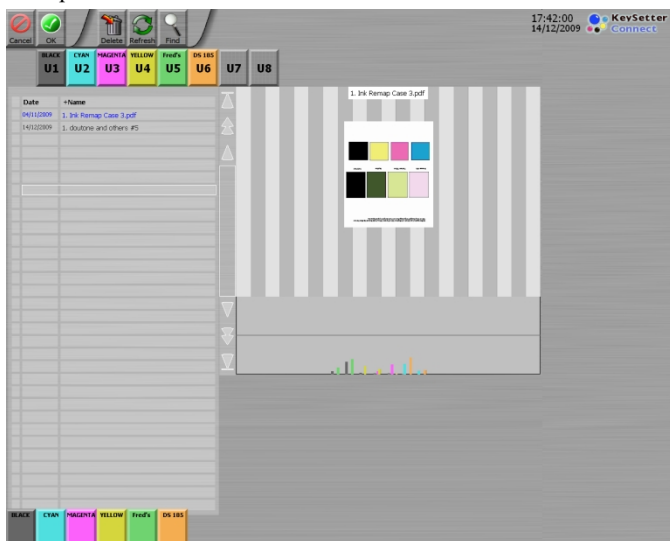
To save a job's settings for later reprinting, on the press console, save it back to the press card. KeySetter Connect will notice that this job has changed, and will indicate 'Receiving' at the top-right-hand corner of the display. After a couple of seconds, the job will be displayed. Now press the Save to

Reprints (  ) button to confirm that you wish to save the job to reprint later.

The Reprint list can contain up to a hundred jobs; older jobs are removed automatically.

You can re-send these jobs to the press console, using the same duct settings which were saved with the job. To re-send a job to the press console from the Reprint Load job list:

1. From KeySetter Connect's main screen, click on the **Reprint Load** button to display the list of saved jobs, for example:



2. Click on the **Refresh** button.

3. Select the required job and, if necessary, make any changes to the colors assigned to the units.

4. Click on the **OK** button.

5. The job is now shown on the main screen. Make any required changes to the job.

*Note: Refer to section 2.8 for details on how to rename the job. Refer to section 1.3 for details on changing the ductor settings.*

6. Click on the **Send** button to send the duct settings to the press console. The duct settings used will be those which you stored back to the card after the job was previously printed, even if the optimization curves have been changed since then. This lets you reprint a job using the same duct settings used originally. The duct settings in the Archive list will be updated if you adjust the ducts on the press console and re-save the job to the card.

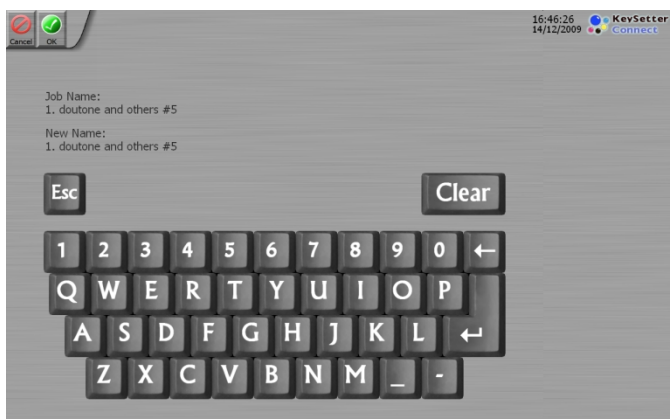
## **2.8 RENAMING A JOB**

KeySetter Connect allows you to rename a job.

*Note: When you rename a job, no files on disk, jobs in the CIP3 or archive job lists are renamed.*

To rename a job:

1. With the required job open in the main window, click on the **Rename** button at the top of the screen. The following screen is displayed:



The current and new job names are shown above the on-screen keyboard.

2. Rename the job using the following keys and buttons:



Use the **ESC** or **Cancel** keys to exit from the rename function and return to the previous screen. Any changes you have made to the job name will be lost.



Use the Clear key to clear the whole job name.



Use the backspace key to delete the last character of the job name.



Use the **Return** or **OK** keys to save the new job name and return to the previous screen.

*Note: If you have cleared the job name, these buttons will not work.*

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
**A-Z 1-0 \_ -** Use the alpha-numeric, underscore and hyphen keys to change the job name, as required.

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3. When you have finished, click on the **OK** or **Enter** button to accept the changes, or on the **Esc** or **Cancel** button to abandon any changes.

4. You will be returned to the main screen.

## **2.9 FINDING A JOB**

The CIP3, Reprint and Archive job lists include the ability to search for a job with a particular name. To use this, Press the Find () button, and enter the first few characters of the job's name, followed by the Return key. Either the on-screen or the physical keyboard may be used for this, but note that some characters which do not appear in the on-screen keyboard may be entered on the physical keyboard, for instance '#', '.', and ' ' (space). The first name which starts with the characters entered will be highlighted.

After you have entered the beginning of the filename, you may type Ctrl-c to copy it. Next time you are on the Find screen, you may type Ctrl-v to paste it in, rather than retype it.



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## Chapter 3: Optimizing KeySetter Connect

This chapter describes how to optimize KeySetter Connect's correction curves to match your press's behavior, and provide more accurate initial duct settings.

Optimization of the correction curves is a valuable feature of KeySetter Connect. The best settings for the ink duct keys are not the same as the percentage ink coverage of the ink zones. For instance, if a zone contains 100% ink, the duct key might be set to 40% of its range. And for 50% ink coverage, the duct key may need to be set to 15% (not 50% or even 25% as you might guess). So the relationship between ink coverage and the required duct setting is non-linear, requiring a correction curve.

KeySetter Connect makes it easy to define accurate correction curves. For the first few weeks, you will be in an optimization phase. This simply means that after each job is printed, the press operator will write back to the press card the actual duct settings which were used with it. After a few jobs (fifteen is recommended) have been run, you can view the current correction curve, overlaid with dots indicating the actual duct settings which were used to run the job.

There is an individual correction curve for each of the three paper types and each of the five colors (C,M,Y,K and spot), making 15 curves in total. Each of these may be set individually



(there is no need to adjust the correction types for papers which are not in use).

If the correction curve is ideal, the dots will all appear on the curve or very close to it.

If the correction curve for each color is not yet ideal, you can drag it to make it best coincide with the dots indicating the duct settings which were used, and then delete the existing jobs, otherwise they will confuse any future rounds of optimization.

**Because KeySetter Connect makes corrections purely to the duct key settings, via the correction curves, it is important to run all jobs for a particular paper type with the same ductor setting, during the optimization phase. So it is important to adjust only the duct key settings and not the ductor (also known as dwell or sweep) setting, when adjusting the press to print each job correctly.**

After KeySetter Connect has been optimized, and all completed jobs are no longer being saved back to card, the ductor value may be adjusted to suit individual jobs if desired, but this should be done as little as possible, for best results.


### **3.1 CREATING OPTIMIZATION CURVES USING SAVED PRESS SETTINGS**

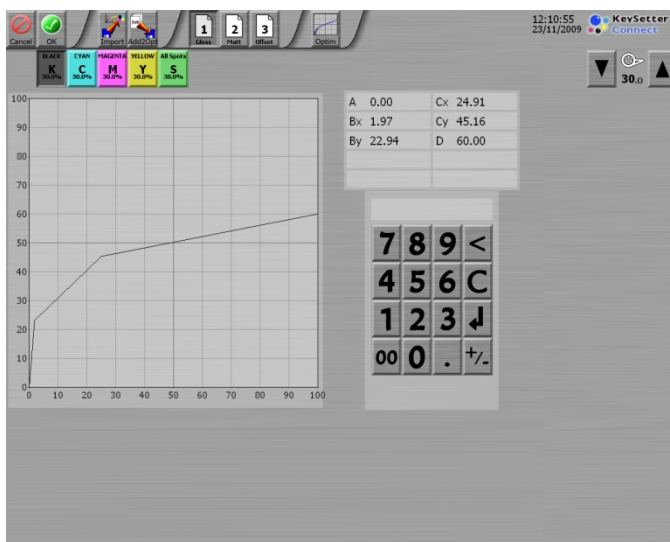
During the first few weeks of operation, KeySetter Connect should be operated in an 'Optimization' phase. This simply

means that after each job run on the press, the press operator saves the job back to the job card, via the press console, and then when data for around fifteen jobs have been collected, entering the curve editor and adjusting the correction curves to best match the collected data.


So, when running each job:

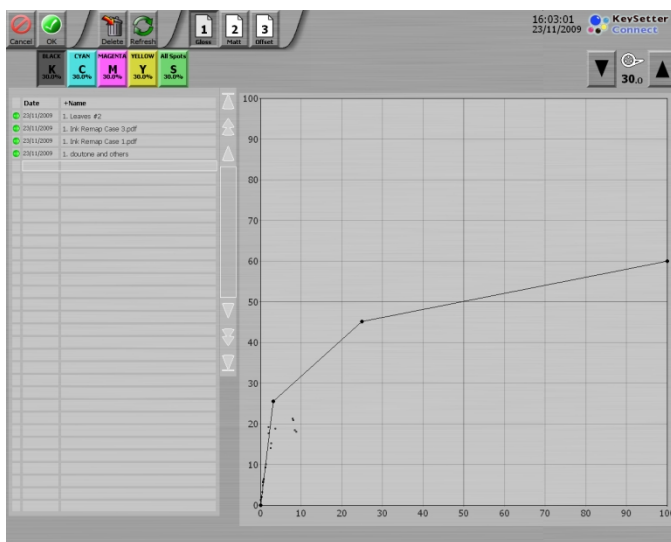
1. In KeySetter Connect, send the job's duct settings to the press console.
2. On the press console, read the duct settings from the press card into the console (depending on your press, the duct setting histogram will be displayed on the press console).
3. When printing the job, if it is found that the duct settings can be improved upon, manually correct them on the press console. Make these corrections to the individual duct key settings, not adjusting the overall ductor, dwell or sweep control.
4. After the job has been printed, save its actual duct settings back to the card (whether or not the duct settings were adjusted on the press). KeySetter Connect will automatically notice these new settings and store them for use with the optimization process.

When about fifteen jobs have been printed, press Setup and then Curve buttons (  ) on KeySetter Connect, to enter the curve editing screen, shown below.



As there are three paper types, and five possible colors, there are a maximum of  $3 \times 5 = 15$  correction curves.  
(All spot colors for a particular paper type share the same correction curve.)

Press the Optim () button to enter the curve optimization screen shown below.



For each of these fifteen curves, in turn (or fewer if you are not using all paper types or colors):

1. Select the color and select the paper type.
2. A list of jobs you have run is shown on the left-hand side of the screen. The existing correction curve is shown on the right. Displayed near the curve on the right are dots indicating the actual duct settings which were run with each job. If the optimization is perfect, these will coincide with the curve. Otherwise, drag the curve (via its large black control point dots) so that it passes through the dots as closely as possible.
3. You may find it helpful to notice that:
  - a) Dots are only shown for jobs which are selected (i.e. they have a green dot to the left of their


name). You can toggle their selection state by clicking to the left of the job name. Or you can select/deselect all jobs at once by clicking at the top-left of the list.

- b) If you hover the cursor over a job name, the dots for that job will be shown in red, and the job's preview image will be shown.

After the curves have all been adjusted, select all the jobs in the list (via the green dot to the left of their name) and press the Delete button. If you did not do this, the data for these jobs would be displayed when you next adjust the curves, in addition to data for any new jobs, which would be confusing.

*Note: The new curves will not be applied to the currently loaded job so you will need to reload the job again from the CIP3 or archived file list. (Curves are not reapplied to jobs opened from the 'Reprint Load' job list.)*

*Note: For best results, set the optimization curves to reflect the average behavior of your press. For instance, if you are replacing ink duct foils on the press each month, the curves should most closely match the jobs run in the middle of the foils' lifetime.*

The curve screen also contains Import and Add2Opt buttons (). These may be used by Xitron Support engineers, when making an optimization remotely.

Now click the OK button to return to the main screen.

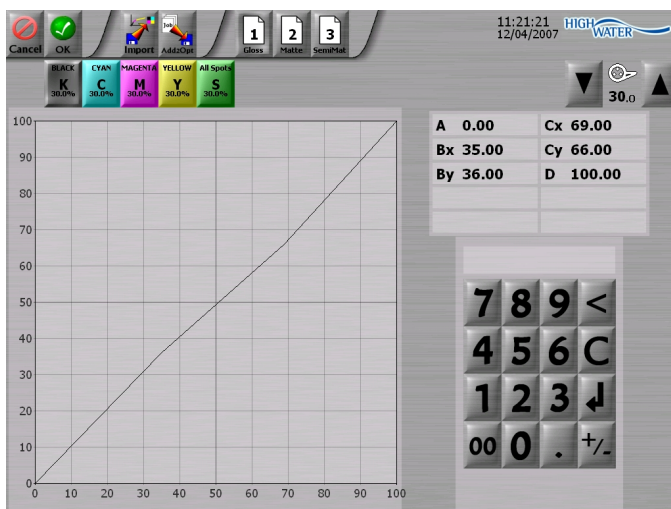
After the optimization phase is complete, and the correction curves are as accurate as possible, there is no need to save the duct settings back to the card after running the job (apart from any jobs you wish to reprint, via the Reprint Load facility).


Later on, you may wish to start another optimization phase, if for instance the press has been adjusted, and your correction curves no longer match its behaviour, or when you have started using a new paper type. To do this, just start saving completed jobs back to the press card on the press console, and when around fifteen jobs have been saved, adjust the correction curves as described above.

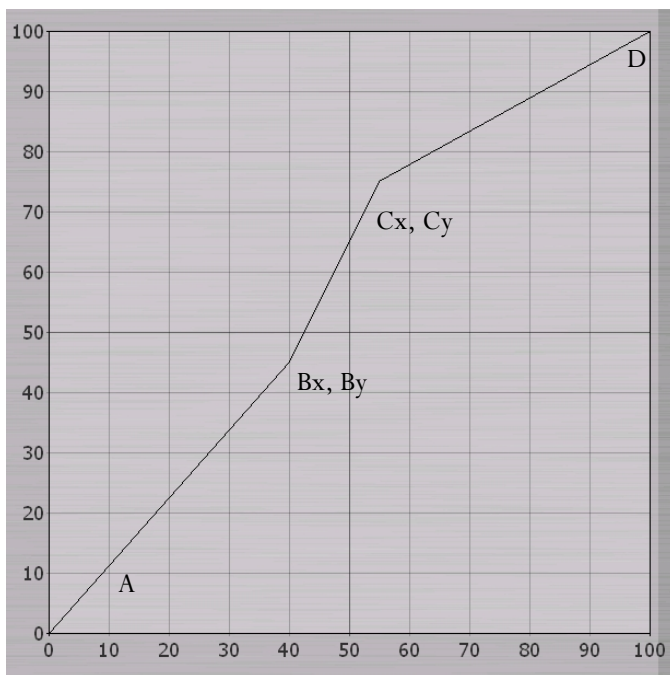
### **3.2 ADJUSTING OPTIMIZATION CURVES NUMERICALLY**

It is also possible to adjust optimization curves by entering numerical positions for the control points as described below. However this is not recommended, as it is simpler to use the procedure described in section 3.1.

1. In KeySetter Connect, click on the **Curve** button (accessible from the **Setup** menu). The following dialog is displayed:

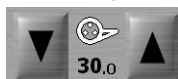


2. Click on the required paper type icon
3. Click on the required press unit color.
4. Edit the curve by changing the **A**, **Bx**, **By**, **Cx**, **Cy** and **D** parameters (shown below), as required, using the on-screen numeric keypad and then clicking on the enter button  .  
As you modify the values, the curve will change, for example:



*Note: The default values for a straight line curve are  $A=0$ ,  $B_x = 33$ ,  $B_y=33$ ,  $C_x=66$ ,  $C_y=66$ ,  $D=100$ .*

5. If required, change the ductor value for the ink color click by pressing the up / down arrows alongside the ductor icon.



6. Now, if required, modify the curves for the remaining unit colors by following steps 3 to 5 again for each color.



7. When you have finished, click on any other paper type you wish to change the curve values for and edit the curves for each unit color, as appropriate, as previously described.

8. When you have finished, click on the **OK** button to return to the main screen. These curves will now be applied to any job using the particular paper type and ink color.

*Notes: The curves will not be applied to the currently loaded job so you will need to reload the job again from the CIP3 or archive file list. (Curves are not applied to jobs opened from the 'Reprint Load' job list.)*

---

## Chapter 4: Installing and configuring KeySetter Connect

This chapter describes how to install and set up KeySetter Connect. Blue tinted steps are on the Navigator Server PC, and Green tinted steps are on the KeySetter Connect PC by the press console.

### 4.1 INSTALLATION INTRODUCTION

These notes cover installation and configuration of KeySetter Connect on a PC near the press console, with a network connection to the Navigator Server PC running the KeySetter Action. The overall flow of the installation is to install the KeySetter action under Navigator Server, to the point where ink duct graphs may be produced, and then to modify this to output data in a form suitable for KeySetter Connect.

### 4.2 PREPARATION

#### Calibrate the press

For best results, the press should be calibrated to whatever standard the customer is using before KeySetter Connect is installed. While not a vital step, with some presses this can make a significant difference to the quality of the results.

#### KeySetter Connect PC requirements

Check that the PC matches the system requirements detailed in Appendix B, and is networked to the Navigator Server PC.

Two USB sockets will be required (for the KeySetter Connect dongle, and Press Connection Kit).

### **Location for the KeySetter Connect PC**

The site should have two power sockets and a network socket with internet access close to the press console. These are for use with the press operator's PC which will run the KeySetter Connect application (the customer may be providing this PC themselves).

### **Prepare for optimization**

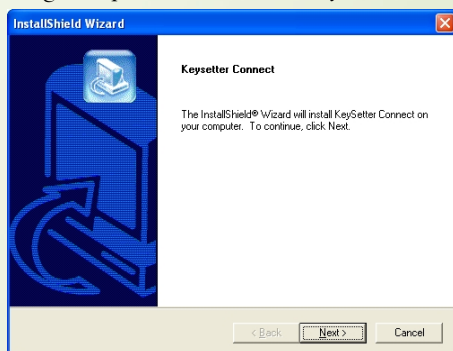
Have a test job ready to RIP, output and print. This should be representative of the jobs printed on this press, and will be printed with their most frequently-used paper type. There should be as much variety in ink coverage as possible, i.e. some duct zones will use only a small amount of ink, and some will use approaching 100% coverage, but mostly around 40% coverage.

**4.3 INSTALL AND CONFIGURE KEYSITTER**  
**On the Navigator Server PC**, following the instructions in the *KeySetter User Guide*, install Navigator Server with the KeySetter Action, and configure it to the level where you can RIP jobs and produce duct key graphs ready to print. The KeySetter items are located in the 'Extras' directory of the Navigator GPS DVD 1.

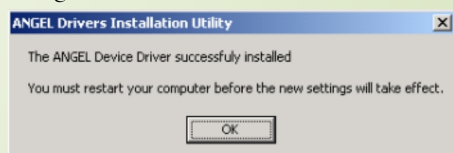
## 4.4 INSTALL AND CONFIGURE KEYSSETTER CONNECT

On the KeySetter Connect PC, install and configure KeySetter Connect as follows:

- Create a user login account which the press operator will use, called, for instance, “KSC”.
- Run the KeySetter Connect installer. Don’t plug in its dongle or press connection kit yet.



- Install the Angel dongle driver and restart the PC when prompted.
- The Angel dongle driver will show the following dialog.

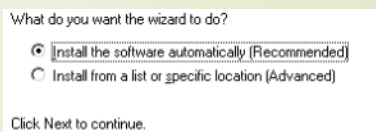


- Plug the KeySetter Connect dongle into a spare USB socket.
- As the PC starts up, you should see a 'Found New Hardware' wizard.



Select the **No, not this time** radio button and click **Next>**.

- You will now be asked how you wish to install the software:



Select **Install the software automatically (Recommended)** and click **Next>**.

When you see the following message, click **Continue Anyway**.

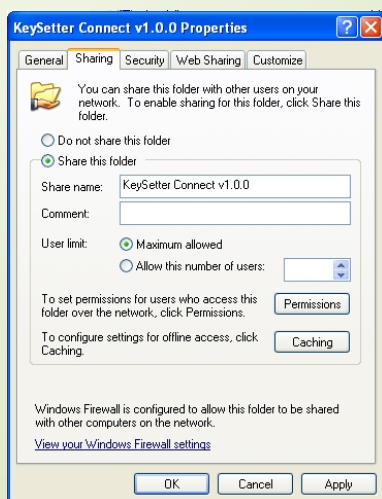


At this point it should be possible to run up and quit from KeySetter Connect. Now we need to link KeySetter to KeySetter Connect:

- **Share the KeySetter Connect folder of the KeySetter Connect PC** (Press Operator's PC) so that it may be mounted on the Navigator server PC, mapped to a drive letter. This is done by:

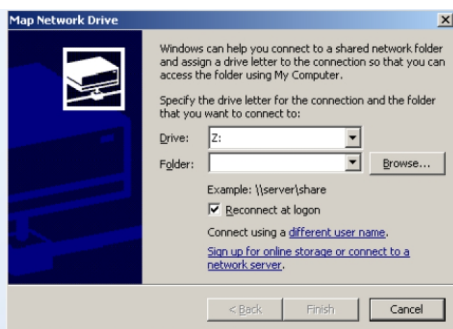
**On the KeySetter Connect PC**

- Right-clicking on the folder, selecting **Properties**.
- On the Properties dialog, **Sharing** tab, clicking the **Share this folder** radio button.
- Entering a **Share name** as shown below:



**On the Navigator Server PC, map a network drive to the shared folder:**

- Double-click **My Computer** on the desktop to open a Windows Explorer window.
- From the **Tools** menu, select **Map Network Drive...**
- Select an unused drive letter (Z in the example below):



- To set the **Folder**, click on the **Browse...** button and navigate to the KeySetter Connect folder that you shared in the previous section.
- Click OK, and select **Reconnect at logon**.
- Click **Finish**.

**On the KeySetter Connect PC** Install the press connection kit. Depending on the press model in use, the hardware installation may vary.

- Connect the press card to the press interface box with the RS232 cable.
- Plug the press card into the card slot of the press.
- Connect the press interface box to the PC, via the USB cable.

**On the KeySetter Connect PC** Finish the press connection kit installation.

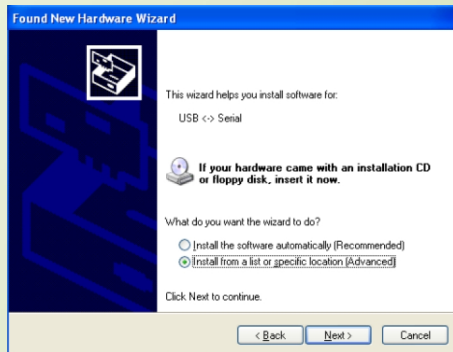


- On the KeySetter Connect PC, you should see a **'Found new hardware'** message, and the 'Found New Hardware Wizard' should launch:

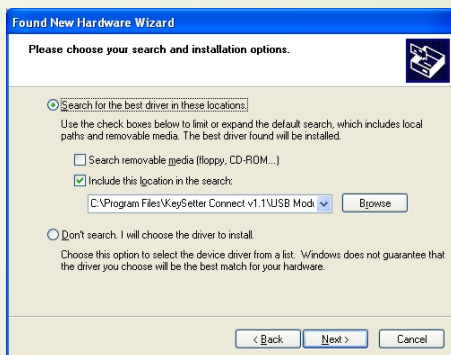


- Select **No, not this time**, and click **Next>**.

The following dialog is displayed:



- Select **Install from a list or a specific location (Advanced)**. The following dialog is displayed:



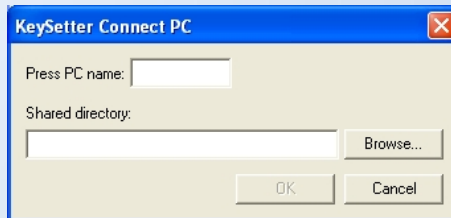
- Select **Search for the best driver in these locations.**
- Uncheck Search removable media and check **Include this location in the search.**
- The driver is in the 'USB Module' folder of the KeySetter Connect folder.
- Click **Next>**. If you see the following warning, click **Continue Anyway** to proceed with the installation.



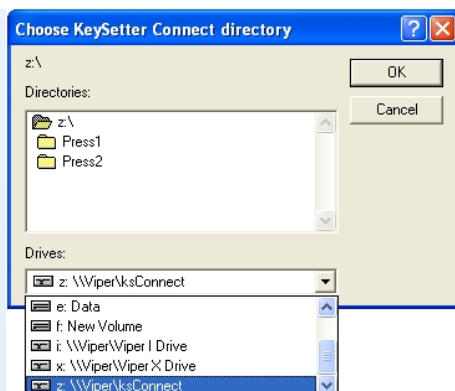
- Once the required driver files have been installed, click **Finish**.

## 4.5 CONFIGURE THE KEYSSETTER ACTION On the Navigator Server PC

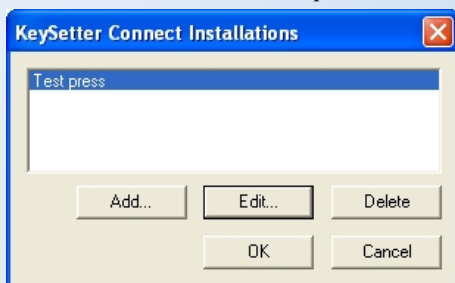
- At this point, as instructed above, you should have the KeySetter Action running under Navigator Server, configured to create ink duct graphs. Now we'll adjust the configuration to make the KeySetter Action output data suitable for KeySetter Connect:
- In the KeySetter Layout Tool, Preferences tab, click the KeySetter Connect 'Installations...' button. Click the Add button and enter a PC name (this does not need to be the same as the PC's network name) as shown below:



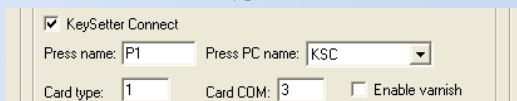
- Click Browse and select the mapped drive letter of the KeySetter Connect folder, which you created earlier ('Z' in this example).



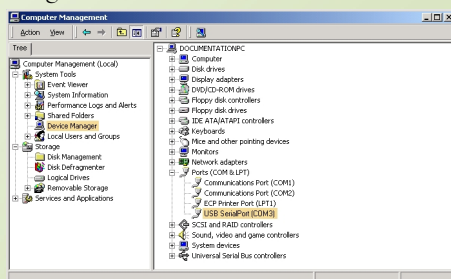
- Click 'OK' on the KeySetter Connect PC dialog.
- You will now see the new KeySetter Connect installation defined, for example:



- Click OK to close the dialog.
- In the **Ink Coverage** tab of the KeySetter Layout Tool, select the **KeySetter Connect** checkbox.
- In the 'Press name' field, enter a name to identify the press for which KeySetter Connect is being used.
- In the 'Press PC name' popup menu, select the name you previously entered via the Preferences tab.
- Enter '1' as the Card type.



- Filling in the 'Card COM' value, which you can obtain by:
  - **On the KeySetter Connect PC**, opening the Computer Management dialog (e.g. by right-clicking on My Computer and selecting Manage).
  - Clicking the Device Manager on the left.
  - On the right-hand side of the dialog, locating 'Ports (COM & LPT)' and looking for an entry that says 'USB SerialPort (COMx)' or similar.
  - Making a note of the COM port value in the brackets (3, in the example below) and close all open Windows system dialogs.



- **Back on the Navigator Server PC**, if the final unit of the press is devoted to a full-coverage varnish plate, check the 'Enable varnish' box.
- Save the configuration. This will make the necessary adjustments to ksConnect.ini.

- Configure the scale factor: find out the range of the duct key values on the press. For instance if the press has ink ducts numbered in the range 0 to 24 (for example), ensure that KeySetter Connect is not running, then edit ksConnect.ini and locate the line

```
Scale = 100
```

and change it to (for instance)

```
Scale = 240
```

This value is only used to label the graph axes on the display; it is not used when setting the duct keys.
- Configure the paper names: ensure that KeySetter Connect is not running, then edit ksConnect.ini and locate the line

```
Paper1Name=Gloss
```

for instance, and change it to the name you require. The same applies for Paper2Name and Paper3Name. These names are only needed for display purposes.
- Configure the sheet sizes: ensure that KeySetter Connect is not running, then edit ksConnect.ini and locate the line starting MaxSheetWidth. Set this and MaxSheetHeight to the dimensions in millimeters of the largest paper size handled by the press. These are only used by the ink usage calculation performed by KeySetter Connect; however these values are not used in the duct value setting. Note that it is important to ensure that KeySetter Connect is not running whilst ksConnect.ini is being edited.

## 4.6 INITIAL TEST

### On the Navigator Server PC

- RIP a job via Navigator Server; the separations should be processed by the KeySetter Action, which will create an ink file and recombined preview image for the job, on the Press Operator's PC .

### **On the KeySetter Connect PC**

- Operating KeySetter Connect following the instructions in section 16 of the KeySetter User Guide, check that the job RIPPed above appears in the job list, and has a correct preview image and valid ink data.
- Check that the duct settings for the test job can be saved to the KeySetter Connect Press Connection Kit, press console. After the duct settings have been saved, and then (with press operator assistance) loaded into the press console, the colored bars in the histogram will adjust to match the heights of the white bars.
- Ensure that the press operator understands that the ductor/dwell/sweep value of the press should normally be left to a fixed setting for most jobs when using KeySetter Connect. This value may be different for each press unit.
- Ensure that the press operator knows that they should make any inking adjustments on the press by changing the duct key values, not by changing the ductor/dwell/sweep control.
- Ensure that the press operator knows that they may temporarily adjust the ductor/dwell/sweep control in order to get unusual jobs to print correctly.

## 4.7 INITIAL OPTIMIZATION

### On the KeySetter Connect PC

- Have the press operator choose a favorite ductor/dwell/sweep value.
- Make an initial optimization as described below, using the chosen ductor/dwell/sweep value, and using the press operator's knowledge of the press, unassisted by a KeySetter duct prediction. This step may be omitted if necessary.

For each paper type the customer will use:

### On the Navigator Server PC

- Process a typical job (see 'Prepare for optimization' above, for details) through the Navigator Server and the KeySetter Action, so that it appears in the KeySetter Connect job list.
- Ask the customer to set the duct values for the job on the press console (and for their most frequently used paper type) using their normal method, probably an educated guess.

### On the KeySetter Connect PC

In KeySetter Connect, set the ductor value and send the duct settings to the press card but do not read them from the press card into the press console. [So that at this stage, the press operator does not see, and is not



- influenced by, KeySetter Connect's duct predictions.]
- Save the press duct settings to the card, overwriting the data you sent from KeySetter Connect.
  - Now you have some accumulated job data, follow the instructions in section 3.1 to adjust the curves.
  - Refine the optimization curves: if time permits during the installation, refine the optimization curves further as follows. Run three or four jobs (for the same paper type), and for each one:
    - In KeySetter Connect, send the job's duct settings to the press card.
    - On the press console, read the duct settings from the press card.
    - If the duct settings need to be adjusted, manually correct them on the press console.
    - After the job has been printed, copy its duct settings back to the card (whether or not they have been adjusted).
    - After you have printed three or four jobs, adjust the optimization curves, as described in section 3.1.
  - After installation, you should instruct the user to follow the full procedure in section 3.1 for further refinement of the optimization curves, after around fifteen jobs have been printed.

## **4.8 PRESS OPERATOR INTRODUCTION**

- Show the press operator the QuickStart card and clip it to the console.
- Ensure the press operator knows:
  - How to send jobs' duct settings to the press console.
  - That they need to save each job's duct settings back to the card, after running it, during the optimization phase.
  - How to assign plates to press units (section 2.6).
  - How to reprint a job, using KeySetter Connect to access the duct settings they previously used with the job (section 2.7).
  - How to access the KeySetter Connect documentation.
  - To leave the ductor/dwell/sweep value set to their chosen initial value.

---

## Appendix A: FAQ

### FREQUENTLY ASKED QUESTIONS

**Remember to exit KeySetter Connect before inspecting or changing ksConnect.ini, or it may become corrupted.**

- **Q.** Where can I find additional documentation?
- **A.** Further documents, including those for optional features, may be found online at:

[www.xitron.com/keysetter\\_documentation](http://www.xitron.com/keysetter_documentation)

- **Q.** The cables supplied with the press interface are not long enough; can we replace them with longer ones?
- **A.** Yes. The USB and serial cables may both be replaced with up to 5m equivalents. If the USB cable is replaced, we recommend use of a powered USB hub.
- **Q.** When I insert the PCMCIA card into the MAN Roland press console, it is ejected after a few seconds.
- **A.** Use KeySetter Connect to write a job to the card, before plugging it into the press console.
- **Q.** The KeySetter Action is not creating the .ink and .bmp file in the Press1\InkFiles directory within the KeySetter Connect directory of the press operator's PC.
- **A.** This is probably a file-sharing permissions problem. Check that from the Navigator Server PC it is possible to create folders and edit files within the KeySetter Connect share of the press operator's PC.

- **Q.** I cannot write to the PCMCIA card on a Heidelberg CP2000 console (the card remains empty, as viewed from the press console).
- **A.** Reset the card by ejecting it from the console and disconnecting the cable from it. Wait ten seconds, then reconnect the cable and plug the card back into the console. Now try writing to it again.
- **Q.** The press has ink ducts numbered in the range 0 to 24 (for instance), not 0 to 100. Can I configure KeySetter Connect to display its graphs in the same range?
- **A.** Yes, you can. Ensure that KeySetter Connect is not running, then edit ksConnect.ini and locate the line  
Scale = 100  
and change it to (for instance)  
Scale = 240
- **Q.** Can I configure the names of the three papers which KeySetter Connect displays?
- **A.** Yes, you can. Ensure that KeySetter Connect is not running, then edit ksConnect.ini and locate the line  
Paper1Name=Gloss  
for instance, and change it to the name you require. The same applies for Paper2Name and Paper3Name.
- **Q.** There is a red 'X' over the Send button:



- **A.** If the card is correctly configured, you should briefly see this red 'X', when KeySetter Connect starts up, as it establishes communication with the press card. If it remains, either
  - One of the connections to the press card is unplugged.

- CardType=1 is not configured in ksConnect.ini (it means USB interface).
- CardCOM does not contain the USB port number for the press connection.
- **Q.** I don't think the data is being sent to the press card correctly.
- **A.** If the card is correctly configured, you should briefly see a red 'X' over the Send button as you start up KeySetter Connect. After pressing Send to send a job's duct information, the Send button should briefly show a red 'X' and then the histogram should adjust, so the heights of the colored bars adjust to be identical to the heights of the white bars. If that is not the case, please check that ksConnect.ini has CardType=1.

### **KeySetter-specific questions**

- **Q.** What do I need in my Navigator Server workflow?
- **A.** The minimum requirement is a HotFolder Action followed by a KeySetter Action. You must also have created a RIP Action in the Navigator Server as the KeySetter Action makes use of it.
- **Q.** In the Layout Tool, do I need to save a .hw file in the first tab?
- **A.** Yes, you need to save it alongside the layout tool (Plotter.exe) which is in your Navigator Server folder, in Config\KeySetter.
- **Q.** Why do I get the error 'Missing filename template configuration file'?
- **A.** Check that in the KeySetter Layout Tool, Ink Coverage tab, you have the Input Filename Matching Options set to 'Current setup: KeySetter'.
- **Q.** Why do I get the error 'No inkduct configuration file specified in layout con... '?

- **A.** In the Plate tab of the KeySetter Layout Tool, ensure that you have pressed the Browse button and selected a suitable .cfg file from under the KeySetter\PressConfigFiles folder.
- **Q.** Why do I get the error 'Missing layout configuration file'?
- **A.** Make sure you have saved a .hw file from the Layout tab of the KeySetter Layout Tool, into the Config\KeySetter folder of your Navigator Server.
- **Q.** My spot color files are not being included in the group correctly.
- **A.** Open the KeySetter.fns file from the Navigator Config\FilenameSetups folder, in a text editor. Check that you have, near the top of the file:
 

```
[SpotId]
SPOT_START_METHOD=8
SPOT_END_METHOD=8
```
- **Q.** After changing the KeySetter configuration, (e.g. the .cfg file or .hw file), will my changes be actioned automatically with the next job I submit, or do I need to restart Navigator Server?
- **A.** The changes should be picked up automatically after you complete the configuration changes in Navigator Server.

---

## Appendix B: System Requirements

The following table shows the system requirements for PCs running just the KeySetter Connect application:

<b>Hardware</b>	IBM PC/AT or compatible machine
<b>Operating system</b>	Windows 2000, Windows XP
<b>CPU</b>	Pentium 4, 2.0GHz or higher
<b>Memory</b>	512MB or more
<b>Hard disk capacity</b>	160GB or more
<b>Monitor resolution</b>	1024 x 768 pixels or higher, 256 colors or more. Touch screen input supported.
<b>Floppy disk drive</b>	Not required
<b>CD-ROM</b>	2x speed or faster (necessary for system installation)
<b>Network</b>	Ethernet 100BASE-TX/10BASE-T
<b>Communication protocol</b>	TCP/IP protocol
<b>Printer/dongle port</b>	USB
<b>Mouse</b>	2 or 3 buttons
<b>USB sockets</b>	Two spare, for KeySetter Connect dongle and Press Connection Kit

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## Appendix C: Perfecting presses

A perfecting unit is a mechanism in a sheet-fed press which turns the paper, to allow subsequent press units to print on the reverse side of the paper. For instance, a 12-unit press might be arranged as six units, then a perfector, then six more units.

To drive such a press with KeySetter Connect, perform the following steps.

1. Configure KeySetter Connect from the Layout Tool as described in the KeySetter Connect manual, and specify the total number of press units.
2. Exit KeySetter Connect.
3. Using Windows Explorer, navigate to the KeySetter Connect application folder (normally in C:\Program Files) and take a backup copy of `ksConnect.ini`. Now edit the original in Notepad.  
  
4. About a dozen lines from the end of the file, change  
`Perfectors=0`  
to  
`Perfectors=1`

This change enables a button in KeySetter Connect, allowing the front or back side of the paper to be selected. This button appears on the screen reached by pressing the CIP3 button.



5. In the line specifying ColorsOnUnits, add definitions for the unit color buttons to appear on the KeySetter Connect dialogs. For instance add “;64,6;65,7;66,8;67,9;68,10” as explained below.

For a 10-unit press with press units K, C, M, Y, Spot 1, then a perfecter, then K, C, M, Y, Spot 2, specify:

```
ColorsOnUnits=[0,1;1,2;2,3;3,4;4,5  
; 64,6;65,7;66,8;67,9;68,10]
```

Each comma-separated pair of numbers takes the form

Color Number, Button Number;

Colors numbered 64 onwards will appear on the reverse side of the paper.

**Color Numbers** follow the pattern shown in the table below.

Ink Color	Front	Back
Black	0	64
Cyan	1	65
Magenta	2	66
Yellow	3	67
Spot 1	4	68

**Button Numbers** follow the pattern shown in the table below.

Press unit color	Press unit number	Button number
K	1	0
C	2	1
M	3	2
Y	4	3
Spot 1 (followed by Perfector unit)	5	4
K	6	5
C	7	6
M	8	7
Y	9	8
Spot 2	10	9

6. Take a backup copy of the new ksConnect.ini in the same folder.

7. Do not make any further changes to the KeySetter Connect configuration in the Layout Tool, as this will overwrite the change made in Step 5. If this happens by accident, revert to the backup made in Step 6.

Note that the press units following the perfector unit are not separately optimized. Duct key settings for these units will be optimized using correction curves for the corresponding units before the perfector.

## USER OPERATION, PERFECTING PRESS

1. After pressing the CIP3 button as part of normal operation, notice that a Front/Back toggle button is now available.
2. Select the job to be printed on the front side of the paper; the separation colours for the front side of the paper will be assigned to the press unit buttons:



3. Press Front button, to toggle it to 'Back'. Select the job to be printed on the back of the paper. The separation colors for the back side of the paper will be assigned to the press unit buttons:








4. Notice that you can toggle between front and back of the job by pressing the Front/Back button.
5. Click OK; select the required paper type.
6. Click Send to send the ink duct presets to the press console:














An example Quick Reference card for use with perfecting presses is shown below.

**Using KeySetter Connect to set duct settings on press console when press has a perfecting unit.**

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- 1    Show job list.
- 2   Select front job.  

Date	+Name
16/02/2007	Triangle00
19/01/2007	Starhope01
19/01/2007	Starhope_01
- 3   Select back job.  

Date	+Name
16/02/2007	Triangle00
19/01/2007	Starhope01
19/01/2007	Starhope_01
- 4    Assign plates to the press units by clicking unit button (top list) and then the separation button (bottom list) for each press unit.
- 5  Show paper selection menu.
- 6     Select required paper.
- 7  Send duct settings to the press card.
- 8 On the press console, read duct settings from the press card.