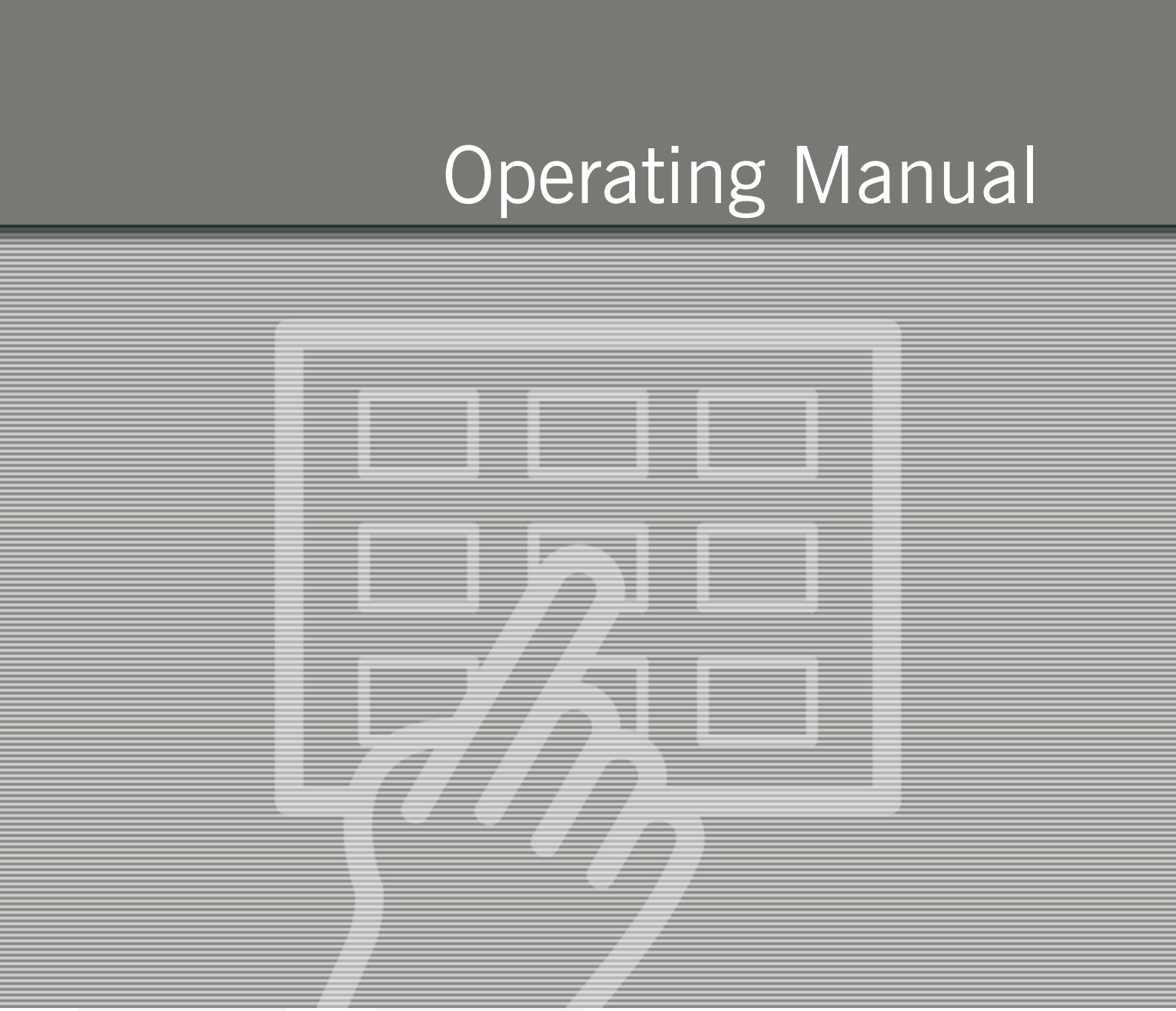
# Operating Manual

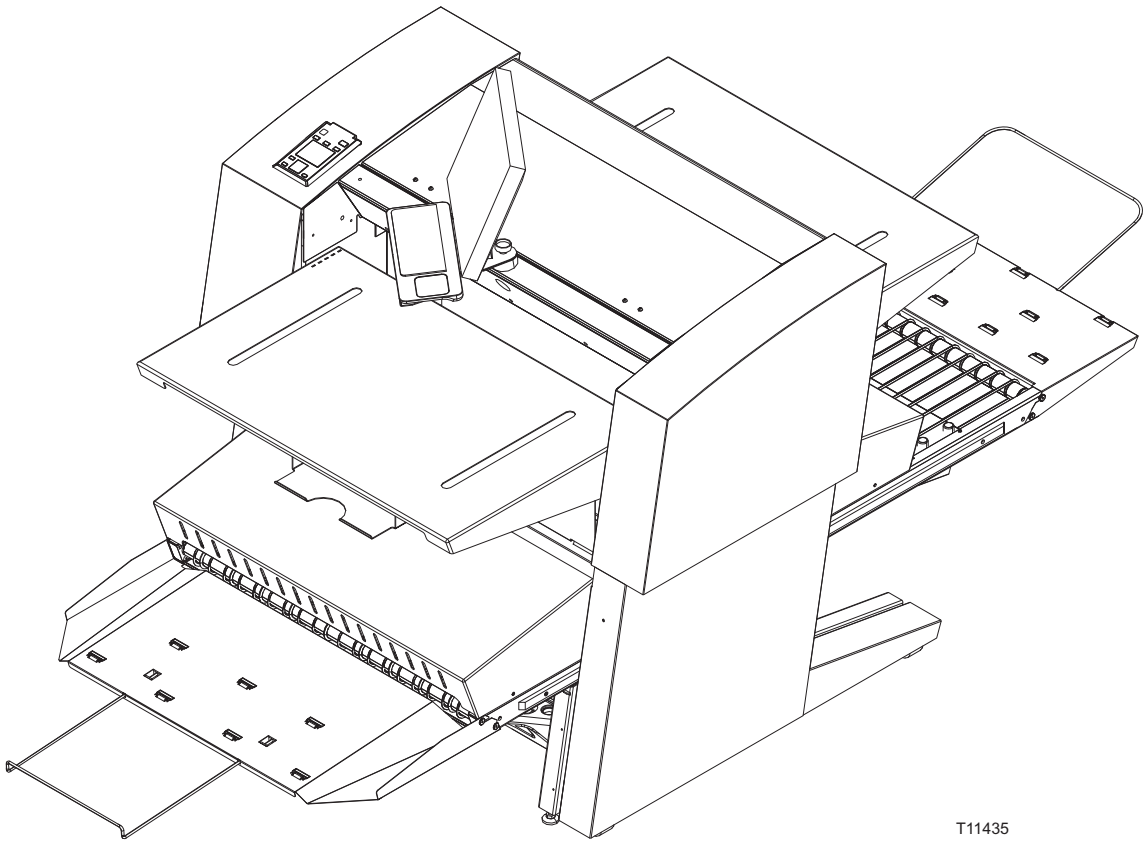


# PlateWriter™ 3600 Pro

GLUNZ & JENSEN

# Operating Manual

## PlateWriter™ 3600 Pro



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# Part 1: Introduction

## About this manual

### Intended use of this manual

- This manual describes the common use procedures of the PlateWriter System. It is intended for the daily user and should be kept with the equipment for reference at all times.

**Printer-specific information relating to operation, maintenance and service can be found in the manuals supplied on the CD with your printer.**

### Reservations

- This manual was written and illustrated using the best possible information available at the time of publication.
- Any differences between this manual and the equipment reflect improvements introduced after the publication of the manual.
- Changes, technical inaccuracies and typographical errors will be corrected in subsequent editions.
- As a part of our policy of continuous improvement, we reserve the right to alter design and specifications without further notice.

### Notes, cautions, and warnings !

Throughout the manual notes, cautions, and warnings are written in bold like the example below:

**Always replace a fuse with one of the same size and rating as the old one.**

| Symbol | Meaning | Explanation |
|---|---|---|
| | **Note** | The operator should observe and/or act according to the information in order to obtain the best possible function of the equipment. |
| | **Caution** | The operator must observe and/or act according to the information in order to avoid any mechanical or electrical damage to the equipment. |
| | **Warning** | The operator must observe and/or act according to the information in order to avoid any personal injury. |

# Important

## Unintended use of the equipment

Glunz & Jensen A/S do not take any responsibility for any damage or accidents caused by unintended use of the equipment:

- As the equipment is certified by accredited test laboratory (UL International Demko A/S) it is absolutely prohibited to make any modifications, electrical nor mechanical, of the equipment. If however this prohibition is disregarded, Glunz & Jensen's warranty will no longer apply and the certification labels for UL, C-UL, and CE certification of the equipment shall be removed as the certification will no longer apply to the equipment.

## Safety and use

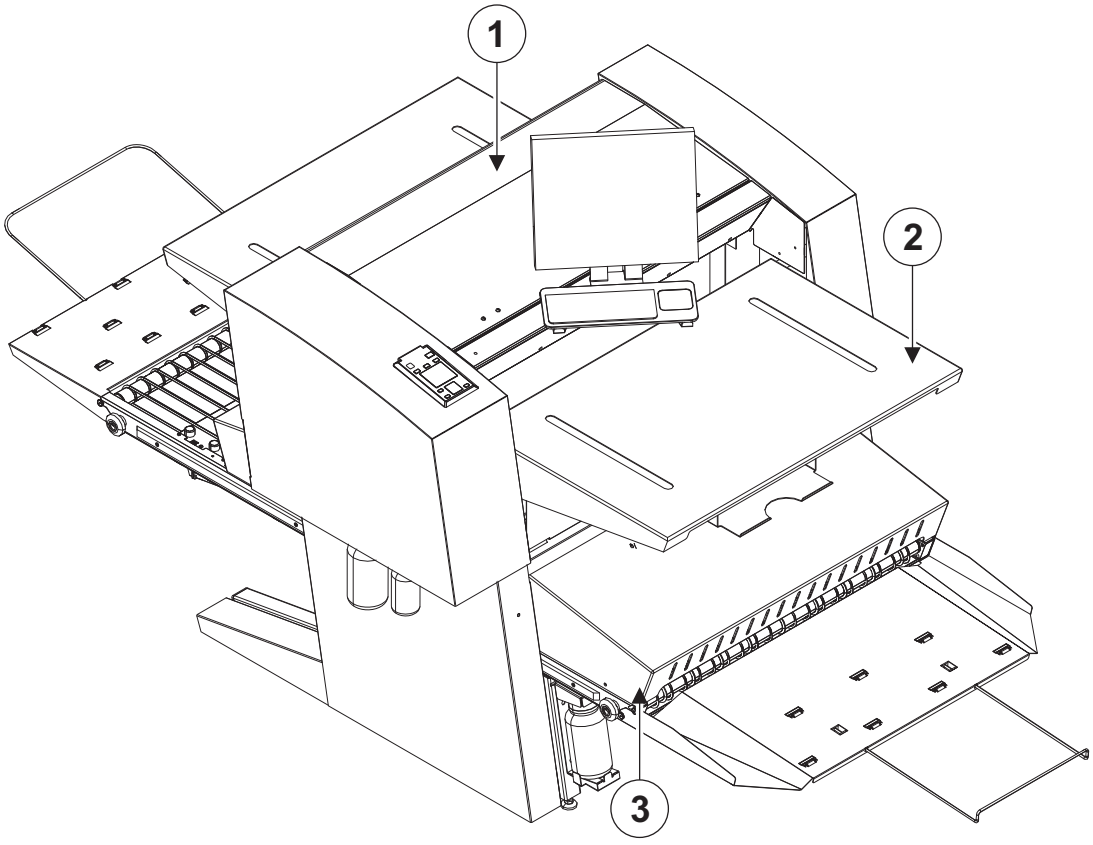
- Before using the equipment it is assumed that it has been properly installed and configured as described in the installation manuals delivered with the system.
- The manufacturer cannot be held responsible for any damage caused by incorrect use of this equipment.

# The PlateWriter System

The PlateWriter System is an innovative and patented inkjet Computer-to-Plate (iCtP) device.

## The PlateWriter System consists of:

- **PlateWriter engine (1)**
  A specially modified Epson inkjet printer that uses Glunz & Jensen's Liquid Dot fluid to image the i-plates printing plates.
- **Plate input table (2)**
  A table for aligning plates prior to entering into the PlateWriter engine.
- **Proofer** (option)
  An unmodified Epson Stylus Color 4800, 4880 or 7800, 7880 printer used for proofing. Plug-ins to drive these printers are supplied with the Harlequin RIP.
- **Harlequin RIP platform**
  A customized workstation accessible by both Mac and PC computers, loaded with the Global Graphics Harlequin RIP.
  The Harlequin RIP provided is customized by Xitron and it accepts PostScript, PDF, EPS, TIF & JPEG files produced by standard pre-press applications.
  It RIPs the data and sends output to the PlateWriter engine or to the Proofer.
- **PlateWriter finishing unit (3)**
  An integrated plate finisher that executes all of the steps necessary to produce press-ready plates, e. g.: curing, gumming and drying of the plates after they are imaged in the PlateWriter engine.

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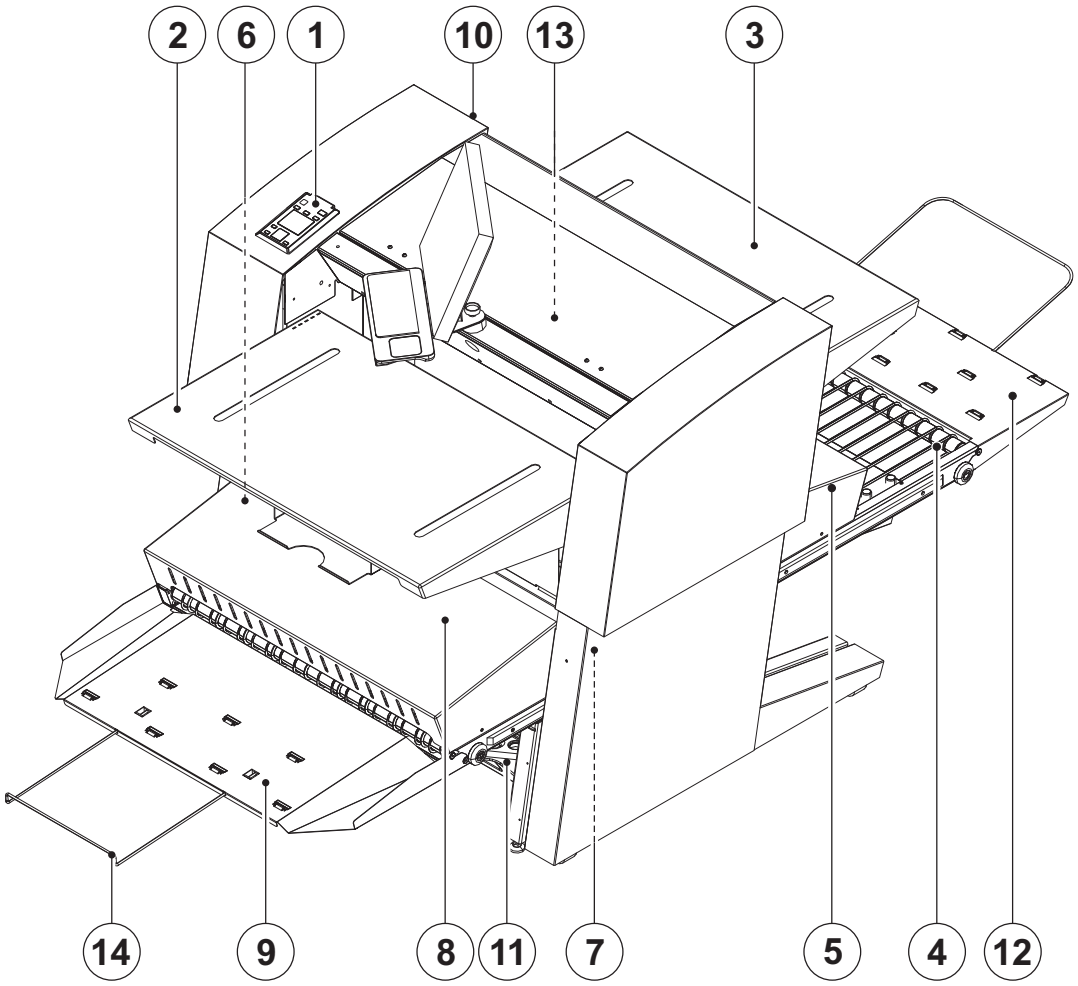
# PlateWriter 3600 Pro

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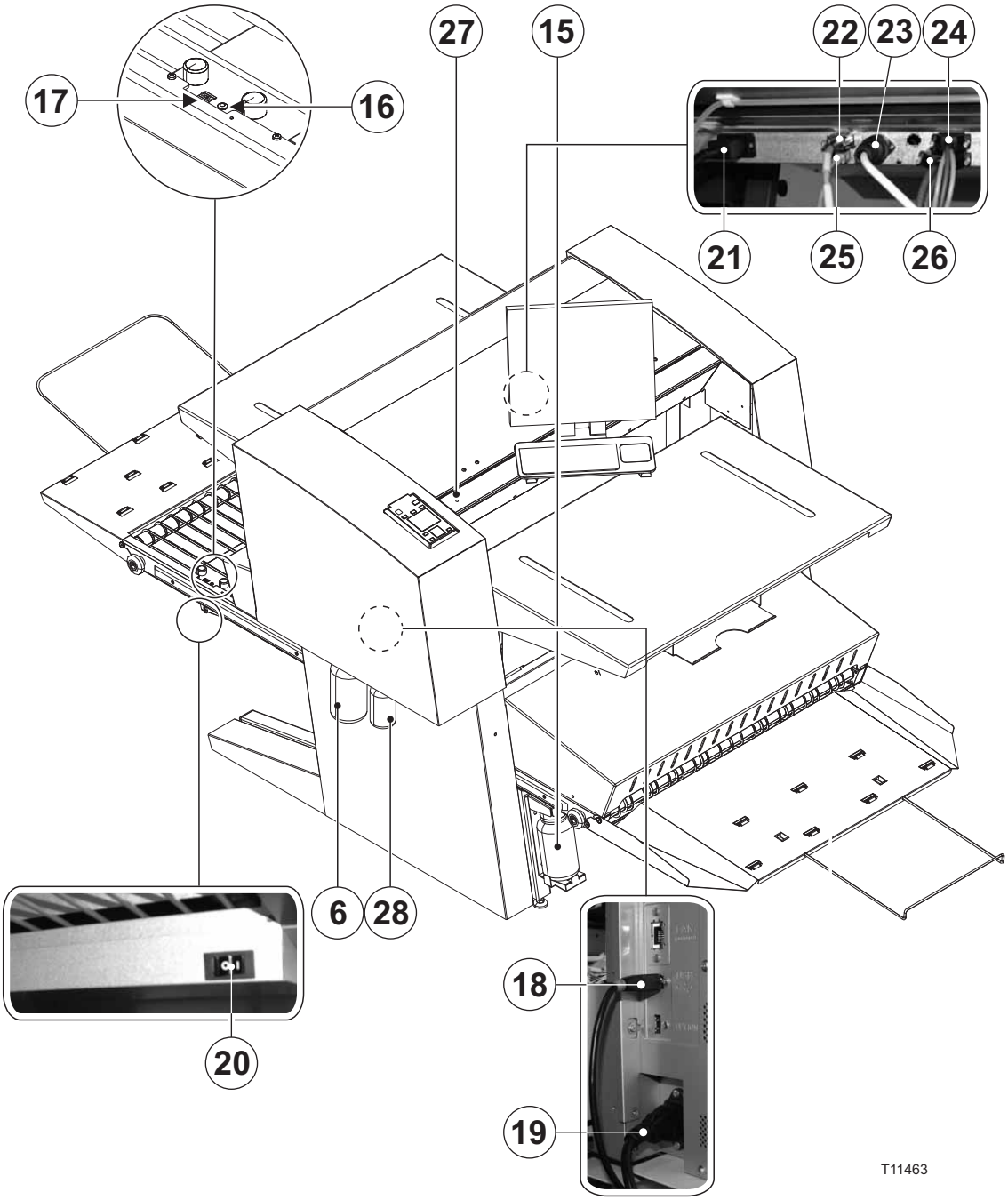
1 **Control panel**: from here you control the imaging unit.
2 **Input table**.
3 **Exit table**.
4 **Curing conveyor**: leads the printed plate through the curing sections.
5 **Curing oven**: dries the ink on the plate and cross-links it to the aluminum base.
6 **Gum/finishing bottle**: contains the finishing solution applied to the plate in the finishing section. Solution not accepted by the plate returns into the bottle.
7 **Finishing section**: cools the plate and applies a combined gum- and plate enhancer to the plate to protect it from oxidation and to improve its press characteristics and hydrophilic properties when on press.
8 **Gum dryer**: dries the plate to provide a finished, dry plate.
9 **Plate exit tray**: holds the finished plates.
10 **Ink cartridges**: the compartment contains 5 cartridges.
11 **Water tank:** contains demineralised water for replenish of the gum.
12 **Short finisher extension**.
13 **Registration system:** ensures that plates are aligned correctly prior to entering the imaging unit.
14 **Exit tray extension**.




**15** **Waste ink bottle**.
**16** **Status indicator LED:** indicates the current status of the finishing unit.
**17** **Program selector:** for selection of the curing oven program.
**18** **USB-cable:** connects the imaging unit with the RIP workstation.
**19** **Power cable:** supply voltage for the imaging unit.
**20** **Power switch:** press here to switch the finishing unit on/off.
**21** **Power cable:** supply voltage for the finishing unit.
**22** **Control cable:** connects the print bed heaters with the finishing unit.
**23** **Power cable:** supply voltage from finishing unit to the print bed heaters.
**24** **Control cable:** connects the fluid in cap system with the finishing unit.
**25** **USB-cable:** connects the finishing unit with the RIP workstation.
**26** **Control cable:** connects the register with the finishing unit.
**27** **Status indicator LED:** indicates the alignment of the plates and the temperature deviation of the print bed.
**28** **Fluid in cap system bottle**.

# Part 2: Daily use

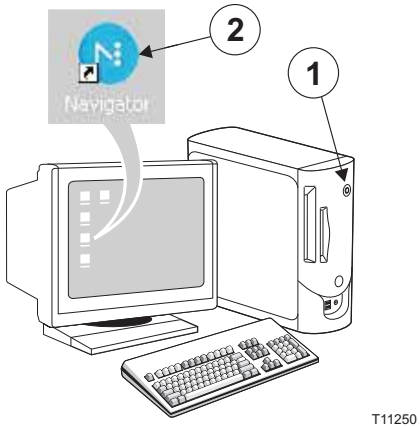
## Overview

The daily use procedures described in this chapter cover the following issues:

- Daily start-up procedure
- Loading of plates into the PlateWriter for printing
- Printing of plates
- Finishing
- Daily shut-down procedure

## Daily start-up

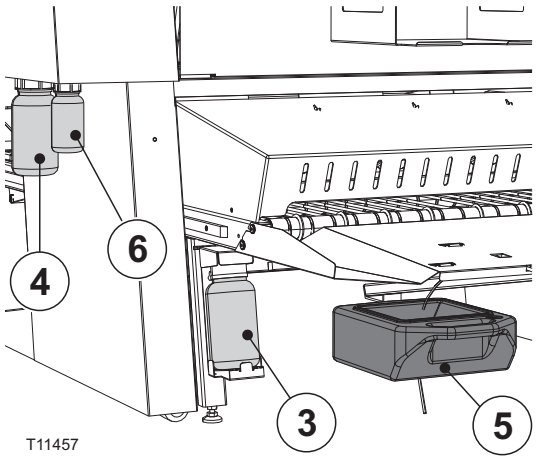
- Start the RIP workstation **(1)**.
- Launch the RIP application **(2)**.




- Replace the finisher solution in the finishing bottle **(3)** with fresh finisher solution.

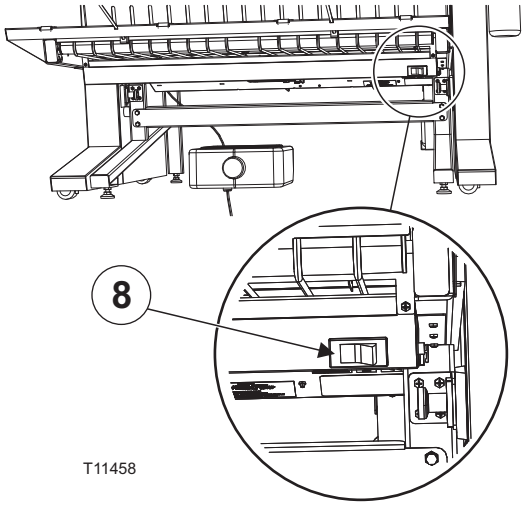
**Half a bottle is sufficient.**

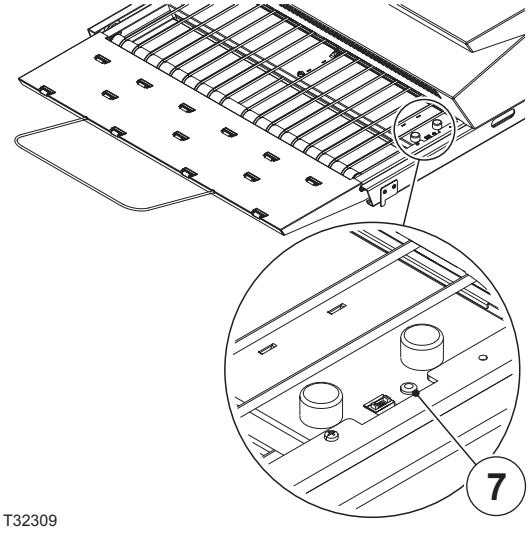
- Empty the waste ink bottle **(4)** if it is full.
- Refill the water tank **(5)** with demineralised water if it is empty.



- Switch on the finishing unit on the main switch **(8)** underneath and make sure that the indicator **(7)** lights steady green.
- The unit will run gum fluid through the system for approximately three minutes to ensure an even gumming of the plates.

**Finishing unit is ready from power up, also while doing initial jogging.**




- Switch on the PlateWriter by pressing the ⏻ button.
- The PlateWriter initializes and when finished, the display shows ”READY”.

# Making a proof

## Creating files for proofs

- Use your DTP application to prepare a **composite** output file - please refer to your application manual for help.
  Select an output page size sufficiently large to accommodate your content and any registration marks or colour bars.
- Save the file to a folder, either on the computer running Navigator RIP or on a server.

## Printing a proof

- In the **Navigator RIP** open the **Output Controller / Monitor** window by either pressing **Ctrl+O** or choosing **Output -> Output Controller** from the RIP menu.
- Be sure that **Disable Output** is checked.
- Select **Navigator -> Print file** from the RIP menu.
  Choose an appropriate Proofing Page Setup and a file type (.ps, .pdf, .eps, .jpg or .tif) from the dialogue.
  Navigate to the folder containing your composite files, choose one file, and click on **Print**.
- The file will be ripped and will appear in the **Active Queue** of the **Output Monitor/Controller** window.
- Uncheck **Disable Output** in the **Output Controller/Monitor** window. The proof will be printed.

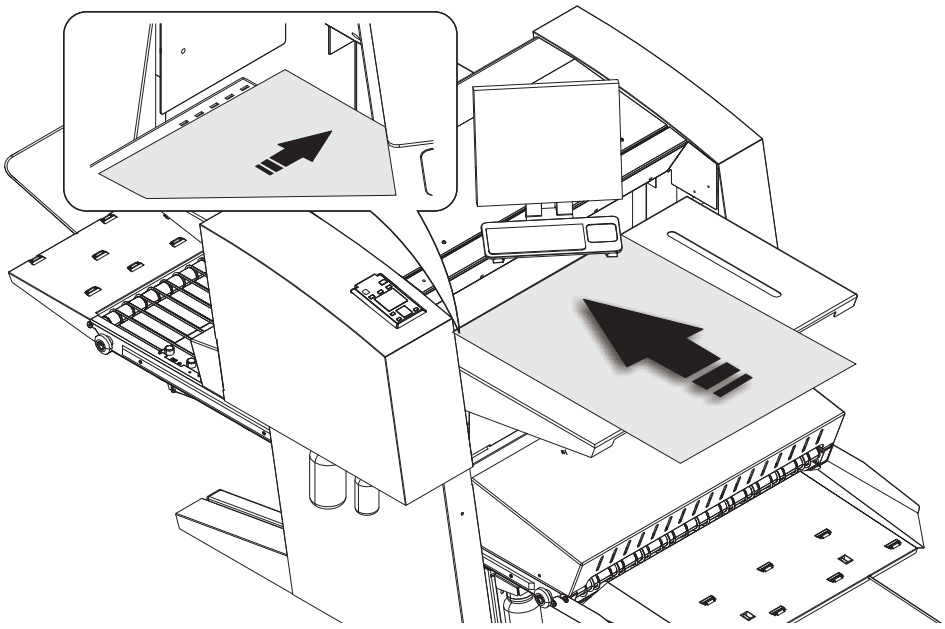
# Making plates

## Creating files for plates

- Use your DTP application to prepare **separation** output files - please refer to your application manual for help.
- Select an output page size sufficiently large to accommodate your content and any registration marks or colour bars - it should not be the same size as your plate. The RIP will position a smaller page correctly on your plate for you.
- Save the file to a folder, either on the computer running Navigator RIP or on a server.

## Loading plates on the PlateWriter™ 3600 Pro

The registration system ensures that plates are fed into the printer correctly. The register pins enable correct and easy alignment prior to entering the printer.



- Press the button, select **Poster Board** and press OK button, place the plate on the input table and slide the plate into the printer, until plate reaches the side register pins.
- Align the plate according to the register pins. Observe the LED control on the front panel of the printer. If LED:
  – lights ***green*** - the plate is placed according to register pins - ***correctly,***
  – is ***off*** - the plate is not placed according to register pins - ***incorrectly***.
- When LED lights ***green***, press the OK button and plate will enter the printer automatically. If LED lights is ***off***, repeat the procedure again.
- Then select the **Keep Settings Above** on the display and press OK button.
- After that uncheck and check again **Disable Output** function on your PC and the **Outputting** will start.
- When the **Outputting** is finished, please follow the procedure Imaging the plate on the next page.

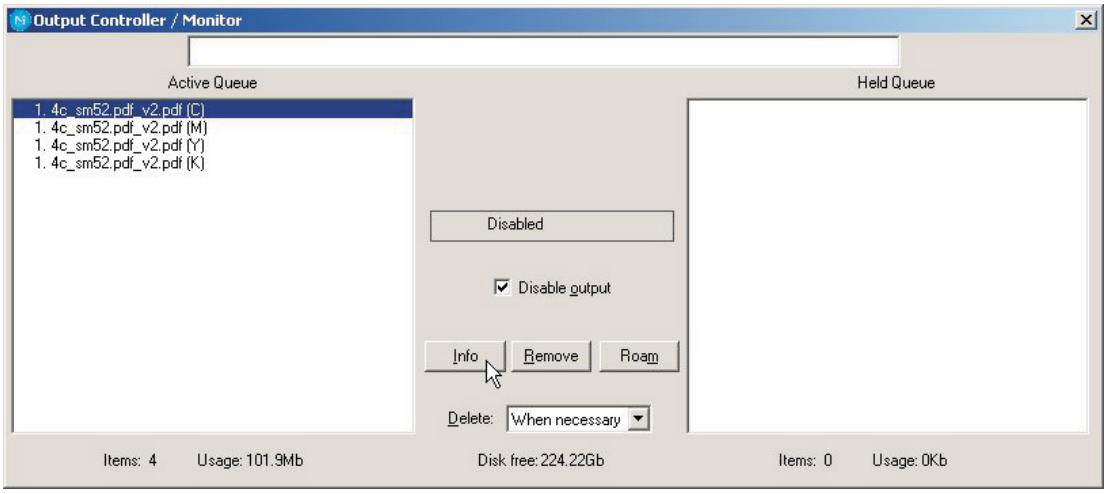
**It is possible to unscrew the small removable registration pin and move it to the right for large size plates.**

**LED flashes *green* even before the plate is inserted. This indicates deviation in temperature on the print bed. When less than 3 flashes, then the temperature is ready to image plates.**

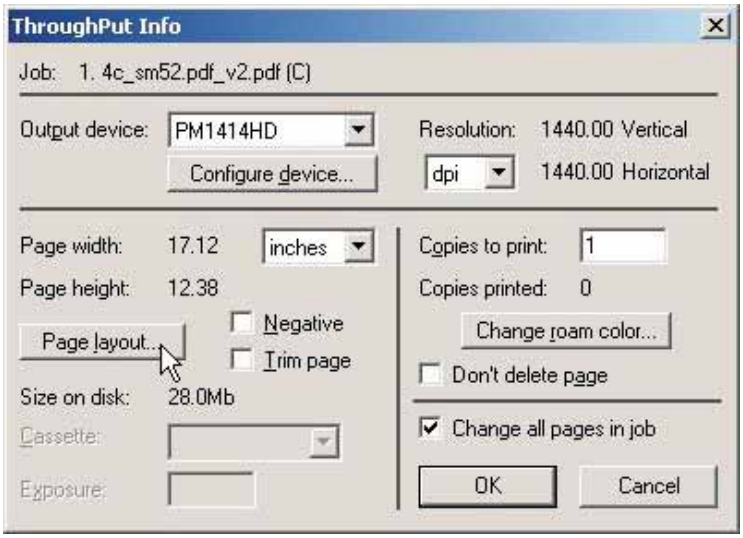
**Do not release the print job from the Navigator RIP before the printer is ready.**

# Imaging the plate

- In the **Navigator RIP** open the **Output Controller / Monitor** window by either pressing **Ctrl+O** or choosing **Output -> Output Controller** from the RIP menu.
- Be sure that **Disable Output** is checked.
- Select **Navigator -> Print file** from the RIP menu.
  Choose an appropriate PlateWriter Page Setup that matches your print job and the orientation of the loaded plate, then choose a file type (.ps, .pdf, .eps, .jpg or .tif). Navigate to the folder containing your **separation** files, choose the files, and click on **Print**.
- The files will be ripped and will appear in the **Active Queue** of the **Output Monitor/Controller** window.
- The ink (colour) of each separation will be displayed in brackets after the job name, and if there are multiple pages, then each page will be designated with a numeric value.

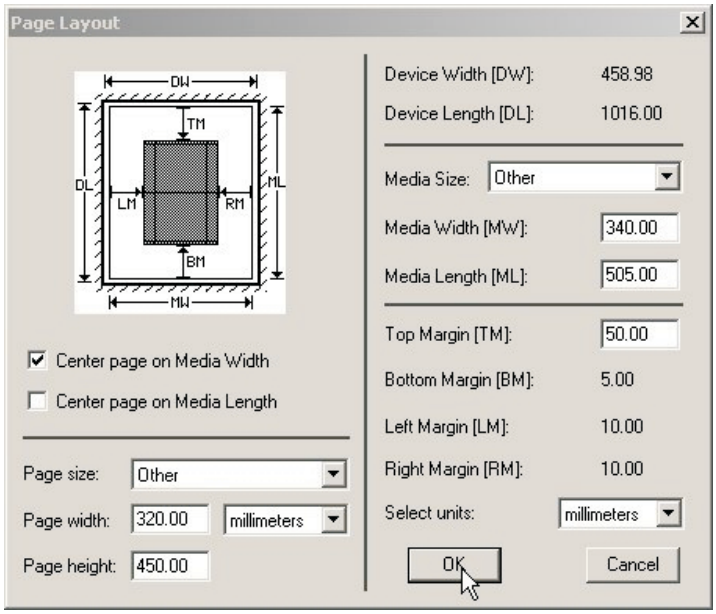



- Select your file and click on **Info**.
- The **ThroughPut Info** window appears.




- Be sure that **Change all pages in job** is checked.

- Click on **Page layout...** to open the **Page Layout** window.

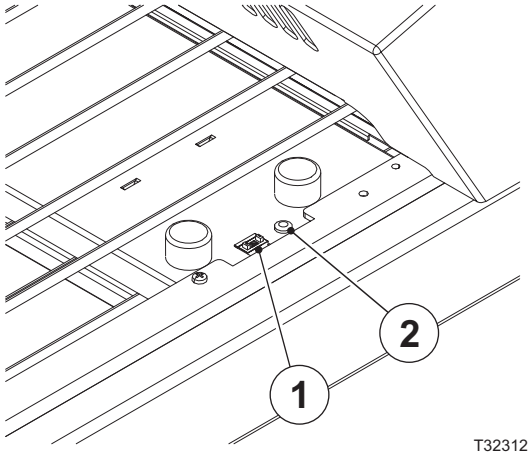



- Check that the size of your plate is correctly entered in the **Media Width [MW]** and **Media Length [ML]** boxes. Most plates will be imaged landscape in the PlateWriter. Depending on whether you are loading the plates in portrait or landscape and whether you have a portrait or landscape press, different selection to select the **Center page on Media Length** and set the **Left Margins** have to be made. If you load the plate in portrait and have a landscape press, be sure [LM] to accommodate the normal unprintable area on your press. (also known as the Grip).
- If you have a portrait press, and have loaded the plate portrait, then make sure to select the **Center page on Media Width** and set the **Top Margin [TM]** to accommodate the normal unprintable area on your press.
- Click **OK** in the **Page Layout** window and in the **ThroughPut Info** window.
- Drag all but the first separation of your job to the **Held Queue**.
- Uncheck **Disable Output** in the **Output Controller/Monitor** window. The first plate will be printed.
- Remove the plate from the PlateWriter and place it on the front of the PlateWriter finishing unit, see finishing procedure in the following section.
- For subsequent plates, make sure that **Disable Output** is checked, load a plate into the PlateWriter, drag one separation from the **Held Queue** to the **Active Queue**, and then uncheck **Disable Output**.

## Finishing

- Use +/- buttons on the program selector **(1)** to select program:

  **0 = diagnostic**
  **1 = small 0.15 mm plates (e.g. 330 x 492)**
  **2 = large 0.15 mm plates (e.g. 459 x 525)**
  **3 = small 0.20 mm plates (e.g. 400 x 511)**
  **4 = large 0.20 mm plates (e.g. 625 x 914)**
  **5 = small 0.30 mm plates (e.g. 530 x 650)**
  **6 = large 0.30 mm plates (e.g. 785 x 1030)**
  **7 = gumming only/gum rinse**



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**Program 0 is for technicians only!**

- Make sure that the indicator **(2)** lights steady green.

**For the various indicator status and error codes please see Part 5 "Troubleshooting".**

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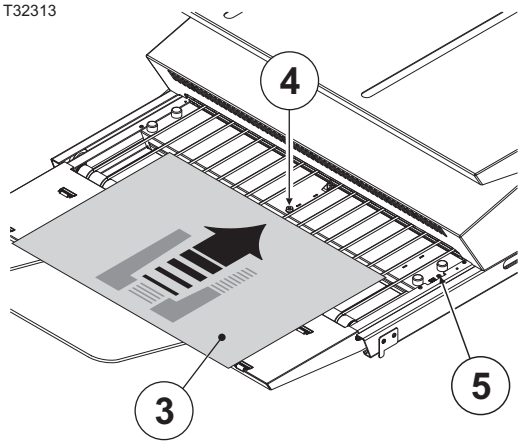
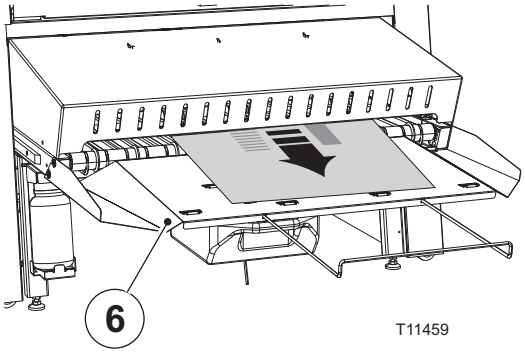



- Place the printed plate **(3)** on the conveyor making sure that the front edge is placed over the plate sensor **(4)**.
- If the curing oven has already reached the correct working temperature, the conveyor will take the plate through the oven, otherwise it moves the plate slightly forward and then it stops until the oven is ready.
- While the indicator **(5)** lights steady green or flashing green, plates can be put on the conveyor if the program selector is not changed. Program selector can be changed only when the indicator lights steady green.

**Recommended distance between two consecutive plates is at least 50 mm. It is important that the plates are not pushed forward by hand into the oven.**

**It is recommended to make a space of at least 300 mm or approx. two minutes between every 4-8 plates in order for the gum replenish system to work properly.**



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- When the plate is cured and finished then it appears on the exit tray **(6)**.

- If a plate is placed on the curing conveyor during the 13 minute gum rinse program, then the plate will be processed as usually but without any heat. Consecutive plates can be run as long as there is always a plate present in the finishing unit.
  When the last plate has exited the finishing unit, then gum rinse program is restarted and after 13 minutes stops and finishing unit is deactivated. It is no longer possible to activate the finishing unit by placing a plate on the curing conveyor. This ensures that finishing unit is not accidentally used for normal processing. To run any program, switch to required program by using program selector.

# Daily shut-down

- Switch the unit into OFF-mode by pressing ⏻ key. All lights turn off and the display will go blank.

## Important notes about switching the power on and off

Never switch off the main power while the printer is running. The printing heads may be left uncapped. If the machine is left unused with the printing heads uncapped for a prolonged period, the printing heads may become irreversibly clogged.

# Control panel function keys

The PlateWriter is equipped with the function keys located on the control panel.

**(1) Power button** - turns the printer on/off.

**(2) Power light** - light is on/off, then the printer is on/off, when flashing, the printer is receiving data or cleaning the print head or performing the other operations in the course of being shut down.

**(3) Load/Remove plate button** - displays Load/Remove plate menu.

**(4) Screen** - displays the printer's status, menus, error messages.

**(5) Menu button** - displays the menu for the tab currently selected in display.

**(6) Back button** - this button is used to take up one level in the menu hierarchy.

**(7) Left/Right buttons** - use this buttons to select the tabs.

**(8) Up/Down buttons** - use this buttons to highlight items or options, when menus are displayed.

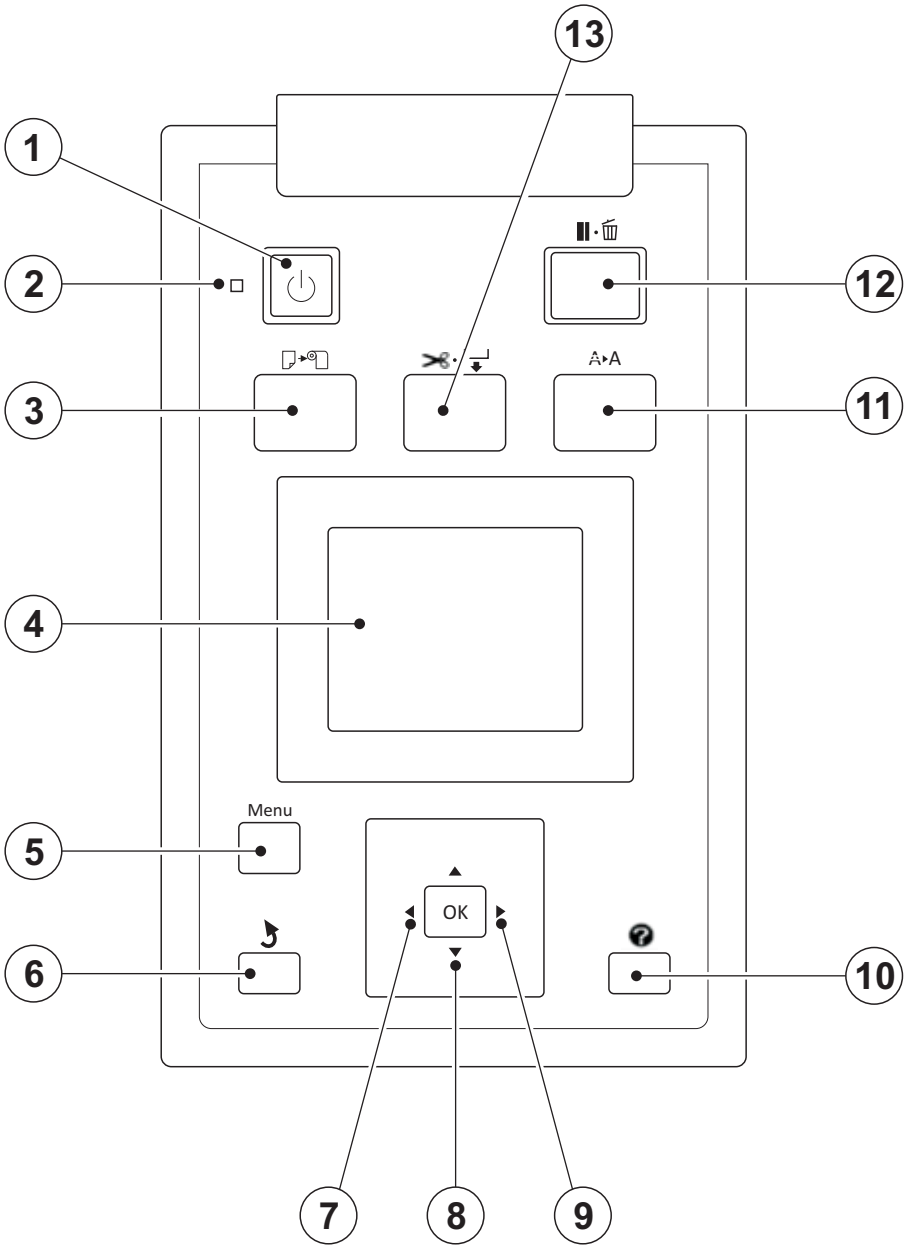
**(9) OK button** - displays the menu for the tab currently selected in the display. When menus are displayed and an item is highlighted, pressing this button displays the sub-menu for the highlighted item. If pressed while a parameter is selected from the Menu, the parameter is set or executed.

**(10) Help button** - displays the Help menu.

**(11) Maintenance button** - displays the Maintenance menu for nozzle checks and head cleaning.

**(12) Pause/Cancel button** - pressing this button while a menu or help is displayed closes the menu or help and returns the printer to ready status.

**(13) Feed/Cut Media button** - if the printing is not currently in progress and printer is loaded with plate, pressing this button first and then ▼ button, will feed the plate ahead.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1
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Menu
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OK
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# Part 3: Cleaning and maintenance

## Overview

This section describes the various procedures for care and maintenance such as:

### Printer

- Cleaning the printer body
- Cleaning the printer ink system
- Additional printer settings and check

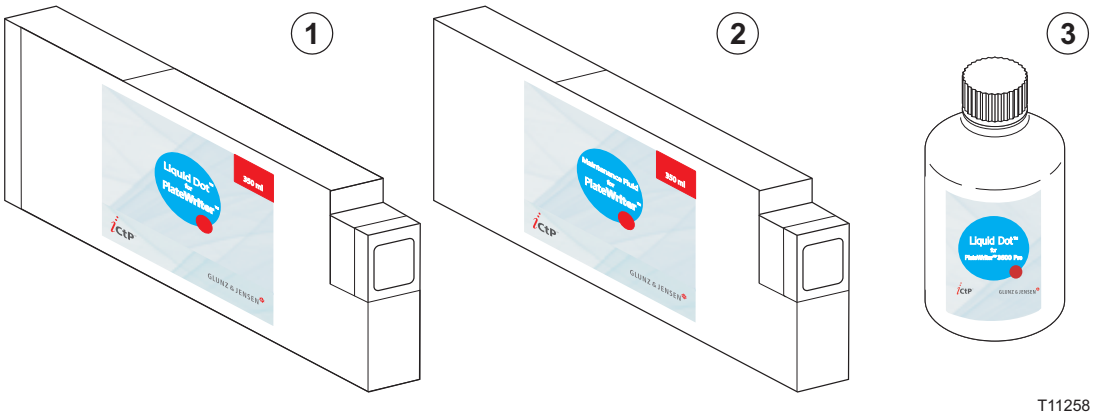
### Finishing unit

- Topping up the gum/finisher solution (daily)
- Replacing the gum/finisher solution (weekly)
- Running the gum rinse program (weekly)
- Cleaning of the gum/finisher and wash rollers (monthly)

For more information about cleaning and maintenance see the Maintenance Chart.

# Inks and fluids

The PlateWriter requires the use of various inks and fluids for processing, cleaning and maintenance purposes:




## Liquid Dot (1)

The Liquid Dot ink is supplied in special cartridges and used in the imaging channels to create a hydrophobic image on the printing plate.

## Maintenance Fluid (2)

The Maintenance Fluid is a general purpose fluid supplied in special cartridges, and is used to help keeping the ink system clean.

## Cleaning Fluid (3)

The Cleaning Fluid is supplied in a small bottle, and is used together with a cleaning stick to wipe around the print head, wiper and head cap seal, to remove dried out ink. The Cleaning Fluid is also used for dripping in and wetting the head cap to prevent the ink from drying out the ink pump system.

# Replacing the ink cartridges

If ink runs out, replace the cartridges as described in the following.

**Never use any ink other than genuine Liquid Dot ink from Glunz & Jensen. Doing so may result in malfunction or faulty operation.**

## Care and handling of ink cartridges

Give attention to the following points when handling ink cartridges.

- Never attempt to install any ink other than a Liquid Dot cartridge.
- Never attempt to disassemble.
- Never drop or allow to fall. The impact from a fall may cause damage, making the cartridge unusable.
- Store unopened in a well-ventilated location where the temperature is from 5ºC (41ºF) to 40ºC (104ºF).
- Once an ink cartridge has been installed, never remove it until the ink has been used up, except when moving the machine.
  Frequent insertion and removal may cause air to enter the ink tube, resulting in dot drop-out or other problems in printing quality.
- After removing an ink cartridge, never allow the machine to stand with the ink-cartridge port remaining empty — install a new ink cartridge immediately. Failure to do so may result in clogging of the heads.

**Read carefully the text on the cartridges for any warning regarding compatibility with other Liquid Dot ink or Maintenance Fluid types.**

- If Liquid Dot Cartridges are moved to a new slot that was previously charged with Maintenance Fluid, then carry out an ink charge as described below.
- The ink charge procedure is conducted in order for moving Liquid Dot through the ink system and into the print head.

Only if clear Maintenance Fluid has been previously charged is it possible to visually control that Liquid Dot has replaced the Maintenance Fluid. Otherwise it is recommended to use a small scale with an accuracy of approximately 1 gram. Cartridges can then be weighed before and after the ink charge giving a more precise indication of the amount of fluid that has been charged.

**Move the small label supplied with each cartridge and place in inside the ink cover lid. This is to mark which slots have Liquid Dot cartridges and which has Maintenance Fluid cartridges for later reference.**

# Other printer cleaning tasks

## General

Exposed areas of the machine may become soiled with ink during printing.
The cleaning methods described below let you continue printing without affecting the printed media or the machine.

**When carrying out any cleaning other than cleaning using cleaning sticks, switch off the main power (before turning off the main power, press the ⏻ key.**
**Never lubricate the mechanisms.**
**Never clean with solvents (such as benzine or thinners).**
**Never touch the printing heads or allow the printing heads to come in contact with anything except ink.**

## Cleaning the printer body

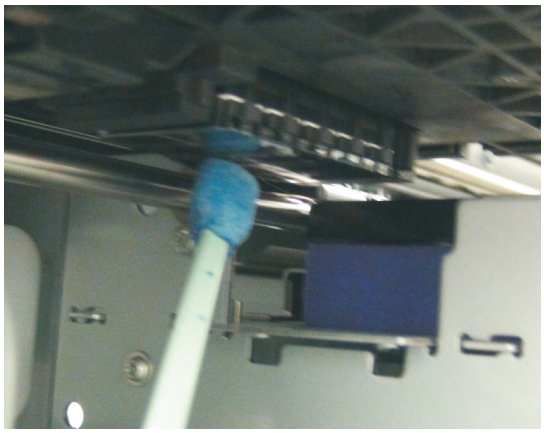
- Use a cloth moistened with water then wrung well, and wipe gently to clean all surfaces.
- Wipe the operating panel and LCD display gently with a clean, soft cloth.

**Do NOT put wet plates back in the printer. This will cause the image to transfer to the rollers and on every subsequent plate!**

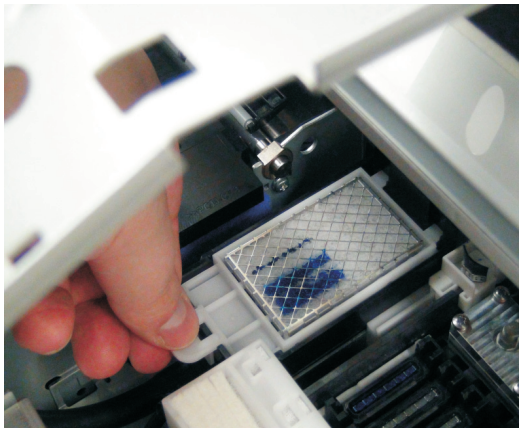
## Cleaning the printer ink system

For this cleaning task is needed the maintenance kit with the 100 ml WB Cleaning Fluid, 8 cleaning sticks and a pipette.

- Remove the right fender from the imanging unit (printer).
- Turn the printer to Serviceman mode by clicking ⏻ while pressing Menu, ↱ and OK button simultaneously.
- Go to (MECHA ADJUSTMENT -> CR UNCAP -> ENTER)
- Now the print head will take the basic position, open the cover and move the print head to the right side, now is print head ready for maintenance.
- Moisten a cleaning stick with the WB Cleaning Fluid and then clean the head cap seal (rubber lip). Also gently clean the foam inside each top cap for any residue of ink if needed.



- Then open and clean residue of ink off the flushing box by using the cleaning stick.



- After cleaning reinstall the left side panel and turn the power on at the imaging unit. The print head will then drive back in the capped position.

**If the print head is not capped immediately after the maintenance is completed, this could result in damaging the print head.**

### Additional printer settings and check

Adjusting the printer feed, uni-directional and bi-directional is important for the output quality of the PlateWriter.

These adjustments have to be performed on a regular basis.

## Finishing unit

### Running the gum rinse program

**It is recommended to run the gum rinse program at the end of each working period (not later than once a week).**

- Replace the solution in the gum/finisher bottle with warm water.
- Select program #7 on the program selector to start the gum rinse program.
- Run the program #7 for approximately 10 minutes recirculating the water through the gumming system and 3 minutes running dry. Then switch it off.

**After 13 minute gum rinse program, finishing unit is deactivated. To start new gum rinse program, switch to other program and then back to program #7.**

- Leave the unit with water until the start of the next working period, then replace the water with fresh gum/finisher solution.

**If a plate is placed on the curing conveyor, the gum rinse sequence is terminated.**

**Danger of crushed fingers when working inside the finisher section, proceed with caution. Always replace the side plate after completing cleaning and maintenance tasks in the finisher section.**

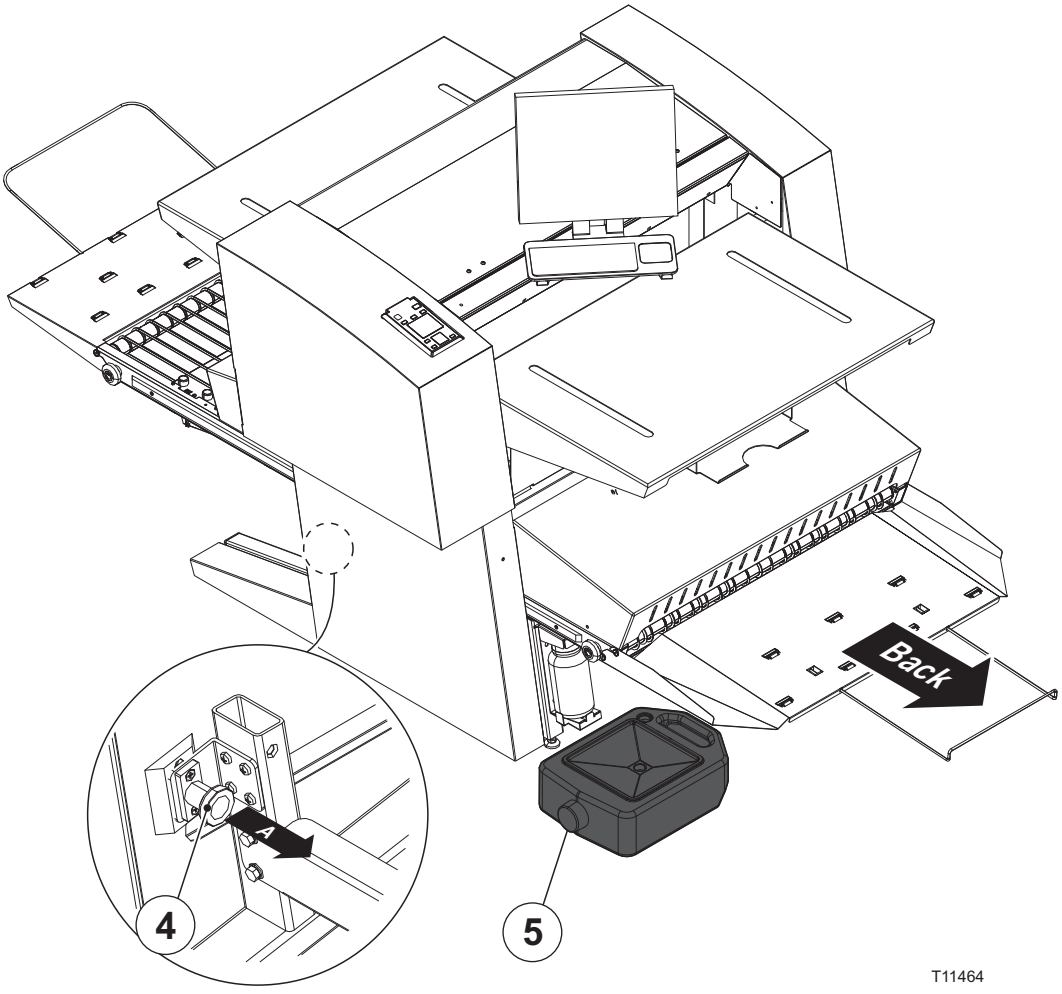
## Procedure for accessing the gum/finisher section

*See illustrations on this and opposite page.*

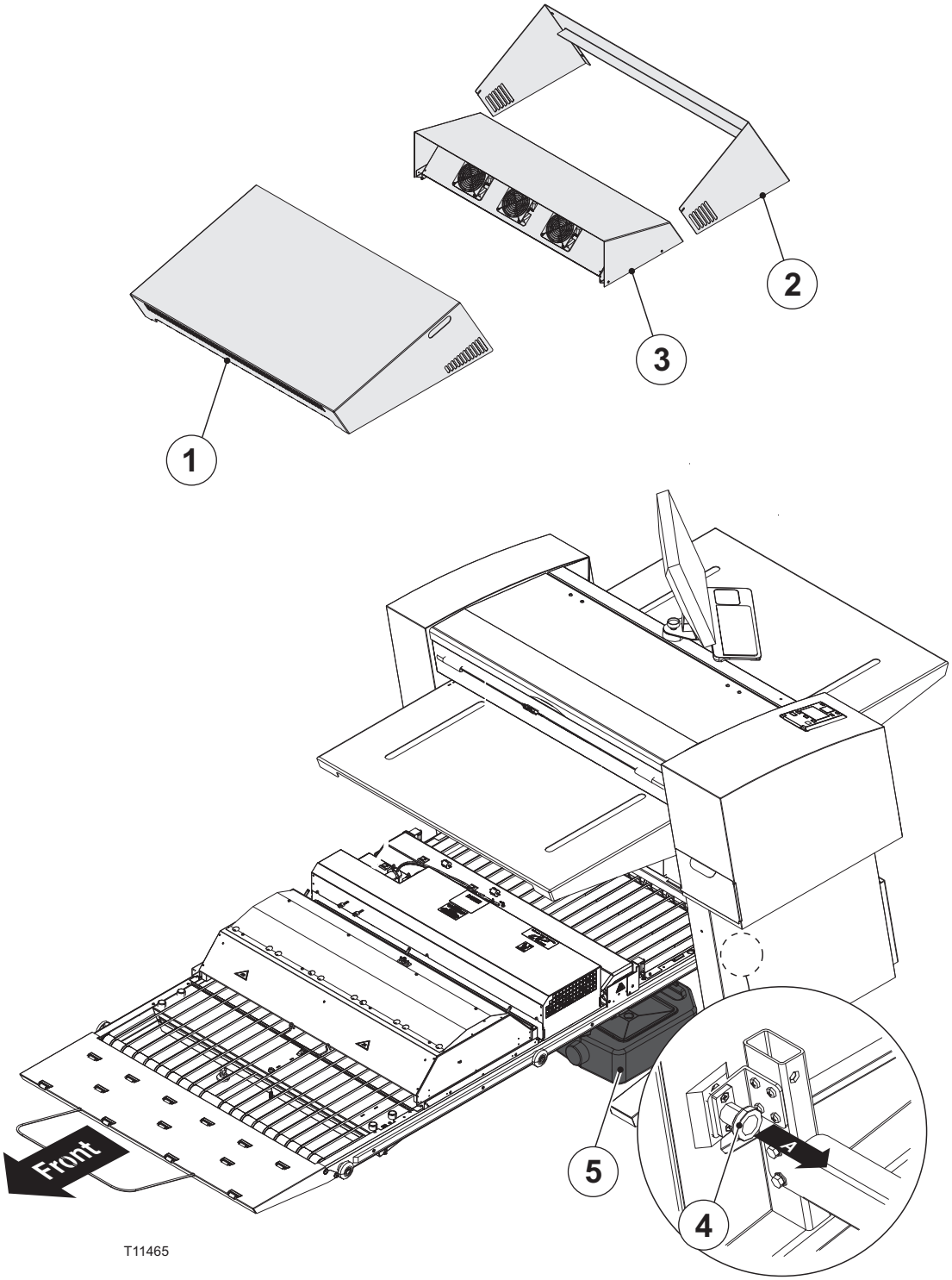
- Turn off the power supply to the machine.
- Remove the plug from the socket.
- Imaging unit (printer) can be slid out of the original position in both directions.

**When moving the finishing unit be aware to move the water tank (5) too to avoid leaking the water on the floor.**

- Pull out **(A)** the button **(4)** and slide out the imaging unit (printer) and remove the dryer, dryer cover and curing unit cover if necessary..



- After maintenance slide the imaging unit back to the original position and if needed reinstall the dryer **(3)**, dryer cover **(2)**, and curing unit cover **(1)**. Make sure that the holes on the dryer and the covers fit the bolts of the finishing unit (see Hardware Installation manual as reference).



## Cleaning of gum/finisher and wash rollers

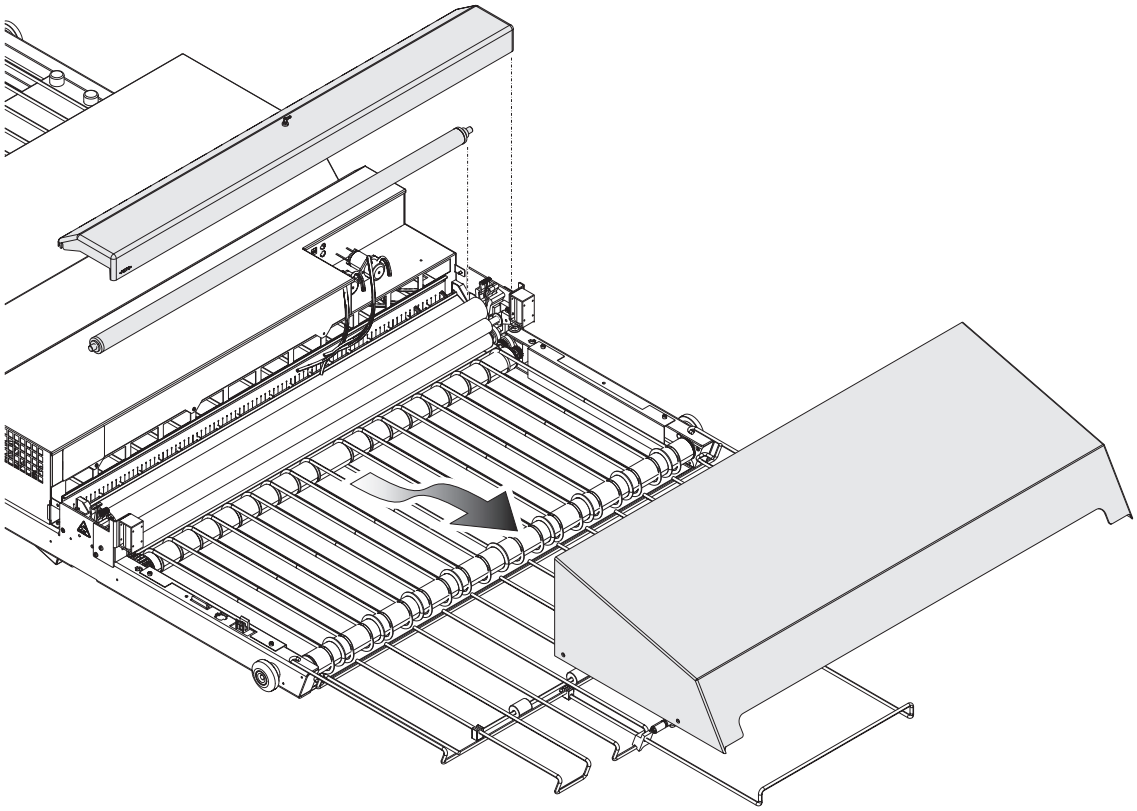
**It is recommended to perform this cleaning procedure once a month.**

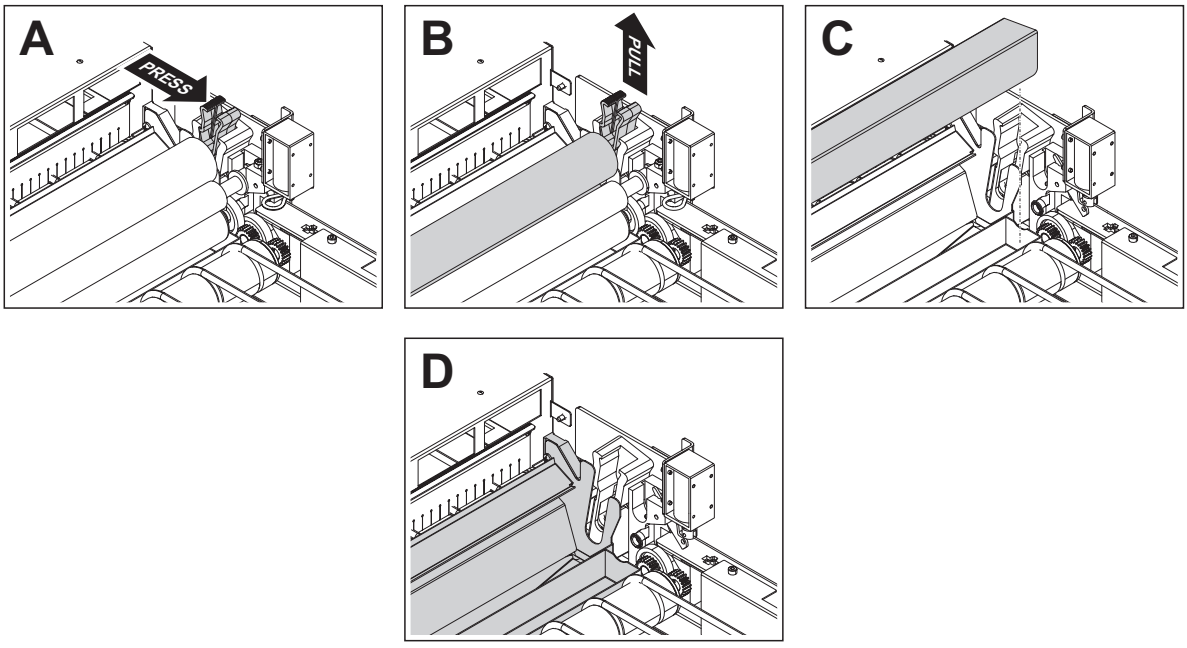
*See illustrations before.*

- Switch off and unplug the finishing unit.
- Remove the gum dryer.
- Slide out the finishing unit.
- Remove the gum section cover.
- Take out the polyurethane roller.
- Release the roller bearings and take out the gum rubber rollers.
  To release the roller bearings, press the locking arm as illustrated **(A)**, and then pull upwards **(B)**.
- Remove the wash guide **(C)**.
- The gum/wash tray can be removed and cleaned **(D)**.
- Clean the rollers and bearings in hot water using a soft brush.
- Reinstall all parts in reverse order, making sure that the bearings click properly into place.
- Rinse and refill black water container.

## Cleaning the finishing unit body

Use a cloth moistened with water then wrung well, and wipe gently to clean all surfaces and conveyor belts.



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## Gum/water replenishing system

### Use

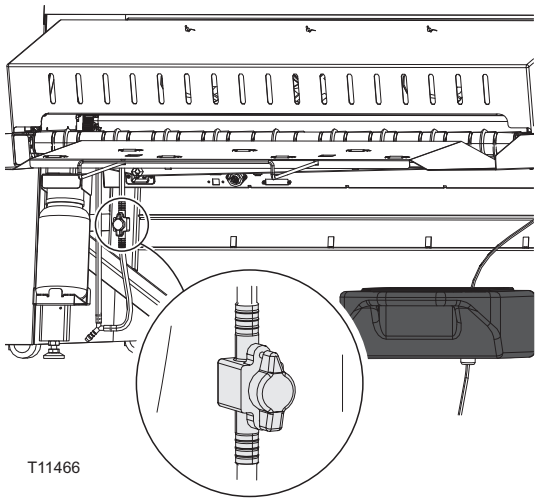
- Depending on the size of the plate, the finishing unit sets aside a little water pump run time (approximately 1 s for every 60 seconds that the finishing unit is running). Once the plate has passed through the machine, the water pump replenishes the reserved amount of water and distributes it to clean the rollers.
- If plates are continuously running through the finishing unit, it will continue reserving water replenish until it has accumulated 30 seconds. The finishing unit lights green (ready) as soon as water replenish is added.

**Do not turn off the finishing unit before it is ready (green). This ensures that water replenish is added and will stop the rollers from sticking together the next day.**

- If the finishing unit is turned off before replenish has been added, any saved replenish will be deleted.

### Cleaning

- The water tank must be emptied and cleaned once a week, for instance when changing gum.
- Refill with demineralised water only to avoid contamination of gum/plates.
- With the gum/water replenish system installed, gum should only be changed/refilled and cleaned once a week.
  Gum consumption will be approximately 20 g/m².
  Water consumption will be approximately 40 g/m².




**Depending on the throughput in the finishing unit, you should calculate how much gum and water to put in the gum bottle and water tank to make the gum last one week. If there is less than 25% gum remaining in the bottle when commencing work with the printer in the morning, it is a good idea to top up.**

# Part 4: Using the RIP

## Overview of the Navigator RIP

The Navigator RIP is an application that takes a document or job describing images or pages and produces output from that job on an output device - which in this case is either the PlateWriter or a proofing device.

In general, a software application or hardware device that performs this task is known as a Raster Image Processor (RIP) or, where the PostScript® language is involved, a PostScript language compatible interpreter.

The iCtP RIP workstation is not just a Navigator RIP, it is a RIP management system. It contains both a RIP and a collection of supporting functions that help the RIP perform its task efficiently.

For example, the iCtP Workstation accepts jobs from various platforms such as Mac or PC, different sources (from disks, CD's, shared folders on Networks or virtual printers visible to other users), the iCtP RIP workstation also handles previewing and output of processed pages, and performs the associated file handling.

### Input formats

The Navigator RIP accepts jobs from most major graphics applications and supports the following formats, with the exact options depending on your configuration of the RIP.

The input formats include:

- PostScript language (PS) files
- Encapsulated PostScript (EPS) files
- Portable Document Format (PDF) files
- TIFF/IT-P 1 files
- (16-bit) TIFF 6.0 baseline files
- JPEG and JFIF files

The Navigator RIP supports modern versions of these files including PostScript Language Level 3, PDF version 1.7, and derived standards such as PDF/X.
The RIP also has controls for special handling of older versions of these files if necessary.
The Navigator RIP can produce output in a variety of formats to suit various physical output devices and file formats.
Similarly, there are options for output to many proofing printers and final output devices. Each device, may have certain size limitations, as well as the ability to handle colour (for proofing) or separations (for plate-making). In turn each of these devices will have its own gain characteristic and require calibration.
Once the RIP is installed, a one-of set up is required to create a "base" from which the RIP will operate, and from time to time you may find it necessary to update or modify the settings to suit your ever-changing requirements.

As there is a great deal to set up, we have created the **Glunz & Jensen factory default** file (found in the C:\Xitron\Navigator 8.3r1\Factory default folder).
The file contains a "Basic Set-up" covering all the settings and calibrations required for several plate sizes and can be loaded into the RIP upon start-up.

Printing the **Glunz & Jensen factory default** file installs all the items required for an initial set up of the RIP including setting memory allocation, the RIP mode, buffers as well as some default calibrations, tone curves, and page setups for plate-making.

Once these have been loaded and the RIP restarted, (and your unlock codes entered as described in the previous section) you can use the following procedures outlined in this section to assist you in editing the existing setups, duplicating them for the basis of new setups or creating new page setups and calibrations customized for your press.

# Basic concepts and definitions

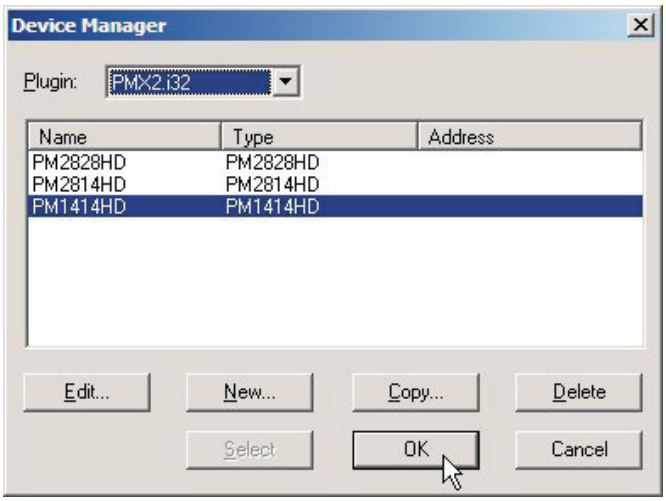
This section is intended as a guide to cover the basics required for operating the Navigator RIP and to get you started.
For a much more detailed explanation of the RIP or each of these definitions please consult the separate RIP User Manual from Xitron.
Many of the main functions and items referred to in this chapter are briefly described below:

- **Devices:** are essentially combinations of a physical printer, a software screen method, and printer-to-computer connection (i.e. USB).
- **Separation Styles:** have to do with how separations and composite files are handled by the Navigator RIP. You can use a "Composite" style to print composite or pre-separated files, a "Separations" style to separate composite files in the RIP (including limited trapping), and a "Progressive" style to produce progressive proofs from composite files.
- **Page Setups:** are sets of information required for printing a plate, such as device, resolution, media size, calibration and tone curves, margins on the media, rotation, etc.
- **Media Size:** when making a Page Setup this will be the size of your printing plate OR the size of the paper used for making proofs.
- **Page Size:** is the size of the PostScript or PDF file that is sent from your pre-press application. When you create or edit a Page Setup, the default Page Size is arbitrary. The RIP will override that setting with the size of the file you send to the Navigator RIP.
- **Calibration Curves:** are used to linearize the output of your Plate or proofer and to add tone curves to your output.
  Printing **Glunz & Jensen factory default** installs standard actual press and intented press curves to use with the device PM1414HD 2Ch HDMW14 and the iScreen2 screening.
  For proofing we have enabled the RIP to support Epson 4800, 4880, 7800, 7880, 9800 and 9880 printers. Within the Config dialogue box for each proofing device are several built-in calibration curves (shown with Green ticks) for various Epson papers and inks.
- **Actual Press Curves:** are used to linearize dot gain from the printing press, or to emulate the characteristics of another press.

- Printing **Glunz & Jensen factory default** installs general press curves designed to match resolution and ink for a specific region and *i*-plates on most commercial printing presses.
- Please note that these are default curves. To achieve a more accurate calibration, you may wish to create your own curves.
- **Intended Press Curves:** are used to rebuild the desired dot gain from the printing press, or to emulate the characteristics of another press.
- Printing **Glunz & Jensen factory default** installs Industry standard: **Commercial A, SWOP and Fogra curves, Gamma-1 -4, GJ PT1 and PT2 and GJ PT4 and PT5 curves** (plus others) which are calibration curves used to place on top of the linearised Glunz & Jensen *i*-plates where 10% will print as 10%, 30% as 30% and 50% as 50% etc., which to many users (particularly with four colour work) will create flat-looking images.
- The intended press curves, ADD back the gain achieved with conventional halftones (such as produced by plates made by film) on most commercial printing presses. Please note that these are default curves. To achieve a more accurate calibration, you may wish to create your own curves.
- **Tone Curves:** are used to adjust dot gain further (they can be used to create a cooler looking image, or to create more saturated images).
- No tone curves are installed with the **Glunz & Jensen factory default,** these can be generate by the user.

# Setting up devices

- Make sure that the PlateWriter is on and connected to your computer.
- Start the Navigator RIP and select **Navigator > Device Manager** from the application menu.




- Ensure the PMX2.i32 appears in the Window. If it does not, then check that you have entered the password for the InkJet Platemaking X1 or PMX2 device correctly (in the **Navigator-> Configure RIP -> Extras** dialogue box - when revisiting the Configure RIP -> Extras Window, the device Inkjet, PlateMaking X1 should have the word **YES** next to it if the password entered was correct).
- The **Device Manager** window lists the device types that are available for the PlateWriter Plugin, PMX2.i32. PMX2.i32 is the default name for the PlateWriter Output device and more options are available here. Select PM1414HD. This window gives you the ability to duplicate or rename the device or add other devices supported by the plugin.
- Based on experience with the PlateWriter and the Navigator RIP, we strongly recommend to leave this unchanged (whilst not needing to change this device, you may need to use this window to add proofing devices).

# Creating separation and progressive styles

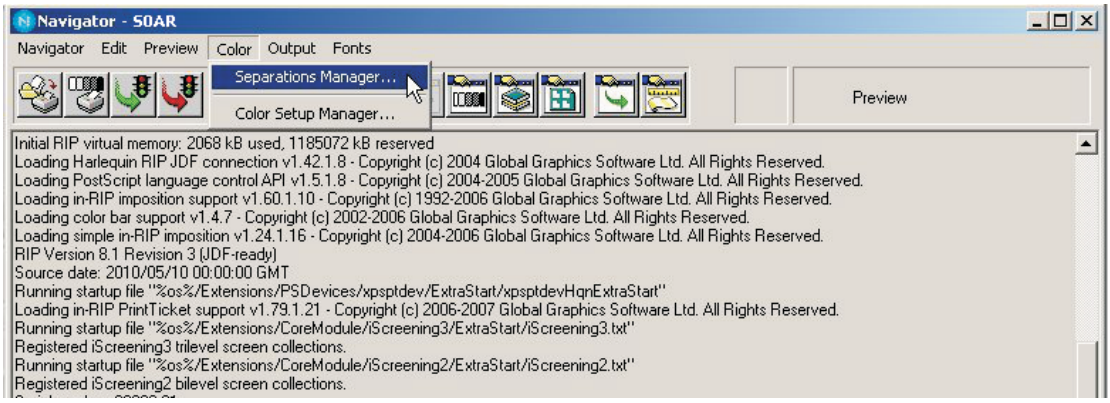
## Separation styles

A **separations style** is a definition used by the RIP to characterize how a file arriving will be handled, how the colours will be separated out and what screening will be used. There are many types of work flows used in the print environment to send files to bureaus and to CTP equipment. One of the most popular is a pre-separated workflow where users output their jobs in separations directly from the application. There are others where users prefer to send composite jobs and allow the RIP to handle the separations. There can be circumstances where files arrive in a format where incorrect colours have been used and you want the RIP to override the separations. A more extensive explanation is found in the Xitron RIP Manual.

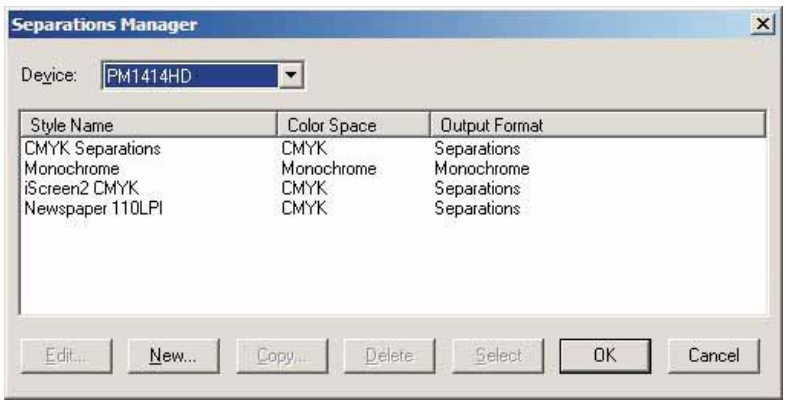
## Predefined separations styles

To make things easier, if you printed the **Glunz & Jensen factory default** file as described earlier, then it will have already installed some separations styles for you.

- Select **Color -> Separations Manager** from the Navigator RIP menu.



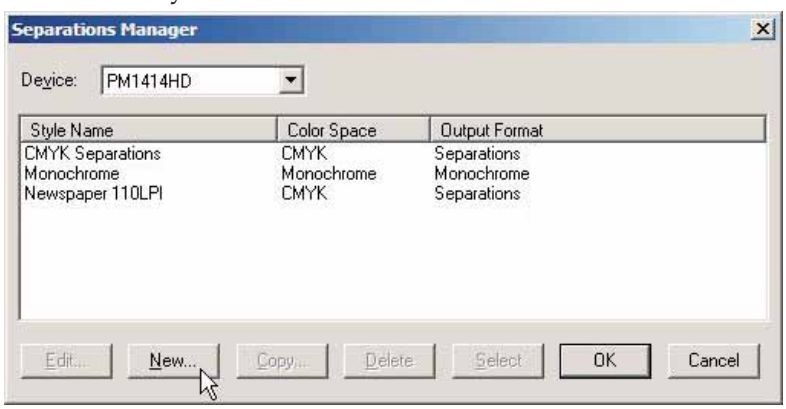

- This opens the **Separations Manager** window. Select PM1414HD as the device.




The predefined separation styles appear in the list. They should cover all the separation styles you need, so to create or edit a **Page Setup**, turn to the section titled **Creating Page Setups for Plate Making** later in this section.
However, if you did not print the **Glunz & Jensen factory default** file, follow the procedure as described below to create your own **separation styles**.

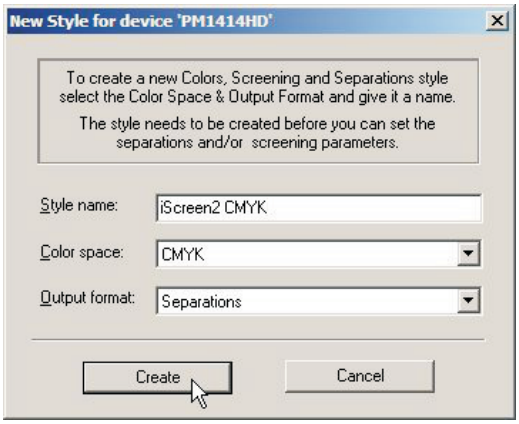
## Creating Separation Styles

- When opening the **Separations Manager** window there will be separation styles already entered if the factory default has been used or when the RIP is started first time.

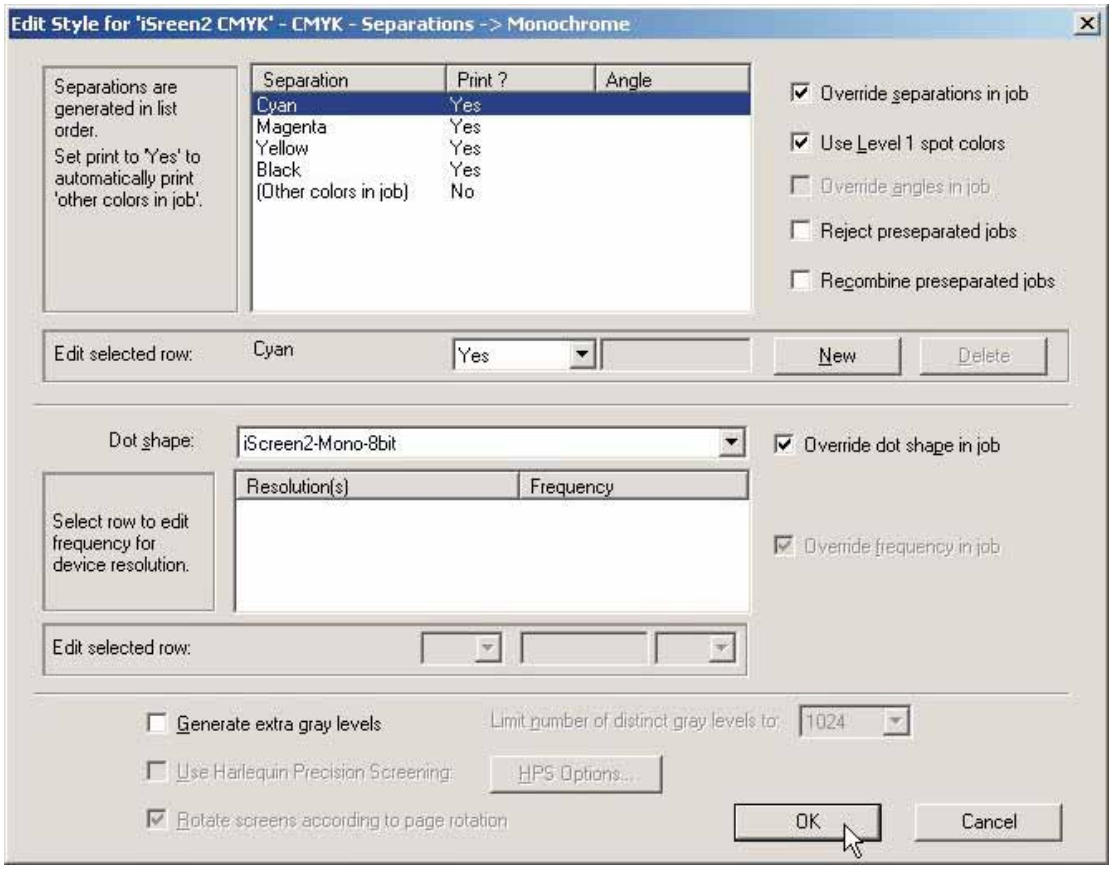



Click on **New**.

- The **New Style...** window opens.

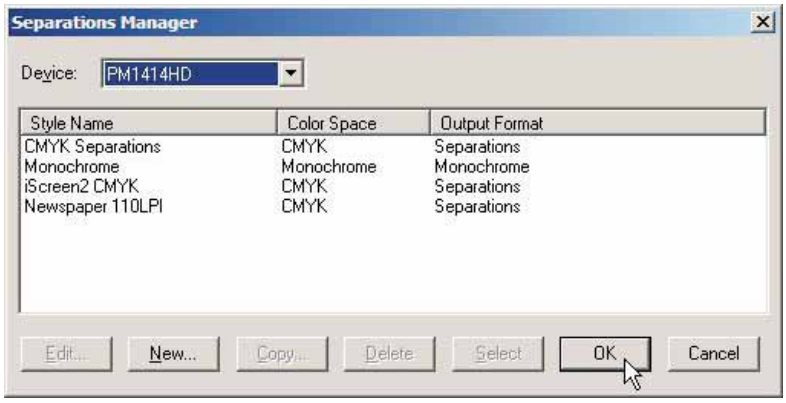



- Give the new style a name that will be easy to remember and reflects what your separation style will achieve (e.g. iScreen2 CMYK).
- Set **Color space** to **CMYK**.
- Set **Output format** to **Separations**.
- Click **Create** to open the **Edit Style** dialogue.




- Choose which process colours you want to print using the pop-up list.
  We recommend using **Not Blank** rather than **Yes** or **No**. **Not Blank** means that the separation will be produced only if it is found in the composite .ps or .pdf file.
  If you select **Yes**, all separations will be produced, even if they are blank. If you want SPOT colours to be printed, then set **Other colours in job** to **Yes** or **Not Blank** as well.

- If you received jobs such as PDF's from customers that contain multiple Spot and CMYK colours, and you want to force the separation to CMYK, then create an additional separation style, set **C, M, Y & K** to **Yes**, then **Other Colors in job** to **No**.
- Select whether to reject or recombine pre-separated jobs. Pre-separated jobs may only be recombined if the separations come to the Navigator RIP in a single file.
- Now set the screen to be applied to the image. Set the **iScreen2-Mono-8bit**, this is screening that have been designed specifically for the PlateWriter.
- Leave the **Generate extra gray levels** box unchecked.
- Click **OK** in the **Edit Style** dialogue.
- Now your style will appear in the list in the **Separations Manager** dialogue.




- Click **OK** to save the changes.

# Creating Page Setups for platemaking

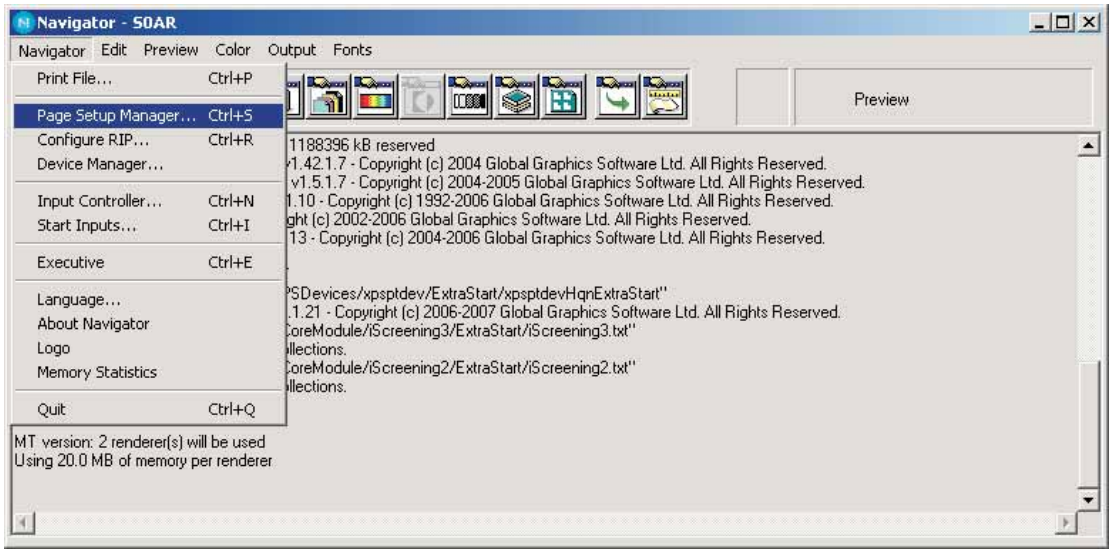
## About Page Setups

The Navigator RIP allows multiple page setups, each can be used to describe how to handle a job that arrives at the RIP.
The page setup identifies which device will be used to output the file, which separation style will be applied and thus the screening used to create the halftone. It also describes the orientation and position of the job on the media, and finally the actual media size itself.
Multiple page setups can be used for varying press sizes or orientations (such as portrait presses or landscape presses) in a large print shop to allow plates to be made for each press and position each plate correspondingly, or page setups can be used to apply a different separation style if you get jobs from different sources, which have been created differently. Any combination of the above can also be applied or even a different output device such as a proofer.

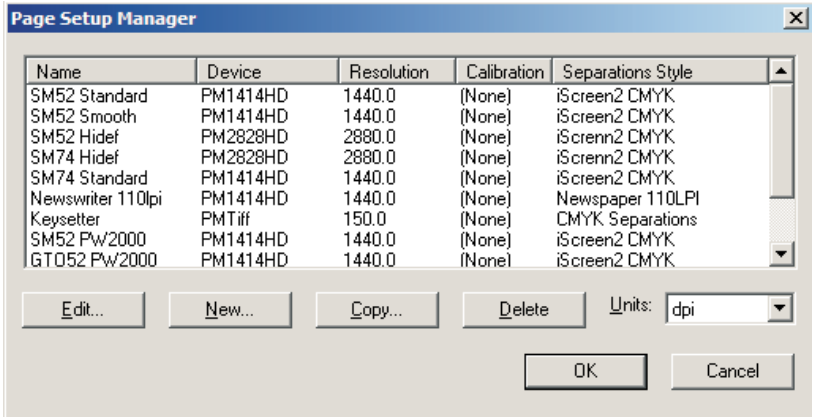
## Predefined Page Setups

To make things easier, if you printed the **Glunz & Jensen factory default** file as described earlier, then it will have already installed some separations styles for you.

- Select **Navigator -> Page Setup Manager** from the Navigator RIP menu.



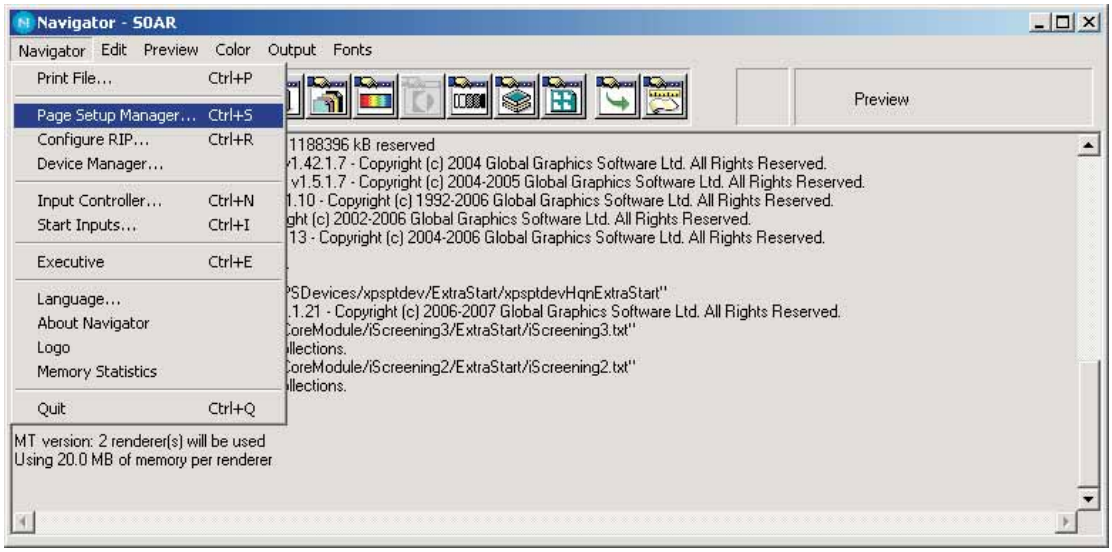
- This opens the **Page Setup Manager** window.



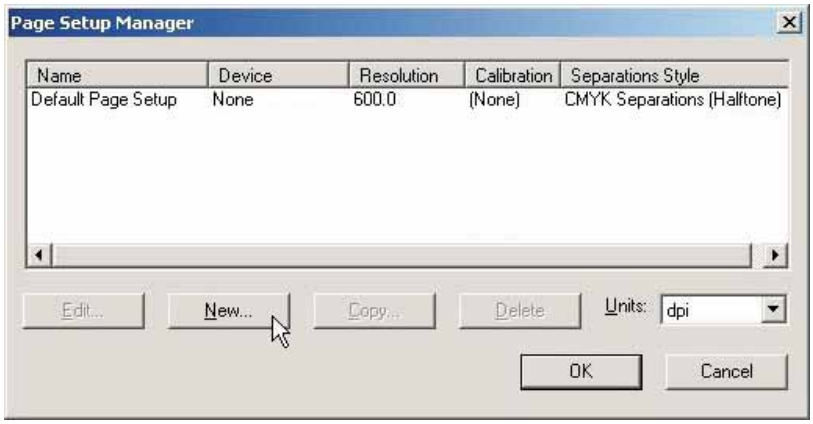

Here are created page setups for different presses, SM52 CMYK and SM74 CMYK based on the device PM1414HD 2Ch HDMW14 or alternative for higher resolutions. You can use these page setups as they are or you can simply change them to meet your requirements (such as larger plate size) or you can create your own.
However, if you did not print the **Glunz & Jensen factory default** file to load the page setups as described earlier, then you will need to create a page setup before you can use the RIP.
Follow the procedure as described below to create your own page setups if required, otherwise for an easier way to change the existing Page Setups loaded by the **Glunz & Jensen factory default** file, see the section *"Duplicating and editing a Page Setup"* on page 4-30.

## Creating Page Setups

- Select **Navigator -> Page Setup Manager** from the Navigator RIP menu.

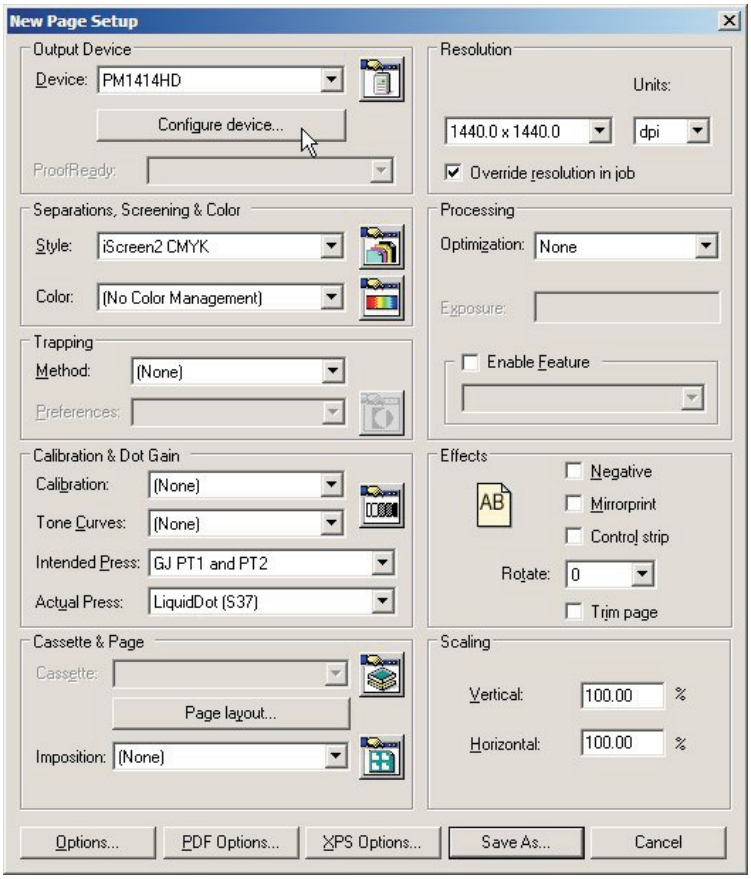


- The **Page Setup Manager** dialogue appears.



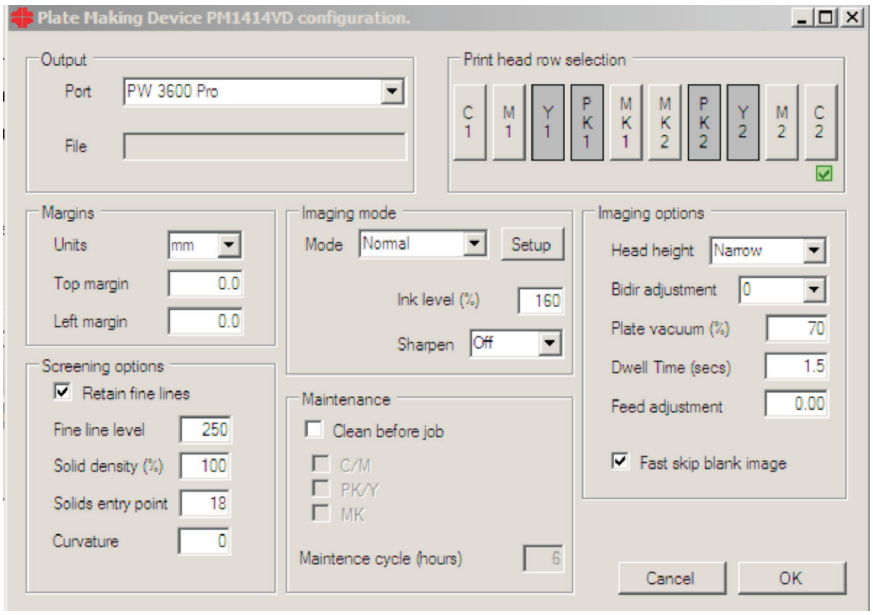

Click on **New…**

- The **New Page Setup** window opens.




- In the **Output Device** section select the device **PM1414HD** and check that the values in the **Resolution** section change to **1400 x 1400**.
- Click on the **Configure device** button in the **Output Device** section.

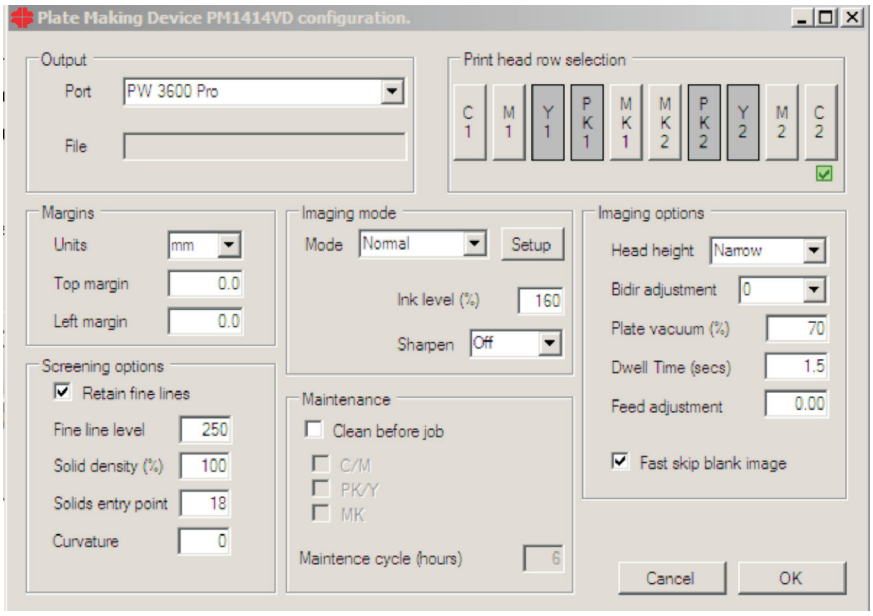
- The configuration window for the **PlateWriter plug-in** opens.




- The screenshot shows the set up as made by the Glunz&Jensen factory default file. This may be altered as described on the following pages.
- Click **OK** to continue.

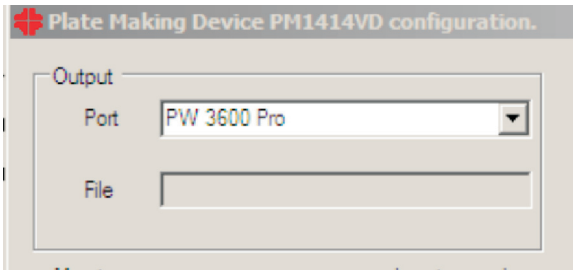
# PlateWriter plug-in functionality

This is a basic description of the functionality for the plug-in used with the Xitron RIP for the PlateWriter.




## Output

Here you can choose the output device. The Plug-in shows installed printers in the Windows system.




In **Port** window select the printer to use.
**File** window is currently not enabled. Printing to a file is still possible by setting up a printer in windows, which prints to file.

## Margins

The margins setting can be used to adjust or tune the margins used when printing. This option allows you to choose millimetres or inches for the Adjust top and left margin option. If the image is not correctly placed on the plate, small adjustments can be made to ensure correct centring and gripper edge. Margins can be typed in as a positive or negative value.

## Maintenance

### Clean before job

If checked a clean before job command is issued to the printer just before the job if the time since last printing has exceeded the "Maintenance cycle (hours)" setting.

### Maintenance Cycle (Hours)

This allows users to specify a maintenance cycle defined in hours. If the printer has not been used within the defined time period, the plug-in will make the printer perform a cleaning before the job is printed.
It is possible to select to perform cleaning for selected pairs only (e.g. Pk/Y). This will reduce the amount of fluid used for cleaning (no Maintenance Fluid is used). Select the channels that have Liquid Dot in the imaging unit.

## Imaging Options

### Head Height (Platen Gap)

Head Height is the actual physical distance or height of the print head relative to the printing plane. It has three options: Narrow, Standard and Wide. Wide can be used in special cases for added safety. The print quality will be slightly degraded.
In generally 0.15 mm will use Narrow and 0.20 or 0.30 mm will use Standard option.

**Bidirectional printing is not supported for the wide print head setting.**

### Plate Vacuum %

The vacuum on the plate during transportation and printing can be set in a range from 0 – 100%. The default value is 60%, which should be sufficient to ensure enough vacuum, and at the same time allow a smooth transportation of the plate. Uneven tints and solids can be caused by too high a vacuum, as it prevents a smooth transportation.

### Feed adjustment %

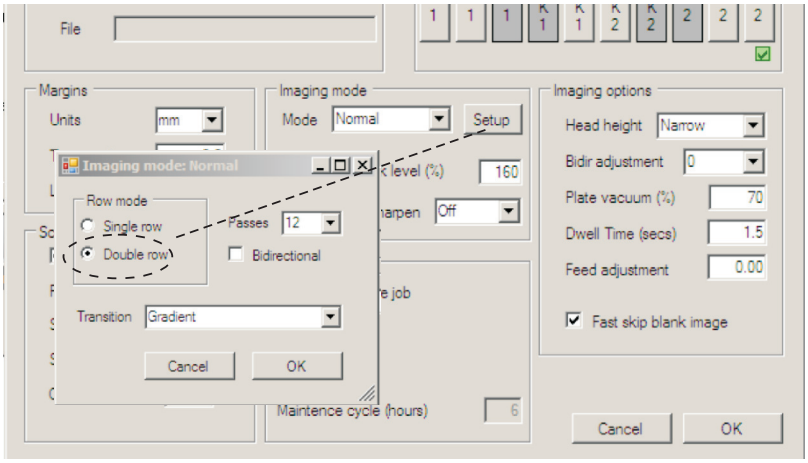
The Feed adjustment is adjustment of the feed in the printer for each job. It is calculated in % and is used to adjust the length of an image. For example, if an image is 400 millimetres and is only printed and measured as 398 millimetres, the feeding must be increased by 0.5%. An image of 400 millimetres will be reduced to 398 millimetres with a feed adjustment of -0.5% and increase to 402 millimetres by a feed adjustment of 0.5%. Please use the file IctpFeedMetric.pdf or IctpFeedInch.pdf and run the job through the RIP on a Feed Adjustment set to (for further information please refer to the chapter Adjustment of the printer feed in Hardware Installation manual).

## Imaging mode

Each imaging mode selection contains several settings which controls the print mode speed and quality. There are two selections: Normal and Fast.
Each imaging mode is setup by clicking the Setup button. First select e.g. Normal, then click the Setup button to see or change settings for the Normal imaging mode.

## Row mode

The print head has 10 individual print rows. Each other print row is displaced physically in the head so that two rows can be combined for printing in double resolution. E.g. M1 and M2 together can be used as a double row combination. The double row combination will have the potential to print twice as fast as a single row. In fact any row designated 1 can be combined with a row designated 2 to form a double row.
If only rows designated 1 or rows designated 2 are used then the printing will be single channel. Single row printing will be slower than double rows but have the potential to print by using more passes. More passes will allow ink to dry better and may help eliminate patterns caused by print head scan due to fast printing.
Note that the PlateWriter will normally have both Liquid Dot and Maintenance Fluid installed. One cartridge will supply a double row pair with ink. E.g. the 'Cyan' cartridge will supply the C1 and C2 print head rows. It is possible to use all rows for printing, however Maintenance Fluid will not work and print in the press.



### Two channel printing

One double row in double row mode or one single row in single row mode is called a channel. A channel can be used to a print job. A channel can be combined with another channel with a randomly interleaved distribution of the image. This is called multi-channel printing. Multi-channel printing does not alter the printing speed, merely it uses more nozzles for the same job. Using more nozzles to print a job will help mask small variations or poor jetting of individual nozzles. In order for multi-channel combination to be valid the selected nozzle rows must align:

1. In **single row mode** only similar designated rows can be used. E.g. PK1 and Y1 can be selected together.

2. In **double row mode** only pairs of double rows must be selected. E.g. PK1/PK2 and Y1/Y2 can be selected.

One double row in double row mode or one single row in single row mode is called a channel. A channel can be used to a print job. A channel can be combined with another channel in randomly interleaved distribution of the image.
The print head rows are grouped in pairs of two rows each. E.g. the M1 and M2 printing rows.

### Passes

This setting determines how fast the printing is. The lower the number of passes the faster the actual print speed. Space of passes will yield the same speed disregarding of single or double row mode. But double row modes have the potential of printing twice as fast.

### Bi-directional

Selecting Bi-directional will enable printing in both print scan directions. The final printing speed will be almost doubled. The quality of bidirectional printing will be highly dependent on the bidirectional adjustment.
Deselect to print bidirectional. This will improve text and line art quality.

### Transition

This function determines the image pattern used for overlapping or interweaving of the individual print passes.
If the number of passes is set to the minimum, then the print mode will default to step transition disregarding the actual selection.
In general it is recommended to use the gradient transition as this will minimize potential patterns from each print head scan.
When printing fast, i.e. 8 passes or fewer, selecting the step transition may improve the print quality.

### Sharpen

Sharpen gives the ability to make text and lines sharper/thinner. The default is Off and no sharpen is applied. You can choose to apply Light or Full sharpen. This function works by removing dots on the edges of solid areas. Light version will remove dots only on the one edge. Full version will remove the front and the rear edge dots.

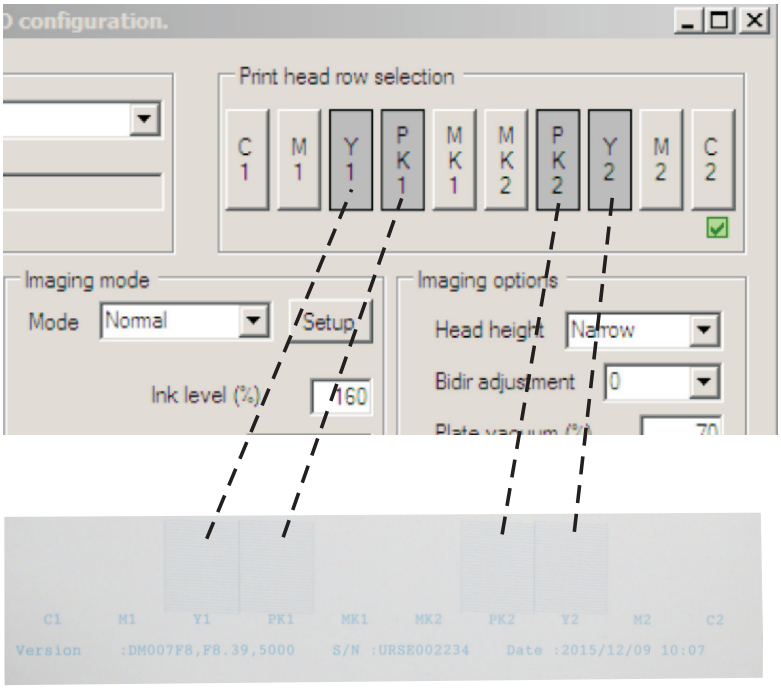
### Ink level

This setting controls the ink level in solid areas. It works on the already screened image, contrary to the settings in the 'Screening options' group.
A setting below 100% will reduce the amount of ink in solid areas. Reduction is done by removing dots in the image.
A setting above 100% will increase the amount of ink in solid areas. Increase of ink is done by adding dots from the other print channels.

**This is only possible if 'double channel' printing is selected, which is done by selecting the individual print row buttons. See below regarding print head row selection.**

## Print head row selection

Each button in the print head row selection pane corresponds to a specific nozzle row in the print head. It also corresponds exactly to the nozzle test job as printed from the printer user panel.




It is not possible to use all combinations of button/nozzle rows for printing. First of all the possible combinations are depending on the imaging mode chosen, single or double row.
The check box in the lower right corner in print head row selection section will indicate if a valid combination is selected. Some buttons/rows will be disabled based on what is currently selected if that combination will not be possible.

### Screening Options

These settings are used only when screening using iScreen. They are not used when using any other screening. If the plugin dialog is started from the output controller monitor, that is when the job has already been screened, than the complete group is disabled.

### Use object masks

Select if the job should be split and screened as four individual object types: text, gradient, solid and image. This is a deprecated setting, it is recommended to keep this setting unchecked.

### Retain fine lines

When 'Solids entry point' is set to a value other than 0 and 'Solid density' is lower than 100%, then all solids are screened as a halftone. This may render hairlines as dotted lines. If this setting is checked then hairlines will remain solid.

### Fine line level

This sets the lightest gray level that will be be retained as a solid, when 'Retain fine lines' are checked. Recommended level is 250 or more, that means that all gray levels at or above 250 (250-255) will not be screened.

## Screening Linearisation Control

The three settings:

Solids entry point

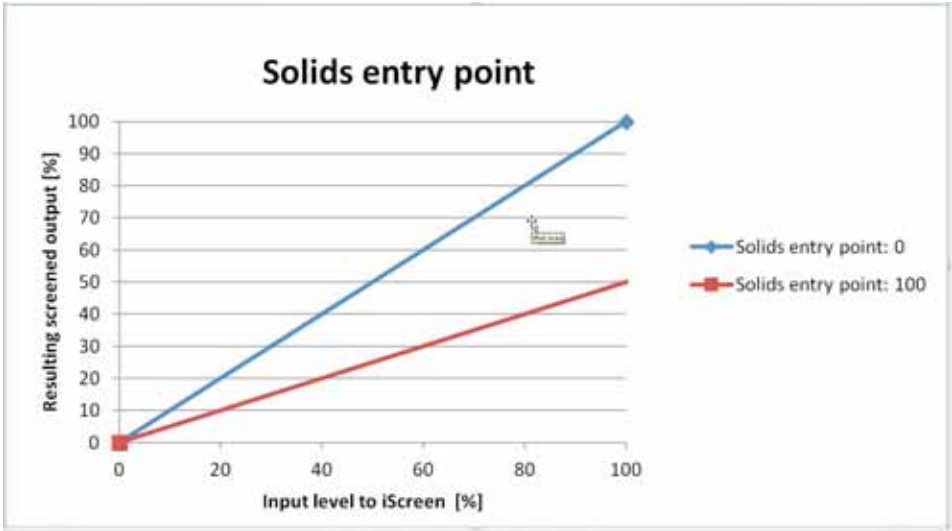
Solid density

Curvature

control how iScreen is internally calibrated. When the screening is calibrated correctly there is no difference in the amount of ink that is jetted onto the plate for the various resolutions (for the same job/halftone).
The maximum achievable ink coverage increases with resolution. E.g. 2880x1440 dpi can jet twice the amount of ink compared to 1440x1440 dpi. It is therefore necessary to decrease the ink coverage when the resolution increases.

### Solids entry point

This setting controls the internal calibration of iScreen. I.e. this setting determines how the grey levels in the RIP'ed image are internally translated into actual ink coverage when the job is screened.
When the job is RIP'ed the individual separations are sent to iScreen as continuous grey level raster images. iScreen screens the image into 1 or 2 bit half toned images suitable for printing on the PlateWriter.




With reference to the shown graph, the input to iScreen, internally in the RIP, are grey levels from 0 to 100%. Then iScreen will screen the image grey levels into ink area coverage as shown on output axis.
If 'Solids entry point' is e.g. 0 then an input of 100% will also be screened as 100% solid. See the blue graph. If 'Solids entry point' is higher than 0 e.g. 100 then solids will be screened as halftones. In the case of the red graph example, a solid in the image will be screen as 50% ink area coverage.
Ink area coverage is the relative amount of ink dots for a given resolution. E.g. for 50% exactly half of the possible ink dots are used.
Note that it is the entire grey level range from 0% to 100% that is affected by the 'Solids entry point' setting.
Note that the very 100% solid can be further enhanced, i.e. the ink coverage is increased, depending on the 'Solid density' setting. See below.

### Solid Density

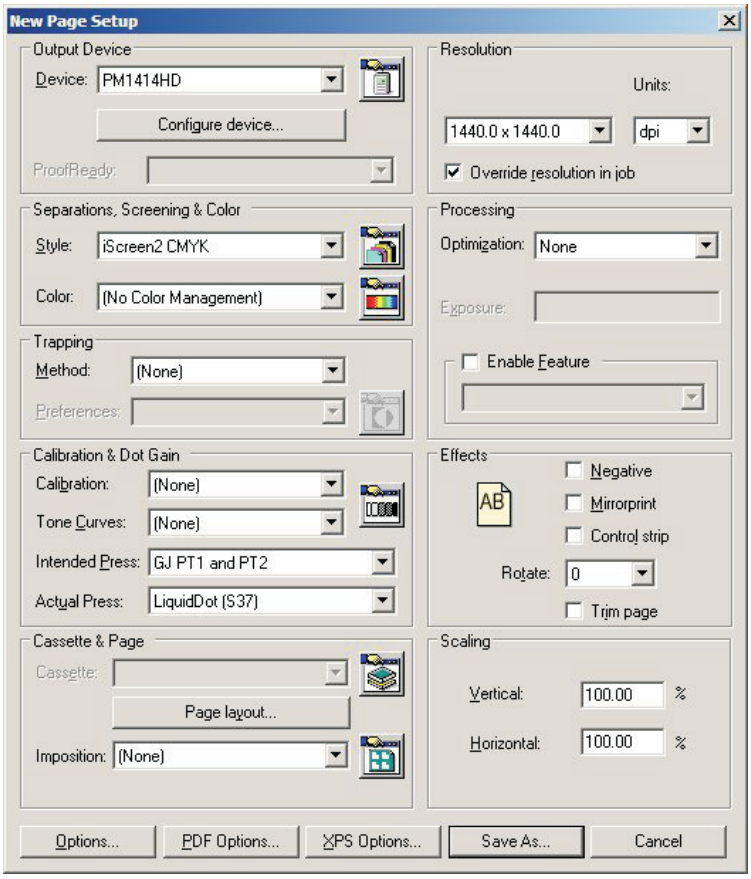
If, due to the setting of ''Solids entry point'', solids are screened as halftone, then this setting will enhance darken the solid. A setting of 0% will retain the solid as a result of the ''Solids entry point'' setting. A setting of 100% will render the solid at full coverage.

### Curvature

This function will adjust the shape of the iScreen internal calibration curve.

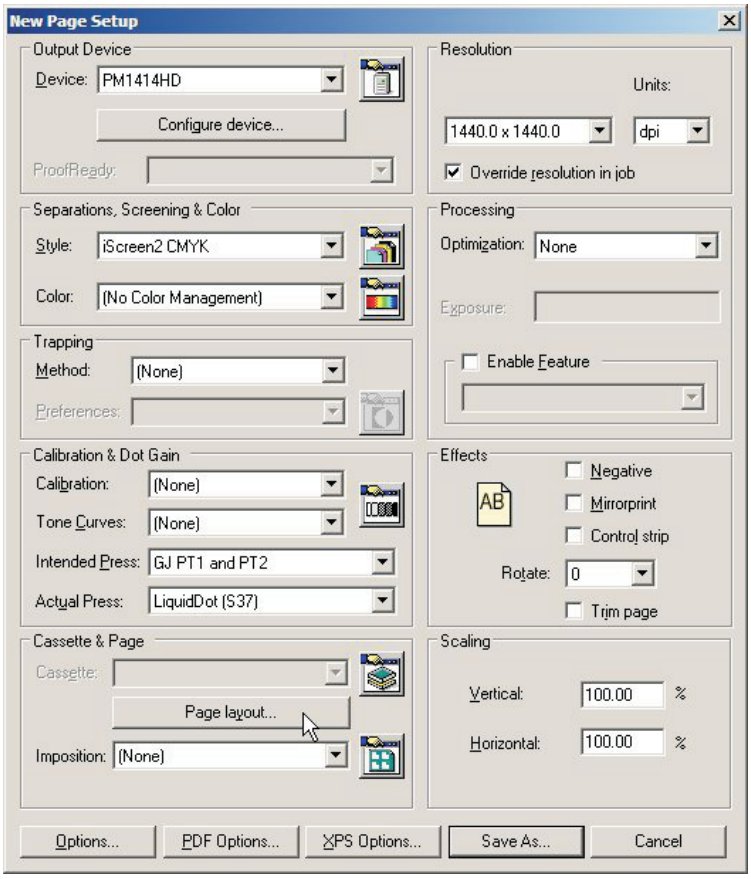
## Saving the page setup

- When you made all settings, click **OK** and return to the **New Page Setup** window.
- In the **Separations, Screening & Color** section of the **New Page Setup** window choose a **Style** – "iScreen2 CMYK" was the one we created earlier, or select it from the pre-defined Separations Styles loaded when printing the **Glunz & Jensen factory default** file.

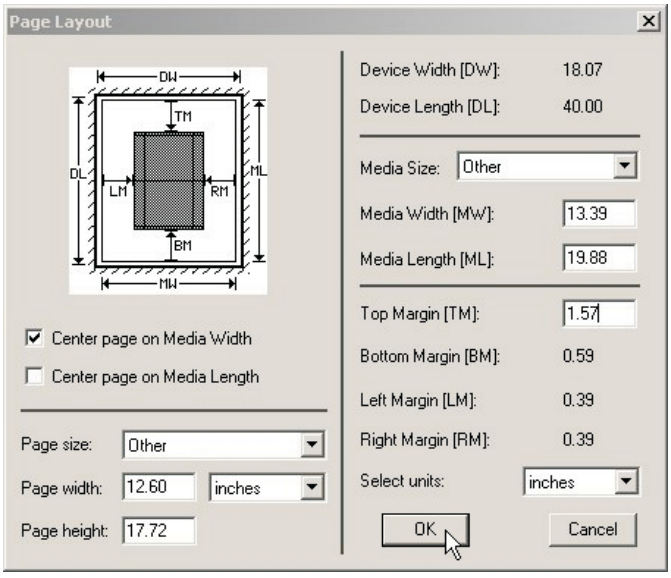



- If you did not print the **Glunz & Jensen factory default** file, then leave the fields in the **Calibration & Dot Gain** section blank, and follow the procedure described in **"Calibrating"** later in this chapter.
- If you did print the **Glunz & Jensen factory default** file then,
  – Set **Calibration** to **None**.
- Set **Tone Curves** to **None**
  – Set **Intended Press** to **GJ PT1 and PT2**, or another curve that matches your request. As CTP equipment is generally calibrated to provide a linear press sheet, this adds back the gain normally expected by conventional printing presses and thus creates a richer output for 4 colour work than a linear press sheet would.
  – Set **Actual Press** to **LiquidDot (S37)** or another curve that matches your request.
  – This linearises the output on the press sheet, thus compensating for individual press characteristics and the effect of the Deeds screening.

- The **New Page Setup** screen should now look like this (if the **Glunz & Jensen factory default** file was printed, otherwise each of the **Calibration & Dot Gain** items are set to **None**).

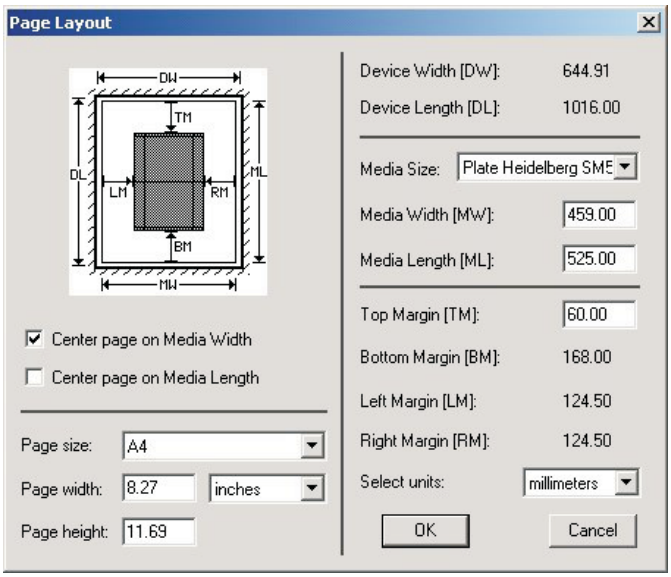



- In the **Cassette & Page** section click the **Page layout...** button to open the **Page Layout** window.




- Select units (inches or mm) for media size and margins.

## Setting the plate size



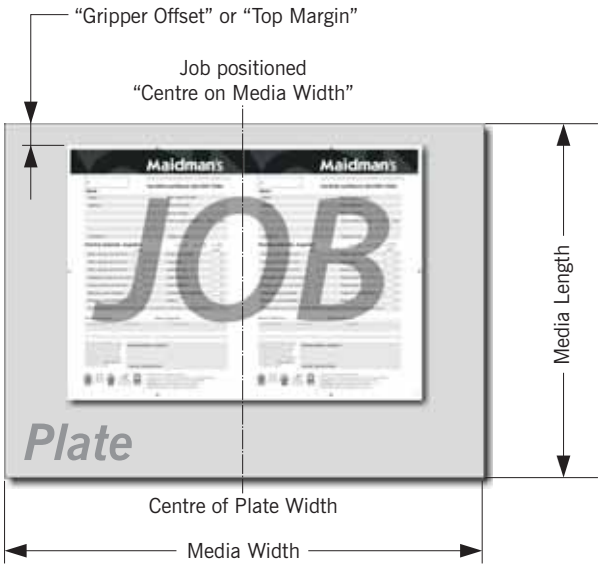

- For printing plates set the **Media Width** and **Media Length** to the width and length of your printing plates. For example, for a **Heidelberg SpeedMaster 52** set **Width** to **525 mm** and **Length** to **459 mm**. In general it is recommended to have the press gripper side along with the register pins on the PlateWriter. As the PlateWriter has both front and side register systems it is always possible to obtain this on a 2-up press and at the same time to image the plate in landscape. 4-up plates are always imaged in portrait with use of the side register system.
- Make sure that the plate will fit on the printer in the orientation you are defining.
- If the **Page Setup** is for proofing set the **Media Width** and **Media Length** to the width and length of your proofing material. Note that this will generally be a different size than your printing plates.

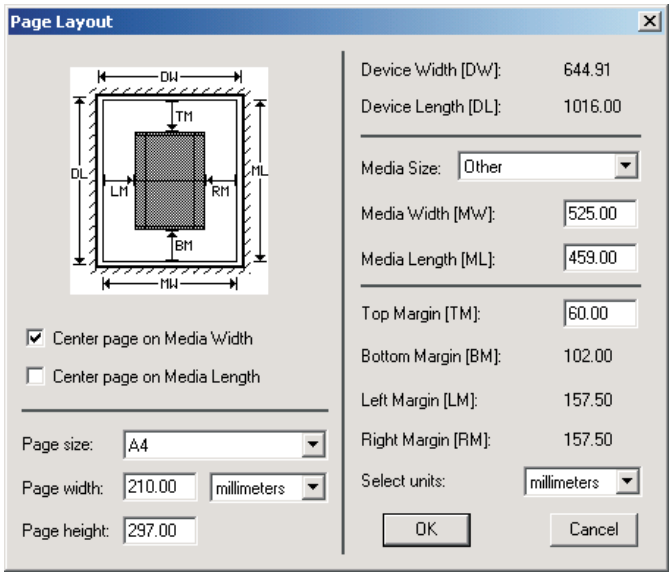
## Setting the Gripper and Job Position on the plate

Not all of the plate can be reproduced. Furthermore, to reduce press make ready time, it is desirable to place the job at the same starting point in terms of height, and in the centre of the width of the plate. As all presses have an area at the top of the plate where some of the plate is placed in the gripper, you should first establish where on the plate you want your jobs to start. This is often known as the **Gripper margin**.

### Setting the Gripper and Job Position for landscape printing presses

For **landscape** presses, where the plate is printed in landscape, the PostScript or PDF file will generally be centred on the **Media Width**, and the **Top Margin** will be the **Gripper Margin** plus the plate bend.





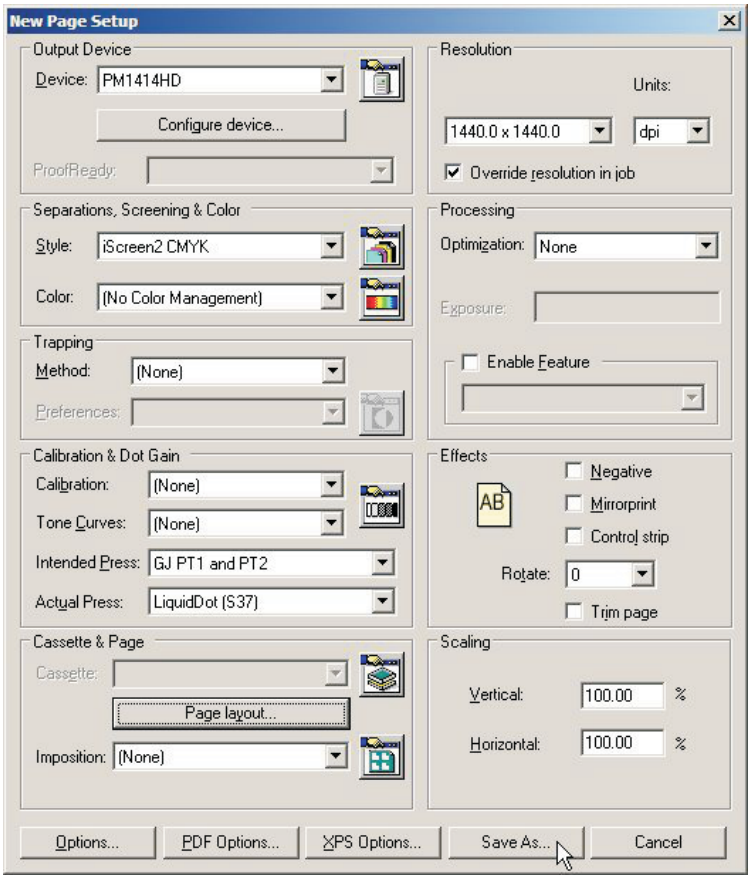

**Example of a Heidelberg SpeedMaster 52**:

- The plate is loaded landscape (the long edge fits into the gripper).
- The plate size is **459 mm x 525 mm**, so set the **Media Width** to **525 mm** and set the **Media Length** to **459 mm** as shown above.
- Then check the **Centre page on Media Width** box (this places the job, irrespective of size, in the centre of the plate Length) and ensure the **Centre Page on Media Length** is **not** checked.
- Finally the **Top Margin** box will be available for you to enter the position that you want the image to start (the gripper margin) from the top plate edge to the start of the job.
- Both the **Left Margin** and **Right Margin** boxes will be greyed out, as the job will automatically be centred by the RIP.

**Please note that running 4up plates on the PlateWriter in most cases will result in printing the plate in portrait. Then the plate must be registered on the side register and centered on the length and the left margin will then be the gripper margin.**

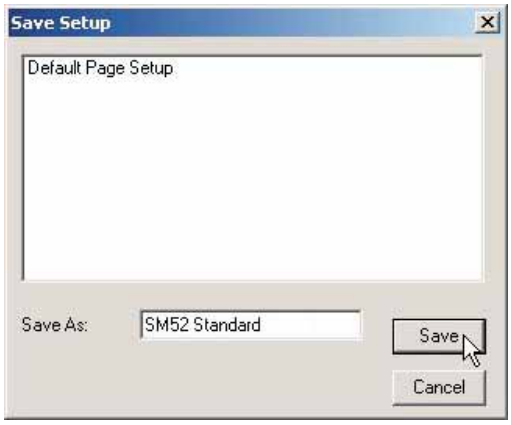
**The Page size in the bottom left of the dialogue box, will be overridden by the page size of the job being sent down from your application, so the value here is not important, however we recommend that you set it at the largest job size you are ever likely to send to this plate.**

- Click **OK** to return to the **New Page Setup** window.

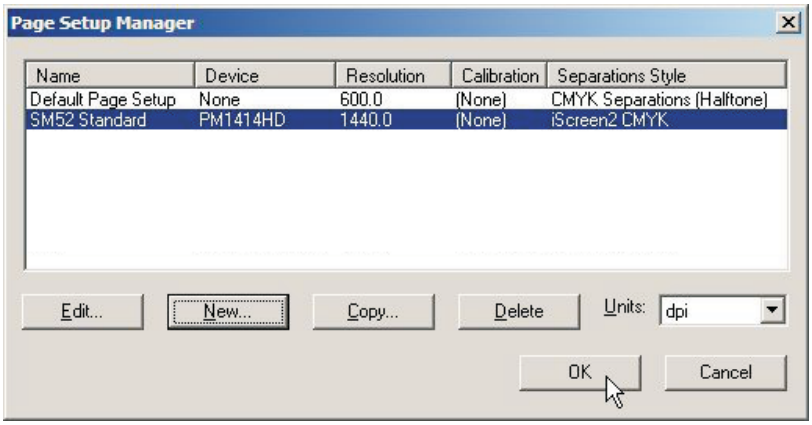



Click the **Save As...** button.

- In the appearing **Save Setup** dialogue…




...give your **Page Setup** a name which reflects the press size, and if necessary the **Separations Style** so it will be easy to select later. Click the **Save** button.

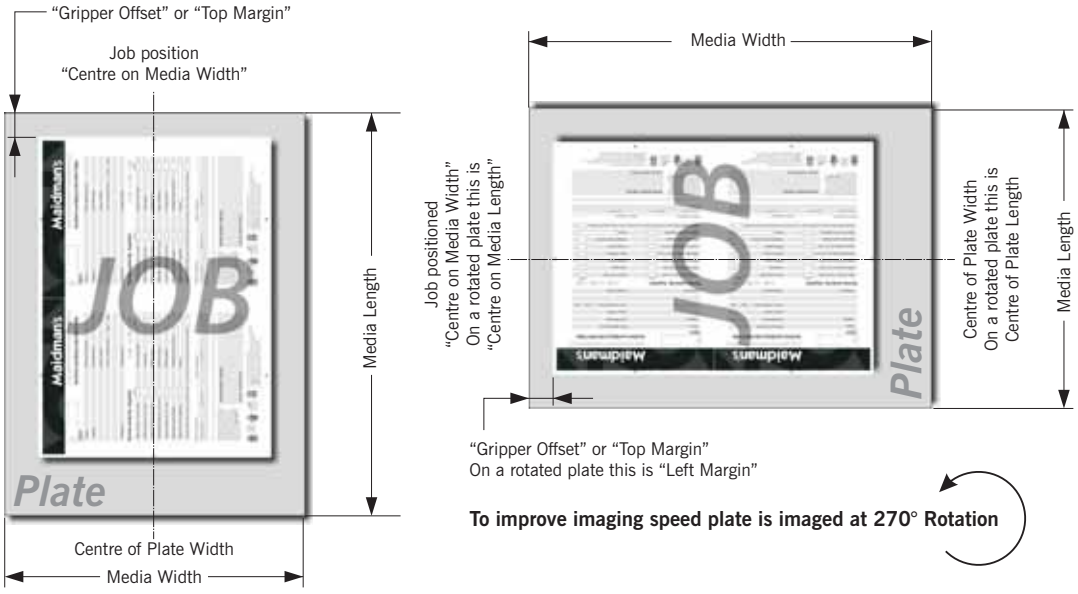



- Click the **OK** button to exit the **Page Setup Manager**.

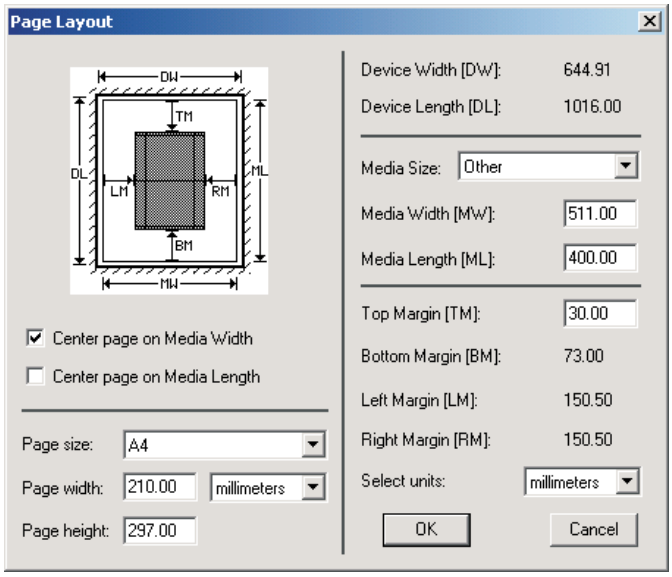
**If you click "Cancel" at any point, including to exit the Page Setup Manager above, then any changes you made or new Page Setups will be lost!**

### Setting the Gripper and Job position for portrait printing presses

For 4-up **portrait** presses, the PostScript or PDF file in theory should be **centred on the Media Width**, and the **Top Margin** should be set equal to the gripper margin plus the plate bend.

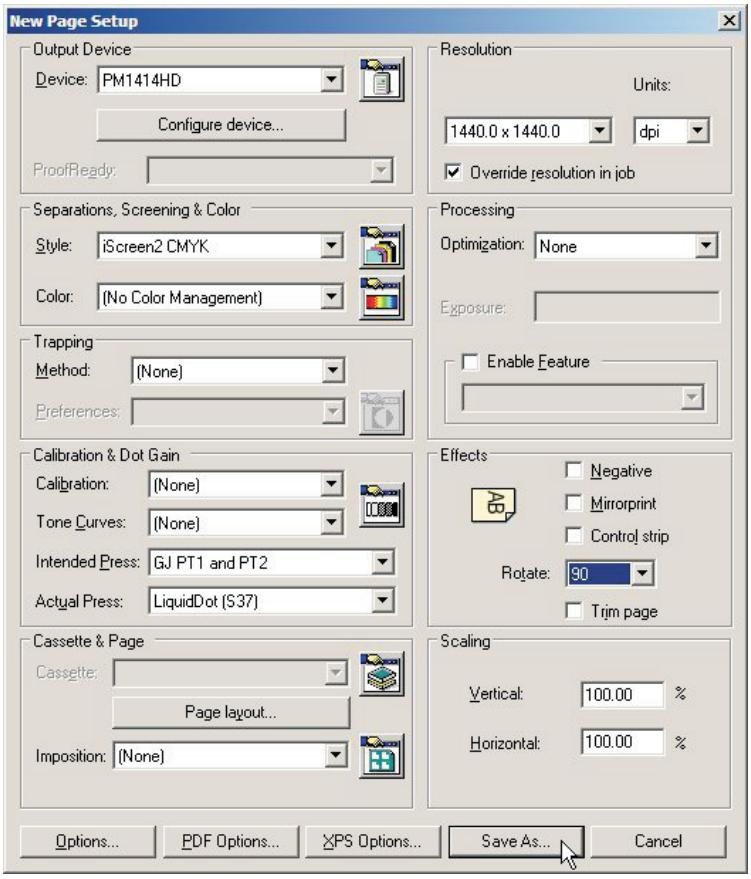



If your plate size allows it, in many cases it will be quicker for the PlateWriter to print the plate in **Landscape** orientation due to the fact that the plate has less far to advance. In this case, the PostScript or PDF file should be set to **centred** on the shortened **Media Length**, and the **Left Margin** will be set to the gripper plus the plate bend on the printing press however as described previously.



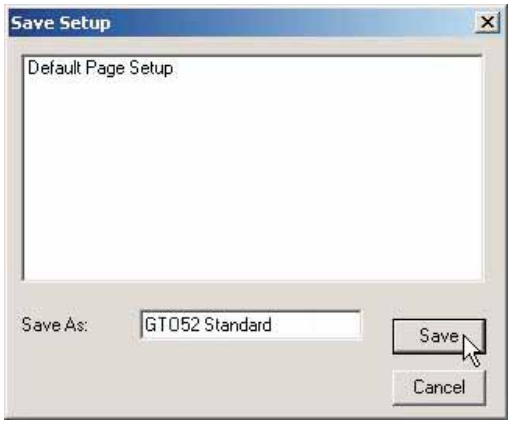

- **Example of an Heidelberg GTO52 press:**
- The plate size is 400 mm x 511 mm.
- Set the **Media Width** to a plate length of **511 mm** and set the **Media Length** to a plate width of **400 mm** as shown above.
- Check the **Centre page on Media Width** box (this places the job, irrespective of size, in the centre of the plate width) and ensure the **Centre Page on Media Length** is **not** checked.
- Finally the **Top Margin** box will be available for you to enter the gripper plus the plate bend on the printing press.
- Both the **Left Margin** and **Right Margin** boxes will be greyed out, as the job will automatically be centred by the RIP.

- Click **OK** to return to the **New Page Setup** window.



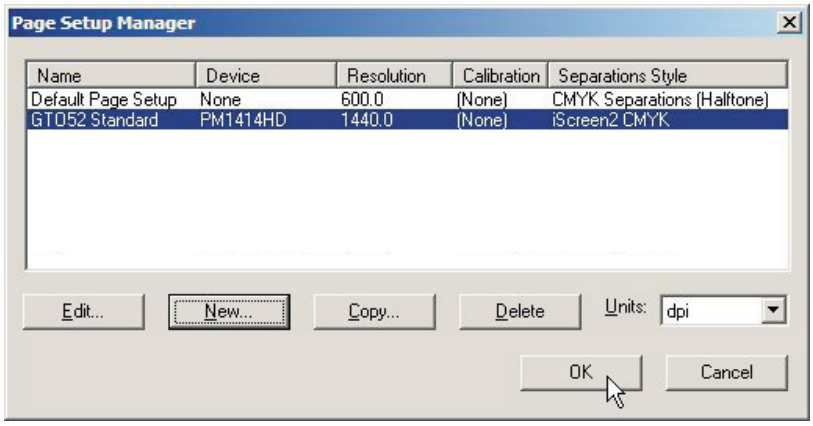

- In the **Effects** section set **Rotate** to the required rotation that matches depending on the PostScript or PDF file and if you have a portrait or landscape press.
- Click the **Save As...** button.

- In the appearing **Save Setup** dialogue…




...give your **Page Setup** a name which reflects the press size and if necessary the **Separations Style** so it will be easy to select later.

- Click the **Save** button.
- In the **Page Setup Manager** dialogue...




...click the **OK** button to exit.

**If you click "Cancel" at any point including to exit the Page Setup Manager above, then any changes you made or new Page Setups will be lost!**

## Duplicating and editing existing Page Setups

### Overview

One of the easiest ways to create new page setups is to duplicate an existing one and change the items you require. The most common requirement is to create Page Setups that match different presses and plate sizes.

In addition to this, you may wish to create a duplicate of an existing Page Setup to handle jobs created by different sources differently.

For example, one workflow/customer may always supply the jobs rotated by 90° and so you can create a duplicate Page Setup, simply with the **Rotation** Page effect switched on to correct this.

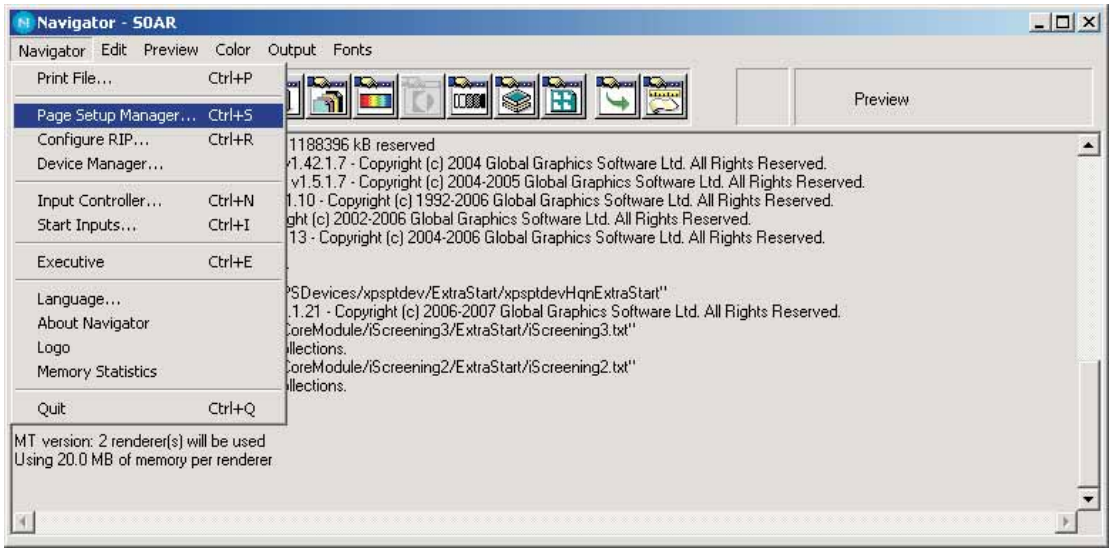
Alternatively, one workflow/customer may supply jobs separated, another may supply jobs pre-separated. Again, duplicating the Page Setup and simply selecting different separation styles for each Page Setup easily solves this problem.

Finally, you may find from time to time, you receive jobs that have been badly constructed, and contain CMYK process inks and multiple spot colour inks. Here again you can edit the Page Setup to override the separation styles to force all colours to CMYK.

**Editing a Page Setup is easy, but remember that it will alter the Page Setup you choose to edit. We recommend that you duplicate/copy the Page Setup you want to base your new Page Setup upon, then change this duplicate and leave the original Page Setup untouched.**

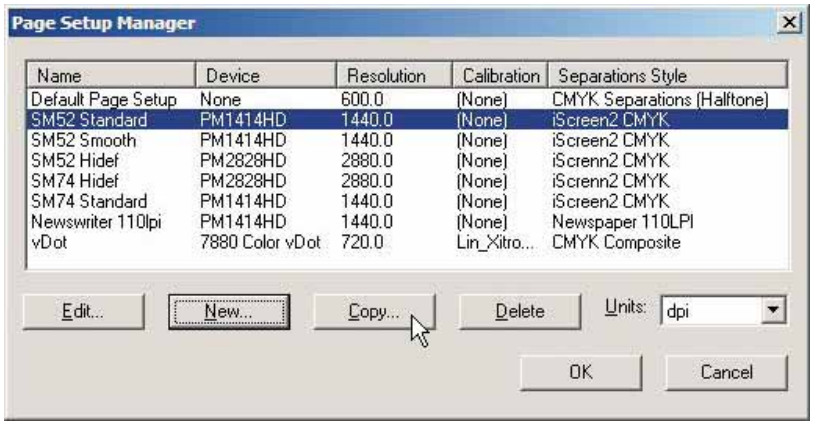
### Using "Copy" to create a Page Setup for a different Plate Size

- Select **Navigator -> Page Setup Manager** from the NavigatorRIP menu.



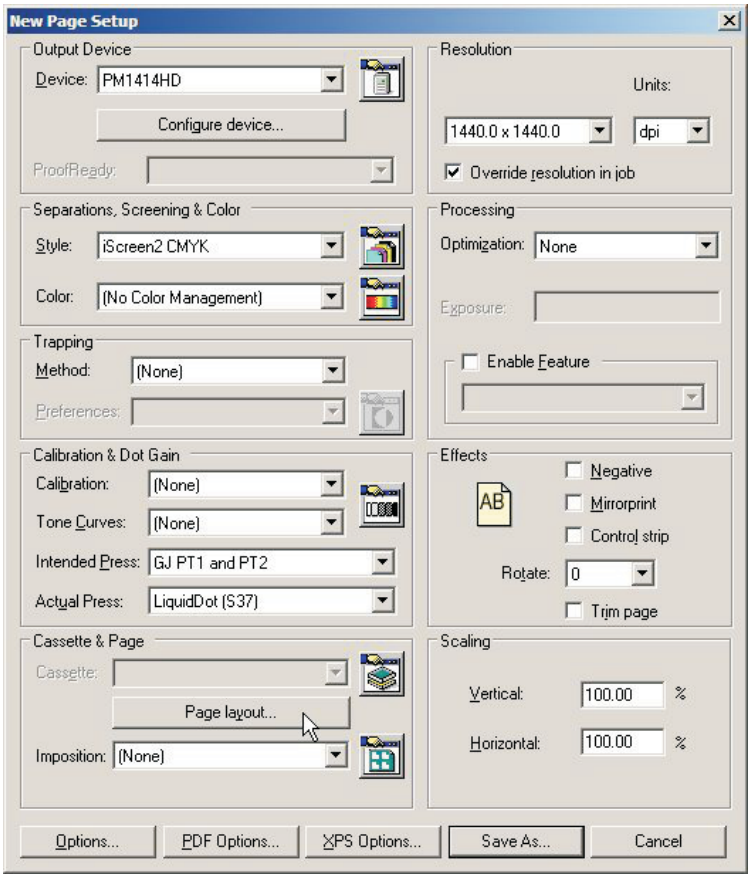

**If you already have a Press Setup created, and you wish to add another of a different size, then try to select a Setup with the same orientation (e.g. if you have a Portrait Press setup such as an Heidelberg QM46 and want to create a different size such as a ABDICK 9810) and copy this Page Setup. This will make creating the Page Setup much quicker as the only items to change will be the Plate Size and the Page Setup Name.**
**Even if you do not have the correct Press orientation already created, it will still be much quicker than creating a New Page Setup, however you will need to check you have centered the image appropriately (see section on creating Page Setups).**

- In this example we will add a **Heidelberg GTO52 press (400 mm x 511 mm)** to our Page Setup list by copying and editing the Heidelberg SM52 Page Setup.
- From the list in the **Page Setup Manager** dialogue…



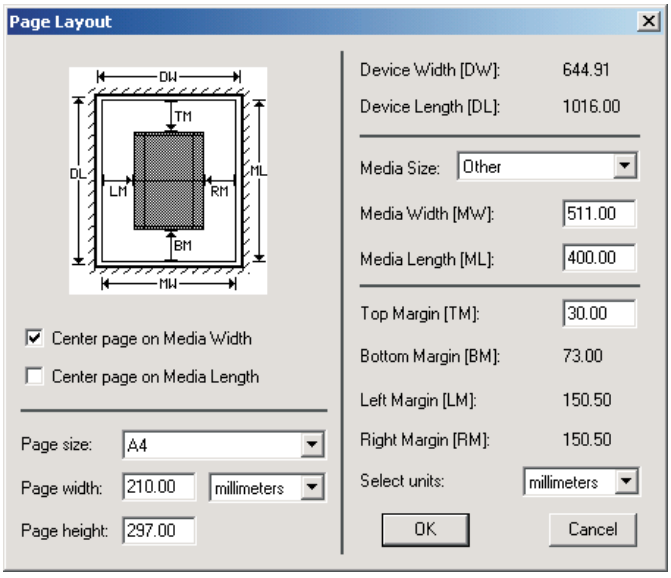

...select the Page Setup you wish to base your new Page Setup upon, in this case select the **SM52 Standard** Page Setup and click **Copy...** to create a duplicate Page Setup.

- The **New Page Setup** window will appear.




Click on the **Page layout...** button.

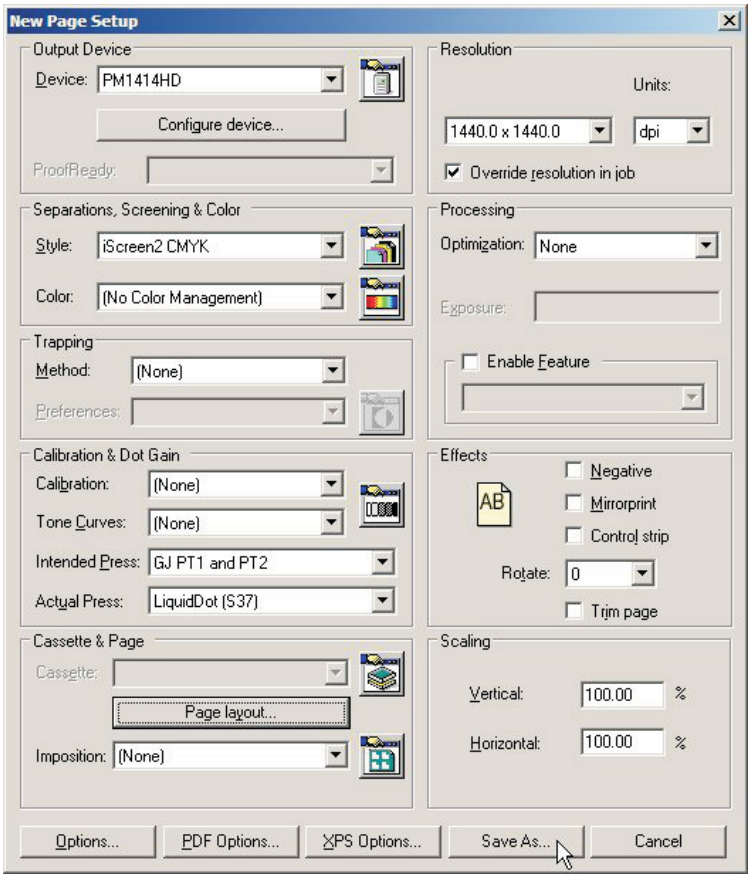
- In the **Page Layout** dialogue…



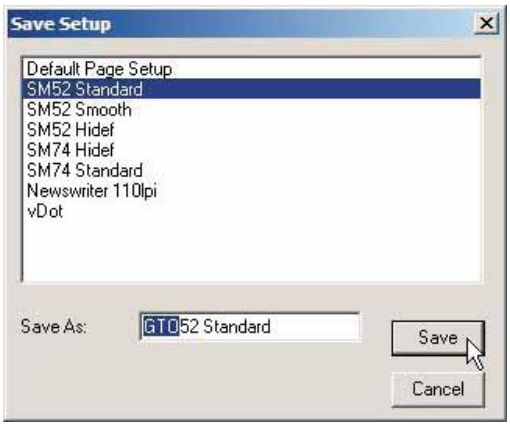

...edit the existing **Media Width** and **Media Length** settings to reflect the plate size of your new press page setup.
In this case plate width is **511 mm** and plate length is **400 mm**.
Set the new **Top Margin** if this press has a different Gripper requirement.
Click **OK**.

- You will be returned to the **New Page Setup** window.

Click **Save As...** to save your new page setup with the new plate size.

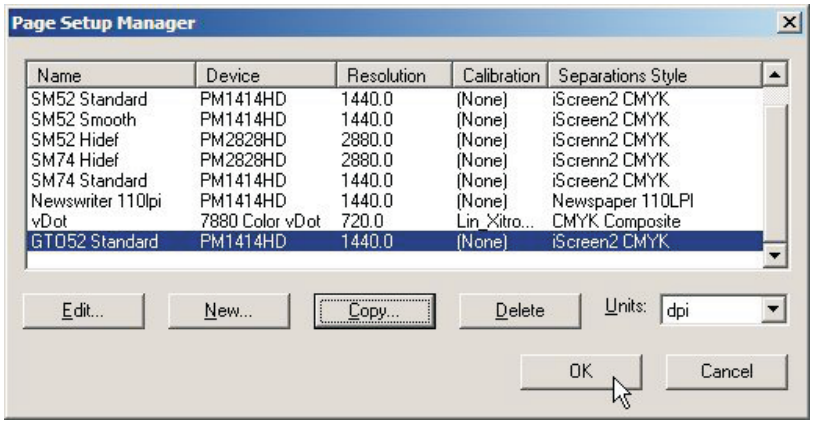



- Give your new Page Setup a name to reflect the setting you have selected.




In this example name the Setup **GTO52 CMYK Standard.** Click **Save.**

- In the **Page Setup Manager** dialogue...




...verify that your new Page Setup appears in the list.
Click **OK** to exit.

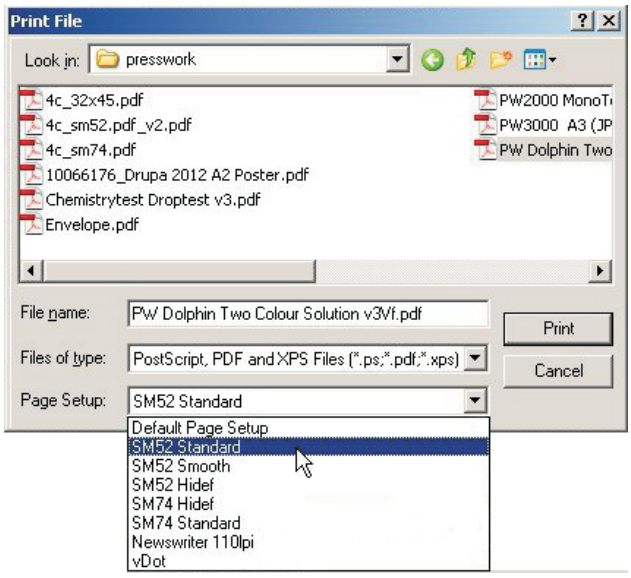
**If you click "Cancel" at any point including to exit the Page Setup Manager above, then any changes you made or new Page Setups will be lost!**

- You have now completed creating your new Press Page Setup.

# Printing a job using the RIP

## Using the Print File command

When you select **Print File** from the **Navigator RIP** menu, the dialogue box shown below appears.




Ensure you choose an appropriate Page Setup for printing the files, from the **Page Setup** drop-down list.

**If you do not choose a Page Setup, the RIP uses the one that you chose last time you printed a file. If you have not printed a file in this RIP session, the first Page Setup in the drop-down list is used. To change the order of this listing, simply drag the Page Setup you want at the top of the list into that position in the Page Setup Manager. See full RIP manual for further details.**

The **Print File** dialogue box shows all PostScript language and PDF files in the current folder. To show files of a different type, or all files, use the **Files of type** drop-down list.

If you want to choose a file that is not in the folder shown, use the dialogue box to navigate to the correct folder.

**To select all files in the list, click anywhere in the central list of files and type Ctrl+A.**

While any file is being processed, an additional **Print File** menu appears on the menu bar of the main RIP window.

You can abort the current job by choosing **Kill Current Job** from this menu, or by typing Alt+ (a period character).

When **Kill Current Job** is selected, the current job is stopped, but subsequent jobs will be processed.

By selecting **Stop Printing File**, the current file will complete, but any jobs queued after the current job will not print.

Selecting **Abort Printing File** will stop the current job and also stop all subsequently queued jobs from ripping.

## Printing several files

To print out several files at once, just select more than one file from the **Print File** dialogue box before clicking **Print**.

The following keys make this possible:

You can select a contiguous block of files by selecting the first file in the block, then selecting the last file in the block while holding down the **Shift** key.

You can select several noncontiguous file names by holding down the **Ctrl** key while making your selection.

**The list of files to print can include files other than PostScript language, PDF files, TIFF 6.0, and TIFF/IT-P 1. The RIP ignores types of files that it cannot print.**

# Automating job input to the RIP

## Printing using managed Input Plug-ins or 'Input Queues'

This section describes the different ways in which the Navigator RIP can accept input, and how to configure the RIP to use each type of input.
There are several ways of providing input to the Navigator RIP:

- Using the **Print File** menu command, as described previously.
  This command allows a user on the machine running the RIP to print all of the job types possible on that installation of the RIP. You can use **Print File** while managed inputs are active.
- Using one or more managed inputs, as described below, and the following sections.
  This is the preferred method for routine use because, in general, the managed inputs allow users on many machines to submit jobs to the RIP.

When you use managed inputs or the **Print File** menu command, you can print several types of job.
The possible types, are:

- PostScript language files (PS) and Encapsulated PostScript files (EPS)
- Portable Document Format (PDF) files.
- JPEG and JFIF files.
- TIFF/IT-P1 files.
- TIFF 6.0 files.

In the same way that the RIP uses output plugins to provide output sources such as the platemaker or Proofer, it uses **Input Plugin** to provide managed input sources.

There are a number of input plug-ins supplied with the RIP, each providing you with the ability to submit jobs under different situations.
The full Xitron RIP manual describes all of these plug-ins, and the way in which you can manage the inputs they provide. This manual only covers the most frequently used plug-ins, what they do and how to set them up.

The most commonly used inputs are:

- **Spool Folder** (also known as Hot Folders, or watched folders)
  This lets you specify multiple independent folders into which users or applications can place jobs to be printed. The RIP checks for the presence of files in these folders and prints each one automatically.

**Folders can be shared across a network, however Apple users with older Mac OS systems will only be able to see PC networks if the Network has been configured with the additional configurations. The RIP allows to configure AppleTalk printers, but this is not recommended. Glunz & Jensen recommends to use the supplied ExtremeZ-IP printer software.**

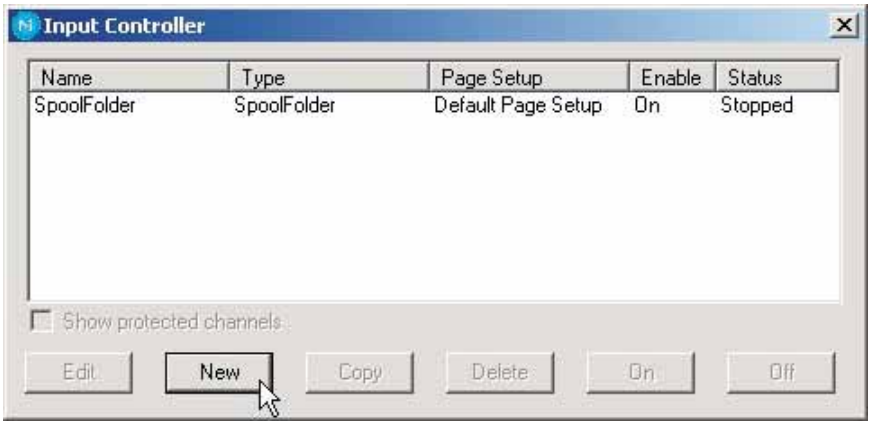
- **AppleTalk**
  This publishes Page Setups in the RIP as a printer(s) on AppleTalk networks and lets the RIP accept input from any Mac application that prints to the printer(s) broadcast by the RIP. However we do not recommend using the built-in AppleTalk on the RIP. If print sharing is necessary for Mac OS, then please use the supplied application ExtremeZ-IP.

## Managing Input Plugins

You control input plugins using the **Input Controller**. Before creating new inputs or changing existing ones, check that you have an appropriate page setup which can be associated with each input.

- Open the **Input Controller** dialogue box either by choosing the **Navigator RIP -> Input Controller** menu option or by clicking the tool bar button.

- The following **Input Controller** dialogue box will appear.




The Input Controller dialogue box shows the input sources currently available. Each input source can be turned on or off individually using the buttons— the state is displayed in the **Status** column.

Each row in the list represents one particular source, and contains:
- The **Name** for the input source. This is used to identify the source within the RIP. It may also be used by the input plugin itself.
- The **Type** of input. This determines which input plugin the RIP uses.
- The **Page Setup**. This is the page setup used by all jobs arriving through this source.
- The **Enabled** state. This should be **On** to make the source available when you start the RIP or start inputs.
- The **Status**. This can be **Stopped**, **Idle**, or **Busy**.

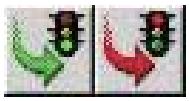
An input is stopped either because all inputs are stopped, because you have disabled this input in the **Input Controller** (using **Off**), or because of a problem when trying to start that input. An idle input is ready to receive a job but none is arriving. A busy input is actually receiving a job.

Below the list of sources are several buttons that allow you to perform the various actions enabling you to create, copy or delete managed inputs.

When you have finished making changes in the Input **Controller**, you can keep it visible as a way of monitoring which inputs are submitting jobs or close it either by using the **Navigator RIP -> Input Controller** menu option or by clicking the tool bar button.

## Turning on the input system

To start receiving jobs from the configured and enabled inputs, choose the **Navigator RIP -> Input Controller** menu option or clicking the tool bar button.



The tool bar button is the most frequently used way to start or stop the queues, and simply uses icons representing Traffic Lights.

Click the **Green Traffic Light** to start the queues, and the **Red Traffic Light** to stop the queues.

**When you start the Queues, there is a delay of a few seconds as the various defined input sources are initialized, and then the RIP starts to accept jobs from those sources.**

The status area of the tool bar shows the searching for input symbol (a torch or flashlight shining on an arrow).

A new menu appears in the menu bar, called **Input Queue**.

This menu has these options:

- **Kill Current Job**: This causes the job currently processing to be aborted. It may take a few seconds.
- **Stop Input Queue:** This turns off the input system when the job currently processing has finished.
- **Abort Input Queue:** This aborts the job currently processing and then turns off the input system.

## Adding a new input source to the list

You can create many different input sources for each input plugin. For example, you could create 5 spool folder input sources and 10 NT Print input sources.

To add a new input source to the list:

- Click the **New** button in the **Input Controller** window. The RIP displays an **Input Channel Edit** dialogue box, allowing you to fill in the details for this source.

- Type a name for the Input plugin device in the **Name** text box.

> **The name is used to identify the source within the RIP. It may also be used by the input plugin itself. If you create an AppleTalk input device, when you start the inputs a 'virtual printer' with this name becomes available on the AppleTalk network. Try to use names that allow you to identify which Page Setup the jobs will be sent to.**

- Choose the plugin type from the **Type** drop-down list (e.g. NT Print, or Spool Folder)
- Choose a saved page setup from the **Page Setup** drop-down list. The RIP applies this page setup to each job arriving at the source.
- If the plugin is to be initially turned on, select the **Enabled** check box.
- Click the **Configure** button to display an **Input Plugin Configuration** dialogue box, allowing you to specify details relevant to the input plugin you have chosen.
  The Configuration dialogue box varies according to the type of plugin chosen. It is used to give details about how the input is to be handled, e.g. for Spool Folders, it tells the RIP which folder to watch for jobs. See below for the configuration and use of this box.
- When you have specified all the details for the new source, click **OK**.

## Copying an input plugin

When you have created an input plugin, you can copy it to create other inputs of a similar type. This can save you some effort, depending on the complexity of the **Configuration** dialogue box.
To copy an existing input, select the entry in the **Input Controller** and click the **Copy** button.
You must give the copied input a new name and you will probably need to alter some details in the **Configuration** dialogue box. For example, only one active input can use a particular spool folder or network input at one time - but you can have two or more inputs using the same source, provided that you enable only one at a time.

## Editing the details for an input source

To edit the details for an existing input source, do one of the following:

- Select the entry in the **Input Controller** and click the **Edit** button.
- Double-click the entry in the **Input Controller**.

The RIP displays an **Input Channel Edit** dialogue box, allowing you to edit the details for the selected plugin.

## Configuring an input plugin

Configuring an input means giving details about how the input is to be handled, and setting up any hardware or software associated with the source. To configure an existing input plugin, select it in the **Input Controller** and click **Edit**.
The RIP displays the **Input Channel Edit** dialogue box. Click **Configure** to see the **Configuration** dialogue box for the selected input.

## Deleting an input source

To delete an input source from the RIP, select it in the **Input Controller** and click the **Delete** button. You can select multiple inputs and delete them in one action.

## Enabling and disabling input sources

To enable an input source, select it in the **Input Controller** and click the **On** button.
To disable a source, select it and click the **Off** button.
Using these buttons has the same effect as selecting or clearing the **Enabled** check box in the relevant **Input Channel Edit** dialogue box.

When the selected input source is enabled, then the **On** button is disabled, and when it is not enabled then the **Off** button is disabled.

You can select several input sources and then turn them on or off together.
When an input plugin is enabled, the RIP automatically publishes it when starting input queues, meaning that the input plugin can be used to send jobs to the RIP.
To make enabled inputs active, choose **Navigator RIP -> Start Inputs** or click the **Green Traffic Light** tool bar button.
To stop all enabled inputs, choose **Navigator RIP -> Start Inputs** again or click the **Red Traffic Light** tool bar button.

# Using the SpoolFolder input folder

The spool folder input is the most popular managed input for Mac and PC users. Use the spool folder to drag and drop PDF files directly. Using NT Print or AppleTalk will result in PostScript language file being generated. The spool plug-in regularly scans a specified disk folder (directory), and processes any PostScript language files (and other suitable files) that are placed there. Normally these files are deleted after successful processing. The spool folder can be on a network file server, or the local iCtP RIP Workstation. Users create files from their applications. These applications can create the files directly in the spool folder, or can create them elsewhere (for example, on the local system) for later transfer into the spool folder.

The RIP can process some or all of the following file types using a spool folder:

- PostScript language (PS)
- Encapsulated PostScript (EPS)
- Portable Document Format (PDF)
- TIFF 6.0
- JPEG and JFIF files

The RIP ignores types of files that it cannot print, and any files that you exclude intentionally by configuring the spool folder input.

You can exclude files based on their names. You may want to exclude files that resemble real jobs, but that actually contain accounting or housekeeping information for the software that delivers files into the spool folder. You may also want to exclude, or at least delay, real jobs with particular origins or qualities. All this is possible so long as the file names have a recognizable prefix.

You specify which folder the RIP uses in the input plugin Configure dialogue box, available from the **Input Controller**. If needed, you can create several spooled inputs, each with its own folder, page setup, and exclusion list.

When you specify a folder accessed over a network, make sure that the folder automatically becomes available to the computer running the RIP when that computer is restarted. Because files are normally deleted as soon as they are printed, it is important to ensure that the RIP has permission to delete files in the spool folder, particularly if the spool folder is on a network file server.

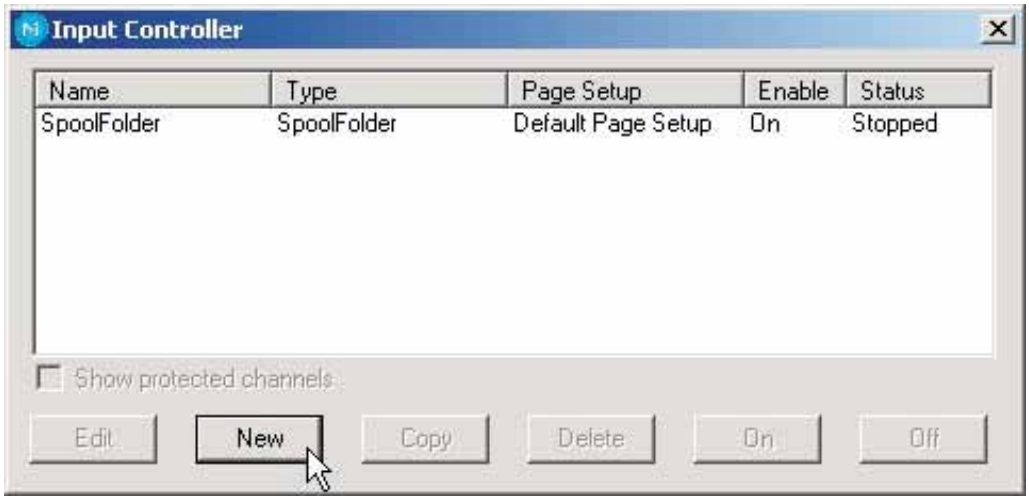
The files in the spool folders are processed in the order in which they arrive. However, if there are jobs already in a folder when the RIP is started, or if a very large number of files have been queued, the RIP determines the order of those jobs by the date stamps on the files.

## Creating and configuring a SpoolFolder input source

To create and configure a new spool folder source do the following:

- Open the **Input Controller** dialogue box either by choosing the **Navigator RIP -> Input Controller** menu option or by clicking the tool bar button.

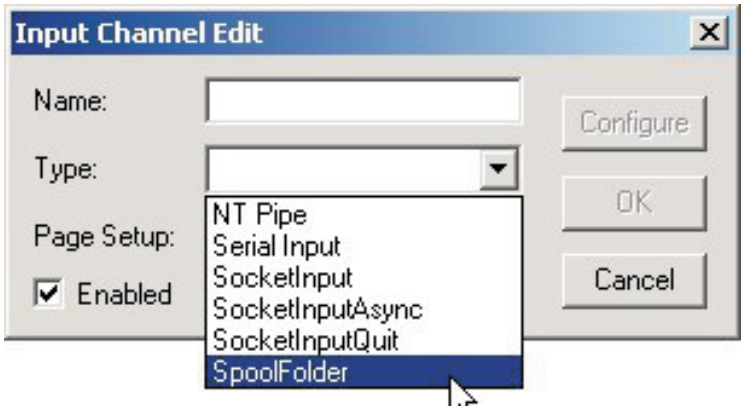
- The **Input Controller** dialogue box will appear.



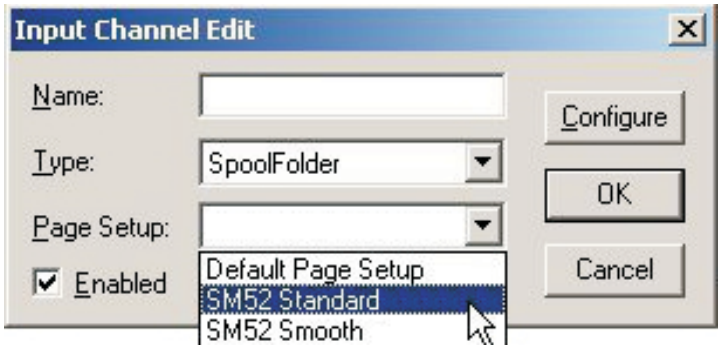

Click **New**.

- The RIP displays the **Input Channel Edit** dialogue box.

- Choose **SpoolFolder** from the **Type** drop-down list.

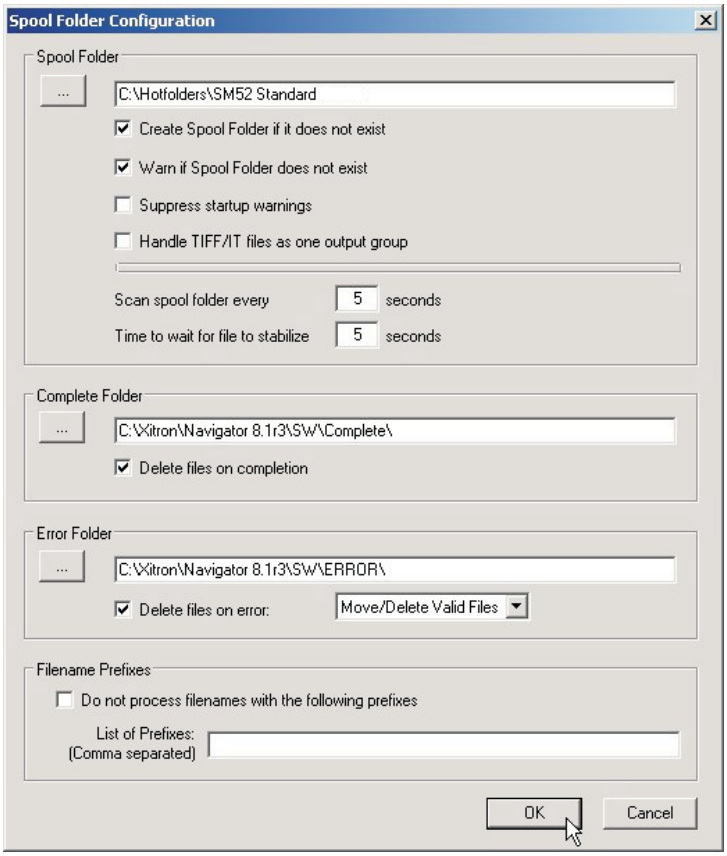


- Select the **Page Setup** you wish to receive and process jobs that arrive in the spool folder (here we have selected the **SM52 Standard** Page Setup).




- Give your input queue a **Name** (try to use names that reflect the Page Setup you are sending it to, to make editing queues later a little easier).

- Click on the **Configure** button to open the **Spool Folder Configuration** window.

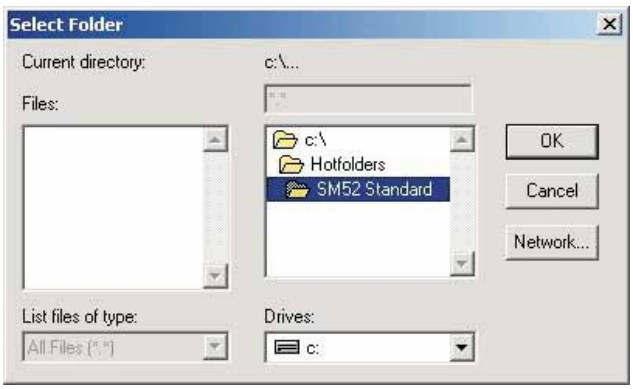


- The **Spool Folder Configuration** window contains the following control items:

**Spool Folder**
The current spool folder is shown in the text field beside this button. This location is where the RIP detects the arrival of files and considers them as possible jobs, by looking at the type of file and any file names excluded in the **Filenames pre-fix list**.

**Choose a folder that is dedicated to receiving jobs. In particular, avoid using folders where other files are arriving or changing (for example, the SW folder is a bad choice, because the log file changes with every job).**

Click the **Spool Folder** button to change this folder using the standard file browsing dialogue box.




**Alternatively you can type a full path name in the text field, but be aware that any typing errors can cause an error or the creation of a new folder.**

We recommend that you create a folder called **Hotfolders** on the C drive, and in there create folders for each Press and Plate Setup you have created as Page Setups.
In this example, as we have created a Spool Folder queue that sends jobs to the **SM52 Standard** Page Setup, we have named the folder the same, so when you drop the files into the folder you will know which Page Setup will be applied to the job.

**Create spool folders if they do not exist**:
Select this box if you want the RIP to create the named spool folders if they do not already exist.
The RIP creates the folders when the input channel becomes available for use. This time can be immediately after you click **OK** in the **Input Channel Edit** dialogue box for an enabled channel, but you may need to choose **Navigator RIP -> Start Inputs** or enable the input channel before it becomes fully available.

**Warn if spool folders do not exist**
Select this box if you want the RIP to issue a warning if a folder named as a spool, error, or completion folder does not exist.

**Error Folder**
If a file fails to print, the RIP moves it to the error folder specified unless the **Delete on error** box is selected. If a file prints successfully, the RIP moves it to the **Complete Folder** specified unless the **Delete on completion** box is selected.
Again, we recommend you change the default here to a folder called **Error** inside your main **Jobs** folder.

**Delete on error**
Select this box if you want the RIP to delete files that the spool folder fails to print. Leave this box clear if you want failed files to be moved to the **Error** folder.

**We recommend you do not check this box, so that you can check which files create an error, then you can take at look at them to determine why.**

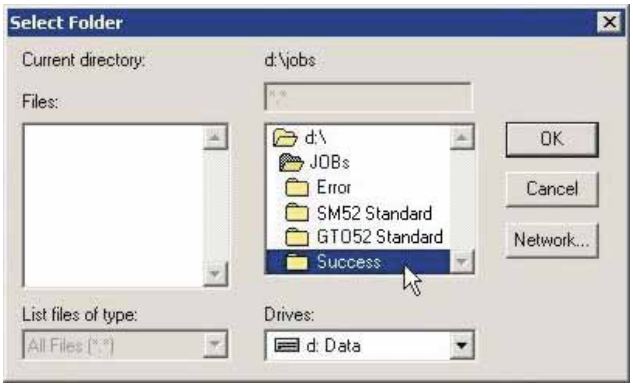
Note that a file is treated as an error if you abort it while it is being processed.

**Move/Delete All Files**
With this option selected the spool plugin will either move to the **Error** folder, or delete any file which it does not recognize (such as badly formed PDF documents). The files are moved or deleted depending on the state of the **Delete on error** check box.

**If you decide to use this option and you inadvertently choose to point the spool folder at a directory containing important files (such as C: \Windows… or your SW folder) you will remove all files in this folder, resulting in either a non-functional computer or non-functional applications. The plugin deletes or moves all the files it cannot handle.**

**Move/Delete Valid Files**
In this case, if a file is encountered which the spool plugin does not recognize, it will leave the file in the spool folder and ignore it. Valid files which cause an error will be treated according to the setting of the **Delete on error** check box.

**Complete Folder**
If a file successfully prints, the RIP moves it to the location specified in the text field beside this button unless the **Delete on completion** box is checked.
Click the **Complete Folder** button to change this location using the standard file browsing dialogue box.



**Delete on completion**
Select this box if you want the RIP to delete files that the spool folder succeeds in printing. Otherwise the RIP moves these files to the **Complete** folder.

**Generally we recommend deleting jobs after printing successfully. However, there are circumstances where this is useful, such as moving the job into another folder for RIPPing, like the Proofing folder. So you can supply Plates and Proofs at the same time from the same file.**

**Filenames prefix list**
This text field specifies files to ignore when they arrive in the spool folder, if you have also selected the **Exclude prefix list** box. The specification is based on the first part or prefix of the file names. Prefixes are case sensitive.

You can enter several prefixes. Separate multiple prefixes by commas without surrounding spaces. If you add spaces after a comma, the RIP treats the spaces as part of the following string. Each prefix can include alphanumeric characters, the underscore character, the period character, and spaces.

For example, this is a valid list of three prefixes: **aaab_c, BAC, 4.4**

**Exclude prefix list**
Check this box to make the prefix list active. Leave this box empty to disable the prefix list without deleting the list of prefixes.

**Scan spool folder every <n> seconds**
The value in the text box specifies how often the RIP checks the Spool folder for new files to be printed.

**Time to wait for file to stabilize <n> seconds**
The value in the text box specifies the number of seconds that the Spool folder waits for the size of an arriving file to remain the same before assuming that it has been fully written and is therefore ready to be printed.

**Suppress startup warnings**
If you have files present in the spool folder and then start the RIP, you will be prompted with a warning that files already exist in this folder which you must acknowledge before the RIP will start. If you would prefer to suppress these startup warning messages and continue to start the RIP, select this option. All files present in the folder will be processed.

- Having set all the configuration options click **OK**. Your Input Queue is now ready to use. If you have now set all the queues up and want to activate them, click the **Green Traffic Light** button on the tool bar to start your queues.

**If you want to set up multiple queues based upon different page setups, select the Spool Folder queue that you have just set up, then use the "Copy" button at the bottom of the Input Manager dialogue box. Then give your copied input queue a different name, select the new page setup which you wish to send the jobs to, then click "Configure". Now you only need to change the "Spool" folder, to reflect a new folder to act as the source for your new queue.**

**If an attempt is made to send a file to a printer attached to a RIP channel that is not currently running (i.e. you have launched the RIP but forgotten to start the Channels) a warning is displayed in Windows that the port is not available and the user is given the chance to retry the job.**
**If this occurs, if you start the RIP input channel before the user retries the job, the job will restart successfully.**

## Using more than one method

The RIP can use any combination of the above input types and listen on all active inputs. When several inputs want to send data, only one job can reach the RIP at a time but the other inputs may be able to receive and buffer data for later rendering.
To accept input from several sources, create and enable the sources you want in the **Input Controller**. The RIP automatically monitor all enabled sources as soon as the input system is started with the **Start Inputs** menu option.

## Enhanced file management and printing for Mac users

To further enhance the printing options for Mac and Windows users, an additional application is supplied, called **ExtremeZ-IP**.
ExtremeZ-IP is installed by the RIP installer - if selected.
Printing from Windows can be done via **ExtremeZ-IP** by using the utility Bonjour for Windows. This utility can also be installed by the RIP installer. It has to be installed on each Windows workstation where printing to the RIP is done.
For details of the **ExtremeZ-IP** application please refer to the manual which can be opened via the Windows Start->Programs->ExtremeZ-IP folder.

# Calibrating

## Why calibrate

The function of Calibration Curves is to linearize output on your plates. There are several approaches on the use of the remaining curves. Generally, if you use the actual press calibration curve to linearize your press then you will be printing with linear plates that will produce flat images. For some users this will be the desirable effect, as a 10% tint on screen will reproduce a 10% tint on the printed sheet; this is preferable for spot colour users.

However, in CMYK (4 colour process) work, the flat image created by a linear output will give a dull uninteresting image. In these cases use of the Intended Press curve or tone curves will provide the needed correction and are used to "put back" the dot gain that is assumed in the pre-press process.

Although the calibrations that we include in the RIP installation process are reasonable starting points, you may find that it will be necessary to create calibration curves for your press, papers, and inks to produce high quality printed results.

**We recommend that you do not perform plate Linearisation, as most measurement devices on the market cannot measure the plate correctly. We recommend that a calibration curve is made for the press only. However you can measure the plate and store the measured values for process control.**

## Calibrating your press

Calibrating your press using the **Actual Press Curve** function will provide you with a linear press sheet, so that 10% on screen prints as 10% on press, 50% as 50% etc.

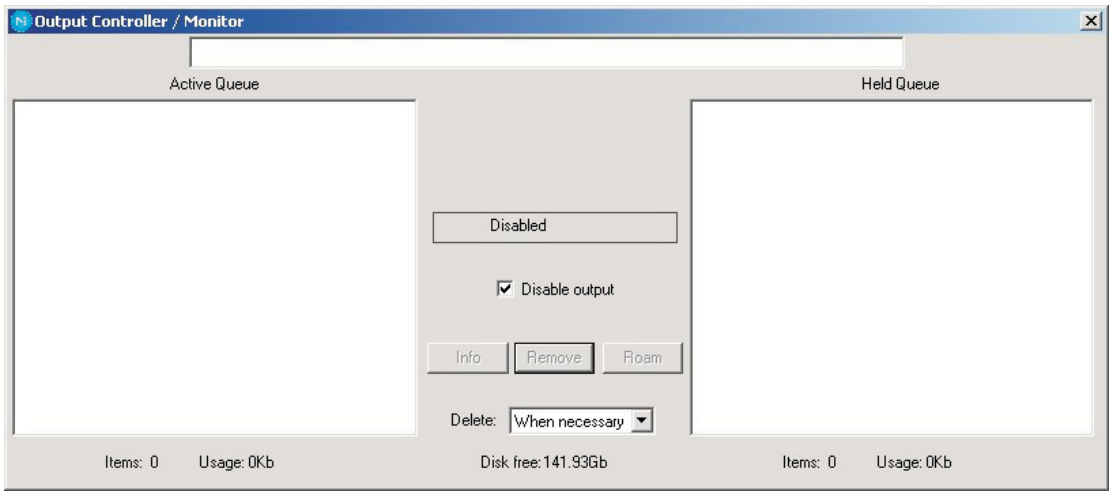
If we stop here, there are many circumstances where this, whilst being accurate, is not really desirable.

Typically older press work produced by film will suffer press gain at around 20% and this gives a warm, strong image. A linear calibration will often produce a very flat-looking result. However, linearising your press is important since it provides a starting point and removes the variables caused by varying press gains and worn press rollers which can be created in a multi-press environment.

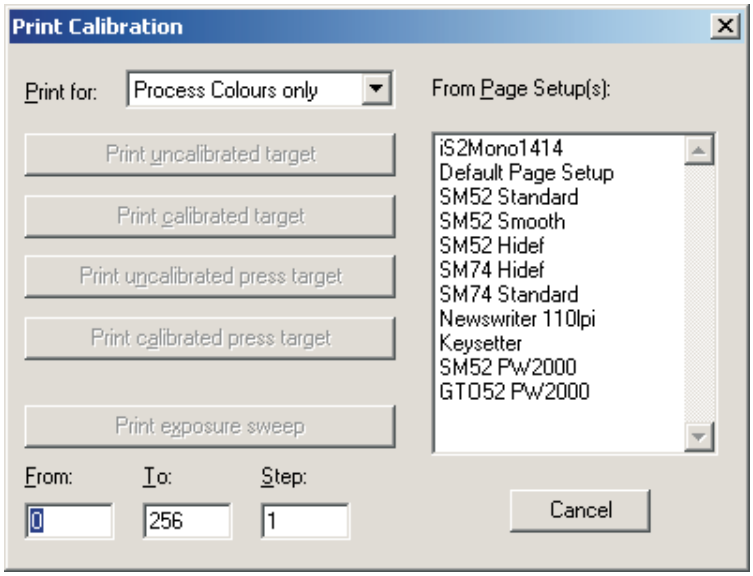
Once you have linearised your press and have created a calibration which we call the "Actual Press" calibration, we can then add an intended press calibration curve, thus enabling a print shop with multiple presses to create a more consistent and even calibration across all its work.

- Start the **Navigator RIP**.

- If necessary, open the **Output Controller / Monitor** window by either pressing **Ctrl+O** or choosing **Output -> Output Controller** from the RIP menu.

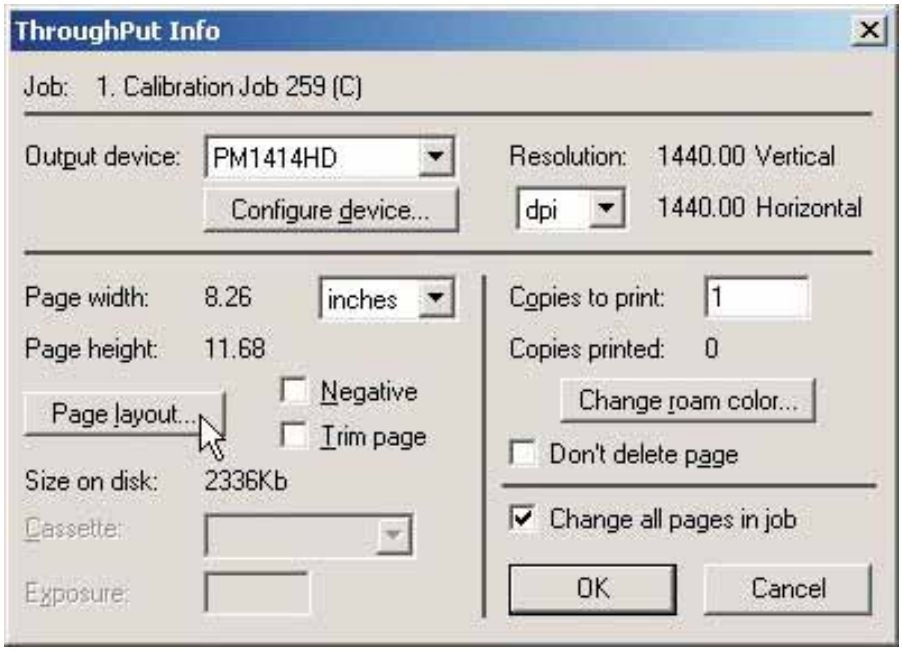



- Make sure that **Disable Output** is checked. This will allow you to control the start of printing in the next steps.
- Ensure that you have applied a Plate calibration to the page setup you wish to create a press calibration for (see earlier in this chapter).
- Choose **Output -> Print Calibration** from the RIP menu.

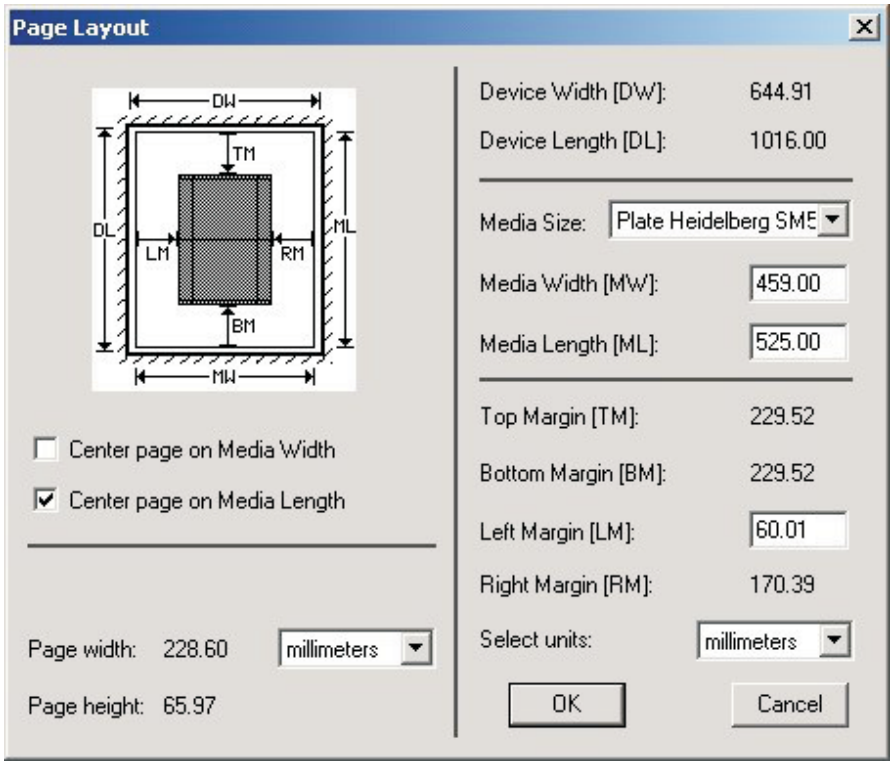



- Choose a page setup and click on **Print uncalibrated press target**. The calibration target will be ripped and written to disk. You should get four separations.
- Load a plate.
- In the **Output Controller/Monitor** window select **Uncalibrated target** in the **Active Queue**

- Click on the **Info** button to open the **ThroughPut Info** dialogue.

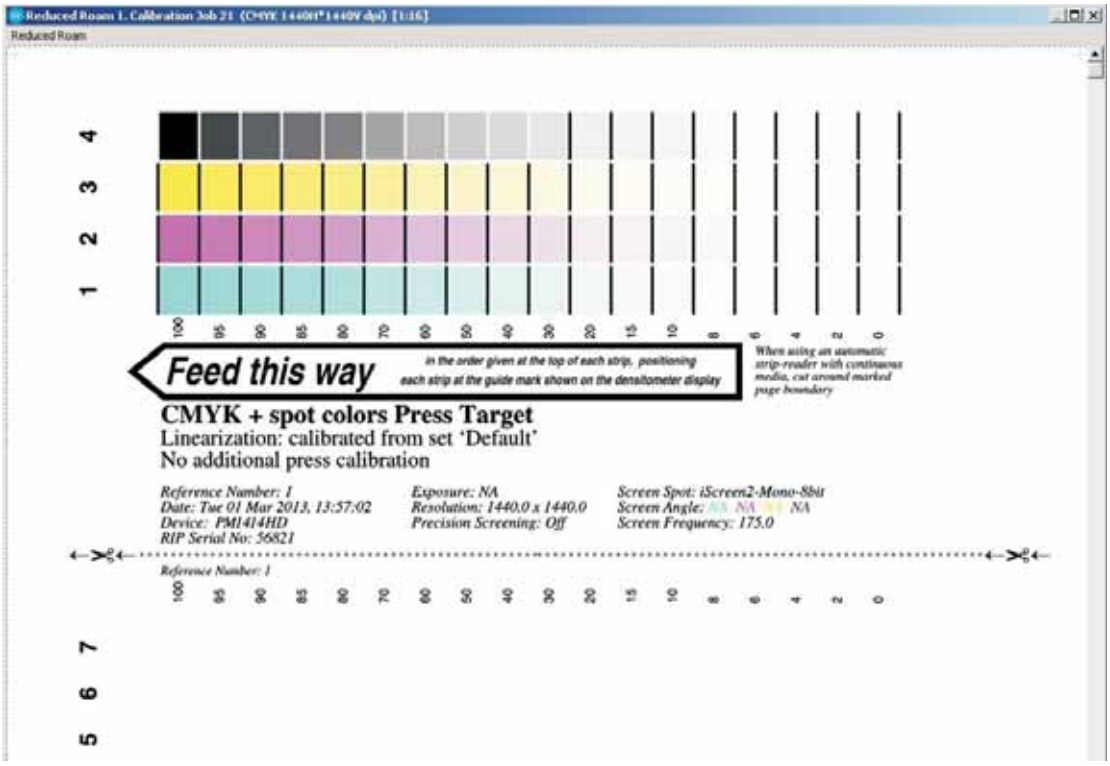



- Click on **Page layout...**.




- Check that the **Media Width**, **Media Length** and **Margins** are correct for your plate. (The calibration target is rather small, but you should check to ensure the margins will put it inside your printing area).

- Uncheck **Disable Output** in the **Output Controller / Monitor** window.
  Once the **Throughput** window shows activity, re-check the **Disable Output** checkbox.
  A target similar to this illustration will be printed.




- After the target has printed, remove the plate from the PlateWriter.
- Place the plate on the front of the PlateWriter's finishing unit.
- Load the next plate and repeat the above procedure for each plate.
- Each plate should then be put on the printing press, and an even ink density should be achieved before printing reference sheets.

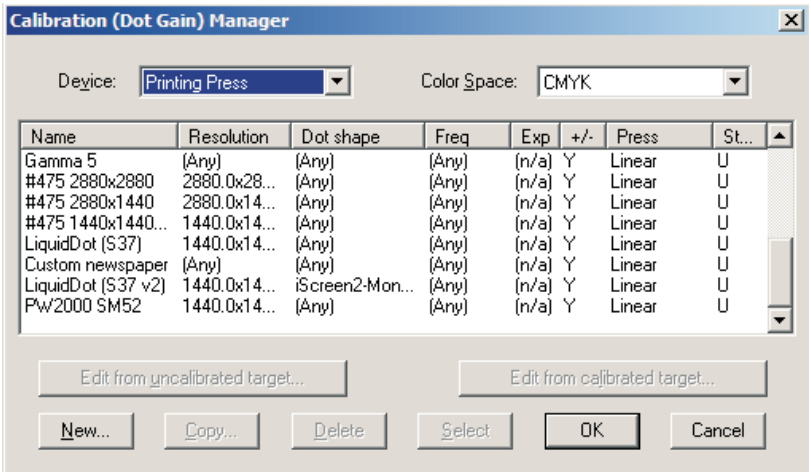
In Europe the standard suggests selecting three typical types of paper stocks:
- Gloss Art: Set the ink densities to C=1.55 D, M=1.50 D, Y=1.45D, K=1.85 D
- Silk/Matt: Set the ink densities to C=1.45 D, M=1.40 D, Y=1.25 D, K=1.75 D
- Uncoated offset paper: Set the ink densities to C=1.00 D, M=0.95 D, Y=0.95 D, K=1.25 D

Each paper stock reacts differently to the press ink and changes the gain achieved on press. Similarly the amount of ink laid down will impact results. So if you do not wish to adhere to the standards given above, then ensure you have some consistent densities that you will to continue to work with.

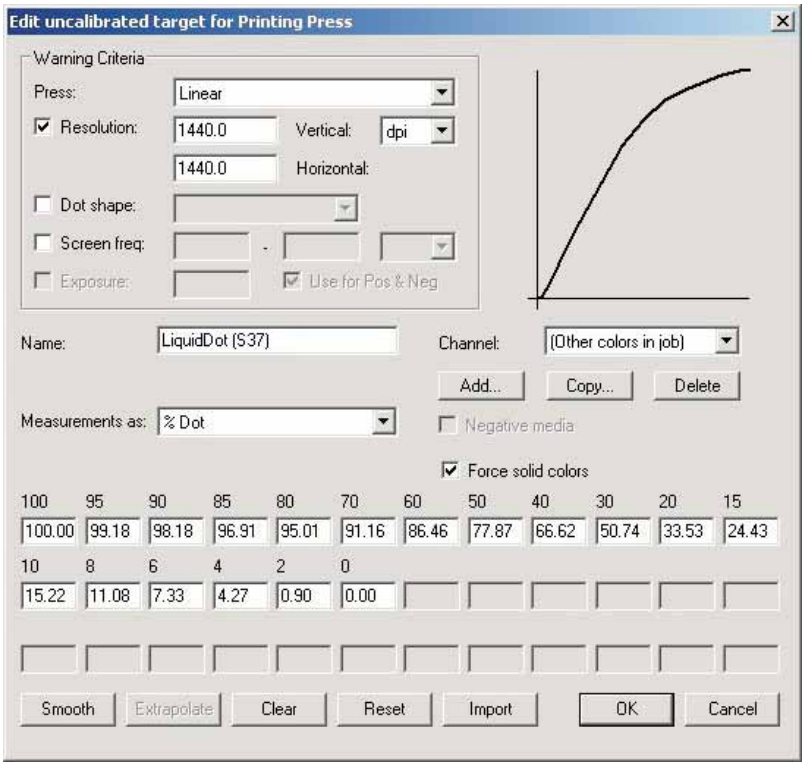
For example, standard Commercial Work in the USA would typically see the ink densities set to C=1.30 D, M=1.40 D, Y=1.00 D, K=1.80 D

- Run each stock through the press, ensuring your reference sheet achieves the correct ink density.
- Once the sheets are dry, use a high quality reflection densitometer capable of reading stochastic dots, or comparable device, to measure the dot percentage for each of the patches on the printed calibration target. It is not unusual for each ink to achieve a different gain characteristic, so you will need to separately measure each colour printed.

- Choose **Output -> Calibration Manager** from the RIP menu.




- Choose **Printing Press** as the **Device** type.
- Select **CMYK** as the **Colour Space**.
- Click on **New...**.

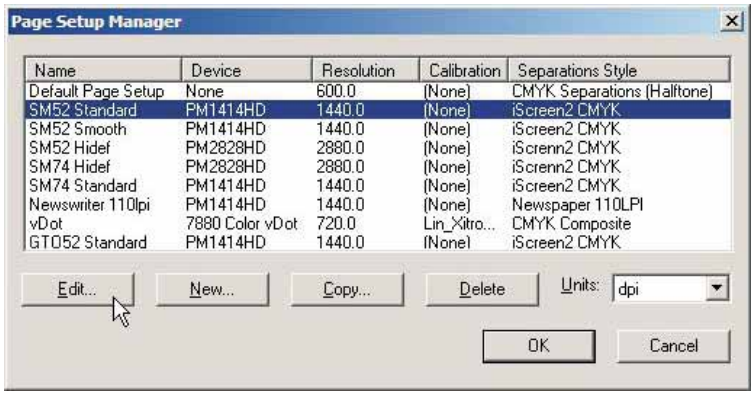



- Name the new calibration in relation to the press and paper type that was used.
- Select the press type as **Linear** and select the first colour channel **Cyan** to enter the cyan data into.
- Enter the modified column of Dot percentage measurements in the edit boxes.
- Once you have entered the **Cyan** data select the **Magenta** channel and enter the data measure for the magenta output.
- Repeat the above for the remaining colours.
- Click **OK** in this window and in the **Calibration Manager** window to save your profile.

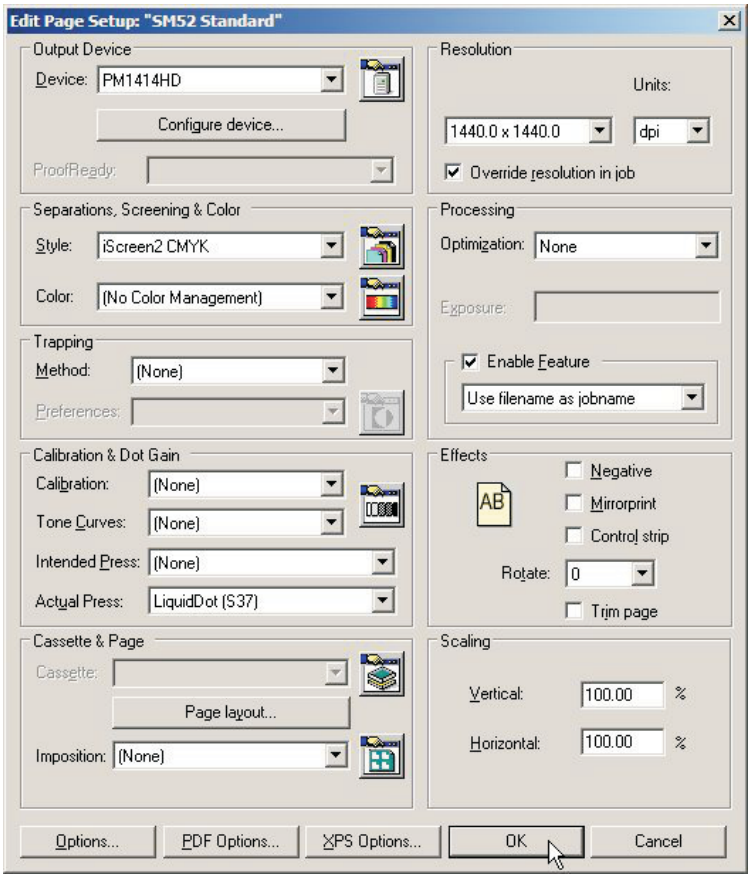
## Including the press calibration in Page Setups

### Editing the Page Setups

- Choose **Page Setup Manager** from the RIP menu to open the **Page Setup Manager** window.




- Select the **Page Setup** that was used when printing the uncalibrated target and click **Edit** to open the **Edit Page Setup** dialogue.




- In the **Calibration & Dot Gain** section select the **Calibration** you just created from the **Actual Press** calibration list.
- Leave the **Tone Curves** and the **Intended Press** curve set to **(None)**.
- Save the edited Page Setup by clicking **OK** in this window and in the **Page Setup Manager** window.

# Why use Intended Press or Tone Curves?

The calibration process we have outlined is used to linearize the printing process using the PlateWriter.

Linear printing means that a nominal 50% dot (gray level) will print as 50% on press. Typically this will result in light or "washed out" looking print since most images are pre-compensated for 20% dot gain. This means that images are generally prepared expecting a nominal 50% dot to print as 70%.

Intended Press Curves are used to add the expected gain back into the press profile. Tone Curves are used to modify this further to create cool looking images or warm images. We have not included any tone curves so this section details the use of the Intended Press Curve to create the expected dot gain from conventional film etc.

We have included curves for standard dot gain, Gamma -1 -5, GJ PT1 and PT2 and GJ PT4 and PT5 along with Commercial, SWOP and Fogra curves with the Navigator RIP. These values are a good starting point.

You may need to fine-tune these Intended Press Curves to meet your particular requirements. However to use one of the existing Intended Press curves, follow the procedure below to implement the Intended press curve in your Page Setups.

## Including the Intended Press curves in Page Setups

- Choose **Page Setup Manager** from the RIP menu to open the **Page Setup Manager** window.
- Select the **Page Setup** that was used when printing the uncalibrated target and click **Edit**.
- In the **Calibration & Dot Gain** section select as the **Intended Press** curve one of the curves included in the Navigator RIP installation or one of the curves loaded when printing the **Glunz & Jensen factory default** file, or any custom **Intended Press** curve you may have created.
- Save the edited Page Setup by clicking **OK** in this window and in the **Page Setup Manager** window.
- You can confirm if the output of your intended curves achieves the results you required by printing calibrated press target.

# Backup & restore your Navigator RIP configuration for Windows

**It is very simple to backup your configuration of the Navigator RIP. If you follow this simple backup procedure, you will preserve all of your Passwords, Memory settings, Calibrations, Tone Curves, Device and Page Setups etc.**

**Having a backup of your RIP configurations is likely to save you hours of work if any problems occur with your workstation or if you need to reinstall the Navigator RIP.**

## Configuration backup

Having configured your RIP follow the instructions below to make a backup file of your settings:

- Start the Navigator RIP.
- Select **Navigator -> Print file** from the RIP Menu.
- In the print dialogue, set the **Page Setup** to **Default Page Setup** and the **Files of Type** to **PostScript (.ps)**
- Choose the file **BackupConfiguration.ps** which is found in **C:\Xitron\Navigator 8.3r1\Utilities**.
- Click **Print**.
  This will create (or overwrite an older version of) **Glunz & Jensen factory default** and put it in the same folder as **BackupConfiguration.ps**.
- Make a backup of **Glunz & Jensen factory default** on removable media and store it in a safe place.

## How to restore your configuration

Follow the installation instructions for Windows on the Navigator RIP install CD. When you are instructed to print the **Glunz & Jensen factory default** file from the installation CD, print the **Glunz & Jensen factory default** file which you have backed up instead.
Follow the instructions to configure the RIP memory and dongle passwords.
Your entire configuration will then be restored, and you can resume work.

# Part 5: Troubleshooting

## General

If the PlateWriter does not work properly, refer to the following pages to find the paragraph that comes closest to your problem.

**Be aware of the different bulbs in the curing unit. When replacing bulbs refer to the label on the bottom side of the curing unit.**

**To change a fuse, switch off all power to the machine first.**
**Always ensure that the new fuse is of the correct size and rating according to the electrical diagram placed in the Spare Parts Manual.**

## Problems with the finishing unit

### Indicator status and error codes

The finishing unit's status indicator lamp has several ways to indicate the current status of the unit and/or unit errors.

| | |
|---|---|
| **GREEN - STEADY** | **Finishing unit is ready.**<br>Program selector may be changed before plate is placed on conveyor. |
| **GREEN - FLASHES** | **Finishing unit is ready for plates using the selected program.**<br>Program selector must not be changed. |
| | |
| **RED - 1 FLASH BUZZER SOUNDS** | **Unit is not ready because oven sensor is covered without conveyor sensor being activated first.**<br>Remove plate and place it properly above conveyor sensor. |
| **RED - 3 FLASHES BUZZER SOUNDS** | **Bulb error - one or more bulbs in the oven are blown.**<br>Power the unit off, replace bulb, then power the unit on again. |
| **RED - 4 FLASHES BUZZER SOUNDS** | **Motor regulation error - motor/conveyor is blocked.**<br>Power the unit off, remove obstacle, then power the unit on again. |

# Problems with the registration system/print head

## Indicator status and error codes

The registration system's status indicator lamp has several ways to indicate the current status of the system and/or system errors.

| | |
|---|---|
| **GREEN - STEADY** | **Plate is registered correctly.** |
| **GREEN - FLASHES** | **Indicates the deviation in temperature from the set point of the print bed (one flash per one °C).**<br>No flashing indicates the temperature which is less than 2°C from set point. |
| | |
| **RED - 1 FLASH BUZZER SOUNDS** | **Register pins have not reached their *home* position within the time limit.**<br>Check cable connection between registration system and finishing unit. |
| **RED - 2 FLASHES BUZZER SOUNDS** | **Register pins have not reached their *upper* position within the time limit.**<br>Check cable connection between registration system and finishing unit. |
| **RED - 5 FLASHES BUZZER SOUNDS** | **Print head touched the plate during printing.** |

When the print head touches the plate, the front cover switch in the printer will be activated. This causes the printer to stop the movement of the print head immediately. The printer displays **FRONT COVER OPEN, CLOSE COVER** error.
If the contact of the print head with the plate causes blocking the print head then the printer displays **PAPER JAM** error.

**These errors cannot be handled by closing the printer front cover. They have to be handled as stated below.**

In case of **FRONT COVER OPEN** error:

- Press the ⏏ button to release the plate.
- Remove the plate from the printer.
- Press the ⏏ button again. This will reset the error and release the front cover switch.

In case of **PAPER JAM** error:

- Feed rollers are automatically opened by the printer.
- Remove the plate from the printer.
- Turn the printer off and on. This will reset the error and release the front cover switch.