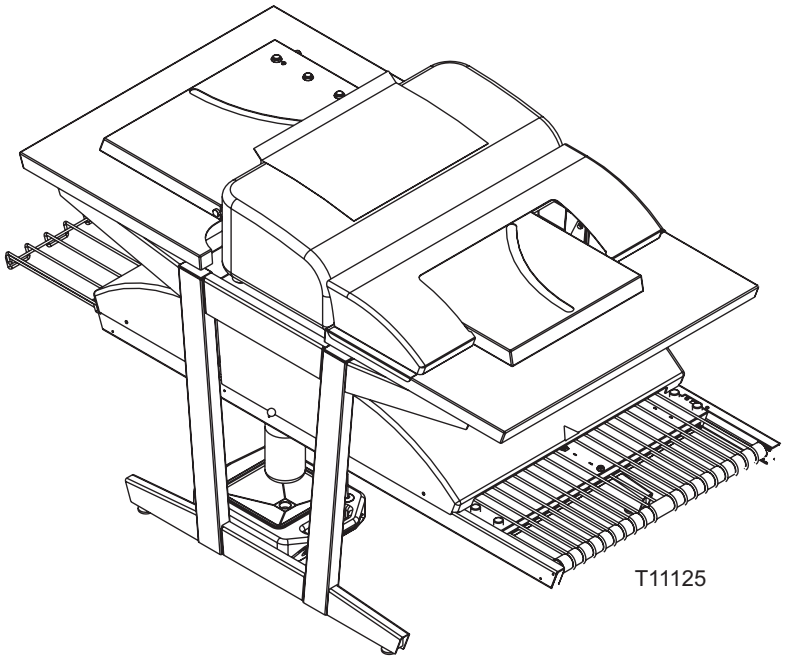
Operating Manual

PlateWriter™ 2000

GLUNZ & JENSEN

Operating Manual

PlateWriter 2000



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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 2000 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:

The cover can only be positioned on the finishing unit if the front cover is <u>not</u> in place.

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

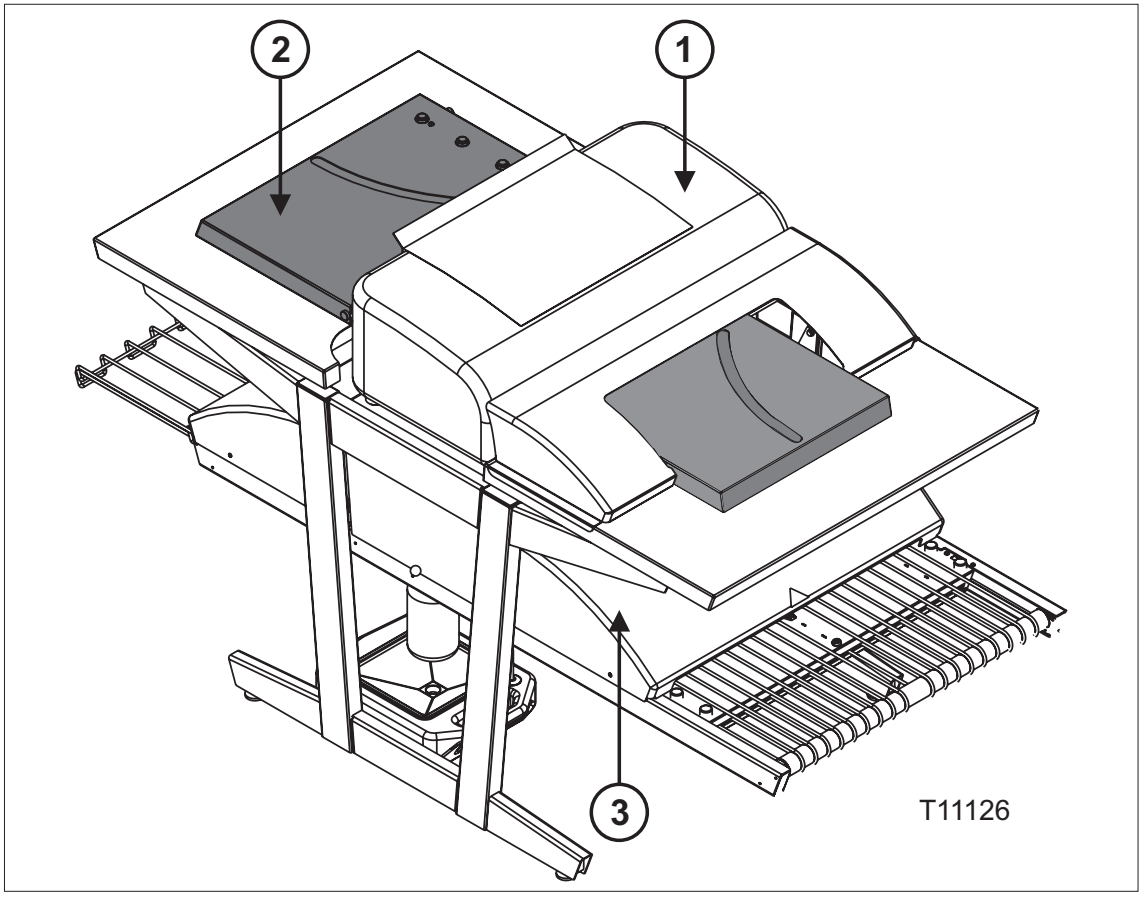
- Before using the equipment it is assumed that it has been properly installed and configured as described in the installation manuals delivered with the system.
- The manufacturer cannot be held responsible for any damage caused by incorrect use of this equipment.

The PlateWriter 2000 System

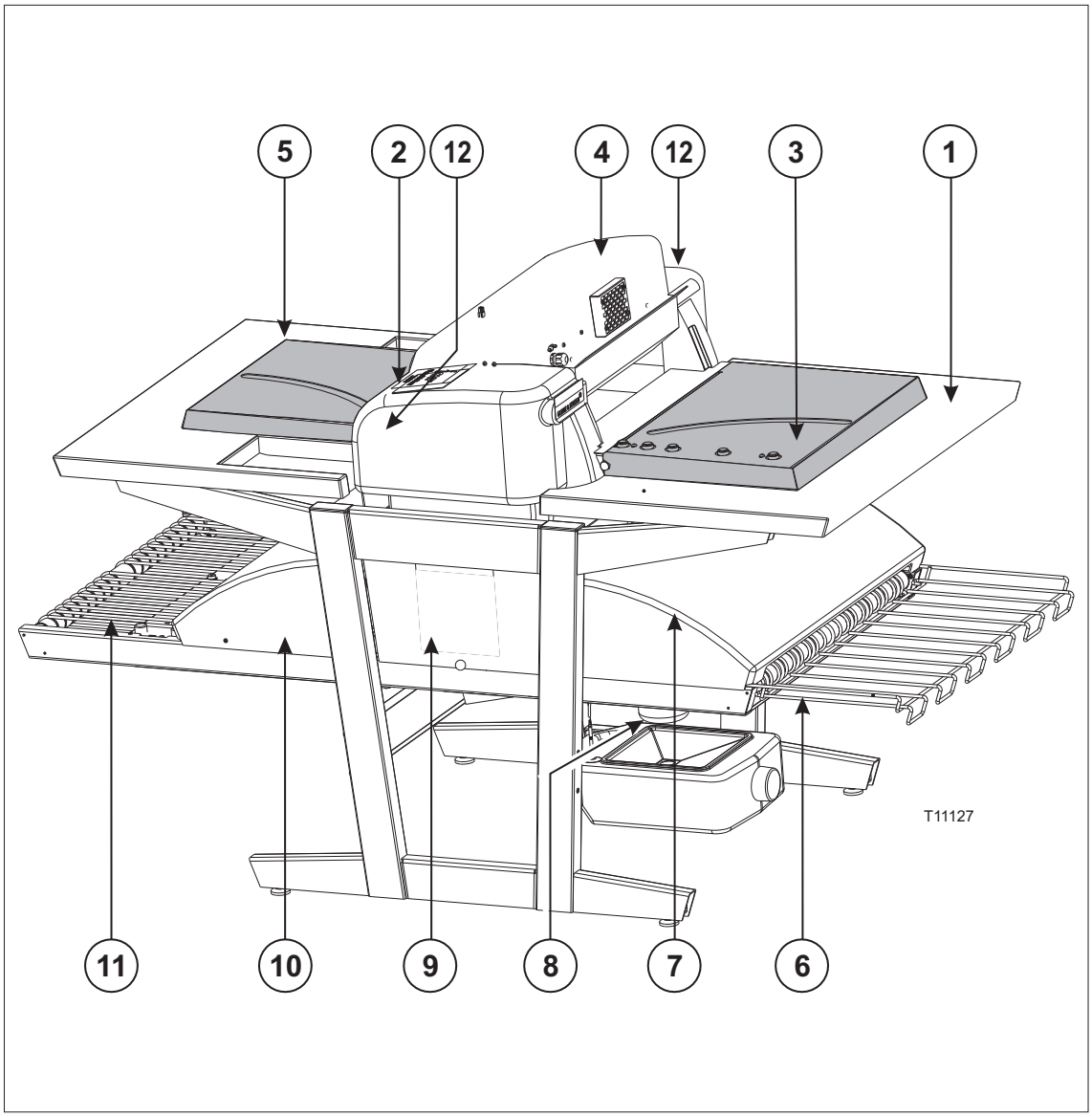
The PlateWriter 2000 System is an innovative and patented inkjet Computer-to-Plate (iCtP) device.

The PlateWriter 2000 System consists of:

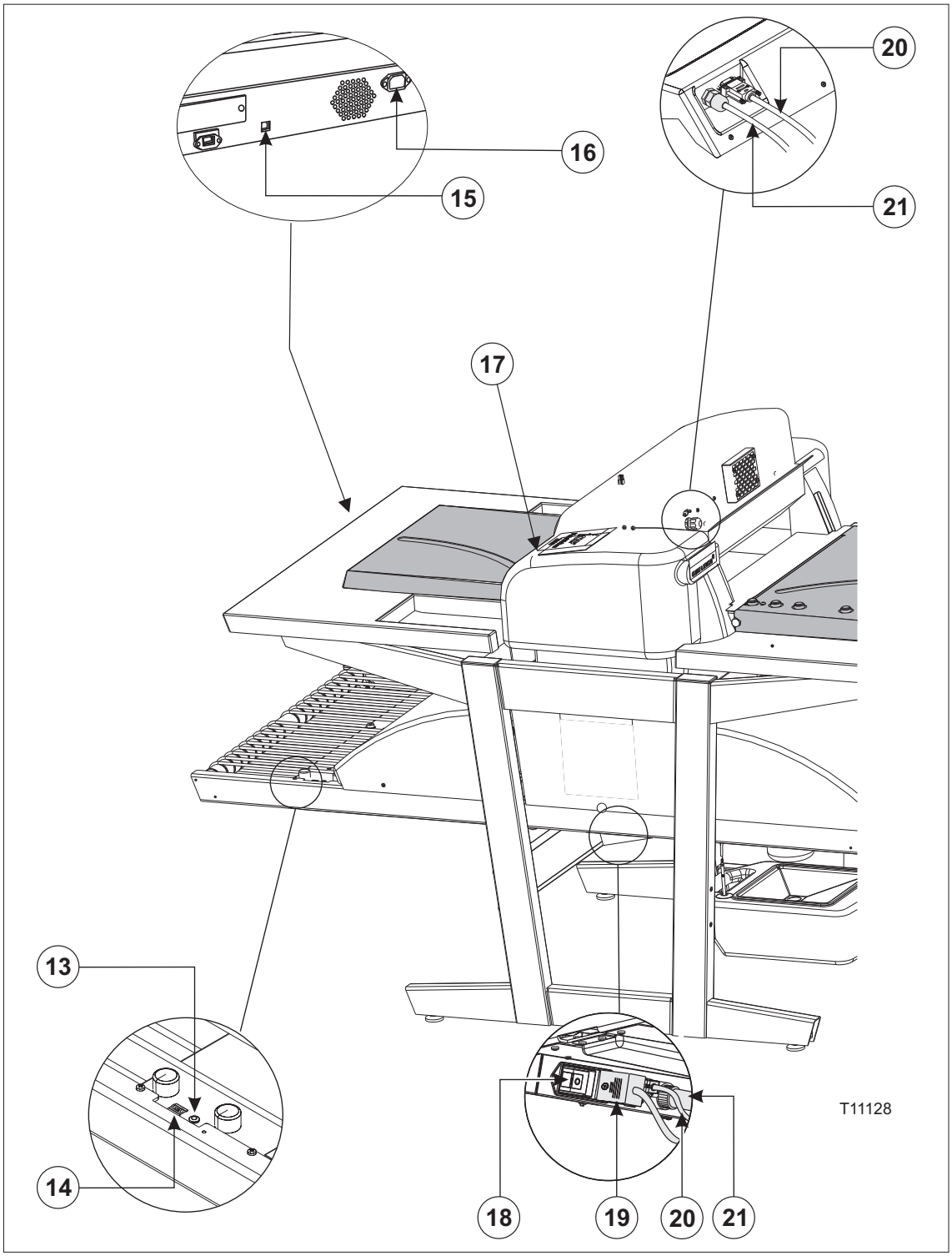
- **PlateWriter 2000 Engine (1)**
  A specially modified Epson Stylus Pro 4880 inkjet printer that uses Glunz & Jensen Liquid Dot fluid to image the iPlates printing plates.
- **Plate Input Table (2)**
  A table for aligning plates prior to entering into the PlateWriter 2000 Engine.
- **Proofer (optional)**
  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 2000 Engine or to the Proofer.
- **PlateWriter 2000 Finishing Unit (3)**
  An integrated plate finisher that executes all of the steps necessary to produce press-ready plates, i.e.: curing, gumming and drying of the plates after they are imaged in the PlateWriter 2000 Engine.



PlateWriter 2000 Overview



1 **Front Plate Table:** place plates here before printing.
2 **Control Panel:** from here you control the Imaging Unit.
3 **Input table:** Ensures that plates are aligned correctly prior to entering the Imaging Unit.
4 **Ink Dryer:** improves the drying of the Liquid Dot ink on the plate.
5 **Rear Plate Table:** when a plate has been loaded it will be transported here before printing starts.
6 **Curing Conveyor:** leads the printed plate through the curing sections.
7 **Curing Oven:** dries the ink on the plate and cross-links it to the aluminum base.
8 **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.
9 **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.
10 **Gum Dryer:** dries the plate to provide a finished, dry plate.
11 **Plate Exit Tray:** holds the finished plates.
12 **Ink Cartridges:** There are two compartments on each side of the printer. Each compartment can contain up to 4 ink cartridges.



13 **Status Indicator LED:** indicates the current status of the Finishing Unit.
14 **Program Selector:** for selection of the Curing Oven program.
15 **USB-cable:** connects the Imaging Unit with the RIP Workstation.
16 **Power Cable:** supply voltage for the Imaging Unit.
17 **Power Switch:** press here to switch the Imaging Unit On/Off.
18 **Power Switch:** press here to switch the Finishing Unit On/Off.
19 **Power Cable:** supply voltage for the Finishing Unit.
20 **Control Cable:** connects the Ink Dryer with the Finishing Unit.
21 **Power Cable:** supply voltage from Finishing Unit to the Ink Dryer.

Part 2: Daily Use

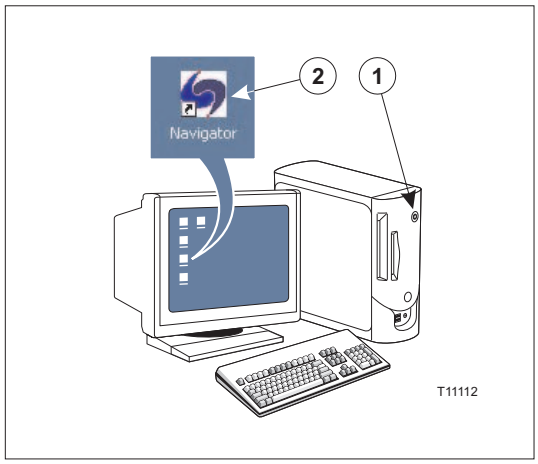
Overview

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

- Daily Start-Up procedure
- Loading of plates into the PlateWriter 2000 for printing
- Printing of plates
- Finishing
- Daily Shut-Down procedure

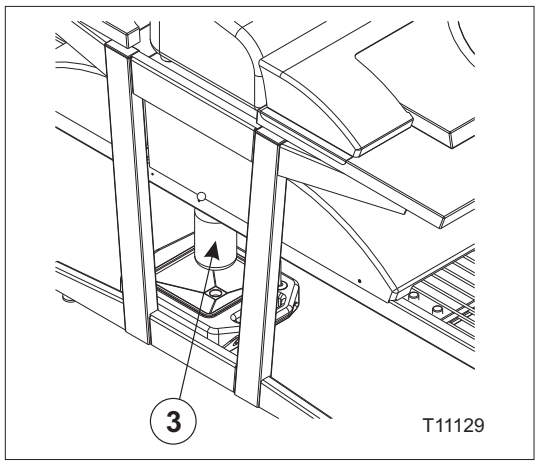
Daily Start-Up

- Start the RIP Workstation **(1)**.
- Launch the RIP Application **(2)**.

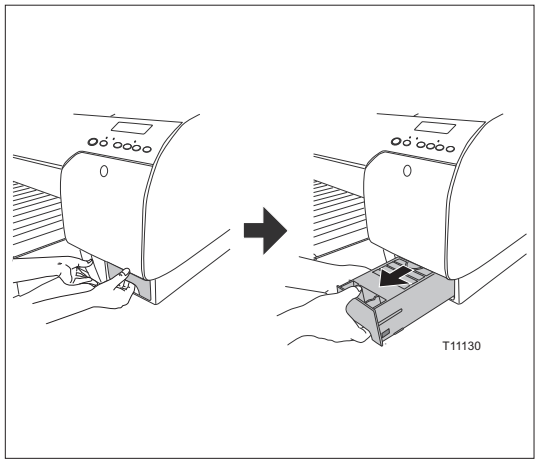


- Replace the finisher solution in the finishing bottle **(3)** with fresh finisher solution.

Half a bottle is sufficient.

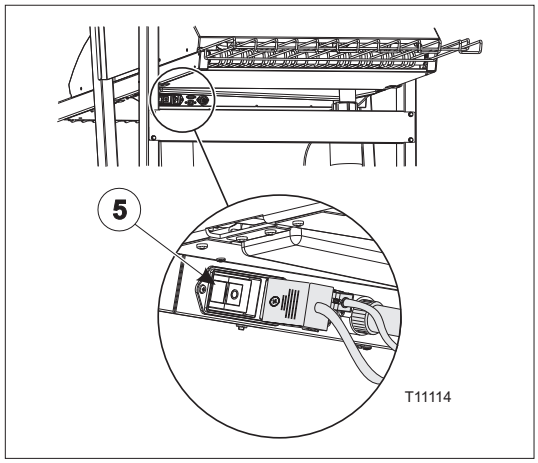


- If you see the message MNT TNK FULL on the LCD display, you need to replace the maintenance tank. Place the used tank in the plastic tank supplied with the new tank. Insert the new tank.

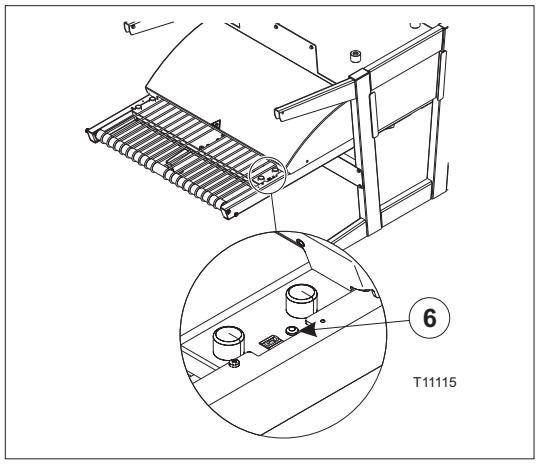


- Switch on the Finishing Unit on the main switch **(5)** underneath and make sure that the indicator **(6)** lights steady green.
- The unit will run gum fluid through the system for approximately three minutes to ensure an even gumming of the plates.

This will also switch on the Ink Dryer.



- Switch on the PlateWriter 2000 by pressing the [POWER] button.
- The PlateWriter 2000 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.

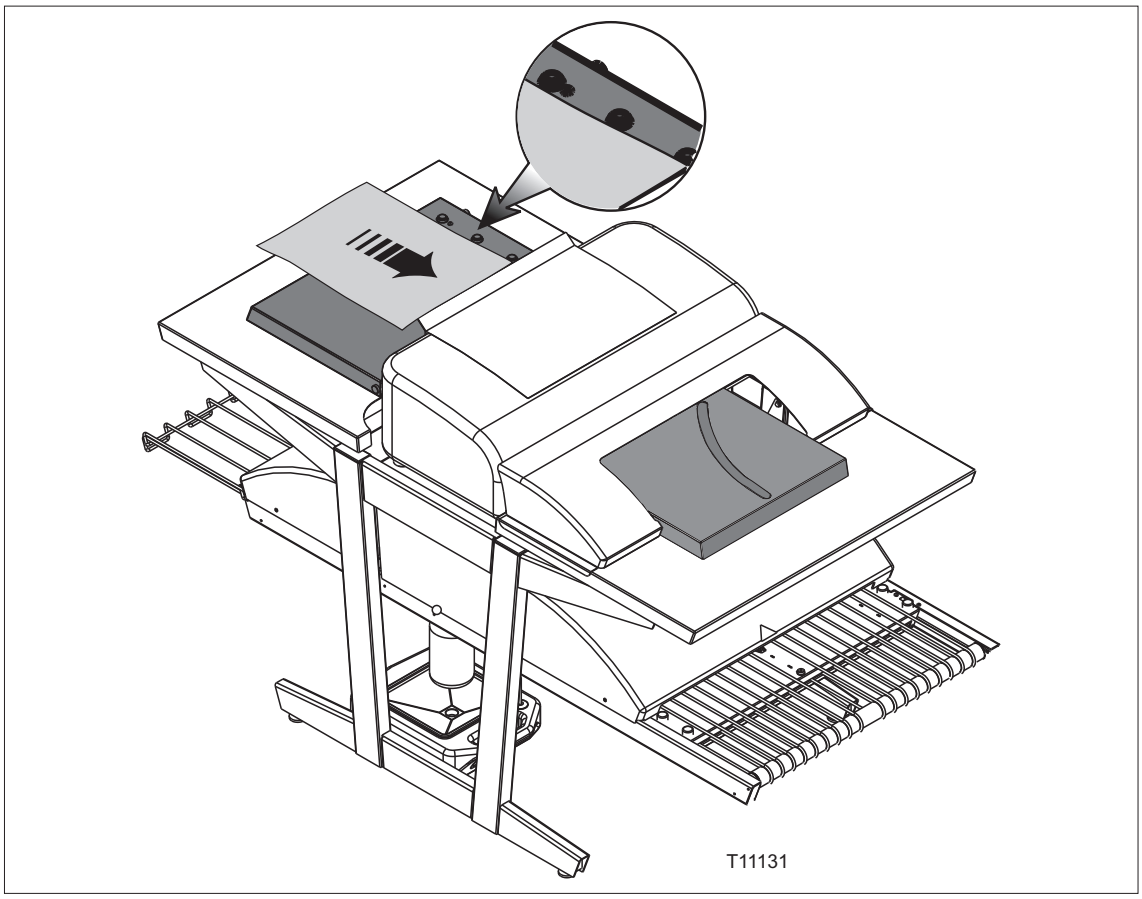
Making Plates

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 2000

The input table ensures that plates are fed into the printer correctly. The side register rollers (see below) enable correct and easy alignment prior to entering the printer.

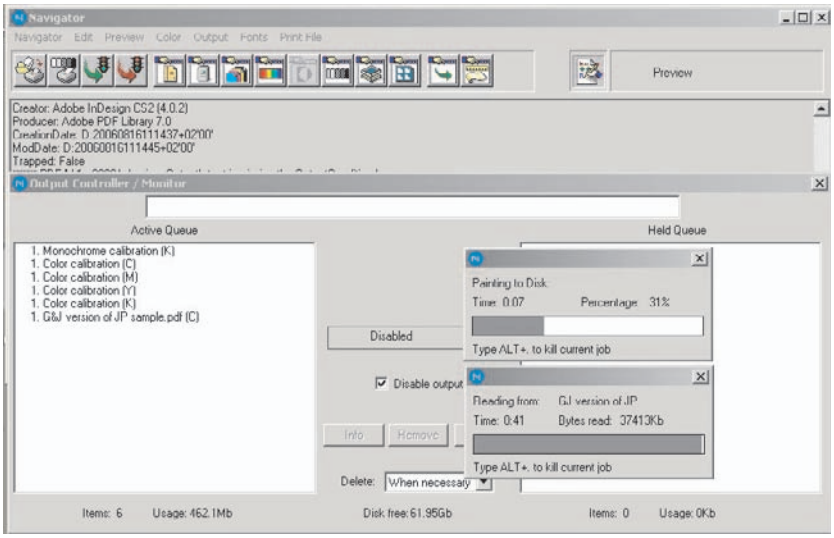


- Place the plate on the input table against the register wheels on the left side and slide the plate into the printer.
- If the plate is fed incorrectly into the printer, the LCD display will show the message “NOT STRAIGHT - RELOAD”.

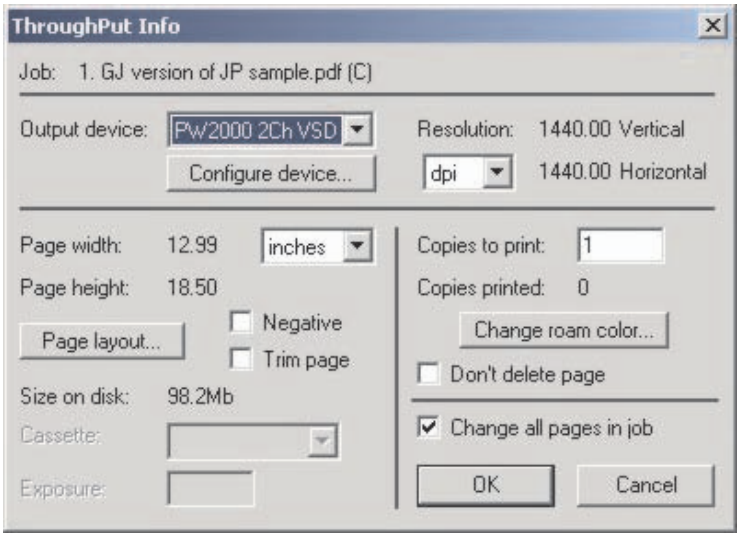
Imaging the Plate

- 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 2000 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.

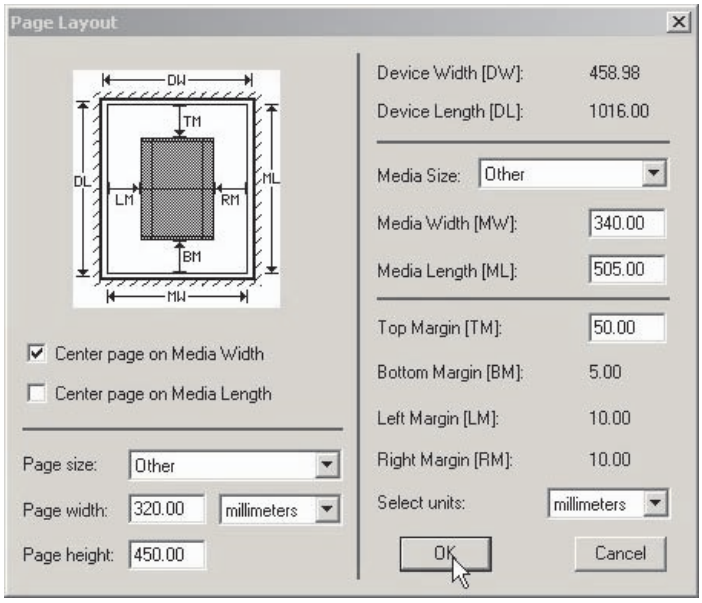


- Select your file and click on **Info**.
- The **ThroughPut Info** window appears.



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

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

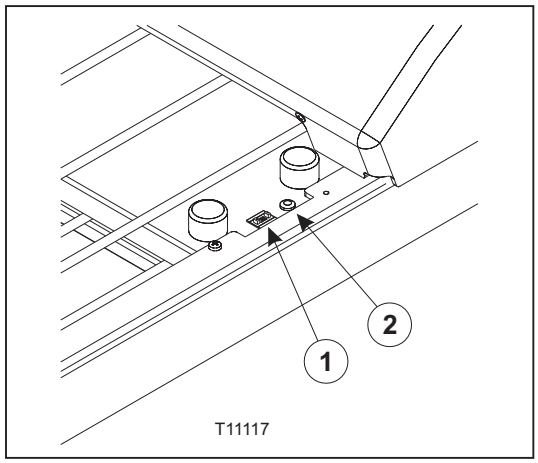


- Check that the size of your plate is correctly entered in the **Media Width [MW]** and **Media Length [ML]** boxes. Most plates will be imaged portrait in the PlateWriter 2000. Depending on whether you are loading the plates in portrait or landscape and whether you have a portrait or landscape press, different selections have to be made. If you load the plate in portrait and have a landscape press, be sure to select the **Center page on Media Length** and set the **Left Margin [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 2000 and place it on the front of the 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 2000, 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:

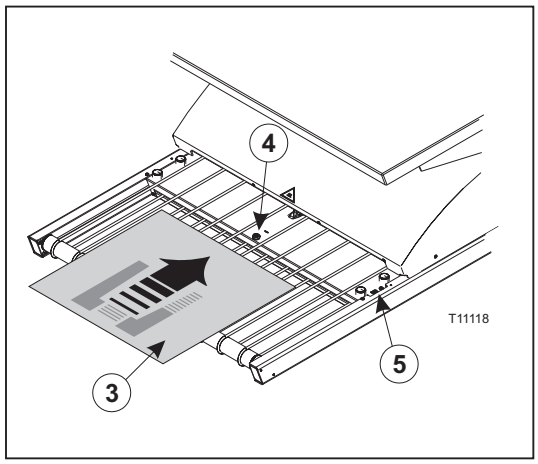
  1 = 0.15 mm plates
  2 = 0.20 mm plates
  3 = 0.30 mm plates
  4 = Gumming only/Gum Rinse



Program 0 is for technicians only!

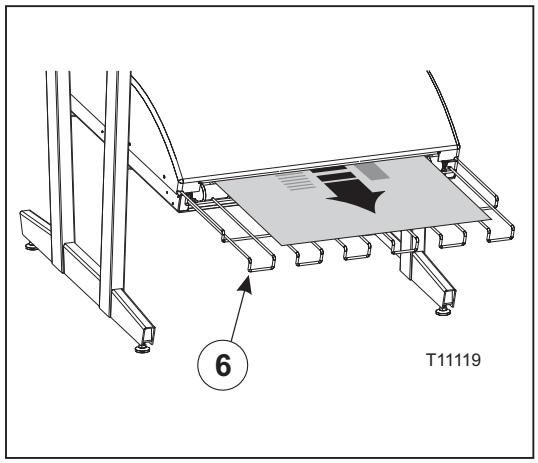
- Make sure that the indicator **(2)** lights steady green.

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



- 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.



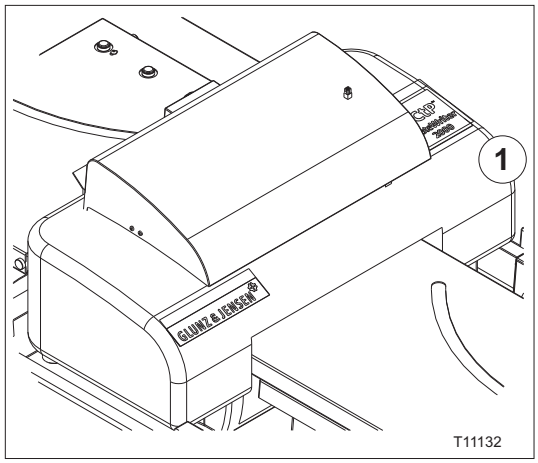
It is recommended to make a space of at least 300 mm or approx. two minutes between every 4-8 plates in order for the gum replenish system to work properly.

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

Daily Shut-Down

- Switch the unit into OFF-mode by pressing and holding the [POWER] key **(1)** for 2 secs. All lights turn off and the display will go blank.

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.



Part 3: Cleaning & Maintenance

Overview

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

Printer

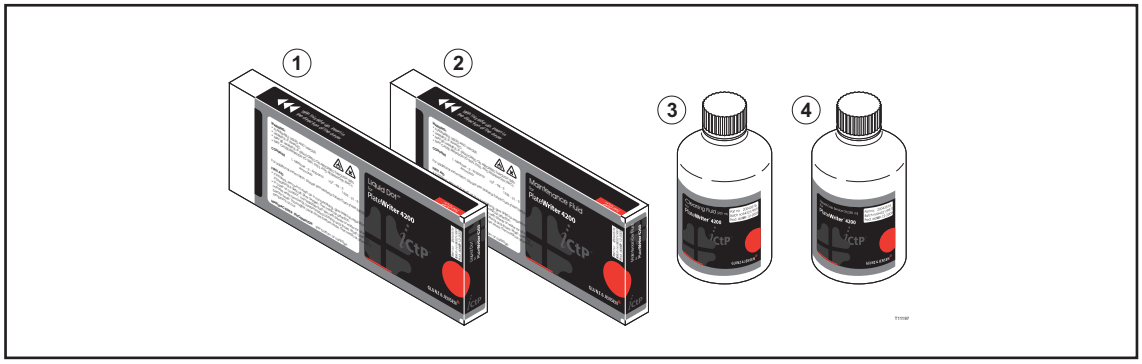
- Cleaning the printer body
- Cleaning the printer ink system
- Additional printer settings and check

Finishing Unit

- Replacing the Gum/Finisher Solution (Daily)
- Running the Gum Rinse Program (Weekly)
- Cleaning of the Gum/Finisher Rollers (Monthly)

Inks and Fluids

The PlateWriter 2000 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.

Head cap service oil (4)

The head cap service oil is used for maintaining the softness of the head cap seal, as the seal hardness from the contact with the cleaning- and maintenance fluid.

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 -20ºC (-40ºF) 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.
- Always be sure to gently shake the ink cartridge before you install it.
- Removing or inserting an ink cartridge while operation is in progress may cause air to get inside the cartridge, resulting in poor image 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.

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 [POWER] key to switch off the sub power.)

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 cleaning the printer ink system we refer to the maintenance video placed on the desktop of the RIP workstation:

- Monthly maintenance of Platewriter
- PW ½ year maintenance

Additional Printer Settings and Check

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

These adjustment has to be performed on a regular basis, for further instructions please refer to the Appendix A in the end of this manual.

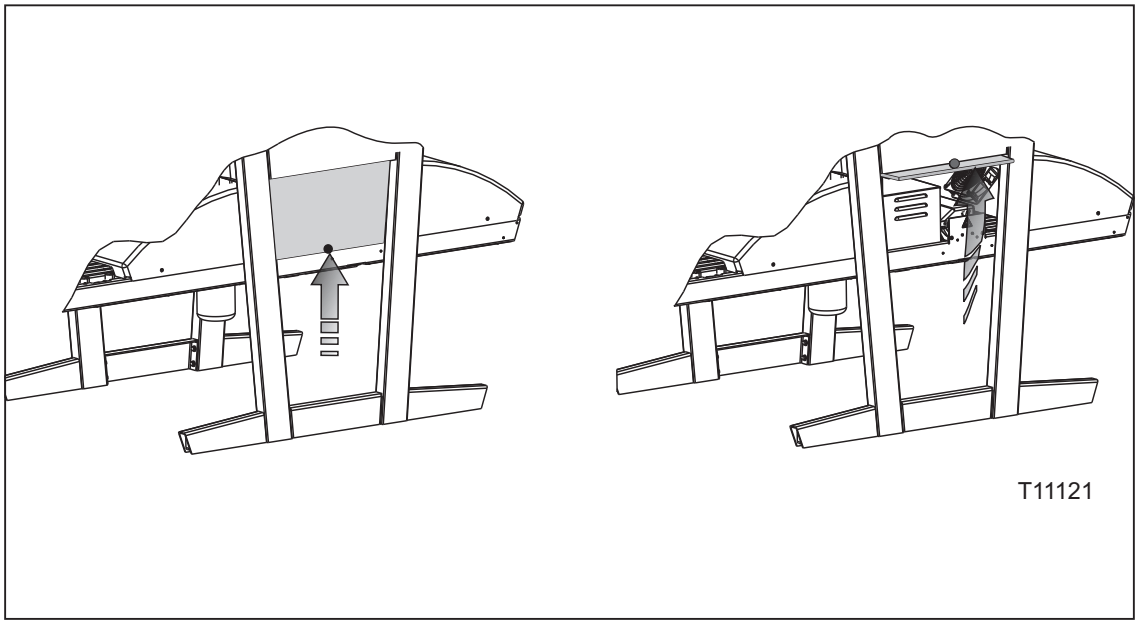
Finishing Unit

Running the Gum Rinse Program

It is recommended to run the Gum Rinse Program at the end of each working period (preferably once a week).

- Replace the solution in the Gum/Finisher bottle with warm water.
- Select Program 4 on the Program Selector to start the Gum Rinse Program.
- The unit will run for approximately 10 minutes recirculating the water through the gumming system and then it switches to stand-by mode.
- Leave the unit with water until the start of the next working period, then replace the water with fresh Gum/Finisher Solution.

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.

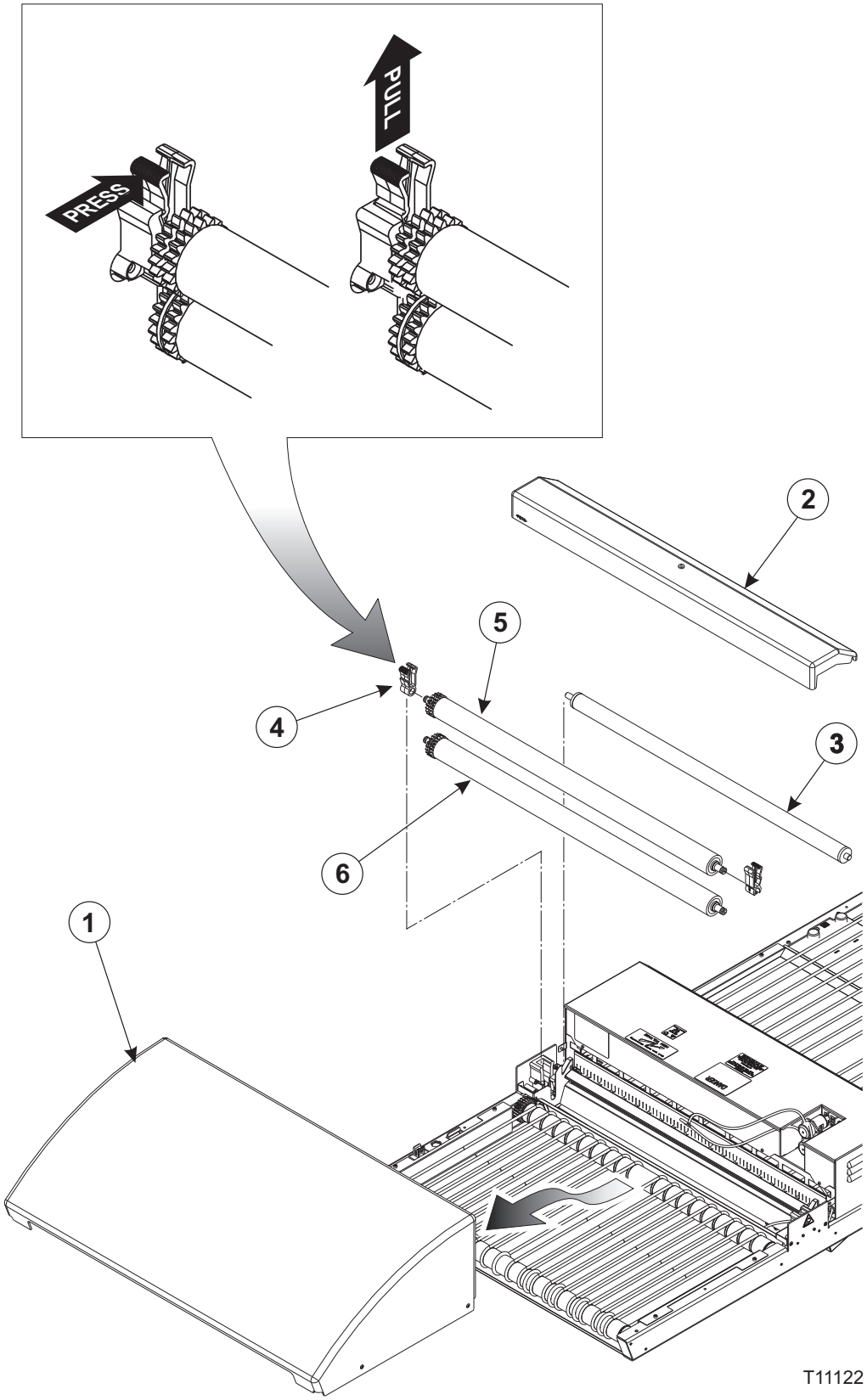


Always replace the side plate after cleaning and maintenance of the Finisher section. Failure to do this will result in inferior processing quality.

Procedure for accessing the Gum/Finisher section

- Turn off the power supply to the machine.
- Remove the plug from the socket.
- Lift the side plate by its knob and push it into the recess where it can be stored while working in the section (see illustration above).

You can also remove the covers of the curing oven and gum dryer for easier access.


PULL
PRESS
2
5
4
3
6
1
T11122

Cleaning of Gum/Finisher Rollers

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

(See illustration opposite)

- Switch off and unplug the Finishing Unit.
- Remove the Gum Dryer **(1)**.
- Remove the Gum Section Cover **(2)**.
- Take out the roller **(3)**.
- Release the roller bearings **(4)** and take out the rollers **(5)** and **(6)**.
  To release the roller bearings, press the locking arm as illustrated, and then pull upwards.
- Clean the rollers and bearings in hot water using a soft brush.
- Reinstall all parts in reverse order, making sure that the bearings **(4)** click properly into place.

Cleaning the Finishing Unit Body

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

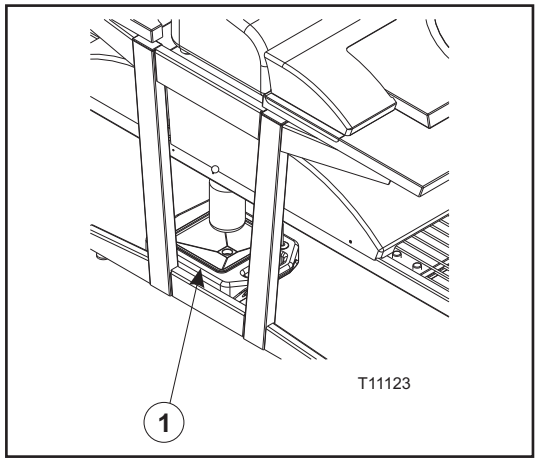
Gum/water Replenishing System

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.
- The water tank **(1)** must be placed below the gum bottle with the cap in the tray dismounted. The water tank functions as a drip tray for the gum bottle.



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 2000 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 1.5, 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 Defaults** file (found in the C:\Program Files\Xitron_72r1\Factory Defaults 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 Defaults** 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 located in your **Manuals** folder in the main RIP folder.
Many of the main functions and items referred to in this chapter are briefly described below:

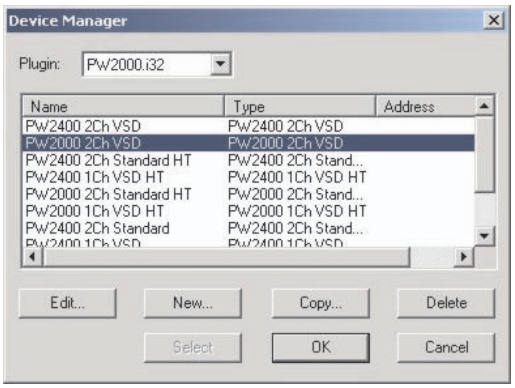
- **Devices:** are essentially combinations of a physical printer, a software screen method, and printer-to-computer connection (i.e. USB).
- **Separation Styles:** have to do with how separations and composite files are handled by the Navigator RIP. You can use a "Composite" style to print composite 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 Defaults** installs: **PW2000_371/219** which is a Calibration Curve for PlateWriter 2000 with the device PW2000 2Ch Standard using Glunz & Jensen *i*-plates. Using the device PW2000 2Ch VSD no curve is added, as we recommend running without as calibration is build into the 3PWIV screening.
  For proofing we have enabled the RIP to support Epson 4800 and Epson 7800 print-

ers. 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 Defaults** installs general press (GJ SM52 0809v2 and GJ SM74 0809) curves which are press calibration curves for linearising Glunz & Jensen *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 Defaults** 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 Defaults,** these can be generate by the user.

Setting Up Devices

- Make sure that the PlateWriter 2000 is on and connected to your computer.
- Start the Navigator RIP and select **Navigator > Device Manager** from the application menu.



- Ensure the PW2000.i32 appears in the Window. If it does not, then check that you have entered the password for the PlateWriter 2000 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, PW2000.i32. PW2000.i32 is the default name for the PlateWriter Output device and more options are available here. Select PW2000 2Ch VSD. 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 2000 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

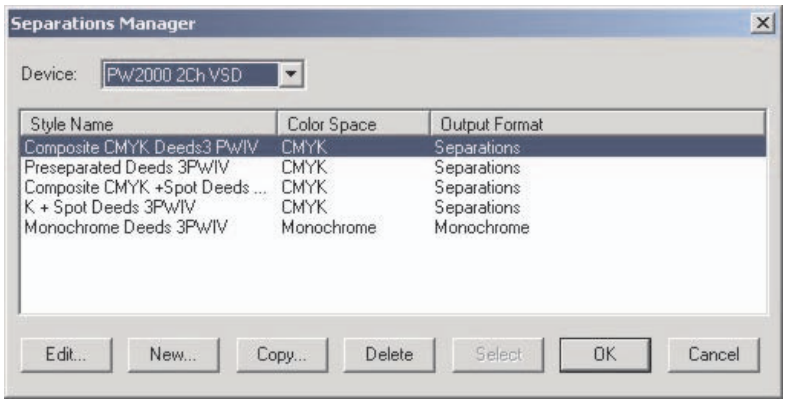
Separation Styles

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 Chapter 14 of the Xitron RIP Manual located in your manuals folder in the RIP installation folder.

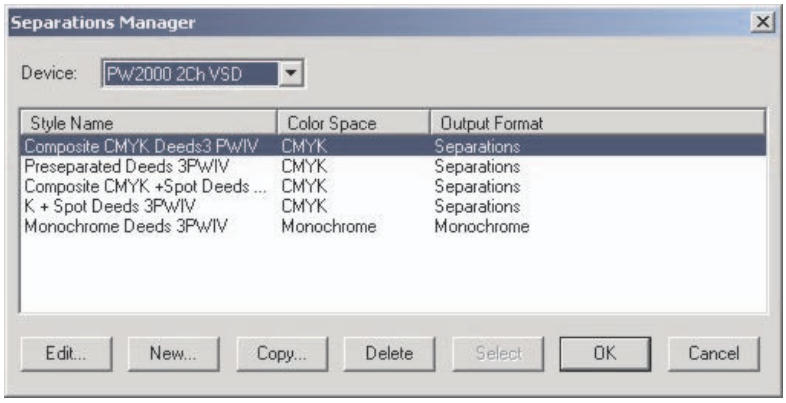
Predefined Separations Styles

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

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



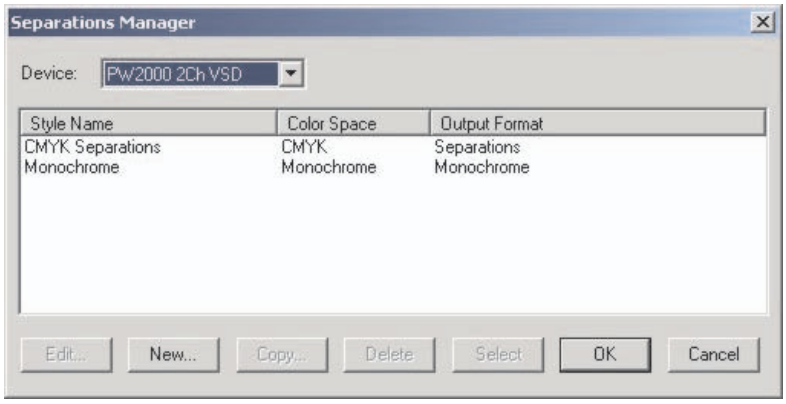
- This opens the **Separations Manager** window. Select PW2000 2ChVSD as the device.



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 Defaults** file, follow the procedure as described below to create your own **Separation Styles**.

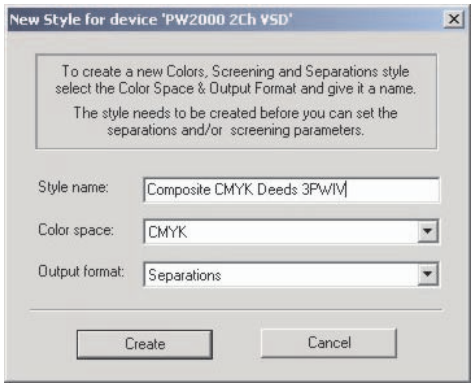
Creating Separation Styles

- When opening the **Separations Manager** window there will be a CMYK separations style and a monochrome style already entered.

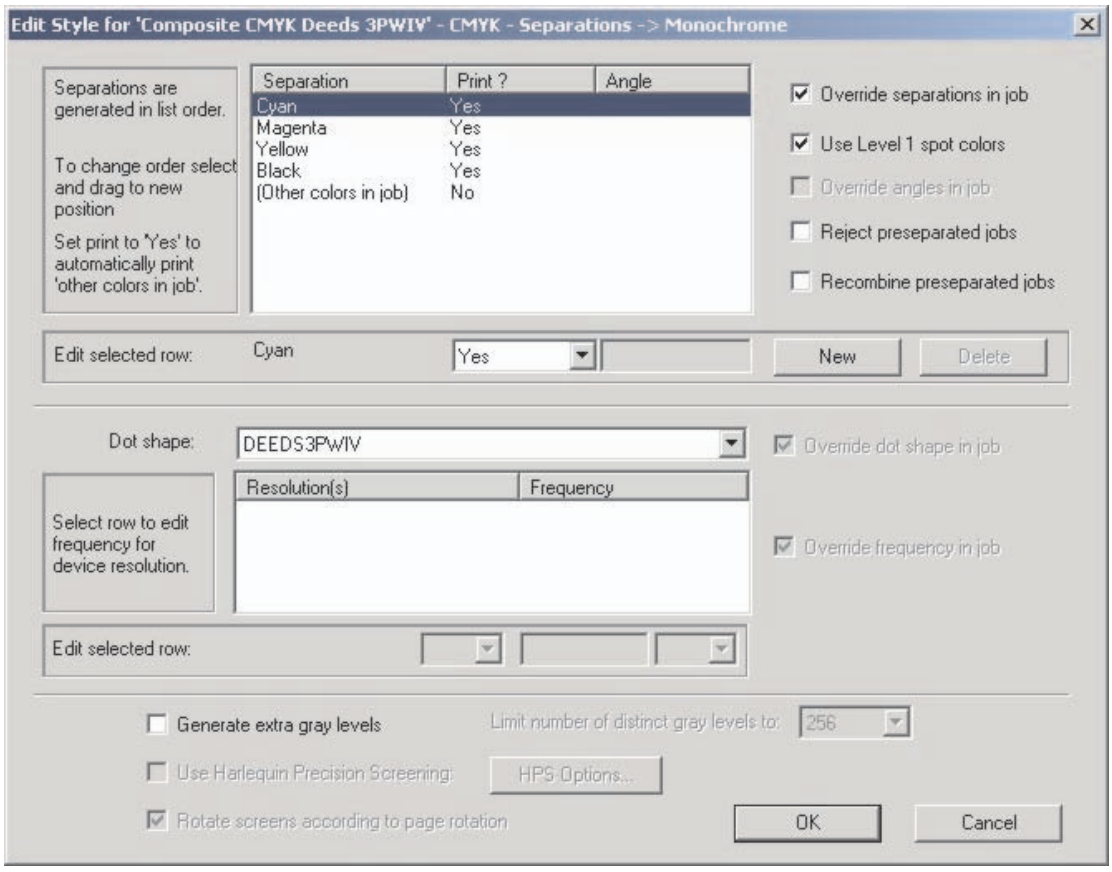


Click on **New**.

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

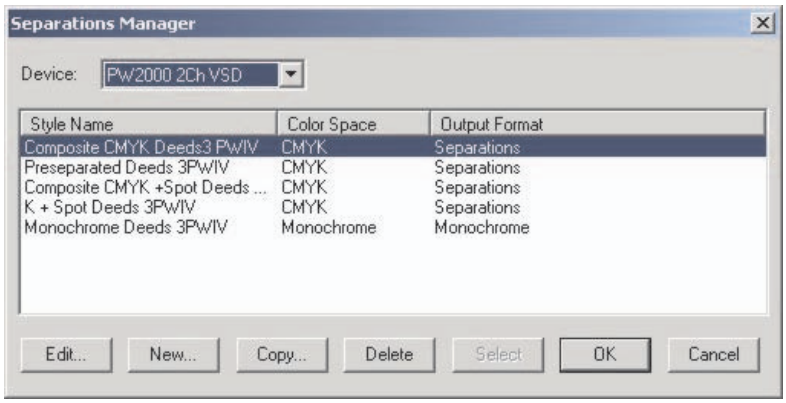


- Give the new style a name that will be easy to remember and reflects what your separation style will achieve (e.g. Composite CMYK to Deeds 3PWIV).
- Set **Color space** to **CMYK**.
- Set **Output format** to **Separations**.
- Click **Create** to open the **Edit Style** dialogue.



- 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 **Dot shape** to **Deeds 3PWIV**, this is the Dynamically Even – Extended Diffused Screens that have been designed specifically for the PlateWriter 2000.
- Check the **Generate extra gray levels** box, and set **Limit number of distinct gray levels to 512**.
- 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 Plate-making

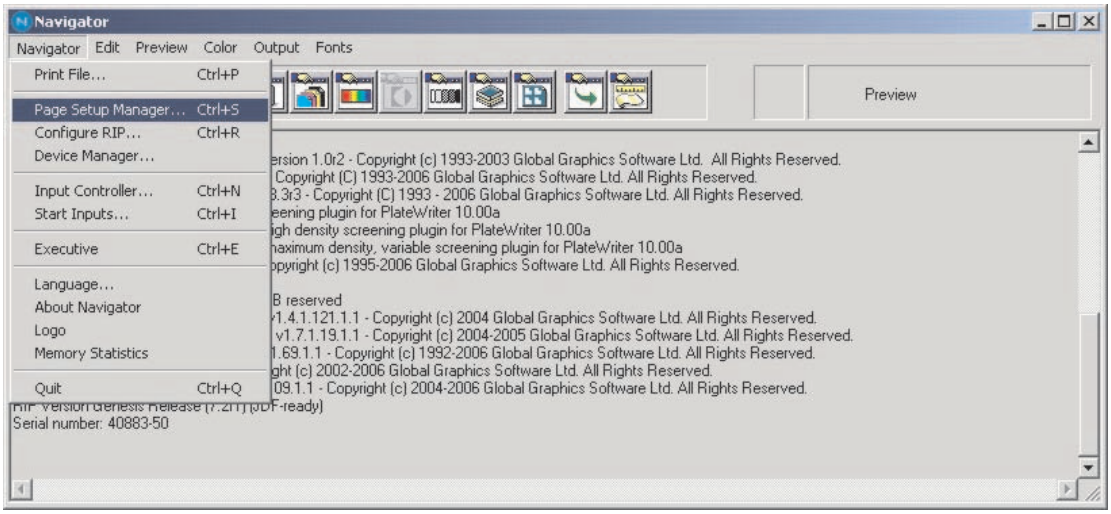
About Page Setups

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.

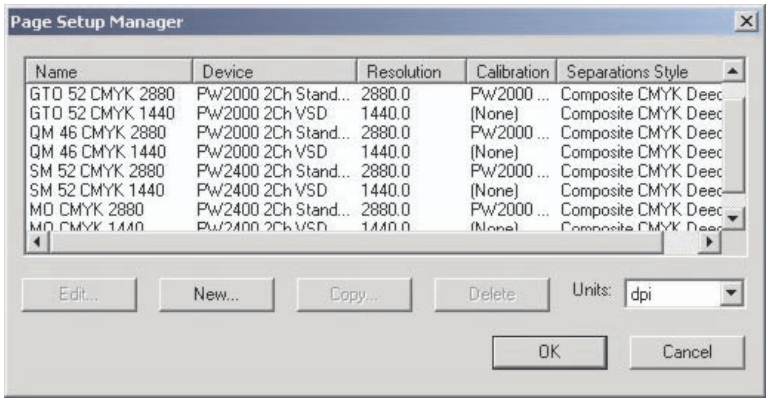
Predefined Page Setups

To make things easier, if you printed the **Glunz & Jensen Factory Defaults** 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.



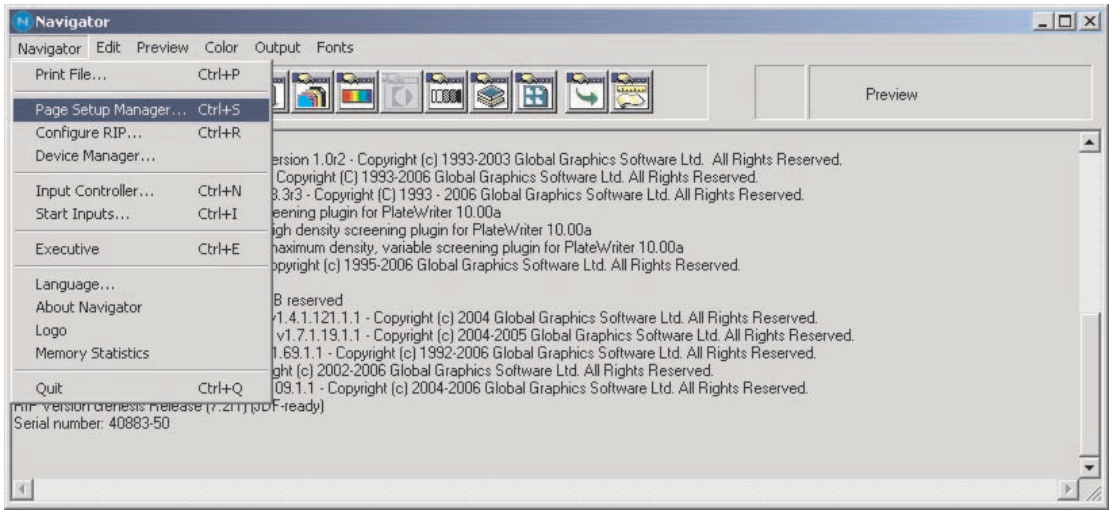
- This opens the **Page Setup Manager** window.



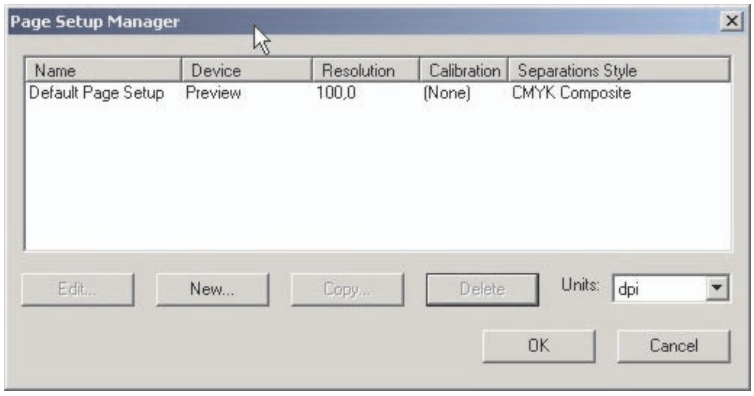
Here two different page setups are created for each press, e.g. GTO52 CMYK 1440 and GTO52 CMYK 2880 either for the device 2Ch VSD or 2Ch Standard. Also you will find several other setups. Simply delete the ones that does not match your requirements.
You can use these page setups as they are or you can 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 Defaults** 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 Defaults** file, see the section *"Duplicating and Editing a PageSetup"* on page 4-27.

Creating Page Setups

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

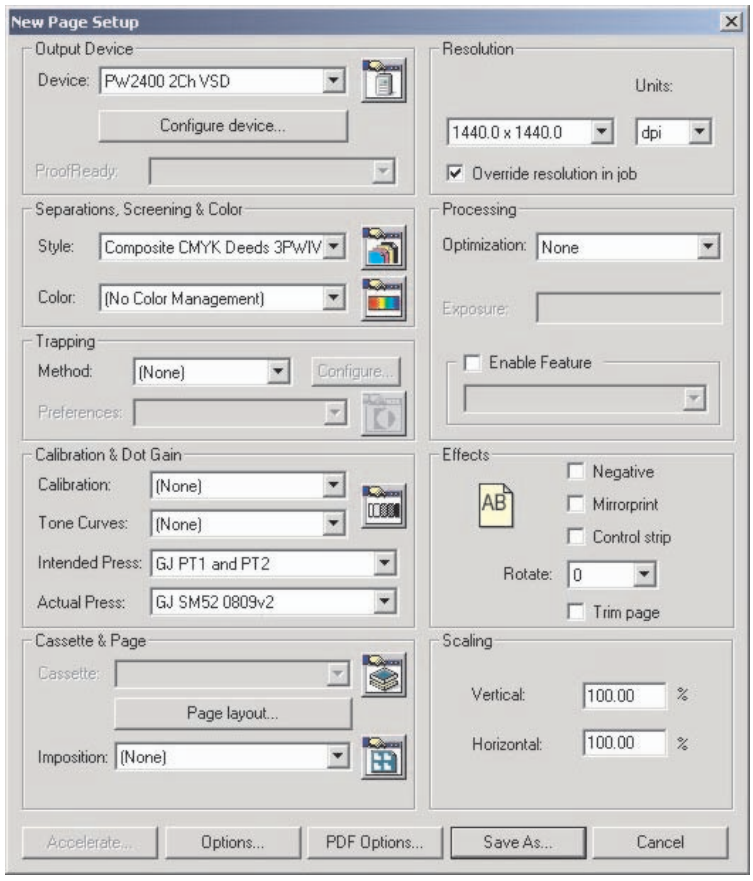


- The **Page Setup Manager** dialogue appears.



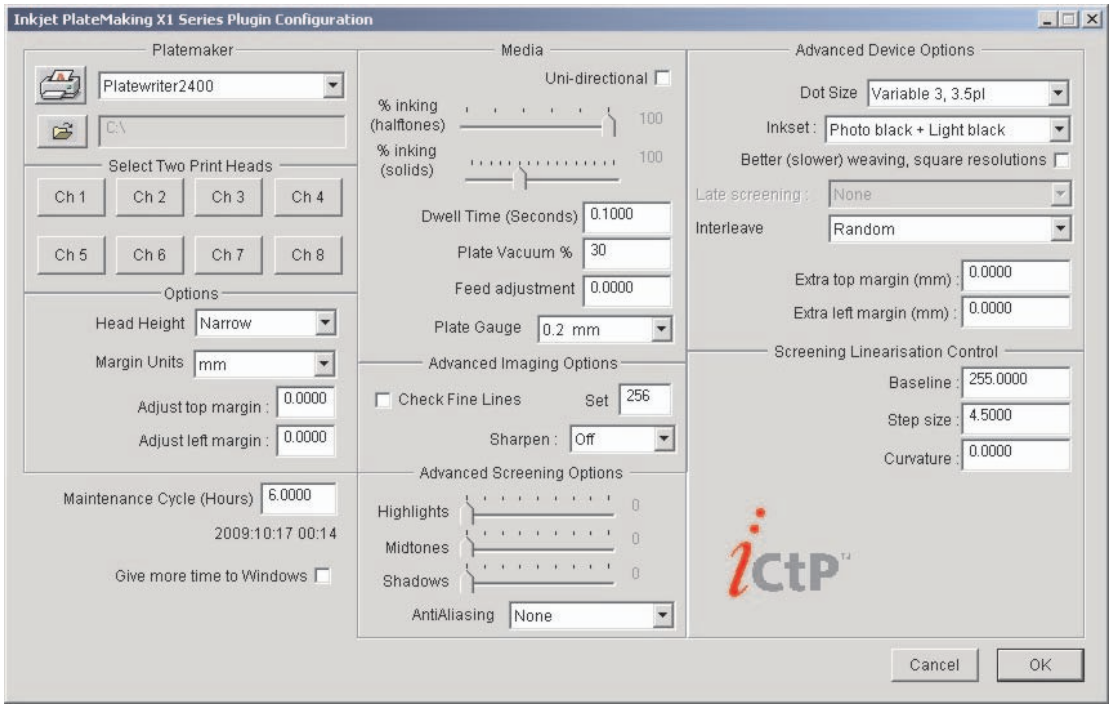
Click on **New…**

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



- In the **Output Device** section select the device **PlateWriter 2Ch VSD** and check that the values in the **Resolution** section change to **1440 x 1440**.
- Click on the **Configure Device** button in the **Output Device** section.

- The configuration window for the **PlateWriter 2000 plug-in** opens.

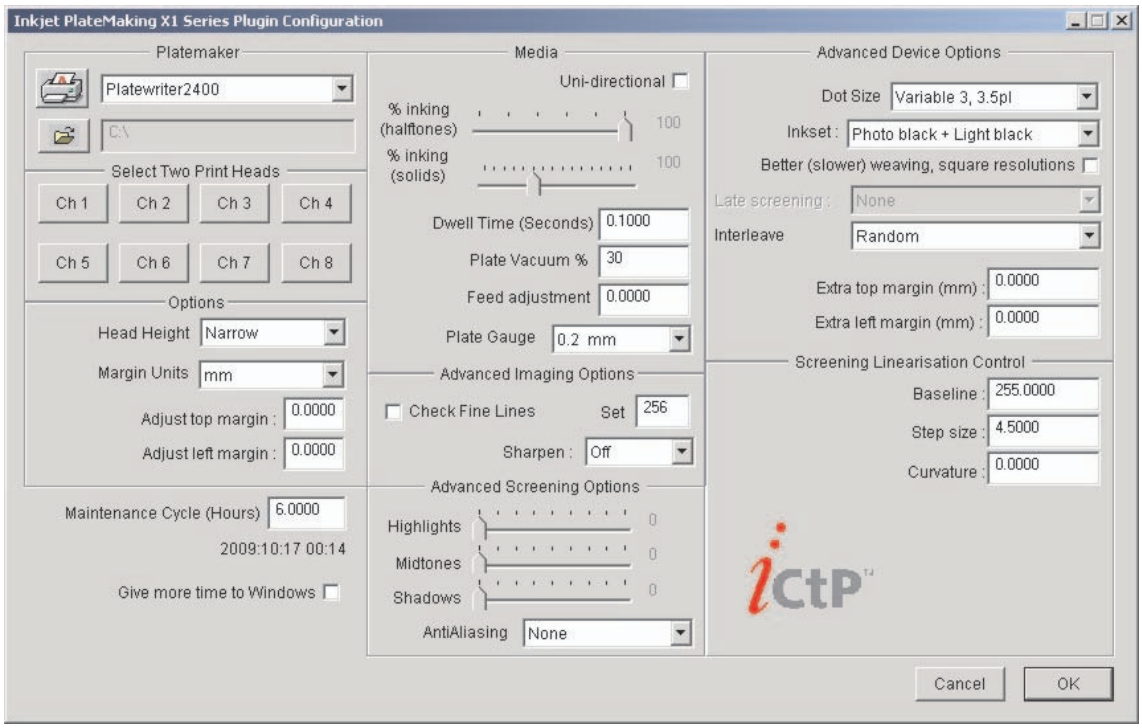


- Make the settings as shown in the screen image. For a detailed description of the PlateWriter 2000 plug-in, please see page 4-12

- Click **OK** to continue.

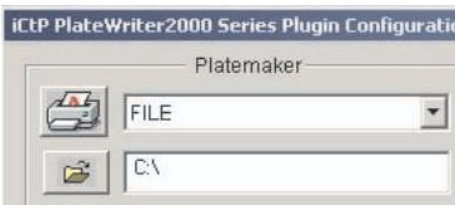
PlateWriter 2000 plug-in functionality

This is a basic description of the functionality for the plug-in used with the Xitron RIP for the PlateWriter 2000.



Platemaker

Here you can choose the output device. The plug-in will search for the installed printers in the Windows system. You can also choose the option **File** and write or browse for the path where the file is to be saved. This can be useful for customer support where a file in EP2 format from a customer RIP can be received and then printed on another PlateWriter 2000 using a Raw Print application.



Select One Print Head or Select Two Print Heads

Depending on the selected device, type the plug-in needed to find out which of the channels is charged with ink in the PlateWriter 2000. This will be indicated by the device name, either by 1Ch or 2Ch included in the device name. The plug-in will write Select One Print Head or Select Two Print Heads.

It is not possible to output a file through the RIP where only one channel is chosen on a 2 channel device or vice versa without getting a RIP error:

! Error : Incorrect number of output channels (1) selected for PlateWriter 2000 2Ch Standard.

! ERROR : Image is 2BPP, should be 1BPP! Please re-RIP with a different screen.

When launching the Plug-in on the Configure Device, the dialog box will become active after a short while, during which time there is a risk of selecting wrong ink channels by typing one of the values between 1 and 8 on the keyboard.

Options

Head Height (Platen Gap)

Head Height has 2 options Standard or Narrow, the default setting should be Narrow. See options below:

Narrow	For PG 0.7 mm
Standard	For PG 1.2 mm
Wide	For PG 1.5 mm
Wider	For PG 2.1 mm
Widest	For PG 2.6 mm

Margin Units and Adjust top and left margin

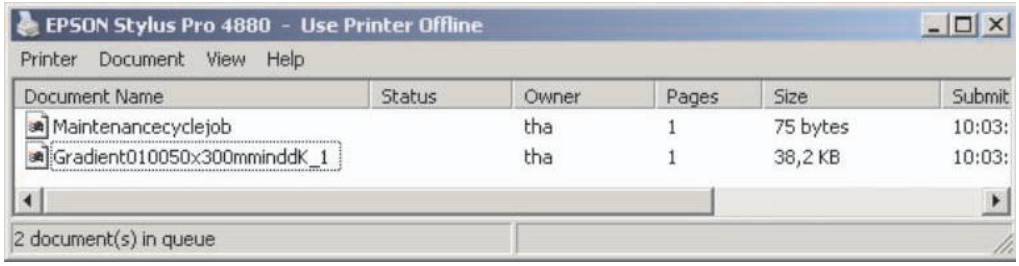
This option allows you to choose millimetres or inches for the Adjust top and left margin option. If the image is not correctly placed on the plate, small adjustments can be made to ensure correct centring and gripper edge. Margins can be typed in as a positive or negative value. Margins can also be adjusted in Advanced Device Options. This section is normally greyed out and not accessible in the normal user mode. Margins created in margin units will be added to those specified in Advanced Device Options. Note that the margins specified in the Advanced Device Options are fixed in millimetres. The margins specified in the Advanced Device Options should under normal circumstances be left unedited.

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. The time and date for the last maintenance cycle will be displayed. The default value should be 6 hours. For instance when outputting a job more than 6 hours after the last job with a defined maintenance cycle of 6 hours, the RIP log will write the following output:

Last maintenance cycle : 2008:03:03 21:00
Performing normal maintenance cycle...

and a maintenance cycle job will be sent to the print spooler.



Give more time to Windows

The item Give More Time For Windows should normally be checked. If the RIP output speed seems slow and there is at least 512 MB RAM in the PC, the box can be unchecked and the results be compared.

Media

Uni-directional

At the top of this section Uni-directional printing mode can be checked and unchecked. Selecting uni-directional will almost double the printing time, but will result in better text and line quality. Selecting uni-directional is useful with text jobs and can be selected for the black channel only by choosing the separation in the active queue. Click on info and then deselect change all pages in job and then activate uni-directional in the Configure device dialog.

Ink limit levels

The ink limit level can be set for solids and halftones; it is recommended that both settings are set at the same value. The purpose of this function is to aid ink drying in the solid area, and thereby removing any bleeding/fisheye effect. Under normal circumstances the ink limiting is only necessary when printing in 2880 x 2880 2 channel mode. In this mode an ink limit of 70% is the default value, and is normally sufficient to keep the solids closed.

Dwell Time (Seconds)

Dwell time, scan interval or scan delay is specified in seconds. This option will allow the print head to pause in between every scan, in order to ensure a better drying of the ink before the next scan is applied. Dwell time is useful on narrow images that are placed on the left side of the plate near to the starting position of the print head. Drying the ink on the plate can be a challenge on images where a very short scan is needed. When printing in bi-directional mode, the scan delay will be applied on scans in both directions. In uni-directional, the scan delay will be applied after the scan is made from left to right and the head has returned to the start position on the left side.

Plate Vacuum %

The vacuum on the plate during transportation and printing can be set in a range from 0 – 150%. The default value is 30%, 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 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%. The Glunz & Jensen PW Adjustment Utillity has a build in function for adjusting the feed. The program and instructions are found locally on the RIP workstation: C:\GJ tools\PWAjUtil.

Plate Gauge

Select the plate gauge (thickness) of the media that is used; this will affect the bi-directional settings on the printer and adjust the setting according to the media thickness.

Select 0.20 mm if your plate has a thickness of 0.15 or 0.20 mm. (6 and 8 gauge), and select 0.30 mm if your plate has a thickness of 0.30 mm. (12 gauge). These setting are valid if you are running all plate thicknesses on the setting **Narrow Head Height**. The Glunz & Jensen PW Adjustment Utillity has a build in function for adjusting the bi-directional. The program and instructions are found locally on the RIP workstation: C:\GJ tools\PWAjUtil.

If you are running 0.30 mm plates on Standard (Normal) Head Height, bi-directional adjustment must be made to that specific head height and a different setting has to be applied depending on which plate thickness was used to perform the adjustment. Please contact a dealer technician for help.

Advanced Imaging Options

Check Fine Lines

The Check Fine Lines option applies an ink reduction or setting for the maximum ink level for fine lines / hairlines defined in one pixel values. The reduction will result in a finer line since the ink level is reduced. The Set value will define where to apply the ink reduction in 0 – 255 levels of grey. The default value should normally be in the range of 240 – 250, which will apply the option in the range of around 95-98%. The Check fine Lines option will only work with the device 2 Ch Standard and the Deeds 2PW screening.

The default value should normally be in the range of 240 – 250, which will apply the option in the range of around 95-98%.

Sharpen

Sharpen gives the ability to make text and lines sharper/thinner. The default is Off and no sharpen is applied. You can chose to applied Light or Full sharpen, please contact your dealer for more details on this function.

Advanced Screening Options

This option enables the function for creating more randomness/noise in the screening by dragging the sliders for highlights, mid tones and shadows from 0 and up to 256 levels. These options are only for advanced usage, and the default value should be 0 for highlights, mid tones and shadows.

AntiAliasing

AntiAliasing must to be set to None, and is not to be used with the currently used versions of screening. The option is designed for a possible future use on lower resolutions of 720 x 720 with 3 bit VSD screenings such as Deeds 4PW. The purpose is to gain smoother edges at a low resolution.

Advanced Device Options

To edit Advanced Device Options and Screen Linearisation Control, an empty txt file must be created and saved as develop.txt and saved in the appropriate device folder of the RIP.

Dot Size

Two modes of dot sizes can be selected for the PlateWriter 2000 depending on the chosen resolution and number of channels:

- Printing in 1 channel VSD or 2 channel VSD (Variable Dot Size) mode on 1440x1440 using Deeds 3PWH, 3PWI and 3PWIV screening requires that Variable 3, 3,5pl is chosen as Dot Size.
- Printing in 2 channel Standard on 2880x2880 using Deeds 2PW screening requires that UMD (Ultra Micro Dot), 3.5pl is chosen as Dot Size.

Inkset

Photo black + Light black must be chosen as default inkset in the plug-in, as they match the current ink and maintenance fluid cartridges used in the PlateWriter 2000.

Better (slower) weaving, square resolutions

Better (slower) weaving, square resolution should not be activated as default; this option is currently not implemented.

Late screening

This section is greyed out and default on the setting None and is not in use in this current version of the plug-in.

Interleave

The function is available on the 2 Ch VSD devices. This gives the option on how to split data in to the 2 channels, either random or alternate. The default and recommended setting is random.

Extra Margins

The adjustment of the margins in this section accounts for the subtraction of the defined non-printable area on the plate as specified by Epson (3 mm. in top and left side). Note that the margins specified in the Advanced Device Options are fixed in millimetres. Margins specified in this section will be added to those specified in the user section.

As the Extra Margins should account for 3 mm printer margins, it should not be necessary to make any adjustment in the user section; however some deviations between printers can be expected, most likely caused by the sensor registering the top edge. Here a special adjustment in the user section should be carried out by a technician.

General setting for Extra margins:

Default margin settings	Extra top margin	Extra left margin
PW2000 2Ch Standard with paper size check = ON	27	0
PW2000 2Ch VSD with paper size check = ON	0	0
PW2000 2Ch Standard with paper size check = OFF*	17	-11
PW2000 2Ch VSD with paper size check = OFF*	-10	-11
PW2400 2Ch Standard with paper size check = ON	27	0
PW2400 2Ch VSD with paper size check = ON	0	0

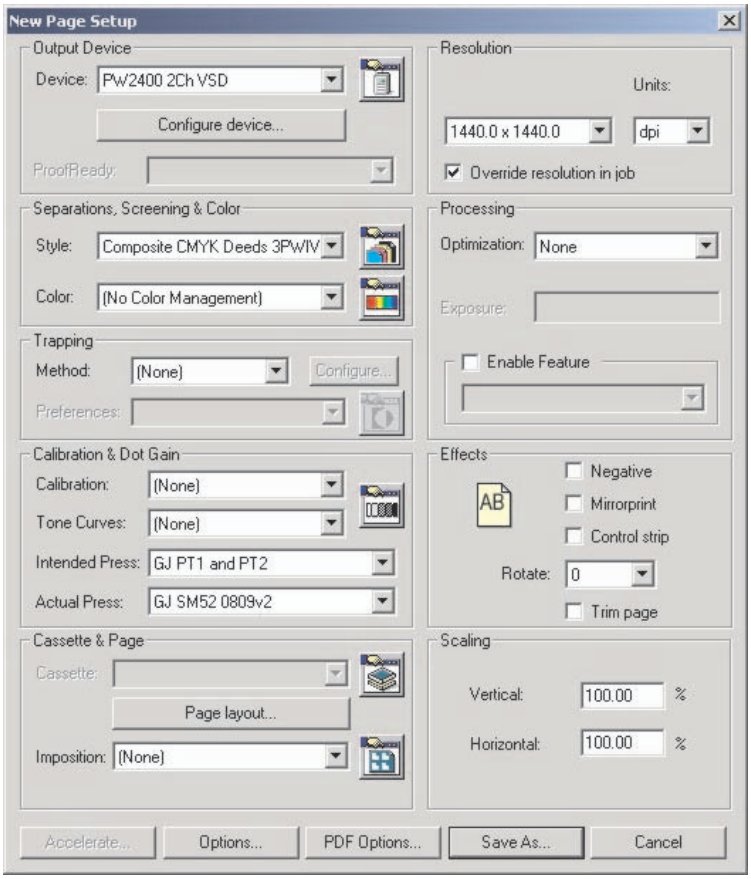
*** Note that the left margin when Paper Size Check is off will be dependent on the positioning of the registering pins on the input table.**

Screen Linearisation Control

The Screen Linearisation Control is designed to work with variable screening such as the 3PWIV, the V in the end stands for variable.

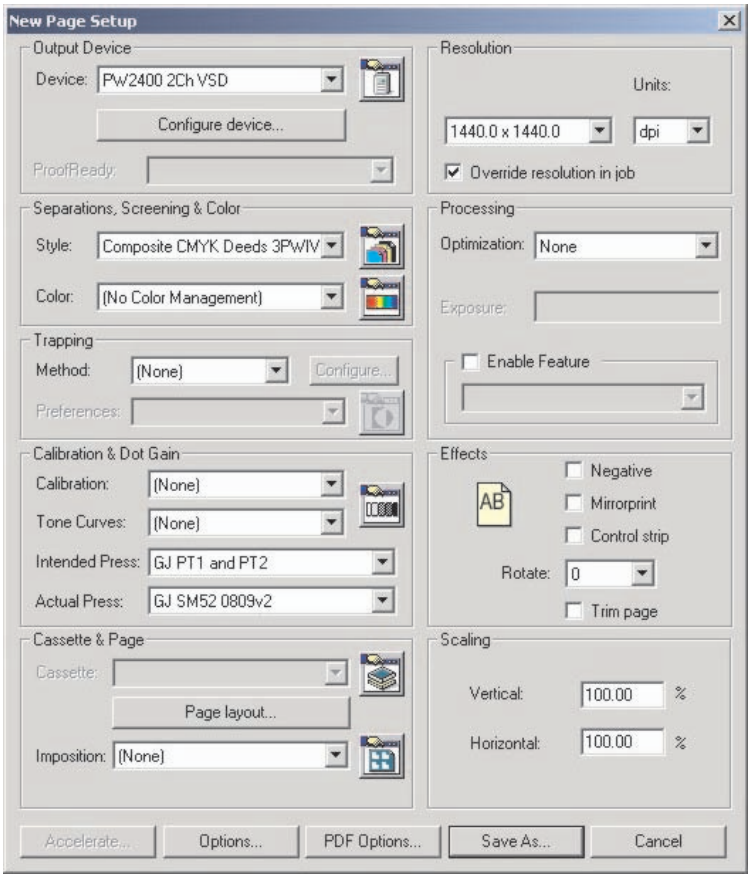
Here a Baseline, Step size and Curvature must be set to make the screening output more dynamic. Running with the Deeds 3PWIV screening the settings must be Baseline = 255, Step size = 4.5 and Curvature = 0. For the 2PW screening the selected values has no effect.

- In the **Separations, Screening & Color** section of the **New Page Setup** window choose a **Style** – "Composite CMYK Deeds 3PWIV" was the one we created earlier, or select it from the pre-defined Separations Styles loaded when printing the **Glunz & Jensen Factory Defaults** file.

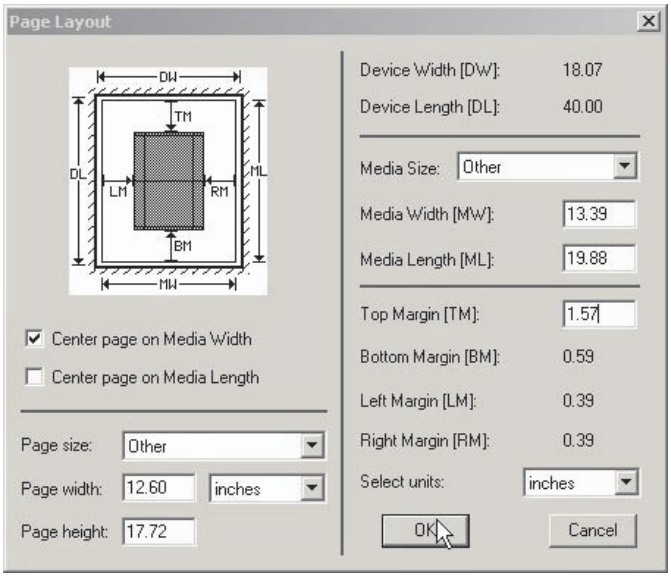


- If you did not print the **Glunz & Jensen Factory Defaults** file, then leave the fields in the **Calibration & Dot Gain** section blank, and follow the procedure described in **"Calibrating"** later in this chapter.
- If you did print the **Glunz & Jensen Factory Defaults** file then,
  – Set **Calibration** 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 **GJ SM52 0809v2** 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 Defaults** file was printed, otherwise each of the **Calibration & Dot Gain** items are set to **None**.

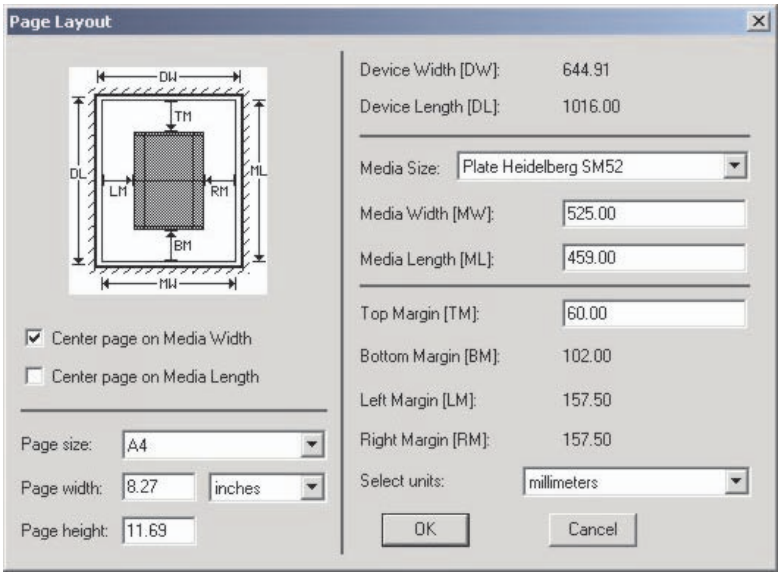


- In the **Cassette & Page** section click the **Page Layout..** button to open the **Page Layout** window.



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

Setting the Plate Size

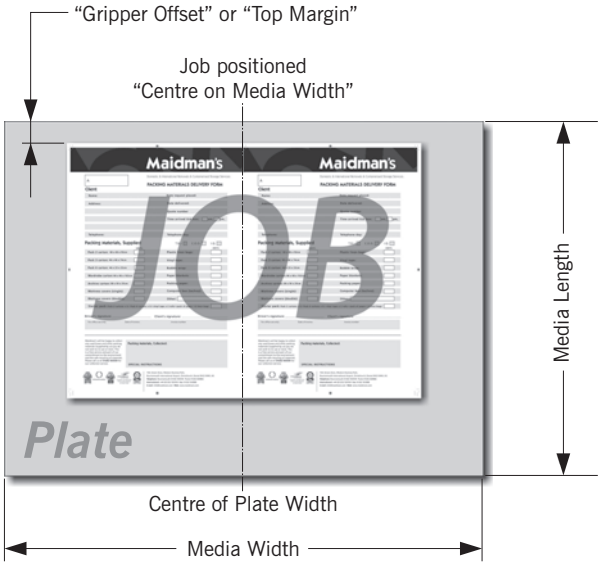


- For printing plates set the **Media Width** and **Media Length** to the width and length of your printing plates. Most plates can be imaged in portrait on the PlateWriter 2000. For example, for a **Heidelberg SpeedMaster 52** set **Width** to **459 mm** and **Length** to **525 mm**. In general it is recommended to have the press gripper side along with the register pins on the PlateWriter. For 2-up press this will result in portrait presses being images landscape and landscape presses being images portrait in the PlateWriter.
- 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.

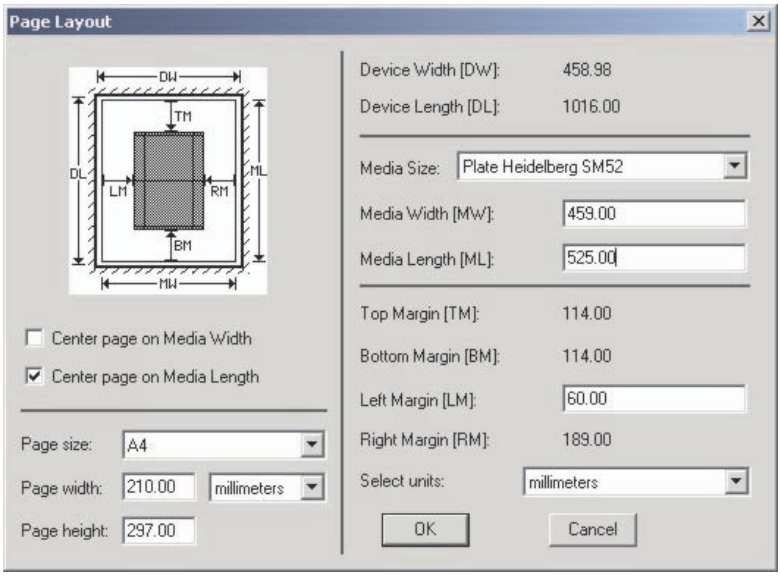
Setting the Gripper and Job Position on the Plate

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 portrait, the PostScript or pdf-file will generally be centred on the **Media Length**, and the **Left Margin** will be the **Gripper Marg**in plus the plate bend.



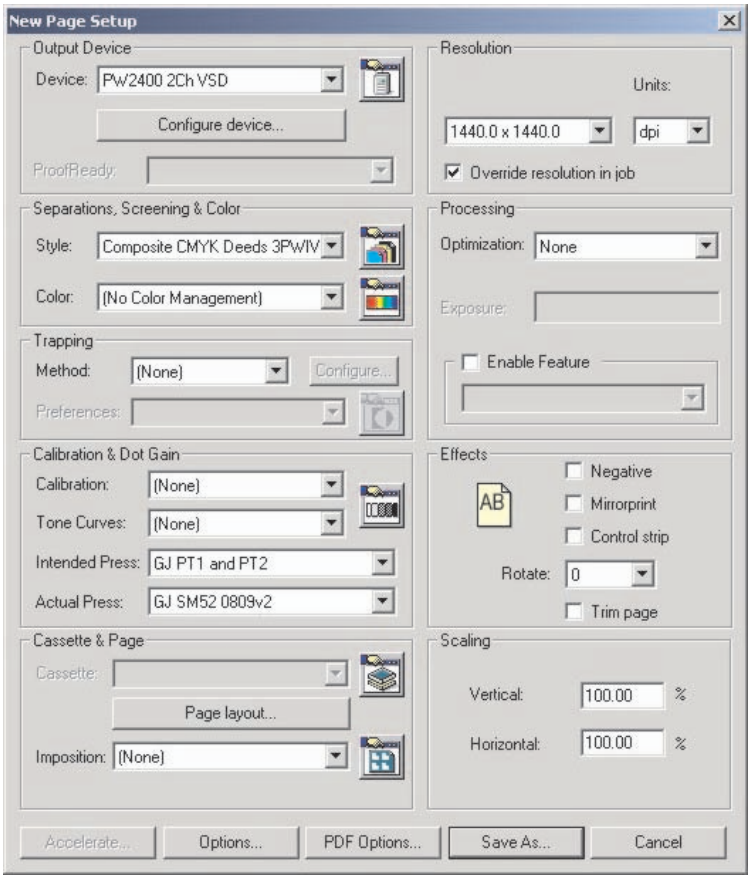
Example of a Heidelberg SpeedMaster 52:

- The plate is loaded portrait (the long edge fits into the gripper).
- The plate size is **529 mm x 459 mm**, so set the **Media Width** to **459 mm** and set the **Media Length** to **525 mm** as shown above.
- Then check the **Centre page on Media Length** box (this places the job, irrespective of size, in the centre of the plate Length) and ensure the **Centre Page on Media Width** is **not** checked.
- Finally the **Left 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 **Top Margin** and **Bottom Margin** boxes will be greyed out, as the job will automatically be centred by the RIP.

Please note that running the SM52 format on the PlateWriter 2000 requires the Paper Size Check is set to OFF, this is the maximum plate size that can be imaged on the PlateWriter 2000.

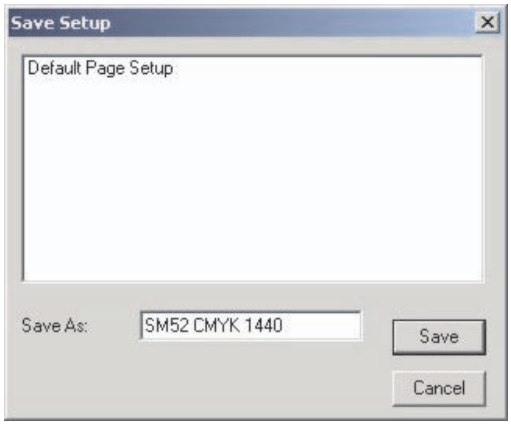
The Page Size in the bottom left of the dialogue box, will be overridden by the page size of the job being sent down from your application, so the value here is not important, however we recommend that you set it at the largest job size you are ever likely to send to this plate.

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

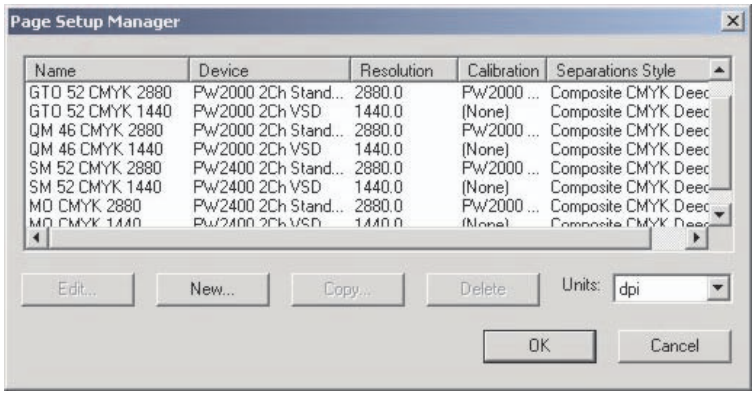


Click the **Save As...** button.

- 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.

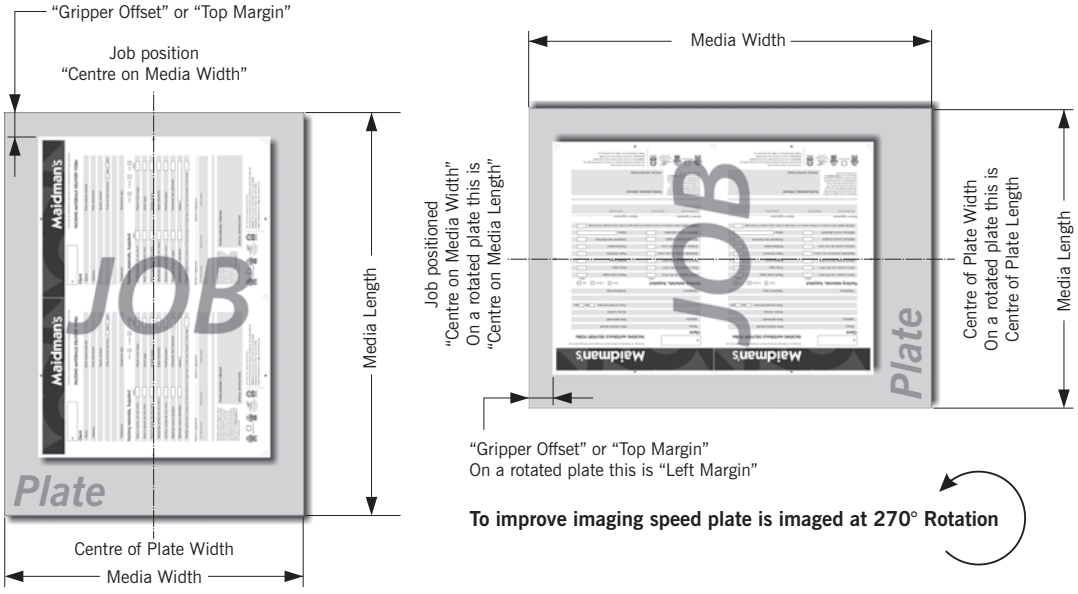


- Click the **OK** button to exit the **Page Setup Manager**.

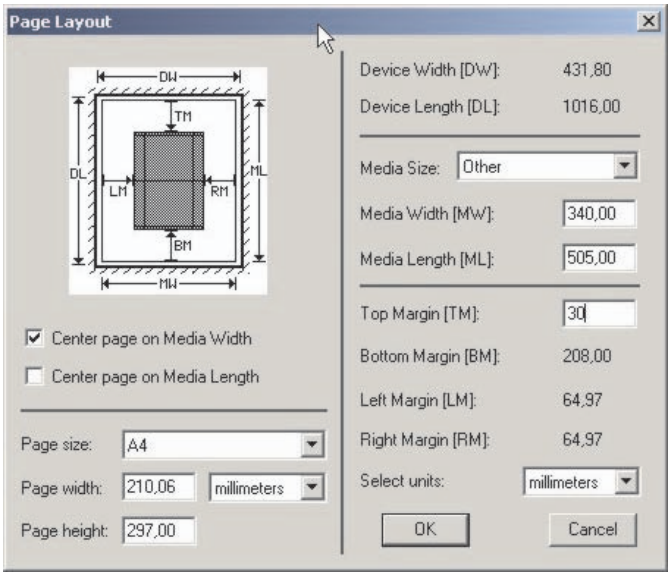
If you click "Cancel" at any point, including to exit the Page Setup Manager above, then any changes you made or new Page Setups will be lost!

Setting the Gripper and Job position for Portrait Printing Presses

For **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.

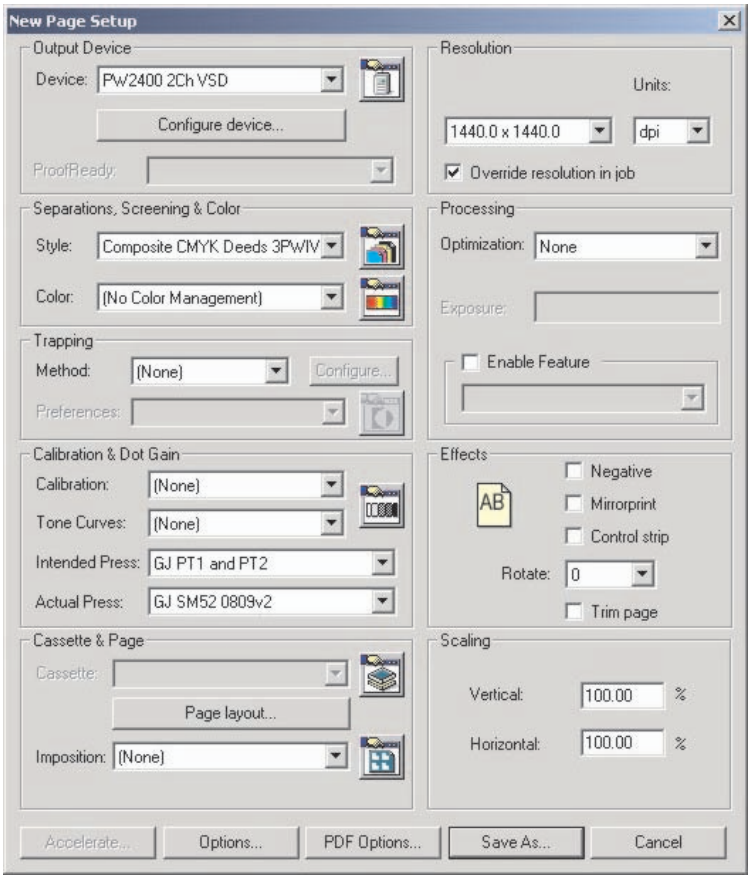


If your plate size allows it, in many cases it will be quicker for the PlateWriter 2000 to print the plate in **Landscape** orientation due to the fact that the plate has less far to advance.
In this case, the PostScript or pdf file should be set to **centred** on the shortened **Media Length**, and the **Left Margin** will be set to the gripper plus the plate bend on the printing press however as described previously.



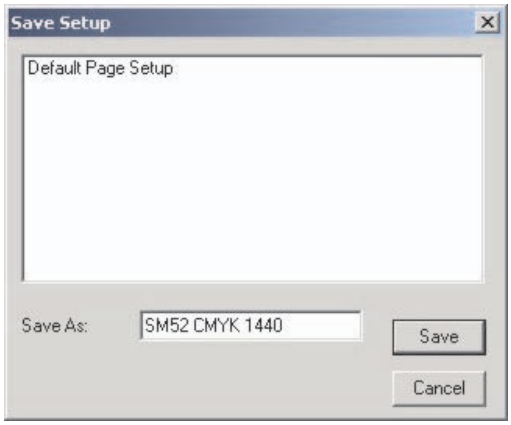
- **Example of an Heidelberg QM46 press:**
- The plate size is 340 mm x 505 mm, and normally the narrow edge (340 mm edge) would be the grip and so would normally be the top.
- Set the **Media Width** to a plate length of **340 mm** and set the **Media Length** to a plate width of **505 mm** as shown 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.



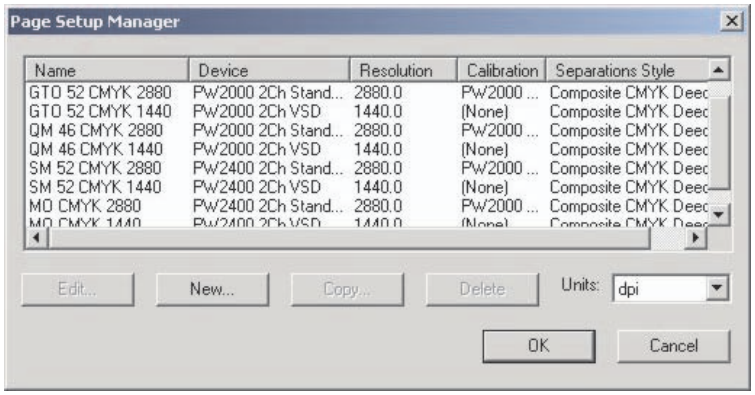
- In the **Effects** section set **Rotate** to the required rotation that matches depending on the PostScript or pdf file and if you have a portrait or landscape press.
- Click the **Save As**… button.

- 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.

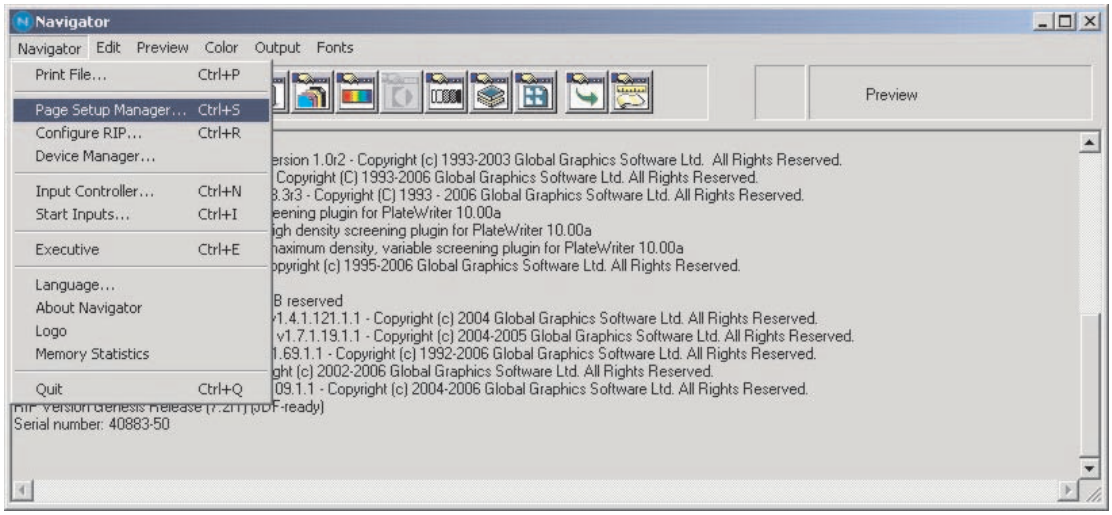
Alternatively, one workflow/customer may supply jobs separated, another may supply jobs pre-separated. Again, duplicating the Page Setup and simply selecting different separation styles for each Page Setup easily solves this problem.

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.

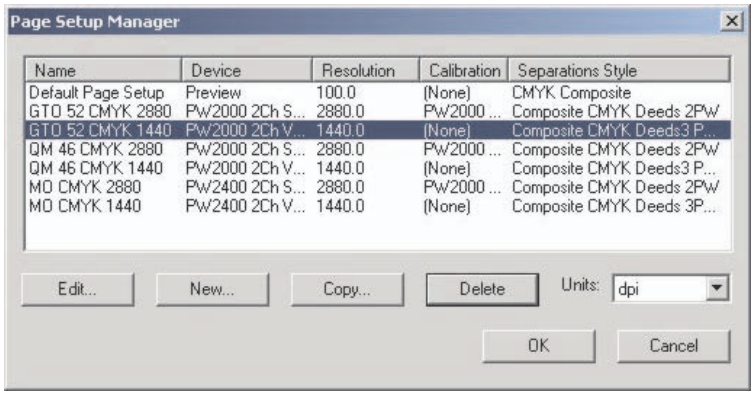
Using "Copy" to Create a Page Setup for a different Plate Size

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



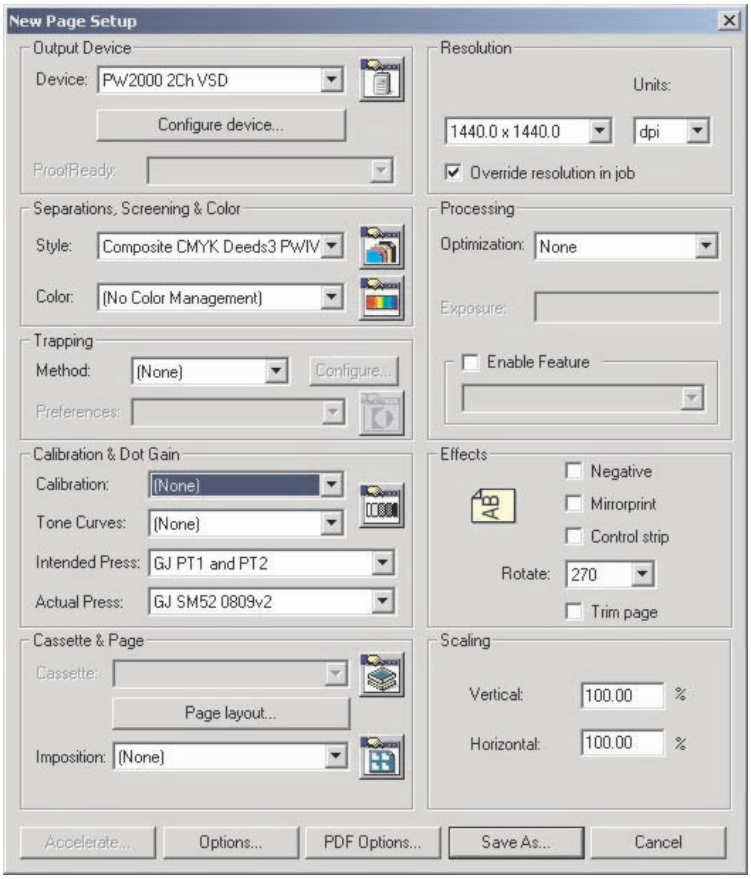
If you already have a Press Setup created, and you wish to add another of a different size, then try to select a Setup with the same orientation (e.g. if you have a Portrait Press setup such as an Heidelberg QM46 and want to create a different size such as a ABDICK 9810) and copy this Page Setup. This 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 on the height (for Landscape) or the length of the page (for rotated Portrait) appropriately (see section on creating Page Setups).

- In this example we will add a **Heidelberg SM52 press (459 mm x 525 mm)** to our Page Setup list by copying and editing the Heidelberg SM GTO52 Page Setup.
- From the list in the **Page Setup Manager** dialogue…



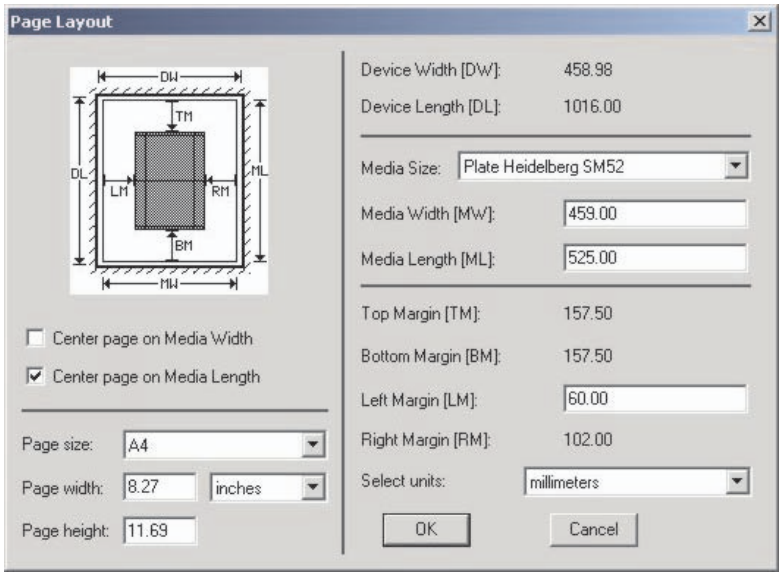
...select the Page Setup you wish to base your new Page Setup upon, in this case select the **GTO 52 CMYK 1440** Page Setup and click **Copy...** to create a duplicate Page Setup.

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



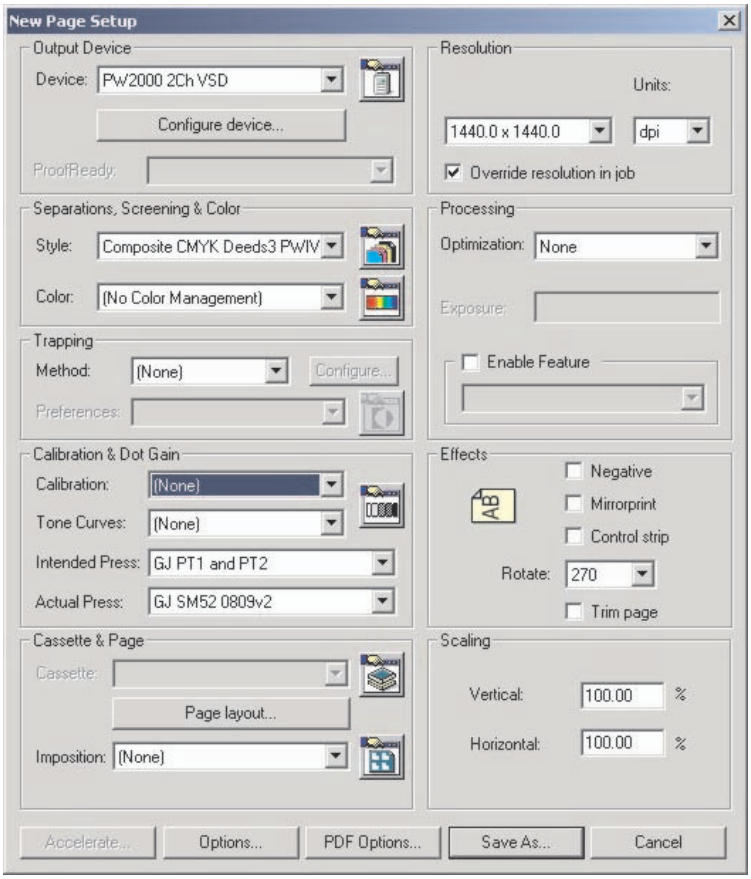
Click on the **Page layout...** button.

- In the **Page Layout** dialogue…



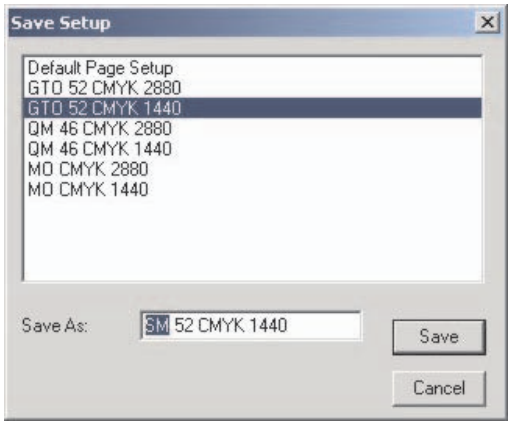
..edit the existing **Media Width** and **Media Length** settings to reflect the plate size of your new press page setup.
In this case plate width is **459 mm** and plate length is **525 mm**.
Set the new **Left Margin** if this press has a different Gripper requirement.
Click **OK**.

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



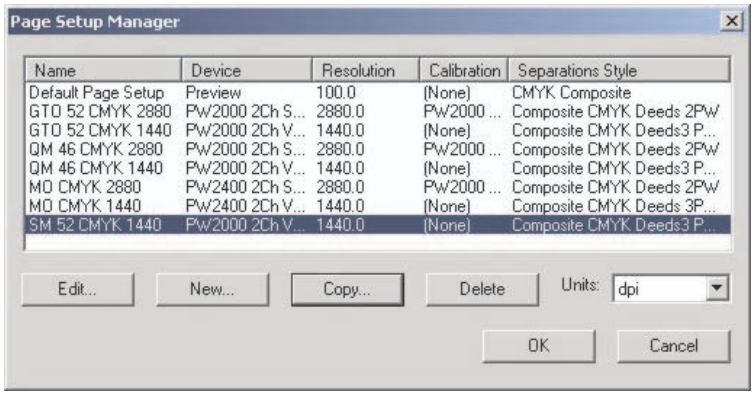
Click **Save As...** to save your new Page Setup with the new plate size.

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



In this example name the Setup **SM52 CMYK 1440**. Click Save.

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



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

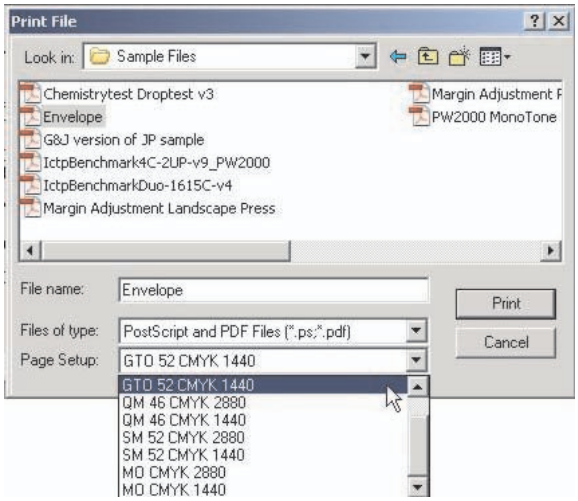
If you click "Cancel" at any point including to exit the Page Setup Manager above, then any changes you made or new Page Setups will be lost!

- 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 page 118 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 will only be able to see PC networks if the Network has been configured with the additional ExtremeZ-IP protocol provided or with SERVER based applications. The Normal mode of connection for Apple users is to use the AppleTalk plug-in detailed below.

- **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.

- **NT Print**

  This publishes the RIP as a printer available to the Windows NT print services, this printer can then be shared to other PC users in a similar fashion to the AppleTalk plug-in for Mac users.

Each of these plug-ins can have multiple configurations, each configuration is given a unique name, then the input derived from the queue is linked to a specified Page Setup, so the RIP can print the file. This enables multiple Inputs from different sources for each page setup, and/or one input plug-in to receive jobs for multiple Page Setups.

Example: A print queue may be set up watching a specific folder (using the Spool input plug-in), any files sent to this folder will be delivered to the page setup associated with this print queue (such as Page Setup 1).

At the same time, an addition queue may be active, using the AppleTalk input plug-in, a print queue can be created which broadcasts a "virtual" printer on an Apple Network. Any jobs printed by a Mac user will be delivered to the page setup associated with this Print Queue (which could also be for this example PageSetup1).

Therefore, in this scenario the RIP allows different inputs (both AppleTalk and SpoolFolders) to send jobs to the RIP and will automatically accept and handle them as they arrive.

Alternatively: A Print queue may be set up watching a specific folder (e.g. folder QM46 CMYK 1440) using the spool input plug-in, any files sent to this folder will be delivered to the page setup associated with this print queue (such as a Page Setup for the Heidelberg QM46 press).

At the same time, an addition queue may be set up watching a different specific folder (e.g. folder GTO52) using the spool input plug-in, any files sent to this folder will be delivered to the page setup associated with this print queue (such as a Page Setup for a Heidelberg GTO52 press).

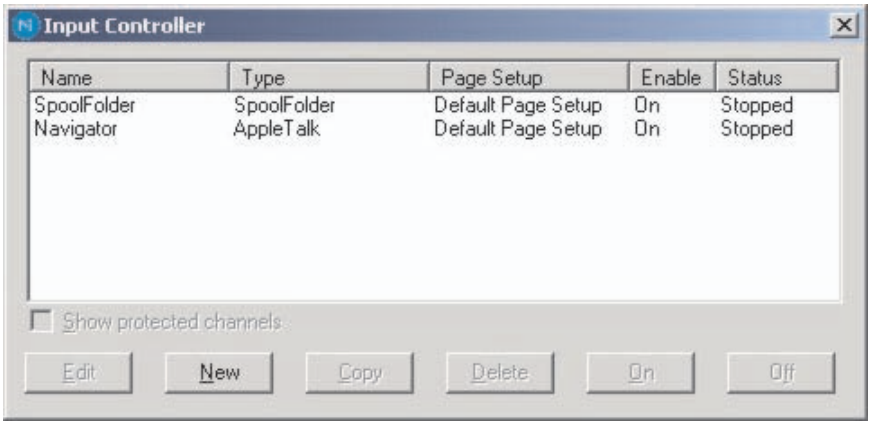
Therefore, in this scenario the RIP allows multiple folders to be published on a network, and users can drag and drop jobs/files into the folder relating to the appropriate page setup. The most common example of this is to accept jobs for different press sizes, so the RIP can orient the job for each press, set the grip position and then output the job.

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 **NavigatorRIP -> 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 **NavigatorRIP -> 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:

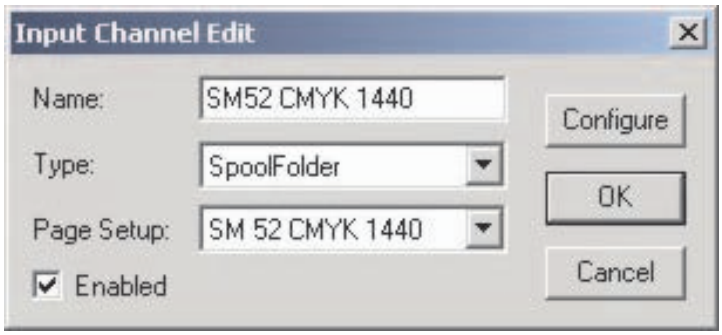
- **Kill Current Job**: This causes the job currently processing to be aborted. It may take a few seconds.
- **Stop Input Queue:** This turns off the input system when the job currently processing has finished.
- **Abort Input Queue:** This aborts the job currently processing and then turns off the input 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 AppleTalk 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. AppleTalk, 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 **NavigatorRIP -> Start Inputs** or click the **Green Traffic Light** tool bar button.
To stop all enabled inputs, choose **NavigatorRIP -> 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 PC users. 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:

- Post-Script-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.

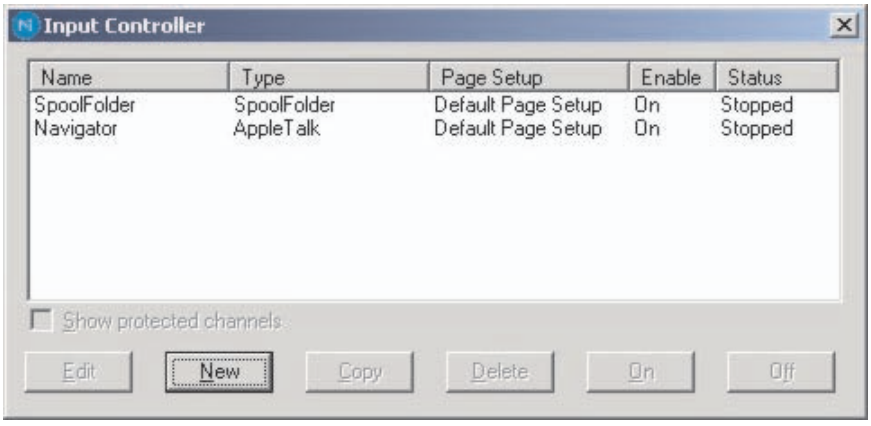
The files in the spool folders are processed in the order in which they arrive. However, if there are jobs already in a folder when the RIP is started, or if a very large number of files have been queued, the RIP determines the order of those jobs by the date stamps on the files.

Creating and Configuring a Spool Folder Input Source

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

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

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

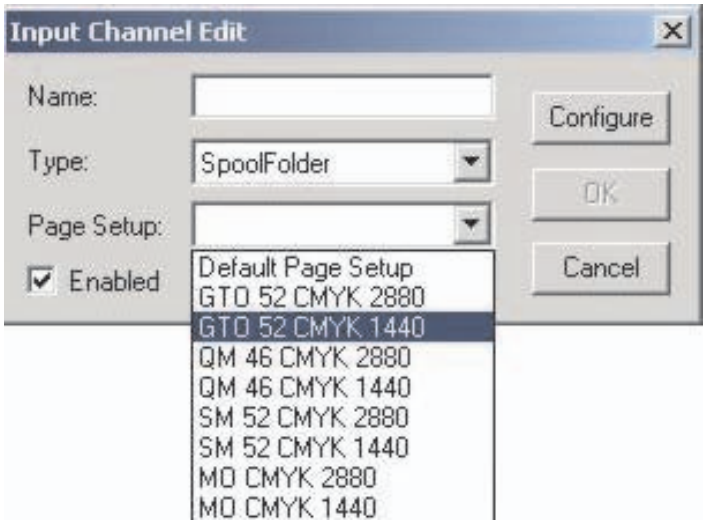


Click **New**

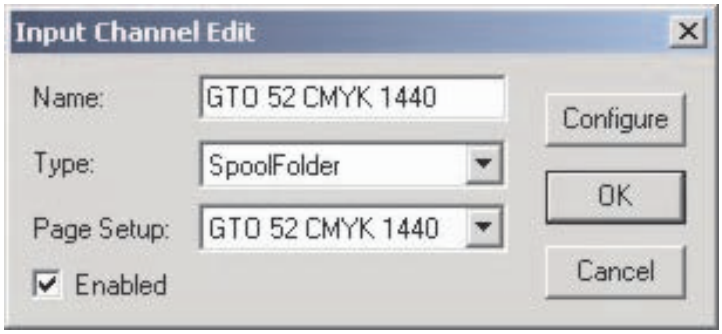
- The RIP displays the **Input Channel Edit** dialogue box.

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

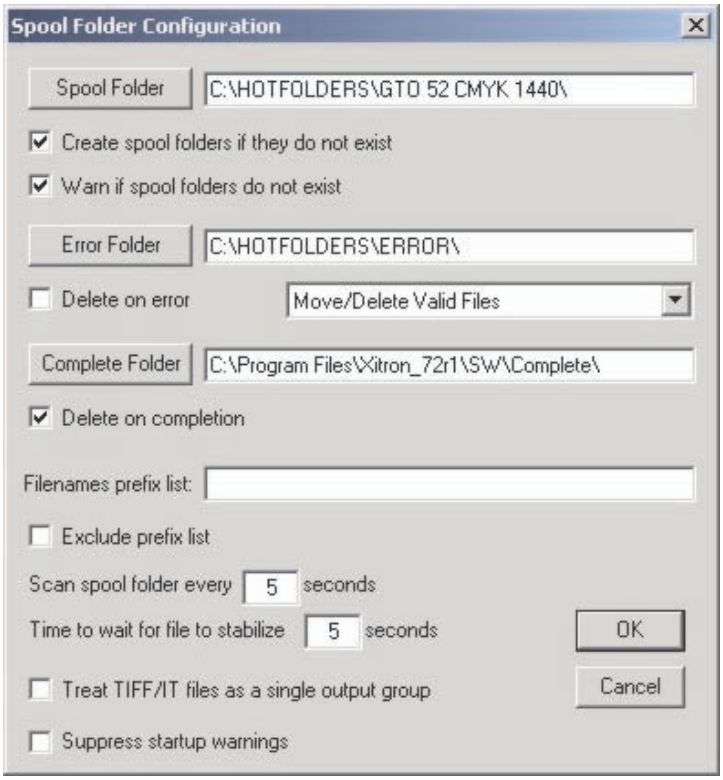
- Select the **Page Setup** you wish to receive and process jobs that arrive in the spool folder (here we have selected the **GTO52 Pre-Separated** Page Setup).



- Give your input queue a **Name** (try to use names that reflect the PageSetup 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.

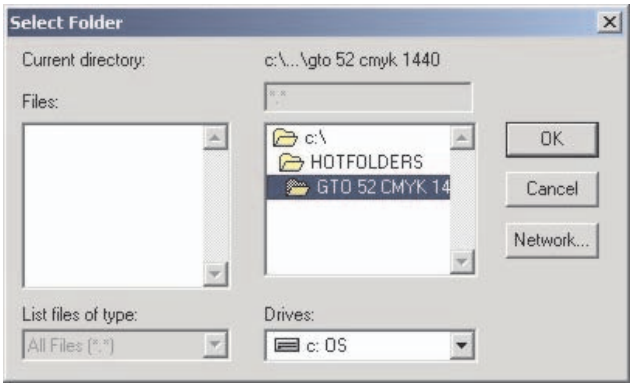


- The **Spool Folder Configuration** window contains the following control items:

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 **hot folders 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 **GTO52 CMYK 1440** 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.

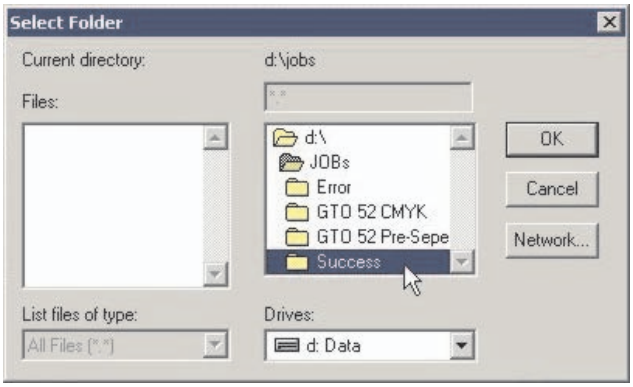
Note that a file is treated as an error if you abort it while it is being processed.

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.

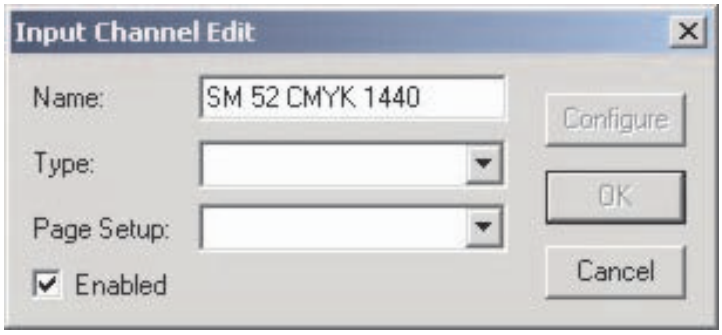
If you want to set up multiple queues based upon different page setups, select the Spool Folder queue that you have just set up, then use the "Copy" button at the bottom of the Input Manager dialogue box. Then give your copied input queue a different name, select the new page setup which you wish to 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.

Using the AppleTalk Input Plugin

With the AppleTalk Plugin, the user defines a name and defines a Page Setup from the RIP to associate to that name (Queue). The name (Queue) is then published by the AppleTalk input source over the Apple network. This name (queue) appears in the **Chooser** on Macintosh computers connected to the network very much like a Laser Printer (so, in effect the Name/Queue is a virtual printer hosted by the RIP).
When Mac users select this name (Queue) they can then install the "virtual printer" hosted by the RIP, just as they would a laser printer. Users can create multiple Queues, each associated with different Page Setups. So, the **Chooser** will see multiple "printers". After this users simply select the Printer relating to the Page Setup they wish to send jobs to and then print directly from the application they are using.
When jobs arrive from the Mac, the RIP detects which "virtual printer" they were sent to, applies the associated Page Setup and processes the job accordingly.

Configuring an AppleTalk input source

- To create an AppleTalk input source, select the source in the **Input Controller** and click **New**. The RIP displays the **Input Channel Edit** dialogue box.



Enter a **Name** for your Queue.

As this name will be broadcast over the AppleNet work to identify your queue (and will essentially appear as a printer in the chooser) select a name that clearly identifies the Page Setup the job will be sent to.

For example for the Page Setup SM52 CMYK 1440 you could set the **Name** to "SM52 CMYK 1440". Or if you have a proofer, you could set the **Name** to Proofer.

- After you have entered the name, select **AppleTalk** from the drop down menu in the **Type** box.

The AppleTalk Input Plugin is one of the simplest to set up, and there is nothing that needs to be configured for this plugin, so you can now click **OK** and the plugin is ready to use.

Using the NT Print input

This input publishes the RIP as one or more printers available to the Windows environment. Once fully installed and configured, each printer has a name visible to Windows operating systems.

There are several stages to installation and configuration, which you must carry out in the following order:

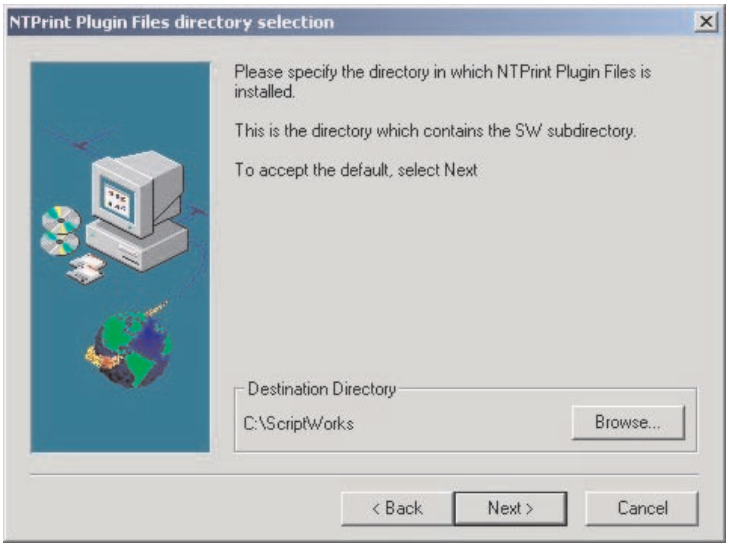
- Installing the plugin
- Configuring the RIP to make the input available
- Configuring Windows to associate a printer with the RIP input

Installing the plugin

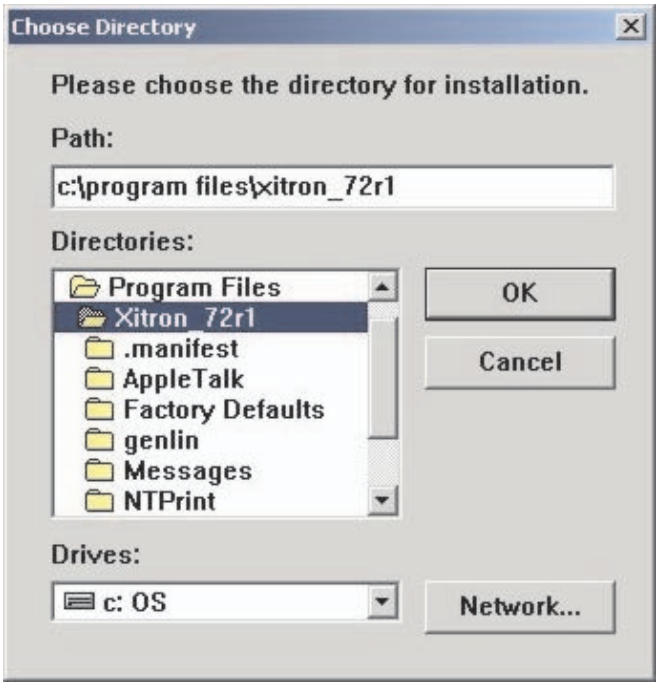
When your RIP was installed, the installer placed the NT Print plugin install wizard in the **C:\Program Files\Xitron_72r1\NTPrint** folder.

Use the Installation Wizard as described below:

- Exit all running applications
- Run the file **Setup.exe** found in the **\Ntprint** folder
- When the installation program asks you, choose the folder in which the Navigator RIP is installed

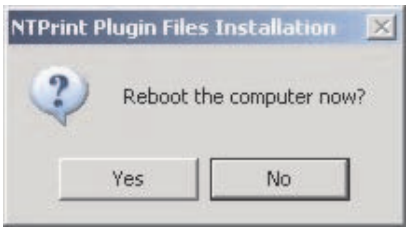


- Click on **Browse** and select the folder where your RIP is installed.



This should be **C:\Program Files\Xitron_72r1**.
Click **OK**

- Wait for the installation process to finish…



...then reboot the computer.

Creating an NT Print Input

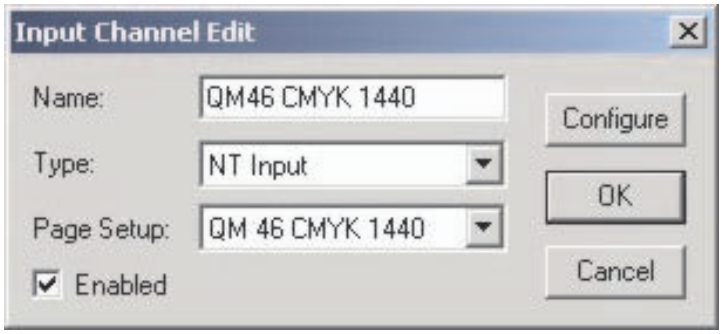
Having installed the plugin as described above, you can create a Navigator RIP input.

- Click **New** in the **Input Controller**. The **Input Channel Edit** dialogue box appears.

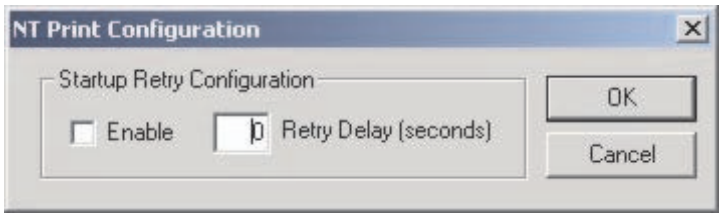
- Give the input a suitable name.

- Choose **NT Input** from the **Type** drop-down list.

- Select a **Page Setup** then check the **Enabled** box.



- Click the **Configure** button. The **NT Print Configuration** dialogue box appears.



The dialogue box contains controls to allow for the situation where RIP inputs have started up before the Windows spooler system - this is possible on fast machines. The default is to accept failure, in which case the printer will be unavailable without user intervention. You can make the RIP keep trying, within a time limit, by using the controls.

Enable
Select this box if you want the RIP to retry making a connection to the Windows spooler after initially failing.

Retry delay
Enter the time, after the initial failure, for which you wish the RIP to continue retrying. A retry delay of 60 seconds is likely to be enough on all machines. Too long a delay means delaying jobs on other inputs, so reduce this figure if you have no problems.

- Click **OK** to close the **NT Print Configuration** window.
- Click **OK** in the **Input Channel Edit** dialogue box to close it.
- Use **Navigator RIP -> Start Inputs** to start inputs (or the **Green Traffic Light** icon on the toolbar).

You now have a RIP channel that forms a port visible to the Windows printer configuration software. Next you must add a printer under Windows XP.

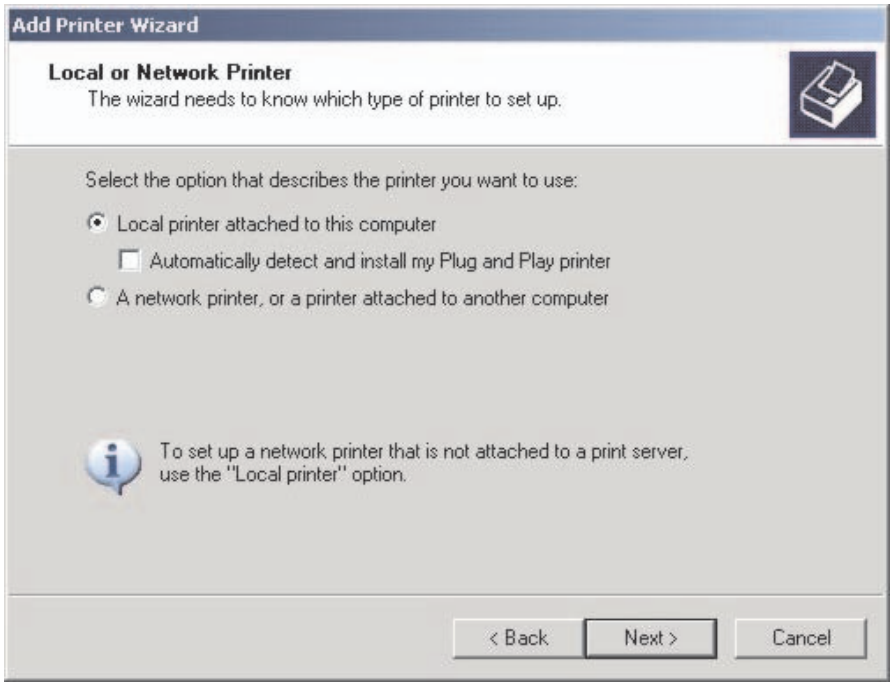
Creating a Printer under Windows XP

You have two options. Either you can create a new printer to use the RIP channel, or you can connect an existing printer to the RIP channel. The procedures are similar for Windows XP and Windows 2000.

To create a printer for Windows XP:

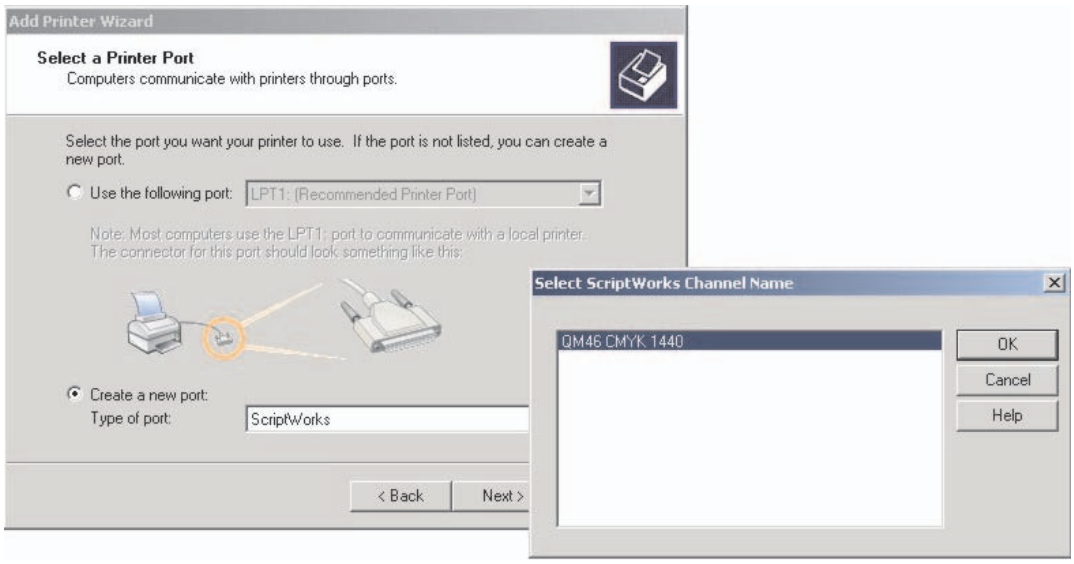
- Using the **Navigator RIP -> Input Controller**, create and start a new input channel of the type **NT Input** as described earlier in "Creating an NT Print Input".
- In Windows, from the **Start** menu select **Settings -> Printers** and select **Add Printer**. The **Add Printer Wizard** appears.

- Click on **Next**.
- Select **Local printer attached to this computer** and ensure that the **Automatically detect and install my Plug and Play printer** check box is **not** checked.



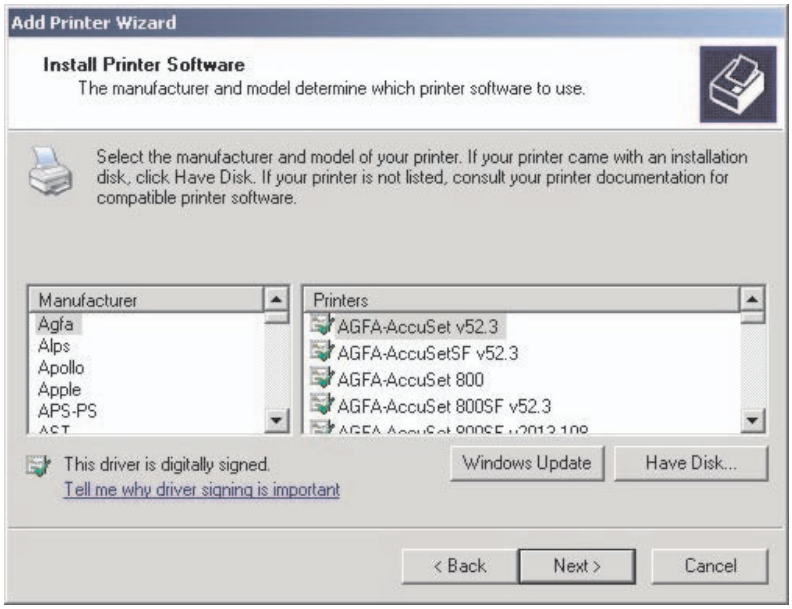
- Click **Next**.

- Select **Create a new port** and select **ScriptWorks** from the drop down selection box (this is the input added to Windows by the Harlequin RIP).
  Click on **Next**.



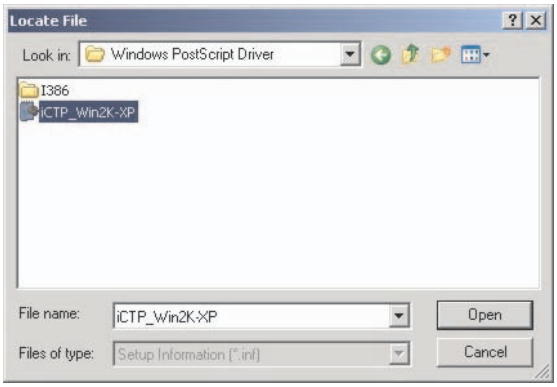
  A list box is then displayed showing the names of all unconnected ScriptWorks Channels (that is the name of any input you have created using the NTPrint Plugin). Select one of these and click **OK**.

- Configure the printer. To do this you need to install the printer driver for the **PlateWriter 2000** supplied on the PlateWriter 2000 Installer CD or located in the directory C:\GJ Tools\Windows PostScript Driver.



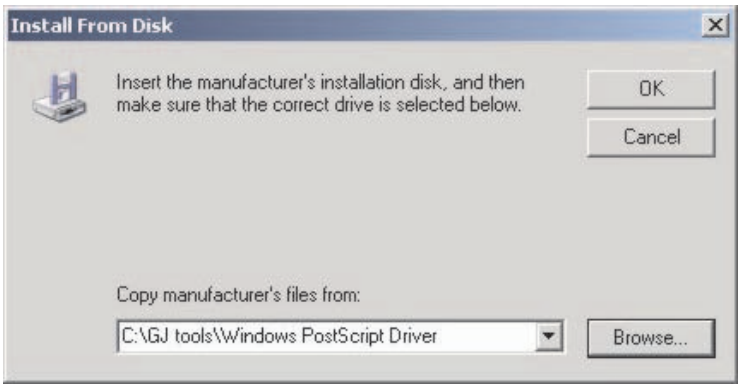
- Click **Have Disk…**

- Insert the PlateWriter 2000 Installer CD ROM or go to C:\GJ Tools and open the **Windows Postscript Driver** folder.

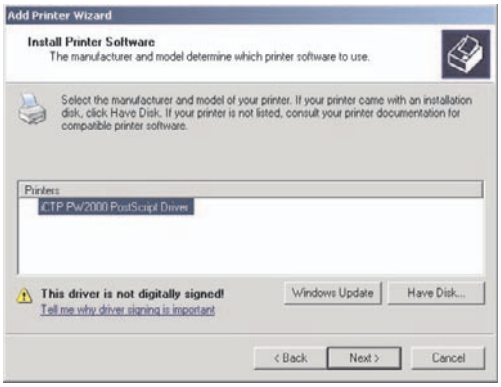


Select the **iCTP_Win2K-XP** file and click **Open**.

- Click **OK**.

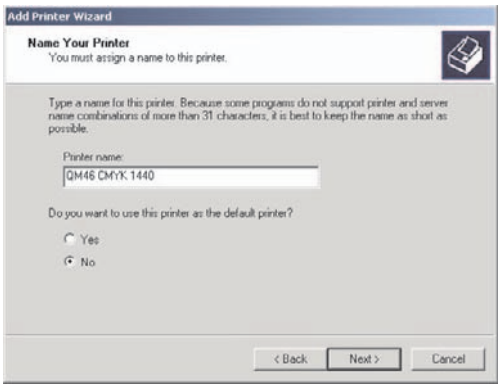


- The **iCTP Postscript Driver** will be displayed.

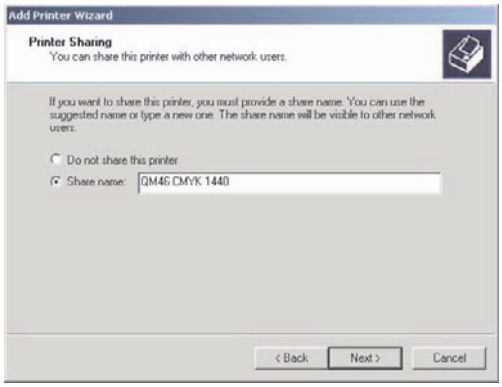


- Select it, then click **Next**.

- Now you must give your printer a name. By default Windows will use the iCTP Postscript driver name, however you will want to choose a name, to reflect which Page Setup the jobs will be delivered to for users using this queue.

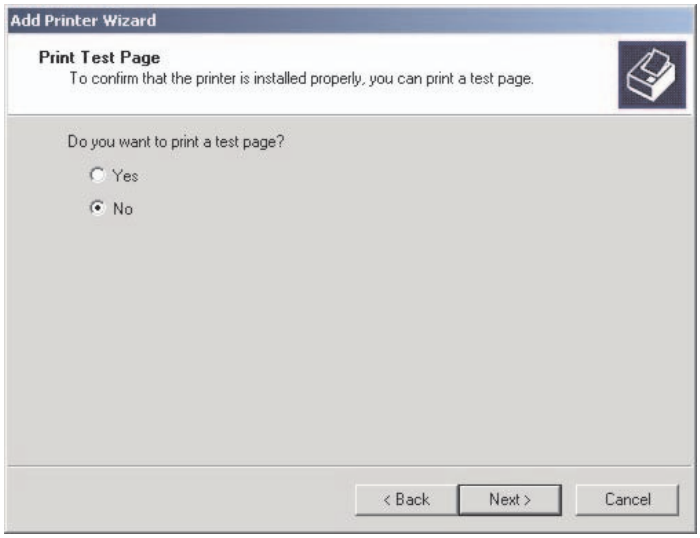


  Name the printer (we suggest you use the PageSetup name or something close to it). Choose NO to if you want to use this printer as the default printer? Click **Next**.
- Select **Share name** in order to enable other users on the network to see the printer and to connect to it. Name the **Share name** identically with the printer name.



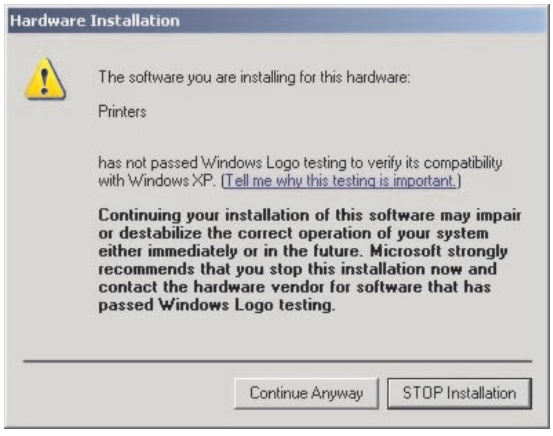
- Click **Next.**

- Windows will ask you if you want to print a test page.



- This is not necessary, so select **No** and click **Next**.
- Finally, you will see a Completion screen summarizing the details fo the printer you have added.

- Click **Finish**.
- Windows will copy the files from the installer or the directory on the C drive. Click **Continue anyway** if prompted that the software might not be compatible with Windows XP.



- Installation is complete.

If you later want to reassign the printer to another port, do this:

- Choose the menu option **Start -> Settings -> Printers**.
- In the **Printers** window, select the printer, right-click and choose **Properties**.
- In the **Properties** window, click the **Ports** tab. Choose a new port by selecting its box in the list of ports.
- Click **OK** to confirm the changes.

Using the Printer from Windows 2000/XP

The new printer is now connected to the RIP. Any printer output sent to the new printer will be routed to the RIP.
The Windows spooler will remember the names of the printers between reboots of the computer running the Navigator RIP.

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 Users, an additional application is supplied, called **ExtremeZ-IP**.
This installer is automatically copied into your AppleTalk folder in the RIP folder, during installation or found on the PlateWriter 2000 installer disk.
For details of the **ExtremeZ-IP** application please refer to the Manual supplied in this 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.

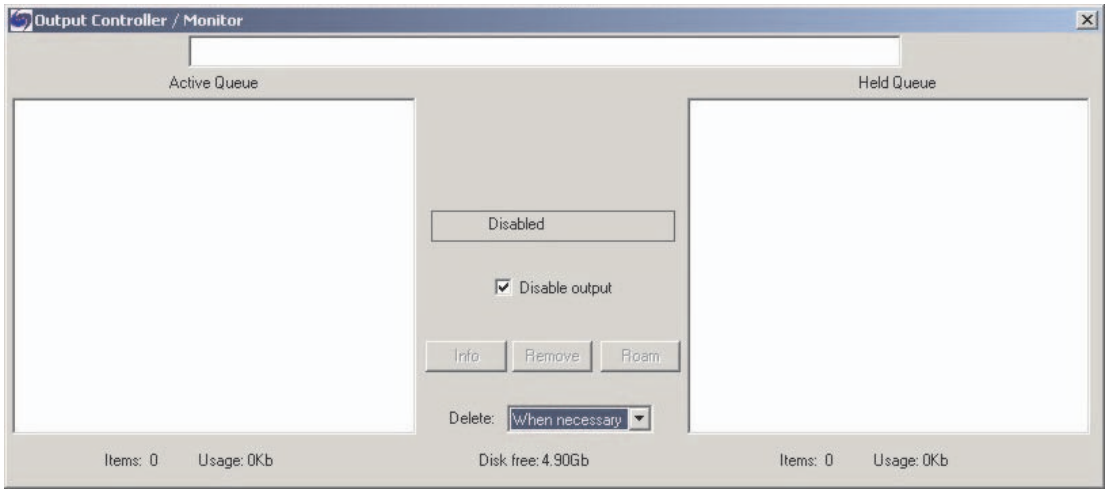
If we stop here, there are many circumstances where this, whilst being accurate, is not really desirable.

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.

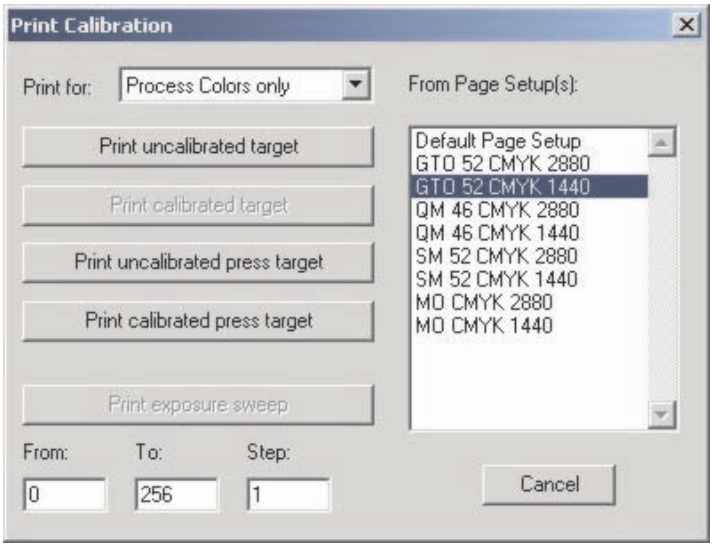
Once you have linearised your press and have created a calibration which we call the "Actual Press" calibration, we can then add an intended press calibration curve, thus enabling a print shop with multiple presses to create a more consistent and even calibration across all its work.

- 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.

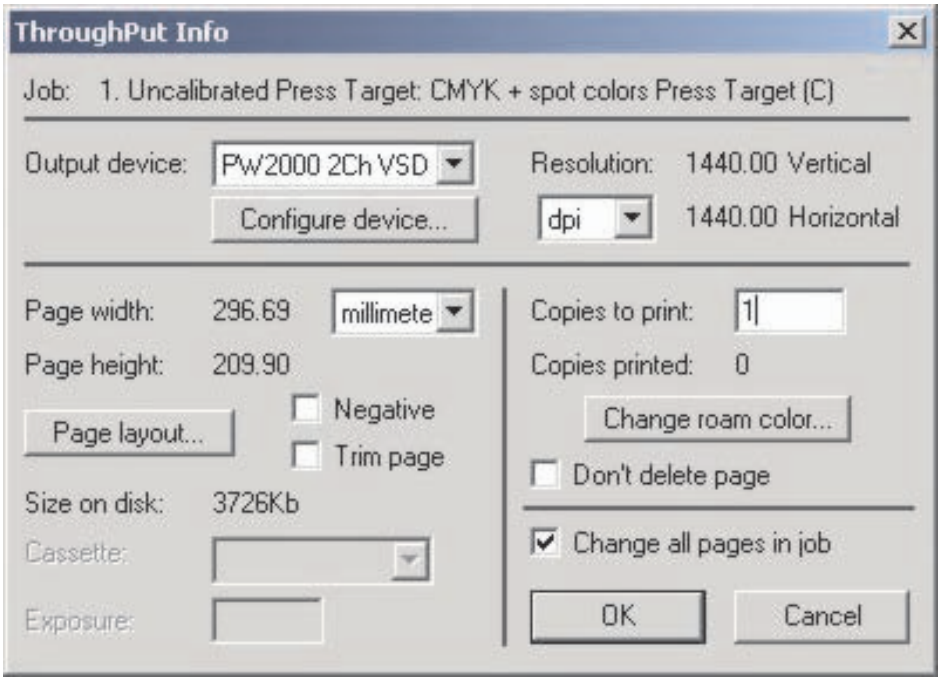


- Make sure that **Disable Output** is checked. This will allow you to control the start of printing in the next steps.
- Ensure that you have applied a Plate calibration to the page setup you wish to create a press calibration for (see earlier in this chapter).
- Choose **Output -> Print Calibration**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

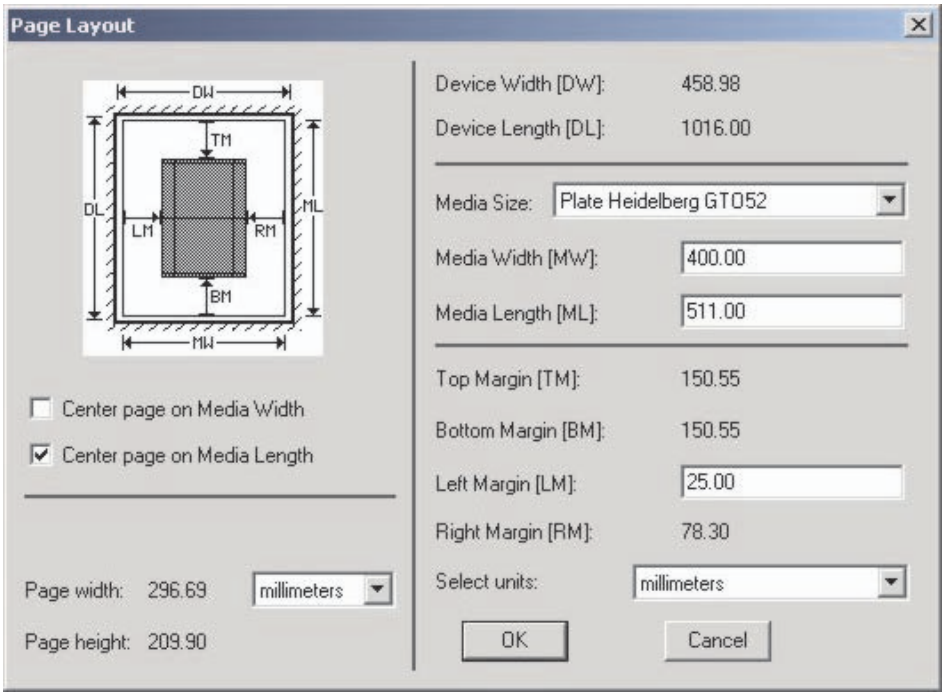


- Choose a page setup and click on **Print uncalibrated press target**. The calibration target will be ripped and written to disk. You should get four separations.
- Load a plate
- In the **Output Controller/Monitor** window select **Uncalibrated target** in the **Active Queue**

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

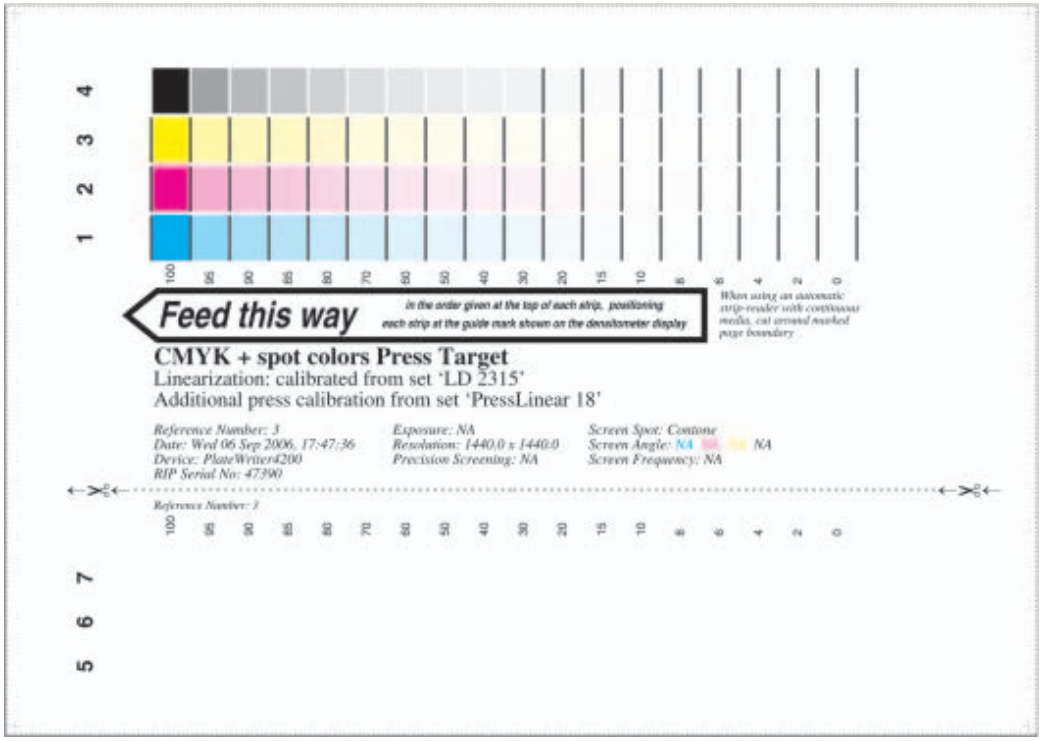


- Click on **Page layout...**.



- 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 2000.
- Place the plate on the front of the PlateWriter 2000'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.

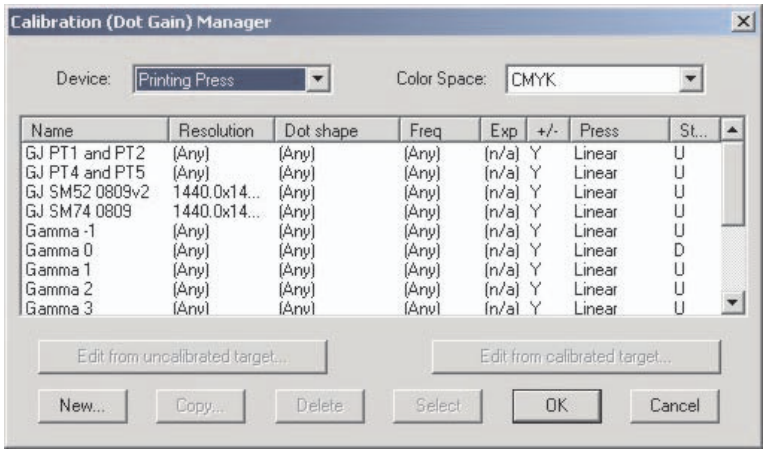
In Europe the standard suggests selecting three typical types of paper stocks:
  – Gloss Art: Set the ink densities to C=1.55 D, M=1.5 D, Y=1.45D, K=1.85 D
  – Silk/Matt: Set the ink densities to C=1.45 D, M=1.40 D, Y=1.25 D, K=1.75 D
  – Uncoated offset paper: Set the ink densities to C=1.00 D, M=0.95 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.

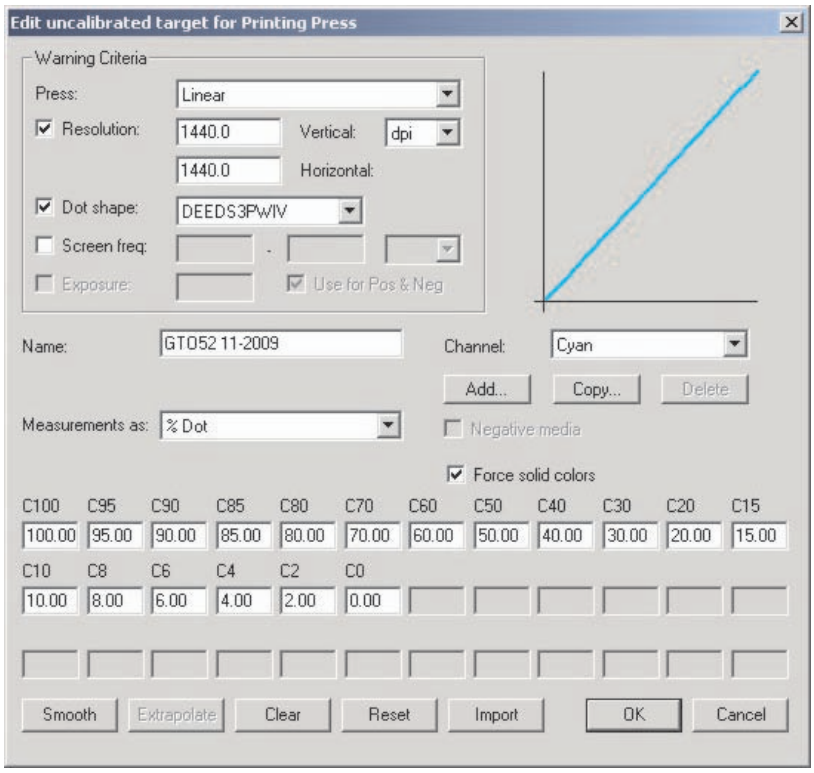
For example, standard Commercial Work in the USA would typically see the ink densities set to C=1.30 D, M=1.40 D, Y=1.00D, K=1.80 D

- 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...**.

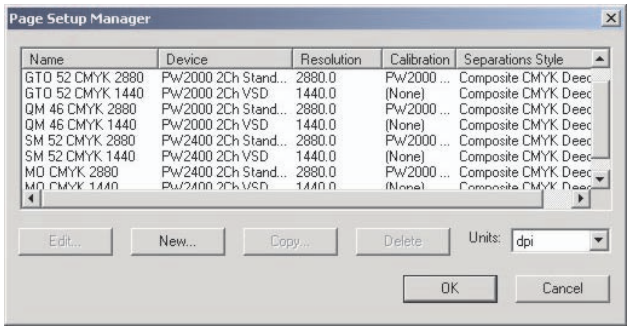


- Name the new calibration in relation to the press and paper type that was used.
- Select the press type as **Linear** and select the first colour channel **Cyan** to enter the cyan data into.
- Enter the modified column of Dot percentage measurements in the edit boxes.
- Once you have entered the **Cyan** 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.

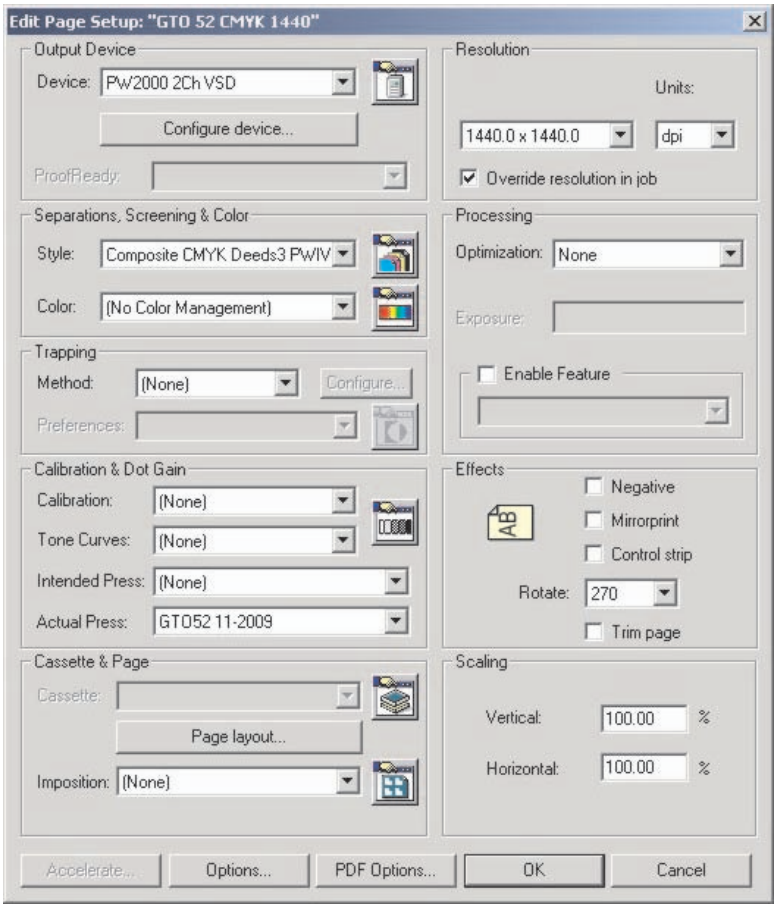
Including the Press Calibration in Page Setups

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 2000.

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 Defaults** 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 a Calibrated Press Target.

Backup & Restore your NavigatorRIP 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:\Program Files\Xitron_72r1\Utilities**.
- Click on **Print**.
  This will create (or overwrite an older version of) **Glunz & Jensen Factory Defaults** and put it in the same folder as **BackupConfiguration.ps**.
- Make a backup of **Glunz & Jensen Factory Defaults** 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 Defaults** file from the installation CD, print the **Glunz & Jensen Factory Defaults** 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.

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 diagram.

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.** Program selector may be changed before plate is placed on conveyor.
GREEN - FLASHES	**Finishing unit is ready for plates using the selected program.** 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.** 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.** Power the unit off, replace bulb, then power the unit on again.
RED - 4 FLASHES BUZZER SOUNDS	**Motor regulation error - motor/conveyor is blocked.** Power the unit off, remove obstacle, then power the unit on again.

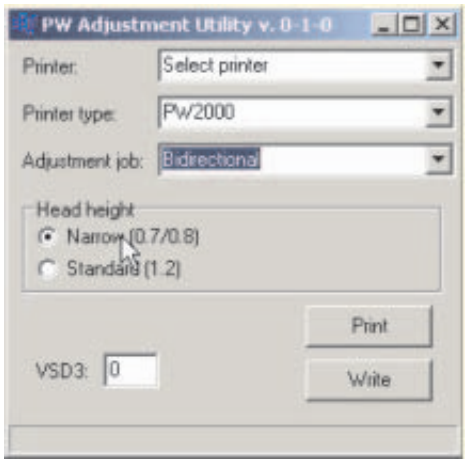
Appendix A:

Bi-directional adjustment on PlateWriter 2000

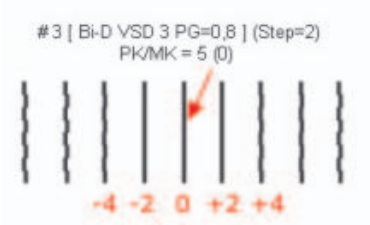
Start the Program "PWAdjUtil" from the folder C:\GJ tools\PWAjUtil on the RIP workstation.

Select the printer connected.

Select printer type and set Adjustment job to Bidirectional and click on Narrow (*).



Load a 0,15 mm or 0,2 mm (*) plate in the iCtP printer and click Print. The following image (shown in black) will appear on the plate:



The Figure PK/MK, 5 in the above show case, indicates the actual setting and represents the line in the center. If the best line is not in the center position you must find the best and enter the best value in the VSD 3 of the utility and click "Write". The correct figure is found by counting the lines from the center line and to the best line. Notice that the distance between the lines is in steps of 2. You might find that two lines that are equally good and you then set the value between the two lines e.g. if lines +2 and +4 are good you set the new value to 5 + 3 = 8.

After setting the new value it is recommended to run the adjustment again to ensure that the setting is correct.

(*) If the 0,2 mm reaches the head surface you must readjust the head height so that the adjustment can be done on **Narrow** head height.

Adjusting the printer feed

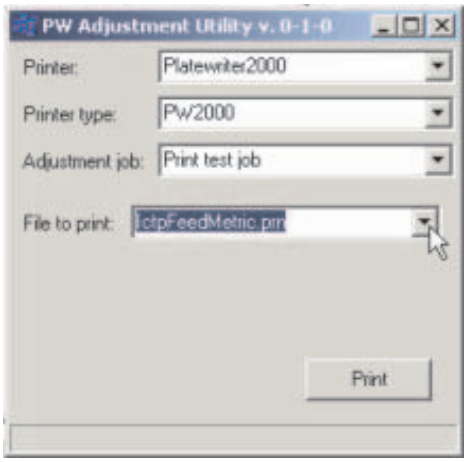
Background

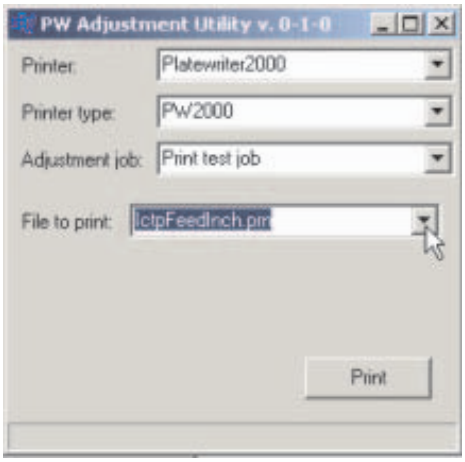
In continuance to increase the print quality we often get questions on graininess. The number one adjustment that reduces grainy looking tints is the printer feed adjustment. The printer already has a feed adjustment built in but since the correction depends on the plate thickness the correction value must be set in the page setup. This makes it possible to ensure perfect feed for all plate gauges used.

Tools

- Start the Program "PWAdjUtil" from the folder C:\GJ tools\PWAjUtil on the RIP workstation.
- An accurate ruler for measuring the feed.

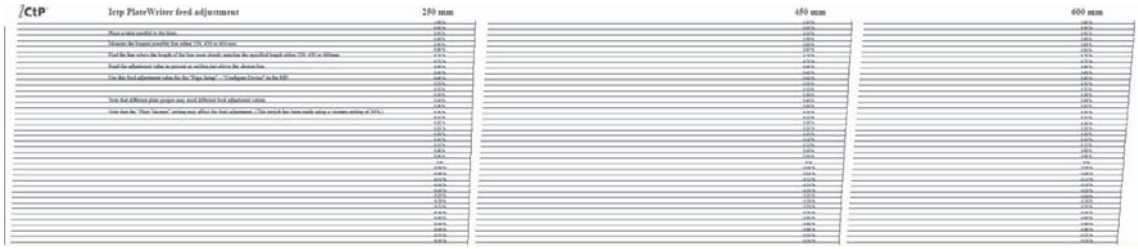
Start the PW Adjustment Utility, select the printer and type in question and print the file as shown below:



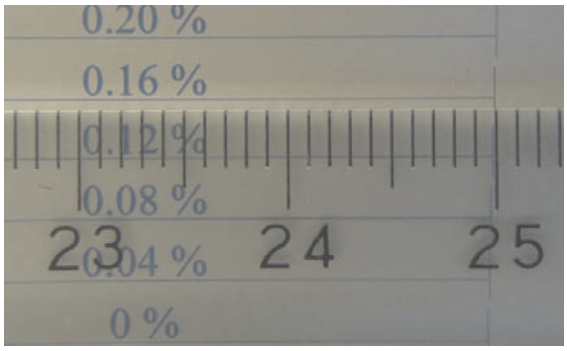


Notice that you must select a suitable file (inch or metric) depending on the ruler you have.

Load a plate in portrait on the PlateWriter, press **Print** in the utility. After the job has been printed place a ruler on the best line of fit.

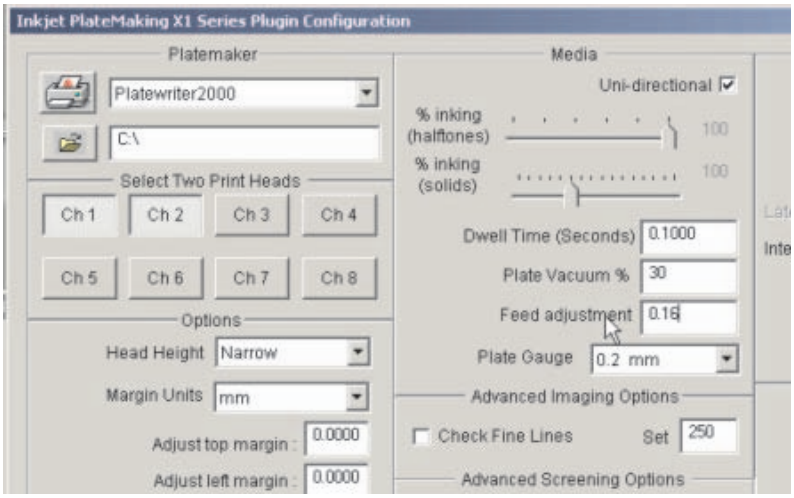


Measure the longest possible line 250, 450 or 600 mm and find the deviation factor as shown.



In this case the feeds needs to be adjusted +0,16% measured at the 25 cm point.

Open the page set-up(s) with plate gauge identical to the one performed for the above test and key in the new value in the **Feed adjustment** in the "Configure Device."



The feed on different plate thicknesses might be different so if other plate thicknesses are used you must run the same test again using the corresponding plate. If the value turns out to be different you can key in the value in the relevant page set-ups.

We recommend that the feed is checked and if needed modified at least once a year e.g. during the yearly maintenance performed by the service staff.