



DPX System Operating Instructions

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DPX System - Operating Instructions
Doc. No.: 089-202-090

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Warning: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the Service Manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

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1. Description

Computer-to-Plate System (CtP)

The DPX SYSTEM digital platesetter produces press-ready plates for a variety of printing jobs. The entire process only takes a few minutes and is carried out in full daylight.

This highly versatile platesetter is capable of managing a variety of colour demands, satisfying a wide range of imaging needs. The DPX SYSTEM targets all black and white applications as well as high-end spot-colour, and quality 4-colour jobs.

Time Saving

The DPX SYSTEM bypasses the conventional film processing stage entirely by integrating functions such as edge-to-edge exposure, plate punching, processing, cutting to size, drying and stacking, in one compact unit.

Perfect Accuracy

Based on an internal drum imaging device with a LED laser (670 nm), the DPX SYSTEM offers unmatched image accuracy and repeatability, ensuring that each separation is in register.

Intelligent Optimization

The DPX SYSTEM contains two cassettes, holding up to 61 metres of material each. If the same material is loaded in both cassettes, the unit will automatically switch to the second cassette when the first is empty, allowing uninterrupted production for hours.

High Quality Register

An internal register punch system is optional.

Cost-Effective Production

The DPX SYSTEM is a highly productive and economic solution. The technology has proven to reduce the processing time by 50%, without compromising the ultimate quality.

The DPX SYSTEM Unit

Exterior of Machine

- A. On/Off Switch
- B. Lid lock release switch
- C. Lid for plate magazines
- D. Exit tray

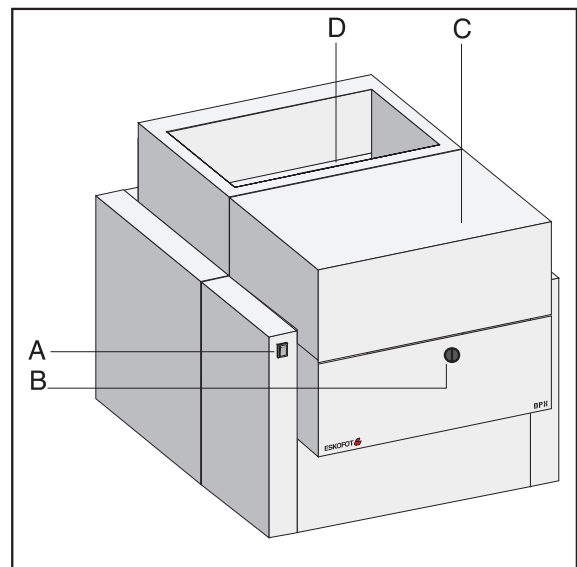


Fig. 3

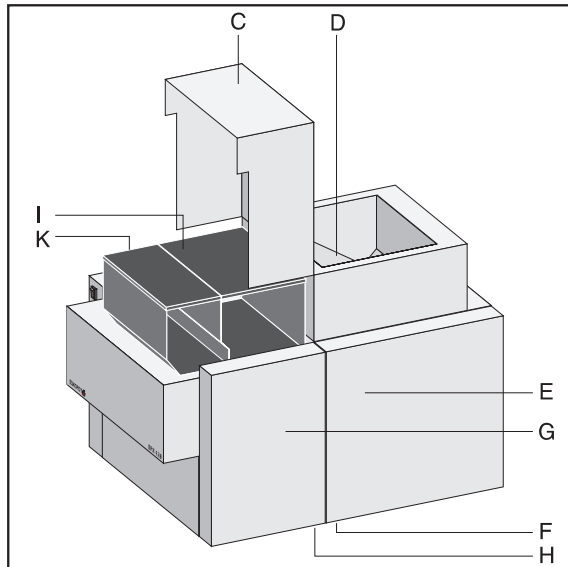


Fig. 2

- E. Processor module door
- F. Locking pawl for processor module door
- G. Plate exposure module door
- H. Locking pawl for plate exposure module door
- I. Roll magazine 2 (rear)
- K. Roll magazine 1 (front)

Interior of Machine

- A. Roll magazine 1
- B. Roll magazine 2
- C. Material load sensors
- D. Empty roll sensors
- E. Drum exit jam sensor
- F. Imagesetting drum
- G. Imagesetter, laser optics and mirror (Flying spot system)
- H. Cutter (Knife)
- J. Drum sensor
- K. Drum exit guide and switch
- L. Buffer

- M. Activator tank
- N. Activator thermo sensor

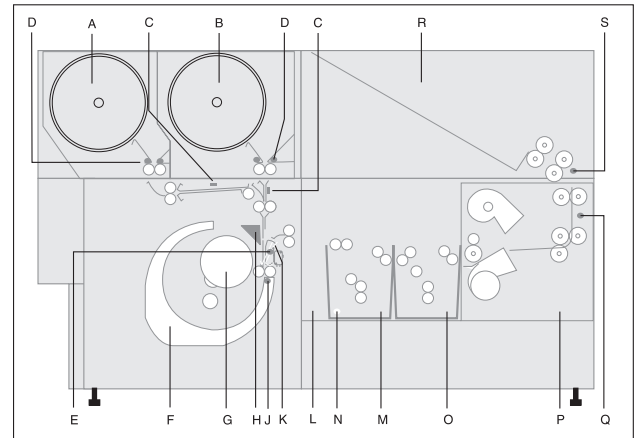


Fig. 3

- O. Stabilizer tank
- P. Dryer module
- Q. Dryer thermo sensor
- R. Plate exit collection ramp
- S. Exit sensor

Sequence of Operation

The operation is computer controlled based on input from sensors that monitor the position of the plate throughout the entire operation, fig. 3 - 6. The sequence is as follows:

1. The plate is fed from the selected cassette into the imagesetting drum by the input rollers, fig. 4.
2. The input/output rollers and sensors ensure that the plate is fed all the way into the drum, where it is kept in position by vacuum.
3. The correct position of the plate inside the drum is ensured by input from the drum sensor to the computer. In this position, the plate is ex-

posed from left to right by the imagesetter, fig. 3G.

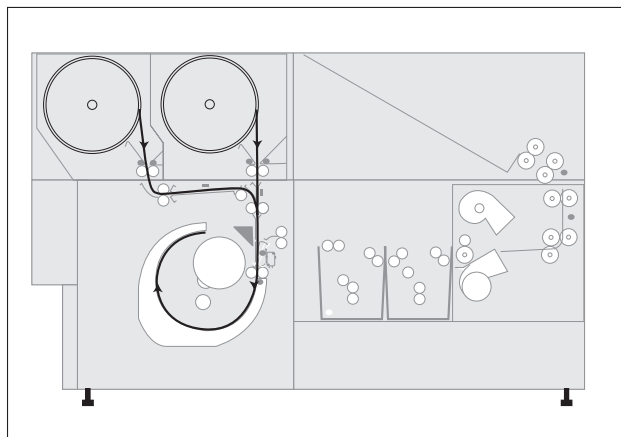


Fig. 4

4. After exposure the plate is guided towards the drum exit guide, fig. 5. During the forward motion the plate is temporarily stopped, and the plate is cut.

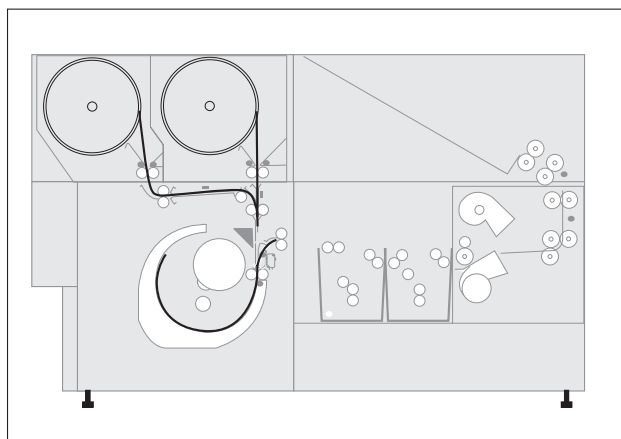


Fig. 5

5. The drum exit guide is turned to exit position, allowing the plate to be fed into the buffer, fig. 3L.

6. The plate is carried through the activator and stabilizer tanks, fig. 6.

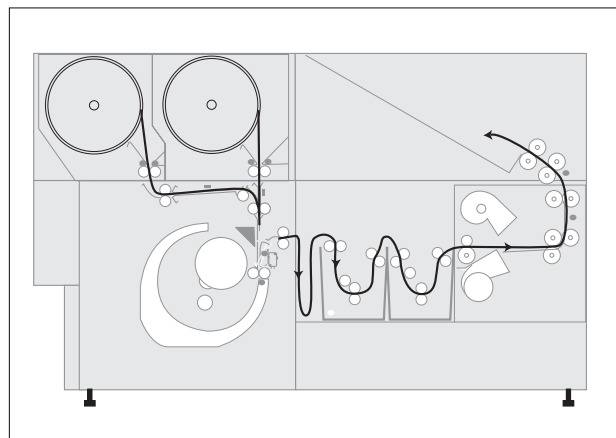


Fig. 6

7. The input rollers and sensors are now ready to feed another plate into the imagesetting drum.
8. The plate is carried through the drying module and finally delivered onto the exit collection ramp.

Basic Operation

Starting the DPX SYSTEM

1. Switch on the DPX SYSTEM unit.
2. Switch on the RIP PC.

DPX SYSTEM should be switched on before the RIP PC, otherwise the RipManager will be unable to start. Should this occur, shut down the RIP PC and start again.

Wait until the following window appears. It may take up to 3 minutes.



3. Press **CTRL + ALT** and keep them pressed while pressing the **DELETE** key.

The Log-In screen will appear ensuring the correct setup. The default setup is normally the correct one. If this default setup is incorrect, please contact your local support engineer.

4. Press **Enter**.

The system automatically starts up.

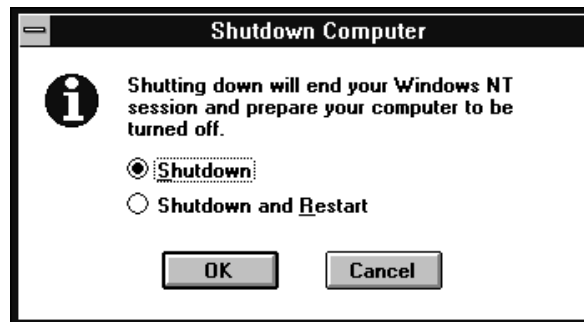


Shutting Down the DPX SYSTEM

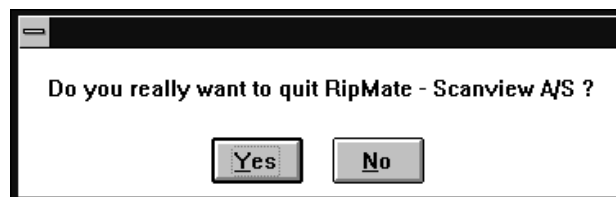
1. Double click on the **Program Manager** icon.



2. Select **Shut down** from the **file** menu.



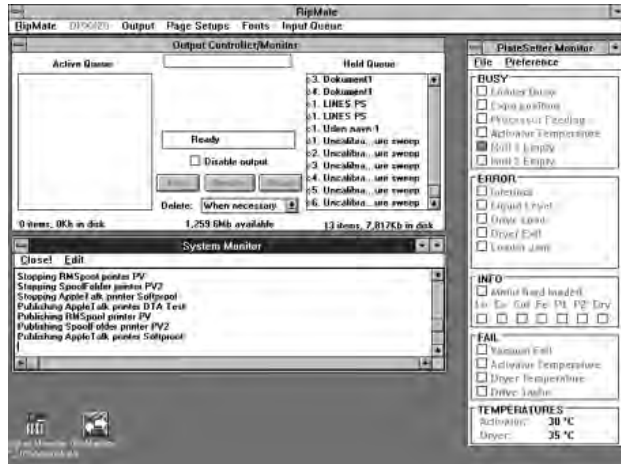
3. Click the **Shut down** radio button and then the **OK** button.



4. Click the **YES** button.
5. Switch off the computer and the DPX SYSTEM unit, when a message to do so is displayed.

RIP Display

The DPX SYSTEM unit has no display, because all settings and operations are made from the RIP PC. The following screen shows the factory settings (the default settings) of the DPX SYSTEM.



During normal operation 4 programmes are needed.



The above icons represent the available programmes, and each programme can display one or more windows on the screen.

Program Manager

The Program Manager in Windows NT manages all programmes. If one of the programmes fails to start, start it by double clicking on the program icon.

RipManager

This programme handles all media and cassette information, including loading and unloading the material. The programme is only used when changing material or editing media and cassette information is required.

RipMate

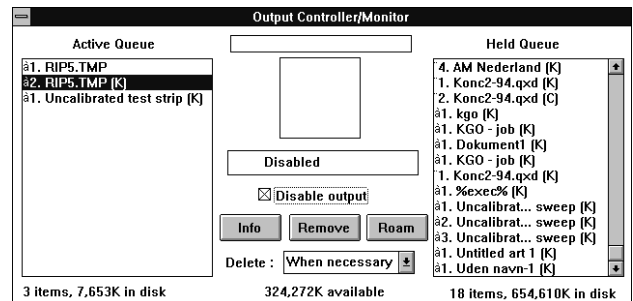
The RipMate handles communication to the front-end, interprets PostScript and sends the plates through the DPX SYSTEM unit.

PlateSetter Monitor

The Rip Monitor displays the state and progress of the functions of the machine. For detailed information, please refer to the section “Monitoring DPX SYSTEM”.

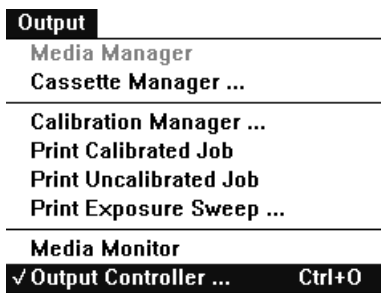
Output Controller

Using the Output Controller the operator controls which and when a specific plate is to be processed or re-exposed.



The Output Controller window is part of the RipMate programme.

1. If the above window does not appear, select Output Controller... from the Output pull-down menu.



Active Queue

This queue shows all jobs ready for processing. The jobs will be processed in top-down order.

Held Queue

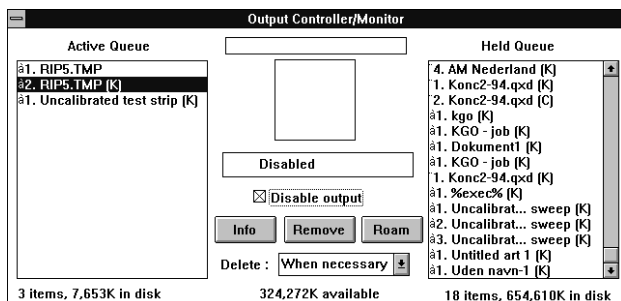
This queue shows already processed jobs and the jobs which have generated an error. A black dot next to the job name indicates an error has occurred. Check the RIP Monitor for error message.

Job Names

The name of the job received by the front-end. After the name the colour is displayed:

- [K] Black
- [M] Magenta
- [Y] Yellow
- [C] Cyan
- [?] The name of the spotcolor.

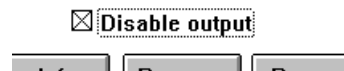
Start/stop processing



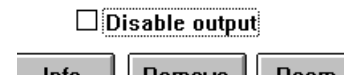
To make the Output controller window active, click on it or open it as described in the section “Output Controller”.

1. Point at Disable Output and press the left mouse button.

Stop Output

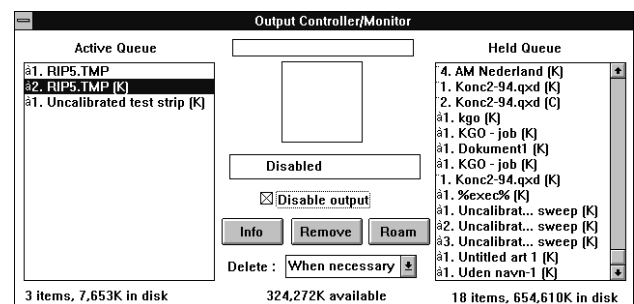


Start Output



When the output is stopped it is still possible to receive and interpret jobs from the front-end. The plates received from the front-end will merely be placed in the Active Queue.

Repeating a Job



1. To make the Output Controller window active, click on it or open it as described in the section “Output Controller”.
2. In the Held Queue point the mouse at the job to be repeated.

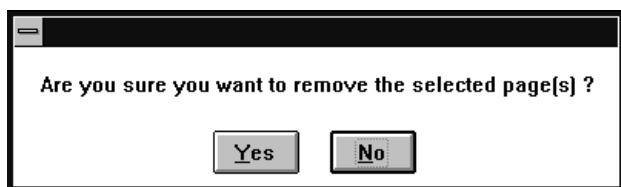
3. Press the left mouse button and hold it down while pulling the job from the Held Queue to the Active Queue. Release the mouse button.

The job has now been moved from the Held Queue to the Active Queue and will be exposed according to its position in the queue.

By placing the job at the top of the Active Queue, it will be exposed before the other plates.

Removing/Deleting a Job

1. To make the Output Controller window active, click on it or open it as described in the section “Output Controller”.
2. Point at the job in the Held Queue which should be removed and press the left mouse button down.
3. Click on the Remove button and the job will disappear.



4. Click the YES button, if the job should be deleted.

By holding the Shift key down while selecting, a range of plates can be selected, and by holding down the Ctrl key, several individual plates can be selected.

Previewing a Job

1. To make the Output controller window active, click on it or open it as described in the section “Output Controller”.
2. Point at the job in the Held Queue which should be previewed and press the left mouse button down.
3. Click on the Roam button.

The job is displayed on the screen in 1:1 (one pixel on the screen represents one pixel on the plate).

By clicking on the Reduce Roam button, a zoom effect is achieved.

Connecting to the Front-End

In order to enable the front-end to send jobs to the RIP, the Input Queue must be started.



1. If the menu entry called Input Queue is present in RipMate, the connection to the front-end is already established.

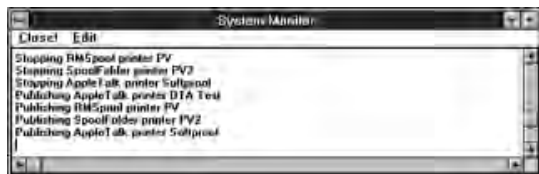
RipMate	DPX420	Output	Page
P rint File ...			Ctrl+P
Page S etup ...			Ctrl+S
Configure R IP ...			Ctrl+R
Device Manager ...			
I nput Manager ...			Ctrl+N
✓ S tart Inputs			Ctrl+I
Start E xecutive			Ctrl+E
✓ R IP M onitor			Ctrl+M
A bout RipMate - Scanview A/S Logo Memory Statistics			
Q uit			Ctrl+Q

- Otherwise, select Start Inputs from the RipMate menu in RipMate.

The connection to the front-end will now be established.

Monitoring the RIP

The RipMonitor/System Monitor displays a log of the RIP as shown below.



- If the above window does not appear, select Rip Monitor from the RipMate pull-down menu.

The most important error messages are:

Missing font

The name of the missing font.

Missing calibration

A selected calibration is no longer present.

PostScript™ fault

A bad or too complicated PostScript file has been sent.

Monitoring the DPX SYSTEM Unit

BUSY/INFO

Information about which function the DPX SYSTEM is performing at a given point of time.

The above example shows the DPX SYSTEM in stand-by mode with no plates being processed.

INFO

The boxes in the INFO window work as a status bar showing the position of the plates.

Lo: Plate loading. The plate is being fed from roll magazine A or B into the drum.

Ex: Exposure Cut. The knife is cutting the plate.

Fe: The plate is being fed from the drum into the buffer.

PI: The plate is in the activator tank.

P2: The plate is in the stabilizer tank.

Dry: The plate is in the drying module.

ERROR

If an error/fault occurs, this window will inform about the cause of the problem.

Interlock: The processor door is not closed.

Liquid Level: The level in the activator tank is too low. Change the chemistry or refill the replenishment bottles

Drive Load: The processor stopped due to overload of the processor motor. Check whether there is a plate in the processor section.

Dryer Exit: Jam in the processor section. Open the processor and make sure that no plates are jammed.

Loader Jam: Jam in the exposure section. The fault numbers refer to the following:

Fault number 0-100: Something in the exposure section went wrong during a sequence. Shutting down the system, remove any plate pieces in the drum, and restart the system.

Fault number 110-112: A jam in the punch tools. Shut the system down and clean the tools before restarting the system.

If a plate jam error occurs, shut down the system, remove the jammed plate before restarting the system. If plate jam reoccurs, contact the local service engineer.

FAIL

Vacuum fail: The vacuum level was incorrect. Examine the plate and repeat the job if necessary. If the fail reoccurs, contact the local service engineer.

Activator temp: The temperature deviates more than 2°C from the specified developer temperature. Do not process a plate until the temperature is correct.

Dryer Temp: The dryer temperature deviates more than 2°C from the specified dryer temperature. The

plates might not be completely dry when they come out.

Drive Tacho: The processor is not running. Check the processing section for jams, and make sure the activator and stabilizer tanks are not covered with dirt. If everything seems in order, and the processor is still not running, contact the local service engineer.

Temperatures

Indicates the actual temperature in the activator tank and in the drying unit.

Changing Plate Material

Unloading material

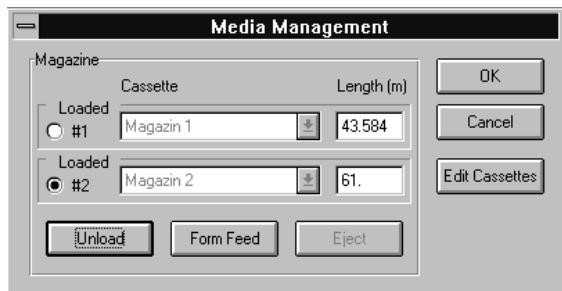
The following description sets forth that the system is installed and setup according to the installation instructions and user guide.

1. Stop processing by activating the Disable output button. See section "Start/stop processing".
2. Activate the RipManager icon by double clicking on it.



3. Select Media Management from the DPX SYSTEM pull-down menu.

The following window appears:



The information reflects the currently loaded cassette.

4. Select the magazine which should be loaded by activating the small radio button to the left of the magazine.

Changing material roll

1. Open the magazine lid by pressing the switch (fig.1, B) in order to gain access to the roll magazines.
2. Open the front or rear magazine door (fig. 2, K/I).
3. Take out the spool shaft from the magazine.

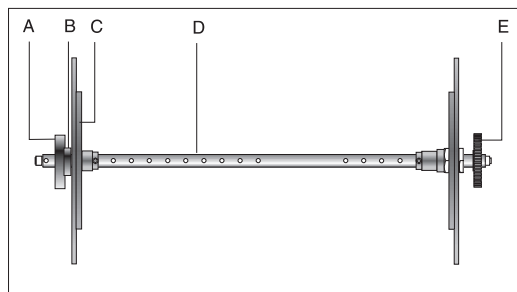


Fig 5

4. Take off the old core by releasing the thumb screw (fig. 7, A), and removing the end cap (fig. 7 C).

5. Place the empty core on the floor, and place the empty spool on top of it. Take a new roll of material and mount it on the spool. Place the end caps again.



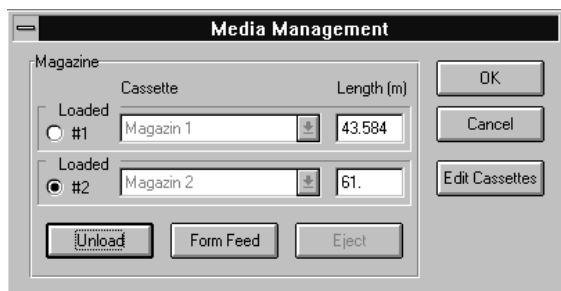
If the endcaps are not firmly tightened, it may affect the edge accuracy of the image.

Loading material

1. Place the roll shaft with a new roll mounted in the bearings inside the magazine so that the thumb screw faces the left side of the magazine. Ensure that the gear wheel (fig. 7, E) on the right side is fitted correctly into the drive gear.



- If the length is zero enter the number of metres just loaded.



- Use the mouse to click on the Load button in order to start the inlet roller drive motor.



- Press **YES** to **LOAD** the material.



- Press **OK** button to save the changes.

The rolls in the magazine which are about to be loaded will now start running. They will run for 30 seconds which allows the operator plenty of time to align the material.

- Remove the white tape from the roll and position the leading edge of the roll at the nip of the inlet rollers at the bottom of the magazine. Guide the leading edge of the roll into the nip of the feed rollers. When the plate starts feeding into the inlet rollers, close the magazine cover and the lid.

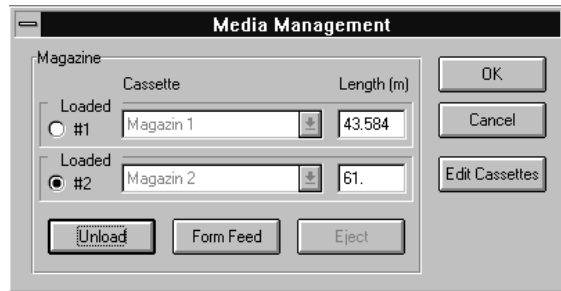
If removing the tape and aligning the material takes more than 30 seconds, just click the **LOAD** button once again.

The emulsion side is matt and dark and faces downwards on the roll. It is important that the front edge of the plate material is not folded or creased and that all tape has been carefully removed.

If length (M) is zero, the length of the material should be specified, otherwise the loading process will generate an error.

Wait for the material to load.

When a new roll has been fitted, the first 2-3 plates cannot be used because of possible fogging during installation.



- Click **Form Feed**.



- Click **YES** to form feed a plate.

Repeat the last two steps until all exposed material is fed.

- Click **OK**.
- Iconise the RipMagager by clicking the following button in the upper right corner.
- To expose, start processing again. See section "Start/stop processing".

Emptying Punch Waste

If the DPX SYSTEM is equipped with a punch tool, the punch waste box must be emptied after every 1,000 plates.

- Shut down the system as described in the section "Shutting down the DPX SYSTEM"
- Open the plate exposure module door (fig. 2, G).



- Pull out the waste box as shown by turning the small key on the front of the box.
- Start the system as described in the section "Starting the DPX SYSTEM"

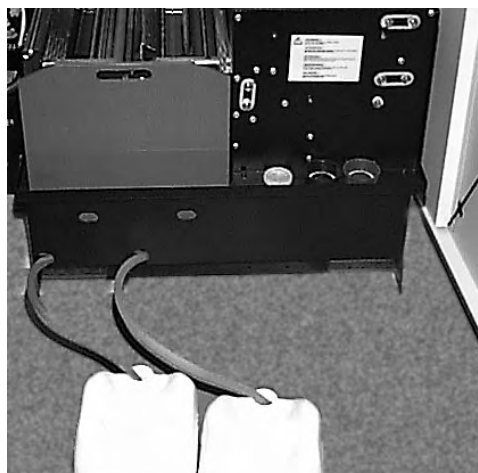
Developer Unit

Draining the Developer Unit

When the processor module door is open-ed, the power is automatically shut off.

- Open the processor module door (fig. 2, E).
- Lift the locking pawl of the processor unit and pull the section forward to the extreme stop position.
- Lift off the two replenishment bottles.
- Carefully pull out the thermostat from the housing in the processor tank.

5. Unplug the cable for the heating element underneath the processor module.
6. Release the draining hoses and insert each one into a separate empty container. Open the taps.



2. Remove the grid on the dryer section.
3. Each processor rack can be lifted approx. 3 cm at the front and pulled out approx. 5 cm, thus releasing the gear wheels from the drive unit at the back.

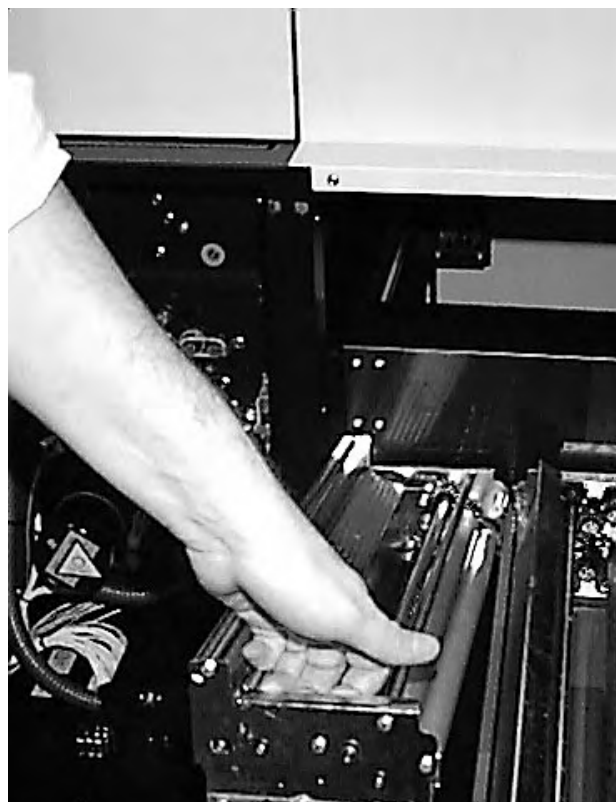
7. When the unit is empty, shut off the taps and fit the hoses into their holders.

Before filling the empty tanks with new chemistry they should be cleaned.

Cleaning of the Developer Unit

The processor module should be cleaned every time the chemistry is changed. The processor module must be drained and released (see “Draining the developer unit”).

1. Remove the tank covers.



4. Lift the two processor racks from the tanks and clean them with a soft brush and lukewarm water.



5. Clean the activator and stabilizer tanks by pouring clean water into the tanks while the draining hoses is open.
6. Let the water run off the racks before replacing them in the tanks.
7. Put the racks back in the tanks and replace the grid on the dryer section.

Filling of the Developer Unit

When the rear right door is opened, the power to the heating element in the activator tank is automatically shut off.

1. Open the front cover of the processor module by activating the locking pawl at the bottom of the rear right door.
2. Pull the carriage with the processor module forward to the extreme stop position. Lift off the two replenishment bottles.

3. Remove the cover of the processor module to gain access to the two processor tanks.
4. Close the draining hose taps.
5. Pour 16 litres of stabilizer liquid into the right-hand tank and approx. 1 litre into the black-capped replenishment bottle.

Important: Avoid any splashing into the activator tank as even small amounts of stabilizer will destroy the activator.



6. Pour 16 litres of activator liquid into the left-hand tank and approx. 1 litre into the blue-capped replenishment bottle.
7. Replace the cover on the processor section and place the replenishment bottles in their holders.
8. Gently slide the processor module back into position and close the door.
9. The activator temperature is regulated by means of a computer-controlled heating element and must be between 20°C (68°F) and 30°C (86°F).

Warning: Never turn on the power unless the processor module is filled or the power plug for the heating element is removed, as this may cause overheating and damage to the processor module.

Troubleshooting

Error messages

The DPX SYSTEM displays error messages in the Output Controller and in the PlateSetter Monitor. Look for the error messages and refer to this section for troubleshooting.

The RipManager and RipMate will not start up

Whenever the RipManager starts up it searches for the DPX SYSTEM unit through the SCSI chain. If it is unable to find the DPX SYSTEM unit or if there is an error on the DPX SYSTEM unit the RipManager does not start. Because the RipManager is iconised it is not possible to see exactly which error occurred. To display an error message do the following:



1. Double click on the Program Manager icon.
2. Find the RipManager programme group.



3. Double click on the RipManager icon.

The error message will now be displayed. Refer to the Troubleshooting section for further help.

Imagesetter not found

If “Imagesetter not found” is displayed in the RipManager window during startup, the DPX SYSTEM does not report on the SCSI chain.

1. Check that the door to the plate exposure module door (fig 2. E) is closed.
2. Try shutting down the system and restarting it. See section “Shutting down the DPX SYSTEM”.

If the DPX SYSTEM unit is not switched on before the RIP PC, this error message will occur.

Cover open

The cover to the plate processing module door (fig 2. E) is not closed.

Close the door (fig 2. E).



Double click on the RipManager icon in the programme manager to launch the RIP again.

Interface card failed

The connection through the SCSI Interface cable is lost, and the RIP cannot communicate with the DPX SYSTEM.

1. Shut down the system as described in section “Shutting down the DPX SYSTEM”
2. Start the DPX SYSTEM as described in “Starting the DPX SYSTEM”

Printer caught up

RipMate has not had the necessary system resources to transfer image data to the DPX SYS-

TEM, due to Windows NT system or another programme.

1. Try repeating the job.

Undefined command "set calibration"

The current plate setup can not find a calibration. This might be due to the setup of the calibration or how the received PostScript job was set up. Refer to the RipMate user guide for further information.

Font not found

The system is set up to refuse processing a plate when a font is missing in the PostScript job.

DPX SYSTEM reports to the Rip Monitor which font is missing.

Loader Jam: 0 - 100

An error in the exposure section of the DPX SYSTEM has occurred. Generally, this error message describes a situation, where a sensor has not seen the material passing by at the expected time.

1. Shut down the system and restart it.

Continue exposing if the error has disappeared, otherwise

2. Shut down the system.
3. Open the exposure module door (fig. 2. G).

Warning: All power to the machine is now shut off. Wait 20 seconds for the spinner motor to settle.



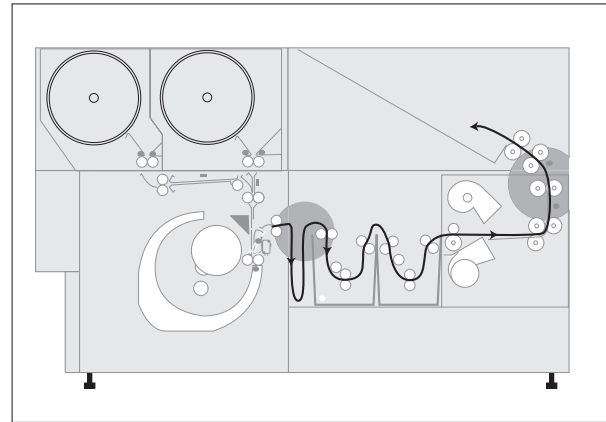
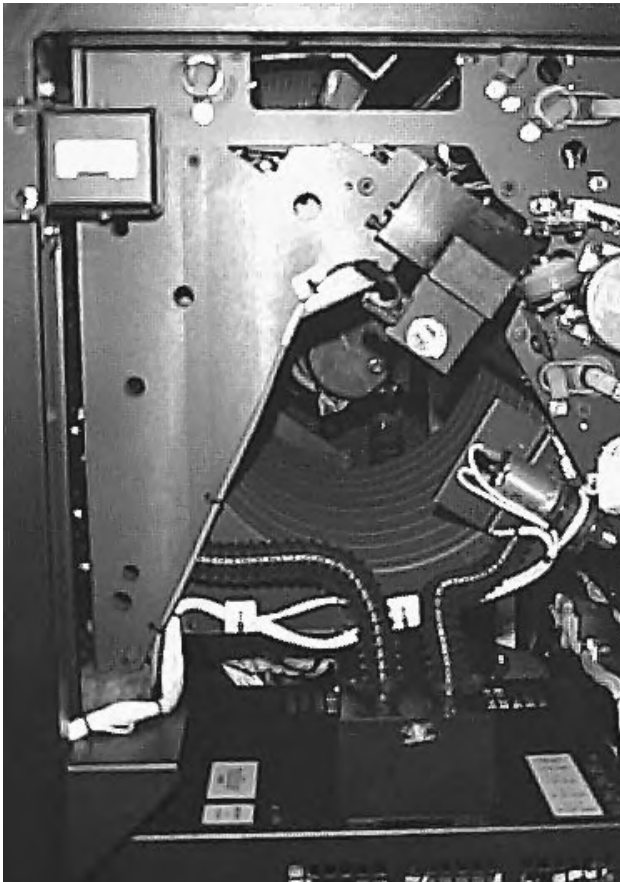
4. Look for plate material left in the drum.
5. With the palm of the hand against the drum surface, scan the surface to make sure that no pieces are left.
6. Close the exposure module door (fig. 2. G), and restart the system.

Loader Jam: 101 - 112

This error only occurs when a punch system is installed.

1. Shut down the system.
2. Open the exposure module door (fig 2. G).

Warning: All power to the machine is now shut off. Wait 20 seconds for the spinner motor to settle.



If the processor unit cannot be pulled out, a plate is jammed either between the buffer and the processor unit or between the exit tray and the processor unit.

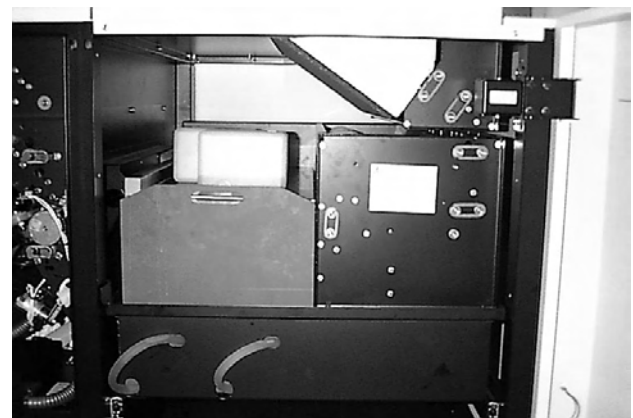
Use the long jam knife (mounted on the inside of the exposure module door) to cut the jammed plate from one of the following holes:

3. Check the two punch tubes and punch tools for punch waste. Make sure they can move freely by turning them by hand.
4. Close the exposure module door (fig 2. G), and restart the system.

Dryer exit

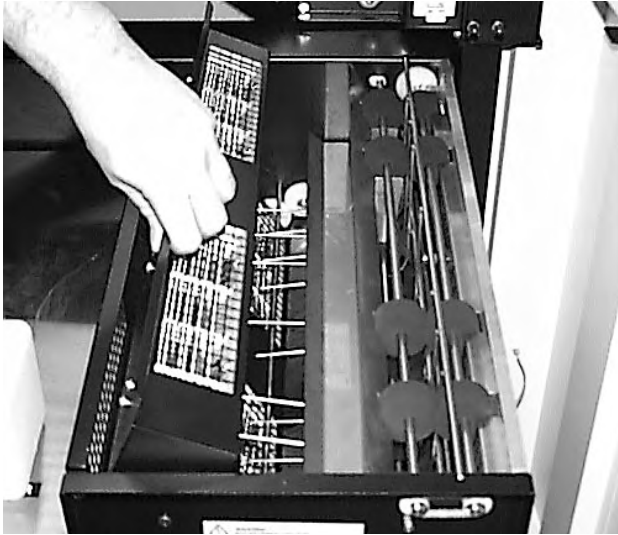
A plate is jammed in the processing section.

1. Open the processor module door (fig 2. E).
2. Lift the locking pawl of the processor unit and pull the section forward to the extreme stop position



3. Take out the two replenishment bottles.
4. Lift off the tank cover and check for plates in the racks. If one is found remove it.

If no plate is found in the tanks, look in the dryer section.



5. Lift the dryer module as shown on the picture.

Check if there is a plate in the dryer section. If not, close the exposure module door (fig. 2. E) and continue exposing.

Warning: Observe closely the mounting of the two guides. If they are not put back in exactly the same position, it might cause a jam.



6. Lift off the air guide.



7. Lift off the material guide.

When all guides are removed the operator can freely remove any jammed material.

8. Mount the two guides in position again and close the dryer module.
9. Close the processor module door (fig 2. E) and continue exposing.

2. Technical Specifications

DPX SYSTEM Digital Platesetter

Type: Digital Plate Exposure System
Max. plate format: 460 x 550 mm / 16.5 x 21.6"
Max. image/ exposure area: 436 x 546 mm / 16.3 x 21.4"
Imaging technology: Internal drum
Light source: 670 nm visible red laser diode
Plate material: Photo-direct polyester plates
Resolution: 900 - 2540 dpi (variable)
Screen ruling: 56 - 175 lpi (determined by the plate material and press)

Dot Range: 5 - 95%

Image size repeatability: $\pm 1/100$ mm

Image positioning repeatability: ± 0.5 mm related to edge
 ± 0.2 mm related to punch

Material loading: Two supply cassettes
Dimensions (WxHxD): 1020 x 1055 x 1366 mm

Weight: 454 kg

Power Consumption: 13 Amp. without punch, 16

Amp. with punch

Optional: Register Punch System (landscape and/or portrait punch)

Integrated Plate Processing Module

Principle: Variable speed
Processor: Activator and stabilizer
Dryer: Temperature controlled, hot air
Replenishment: Level control
Stacking: 50 - 100 plates

RIP Module

System: Windows NT hosted
Features: Harlequin Core (Script-Works)
HPS screening
Postscript level 2
Network: Compatible with PC, Macintosh and UNIX networks
Interface: Standard SCSI -2 Differential.

Operation Condition

Operation temperature range: 18°C-28°C

Humidity: 25% - 80% RH non condensing

Storage Condition

Operation temperature range: 5°C-50°C

Humidity: 25% - 80% RH non condensing

