MAKO 8 CTP/
NEWS extra
Operator Guide

Mako 8 CTP / NEWS extra

Operator Guide

This guide reflects Mako 8 CTP/NEWS extra systems as of March 2005

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Preface

Scope of this Guide

This guide provides instructions for the operating and maintaining a Mako 8 CTP/NEWS extra platesetter. This guide describes all aspects of the operation of the system, from the loading of media, to the delivery of exposed media to an on-line processor.

The Mako 8 CTP/NEWS extra employs a Class 3B laser. This guide contains important safety information and regulatory information about the laser. You should read this information thoroughly before operating the system or performing the procedures described in this guide.

This guide assumes the system is properly installed and plugged into the system power conditioner. It also assumes that the system has been calibrated and tested for proper operation and acceptable output.

Organization of this Guide

Chapter 1: Requirements and Safety

This chapter includes system operating requirements and information about laser safety.

Chapter 2: System Operation

This chapter discusses all operational features and provides complete listings of system operational messages. All of the system menus are described in detail. All of the menu items are mapped in flow diagrams.

Chapter 3: Media Handling

This chapter provides instructional information on how to load media. Guidelines for handling media are also provided.

Chapter 4: General Maintenance and Troubleshooting

This chapter covers general maintenance items that can be performed by the operator. This chapter includes troubleshooting tips and a procedure for re-locating or moving the system.

Not Covered in this Guide

System set-up and installation

Engineering specifications

Alignment and calibration

Field service information

Requirements and Safety

Introduction to the System

Plates are loaded by manually positioning the plate against the pin bar registration system. When sensors determine the plate is properly positioned, the plate is automatically moved into the imaging unit and imaged. After that, the exposed plate is moved onto the media transport, which feeds the plate into a customer-supplied plate processor.

System Requirements

System Power and Heat Dissipation

Power (maximum)	100 - 240 Volts; 3 Amps 50/60Hz, single phase.
Heat Dissipation	850 BTU/hour

Environmental Requirements

Temperature-	62 - 86 degrees F (17 - 30 degrees C)
Humidity	45 - 65%, non-condensing.

Note: **Operating the system outside the ranges specified above may affect performance.**

Laser Safety

Laser Product Classification

The system is classified as a Class one (I) laser product which contains a Class 3B (IIIb) laser System. This classification means that the operator is exposed to no hazardous laser light during operation and maintenance. The laser itself, however, is a Class 3B (IIIb) laser device, and emits visible laser light which is considered hazardous by FDA published limits.

IMPORTANT WARNING

Use of controls or adjustments or performance of procedures other than those specified in this guide may result in hazardous laser light exposure.

System Laser Wavelength Identification Label

The system contains a laser that emits visible laser light. The identification label is located on the optics assembly. The label is shown in Figure 1-1.

<div style="border:1px solid black; text-align:center;">

MEDIA SENSITIVITY
405 nm VISIBLE

</div>

Figure 1-1 Media Sensitivity Label

Regulatory Information

Electromagnetic Emissions

DOC - Canada

The Canadian Department of Communications requires compliance with the Radio Interference Regulations, ICES -003.

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

EMC Directive - Europe

Complies with EN 55011: 1998

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

FCC - USA

The standards for electromagnetic emissions are Part 15, Subpart J of the FCC rules. The system was tested to Class A limits. The following statements are required by the FCC:

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which

case the user will be required to correct the interference at his or her own expense.

Compliance with applicable regulations depends on the use of shielded cables, which the user is responsible for procuring.

Identification and Certification Label (ratings plate)

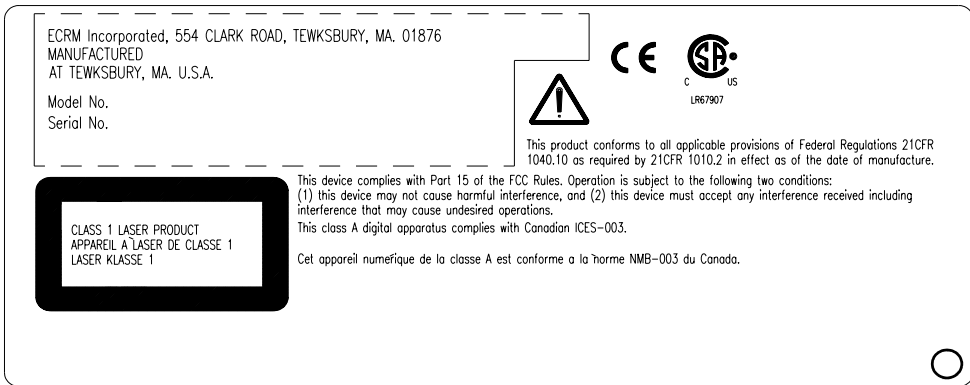The identification and certification label is attached to the back of the unit, above the pinch rollers.

ECRM Incorporated, 554 CLARK ROAD, TEWKSBURY, MA. 01876
MANUFACTURED
AT TEWKSBURY, MA. U.S.A.

Model No.
Serial No.

LR67907

This product conforms to all applicable provisions of Federal Regulations 21CFR 1040.10 as required by 21CFR 1010.2 in effect as of the date of manufacture.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operations.
This class A digital apparatus complies with Canadian ICES-003.

Cet appareil numefique de la classe A est conforme a la norme NMB-003 du Canada.

CLASS 1 LASER PRODUCT
APPAREIL A LASER DE CLASSE 1
LASER KLASSE 1

Figure 1-2 Identification and Certification Label

System Operation

<div style="float:right">**2**</div>

Introduction

A complete Mako 8 CTP / NEWS extra system includes a control workstation, CtServer software, the platesetter, and a power conditioner.

Workstation

The control workstation connects directly to the platesetter and runs the CtServer software. Operating instructions for the workstation are provided with the workstation.

The operator makes frequent use of the workstation. For that reason, the workstation should be set up next to the platesetter.

CtServer Software

CtServer is used to send jobs to the platesetter. It is also used to define the plate and pin bar requirements for jobs and communicate that information to the platesetter, which displays the information on the control panel LCD. The use and operation of CtServer is documented in the *CtServer User's Guide*.

Mako 8/NEWS extra Platesetter

The platesetter is the output device that images the plates.

Power Conditioner

The system power conditioner protects the system against power quality problems like brownouts, surges, over-voltage, sags, voltage imbalance, and line noise.

The platesetter, the workstation, and the workstation monitor all must be plugged into the power conditioner.
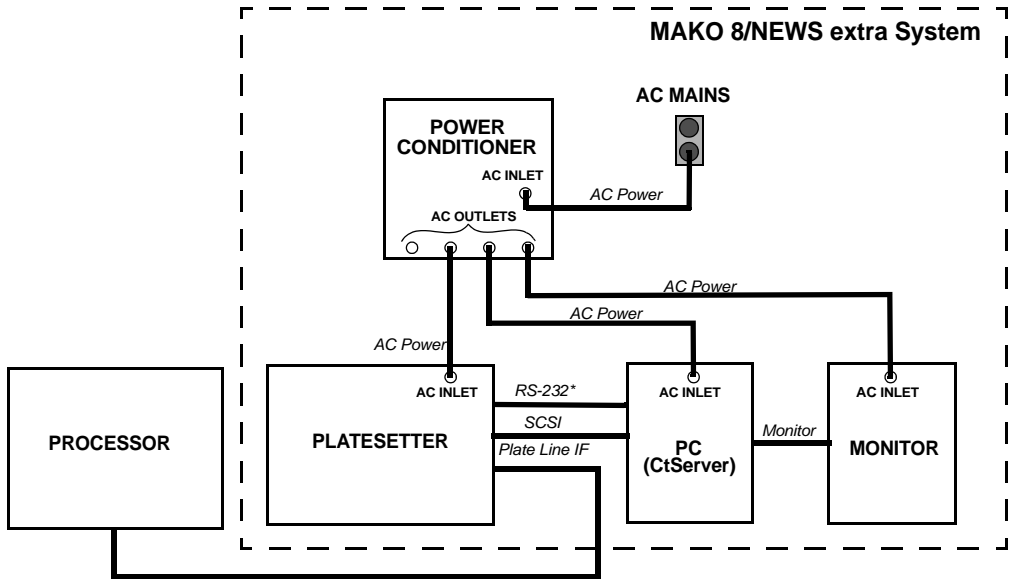
* Used by service personnel to run diagnostic programs.

Figure 2-1 AC Power and I/O Connections

Platesetter Parts

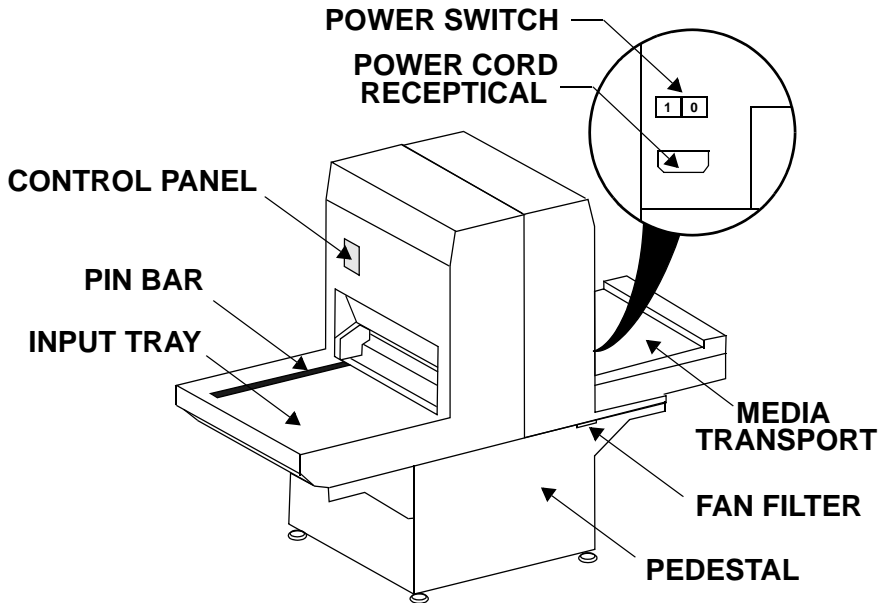The main parts of the platesetter are shown and described below

Figure 2-2 External View of the Platesetter

Power Cord Receptacle

The power cord receptacle is located on the right side of the system, as shown in Figure 2-2.

Note: **In order for the system to work properly, the platesetter, the CtServer computer, and the computer monitor must *all* be plugged into the system power conditioner. Be advised that if the devices are not plugged into the power conditioner, damage resulting from voltage spikes, brownouts, etc., will NOT be covered by the warranty.**

Power Switch

The power switch controls ac power to the system. To start up the system, turn on the power switch located on the rear right side of the machine. Depress zero (0) to turn **OFF**, depress one (1) to turn **ON**. See Figure 2-2.

Note: It is recommended that the system be powered on for a 1-hour warm-up period prior to imaging.

Pin Bar

The pin bar is used for plate registration. There are two types of pin bars: press notch registered and edge registered.

Up to two pin bars come with the system as standard equipment. Additional pin bars can be ordered as an option. Exposing sets of plates with different registration notch requirements is easily accomplished by changing the pin bar.

Control Panel

The control panel allows you to interact with the platesetter. Commands and menu selections are controlled through this device.

Input Tray

The input tray is used to position the plate for exposing. The plate is placed on the input tray and gently pushed against the registration pins.

A new plate cannot be loaded until the previous plate has been completed.

Media Transport

The media transport provides for automated delivery of media to a customer-supplied online processor.

Pedestal

The pedestal is a specially designed base for the platesetter.

Fan Filters

The platesetter has several fan filters. For details about the filters, see Chapter 4.

Starting Up the System

Turn on the power switch located on the rear right side of the machine. Depress one (1) to turn the power **ON**. When the system completes its initialization, a message appears on the display indicating **ONLINE.** When **ONLINE** appears, the host computer can be powered on. Once the host computer is powered on and running CtServer or the RIP, and the Mako CTP is **ONLINE,** the system is ready to expose images.

Shutting Down the System

To shut down the system, turn off the power switch located on the lower right side of the machine. Depress zero (0) to turn the power **OFF**. Shut down the system **only** when the display reads **ONLINE**, and the second line is blank. (No operational message visible). Once the machine is turned off, the host computer will have to be rebooted after the machine is turned back on in order to establish communication.

Using the Platesetter Control Panel

The first time you use your new system, you should review and set all the menu parameters. Advance through the menu items and verify or change them as needed. When you finish, the system is ready for use.

Using the Control Panel to Access Menus

The system control panel is used to access the menus. The main parts of the control panel are shown and described below.
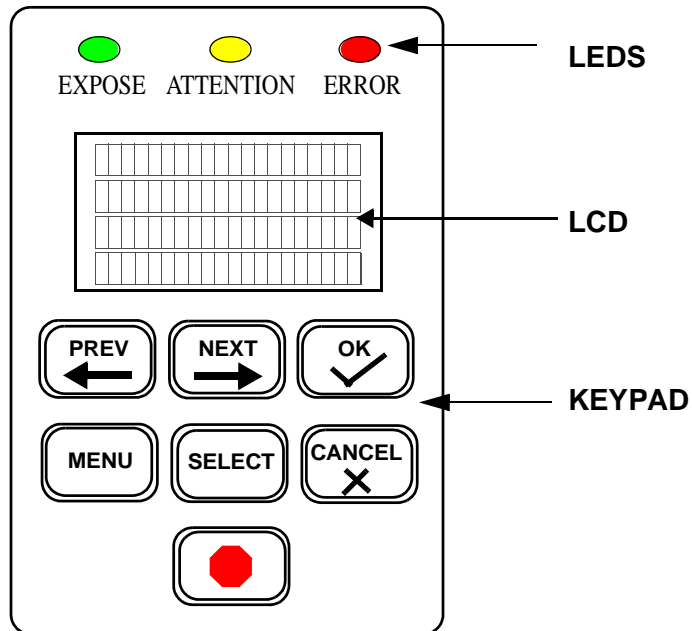

Figure 2-3 Control Panel

Keys

PREV — Moves you backward within the menu or moves the cursor backward within the current menu item.

MENU — Enter or exit the menu sub-system by pressing **MENU** from the **ONLINE** or the **OFFLINE** state.

NEXT — Moves you forward within the menu or moves the cursor forward within the current menu item.

SELECT — Increments the numeric digit under which the cursor is positioned or scrolls through the options available for the current menu item.

OK — Start exposing the loaded plate. Also, from anywhere in a numeric field, causes the next menu item to be displayed. In the last item of a menu, causes a return to the first item of the menu.

CANCEL — Cancels a pending "load plate" request, but does not stop a job that is in progress.

The Emergency stop button. This button will stop all moving parts of the platesetter.

LEDs

EXPOSE — Green LED that indicates the plate is being exposed when it is flashing. Additionally, indicates registration pin contact when loading a plate.

ATTENTION — Yellow LED that indicates there is a condition that requires operator attention. The LCD display indicates what needs to be done.

ERROR — Red LED that indicates a platesetter error condition. The LCD display indicates what the error is.

Menu Selection

There are three operator menus:

- User Preference Menu (See page 13).

- User Maintenance Menu (See page 17.)

- Test Pattern Menu (See page 19.)

To select and set parameters in any menu:

Step 1. Press MENU to enter the user menu system.

Step 2. Press SELECT until the menu you want displays on the LCD.

Step 3. Press NEXT to enter the menu.

Step 4. Set the parameter to what you want. Press SELECT to change the value.

Step 5. Press Next to go to the next parameter until you have completed your selections.

Step 6. Repeat steps 4 and 5 until all changes are made.
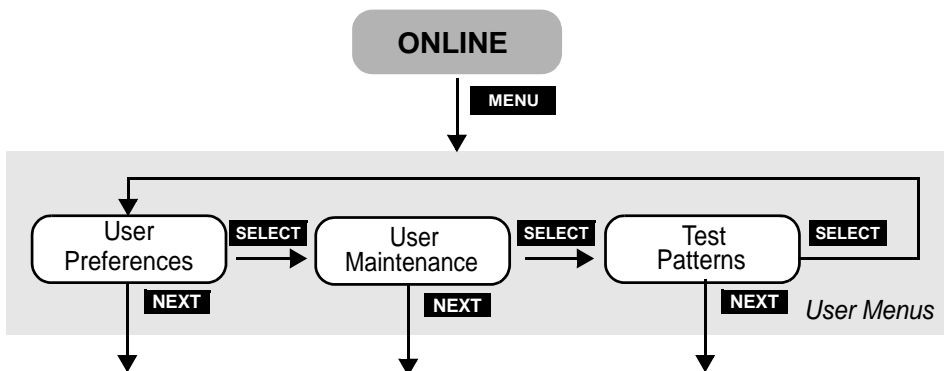
Step 7. Press MENU to exit the user menu system.

Figure 2-4 The User Menus

User Preferences Menu

UNITS OF MEASURE

OPTIONS   ENGLISH (inches) or METRIC (millimeters)

The selected units of measure apply to all numeric measurement values in various menus.

AUDIO ALERTS

OPTIONS   ENABLED or DISABLED

This menu item allows you to disable or to enable the audible alarms for the following conditions:

Error conditions, Power-up, Image complete

HORIZONTAL MAGNIFICATION

LIMITS   85.00% to 110.00%

Sets the size of the image in the horizontal direction from 85% to 110% of nominal.

VERTICAL MAGNIFICATION

LIMITS   85.00% to 110.00%

Sets the size of the image in the vertical direction from 85% to 110% of nominal.

IMAGE OFFSET

LIMITS   -0.300" to +0.300" (-7.62mm to +7.62mm)

The image may be shifted to the left with a negative (-) value, or to the right with a positive (+) value by up to 0.300 inches. Press **PREV** to access the (+) and (-) sign.
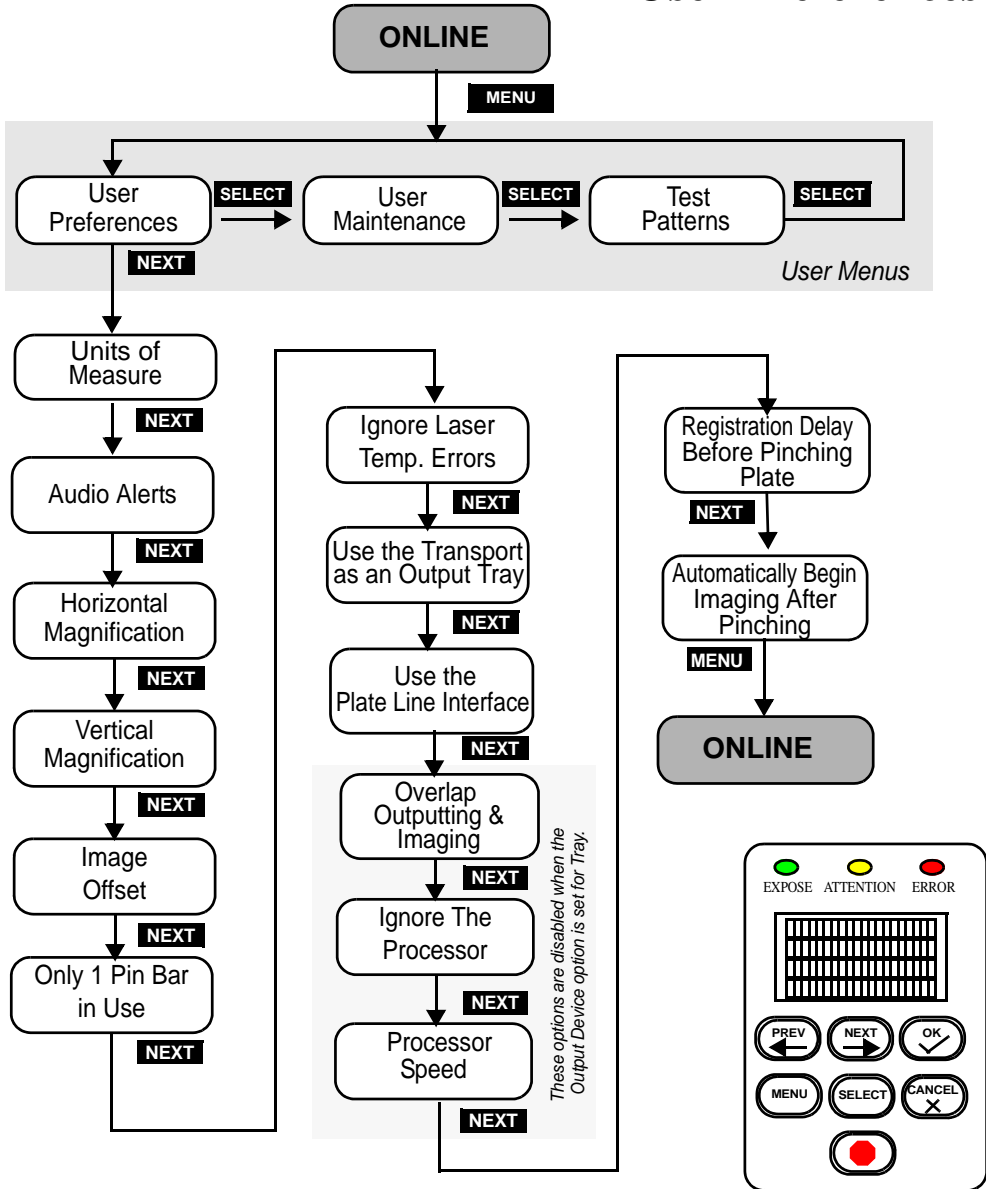
User Preferences

ONLINE

MENU

User Preferences → **SELECT** → User Maintenance → **SELECT** → Test Patterns → **SELECT**

User Menus

NEXT

Units of Measure
NEXT

Audio Alerts
NEXT

Horizontal Magnification
NEXT

Vertical Magnification
NEXT

Image Offset
NEXT

Only 1 Pin Bar in Use
NEXT

Ignore Laser Temp. Errors
NEXT

Use the Transport as an Output Tray
NEXT

Use the Plate Line Interface
NEXT

Overlap Outputting & Imaging
NEXT

Ignore The Processor
NEXT

Processor Speed
NEXT

These options are disabled when the Output Device option is set for Tray.

Registration Delay Before Pinching Plate
NEXT

Automatically Begin Imaging After Pinching
MENU

ONLINE

EXPOSE ATTENTION ERROR

PREV NEXT OK

MENU SELECT CANCEL ✕

Figure 2-5 User Preferences Menu Map

ONLY 1 PIN BAR IN USE

OPTIONS: YES or NO

"YES" prevents the system from displaying a prompt to verify that the correct pin bar is installed whenever you open an autoloader cover. "NO" permits the system to display the prompt.

IGNORE LASER TEMPERATURE ERRORS

OPTIONS   YES or NO

If the laser exceeds its target operating temperature an error will be reported. It is recommended that this problem be fixed. However, if critical jobs need to be completed, it is possible to operate the laser at a higher temperature. This operation is enabled by ignoring the laser temperature errors.

Note: Operating the laser at a higher temperature shortens the life of the laser.

USE TRANSPORT AS AN OUTPUT TRAY

OPTIONS: YES or NO

"YES" disables the media transport conveyor and effectively makes the transport function as an output tray. "NO" (the default setting) enables the conveyor to operate and transport plates to the processor.

USE THE PLATELINE INTERFACE

OPTIONS: YES or NO

"YES" enables the plateline interface to halt the platesetter when another device in the plate line is not ready to perform its function. "NO" causes the platesetter to ignore the plateline interface. This feature should be set to "NO" if a plateline interface is not being used.

OVERLAP OUTPUTTING AND IMAGING

OPTIONS   YES or NO

If this option is set "YES," an operator can begin imaging another plate while the previous plate is still feeding into the processor.

IGNORE THE PROCESSOR

OPTIONS   YES or NO

"YES" stops the media transport from feeding a plate into the plate processor.

This feature is useful when the online processor is down for maintenance or repairs.

PROCESSOR SPEED

LIMITS   9.5" to 77.9" per minute
                         (241mm to 1980 mm per minute)

Should be set to match the speed of the online processor.

REGISTRATION DELAY BEFORE PINCHING PLATE

LIMITS   0.10 seconds to 5.00 seconds

Sets the length of time the system waits to close the pinch rollers after the plate is registered. The default setting is 0.50 seconds.

AUTOMATICALLY BEGIN IMAGING AFTER PINCHING

OPTIONS   YES or NO

YES enables the platesetter to automatically image the plate immediately after the pinch rollers close. NO disables the platesetter from doing so.

When NO is selected, you must manually initiate imaging by pressing the OK button.

User Maintenance Menu

PROGRAM VERSIONS

This option displays version numbers of the installed software and firmware. The versions are displayed as:

```
          VERSIONS
         JP0020 n.n
          JA1126 n
    "NEXT" TO CONTINUE
```

Where JP0020 n.n is the part number and revision level of the controller software, and JA1126 n is the part number and revision level of the controller firmware.

RUN TRANSPORT

This user maintenance option will run the media transport until the STOP button is pressed. This function is used to clean the transport.

RUN MEDIA ROLLERS

This option runs the media rollers until the STOP button is pressed. This function is used to clean the rollers.

DISPLAY ERROR LOG

This option presents system faults (up to a maximum of 20 faults) in chronological order. **TIME** is the elapsed time since the latest power on. **SESSION #** is the total number of times the system has been turned on. **DEVICE NAME** identifies the system component that failed. **ERROR** is an indication of the nature of the fault.

DISPLAY LASER LOG

This option presents status information about the system laser. The information is useful to service personnel, who sometime request the information over the phone during service calls.

User Maintenance

ONLINE

MENU

User Preferences → **SELECT** → User Maintenance → **SELECT** → Test Patterns → **SELECT**

User Menus

NEXT

Program Version

SELECT

Run Transport

SELECT

Run Media Rollers

SELECT

Display Error Log

SELECT

Display Laser Log

SELECT   **MENU**

EXPOSE   ATTENTION   ERROR

PREV   NEXT   OK

MENU   SELECT   CANCEL

ONLINE
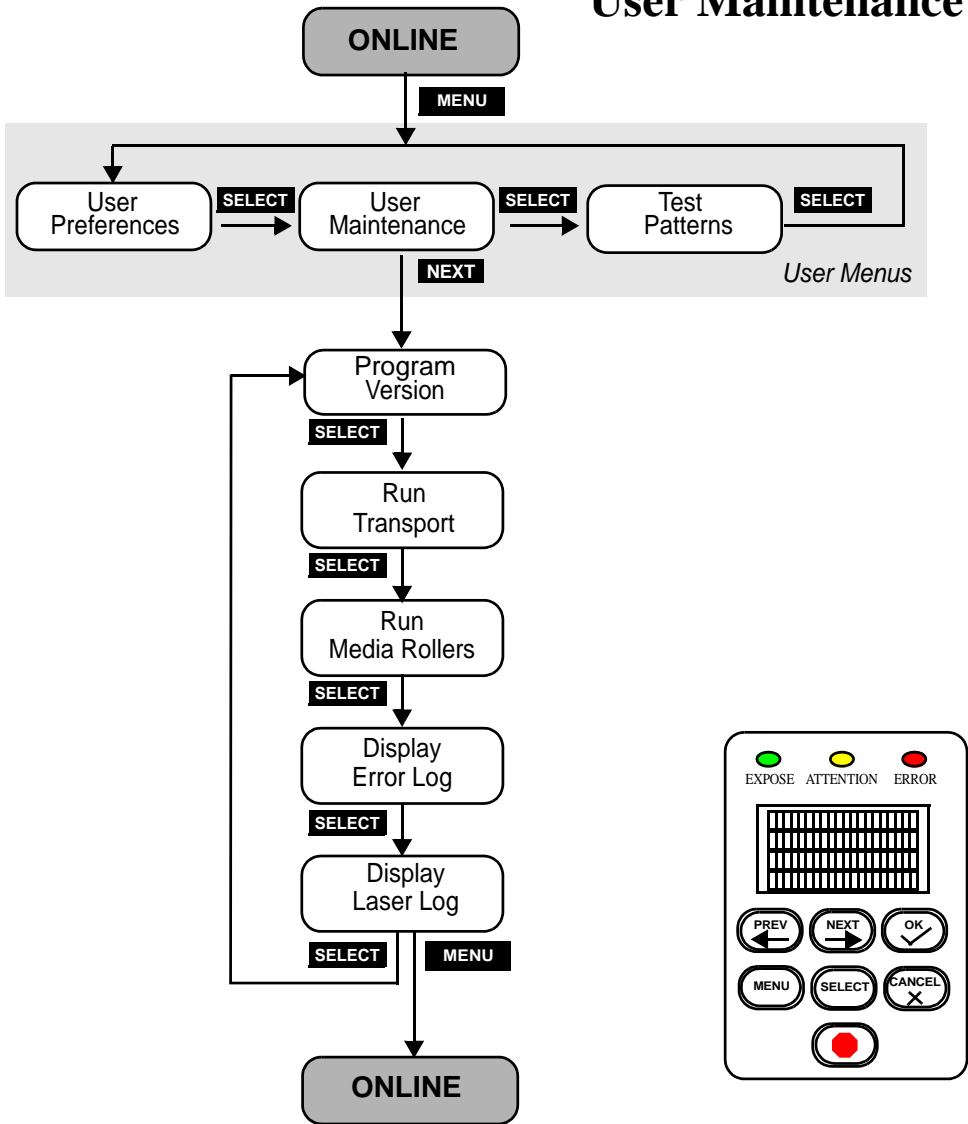
Figure 2-6 User Maintenance Menu Map

Test Patterns Menu

This section describes the settings that affect test patterns. Depending on which test pattern is selected, the following options may be enabled and displayed or disabled and not displayed.

TEST PATTERN MODE

OPTIONS   Enabled or Disabled

This option moves the system in and out of test pattern mode.

TEST PATTERN TYPE

OPTIONS   List of Test Patterns

Test Patterns are for the use of qualified technicians only.

NUMBER OF PLATES

OPTIONS   1 to 60

This parameter specifies the number of plates to be imaged in the testing session. The default value is 1.

REVERSE IMAGE POLARITY

OPTIONS   YES or NO

This option will reverse the test pattern images. YES will expose the background of the plate. NO will expose the image area.

BAR WIDTH

OPTIONS   1 to 999999 Pixels

This parameter specifies the width of the lines in the Bar Test Patterns.

BAR SPACING

OPTIONS   1 to 999999 Pixels

This parameter specifies the width of the spaces between the lines in the Bar Test Patterns.

IMAGE LENGTH

OPTIONS   0.027" to 39.330" or 2mm to 999 mm

This parameter specifies the length of the test pattern to be recorded.

IMAGE OFFSET (VERTICAL)

OPTIONS   0.0000" to 39.330" or 0 mm to 999 mm

This parameter specifies the distance from the leading edge of the plate to the first line of the image.

HORIZONTAL RESOLUTION

OPTIONS   1800, 2400, 2540, 3048 and 3556 dpi

                       70.8, 94.5, 100.0, 120.0, 140.0 dpmm

By picking any of the optional values, you set the horizontal resolution to that value. Horizontal Resolution is not displayed if a GRID test pattern is selected.

Resolution is model dependent. Your options may differ from those listed above.

VERTICAL RESOLUTION

OPTIONS   1800, 2400, 2540, 3048 and 3556 dpi

                       70.8, 94.5, 100.0, 120.0, 140.0 dpmm

By picking any of the optional values, you set the vertical resolution to that value. Vertical Resolution is not displayed if a GRID test pattern is selected.

Resolution is model dependent. Your options may differ from those listed above.

EXPOSURE LEVEL

LIMITS   000 to 255

This menu entry sets the exposure level at the media. The higher the number, the higher the exposure.

Test Patterns

ONLINE

MENU

User Preferences → User Maintenance → Test Patterns

SELECT | SELECT | SELECT

NEXT

Test Pattern Mode

SELECT → Enable

SELECT → Disable

NEXT

Enable

NEXT

TEST PATTERNS (SEE SIDEBAR AT RIGHT)

NEXT

NUMBER OF PLATES

NEXT

REVERSE IMAGE POLARITY

NEXT

only apply to the BARS test patterns

BAR WIDTH

NEXT

BAR SPACING

NEXT

IMAGE LENGTH

NEXT

IMAGE OFFSET

NEXT

HORIZONTAL RESOLUTION

NEXT

VERTICAL RESOLUTION

NEXT

EXPOSURE LEVEL

NEXT

PLATE WIDTH

NEXT

PLATE LENGTH

NEXT

PLATE IS NOTCH REGISTERED

NEXT

TEST PATTERN SELECTIONS

BARS (HORIZONTAL)
BARS (VERTICAL)
CHECKERBOARD
GRID
DROOP (MEDIA)
DROOP (SCOPE)
LASER
RUN CONTINUOUSLY
STEP WEDGE

PRESS **SELECT** *TO SCROLL THROUGH THE SELECTION OPTIONS.*

Only apply if "Plate is Notch Registered" is set to YES.

NOTCH DEPTH

NEXT

DISTANCE FROM NOTCH TO EDGE

NEXT

MAGNIFICATION (HORizontal)

NEXT

OK

MAGNIFICATION (VERtical)

NEXT

ONLINE

Figure 2-7 Test Patterns Menu Map

PLATE WIDTH

OPTIONS   9.92" to 33.023"
                 (252.0mm to 838.78 mm)

By picking a value, you set the plate width for test patterns.

PLATE LENGTH

OPTIONS   9.922" to 47.99"
                 (253.8 to 1209.0 mm)

By picking a value, you set the plate length for test patterns.

PLATE IS NOTCH REGISTERED

OPTIONS   YES or NO

Sets the alignment to be used for test patterns. Punched plates are generally notch registered as opposed to edge registered.

NOTCH DEPTH

OPTIONS   0.00" to 1.00" (00.0mm to 25.4 mm)

By picking a value, you set the notch depth for test patterns.

DISTANCE FROM NOTCH TO LEADING EDGE

OPTIONS   2.125" to 36.57" (53.9mm to 928.9 mm)

This options specifies the distance from the leading edge of the plate to the center of the notch that is closest to the leading edge. This parameter is only for notch-registered plates.

HORIZONTAL MAGNIFICATION

LIMITS   85.00% to 110.00%

Sets the size of the image in the horizontal direction from 85% to 110% of nominal.

VERTICAL MAGNIFICATION

LIMITS   85.00% to 110.00%

Sets the size of the image in the vertical direction from 85% to 110% of nominal.

Running a Step Wedge Test Pattern

The step wedge test pattern is used to set the proper exposure for a polymer plate. Here's how to run step wedge test plate.

Prepare a plate for the test

Step 1. Under safelight conditions, place a test plate on the input shelf.

Step 2. Using the plate manufacturer's recommended step wedge, center the step wedge on the plate 6 inches (15.2 cm) back from the leading edge, as shown below.

Be sure to use two pieces of tape. Make sure the emulsion side of the step wedge faces the emulsion side of the plate, and that there are no air gaps between the wedge and the plate.
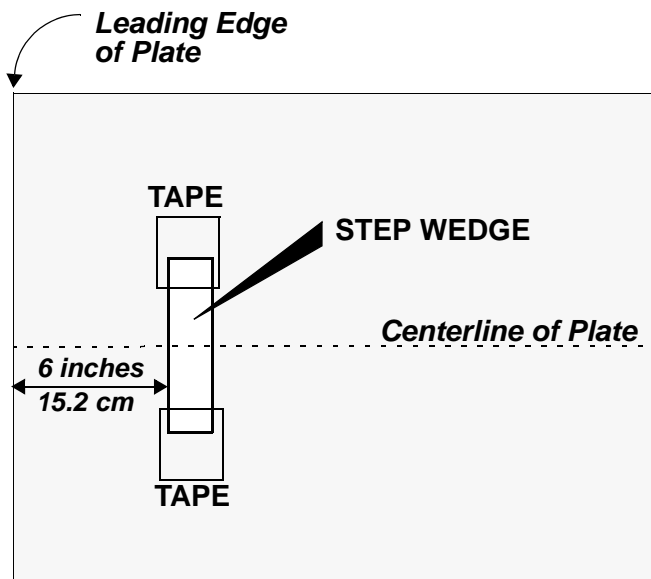
Figure 2-8 Placement of Step Wedge on Test Plate

Run the Step Wedge Test Pattern

Step 1. At the control panel, press MENU and then repeatedly press SELECT until the "Test Patterns" Menu displays.

Step 2. Press NEXT, and then press SELECT to Enable.

Step 3. Press NEXT, and then repeatedly press SELECT until the Step Wedge pattern displays. Then, press NEXT again.

Step 4. Set Horizontal resolution to the required resolution.

Step 5. Set Vertical resolution to the required resolution.

Step 6. Set Exposure to the value you wish to expose the wedge (range is 0-255.)

Step 7. Set Plate Width to the plate width being used.

Step 8. Set Plate Length to the plate length being used.

Step 9. Set Magnification Horizontal to the magnification being used (normally 100%).

Step 10. Set Magnification Vertical to the magnification being used (normally 100%).

Step 11. Select MENU.

Step 12. Press the SELECT key to begin exposure.

> The system exposes the first 8 inches of the plate with 100% laser light at the exposure setting selected. After exposure, the plate moves onto the transport belt and advances until the leading edge of the plate is detected by the transport exit sensor. The transport then stops, the warning light flashes, and a prompt to remove the step wedge displays on the control panel.

Step 13. Making sure to maintain safelight conditions, remove the taped-on step wedge.

Step 14. On the front panel, press OK. The transport feeds the plate into the processor.

Status Messages

During operation, the system displays information that indicates the current condition of the system and of any jobs in process. The status messages appear on the control display.

PREPARING TO EXPOSE - The system is starting the spinner and moving the plate to the recording start position.

EXPOSING IMAGE - The system is now recording an image.

EJECTING PLATE - Exposing is complete and the plate is being ejected onto the plate transport.

MOVING TO PROCESSOR - Plate has been ejected from the rollers and is moving to the processor.

FEEDING PROCESSOR - Plate is on the transport and the leading edge of the plate is moving into the processor.

EJECTING PLATE - Exposing is complete and the plate is being ejected onto the plate transport.

ONLINE - The normal operating mode for the system.

STARTING SPINNER - This message is accompanied by a progress bar when preparing to start an image and the spinner motor is stopped.

TEST PATTERNS - Test Patterns mode has been selected in the Test Patterns Menu and the system is ready to produce a test pattern. This mode of operation should be used by qualified service technicians only.

INITIALIZING - The system is performing initialization functions prior to going online.

WAITING FOR LASER - The system is waiting for the laser to warm up to normal operating temperature.

Error Messages

When an error condition occurs, an error message will appear on the system display panel and the error indicator LED will light. Additionally, if enabled the alarm will also sound.

Operator-Correctable Errors

The error messages you can clear are listed below.

COVERS ARE NOT SECURE - This error is displayed when one of the system covers are not secure. Locate and close the open cover, and then

OPERATOR ABORT - This error is displayed when the operator aborts a job by using the 'stop' button on the control panel.

LASER IS OVER TEMPERATURE - Alerts you that the laser is over temperature. If you override this error in the User Preferences Menu, the laser life will be shortened.

IMAGE OFFSET ERROR, INCOMPATIBLE PARAMETERS - This error is displayed when the combination margin, resolution, magnification, media width, and image offset result in a condition where the image starts before the laser can activate. If you should encounter this error, minor adjustments to the above parameters, to push the image to the center of the plate should resolve the problem.

Correcting Errors

Step 1. If a plate is in the machine when the error occurs, remove the plate as explained in the last chapter.

Step 2. Correct the condition that caused the error.

Step 3. Press the control panel "OK" button.

Step 4. Resume normal operation.

System Configuration Display

Should you ever call for service, your service provider may ask you to relate the information that appears on the System Configuration display. To view the display:

Step 1. Place the system in ONLINE mode.

Step 2. Press the Select key. The first System Configuration Screen displays.

Step 3. Press the Select key again. The second System Configuration Screen displays.

Step 4. Convey the information on the two screens to your service provider.

Step 5. Press the select key to clear the display and return to ONLINE mode.

:

ONLINE	SYSTEM CONFIGURATION DISPLAYS

SELECT

-------------- FIRST DISPLAY --------------

MACHINE TYPE
MACHINE ID
FIRMWARE
LASER POWER/SENSITIVITY/OPTICAL EFFICIENCY

SYSTEM CONFIGURATION

SELECT

-------------- SECOND DISPLAY --------------
OUTPUT TYPE
SPINNER MOTOR

SYSTEM CONFIGURATION

SELECT
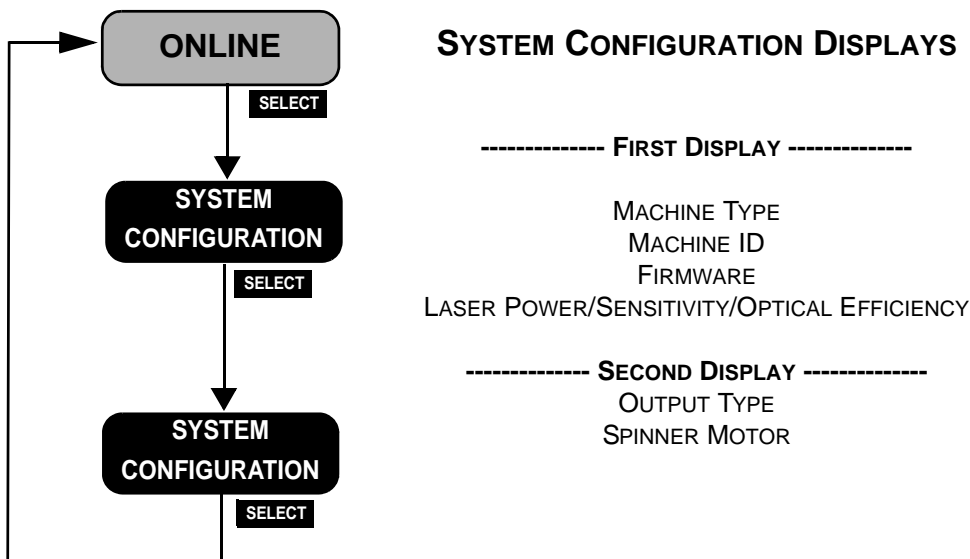
Figure 2-9 System Configuration Displays

Media Handling

3

Introduction

This chapter explains how to load and unload media, and how to install and remove a pin bar from the machine.

Media

Media thickness -	6 mil (0.15 mm), 8 mil (0.20mm), 10 mil (0.25mm), 12 mil (0.30mm)
Media size -	Minimum - 10" W x 10" L (254mm x 254mm), Maximum - 32.4" W x 45.0" L (824mm x 1143mm)
Configuration -	Prepunched Press Grooves or Edge Registered

W = Width

L = Length
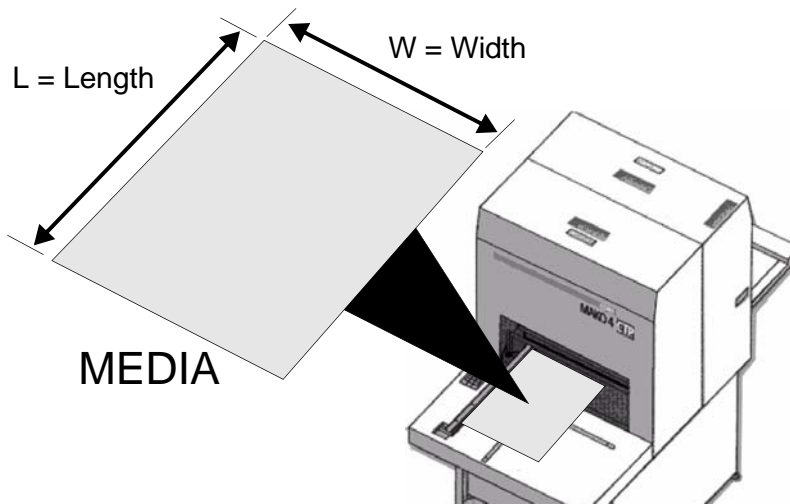
MEDIA

Figure 3-1   Media Orientation

Media Handling

The Mako 8/NEWS extra is designed to be operated in a safe-light room. Safe working time varies with manufacturer. See your plate manufacturer's specification for safe-light recommendations.

Installing and Removing the Pin Bar

The pin bar provides alignment points that insure accurate plate registration.

There are two types of pin bars: notch-registered and edge-registered. Notch-registered pin bars are for registering plates that are punched with a specific notch pattern. This pattern matches up with the pins on both the platesetter's pin bar and the press clamp. Edge-registered pin bars are used to edge register a plate.

Typically, notch registration provides more consistent registration than edge registration.

Note: The platesetter does not "know" which pin bar is loaded. It is up to you to make sure the correct pin bar is installed.

The pin bar fits into a mount assembly located on the left side of the input tray (see Figure 3-2).

GRASP
NOTCH

PIN BAR

GRASP
RECESS

RELEASE
LEVER

MOUNT
ASSEMBLY

INPUT TRAY
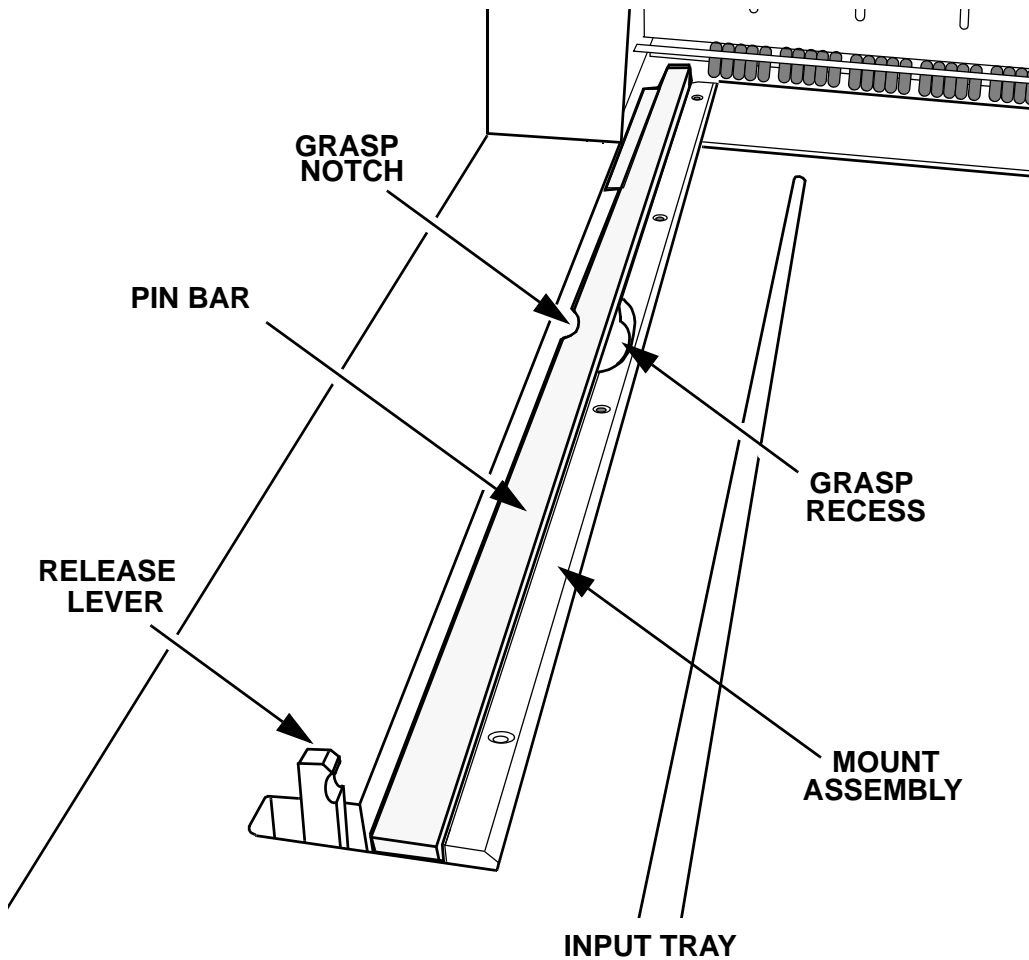
Figure 3-2   Pin Bar (in place in the pin bar mount assembly)

All pin bars include leading- and trailing-edge registration pins, an interlock pin, and a finger notch (see Figure 3-3). The registration pins align the plate with the platesetter's imaging system. The interlock pin is a safety feature that prevents the system from imaging without a pin bar. It disables a safety interlock switch when the pin bar is installed, and enables the interlock switch when the pin bar is removed.

The finger notch provides a grasp point that facilitates removing the pin bar from the pin bar mount assembly.

Edge-registered pin bars include an additional pin not found on notch-registered bars. This additional "head pin" controls the operation of a third, internal registration pin that is located inside the machine, just behind the input roller.
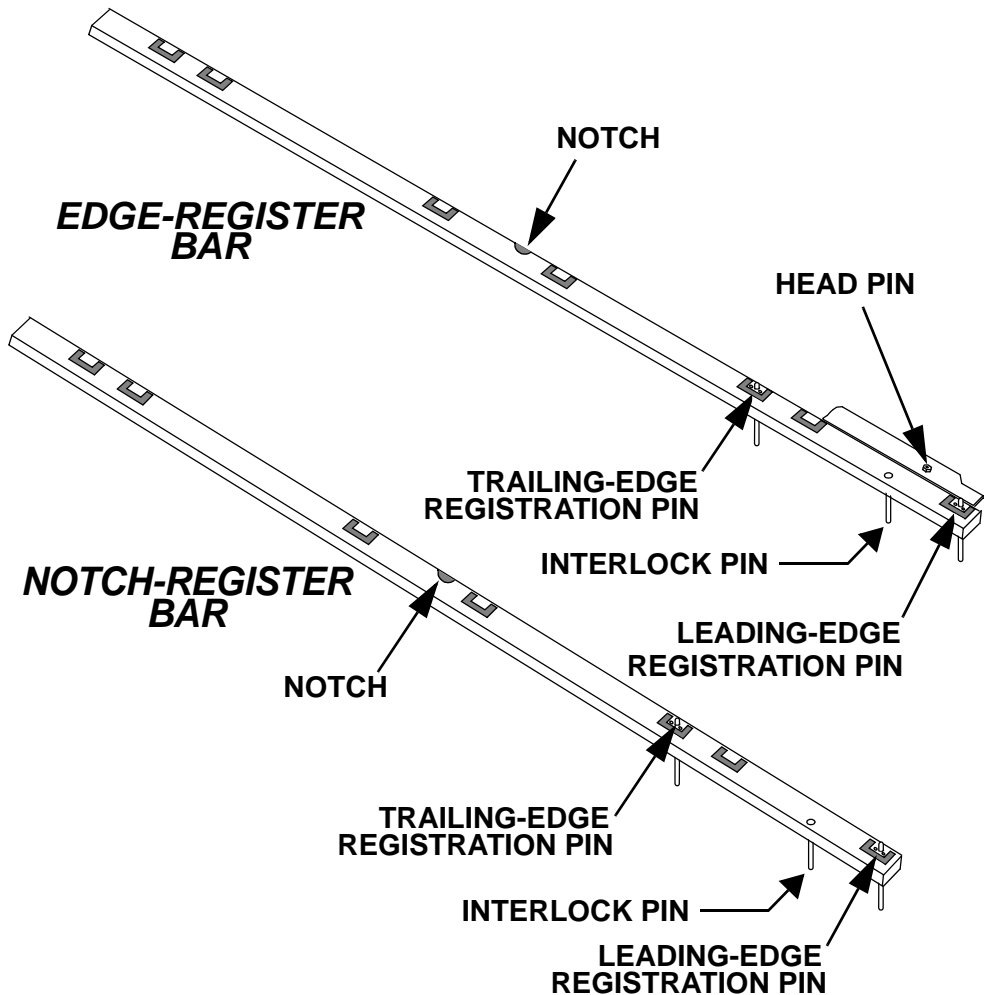
Figure 3-3   Pin Bars

Installing a Pin Bar

Step 1. .Pull and hold open the pin bar
release lever shown at the right.
This opens the retaining block
shown below in Figure 3-5.

Step 2. If necessary, remove the old pin bar.

Step 3. Position the new pin bar above the
pin bar mount assembly so that:

- the interlock pin is just ahead of
  the stud shown in Figure 3-5.
- the back end of the pin bar lines up with the pin bar release
  lever.

Step 4. Push down on the pin bar down to snap it in place in the pin bar
mount assembly.
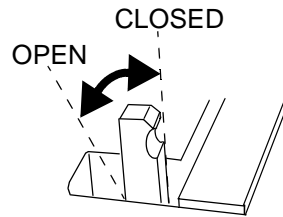
Figure 3-4
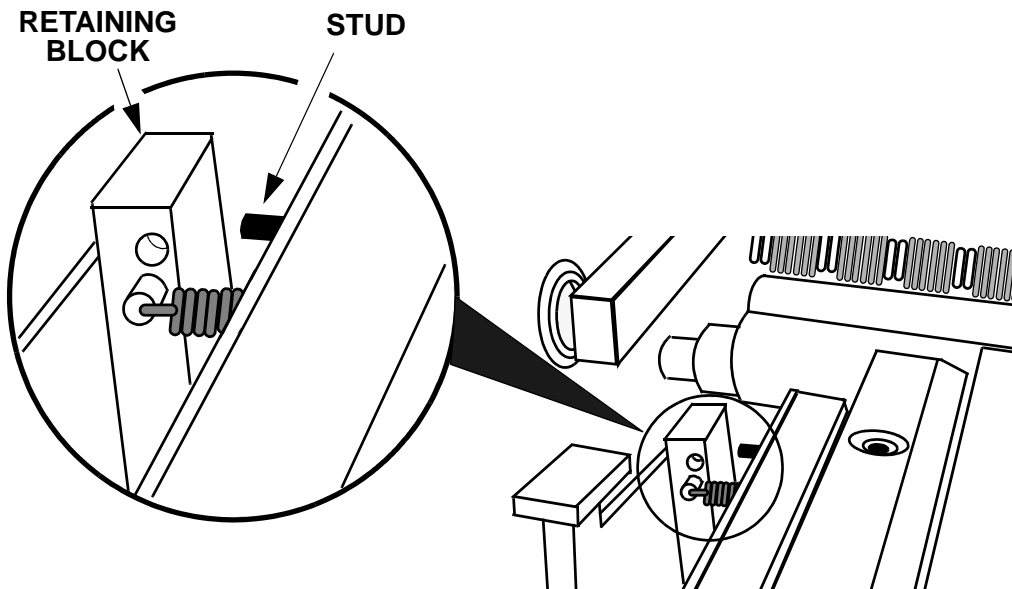
Figure 3-5 Pin Bar Mount Assembly (with Release Lever Open)

Step 5. Release your hold on the pin bar release lever.

Removing the Pin Bar

Step 1. Pull open and hold the pin bar release lever (see Figure 3-4).

Step 2. Place your thumb in the notch in the pin bar and your fingers in the recess in the pin bar mount assembly (Figure 3-2).

Step 3. Pinch the center of the pin bar to get a good grasp on it, and the lift the pin bar straight up and out of the mount assembly.

Loading Media

The host computer will request a pin bar and plate be loaded, and the platesetter control panel display will prompt you to load the plate.

One of the following prompts will appear on the control panel LCD:

```
LOAD A PLATE
<plate name>
 <bar name>
```

This message indicates that the next plate to be imaged is the same as the preceding plate. **It is a prompt for you to load the same kind of plate that was just imaged.**

```
LOAD A NEW PLATE
  <plate name>
   <bar name>
```

This message indicates that the next plate to be imaged is different than previous plate, but that it uses the same pin bar. **It is a prompt for you to load the new (different) type plate.**

```
VERIFY BAR AND LOAD
   <plate name>
    <bar name>
```

The meaning of this message depends on when it appears during the CtServer (host computer) session.

When the session is first opened, **it is a prompt for you to ensure that the correct pin bar is installed before loading the first plate, and then to load the plate.**

Subsequently in the session, the message indicates that the next plate to be imaged is different than the preceding plate AND requires a different pin bar. **Thus, it is a prompt for you to change the pin bar and load the new (different) plate**.

Loading Edge-registered plates

Step 1. Face the front of the platesetter.

Step 2. Verify the requested pin bar is loaded. If not, change the pin bar.

Step 3. Place the requested plate on the input tray.

Note: Always handle and position the plate gently and carefully. Thin plates are especially susceptible to dings and dents.

Step 4. Push the plate to the left so that the edge of the plate contacts the registration pins in the pin bar (Step 1 in Figure 3-6).
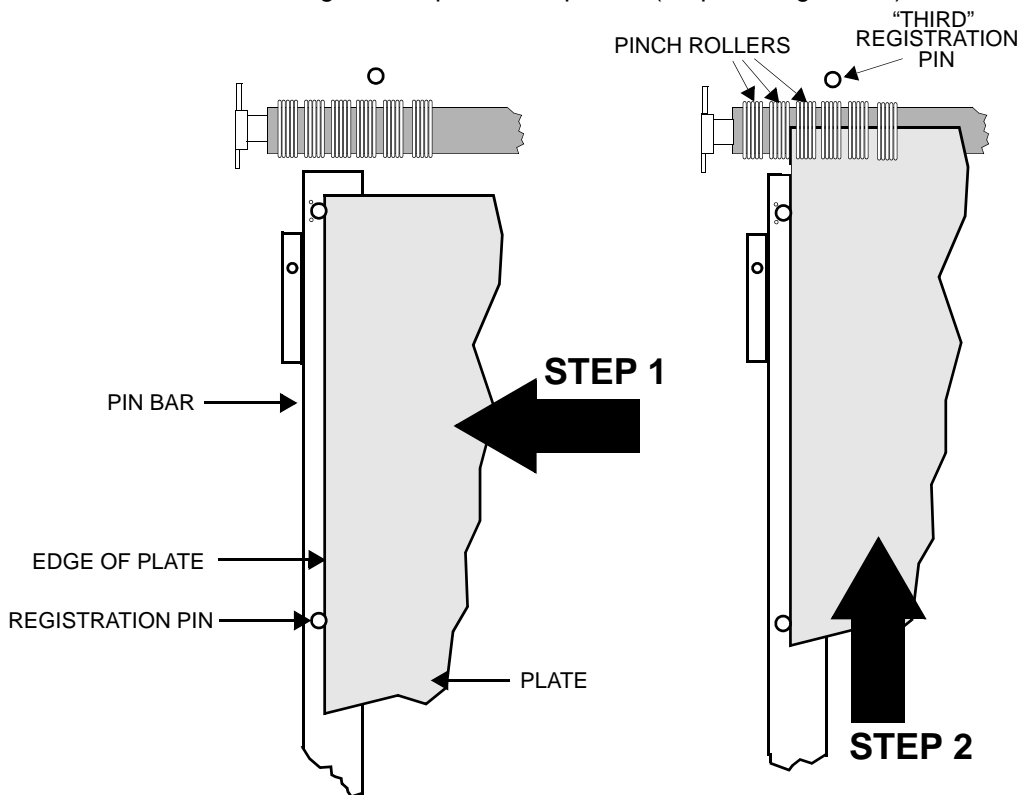
Figure 3-6 Loading Edge-registered Plates

Step 5. Push the plate forward (Step 2) until it comes into contact with a

third registration pin that is inside the platesetter.

Step 6. Gently adjust the position of the plate until the green "Expose" LED stops blinking and stays on steady. (Steady on indicates the plate is making contact with all the registration pins).

Step 7. The platesetter automatically lowers the pinch rollers.

Note: **The platesetter will not lower the pinch rollers until electronics sensors report that the plate is making good contact with all the registration pins.**

If the pin bar isn't properly seated in its mount, the sensors may not operate correctly and the platesetter may not close the pinch rollers. If you load a plate that it is making good contact with the registration pins but the pinch rollers don't close, try re-seating the pin bar.

After the pinch rollers close, the platesetter does either of the following, depending on the setting of the *Automatically Begin Imaging After Pinching* menu option:

> See "User Preferences Menu" on page 13. for more about the *Automatically Begin Imaging After Pinching* menu option.

- automatically begins imaging the plate, or

- displays a "PRESS OK TO BEGIN" prompt on the control panel display.

Step 8. If the prompt appears, press the OK button.

Step 9. After the plate is imaged, it is automatically transported to the on-line processor via the Mako's media transport.

Loading Notch-registered plates

Step 1. Face the input tray.

Step 2. Verify the requested pin bar is loaded. If it is not, change the pin bar.

Step 3. Place the requested plate on the input tray.

Step 4. Position the plate so that both notches in the plate fully engage the two registration pins on the pin bar (see Figure 3-7).

PINCH ROLLERS

REGISTRATION PIN

PIN BAR

NOTCH

PIN BAR →

REGISTRATION PIN →
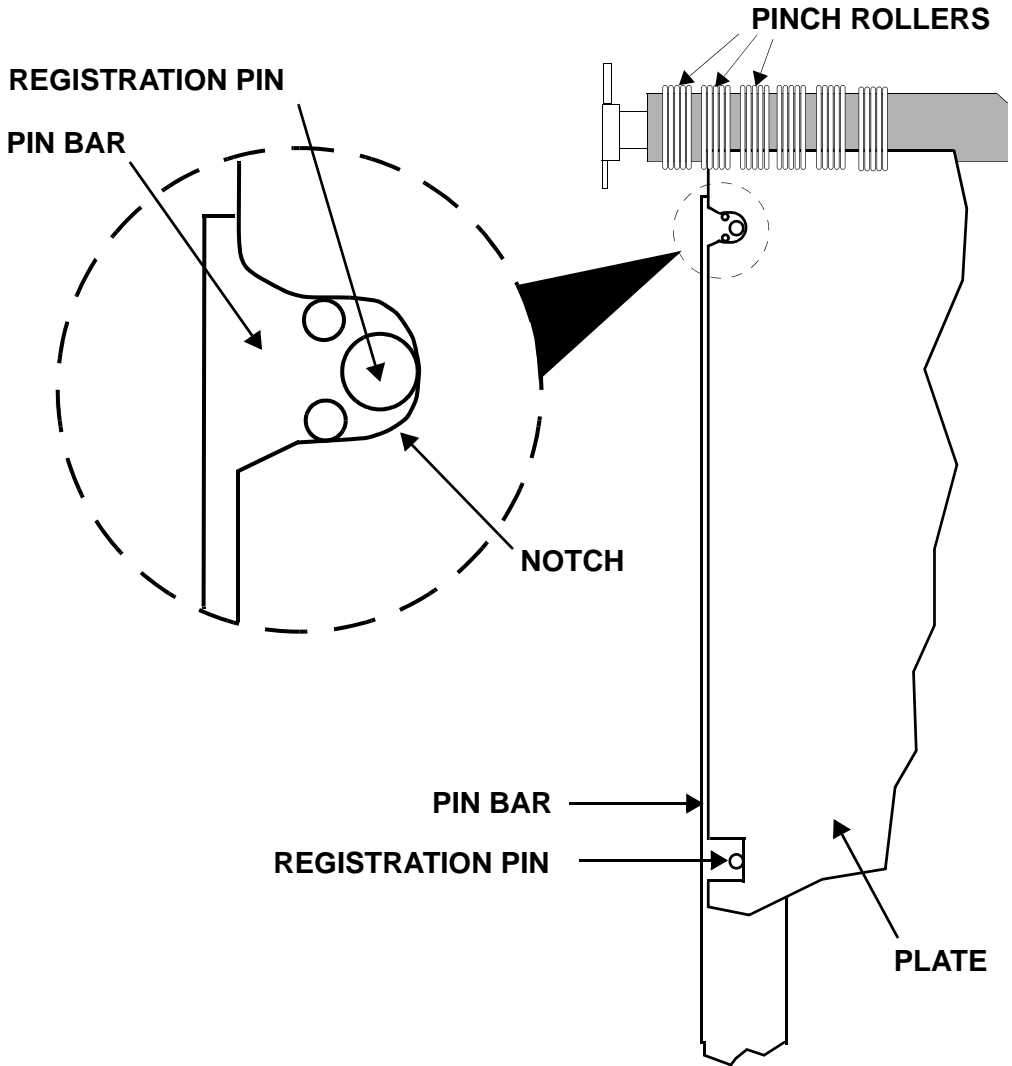
PLATE

Figure 3-7 Loading Notch-registered Plates.

Step 5. Gently adjust the position of the plate until the green "Expose"

LED stops blinking and stays on steady. ("Steady" on indicates the plate is making contact with all the registration pins).

Step 6. The platesetter automatically lowers the pinch rollers.

Note: The platesetter will not lower the pinch rollers until electronics sensors report that the plate is making good contact with all the registration pins.

If the pin bar isn't properly seated in its mount, the sensors may not operate correctly and the platesetter may not close the pinch rollers. If you load a plate that it is making good contact with the registration pins but the pinch rollers don't close, try re-seating the pin bar.

After the pinch rollers close, the platesetter does either of the following, depending on the setting of the *Automatically Begin Imaging After Pinching* menu option:

- automatically begins imaging the plate, or

- displays a "PRESS OK TO BEGIN" prompt on the control panel display.

Step 7. If the prompt appears, press the OK button.

Step 8. After the plate is imaged, it is automatically transported to the on-line processor via the media transport.

Maintenance and Troubleshooting 4

Introduction

This chapter discusses:

- General Maintenance

- Moving the System

General Maintenance

This chapter explains how to keep the system in clean, working order. Remember to shut the power off to the machine prior to performing any internal maintenance procedures. Use only the recommended cleaner. Make sure that cleaning supplies are lint and dirt free.

Cleaning the System

Clean the outside of the system and the pin bar with any mild detergent in clean water using a soft, cotton cloth. Don't use abrasive cleansers or chemical cleansers.

Cleaning the Lower Fan Filter

Inside the electronics box, a filtered fan runs at all times to maintain an air flow inside the platesetter. The filter can become clogged with dust and debris if it is not cleaned regularly. A clogged filter can result in the loss of internal pressure and increase the possibility of a system malfunction. Clean the filter whenever it shows signs of

contamination with dust or other debris.

To remove and replace the lower
fan filter:

Step 1. Turn the power switch off.

Step 2. On the right side of the
machine, locate the lower fan
filter shown below. It is posi-
tioned in a slot at the bottom
of the rear main cover.
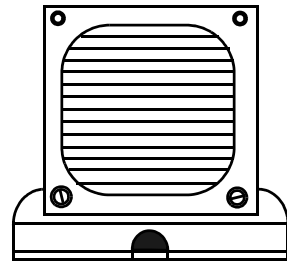
LOWER FILTER ASSEMBLY

Step 3. Place your finger in the finger hole and gently pull the filter out of
the slot.
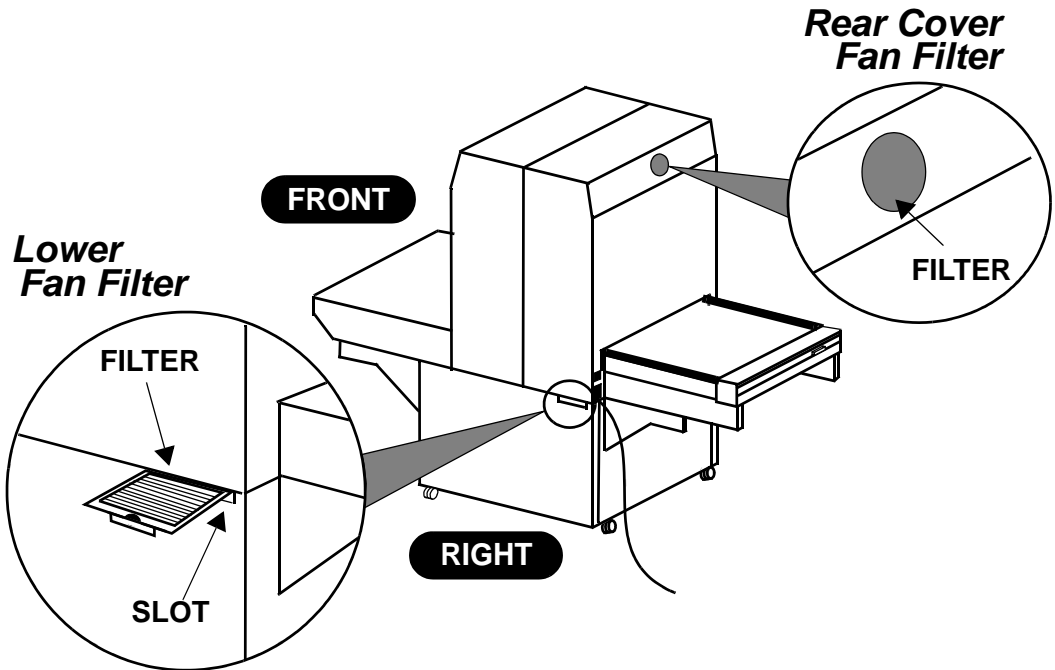
Figure 4-1 Fan Filter Removal

Step 4. Pull the filter out of the slot.

Step 5. Wash the filter in mild, soapy water. Rinse in clean water and dry.

Cleaning the Rear Cover Fan Filter

There is a filtered fan in the rear cover. The fan filter can become clogged with dust and other debris if is not cleaned regularly. A clogged fan causes a loss of internal pressure and the increased probability of a system malfunction.

Figure 4-1 shows where the rear cover fan filter is located. To clean the filter:

Step 1. Turn the power switch off.

Step 2. Locate the fan filter. It is positioned over a hole in the rear, where it is snugly fitted between the fan guard and the pan.

Step 3. Gently pinch the filter to get hold of it, and then carefully pull it out from between the fan guard and the pan.
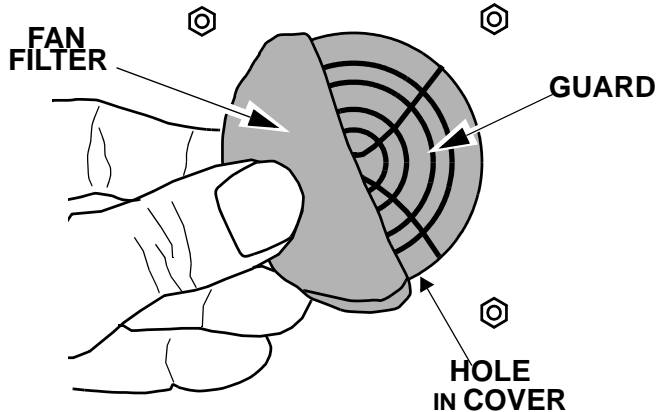
Figure 4-2 Removing the Fan Filter

Step 4. Wash the filter in mild, soapy water. Rinse in clean water and dry.

Step 5. Place the filter back in position between the fan and the opening in the pan.

Cleaning the Transport Fan Filters

Two filtered fans provide positive air pressure to the media transport unit. The filters for the fans are located underneath the transport, as shown below.
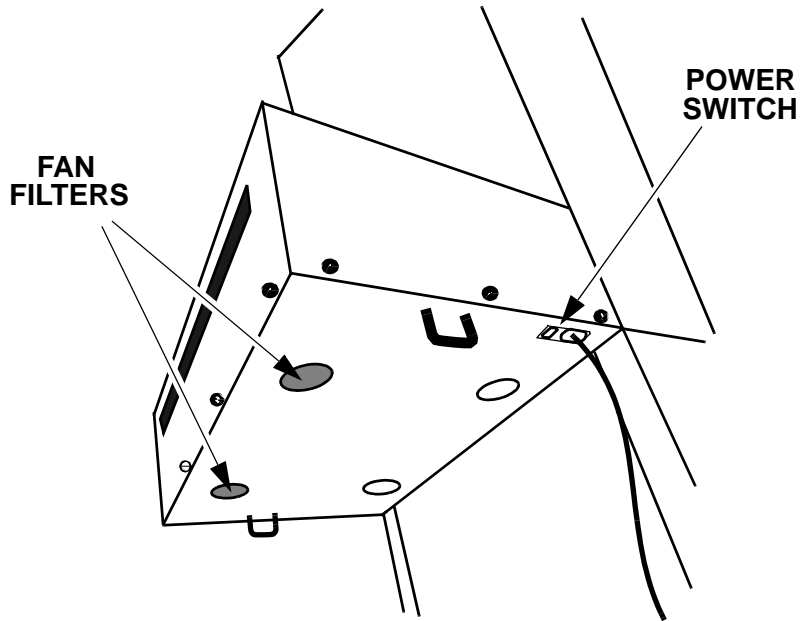
Figure 4-3 Transport Fan Filters

To remove and replace either filter:

1. Turn the power switch off.

2. Locate the fan filter. It is positioned over a hole in the pan, where it is snugly fitted between the fan guard and the pan.

3. Gently pinch the filter to get hold of it, and then carefully pull it out from between the fan guard and the pan. (See Figure 8-4-2 on page 43)

4. Wash the filter in mild, soapy water. Rinse in clean water and dry.

5. Place the filter back in position between the fan and the opening in the pan.

6. Repeat the same procedure for the other filter, which is located on the opposite side of the platesetter.

Cleaning the Media Drive Rollers

Cleaning the rollers will cut down on the contaminants running through the media system. Dirty rollers can cause contamination of the media.

Front Media Roller Cleaning Procedure

Step 1. Open the pinch roller bar to open the rollers.

Step 2. Use the User Maintenance Menu to run the media rollers.

Step 3. Sparingly apply "Fantastik" (ECRM HB2456) to a clean, lint-free wipe.

Step 4. As the rollers turn, gently wipe both the front and back rollers with the cloth, being careful to not 'catch' the cloth in the rollers. Do not touch the rollers with bare hands. The oils and dirt will contaminate the rollers.

Step 5. After wiping with "Fantastik," sparingly apply isopropyl alcohol to a clean, lint-free wipe.

Step 6. As the rollers turn, gently wipe both the front and back rollers with the cloth, being careful to not 'catch' the cloth in the rollers. Do not touch the rollers with bare hands. The oils and dirt will contaminate the rollers.

Rear Media Roller Cleaning Procedure

The rear media roller is not accessible to an operator. The next time you have the system serviced, ask your service provider to clean the rear roller.

Cleaning the Media Transport Output Sensor

The output sensor may become dirty and require cleaning.

Step 1. Using a cotton tip swab moistened with isopropyl alcohol, gently
rub the output sensor to remove any debris buildup.

**TRANSPORT
BELT**

**OUTPUT
SENSOR**

BACK
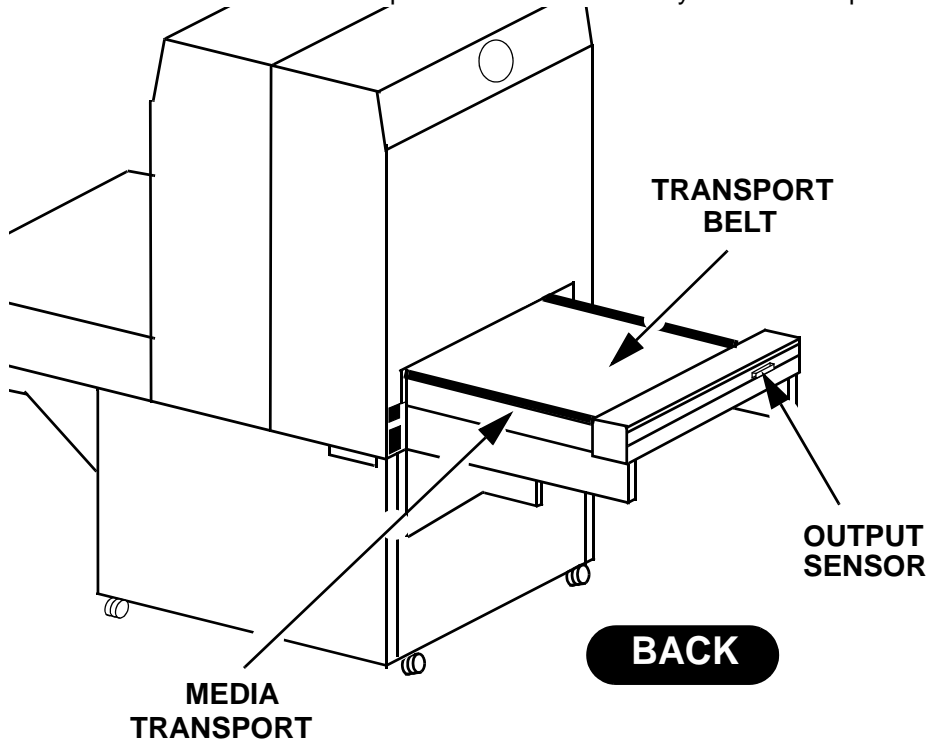
**MEDIA
TRANSPORT**

Figure 4-4 Media Transport

Cleaning the Media Transport Belt

Step 1. Use the User Maintenance Menu to run the transport.

Step 2. Using a lint-free cloth moistened with "Fantastik" (ECRM HB2456),
remove debris from the belt.

Step 3. Using a second lint-free cloth moistened with alcohol, rub down
the belt.

Clearing Misfeeds

Step 1. Use the control panel PREV and NEXT buttons as follows to extract the plate:

- Press the PREV button to effect a movement of the plate toward the front of the machine, and then press the button again to stop the movement.

- Press the NEXT button to effect a movement of the plate toward the back of the machine, and then press the button again to stop the movement.
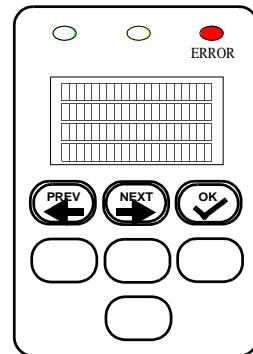
Step 2. Exercise the PREV and NEXT buttons as required until the plate out all the way of the machine.

Step 3. Press the OK button. This turns off the blinking error light and clears the the error message from the display.

Step 4. Resume normal operation.

Leveling the System

When installing or moving the system, *you must level the system at its new location* as explained below. See Figure 4-5 for the location of the leveling feet in the pedestal.

Step 1. Unplug the power cable from the power conditioner. Leaving one end of the cable plugged into the Mako CTP, gently coil the power cable and store it on the shelf in the pedestal.

Step 2. Disconnect the SCSI cable from the PC attached to the Mako CTP. Leaving the SCSI cable connected to the Mako CTP, gently coil the power cable and store it on the shelf in the pedestal.

FRONT
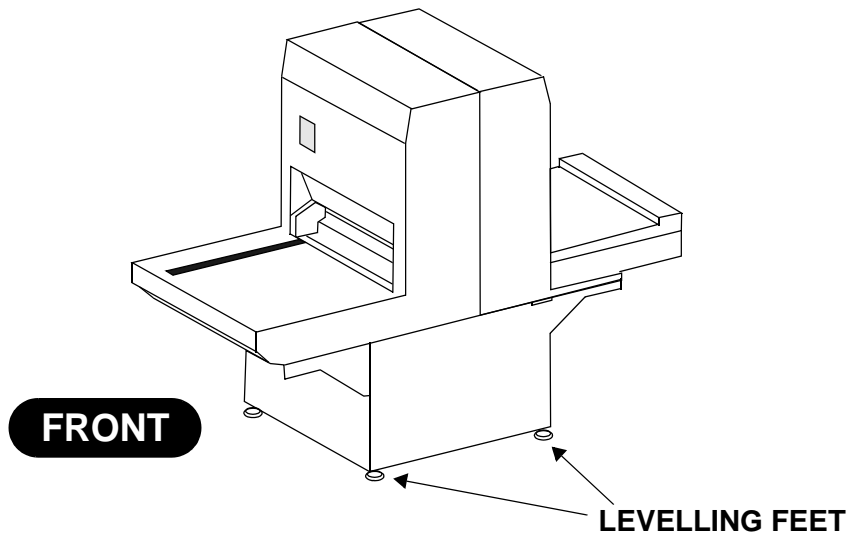
LEVELLING FEET

Figure 4-5 Levelling Feet Location

Step 3. Retract all four levelling feet so the system rides on its wheels and place the system in its new location.

Step 4. Turn all four levelling feet of the platesetter down until they just touch the floor.

Step 5. Continue to turn leveling feet until the system is level, front to back and side to side.