User Guide

English

Dolev 4press

version **2.0**

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Patents

This product is covered by one or more of the following U.S. patents:

RE37376	5247174	5420702	5625766	5854883	6031932	6181362
4456924	5247352	5420722	5636330	5861904	6043865	6181439
4500919	5249067	5459505	5649220	5861992	6060208	6186068
4558302	5283140	5473733	5650076	5864651	6063528	6189452
4743091	5291273	5481379	5652804	5875288	6063546	6191882
4992864	5296935	5488906	5680129	5894342	6072518	6204874
5049901	5313278	5497252	5691823	5900981	6090529	6208369
5079721	5323248	5508828	5691828	5934196	6096461	6214276
5081617	5325217	5509561	5696393	5942137	6098544	6217965
5103407	5331439	5517359	5699174	5946426	6107011	6252522
5111308	5333064	5519852	5699740	5947028	6112663	6260482
5113249	5339176	5526143	5708736	5958647	6115056	6266080
5122871	5343059	5532728	5713287	5966504	6121996	6266134
5124547	5355446	5561691	5739819	5969872	6130702	6267054
5132723	5359451	5568595	5742743	5973801	6134393	6268948
5150225	5359458	5576754	5764374	5986819	6136509	6283589
5153769	5367360	5579115	5764381	5995475	6137580	6295076
5155782	5367388	5592309	5771794	5996499	6147789	
5157516	5384648	5594556	5785309	5998067	6158345	
5177724	5384899	5600448	5802034	6003442	6159659	
5208818	5412491	5608822	5813346	6014471	6164637	
5208888	5412737	5615282	5818498	6016752	6180325	

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1 INTRODUCTION TO THE IMAGESETTER

2 HANDLING CASSETTES & MEDIA

3 ALIGNING TO PUNCH

ABOUT THIS USER GUIDE

The Dolev 4press Imagesetter is operated from a Host workstation. This guide describes the Imagesetter and some procedures performed via the workstation.

The guide includes the following chapters:

Chapter 1, Introduction to the Imagesetter, introduces the Imagesetter, explains how to start it up, shut it down, and use the Control Panel.

The last section of this chapter lists the specifications of the Imagesetter.

Chapter 2, Handling Cassettes & Media, discusses topics related to loading and unloading of film.

The first section explains how to remove the Loading Cassette, load film into it, place it back in the Imagesetter, and trim the film.

The following section explains how to place the Unloading/Accumulating Cassette in the Imagesetter, and update the *Media Info* table.

The next section describes the exposure process, and the actions that may be taken during it.

The last part of the chapter explains how to remove the Unloading/Accumulating Cassette, and process the film.

Chapter 3, Aligning to Punch, explains how to align images to any point on the imageable area on film (that is, not just according to the punch holes).

Chapter 4, Calibration and Service Utilities, explains how to guarantee high quality exposures using a unique laser intensity for each plotting resolution.

In addition, the functions available in *Service Utilities* mode are listed.

Chapter 5, Media-related Troubleshooting, explains how to solve problems related to the exposure media, and especially how to clear film that is stuck in the Imagesetter.

Related Documents

❑ Dolev 4press Installation Manual, Document No. 747-2G647.

Documentation Conventions

References	References to other sections of this document or to other documents are printed in italics. For example: Refer to *Chapter 3, Aligning To Punch*
User Interface Elements	Forms, windows, lists, and other named user interface elements are printed in italics. For example: The *Media Info* window.
Software Functions	Named functions which you activate directly via software are printed in bold. For example: Select **Release Motors**.
System Messages	Messages generated by the software or operating system are printed in sans serif type. For example: End of Film.
❒ Followed by text...	A square-shaped bullet precedes a note for your attention.
♦ Followed by text...	A diamond-shaped bullet precedes an action you perform.
• Followed by item...	A dot-shaped bullet precedes a listed item.

❒ Throughout the book, the term **film** represents all types of exposure media.

SAFETY PRECAUTIONS

Read this chapter carefully before installing, operating, or maintaining the Dolev 4press Imagesetter.

Installation Safety Precautions

⚠ Installation must be done by authorized service personnel only.

CAUTION !   To avoid the risk of fire, no connections to the supply are to be made before setting the line voltage selector !

Setting the Line Voltage Selector

At the factory, the Imagesetter is set to a line voltage of 220 volts. If this setting does *not* match your local voltage, you need to change the position of the voltage selector.

❒ For all voltage settings, leave the two (2) fuses supplied by the factory (T 6.3A 250V).

The present voltage selector setting appears in a small window on the *Electronic Power Drawer* assembly located on the rear side of the Imagesetter (adjacent to the *Master circuit breaker*).

♦ Measure the line voltage at the wall outlet.

❒ The measured line voltage should suit the nominal line voltage at your country.

Measured Voltage	Voltage Selector Setting
90 V to 109 V	100 V
110 V to 127 V	120 V
180 V to 229 V	220 V ***
230 V to 254 V	240 V

*** factory setting

To change the voltage setting:

♦ Ensure that the power cord is **not** connected to the Imagesetter.

♦ Locate the *Electronic Power Drawer* assembly at the *rear left side* of the Imagesetter.

♦ Remove the fuse holder from the Unit to provide access to the voltage selector. Place a small pen knife or flat head screwdriver under the tab at the bottom of the fuse holder, and lift the tab slightly to release the holder.

Master Power Breaker
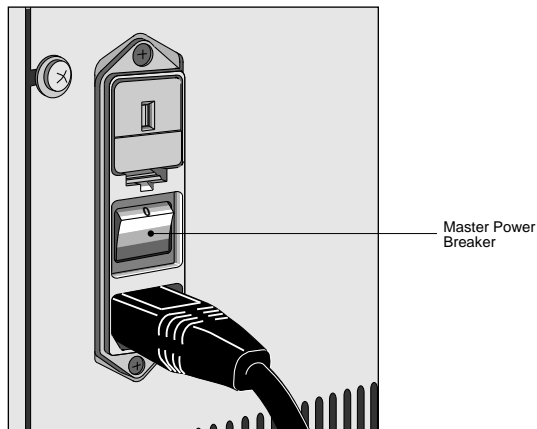
♦ Once it is released, pull the holder completely out of the Unit.
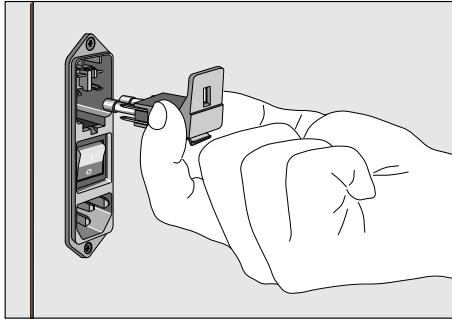
♦ Remove the voltage selector from the Unit. Grasp the selector and pull it straight out. Note that voltage settings are printed on each of its four (4) posts. The appropriate voltage setting for the Imagesetter should face *outward* for viewing through the fuse holder window.

Selected Voltage Faces Outward
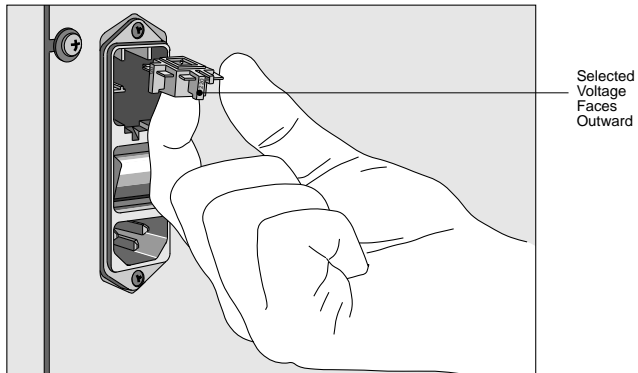
♦ Rotate the voltage selector until the required voltage setting faces outward for viewing through the fuse holder window (refer to the table above for the correct setting).

♦ Reinsert the voltage selector into the Electronic Power Drawer Assembly. Push the selector slightly to ensure that it is completely inserted.

♦ Replace the fuse holder in the Unit. When properly seated, the holder will snap into place with only slight finger pressure.

♦ Verify that the appropriate voltage setting appears in the window.

Selecting the Power Supply Cord

The Dolev 4press is supplied **without** a power supply cord.

Select one of the following:

- **In the United States and Canada**

  Use a UL-listed/CSA-certified cord set that includes a flexible cord of type SJ, SJE, SJO, SJOO, SJT, SJTO, SJTOO, S, SE, SO, SOO, ST, STO, or STOO, with minimum 16 AWG, three (3) conductors. The cord set must include a parallel blade grounding type attachment plug (min. 12 Amp), and an IEC 320 type appliance coupler.

- **In Europe**

  Use only a three (3) conductors HAR-type cord. The cord set used must be approved for the country in which the equipment is installed. The cross section of the conductor must be at least 1.25 mm^2 and the cord set must include a grounding type attachment plug and an IEC 320 type appliance coupler.

Having completed setting of the voltage sector, proceed as follows:

- ♦ Connect the appropriate power cord to the power inlet plug of the *Electronic Power Drawer* assembly.

- ♦ Plug the opposite end of the cord into the electrical power supply located in the wall.

Selecting an Inline Processor

An opening is located at the back of the Dolev 4press imagesetter. The Inline processor is connected via this opening. The exposed media is conveyed through this opening and through a mating opening in the processor to the inside of the processor.

For the safe use of Dolev 4press with the processor connected to it, the processor used should be designed so you are **not** exposed to hazards.

To achieved this, an inline processor with the following properties should be used:

- The mating opening in the processor should **not** enable you to touch hazardous moving parts inside the plotter, even while operator openings in the processor are open.

- The opening in the processor should **not** enable you to touch hazardous moving parts inside the processor through any of the plotter service doors.

- The processor should be designed so that, while plotter service doors are open, it is not possible to touch (through these doors) any hazardous processor part that penetrates the plotter.

❒ To decide whether a part can or cannot be touched, refer to *Standards for Safety UL1950* or *IEC950* : *Figure 19: Test Finger*.

NOTE: An Inline processor that complies with these safety requirements must be used !

General Safety Precautions

Disconnection from the Mains Supply

The Dolev 4press is equipped with a *Master circuit breaker*, located at the lower rear part of the imagesetter, and an *On/Off* switch, located near the Control Panel at the front part of the imagesetter.

To achieve complete disconnection from the mains supply, the *Master circuit breaker* must be disconnected (switched to **0** position).

CAUTION !   Switching off only the On/Off switch leaves several circuits of the imagesetter energized !

Lithium Battery

The Dolev 4press contains a Lithium battery in the CPU board.

The battery should be replaced by qualified service personnel. The battery must **not** to be replaced by the user.

CAUTION !   Danger of explosion if battery is incorrectly replaced !

♦ Replace only with the same or equivalent type recommended by the manufacturer.

♦ Dispose of the used batteries according to the manufacturer's instructions.

Interlocks

Upon opening the left/right service door:

- Interlock switches are designed to disconnect power from the laser and motors.

- You are forbidden, under any circumstances, to defeat any interlock switch.

  CAUTION !   Beware not to touch the spinner motor or the rotating prism while they are rotating !

  NOTE: It may take up to 30 seconds for the rotating prism to rest after the service door has been opened !

  WARNING !   Even when the Interlocks are not defeated, the media Loading Rollers located inside the Loading drawer may be rotating. Keep your hands off the running loading rollers !

Upon opening the Unloading drawer:

- An interlock switch is designed to disconnect power from the media Unloading motor.

- You are forbidden, under any circumstances, to defeat this interlock switch.

- You are forbidden, under any circumstances, to open covers that need a screwdriver or any other tool to do so.

Laser Safety Precautions

The Dolev 4press Imagesetter consists of a laser system that exposes the media (film).

DANGER !	Even brief exposure of the eyes to the laser beam or its reflections may cause permanent loss or permanent degradation of eyesight.
CAUTION !	Use of controls and/or adjustments, or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

The Dolev 4press imagesetter is installed and serviced exclusively by specialized technicians trained in the proper procedures for working with and adjusting the Semiconductor laser beam power and its optical path.

You are allowed to perform only one (1) maintenance procedure, that is, to remove film (supply media) stuck inside the imagesetter drum area.

In case film gets stuck inside the Imagesetter drum area, proceed as follows:

♦ To access the inside of the Imagesetter drum area, open the left or right service door as explained in *Opening Service Doors* in *Chapter 1, Introduction to the Imagesetter.*

Upon opening the left or right service door:

- Interlock switches are designed to disconnect power from the laser and motors.

- You are forbidden, under any circumstances, to defeat any of the interlock switches.

  ❒ Beware not to touch the spinner motor or the rotating prism while they are rotating !

  ❒ It may take up to 30 seconds for the rotating prism to rest after the service door has been opened !

  ❒ Even when the Interlocks are not defeated, the media Loading Rollers located inside the Loading drawer may be rotating. Keep your hands off the running loading rollers !

- You are forbidden, under any circumstances, to open covers that need a screwdriver or any other tool to do so.

♦ Remove the stuck media as explained in *Chapter 5, Media-related Troubleshooting.*

While the Imagesetter is switched on and the interlocks are defeated:

• There is power present in the electrical, optical and mechanical assemblies.

  DANGER !   Electrical, mechanical and laser hazards exist !

• Up to **5** mw of laser power at a wavelength of approx. 650 nm may be present in the *Output optical* connector of the *Static optics* assembly, *Dynamic optics* assembly, *optical* fibers and connectors, and on the inside of the imagesetter drum.

• Up to **10** milliwatt of laser power at the same wavelength may be present inside the *Static optics* assembly.

  DANGER !   This laser radiation is hazardous to the eye and skin ! Avoid direct exposure to the beam and its reflections !

Laser Precaution Labels

The following pages show the locations of the laser warning signs. Please notify Scitex service personnel if any of them are damaged.

Types of Labels

(1)

DANGER

LASER LIGHT WHEN OPEN AND INTERLOCKS DEFEATED.

AVOID EXPOSURE TO BEAM.

(2)

DANGER
LASER LIGHT
WHEN OPEN AND
INTERLOCK
DEFEATED.

AVOID
EXPOSURE
TO BEAM.

(3)

WARNING

DO NOT
REMOVE THIS
CONNECTOR
WHILE POWER
IS ON ! ➡

Serial No.
----

(4)

CLASS 1
LASER PRODUCT

APPAREIL LASER
CLASSE 1

LASER APPARAT
KLASSE 1
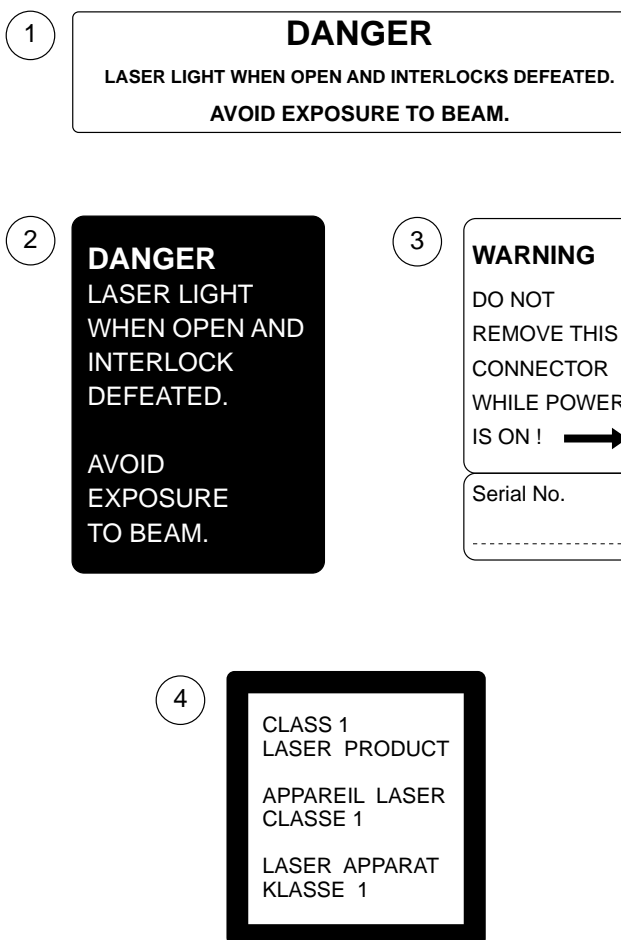
Laser precaution labels

Location of Labels
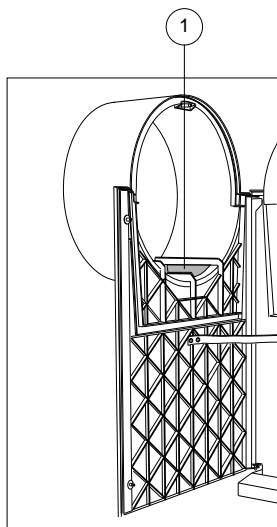
Left door open

Right door open
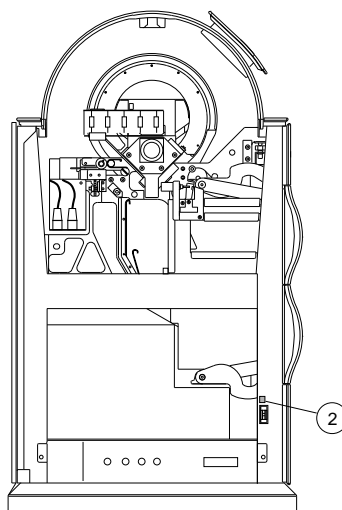
Left side view
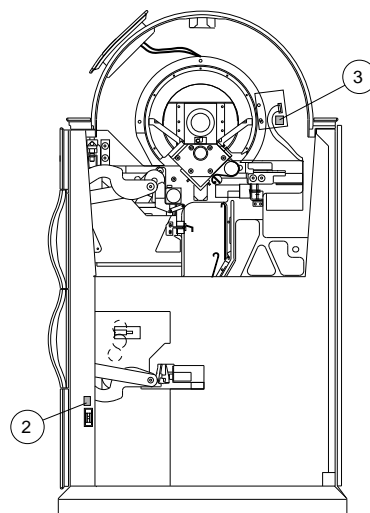
Right side view
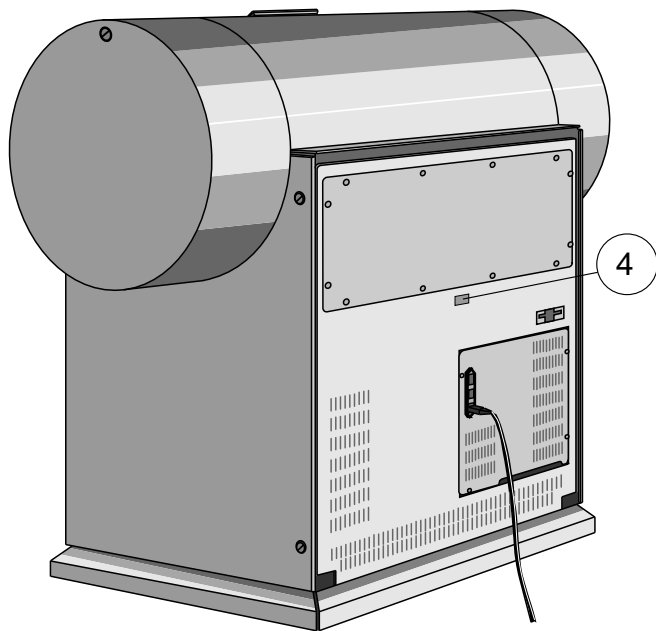
Rear side view
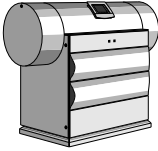
This chapter introduces the Imagesetter, and explains how to start it up, shut it down, and use the Control Panel. The last section of this chapter lists the specifications of the Imagesetter.

The Dolev 4press Imagesetter is a high-speed internal drum output device. The Imagesetter uses laser optics to output images onto film, paper, or polyester plates. The Imagesetter does **not** require computer experience to operate. During normal use, once exposing starts, there is no need for intervention since all functions are performed automatically.

The Imagesetter handles high-volume film output of color and black-and-white pages of text and graphics, and processes this data to produce high-quality film output.

The media that is loaded into the Loading Cassette can be exposed in single or multiple runs in a continuous manner.

A punch option allows the definition of customized registration marks. This functionality is especially important when preparing films for impositioning.

The exposed film is cut at the user's request, and is unloaded into a removable Accumulating Cassette. At the completion of a work session, the cassette is taken to a film processor for development. Alternatively, a conveyor and inline processor can be used for continuous film development.

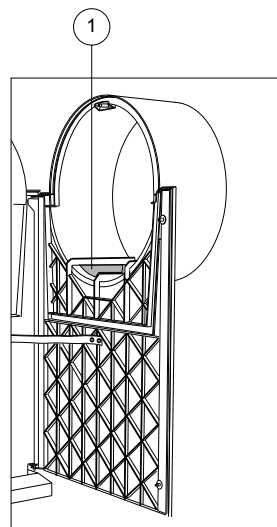The Imagesetter changes the way images for plate-imposition are prepared. Instead of using time consuming step-and-repeat machines, the Imagesetter prepares plate-ready separation films. After the files that are transferred from the workstation to the Imagesetter are exposed on the film, the film is transferred to the plate department.

Imagesetter Front View

On/Off Switch
Reset Button

Control
Panel

Film Loading
Drawer

Film Unloading
Drawer

Left Service
Door

Door Securing
Bolts (3)
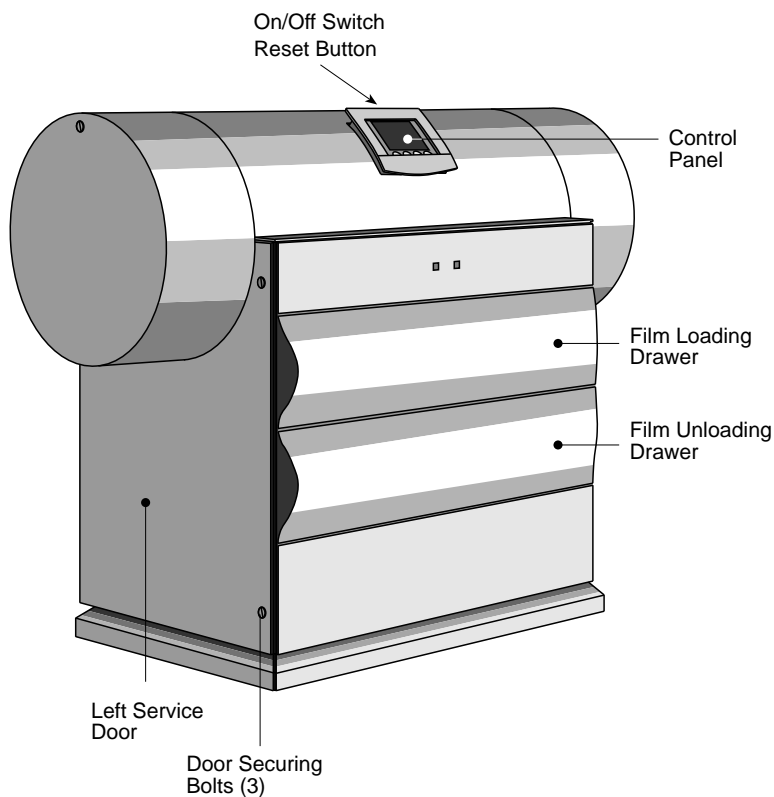
Imagesetter front view

Left Service Door

This door allows access to the carriage area and to the Film
Path selector (for details, refer to *Chapter 2, Handling Cassettes &
Media, Setting the Film Path Selector*). Service engineers access
the electronics and optomechanics via the service doors.

Door Securing Bolts (3)

Release these bolts to open the left service door in order to clear stuck media (for details, refer to *Opening Service Doors* below, and to *Chapter 5, Media-related Troubleshooting*).

Film Loading Drawer

The Loading Cassette lies in this drawer (for details, refer to *Chapter 2, Handling Cassettes & Media, Loading Film*).

Film Unloading Drawer

The Unloading/Accumulating Cassette lies in this drawer. Exposure media can be output either to the cassette or to an inline processor (refer to *Chapter 2, Handling Cassettes & Media, Setting the Film Path Selector* and *Unloading Film*).

Control Panel

The LCD screen of the Control Panel displays messages, icons, and Imagesetter views that inform you of the current status of the Imagesetter and of the cassettes. In addition, the soft **buttons** enable you to perform both the basic and the advanced operations related to the machine and to the exposure media (refer to the *Control Panel* section further on).

On/Off Switch

Use this switch to turn the Imagesetter *on* or *off* (refer to the *Startup* and *Shutdown* sections further on).

Reset Button

In case of a **fatal** software error, press this button to resume work (refer to the *Reset* and *Control Panel* sections further on).

Imagesetter Rear View

Floppy Disk Drive

Master Power Breaker

Power Cord

Door Securing Bolts (3)
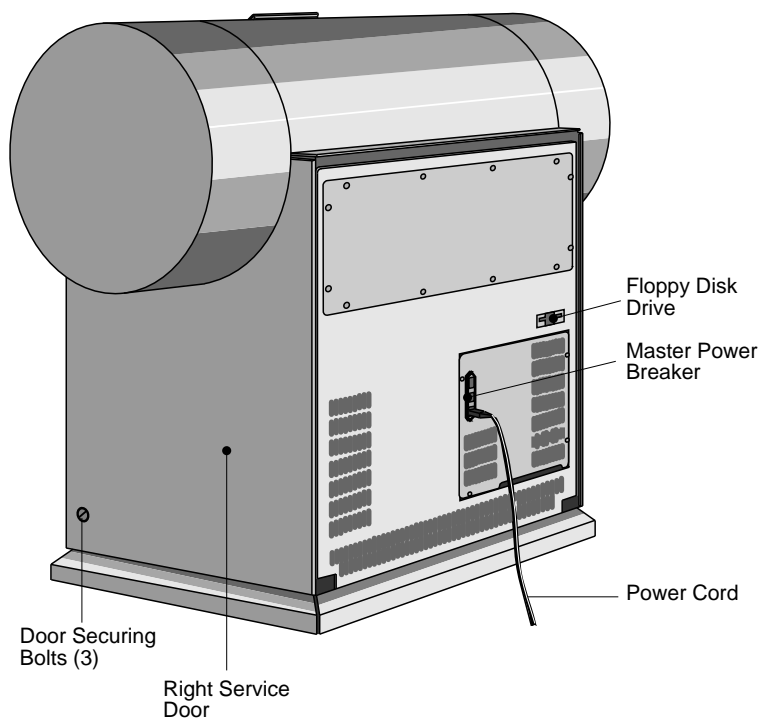
Right Service Door

Imagesetter rear view

Right Service Door

This door allows access to the carriage area. Service engineers access the electronics and optomechanics via the service doors.

Door Securing Bolts (3)

Release these bolts to open the left service door in order to clear stuck media (for details, refer to *Opening Service Doors* below, and to *Chapter 5, Media-related Troubleshooting*).

Power Cord

The power cord should be plugged into the wall outlet (or electrical strip) on one end, and to the Imagesetter on the other (for details, refer to the *Startup* and *Shutdown* sections below).

Master Power Breaker

During normal operation, do **not** shut down the power from this breaker (for details, refer to the *Startup* and *Shutdown* sections below).

Floppy Disk Drive

In case you need to update the Imagesetter software, insert a 3½" floppy disk into the drive.

Opening Service Doors

Please refer to the *Safety Precautions* chapter for details on laser and other safety precautions before proceeding.

You may open the left/right service doors for the following:

- To access the Film Path selector (for details, refer to *Chapter 2, Handling Cassettes & Media, Setting the Film Path Selector*).

- To clear stuck media (for details, refer to *Chapter 5, Media-related Troubleshooting*).

To open the door, proceed as follows:

❒ The procedure for opening the Imagesetter service doors is identical for both left and right doors.

♦ **Release** the three (3) securing bolts.

   ❒ There is **no** need to **remove** the bolts since the door springs open when they are loosened.

Left Service
Door

Door Securing
Bolts (3)
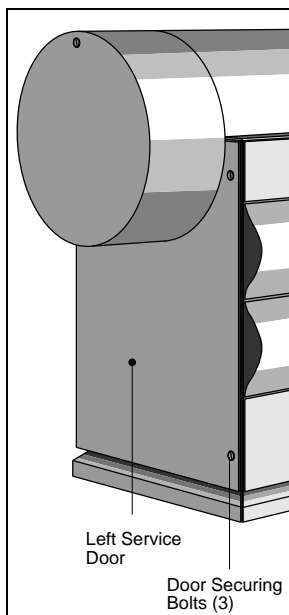
Left service door closed

♦ Open the service door.
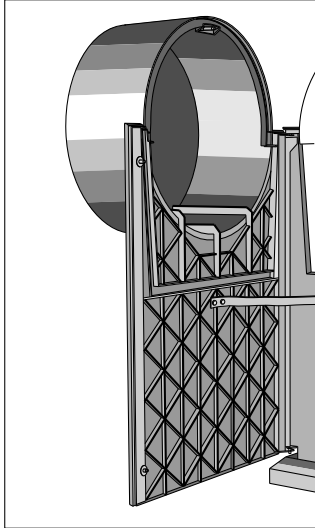
Left Service door open

CAUTION !　　　Be sure not to defeat the safety interlocks of the side doors.

　　　　　　　　　Beware not to touch the spinner motor or the rotating prism while they are rotating !

NOTE:　　　　　It may take up to 30 seconds for the rotating prism to rest after the side door has been opened !

WARNING !　　Even when the Interlocks are not defeated, the media Loading Rollers located inside the Loading drawer may be rotating. Keep your hands off the running loading rollers !

❐ When you are closing the door, secure the three (3) bolts in the following order: bottom, middle, top.

Startup

♦ To **power** *on* the Imagesetter, press on the *upper* part of the Master Power Breaker (located on the *rear* side of the Imagesetter).

❒ This is required only the first time you power on the Imagesetter.
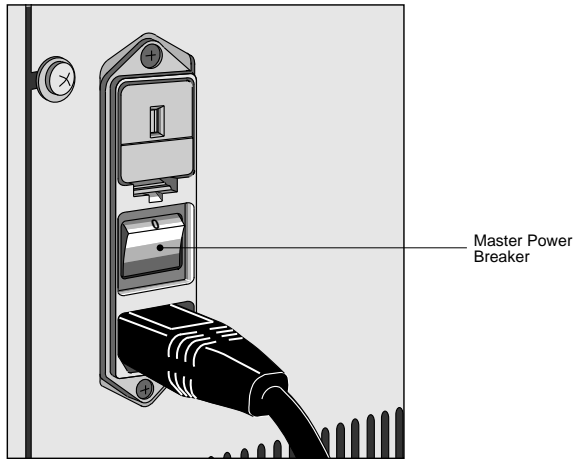
Master Power Breaker (Off position)

♦ To **turn** *on* the Imagesetter, face the Imagesetter and press on the *right* part of the *On/Off* switch (located on the top edge of the Control Panel).

On/Off switch on top edge of Control Panel

The system beeps, and the Control Panel indicates the currently performed *startup* stage (StartUp 1 . . . StartUp 7). **Note**: Stages #8-#12 are **not** specifically indicated.

❒ This information is helpful in case the Imagesetter hangs during startup, as it indicates the stage at which the problem occurred.

After the startup procedure is completed, one of the following is indicated on the Control Panel's LCD screen:

- STANDBY indicates that the Imagesetter is **ready** to expose (that is, film is already loaded, and both the Loading and Unloading drawers are closed).

- NOT READY indicates that the Imagesetter is **not** ready to expose (for example, film is **not** loaded; one of the drawers/doors is **open**; Startup **failed**).

❒ For further information, refer to the *Control Panel* section below.

If, after switching on, the beep is not heard, proceed as follows:

◆ Press on the **left** side of the *On/Off* switch to **turn** *off* the Imagesetter.

◆ Press on the **lower** part of the Master Power Breaker to **power** *off* the Imagesetter.

◆ Check that the power cord is plugged into the wall outlet (or electrical strip) on one end, and to the Imagesetter on the other.

◆ Check that a current is reaching the outlet (that is, there has **not** been a short circuit).

◆ Press on the **upper** part of the Master Power Breaker to **power** *on* the Imagesetter.

◆ Press on the **right** part of the *On/Off* switch to **turn** *on* the Imagesetter.

Shutdown

Under normal conditions, leave the Imagesetter operational at all times (that is, you do **not** need to turn *off* the power overnight).

♦ If you intend to leave the Imagesetter idle for 48 hours, press on the *left* side of the *On/Off* switch to **turn** *off* the Imagesetter.

❒ In case a power surge or some other electrical problem has shorted power to the Imagesetter, the Master Power Breaker may shut down the machine. Refer to the *Startup* section *above.*

❒ If you wish to turn off only the **motors** of the Imagesetter, access *Service Utilities* mode on the Control Panel, and select **Release Motors** (refer to *Chapter 4, Calibration and Service Utilities*).

Reset

In case a **fatal** error message appears, you need to reset the Imagesetter (that is, its software and hardware). **Note**: For details on system messages, refer to the *Control Panel* section.

The Reset button is recessed on the **top** edge of the Control Panel.
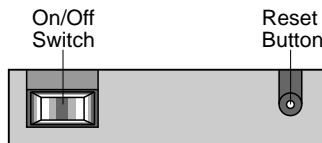
♦ Use a narrow blunt instrument and depress the Reset button.

❒ Resetting the Imagesetter does **not** help in case of "Film crash".

❒ If you wish to reset only the Imagesetter software, select **Start Up** on the Control Panel (refer to the *Control Panel Functionality* section in *Chapter 2, Handling Cassettes & Media*).

Control Panel

The Control Panel is located on the upper part of the Imagesetter (refer to the *Imagesetter Front View* figure above).

The Control Panel is both an informational tool and an action-oriented user interface.
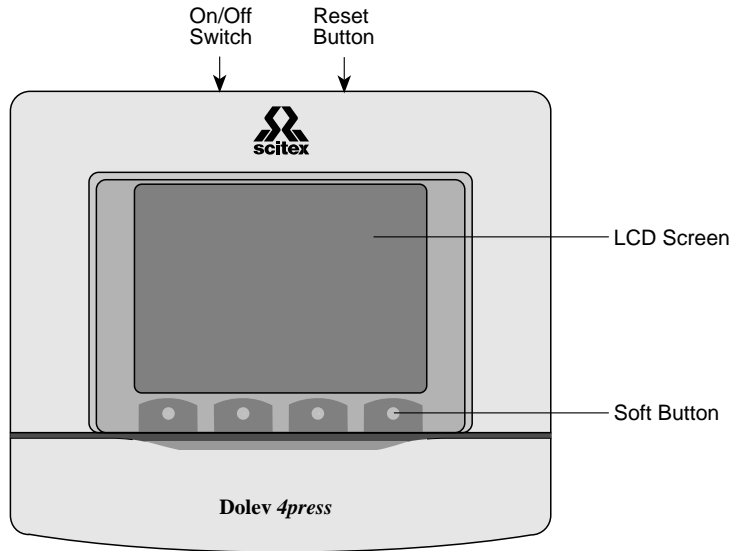
Control Panel

The Control Panel consists of the following:

- LCD Screen (refer to the *LCD Screen* section below).
- Four (4) Soft Buttons (refer to the *Soft Buttons and Soft Functions* section below).

❐ For details on the **On/Off Switch** and **Reset Button**, refer to the *Startup*, *Shutdown*, and *Reset* sections above.

LCD Screen
The LCD screen displays text (for example, messages) and a variety of graphical representations (for example, icons, Imagesetter views) that inform you of the current status of the Imagesetter and of the cassettes.

In addition, it displays menus and windows through which you may perform both basic and advanced operations related to the machine and to the exposure media.

❒ You may control the brightness of the display (for information, contact Scitex service personnel).

The LCD screen is activated during startup (refer to the *Startup* section above).

♦ After startup is completed, press the soft **button** below **Status** to display the following:
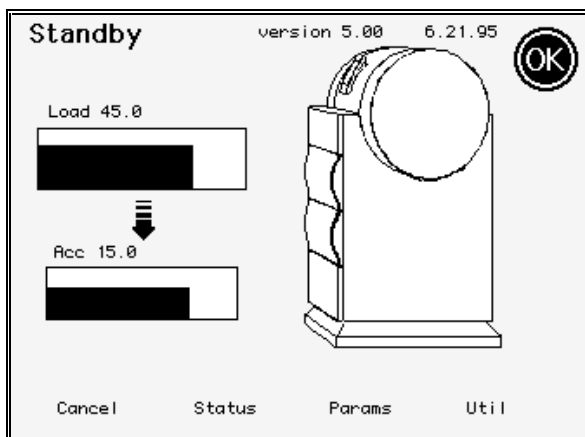
LCD screen following startup

The display on the LCD screen includes the following areas:

• Current Process (or Progress Indicator)

• Imagesetter Micro Version

• Status Icon

• Imagesetter View

• Status of Loading Cassette and Accumulating Cassette or Inline processor

• Soft Functions

Current Process

This area (on the top left corner of the screen) displays the name of the process that is currently running, or the current state of the Imagesetter (that is, **Advance** or **Not Ready**).

```
HostOnLine
```

Sample current process

- StartUp - the startup process includes 12 stages, some of which are indicated by *StartUp #* (# specifying a number), while others are indicated by the name of the task (for example, **Attach**).

- Standby appears when the Imagesetter is ready to expose (that is, film is already loaded, and both the Loading and Unloading drawers are closed).

- Not Ready appears when the Imagesetter is **not** ready to expose (for example, film is **not** loaded; one of the drawers/doors is **open**).

- HostOnLine appears when communication between the Host and the Imagesetter has been established (for example, at the beginning of the expose process or after selecting **Get Params from Plotter**).

Progress Indicator

When the Imagesetter is exposing, a Progress indicator is displayed in the *Current Process* area.

The bar fills from left to right to show the amount of exposing completed.

```
0%              100%
```

Sample Progress indicator

Imagesetter Micro Version

This area (on the top center part of the screen) displays the number and the date of the Imagesetter Micro software version that is currently installed on the Imagesetter's PC.

```
version 5.00    6.21.95
```
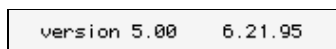
Sample software version number and Date

❏ The date format is month:day:year.

Before starting to work, you need to verify that this software version is compatible with the Scitex software version installed on the host workstation.

Status Icon

This area (on the top right corner of the screen) displays one of the following icons:

OK
This icon appears when the Imagesetter is ready to start working (for example, following startup).

WAIT
This icon appears when the Imagesetter (or its PC) is performing an action (for example, during startup). **Note**: At this stage, you may **not** perform any actions on the Control Panel.

WARNING
This icon appears when NOT READY appears in the *Current Process* area (for further information, refer to *Status* in the *Soft Buttons and Soft Functions* section below).

EXPOSING
This icon appears when the Imagesetter is exposing. **Note**: At this stage, the Progress indicator (that appears in the *Current Process* area) shows the amount of exposing completed.

Imagesetter View

This area (on the right part of the screen) displays one (1) of the following representations of the Imagesetter:

Without inline processor
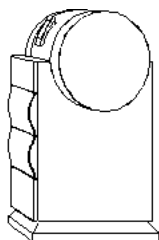
Ready to expose is open
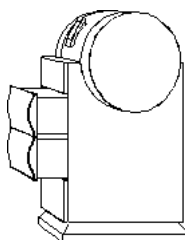
Both drawers are open
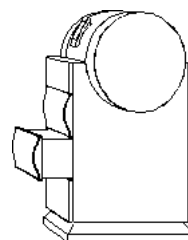
Unloading drawer
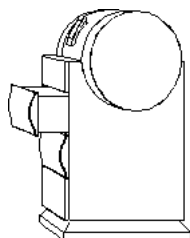
Loading drawer is open
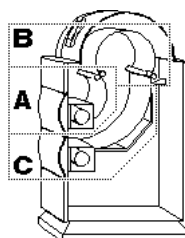
Fatal Error

Location of Fatal Error

A Loading area	[**D** Inline processor]
B Drum area	**E** Other areas (e.g., *PC*)
C Unloading area	

❒ For further information on system error messages (that refer to these locations), see *Status* in the *Soft Buttons and Soft Functions* section below.

With inline processor
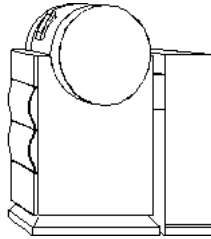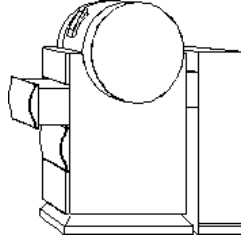
Ready to expose   *Loading drawer is open*
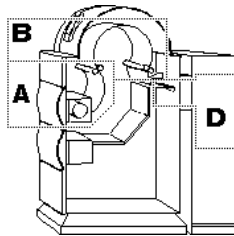
Fatal Error

Location of Fatal Error

A	Loading area	**D**	Inline processor
B	Drum area	**E**	Other areas (e.g., *PC*)
[**C**	Unloading area]		

❒ For further information on system error messages (that specify these locations), see *Status* in the *Soft Buttons and Soft Functions* section below.

Status of Loading and Unloading Cassettes (or Inline Processor)

This area (on the left side of the screen) displays one (1) bar that represents the Loading Cassette, and one (1) bar that represents the Unloading Cassette (or Inline processor, when relevant).

Length of film

The filled part of the bar represents the **length** of the film that is currently detected in the cassette/Inline processor (that is, a completely full bar represents a Loading Cassette with 60 m or an Unloading Cassette with 23 m).

❐ The Inline processor bar is either **completely full** (when it contains 0.1-0.6 m) or **completely empty** (when it contains **no** film).

The actual length of the film (in meters) is indicated above the bar (for example, **Load 45.0**, **Acc 15.0**, or **InLine 0.2**).

Punch option

The **width** of the filled part *within the bar* is determined by the currently set punch option (according to the current location of the **left** flange of the film spool), **and** by the width of the currently loaded film (according to the current location of the **right** flange of the film spool).

❐ For further details, refer to *Chapter 2, Handling Cassettes & Media, Loading Film*.

Status of Loading Cassette

Load 45.0

Acc 15.0

Side punch (narrow film)

Load 45.0

Acc 15.0

Head punch OR:
No Punch (narrow film)

Load 60.0

Acc 0.0

No punch
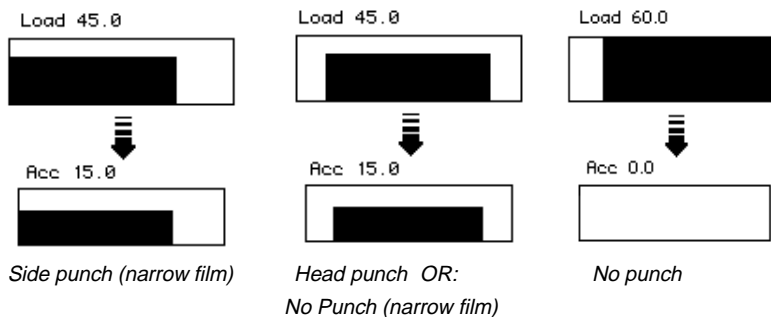
Status of Inline Processor

Load 45.0

InLine 0.0

Side punch (narrow film)

Load 45.0

InLine 0.2

Head punch OR:
No Punch (narrow film)

Load 60.0

InLine 0.0

No punch
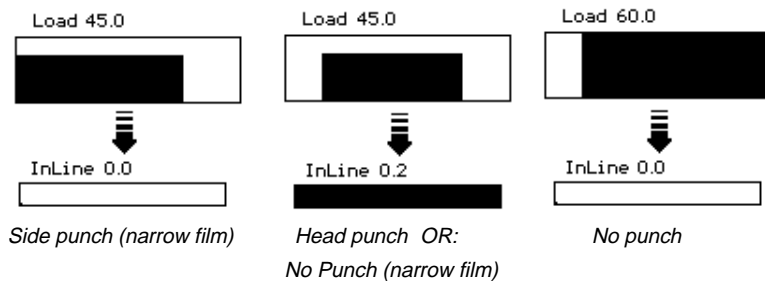
Soft Buttons and Soft Functions

Soft Buttons

Four (4) soft **buttons** are located **below** the LCD screen of the Control Panel.

Press a soft **button** to activate the function that is indicated on the LCD screen directly **above** it.

Soft Button

Dolev _4press_
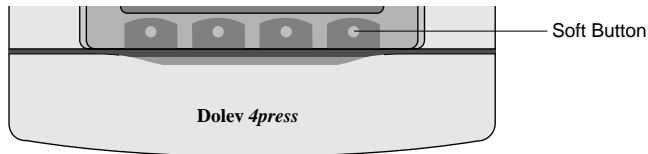
Soft buttons

Soft Functions

Four (4) soft **Functions** are indicated on the bottom part of the LCD **screen**.

Each soft **Function** indicates the action that is activated when you press the corresponding soft **button** (that is directly **below** it).

Cancel	Status	Params	Util

Sample soft Functions

❐ The functionality related to a specific soft **button** (for example, the second on the right) is **variable** (depending on the soft **Function** that is **currently** indicated on the LCD screen).

Activating the functionality

♦ Press the soft **button** that corresponds to the desired soft **Function**. **For example**: To activate **Status**, press the soft **button** that is directly **below** it.

The relevant soft **Function** becomes active (its name appears highlighted on a black background). A menu or a window appears (for example, the *Util* menu or the *Media Info* window), and a new set of soft **Functions** is indicated.

♦ To activate another soft **Function**, press the relevant soft **button**. **Note**: For an explanation of how to return to the previous function, refer to the *Status* section below, and to the *Params* and *Util* sections in *Chapter 2, Handling Cassettes & Media, Control Panel Functionality*.

Main screen
SOFT FUNCTIONS

Cancel
Inactive on this screen.

Status
Press the soft **button** below **Status** to view system messages. Refer to the *Status* section below.

Params
Press the soft **button** below **Params** to view the parameters of the last/current exposure that the Host sent to the Imagesetter. For further details, refer to *Chapter 2, Handling Cassettes & Media, Control Panel Functionality: Params*.

Util
Press the soft **button** below **Util** to perform various functions related to the exposure media, and to get information on the media and the detectors. For further details, refer to *Chapter 2, Handling Cassettes & Media, Control Panel: Util*.

Status   Press the soft **button** below **Status** to view system messages. The screen refreshes to list *basic* messages.

Basic Messages

```
status
A: [F] Film
E: [E] Expose
B: [W] SPINNER
```

Sample basic messages

♦ To view a more detailed format of **all** the listed *basic* messages, press the soft **button** below **Status** once (refer to *Detailed Messages* below).

or

♦ To return to the previous screen, press the soft **button** below **Status** twice.

A *basic* message is composed of the following parts:

```
LOCATION:   [SEVERITY]   Message text
```

Structure of basic message

LOCATION   **A: B: C: D: E:**

The letter followed by the colon (**:**) indicates the location in the Imagesetter that is related to the message (see also the figures in *Imagesetter View: Fatal Error* above).

One of the following locations may be indicated:

A Loading area	**D** Inline processor
B Drum area	**E** Other areas (e.g., *PC*)
C Unloading area	

[SEVERITY]   **[F] [E] [W]**

The letter enclosed by the square brackets indicates the severity of the message.

One of the following severity types may be indicated:

> **F** Fatal error message
>
> **E** Error message
>
> **W** Warning message

- A **fatal error** message indicates that the Imagesetter is unable to continue operation.
- An **error** message indicates that the current process failed. You may continue to the next function.
- A **warning** message provides information related to the current process. **Note**: This type of message does **not necessarily** indicate an erroneous situation.

Message text

The word(s) that follow the [severity] part of the message (for example, **SPINNER**) specify the part of the Imagesetter (or the process) that is related to the message.

Detailed Messages

♦ Press the soft **button** below **Status** again to list *detailed* messages.

Below each *basic* message, a more *detailed* message appears (in smaller print). **Note**: Several **detailed** messages (for example, **[F] Startup failed**) appear when you list **basic** messages (since they do **not** have related *basic* messages).

```
A: [F] Film
[F] Film crash
E: [E] Expose
[E] Media width exceeded
B: [W] SPINNER
[W] Illegal spinner speed
```

Sample detailed messages

A *detailed* message is composed of the following parts:

```
[SEVERITY]        Message text
```

Structure of detailed message

[**SEVERITY**]   [F] [E] [W]

See *[SEVERITY]* above.

Message text

The text of the *detailed* message attempts to explain the nature of the error. If this does **not** suffice, refer to *Chapter 5, Media-related Troubleshooting* or to a Scitex service engineer. **Note**: An exclamation mark "**!**" that follows a message (for example, **Open Door !**) indicates an **action** that **you** should perform.

Imagesetter Specifications

Technology

Structure	Internal Drum
Light Source	Laser Diode 650 nm
Spot Size (variable with Intensity)	17 microns nominal
Raw Imaging Speed @ 2540 dpi	22.4 cm^2/second @ 24000 rpm (208 in^2/minute)
Repeatability (on Film)	± 15 microns

The Imagesetter

Maximum Net Image Area	724 x 559 mm (28.5 x 22.01 in) 724 x 540 mm (28.5 x 21.3 in) with optional head punch 708 x 559 mm (27.9 x 22.01 in) with optional side punch
Page Formats Capability	Up to 4 A4, 2 A3, 4 B4, 2 B3, 1 A2, 1 B2
Press Formats Capability	Heidelberg GTO, MO, SM 72; Man Roland 100; Komori 26, 28
Resolution	60, 80, 100, 120, 140, 160 pt/mm (1524, 2032, 2540, 3048, 3556, 4064 dpi); continuously variable (optional)
Multi-Image Capability	Flat, 1-Up, 2-Up, Auto
Screen Technology	Scitex Class Screening, including conventional dot shapes (round, square, diamond, gravure and composite); FULLtone (stochastic), GeometricDOT and High Definition
Screen Frequency	2–24.6 lines/mm (50–625 lines/inch)
Screen Angles	User-selectable from a variety of preset angles
Communications	Scitex Fiber Link (fiber optic cable)
Inline Processor	Optional
Registration System	Customized head and side punch; tail on special order (optional)
Dimensions	Width: 1400 mm (55 in) Depth: 630 mm (25 in) Height: 1140 mm (45 in)
Weight	230 kg (506 lb)

The Media

Film Type	Medium-to-high contrast red sensitive, orthochromatic litho or line film, paper or polyester plates; emulsion-out type
Film Width	254–737 mm in steps of 25 mm (10–29 in. in steps of 1 in.)
Film Length	Min. 100 mm; max. 20 m with Accumulating Cassette Min. 250 mm; max. 609 mm with inline processor (optional)
Film Thickness	4 or 7 mil
Loading/Unloading	Fully automatic loading, cutting, and unloading in daylight to Accumulating Cassette or inline film processor
Loading Cassette	Roll film; 61 m (200 ft) @ 0.004 mil; 30 m (100 ft) @ 0.007 mil
Unloading Cassette	Accumulating roll; 20 m (60 ft) capacity

Environment

Electrical Requirements	100/110/120 VAC± 10%; 200/220/240 VAC, ± 10% Single Phase, 50/60 Hz ± 2 Hz Power - 700 VA	
Operating Environment	Lighting:	Daylight operation; no direct sun
	Temperature:	22°C ± 2°C
	Relative Humidity:	55% ± 5%
	Audible Noise:	< 55dbA
	Cleanliness:	Standard work area
	Heat Dissipation:	1500 BTU/hour
Area Requirements	6.32 cubic meters	
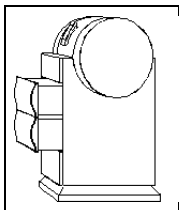
2 HANDLING CASSETTES & MEDIA

This chapter explains how to remove the Loading Cassette, load film into it, place it back in the Imagesetter, and trim the film.

The following section explains how to place the Unloading/Accumulating Cassette in the Imagesetter, and update the *Media Info* table.

The next section describes the exposure process, and the actions that may be taken during it.

The last part of the chapter explains how to remove the Unloading/Accumulating Cassette, and process the film.

Before starting, make sure the following conditions are met:

- The Imagesetter is powered-on (refer to *Chapter 1, Introduction to the Imagesetter, Startup*).

- Both the Film Loading and Film Unloading drawers are open. **Note**: Both drawers open automatically if the Loading Cassette contains **no** film, or if you requested **Change Media** on the Control Panel. If one of the drawers is closed, select **Open Load Drawer** or **Open Unload Drawer** on the Control Panel (see *Control Panel Functionality* further on).

- The NOT READY message appears on the Control Panel (refer to *Chapter 1, Introduction to the Imagesetter*).
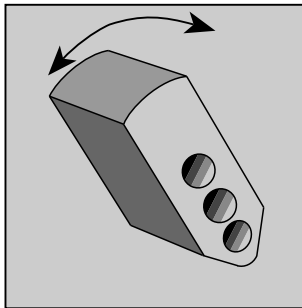
Setting the Film Path Selector

The Film Path selector determines whether the exposed film is output to the Film Unloading **cassette** or to the **inline processor**.

Before starting to expose, proceed as follows:

♦ Open the left service door (refer to *Opening Service Doors* in *Chapter 1, Introduction to the Imagesetter*).

The Film Path selector is located below the cutter.

Film Path selector (set for Unloading/Accumulating Cassette)

♦ To direct the exposed film to the **Unloading/Accumulating Cassette**, turn the selector to the **left** (counter-clockwise).

♦ To direct the exposed film to the **inline processor**, turn the selector to the **right** (clockwise).

❒ Since the selector is arrow-shaped, it points to the selected output device (that is, to the Film Unloading cassette or to the inline processor).
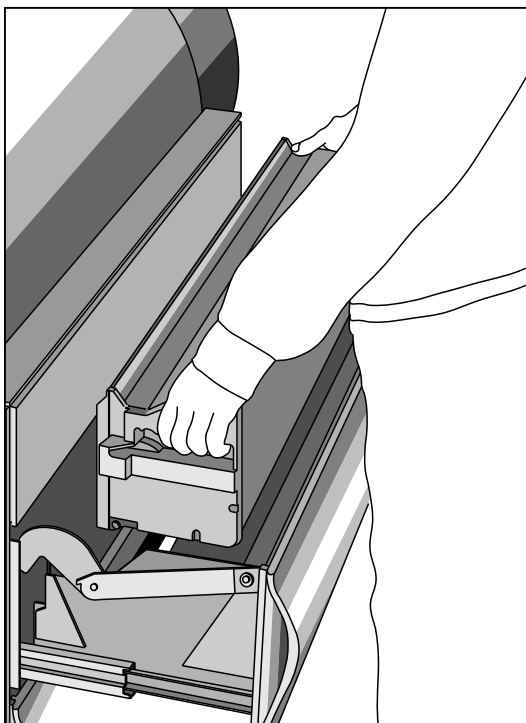
Loading Film

When the Loading Cassette runs out of film, the Control Panel prompts End of Film, and the Loading drawer opens.

The loading film procedure consists of the following stages:

- Removing the Loading Cassette from its Drawer.

- Loading a Roll of Film into the Loading Cassette.

- Placing the Loaded Cassette in its Drawer.

- Trimming the Film.

Removing the Loading Cassette from its Drawer

♦ Pull the Film Loading drawer to open it to its full extent.

♦ Grasp the Loading Cassette by the inset handles on both sides. **Note**: To avoid hurting your knuckles, keep your fingers straight.

♦ Lift the cassette, and remove it from the drawer.

Removing the Loading Cassette from its drawer

Loading a Roll of Film into the Loading Cassette

❒ Be sure to load film under the appropriate lighting conditions (that is, depending on the type of film).

❒ Load **only** *emulsion-out* films.

♦ Clear sufficient space on a dry tabletop in the darkroom.

♦ Place the Loading Cassette on the table with its two (2) spring-loaded tabs facing upward.

  ❒ Position the cassette so that the tabs are closest to you.

Spring-loaded tab
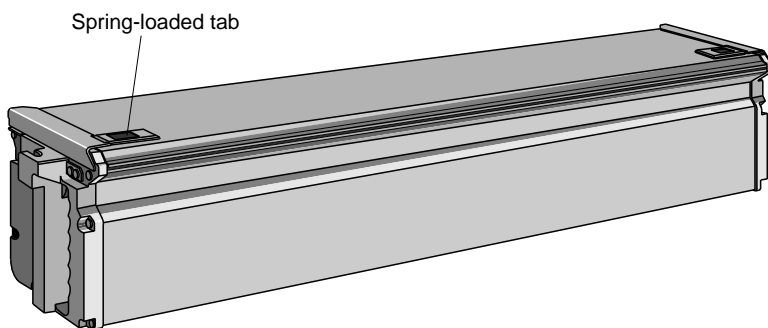
The Loading Cassette

♦ Push the tabs toward the center and lift the cover.

♦ Lift the film spool remove it from the cassette, and place it on the table.

A **different** flange is attached to each side of the film spool, namely, the **left** flange and the **right** flange (see *Handling the Left Flange* and *Handling the Right Flange* below).

Handling the Left Flange

Situate the left flange at one of the following positions:

- Nearer to the **middle** of the spool if side punches are **not** installed (by default, the flange is set to this position).

- Nearer the **end** of the spool if **side punches** are installed.
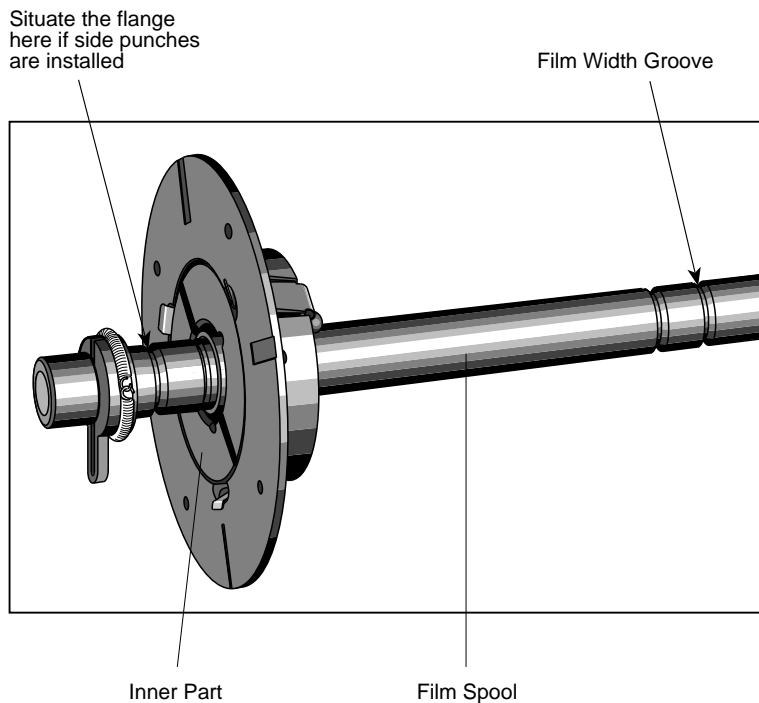
*Left film flange on film spool (situated for **no** side punches)*

♦ To adjust the flange, press on its inner part, and move it to the appropriate position (see the *figure* on the *next page*).

♦ When the flange is at the desired position, release its inner part to lock it into position. Attempt to move the flange slightly to ensure that it is locked in position.

❒ Make sure to update the *Media Position* parameter accordingly (refer to *Updating the Media Info Table* below).

Handling the Right Flange

Situate the right flange according to the width of the film:

♦ Press on the inner part of the **right** flange and move it until it is detached from the spool.

♦ Insert the spool into the film roll so that the roll rests on the inner part of the **left** flange.

♦ Attach the **right** flange to the opposite side of the spool.

♦ Press on the inner part of the **right** flange and move it to the Film Width groove nearest to the edge of the film roll (see the *figure* on the *previous page*).
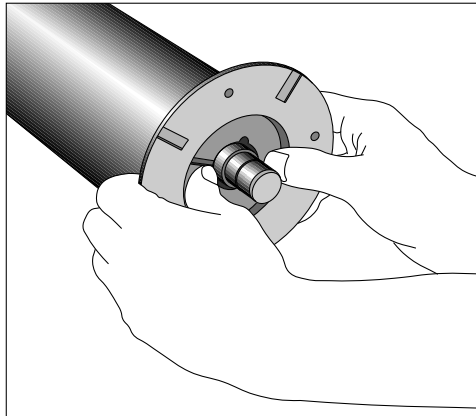
Attaching the right flange

♦ When the flange is at the desired position, release its inner part to lock it into position.

♦ Attempt to move the flange slightly to ensure that it is locked in position.

♦ Insert the loaded film spool into the Loading Cassette, film emulsion facing **upward**.

Emulsion facing upward
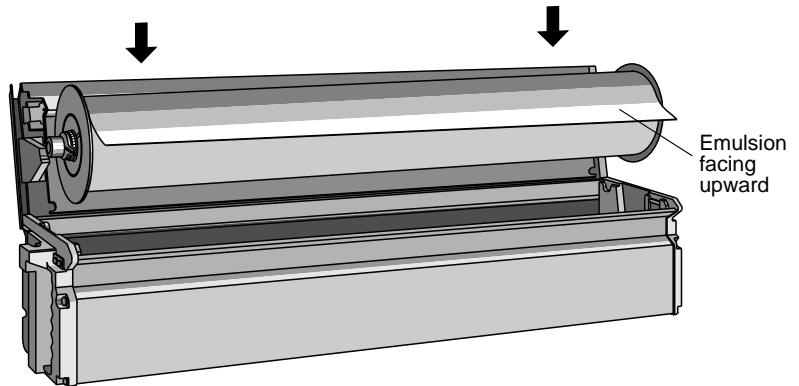
Inserting the film spool into the Loading Cassette

♦ Rest the film spool ends in the V-shaped channels on both sides of the cassette.

♦ Pull at least 50 mm (2 inches) of film so it extends beyond the edge of the cassette.

♦ Close the cover of the cassette until it locks soundly with a click. **Note**: To make sure that the cover is closed, push the tabs toward the sides of the cassette.

♦ Turn the cassette and grasp it by the inset handles on both its sides.

♦ Exit the darkroom.

Placing the Loaded Cassette in its Drawer

♦ Pull the Film Loading drawer to open it to its full extent.

♦ Grasp the Loading Cassette by the inset handles on both sides. **Note**: To avoid hurting your knuckles, keep your fingers straight.

♦ Place the loaded cassette in the Film Loading drawer so that its tabs face the Imagesetter, and the film exits from the **top** of the cassette.
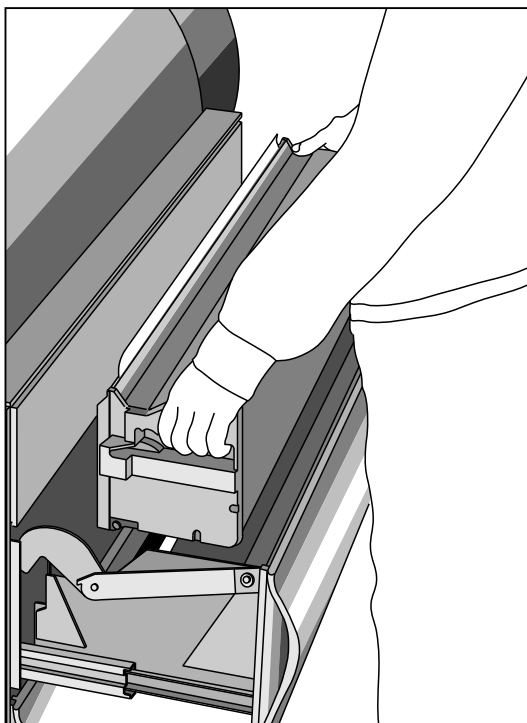

Placing the Loading Cassette in its drawer

♦ Rest the cassette against the *rear* side of the Film Loading drawer (the side furthest from you).

Trimming the Film

The special film trimmer is included in the Accessories kit.

❒ Apart from the trimmer, the kit includes two (2) interlock keys and four (4) fuses.

♦ Grasp the edge of the film with one hand.

♦ Hold the trimmer with two (2) fingers (of your other hand).

Hold this part with two fingers
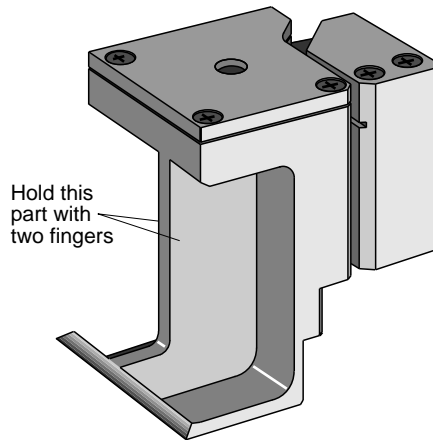
Film trimmer

♦ Place the trimmer on the left side of the film, and slide it to the right along the width of the film. **Note**: To make sure that trimming is straight, hold the trimmer steadily, and push it downward.
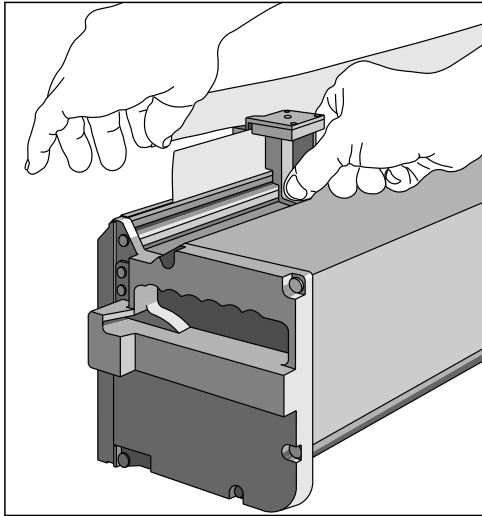
Trimming the film

❏ If the trimmed film is **not** parallel to the edge of the cassette, repeat the trimming procedure.

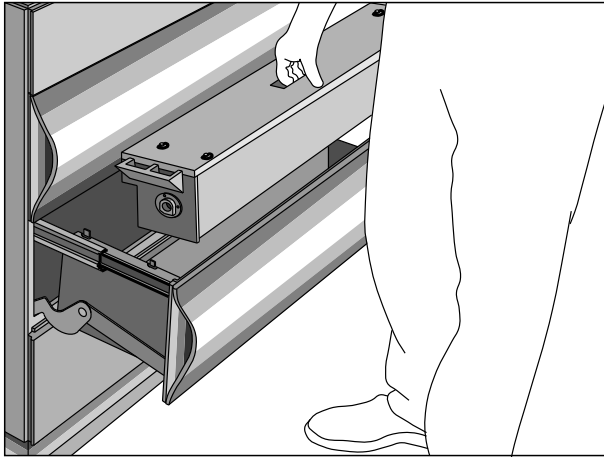♦ Close the Film Loading drawer. Push firmly until it clicks shut.

Before Exposing

❐ If the Unloading/Accumulating Cassette is already in its drawer, check whether it contains film. If it **does**, skip to the *Unloading Film* section; if **not**, close the Film Unloading drawer and push it firmly until it clicks shut; then skip to the *Updating the Media Info Table* section.

This section includes the following topics:

- Placing the Unloading/Accumulating Cassette in its Drawer.

- Updating the Media Info Table.

- Reading Settings from the Imagesetter.

Placing the Unloading/Accumulating Cassette in its Drawer

♦ Hold the Unloading/Accumulating Cassette by the inset handle at its top center.

♦ Place the cassette in the Film Unloading drawer.

Placing the Unloading/Accumulating Cassette in its drawer

♦ Rest the cassette against the *front* side of the drawer (that is, the side **closest** to you).
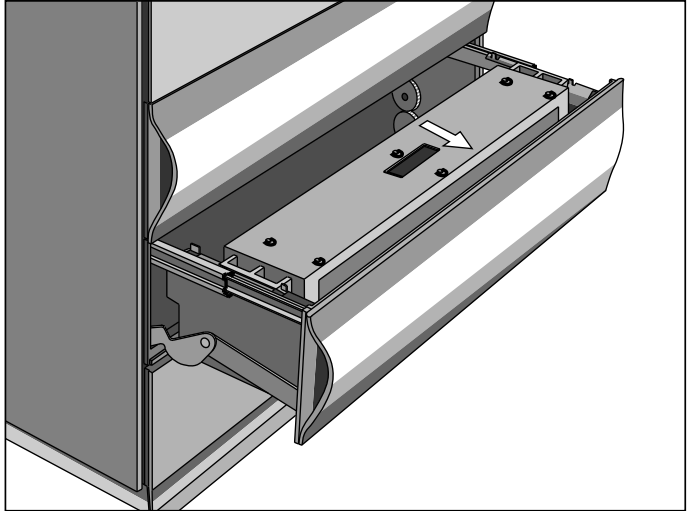
Unloading/Accumulating Cassette resting against the front side of the drawer

♦ Close the Film Unloading drawer. Push firmly until it clicks shut.

Updating the Media Info Table

After you close the Film Loading drawer (and the Film Unloading drawer is already closed), the *Media Info* window is displayed on the Control Panel's LCD screen.

❒ Alternatively, select **Util: Media Info** on the Control Panel (refer to *Control Panel Functionality* below).

```
Material^              >Film      [Film]
Media Thickness^        4         [4mil]
Media Width^            254       [254]
Media Position^         Punch     [Punch]
Res/Int Table #^        D         [D]
Vendor^                 None      [None]
Cur. Length (m)^        61        [61]
```

Media Info window

The *Media Info* window shows the parameters of the *Media Info* table of the currently loaded film (the square brackets enclose the default value of the field).

The system uses this data to inform you of the status of the cassettes during exposure. Therefore, **each** time you load film, you need to check the values in the table, and modify them to suit the film you loaded.

♦ To update a parameter, press the soft **button** below **Toggle**. This switches between available options.

♦ When you wish to confirm the values and exit, press the soft **button** below **Done**.

A *First Feed* is performed and the new film is loaded into the Imagesetter drum. When the Imagesetter completes the first load, a STANDBY message is displayed on the Control Panel.

❒ For further information on the soft buttons, refer to *Control Panel Functionality, Util* below.

Material   [toggle field; default is *Film*]

Toggle this field to **Film** (the *default*), **Plate**, or **Paper**, according to the media you loaded.

Media Thickness   [toggle field; default is *4 (mil)*]

Toggle this field to **4 mil** (the *default*) or **7 mil**, according to the media you loaded.

Media Width   [toggle field; default is *254 (mm)*]

Toggle this field to the width of the media you loaded.

Media Position   [toggle field; default is *Punch*]

Toggle this field to **No**, **Cnt Punch** (center), or (side) **Punch** (the *default*), to match the way **you positioned** the media inside the Loading Cassette (that is, unrelated to the existence or the absence of a punch). For details, see *Handling the Left Flange* above.

❒ The Imagesetter hardware does **not** yet support **Cnt Punch**.

For example: If you have positioned the media in order to accommodate built-in side punches, toggle the field to **Punch**.

❒ The position of the left flange affects the representation of the cassettes on the Control Panel (refer to *Chapter 1, Introduction to the Imagesetter, Status of Cassettes/Inline Processor*).

Res/Int Table #   [toggle field; default is *D*]

Toggle this field to **D** (the *default*) to automatically select a *Res/Int* table to suit the vendor (if such is indicated in the *Vendor* field).

If the loaded film is **not** of the same type as the one previously loaded, toggle this field to the appropriate Res/Intensity table **number** (refer to *Chapter 4, Calibration and Service Utilities*).

Vendor   [toggle field; default is *None*]

Toggle this field to **None** (the *default*) in order to use the table specified in the *Res/Int Table* field.

Toggle this field to the **name** of the vendor of the loaded media to use the *Res/Int* table that is specified in *the Res/Int Table #* field. **Note**: If the Res/Int Table specifies **D**, the system automatically selects a *Res/Int* table to suit the specified vendor.

Cur. Length (m)   [default is *61*]

The default (61 m) specifies that the loaded film is a full roll. If you did **not** load a full roll of film, toggle this field to its current length (in meters). **Note**: If the required value falls between suggested options, select a **higher** value.

❐ This is the **only** field that updates **during** exposure.

Exposing

After you press the **Done** soft **button** on the *Media Info* window, FIRST LOAD and ATTACH are *performed (*refer to *Chapter 4, Calibration and Service Utilities, Service Utilities Mode*).

• STANDBY appears on the Control Panel. **Note**: If it does **not**, refer to *Chapter 1, Introduction to the Imagesetter, Control Panel, Status*.

♦ Now is the time to send the file you wish to expose from the Host to the Imagesetter.

• After communication between the Imagesetter and the Host has been established, the Control Panel prompts:

> HostOnLine

• The Imagesetter starts to expose, and the following icon appears on the Control Panel:

• The Progress indicator on the Control Panel shows how much exposing has been completed.

♦ During exposure, you may view the system messages (refer to *Chapter 1, Introduction to the Imagesetter, Control Panel, Status*), or the exposure parameters (refer to *Control Panel Functionality, Params* below).

• When the exposure has been completed, the carriage returns to the HOME position (the **left** side), the Imagesetter punches the film (if a punch is installed and active), and performs ADVANCE (according to the size of the file). STANDBY appears on the LCD of the Control Panel.

♦ At this stage, you may perform various functions (for example, **Cut and Collect**). For details, refer to *Control Panel Functionality, Util* below.

Control Panel Functionality

❐ For further details on the display of the Control Panel's LCD screen, and on system messages, refer to *Chapter 1, Introduction to the Imagesetter, Control Panel.*

❐ For details on *Service Utilities* mode, refer *to Chapter 4, Calibration and Service Utilities*.

Params

Press the soft **button** below **Params** to view the parameters of the last/current exposure that the Host sent to the Imagesetter.

The *Params* screen appears.

```
Flatleft                   01
Spinner Speed        24000.00
Total Height            50.00
Total Width            100.00
Laser Value            24000
Res Int Table #            1
Resolution              80.0
Height lines        00018959
Width Pixels        00044000
Height Offset           0.00
Width Offset           15.00
Simulation                00
```

Params screen

♦ To return to the previous screen, press the soft **button** below **Params** again.

or

♦ To activate **Status** or **Util**, press the related soft **button**.

❐ All the fields are read-only fields (that is, you **cannot** enter values into them).

❐ All the parameters refer to the last/current exposure.

Flatleft

This field indicates how may files, related to the flat batch, still have to be exposed.

Spinner Speed

This field indicates the speed of the spinner in rpm.

Total Height

This field indicates the height of the exposed file.

Total Width

This field indicates the width of the exposed file.

Laser Value

This field indicates the laser intensity value of the exposure.

Res Int Table

This field indicates the number of the *Res Intensity* table. For further details, refer to *Chapter 4, Calibration and Service Utilities.*

Resolution

This field indicates the resolution of the exposed file.

Height lines

This field indicates the height (in lines) of the exposed file.

Width Pixels

This field indicates the width (in print dots) of the exposed file.

Height Offset

This field indicates the *height* offset (in mm) of the exposed file as measured from the origin of the film.

Width Offset

This field indicates the *width* offset (in mm) of the exposed file as measured from the origin of the film.

Simulation [for service engineers only]

This field indicates **00** for *no* simulation, **01** for *communication* simulation, **02** for *ready* simulation, or **03** for *ELOP SIM* simulation.

Util   Press the soft **button** below **Util** to perform various functions related to the exposure media, and to get information on the media and the detectors. The *Util* menu and the *Util* soft **Functions** appear.

Util menu

```
>  Cut and Collect    !
   Advance  ..
   Media Info ..
   Res. Int. Setting  !
   Other              >
   Service Utilities  !
```

> **>** This sign [on the left] is a cursor. It points to the **active** entry.
>
> **!** This sign indicates that — selecting this entry **directly activates** the related function, and exits to the *Main* screen.
>
> **>** This sign [on the right] indicates that — selecting this entry displays a **menu** of entries.
>
> **..** This sign indicates that — selecting this entry displays a **window** of fields. In windows: **^**   this sign indicates a **toggle** field.
>   **[ ]** these enclose the default value for the field.

Do one of the following:

♦ Press the soft **button** below **Done** to select the entry to which the cursor points.

♦ Press the soft **button** below **Scroll** to move the cursor to the entry below the active entry.

♦ Press the soft **button** below **Cancel** to exit to the previous screen.

❒ Selecting **Service Utilities** activates *Service Utilities* mode. For further details, refer *to Chapter 4, Calibration and Service Utilities*.

Cancel	Toggle	Scroll	Done

Cancel

Press the soft **button** below **Cancel** to return to the previous screen.

Toggle

Press the soft **button** below **Toggle** to switch between the values available for the *toggle* field in which the cursor is located (for example, the *Vendor* field in the *Media Info* window). **Note**: While a menu is displayed, this soft **button** is identical to **Scroll**.

Scroll

Press the soft **button** below **Scroll** to move the cursor to one (1) menu entry (or window field) below the active one. **Note**: Since no button moves the cursor **upward**, the scrolling is **cyclic** (that is, pressing the **Scroll** button when the last entry/field is active moves the cursor to the first entry/field).

Done

Press the soft **button** below **Done** to select the active entry when a **menu** is displayed (and display the related menu/window), **or** to confirm the current values when a **window** is displayed (and exit to the previous window).

Cut and Collect   !

Select this entry to cut the film, and perform a regular film unloading cycle (after which the Film Unloading drawer opens).

Advance . .

Select this entry to move the film forward (for example, to create a gap between the margin of the exposure and the edge of the film).

❒ If you are using an inline processor, select this entry to send the film to be processed.

The *Advance* window appears.

♦ Toggle the *Film Length* field to 100 mm, 200 mm, 300 mm, 400 mm, 500 mm, or 600 mm. **Note**: If you are using an inline processor, toggle this field to 300 mm, 400 mm, or 500 mm.

Media Info . .

Select this entry to update the parameters of the media after loading a new roll of film. For details, refer to *Updating the Media Info Table* above.

Res. Int. Setting !

Select this entry to calibrate the intensity for each plotting resolution. For details, refer *to Chapter 4, Calibration and Service Utilities.*

Other >

Select this entry to replace the media before it reaches its end
and to perform actions that are normally performed
automatically (some of which you need when clearing stuck
media - refer to *Chapter 5, Media-related Troubleshooting*).

```
>  Change Media          !
   Open Load Drawer       !
   Open Unload Drawer     !
   Detectors Status       !
   Start Up               !
```

Change Media !

Select this entry to replace the media before it reaches its end.

In case the Unloading/Accumulating Cassette contains media,
Cut and Collect is performed automatically. The Imagesetter
then pulls the media (that is in the drum) back into the
Loading Cassette (Empty Drum), and opens the Film Loading
and Film Unloading drawers.

♦ Pull the film beyond the edge of the cassette until you feel
  resistance, and trim it (refer to *Trimming the Film* above).

Open Load Drawer !
Select this entry to manually open the Film Loading drawer.
The system prompts:

```
Drawer will be open.  [Done/Cancel]
```

♦ Press the soft **button** below **Done** to open the drawer, or the
  one below **Cancel** to abort the request.

❒ When relevant (for example, during **Expose**), the system prompts:
Process is not available.

Open Unload Drawer   !

Select this entry to manually open the Film Unloading drawer. The system prompts:

```
Drawer will be open.   [Done/Cancel]
```

♦ Press the soft **button** below **Done** to open the drawer, or the one below **Cancel** to abort the request.

❒ When relevant (for example, during **Expose**), the system prompts: Process is not available.

Detectors Status . .

Select this entry to display a window that lists the **names** of the detectors, and indicates which are **active** (Yes) and which are **inactive** (No).

The *Detectors Status* window appears.

Drum Input		Output Cassette	
Input Cas. Mounted	**Yes**	Film in Out.Cas.mouth	**No**
Loading Drw. Closed	**Yes**	Out. Cas. axis Ready	**Yes**
Film at Film In	**Yes**	Output Cas. Mounted	**Yes**
Drum Output		Unloading Drw. Closed	**Yes**
Film at Film Out	**No**	**General**	
Cutter at Right	**No**	Output to Cassette	**Yes**
Cutter at Left	**Yes**	InterLock active	**Yes**
InLine		Punch Installed	**No**
Output to Processor	**No**		
Conveyor is Empty	**No**	Carriage at Home	**Yes**
Processor is Ready	**No**	Carriage at End	**No**

♦ To exit to the previous screen, press the soft **button** that is first on the left.

Select this entry to load the Imagesetter's software, starting from StartUp stage #7 (that is, the hardware boards are **not** reloaded).

❐ Refer also *Chapter 1, Introduction to the Imagesetter, Startup*.

Unloading Film

When the Unloading/Accumulating Cassette collects approx. 21 m of film, the Control Panel prompts: C: [W] Acc. Cas full (# m). **Note**: The # stands for the length of film that may be exposed before the Imagesetter performs CUT.

When the Unloading/Accumulating Cassette is **full** (it accumulated 23 m of film), the film is cut, and the Unloading drawer opens automatically.

❐ To cut the film and open the drawer following the end of a **specific** exposure, select **Cut & Collect** on the Control Panel (see *above*) or via the Host.

❐ Selecting **Change Media** or **Open Unload Drawer** on the Control Panel (see *above*) also opens the Unloading drawer.

Removing the Accumulating Cassette from its Drawer

♦ Pull the Film Unloading drawer to open it to its full extent.

♦ Hold the Unloading/Accumulating Cassette by the inset handle at its top center.

♦ Lift the Unloading/Accumulating Cassette out of its drawer.
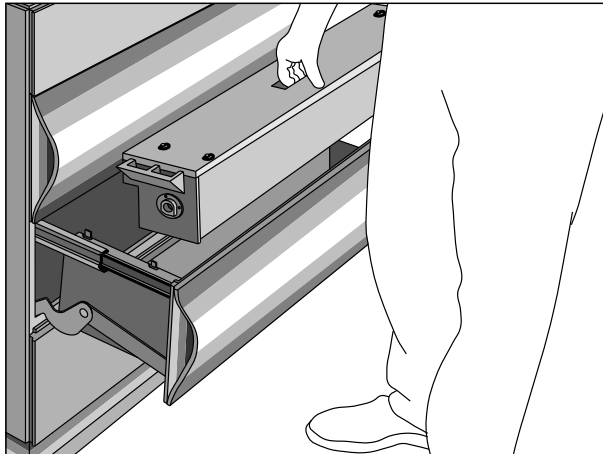
Lifting the Unloading/Accumulating Cassette out of its drawer

Processing the Film

♦ Take the Unloading/Accumulating Cassette to the darkroom film processor.

♦ Check that a flap of film is sticking out of the cassette (if it does **not**, refer to *Chapter 5, Media-related Troubleshooting).*

Film Gate   Flap of film sticking out
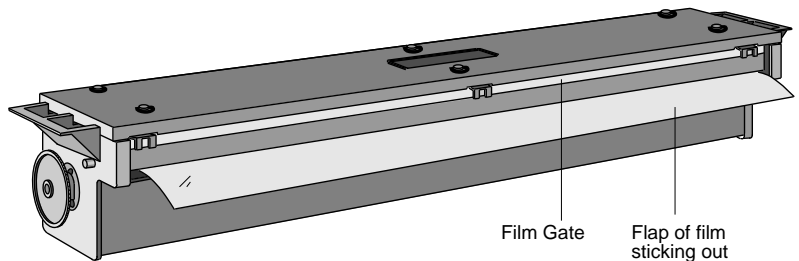
Unloading/Accumulating Cassette (before flipping around) with film sticking out

♦ Flip the cassette around so that the film flap sticks out of the **bottom** of the cassette and **away** from you.

♦ Rest the cassette on the film processor entry bed.

♦ To release the film, press on both sides of the Film Gate until it catches with a click.

♦ Use your fingers to slowly advance the film toward the processor take-up roller, until the processor begins feeding the film automatically.

♦ After feeding the entire length of film, place the cassette in the Imagesetter (as explained above).

3   ALIGNING TO PUNCH
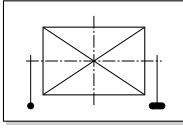
This chapter explains how to align images to any point on the imageable area on film (that is, **not** just according to the punch holes).

This may be required in the following cases:

- To center an exposed image between the punch holes on a film which is intended for plate preparation on *Step and Repeat* machines.
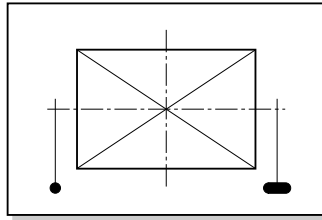
- To achieve precise image-to-punch alignment when using tiled flats for plate making.
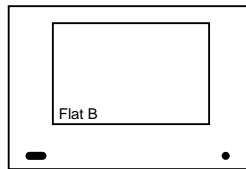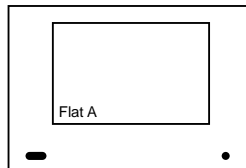
Using the **Align to Punch** option
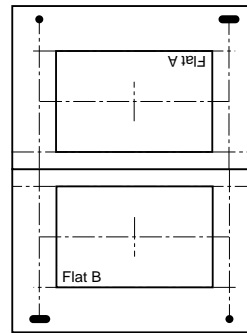
Results in
Proper Alignment on Plate Machine

❐ Since the two (2) tiles above combine to make one (1) plate, it is crucial that they are precisely aligned to the punched holes, and placed at a specific distance (from the top, opposite the punched holes of the film).

Alignment Point on the Imagesetter

During installation, the service engineer defines up to four (4) Punch Systems (according to your requirements). A *Punch System* is a set of parameters.

The following parameters are specified by the punch system:

- The **type** of punch used (up to **9** *side* punches or **1** *head* punch).
- The **number** of holes (**1 to 8** for the *head* punch and/or **1** for the *side* punch).
- The **shapes**, **dimensions**, and **distances** of the punches.

In addition, the service engineer specifies the coordinates of a **pivot** for **each** Punch System. This point is used as the alignment point on the **Imagesetter**.

Each Punch System is assigned a **unique** name.

Alignment Point on the Image

In the exposure dialog, one (1) of the following nine (9) **image** alignment points is specified.
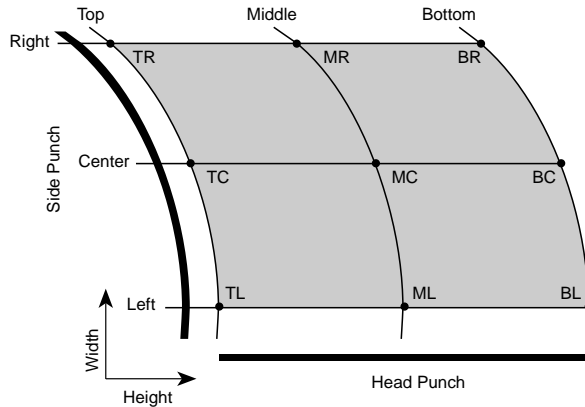
TL - Top Left	ML - Middle Left	BL - Bottom Left
TC - Top Center	MC - Middle Center	BC - Bottom Center
TR - Top Right	MR - Middle Right	BR - Bottom Right

❒ **Middle** refers to the *vertical* dimension height; **Center** refers to the *horizontal* dimension width.

Automatic (optimal) Alignment

The optimal position on the imageable area is automatically calculated by the system according to the location of the pivot punch. This is the default value in the Exposure dialog.

❐ **For Example:**

TL aligned with pivot #1

TC aligned with pivot #2

ML aligned with pivot #3
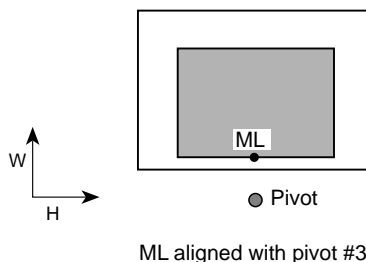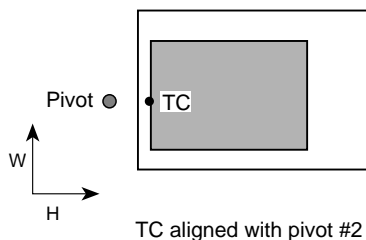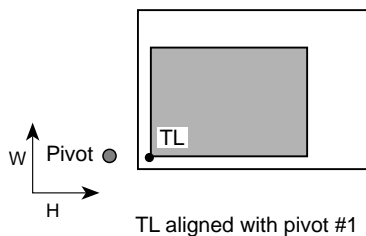
❐ The height and width directions in the figure above represent the dimensions of the Imagesetter (**not** of the Host screen).

Custom Alignment

If you wish to change the *default* alignment point on the image, you may toggle to another value. **Note**: In certain cases, some of the image may be trimmed, and a relevant message appears before exposure.

4.30
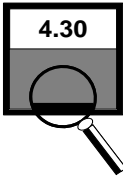
This chapter explains how to set a laser intensity value for each plotting resolution via the Control Panel. In addition, the functions available in *Service Utilities* mode are listed.

Resolution Intensity Calibration

To guarantee high-quality exposures, a unique laser intensity is required for each plotting resolution (60, 80, 100, 120, 140, and 160 pt/mm).

If the laser intensity is too low, the exposure is too light and quality is lost (that is, black areas are not uniform, and thin lines and small text may disappear).

If the laser intensity is too high, thin lines may become too thick and small text may be covered. In addition, the life of the laser is also shortened.

Each type of film requires a **unique** laser intensity. Each film manufacturer has slightly different specifications for various types of film. If you switch to a new type of film, you must expose several strips of film and check the density to ensure that the exposure is still of the same high quality. You must check which laser intensity on the Imagesetter yields your desired exposure results.

Calibrating Laser Intensity

Use newly processed films as the basis for creating a set of default Imagesetter *Res/Int* tables.

❒ Laser intensity must be calibrated for **each** film type **and** plotting resolution used in order to guarantee consistent high-quality exposure.

To create the test exposure, proceed as follows:

♦ Ensure that the Imagesetter Control Panel displays the STANDBY message.

♦ In *Service Utilities* mode, select **Expose: Test Intensity**.

♦ Fill in the fields in the window which appears.

❒ If you are performing this procedure for the first time, use a high **Intensity Step** at first, and gradually reduce it until you find the optimal step.

♦ Press **Done** when you have completed filling the window. The Imagesetter starts exposing the current set of intensity strips.

♦ Repeat this procedure to expose a set of strips for **each** relevant resolution: 60, 80, 100, 120, 140, and 160.

Perform the following for each set of strips:

♦ Measure the density of the exposed strips on a light table. Look for the density you require (for example, 4.2). Write down the intensity which appears next to this strip on the film.

❒ If you cannot find a strip with the desired density on the film set, adjust the overall laser intensity and recreate the strips.

♦ To set the new laser intensity value to be used for the current plotting resolution, select **Util: Res. Int. Setting** on the Control Panel. *Service Utilities* mode is activated.

♦ Select a number (between 1-6) to access the desired *Res/Int* table.

The selected *Res/Int* table for the current setting is displayed.

```
                   --1--
   Material^            Film        [Film]
   Vendor               None        [None]
   Media Thickness      4 mil       [4 mil]

      Resolution        Laser Intensity
   60     [60]          22000   [10000]
   80     [60]          16500   [10000]
  100     [60]          13000   [10000]
  120     [60]          10000   [10000]
  140     [60]           8500   [10000]
```

Sample Res/Int window (table #1)

♦ Toggle the *Material, Vendor,* and *Media Thickness* fields as
   required, and enter the intensity value you wrote down for
   each plotting resolution.

♦ Press **Done** when you complete filling the window.

❒ For details on the use of soft functions on this screen, refer to *Service
Utilities Mode* below.

Service Utilities Mode

After you select **Service Utilities** from the *Util* menu, the system activates *Service Utilities* mode.

❒ Alternatively, access **Remote Mode** on the host workstation.

The following screen appears.

Film	Expose	Setup	Machine	Options	Exit
Shift	⇩	⇨			Done
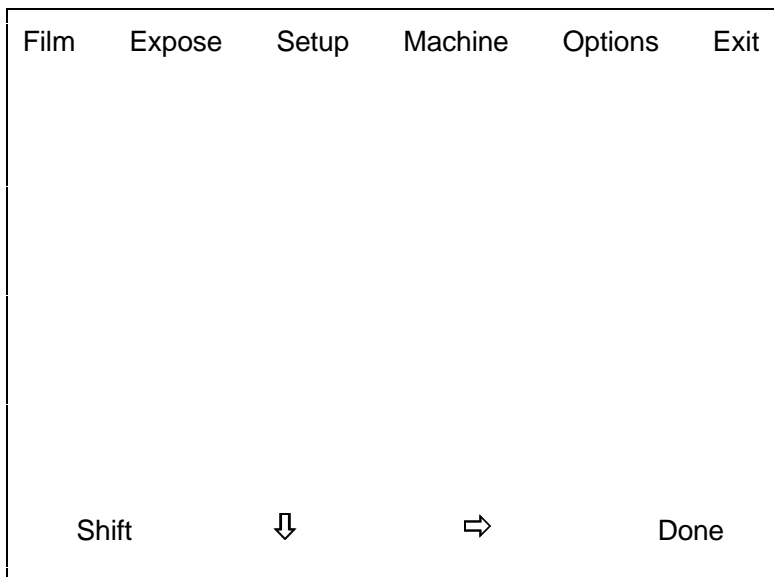
Service Utilities Main screen

♦ Press the ⇩ and/or ⇨ buttons to access the desired function, and press **Done** to select it.

  or:

♦ Press ⇨ until you access **Exit** and select **Done** to exit *Service Utilities* mode.

❒ The menu headings (**Film**, **Expose**, **Setup**, **Machine**, and **Options**) are described in the corresponding sections further on.

Shift	⇓	⇨	Done
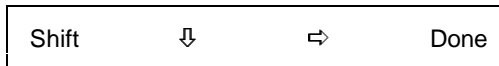
Shift

Use this button to toggle the status of the ⇓, ⇨, and **Done** buttons.

♦ Hold down **Shift** to toggle the ⇓ button to ⇑.

 or:

♦ Hold down **Shift** to toggle the ⇨ button to ⇦.

 or:

♦ Hold down **Shift** to toggle the **Done** button to **Esc**.

⇓   [switches to ⇑ while **Shift** is held down]

♦ Press ⇓ to move the cursor down, and highlight the menu entry below the current.

❒ After you hold down **Shift**, the ⇓ button switches to ⇑.

♦ Press ⇑ to move the cursor up, and highlight the menu entry above the current.

⇨   [switches to ⇦ while **Shift** is held down]

♦ Press ⇨ while **all menus** are **closed** to move the cursor to the menu heading to the right of the current.

♦ Press ⇨ while **a menu** is **displayed** to move the cursor to the menu heading to the right of the current, **and** display its menu.

❒ After you hold down **Shift**, the ⇨ button switches to ⇦.

♦ Press ⇦ while **all menus** are **closed** to move the cursor to the menu heading to the left of the current.

♦ Press ⇦ while **a menu** is **displayed** to move the cursor to the menu heading to the left of the current, **and** display its menu.

Done   [switches to Esc while Shift is held down]

♦ Press **Done** to select a menu heading or a menu entry.

❏ After you hold down **Shift**, the **Done** button switches to **Esc**.

♦ Press **Esc** to remove the currently **displayed menu**, and exit to the menu above, or to the *Service Utilities Main* screen.

Service Utilities Mode - **MENUS**

After you select a menu heading on the *Service Utilities Main* screen, a menu of entries appears (for example, after you select **Film**, the *Film* menu appears).

```
First Load      !
Advance ..

Cut and Collect !
Empty Drum      !
Cut             !

Attach          !
Relief          !

Media Info ..
Motors Graph    !
```

Sample menu (Film)

> **!**   This sign indicates that — selecting this entry **directly activates** the related function.
>
> **..** This sign indicates that — selecting this entry displays a **window** of fields.
>
> **>**   This sign indicates that — selecting this entry displays an additional **menu** of entries.

❏ In the sample menu above, the **>** sign is **not** used.

After you select a menu entry which is followed by **. .**
a window of fields appears (for example, after you select
Expose: Res./Int. Setting: 1.. the *Res/Int Setting* window
appears).

```
                    --1--
   Material^             Film       [Film]
   Vendor                None       [None]
   Media Thickness       4 mil      [4 mil]

      Resolution        Laser Intensity
  60      [60]        22000   [10000]
  80      [60]        16500   [10000]
 100      [60]        13000   [10000]
 120      [60]        10000   [10000]
 140      [60]         8500   [10000]
```

Sample window (Res/Int Setting window)

---

^   This sign indicates a **toggle** field.

[ ]   These brackets enclose the default value for the field.

Shift	Next-Field	Next-Value	Done

Shift

Use this button to toggle the status of the **Next**-**Field** and
Next-**Value** buttons.

♦ Hold down **Shift** to toggle the **Next**-**Field** button to
Prev-**Field**.

  or:

♦ Hold down **Shift** to toggle the **Next**-**Value** button to
Prev-**Value**.

Next-Field   [switches to Prev-Field while Shift is held down]

♦ Press this key to move the cursor to the next field.

After you hold down **Shift**, **Next**-**Field** switches to **Prev**-**Field**.

♦ Press this key to move the cursor to the previous field.

Next-Value   [switches to Prev-Value while Shift is held down]

A *toggle* field is indicated by a **^** sign which follows the field name. It switches between several pre-defined values.

♦ Press **Next**-**Value** while the cursor is located in a *toggle* field to cycle to the next value.

After you hold down **Shift**, **Next**-**Value** switches to **Prev**-**Value**.

♦ Press **Prev**-**Value** while the cursor is located in a *toggle* field to cycle to the previous value.

Done   [switches to Esc while Shift is held down]

♦ Press this button to confirm the values in the window.

After you hold down **Shift**, **Done** switches to **Esc**.

♦ Press **Esc** to exit a window without saving your changes.

❒ If you modified a value in a window field, pressing **Esc** resets the last field you modified to its previous value. Press **Esc** again to exit the window.

❏ The following pages list the functions available in *Service Utilities* mode. The functions which are **not** explained are intended for service purposes only.

Film

```
First Load       !
Advance ..

Cut and Collect  !
Empty Drum       !
Cut              !

Attach           !
Relief           !

Media Info ..
Motors Graph     !
```

Film menu

First Load !

Select this entry to move the center of the carriage to the center of the film, and feed film from the Loading Cassette into the drum (up to the *Film Out* detector).

Advance ..

Select this entry to move the film forward (for example, to create a gap between the margin of the exposure and the edge of the film).

❏ If you are using an inline processor, select this entry to send the film to be processed.

The *Advance* window appears.

♦ Toggle the *Film Length* field to 100 mm, 200 mm, 300 mm, 400 mm, 500 mm, or 600 mm. **Note**: If you are using an inline processor, toggle this field to 300 mm, 400 mm, or 500 mm.

Cut and Collect!

Select this entry to cut the film, and perform a regular film unloading cycle (after which the Film Unloading drawer opens).

Empty Drum !

Select this entry to pull the film (that is in the drum) back into the Loading Cassette, and open the Film Loading and Film Unloading drawers.

Cut !

Select this entry to cut the film.

Attach !

Select this entry to fasten the film (that is already in the drum) to the entire surface of the drum.

Relief !

Select this entry to detach the film (that is already in the drum) from the entire surface of the drum.

❒ **Relief** is recommended if you intend to the leave the Imagesetter idle with film in the drum area.

Media Info ..

Select this entry to update the parameters of the currently loaded film. For further details, refer to *Chapter 2, Handling Cassettes & Media, Updating the Media Info Table.*

Motors Graph !

For service engineers only.

Expose

```
┌─────────────────────────────────────┐
│                                     │
│  Res. Int. Setting     >            │
│                                     │
│  Test Intensity ..                  │
│  Internal Pattern ..                │
│                                     │
│                                     │
└─────────────────────────────────────┘
```
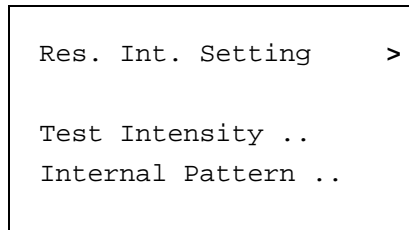
Expose menu

Res. Int. Setting >

Select this entry to calibrate the laser intensity values for each plotting resolution. For further details, refer to the *Resolution Intensity Calibration* section above.

Test Intensity ..

Select this entry to Create test exposure strips to examine the Imagesetter's output. For further details, refer to the *Resolution Intensity Calibration* section above.

Internal Pattern ..

Select this entry to expose test film with the Imagesetter internal pattern generator. These films are used to check Imagesetter plotting accuracy prior to routine operation.

Setup

```
Service              >  Plotter Setting ..
                        Dimension Setting ..
                        Motors Setting ..
                        Punch Setting ..
                        Grid Setting ..
                        D2A Setting ..
Factory              >  Plotter Description ..
                        Stepper Harmonics ..
Default Setup        !
Save Setup to Dskt   !
Load Grid from Dskt  !
```

Setup menu and submenus

The above options are intended for service engineers only.

Machine

```
Spinner                      >
Laser                        >
Carriage                     >
Motors                       >
Punches                      >
Solenoid                     >

Detectors Status             !
```

Machine menu

The above options are intended for service engineers only.

Below you will find a listing of the submenus of the *Machine* menu.

```
Set Speed ..
Start Spin                          !
Stop Spin                           !
```

Spinner submenu

```
Set Calibrate Values ..
Perform Calibrate               !
Active Laser Beam               !
Deactivate Laser Beam           !
Laser Off                       !
Focus Calibration               !


Create NDF Graph                !
Create Laser Graph              !
```

Laser submenu

```
Calibrate Home Position         !
Move to End Position            !
Move to Location               !


Move To ..
Movement Speed ..
```

Carriage submenu

```
Set Parameters ..
Run Load Motor                    !
Run Take Motor                    !
Run Cut Motor                     !
Run Cassette Motor                !
Run All Motors                    !
Release Motors                    !
Run Other ..
```

Motors submenu

Release Motors !

Select this entry to turn off only the **motors** of the Imagesetter (unlike switching off the Master Power Breaker that disconnects power from the entire machine).

```
Set Active ..
Run                               !
Status                            !
```

Punches submenu

```
Loading                           !
Unloading                         !
```

Solenoids submenu

Detectors Status **!**

Select this entry to display a window that lists the **names** of the detectors, and indicates which are **active** (by **Yes**) and which are **inactive** (by **No**).

The *Detectors Status* window appears.

```
   Drum Input                  Output Cassette

Input Cas. Mounted  Yes  Film in Out.Cas.mouth No

Loading Drw. Closed Yes  Out. Cas. axis Ready  Yes

Film at Film In     Yes  Output Cas. Mounted   Yes

    Drum Output          Unloading Drw. Closed Yes

Film at Film Out     No       General

Cutter at Right      No  Output to Cassette    Yes

Cutter at Left      Yes  InterLock active      Yes

      InLine             Punch Installed        No

Output to Processor  No

Conveyor is Empty    No  Carriage at Home      Yes

Processor is Ready   No  Carriage at End        No
```

Detectors Status window

Options

```
Load All Boards              !
Start Up                     !
Diagnostics Setup            !
Diagnostics                  !
Remote Shell                 !
Panel Setup                  !
```

Options menu

The above options are intended for service engineers only.
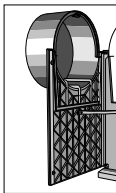
This chapter explains how to solve problems related to the exposure media, and especially how to clear film that is stuck in the Imagesetter.

❒ The *Control Panel Functionality* is described in *Chapter 2, Handling Cassettes & Media.*

❒ The *Service Utilities* mode of the Control Panel is described in *Chapter 4, Calibration and Service Utilities.*

Film Guide Doors

The Film Guide doors are located behind the service doors. By default, the Film Guide *Upper* door is **locked** (until you open it); the Film Guide *Lower* door is **unfastened** (at all times).

Film Guide Upper door release button

Film Guide Upper door

Film Guide Lower door
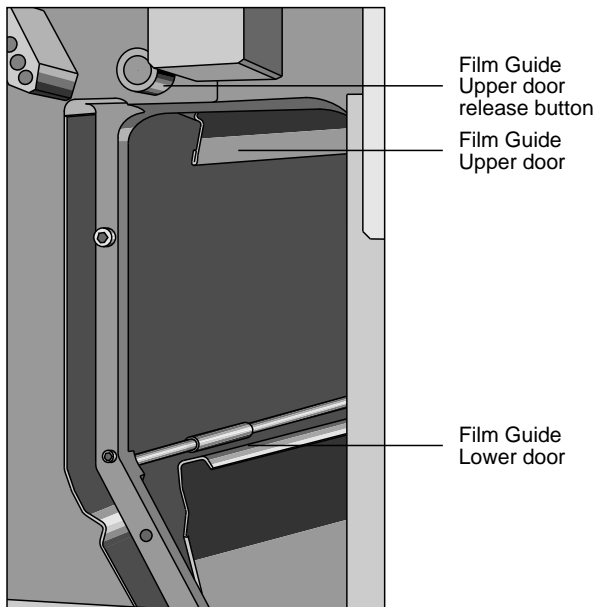
Film Guide doors in default state

Opening Film Guide Doors

During the procedures described below, you need to open the Film Guide doors to check where media is stuck and/or to clear it.

Please refer to the *Safety Precautions* chapter for details on laser and other safety precautions before proceeding.

♦ Open the Left service door.

   ❒ For instructions of how to open service doors, refer to *Chapter 1, Introduction to the Imagesetter, Opening Service Doors.*

Film Guide Upper door

♦ To open the *Upper* door, keep the Upper door release button depressed, while using your other hand to **pull** the door towards the **front** side of the Imagesetter.

♦ To close the *Upper* door, keep the Upper door release button depressed, while using your other hand to **push** the door towards the **rear** side of the Imagesetter. **Note**: Make sure the door is fastened firmly on both sides.

❒ The system does **not** detect when the Film Guide *Upper* door is open; therefore, make sure to close this door **before** closing the *left* service door.

Film Guide Lower door

♦ When required, lift the *Lower* door towards the **front** side of the Imagesetter.

♦ To close, lower the door back.

❒ The system does **not** detect when the Film Guide *Lower* door is open; therefore, make sure to close this door **before** closing the left service door.

System Messages

The messages explained below are grouped by the stage at which they are displayed on the Control Panel.

The following stages are listed:

- First Load

- Advance

- Punching

- Cut & Collect

- End of film

- After removing
  the Unloading/Acc. Cassette

- Inline Processor (if used)

In the explanations below:

The messages that **appear** are indicated by a ● bullet

The actions that you should **perform** are indicated by a ♦ bullet

The wording of the messages which **appear** may be slightly different from the messages **specified** below.

First Load

After you close the Film Loading drawer, and the system performs the *First Load* procedure, one of the following messages may appear on the Control Panel:

- [E]   No LDM enc. pulses
- [E]   No film at entry
- [F]   First Load error
- [W]   Film end   [refer to the *End of Film* section below]

- [E]   No LDM enc. pulses

  This message indicates that the system did **not** detect any film movement.

- [E]   No film at entry

  This message indicates that the system did **not** detect film entry into the drum at all.

  ❏ In such cases, the Film Loading drawer usually opens automatically.

  ♦ Make sure there is film in the Loading Cassette.

  ♦ Pull an additional 2 in. of film out of the Loading Cassette, and use the supplied Film trimmer to cut the edge of the film properly.

- [F]   First Load error

  This message indicates that the film did **not** reach the *Film Out* detector.

  ♦ On the Control Panel, access *Service Utilities* mode, and select **Empty Drum**.

  The film rolls back into the Loading Cassette (or into the Film Loading drawer), and the Film Loading drawer opens.

  ♦ Pull approximately 32 in. of film out of the Loading Cassette until you feel resistance, and use the supplied Film trimmer to cut the edge of the film properly.

Advance - 1st Stage

While the film is advancing towards (or being grasped by) the Unloading/Acc. Cassette, one of the following messages may appear on the Control Panel:

- [E]   No LDM enc. pulses
- [E]   No TKM enc. pulses
- [F]   No film at exit
- [F]   Attach film crash
- [F]   Missed Grasp pos
- [F]   Film stuck in guide
- [F]   Capture film crash
- [F]   Film crash
- [W] Film end   [refer to the *End of Film* section below]

❐ In case the film is jammed by the carriage, and **no** message appears, refer to the *Film Jammed by Carriage* section.

- [E]   No LDM enc. pulses
- [E]   No TKM enc. pulses

   These messages indicate that the system did **not** detect any film movement.

- [F]   No film at exit
- [F]   Attach film crash

   These messages indicate that the film did **not** reach the *Film Out* detector.

   ♦ On the Control Panel, access *Service Utilities* mode, and select **Empty Drum**.

   ♦ The film rolls back into the Loading Cassette (or into the Film Loading drawer), and the Film Loading drawer opens.

   ♦ Pull the part of film that is wrinkled out of the Loading Cassette, until it is stretched.

   ♦ Use the supplied Film trimmer to cut the edge of the film properly.

- [F] Missed Grasp pos

  This message indicates that the Unloading/Acc. Cassette is **not** ready to grasp the film.

  ♦ Select **Util: Other: Open Unload Drawer** on the Control Panel.

  ♦ Remove the Unloading/Acc. Cassette from its drawer.

  ♦ Replace the Unloading/Acc. Cassette back into its drawer and close the drawer.

- [F] Film stuck in guide

  This message indicates that the film is stuck somewhere in the film path between the Unloading rollers and the Unloading/Acc. Cassette.

- [F] Capture film crash

  This message indicates that the film was **not** grasped by the Unloading/Acc. Cassette.

  ♦ Open the left service door.

  ❐ If the film is jammed in the Cutter area, open the Film Guide **Lower** door, and attempt to stretch the film so it is straight in the Cutter area. Pull the film gently for it to remain attached to the drum.

  ♦ Close the Film Guide doors, close the left service door, and select **Cut** in *Service Utilities* mode on the Control Panel.

  ♦ Open the left service door and the Film Guide **Lower** door; pull the film out through the left side of the Imagesetter; close all doors.

- [F] Film crash

  This message indicates that the film crashed in the Drum while advancing.

  ♦ On the Control Panel, access *Service Utilities* mode, and select **Empty Drum**.

  The film rolls back into the Loading Cassette (or into the Film Loading drawer), and the Film Loading drawer opens.

Advance - 2nd Stage

During unloading of film into the Unloading/Acc. Cassette, one of the following messages may appear on the Control Panel:

- [F] Film is not grasped
- [E] ACC Buffer too large
- [F] Attach film crash
- [E] No LDM enc. pulses
- [E] No TKM enc. pulses
- [F] Film crash
- [W] Film end   [refer to the *End of Film* section below]

❒ In case the film is jammed by the carriage, and **no** message appears, refer to the *Film Jammed by Carriage* section.

- [F] Film is not grasped

  This message indicates that the film was **not** grasped (or **not** stretched) by the Unloading/Acc. Cassette.

- [E] ACC Buffer too large

  This message indicates that film accumulated between the Unloading rollers and the Unloading/Acc. Cassette.

  ♦ Select **Util: Advance** on the Control Panel; select **100** mm, and press **Done**.

  ♦ If this fails, select **Util: Other: Open Unload Drawer** on the Control Panel. The Film Unloading drawer opens.

  ♦ Remove the Acc. Cassette, and open the left service door.

  ♦ Pull the film out through the empty Film Unloading drawer and stretch the film so it is straight in the Cutter area. **Note**: Pull the film gently so it remains attached to the drum.

  ♦ Close the left service door.

  ♦ Select **Cut** in *Service Utilities* mode on the Control Panel.

  ♦ Pull the film out through the empty Film Unloading drawer and dispose of the film.

- [F] Attach film crash

  This message indicates that the film crashed in the Drum while attaching.

- [E] No LDM enc. pulses
- [E] No TKM enc. pulses

  These messages indicate that the system did **not** detect any film movement.

  ♦ On the Control Panel, access *Service Utilities* mode, and select **Empty Drum**.

  The film rolls back into the Loading Cassette (or into the Film Loading drawer), and the Film Loading drawer opens.

  The film is cut & collected into the Unloading/Acc. Cassette, and the Film Unloading drawer opens.

- [F] Film crash

  This message indicates that the film crashed in the Drum while advancing.

  ♦ On the Control Panel, access *Service Utilities* mode, and select **Empty Drum**.

  The film rolls back into the Loading Cassette (or into the Film Loading drawer), and the Film Loading drawer opens.

  The film is cut & collected into the Unloading/Acc. Cassette and the Film Unloading drawer opens.

Film Jammed by Carriage

♦ Open the right **and** left service doors.

If the film is jammed by the carriage, turn the *Carriage Damper* wheel until the film is released, as follows:

  ♦ If the film was jammed by the carriage while it moved to *home* position, turn the wheel **counter-clockwise** to move the carriage **away** from you.

  ♦ If the film was jammed by the carriage while it moved to *end* position, turn the wheel **clockwise** to move the carriage **towards** you.

♦ Attempt to straighten the film so it is as smooth and as fastened to the drum surface as possible.

♦ Close the service doors.

♦ On the Control Panel, access *Service Utilities* mode, and select **Empty Drum**.

The film rolls back into the Loading Cassette (or into the Film Loading drawer), and the Film Loading drawer opens.

The film is cut & collected into the Unloading/Acc. Cassette and the Film Unloading drawer opens.

Punching

After the film is punched, the following messages may appear on the Control Panel:

- [F] Punch current limit

  This message indicates that the punch system is stuck.

- [F] Punch not returns

  This message indicates that the punch is unable to return to *home* position.

  ♦ On the Control Panel, access *Service Utilities* mode, and select **Machine: Punches: Run**.

  This function activates **all** the punches and should solve the problem.

Cut & Collect (Cut & Unload)

While the film is cut and unloaded into the Unloading/Acc. Cassette, the following message may appear on the Control Panel:

- [F] Unld detector fault

  This message indicates that **not** all of the film was collected into the Unloading/Acc. Cassette.

  ♦ Select **Util: Other: Open Unload Drawer** on the Control Panel. The Film Unloading drawer opens.

  ♦ Remove the Unloading/Acc. Cassette, and cut the excessive part of film. **Note:** Make sure to leave an edge of film sticking out of the cassette.

  ♦ Process the film.

End of Film

When the roll of film is finished, the following message appears on the Control Panel:

- [W] Film End

During First Load or during Advance - 1st Stage

The piece of film that is already in the drum/carriage automatically rolls back into the Loading Cassette (or into the Film Loading drawer), and the Film Loading drawer opens.

♦ Remove the film from the Loading Cassette/Film Loading drawer and dispose of it.

During Advance-2nd Stage

Since the film is already grasped by the Unloading/Acc. Cassette, the system automatically unloads the rest of the film into the Unloading/Acc. Cassette, and opens the Film Unloading drawer.

♦ Remove the Unloading/Acc. Cassette and process the film.

After Removing the Unloading/Accumulating Cassette

After removing the Unloading/Acc. Cassette, the edge of the film may fall **into** the cassette (that is, it **no** longer sticks out of the cassette).

Perform the following in a dark room:

♦ Lift each of the clasps located on the cover of the Unloading/Acc. Cassette, and turn it **counter**-**clockwise** to unscrew.

♦ Pull the cover upward and remove it.

♦ Grasp the film and pull some of it out.

♦ Process the film and replace the cover of the Unloading/Acc. Cassette.

Inline Processor

If an **Inline processor** is used, the following additional messages may appear on the Control Panel:

- [E] Film not reach conv
- [W] No film on conveyor
- [F] Asked too long film
- [F] Film stuck on conv
- [F] Film stuck at proc

- [E] Film not reach conv
- [W] No film on conveyor

  These messages indicate that, following loading, the film did **not** access the conveyor.

  ♦ On the Control Panel, select **Util: Other: Change Media**.

  The film rolls back into the Loading Cassette (or into the Film Loading drawer), and the Film Loading drawer opens.

  ♦ Pull approximately 32 in. of film out of the Loading Cassette until you feel resistance, and use the supplied Film trimmer to cut the edge of the film properly.

- [F] Asked too long film

  This message indicates that, performing **Advance** (using the value entered in the *Film Length* field) will cause the length of film in the conveyor to exceed the allowed limit.

  ♦ Decrease the value in **Util: Advance:** *Film Length* field.
  Note: If the message reappears, select **Util: Cut and Collect**.

- [F] Film stuck on conv

  This message indicates that the film was **not** removed from the conveyor (that is, it was **not** fed into the processor).

  ♦ On the Control Panel, select **Util: Cut and Collect**.
    Note: If the message reappears, remove the film from the conveyor by hand.

- [F] Film stuck at proc

  This message indicates that the processor was busy for an exceeded period of time (for example, some of the film was **not** fed into the processor).

  ♦ If film resides at the processor's entrance, remove it by hand. If not, refer to the processor's manual.

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