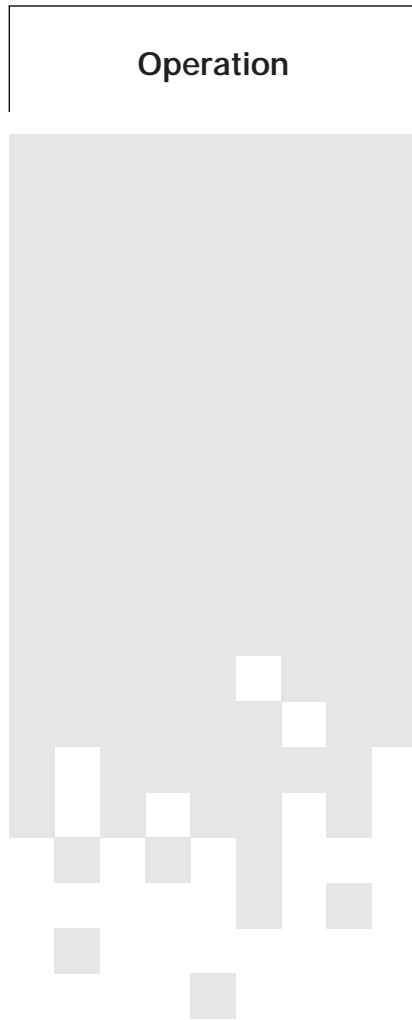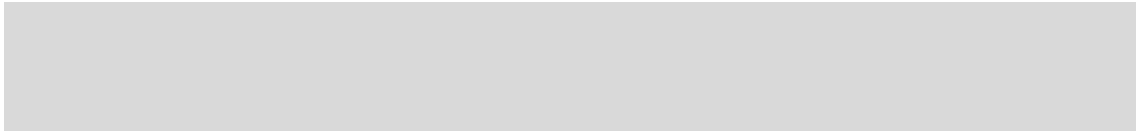# *Ultre 4800 User Manual*

Operation

ULTRE

a division in the Heidelberg group

■ Notes on Technical Safety

This device must be installed by authorized service personnel only. The installation must be performed in compliance with the recommended ambient conditions.

The power socket of the device, and also the wall socket used in conjunction with the device, must be readily accessible. This is to ensure easy removal of the power cord from the wall socket, for example, in the event of an emergency.

Caution: Unauthorized opening and improper repairs of the device may expose the user to serious danger.

All service and maintenance work must be done by trained and authorized service personnel only. The respective safety rules must be observed at all times. Failure to comply with the safety rules may result in loss of insurance claims.

■ Laser Safety

▨ Standards and Regulations

The Ultre 4800 laser imagesetter is certified as a Class 1 laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968. As such, this unit complies with 21 CFR Chapter 1, Subchapter J

In addition, this product meets the requirements of EN60825

This means that this laser imagesetter does not emit hazardous laser radiation Since radiation emitted inside the laser imagesetter is completely confined within protective housings and external covers, the laser beam cannot escape from the machine during any phase of user operation or maintenance

▨ Service

None of the parts within the protective housing require servicing by the user. Any servicing only must be done by factory-trained service technicians authorized by Ultre Division of the Heidelberg Group.
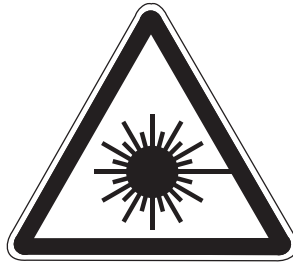
Caution: Do not remove the cover or housing of the imagesetter. Otherwise there is a risk that you will be exposed to invisible laser radiation or injured by an electrical shock.

Caution: Use of controls or adjustments, or performance of procedures other than those specified herein, may result in hazardous radiation exposure.
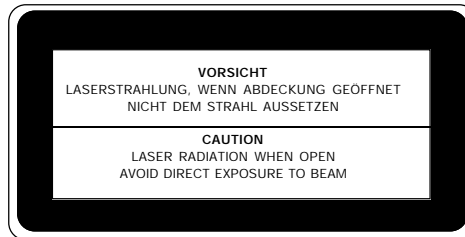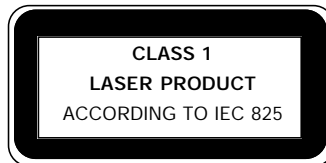
◼ Location of Laser Safety Labels

Bottom of the take-up cassette compartment (protective cover of the optical assembly)

Bottom of the take-up cassette compartment (protective cover of the optical assembly)

LASERSTRAHLUNG
NICHT DEM STRAHL AUSSETZEN
LASER KLASSE 3B
NACH IEC 825

Bottom of the take-up cassette compartment (protective cover of the optical assembly)

VORSICHT
LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET
NICHT DEM STRAHL AUSSETZEN

CAUTION
LASER RADIATION WHEN OPEN
AVOID DIRECT EXPOSURE TO BEAM

Rear panel of the imagesetter

CLASS 1
LASER PRODUCT
ACCORDING TO IEC 825

■ Radio Interference Notice

▨ Note for Users in the USA

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

Notes for Users in Canada

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

Le persent apparil numerique n'emet pas de bruits radio electriques depassant les limites applicables aux appareils numeriques de la Classe A prescrites dens le reglement sue le brouillage radio electrique edicte par le ministre des communications du Canada.

Notes for Users in Europe

Comply with radio interference suppression regulations when you connect other electrical equipment to this unit. Ensure compliance by following the instructions given by the manufacturer of this equipment, regarding correct installation and maintenance.

One can assume that the equipment you are going to connect complies with radio interference suppression regulations if it is marked with the conformity mark of the European Union (CE) and all instructions regarding installation, operation and maintenance are followed.

Safety Information

This device meets the safety regulations for information technology equipment including electrical office equipment. As such, it meets the European "low Voltage Directive" 73/23/EEC. It also complies with the EEC Directive 89/336/EEC concerning "electromagnetic compatibility" for residential, commercial and light industry.

Electrical/Mechanical Safety

EN 60950 (Europe)

UL 1950 (USA)

CSA C22.2 No, 950 (Canada)

Electromagnetic Compatibility

FCC Part 15, Subpart B, Class A (USA)

DOC Radio Act SOR/88-475, Class A (Canada)

Directive 89/336/EEC (Europe) (EN 55022, Class B; EN50081-1)

Electromagnetic Interference

EN50082-1:1993

IEC 801-3

EN50082-2:1994

EN61000-4-2

EN61000-4-5

ENV50140

ENV50141

ENV50204

Conformity Marks And Approvals

CE (Europe)

UL (USA)

CSA (Canada)

CE Conformity Declaration

Ultre a Division in the Heidelberg group

CE-Declaration of Conformity

according to Council Directives 73/23/EEC and 89/336/EEC on the approximation of the laws of the Member States relating to low voltage and to electromagnetic compatibility

Suppliers Name:	Ultre
Address:	145 Pinelawn Road
	Melville, New York 11747

declares that the product

Product Name:	Ultre 4800
Product Class:	Imagesetter
Type Designation:	4800

conforms to the above mentioned Directives.

Applicable Standards:

- EN60950 Safety of Information Technology Equipment

including electrical business equipment

- EN50081-1, Table 1 (EN55022, Class B) EMC Generic Emission Standard

- EN50082-1/-2 EMC Generic Immunity Standard

Place	Date	Name	Signature Stamp
New York, USA,	May 1, 1997		

■ About This Manual

The Ultre 4800 laser imagesetter is designed for use as an output device in conjunction with a PostScript ™ RIP to output jobs from any suitable front-end system.

This manual describes the installation, the control panel, and the switching on/off procedure of the Ultre 4800 laser imagesetter. It contains instructions for loading, changing, and removing photographic material, as well as descriptions of the imagesetter functions and other technical data.

Typographic Conventions

The following conventions are used in this manual:

■ Cross-references to other manuals, chapters, or sections are shown in *italics*.

Example: see Chapter 3, *Controls*.

■ Hardware status, switch settings, or system prompts are also shown in *italics*.

Example: Set the switch to *off*.

■ User entries, menu titles, menu functions, button names, folder and file names are enclosed in quotation marks.

Example: You have now finished making the settings in the "MISC – Miscellaneous" menu.

■ For keystroke combinations, hyphens are used to signify that the keys must be held down simultaneously.

Example: Press the SHIFT-SAVE keys to save the values entered.

Important Information

Important information in the text is provided with a symbol next to it, which designates the following:

Note: Contains important general or supplementary information about a specific topic.

Attention: Contains information that must be taken into consideration to prevent damage to hardware or software.

Caution: Contains information that must be taken into consideration to prevent losing data.

Contents

Contents

Introduction

1

■ Scope of Application

The Ultre 4800 laser imagesetter is designed for use as an output device in conjunction with the UltreRIP to output high-quality jobs.

■ Performance

The resolutions shown in the following list are available for this imagesetter type.

Available resolutions (vertical and horizontal directions)

1333 Pixel/cm	3387 dpi *
1000 Pixel/cm	2540 dpi *
800 Pixel/cm	2032 dpi *
666 Pixel/cm	1693 dpi
500 Pixel/cm	1270 dpi
400 Pixel/cm	1016 dpi
333 Pixel/cm	846 dpi

(The resolution steps marked with an * can only be used in LI 2 asynchronous mode with a 16 MHz clock.)

■ Imaging Process

The Ultre 4800 controls the processing of images using the following features:

- a laser light source
- a polygon mirror
- a raster image processor (RIP).

■ Area Imagesetter

The Ultre 4800 is an area imagesetter. The recorder beam does not expose the composition work character by character, but instead moves in horizontal scan lines across the entire width of the material. This recording procedure requires the image data to be converted into picture elements (pixels) before imaging begins.
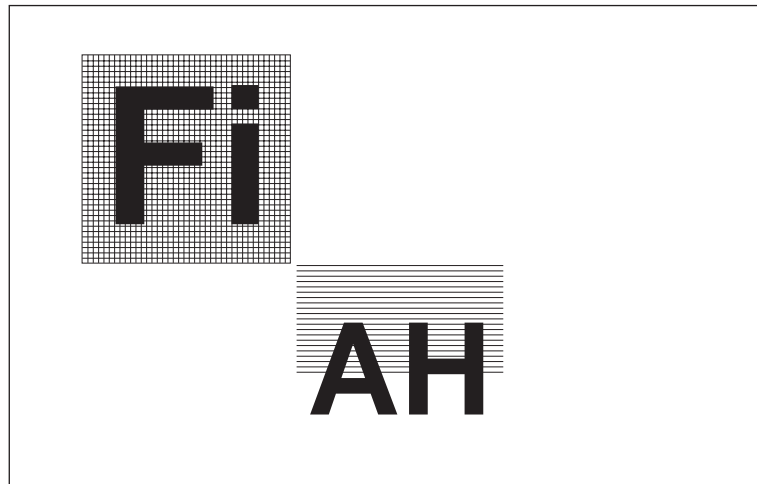
The Laser

The light source of the Ultre 4800 is a helium neon laser. A laser light source sends out highly amplified and concentrated monochrome light waves, modulated by the pixel information from the RIP. Output of extremely sharp contour with high density is therefore achieved within a short processing time.

The Ultre 4800 laser imagesetter is classified according to standards of safety class 1. Registration and an assigned laser safety representative are therefore not required.

Polygon Mirror

A mirror with six surfaces, called the polygon mirror, controls the laser beam and directs it onto the photomaterial. The polygon mirror rotates at high speed around its own axis. This rotation is so precise that the imagesetter output has an accuracy better than 10/100 μm.

PostScript RIP

The conversion of the image data is computed by the Raster Image Processor (RIP). To visualize this, imagine a grid positioned over the page, with each grid square representing a pixel to be exposed. The number of dots per inch (dpi) or pixels per centimeter (pixel/cm) is determined by the selected resolution.

Output Quality

The Ultre 4800 offers different resolutions. The output speed depends on the selected resolution and on the complexity of the image data analyzed by the RIP.

Installation

2

■ Location

The Ultre 4800 laser imagesetter is mounted on wheels for easy movement. When the imagesetter has been moved to its operating location, lock the wheels and ensure that the imagesetter is level.

■ Required Space

Position the Ultre 4800 so that there is access to the rear of the imagesetter. The distance from the rear of the imagesetter must be at least 32 inches (80 cm) so that the imagesetter can be moved without disconnecting attached cables. Avoid locations exposed to direct sunlight, and do not place the imagesetter near heaters. The operating temperature should be between between +18 °C (65 °F) and +27 °C (80 °F) at a relative humidity of 45 % to 85 %.
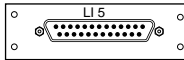
■ Connections

The following figure shows all connections at the rear of the Ultre 4800 imagesetter.
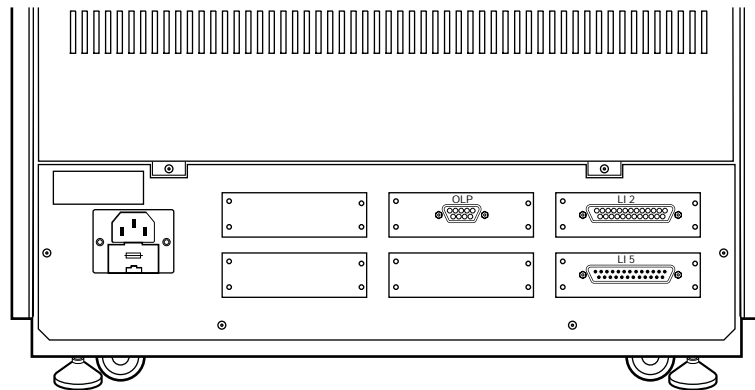
■ LI 2
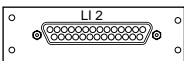
This is the interface for data transmission (in bitmap format).

For details, see Chapter **2** *Connecting the Interface Cable.*

■ LI 5

This is the interface for communication between the UltreRIP and the Ultre 4800 imagesetter.

For details, see Chapter 2 *Connecting the Interface Cable*.

■ Power Connection

The Ultre 4800 imagesetter is supplied with a power cord. Before shipment, the operating voltage of the Ultre 4800 imagesetter is configured to operate in one of two AC input voltage ranges. A label near the AC socket unit indicates the voltage selected prior to shipment. The voltage must be changed by trained personnel only.
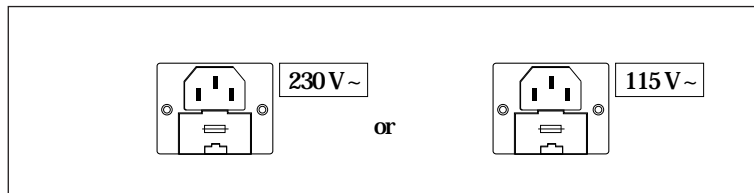
Attention: The power supply will fail if a mains voltage of 230 V is applied to a Ultre 4800 imagesetter that is set to 115 V and vice versa.

Note: Switching off the Ultre 4800 imagesetter from the front panel does not disconnect the power supply from the mains supply. To disconnect the Ultre 4800 from the mains supply, remove the power cord first. The mains outlet must be easily accessible and must be located near the Ultre 4800 imagesetter.

In some countries (for example, Great Britain) the power cord is supplied without a plug. In this case, connect the wires to the plug terminals before connecting the power cord to the power supply. The power cord wires are colored as follows:

Green and Yellow   Earthed
Blue   Neutral
Brown   Live

Follow this procedure only if your power cord is not supplied with a plug:

1. Connect the green and yellow wire to the plug terminal marked E or marked with the earth symbol.

2. Connect the blue wire to the plug terminal marked N.

3. Connect the brown wire to the plug terminal marked L.

Note: The 115 volt version of the Ultre 4800 is supplied with a UL/CSA approved power cord and plug connector on the power side. The power cord and plug connector meet the American and Canadian standards for such cables and connectors. The 230 volt version of the Ultre 4800 imagesetter is supplied with a power cord and plug connector that meet the respective German (and some European) standards for such cables and connectors.

■   Changing the Fuse

There is a separate power fuse compartment with a hinged cover located beneath the contact pins of the power connection. The power connection is located at the rear of the imagesetter.

To change the fuse:

1. Disconnect the power cord.

2. Open the power fuse cover. Insert a screwdriver or similar instrument between the cover and the compartment body, and gently push the cover outwards.
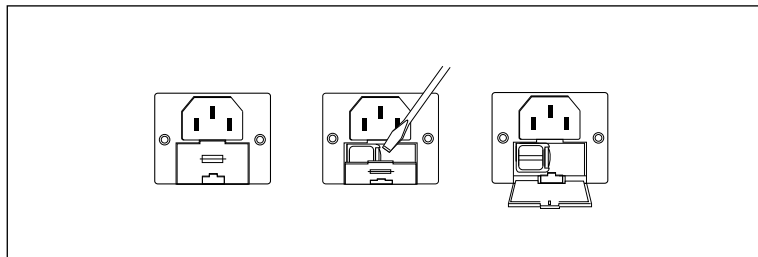
3. If necessary, replace the fuse with a fuse of the same type and rating only.

4. Close the fuse compartment.

■ Cables and Connectors

The cables and connectors necessary to connect a Ultre 4800 laser imagesetter with the UltreRIP are listed below.

i Note: F.C.C. Regulation (subpart B of part 15) requires the use of shielded-type interface cable.

▪ Ultre 4800/UltreRIP

To connect the Ultre 4800 to the UltreRIP, use the following cables (Ultre Part Number 2356.01):

■ 25-pin "D" connector to 25-pin "D" connector for connection to the LI2 interface

■ 25-pin "D" connector to 8-pin DIN connector for connection to LI5 Interface

■ power cord with the corresponding connectors.

Connecting the Cables

Connect the Ultre 4800 to the RIP as follows:

1. Connect the power cord at the rear of the Ultre 4800. Plug the power cord into the power socket.

2. Connecting the LI 2 and LI 5 cables

Connect the LI 2 and LI 5 cables to the UltreRIP and the Ultre 4800.

Attention: For safety reasons, connect the cables with the power switched off. Connect the power cords of the UltreRIP, and Ultre 4800 before connecting the data cables.

Installing the Printer Interface Card

Install the PCI Interface card as follows:

Before installing an interface card into the host platform, check your machine's warranty and follow any instructions it contains to ensure that you do not invalidate it.

1. Turn off the computer and unplug the power cable at least 15 minutes before installing the card. This allows it to cool down and any static to dissipate. Then install the printer interface card, following the instructions that are supplied with it, and making sure that you follow normal procedures for handling static sensitive devices.

2. The Ultre 4800 is driven with the UltreRip along with a Highwater LI2/LI5 interface card. The PCI interface card requires no set-up prior to installation.
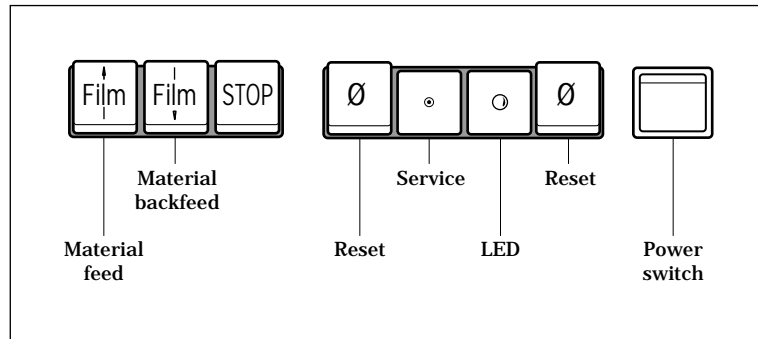
Controls

3

■ **Ultre 4800 – Front View**

■ Function Keys

▓ Material Feed Key

Use this key to load new photographic material. Press the key to feed material from the supply cassette into the take-up cassette. The material is cut automatically.

▓ Material Backfeed Key

Press this key to reverse the material feed. The material is fed back, from the take-up cassette compartment into the supply cassette compartment. You must use this key:

■ if the photomaterial is to be changed, or

■ when the new material has not been fed in correctly, in which case you must reload it.

Stop Key

Press this key to stop the feed of material immediately, before it stops automatically.

Service Key

This key should only be used to start a service diagnosis program:

- **either by an authorized Service Technician on site,**
- **or by the user through remote operating instructions given by an authorized Service Technician.**

It is activated by pushing the point of a ball-point pen or similar instrument into the small hole in the center of the key. Both Reset keys are then pressed at the same time.

Light Emitting Diode (LED)

The LED indicates that the laser imagesetter is on. It flashes momentarily after the imagesetter has been switched on, then stays lit continuously. However, if the LED continues flashing, it indicates a problem with the power supply of the laser imagesetter. In this case, press both Reset keys simultaneously.

■   **Reset Keys**
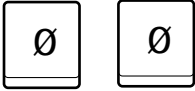
Both Reset keys are provided for emergency use. Press both keys simultaneously only if:

- **the LED does not stop flashing, or**
- **job processing is not continued.**

Attention: Pressing the Reset keys while processing a job cancels the job.The operating program will be restarted after a reset.

■   **On/Off Switch**

This is the On/Off switch. After the imagesetter has been switched on, the LED flashes for a short time and then remains lit. The operating program is started automatically by switching on the imagesetter. It is not necessary to press Reset.

■ Control Panel

The control panel is used to set the output parameters. It is also used to configure the channel and interface. Note: Several functions accessed from the control panel are overridden by the UltreRip software. (Refer to the UltreRip User Manual for more detailed information).

The control panel consists of a 20-digit display and a keypad with 18 keys. Some keys have a second function, activated by pressing the Shift key before pressing the key. In addition, several keys are labeled 0 to 9 (and a decimal point on the START/STOP key). Whenever a menu function requires entry of a number value, these keys act as the numeric keypad, allowing you to enter the values as needed.
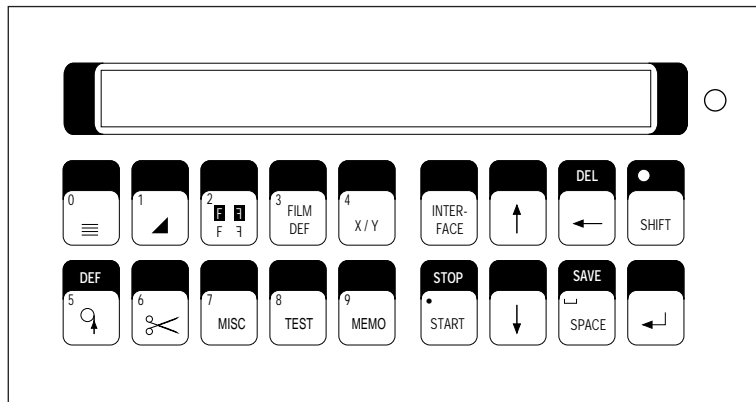
The following list gives only a brief description of the functions of the keys. For a detailed description, see Chapter 6, *Imagesetter Functions.*

Resolution

Use this key to select the resolution. **(Note: The primary means of controlling imagesetter resolution is done via UltreRip. The UltreRip will override any resolution set from the Ultre 4800 control panel).**

Density

Use this key to define the density. **(Note: The primary mean of controlling imagesetter density is done via UltreRip. The UltreRip will override any density set from the Ultre 4800 control panel).**

Imaging Mode

Use this key to select the imaging mode. The various modes are indicated as follows: (Refer to the UltreRip User Manual for more detailed information regarding imaging mode).

F   right reading/positive

█   right reading/negative

�   wrong reading (mirror print)/positive

█   wrong reading (mirror print)/negative

■ **Material Definition**

Use this key to define the following settings:

- counting direction (defines the direction of the material counter, either incremental or decremental,

- material counter (specifies the material length)

- visual warning indicating the end of material

- material width

- material thickness

■ **X/Y Coordinates**

Use this key the output position parameters (left margin and the measure).(Refer to the UltreRip User Manual for more detailed information regarding output position parameters).

■ **INTERFACE**

Use this key to define the channel used for data transfer and the communication between the Ultre 4800 imagesetter and UltreRIP.

(For further details, see the section *INTERFACE – Interface Setting* in Chapter 6.)
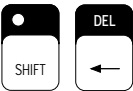
■ **Scroll "Backward"**

Use this key to redisplay previous messages.

Delete (Last Character)

Use this key to delete the last character entered.

Delete (Last Message)

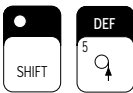Press the SHIFT key and then the DEL key to delete whole of the last entry.

SHIFT

Use this key to access the second (alternate) function available on some keys.

Material Advance

Use this key to advance the photomaterial.

DEF

Press the SHIFT key and then the Material Advance key to define the material advance.

Cut

Use this key to cut the material. The material advances automatically by the preset amount before it is cut.

■ MISC

Use this key to define miscellaneous settings such as audible signals, advance between jobs, units of measure, manual or automatic OLP cut, and output mode. See the section *MISC – Miscellaneous Functions* in Chapter 6.

■ TEST

Use this key to access the three testing functions (see the section *TEST – Test Functions* in Chapter 6).

■ MEMO

Use this key to store the parameters of up to 8 supply cassettes for various photographic materials.

■ START

Use this key to start the "Test" menu functions.

Note: When numeric values are required within a menu, this key represents the decimal point (.) on a numeric keypad.

■ STOP

Press the SHIFT key and then the STOP key to stop the current activity (for example, the material advance). SHIFT-STOP can also be used to exit from a menu without saving the data.
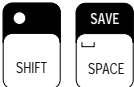
■ **Scroll "Forward"**

If you previously scrolled "backward", use this key to scroll "forward" to the current message.

■ **SPACE**

Use this key to select preset values within a menu. The character ␣ on the control panel indicates that this key can be used.

■ **SAVE**

Press the SHIFT key and then the SPACE key to exit from a menu and save the data entered.

■ **Return**

Use this key to terminate a message. A system default message appears in the display.

In menu mode, press the Return key to step through the menu or terminate and confirm an entry.

■ Display

The characters and signs that appear in the panel display are described in the examples titled *Default message 1* and *Default message 2* below. The first default message (1) is always displayed while the imagesetter is idle.

▦ Default Message 1

| L | | | M | 1 | F | | 2 | 1 | . | 3 | 4 | m | | j |

Operating
mode

Code for selected supply
cassette (MEMO)
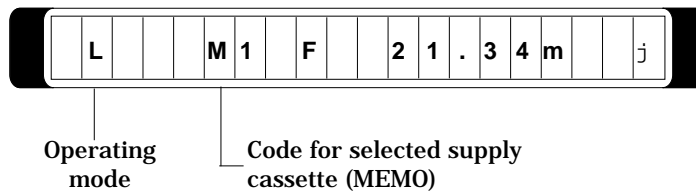
▫ Operating Mode

This character indicates the operating mode of the Ultre 4800 laser imagesetter.

■ LI 5 Mode

LI 5 Mode

LI 5 mode is the normal operating mode of the Ultre 4800 when operated in connection with UltreRIP. The Ultre 4800 is connected to the system unit and front-end system via UltreRIP using the LI 5 (and LI 2) interfaces. In LI 5 mode, the required output parameters are entered on the front-end.

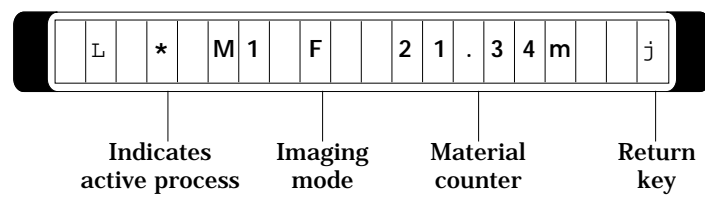The character **L** means that the Ultre 4800 is idle in LI 5 mode.

The reverse video character L appears in the operating mode field when a process is active in LI 5 mode. If this character is displayed, one or more of the following processes are active:

■ material advance or cut (for example, during material loading)

■ material advance or cut during normal imaging or test imaging

■ imaging process is running. In this case, the sign * appears in the display as well (see the next page).

Code for Selected Supply Cassette

The code M1 stands for supply cassette 1, for which the respective parameters have been defined (see the section *MEMO – Store Material Parameters* in Chapter 6).

Display Default Message 1 (Active Process)

| L | | * | M | 1 | F | | | 2 | 1 | . | 3 | 4 | m | | j |

Indicates   Imaging   Material   Return
active process   mode   counter   key

Active Process

Two symbols appear on the display to indicate internal processes running in the Ultre 4800. They are as follows:

+ **Start of imaging process.**
  This character appears for a very short time only or not at all.

∗ **The imaging process is running.**
  This character appears immediately after the preceding character.

Imaging Mode

This character shows the selected imaging mode. In the above example, the selected mode is for rightreading, positive exposure (for further details, see the section *Imaging Mode* in Chapter 6).

■ Material Counter

Two settings are available for the material counter (for further details, see the section *FILM DEF – Material Definition* in Chapter 6):

■ decremental counting, or

■ incremental counting.

Decremental counting is the default setting. The display shows the length of material that remains available in the supply cassette. In the previous example the value is 21.34 m (70 ft.).

When incremental counting is selected, the display shows the length of the material already used.

Note: If question marks (??.??m) appear in the display instead of figures, an error occurred when the parameters were saved. If this happens, it is not necessary to stop the current activity.
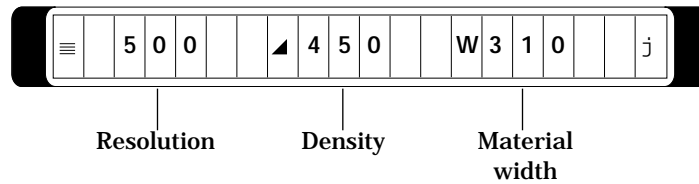
■ Return Key

When default message 1 is displayed, press the Return key to switch to default message 2.

Default message 2 is displayed momentarily and automatically returns to default message 1.

When default message 2 is displayed, press the Return key to immediately redisplay default message 1.

Default Message 2

```
≡   5 0 0      ▲ 4 5 0      W 3 1 0      j
```

Resolution   Density   Material
width

Resolution

The symbol and the figure indicate the selected resolution (500 pixels per centimeter = 1270 dots per inch). **During operation, UltreRip will set the resolution and will override the value set through the panel.** (see the section *Resolution* in Chapter 6).

Density

The density character and the figure show the predefined density corresponding to the resolution. In the above example, the value "450" has been selected for the resolution of 500 pixels/cm (1270 dpi). **During operation, UltreRip will set the density and will override the value set through the panel.** (see the section *Density* in Chapter 6).

Material Width

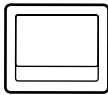The width of the photographic material is shown here.

Switching On/Off

4

■ Switching On

Check the connection at the rear of the Ultre 4800. Be sure all connections between front-ends and the imagesetter are correct.

Switch on the imagesetter by pressing the on/off switch. After first flashing briefly, the LED remains steadily lit. The control panel displays the message shown below. It indicates the (abbreviated) model name (LTC 560), model version (R = recorder), the software version and revision of your laser imagesetter.

Example:

| L | T | C | | 5 | 6 | 0 | | R | | | V | : | 1 | | | R | : | 2 | |

Linotronic   Recorder Version   Revision
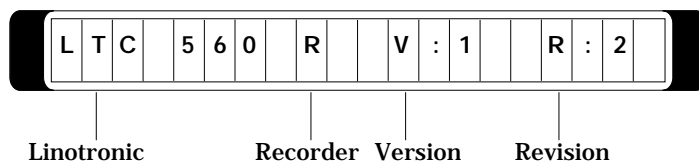
The Ultre 4800 then performs the initialization. During the initialization, the following messages are displayed on the control panel:

| I | N | I | T | | R | E | C | O | R | D | E | R | | S | T | A | R | T | |

| I | N | I | T | | R | E | C | O | R | D | E | R | | 0 | | | | | |

| I | N | I | T | | R | E | C | O | R | D | E | R | | 1 | | | | | |

| I | N | I | T | | R | E | C | O | R | D | E | R | | 2 | | | | |

| I | N | I | T | | R | E | C | O | R | D | E | R | | 3 | | | | |

i Note: Under special circumstances, you may receive an additional message, "INIT RECORDER 4". This message indicates that the cutting knife did not move to its end position for some reason (for example, because of a power failure). The knife will then proceed to its end position.

| I | N | I | T | | R | E | C | O | R | D | E | R | | D | O | N | E | |

The imagesetter initialization process has been completed without errors. The Ultre 4800 is idle and ready for operation. The control panel shows the default message 1:

| | L | | | M | 1 | | F | | | 1 | 4 | . | 9 | 6 | m | | | j |

■ Switching Off
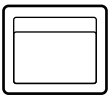
To switch off the Ultre 4800, press the on/off switch of the Ultre 4800.

Material Handling

5

■ Supply Cassette Compartment

■ Supply Cassette Compartment with Protective Cover Installed

Before outputting the first job, be sure to close the protective cover over the supply cassette compartment. Having closed the cover, press the Material Advance key once to remove the exposed material from the output unit.
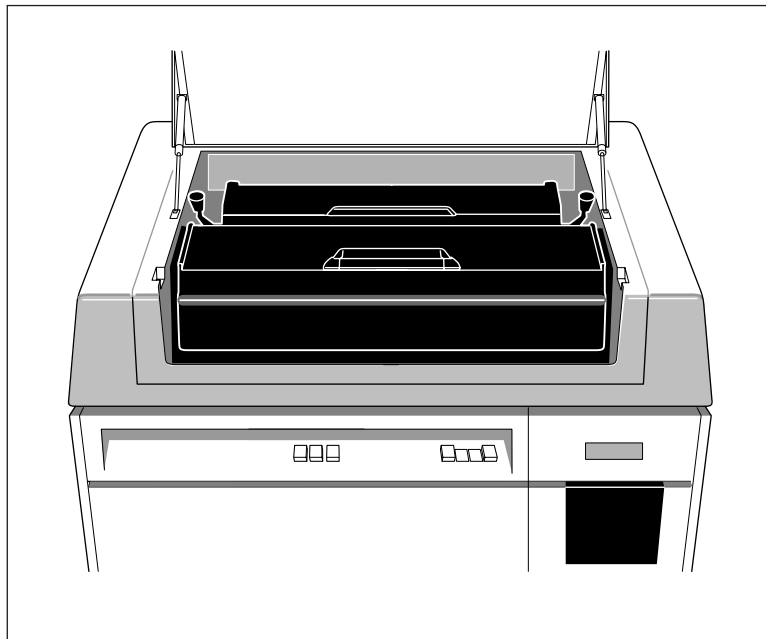
■ **Supply Cassette Compartment with Protective Cover Removed**

If the protective cover is removed, the photomaterial between supply cassette and material feed slot will be exposed to light.
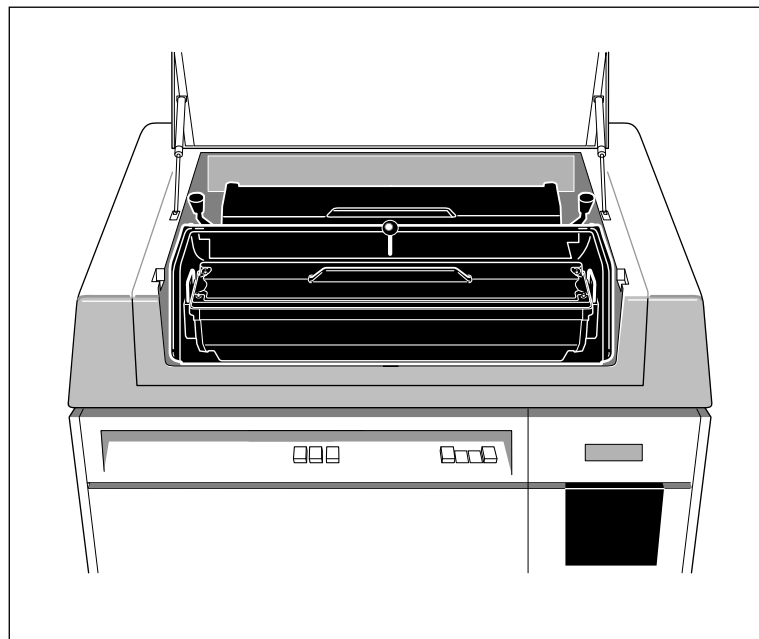
■ **Supply Cassette in Compartment (Tilted)**

Take-up cassette release levers

Capstan lever   Knife

Locking pegs   Material width markers
                          on the cassette

Handle

■ **Opened Supply Cassette**

Material exit — — Right-hand
flanged wheel
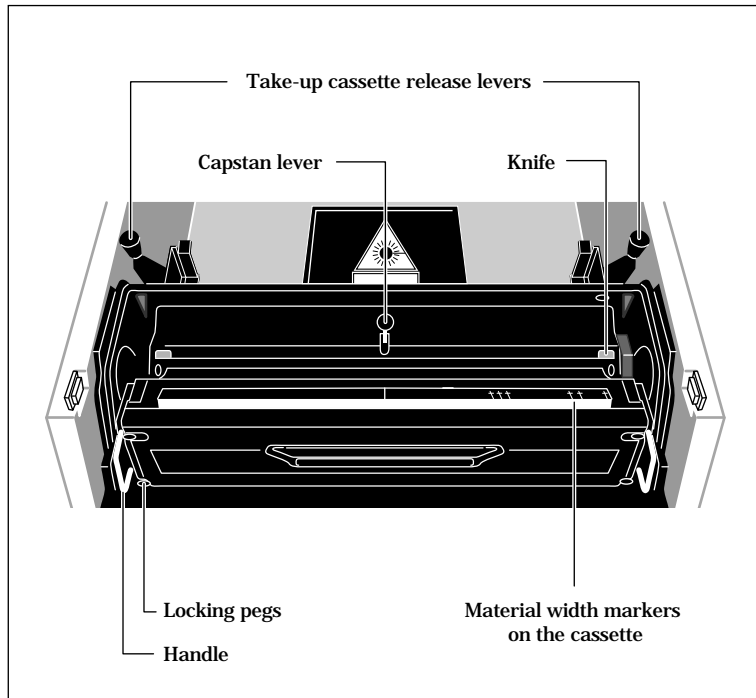
— Left-hand flanged wheel
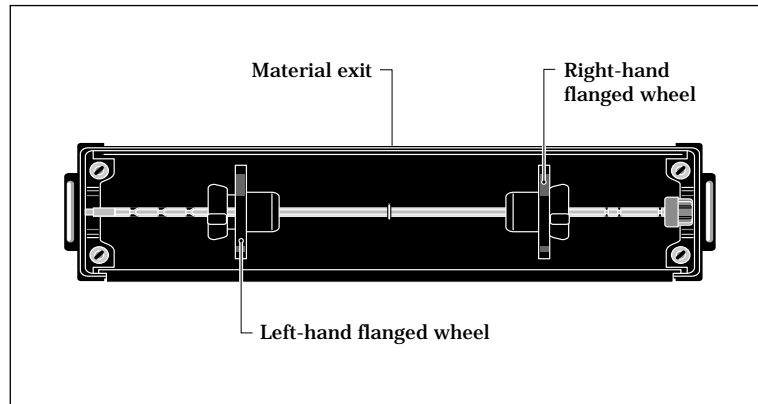
■ **Cassette Shaft and Flanged Wheels**

Left-hand
(free)   Pressure   Right-hand
flanged wheel   lever   Cassette shaft flanged
                                             wheel   Coupling

Material width markers
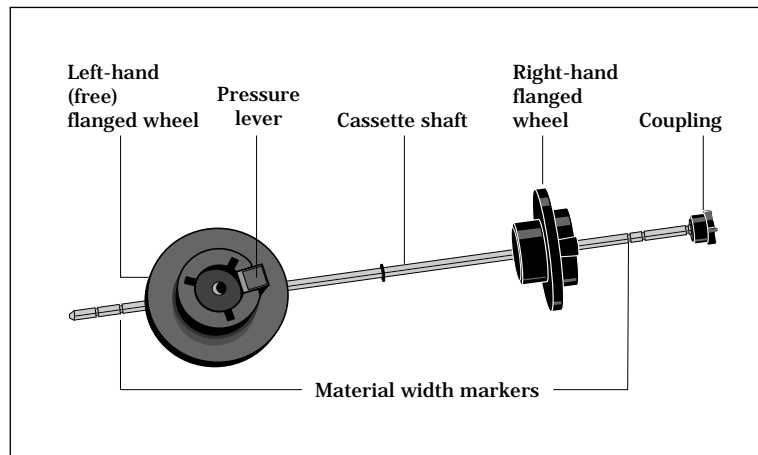
■ **Take-Up Cassette Compartment**

■ **Take-Up Cassette Compartment with Cassette**
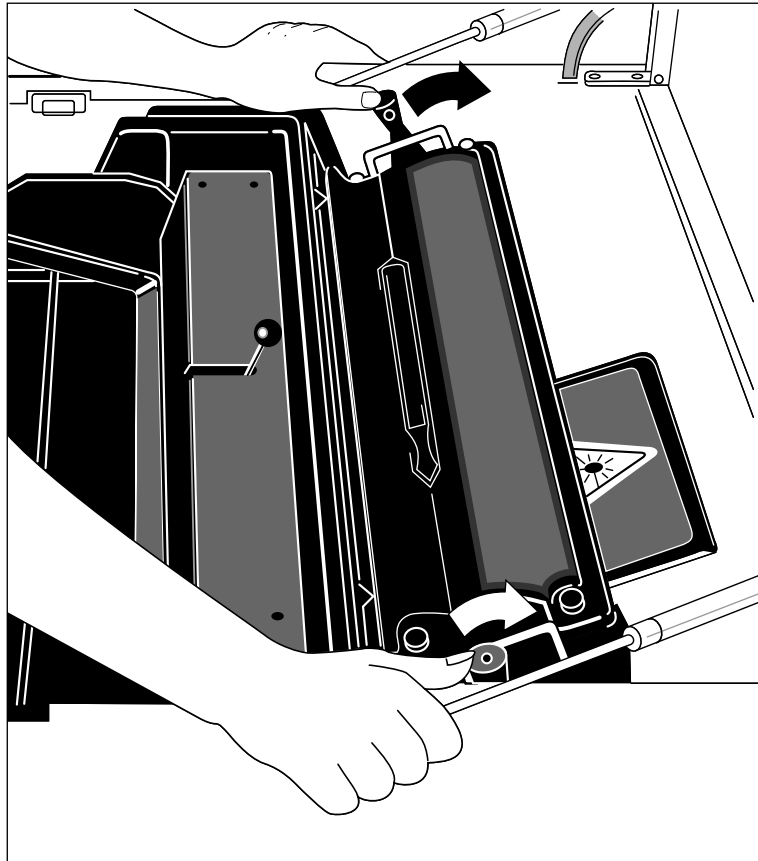
To remove the cassette, release it by pressing the two levers located on the right and left sides of the cassette (see figure above).

■ **Detail of Take-Up Cassette**

Knife	Cassette guide	Release levers
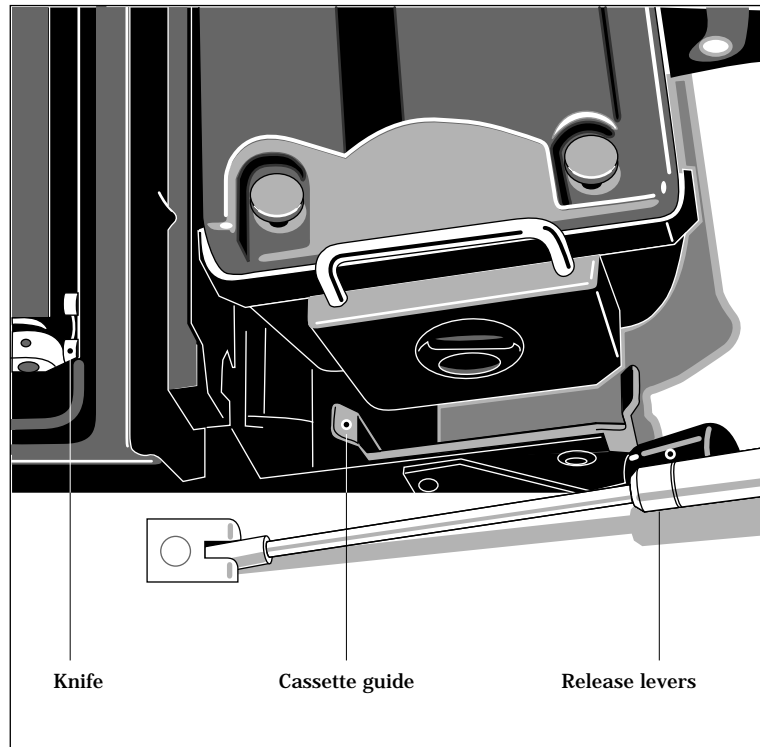
■ Loading the Material

Before loading the photomaterial, be sure the following
requirements are met:

■ no material is in the supply cassette

■ no take-up cassette is in place. If you did not remove the last
  cassette used, the input panel displays: "REMOVE TAKEUP
  CASS".

Load the photomaterial cassette with the following procedure:

1. Open the supply cassette by pressing the locking pegs, and remove
   the material core.

Opened supply cassette with shaft
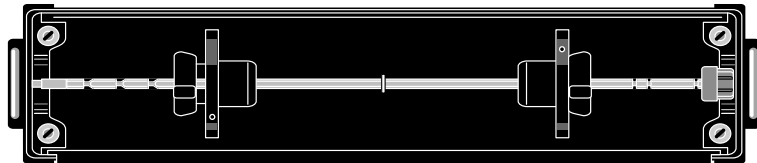
2. Release the pressure lever to free the right flanged wheel, located
   on the coupling side, and adjust the wheel to the desired material
   width.

The corresponding value is engraved immediately to the left of the flanged wheel. Make slight adjustments with the pressure lever released until the flanged wheel locks into the appropriate notch on the shaft.

Adjusting the flanged wheel to the desired width

Attention: Perform steps 3 to 9 in the dark or in green light. Follow also the instructions given by the manufacturer of the photographic material.

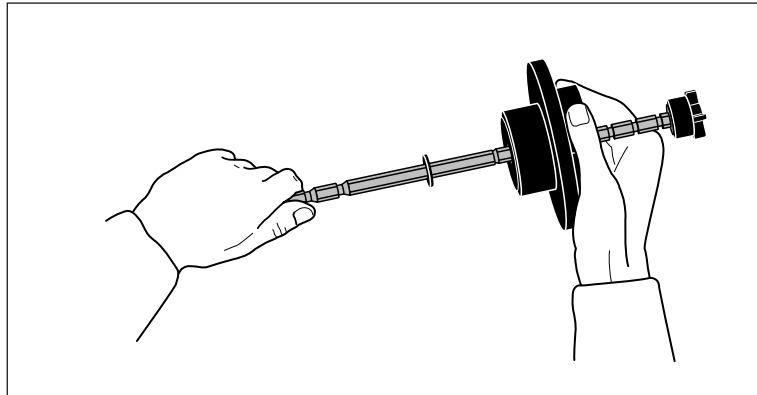3. Remove the photomaterial packaging, keeping the cassette in front of you and the material exit facing away from you. Adhesive tape prevents the material from unreeling off the roll.

4. Loosen the left flanged wheel with your left hand (with the right flanged wheel in your right hand), and pull it off the shaft.

5. Slide the material roll onto the shaft, and push it over the slip-on cone of the right flanged wheel.

6. Press the lever of the left flanged wheel and hold it down. Then slide the wheel onto the shaft until it has reached the material roll.

7. Release the lever and push the flanged wheel against the spring resistance until it locks into the notch on the shaft.

8. Insert the shaft with the material into the cassette.The material exit faces away from you and the coupling is to your right. If the material has been loaded correctly, it should unreel over the roll to the exit slot after you have removed the adhesive tape. The material should not protrude from the exit slot by more than 5 cm (2 inches).

Cassette with inserted material

9. Place the cover onto the cassette with the handle close to the material exit side, and close the cassette by pressing the four locking pegs. Carefully try lifting the cover to be sure it is securely closed and that all locking pegs have fastened it properly.

10. Place the supply cassette into its compartment. Position it with the front side resting on the bottom and the material width marker and material exit slot facing upwards.

Supply cassette placed in the compartment
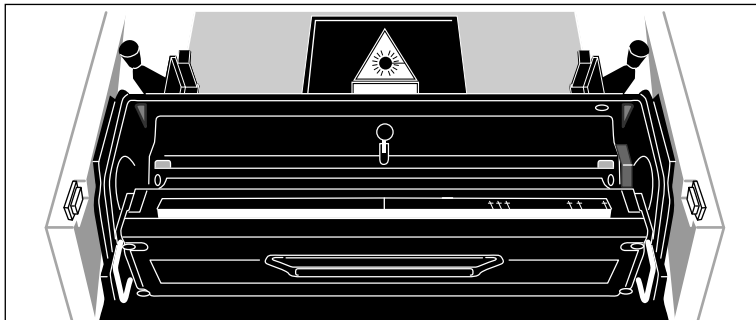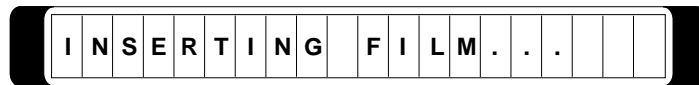
11. Pull some more of the material out of the cassette, and place it at the material width markers of the cassette and the material feed slot. Use both hands in order to pull the material evenly.

Film

12. **Press the Material Feed key (function key). The control panel displays the following messages:**

```
L O A D I N G   F I L M
```

```
I N S E R T I N G   F I L M . . .
```

13. **Slide the material into the feed slot until it is caught by the material feed mechanism.**

14. **Turn the cassette to its home position while the material is loading. Do not rush! Let the tension created by the material feed rollers guide you.**
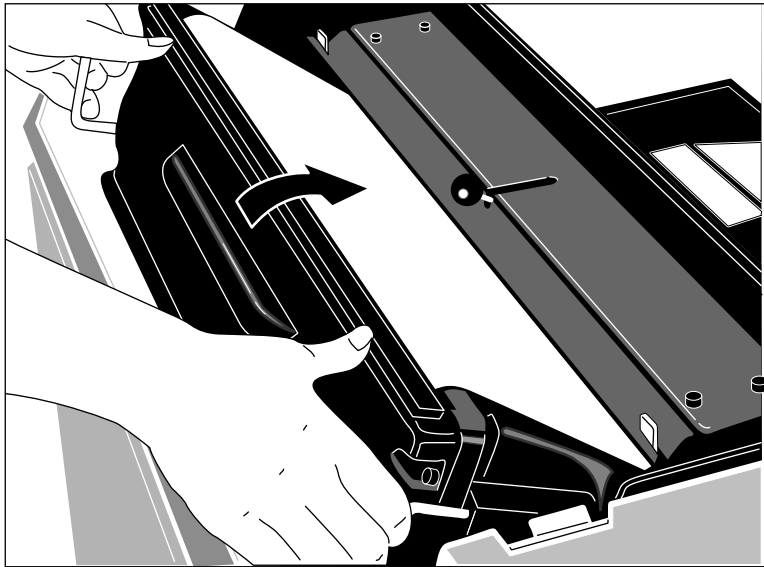
15. **Wait until the message "ADJUST FILM!" appears:**

| A | D | J | U | S | T | | F | I | L | M | ! | | | | | | |

This is to correct material that may have loaded unevenly.

16. **To release the capstans for adjusting the material pull the red lever (on the right) to the left.**
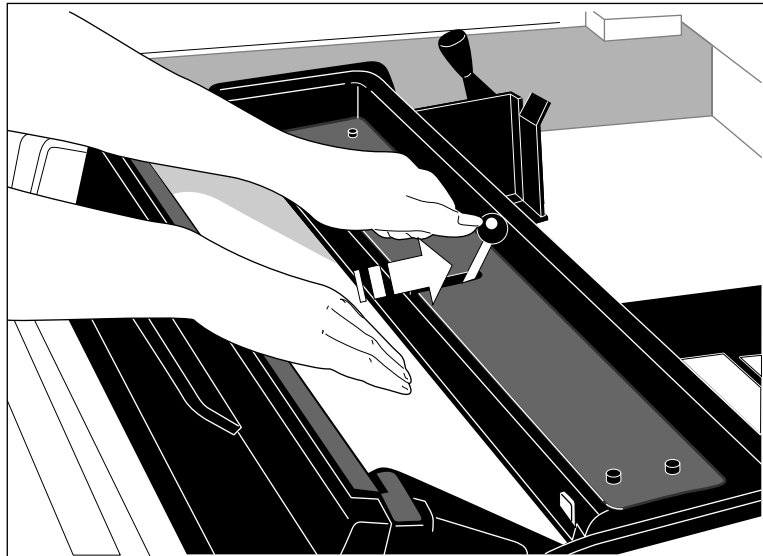
17. **Tighten the material in the take-up cassette compartment. Be sure the material is unbuckled and fed from the supply cassette evenly on both sides.**

18. **Reset the red lever. An audible click indicates that the lever is in position to lock the capstans again.**

19. **Install the light protective cover over the supply cassette.**

20. **Press the Material Feed key again. The following message appears:**

Film

C O N T I N U E   F I L M   L O A D
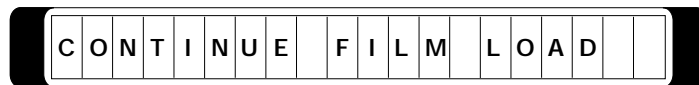
21. Wait until the following message appears:

```
F I L M   L O A D   D O N E
```
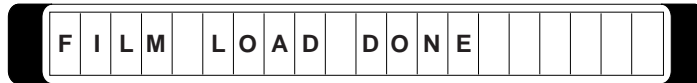
Material loading is complete. The material advances and is automatically cut. Remove and discard the cut-off material strip from the take-up cassette compartment.

22. Close the top cover of the supply cassette compartment.

23. Check the defined material parameters, for example, the material counter, material width, material thickness (see the section *FILM DEF – Material Definition* or the section *MEMO – Store Material Parameters* in Chapter 6).

■ Correcting the Material Feed

STOP

Film

If during the material feed you realize the material is not fed in evenly but is buckled, you may stop the feed sequence by pressing the STOP key (function key).

Start a material backfeed by pressing the Material Backfeed key. The message "FILM UNLOADING" appears. When the message "FILM UNLOAD DONE" appears, the backfeed is complete. Then, you can repeat the loading procedure.

■   **Inserting the Take-Up Cassette**

After the material is loaded, the next step is to insert an empty take-up cassette to hold exposed jobs.

1. Lift the cover of the take-up cassette compartment until it catches in the open position.

2. Tilt the cassette slightly upwards and slide it onto the guiding rails.

3. Pull the cassette home until it clicks into the holders on both sides.

4. Close the cover of the take-up cassette compartment.

■ Removing the Material

The standard take-up cassette supplied with the Ultre 4800 image-setter is for maximum 30 m (98 feet) of exposed photographic material (depending on the type of material).

However, you must remove the take-up cassette when it is full or when you have reached the end of your material.

▪ Removing the Material After Exposure

1. Press the Cut key or enter the corresponding command from your front-end.

   The the following message appears:

   | C | U | T | T | I | N | G | | F | I | L | M | | | | | | | | |

   The exposed material is fed into the take-up cassette and is then cut.

   When the cut is completed, the following message appears:

   | F | I | L | M | | C | U | T | | D | O | N | E | | | | | | | |
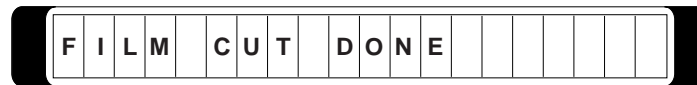
2. Open the top cover of the take-up cassette compartment after the above two messages have appeared.

3. Press the two levers located on the right and left of the cassette to release it.
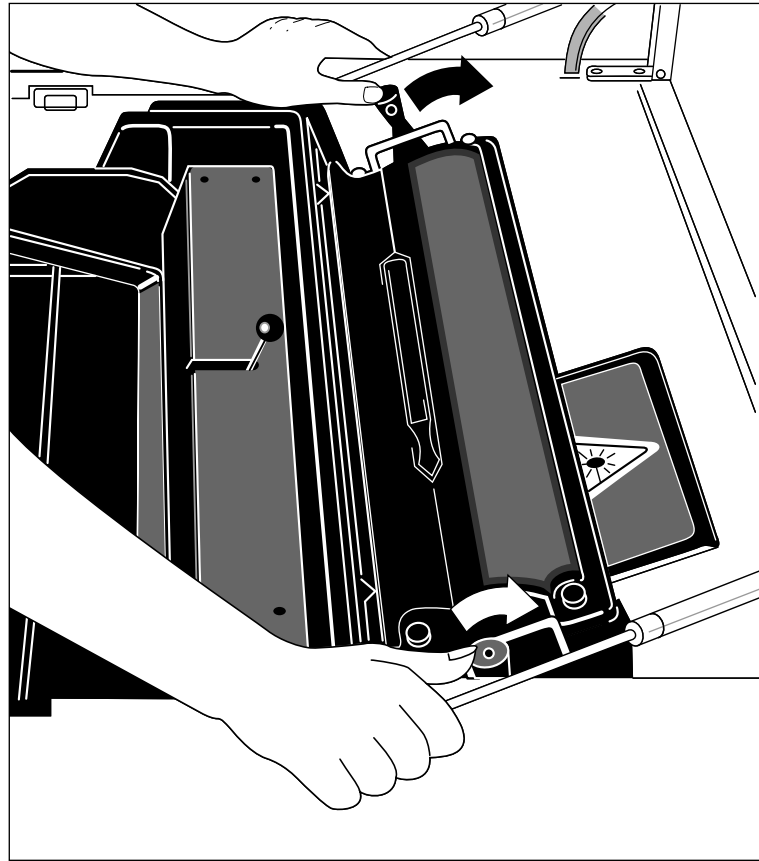
4. Remove the full cassette.

5. Insert an empty take-up cassette (see the section *Loading the Material* earlier in this Chapter).

■ **Removing the Material Under Special Conditions**

▨ Full Take-Up Cassette

The following message appears:

T	A	K	E	-	U	P		C	A	S	S		F	U	L	L			j

This message appears when the maximum capacity of the take-up cassette is exceeded during the processing of a job or before a job is processed.

Cut the material and remove the take-up cassette.

▨ End of Material

A warning message appears when a predetermined distance from the end of the material is reached provided you entered a value in the "FILM DEF" menu. See also the section *FILM DEF – Material Definition* in Chapter 6.

W	A	R	N	I	N	G		E	N	D		O	F		F	I	L	M

When the physical end of material is reached, the following message appears:

N	O		F	I	L	M		S	U	P	P	L	Y					j

In this case, you can remove the take-up cassette immediately.

■ **Opening the Take-Up Cassette**

If the material has not fed in correctly, or if it is buckled, you have to open the take-up cassette.

1. Press the Material Advance key.

2. When the material feed is terminated press the Cut key.

3. Lift the cover of the take-up cassette compartment until it catches in the open position.

4. Remove the take-up cassette.

5. To open the take-up cassette, release the cassette fasteners by lifting them upwards and sliding them outwards over the cover lids.

6. Remove the top cover of the cassette.

7. Remove the spring pin located in the center. Now you can remove the creased material.

8. Reinstall the spring pin in the cassette and close the cassette again.

9. Push the take-up cassette back into its guide rails, and close the cover of the take-up cassette compartment.

■ Changing the Material

■ Changing the Supply Cassette

You may need to change the photomaterial during the production process, if another type of material has been loaded previously.

1. Cut the material, and remove the take-up cassette.

    If you do not remove the cassette, the control panel shows the message "REMOVE TAKEUP CASS" after the cut is complete.

2. Before the supply cassette can be removed, the material in the feed mechanism must be returned into the supply cassette. To do so, press the Material Backfeed key on the front panel.

    When the feed mechanism has released the end of the material, the supply cassette can be removed.

3. Insert the new cassette and feed the material as described in the section *Loading Material*. If material with a different width has been inserted, the material width has to be adjusted accordingly (see the section *FILM DEF – Material Definitions* in Chapter 6).

■ Changing the Material in the Supply Cassette

You can insert another material into a supply cassette by removing the existing photomaterial. Do this in a dark room in complete darkness or with green light.

1. Place the supply cassette in front of you with the material exit facing away from you.

2. Press the locking pegs to loosen the cover of the supply cassette.

3. Remove the cover and shaft with the material roll.

Opened supply cassette with the in-
serted material roll

4. Hold the shaft at the right flanged wheel, loosen the left flange
    wheel using the pressure lever, and let it slide off the wheel.

Cassette shaft with the material roll
on it and the removed left-hand
flanged wheel
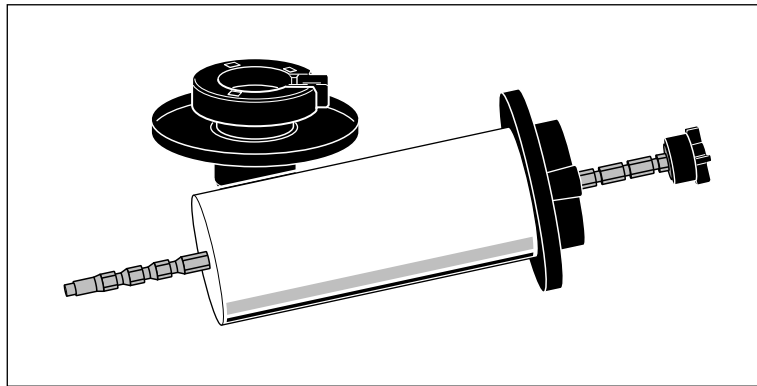
5. Remove the material roll from the shaft and store it in a light-proof
    container.

6. Adjust the right flanged wheel to the new material width. You may
    find it necessary to do this in a fully lit room.

7. Follow the procedure from step 2 of the section *Loading the
    Material* earlier in this chapter.

Imagesetter Functions

6

■ Starting the Output

Before you start imaging, be sure that the following conditions are met:

- the imagesetter has been switched on
- the system initialization has been successfully completed
- the parameters required for output in LI 5 mode have been defined.(Refer to Interface Setting in this chapter)
- the imagesetter is idle and ready to receive data.

▩ LI 5 Mode

For the LI 5 mode, the Ultre 4800 is controlled by UltreRIP. You start imaging from a front-end via the UltreRIP. In this mode, the operating mode field of the Ultre 4800 shows the character L **along with the symbol for active processing** (∗)**, instead of the** **L** **that indicates the Ultre 4800 being idle. The example below illustrates this procedure as follows:**

The imagesetter is idle:

| L | | | M | 1 | | F | | | 1 | 9 | . | 8 | 6 | m | | | j |
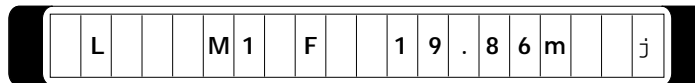
You start the output from your front-end.

The following message appears:

| I | M | A | G | I | N | G | | | | | | | | | | | |

After a few seconds, default message 1 appears:

| L | | * | | M | 1 | | F | | | 1 | 9 | . | 6 | 4 | m | | | j |
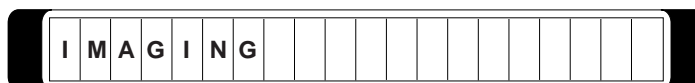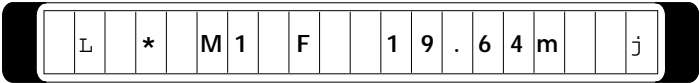
Note: While the imagesetting process is active, you cannot change any parameters. If you press any key during this process, the following message indicates that the imagesetting process is still running:

| P | R | O | C | E | S | S | | A | C | T | I | V | E | | | | | |

The end of imagesetting is shown as follows:

| I | | M | A | G | I | N | G | | D | O | N | E | | | | | | |
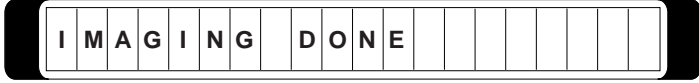
The imagesetter is idle again:

| L | | | | M | 1 | | F | | | 1 | 9 | . | 3 | 6 | m | | | j |
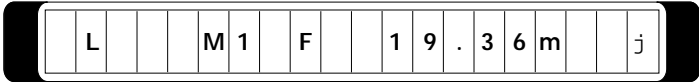
■ General Controls

The following functions are under the control of the UltreRip software but can be set from the Ultre 4800 control panel to be used for imagesetter diagnostic purposes:

- resolution
  (see the section *Resolution* in this chapter)

- density
  (see the section *Density* in this chapter)

- imaging mode (right and wrong reading)
  (see the section *Imaging Mode* in this chapter)

- output position parameters
  (see the section *Output Position Parameters* in this chapter)

- material feeds and cuts
  (see the section *Miscellaneous Functions* in this chapter)

■ Resolution

The resolution of the Ultre 4800 imagesetter is under the control of the UltreRip **Page Setup** dialog box. This UltreRip resolution selection will override any setting programmed from the Ultre 4800 control panel (Refer to the UltreRip User Manual for more detailed information).

The following resolutions are available:

Available resolutions (vertical and horizontal directions)

1333 Pixel/cm	3387 dpi *
1000 Pixel/cm	2540 dpi *
800 Pixel/cm	2032 dpi *
666 Pixel/cm	1693 dpi
500 Pixel/cm	1270 dpi
400 Pixel/cm	1016 dpi
333 Pixel/cm	846 dpi

(The resolution steps marked with an * can only be used in LI 2 asynchronous mode with a 16 MHz clock.)

■ Density

Under normal conditions, the density of the Ultre 4800 imagesetter is under the control of the UltreRip **Page Setup** dialog box. This UltreRip density setting will override any setting programmed from the Ultre 4800 control panel. (Refer to the UltreRip User Manual for more detailed information)

For imagesetter diagnostics, refer to pages 6-7, 6-8 and 6-24 in this section

i   Note: The density of the photographic material depends not only on the light intensity, but also on the sensitivity of the material, on the processor, and on the chemicals used for developing. To determine the most suitable value, you must perform a series of test exposures (see the section *TEST – Test Functions* later in this chapter and the UltreRip User Manual). If you decide to use the photographic material of a different manufacturer, you must perform the test exposures again to determine the density for the new material.

The following example shows how to define the density for a specific material at a specific resolution from the control panel.
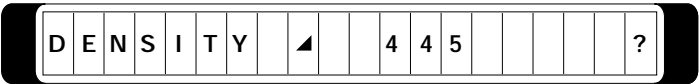
1. Press the Density key. A message appears indicating the current density:

| D | E | N | S | I | T | Y | | ◢ | | 5 | 0 | 0 | | | | ? |

? = You can enter a numeric value by using the keys marked 0–9 and the decimal point (.). Entries can range from 000 (white) to 999 (black).

Assuming you previously exposed a test bar and the density was too high, you now want to change the setting to 445.

2. Enter 4, 4, and 5. The following message appears:

| D | E | N | S | I | T | Y | | ◢ | | 4 | 4 | 5 | | | | ? |

3. Save the new value by pressing the SHIFT and then the SAVE key. Default message 1 appears:

| | L | | | M | 1 | | F | | 7 | 0 | ' | 0 | " | | | j |
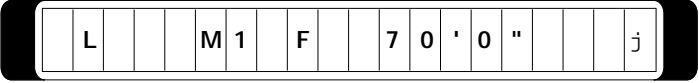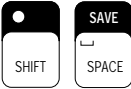
4. Press the Return key. Default message 2 appears, indicating that the density is now set to 445:

| ≡ | | 6 | 3 | 5 | | | ◢ | 4 | 4 | 5 | | | W | 1 | 2 | | | j |
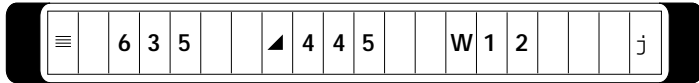
Again expose a test bar. This shows that the density value 445 is too low for your work. So continue to step 5.

5. Press the density key again. The following message appears:

| D | E | N | S | I | T | Y | ◢ | | 4 | 4 | 5 | | | | ? |
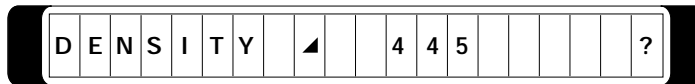
Now select 450 as the new value.

6. Enter the numbers 4, 5, 0. The following message appears:

| D | E | N | S | I | T | Y | ◢ | | 4 | 5 | 0 | | | | ? |
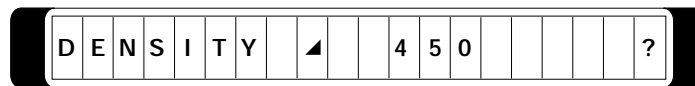
Expose another test bar. If this value meets your specific requirements, finish the settings within this menu with step 7. Otherwise repeat the procedure until you achieve the optimum density.

7. Save your entries by pressing SHIFT-SAVE. The following message appears:

| L | | | M | 1 | F | | 6 | 9 | ' | 4 | " | | | j |
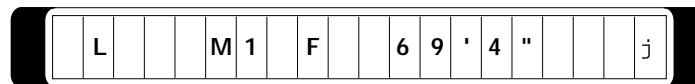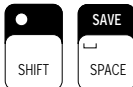
8. Press the Return key. The default message 2 appears, indicating that the density is now set to 450.

| ≡ | 6 | 3 | 5 | | ◢ | 4 | 5 | 0 | | W | 1 | 2 | | j |
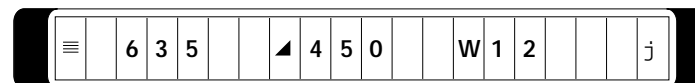
This completes defining the density.

■ Imaging Mode

The great variety of printing techniques in use today requires different kinds of imaging modes such as positive or negative output, right or wrong reading.

The imaging mode of the Ultre 4800 imagesetter is under the control of the UltreRip **Page Setup** dialog box. (Refer to the UltreRip Users manual for more detailed information.)

■ Output Position Parameters

The Ultre 4800 imagesetter output position parameters are under the control of the UltreRip **Page Setup** dialog box. (Refer to the UltreRip User Manual for more detailed information).

■ **Overview of Position Parameters**
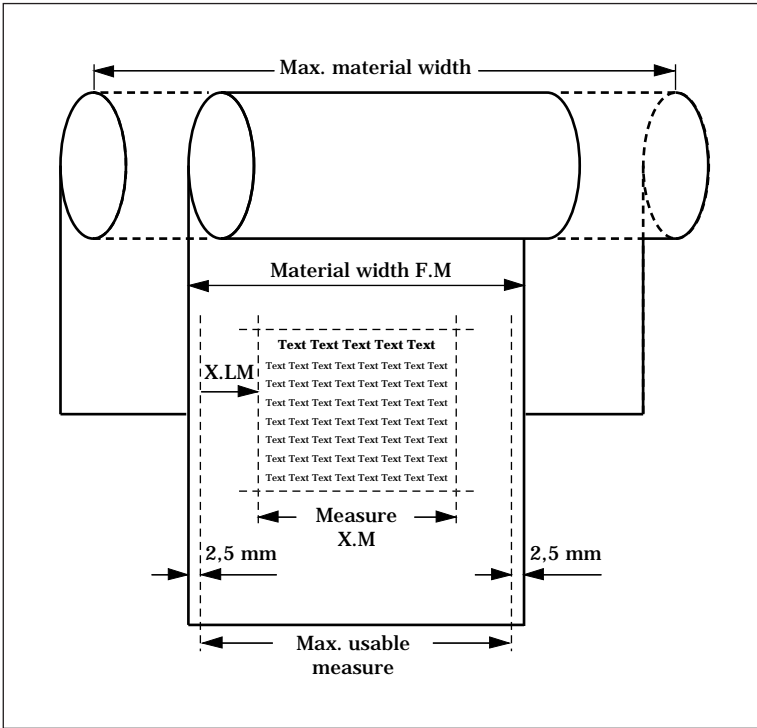
Note: The Ultre 4800 requires a margin of 2.5 mm (0.1 in.) on both outer edges of the material in order to transport the material. This area is not available for exposure.

■ MISC – Miscellaneous Functions

The following parameters can be defined in the "MISC – Miscellaneous Functions" menu:

■ audible signals on/off (SOUND ON/OFF)

■ material advance before a job and/or between jobs

■ output mode (B/W MODE or COLOUR SEP MODE)

■ automatic or manual cut choice (with on-line processor only)

■ measuring units (metric or inches)

The entries for the various functions are described on the following pages.

The "MISC – Miscellaneous Functions" menu is accessed by using the MISC key. When you first press the MISC key, the control panel shows the default message for the audible signal setting, that is usually SOUND ON.

Whenever you subsequently press the Return key, you toggle to the next function in the "MISC – Miscellaneous Functions" menu.

A question mark (?) in the display means you can enter a numeric value by using the corresponding keys. The SPACE key symbol (␣) indicates that you can toggle between multiple settings by using the SPACE key.

To exit the menu and to save any changes made to the settings in the menu, press the SHIFT key and then the SAVE key. To keep the original settings, press the SHIFT key and then the STOP key. Any changes made to the settings in the menu will be ignored.

■   **Audible Signals On/Off**

This function provides audible signals to alert you when specific processes in the Ultre 4800 imagesetter are active (for example, "advance done", "cut done", etc.). The audible signals can be switched on or off by using the procedure described below.

The following example shows how to switch off the audible signals.

1. Press the MISC key. The following message appears:
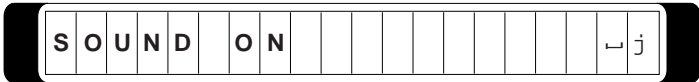
S	O	U	N	D		O	N									⊔	j

The audible signals are usually set to ON (SOUND ON).

2. To switch off the audible signals, press the SPACE key. The following message appears:

S	O	U	N	D		O	F	F								⊔	j

The setting changes to SOUND OFF. (You can toggle between SOUND OFF and SOUND ON using the SPACE key.)

■ **Advance between Jobs**

The amount of automatic advance between two jobs can be defined by using this function.

Advance
between
two jobs
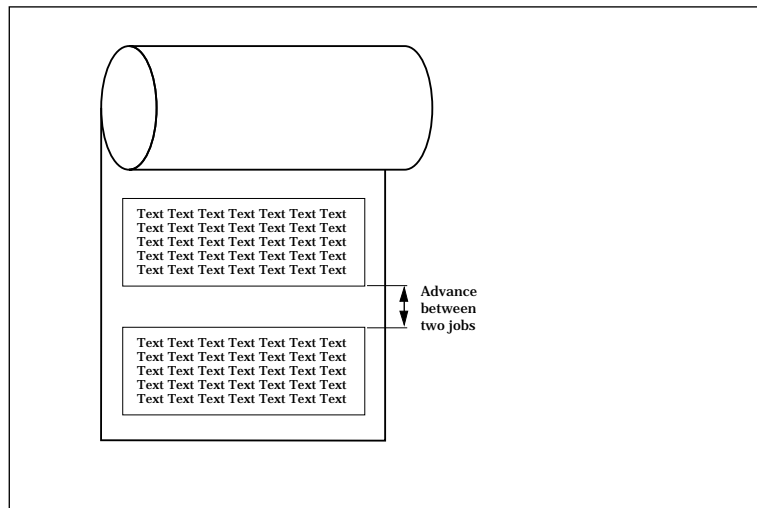
The following example shows how to set the advance between jobs to 5 mm (0.12 in.)

1. Press the Return key. The following message appears:
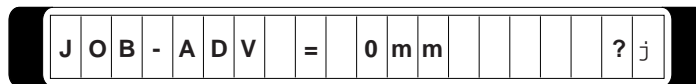
0 = No advance between jobs.

? = You can enter a numeric value using the keys marked 0–9 and the decimal point (.). Entries can range from 0 mm to 500 mm (0 in. to 20 in.).

2. To change the advance to 5 mm (0.12 in.), enter 5. The following message appears:
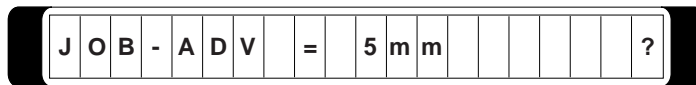
```
J O B - A D V   =   5 m m           ?
```

3. To exit the menu, save the changes by pressing the SHIFT key and then the SAVE key. To exit the menu without saving the changes, press the SHIFT key and then the STOP key.

   If you want to continue with the menu settings, press the Return key to access the next function.

■ **Output Mode**

You can choose between the following output modes:

■ black-and-white mode (B/W MODE).

■ color separation mode (COLOUR SEP MODE).

▢ B/W MODE

Black-and-white mode is the standard output mode of the Ultre 4800. You can use the black-and-white mode for "normal" typesetting, or imagesetting work such as text, graphics, jobbing work.

■ COLOUR SEP MODE

Color separation mode is only used for multiple exposures that must precisely align with one upon the other, for example, color separations.

The following example shows how to change the output mode.

1. **Press the Return key. The following message appears:**

| B | / W | | M | O | D | E | | | | | | | | | ↵ | j |
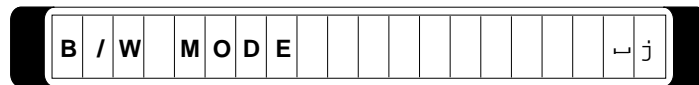
2. **To change to "COLOUR SEP MODE", press the SPACE key. The following message appears:**

| C | O | L | O | U | R | | S | E | P | | M | O | D | E | | | ↵ | j |

3. **To exit the menu, save the changes by pressing the SHIFT key and then the SAVE key. To exit the menu without saving the changes, press the SHIFT key and then the STOP key.**

   If you want to continue with the menu settings, press the Return key to access the next function.

▪   **Units of Measure**

Parameters can be displayed either in feet and inches or in metric units. The default measurement system of the Ultre 4800 is metric.

The following example shows how to change the units of measure from metric units to feet and inches.

1. Press the Return key again. The display indicates the current units of measure:

```
M E A S U R E M E N T > M E T R I C ⏎ j
```
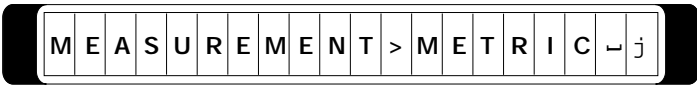
2. Press the SPACE key to change to feet and inches. The following message appears:

```
M E A S U R E M E N T > I N C H     ⏎ j
```
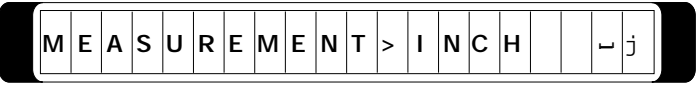
You have now selected "inches". (You can toggle between metric units and feet and inches by using the SPACE key .)

The settings of all measurement parameters are converted automatically to the selected units of measure and are displayed on the control panel. Subsequent entries appear in the units of measure currently selected.

The following example shows how different units of measure are displayed in default message 1.

Default message 1 – metric units:

```
L     M 1  Ⅎ    3 6 . 3 0 m    j
```

Default message 1 – units in feet and inches:

```
L     M 1  Ⅎ    1 1 9 ' 1 "    j
```
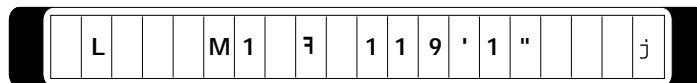
3. After making all changes, exit the menu either by pressing the SHIFT key and then the SAVE key (the changes are saved), or by pressing the SHIFT key and then the STOP key (the changes are not saved).

This completes your work in the "MISC – Miscellaneous Functions" menu.

■ Material Advance

The material advance of the Ultre 4800 imagesetter is under the control of a pull down menu in the UltreRip and allows advances of one, three and six inches. In addition, the UltreRip **Media Manager** dialog box provides further flexibility in controlling material advances (Refer to the UltreRip User Manual for more detailed information).

A second method described below is to use the material advance key on the control panel of the imagesetter.

Press this key to advance the material. The Material Advance key is also used to define the distance that the material advances whenever the key is pressed.

The following example shows how to set the material advance to 200 mm (7.87 in.).

1. Press the Shift key and then the Material Advance key. The current value for the material advance appears.
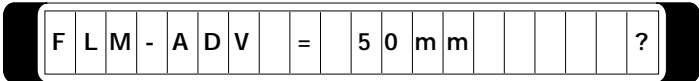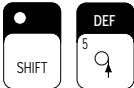
| F | L | M | - | A | D | V | | = | | 5 | 0 | m | m | | | | | ? |

? = You can enter a numeric value using the keys marked 0–9 and the decimal point (.). Entries can range from 1 mm to 500 mm (0.04 in. to 20 in.).

2. Enter 6 and 0. The following message appears:

| F | L | M | - | A | D | V | | = | | 2 | 0 | 0 | m | m | | | | ? |

3. Press the SHIFT key and then the SAVE key to save the value entered. The system default message 1 appears again.

| | L | | | M | 2 | | | | | 2 | 9 | . | 5 | 7 | m | | | j |
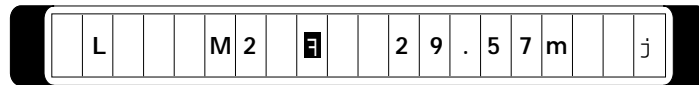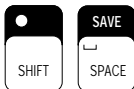
■ Material Cut

The material cut of the Ultre 4800 imagesetter is under the control of a pull down menu in the UltreRip and allows a cut with film feed and cut with no film feed. In addition, the UltreRip **Media Manager** dialog box provides further flexibility in controlling material cuts. (Refer to the UltreRip User Manual for more detailed information)
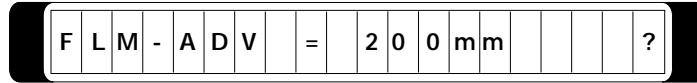
A second method described below is to use the cut key on the control panel of the imagesetter.

Use this key to cut the material. The Material Cut key automatically advances the material before cutting it. The material advance is necessary to transport the full length of the exposed material into the supply cassette. The material must be cut before the take-up cassette can be removed.

To cut the material:

1. Press the Material Cut key. The following message appears:

```
C U T T I N G   F I L M
```

When the cutting procedure has been completed, the following message appears:

```
F I L M   C U T   D O N E
```
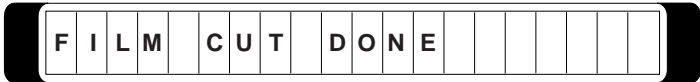
If default message 1 appears instead of "FILM CUT DONE", check that the material has been cut by pressing the scroll "Backward" key. The display must then show the message "FILM CUT DONE".

2. Remove the take-up cassette. If you do not remove the cassette, the message "CHANGE TAKE-UP CASS" appears.
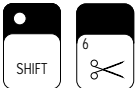
With the SHIFT and Cut keys, there is an additional function that cuts the material without causing an automatic advance. You can use this function when removing the supply cassette if you realize that you did not press the Cut key. Pressing the SHIFT key and then the Cut key cuts the material without causing any advance.

Attention: If you do use the SHIFT-Cut function, be careful that you do not cut an exposed document. For this reason, be sure to use this function only when it is absolutely necessary.

■ INTERFACE – Interface Setting

The "INTERFACE" menu is used to define the imagesetter's external connections (LI 2 and LI 5 interfaces) for the data communication between the UltreRIP and the Ultre 4800.

The interface definition is determined by a qualified service technician..

LI2	LI5
VIA LI 5	BAUD RATE = 9600
ASYNCHRONOUS	BIT/CHAR = 8
R_CLOCK = 16/8 MHZ	STOP_BIT = 1
	PARITY = NO
	FLOW-CTRL = RTS/CTS

■ TEST – Test Functions

The test functions of the Ultre 4800 imagesetter can be defined

■ by using the TEST key on the control panel of the imagesetter

The method is described below.

Pressing the TEST key accesses a menu from which the following test functions can be started:

8
TEST

■ Output a test bar to determine the current density. The density corresponds to the value defined for the selected resolution.

■ Output the density job. The density job shows all light intensity steps available for the Ultre 4800.

■ Test the Ultre 4800 imagesetter itself.

■   **Outputting a Test Bar**

To output a test bar:

1. Press the TEST key. The following message appears:

| C | U | R | R | | D | E | N | S | I | T | Y | | (| S | T | R | T |) | ␣ |

2. Press the START key to start the imaging of the test bar. The following message appears:

| C | U | R | R | | D | E | N | S | I | T | Y | | S | T | A | R | T | E | D |

The Ultre 4800 is now exposing the test bar. While this occurs, default message 1 remains displayed:

| | P | | * | M | 2 | Ⅎ | | 2 | 9 | . | 9 | 5 | m | | | ⌐ |

When the test bar job has been fully exposed, the following message appears:

| C | U | R | R | | D | E | N | S | I | T | Y | | D | O | N | E | | | |

An example of an exposed and developed test bar is shown below:

Measure and read the current density of your test bar using a densitometer. In the "Density" menu (see the section *Density* earlier in this chapter), enter the light intensity value that corresponds to the measured density of the test bar.

■ **Outputting the Density Test Job**

1. Press the TEST key. The following message appears:

| C | U | R | R | | D | E | N | S | I | T | Y | | (| S | T | R | T |) | ␣ |

2. Press the SPACE key. The following message appears:
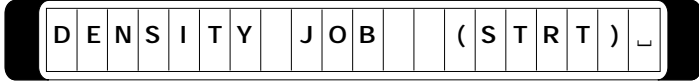
| D | E | N | S | I | T | Y | | J | O | B | | | (| S | T | R | T |) | ␣ |

3. Press the START key to start the density job. The following message appears:

| D | E | N | S | I | T | Y | | J | O | B | | S | T | A | R | T | E | D |
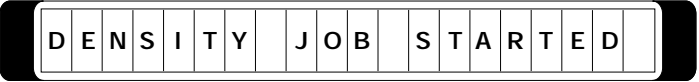
The density test job consists of a series of test bars beginning with a density of 790. This value decreases from test bar to test bar, down to the minimum value 030 in the following decremental steps:

790, 760, 730, 690 ... 130, 090, 060, 030.

During the exposure of each test bar, the display shows the value for the test bar just exposed, for example, 790.

```
I M A G I N G   ◢ 7 9 0 . . .
```
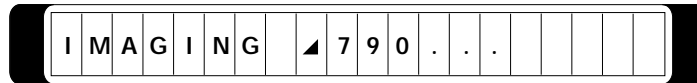
When the density test job has been fully exposed, the following message appears:

```
D E N S I T Y   J O B   D O N E
```

Depending on how long the laser has been in operation, the lower bars may disappear. In this case, the density test job will be finished with one of two messages:

```
W A R N I N G >   D E N S I T Y
```

or:

```
N O   L I G H T >   D E N S I T Y
```
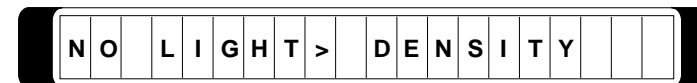
However, you can ignore these messages.

Output example of a density job

790*
760*
730*
690*
660*
.
.
.
.
.
.
.
.
.
.
160*
130*
090*
060*
030*
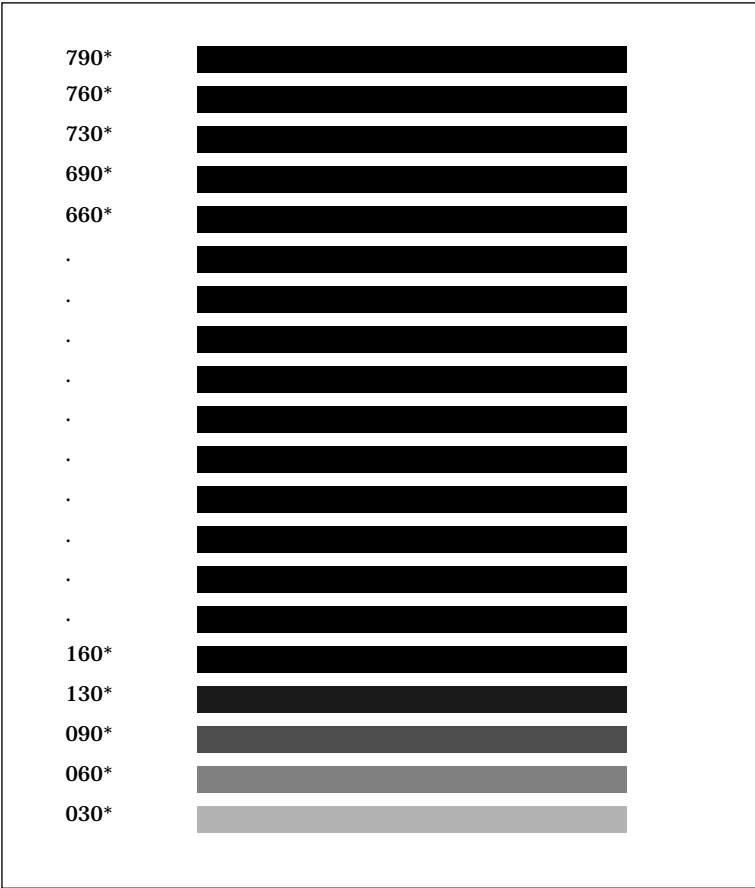
* **These numbers do not appear on the output. They are for reference only.**

███ **Determining the Density**

Under normal conditions, density settings are under the control of the UltreRip **Page Setup** dialog box. A text box labeled **Exposure** is used for this purpose (Refer to the UltreRip User Manual for more detailed information).

(For imagesetter diagnostics, see the section *Density* earlier in this chapter).

███ **Density Graph**

The following graph is a purely schematic representation. It illustrates only the relationship between the logarithmic density of the photographic material and the value allocated to the test bars of the density output. For this reason, there are no figures stated for the logarithmic density.

Therefore, the density of your specific material, measured in relation to a defined density value (light value setting), only applies to this material.
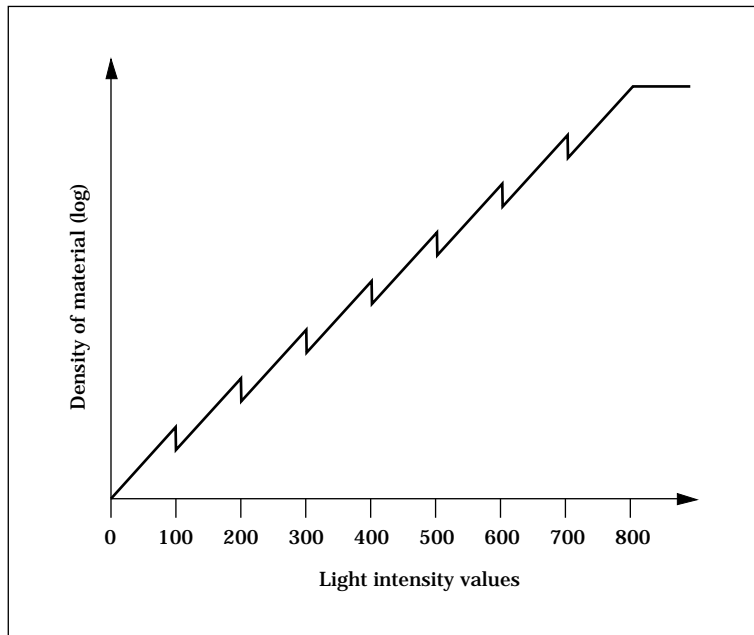
The "steps" around the values 100, 200, etc. have been "installed" for technical reasons (change to the next filter wheel). Otherwise, there would be gaps. In other words, certain values within the range of these "steps" would be ignored. With these "steps" it may therefore happen that the values 395 and 405, for example, result in identical logarithmic densities. However, this depends on the photographic material, on the chemicals used for developing, etc.

The value 799 corresponds to the maximum density. If you enter the value 850, for example, there will be no further change of density.

■   **Ultre 4800 Function Test**

The TEST key can also be used to test the functions of the Ultre 4800. You can run the test any time without special preparations.

1. Press the TEST key. The following message appears:

```
8
TEST
```

| C | U | R | R | | D | E | N | S | I | T | Y | | (| S | T | R | T |) | ␣ |

2. Press the SPACE key. The following message appears:

```
SAVE
␣
SPACE
```

| D | E | N | S | I | T | Y | | J | O | B | | | (| S | T | R | T |) | ␣ |

3. Press the SPACE key again. The following message appears:

```
SAVE
␣
SPACE
```

| R | E | C | - | T | E | S | T | | | | (| S | T | R | T |) | ␣ |

```
STOP
•
START
```

4. Press the START key. This starts a function test for the Ultre 4800 imagesetter. When the test job is run, all defined parameters are taken into account. These include:

   ■ the resolution

   ■ the density

   ■ the imaging modes (positive / negative / right reading / wrong reading)

   ■ the parameters defined in the "FILM DEF – Material Definitions" menu

   ■ the advance between jobs (defined in the "MISC – Miscellaneous Functions" menu).

The following message appears on the display:

| T | E | S | T | | I | M | A | G | I | N | G | | | | | |

After a few seconds, default message 1 appears again, indicating that imaging is in progress:

| | P | | * | | M | 2 | Ⴈ | | | 2 | 9 | . | 6 | 8 | m | | | j |

When the test has been completed, the following message appears:

| T | E | S | T | | I | M | A | G | I | N | G | | D | O | N | E | | | |

A few seconds later, the default message 1 reappears:

| | P | | | | M | 2 | Ⴈ | | | 2 | 9 | . | 6 | 4 | m | | | j |
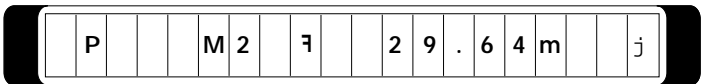
4. Remove the take-up cassette (see the section *Removing the Material* in Chapter 5). Develop the exposed material in your processor. Then compare the processed output with the test pattern shown on the next page.

◼ **Test Pattern**

For this test pattern example, the following parameters have been selected:

```
LTC-RECORDER    LTC-RECORDER    LTC-RECORDER    LTC-RECORDER    LTC-RECORDER
LTC-RECORDER    LTC-RECORDER    LTC-RECORDER    LTC-RECORDER    LTC-RECORDER
LTC-RECORDER    LTC-RECORDER    LTC-RECORDER    LTC-RECORDER    LTC-RECORDER
LTC-RECORDER    LTC-RECORDER    LTC-RECORDER    LTC-RECORDER    LTC-RECORDER
LTC-RECORDER    LTC-RECORDER    LTC-RECORDER    LTC-RECORDER    LTC-RECORDER
LTC-RECORDER    LTC-RECORDER    LTC-RECORDER    LTC-RECORDER    LTC-RECORDER
LTC-RECORDER    LTC-RECORDER    LTC-RECORDER    LTC-RECORDER    LTC-RECORDER
LTC-RECORDER    LTC-RECORDER    LTC-RECORDER    LTC-RECORDER    LTC-RECORDER
```
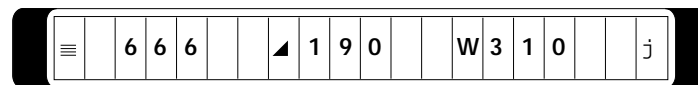
- ◼ resolution: 1693 dpi (666 pixels/cm)

- ◼ imaging mode: right-reading, positive.

These parameters appear in the default messages 1 and 2.

Default message 1:

```
| P |   | M | 2 | Ⴑ |   | 2 | 9 | . | 6 | 4 | m |   | j |
```
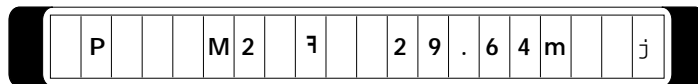
Press the Return key to show the default message 2 with the current parameters for resolution, density and material width:

```
| ≡ | 6 | 6 | 6 |   | ◢ | 1 | 9 | 0 |   | W | 3 | 1 | 0 |   | j |
```

7
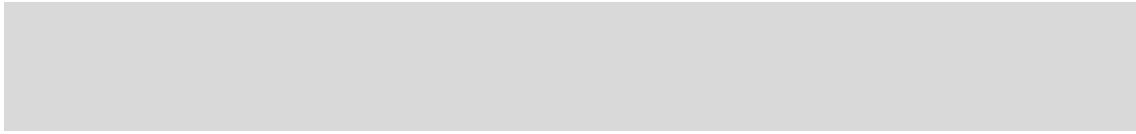
Messages

■ General Messages and Error Messages

The messages, error messages, and error situations described below can occur during the operation of the Ultre 4800.

Note: In the explanatory notes to the error messages, you are sometimes requested to contact the support service. In this case call your local Customer Support Department or distributor.

▦ Plain-Text Messages

The following plain-text messages can appear on the display of the Ultre 4800 operating panel. The messages are listed in alphabetical order.

■ ABORT FILM LOAD

Material loading aborted. No material has been inserted or the material has not been caught by the material feed mechanism.

Repeat loading the material.

■ ADJUST FILM!

Requesting you to adjust the material.

Pull the right-hand red lever on the material feed mechanism. Adjust material. Push the red lever.

■ ALREADY FILM

Information: The material has already been loaded.

■ **CHANGE TAKE-UP CASS**

Change take-up cassette. The take-up cassette was not removed after the material was cut.

Remove the take-up cassette. Develop the material. Insert an empty take-up cassette.

■ **CHECK CUTTER POS**

Cutting knife not in its end position.

Press the Reset keys.

■ **CONTINUE FILM LOAD**

Material loading is continued. Advancing and cutting the material.

■ **CURR DENSITY DONE**

Test job with current density has been completed.

■ **CURR DENSITY STARTED**

Test job with current density has been started.

■ **CUT BEFORE UNLOAD**

Material unloading has been aborted. The exposed material has not yet been cut. The material must be cut before unloading.

Cut the material. Repeat FILM UNLOADING.

■ **DENSITY JOB DONE**

Density job has been completed.

■ **DENSITY JOB STARTED**

Density job has been started.

■ **DENSITY > TIME OUT**

Contact your local Customer Support Department or distributor.

■ **ERROR >…**

The messages that start with EEPROM indicate a system error.

Contact your local Customer Support Department or distributor.

■ **FILM ADVANCE DONE**

Material advance has been completed.

■ **FILM ADVANCING**

Material advance has been started.

■ **FILM CUT DONE**

Material cutting has been completed.

Remove take-up cassette.

■ **FILM CUTTING**

Material cutting has been started.

■ **FILM LOAD DONE**

Material loading has been completed.

Insert a take-up cassette.

■ **FILM LOADING**

Material loading has been started.

■ **FILM UNLOAD DONE**

Material unloading has been completed.

■ **FILM UNLOADING**

Material unloading has been started.

■ IMAGING

Imaging process is active. Data can be processed via the LI 2 interface.

■ IMAGING DONE

Imaging process has been completed. You can set new parameters.

■ INIT RECORDER 0

Electronic drive system has been activated.

■ INIT RECORDER 1

Polygon mirror drive system has been initialized. The last resolution in X-direction is set.

■ INIT RECORDER 2

Material transport drive system has been initialized. The last resolution in Y-direction is set.

■ INIT RECORDER 3

Current density is set

■ INIT RECORDER 4

Cutting knife has been initialized. This message only appears if for some reason the cutting knife did not move to its end position, (for example, because of a power failure).

■ INIT RECORDER DONE

Recorder initialization has been completed.

■ INIT RECORDER START

Recorder initialization has been started.

■ INSERTING FILM...

Requesting you to insert the material in the material transport unit.

Insert the material. Wait for the message "ADJUST FILM!".

■ LI 2 > SCAN OVERRUN

Scanline overrun. This message appears whenever too many pixels are transmitted in one scan line.

Switch the connected UltreRIP off and on again.

■ LI 2 > SENDER ERROR

The communication between the imagesetter and the connected UltreRIP was aborted by the imagesetter. Sender still active.

Abort the job by pressing the STOP key or by switching off the PostScript RIP.

■ LI 2 > SENDER NOT OPR

Sender is not ready to operate.

Switch on the UltreRIP. Check the LI 2 and LI 5 cables.

■ LI 2 > TIMEOUT

Contact your local Customer Support Department or distributor.

■ LI 2 WITHOUT LI5

The imaging process is not controlled via the LI 5 interface.

Check the LI 5 connection between the UltreRIP and the imagesetter. If this error message appears again, contact your local Customer Support Department or distributor.

■ **LI 5 > FRAMING ERROR**

LI 5 channel: Serial Communications Controller framing error.

Switch the UltreRIP off and on again. If this error message appears again, contact your local Customer Support Department or distributor.

■ **LI 5 > NO PARTNER**

LI 5 channel: Partner is not available.

Check the cable connections. Switch the UltreRIP off and on again. If this error message appears again, contact your local Customer Support Department or distributor.

■ **LI 5 > OVERRUN**

LI 5 channel: Serial Communications Controller overrun.

Switch the UltreRIP off and on again. If this error message appears again, contact your local Customer Support Department or distributor.

■ **LI 5 > PARITY ERROR**

LI 5 channel: Serial Communications Controller parity error.

Switch the UltreRIP off and on again. If this error message appears again, contact your local Customer Support Department or distributor.

■ **LI 5 > SYNC ERROR**

LI 5 channel: Software synchronization error.

Switch the UltreRIP off and on again. If this error message appears again, contact your local Customer Support Department or distributor.

■ LI 5 > TIMEOUT

LI 5 channel: Time out.

Switch the UltreRIP off and on again. If this error message appears again, contact your local Customer Support Department or distributor.

■ NO FILM SUPPLY

Material end.

Insert new material.

■ NO LIGHT > DENSITY

Contact your local Customer Support Department or distributor.

■ NO RES FOR LI2 STNG

The selected resolution cannot be used with this LI2 setting.

Use the ASYNCHRONOUS 16/8 MHz setting, provided that a RIP is connected that supports this setting.

■ NO TAKE-UP CASS

No take-up cassette was inserted.

Insert a take-up cassette.

■ NVRAM > ...

The messages that start with NVRAM indicate a system error.

If one of the these error messages appear, you can continue to work. Ask your local Customer Support Department or distributor to fix the problem at the next regular maintenance inspection.

■ OLP AUTOMATIC CUT

This message can only appear if an on-line processor is connected. Automatic cutting is performed.

■ OLP BRIDGE

This message can only appear if an on-line processor is connected. Problem on the bridge from the imagesetter to the on-line processor.

Check the OLP bridge for any errors.

Check the connections. If necessary, contact your local Customer Support Department or distributor.

■ OLP FORCED CUT

This message can only appear if an on-line processor is connected. A forced cut is performed if the maximum galley length is exceeded.

■ OLP NOT OPERABLE

This message can only appear if an on-line processor is connected. The connection between the imagesetter and the on-line processor was interrupted.

Check the cable connections. If necessary, contact your local Customer Support Department or distributor.

■ OLP NOT READY

This message can only appear if an on-line processor is connected. The on-line processor is not ready to process the photo-material.

Check the on-line processor for any errors. If necessary, contact your local Customer Support Department or distributor.

■ PROCESS ACTIVE

A process is active. Starting another process or changing any parameters is not possible.

Press the Return key and stop the current activity by pressing the SHIFT key and then the STOP key, or wait for the completion of the active process. You can then continue to work with the image-setter as usual.

■ PROCESS-ERROR ...

The messages that start with PROCESS-ERROR indicate a malfunction of the imagesetter.

Contact your local Customer Support Department or distributor.

■ RANGE OVERFLOW

Current entry too high or too low.

Reduce or increase the entered value.

■ RECORDER > TIMEOUT

Contact your local Customer Support Department or distributor.

■ RECORDER > NO SOL

Contact your local Customer Support Department or distributor.

■ REMOVE TAKE-UP CASS

Remove the take-up cassette.

■ SPINNER > TIMEOUT

Contact your local Customer Support Department or distributor.

■ SYSTEM-ERROR ...

The messages that start with SYSTEM-ERROR indicate a system error.

Contact your local Customer Support Department or distributor.

- **TAKE-UP CASS FULL**

  The take-up cassette is full.

  Remove the take-up cassette. Develop the exposed material.

- **TAKO ACTIVE**

  If this error message appears, you can continue to work. Ask your local Customer Support Department or distributor to fix the problem at the next regular maintenance inspection.
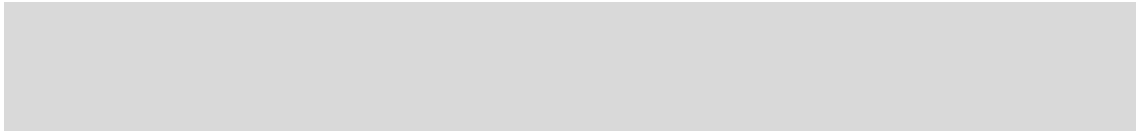
- **TEST IMAGING**

  Imagesetter test imaging has been started.

- **TEST IMAGING DONE**

  Imagesetter test imaging has been completed.

- **USER STOPPED**

  An active imagesetter process has been stopped by pressing the SHIFT key and then the STOP key on the operating panel.

- **WARNING > DENSITY**

  The defined density is too low.

  Contact your local Customer Support Department or distributor.

■ WARNING END OF FILM

Warning for material end. The material end will be reached soon. The exposure still continues when this message is displayed.

If this message appears, finish exposing your document as soon as possible. Then insert new material.

■ WARNING "FILM DRIVE"

The COLOR SEP MODE function cannot be performed.(see the section *MISC – Miscellaneous Functions* **in Chapter 6).**

If this error message appears, you can continue to work. Ask your local Customer Support Department or distributor to fix the problem at the next regular maintenance inspection.

■ WARNING "TAKO"

The polygon tachometer correction could not be performed correctly.

If this error message appears, you can continue to work. Ask your local Customer Support Department or distributor to fix the problem at the next regular maintenance inspection.

■ X.LM + X.M > F-WIDTH

This means that the left margin plus measure is greater than the available material width.

Reduce the left margin and/or the measure on the imagesetter operating panel.

Technical Data

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Light source	5 mW helium neon gas laser
Exposure system	Rotating polygon mirror
Control	Via the LI 2 and LI 5 interfaces
Ports/interfaces	LI 2 interface (input) LI 5 interface (input/output) Power connection (input) Optional: Connection for on-line processor
Output format	Horizontal: 457.5 mm/108 Picas/18" maximum scanline length Vertical: With take-up cassette: 20 m or 65 feet (Maximum length, if using a HeNe laser film of 0.1 mm thickness and 510 mm/20 in. horizontal scanline length. In general, the vertical format depends on the RIP and front-end system.) With on-line processor connected: variable lengths up to maximum 800 mm or 31.5 inch; refer to the instructions of the processor manufacturer
Photomaterial	Red-sensitive high speed imagesetting materials with maximum sensitivity at 632 nm and high contrast. Materials: polyester-based HN-laser film HN RC-paper HN-direct plate-making materials (printing foils)
Photomaterial supply form	Roller material, emulsion inside; light-proof packaging; wound core diameter 50.4 mm or 2 inches
Required density	Minimum log D 3 to 3.4; follow the density recommendations of the photomaterial manufacturer.
Material thickness	0.10 mm to 0.19 mm or 4 mil to 7 mil
Material widths	250 mm, 280 mm, 310 mm, 430 mm, and 510 mm 9.8 inch, 11.0 inch, 12.2 inch, 16.9 inch, and 20.0 inch

Cassette capacities Supply cassette:
60 m (200 feet) for film and paper with a thickness of 0.10 mm or 4 mil;
30 m (100 feet) for printing plates or film with a thickness 0.18 mm or 7.2 mil

Take-up cassette:
20 m (65 feet) for RC paper and film with a width of less than 510 mm;
5 m (17 feet) for printing plates or film with a thickness 0.18 mm or 7.2 mil

Spot size 30 μm or 1.2 mil

Addressability (Resolution) In vertical and horizontal direction:

1333 Pixel/cm	3387 dpi *
1000 Pixel/cm	2540 dpi *
800 Pixel/cm	2032 dpi *
666 Pixel/cm	1693 dpi
500 Pixel/cm	1270 dpi
400 Pixel/cm	1016 dpi
333 Pixel/cm	846 dpi

(The resolution steps marked with an * can only be used in LI 2 asynchronous mode with a 16 MHz clock.)

Note: Density calibration is required for each addressability (resolution) step. (Refer to UltreRip User Manual for calibration procedures).

Maximum recorder speeds	Speed cm/min.	Speed inch/min.	Resolution dpi	Resolution pixels/cm
	7.5	3.0	1333	3387
	13.2	5.2	1000	2540
	21.0	8.3	800	2032
	30.0	11.8	666	1693
	53.4	21.0	500	1270
	41.8	16.5	400	1016
	60.2	23.7	333	846

Maximum* repeatability** ±50 μm or ± 2 mil
(In the full specified range of temperature and humidity, that is +18 °C to +27 °C and 45 % to 85 %, at constant conditions for 4 consecutive jobs within a page size of 30 cm x 30 cm.)

Typical* repeatability** ±25 μm or ±1.0 mil
(In the full specified range of temperature and humidity, that is +18 °C to +27 °C and 45 % to 85 %, at constant conditions for 4 consecutive jobs within a page size of 30 cm x 30 cm.)

Maximum* absolute accuracy ±120 μm or ±4.8 mil
Typical* absolute accuracy ±80 μm or ±3.2 mil
At constant conditions of temperature and humidity within a page size of 45cm x 45cm (17.7in. x 17.7in.).

* As used, the terms "maximum" and "typical" mean the following:
All Ultre 4800 laser imagesetters achieve the given value for "Maximum repeatability" (± 50 μm or ± 2mil) or "Maximum absolute accuracy" (±120 μm or ±4.8 mil), provided the defined ambient conditions are met.

Most Ultre 4800 laser imagesetters achieve the given value for "Typical repeatability" (±25 μm or ±1.0 mil) or "Typical absolute accuracy" (±80 μm or ±3.2 mil), provided the defined ambient conditions are met.

** As used, the term "repeatability" means the following:
Any point of a specified page area, for example, 45 cm x 45 cm (17.7 in. x 17.7 in.), is exposed within a circle with a radius defined by the above repeatability value, provided the same job is ouput four times consecutively.

Voltage range	selectable to 180 to 264 VAC ($\sim$), or 90 to 132 VAC ($\sim$)
Frequency range	48 Hz to 62 Hz
Phase requirements	Single phase
Nominal line voltage	230 VAC ($\sim$), or 115 VAC ($\sim$) (selectable)
Nominal line frequency	50/60 Hz
Power consumption	Maximum 400 Watt
Ambient conditions	Operating temperature: +18 °C to +27 °C (+65 °F to +81°F) Storage temperature: –10 °C to +50 °C (+14 °F to +122 °F) Relative humidity (non-condensing): 45% to 85%
Noise level	LpA $\leq$ 50 dB(A) Noise measurement as per standard:DIN 45 635-19-01-KL2
Physical dimensions	Width: 40.5 inch 1030 mm Depth: 32.0 inch 815 mm Height: 37.6 inch 955 mm
Installation weight	Approximately 260 kg or 468 lbs
Transport weight	Approximately 300 kg or 540 lbs

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Date	Part No.	ECO #	Desc	App'd
6/20/97	4800.OM	1877	Initial Release	MH