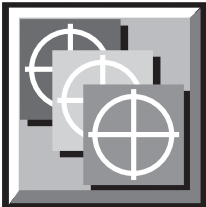


# ***ECRM***<sup>®</sup>

*Every Customer Really Matters*

***Mako Series  
Operator Guide***



***ECRM***

*554 Clark Rd.*

*Tewksbury, MA 01876*

*Phone (978) 851-0207 Fax - (978) 851-7016*

AG11792 Rev. 2



# Mako Series Operator Guide

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**AG11792 Rev.2**



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# TOC

# Contents

# Introduction

# 1

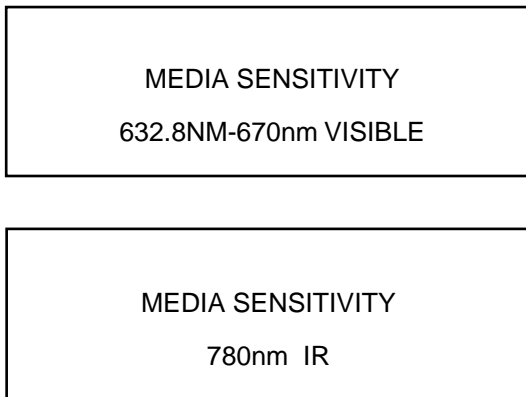
## Introduction

This manual provides the information necessary for running your imagesetter. It consists of the following:

- Laser Regulations
- The Control Panel
- The Menus
- Loading Media Into an input Cassette
- Loading the Cassette into the System
- Roller Cleaning Procedure
- Status and Error Messages

Section 2 describes the Laser Regulations for the product. Continue to Section 3 to become familiar with the Control Panel and its functions. Section 4 describes the Menu Operation.

**Note:** Labels are used to indicate the media sensitivity of the system. These labels, similar to those below, are located on the inside of the input cassette door.



*Figure 1-1 — Media Sensitivity Labels*



**DANGEROUS VOLTAGE!**

This symbol identifies parts that have dangerous voltages inside. Do not attempt to open these covers.

---



**ATTENTION**

This symbol is used throughout the Operator Guide to alert you to cautions, warnings and important notes.

---



## Product Compliance Definitions

### **CSA - Canadian Standards Association**

An agency responsible for testing products for compliance to Canadian law.

### **DOC - Department of Communications**

The Canadian government department responsible for creating Canadian laws regarding electromagnetic emissions.

### **IEC - International Electrotechnical Commission**

An international agency whose purpose is to write or approve standards for product design and safety.

### **FCC - Federal Communications Commission**

The agency of the U.S. Government responsible for setting limits for electromagnetic interference created by certain products.

### **Laser**

A device in which atoms, when stimulated by focused light waves, amplify and concentrate these waves, then emits them in a narrow, very intense beam.

### **Laser Product**

A device which incorporates a laser system.

## **Laser Radiation (Light)**

The process in which energy in the form of rays of light is sent out through space from atoms as they undergo change. This is non-ionizing radiation. Essentially it is harmless to humans, however damage to the retina of the eye can result if the beam is viewed directly.

## **Laser System**

A laser and its power source.

## **Operation and Maintenance**

User functions such as operating the product and replacing film.

## **Service**

Repair/alignment functions, performed by a service technician.

## **TÜV**

An independent German agency responsible for testing products for compliance to German laws and VDE standards.

## **VDE**

German Institute of Electrical Engineers, the organization which provides technical assistance used by the German government when creating laws.

### Laser Safety

Laser safety is regulated by the Center for Devices and Radiological Health (CDRH), Food and Drug Administration (FDA), U.S. Department of Health and Human Services (DHHS). The system is in compliance with the Regulations for the Administration and Enforcement of the Radiation Control for Health and Safety Act of 1968 (as amended) Chapter 1, subchapter J, 21CFR 1040.10(h).

There are other laser safety standards which apply to the system. One is EN 60 825:1993 Safety of Laser Products. Also, CSA reviews laser safety as it relates to product safety, however CSA does not have a specific standard which applies.

### Laser Product Classification

Laser products are classified by the amount of laser light accessible to the operator. Products are classified in Classes I through IV, where Class I emits the least laser light, and Class IV emits the most laser light. The system is classified as a Class I Laser Product which contains a Class IIIb Laser System. This classification means the operator is exposed to no hazardous laser light during operation or maintenance. The laser itself, however, is a Class IIIb laser device, and emits visible and/or invisible laser light which is considered hazardous by FDA published limits.



---

**CAUTION!**

Never remove any of the covers bearing laser warning labels (see Description of Labels section below). Any adjustment or other work performed inside the system should be performed by a trained service technician. When properly operated with covers in place, you cannot be exposed to laser light that exceeds the acceptable limitations of a Class I Laser Product as defined and described below.

---

**Maximum Accessible Light.**

The maximum accessible continuous wave laser light during operation and maintenance is less than 0.39 $\mu$ W.

**Service Radiation.**

The maximum accessible continuous wave laser light during service is less than 10mW.

---

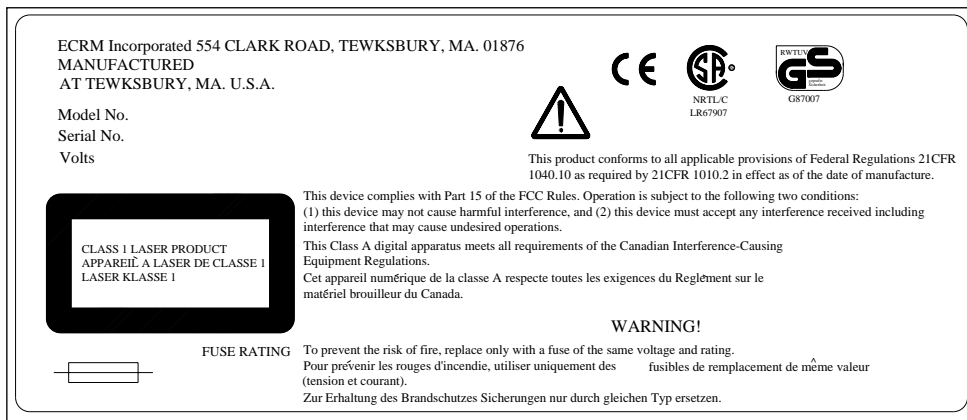
**WARNING!**

Use of controls or adjustments or performance of procedures other than those specified in this manual may result in hazardous laser light exposure. This warning does not apply to operating and maintenance procedures provided the covers with warning labels are not removed.

## Description of Labels

### Identification and Certification Label (Ratings Plate)

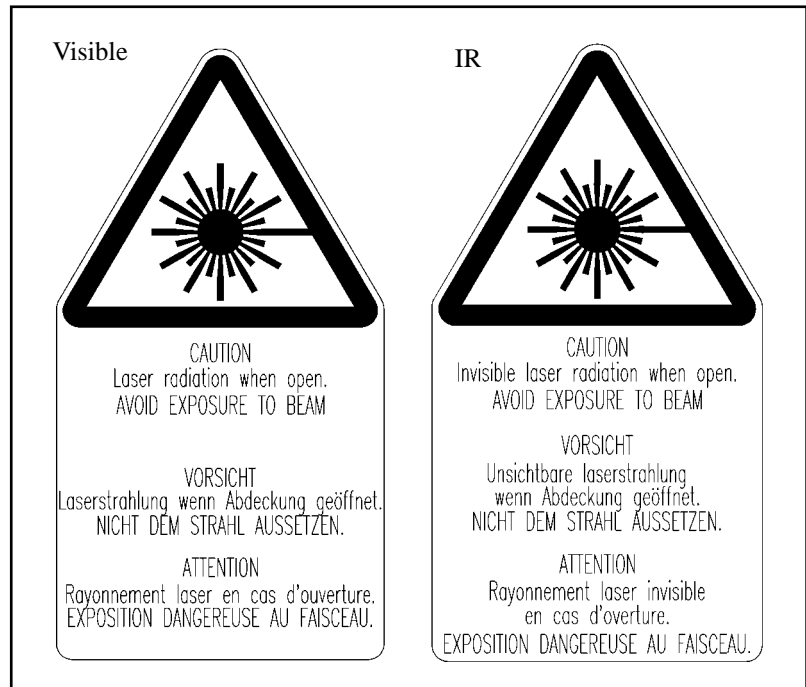
The identification and certification label is attached to the rear exterior surface of the unit, adjacent to the appliance inlet. Refer to Figure 2-1 — “Laser Identification and Certification Label”.



**Figure 2-1 — Laser Identification and Certification Label**

## Laser Warning Labels (Non-interlocked covers)

Several covers are not interlocked, and are not designed to be opened by the operator. These covers are securely fastened to the unit. They are identified by the laser warning label. Refer to Figure 2-2 — “Laser Warning Label (Non- Interlocked Covers)”.



**Figure 2-2 — Laser Warning Label (Non- Interlocked Covers)**

## Laser Warning Labels (Interlocked Covers)

Several covers are interlocked and may be opened during maintenance. The interlocks prevent you from laser or mechanical hazards as long as the covers are open and the interlocks have not been “defeated”. Interlocked covers are identified by the laser warning label. Refer to Figure 2-3 — “Laser Warning Label (Interlocked Covers)”.

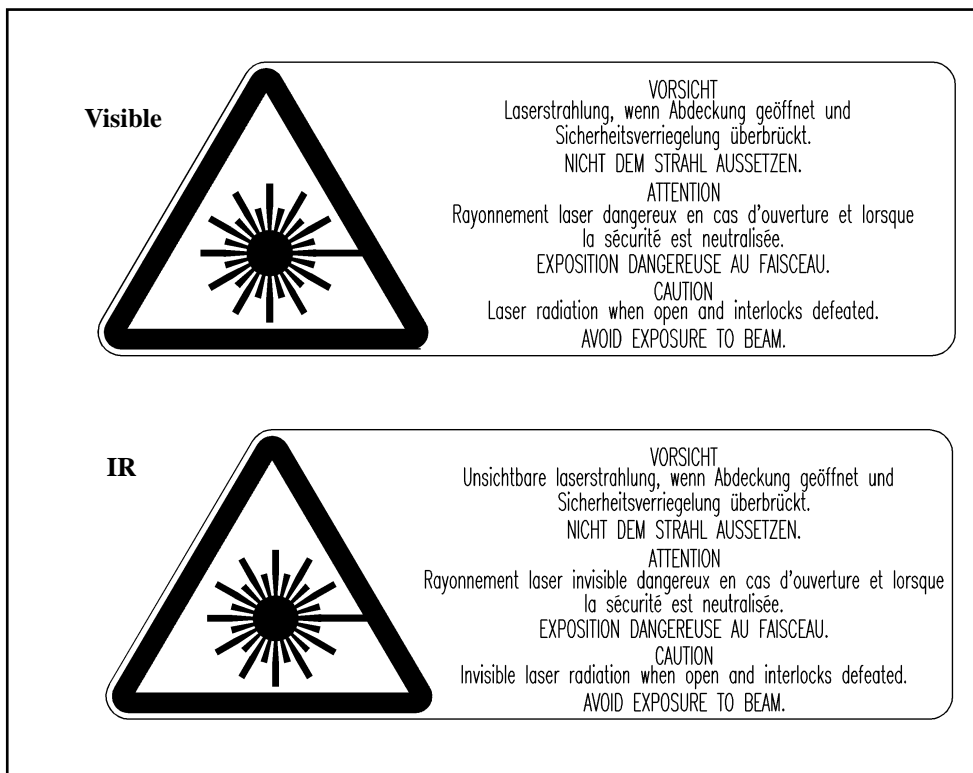
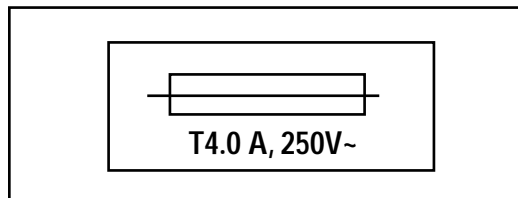


Figure 2-3 — Laser Warning Label (Interlocked Covers)

## Fuse Labels

Fuse labels are located near each fuse holder. They indicate the correct rating of the fuse. Only a like replacement fuse should be used. Note that a label which has a “T” in it means that the fuse is of the time delay (slow blow) type; e.g. T4.0 A 250V ~ would indicate a 4 Amp slow blow fuse and 4.0 A 250 V~ would indicate a 4 Amp non-time delay (normal or fast blow) fuse.



*Figure 2-4 — Fuse Label (Example)*

## **Product Safety**

The system was submitted to independent agencies for testing to product safety standards. These are CSA for North America, and TÜV for the European Union (EU).

### **CSA**

The CSA standard which covers the system is C22.2 No. 950-M95 Safety of Information Technology Equipments including Electrical Business Equipment.

### **TÜV**

The standards to which TÜV tests the system are:

EN 60 950:95, Safety of Information Technology Equipment including Electrical Business Equipment.

In addition, EN 60 950:95, Safety of Information Technology Equipment including Electrical Business Equipment.

## Electromagnetic Emissions

### FCC - USA

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

---

#### WARNING!



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

---

### DOC - Canada

The Canadian Department of Communications requires compliance with the Radio Interference Regulations, CRC c.1374. The statement “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” is found on the Certification and Identification Label on the exterior rear surface of the unit. Refer to Figure 2-1 — “Laser Identification and Certification Label”.

### EMC Directive - Europe

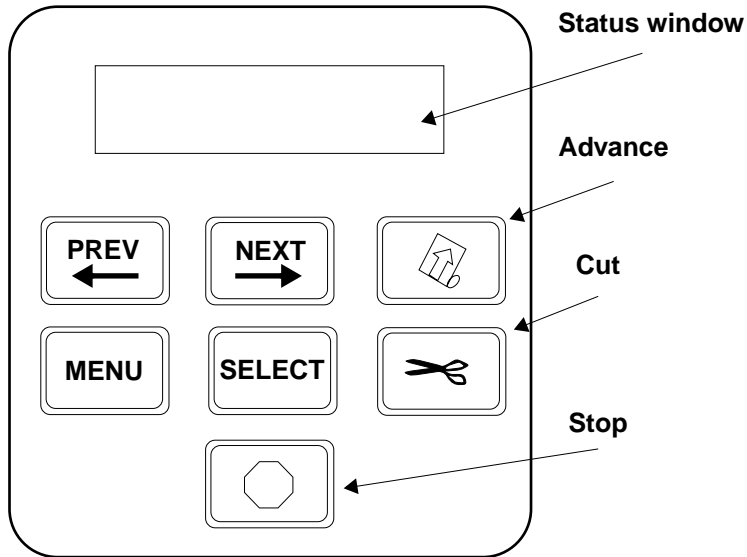
The system complies with the EMC Directive (83/336/EEC) and is tested to EN 55 022 Class A and EN 50 082-01 Compliance with applicable regulations depends on the use of shielded cables. It is the user who is responsible for procuring the appropriate cables.

The system has been tested concerning compliance with the relevant RFI protection requirements both individually and on the system level (to simulate normal operation conditions). However, it is possible that these RFI requirements are not met under certain unfavorable conditions in other installations. It is the user who is responsible for compliance of his/her particular installation.



## Introduction

This chapter describes the Control Panel functions. Refer to Figure 3-1.



*Figure 3-1 — Control Panel*

## Menu Keys

The table below describes the Control Panel Menu Keys and their specific functions.

### Control Panel Menu Keys

KEY	DESCRIPTION
MENU	This key is used to enter the Menu System.
SELECT	This key is used to cycle through the available choices within a menu, or cycle through numeric values within a numeric field.
NEXT	This key is used to move to the next menu, or to move the cursor to the right within a numeric field. It can also be used to skip the pause between menu commands.
PREV	This key is used to move to the previous menu, or to move the cursor to the left within a numeric field. It can also be used to skip the pause between menu commands.
STOP	This key is used to return to the Save Setup menu or to interrupt "Recording Image".
ADVANCE	This key is used to advance the film.
CUT	This key is used to advance and cut film prior to processing.

## Using Menus

The imagesetter menu system consists of a series of menus that are used to set up system parameters (e.g. SPINNER TIME-OUT). You enter the menu system by simply pressing the **MENU** Key. You move through the menus by using the **PREV** and **NEXT** keys. To exit from anywhere in the menu, press the **STOP** key.

The **NEXT** key moves the cursor to the *right* and the **PREV** Key moves the Cursor to the *left*. The **SELECT** Key scrolls you through the available values (0-9).

	Cursor Moves	
<u>Press</u>	<u>From</u>	<u>To</u>
<b>NEXT</b>	0 <u>2</u> 0	02 <u>0</u>
<b>PREV</b>	02 <u>0</u>	0 <u>2</u> 0
<b>SELECT</b>	02 <u>0</u>	02 <u>1</u>

For example, if you are in the SPINNER TIMEOUT window and SPINNER TIMEOUT is set to 020 and you want to change it to 025 perform the following:

	Cursor Moves	
<u>Press</u>	<u>From</u>	<u>To</u>
<b>NEXT</b>	0 <u>2</u> 0	02 <u>0</u>
<b>SELECT</b>	02 <u>0</u>	02 <u>1</u>
<b>SELECT</b>	02 <u>1</u>	02 <u>2</u>
<b>SELECT</b>	02 <u>2</u>	02 <u>3</u>
<b>SELECT</b>	02 <u>3</u>	02 <u>4</u>
<b>SELECT</b>	02 <u>4</u>	02 <u>5</u>

Use the **NEXT** key to move the cursor from 020 to 020. Now use the **SELECT** Key to scroll through the numbers 0 through 9. Stop at the 5. The new value will read 025. Pressing **NEXT** again will bring you to the next window.

When you move through the menus, the currently selected menu will appear in the display window. To change the menu selection, press the **SELECT** key until the desired choice is displayed, then move out of that window using the **NEXT**, **PREV** or **STOP** keys.

**NEXT** and **PREV** are also used to step through the digit positions for windows that have numeric fields. If you press **NEXT** when the cursor is under the rightmost digit, the window will display the next menu. If you press **PREV** when the cursor is under the leftmost digit, the window will display the previous menu.

Each time the imagesetter is turned on, the parameters are loaded from a special memory. Any changes that you make to the parameters will remain in effect until the system is turned off, at which time they will be lost unless they are saved in this memory. Each time you exit the menu system you will be given the choice of saving your changes.

The last menu prior to exiting the menu system, is the **SAVE SETUP** menu. The default selection is to not save the changes. If you want to save your changes, use **SELECT** to change the displayed choice to **yes**, then press **NEXT**. Once you become familiar with the imagesetter Control Panel, continue with Section 4 to run through the system menus.

## Introduction

This section describes how to use the **USER SETUP**, **SYSTEM SETUP** and **DIAGNOSTICS** Menus. These menus are divided into *three* major categories. For the most part, this section covers **SYSTEM** and **USER SETUP** options. Refer to Figure 4-1 — “System Setup Menu Map”, and Figure 4-2 — “User Setup Menu Map”.

Refer to “Media Jams” on page 4-16 for instructions on how to access the **DIAGNOSTIC MENU**. Turn the Power switch **ON**. The Power switch is located at the rear of the imagesetter. (**0** = **OFF** and **1** = **ON**.)

**Note:** The system must be powered on for 30 minutes before running output.

## Setting up the Imagesetter

### System Setup

The **SYSTEM SETUP** option should be performed first. System Setup allows you to step through setups such as **ENGLISH/METRIC**, **LANGUAGE**, **AUDIO ALERTS**, **MEDIA TYPE**, **IMAGE SPACING**, **FILM ADVANCE AFTER CUT**, **MAXIMUM CASSETTE**, **CUT TRAILER**, **IMAGE OFFSET**, **SPINNER TIMEOUT** and **SAVE SYSTEM SETUP**. To access this option from the **ONLINE/OFFLINE** window, press **MENU**, continue to press **SELECT** until **MENU OPTIONS/SYSTEM SETUP** is displayed.

After setting up your system, the **USER SETUP** option lets you step through setups such as **EXPOSURE**, **RESOLUTION**, **MEDIA WIDTH**, **OVERSCAN**, **RESET FILM COUNTER AFTER CUT**, and **SAVE USER SETUP**. To set up your imagesetter, perform the following:

The system defaults to **ENGLISH** for Language. It also defaults to **ENGLISH** for the Units of measure. If you want to change the Units of measure, and change the desired settings refer to Figure 4-1 — “System Setup Menu Map” and use the following System Setup table to guide you. When you finish, press the **STOP** key. You will be prompted to “**SAVE THE SETUP**”. Select “**Yes**”. After you setup your system, continue with the **USER SETUP** Menu. Refer to Figure 4-2 — “User Setup Menu Map”.

# Menu Operation

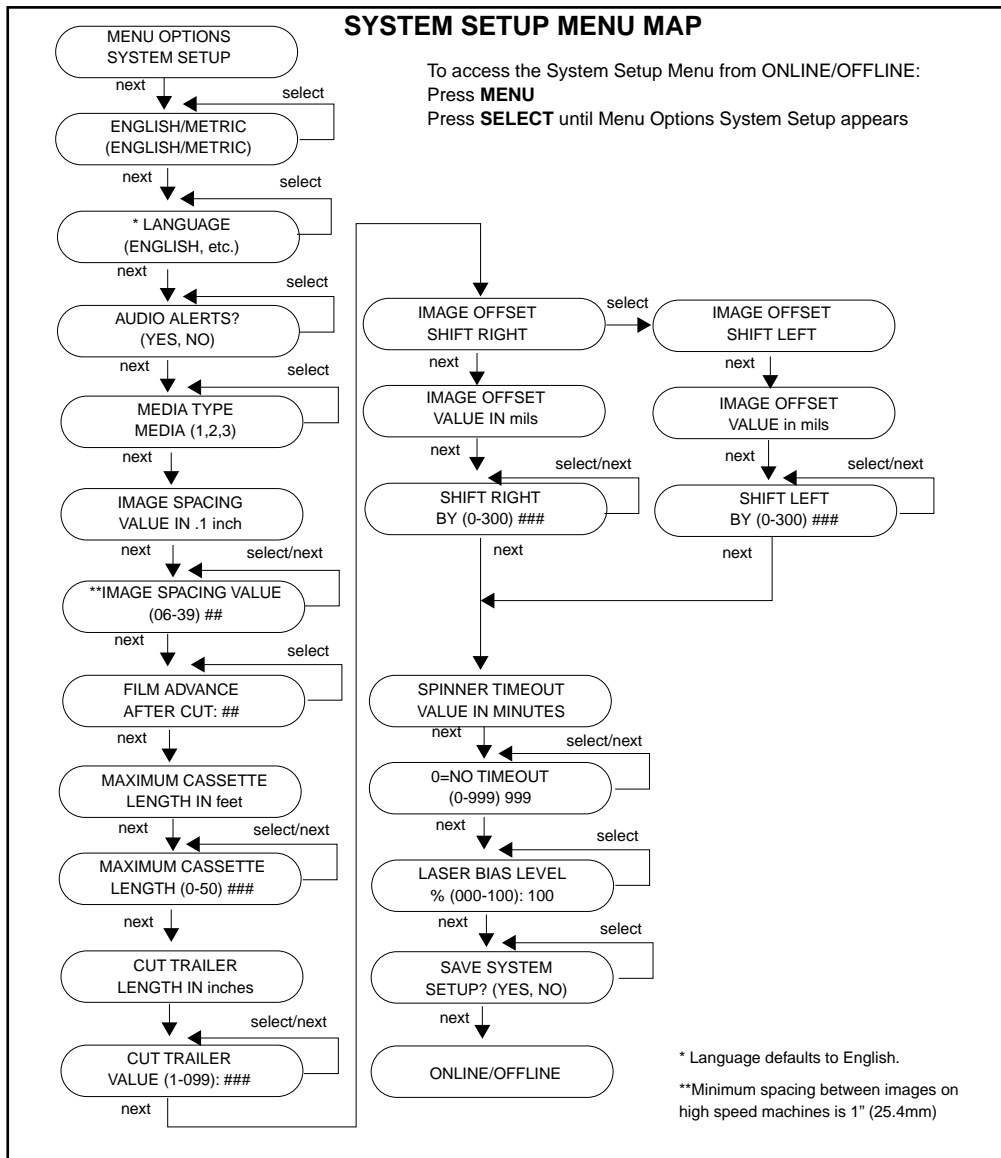


Figure 4-1 — System Setup Menu Map

## System Setup

Window	Function
<b>English/ Metric</b>	This window allows you to set the units of measure to either English or Metric units. This applies to the Resolution, Image Spacing Length, Cut Trailer Length, Maximum Cassette Length, New Film Counter Value Windows. Their values are displayed in centimeters or meters if Metric and feet or inches if English.
<b>Language</b>	This window allows you to set the desired language.
<b>Audio Alerts</b>	This window defaults to Audio Alerts "Yes". It allows you to turn off the audio beep for cuts and the end of image.
<b>Media Type</b>	Selecting one of three media types enables the system to use different sets of calibration values during operation. These sets of calibration values are determined during system installation and should be changed only by qualified service personnel.
<b>Image Spacing</b>	This window allows you to specify spacing between images in tenths of an inch or mm. The space is generated before the start of the image. (High speed systems have a minimum 1" spacing.)
<b>Film Advance After Cut</b>	This window allows you to select the amount of film that you want to advance the film after it is cut. You may select 0.1" (3mm) or 3.5" (89mm).
<b>Maximum Cassette Length</b>	This window allows you to set a limit on the amount of film sent to the output. If your output cassette or your processor can only handle a certain amount of film, you can enter a number in this window to set the limit. For example, if your output cassette can handle only 10 feet of output, set the Maximum Cassette Length to 10. Then, once the system has sent 10 feet of output to the output cassette, the system automatically cuts at the end of the image.
<b>Cut Trailer Length</b>	This window allows you to set the trailer length. The trailer is the amount of space left between the end of the image and the cut.
<b>Image Offset</b>	This window allows you to set the image to shift right or shift left. (This function is independent of Calibration which is factory set.)

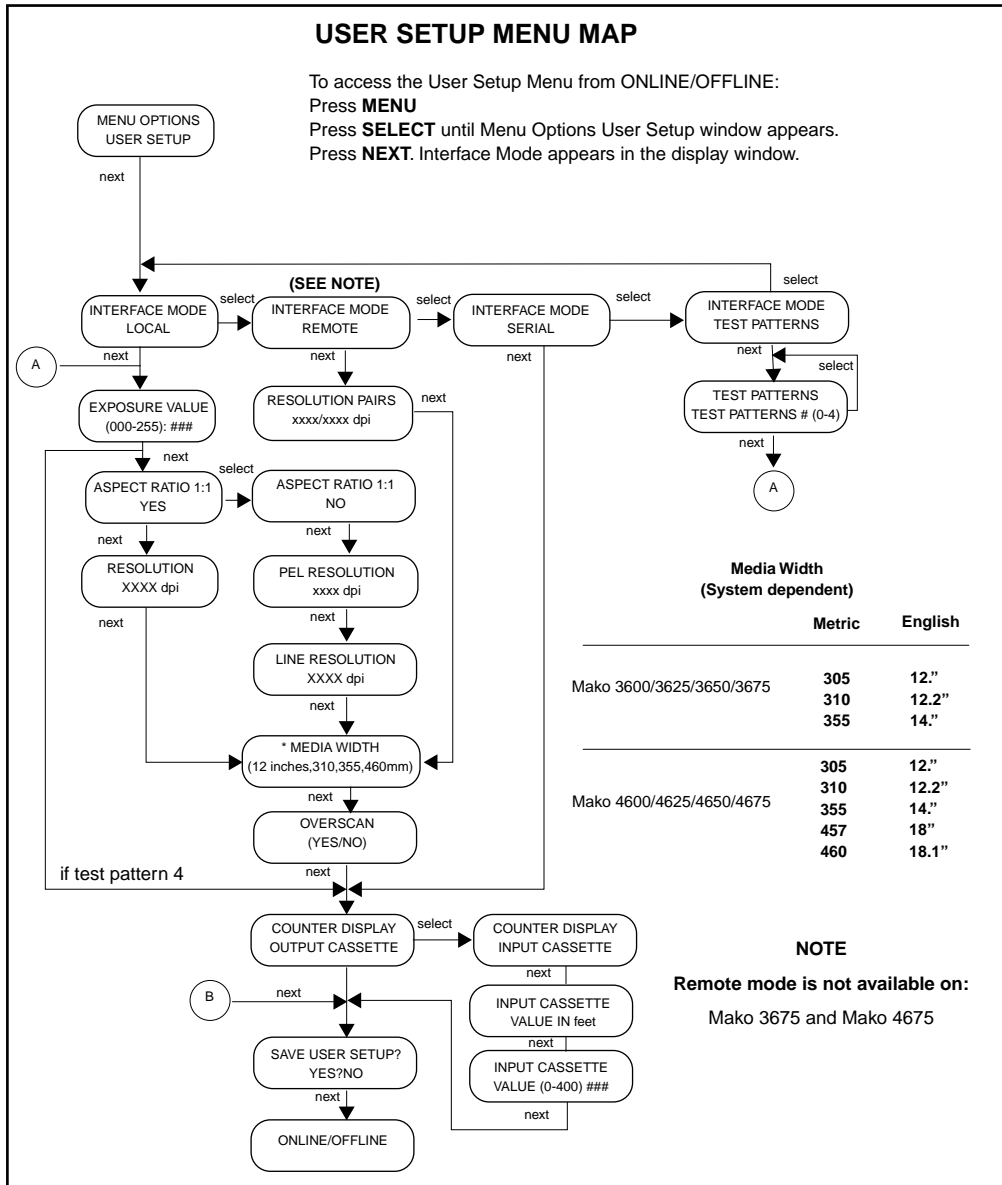
## System Setup

Window	Function
<b>Spinner Timeout</b>	This window allows you to set the amount of time (in minutes) that the machine idles before the spinner motor times out and shuts off the spinner motor (standard speed systems) or reduces speed from high speed to low speed (high speed systems).
<b>Laser Bias Level</b>	Independent laser diode bias levels can be saved for each of the media types. The default value is 100%. Percent of laser diode bias applied can be adjusted to reduce background fog on sensitive media.
<b>Save Setup</b>	This window allows you to save the current setups in memory. If you choose <b>Yes</b> , the current setups are saved in memory. If you choose <b>No</b> , the current setup values you have just entered will be used until the system is powered down. When the system is powered up, the last saved setup values are used.

## User Setup

To access **USER SETUP** from the **ONLINE/OFFLINE** window, press the **MENU** Key. Press the **SELECT** Key until **USER SETUP** appears. Then Press the **NEXT** Key. **INTERFACE MODE** will appear in the display menu.

# Menu Operation



**Figure 4-3 — User Setup Menu**

## User Setup Windows

Windows	Options/Limits	Function
INTERFACE MODE	LOCAL  REMOTE  SERIAL  TEST PATTERNS (0,1, 2, 3, and 4)	<p>Press SELECT to scroll through the INTERFACE MODE options: LOCAL, REMOTE, SERIAL, and TEST PATTERNS. Press NEXT to choose an interface mode when its window appears.</p> <p>REMOTE mode is not available on all models.</p> <p>SERIAL mode is the normal mode of operation.</p> <p>TEST PATTERNS mode should only be used by a qualified service technician.</p>
LOCAL	<p>EXPOSURE VALUE (000-255)</p> <p>ASPECT RATIO YES/NO</p> <p>PEL and LINE resolution limits            1000 dpi (39.8 dpmm)            1016 dpi (40 dpmm)            1200 dpi (47.2 dpmm)            1270 dpi (50 dpmm)            1446 dpi (56.9 dpmm)            1524 dpi (60 dpmm)            1800 dpi (70.9 dpmm)            2032 dpi (80 dpmm)            2400 dpi (94.5 dpmm)            2540 dpi (100 dpmm)            3048 dpi (120 dpmm)            3556 dpi (140 dpmm)</p> <p>MEDIA WIDTH            Mako 3600/3625/ 3650/            3675            12" (305mm)            12.2" (310mm)            14" (355mm)</p> <p>Mako 4600/4625/4650/            4675            12" (305mm)            12.2" (310mm)            14" (355mm)            18" (457mm)            18.1" (460mm)</p>	<p>LOCAL mode allows you to access the RESOLUTION and EXPOSURE windows. The exposure level increases with value to the maximum of 255. However, only qualified technicians should set the exposure value.</p> <p>Press NEXT to access the ASPECT RATIO window. It gives you the choice of setting the ASPECT RATIO 1:1. If you choose YES to ASPECT RATIO 1:1, the system will record your resolution equal in the line and pel direction. If you choose NO, you can set the pel and line resolution independently with the next two windows, PEL RESOLUTION and LINE RESOLUTION.</p> <p>The MEDIA WIDTH option appears in LOCAL and REMOTE modes only. Enter the width of the media that the system contains.</p>

### User Setup Windows

Windows	Options/Limits	Function
REMOTE	<p>English</p> <p>DPInch: 1000/1000 1446/1446 1524/1524 1800/1800 2032/1016 2400/1200 2540/1270 3048/3048 3556/3556</p> <p>Metric</p> <p>Dpmm: 39.8/39.8 56.9/56.9 60/60 70.9/70.9 80/40 94.5/47.2 100/50 120/120 140/140</p>	<p>REMOTE mode allows host control of the RESOLUTION PAIRS.</p> <p>REMOTE mode is not available on all models.</p>
SERIAL		<p>SERIAL mode allows greater host control of the systems' RESOLUTION, EXPOSURE, MARGINS, and NEGATIVE settings. SERIAL is the normal operating mode.</p>
OVERSCAN	YES/NO	<p>OVERSCAN causes the imagesetter to record over the entire width of the film, which is useful when making negatives.</p>
COUNTER DISPLAY	<p>INPUT CASSETTE 0-400ft (0-121920 mm)</p> <p>OUTPUT CASSETTE</p>	<p>These windows allow you to monitor the amount of film in the input and output cassettes. SET the INPUT CASSETTE value to reflect the amount of film in the input cassette. The OUTPUT CASSETTE value resets to 0 after each cut.</p>
SAVE SETUP	YES/NO	<p>This window allows you to save the current setups in memory. If you choose Yes, the current setups will be saved in memory. If you choose No, the current setup values you have just entered will be used until the system is powered down. When the system is powered up, the last saved setup values will be used.</p>

## Loading Media into a 400 Foot Cassette

---

### Important Note

Move only the Adjustable Hub Assembly.



The position of the Fixed Hub Assembly sets the centering of the media and should not be moved except in the following two situations:

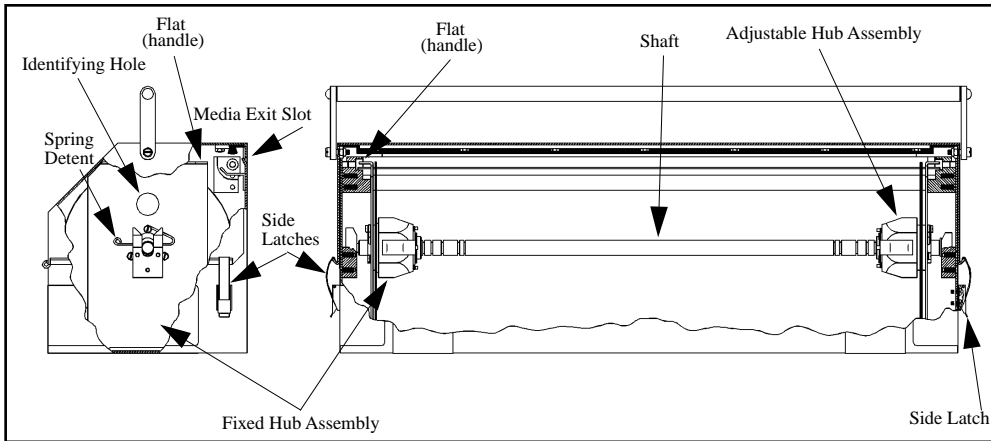
- (1) The width of the media in use changes and an adjustment is needed.
- (2) The media shaft must be exchanged to accommodate a new media width whose width setting is not available on the media shaft in use.

---

You should practice loading an empty film roll before loading a new roll in the dark room. To load media into a 400 foot input cassette, place the empty cassette on a convenient, flat surface with the media exit slot toward you and complete the following steps:

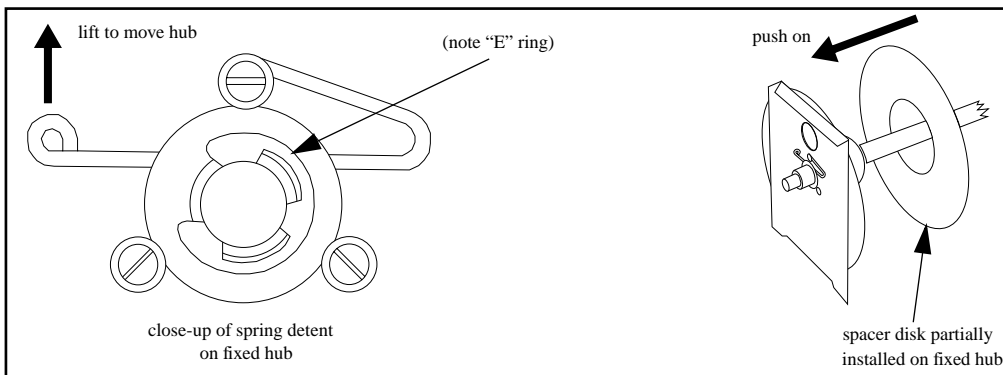
1. Open the cassette. Unhook the side latches. Refer to Figure 4-4 — “Inside View of Input Cassette”. Swing the top of the cassette open, away from you.
2. Lift out the shaft and hub assembly and place it on the table before you in the same orientation. The upper edges of the fixed and adjustable hub assemblies are flattened to the side. Use these two flats as handles.
3. Remove the adjustable hub assembly. The adjustable hub assembly is on the right. The fixed hub assembly on the left has an identifying hole and a conspicuous label, “DO NOT REMOVE THIS END”. Lift the spring detent up and out of the groove and slide the adjustable hub assembly off. If an empty media roll is on the shaft, you may feel a slight pop as the spring-loaded adjustable hub assembly pushes out.

## Menu Operation



**Figure 4-4 — Inside View of Input Cassette**

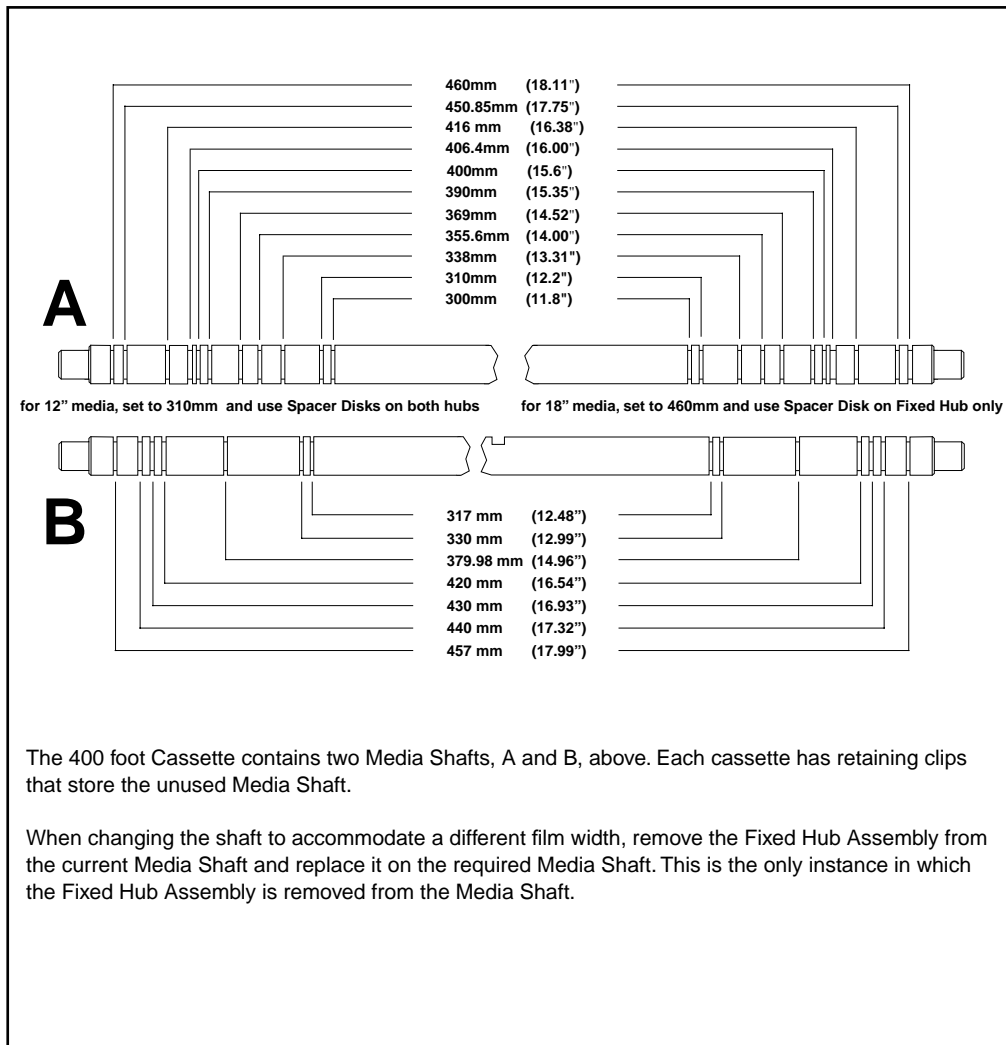
4. Set the fixed hub assembly for media width, if necessary (you may need to exchange the media shaft). See Figure 4-6 — “Grooves for Different Media Widths”. Snap the fixed hub assembly spring detent into the proper groove.
5. ***If you are loading either 12" or 18" media,*** install a spacer disk on the fixed hub assembly. See Figure 4-5 — “The Spring Detent and the Spacer Disk”. **Note:** If you are loading 12" media, use the 12.2" groove. If you are loading 18" media, use the 18.11" groove.



**Figure 4-5 — The Spring Detent and the Spacer Disk**

6. Install a roll of media on the shaft and hub assembly. Position the roll with the dull, emulsion side of the media down as it unrolls. With the fixed hub assembly on your left, press the roll over the shaft and onto the fixed hub assembly.
7. ***If you are loading 12" media***, install the second spacer disk on the adjustable hub assembly.
8. Install the adjustable hub assembly . Press it on from the right. You will feel pressure from the spring-loading of the hub assembly just before the detent spring snaps into place in the proper groove. ***You must push the hub assembly until the detent spring snaps into place and the side-wall of the media is against the hub assembly.***
9. Install the loaded shaft and hub assembly. Use the two flat handles on the hub assemblies to lift the loaded assembly into the cassette so that the media rolls off the top of the roll and out the media exit slot. Make sure that the ends of the shaft slide into their holders in the cassette.
10. Feed one foot (0.3 meter) of media out of the cassette. Close the cover of the cassette and secure the side latches.

## Menu Operation

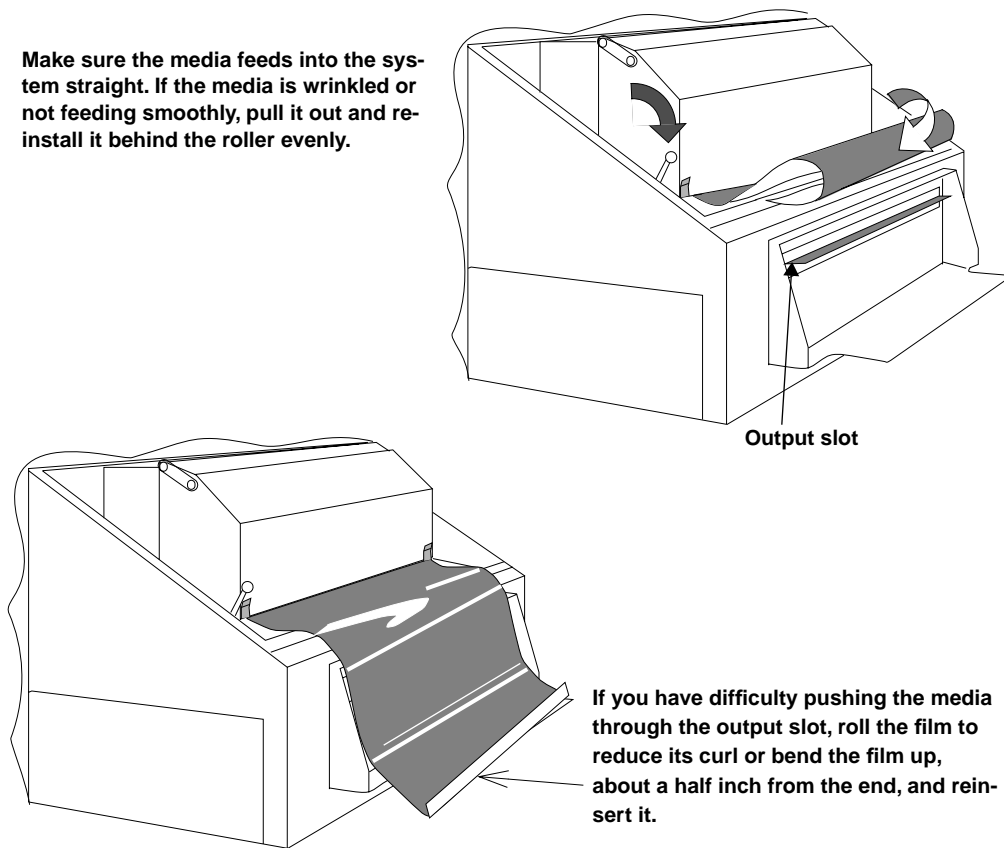


*Figure 4-6 — Grooves for Different Media Widths*

## Installing Media into the System

1. Place the cassette on the cassette shelf so that the media exits from the bottom, front of the cassette, and pull out about 18 inches of media.

Make sure the media feeds into the system straight. If the media is wrinkled or not feeding smoothly, pull it out and re-install it behind the roller evenly.

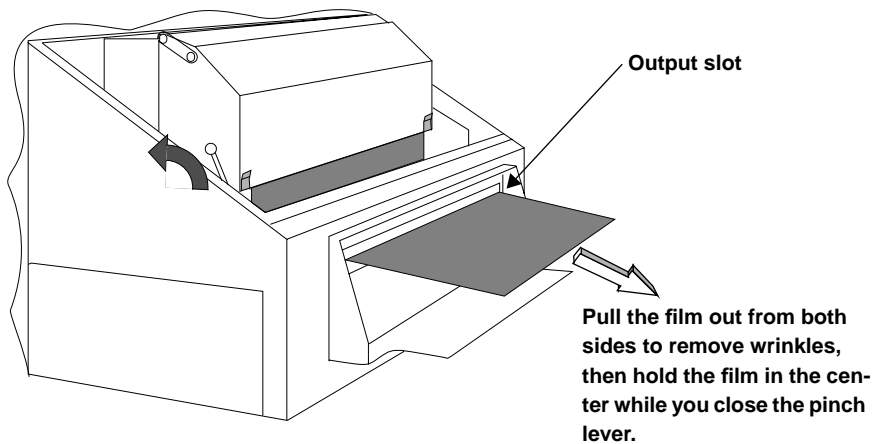


**Figure 4-7 — Installing media**

2. Pull the pinch roller lever toward you to disengage the pinch roller.

## Menu Operation

3. Feed the media down behind the roller. Slide the media manually through the system until it exits the output slot.
4. Pull on the media to make it tight and straight while you close the pinch roller. Close the cover and feed more media with the **ADVANCE** Key on the Control Panel until it tracks properly.



*Figure 4-8 — Closing the pinch lever*

5. Once the media tracks properly, press **CUT** on the Control Panel to cut it.

*Note: Some tension is expected when pulling media through the output slot. If the media is straight and wrinkle free from the cassette, this tension is acceptable).*

*Note: If tension exists and the media is not exiting the cassette or output slot straight, push the media approximately 1/2" back into the system from the output slot in a side to side motion, until you have straightened the media. (A few iterations may be necessary.)*

## Media Jams

This procedure covers information on clearing a media jam by using the **UNWIND FILM** button. Refer to SEE “APPENDIX A - DIAGNOSTICS MENU” when performing this procedure.

If you accidentally tried to cut the media while it was jammed a **CUTTER NOT PARKED** message may appear in the display menu. Go to the **DIAGNOSTIC** menu.

To access the **DIAGNOSTIC** Menu from the **ONLINE/OFFLINE** menu, press **MENU**, press **SELECT**. Continue to press **SELECT** until the **MENU OPTION DIAGNOSTICS** is displayed. Press **NEXT** once, then press **SELECT** until **PARK CUTTER** appears. Press **NEXT** to **PARK CUTTER**. The cutter will return to the **HOME** position.

If the media becomes jammed while you are trying to load it into the system, perform the following:

1. If a system error appears in the display window, press **PREV** to clear the system error. If a system error does not appear, go to Step 2.
2. Go to **MENU OPTIONS DIAGNOSTICS** window and press **SELECT** until **UNWIND MEDIA** appears. Press **NEXT**. Then press the **ADVANCE** key to unwind media.
3. Once the media is unwound, reload the media.
4. Ensure the media is installed. Refer to “Installing Media into the System” on page 4-14.

# Roller Cleaning Procedure

The roller in the drive section of an imager requires periodic cleaning in order to perform efficiently. If the roller becomes contaminated with oils and paper dust, it will not perform efficiently. The roller should be cleaned every two months, depending upon film usage (based on 8 hours of use per day). This will ensure repeatability, and prevent film slip-page. Follow these directions carefully to prevent damage to the roller itself.

1. Open the cover to the Media area. Remove the Input Cassette.
2. Disengage the pinch roller.
3. From the ONLINE/OFFLINE window, press **MENU** then press **SELECT** until MENU OPTIONS DIAGNOSTICS window is displayed. Press **NEXT**. Press **SELECT** until DIAGNOSTICS UNWIND FILM window is displayed.
4. Clean the roller with a good, non-abrasive general purpose cleaner, applied sparingly to a lint-free wipe, pressing **ADVANCE** as needed to expose new areas of the roller.
5. Clean the roller with 70% isopropyl alcohol applied sparingly to a lint-free wipe, pressing **ADVANCE** as needed to expose new areas of the roller.
6. When the roller is clean and dry, press **STOP** to exit the UNWIND FILM mode, reinstall film, and continue operation.



---

### CAUTION!

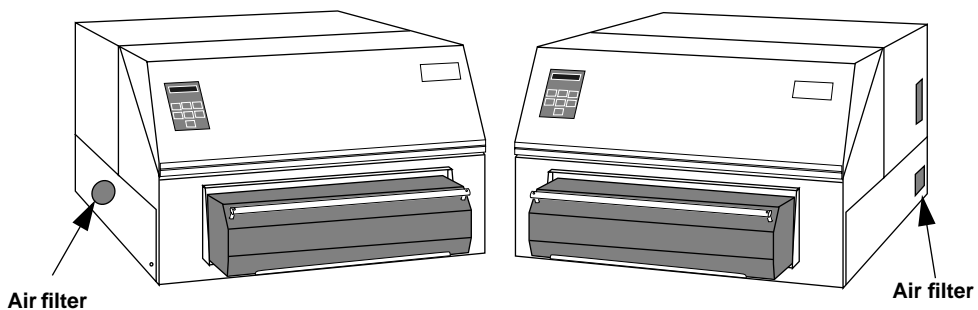
Don't clean the roller when it is moving.

---

## Air Filter Cleaning Procedure

The air filters for the system are located on the left and right sides of the imagesetter cover. Clean the air filters periodically, when you notice they are dusty. The amount of time between cleanings varies depending on where the system is located and how often it is used.

1. Remove the air filter.



2. Wash the air filter with detergent in warm soapy water.
3. Rinse the air filter carefully in clear water and let it dry.
4. Replace the air filter into the imagesetter.

## Status and Error Messages

The following is a list of the Status Messages and possible Error Messages that can appear on the imagesetter display window.

### STATUS MESSAGES

MESSAGE	MEANING
<b>OFFLINE</b>	The system is currently offline or "Test Patterns" has been selected in Interface Mode Menu.
<b>ONLINE</b>	The system is currently online.
<b>NO CASSETTE</b>	There is no output cassette on the imagesetter.
<b>OUT OF FILM</b>	The system has run out of film or paper. Media is advanced beyond the Capstan Drive and Pinch Rollers. A cut signal is initiated to the Online Processor, but no cut is performed. These actions flush the media from the recorder and initiate online processing.
<b>CUTTER NOT PARKED</b>	The cutter has not parked completely. If the cutter is not parked, go to the Diagnostic Park Cutter window. The cutter will then try to cycle correctly. If it does not, contact an Authorized Service Representative.
<b>WAITING FOR PROCESSOR READY</b>	Waiting for the Online Processor to Go Ready.
<b>RECORDING IMAGE</b>	Status message indicating the imagesetter is currently recording an image.
<b>ADVANCING MEDIA</b>	This message appears when the <b>ADVANCE</b> Key is pressed.
<b>CUTTING MEDIA</b>	This message appears when the <b>CUT</b> Key is pressed or system is performing an imagesetter cut cycle.
<b>REMOVE CASSETTE</b>	This message appears after a Cut has been completed to remind you to remove the output cassette and process the output.

When any of the following error messages appear, power down the system and then power system back on. If the error message still appears, contact your authorized service representative.

### ERROR MESSAGES

MESSAGE	MEANING
<b>SYSTEM ERROR #1</b>	Drive motor error
<b>SYSTEM ERROR #2</b>	SOL (start of line) error
<b>SYSTEM ERROR #3</b>	No active Video error
<b>SYSTEM ERROR #4</b>	Fatal cutter error

The following error messages refer to possible power problems and should also be reported to your authorized service representative.

<b>CHECKING POWER</b>	
<b>24V LO</b>	
<b>24V HI</b>	
<b>+/-15V LO</b>	
<b>24V LO, +/-15V LO</b>	
<b>24V HI, +/-15V LO</b>	
<b>+/-15V HI</b>	
<b>24V LO, +/-15V HI</b>	
<b>24V HI, +/-15V HI</b>	

# Appendix A - Diagnostics Menu

# A

## Diagnostics Menu Map

The Diagnostics Menu Map should be used when you want to perform one of the following:

- Unwind Film
- Park the cutter
- Check the EPROM version of your firmware

---

### IMPORTANT NOTE!

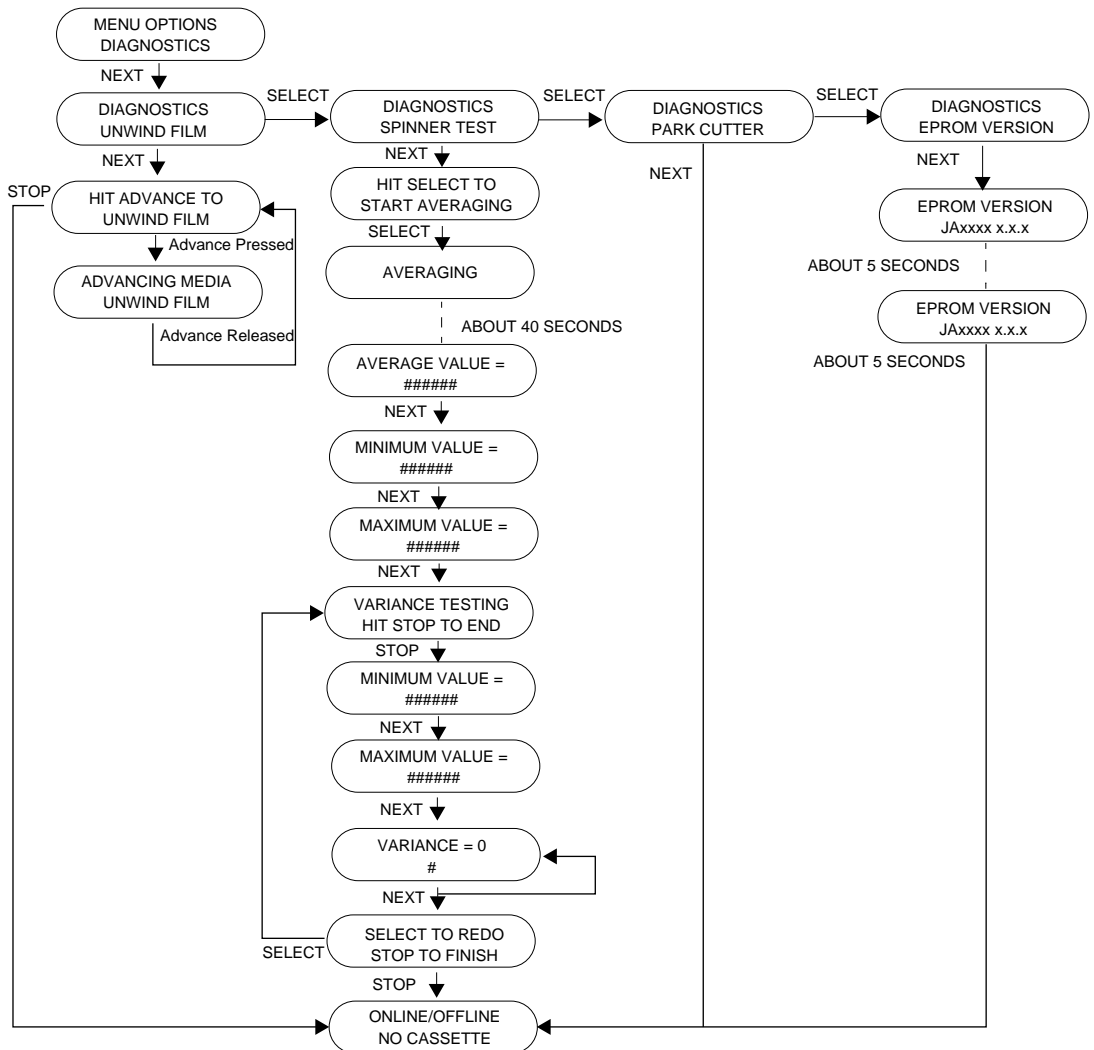


The Diagnostic Spinner Test, Averaging and Variance Testing should only be performed by a qualified service technician.

---

# Appendix A - Diagnostics Menu

To access the Diagnostics menu from the ONLINE/OFFLINE prompt Press MENU to access the Menu Options User Setup. Press SELECT to access the Menu Options System Setup. Keep pressing SELECT until Menu Options Diagnostics appears.



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+/-15V LO 4 - 20

## **Numerics**

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