

KODAK IMAGELINK Scanner 900 and 923



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1 INTRODUCTION

The KODAK IMAGELINK™ Scanner 900 is a medium- to high-speed (up to 120 pages per minute†), high-resolution (up to 400 dpi) rotary scanner designed for medium- to high-volume digital capture of business documents. The Scanner 900 captures printed characters, handwritten text, and graphics from documents of various sizes (from 2.5 in [64 mm] to 20 in [508 mm] long and from 2.5 in [64 mm] to 12 in [305 mm] wide) and thicknesses (standard documents up to 0.014 in [0.36 mm]; even thicker documents may be scanned using the gap release feature).

The KODAK IMAGELINK™ Scanner 923 is a high-speed (up to 144 pages per minute†), medium- to high-resolution (up to 300 dpi) rotary scanner designed for high-volume digital capture of business documents. The Scanner 923 captures printed characters, handwritten text, and graphics from documents of various sizes (from 2.5 in [64 mm] to 20 in [508 mm] long and from 2.5 in [64 mm] to 12 in [305 mm] wide) and thicknesses (standard documents up to 0.014 inches [0.36 mm]; even thicker documents may be scanned using the gap release feature).

Scanner features

The following features make the Scanners unique:

- Easy-to-reach Control Panel keys, identified by graphic symbols.
- A high-speed document transport system.
- A two-line 80-character display for status information and operator messages.
- Full programmability of all eighteen (18) application modes, with override capability.
- Linked modes may be used to carry over the Image Address from one mode to another.
- Programmable keys to perform commonly-used functions.
- Transport-on functions; allows twenty-seven of the function codes to be executed while the transport is running.
- Audible tones for selected functions, such as footswitch, patch reading, etc.
- English or other language message display.
- A large, built-in workshelf.
- An adaptable, modular design for easy addition of accessories.

† Standard-sized documents fed in landscape orientation; continuous transport using the Semi-Automatic Feeder.

Scanner options

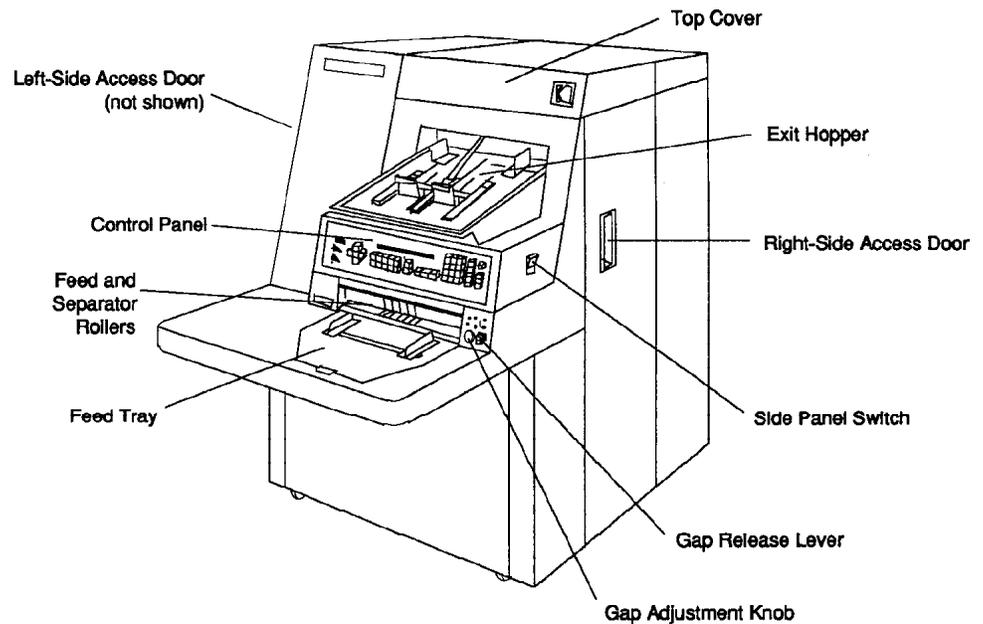
The following options are available for use with your Scanner:

- A custom-designed chair (ergonomic design).
- A workstation console, left or right position.
- A choice of feeders.
- A choice of exit hoppers.
- A footswitch for document level control.
- An endorser for stamping information on documents.
- A choice of ink-jet printers for printing information on documents.
- Large and small print fonts available for Document Printer 12.
- A patch reader for automatic document level control.
- End-fed patch capability.
- A bar code reader for decoding encoded information.
- An Optical Character Recognition subsystem for reading alphanumeric information on form-type documents
- A skew/length monitor

Scanner components

The following illustrations and descriptions will assist you in locating and becoming familiar with the Scanner components:

Front view



Control Panel – contains the Status Display, Indicators, and Operating Keys used to control the Scanner.

Exit Hopper – accepts documents after they have been scanned.

Feed and Separator Rollers – provide smooth feeding of documents of various sizes and textures.

Feed Tray – holds documents prior to feeding.

Gap Adjustment Knob – allows you to manually adjust the space between the feed and separator rollers for documents of varying thicknesses.

Gap Release Lever – allows you to open the feed gap for thicker documents to be fed into the transport.

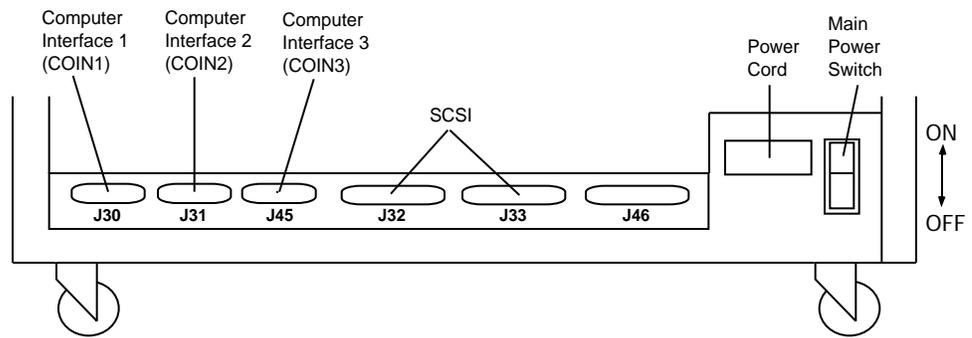
Left-Side Access Door – provides access to select components.

Right-Side Access Door – provides access to the transport system components.

Side Panel Switch – allows you to turn the transport system on/off.

Top Cover – provides access behind the transport area.

Rear view



Computer Interface 1 (COIN1) - Service/Diagnostic Interface.
Used when configuring the Scanner and for running diagnostics.

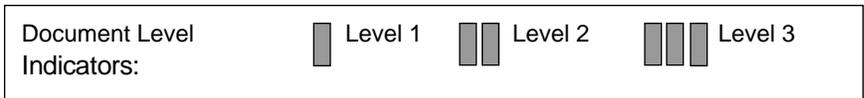
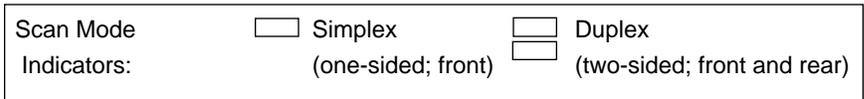
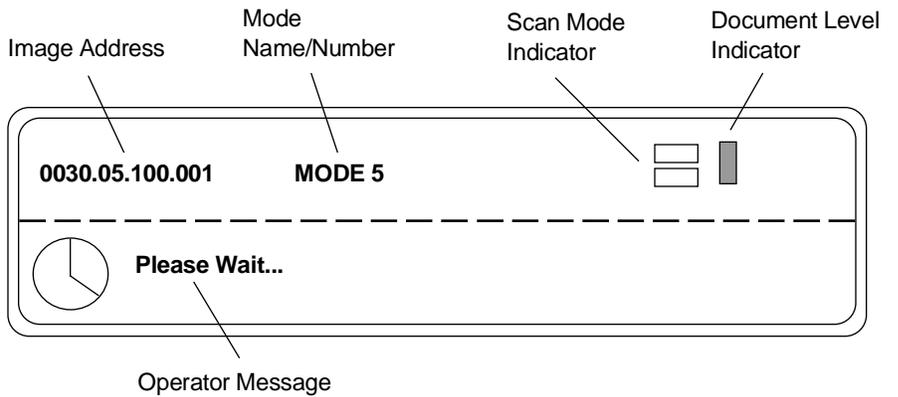
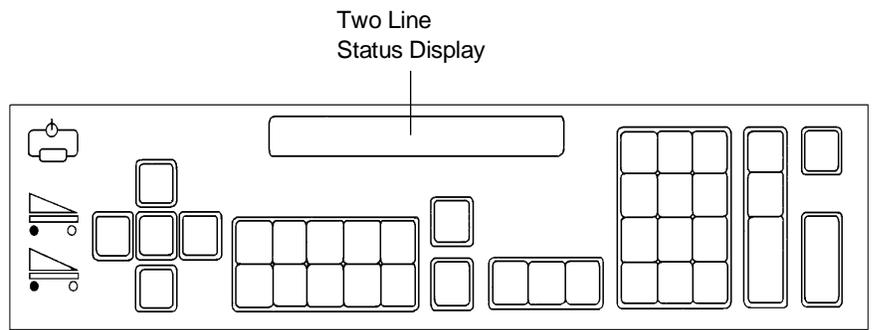
Computer Interface 2 (COIN2) - OCR Command/Bar Code Interface.
Used for transferring commands between the Scanner and external devices/subsystems.

Computer Interface 3 (COIN3) - SCSI Diagnostic Port Interface.
Used for system debugging and for monitoring SCSI-Host Computer communications.

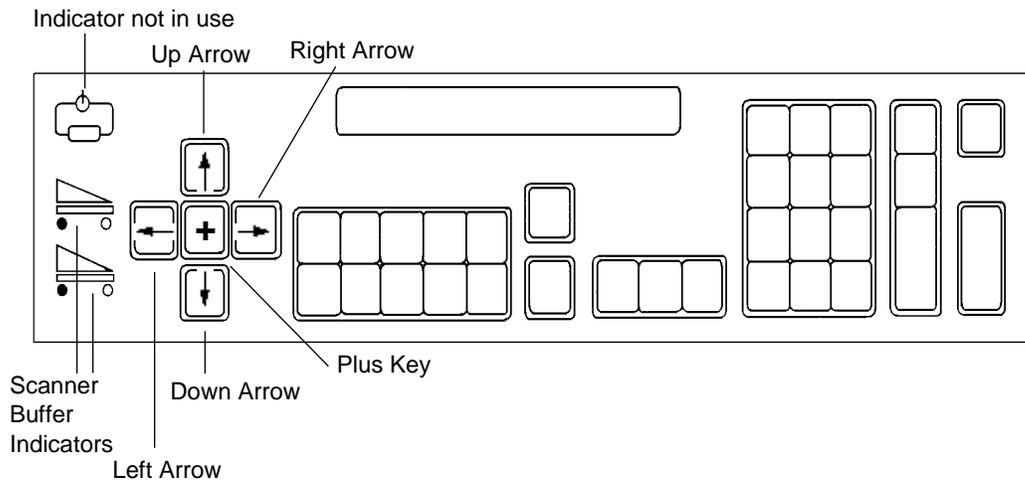
Main Power Switch – allows you to turn main power to the Scanner on/off.

Power Cord – plugs into an appropriate power outlet.

Status display

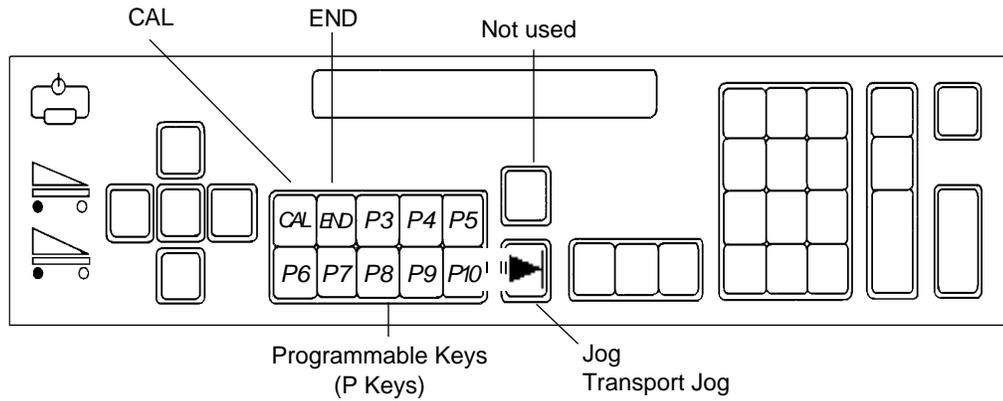


Operating keys and indicators



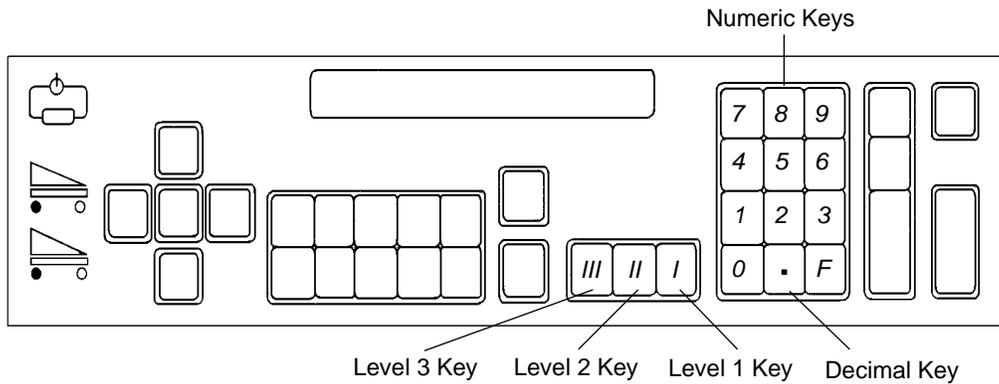
| Key/Indicator | Function |
|----------------------------------|---|
| Scanner Buffer Status Indicators | <p>Indicates how much image buffer space is available: A full image buffer is represented by only one light in the display; An empty image buffer is represented by all lights in the display.</p> <p>Upper indicator: represents the image buffer for front side images. Lower indicator: represents the image buffer for rear side images.</p> |
| Plus key | Used when inputting a value for the Image Address. When pressed, it allows a field to remain unchanged. |
| Up Arrow | Used to increment values at a faster rate. Also used to increase a data value when used with certain functions. Also used when entering an alpha character in the Image Address Fixed Field. |
| Right Arrow | Used to increment values at a slower rate. Also used to display additional messages in the Status Display; a blinking cursor appears over the arrow in the display as an indication that there are additional messages. Press the right arrow key to display the additional messages. Also used when entering an alphanumeric character in the Image Address. |
| Down Arrow | Used to decrement values at a faster rate. It is also used to decrease a data value when used with certain functions. Also used when entering an alpha character in the Image Address Fixed Field. |
| Left Arrow | Used to decrement values at a slower rate. Also used to backspace, delete the last keystroke, or clear messages in the Status Display. Also used when entering an alphanumeric character in the Image Address. |

Operating keys and indicators



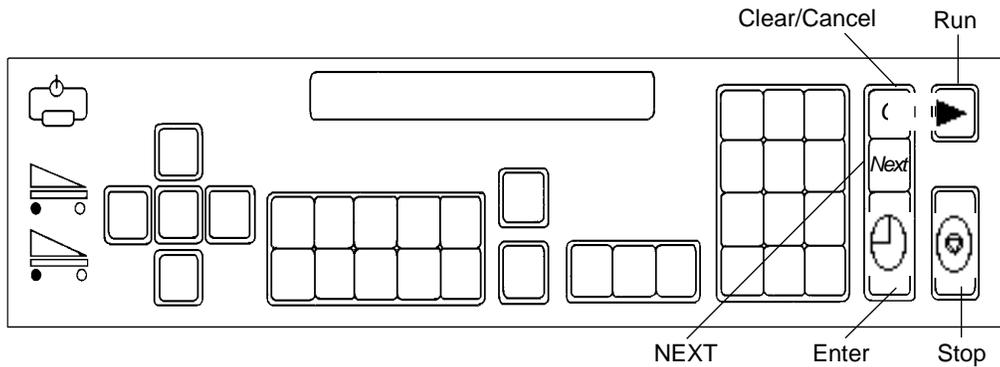
| Keys/Indicators | Function |
|----------------------------|--|
| CAL | Used to initiate the calibration process. |
| END | Used at the end of a batch or job to alert the host computer that the batch or job has ended. |
| Programmable Keys (P Keys) | Used to perform specific functions. The P Keys have default values; any or all of the defaults may be overridden/reprogrammed at installation. |
| Jog Transport Jog | Used to momentarily turn on (jog) the transport system. Used to help clear document jams. |

Operating keys and indicators



| Keys/Indicators | Function |
|----------------------|---|
| Numeric Keys (0 - 9) | Used to enter numeric data such as an Image Address or Function Code. |
| F Key | Used to select one of the available functions, when used with the numeric keys. |
| Decimal Key | Used to insert a field separator in an Image Address. |
| Level 1 Key | Used to identify the next document fed into the Scanner as a Level 1 document. |
| Level 2 Key | Used to identify the next document fed into the Scanner as a Level 2 document. |
| Level 3 Key | Used to identify the next document fed into the Scanner as a Level 3 document. |

Operating keys and indicators



| Key/Indicator | Function |
|-----------------|--|
| Clear Cancel | Used to cancel a function without changing the preset values. Used to clear the Status Display after executing select function codes. Used to clear an operator message from the Status Display. |
| Run | Used to turn on the feeder and transport system. |
| NEXT | Allows operator to enter the next document Image Address. |
| Stop | Used to stop the feeder and transport system. Documents in the transport system when the Stop key is pressed will be scanned and placed in the exit hopper before the transport system stops. |
| Enter | Used to enter data for a Function Code or an Image Address change. |

2 BASIC CONCEPTS

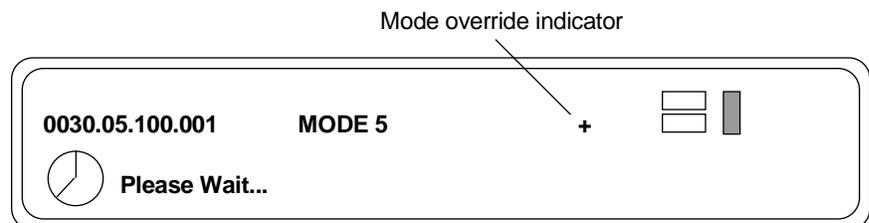
The following information will provide you with the basic concepts associated with scanning documents.

Modes

The Scanner offers eighteen (18) modes which may be defined for a particular application or group of applications.

When you select a mode for use with a particular application, you are selecting the format/appearance of the output. Each mode consists of definitions which affect the output of the Scanner. Required mode definitions include index format, level to follow level rules, etc. Optional mode definitions include a variety of accessory options, such as turning the endorser on or off. The mode definitions are established during installation.

Many of the optional mode definitions established during installation may be overridden using function codes. The overrides are temporary, unless during installation it is specified that the mode overrides be saved. Upon execution of a function which overrides a prior definition, a plus sign (+) will appear in the first line of the status display if the mode overrides are saved.



Linked modes

Linking modes eliminates the requirement of re-entering the Image Address when changing from one mode to another. When two modes are linked, you may change from one mode to another, maintaining the Image Address.

Modes are linked by defining the same Index Format and Image Address Fields (both number of fields and individual field lengths) during installation.

NOTE: The Level Rule options defined during installation do not have to be the same to link modes.

To change from one mode to another, maintaining the Image Address, use Function Code F91.

The following example illustrates the use of linked modes.

- Assume that in Mode 10:
 - The Index Format is three-level.
 - The Image Address Level 3 field length is three (3) characters; the Image Address Level 2 field length is two (2) characters; the Image Address Level 1 field length is four (4) characters.
 - The Level Rules are: Level 1 followed by Level 1; Level 2 followed by Level 1; and Level 3 followed by Level 3.

- Assume that in Mode 12:
 - The Index Format is three-level.
 - The Image Address Level 3 field length is two (2) characters; the Image Address Level 2 field length is two (2) characters; the Image Address Level 1 field length is five (5) characters.
 - The Level Rules are: Level 1 followed by Level 2; Level 2 followed by Level 2; and Level 3 followed by Level 2.

- Assume that in Mode 14:
 - The Index Format is three-level.
 - The Image Address Level 3 field length is two (2) characters; the Image Address Level 2 field length is two (2) characters; the Image Address Level 1 field length is five (5) characters.
 - The Level Rules are: Level 1 followed by Level 1; Level 2 followed by Level 1; and Level 3 followed by Level 2.

Mode 10 and Mode 12 may not be linked; the Image Address field lengths are not the same.

Mode 10 and Mode 14 may not be linked; the Image Address field lengths are not the same.

Mode 12 and Mode 14 may be linked; the Index Format is three-level; and the Image Address has three fields, each with the same length

NOTE: If you are currently in Mode 12 and want to change to Mode 14, note the affect of different level rules on the Image Address: assume that the Image Address of the last document fed into the transport is 01.05.01234. The next Image Address displayed while still in Mode 12 is 01.06.00000. However, if you change to Mode 14, using Function Code F91, the next Image Address displayed in Mode 14 is 01.05.01234.

Image addresses

An Image Address is assigned to every document scanned. An Image Address consists of four fields, each of which represent a different document level. An Image Address has a maximum length of fifteen (15) characters; twelve (12) alphanumeric (Field A, Field B, and Field C must be numeric; the Fixed Field may contain alphanumerics) and three (3) delimiters (inserted between fields).

The Image Address (number of fields and characters) is based upon the indexing scheme chosen (refer to *Indexing Schemes*).

Regardless of the indexing scheme used, the following four fields must be defined during installation for each mode:

- Field A. A numeric field representing document Level 1.
Its value is incremented whenever a document is assigned Level 1.
- Field B. A numeric field representing document Level 2.
Its value is incremented whenever a document is assigned Level 2.
- Field C. A numeric field representing document Level 3.
Its value is incremented whenever a document is assigned Level 3.
- Fixed Field. An alphanumeric field containing fixed information; typically, the date.

An example of an Image Address is:

1201.01.020.005

where:

- Field A (Level 1) contains 005.
- Field B (Level 2) contains 020.
- Field C (Level 3) contains 01.
- Fixed Field contains 1201.

Assigning an image address

An Image Address may be assigned or changed by pressing the NEXT key or by entering Function Code F92. The NEXT key (or Function Code F97) is used when setting/changing any or all of the Image Address fields. Function Code F92 is used when setting/changing only the Fixed Field of the Image Address.

Using the NEXT key

To set or change an Image Address using the NEXT key (or Function Code F97), simply press the NEXT key or enter Function Code F97.

The next Image Address will be displayed. An entry cursor will appear over the first character of the next Image Address. Simply enter the desired Image Address or use the left and right arrow keys to position the entry cursor over the character to be set/changed and enter the desired value. The Plus key (+) may also be used to move the entry cursor to the first character in the next Image Address field, leaving the current Image Address field unchanged.

All numeric keys (0 - 9) and the decimal key have dedicated keys on the keyboard and can be entered directly.

For example if the current Image Address is 1201.01.020.005 and you want to change it to 1201.02.000.000, the following steps would be used:

- Press the NEXT key or enter Function Code F97.
The entry cursor will appear over the first Fixed Field character (1201.01.020.005).
- Press the Plus key (+) to leave the Image Address Field (1201) unchanged.
- Enter .02.000.000.
- Press Enter to exit, saving the changes to the Image Address and return to a normal operating display.

Using function code F92

To set or change the Image Address Fixed Field, enter Function Code F92.

The number of characters in the Image Address Fixed Field is defined during installation for each mode. Using Function Code F92, you will not be allowed to enter more than the predefined number of characters.

The Fixed Field of the Image Address will be displayed. An entry cursor will appear over the first character of the Fixed Field.

To enter numeric characters, simply input the desired value using the numeric keys (0 - 9) on the keyboard and press Enter to input the value.

To enter alpha characters, you must enter the alpha entry mode by pressing either the up or down arrow key. A portion of the alpha character set will be displayed, with a flashing cursor appearing over one of the characters.

If the desired alpha character does not appear in the display, press either the up or down arrow key to display another portion of the alphabet.

The alpha character set consists of: upper-case English characters (A-Z), a space (), six special characters (\$ * - : < >), a dieresis (ä), beta (ß), n tilde (ñ), o dieresis (ö), and u dieresis (ü).

NOTE: The plus sign (+) is also an acceptable character, input from the control panel. However, it cannot be input as the first character in the Fixed Field.

Once the desired alpha character appears in the display, it may be selected for input into the Fixed Field. To input the desired alpha character, use the left or right arrow key to move the flashing cursor over the desired alpha character. Press Enter to place the alpha character in the Fixed Field.

Repeat the process of entering alpha entry mode, and entering an alpha character for each Fixed Field character.

For example, if the current Image Address Fixed Field is 1201 and you want to change it to DEC5, the following steps would be used:

- Enter Function Code F92.
The entry cursor will appear over the first Fixed Field character (1201).
- Press the up or down arrow key to enter alpha entry mode.
- Make sure that the letter *D* is displayed. If not, press the up or down arrow key until the letter is displayed.
- Use the left or right arrow key to position the flashing cursor over the letter *D*.
- Press Enter to place the letter *D* in the first Fixed Field character position. Only the letter *D* will appear in the display, with the entry cursor appearing in the next character position.
- Press the up or down arrow key to enter alpha entry mode.
- Make sure that the letter *E* is displayed. If not, press the up or down arrow key until the letter is displayed.
- Use the left or right arrow key to position the flashing cursor over the letter *E*.
- Press Enter to place the letter *E* in the second Fixed Field character position. The letters *DE* will appear in the display, with the entry cursor appearing in the next character position.
- Press the up or down arrow key to enter alpha entry mode.
- Make sure that the letter *C* is displayed. If not, press the up or down arrow key until the letter is displayed.
- Use the left or right arrow key to position the flashing cursor over the letter *C*.
- Press Enter to place the letter *C* in the third Fixed Field character position. The letters *DEC* will appear in the display, with the entry cursor appearing in the next character position.
- Press the numeric key 5 to place the number 5 in the fourth Fixed Field character position.
- Press Enter to exit Function Code F92. saving the changes to the Image Address and return to a normal operating display.

Image address formats

The Image Address may be displayed in the status display, and printed on the original document(s) as they are transported through the system.

The format in which the Image Address appears when displayed, written, or printed is defined during installation for each mode.

The written/printed Image Address may appear in one of three formats:

- Display leading zeros format
004.003.002.001
- Suppress leading zeros format
004. 3. 2. 1
- Compress leading zeros format
004.3.2.1

NOTE: The format chosen does not affect the Fixed Field of the Image Address; it is always displayed and printed in its entirety.

Indexing schemes

The purpose of scanning documents is to record the information contained on the documents in an easily accessible form.

In order to access or retrieve the information recorded, an indexing scheme is used to assist you in locating the desired information.

The indexing scheme is defined during installation for each mode.

The Scanner offers five indexing schemes:

- Single Level.
- Two Level.
- Two Level Offset.
- Three Level.
- Three Level Offset.

Single level indexing

When using this scheme, the Image Address (IA) assigned to each document is defined as follows:

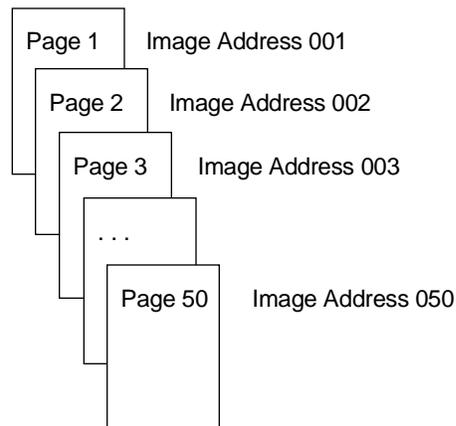
- Field A (Level 1) is defined as having a field length greater than zero.
- Field B (Level 2) is defined as having a field length of zero.
- Field C (Level 3) is defined as having a field length of zero.
- Fixed Field may be defined, if desired.

Example of single level indexing

Let's use the scanning of a book as an example. Assume that the book has fifty (50) pages.

The Image Address has been defined:

- Field A has a field length of three (3) characters.
- Field B has zero (0) characters.
- Field C has zero (0) characters.
- Fixed Field has zero (0) characters.



The first page is assigned Image Address 001. The second page is assigned Image Address 002, and so on, through the remainder of the book.

Any one of the fifty pages may later be located and retrieved using its unique Image Address.

Two level indexing

When using this scheme, the Image Address (IA) assigned to each document is defined as follows:

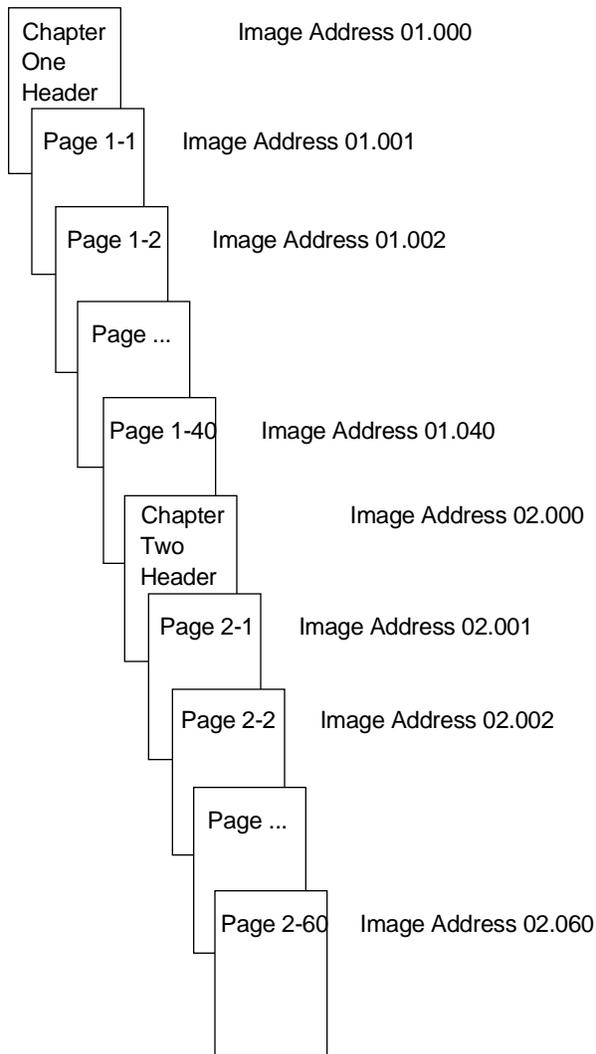
- Field A (Level 1) is defined as having a field length greater than zero.
- Field B (Level 2) is defined as having a field length greater than zero.
- Field C (Level 3) is defined as having a field length of zero.
- Fixed Field may be defined, if desired.

Example of two level indexing

Let's use the scanning of a book as an example. Assume that the book contains two chapters; Chapter 1 has forty (40) pages and Chapter 2 has sixty (60) pages.

The Image Address has been defined:

- Field A has three (3) characters.
- Field B has two (2) characters.
- Field C has zero (0) characters.
- Fixed Field has zero (0) characters.



The header page for Chapter 1 is assigned Image Address 01.000. The first page of Chapter 1 is assigned Image Address 01.001. The second page of Chapter 1 is assigned Image Address 01.002, and so on through the remainder of Chapter 1.

The header page for Chapter 2 is assigned Image Address 02.000. The first page of Chapter 2 is assigned Image Address 02.001. The second page of Chapter 2 is assigned Image Address 02.002, and so on through the remainder of Chapter 2.

Any one of the pages may later be located and retrieved using its unique Image Address.

Two level offset indexing

When using this scheme, the Image Address (IA) assigned to each document is defined as follows:

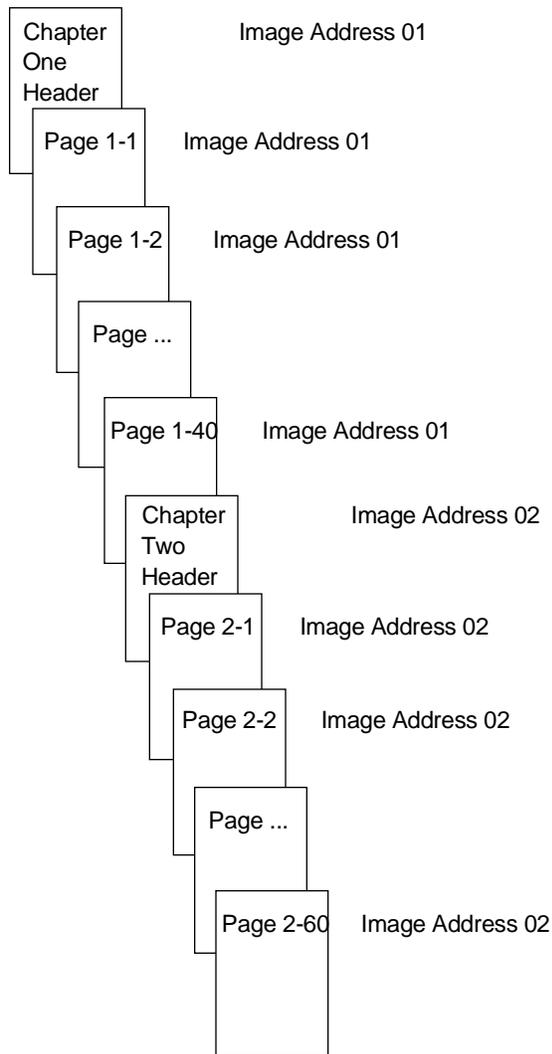
- Field A (Level 1) is defined as having a field length of zero.
- Field B (Level 2) is defined as having a field length greater than zero.
- Field C (Level 3) is defined as having a field length of zero.
- Fixed Field may be defined, if desired.

Example of two level offset indexing

Let's use the scanning of a book as an example. Assume that the book contains two chapters; Chapter 1 has forty (40) pages and Chapter 2 has sixty (60) pages.

The Image Address has been defined:

- Field A has zero (0) characters.
- Field B has two (2) characters.
- Field C has zero (0) characters.
- Fixed Field has zero (0) characters.



The header page for Chapter 1 is assigned Image Address 01. The remaining pages of Chapter 1 are also assigned Image Address 01.

The header page for Chapter 2 is assigned Image Address 02. The remaining pages of Chapter 2 are also assigned Image Address 02.

Either one of the chapter header pages may later be located and retrieved using its unique Image Address. Pages within a chapter may be located and retrieved by first finding the chapter header and then manually scrolling through the remaining pages of the chapter.

Three level indexing

When using this scheme, the Image Address (IA) assigned to each document is defined as follows:

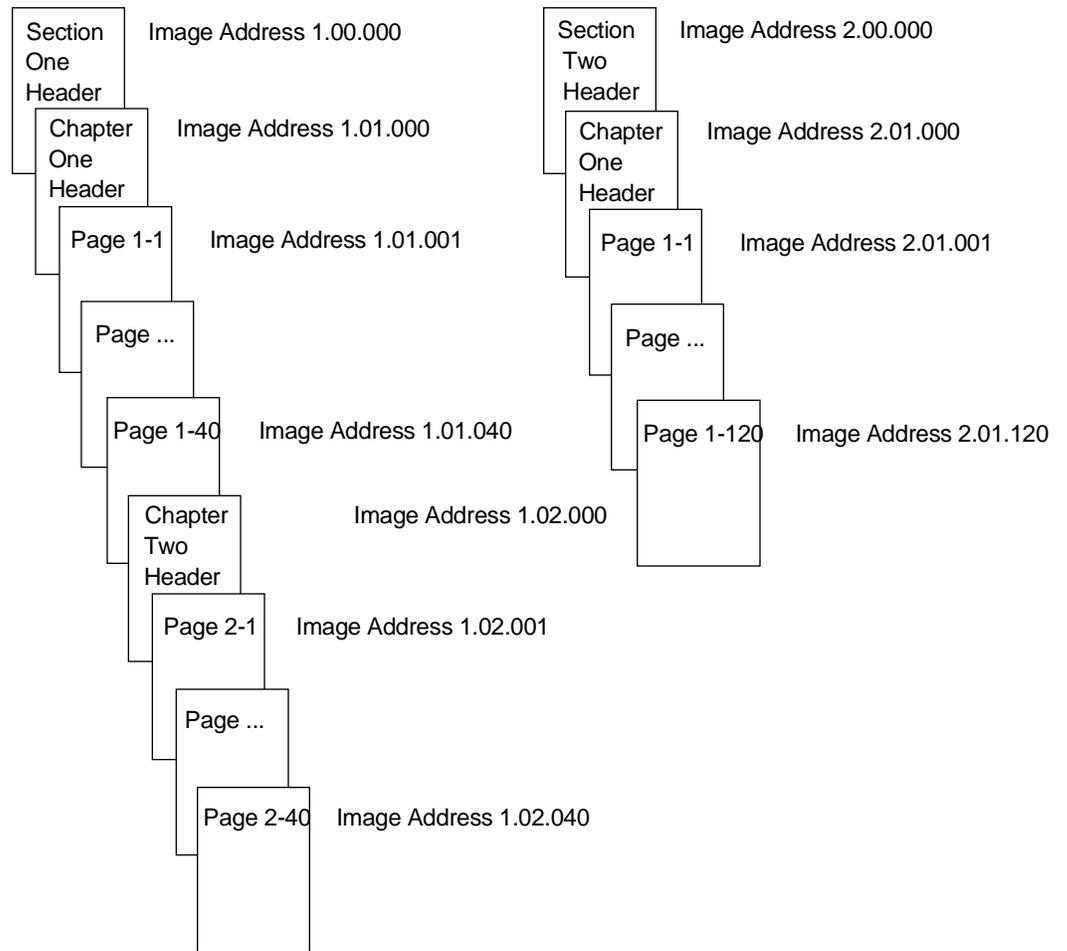
- Field A (Level 1) is defined as having a field length greater than zero.
- Field B (Level 2) is defined as having a field length greater than zero.
- Field C (Level 3) is defined as having a field length greater than zero.
- Fixed Field may be defined, if desired.

Example of three level indexing

Let's use the scanning of a book as an example. Assume that the book contains two sections; Section One contains two chapters, each having forty (40) pages; Section Two contains only one chapter, having one-hundred twenty (120) pages.

The Image Address has been defined:

- Field A has three (3) characters.
- Field B has two (2) characters.
- Field C has one (1) character.
- Fixed Field has zero (0) characters.



The header page for Section 1 is assigned Image Address 1.00.000. The header page for Chapter 1 of the section is assigned Image Address 1.01.000. The pages within the Chapter are assigned Image Address(es) 1.01.001 through 1.01.040. The header page for Chapter 2 of the section is assigned Image Address 1.02.000. The pages within the Chapter are assigned Image Address(es) 1.02.001 through 1.02.040.

The header page for Section 2 is assigned Image Address 2.00.000. The header page for Chapter 1 of the section is assigned Image Address 2.01.000. The pages within the Chapter are assigned Image Address(es) 2.01.001 through 2.01.120.

Any one of the pages may later be located and retrieved using its unique Image Address.

Three level offset indexing

When using this scheme, the Image Address (IA) assigned to each document is defined as follows:

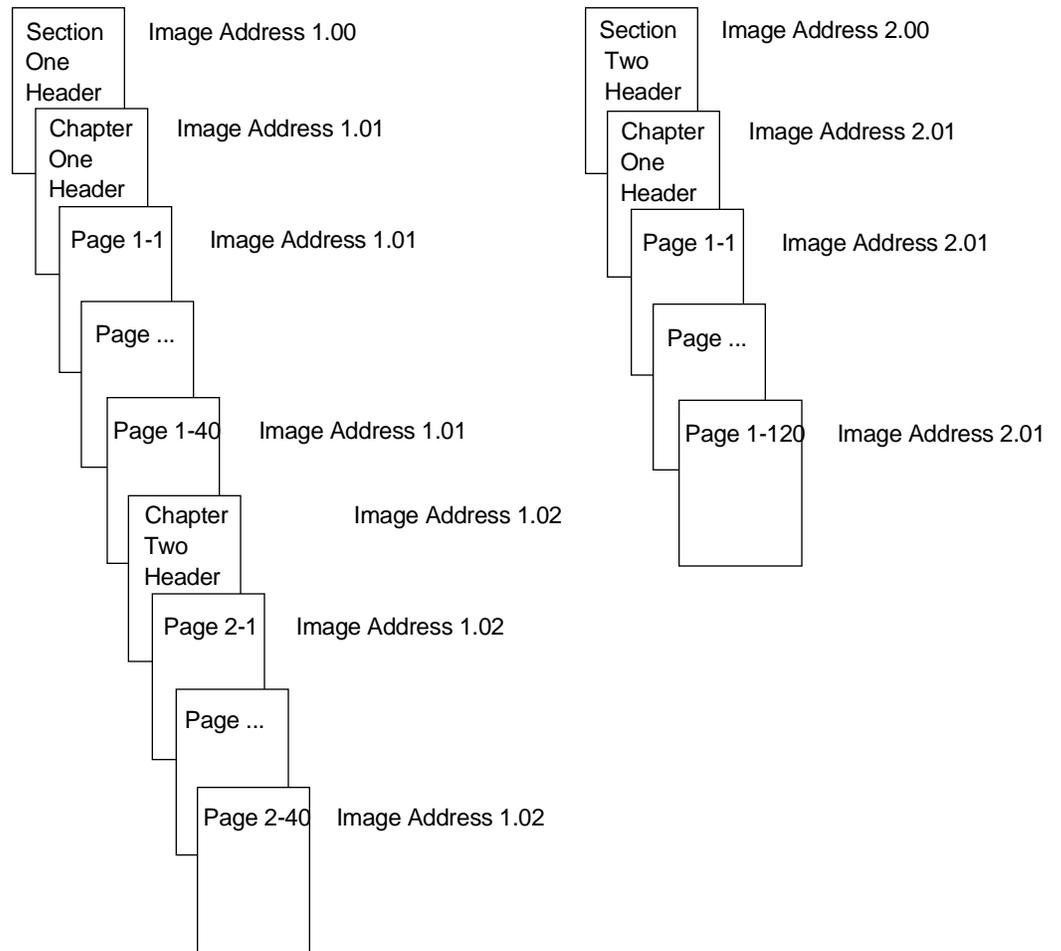
- Field A (Level 1) is defined as having a field length of zero.
- Field B (Level 2) is defined as having a field length greater than zero.
- Field C (Level 3) is defined as having a field length greater than zero.
- Fixed Field may be defined, if desired.

Example of three level offset indexing

Let's use the scanning of a book as an example. Assume that the book contains two distinct sections; Section One contains two chapters, each having forty (40) pages; Section Two contains only one chapter, having one-hundred twenty (120) pages.

The Image Address has been defined:

- Field A has zero (0) characters.
- Field B has two (2) characters.
- Field C has one (1) character.
- Fixed Field has zero (0) characters.



The header page for Section 1 is assigned Image Address 1.00. The header page for Chapter 1 of the section is assigned Image Address 1.01. The remaining pages of Chapter 1 are also assigned Image Address 1.01. The header page for Chapter 2 of the section is assigned Image Address 1.02. The remaining pages of Chapter 2 are also assigned Image Address 1.02.

The header page for Section 2 is assigned Image Address 2.00. The header page for Chapter 1 of the section is assigned Image Address 2.01. The remaining pages of Chapter 1 are also assigned Image Address 2.01.

Either one of the section header or chapter header pages may later be located and retrieved using its unique Image Address. Pages within a chapter may be located and retrieved by first finding the chapter header and then manually scrolling through the remaining pages of the chapter.

Controlling document level changes

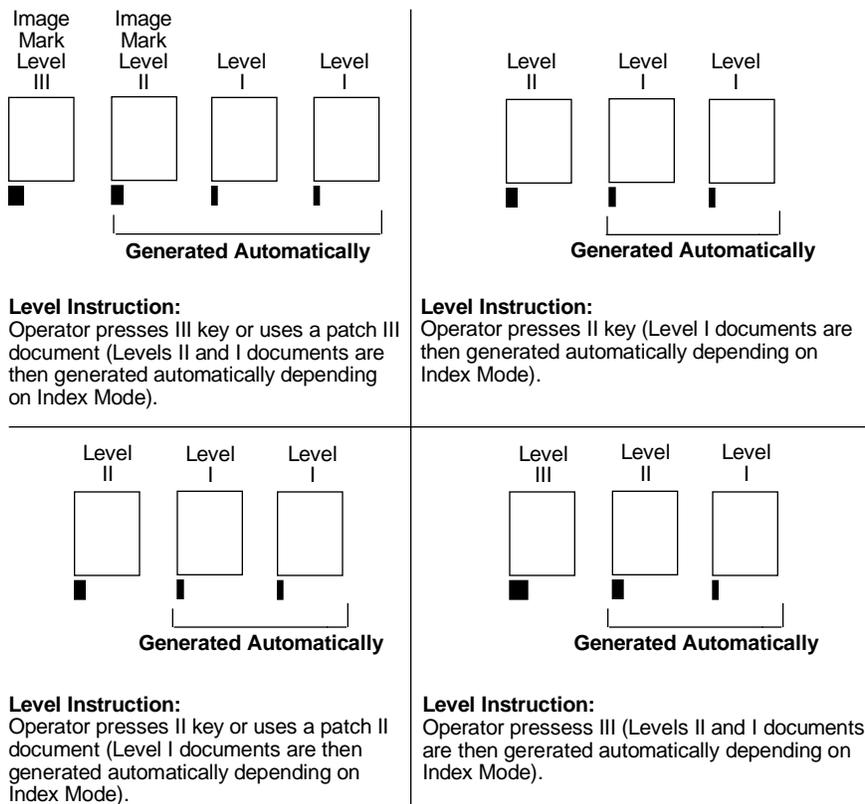
Throughout the *Indexing Schemes* examples, you have seen document levels change within a single group of documents. There are four document image levels: 3, 2, 1, and 0.

There are a number of ways in which user can set or change the document level:

- You may press a document Level Key on the Control Panel to assign a document Level 3, 2, or 1.
- You may use Function Code F07 to assign a document Level 0.
- You may use the optional KODAK IMAGELINK™ Footswitch accessory; pressing, pressing and holding, or releasing the Footswitch can change document levels.
- You may use the optional KODAK IMAGELINK™ Patch Reader accessory; feeding a document containing a particular type of patch can change document levels.

If the user does not set or change the document level using one of the methods listed, the document level will be set automatically based upon the Level Rules (i.e., Level 2 is followed by Level 1, etc.) defined during installation for each mode.

The following diagram illustrates how document levels are set or changed:

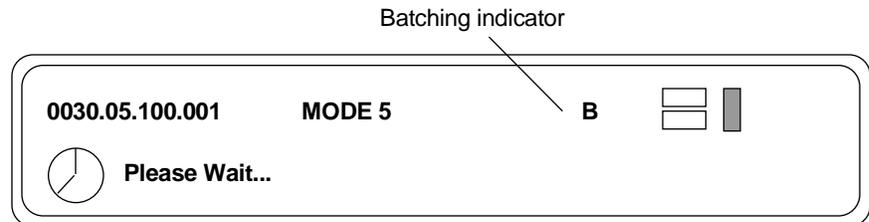


Batching

A batch is defined as a specific number of documents of a given level (Level 1, Level 2, or Level 3). Prior to processing, a predefined action may take place. During processing, when the specified number of documents of the given level have been processed, a predefined action will take place.

The start-of-batch and end-of-batch actions are defined during installation for each mode.

When batching is enabled in the current mode, a *B* will appear in the first line of the status display.



Special considerations

The topics presented in this section apply to the general usage of the Scanner.

Checking the meters

Checking the meters is useful in determining:

- maintenance schedules.
- the length of time required to complete a job.

To view the run time display, enter Function Code F17. The display will show three (3) meters: Meter A shows the number of motor-on hours; Meter B shows the number of transport-on hours; and Meter C shows the number of AC-on hours. Press the right arrow key to view each meter in turn. In addition, the non-resettable document count is shown as Meter D.



Press the Clear key to clear the display.

Scanning considerations

The topics presented in this section apply to document scanning.

Image headers

Image Headers are created when documents are scanned. Each scanned document has its own individual image header, containing information such as:

- Document number (sequential number)
- Image size
- Document Level
- Mode
- Line length
- Page length
- Image Address
- Compression type
- Date
- Time
- Resolution
- Bit Order
- Skew
- Header flags
- Optional information (i.e., bar code information)

The document image header is sent ahead of the scanned document image to the host computer. The image header and document image are then stored on a magnetic or optical disk media. The information contained in the header is later used to retrieve the document images (most often using the Image Address or bar code information stored in the header).

Header flags

Header flags are used to alert the host system that the document(s) fed into the transport are of special interest. There are two types of flags: latched and momentary.

The latched flag is activated by performing Function Code F73. When the latched flag is set, the Image Header for the current document (or the next document fed into the transport) and all documents which follow will contain a header flag. The latched flag will remain activated until it is turned off by again performing Function Code F73.

NOTE: A flag symbol will appear in the first line of the status display until the latched flag is turned off.

The momentary flag is activated by performing Function Code F74. When the momentary flag is set, the Image Header for the current document (or the next document fed into the transport) only will contain a header flag.

3 GETTING STARTED

The following steps are necessary to prepare the Scanner for operation:

- Turn on the Main Power Switch (located at the rear of the machine).
- Turn on the Side Panel Switch.
- Select the language display.
- Calibrate the Scanner.
- Adjust the Feed and Separator Roller gap.
- Adjust the Feed Shelf position.
- Adjust the Feed Shelf Side Guides.
- Adjust the Exit Hopper Side Guides and End Stop.
- Change the Deflector (if required).
- Prepare documents for scanning.

Turning on the Scanner

The following steps are required to power on the Scanner:

1. Turn on the Main Power Switch (located at the rear of the machine).

NOTE: It is not necessary to turn off the Main Power Switch during normal daily operation.

2. Turn on the Side Panel Switch.

Wait until the Status Display indicators are lit and an operating display appears before you continue.



Selecting the language display

The Scanner may have been configured at installation to allow use of a second language in the status display. The language used (French, German, Italian, Spanish, or other) is defined during installation. If available, the alternate language display may be accessed using Function Code F19.

Calibrating the Scanner

Calibration sets the intensity of the lamps, which contribute to the overall quality of the scanned document image.

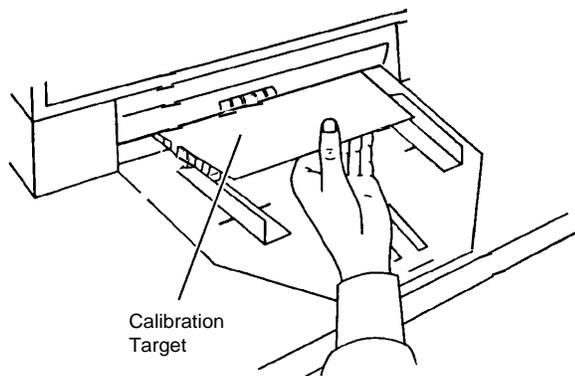
The Scanner should be calibrated:

- At least once a day when the Scanner is turned on using the Side Panel Switch - prior to scanning documents.
- Any time the Scanner is turned on using the Main Power Switch.
- If image quality is poor.
- After changing lamps.

Calibrate the Scanner using a calibration target (sheet of paper) that is:

- Blank.
- Clean.
- Matte finish (not glossy).
- White or the same color as the background color of the documents to be scanned. If you are scanning a variety of colored documents, use a white calibration target.
- Wider than the documents you are going to scan (i.e. to scan 8.5 x 11 inch (215.9 x 279.4 mm) documents, the calibration target should be wider than 8.5 inches/215.9 mm). The recommended width for the calibration target is 12 inches (300 mm).

1. Verify that the Main Power Switch (located at the rear of the Scanner) and Side Panel Switch are on. A normal operating Status Display should appear.
2. Press P-Key P1 or enter Function Code F37 to initiate the calibration sequence.
3. Insert the calibration target into the feeder.



When the calibration is successful, the Status Display will return to a normal operating display.

Unsuccessful calibration

If the calibration is not successful, a message will appear in the Status Display.

You may need to:

- Verify that you are using a clean, blank sheet of paper as a calibration target.
- Verify that there is not a document already in the document path. Refer to *Troubleshooting - Clearing the document path*.
- Clean the Imaging Guides. Refer to *Maintenance - Cleaning the imaging guides*.
- Calibrate the Scanner again. If this calibration attempt fails, change the lamps. Refer to *Maintenance - Replacing the exposure lamps*.

If the required action has been taken and another calibration attempt fails, contact your local service representative.

Adjusting the feed and separator roller gap

The gap adjustment knob on the Control Panel increases or decreases the space between the feed and separator rollers. The gap must be adjusted properly for smooth transportation of documents without document overlap.

When documents of different thicknesses are fed in a group, adjust the gap using the thinnest document in the group.

The feed and separator roller gap may have to be adjusted to compensate for:

- Very thin documents (onion skin, tracing paper, etc.).
- Very thick documents (card stock, punch cards, cover stock).
- Some coated documents (photographic paper, plastic-coated paper).

If the gap is not adjusted properly:

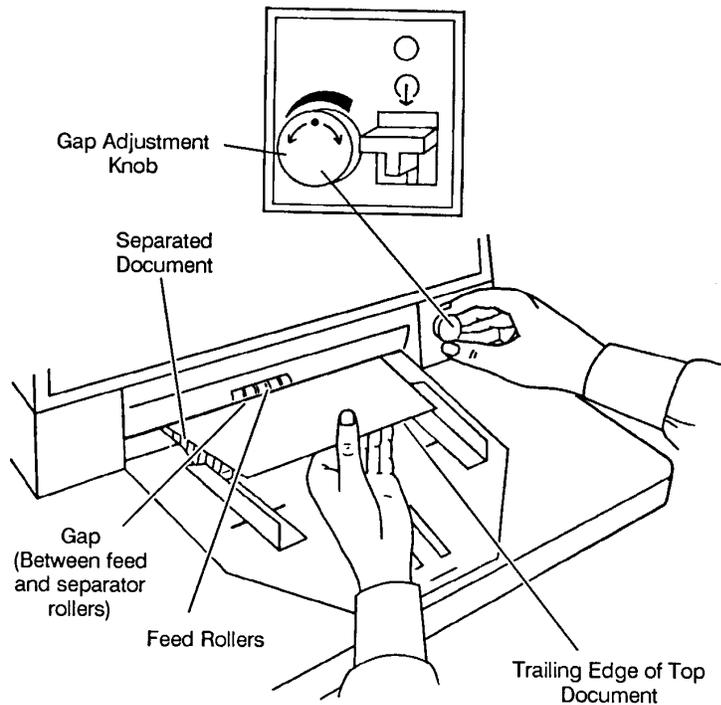
- More than one document at a time may be drawn into the transport system at the same time; not all of the documents will be scanned.
- Documents may be drawn into the transport too quickly; documents may overlap or be spaced too closely (causing an error display).
- Documents may become skewed during transport; jamming may occur.

NOTE: Prior to performing the adjustment procedure outlined in this section, the Scanner must be calibrated and enabled.

1. Turn on the Side Panel Switch.
2. Enter Function Code F04 and enable counting-only.
3. Press Enter.
4. Press Run.

IMPORTANT: *Do not make a gap adjustment while documents are in the feeder or transport system; doing so will produce an inaccurate adjustment.*

5. Turn the Gap Adjustment Knob clockwise three complete turns to open the gap between the feed and separator rollers.



6. Select two documents of the same size, texture and thickness, similar to the types of documents you will be processing.
7. Place one document on top of the other. Hold them firmly by their trailing edges. Insert them into the gap approximately 0.125 (1/8) inch (3 mm).
If the documents separate, repeat the following steps until the documents do not separate:
 - a. Turn the Gap Adjustment Knob clockwise one-half (1/2) turn.
 - b. Insert the documents again.If the documents do not separate, proceed with Step 8.
8. Rotate the Gap Adjustment Knob counterclockwise one or two clicks.
9. Hold the trailing edges of the documents firmly. Insert them into the gap.

If the bottom document is not separating from the top document, remove the documents and repeat Steps 8 and 9 until the bottom document separates from the top document.

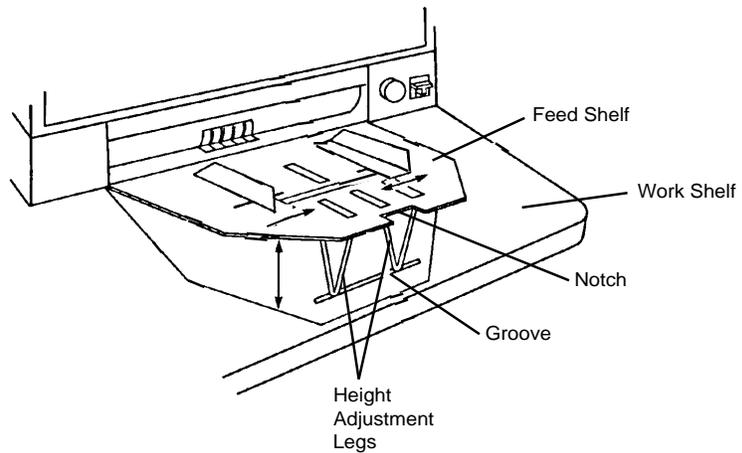
If the bottom document is separating from the top document, proceed with Step 10.

10. When you have adjusted the gap so that the bottom document separates consistently from the top document, rotate the Gap Adjustment Knob counterclockwise another one or two clicks to complete the adjustment.
11. Feed a stack of fifty (50) to one-hundred (100) documents twice through the transport system. Verify that the final count reflects the total number of documents that were fed and that the counter shows the same amount each time the documents are counted.

If the count is not the same, the gap is not adjusted correctly. Rotate the Gap Adjustment Knob counterclockwise another one or two clicks and repeat Step 10. Repeat until corrected.
12. Press Stop.
13. Enter Function Code F04 and disable counting-only.
14. Press Enter.

Adjusting the feed shelf position

Before you begin feeding documents into the Scanner, adjust the position of the Feed Shelf:



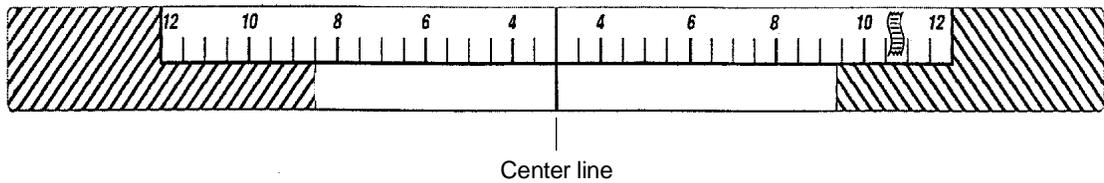
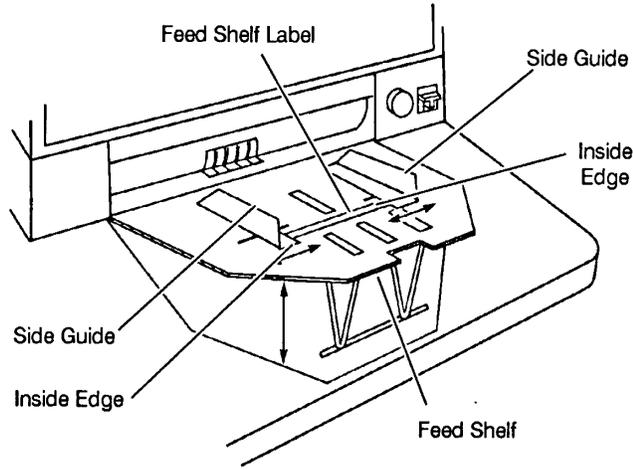
To automatically feed multiple documents, the feed shelf should be in the raised position (as shown above). To raise the feed shelf, grasp the notch and lift the feed shelf. Swing the height adjustment legs out and insert them into the groove on the work shelf.

To hand feed documents (one at a time), the feed shelf should be in the down position (not shown). To lower the feed shelf, grasp the notch and lift the feed shelf until the height adjustment legs are no longer resting in the groove on the work shelf. Tuck the height adjustment legs in and gently lower the feed shelf into position, level with the work shelf.

Adjusting the feed shelf side guides

Before you begin processing documents, adjust the side guides on the feed shelf to accommodate the documents being processed.

2. Slide apart the Side Guides on the Feed Shelf until the Feed Shelf Label is visible.



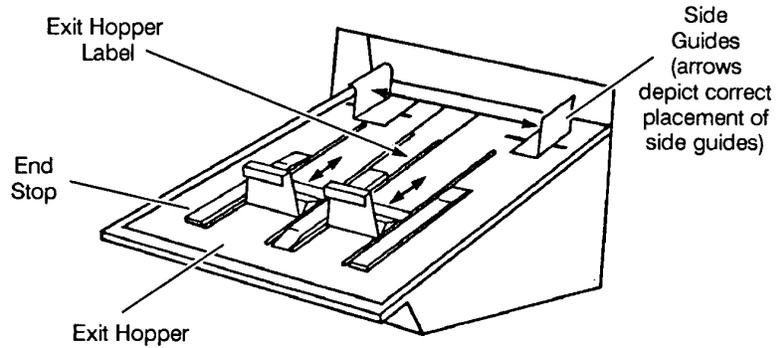
2. Center the documents across the feed shelf label. Adjust the feeder side guides dependent upon the width of the document. Leave approximately 0.0625 (1/16) inch (2 mm) clearance on each side of the documents so that they will feed properly.

NOTE: If the documents are larger than the area shown on the Feed Shelf Label and do not fit between the Side Guides, rotate and reposition the documents within the Side Guides.

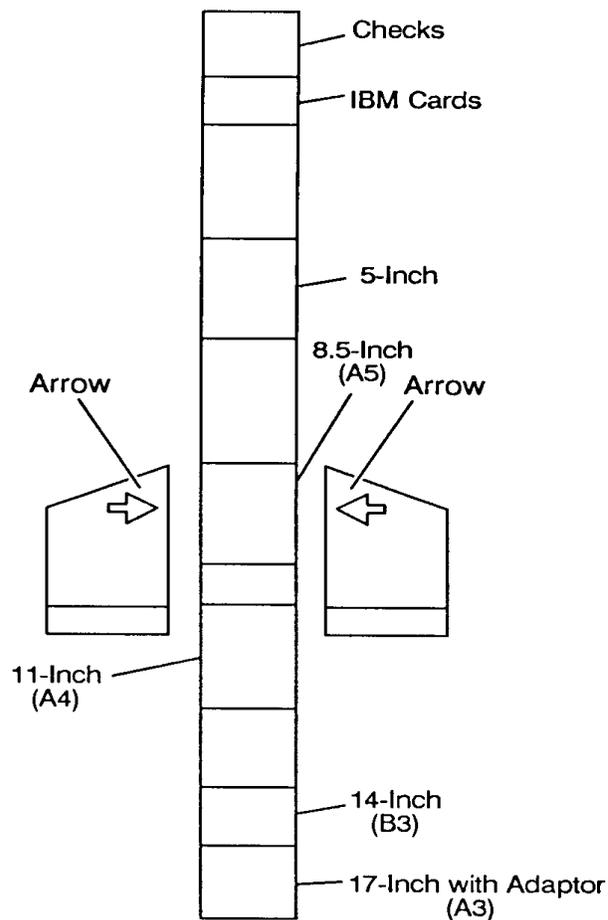
Adjusting the exit hopper side guides and end stop

The Exit Hopper Side Guides and End Stop must be adjusted so that documents will be stacked properly after processing.

1. Adjust the Side Guides on the Exit Hopper to match the adjustment of the Side Guides on the Feed Shelf.



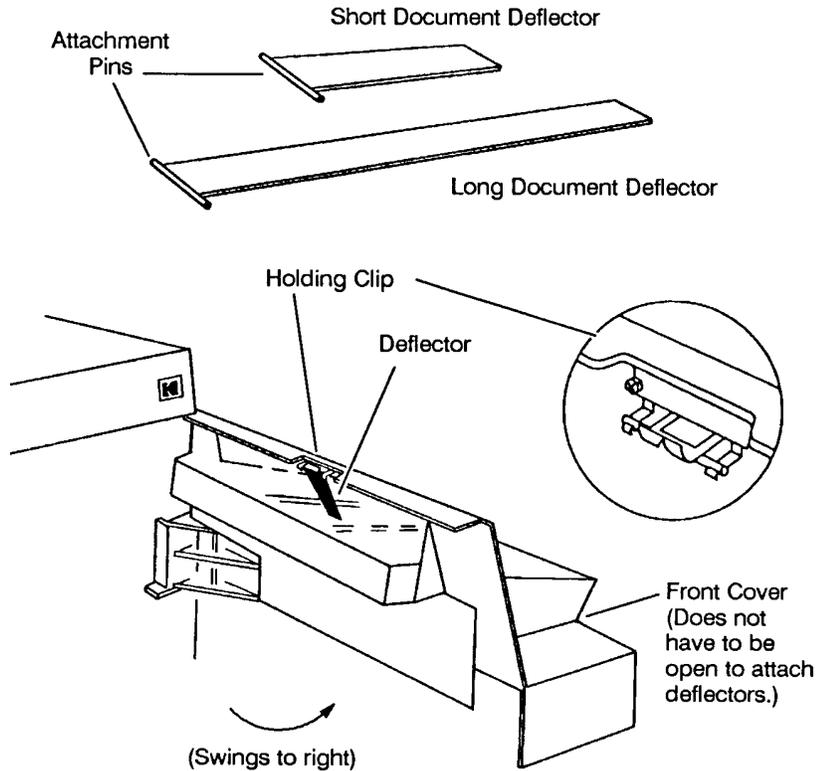
2. Adjust the End Stop of the Exit Hopper by determining the longest document to be processed. Slide the End Stop until the Arrows point to where the length of the longest document is shown on the Exit Hopper Label.



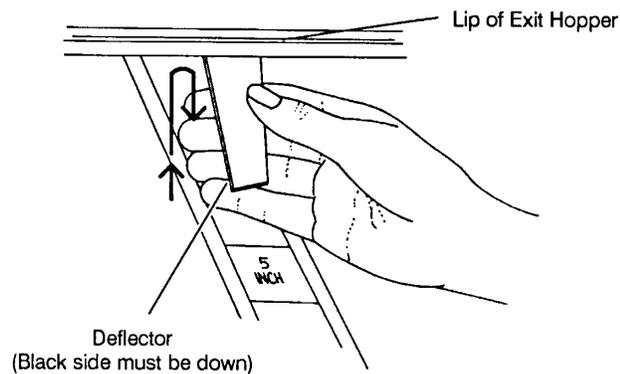
Changing the deflector

The Scanner comes with two deflectors (stored in the pocket located inside the right-side access door), designed to help stack the documents as they exit the transport system and enter the exit hopper.

Use the short deflector for documents less than 5 inches (13 cm) and the long deflector for documents longer than 5 inches (13 cm) as well as for mixed sizes.



1. Grasp the deflector near the attachment pin (as shown).



2. Guide the deflector into the exit hopper, just below the lip of the hopper, to insert the attachment pin in the holding clip.
3. Pull the deflector toward you until it clicks into place.

Preparing documents for scanning

Before you begin processing documents, make certain that the documents may be fed through the Scanner easily:

- Remove any staples, rubber bands, loose mending tape, or paper clips from the documents to be processed.
- Straighten wrinkled edges and tape any torn documents.
- Trim ragged edges.

When using the automatic feeder, make certain all documents are of similar size and, texture, thickness, and weight, and that the leading edges of all documents are aligned.

4 OPERATING THE SCANNER

Overview

The scanning process consists of the following steps:

1. The Scanner is prepared for operation (refer to *Getting Started*).
2. The Scanner is enabled by the host system.
3. A mode is selected for the application. Typically this step is performed by the host computer, but it may also be performed by the operator.
4. Temporary operating values are selected (if required).
5. The Run key is pressed.
6. Documents are fed into the transport.
 - The Scanner assigns a Sequential ID Number (for digital image storage), the document Image Level and Image Address.
 - The document is scanned.
 - The document Image Header is created.
 - The host computer initiates transfer of the document Image Header and document image to the host system for storage on magnetic or optical disk media.

Documents are deposited in the exit hopper, face down, in the order in which they were fed into the transport.

7. The Stop key is pressed.
8. A Scanner End-of-Job is executed.
9. The side panel switch is turned off until ready for the next application.

The main power switch is turned off (optional - performed only when the Scanner will be out of operation for more than eight (8) hours; not necessary during normal daily operation).

Selecting a mode

The Scanner offers eighteen (18) modes which may be programmed for a particular application or group of applications.

The modes are programmed at the time of installation and stored for easy access and use.

Typically, the mode will be selected via the host system, using a scanner-unique command. However, the operator may manually select a mode.

There are two methods which may be used by the operator to select a mode:

- Use Function Code F01, Select Mode, to enter a mode number.
 - Press the F key.
 - Press the numeric key 0 and then 1.
 - Press Enter.
 - Press the numeric keys which correspond to the desired mode. (i.e., to enter mode number 15, press the numeric key 1 and then 5.)
 - Press Enter.
- The mode selection function may be preprogrammed and accessible using one of the P-keys. Ask your system administrator if any one of the P-keys has been programmed to perform this function.

Temporary operating values

Each of the eighteen (18) modes which are programmed at the time of installation contain definitions which affect the output of the Scanner. Each mode is programmed to conform to the output requirements of a particular application or group of applications.

There may be instances, however, when a particular application requires some variation of an existing mode. In such instances, mode definitions may be changed using available Function Codes.

NOTE: Changes to mode definitions will remain in effect until another mode is selected or the side panel switch is turned off. The original mode definition is only affected by these changes if the mode overrides are saved (the mode override option may be selected at installation and if selected, a plus sign (+) will appear in the first line of the status display).

Example:

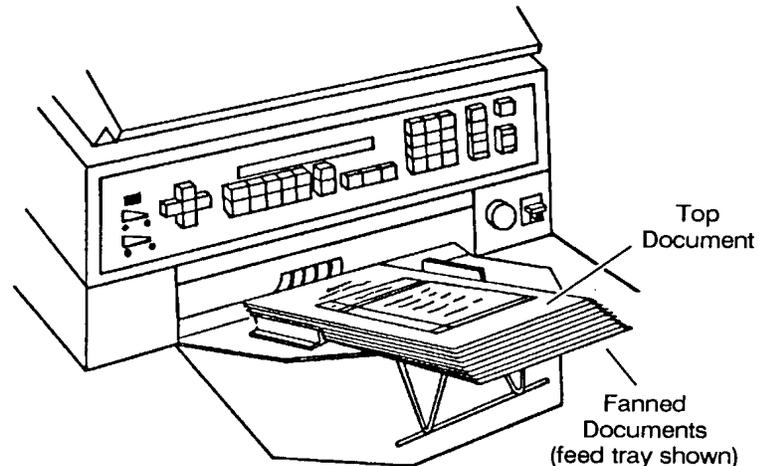
Assume that mode 15 contains definitions which allow use of the KODAK IMAGELINK™ Endorser. The starting print position (which defines how far from the leading edge of the document the endorsement is printed) is programmed to be 0.5 inches.

If there is a special application which requires that the endorsement be printed 1.0 inch from the leading edge of the document, you may use Function Code F59 to temporarily change the starting print position.

Feeding documents

After the Scanner has been prepared for operation and the desired mode and any temporary operating values have been defined, you are ready to feed documents into the transport.

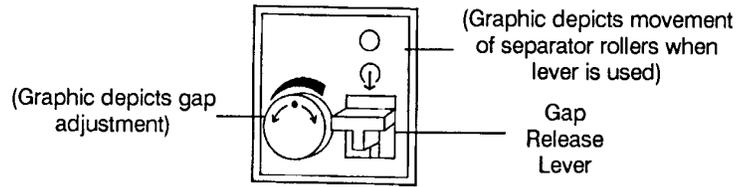
1. Verify that the side panel switch is on. Also verify that all of the proper adjustments have been made (feeder side guides, exit hopper side guides, etc.).
2. Press the Run key.



3. Select a stack of documents which is no more than 1.5 inch thick.
4. Fan the stack of documents so that the leading edge of the top document will engage the feed/separator rollers first (refer to the illustration above).
5. Place the stack of fanned documents into the feeder so that the leading edge of the top document contacts the feed/separator rollers. The documents will be drawn into the transport, with the top document being fed first. The documents will be deposited in the exit hopper face down, in the order in which they were fed into the transport.
6. Repeat steps (3) through (5) until all of the application documents have been fed into the transport.
7. Press the Stop key after all documents have been deposited in the exit hopper.

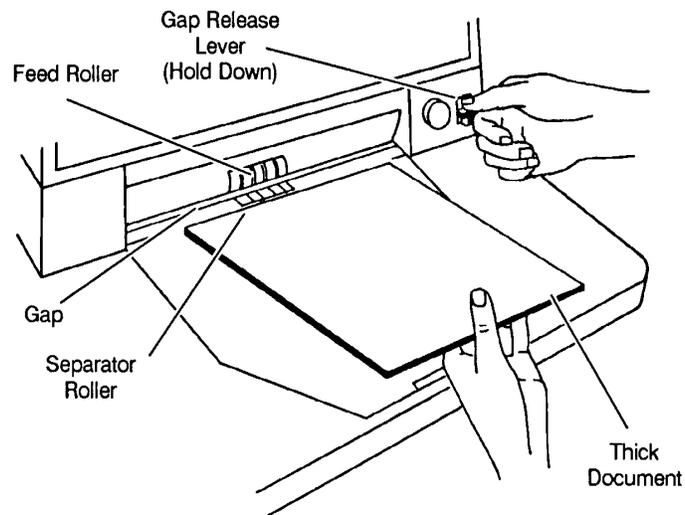
Feeding thick documents

The Gap Release Lever is used to feed thick documents such as card stock or cover stock. The lever is located on the front panel of the Scanner, next to the gap adjustment knob.



1. Press down and hold the gap release lever. This opens the gap between the feed and separator rollers, allowing thick documents to pass between them. You will be able to see the gap open as the lever is pushed down.
2. Insert the thick document past the rollers until it is taken into the transport system.

NOTE: If more than one thick document is to be scanned, feed them into the transport one at a time.



3. After the thick document(s) have been scanned, release the gap release lever. It will return to its original position. The feed and separator rollers will return to their previously adjusted positions.

5 FUNCTION CODES

Using function codes

There are a variety of functions available which may be used to temporarily change operating conditions and values, and to obtain system and accessory status information.

To execute a function code:

- Press the F key.
- Press the numeric keys which correspond to the desired function code.
- Press the Enter key.

Additional input may be necessary:

If the function is used to enable/disable an option (turn an option on or off):

- Press the number one (1) key to turn the option ON;
or
Press the number zero (0) key to turn the option OFF.
- Press the Enter key.

If the function requires numeric input:

- Press the number key(s) required.
- Press the Enter key.

If the function is used to increment/decrement a measurement:

- Press the up arrow key to increment the measurement by 1 inch (25 mm);
or
Press the down arrow key to decrement the measurement by 1 inch (25 mm);
or
Press the right arrow key to increment the measurement by 1/8 inch (3 mm);
or
Press the left arrow key to decrement the measurement by 1/8 inch (3 mm).
- Press the Enter key.

To cancel a function or clear the Status Display after executing a function, press the Clear/Cancel key.

Function code summary

Status

| | |
|------------------------|-----|
| Accessory Status* | F05 |
| Date and Time Display* | F23 |
| Elapsed Time* | F17 |

Counters

| | |
|-----------------------|-----|
| Level 0 Count* | F10 |
| Level 1 Count* | F11 |
| Level 2 Count* | F12 |
| Level 3 Count* | F13 |
| Total Document Count* | F09 |
| Reset Level Counts | F14 |

Setup

| | |
|--------------------------|-----|
| Action/Confirmation Tone | F93 |
| Alarm Tone | F16 |
| Alarm Volume | F15 |
| Change Date | F22 |
| Change Time | F21 |
| Display Contrast | F18 |
| Display Language | F19 |
| Measurement System | F20 |
| Operator ID | F34 |
| Scanner Calibration | F37 |

Mode

| | |
|--------------------|-----|
| Select Mode | F01 |
| Select Linked Mode | F91 |
| Counting Only | F04 |
| Restore Mode | F02 |

Index/Image Address

| | |
|---------------------|-----|
| Last Image Address* | F08 |
| Level 0* | F07 |
| Level 1* | F94 |
| Level 2* | F95 |
| Level 3* | F96 |
| Fixed Field | F92 |
| Next Image Address | F97 |

Scanning

| | |
|--------------------------|-----|
| Scanner Calibration | F37 |
| Latched Scanning Flag* | F73 |
| Momentary Scanning Flag* | F74 |
| Scanner End-of-Job | F38 |

Operation

| | |
|------------------|-----|
| Run | F99 |
| Terminate Batch* | F06 |
| Stop* | F98 |

Bar Code

| | |
|-------------------------------------|-----|
| Bar Code Reading On/Off | F60 |
| Partial Bar Code Reading On/Off | F66 |
| Bar Code Reading Confirmation Tone | F63 |
| Bar Code/Patch Reading Conf. Tone | F62 |
| Bar Code Test | F65 |
| Omit Bar Code Reading on Next Doc.* | F64 |

Document Controller

| | |
|------------------------------------|-----|
| Length Checking On/Off | F70 |
| Omit Length Checking on Next Doc.* | F71 |
| Skew Detection | F72 |

Document Printers

| | |
|-------------------------------------|-----|
| All Document Printers On/Off | F40 |
| Primary Document Printer 1 On/Off | F41 |
| Secondary Document Printer 1 On/Off | F42 |
| Document Printer 12 On/Off | F43 |
| Omit Printing on Next Document* | F44 |
| Print Position | F46 |
| Print Test | F45 |
| Printer Character Shift | F39 |
| Printer Open Jet Test | F56 |
| Purge Frequency | F49 |
| Purge Print Head* | F48 |

Endorser

| | |
|-------------------------|-----|
| Endorser On/Off | F57 |
| Endorser Mode | F58 |
| Endorser Print Position | F59 |

Footswitch

| | |
|------------------------------|-----|
| Footswitch Confirmation Tone | F75 |
|------------------------------|-----|

OCR

| | |
|------------|-----|
| OCR On/Off | F76 |
|------------|-----|

Patch Reader

| | |
|----------------------------------|-----|
| Patch Reader 1 On/Off | F50 |
| Patch Reader 2 On/Off | F51 |
| End Fed Patch Reading On/Off | F52 |
| Patch Reading Confirmation Tone | F53 |
| Omit Patch Reading on Next Doc.* | F54 |

* May execute while transport is running.

Function code descriptions

F01 Select Mode

Allows you to select one of the eighteen (18) application modes.

| | |
|-----------------|---|
| FFF.003.002.001 | Mode 10 |
| Mode: | <input type="checkbox"/> <input type="checkbox"/> |

- Enter the number of the application mode you wish to select; one or two digits.
- Press the Enter key.

F02 Restore Mode

Allows you to restore the current application mode to its default status (as it was defined at installation), provided that mode overrides are not saved.

| | |
|-----------------|---------|
| FFF.003.002.001 | Mode 10 |
|-----------------|---------|

A normal operating display will appear.

F04 Counting Only

Allows you to count documents only, with no filming, scanning, etc.

| | |
|---------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Count Only Mode OFF | 1=ON |

- Enter the number one (1) to turn Counting Only ON.
- Press the Enter key.

| | |
|--------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Count Only Mode ON | 0=OFF |

- Enter the number zero (0) to turn Counting Only OFF.
- Press the Enter key.

F05 Accessory Status

Allows you to display the current status of each accessory installed.

The status of each accessory is either ON, OFF, or NOT PRESENT (except for Endorser Mode, where the status is either Single Stamping, Continuous Stamping, or NOT PRESENT).

| |
|--|
| Accessory Status (↑ ↓): Endorser ON |
|--|

- Press the down arrow key to view the next accessory; or
Press the up arrow key to view the previous accessory.
- Press the Cancel key at any time to return to a normal operating display.

The accessories appear in the order listed:

Endorser
Endorser Mode
Document Printer #1
Document Printer #2
Document Printer 12
Patch Reader #1
Patch Reader #2
End Fed Patches
Patch Read Confirmation Tone
Front Bar Code Reading
Front Partial Bar Code
Bar Code Confirmation Tone
Bar Code / Patch Conf Tone
Skew Detection
Length Checking
Foot Switch Confirmation Tone
OCR

F06 Terminate Batch

Allows you to prematurely end a batch.

NOTE: The predefined end-of-batch function(s) will be executed.

| |
|--|
| FFF.003.002.001 Mode 10 End of Batch |
|--|

| |
|---|
| FFF.003.002.001 Mode 10 Last Image Address: FFF.003.001.098 |
|---|

- Press the Clear key to return to a normal operating display.

F07 Level 0

Allows you to assign Level 0 to the next document fed into the transport.

FFF.003.002.001 Mode 10

A normal operating display will appear.

F08 Last Image Address

Allows you to display the Image Address of the last document processed.

FFF.003.002.001 Mode 10
Last Image Address: FFF.003.001.098

- Press the Clear key to return to a normal operating display.

F09 Total Document Count

Allows you to display the total number of documents processed.

FFF.003.002.001 Mode 10
Total Document Count: 123456789

- Press the Clear key to return to a normal operating display.

F10 Level 0 Count

Allows you to display the total number of documents assigned Level 0.

FFF.003.002.001 Mode 10
Level 0 Count: 123456789

- Press the Clear key to return to a normal operating display.

F11 Level 1 Count

Allows you to display the total number of documents assigned Level 1.

FFF.003.002.001 Mode 10
Level 1 Count: 123456789

- Press the Clear key to return to a normal operating display.

F12 Level 2 Count

Allows you to display the total number of documents assigned Level 2.

| | |
|--------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Level 2 Count: 123456789 | |

- Press the Clear key to return to a normal operating display.

F13 Level 3 Count

Allows you to display the total number of documents assigned Level 3.

| | |
|--------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Level 3 Count: 123456789 | |

- Press the Clear key to return to a normal operating display.

F14 Reset Level Counts

Allows you to reset all counters to zero (Level 0 Counter, Level 1 Counter, Level 2 Counter, and Level 3 Counter).

| | |
|-------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Level Count Reset | |

- Press the Enter key.

F15 Alarm Volume

Allows you to adjust the volume of the alarm.

| | |
|-------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Changing Volume of Tone (↑ ↓) | |

- Press the up arrow key to increase the volume; or
Press the down arrow key to decrease the volume.
- Press the Enter key.

F16 Alarm Tone

Allows you to adjust the pitch of the alarm tone.

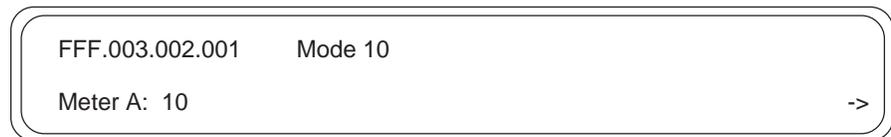
There are two available options: LOW or HIGH.



- Press the up arrow key to increase the pitch; or
Press the down arrow key to decrease the pitch.
- Press the Enter key.

F17 Elapsed Time

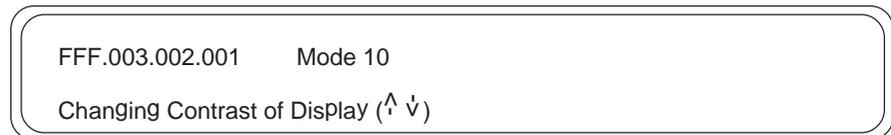
Allows you to display the number of hours the motor, transport, and AC have been running. In addition, the non-resettable document count is displayed.



- Press the right arrow key to view all four time meters:
Meter A shows the number of motor-on hours;
Meter B shows the number of transport-on hours;
Meter C shows the number of AC-on hours; and
Meter D shows the non-resettable document count.
- Press the Cancel key to return to a normal operating display.

F18 Display Contrast

Allows you to adjust the contrast of the Status Display.

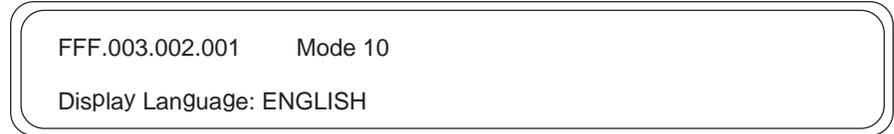


- Press the up arrow key to increase the contrast; or
Press the down arrow key to decrease the contrast.
- Press the Enter key.

F19 Display Language

Allows you to choose the language in which Status Display messages appear.

There are two available options: ENGLISH or OTHER (where OTHER is defined as a specific language during installation).



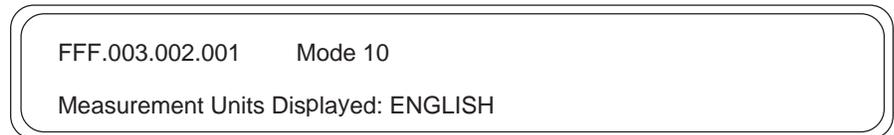
FFF.003.002.001 Mode 10
DisPlay LanGuaGe: ENGLISH

- Press any arrow key (up arrow, down arrow, right arrow, or left arrow) to toggle between the two available options.
- Press the Enter key.

F20 Measurement System

Allows you to choose the measurement system in which lengths are displayed.

There are two available options: ENGLISH or METRIC.

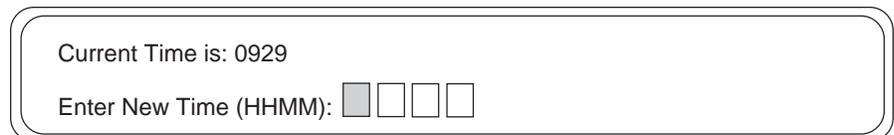


FFF.003.002.001 Mode 10
Measurement Units Displayed: ENGLISH

- Press any arrow key (up arrow, down arrow, right arrow, or left arrow) to toggle between the two available options.
- Press the Enter key.

F21 Change Time

Allows you to change the time.

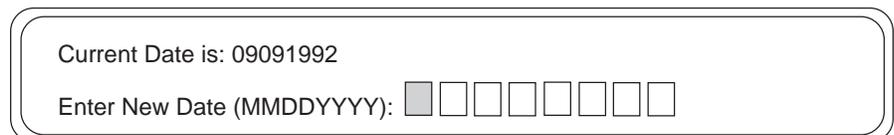


Current Time is: 0929
Enter New Time (HHMM):

- Enter the new time in the format illustrated.
- Press the Enter key.

F22 Change Date

Allows you to change the date.



Current Date is: 09091992
Enter New Date (MMDDYYYY):

- Enter the new date in the format illustrated.
- Press the Enter key.

F23 Time and Date Display

Allows you to view the current time and date.

NOTE: You cannot change the time or date using this function.

Formatted Time and Date:
9/9/92 9:30AM

- Press the Clear key to return to a normal operating display.

F34 Operator ID

Allows you to display the operator ID number.

Also allows you to change the operator ID number.

FFF.003.002.001 Mode 10
Operator ID: 0 01

- Enter a new operator ID, up to three (3) digits.
- Press the Enter key.

F37 Scanner Calibration

Allows you to initiate the calibration process required before scanning documents.

FFF.003.002.001 Mode 10
⊘ Feed Calibration Target...

- Feed calibration target.

F38 Scanner End-of-Job

Allows you to signal the host computer that the last document of the job has been fed into the transport.

FFF.003.002.001 Mode 10

A normal operating display will appear.

F39 Printer Character Shift

NOTE: This function code is available only when using Document Printer 12.

Allows you to select which set of ink jets will be used to print each character.

There are three available options: Left, Center (default), or Right.

| |
|---|
| Printer Character Shift: <input type="text" value="2"/> |
| 1=Left 2=Center 3=Right |

- Enter the number 1 to select the left set of ink jets; or
Enter the number 2 to select the center set of ink jets; or
Enter the number 3 to select the right set of ink jets.
- Press the Enter key.

F40 All Document Printers On/Off

Allows you to turn all document printers (Document Printer 1 (primary), Document Printer 1 (secondary), and Document Printer 12) on or off.

| |
|---|
| FFF.003.002.001 Mode 10 |
| All Document Printers ON 0=OFF |

- Enter the number zero (0) to turn all document printers OFF.
- Press the Enter key.

| |
|---|
| FFF.003.002.001 Mode 10 |
| All Document Printers OFF 1=ON |

- Enter the number one (1) to turn all document printers ON.
- Press the Enter key.

F41 Primary Document Printer 1 On/Off

Allows you to turn the primary document printer 1 on or off.

| | | |
|------------------------|---------|-------|
| FFF.003.002.001 | Mode 10 | |
| Document Printer #1 ON | | 0=OFF |

- Enter the number zero (0) to turn the primary document printer 1 OFF.
- Press the Enter key.

| | | |
|-------------------------|---------|------|
| FFF.003.002.001 | Mode 10 | |
| Document Printer #1 OFF | | 1=ON |

- Enter the number one (1) to turn the primary document printer 1 ON.
- Press the Enter key.

F42 Secondary Document Printer 1 On/Off

Allows you to turn the secondary document printer 1 on or off.

| | | |
|------------------------|---------|-------|
| FFF.003.002.001 | Mode 10 | |
| Document Printer #2 ON | | 0=OFF |

- Enter the number zero (0) to turn the secondary document printer 1 OFF.
- Press the Enter key.

| | | |
|-------------------------|---------|------|
| FFF.003.002.001 | Mode 10 | |
| Document Printer #2 OFF | | 1=ON |

- Enter the number one (1) to turn the secondary document printer 1 ON.
- Press the Enter key.

F43 Document Printer 12 On/Off

Allows you to turn the document printer 12 on or off.

| | |
|------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Document Printer 12 ON | 0=OFF |

- Enter the number zero (0) to turn the document printer 12 OFF.
- Press the Enter key.

| | |
|-------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Document Printer 12 OFF | 1=ON |

- Enter the number one (1) to turn the document printer 12 ON.
- Press the Enter key.

F44 Omit Printing on Next Document

Allows you to omit printing by all document printers (Document Printer 1 (primary), Document Printer 1 (secondary), and Document Printer 12) on the next document only.

| | |
|------------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Omit Printing on Next Document OFF | 1=ON |

- Enter the number one (1) to omit printing on the next document only.
- Press the Enter key.

| | |
|-----------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Omit Printing on Next Document ON | 0=OFF |

- Enter the number zero (0) to print on the next document.
- Press the Enter key.

F45 Print Test

Allows you to test the position and print quality of all document printers (Document Printer 1 (primary), Document Printer 1 (secondary), and Document Printer 12) installed.

NOTE: Print Test options 3=Shift and 4=Test are available only when using the Document Printer 12.

| |
|--|
| Print Test: <input type="checkbox"/> |
| 1=Print IA 2=Prime 3=Shift 4=Test |

- Enter the number one (1) to perform a Print IA test; or
Enter the number two (2) to perform a Prime test; or
Enter the number three (3) to perform a Shift test; or
Enter the number four (4) to perform a standard test.
- Press the Enter key.

F46 Print Position

Allows you to specify how far from the leading edge of the document (fed into the transport first) all document printers (Document Printer 1 (primary), Document Printer 1 (secondary), and Document Printer 12) will print information.

The default print position, defined during installation, is used as the base value. The use of inches or millimeters depends upon the measurement system specified during installation.

| |
|---|
| FFF.003.002.001 Mode 10 |
| Front Print Position: .250 (in) <--> |

- Press the up arrow key to increment the starting print position by one (1) inch [25 mm]; or
Press the down arrow key to decrement the starting print position by one (1) inch [25 mm]; or
Press the right arrow key to increment the starting print position by one-eighth (0.125) inch [3 mm]; or
Press the left arrow key to decrement the starting print position by one-eighth (0.125) inch [3 mm].
- Press the Enter key.

F48 Purge Print Head

NOTE: This function code is available only when using Document Printer 12.

Allows you to initiate an immediate priming ink spurt.

| | |
|-----------------|---------|
| FFF.003.002.001 | Mode 10 |
|-----------------|---------|

NOTE: This function code should only be executed while performing a Print Test (F45).

F49 Purge Frequency

NOTE: This function code is available only when using Document Printer 12.

Allows you to specify how often, in terms of the number of documents fed into the transport, a priming ink spurt is initiated.

| | |
|------------------|--|
| FFF.003.002.001 | Mode 10 |
| Purge Frequency: | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

- Enter the number of documents; the maximum entry is 50,000.
- Press the Enter key.

F50 Patch Reader 1 On/Off

Allows you to turn the primary patch reader on or off.

| | |
|--------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Patch Reader #1 ON | 0=OFF |

- Enter the number zero (0) to turn the primary patch reader OFF.
- Press the Enter key.

| | |
|---------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Patch Reader #1 OFF | 1=ON |

- Enter the number one (1) to turn the primary patch reader ON.
- Press the Enter key.

F51 Patch Reader 2 On/Off

Allows you to turn the secondary patch reader on or off.

| | | |
|--------------------|---------|-------|
| FFF.003.002.001 | Mode 10 | |
| Patch Reader #2 ON | | 0=OFF |

- Enter the number zero (0) to turn the secondary patch reader OFF.
- Press the Enter key.

| | | |
|---------------------|---------|------|
| FFF.003.002.001 | Mode 10 | |
| Patch Reader #2 OFF | | 1=ON |

- Enter the number one (1) to turn the secondary patch reader ON.
- Press the Enter key.

F52 End Fed Patch Reading On/Off

Allows you to turn end fed patch reading on or off.

| | | |
|------------------|---------|-------|
| FFF.003.002.001 | Mode 10 | |
| End Fed Patch ON | | 0=OFF |

- Enter the number zero (0) to turn end fed patch reading OFF.
- Press the Enter key.

| | | |
|-------------------|---------|------|
| FFF.003.002.001 | Mode 10 | |
| End Fed Patch OFF | | 1=ON |

- Enter the number one (1) to turn end fed patch reading ON.
- Press the Enter key.

F53 Patch Reading Confirmation Tone

Allows you to turn the patch reading confirmation tone on or off.

| | |
|---------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Patch Read Confirmation Tone ON | 0=OFF |

- Enter the number zero (0) to turn the patch reading confirmation tone OFF.
- Press the Enter key.

| | |
|----------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Patch Read Confirmation Tone OFF | 1=ON |

- Enter the number one (1) to turn the patch reading confirmation tone ON.
- Press the Enter key.

F54 Omit Patch Reading on Next Document

Allows you to omit patch reading on the next document only.

| | |
|---------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Omit Patch Read on Next Doc OFF | 1=ON |

- Enter the number one (1) to omit patch reading on the next document only.
- Press the Enter key.

| | |
|--------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Omit Patch Read on Next Doc ON | 0=OFF |

- Enter the number zero (0) to read patches on the next document.
- Press the Enter key.

F56 Printer Open Jet Test

NOTE: This function code is available only when using Document Printer 12.

Allows you to determine whether or not there are non-functional ink jets in the document printer 12 ink cartridge.

| |
|--|
| Printer Open Jet Test Results |
|  |
| TOT= 0 |

- Press the Clear key to return to a normal operating display.

F57 Endorser On/Off

Allows you to turn the endorser on or off.

| | |
|-----------------|---------|
| FFF.003.002.001 | Mode 10 |
| Endorser ON | 0=OFF |

- Enter the number zero (0) to turn the endorser OFF.
- Press the Enter key.

| | |
|-----------------|---------|
| FFF.003.002.001 | Mode 10 |
| Endorser OFF | 1=ON |

- Enter the number one (1) to turn the endorser ON.
- Press the Enter key.

F58 Endorser Mode

Allows you to display the current endorser mode.

Also allows you to change the endorser mode.

There are two available options: Single Stamping, or Continuous Stamping.

| | |
|--------------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Endorser Mode (↑ ↓): Single Stamping | |

- Press any arrow key (up arrow, down arrow, right arrow, or left arrow) to toggle between the two available options.
- Press the Enter key.

F59 Endorser Print Position

Allows you to specify how far from the leading edge of the document (fed into the transport first) the endorsement will appear.

The default print position, defined during installation, is used as the base value. The use of inches or millimeters depends upon the measurement system specified during installation.

| | |
|-------------------------------|-----------|
| FFF.003.002.001 | Mode 10 |
| Endorser Print Position: .250 | (in) <--> |

- Press the up arrow key to increment the starting print position by one (1) inch [25 mm]; or
Press the down arrow key to decrement the starting print position by one (1) inch [25 mm]; or
Press the right arrow key to increment the starting print position by one-eighth (0.125) inch [3 mm]; or
Press the left arrow key to decrement the starting print position by one-eighth (0.125) inch [3 mm].
- Press the Enter key.

F60 Bar Code Reading On/Off

Allows you to turn the bar code reader on or off.

NOTE: If function code F60 is used to turn bar code reading off, partial bar code reading is also turned off.

| | |
|---------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Front Bar Code Reading ON | 0=OFF |

- Enter the number zero (0) to turn the bar code reader OFF.
- Press the Enter key.

| | |
|----------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Front Bar Code Reading OFF | 1=ON |

- Enter the number one (1) to turn the bar code reader ON.
- Press the Enter key.

F62 Bar Code/Patch Reading Confirmation Tone

NOTE: This function code is available when using Bar Code Reader AND a primary and/or secondary Patch Reader.

Allows you to turn the bar code/patch reading confirmation tone on or off.

| | |
|--------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Bar/Patch Confirmation Tone ON | 0=OFF |

- Enter the number zero (0) to turn the bar code/patch reading confirmation tone OFF.
- Press the Enter key.

| | |
|---------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Bar/Patch Confirmation Tone OFF | 1=ON |

- Enter the number one (1) to turn the bar code/patch reading confirmation tone ON.
- Press the Enter key.

F63 Bar Code Reading Confirmation Tone

Allows you to turn the bar code reading confirmation tone on or off.

| | |
|-------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Bar Code Confirmation Tone ON | 0=OFF |

- Enter the number zero (0) to turn the bar code reading confirmation tone OFF.
- Press the Enter key.

| | |
|--------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Bar Code Confirmation Tone OFF | 1=ON |

- Enter the number one (1) to turn the bar code reading confirmation tone ON.
- Press the Enter key.

F64 Omit Bar Code Reading on Next Document

Allows you to omit bar code reading on the next document only.

| | |
|------------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Omit Bar Code Read on Next Doc OFF | 1=ON |

- Enter the number one (1) to omit bar code reading on the next document only.
- Press the Enter key.

| | |
|-----------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Omit Bar Code Read on Next Doc ON | 0=OFF |

- Enter the number zero (0) to read bar codes on the next document.
- Press the Enter key.

F65 Bar Code Test

Allows you to perform a bar code test to verify the operation of the bar code reader.

| | | | |
|-------------------------|-----------|----------|----------------------------------|
| Bar Code Type = Code 39 | | | |
| 1=Evaluate | 2=Display | 3=%Kodak | 4=%Norm <input type="checkbox"/> |

- Enter the number one (1) to perform an Evaluate test; or
Enter the number two (2) to perform a Display test; or
Enter the number three (3) to perform a %Kodak test; or
Enter the number four (4) to perform a %Norm test.
- Press the Enter key.

F66 Partial Bar Code Reading On/Off

Allows you to turn partial bar code reading on or off.

NOTE: If function code F60 is used to turn bar code reading off, partial bar code reading is also turned off. Function code F66 must be used to re-enable partial bar code reading.

| | |
|------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Partial Bar Code Reading OFF | 1=ON |

- Enter the number one (1) to turn partial bar code reading ON.
- Press the Enter key.

| | |
|-----------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Partial Bar Code Reading ON | 0=OFF |

- Enter the number zero (0) to turn partial bar code reading OFF.
- Press the Enter key.

F70 Length Checking On/Off

NOTE: This function code is available only when the Advanced Document Controller is installed.

Allows you to turn length checking on or off.

| | |
|---------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Length Checking OFF | 1=ON |

- Enter the number one (1) to turn length checking ON.
- Press the Enter key.

| | |
|--------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Length Checking ON | 0=OFF |

- Enter the number zero (0) to turn length checking OFF.
- Press the Enter key.

F71 Omit Length Checking on Next Document

NOTE: This function code is available only when the Advanced Document Controller is installed.

Allows you to omit length checking on the next document only.

| | | |
|--------------------------------------|---------|------|
| FFF.003.002.001 | Mode 10 | |
| Omit Length Checking on Next Doc OFF | | 1=ON |

- Enter the number one (1) to omit length checking on the next document only.
- Press the Enter key.

| | | |
|-------------------------------------|---------|-------|
| FFF.003.002.001 | Mode 10 | |
| Omit Length Checking on Next Doc ON | | 0=OFF |

- Enter the number zero (0) to perform length checking on the next document.
- Press the Enter key.

F72 Skew Detection

NOTE: This function code is available only when the Advanced Document Controller is installed.

Allows you to turn skew detection on or off.

| | | |
|--------------------|---------|------|
| FFF.003.002.001 | Mode 10 | |
| Skew Detection OFF | | 1=ON |

- Enter the number one (1) to turn skew detection ON.
- Press the Enter key.

| | | |
|-------------------|---------|-------|
| FFF.003.002.001 | Mode 10 | |
| Skew Detection ON | | 0=OFF |

- Enter the number zero (0) to turn skew detection OFF.
- Press the Enter key.

F73 Latched Scanning Flag On/Off

Allows you to set a flag which alerts the host system that the document, and those which follow, are of special interest. The flag will remain activated until turned off.

| | | |
|-------------------------|---------|------|
| FFF.003.002.001 | Mode 10 | ▶ |
| User Definable Flag (▶) | OFF | 1=ON |

- Enter the number one (1) to turn the latched scanning flag ON.
- Press the Enter key.

NOTE: The flag symbol will appear in the first line of the status display until the latched flag is turned off.

| | | |
|-------------------------|---------|-------|
| FFF.003.002.001 | Mode 10 | |
| User Definable Flag (▶) | ON | 0=OFF |

- Enter the number zero (0) to turn the latched scanning flag OFF.
- Press the Enter key.

F74 Momentary Scanning Flag

Allows you to set a flag which alerts the host system that the next document only is of special interest.

| | | |
|-------------------------------|---------|------|
| FFF.003.002.001 | Mode 10 | |
| Special Flag on Next Document | OFF | 1=ON |

- Enter the number one (1) to turn the momentary scanning flag ON.
- Press the Enter key.

| | | |
|-------------------------------|---------|-------|
| FFF.003.002.001 | Mode 10 | |
| Special Flag on Next Document | ON | 0=OFF |

- Enter the number zero (0) to turn the momentary scanning flag OFF.
- Press the Enter key.

F75 Footswitch Confirmation Tone

Allows you to turn the footswitch confirmation tone on or off.

| | |
|----------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Foot Switch Confirmation Tone ON | 0=OFF |

- Enter the number zero (0) to turn the footswitch confirmation tone OFF.
- Press the Enter key.

| | |
|-----------------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Foot Switch Confirmation Tone OFF | 1=ON |

- Enter the number one (1) to turn the footswitch confirmation tone ON.
- Press the Enter key.

F76 OCR On/Off

Allows you to turn OCR on or off.

| | |
|-----------------|---------|
| FFF.003.002.001 | Mode 10 |
| OCR OFF | 1=ON |

- Enter the number one (1) to turn OCR ON.
- Press the Enter key.

| | |
|-----------------|---------|
| FFF.003.002.001 | Mode 10 |
| OCR ON | 0=OFF |

- Enter the number zero (0) to turn OCR OFF.
- Press the Enter key.

F91 Select Linked Mode

Allows you to switch from one application mode to another, keeping the last Image Address.

The current mode and the selected mode must both have the same Index Format (i.e., three-level offset), Image Address fields (number of fields and field lengths), and compatible film modes.

| | |
|-----------------|----------------------------------|
| FFF.003.002.001 | Mode 10 |
| Mode (same ia): | <input type="text" value="1"/> 0 |

- Enter the number of the application mode you wish to select; one or two digits.
- Press the Enter key.

F92 Fixed Field

Allows you to enter a new fixed field value, containing alphanumeric characters.

For each character:

You may enter a numeric character:

- Enter the number to be placed in the Fixed Field.
- Press the Enter key.

| | |
|--|--|
| FFF.003.002.001 | ABC... <input type="text" value="^"/> <input type="text" value="v"/> |
| Fixed field: <input type="text" value="F"/> FF | |

You may enter an alphabetic character:

- Press the up arrow key or the down arrow key.
- Use the right or left arrow key to position the highlighted cursor over the alphabetic character to be placed in the Fixed Field.
- Press the Enter key.

| | |
|------------------|--|
| FFF.003.002.001 | ABCDE <input type="text" value="F"/> GHIJKLMNOPQ <- <input type="text" value="^"/> <input type="text" value="v"/> -> |
| Fixed field: FFF | |

F93 Action/Confirmation Tone

Allows you to adjust the pitch of the action/confirmation tone.

There are two available options: LOW or HIGH.

| | |
|------------------------|---------|
| FFF.003.002.001 | Mode 10 |
| Sound Alarm (↑ ↓): LOW | |

- Press any arrow key (up arrow, down arrow, right arrow, or left arrow) to toggle between the two available options.
- Press the Enter key.

F94 Level 1

Allows you to assign Level 1 to the next document fed into the transport.

| | | |
|-----------------|---------|---|
| FFF.003.002.001 | Mode 10 | █ |
|-----------------|---------|---|

A normal operating display will appear.

F95 Level 2

Allows you to assign Level 2 to the next document fed into the transport.

| | | |
|-----------------|---------|----|
| FFF.003.002.001 | Mode 10 | ██ |
|-----------------|---------|----|

A normal operating display will appear.

F96 Level 3

Allows you to assign Level 3 to the next document fed into the transport.

| | | |
|-----------------|---------|-----|
| FFF.003.002.001 | Mode 10 | ███ |
|-----------------|---------|-----|

A normal operating display will appear.

F97 Next Image Address

Allows you to input the next Image Address.

| | |
|---------------------|--|
| FFF.003.002.001 | Mode 10 |
| Next Image Address: | <input type="text" value="F"/> FFF.003.002.001 |

- Enter the next Image Address.
- Press the Enter key.

F98 Stop

Allows you to stop the transport.

| | |
|-----------------|---------|
| FFF.003.002.001 | Mode 10 |
|-----------------|---------|

A normal operating display will appear.

F99 Run

Allows you to turn on the transport.

| | |
|-----------------|---------|
| FFF.003.002.001 | Mode 10 |
|-----------------|---------|

A normal operating display will appear.

6 OPERATOR MESSAGES

Users

The following section outlines the actions which should be taken by the users and system administrators when an operator message appears in the status display.

If a message appears in the Status Display which is within the ranges E000-E299 or E500-E599, you should take the action indicated in the table(s) which appear in this section.

IMPORTANT: *Never power down the machine without first contacting your System Administrator.*

If a message appears in the Status Display which is within the ranges E300-E499 or E600-E999, you should contact your System Administrator.

System administrators

If a message appears in the Status Display which is within the ranges E300-E499 or E600-E999, you should be contacted by the operator.

The following action(s) should be taken:

- Determine whether or not the error can be addressed from the host system.
- If the error cannot be addressed from the host system, attempt to clear the error by taking the action indicated in the table(s) which appear in this section.
- If the prescribed action(s) do not clear the error, initiate a controlled power-down sequence:
 - Wait for all information currently held in the buffer to be transferred to the host system.
 - Turn off the Scanner transport using the side panel switch.
 - Turn off the Scanner power using the main power switch.
 - Wait 10 - 30 seconds.
 - Turn on the Scanner power using the main power switch.
 - Turn on the Scanner transport using the side panel switch.
- If the error condition is not cleared using the controlled power-down sequence, contact service.

Operator message listing

| Code | Operator Message Displayed | Description/Action Required |
|----------------------|-----------------------------------|---|
| E000 | Memory battery low - call service | Call service - do not turn off the machine. |
| E100 | Please wait | No action required. Wait for the message to clear. |
| E101 | Auto shut off, press RUN | Press the Run key to continue. Feed documents. |
| E102 | Press STOP and try again | Press the Stop key and try again. |
| E103 | Select valid mode | Invalid mode selected. Enter function code F01 to select another mode. |
| E104 | Function not available | Invalid function code entered. Enter another function code. |
| E106 | Warning - document length error | Check the document length to see if it is shorter than the minimum or longer than the maximum allowed. Refeed the document. |
| E107 | Warning - skewed document | Refeed the document. |
| E110 | Upper lamp warning, press RUN | Press the Run key to continue. Change the lamps when the current set of documents has been processed. |
| E111 | Lower lamp warning, press RUN | Press the Run key to continue. Change the lamps when the current set of documents has been processed. |
| E112 | Invalid patch level | Invalid patch was used. Feed correct patch. |
| E113 | Enter correct Image Address | Use the NEXT key to enter correct Image Address. |
| E114 | Check current level | Check the current document image level. Conflicting input regarding the proper level was received. |
| E117 E118 E119 | Enter correct level/Image Address | Document image level assignment and next Image Address input conflict. Specify another document image level, or use the NEXT key to enter a valid Image Address. |
| E120 | Diagnostic running - do not use | Please do not use; the machine is being serviced. |

| Code | Operator Message Displayed | Description/Action Required |
|--------------------------------------|--|---|
| E121 E122 | Check front patch reader Check rear patch reader | Patch code not recognized. Verify that the patch document was fed into the transport in the proper orientation. If not, refeed the patch document. If so, change to a non-patch mode to continue; call service. |
| E123 | Command data rejected - resend | Command not recognized. Enter command again. |
| E124 E125 | Command not allowed in this model | Command cannot be performed. Enter a valid command. |
| E126 | Enter correct command | Press correct key(s) for mode selected. |
| E127 | Feeder waiting for host system | System is busy. No action required. Wait for message to clear. |
| E128 | Feeder adjustment warning | Check and adjust feed and separator roller gap. |
| E130 | OCR not installed | Requested action requires installation of the OCR accessory. |
| E131 | Device not enabled | Requested action requires installation of the Bar Code Reader. |
| E132 E133 | Enable barcode first | Requested action requires that you enable the Bar Code Reader. Enter function code F60 to enable bar code reading. |
| E140 E141 E142 E143 E145 | Document Printer not installed Patch Reader not installed Detection System not installed Barcode Reader not installed Endorser not installed | Requested action required installation of the module/accessory indicated. The required module/accessory is not installed. |

| Code | Operator Message Displayed | Description/Action Required |
|--------------|-----------------------------------|---|
| E200 E201 | Verify/enter Image Address | An error has occurred in the system and the Image Address may no longer be correct. Use function code F08 to determine the last Image Address. Use the NEXT key to correct the Image Address, if necessary. |
| E204 | Skewed document - refeed | Press the Clear key. Use the NEXT key to enter the correct Image Address and refeed document(s). |
| E205 | Level overflow - press next level | Press the Clear key. Use the NEXT key to enter the correct Image Address, or press a level key for a higher level. |
| E206 | Check print head | Install the correct Document Printer print head. |
| E207 | Check printer installation | Document Printer not correctly installed. Properly install the Document Printer print head. |
| E211 | Enter correct Image Address | Use the NEXT key to enter correct Image Address. |
| E214 | Document length error - refeed | Press the Clear key. Use the NEXT key to enter the correct Image Address and refeed document(s). |
| E219 | Clear error and refeed last doc | Press the Clear key. Press the Run key and refeed the last document. |
| E220 | Check for jam in entrance transp | Clear the document path. Press the Clear key. Press the Jog key. Press the Run key and refeed document(s). |
| E221 | Clean entrance sensor | Perform maintenance/cleaning procedures. |
| E225 | Check for jam in transport | Clear the document path. Press the Clear key. Press the Jog key. Press the Run key and refeed document(s). |
| E226 | Clean slide-out sensor reflector | Perform maintenance/cleaning procedures. |
| E227 | Check for jam in transport | Clear the document path. Press the Clear key. Press the Jog key. Press the Run key and refeed document(s). |
| E228 | Check for jam in upper transport | Clear the document path. Press the Clear key. Press the Jog key. Press the Run key and refeed document(s). |
| E229 | Clean exit sensor | Perform maintenance/cleaning procedures. |

| Code | Operator Message Displayed | Description/Action Required |
|--|------------------------------------|---|
| E230 | Open access door to correct error | Open the access door. Verify that all operator accessible areas are properly closed. Press the Run key to continue. |
| E231 | Press JOG, and try again | Press the Jog key. Press the Run key. Try again. |
| E232 | Close all access doors and RUN | Close all access doors. Press the Run key to continue. |
| E234 | Press JOG, and try again | Press the Jog key. Press the Run key. Try again. |
| E235 E236 | Turn main power OFF and ON | Turn the side panel switch off. Turn the main power switch off. Wait five (5) to ten (10) seconds. Turn the main power switch on. Turn the side panel switch on. If the error repeats, call service. |
| E238 | User function string invalid | The P-Key, End-of-Batch, etc. definition made during installation is invalid. Correct the definition using the Mode Setup Software. |
| E240 E241 E242 E243 E244 E245 | Enter correct level of IA - refeed | Set or change the document image level or use the Next key to enter a new Image Address. Press the Run key to continue. |
| E246 | Conflicting input - what level? | Set or change the document image level to confirm the proper document image level. Press the Run key to continue. |
| E267 | Clear error, re-enter IA | Press the Clear key. Use the NEXT key to enter an Image Address. Press the Run key to continue. |
| E280 | Feeder off due to host request | System is busy. Feeder will be reactivated when the system is no longer busy. Wait until the message clears and continue. |
| E281 | OCR was reset - restart batch | Use the NEXT key to enter a starting Image Address. Rerun the batch. |
| E282 | Comm buffer full - please wait | System is busy. Wait until the message clears and continue. |

| Code | Operator Message Displayed | Description/Action Required |
|-------------|-----------------------------------|---|
| E283 | Invalid configuration for OCR | OCR is not enabled in the mode selected. Enable the OCR using function code F76, or change the application mode to one in which the OCR is enabled. |
| E284 | OCR initializing - please wait | System is busy. Wait until the message clears and continue. |
| E285 | Feeder off due to OCR request | System is busy. Feeder will be reactivated when the system is no longer busy. Wait until the message clears and continue. |
| E286 | Feed calibration target | Calibration process has started. Press the Run key and feed the calibration target into the transport. |
| E288 | OCR batch stopped due to error | Determine the cause of the error via the OCR Workstation interface. Correct the error. Rerun the batch. |
| E291 | Scanner disabled | The machine has been disabled due to an error. Determine the cause of the error via the host system. Enable the machine. Press the Run key to continue. |
| E293 | Host recovery required | Contact your System Administrator to initiate the required action on the host system. |
| E294 | Front calibration warning | Perform maintenance/cleaning procedures for the Document Scanning Array, Image Guides, etc. Check the lamps; replace if necessary. Recalibrate the machine. |
| E295 | Rear calibration warning | Perform maintenance/cleaning procedures for the Document Scanning Array, Image Guides, etc. Check the lamps; replace if necessary. Recalibrate the machine. |
| E296 | Target not seen | Repeat the calibration process using a blank target. If error repeats, call service. |
| E297 | Document que full | The feeder and transport are stopped, and the machine is disabled. Transfer images from the image buffer to the host system. Re-enable the machine. Press the Run key to continue. |
| E298 | Calibration required | Enter function code F37 to initiate the calibration sequence. |

| Code | Operator Message Displayed | Description/Action Required |
|--|------------------------------|---|
| E500 E501 E502 E503 E512 E513 E550 E551 E552 E553 E562 E563 | System error | Contact your System Administrator. A controlled power-down sequence is required. |
| E504 E505 E506 E507 E508 E509 E510 E511 E514 E515 E516 | Display communications error | Press the Jog key to clear all documents from the transport. Press the Run key and refeed the document(s). |
| E554 E555 E556 E557 E558 E559 E560 E561 E564 E555 E556 | COIN-2 communications error | Check cable connections. Verify that all equipment components are powered on. |

| Code | Operator Message Displayed | Description/Action Required |
|-------------------------|----------------------------|---|
| E600 through E699 | <i>various messages</i> | Turn the side panel switch off. Turn the main power switch off. Wait five (5) to ten (10) seconds. Turn the main power switch on. Turn the side panel switch on. If the error repeats, or if additional errors are received, call service. |
| E700 through E799 | <i>various messages</i> | Turn the side panel switch off. Turn the main power switch off. Wait five (5) to ten (10) seconds. Turn the main power switch on. Turn the side panel switch on. If the error repeats, or if additional errors are received, call service. |
| E800 through E899 | <i>various messages</i> | Turn the side panel switch off. Turn the main power switch off. Wait five (5) to ten (10) seconds. Turn the main power switch on. Turn the side panel switch on. If the error repeats, or if additional errors are received, call service. |
| E900 through E999 | <i>various messages</i> | Turn the side panel switch off. Turn the main power switch off. Wait five (5) to ten (10) seconds. Turn the main power switch on. Turn the side panel switch on. If the error repeats, or if additional errors are received, call service. |

7 TROUBLESHOOTING

Trouble and remedy chart

This section outlines some of the problems you may encounter and their probable causes and remedies.

| Trouble | Probable Cause | Remedy |
|---|---|--|
| Scanner does not power on (status display does not illuminate). | Power cord not connected. | Push the power cord plug into the receptacle. |
| | Wall outlet defective. | Check outlet (call authorized electrician). |
| | Main power switch off. | Turn the main power switch on. |
| | Side panel switch off. | Turn the side panel switch on. |
| | Cabinet covers not closed. | Check and close all cabinet covers. |
| Documents not feeding properly. | Feed and separator roller gap not properly adjusted. | Refer to Section 3. Adjust the feed and separator roller gap. |
| | Feeding thick documents without using the Gap Release Lever. | Refer to Section 3. Use instructions on feeding thick documents. |
| | Feed and separator rollers may be dirty. | Refer to Section 8. Clean the feed and separator rollers. |
| | The feed shelf position is not properly adjusted. | Refer to Section 3. Adjust the feed shelf position. |
| | The feed shelf side guides not properly adjusted. | Refer to Section 3. Adjust the feed shelf side guides. |
| Documents not stacking properly. | Exit hopper side guides not properly adjusted. | Refer to Section 3. Adjust the exit hopper side guides. |
| | Exit hopper end stop not properly adjusted. | Refer to Section 3. Adjust the exit hopper end stop. |
| | Wrong deflector being used. | Refer to Section 3. Change the deflector. |
| Repeated jamming. | Transport system baffle plates and operator-accessible areas not firmly closed. | Refer to Section 7. Refer to Section 8. Repeat any recent jam clearing or maintenance procedures, making certain that all baffle plates are firmly in place and all operator-accessible areas are properly closed. |

| Trouble | Probable Cause | Remedy |
|---|---|--|
| Clear streak on scanned images. | Foreign object in the optical path. | Refer to Section 8. Check and clean imaging guides and transport area. |
| Overall scanned image density too light, too dark, or uneven. | Dust or dirt on mirrors or imaging guides. Check and | Refer to Section 8. clean imaging guides and mirrors. |
| | Calibration not performed or not performed correctly. | Refer to Section 3. Perform calibration using instructions provided. |
| | Lamps are dirty or not properly installed. | Refer to Section 8. Check the lamps for proper installation. Check for dirt or debris in the lamp housing. |
| Calibration failure. | Calibration target skewed when feeding. feed and | Retry. Adjust feed tray side guides. Adjust |
| | Lamps are dirty or not properly installed. | separator roller gap. Refer to Section 8. Check the lamps for proper installation. Check for dirt or debris in the lamp housing. |
| | Document in the transport at the Remove | Refer to Section 7. |
| | time of calibration. | any documents in the transport system. Retry. |

Clearing the document path

If a document becomes lodged in the Scanner transport system, the system will stop running and a message will appear in the Status Display.

A document can become lodged in the transport system when:

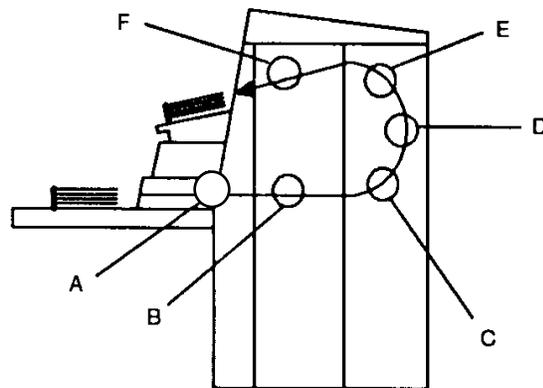
- Documents are not fed straight (skewed).
- Documents are torn, badly folded, or wrinkled.
- Staples and paper clips were not removed from documents.
- Imaging guides are not seated properly or are not installed.
- Transport system baffle plates are not firmly closed.

The document path can be cleared easily because:

- No tools are needed.
- Easy-access panels let you quickly locate and clear documents.

The document path

There are six (6) areas in the transport system where documents may



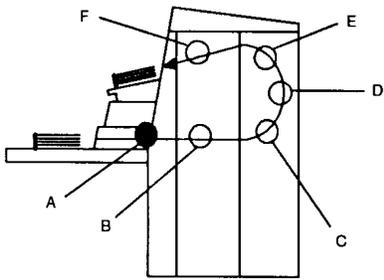
- A The feeder/horizontal transport area
- B The imaging guide area
- C The lower roller assembly area
- D The vertical transport area
- E The upper turn area
- F The document exit area

Clearing documents

- Check each transport area, in turn (Area A through Area F), for documents lodged in the document path. You only have to remove the jammed document(s). The jog feature places the rest of the documents in the exit hopper. Make certain that all operator accessible areas are firmly closed and all baffle plates are locked into place.
- Press and hold down the JOG key to clear any remaining documents.
- Collect the documents located in the transport system. Put them back into their original order, if necessary.
- Reset the Image Address, Level, etc., if necessary.
- Rescan the documents. If an error code appears in the Status Display, check each transport area again to make certain that all documents have been cleared.

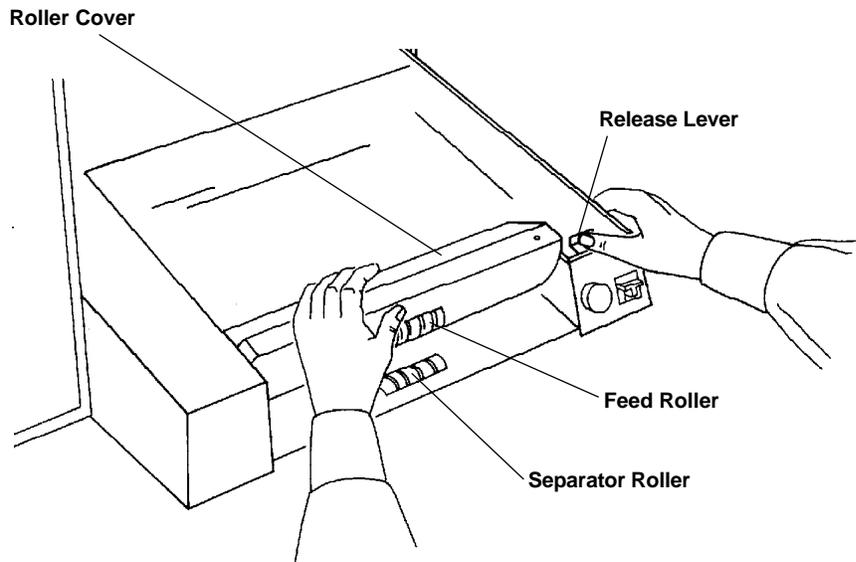
NOTE: Green labels on handles designate operator accessible areas.

Area A - The feeder/horizontal transport area



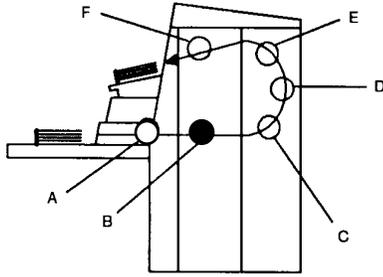
To clear the feeder/horizontal transport area:

1. Grasp the front cover and swing it open to the right.
2. Push the roller cover release lever toward the rear of the machine.



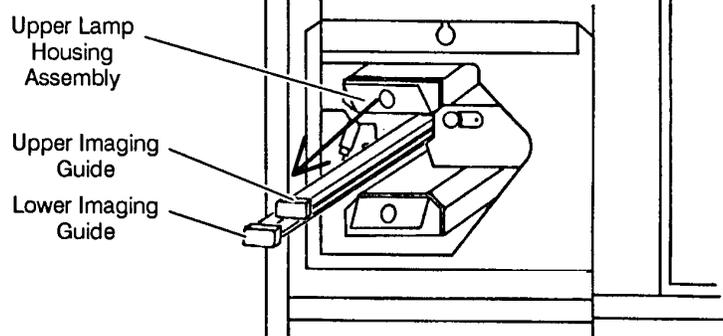
3. Grasp and rotate the roller cover toward the back of the machine.
4. Press down and hold the gap release lever.
5. Remove any documents or document pieces found between the rollers.
6. Press the roller cover release lever toward the back of the machine.
7. Grasp and rotate the roller cover back into its original position.
8. Close the front cover.

Area B - The imaging guide



To clear the imaging guide area:

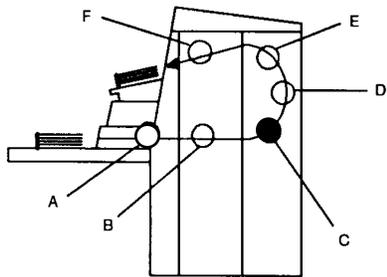
1. Open the right-side access door.



2. Locate and remove only the upper imaging guide.
3. Locate and remove the upper lamp housing assembly.
4. Remove any documents or document pieces.
5. Reinsert the upper lamp housing assembly.
6. Reinsert the upper imaging guide.
7. Close the right-side access door.

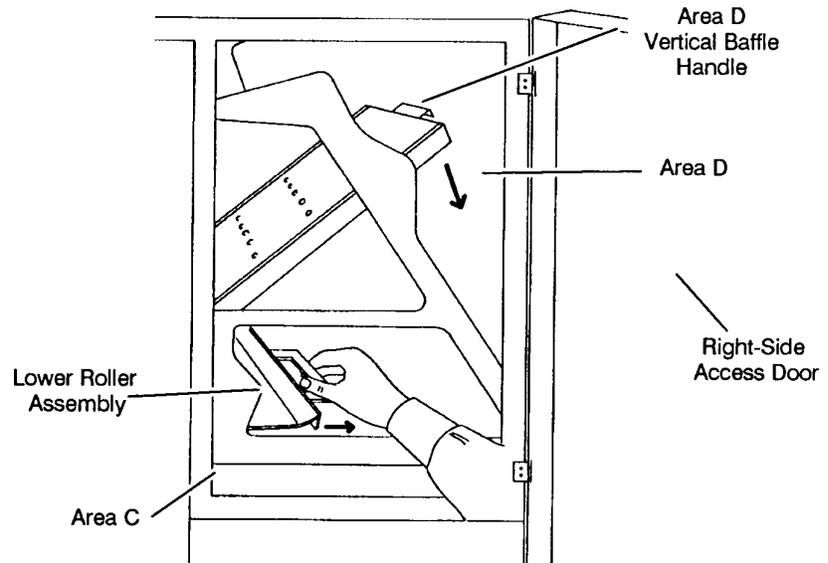
NOTE: It may be helpful to remove the lower imaging guide and lower lamp housing assembly for easier access to this area.

Area C - The lower roller assembly area



To clear the lower roller assembly area:

1. Open the top cover.
2. Open the right-side access door.



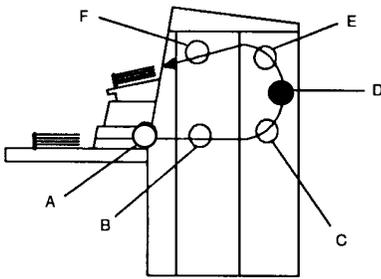
3. Turn the baffle handle to unlatch the baffle plate. Pull the baffle plate to the right until it stops. This unlocks the lower roller assembly.
4. Grasp the lower roller assembly handle (as shown above) and slide the assembly to the right (toward the back of the machine).
5. Remove any documents or document pieces.

IMPORTANT: *Do not slide the lower roller assembly back into place without first removing the image guides. Failure to remove them first can cause misalignment and/or damage to the machine.*

6. Remove the imaging guides.
7. Slide the lower roller assembly back into place.
8. Turn the baffle handle to release the baffle plate. Raise the plate into its original position.
9. Replace the imaging guides.
10. Close the right side access door and top cover.

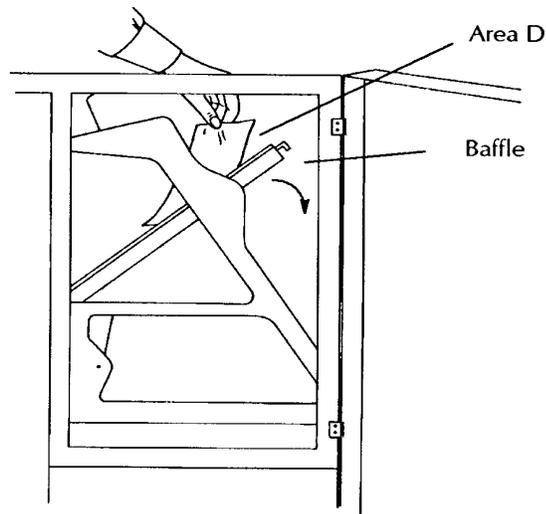
NOTE: If the baffle plate is not securely locked into its original position, documents will become lodged in this area.

Area D - The vertical transport area



To clear the vertical transport area:

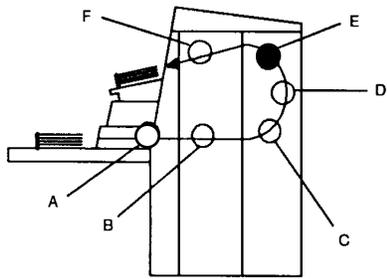
1. Open the top cover.
2. Open the right-side access door.



3. Turn the baffle handle to unlatch the baffle plate. Pull the baffle plate to the right until it stops.
4. Remove any documents or document pieces.
5. Turn the baffle handle to release the baffle plate. Raise the plate into its original position.
6. Close the right-side access door and top cover.

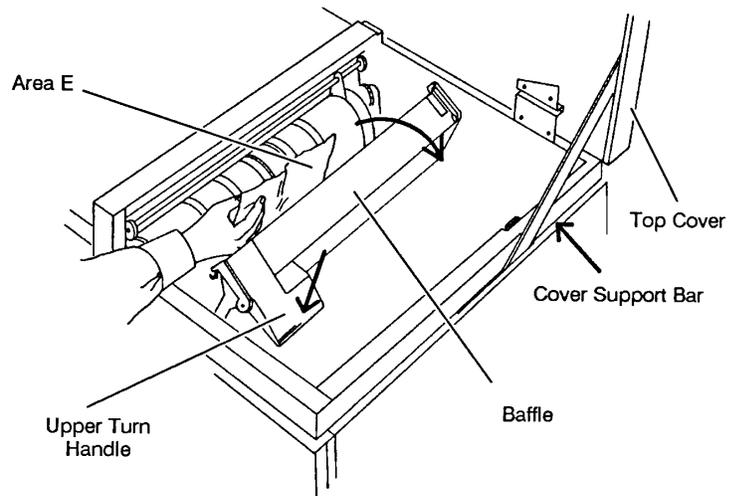
NOTE: If the baffle plate is not securely locked into its original position, documents will become lodged in this area.

Area E - The upper turn area



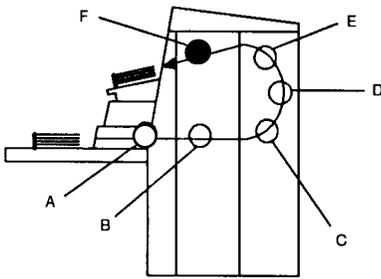
To clear the upper turn area:

1. Open the top cover.



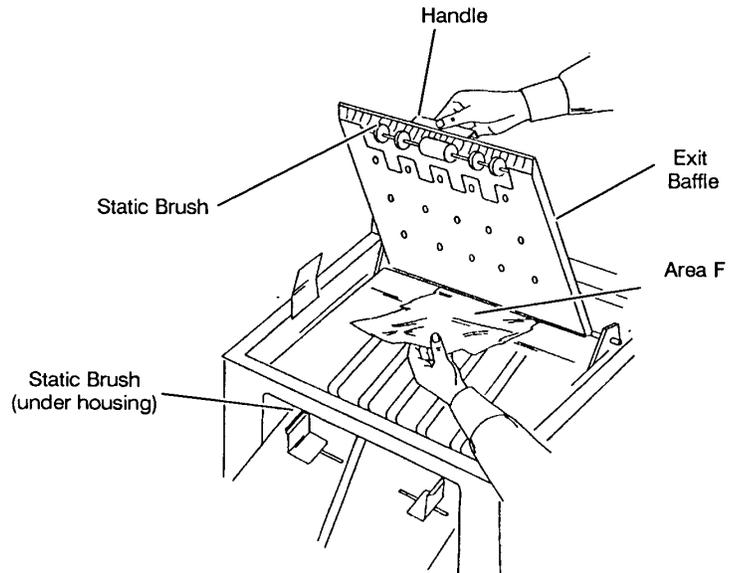
2. Locate and grasp the upper turn handle.
3. Push the upper turn handle down and pull the baffle toward the back of the machine until it stops.
4. Remove any documents or document pieces.
5. Pull the baffle back into place. Lift the upper turn handle up to lock the baffle into place.
6. Close the top cover.

Area F - The document exit area



To clear the document exit area:

1. Turn off the side panel switch.
2. Open the top cover.



3. Locate and grasp the exit handle.
4. Raise the exit baffle to expose any documents.
5. Remove any documents or document pieces.

IMPORTANT: *Be careful not to damage the static brush when removing documents.*

6. Lower the exit baffle into its original position.
7. Close the top cover.

8 SCANNER MAINTENANCE

Cleaning tasks

To keep your Scanner in good operating condition, the following tasks must be performed periodically:

- Cleaning the imaging guides
- Cleaning the Document Scanning Array, if installed
- Vacuuming inside the Scanner
- Cleaning the feed and separator rollers
- Cleaning the cabinet
- Replacing the air filter
- Replacing the Document Scanning Array lamp, if installed
- Replacing the exposure lamps.

Cleaning materials

Materials needed to perform all maintenance procedures are:

- A mild cleaning agent
- A quality lens cleaner
- A soft, clean, lint-free cloth
- A cleaning brush
- A vacuum cleaner
- STATICIDE WIPES

IMPORTANT: *Do not use any commercial cleaning solvent in any of the cleaning procedures.*

Daily maintenance procedures

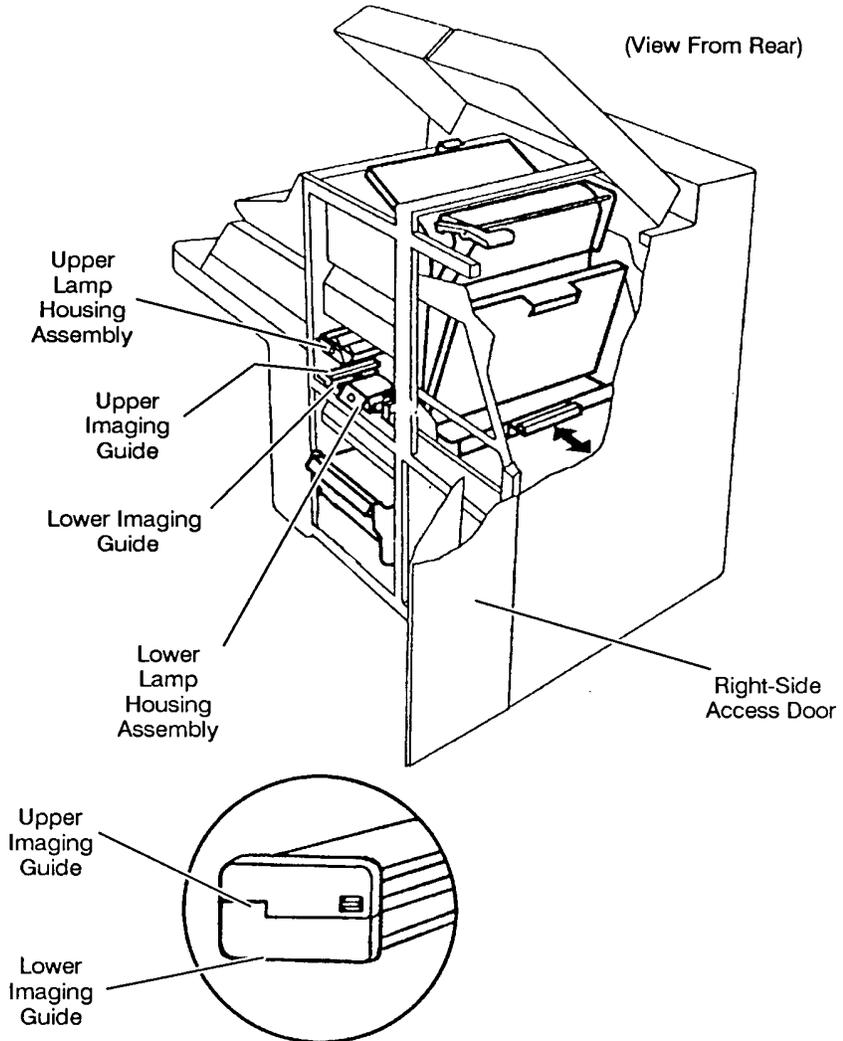
Maintenance procedures which should be performed every day include: cleaning the imaging guides and cleaning the Document Scanning Array.

Cleaning the imaging guides

The imaging guides should be cleaned daily, or between each roll of film, whichever comes first.

IMPORTANT: *Do not use any abrasive materials when cleaning the imaging guides. This includes abrasive cleansers, commercial solvents, paper towels, or coarse cloths.*

1. Open the right-side access door.



Imaging Guide Orientation

2. Locate and grasp the end of the upper imaging guide. Carefully slide the imaging guide out of its track.
3. Locate and grasp the end of the lower imaging guide. Carefully slide the imaging guide out of its track.

4. Remove dust from the imaging guides, using a soft bristle brush.
5. Remove fingerprints or smudges from the imaging guides, wiping both sides of each imaging guide with a clean, soft, dry, lint-free cloth slightly moistened with water or lens cleaner. Then, lightly wipe both sides of each imaging guide with a dry cloth or an antistatic wipe.
6. Remove the upper lamp housing assembly.
7. Remove dust from the upper lamp housing assembly, using a soft bristle brush.
8. Reinstall the upper lamp housing assembly.

Repeat steps 6 - 8 for the lower lamp housing assembly.

9. Grasp and hold the lower imaging guide by the edges and carefully slide it back into place. Make sure the grooves fully engage the track.
10. Grasp and hold the upper imaging guide by the edges and carefully slide it back into place. Make sure the grooves fully engage the track.

NOTE: The imaging guides are not interchangeable. They can only be inserted one way. Use the illustration to the left to assist you in properly positioning the imaging guides.

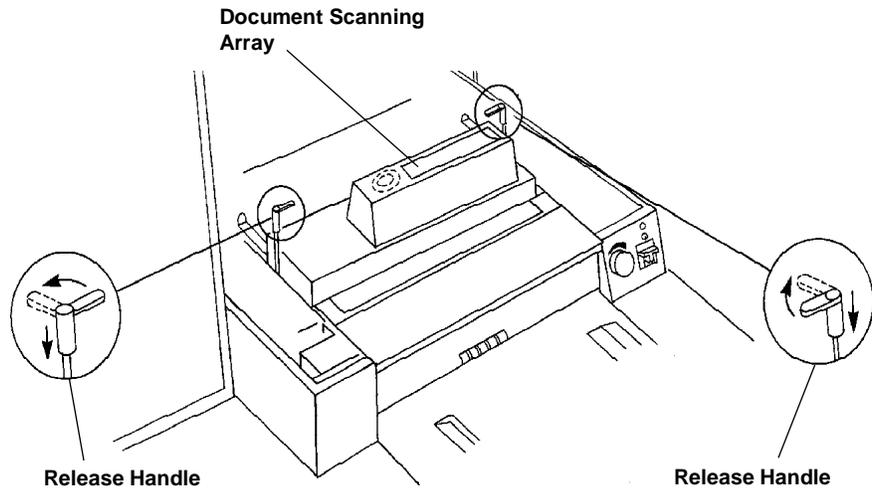
11. Close the right-side access door.

Cleaning the document scanning array

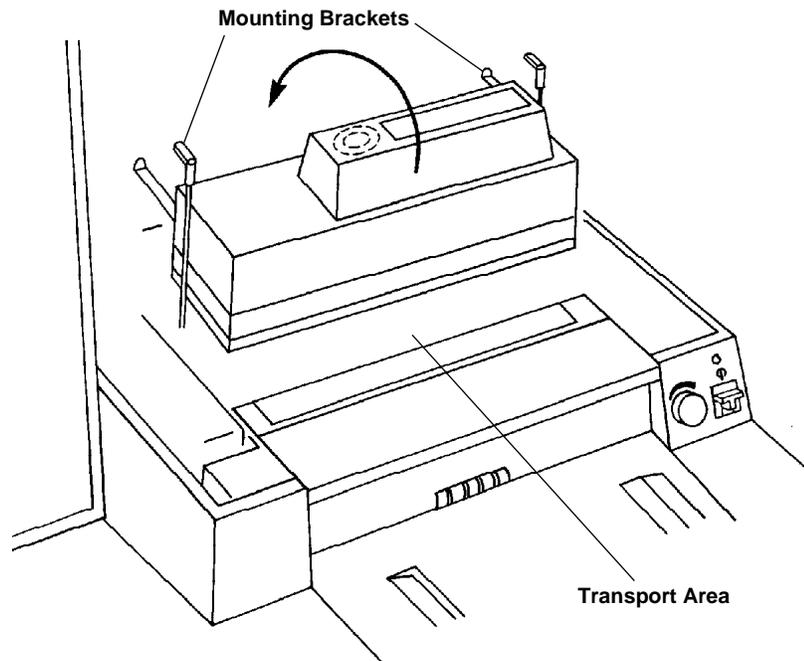
NOTE: The Document Scanning Array is an optional accessory which is available only when using a Scanner 923. If your Scanner does not have a DSA, proceed to the next section.

The Document Scanning Array (DSA) should be cleaned daily.

1. Turn the side panel switch off.
2. Open the front cover.
3. Locate the Document Scanning Array.

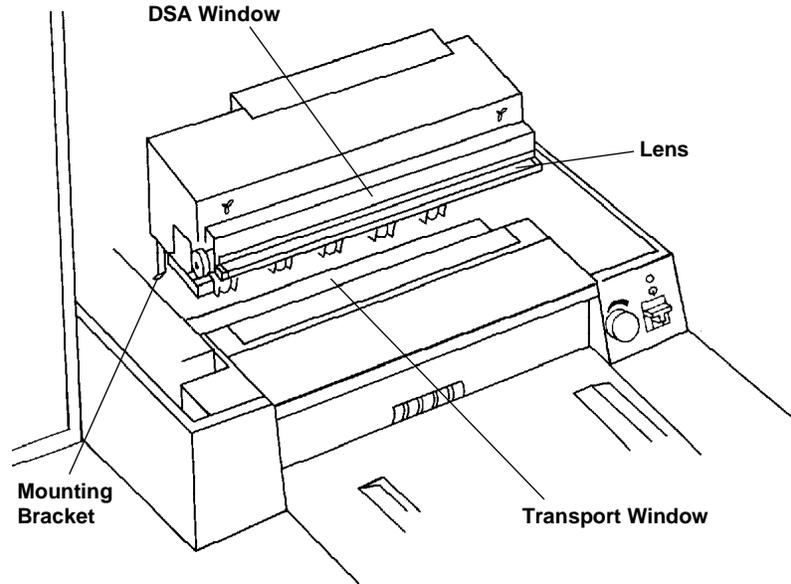


4. Push down and rotate the release handles outward to release the DSA assembly.



5. Lift the DSA assembly straight up from the transport area.

6. Rotate the DSA assembly away from you. The mounting brackets should be pointing straight down.
7. Set the DSA assembly down, using the mounting brackets for support.



8. Wipe all exposed surfaces of the DSA assembly, including the DSA window, lens, and transport window. Use a clean, dry, lint-free cloth.
9. Lift the DSA assembly straight up from the transport area.
10. Rotate the DSA assembly toward you. The mounting brackets should be pointing toward the back of the machine.
11. Replace the DSA assembly in its original position.
12. Push down and rotate the release handles inward so that they both point toward the center of the transport to lock the DSA assembly in place.
13. Close the front cover.
14. Turn the side panel switch on.

Weekly maintenance procedures

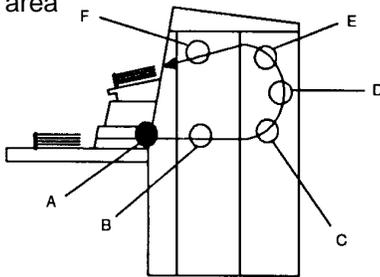
Maintenance procedures which should be performed weekly include: vacuuming inside the Scanner, cleaning the feed and separator rollers, and cleaning the cabinet.

Vacuumping inside the Scanner

The sensors located under the baffle plate in the feeder/horizontal transport area and in the upper section of the lower roller housing assembly, the mirrors, the lamp housings, and the air filter should be vacuumed or wiped down thoroughly with a clean, dry, soft, lint-free cloth at least once a week.

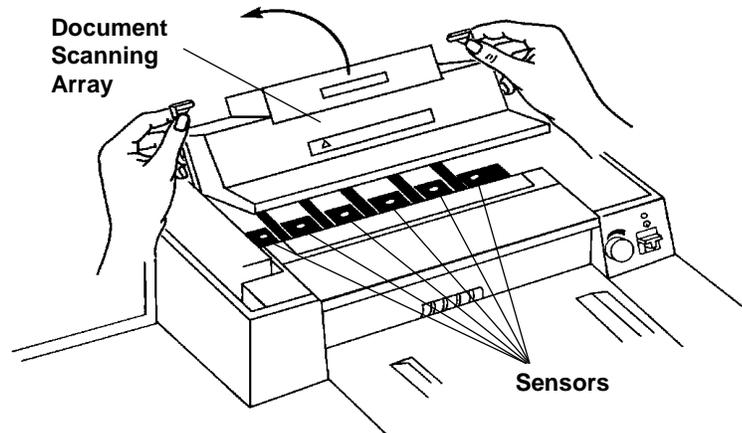
Refer to the instructions and illustrations provided in the *Troubleshooting* section to assist in accessing the sensor locations. The following illustrations show the location of the sensors once the correct area has been accessed.

Feeder/horizontal transport area



The sensors in the feeder/horizontal transport area are located under the Document Scanning Array, behind the feed/separator rollers, near the reflector strips:

1. Open the front cover.

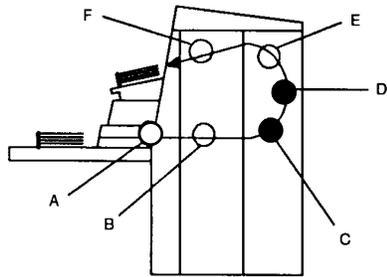


2. Tilt the Document Scanning Array toward the back of the machine, using the release handles, as shown.

NOTE: If a DSA is not installed, raise the baffle plate.

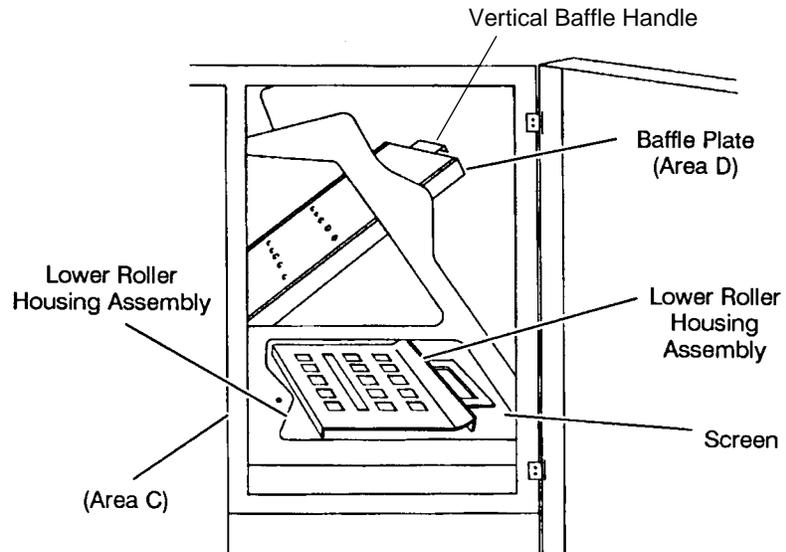
3. Vacuum the area underneath the Document Scanning Array or baffle plate.
4. Lower the Document Scanning Array or baffle plate back into place.
5. Close the front cover.

The lower roller housing assembly



The sensors are located in the upper section of the lower roller assembly housing.

1. Open the top cover.
2. Open the right-side access door.



3. Grasp the vertical baffle handle and pull down until the baffle plate stops and clicks into place. This unlocks the lower roller assembly.
4. Slide the lower roller assembly out of its housing and vacuum inside the housing.

IMPORTANT: *Do not slide the lower roller assembly back into place without first removing the imaging guides. Failure to remove them first can cause misalignment and/or damage to the machine.*

5. Remove the imaging guides.
6. Replace the lower roller assembly.
7. Replace the imaging guides.
8. Vacuum the screen located at the base of the transport system.

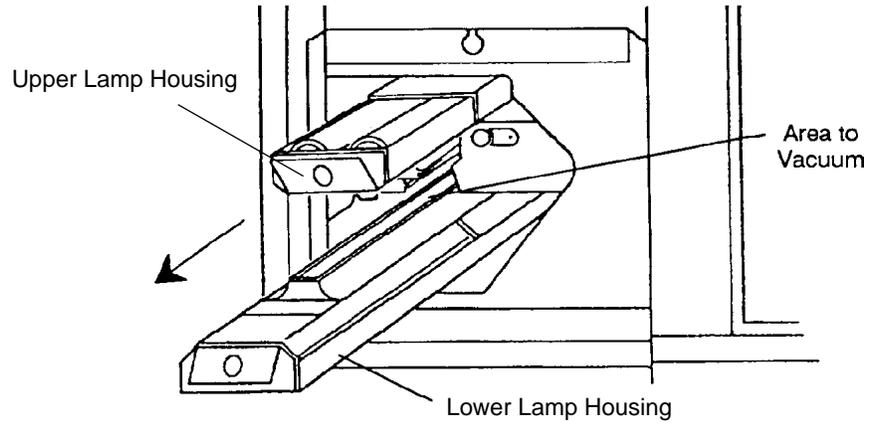
IMPORTANT: *Do not insert the vacuum cleaner nozzle under the lower roller housing assembly. The lamp sensor may be damaged or dislodged.*

9. Push down on the baffle handle to release the baffle plate. Raise the baffle plate into its original position.
10. Close the right-side access door and top cover.

The exposure lamp housings

The upper and lower lamp housings should be cleaned.

1. Open the right-side access door.



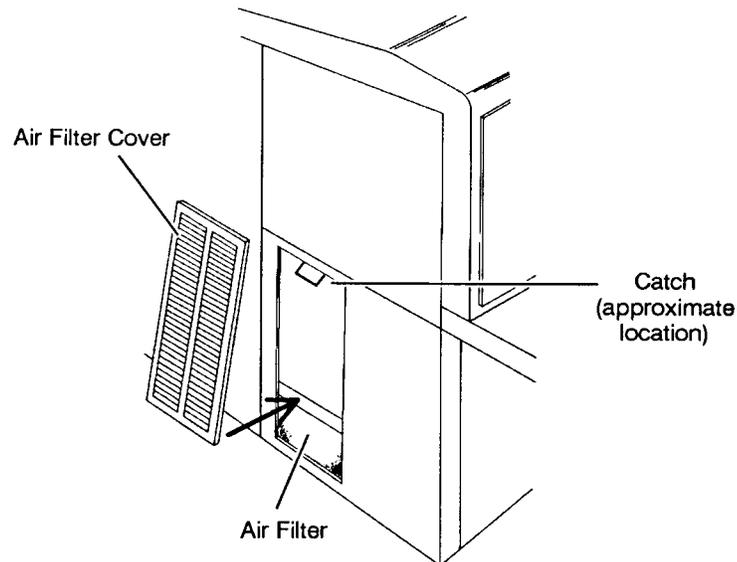
2. Remove the lower lamp housing.
3. Vacuum the housing.
4. Replace the lower lamp housing.

Repeat steps 4 through 8 for the upper lamp housing.

5. Close the right-side access door.

The air filter

The air filter should be cleaned.

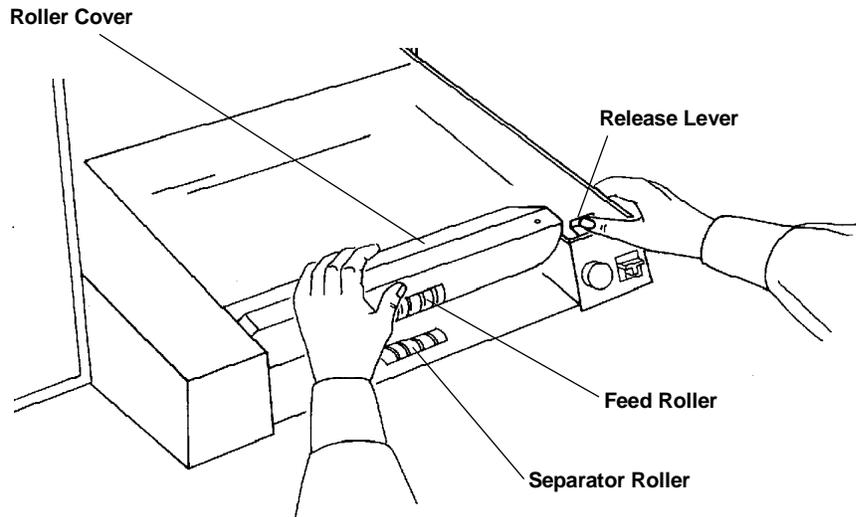


1. Remove the air filter cover.
2. Lightly vacuum the outside of the air filter and the air filter cover.
3. Replace the air filter cover.

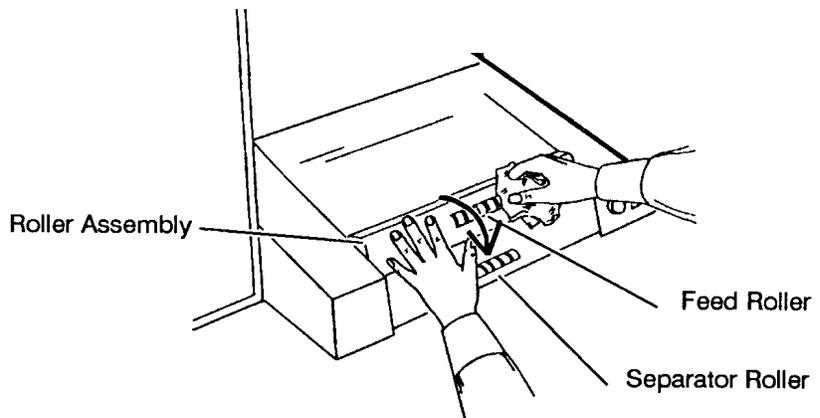
Cleaning the feed and separator rollers

Clean the feed and separator rollers at least once a week to prevent ink, toner, and dust from collecting on the rollers and preventing documents from separating.

1. Grasp the front cover and swing it open to the right.



2. Push the roller cover release lever toward the back of the machine.
3. Grasp and rotate the roller cover toward the back of the machine, exposing the feed and separator rollers.



4. Clean the feed and separator rollers with a clean, lint-free cloth slightly dampened with water. Clean until all residue is removed from the roller ribs.
5. Wipe the feed and separator rollers with a clean, dry, lint-free cloth to dry the rollers.
6. Rotate the roller assembly back into position.
7. Close the front cover.

NOTE: Make certain to adjust the feed and separator roller gap after cleaning the rollers.

Cleaning the cabinet

Clean the exterior of the Scanner, the feed shelf, and the hopper area with a soft cloth. Remove any fingerprints, stains, or stubborn dirt with a cloth dampened with water or a mild cleaning agent.

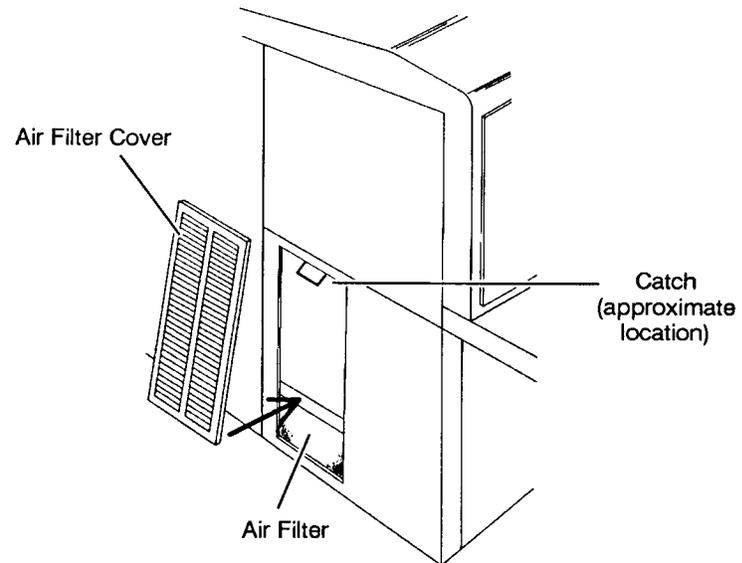
Monthly maintenance procedures

Maintenance procedures which should be performed monthly include: checking the air filter.

Checking the air filter

The air filter should be checked at least once a month and changed as needed.

1. Remove the air filter cover by pressing in on the top of the cover to release the catch.



2. Examine the filter for dust accumulation. If dust has accumulated, follow the instructions in the *Replacement Procedures*.

Replacement procedures

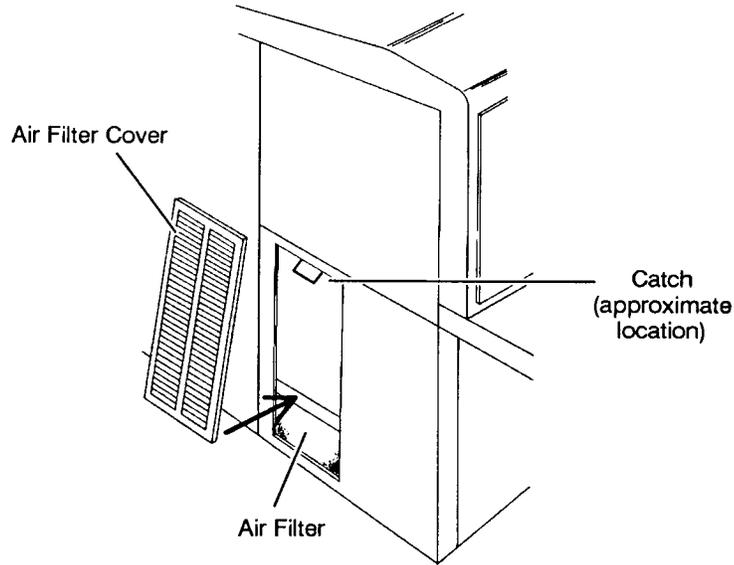
Replacement procedures should be performed on an as needed basis. Components which need periodic replacement include: the air filter, the Document Scanning Array lamp, and the exposure lamps.

Replacing the air filter

The air filter should be replaced at least once a year; more often if needed.

IMPORTANT: *Never operate the Scanner without an air filter installed. The imaging apparatus will quickly become contaminated with dust and dirt, impairing image quality.*

1. Remove the air filter cover by pressing in on the top of the cover to release the catch.



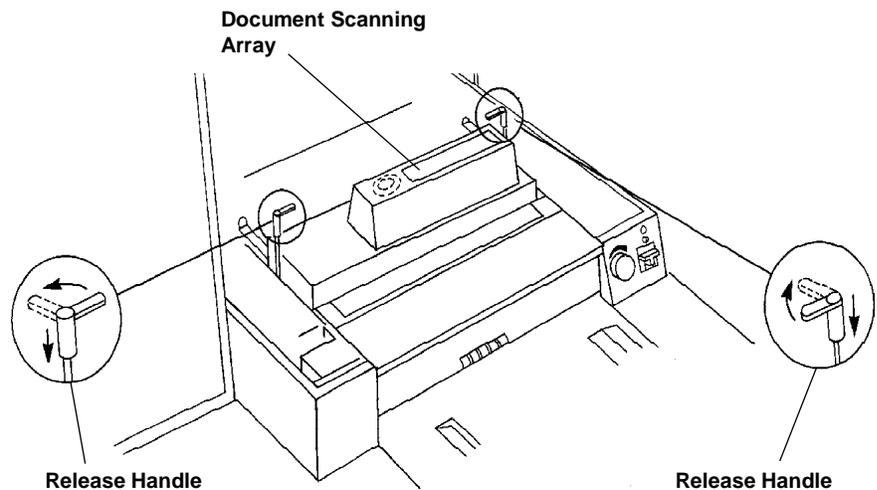
2. Carefully remove the old air filter. Note the orientation of the filter as it is removed from the machine.
3. Orient a new air filter the same as the old air filter, and insert it into the space left open by the old air filter.
4. Replace the air filter cover by first inserting the bottom edge and then pushing in the top edge until it is in place.

Replacing the document scanning array lamp

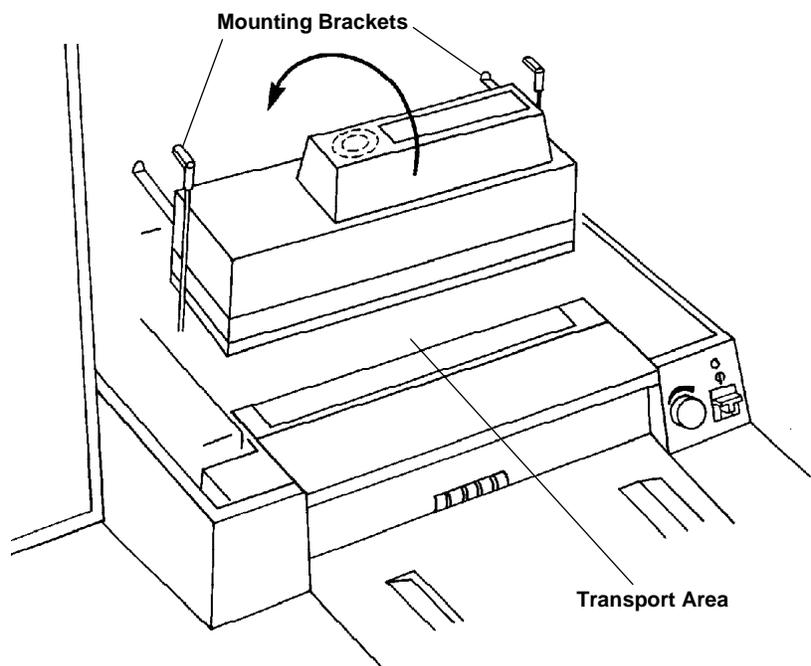
NOTE: The Document Scanning Array is an optional accessory which is available only when using a Scanner 923. If your Scanner does not have a DSA, proceed to the next section.

The Document Scanning Array lamp should be replaced whenever a message appears in the Status Display which indicates that the lamp needs to be replaced.

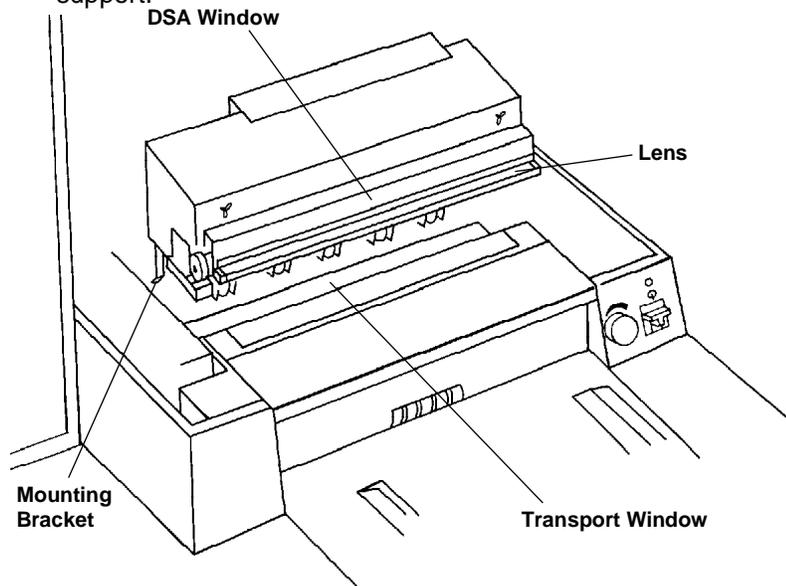
1. Turn the side panel switch off.
2. Open the front cover.
3. Locate the Document Scanning Array.



4. Push down and rotate the release handles outward to release the DSA assembly.

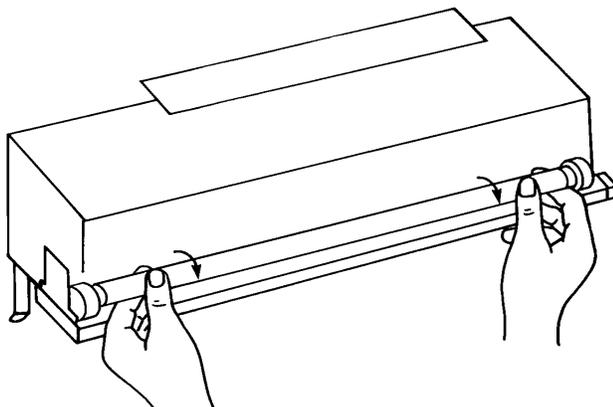


5. Lift the DSA assembly straight up from the transport area.
6. Rotate the DSA assembly away from you. The mounting brackets should be pointing straight down toward the transport area.
7. Set the DSA assembly down, using the mounting brackets for support.



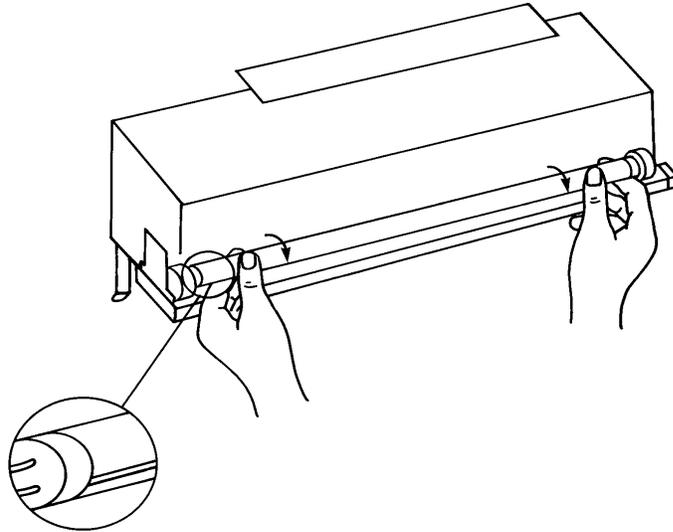
8. Grasp the quarter-turn screws and turn each counterclockwise one-quarter turn to loosen the DSA window panel.
9. Remove the DSA window panel by pulling it gently toward you. The DSA lamp will be exposed.

CAUTION: Allow the DSA lamp to cool before attempting to remove



10. Grasp the lamp by both ends.
11. Rotate the lamp toward you until it becomes loose. Gently remove the lamp from its housing.

12. Grasp the replacement lamp by both ends with the clear stripe pointing toward you.



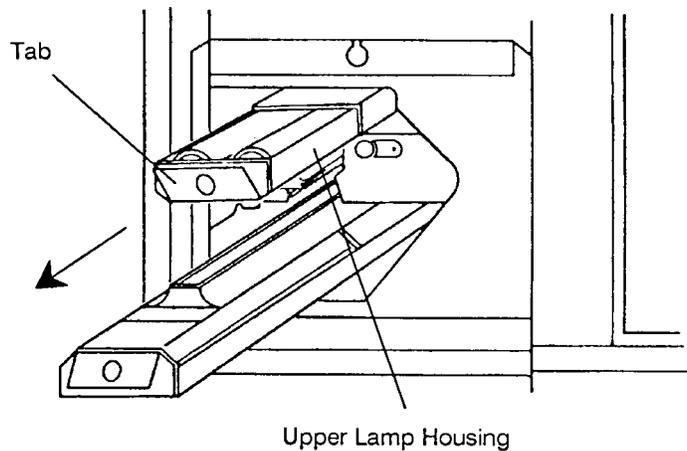
13. Insert the lamp gently into the housing.
14. Rotate the lamp toward you until it snaps into place. The clear stripe should disappear just below the lower edge of the DSA assembly.
15. Replace the DSA window panel, turning the quarter-turn screws clockwise one-quarter turn to secure the panel.
16. Lift the DSA assembly straight up from the transport area.
17. Rotate the DSA assembly toward you. The mounting brackets should be pointing toward the back of the machine.
18. Replace the DSA assembly in its original position.
19. Push down and rotate the release handles inward so that they both point toward the center of the transport to lock the DSA assembly in place.
20. Close the front cover.
21. Turn the side panel switch on.

Replacing the exposure lamps

The exposure system consists of four (4) long-life fluorescent lamps. There are two lamp housings; one upper and one lower. Each lamp housing contains two (2) lamps.

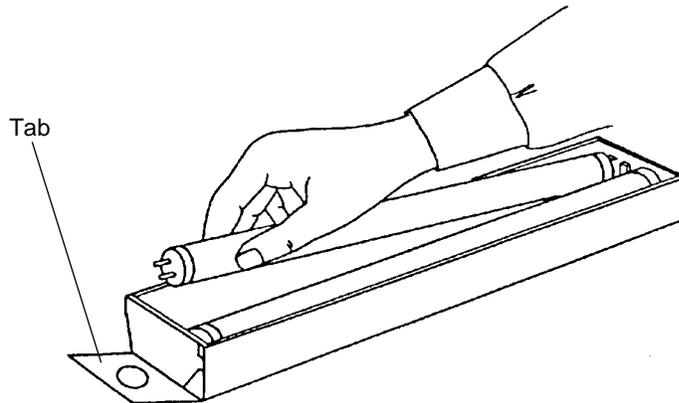
Change the lamps every five-hundred (500) hours, when image quality appears to be degrading (and standard maintenance procedures do not improve the image quality), or when requested to do so via an operator message. Always replace both lamps in a housing at the same time, or exposures may appear inconsistent. Always use the recommended lamps, or image quality may be unacceptable.

1. Turn the side panel switch off.
2. Open the right side access door.
3. Remove the imaging guides.
(Refer to *Changing the imaging guides.*)
4. Grasp the tab at the end of the upper lamp housing and slide the housing out of the track.



WARNING: *Make sure the lamps are cool before attempting to remove them from the lamp housing.*

5. Carefully grasp the end of the lamp that is nearest the tab and lift it out of the lamp housing socket. Free the other end of the lamp and lift the it out of the lamp housing. Remove the second lamp in the same manner.



6. Discard the used lamps.
7. Install each lamp using the following sequence of steps:
 - Face the clear, horizontal line of the new lamp toward the slot in the bottom of the lamp housing.
 - Insert one end of the lamp into the socket at the tab end of the lamp housing. Insert the opposite end of the lamp into the other socket.

WARNING: The exposure lamps are fragile. Never apply pressure to the center of the lamp; press down only on the ends of the lamp.

- Gently push down on each end of the lamp. Do not force the lamp into place. The lamp should fit securely into the housing and click into place.

NOTE: Improperly installed lamps (i.e., not securely seated in the lamp housing) will result in repeated low lamp warnings.

8. Place the upper lamp housing in the track and slide it back into place.

Repeat steps 4 through 8 to replace the lamps in the lower lamp housing.

9. Reinstall the imaging guides.
10. Close the right side access door.
11. Turn the side panel switch on.

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