



AstroJetTM

IMAGE SYSTEM II

Professional Addressing System



inkjet
technology by  [®]
invent

INSTALLATION AND OPERATING MANUAL

SAFETY PRECAUTIONS

THIS EQUIPMENT PRESENTS NO PROBLEM WHEN USED PROPERLY. HOWEVER, OBSERVE SAFETY RULES WHEN OPERATING THE IMAGE SYSTEM II.

BEFORE USING THE SYSTEM, READ THIS MANUAL CAREFULLY AND FOLLOW THE RECOMMENDED PROCEDURES, SAFETY WARNINGS, AND INSTRUCTIONS:

- ✓ Keep hands, hair, and clothing clear of rollers and other moving parts.
- ✓ Avoid touching moving parts or materials while the machine is in use. Before clearing a jam, be sure machine mechanisms come to a stop.
- ✓ Always turn off the machine before making adjustments, cleaning the machine, or performing any maintenance covered in this manual.
- ✓ Always use the power cord supplied with the machine and plug it into a properly grounded, easily accessible wall outlet located near the machine. Failure to properly ground the machine can result in severe personal injury and/or fire.
- ✓ Power cord and wall plug are the primary means of disconnecting the machine from the power supply.
- ✓ **DO NOT** use an adapter plug on the line cord or wall outlet.
- ✓ **DO NOT** remove the ground pin from the line cord.
- ✓ **DO NOT** route the power cord over sharp edges or trap it between furniture.
- ✓ Avoid using wall outlets controlled by wall switches or shared with other equipment.
- ✓ Make sure there is no strain on the power cord caused by jamming between equipment, walls or furniture.
- ✓ **DO NOT** remove Covers. Covers enclose hazardous parts that should be accessed by a qualified service representative. Report any cover damage to your service representative.
- ✓ This machine requires periodic maintenance. Contact your authorized service representative for required service schedules.
- ✓ To prevent overheating, do not cover the vent openings.
- ✓ Use this equipment only for its intended purpose.

In addition, follow any specific occupational safety and health standards for your workplace or area.

This manual is intended solely for the use and information of Astro Machine Corp., its designated agents, customers, and their employees. The information in this guide was obtained from several different sources that are deemed reliable by all industry standards. To the best of our knowledge, that information is accurate in all respects. However, neither Astro Machine Corp. nor any of its agents or employees shall be responsible for any inaccuracies contained herein.

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Table of Contents

SECTION 1 – Getting Acquainted	1
IMAGE SYSTEM II	1
IMAGE SYSTEM II Control Panel	2
FF 14 Friction Feeder Control Panel	3
ASF 3000 Vacuum Shuttle Feeder Control Panel	4
Printer Control Panel	5
SECTION 2 – Installing Image System II	7
Choose a Location	7
Assembling Image System II	8
Wiring and Connecting Image System II	10
Install Inkjet Cartridges	13
Setting up FF-14 Friction Feeder	14
Setting up ASF 3000 Shuttle Feeder	15
Adjusting Image System II Base Media Guides	17
Installing Software on Computer	19
Types of Software	19
SECTION 3 – Operating System	21
Setting Up Image System II to Print a Job	21
Printer Controls	23
Purge While Printing	25
Types of Media	26
Media Thickness	26
Databases	26
SECTION 4 – Maintenance	28
The Inkjet Cartridges	28
Storage	29
Disposal	29
Cleaning the Printhead	29
Purging the Nozzles	30
Jams in the Printer	30
Removing Jammed Media	31
Replacing the Sheet Separators on the Friction Feeder	31
Cleaning	31
Image System II	31
Cleaning the Media Sensor	32
Optional FF-14 Friction Feeder	32
Cleaning Sensors	32
Optional ASF-3000 Shuttle Feeder	33
Cleaning Media Sensor	33
Cleaning Feed Rollers	33
Jar Filter	33
Cleaning Vacuum Pump Filters	34

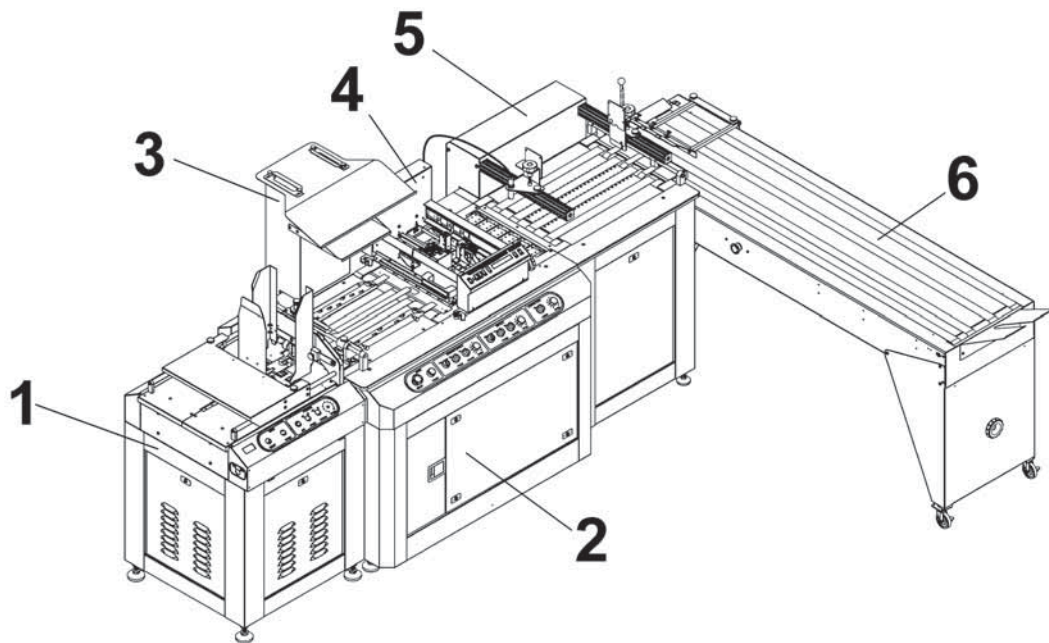
TABLE OF CONTENTS

SECTION 5 – Troubleshooting	35
Power Problems	35
Interface Communication Problems	35
LCD Display Problems	36
Feeding Problems	36
Print Placement Problems	38
Print Content Incorrect	39
Software Problems	39
Print Quality Problems	40
APPENDIX A – Specifications	43
APPENDIX B – Supplies and Computer Requirements	44
Supplies	44
Computer Requirements	44
INDEX	45

NOTES

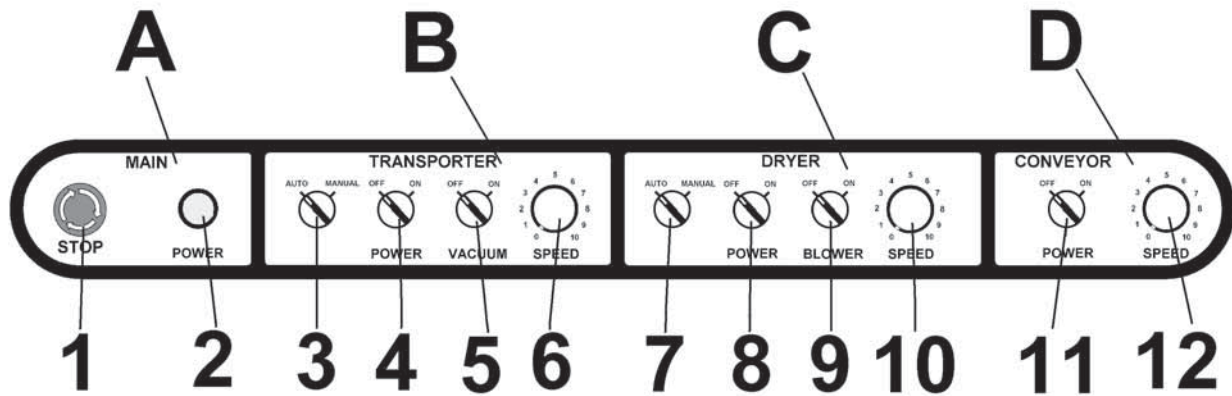
SECTION 1 – *Getting Acquainted*

IMAGE SYSTEM II



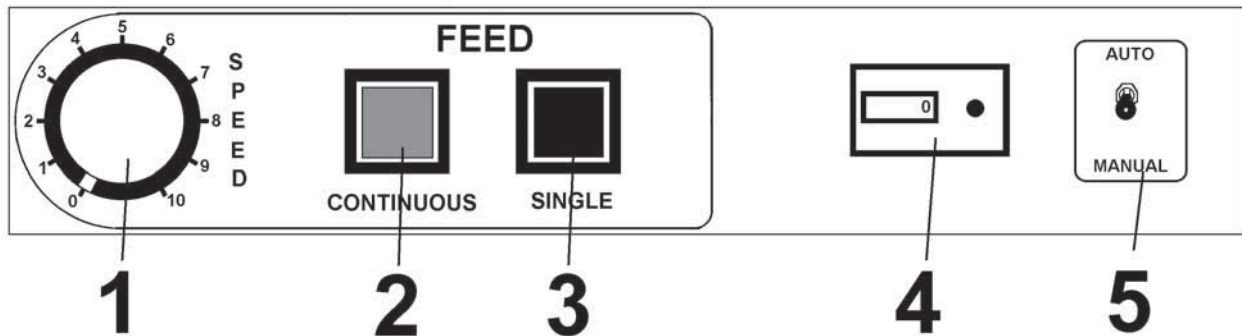
1	ASF 3000 VACUUM SHUTTLE FEEDER – Vacuum Shuttle Feeder is shown. Optional FF 14 Friction Feeder also available.
2	MAIN BASE UNIT – All controls, computer, and Printer are located here.
3	COMPUTER MONITOR SUPPORT – Computer monitor, keyboard, and mouse are located on this support. Computer CPU is located in Main Base Unit behind left front door.
4	IMAGE SYSTEM II PRINTER – Prints information on media.
5	DRYER BASE – If system is so equipped, Infrared Dryer unit mounts here.
6	CONVEYOR STACKER – Media stacks on this conveyor after printing.

IMAGE SYSTEM II Control Panel



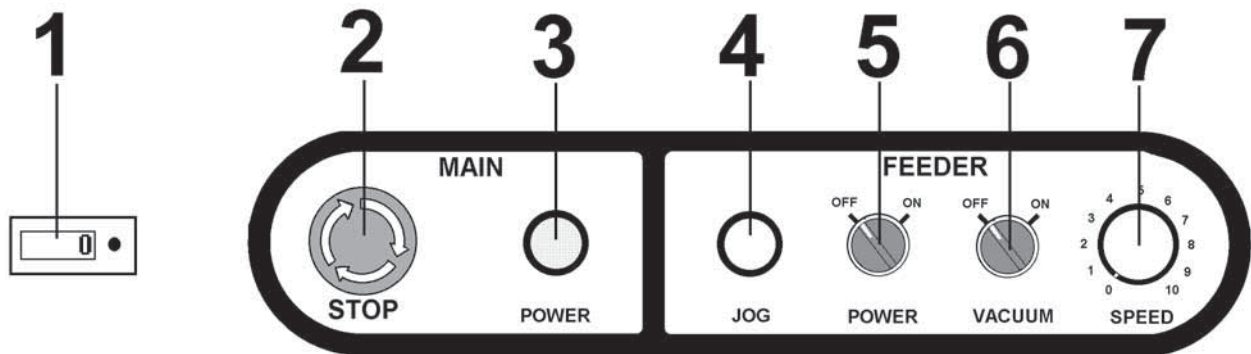
A Main Control	
1	STOP – Shuts down entire machine. Must be turned in direction of arrows to reset system to restart.
2	POWER – When Stop button is reset, press this button to start system.
B Transporter Section Controls	
3	AUTO/MANUAL – Places Transporter in AUTO mode (<i>Printer controls transport speed</i>) or MANUAL mode (<i>Operator controls transport speed</i>).
4	POWER – Controls power to Transport unit.
5	VACUUM – Controls vacuum in transport.
6	SPEED – Controls Transport speed when AUTO/MANUAL switch is in MANUAL position.
C Dryer Section Controls	
7	AUTO/MANUAL – Used to place Dryer in AUTO (<i>Printer controls Dryer speed</i>) or MANUAL mode (<i>Operator controls Dryer speed</i>).
8	POWER – Controls power to Dryer unit.
9	BLOWER – Controls Blower in Dryer section.
10	SPEED – Controls Dryer's transport speed when AUTO/MANUAL switch is in MANUAL position.
D Conveyor Controls	
11	POWER – Controls power to Conveyor unit.
12	SPEED – Controls Conveyor speed.

FF 14 Friction Feeder Control Panel



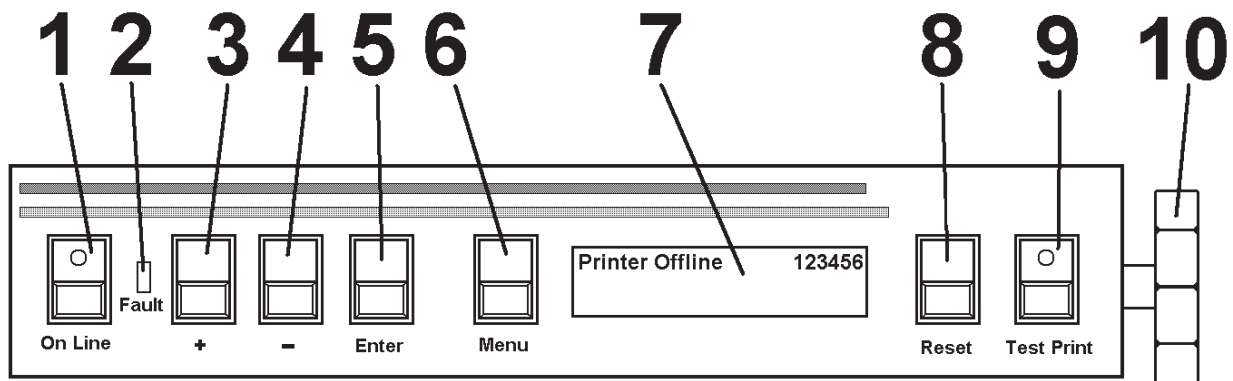
1	SPEED – Used to vary Feeder speed in MANUAL mode to provide separation between pieces being printed. In AUTO mode, additional separation of pieces can be accomplished in Control Panel software.
2	CONTINUOUS FEED – When pressed, and Feed Select Switch is in MANUAL position, Feeder feeds continuously.
3	SINGLE FEED – When pressed, and Feed Select Switch is in MANUAL position, permits Feeder to feed a single piece of media.
4	BATCH COUNTER – Resettable. Keeps track of pieces run on each job.
5	AUTO/MANUAL – When Feed Select Switch is in MANUAL , operator can feed one or continuous pieces of media by pressing FEED Switches. When in AUTO , Image System II controls Feeder through ENTER key on Printer Control Panel if Feeder is connected to Printer.

ASF 3000 Vacuum Shuttle Feeder Control Panel



1	Resettable Counter – Keeps track of number of pieces run.
2	STOP Button – Stops Feeder and locks out controls.
3	MAIN Power Button – When STOP switch is unlocked, pressing this button turns Feeder power ON .
4	JOG Button – When Main power is ON and Feeder Power switch is OFF , Jog button is used to feed material.
5	POWER Switch – In OFF position, permits operator to jog machine. When ON , permits machine to run continuously.
6	VACUUM Switch – Turns Vacuum Pump ON .
7	SPEED Control – Controls Feeder speed.

Printer Control Panel



1	ON LINE key – Indicator lights when data is sent to Image Blaster and it is ready to begin printing. Also turns Printer OFF LINE to access MENU Mode.
2	FAULT Indicator – Lights when there is a problem with printing process.
3	- Key – In MENU mode, scrolls to <i>previous</i> selection.
4	+ Key – In MENU mode, scrolls to <i>next</i> selection.
5	ENTER key – Starts and stops printing.
6	MENU key – Puts Printer into MENU mode to access various operator functions.
7	OPERATOR DISPLAY – Indicates Printer's status including menus and error messages.
8	RESET Key – Resets Printer to "wait state".
9	TEST PRINT Key – Puts Printer into TEST mode and sends a sample copy to check Printer's output.
10	MEDIA THICKNESS Knob – Adjusts height of Printheads to compensate for different media thicknesses.

NOTES

[illegible]

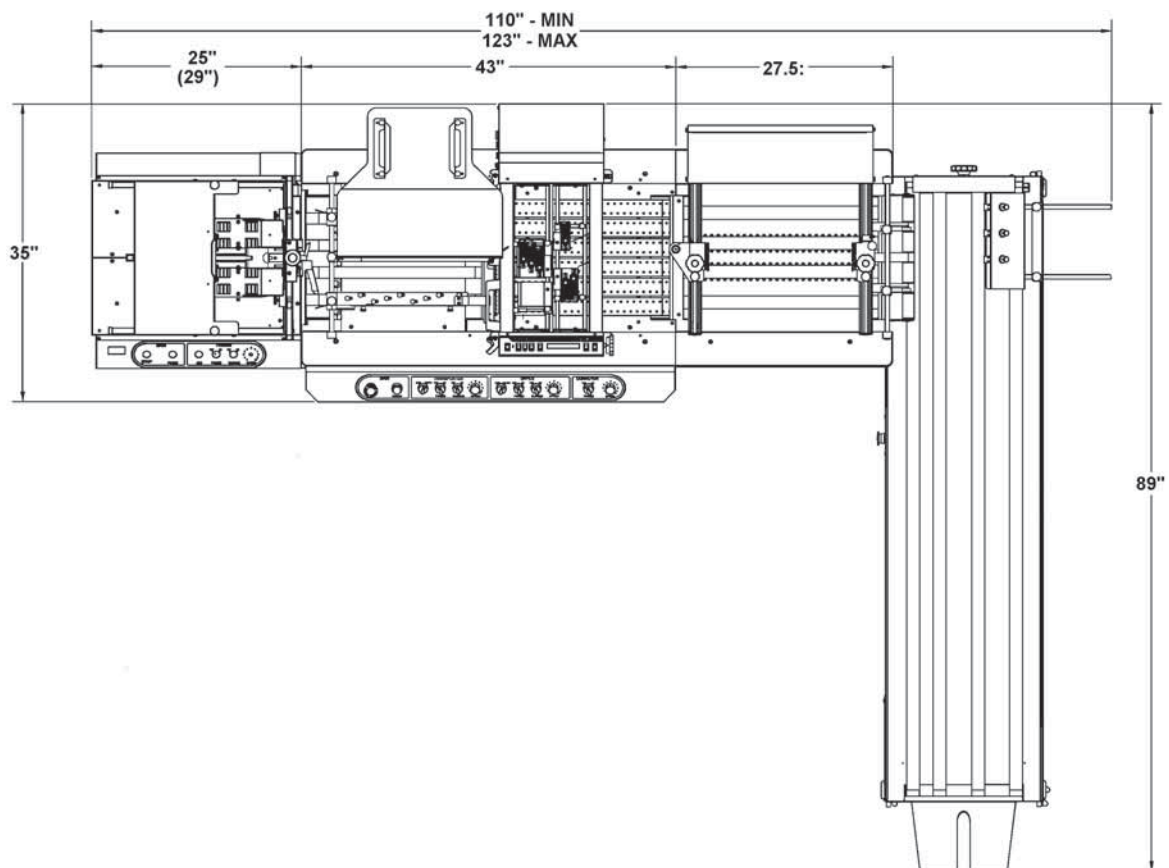
SECTION 2 – *Installing Image System II*

To install the system:

- Choose a location for Image System II
- Assemble Image System II
- Connect components to power and the printer to computer
- Install Inkjet Cartridges
- Set up feed on feeder
- Install Image System II software on computer

Choose a Location

Image System II should be placed at least 12 inches from any walls on a solid floor, not carpeting. Protect the Image System II from excessive heat, dust, and moisture – avoid placing it in direct sunlight. Below is a drawing of the complete Image System II with an ASF-3000 Feeder showing the installation space required.



Assembling Image System II

Leveling Base Unit

Before beginning, decide where the System is to be installed. Make sure that adequate 220 VAC (4-wire, two 115V lines plus neutral and ground) are available. This machine must be connected to a dedicated line. If an Infrared Dryer is to be installed, it should also have its own dedicated 220 VAC Line.

Begin by placing Base Unit in position on a bare floor (*Carpeting is not recommended*). Place a level on the front plate of the Base Unit and level the machine using the four leveling feet.



Check the front to rear level of the Base by placing a level on the Transport Belts.



Attaching Feeder

Make sure that Image System II Printer is disconnected from the power source.

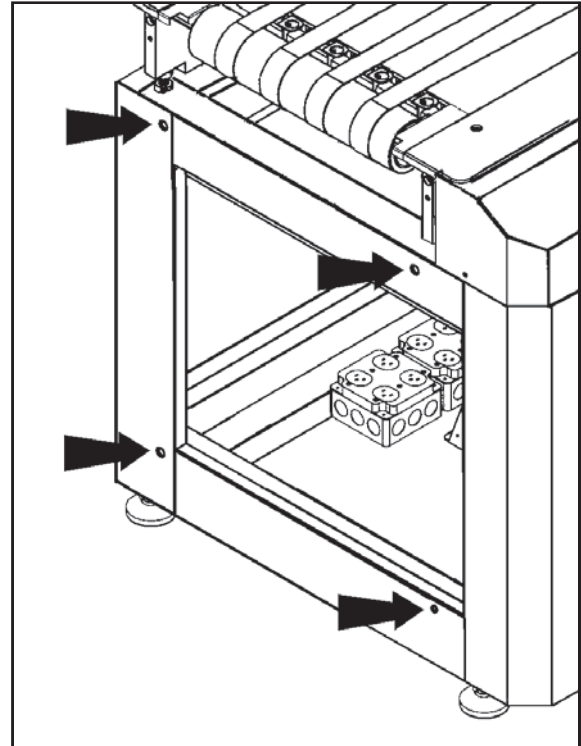
Remove the Covers from the Feeder, Main Base, and Dryer Cabinets.

Four screws attach Feeder Base to Main Base. Two screws attach Dryer Base to Main Base. To install ASF-3000 Vacuum Shuttle Feeder to Main Base you must first install lower mounting bracket supplied to Feeder base.

NOTE: FF-14 Friction Feeder does not require lower mounting bracket.



Raise Feeder Stand so the four holes line up with the threaded holes in the Base Unit and install the four Allen head screws and washers.



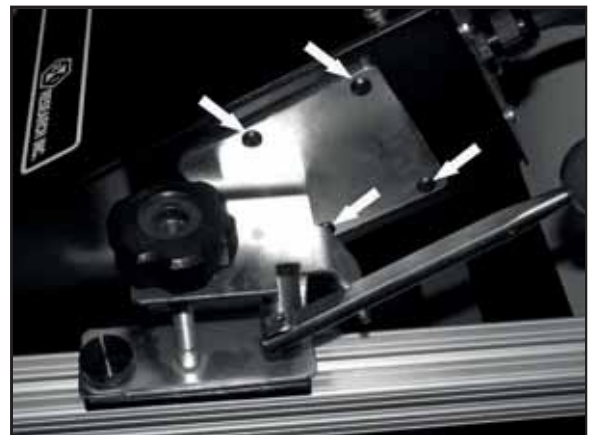
Attaching Dryer Base

Raise Dryer Base until table on Dryer Base is even with table on Main Base Unit. Attach Dryer Base to Main Base Unit at the top with two Allen head screws supplied.



Dryer Installation

If also installing a Dryer, it mounts between the two supports on the Dryer Base. (*Installation shown is typical.*) Refer to information supplied with Dryer for assembly and operation.



Wiring and Connecting Image System II

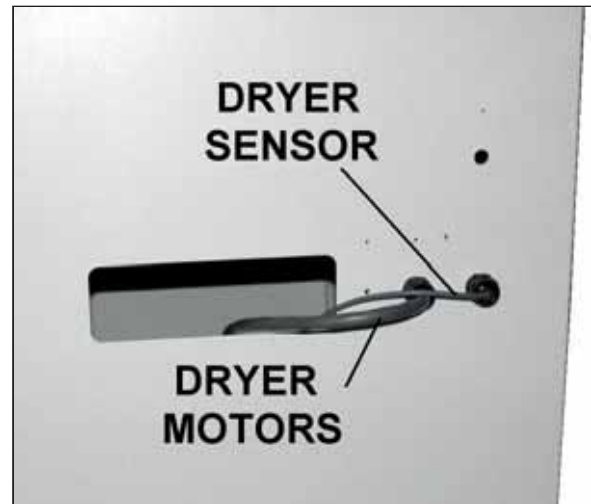
Once System is assembled and leveled, the next step is to connect the various parts electrically. Two outlet boxes at the left rear of the Main Base unit provide power to the various parts of the System. One outlet box is marked **SWITCHABLE** and the other one is not marked. **SWITCHABLE** Outlet Box is wired to the safety circuit. Feeder is plugged into the box for power. **Unmarked** Outlet Box has power on it as long as the System is plugged into the power source. This Outlet Box is where the COMPUTER, PRINTER, MONITOR, and any other devices that have to remain powered during an Emergency Shutdown are plugged. If the System has the optional FF-14 Tabber, it can also be plugged into this box or directly into a separate wall outlet.

WARNING!

**MAKE SURE SYSTEM IS DISCONNECTED FROM POWER SOURCE
BEFORE BEGINNING WIRING.**

Remove all Covers from System (*if not already done*). Connect following cables in order:

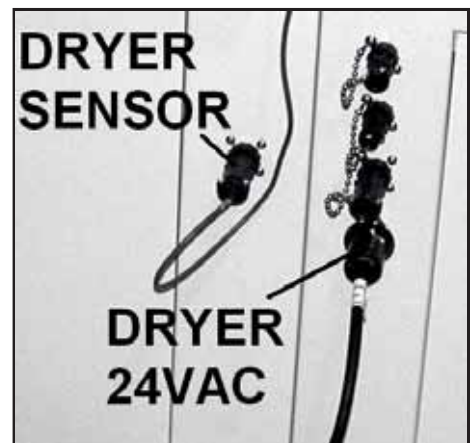
1. Connect the two cables from Dryer Base to the two cables under Control Panel on front of Main Base Unit. Thinner wire is Dryer Sensor connector and the other thicker wire is for power and control of Dryer Base Motor and Cooling Fans.



2. Next connect Dryer Sensor to the plug at the rear of the Dryer and plug the 24 VAC Plug from the Dryer into the 24VAC connector on the left rear of the Base Unit.

CAUTION

**DO NOT ATTEMPT TO POWER DRYER UNIT
FROM IMAGE SYSTEM II BASE. DRYER
REQUIRES A SEPARATE CONNECTION.**



3. Install computer CPU in Base Unit. Computer Monitor, Keyboard and Mouse are installed on Monitor Stand of Base Unit. Two clamps provided to hold the monitor in place. CPU and Monitor should be plugged into the Non-Switchable Outlet Box.

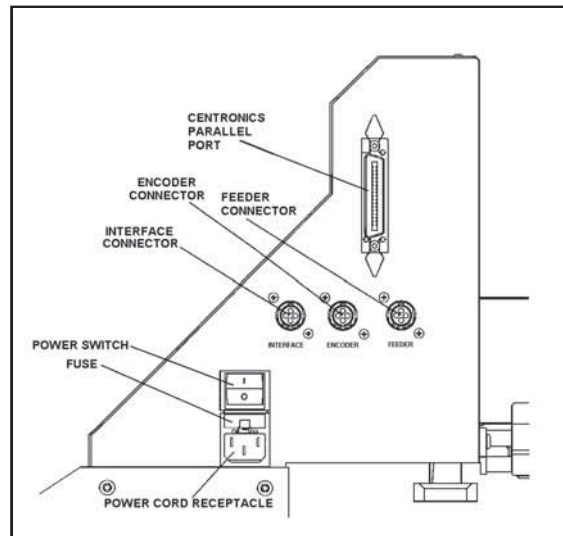


CAUTION

COMPUTER AND PRINTER SHOULD BE PLUGGED INTO UNMARKED RECEPTACLE BOX PROVIDED IN BASE OF IMAGE SYSTEM II. THIS RECEPTACLE BOX ALWAYS HAS POWER WHEN SYSTEM IS PLUGGED INTO WALL OUTLET. USE ONLY POWER CORDS SUPPLIED.

4. Connections for the computer and System are on left-hand side of Printer.

- a. Connect parallel cable from computer to parallel port on Printer.
- b. Plug Printer Power Cord into Non-Switchable Outlet Box, then into Printer.
- c. Connect cable at the top center of Base unit marked ENCODER to Printer Encoder.
- d. Connect cable at the top center of Base unit marked INTERFACE to Printer Interface Connector.



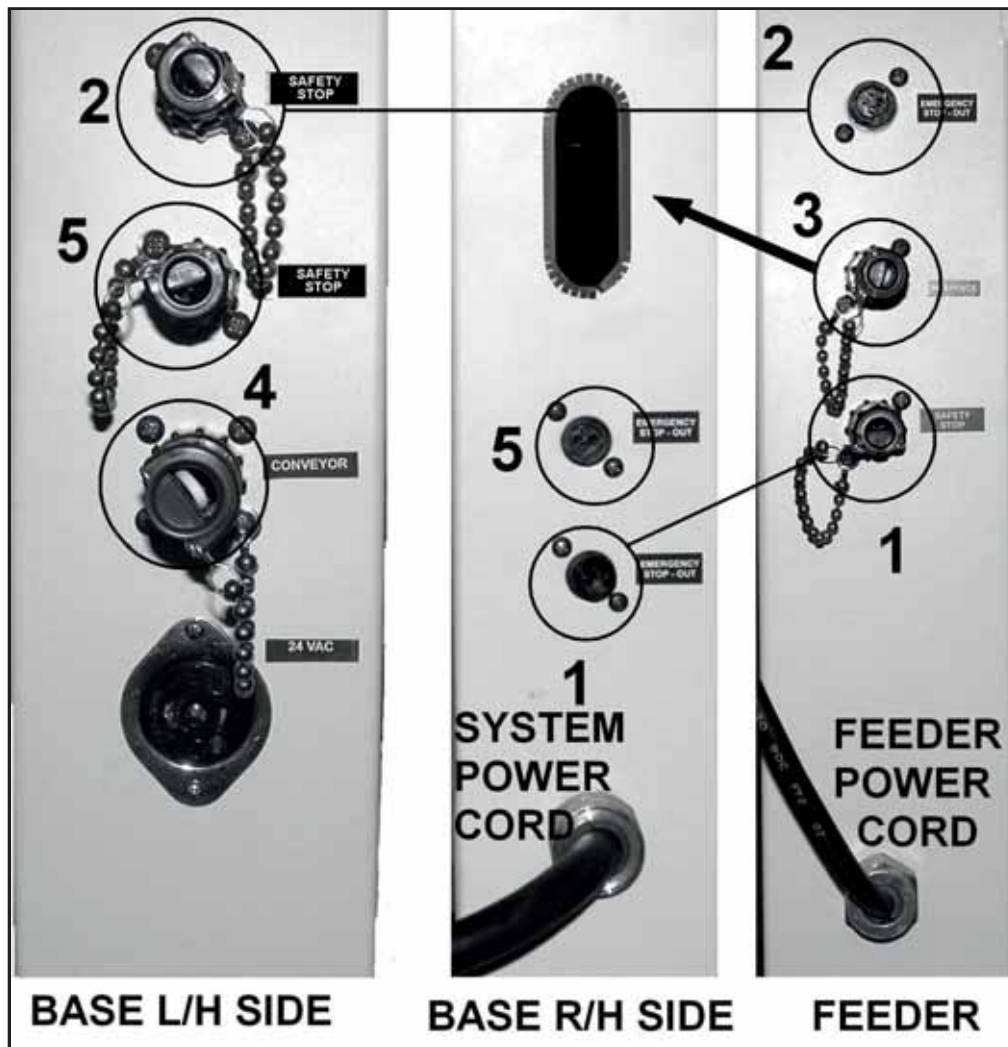
- e. Remove Jumper Plug from INTERFACE connector on Shuttle Feeder (*not required on Friction Feeder*). Connect a cable from the INTERFACE connector [3] on Feeder to FEEDER connection on Printer (*required on both Shuttle and Friction Feeders*).
5. Route Power Cord from Feeder through oval hole on Base Unit right-hand side and plug Feeder into **SWITCHABLE** Outlet Box.

SECTION 2 INSTALLING THE IMAGING SYSTEM II

6. Remove Jumper Plug and connect a cable from the Safety Stop connector [1] on Shuttle Feeder to Emergency Stop-Out connector [1] on left-hand side of Base Unit.
7. Remove Jumper Plug and connect second cable from Emergency Stop-Out connector [2] on Shuttle Feeder to Safety Stop Connector [2] on right-hand side of Base Unit.

NOTE: Plug on Base R/H side marked [5] Emergency Stop-Out goes to Tabber Safety Stop (*if installed*) and Plug on Base L/H side marked [5] Safety Stop goes to Emergency Stop-Out on Tabber. Tabber should be plugged into Non-Switchable Circuit Box in Base for power or into a separate 115 VAC wall outlet.

8. [3] Plug Interface is connected to Feed connector on Printer.
9. Conveyor is connected [4] Plug Conveyor for power and control.



Completing System Assembly

Remove packing blocks from Printheads (or installed Side Guides on Feeder *(if not done)*). Check safety circuit on each parts of the system before operating for the first time.

WARNING!

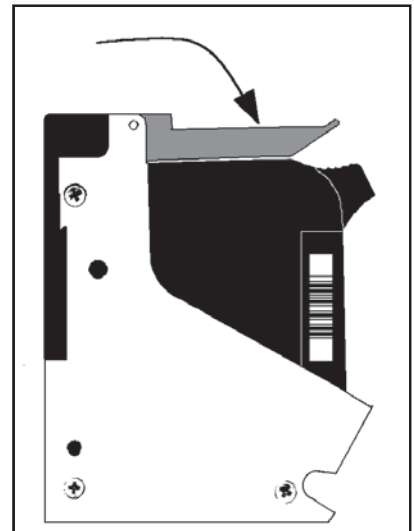
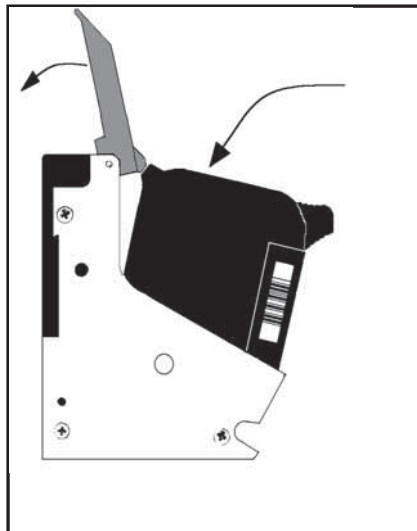
FOR SAFETY, IT IS IMPORTANT THAT EMERGENCY STOP CIRCUIT IS PROPERLY CONNECTED. ONCE CONNECTED, CHECK SAFETY CIRCUIT OPERATION BEFORE OPERATING SYSTEM.

Install Inkjet Cartridges

Image System II can be configured with eight Inkjet Cartridges.

Install standard cartridges as follows:

1. Remove Inkjet Cartridge from packaging, take care not to touch copper contacts, metal plate, or tgold printhead. Remove protective tape from Printhead.
2. Release Latch Lever mounted on the Inkjet Cartridge Holder.
3. With Cartridge's Printhead pointing down, slide Cartridge into tHolder and push down and toward contacts in Holder.
4. Make sure Cartridge is seated in Holder. Close Latch Lever to secure Cartridge. **DO NOT** force Latch Lever into place. (See diagram.)
5. Repeat **Steps 1-4** above for remaining Cartridges.



NOTE: For optimum image quality during the run, refer to "*Cleaning the Printhead*".

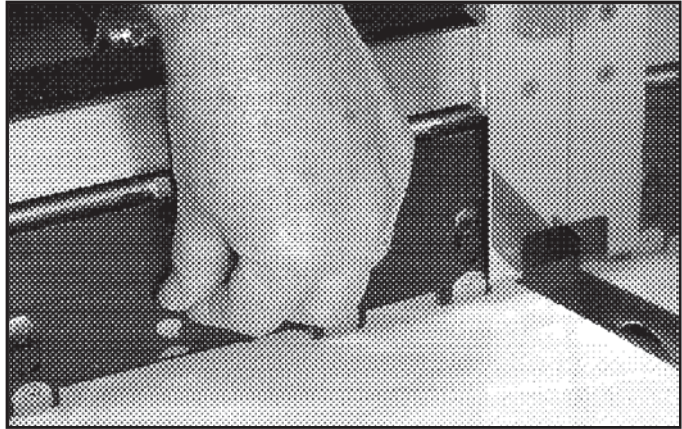


**Ink in Cartridge may be harmful if swallowed.
Keep new and used cartridges out of reach of children.
Discard empty cartridges immediately.**

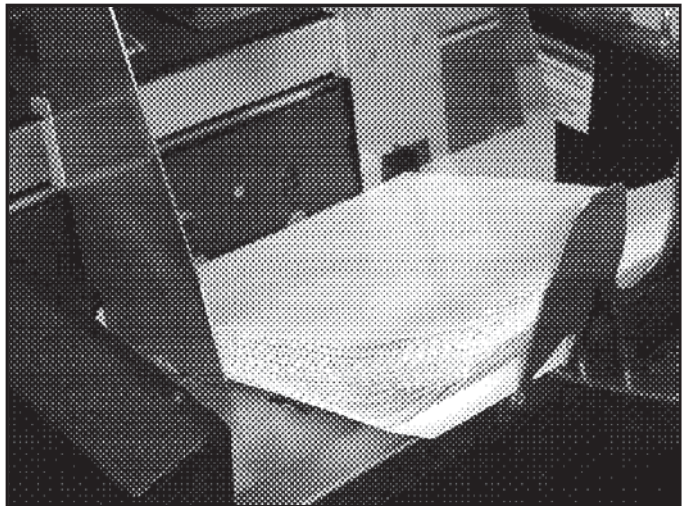
Setting up FF-14 Friction Feeder

1. Release Separator Locking Lever located on operator's side of Feeder, raise Separators to "UP" and locked position. Move Side Guides out to extreme open position. Place one piece of media in the center of Feed Table.

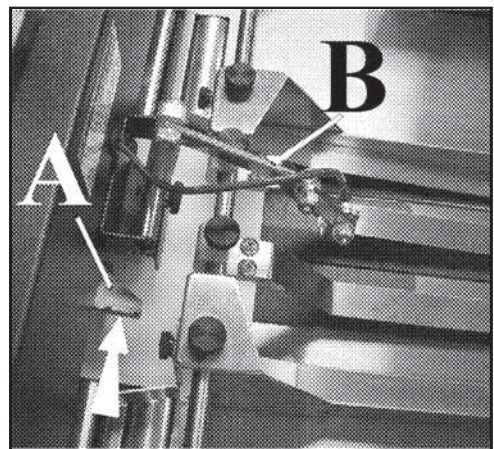
NOTE: There are four Separators on Feeder. Use two center Separators for narrow media and all four Separators for wide media. Place media under the Separators and lower Separators so they rest on media.



2. Rotate Locking Lever up to lock Separators in place.
3. Adjust Side Guides to within 1/32-inch of media and set Back Guide so media is raised approximately 1/2-inch and rests on curve of Back Guide. When running 10 inch or longer or heavy media you may have to set Back Guide so it just touches back of media.



4. Release Forwarding Roller by moving Locking Lever [A] in direction of arrow. Hand feed one piece of media into Printer. Adjust Side Guides and Belts on Printer to the media. Allow approximately 1/16-inch between media and Side Guides. Adjust Media Sensor Assembly [B] so Sensor is pointed straight down at media as it passes under it.



NOTE: Forwarding Roller Locking Lever is set in locked or down position when running media less than 1/4" thick. Forwarding Rollers should be locked in "UP" position when running media thicker than 1/4".

5. Turn Image System II ON. Place a piece of media under Printer. Use Height Adjustment Knob to raise or lower Printer until you feel a slight drag when you pull on media.

NOTE: *These are initial settings. It may be necessary to adjust MEDIA THICKNESS Control to optimize print quality*

6. To test feed media after set up, turn Feeder and Printer ON. Place AUTO/MANUAL Selector Switch on Feeder to **AUTO**. Press **TEST PRINT** key on Printer, then press the **ENTER**, to test feed media.

Setting up ASF 3000 Shuttle Feeder

1. Choose and Install Proper Vacuum Plate.

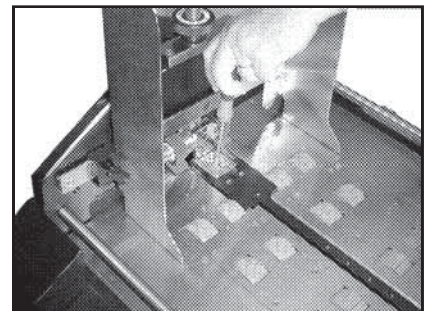
ASF 3000 Shuttle Feeder Kit contains four Vacuum Plates. Each one works best with a specific type of media. Refer to the chart below and select the plate for the media you will be feeding:

MEDIA	VACUUM PLATE
Single sheets of paper	1
Thin post card stock	2
Thick media up to 1/2"	3*
Folded media	4

NOTE: *Use P/N 28-105-45 Rear Pusher on media 1/4-inch or thicker to improve feeding.

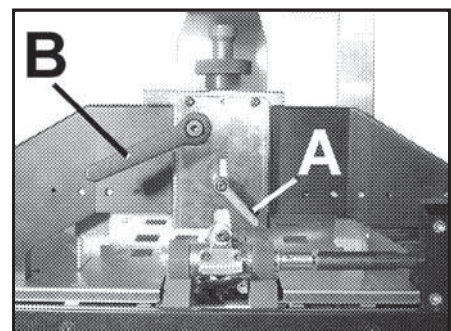
Install Vacuum Plate:

- a Remove Philips screw holding Vacuum Plate to Vacuum Arm.
- b Remove Plate.
- c Install new Plate, reinstall screw.



2. Adjust Forwarding Rollers to media.

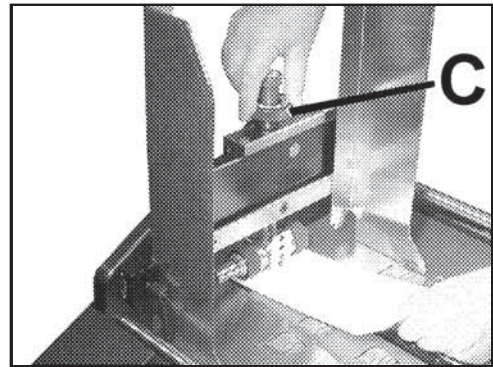
- a Release Media Thickness/Separator Locking Lever [A].
- b Raise Roller Pressure Lever [B] to release pressure between Forwarding Rollers.



SECTION 2

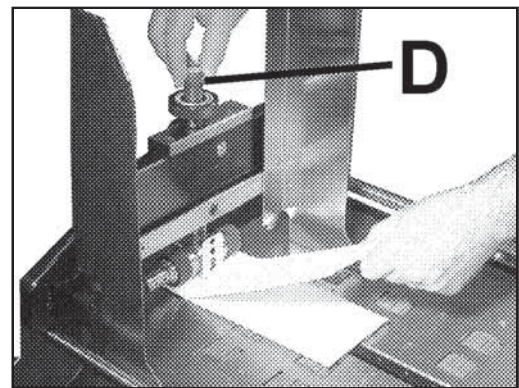
INSTALLING THE IMAGING SYSTEM II

- c Place one piece of media under Forwarding Rollers, then lower Roller Pressure Lever [B].
- d Adjust the Media Thickness Knob [C] until you feel a slight drag on the media from the Rollers.



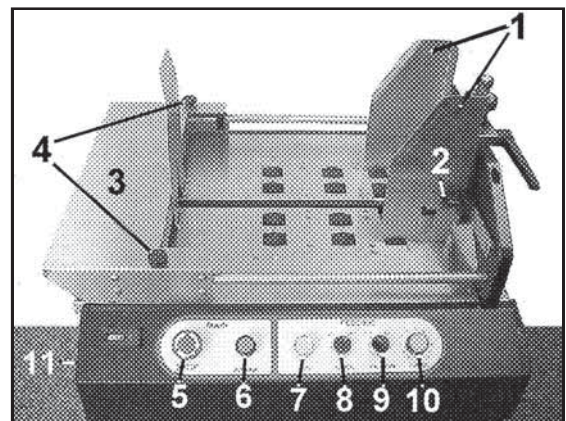
3. Adjust Sheet Separator:

- a Raise Sheet Separator using Separator Adjustment Knob [D]. Place a second piece of media under Sheet Separator.
- b Adjust Sheet Separator Knob [D] so second sheet of paper is held firmly by Separator, but when it is removed, the sheet under it slides smoothly.
- c Use Thickness/Separator Locking Lever [A] to lock in settings.



4. Operating Shuttle Feeder:

- a Center media and adjust two Side Guides [1] to within 1/16-inch of media.
- b Lock Side Guide in place with Locking Levers [2].
- c Adjust Rear Guide [3] to within 1/16" of rear of media. Tighten two Locking Knobs [4].
- d Set Sheet Length Switch [11] to proper position for media length. (**UP TO 13 IN** for media less than 13" long or **OVER 13 IN** for media over 13" long.)
- e Turn **STOP** Button [5] clockwise to release switch. Press **POWER** Button [6] to start machine.
- f Turn **VACUUM** Switch [9] **ON** and set **SPEED** to 1 or 2 [10].



g Press and hold **JOG** Button [7] until one piece of media is fed. (*This is to check your setup and feeding of the media.*)

h Reset **COUNTER** to Zero (0) by pressing **RED** button next to Display.

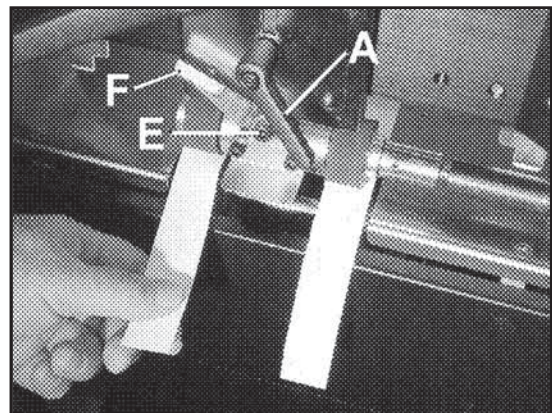
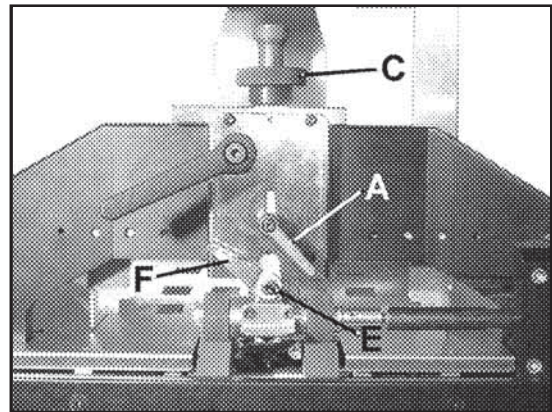
i Turn **POWER** Switch [8] **ON** to start continuous feeding.

NOTE: When Shuttle Feeder is connected to an Image System II Base Unit, Base Unit should be turned **ON** and operating. When **ENTER** is pressed, Feeder will start to feed if Power Switch is **ON**.

Shuttle Feeder Forwarding Roller Parallel Adjustment

Lever [F] is used to adjust parallel alignment of Forwarding Rollers in cases where media skews. Lower Forwarding Rollers are spring-loaded and as a result, this adjustment does not have to be performed for every setup. It should only be performed when Rollers are replaced.

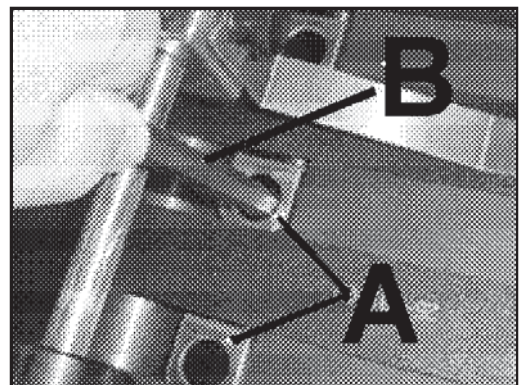
1. Release Thickness/Separator Locking Lever [A]. Then loosen Hex Screw [E].
2. Place two strips of 20-lb. paper under Forwarding Rollers and adjust Media Thickness Knob [C] until one of the strips has a slight drag in it.
3. Lock Lever [A] and adjust Lever [F] until drag on both sides is even, then tighten Hex Screw [E].



Adjusting Image System II Base Media Guides

Before you can feed media, Media Guides and Transport Belts on Base Unit must be adjusted to accommodate media.

1. Loosen Locking Knobs and move two Side Guides to full open position.
2. Adjust Transport Belts so they support media. Transport Belt Guides have a ring [A] on them that will assist you when moving them. Turn Base Transport **ON** in Manual, then insert



SECTION 2

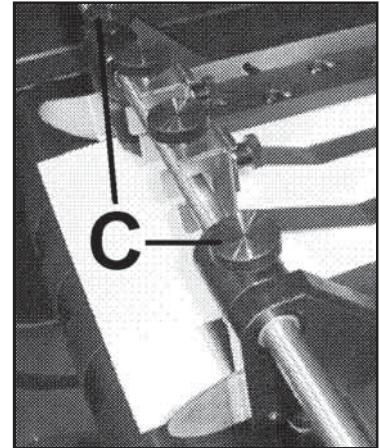
INSTALLING THE IMAGING SYSTEM II

a rod of wood or metal [B] in hole in Guide. Move Guide with Belt in direction required to place the Belt.

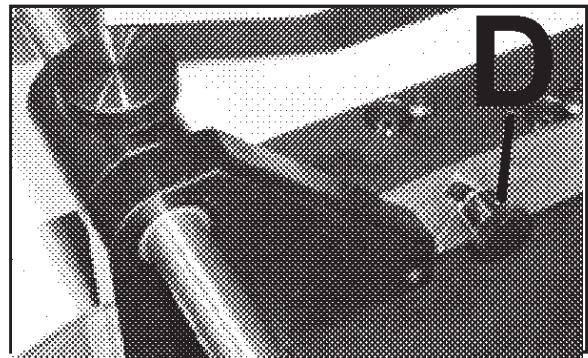
WARNING!

**BELTS HAVE TO BE ADJUSTED WITH MACHINE RUNNING.
DO NOT TOUCH ANY MOVING PARTS DURING THIS PROCESS.**

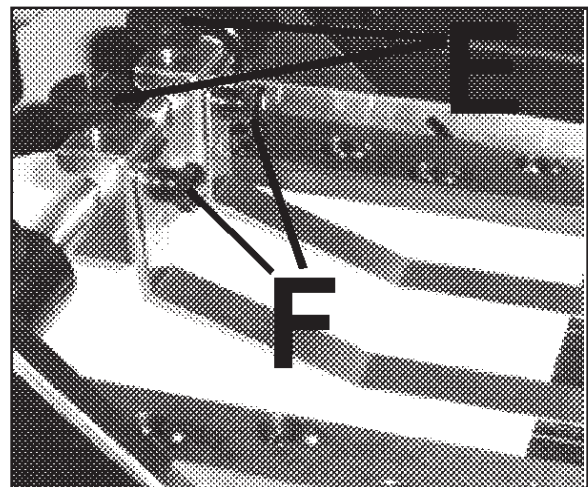
3. Loosen Side Guide Locking Knobs [C] and place Side Guides to within 1/16" of media.



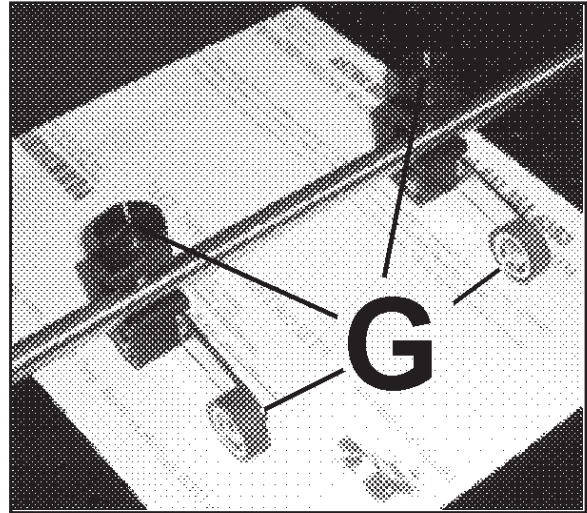
4. Adjust Media Thickness Guide [D] by loosening two screws on each end of Side Guides and lower Ball Guide Assembly so it just rests on media.



5. Adjust two straps between Side Guides to rest on top of media. Loosen locking screws [E] to move straps from side to side. Additional adjustment for pressure of straps on media can be obtained by loosening strap-locking screws [F] and raising or lowering them.



- Exit Rollers mounted on Dryer section should also be adjusted. Loosen locking screw [G] and position Rollers so they run on media outside of printing area. Rollers can be adjusted for different media thicknesses by rotating clamp on mounting bar.



Installing Software on Computer

System operates on WindowsTM compatible Printer Drivers.

Types of Software

Image System II can operate on one of two types of software. Refer to the Software Manual supplied with the system for installation and operating instructions.

AstroJet Professional Software

The AstroJet Professional Software is an integrated package that contains a Layout Editor and a Printer Control Panel.

1. The Layout Editor is used to create the piece.
2. The Printer Control Software is used to print the piece and control the Printer.
3. The printing is done through the Parallel port of the computer.

PCL Driver and Software

1. The PCL Printer Driver sends the piece as laid out on your application to the Printer.
2. The Printer Driver can connect the Printer to the computer with either the Parallel port or the USB port.
3. The software supplied with the PCL version of the system is AstroPrint. It is layout software that you can import your database into and print both fixed and variable data. It can also print graphics.
4. The PCL Driver can also be used with all of the popular brands of mailing software available.

NOTES

[illegible]

SECTION 3 – *Operating System*

Setting Up Image System II to Print a Job

The preferred method of running the Image System II is in **AUTOMATIC** mode. When set up to run in Automatic mode, clicking **GO** on Control Panel and then pressing **ENTER** Key on Printer will start the media feeding and cause Printer to print. Refer to **Section 1 – Getting Acquainted** for location of switches referred to below.

To set up the Image System II to print in Automatic Mode, set switches and dials as follows:

1. Make sure that Emergency Stop Switches have been released. System cannot be turned on if any Emergency Stop Switches are depressed.
2. Turn Printer Power Switch ON, and start the computer.
3. On the System Control Panel, set the Transporter Mode Select Switch to **AUTO** and the Dryer Mode Select Switch to **AUTO**.
4. If using the Friction Feeder, set the Select Switch to **AUTO** and turn the unit **ON**. Then press the **CONTINUOUS** Feed Switch. When you are ready to print, press the **ENTER** key on the Printer to start the Feeder. If you have a Shuttle Feeder attached to the system, go to **Step 5**.
5. When using the Shuttle Feeder, first make sure that the Emergency Stop Switch is released, and then press the **POWER** Switch to turn the unit **ON**. To feed from the unit, both the **POWER** Switch and the **VACUUM** Switch must be **ON**. When you are ready to print, press the **ENTER** key on the Printer to start the Feeder.
6. Turn **POWER** and **VACUUM** Switches ON for the Transporter and Dryer on the System Control Panel. Also, turn the **POWER** Switch ON for the Conveyor if the optional Conveyor is installed. The Conveyor will start automatically, but you must adjust the speed manually for the best stacking of the media.

NOTE: When the Image System II is set up for automatic operation, the speed of the system is selected by the resolution of the print. To run at other speeds, select the **MANUAL** Modes for the Transporter and Dryer. You cannot run the system faster than the maximum speed for the resolution selected.

Starting Up the Image System II

If the Image System II has been sitting idle for a period, purge the Printheads before beginning to run a job. This can be done from the Printer LCD Display Panel. Press the **MENU** key. Then use the “+” or “-” keys to scroll to “**PURGE**”: then press **ENTER**. Run a few pieces, then press **ENTER** again to stop the purge. Check that the pattern run on the media is even, without any blank areas or white streaks. If the pattern is OK, then send the job and start printing. Any time the Image System II sits idle for a while, the purge routine should be run before running the job.

Printing a Test Print

A Test Print is built into the Printer. Press **TEST PRINT** key. Display indicates it is working. Then Display changes to "**Press Enter Key**" to print. Press **ENTER** key to start media feeding and Printer prints the standard test job.

To print a sample of your job, refer to the Printer Operator Manual for instructions.

Printing the Job

Click on the **GO** button to begin printing. Image System II begins by rendering the fonts and logos, then downloading them to the Printer. Depending on the complexity of the page, this process may take up to a few minutes. Once a font or logo is rendered, the Image System II can call it up from this folder for reuse the next time a job that uses that particular font style or logo is run. When the Image System II starts, simply press the **ENTER** key on the Printer to start the system.

Monitoring the Job

Stop the Image System II by pressing the **ENTER** key on the Printer or by clicking on **STOP** in the AstroJet Software Control Panel without affecting the job. The Printer will resume printing at exactly the same point in the database when it is restarted.

NOTE: Pressing any RED Emergency Stop Switch will stop entire system immediately.

Printing a Test Print

Press the **TEST PRINT** key on the Printer Control Panel to print the built-in **Test Print**. The Test Print has been preloaded into the Printer's memory. It will print information from all the cartridges installed on the Printer. If you wish to print a test copy of the job you are printing, then use "**Printing a Test Print**" above.

Monitoring the Job

The AstroJet Image System II can be stopped by pressing the **ENTER** key on the Printer or by clicking on **STOP** in the AstroJet Software Control Panel without affecting the job. The Printer will resume printing at exactly the same point in the database when it is restarted.

Printer Controls

When you first turn the Printer ON, the **ON LINE** key light blinks. Printer's Display shows ***"Printer Offline / Enter for Paper Feed"***. The **TEST** key light is OFF. In this mode, pressing the **ENTER** key will start the paper feeding, but no printing will take place.

To print, you must put the Printer **ON LINE**. When you do, the Display changes to ***"Printer Online / Waiting for Data"***. In this mode, when you send a job, the Printer will be ready to print when the **ENTER** key is pressed.

The following is a description of the operation of the Printer's various menu options that let you customize the operation of the Printer. The Printer Control Panel Keys can be used to access various functions that help the operator control the Printer.

These functions and their operation are as follows:

TEST Key

Pressing the **TEST** key places the Printer in **Test Print** mode. ***"Working"*** appears in the lower half of the Display and then changes to ***"Enter to feed"***. Pressing the **ENTER** key will start the printing process and print the Test Print. To stop feeding, press **ENTER** again.

NOTE: If you have chosen to have the Printer start automatically (see the *MENU Key* below) the Printer will start printing the test print once it is loaded without your having to press the ENTER key. In this case, pressing the ENTER key stops the paper feed.

To exit the **Test Print** mode, press the **TEST** key again and Printer returns to its ready state.

Pressing and holding the **TEST** key causes the Printer to enter the "Service Menu" where the various functions of the Printer can be tested. To exit the "Service Menu," press the **TEST** key a second time. The Service Menu is primarily used by service to diagnose problems should they occur. You can use the "+" or "-" keys to scroll through the menu. Pressing the **ENTER** key will test the function.

To check the Ink Cartridges ink levels when you enter the **Service Menu**, press the "-" key and amount of ink remaining appears as a percentage in the lower half of the Display window.

MENU Key

Used to access special features built into the Printer and to customize the operation of the Printer. Basic features are accessed by pressing the **MENU** key. Use the "+" or "-" keys to access the features. **Features available under this mode of operation are as follows:**

NOTE: If the ONLINE key is ON, you cannot enter Menu mode. First take the machine "Off Line" by pressing the ONLINE key.

Media Thickness Setup – The first item to appear in the Display is the ***"Media Thickness Setup"*** (if Printer is equipped with an Automatic Media Thickness Control). Use this feature to preset the Printhead height for various media thicknesses.

Press Enter to Purge – “**Purge**” is useful in cleaning Printhead Nozzles when the machine has been sitting idle. To activate **Purge**, press **ENTER** to feed one piece of media. To purge the Printheads additional times, press **ENTER** for each additional purge.

NOTE: Printer will only purge one piece each time you press ENTER. For additional purges, press ENTER again for each subsequent purge.

Clear Batch Counter – Pressing **ENTER** clears the number in the upper right hand corner of the Display. Resetting the Counter is usually performed at the start of each job. Turning the Printer OFF will not reset this Counter.

Purge First Piece – Turning the feature ON causes the Printer to send one purge pattern on the first piece. After the purge is completed, the next piece will have the first record of your database. Once this is turned ON, it will remain ON even if the Printer is turned OFF.

Address Recovery – In event of a jam in the Printer you can recover up to 10 pieces by pressing the **MENU** key, then stepping to “**Address Recovery**”. Then press **ENTER**. “**Enter: Recover 1 Piece**” appears. Use the “+” key to select the number of pieces to reprint (1-10), then press **ENTER** again to start the printing process. Once the pieces are printed, press the **ONLINE** key and then **ENTER** to resume printing the job.

Print Enhancement – Pressing the “+” or “-” keys brings **Print Enhancement** up in the display. **Print Enhancement** is used when printing to ensure that the Printhead Nozzles stay open and prevent the loss of descenders on letters such as “y” or “q” and accent marks that do not appear in every address. Pressing **ENTER** turns this function ON or OFF. Function remains as changed until the operator changes it again. Turning the Printer ON and OFF will not affect the setting.

NOTE: Print Enhancement feature times out after 100 seconds if no media is going through the Printer. Once media starts printing, it will restart.

Automatic Feed – Turning the feature ON causes the Printer to start feeding once the job is sent. If the **ONLINE** key is ON, the Printer will start feeding and printing automatically. If you prefer to press the **ENTER** key to start the printing process, turn this feature OFF. Turning the machine ON or OFF will not affect your selection.

Installing New Printheads – The Printer is capable of telling you when a Printhead is running low on ink. To use this feature, press the **MENU** key. Then use the “+” or “-” key to highlight “**Enter when head (n) is filled**”. Press **ENTER** and install a new Cartridge. Repeat for each Cartridge you install. When **ENTER** is pressed, Display changes to “**Head (n) has a new cartridge**”. To check Cartridge ink levels, press and hold the **TEST PRINT** key until “**Service Menu**” appears. Use the “+” or “-” keys to scroll to “**Service Menu: Ink Levels, 100%100%100%**”. This will show how much ink remains in the Cartridge.

NOTE: Feature only works if Cartridges remain in original head where they were installed. If you swap Cartridges from one head to another, levels will not be accurate.

A second set of Menus is available in the Display. To activate, press and hold **MENU** key until “**Setup Menu**” appears. Step through these items with the “+” or “-” keys.

Total Count – Displays total number of prints that have passed through the Printer.
Non-resettable.

BIOS Version – Press the “+” key to display current BIOS version.

Bulk Ink – No provisions are made to install larger cartridges.

+ / - Key

Used to step through the options in various Menu Modes.

ON LINE Key

If **ON LINE** key is ON, Display shows “**Printer Online / Waiting for Data**” and light is lit. This means the Printer is ready to print the job when it is sent. To have the Printer start printing immediately when the job is sent, the Automatic Feed feature must be turned ON. If the **ON LINE** key is OFF, Display shows “**Printer Offline / ENTER for Paper Feed**”. In this condition the machine can feed paper. This is useful for setting up the Feeder.

NOTE: If the Printer is Off Line and you send a job, the Display shows “Printer Offline / Data Ready to Print”. To print, first press the ON LINE key to put the Printer On Line. If you sent data and the Printer is set up not to start feeding automatically and the ON LINE key is lit, then Display will show “Printer Online / ENTER to Start Feed”.

ENTER Key

Used to start the Printer printing when it is On Line and the Automatic Feed is turned OFF. Additionally, when the Printer is placed in any of the Menu Modes, the **ENTER** key is used to choose the options available.

RESET Key

Used to clear the Printer's memory and return it to the “wait state”. This key only functions if the Printer is Off Line.

Purge While Printing

To **Purge** in the middle of a job:

Press **ONLINE** key to pause current job.

Press **MENU** key, then step to “**Press Enter to Purge**”.

Press **ENTER** to start **Purge**. Press **ENTER** again to stop **Purge**.

Press **ONLINE** key, then **ENTER** to get back to normal printing.

Note. If a paper jam occurs during the purge; after purging, use "Address Recovery" to get back to normal printing. Otherwise you will lose records.

Types of Media

Image System II prints on many types of mailing media, but some restrictions apply. As with any other printing process, the texture of the media has a direct effect on both print quality and ink drying time. It is best to test each new type of media to determine performance levels before beginning the job.

Coated and plastic types of paper do not easily absorb ink and smearing may occur. Print may appear fuzzy on very porous paper. Another cause of fuzzy printouts is excessive buildup of dust within the machine, or if the Printhead is too far away from the media. Be aware, that when printing in the High Quality mode, drying time for the ink is longer than in the other modes. In addition, when humidity is high, drying time is increased.

Media Thickness

The Image System II handles pieces up to 1/2-inch thick (0.5") if it is equipped with the Vacuum Shuttle Feeder. All folds must be crisp and even.

CAUTION

DO NOT USE STAPLED PIECES IN THE IMAGE SYSTEM II.
DO NOT USE PAPER- CLIPPED PIECES IN THE IMAGE SYSTEM II.
THESE METHODS OF BINDING THE MAIL PIECE WILL DAMAGE THE PRINTHEADS, AFFECT PRINT QUALITY, AND MAY SERIOUSLY DAMAGE YOUR PRINTER. THE ASTRO WARRANTY POLICY WILL NOT COVER COMPONENTS DAMAGED THROUGH IMPROPER USE.
USPS DOES NOT ACCEPT THIS TYPE OF MAIL FOR ITS AUTOMATED EQUIPMENT.

Databases

The Image System II software is capable of handling many types of databases including .TXT, .CSV, Microsoft Access. MDB, dBase III, IV, V, FoxPro (*.DBF). TXT and CSV files are handled as they are. The rest of the database files are converted automatically by the Image System II software to CSV files. In addition, whenever you update a file the Image System II Software will reconvert and re-index it the next time you open it if you place the updated files in the Image System II Database folder in the software.

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SECTION 4 – *Maintenance*

This section discusses how to care for the Inkjet Cartridges, clear paper jams, replace Sheet Separators, and perform routine operator maintenance to the Image System II Printer.

The Inkjet Cartridges

Image System II Inkjet Cartridges must be replaced when out of ink, when print quality is poor, or when purging and cleaning have not helped the image quality.

Approximate life of the HP 51645A Inkjet Cartridges based on three lines of 20 characters at 10-point size per address is:

AstroJet Version:

High Quality	50,000 addresses
Standard Quality	100,000 addresses
Draft Quality	200,000 addresses

PCL Version:

600 x 600 DPI	50,000 addresses
300 x 600 DPI	100,000 addresses
200 x 600 DPI	150,000 addresses
150 x 600 DPI	200,000 addresses

NOTE: These figures can vary depending on the font selected. The Bulk Ink Cartridge will print approximately 10 times the number of addresses as a Standard Inkjet Cartridge.

To Replace Inkjet Cartridges:

1. Raise the Latch Lever to release the Cartridge, then pull Cartridge up and out of Holder.
2. Remove new Inkjet Cartridge from packaging. Take care not to touch copper contacts, metal plate, or gold printhead. Remove protective tape from Printhead.
3. With Cartridge's Printhead pointing down, slide Cartridge into Holder and push down and toward the contacts in Holder.
4. Make sure Cartridge is seated in Holder, then close Latch Lever to secure the Cartridge. DO NOT force Latch Lever into place.
5. Repeat **Steps 1-4** above for the remaining Inkjet Cartridges.

CAUTION

NEVER SHAKE, DROP, OR HIT CARTRIDGE AGAINST PALM OF YOUR HAND OR ANY OTHER HARD SURFACE. SHAKING PRINT CARTRIDGE DOES NOT “MIX” INK AND HITTING CARTRIDGE AGAINST A HARD SURFACE DOES NOT CLEAR NOZZLES. BOTH ACTIONS HURT PRINT QUALITY BECAUSE THEY ALLOW BUBBLES TO FORM NEAR INK FIRING CHAMBERS. THESE BUBBLES PREVENT NOZZLES FROM FIRING, CAUSING WHITE STREAKS IN PRINT IMAGE.

Storage

Short-term storage is defined as less than 2 days or less than 1 day in a hot and dry environment. Long-term storage is defined as more than 2 days or more than 1 day in a hot and dry environment.

- **Short-term storage** – Less than 2 days or less than 1 day in a hot and dry environment.
- **Long-term storage** – More than 2 days or more than 1 day in a hot and dry environment.

Short-term Storage

Leave the Cartridge in the Printer for short periods of time, 1 day or less. The next time that the Printer is used, the Printhead may have to be cleaned and purged.

Long-term Storage

Keep the Printhead in an area that is relatively free of dust and paper particles that is not too dry. Place the Standard Cartridges in a sealable plastic container with a damp sponge or towel to maintain humidity and prevent the Printhead from drying out. When the Cartridges are ready to be used again, the Printhead will need to be cleaned.

Disposal

Cartridges may be disposed of in a normal manner.

In case of an ink spill, use soap and water to clean up any problem areas.

Abrasive soap works well in removing ink from your hands.



The ink in the cartridge may be harmful if swallowed. Keep new and used cartridges out of reach of children. Discard empty cartridges immediately.

Cleaning the Printhead

To maintain good print quality it is important that the Printheads are kept clean. During the printing process ink spray, paper fibers, and dust can cause a build-up on the Printheads. This build-up will eventually degrade the print quality. If you begin to notice problems with the quality of the print, or to just prevent a build-up from occurring, wipe the Printhead with a wet fiberless cloth.

SECTION 4 MAINTENANCE

<i>Cloth should be:</i>	<i>Cloth should not be:</i>
✓ Soft	✗ Abrasive
✓ Fiberless	✗ Made of small fibers
✓ Moistened with water (<i>Distilled is best but tap works</i>)	✗ Dry or contain chemical additives

Wipe slowly across the long-axis with the Printhead facing down (*as shown*). Do not apply excessive force, as this could scratch the Nozzle surface.



Purging the Nozzles

If the Printhead sits inactive for a period, ink may dry in the Nozzles. Printing may not remove these “ink plugs” from the Nozzles. White streaks will then show up in the printed text or graphic. In order to obtain better print quality, these ink plugs need to be forced out or purged. A Purge routine is built into the Image System II Printer. It can be accessed from the LCD Panel on the Image System II Printer. If this does not solve the problem, proceed as follows:

1. Wipe Printhead with a wet cloth as described in "***Cleaning the Printhead***" above.
2. Perform **Purge** from the Image System II Printer Display Panel.
3. Wipe Printhead again with a moist cloth.

NOTE: For more information, refer to "**Troubleshooting Printheads**" in Section 6 – Troubleshooting Guide.

Jams in the Printer

If a jam occurs, **STOP the Printer**.

Missed addresses can be recovered at the computer from the Control Panel by stepping back to the place in the job where the jam occurred. No data will be lost.

Some possible reasons for jamming are:

1. Feeding more than one piece of media.
2. Damaged media, such a dog-eared (*turned-down corners*).
3. Media that is not stiff enough and may not be usable. Media that meets Postal stiffness requirements for automated feeding is acceptable in the Image System II.
4. Envelopes caught under the flap of another envelope or stuck to one another.

Removing Jammed Media

The Printer is equipped with a hinge device that permits it to be swung in the UP position to remove any jammed media. First turn the system OFF by pressing one of the **STOP** buttons. To release the Printer, press down on the Grab Handle and release the two Latches on the left-hand side that lock the Printer in place. Then raise the Printer using the Grab Handle.

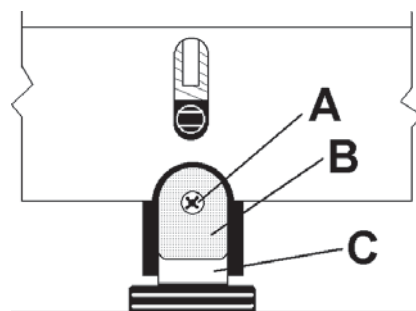
Refer to the appropriate Printer Operating Manual for job restart information.

Replacing the Sheet Separators on the Friction Feeder

Sheet Separators on the Friction Feeder insure separation of the pieces as they are being fed. They wear and must be replaced periodically. If you experience double sheet feeding and cannot adjust the Separators to prevent it, they should be replaced.

Replacing the Sheet Separators is not difficult:

1. Turn System OFF and unplug it from the power source.
2. Release the Separator Locking Lever and move the Media Side Guides to maximum open position.
3. Lower the Separators so they touch the Feed Roller.
4. Remove screw [A] and Separator Support [B]. Then remove Separator [C] by prying it out of the Holder.
5. Install a new Separator in place and reinstall the Separator Support and screw.



Cleaning

Image System II

WARNING!

IMAGE SYSTEM II PRINTER IS A PRECISION MACHINE THAT SHOULD BE CLEANED REGULARLY TO INSURE MANY YEARS OF SERVICE. BEFORE PERFORMING ANY MAINTENANCE, DISCONNECT MACHINE FROM ITS POWER SOURCE!

System must be cleaned regularly of accumulated paper dust and ink. Depending on the types of media that are run, paper dust may accumulate within the printer and on the transport. Unplug the system from the power receptacle before removing the covers.

- **Internal areas** – Best cleaned with a vacuum that has a soft brush attachment to help loosen the dust particles. Take care not to damage the PC boards or electrical wiring.
- **Exterior** – May be cleaned with any standard non-abrasive household cleaner that does not contain plastic-harming solvents.

CAUTION

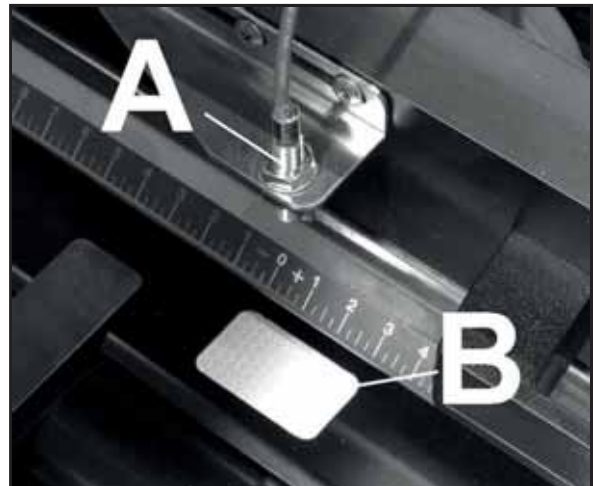
NEVER SPRAY OR POUR CLEANERS DIRECTLY ON OR INTO THE IMAGE SYSTEM II PRINTER. EXCESS LIQUID COULD HARM ELECTRONIC PARTS. ALWAYS DAMPEN A RAG WITH THE CLEANER AND APPLY IT TO THE PARTS TO BE CLEANED.

Cleaning the Media Sensor

Periodically check the Media Sensor [A] located on the Printer. Sensor is self-contained in that the light source and the Sensor are both in the Assembly. Directly below the Sensor mounted on the Base Table is a reflective strip. Reflective strip [B] reflects light from the Sensor back to the Sensor when no media is present. As media passes under the Sensor, the reflection from the media tells the Printer it is time to print.

Sensor and light source should be kept clean and free of dust. Reflective strip should be kept clean of dust and dirt.

Sensor can be cleaned with a Q-tip by gently dusting it. Reflective strip can be cleaned with a mild soap solution on a damp cloth. Should the reflective strip become scratched or worn it should be replaced, as the system cannot function properly without it.



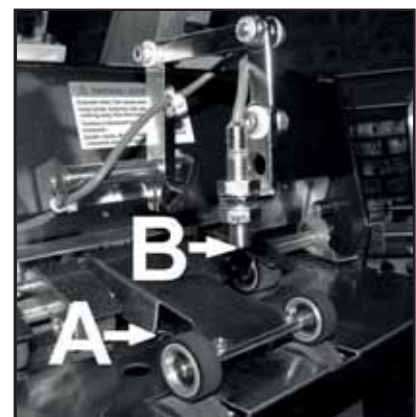
Optional FF-14 Friction Feeder

Cleaning Sensors

Two Sensors on FF-14 should be kept clean. Media Sensor [A] is located under Exit Guide Rollers (*as shown*). Jam Sensor [B] is located on Jam Sensor Support. Use a Q-tip to clean Sensor.

CAUTION

DO NOT USE SOLVENTS OR ABRASIVES TO CLEAN THE SENSORS.



Optional ASF-3000 Shuttle Feeder

Cleaning Media Sensor

Periodically check the Media Sensor located just below the two large Forwarding Rollers. The Sensor should be clean and free of accumulated paper dust. Use a vacuum with a soft brush attachment or dry compressed air to remove the dust.



Cleaning Feed Rollers

Feed Rollers can become glazed with paper lint and ink from media. They should be regularly cleaned with a mild abrasive household cleaner on a damp cloth.

Avoid using solvents on Rubber Rollers.

Jar Filter

Location: Mounted on pump located in base of Shuttle Feeder.

WARNING!

JAR IS GLASS. TAKE PROPER PRECAUTIONS TO GUARD AGAINST FRAGMENTING OR BREAKING THE GLASS.

CAUTION

GLASS JAR CAN EXPLODE IF SUBJECTED TO MORE THAN 5 PSI/35 BAR.

Cleaning: Jar and felt filter should be cleaned at least once a month (*after every 100 hours of operation*). Unscrew and remove any debris from within the Jar. Use a compressed air hose to clean the felt Filter. Then reinstall Jar.



Cleaning Vacuum Pump Filters

Vacuum Shuttle Feeder is equipped with an Oilless Vacuum Pump. It does not require lubrication, however it does require cleaning.

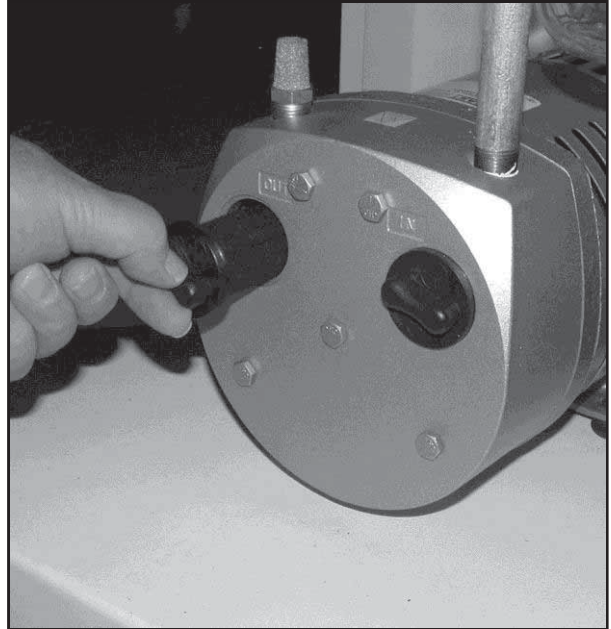
1. Remove the two Filter Assemblies in the front of the Pump and brush the Filters with a stiff brush regularly.

WARNING!

CHECK VACUUM PUMP AT LEAST ONCE A MONTH. FAILURE TO DO SO CAN AFFECT PERFORMANCE OR EVEN CAUSE PUMP OVERHEATING AND FAILURE.

CAUTION

THE VACUUM PUMP IN THE SHUTTLE FEEDER IS AN OILLESS PUMP. DO NOT ATTEMPT TO PUT OIL OF ANY KIND IN THE PUMP!



SECTION 5 – *Troubleshooting*

This section is arranged first by the condition that might occur, and then by possible problems, their cause and recommended solutions.

WARNING!

**DO NOT REMOVE ANY COVERS FROM IMAGE SYSTEM II
HIGH VOLTAGES PRESENT BEHIND COVERS!**

Power Problems

CONDITION	PROBLEM	SOLUTION
Power ON, nothing happens.	No power to Printer or Base.	Check that power cord is plugged in. Check that power outlet is live. Check fuses on power supply PC board. <i>(Requires disassembly)</i> Bad controller PC board Bad power supply

Interface Communication Problems

CONDITION	PROBLEM	SOLUTION
Printer does not respond to software.	Connection problems.	Check that port is communicating with Printer by using another parallel or USB cable on PCL version, replace cable. If port cannot communicate using another parallel or USB cable, check Printer. If port cannot communicate using another parallel or USB cable and Printer is OK, check parallel or USB port. Check cable connection to see if any pins are bent or missing. If so replace cable.
Printer not responding to software	Poor connection between Printer and computer.	Turn Printer OFF, then ON. Check connections.

LCD Display Problems

CONDITION	PROBLEM	SOLUTION
No LCD display.	Power not ON. Contrast Pot broken or maladjusted. Broken solder joint on Contrast Pot.	Turn power switch ON. If still no display, see " <i>Power Problems</i> ". Adjust Pot or replace display PC board. Repair or replace Display PC board.
LCD shows solid line of characters or garbage.	Power supply Static electricity	Check voltages and inspect power supply connections to processor PC board. Turn Printer OFF, then ON
LCD displays solid black line or lines.	Bad power supply. No firmware (BIOS). Bad processor PC board.	Check all voltages Install firmware Replace processor PC board.

Feeding Problems

CONDITION	PROBLEM	SOLUTION
Intermittent feeding	Feed Ramp not used Side Guides set improperly. Dirty Feed Rollers. Paper stuck together. Bad or dirty Sensor. Uneven mail piece.	Feed Ramp adds a slope to stack and helps feeding. Loosen Side Guides slightly. Clean Feed Roller with distilled water and a cloth. DO NOT use any solvents or detergents as they may damage Feed Rollers. Fan media before placing in Printer. Clean Sensor with compressed air or replace it. Tap inserts to front of envelopes and retry.
Multiple feeds	Separator gap not set properly. Sensor bad or dirty. Media stuck together.	Adjust Separators to media thickness. Clean Sensor with compressed air or replace it. Fan media before feeding
Multiple feeds continued	Side Guides too close to media. Brake misadjusted.	Push Side Guides away from media. Adjust Brake (see <i>Section 4- Adjustments</i>).

CONDITION	PROBLEM	SOLUTION
Failure to feed	<p>Side Guides too close to media.</p> <p>ENTER key not pressed.</p> <p>No power to Printer.</p> <p>Feed gap too tight.</p> <p>Feed gap too loose.</p> <p>Material is out of specification.</p> <p>Motor ON, Feed Rollers not turning.</p> <p>Clutch not engaging.</p> <p>Motor failure.</p> <p>No power.</p> <p>Printhead adjustment too low.</p>	<p>Readjust Side Guides.</p> <p>Check that power button is ON and power cord is plugged in.</p> <p>Adjust Separator to media thickness.</p> <p>Adjust Separator to media thickness.</p> <p>Maximum thickness is 1/4" or 0.125"</p> <p>Press ENTER key, check for broken Drive Belt and replace, check for loose set screws on Drive Pulley or Belt Drive Roller Pulley.</p> <p>Replace Clutch.</p> <p>Check Motor circuit breaker or replace Motor.</p> <p>See "<i>Power Problems</i>" in this Section.</p> <p>Adjust Printhead height to accommodate media thickness.</p>
Jams	<p>Paper path obstruction.</p> <p>Paper not loaded properly.</p> <p>Feed Ramp not used properly.</p> <p>Separators improperly adjusted.</p> <p>Media curled or bent.</p> <p>Bad or dirty Sensor.</p>	<p>Clear jam and remove pieces remaining under Printhead.</p> <p>Instruct operator in proper loading of media.</p> <p>Set Feed Ramp.</p> <p>Adjust Separators to media thickness.</p> <p>Uncurl media.</p> <p>Clean or replace Sensor.</p>
Jams continued	<p>Worn Separator Tip.</p> <p>Printhead adjusted too low.</p> <p>Conveyor tape(s) under Printhead broken.</p>	<p>Replace Separator Tip.</p> <p>Raise Printhead</p> <p>Replace tapes.</p>

Print Placement Problems

CONDITION	PROBLEM	SOLUTION
Print too close to leading or trailing edge of media	Size of media not set correctly in Layout. Bad or dirty Sensor. Feed Ramp not used properly. Printheads set incorrectly.	Check layout in Layout for proper size. Clean or replace Sensor. Set Feed Ramp. Check location and margins in layout software. Check that piece on layout screen looks exactly the way you want the piece to look. Remember there is a 1 5/16" space that is always blank between Head 4 and 5 and the Head 1, 2, and 3 bank.
Print too high or low on media	Physical location of Printheads do not match layout template.	Adjust Media Guides or Printheads. Use "0" reference point in center of scale to help you align print on media.
Address prints upside down on media	Layout and/or stock direction incorrect.	Change direction from Normal to Inverted or Inverted to Normal in Properties of Driver.
Address too close to center of media	Chosen media size in layout is too small. Physical location of Printheads do not match layout template. Feed Ramp not set properly.	Set correct media width size in layout. Check image on layout screen, adjust Media Guide or Printhead. Adjust Feed Ramp.
Address printing partially off media	Chosen media size in layout is too large. Physical location of Printheads do not match layout template. Feed Ramp not set properly.	Set correct size in Layout Check image on layout screen, adjust Media Guide or Printhead. Adjust Feed Ramp.

Print Content Incorrect


CONDITION	PROBLEM	SOLUTION
Information being printed is wrong, incomplete, or garbage	Poor cable connections.	Check parallel cable is securely fastened at both ends. Cable does not exceed 6' in length.
	Interface problem.	Printers internal Parallel or USB cable in good condition.
	Corrupted database file.	Check Printer set-up at computer. Use another database file.
Barcode does not print	Wrong font selected.	If using a combined field barcode choose USPS barcode font.
	No zip code in database.	Put zip code field in database or use another database.
	Barcode not enabled.	Enable barcode.
Unwanted BOLD , <i>Italic</i> , or <u>Underlined</u> type	Turned on in layout.	Open layout and change type style.
Not all addresses in database print	Only some addresses in database have been selected to print.	Start new job and select entire database.
Data is being lost	Database problem. Parallel or USB cable connection loose.	Check database program. Reconnect.
Graphics or text have a white line through them	Graphic or text is set between junction of two Printheads.	Move copy or adjust Printheads.

Software Problems

Refer to the manual for the application software being used.

Print Quality Problems

CONDITION	PROBLEM	SOLUTION
Black streaks in text This is a sample of text showing black streaks in the copy.	Lint or paper dust on Printhead.	Clean Cartridge Nozzles with clean lint-free cloth moistened with distilled water.
Cartridge will not print	Sheet is blank even after it has gone underneath Cartridge(s).	Check to make sure tape is off Printhead. Remove and reinsert Cartridge into Carriage Holder. Install new Print Cartridge.
White streaks in text or graphics Michael Jones Astro Machine Corp. 630 Lively Blvd. Elk Grove Village, IL 60007-1234	Lint or dust blocking Printhead holes. Poor contact between Printhead and Printhead Holder.	Clean Cartridge Nozzles with clean lint-free cloth moistened with distilled water. Clean interconnects. Remove and reinsert Cartridge into Holder. Insert a new Print Cartridge.
Extra lines; losing data	Database problem.	Check data in database program.
Improper output (address information out of order, miss-feeding, etc.)	Wrong interface settings. Static electricity. Dirty media Sensor.	Check software or database on PC. Close AstroJet Control Panel software, the turn Printer OFF, then ON. Clean Media Sensor.
Media jams	Double feeding. Media is curled or bent. Media is too thin.	Adjust Sheet Separators on Feeder. Uncurl media. Media must be at least 0.008".
No communication	Improper cabling / connector. Unit not receiving power.	Use proper cable (see <i>Operator Manual</i>). Check plug connections, ON/OFF switch and fuse on back panel (see <i>Operator Manual</i>).
Not printing on media	Media not positioned properly.	Adjust Printhead vertically. Adjust margin setting in Layout software.
Print too light or missing character dots	Clogged or dirty Printheads Running out of ink.	Purge or clean Cartridges. Replace Inkjet Cartridges.

CONDITION	PROBLEM	SOLUTION
Blurry address 	Image is not sharp.	Printhead gap too high. Adjust Printhead closer to the media.
Split line of type Astro Machine Corp. 630 Lively Blvd. Elk Grove Village, IL 60007	Line of type is placed across two Printheads.	Reposition text in layout so it does not print across two Printheads. Adjust positioning of two Printheads in relation to each other using Head Alignment Tool in Properties window of Driver.
Uneven split line of type Astro Machine Corp. 630 Lively Blvd. Elk Grove Village, IL 60007	Some but not all of a line of type across two Printheads matches up.	Reposition text in layout so it does not print across two Printheads. Check Sheet Separator adjustment. Separators should just touch media. Check that Printhead is set at proper height. A Printhead set too high causes slippage in media as it passes under Heads.

WARNING!

**DO NOT REMOVE ANY COVERS FROM IMAGE SYSTEM II
HIGH VOLTAGES PRESENT BEHIND COVERS!**

NOTES

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

APPENDIX A – *Specifications*

PRINT QUALITY (Dots Per Inch)	600 x 600 dpi 600 x 300 dpi 600 x 200 dpi* 600 x 150 dpi
PRINT SPEED	Up to 26,000 #10 Envelopes per hour
IMAGE SYSTEM AREA	3 or 4 inches depending on the printer version
MEDIA SIZES	Maximum: 17" long x 13.5" wide up to 1/2" thick Minimum: 5" long x 3" wide up to 1/2" thick
PRINT MECHANISM	HP 51645A Inkjet Cartridge
NUMBER OF CARTRIDGES	6 or 8 Cartridges
GRAPHICS AND LOGOS	Allows printing of graphics, logos, and pictures.
SOFTWARE AND FONTS	Windows™ compatible Printer Drivers All Windows True-Type fonts
PRINT COLORS	Standard Black, Versatile Black, and Spot Colors
INK	Water-based, may require drying assistance for coated stock
OPERATOR DISPLAY OPTIONS (LCD)	Counter, Stop on Break, Print Enhancement, Print Resolution, Purge, BIOS Version
PC INTERFACE	Parallel Cable or USB
DIMENSIONS	123" W x 35" D** x 70" H
ELECTRICAL	220 VAC, 50/60 Hz

** Does not include Conveyor

The information (*electrical and physical dimensions, etc.*) on the IMAGE SYSTEM II is presented here for your reference. Specifications are subject to change without notice.

APPENDIX B – *Supplies and Computer Requirements*

Supply items and optional hardware are available from your Astro Machine Dealer.

Supplies

Black Inkjet Cartridge	HP 51645A
Yellow Inkjet Cartridge	HPC6173A
Red Inkjet Cartridge	HPC6168A
Green Inkjet Cartridge	HPC6169A
Blue Inkjet Cartridge	HPC6170A
Versatile Black	HPC8842A
Black Image Quake	IQ2392

Computer Requirements

1. An IBM or Compatible Pentium 100 Megahertz PC or better.
2. Windows 98, 2000, or XP installed.
3. A minimum of 20 Megabytes of free hard disk space.
4. At least 32 Megabytes of RAM. (64 Megabytes for Windows 2000 and XP)
5. A 2X CD ROM or better.
6. An 800 x 600 SAGA Monitor or better.
7. Parallel (Centronics) printer cable, no longer than 6 feet or a USB cable (for PCL version only).
8. The Parallel Port must be set to the PEP (Enhanced Parallel Port) setting in the COMES of the computer.

INDEX

- Key, Printer 5, 25

+ Key, Printer 5, 25

A

ASF-3000 Shuttle Feeder 1

Cleaning 33

Control Panel 4

Counter, Resettable 4

Feed Rollers, Cleaning 33

Forwarding Roller, Adjust 17

Jar Filter, Cleaning 33

Jog Button 4

Media Sensor, Cleaning 33

Operating 16

Power Switch 4

Power Switch, Main 4

Set-Up 15

Sheet Separator, Adjust 16

Speed Control 4

Stop Button 4

Vacuum Plate, Install 15

Vacuum Pump Filter, Cleaning 34

Vacuum Switch 4

Assembly

Image System II 8

Auto/Manual Switch

Dryer 2

FF-14 Feeder 3

Transport 2

B

Base Media Guides, Adjust 17

Batch Counter, FF-14 Feeder 3

Blower Switch, Dryer 2

C

Cleaning

ASF-3000 Feeder 33

Feed Rollers, ASF-3000 Feeder 33

FF-14 Feeder 32

Image System II 31

Jar Filter, ASF-3000 Feeder 33

Media Sensor, ASF-3000 Feeder 33

Media Sensor, Image System II 32

Printhead, Printer 29

Vacuum Pump, ASF-3000 Feeder 34

Computer Monitor Support 1

Computer Requirements 44

Continuous Feed Switch, FF-14 Feeder 3

Control Panel 2

Auto/Manual Switch, Dryer 2

Auto/Manual Switch, Transport 2

Blower Switch, Dryer 2

Conveyor Controls 2

Dryer Section Controls 2

Main Control 2

Power Switch, Conveyor 2

Power Switch, Dryer 2

Power Switch, Main 2

Power Switch, Transport 2

Printer 5, 23

Speed Control, Conveyor 2

Speed Control, Dryer 2

Speed Control, Transport 2

Stop Button, Main 2

Transporter Section Controls 2

Vacuum Switch, Transport 2

Conveyor Stacker 1

Counter

ASF-3000 Feeder 4

D

Databases 26

Disposal, Inkjet Cartridges 29

Dryer

Install 9

Dryer Base 1

Attach 9

E

ENTER Key, Printer 5, 25

F

FAULT Indicator, Printer 5

FF-14 Friction Feeder 1

Auto/Manual Switch 3

Batch Counter 3

Cleaning 32

Continuous Feed Switch 3

Control Panel 3

Sensors, Cleaning 32

Set-Up 14

Sheet Separators 31

Single Feed Switch 3

Speed Control 3

Filter, Vacuum Pump 34

I

Image System II 1

Assembly 8

Base Media Guides, Adjust 17

Cleaning 31

Computer Monitor Support 1

Control Panel 2

Conveyor Stacker 1

Dryer Base 1

Install 7

Main Base Unit 1

Maintenance 28

INDEX

Media	26
Media Sensor, Cleaning	32
Operating	21
Printer	1
Troubleshooting	35
Wiring and Connecting	10

Inkjet Cartridges

Disposal	29
Install	13
Maintenance	28
Remove/Replace	28
Storage	29

Install

Dryer	9
Image System II	7
Inkjet Cartridges	13
Printer Software	19
Vacuum Plate, ASF-3000 Feeder	15

J

Jams, Printer	30
Jog Button, ASF-3000 Feeder	4

M

Main Base Unit	1
----------------------	---

Main Power Switch

ASF-3000 Feeder	4
Image System II	2

Main Stop Button	2
------------------------	---

Maintenance

ASF-3000 Feeder	33
FF-14 Feeder	32
Image System II	31
Inkjet Cartridges	28
Printhead	29
Media Thickness	26
Media Thickness Knob, Printer	5
Media Types	26
MENU Key, Printer	5, 23

O

ON LINE Key, Printer	5, 25
Operator Display, Printer	5

P

Power Switch

ASF-3000 Feeder	4
Conveyor	2
Dryer	2
Main	2
Transport	2

Printer

- Key	5, 25
+ Key	5, 25
Control Panel	5, 23
ENTER Key	5, 25
FAULT Indicator	5
Jams	30

Media Thickness Knob	5
----------------------------	---

MENU Key	5, 23
----------------	-------

ON LINE Key	5, 25
-------------------	-------

Operator Display	5
------------------------	---

Printhead, Cleaning	29
---------------------------	----

Purge	25
-------------	----

RESET Key	5, 25
-----------------	-------

Software, Install	19
-------------------------	----

TEST Key	23
----------------	----

TEST PRINT Key	5
----------------------	---

Purge, Printer	25
----------------------	----

R

Remove/Replace

Inkjet Cartridges	28
-------------------------	----

RESET Key, Printer	5, 25
--------------------------	-------

S

Set-Up

ASF-3000 Feeder	15
-----------------------	----

FF-14 Feeder	14
--------------------	----

Sheet Separator

ASF-3000 Feeder	16
-----------------------	----

Single Feed Switch, FF-14 Feeder	3
--	---

Specifications	43
----------------------	----

Speed Control

ASF-3000 Feeder	4
-----------------------	---

Conveyor	2
----------------	---

Dryer	2
-------------	---

FF-14	3
-------------	---

Transport	2
-----------------	---

Stop Button

ASF-3000 Feeder	4
-----------------------	---

Main	2
------------	---

Storage, Inkjet Cartridges	29
----------------------------------	----

Supplies	44
----------------	----

T

TEST Key, Printer	23
-------------------------	----

TEST PRINT Key, Printer	5
-------------------------------	---

Troubleshooting

Feeding Problems	36
------------------------	----

Interface Communication	35
-------------------------------	----

LCD Display	36
-------------------	----

Power Problems	35
----------------------	----

Print Content, Incorrect	39
--------------------------------	----

Print Placement	38
-----------------------	----

Print Quality	40
---------------------	----

Software Problems	39
-------------------------	----

V

Vacuum Pump Cleaning	34
----------------------------	----

Vacuum Switch

ASF-3000 Feeder	4
-----------------------	---

Transport	2
-----------------	---

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Part Number: 500-IMAGE SYSTEM II Rev. B
