



# AstroJet™ 300P/500P PRINTER



inkjet  
technology by   
invent

## OPERATOR MANUAL

**ASTRO MACHINE CORP.**

630 Lively Blvd.,

Elk Grove Village, IL 60007

Phone: (847) 364-6363

Fax: (847) 364-9898

[www.astromachine.com](http://www.astromachine.com)

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## SAFETY PRECAUTIONS

THIS EQUIPMENT PRESENTS NO PROBLEM WHEN USED PROPERLY. HOWEVER, CERTAIN SAFETY RULES SHOULD BE OBSERVED WHEN OPERATING THE ASTROJET 300 OR 500 PRINTER.

BEFORE USING THE PRINTER, YOU SHOULD 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.
- ✓ 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.
- ✓ The power cord and wall plug is 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 that are 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 only 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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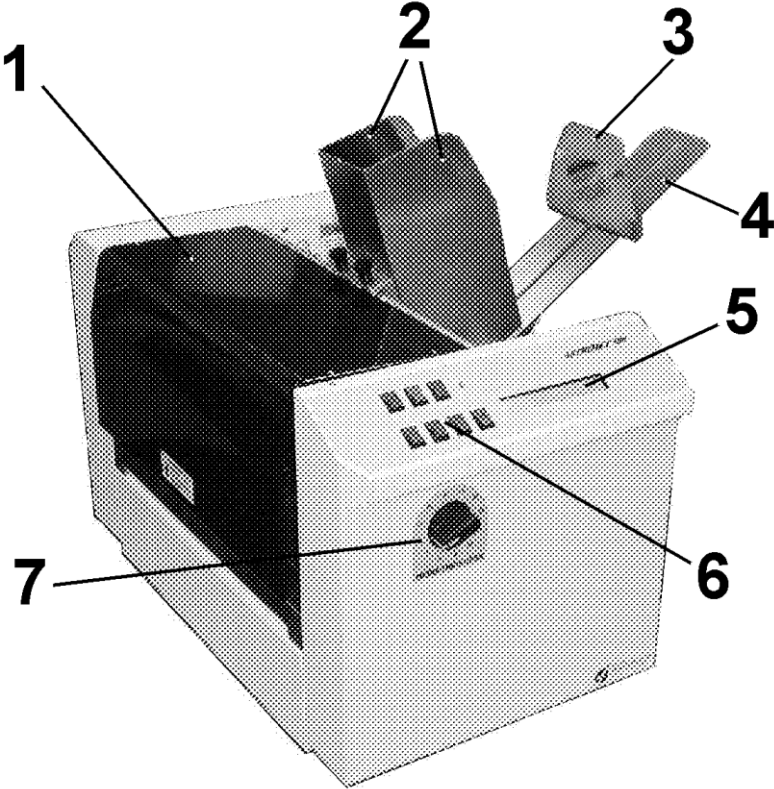
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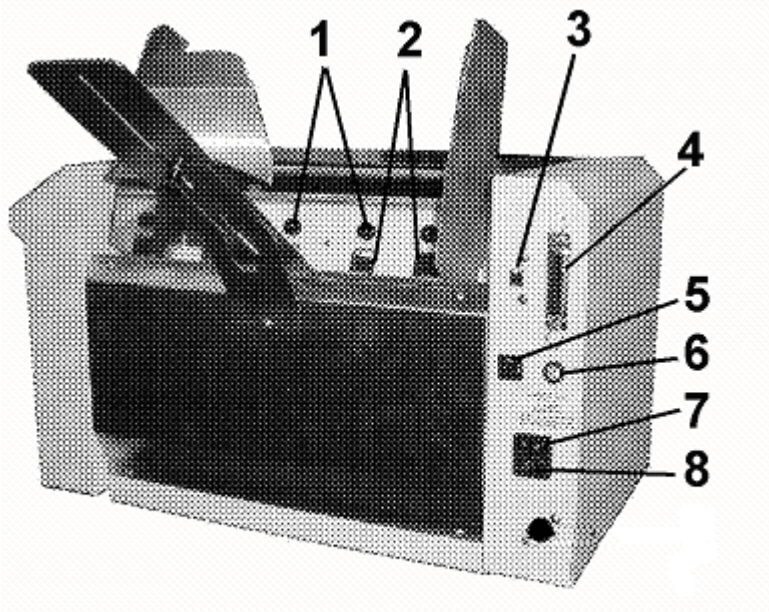
# Section 1 – Getting Acquainted

**NOTE:** The AstroJet 300 and 500 are similar in operation. The only difference is that the AstroJet 300 has only one print speed regardless of print resolution, while the AstroJet 500 has variable printing speeds based on the print resolution.



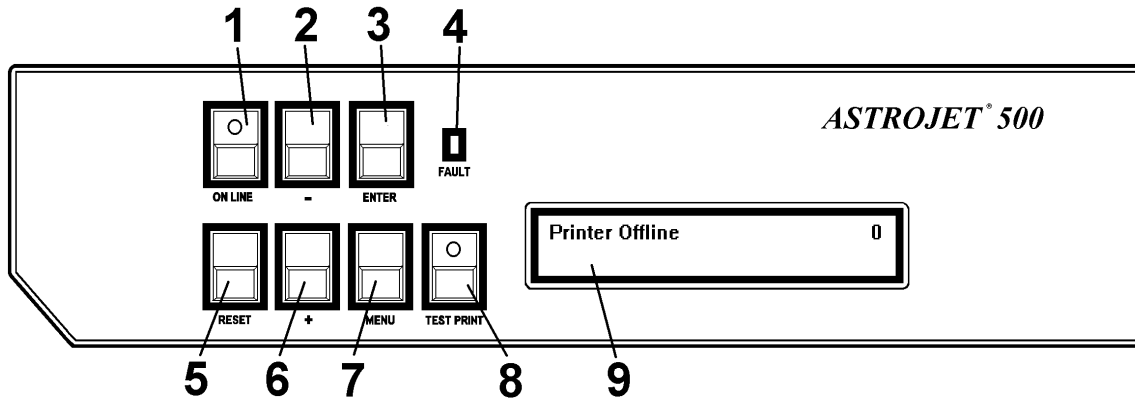
### Operator View

1.	<b>Safety Cover</b> – Encloses the Printheads. When raised it interrupts the feeding of the media and stops the Printer.
2.	<b>Media Side Guides</b> – Help guide the media to the Printheads.
3.	<b>Rear Media Guide</b> – Holds the media against the front plate.
4.	<b>Rear Paper Support</b> – Holds longer media in position.
5.	<b>Printer LCD Display</b> – Displays information about the status of the Printer.
6.	<b>Printer Control Panel</b> – Keys are used to operate the Printer.
7.	<b>Media Thickness Adjustment Knob</b> – Used to set the Printheads at the proper height for printing on the media. <b>Always raise the Printheads to their uppermost position when storing the Printer.</b>



**Rear View**

<b>1.</b>	<b>Separator Locking Knob</b> – Used to lock the Separator in place after it is adjusted.
<b>2.</b>	<b>Sheet Separator</b> – Separates each piece of media as it is feed.
<b>3.</b>	<b>USB Port</b> – Connects the Printer to your computer using your USB Port.
<b>4.</b>	<b>Parallel Port</b> – Connects the Printer to the Parallel Printer Port on your computer.
<b>5.</b>	<b>Main Power Fuse</b> – Protects all of the electronic circuits in the Printer.
<b>6.</b>	<b>Motor Circuit Breaker</b> – Protects the Printer’s Motor from overload.
<b>7.</b>	<b>Main Power Switch</b> – Turns the Printer ON and OFF.
<b>8.</b>	<b>Power Receptacle</b> – Power cord plugs in here.



**Control Panel**

<b>1.</b>	<b>ON LINE key</b> – Indicator lights when data is sent to the AstroJet 300/500 and printing is ready to begin. Also turns the Printer offline to access the Menu Mode.
<b>2.</b>	<b>- key</b> – In Menu Mode, use this key to scroll to the previous selection.
<b>3.</b>	<b>ENTER key</b> – Starts and stops printing.
<b>4.</b>	<b>FAULT Indicator</b> – Lights when there is a problem with the printing process.
<b>5.</b>	<b>RESET key</b> – Resets the Printer to its wait state.
<b>6.</b>	<b>+ key</b> – In Menu Mode, use this key to scroll to the next selection.
<b>7.</b>	<b>MENU key</b> – Puts the Printer in the Menu Mode to access several operator functions.
<b>8.</b>	<b>TEST PRINT key</b> – Puts the Printer in Test Mode and sends a sample copy to check the Printer’s output.
<b>9.</b>	<b>OPERATOR DISPLAY</b> – Indicates the status of the Printer including menus and error messages.

**NOTE:** A complete description of the functions and operation of the printer keys can be found in Section 3 – Operating the AstroJet 300/500.





## Section 2 – Installing the Printer

Before using the AstroJet 300 or 500 Printer the following must be done:

- Choose a location for the Printer
- Plug in the Printer and connect it to the computer
- Install the Inkjet Cartridges
- Set up the feed on the Printer
- Install the AstroJet 300 or 500 Printer Driver depending on the model

### *Choose a Location*

The Printer should be placed on a sturdy worktable or cabinet at least 12 inches from any walls. Protect the Printer from excessive heat, dust, and moisture – avoid placing it in direct sunlight.

### *Connecting the AstroJet 300 or 500*

#### **Plugging in the Printer**

Make sure that the Main Power Switch of the Printer is in the OFF position.

1. Connect one end of the power cord to the rear of the Printer in the corresponding receptacle.
2. Plug the other end into a 115-220 Volt AC, 50/60 Hz. grounded outlet.



#### **CAUTION**

**Do not use an adapter plug or extension cord to connect the Printer to the wall outlet.**

**Do not use on outlets controlled by wall switches.**

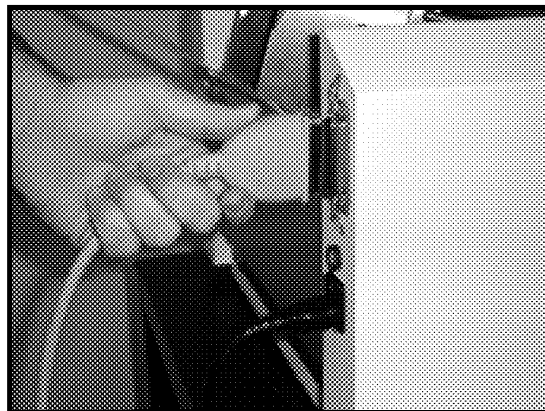
**Do not use an outlet that shares the same circuit with large electrical machines or appliances.**

#### **Connecting to the Computer**

**Parallel Port:** Plug the Parallel Printer Cable from your computer into the rear of the Printer and latch the two locking clips.

**USB Port:** If using a USB Interface, plug that cable into the connector mounted next to the Parallel Port. **The cable used to connect the Printer to the computer must not exceed 6 feet long.**

**NOTE:** The Parallel Port may be used for all versions of Windows. The USB Port is used only for Windows ME, 2000, and XP.



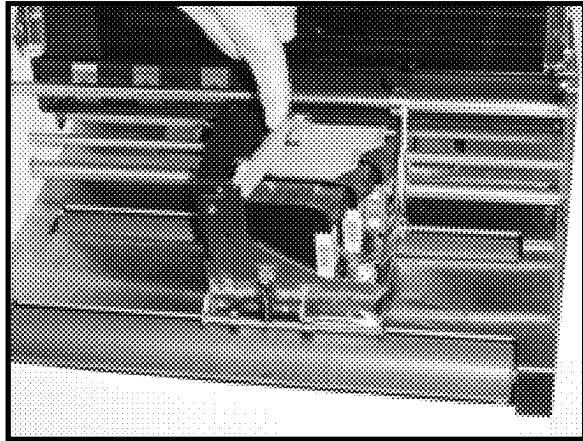
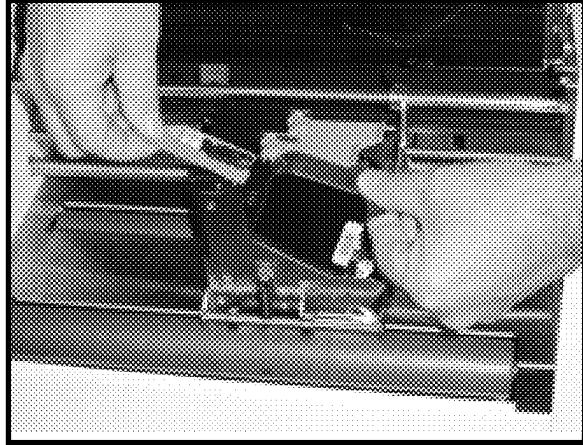
## SECTION 2 INSTALLING THE PRINTER


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### *Install the Inkjet Cartridges*

The Printer can be configured with 3 Inkjet Cartridges. To install the cartridges:

- Remove the Inkjet Cartridge from its packaging, taking care not to touch the copper contacts, the metal plate, or the gold printhead. Remove the protective tape from the Printhead.
- The Cartridges are held in place by a Latch Lever mounted on the Inkjet Cartridge Holder. Release the lever by raising it vertically.
- With the Cartridge's Printhead pointing down, slide the Cartridge into the Holder and push down and toward the contacts in the Holder.
- Make sure the Cartridge is seated in the Holder then close the Latch Lever to secure the Cartridge in the Holder. Do not force the lever into place. (*See diagram.*)
- Repeat the above for the remaining Cartridges.



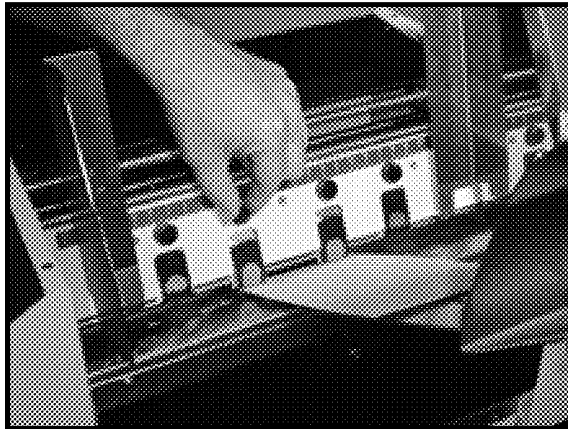


**The Ink in the Cartridge may be harmful if swallowed. Keep new and used Cartridges out of reach of children. Discard empty Cartridges immediately.**

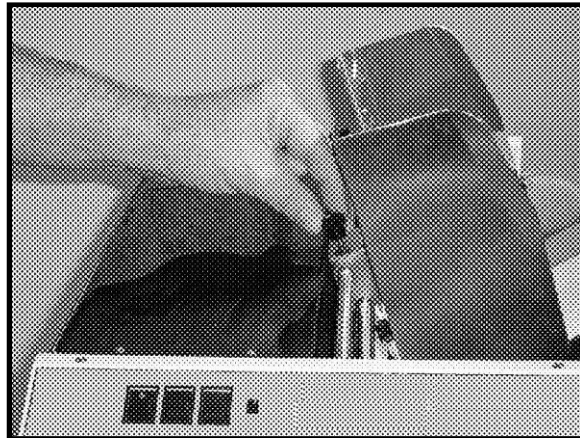
### *Setting up the Feed*

The AstroJet Printer is equipped with four Sheet Separators, two Side Guides, and a Back Media Guide. The Sheet Separators are adjusted individually as follows:

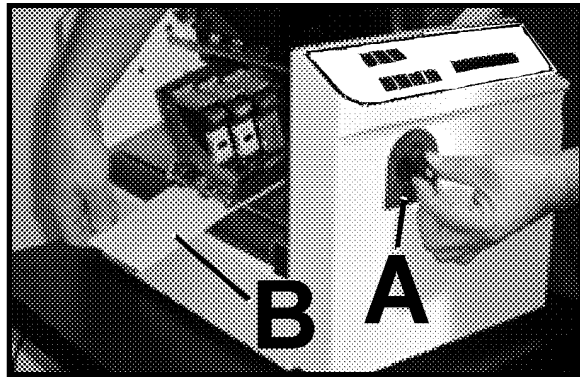
1. Move the Side Guides so that the locking screws are accessible.
2. Loosen the locking screw as shown and raise the Separator, then tighten the locking screw to hold the Separator in the up position.
3. Place the media under the Separators. It is best to place the media in the center position on the Table.
4. Loosen the Separator locking screw. Place the Separator on the media and tighten the locking screw. Repeat for each Separator that has media under it.



5. Adjust the Side Guides so that they are about 1/32-inch from the sides of the media. Tighten the locking screws on the Side Guides.



6. Adjust the Rear Guide by loosening the locking screw and place it so that the media is raised approximately 1/2-inch above the Feed Table.
7. Turn the Media Thickness Knob [A] fully counterclockwise. Place a piece of media [B] under the Printhead Carriage. Adjust the Media Thickness Knob clockwise until the Printhead Carriage just touches the media. Then turn the Media Thickness Knob counterclockwise until the media [B] can be pulled from under the Print Carriage with a slight pull.
8. Test feed the media by pressing the **ON LINE** key and then the **ENTER** key. Press the **ENTER** key to stop feeding, then press the **ON LINE** key to stop the Printer.



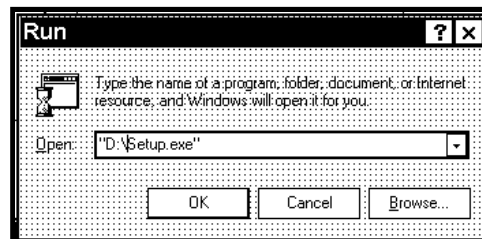
**NOTE: When the Printer is not in use always raise the Printheads to their maximum up position.**

### *Installing the Printer Driver*

A dedicated Printer Driver is included with the Printer. It must be installed on your computer before you install the AstroPrint Software.

**NOTE: The Driver for the Printer should start when installed. If it does not, then use the steps below.**

1. If you have any applications running on your computer close them and restart the computer before beginning the Driver installation.
2. Install the CD in the CD drive and click **START**. Then click **RUN**, then type the following; *D:\Setup.exe* (where D is the CD drive) then click **OK**.
3. The “Add Printer Wizard (*n.nm*)” window will open, and then click **N**ext>.
4. Type in your Name and Company and click **N**ext>.



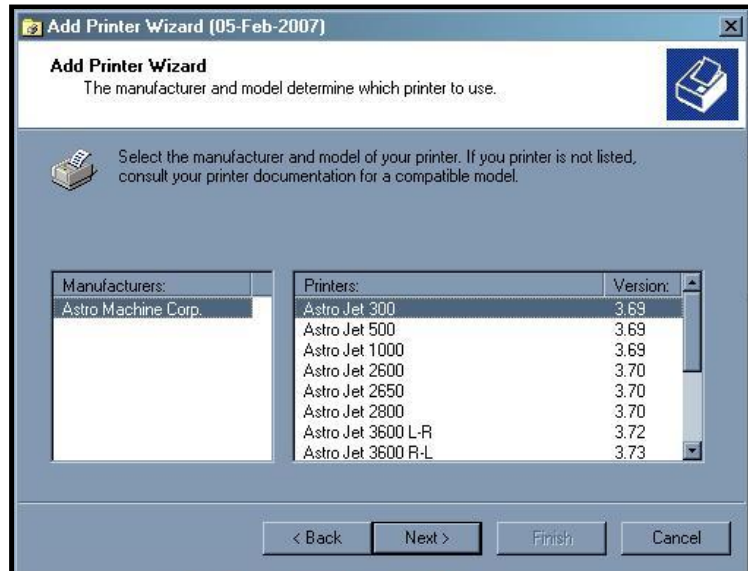
## SECTION 2 INSTALLING THE PRINTER

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5. Select Printer Port **LPT1**. Then click **Next>**. The “Add Printer Wizard” will appear. Select your printer from the table below, then click **Next>**

Printer	Driver
<b>AJ 300 P</b>	<b>AstroJet 300</b>
<b>AJ 500 P</b>	<b>AstroJet 500</b>

6. The next screen allows you to “Name Your Printer”. Unless you have another printer of the same name on your system or network ignore this step and click **Next>**.
7. Click **Finish** to complete the installation.



## Section 3 – Operating the AstroJet 300/500

Once the Printer Driver is installed on your computer, you are ready to start printing. This section is divided into three parts. The first describes the function of the **Printer Control Panel**. The second section describes the **Driver Properties** and the various options available when you run a job. The third section describes how to **Set Up a Job to Print from Microsoft Word**.

The Printer Driver that you installed on your computer in Section 2 should be set as the default driver. It will then be accessible through your applications such as Microsoft Word. Other types of applications and database management software will work in a similar manner using the AstroJet 300 or 500 Driver. This Section further assumes that you set up the feed and connected the AstroJet 300 or 500 to your computer.

### *Printer Operation*

When you first turn the Printer ON, the **ON LINE** key light will blink. The Printer's Display will show the message; "*Printer Offline / Enter for Paper Feed*". The **TEST** key light will be 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 will change to the following message; "*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 to suit. 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 momentarily places the Printer in the **Test Print** mode. The word "Working" appears in the lower half of the Display, after a short period of time the Display changes to "Enter to feed". Pressing the **ENTER** key will start the printing process and print the Test Print. To stop the 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 will stop the paper feed.**

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

Pressing and holding the **TEST** key will cause the Printer to enter the "Service Menu" where 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 "-" key to scroll through the menu. Pressing the **ENTER** key will test the function.

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

#### **MENU key**

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

**NOTE: If the ON LINE key is ON you cannot enter the Menu Mode. You must first take the machine offline by pressing the ON LINE key.**

*Media Thickness Setup* – The first item to appear in the Display is the "*Media Thickness Setup*", if the Printer is equipped with an Automatic Media Thickness Control. You can use this feature to pre-set the Printhead height for various media thicknesses.

## SECTION 3 OPERATING THE ASTROJET 300/500

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**Press Enter to Purge** – The purging function is useful for clearing the Printhead Nozzles when the machine has been idle for a time. To activate the Purge, press the **ENTER** key to feed one piece of media. To purge the Printheads additional times, press the **ENTER** key for each additional purge.

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

**Clear Batch Counter** – Pressing the **ENTER** key will clear 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 will cause the Printer to send one purge pattern on the first piece. After the purge is completed, the next piece will be 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 the “Address Recovery”. Then press the **ENTER** key. The message “Enter: Recover 1 Piece” will appear. Use the “+” key to select the number of pieces to reprint (1-10) then press **ENTER** again to start the printing process. When the pieces are printed, press the **ONLINE** key and then the **ENTER** key to resume printing the job.

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

**NOTE: The Print Enhancement feature will time out after 100 seconds if no media is going through the Printer. Once media is being printed it will restart.**

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

**Pause Type:** – This feature allows the Printer to respond to a “break mark” set in the database used in a given job. The “break mark” marks the end of a series within the database. For example, addresses with the same postal code or after a set number of entries. There are two “**Pause Type:**” selections:

**Feed Stop** – This setting is for standalone desktop units not used in line with other mailing equipment. The Printer will stop feeding media for a set amount of time after it “sees” a “break mark”. Allows time for the operator to pack or separate that set of printed pieces before the next set starts. Use the “+” or “-” key to access this feature. Press **ENTER** to turn this function ON or OFF.

**Conveyor Speed Up** – This feature is for use when the Printer is used in line with other mailing equipment (conveyors, tabbers, etc.) When this feature is activated, the Printer responds to the “break mark” by sending a signal to the conveyor to speed up momentarily. This creates an obvious gap between the end of one set of pieces and the beginning of the next. Use the “+” or “-” key to access this feature. Press **ENTER** to turn this function ON or OFF.

**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 momentarily. Then use the “+” or “-” key to highlight “Enter when head (n) is filled”. Press the **ENTER** key and install a new Cartridge. Repeat for each Cartridge you install. When the **ENTER** key is pressed the Display will change to “Head (n) has a new cartridge”. To check the level of ink in the Cartridges, press and hold the **TEST PRINT** key until the “Service Menu” appears. Use the “+” or “-” key to scroll to the “Service Menu: Ink Levels, 100%100%100%”. This will show how much ink remains in the Cartridge.

**NOTE:** This feature only works if the Cartridges remain in the original Head where they were installed. If you swap the Cartridges from one Head to another, the levels will not be accurate.

There is a second set of menus available in the Display. To activate them, press and hold the **MENU** key until the “Setup Menu” appears. You can step through these items with the “+” or “-” key.

**Total Count** – The total count displayed is the total number of prints that have passed through the Printer. It is non-resettable.

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

**Bulk Ink** – This feature is not used on the AstroJet desktop printers. No provisions are made to install the larger cartridges.

### + / - key

In various menu modes these keys are used to step through the options.

### ON LINE key

If the **ON LINE** key is ON the Display will return the following message “*Printer Online / Waiting for Data*” and the light will be lit. This means that the Printer is ready to print the job when it is sent. To have the Printer start printing immediately when the job is sent you must also have the Automatic Feed feature turned ON. If the **ON LINE** key is OFF, the Display will return the following message, “*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 will show, “Printer Offline / Data Ready to Print”. To print, you must first press the ON LINE key to put the Printer on line. If you sent data and the Printer is set up to not start feeding automatically and the ON LINE key is lit, then the Display will show “Printer Online / ENTER to Start Feed”.**

### ENTER key

The **ENTER** key is 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

The **RESET** key is used to clear the Printer Memory and return it to the wait state. This key only functions if the Printer is offline.

### *Purge While Printing*

To do the purge in the middle of a job, follow these steps:

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

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

Press **ENTER** key to start the purge and press the **ENTER** key again to stop purge.

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

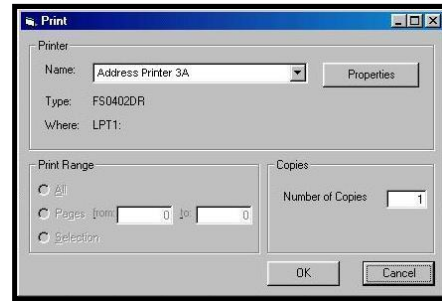
**Note. If paper jam occurs during the purge, after the purge you should use Address Recovery to get back to normal printing. Otherwise you will lose records.**

### *Printer Driver Properties*

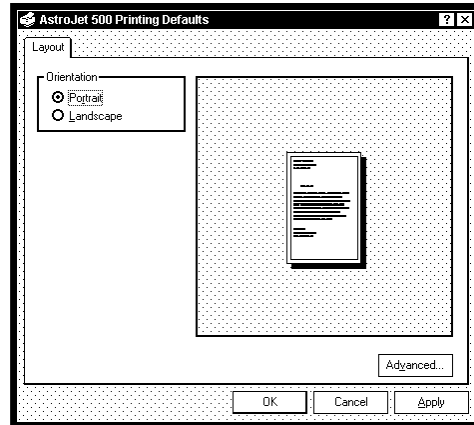
The Printer Driver describes to the Printer how to print your job. It controls the operation of the Printer and allows you to send fixed and variable text and graphics to the Printer. Within your data management software is a print function. In that print function is a Properties Button. It is through the Properties that you control the output of your Printer. The following describes the Properties Windows for the AstroJet 300/500 and how to use them to customize the output of your Printer.

## SECTION 3 OPERATING THE ASTROJET 300/500

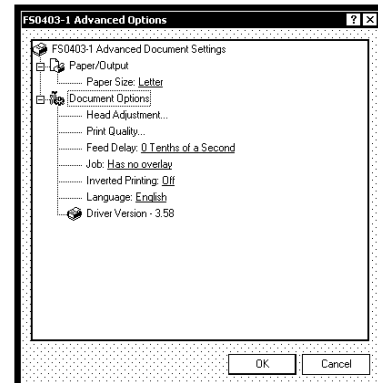
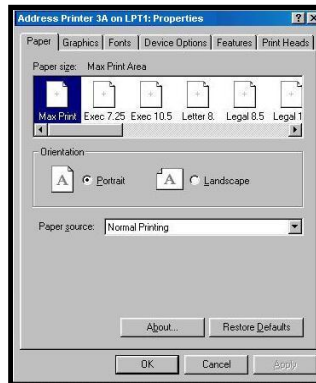
To start printing, click on **File**, then **Print**. The Print window will open. If you wish to print the job, click **OK**. If you wish to use the special features built into the AstroJet Printer Drivers, clicking on the **Properties** button will open the Properties Window in Windows 98, NT, or ME.



If you are using Windows 2000 or XP, the window on the right will open. Clicking on **Advanced** will open the “Options” window. In the following illustrations the windows for Windows 98, NT, and ME will be on the left. The windows for Windows 2000 and XP will be on the right.

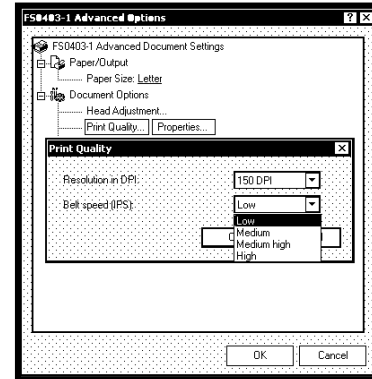
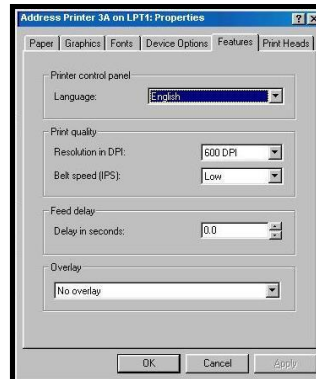


When the Properties Window opens you are presented with several tabs in Windows 98. The following are standard Windows Printer Driver functions and should be left at their defaults: **Graphics**, **Fonts**, and **Device Options**. The **Features** and **Print Heads** tabs are used to set up, change, and adjust the Printer.



### Features Tab

The **Features Tab/ Advanced Options**, depending on the operating system, is used to change the speed and resolution of the Printer, to add a delay to the feed to provide separation between the pieces, and to print and overlay with the job. The first feature is the **Print Quality** which has two settings. One for the resolution of the print quality and the second for the appropriate speed. Changing the resolution to a higher number (e.g. 200 DPI to 600 DPI) will increase the quality of the image. When the resolution is changed the Belt speed (IPS) is automatically changed to the optimum speed for the resolution selected. You can change the speeds to a lower speed as follows:



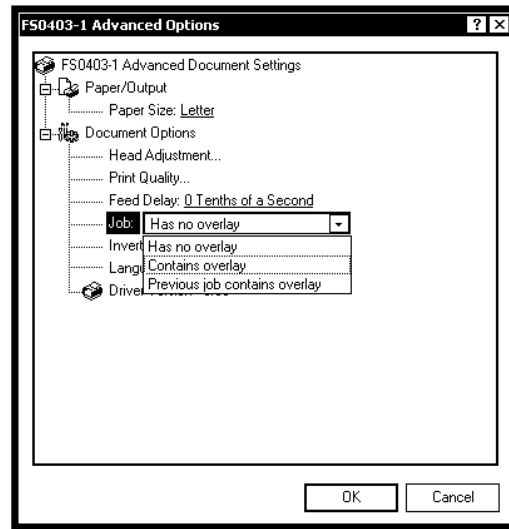
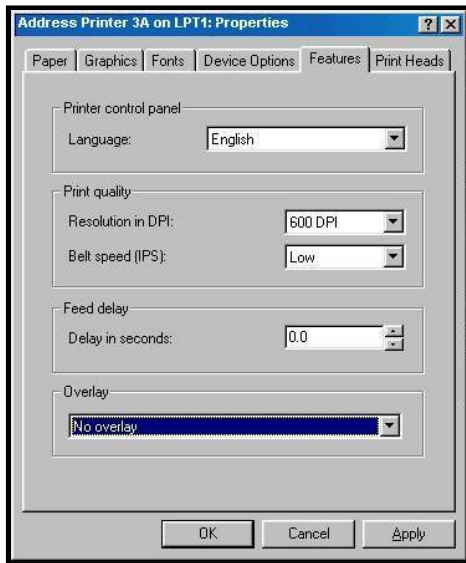


<b>AstroJet 300</b>	
<b>Resolution</b>	<b>Speeds available</b>
150 DPI	Low
200 DPI	Low
300 DPI	Low
600 DPI	Low

<b>AstroJet 500</b>	
<b>Resolution</b>	<b>Speeds available</b>
150 DPI	Low, Medium, Medium High, and High
200 DPI	Low, Medium, and Medium High
300 DPI	Low, and Medium
600 DPI	Low

The **Feed Delay** can be used to put more space between the pieces as they are being printed. This will give the first piece printed more time to dry before the next piece is Printer. The adjustment range is in 0.1-second increments. This feature works at all speeds.

The **Overlay** feature is used to save time printing when you are combining a database with fixed information or graphics. The default is “No overlay”.



**To use the Overlay feature**, first create a layout in an application such as Microsoft Word. Place all of the fixed information and graphics on this layout. Open the layout and go to **Print** in the **File** menu. Click on **Features**, then click **Overlay**. Select “Contains overlay” from the box, then click **Apply** and **OK**.

Next, click **OK** on the “Print” window. The Overlay will download.

Now open the job that contains the variable data and using **File** then **Print** from the dropdown menu open the “Print” window for the application. Click on **Properties** then the **Features** tab. Then click on the dropdown menu under “Overlay” and click on **Previous job contains overlay**. Click **Apply**, then **OK**. When the Print window reappears, click **OK** to send the job to the Printer. To start printing, press the **ENTER** key on the Printer.

If you wish to print a second job using the same Overlay, simply open that job and send it to the Printer. If the next job does not contain an Overlay, then click on **Properties** in the “Print” window, select Overlay, then **No overlay**. Click **Apply**, then **OK**.

To print the next job with a different Overlay, repeat the process for the first Overlay.

**NOTE: Turning the Printer OFF, then ON will clear the Overlay and the job.**

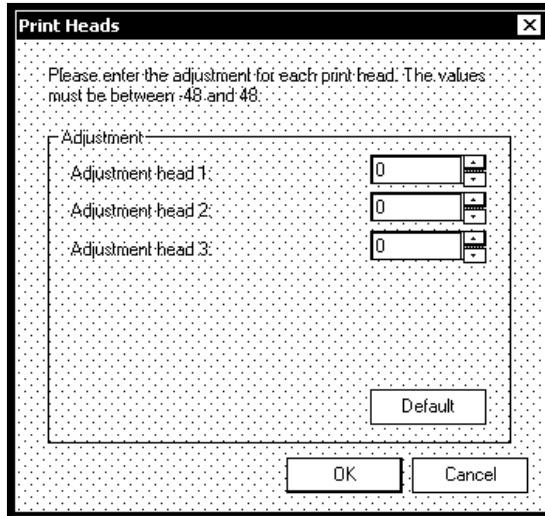
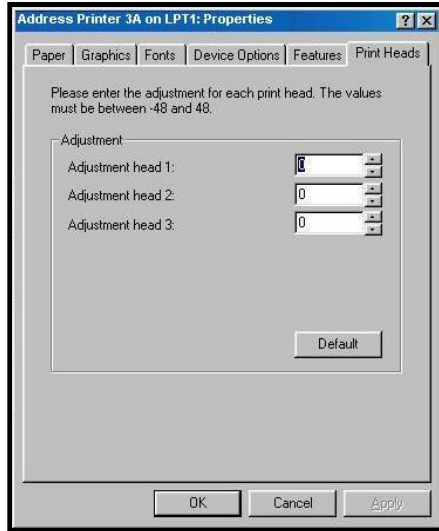
## SECTION 3 OPERATING THE ASTROJET 300/500

### Print Heads Tab

The purpose of the Print Heads tab is to permit slight (0.001-inch) adjustment to the position of the Printheads to each other. The adjustment is used to precisely align the three Printheads when printing graphics or type that extends beyond the width of one Printhead. Each Head can be moved +/- 0.048-inch in 0.001-inch increments.

If you want to move the Printhead toward the lead edge of your layout, then it should be moved in the “-” direction. To move the Head away from the lead edge, move it in the “+” direction.

When the Printer is turned OFF, the changes that you make in this manner go back to the original settings.

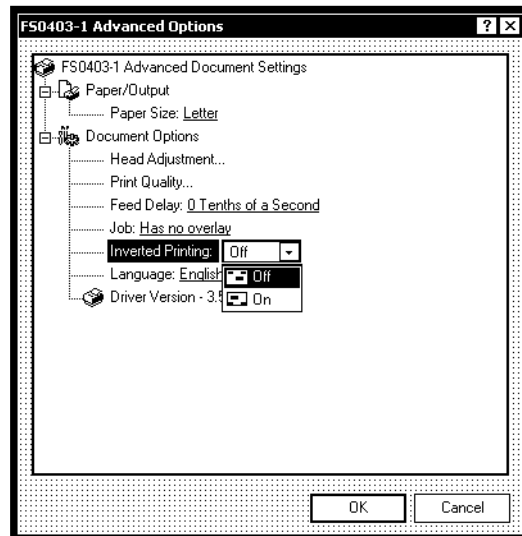
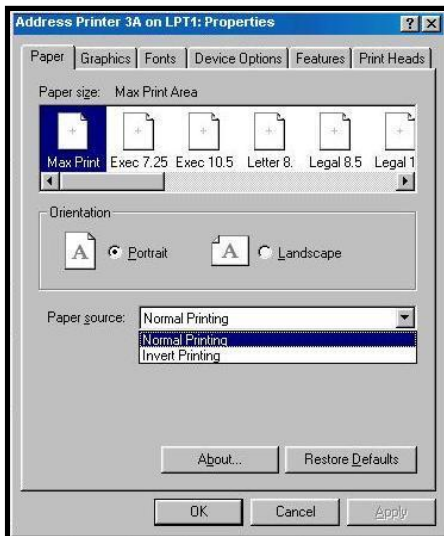


### Inverse Printing

The Paper Tab contains one element that is used to reverse or invert the printing on the AstroJet 300/500.

In normal operation the printing is read from the operator side of the Printer. It is sometimes necessary to turn the printing direction 180 degrees from the normal direction. This occurs when due to the layout or the method of binding, the media must be fed in the reverse direction.

Clicking on the Paper Tab and then on the Paper Source will permit you to reverse the printing direction 180 degrees. The rest of the settings on this tab should be left as they are. Paper size is always “Max Print Area” and Orientation is always “Portrait”. **Do not change them.**

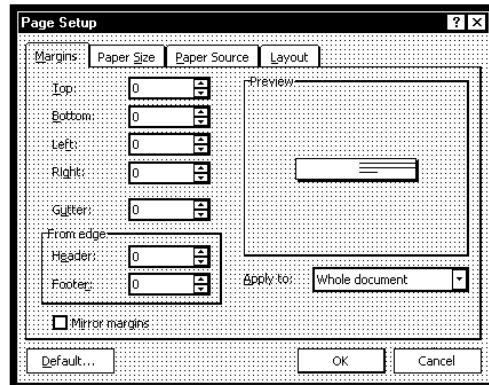


## Printing from Microsoft Word

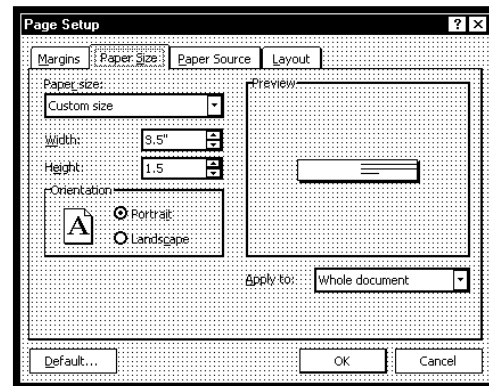
If you are not using a specific program designed for mailing applications it is possible to print your mail pieces using Microsoft Word. This section will cover how to layout a piece and to print from Microsoft Word.

To begin, open a new page and turn on the toolbar for **Mail Merge**. Under "Print" select the Address Printer 3 or 3A as the default printer. Go to **Page Setup** in the **File** menu. Set all of the margins to "0".

**NOTE: The Printer must be selected before you do the set up so that the setting will be registered.**

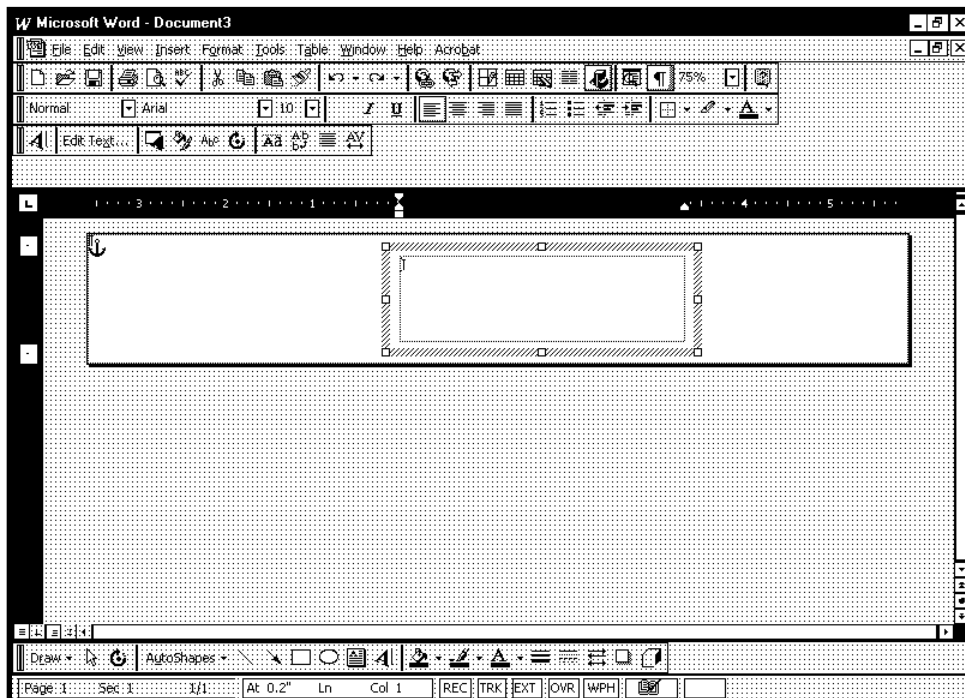


Next select the **Page Size** tab and Custom Page. The size of the layout should be 1.5-inches high by the length of the piece you are intending to print on. In our example, we have selected the width of a # 10 envelope, 9.5-inches. The orientation of the piece is always **Portrait**. The effective printing area of the AstroJet 300/500 is 1.5-inches by 14-inches. When you have completed this step click **OK**.



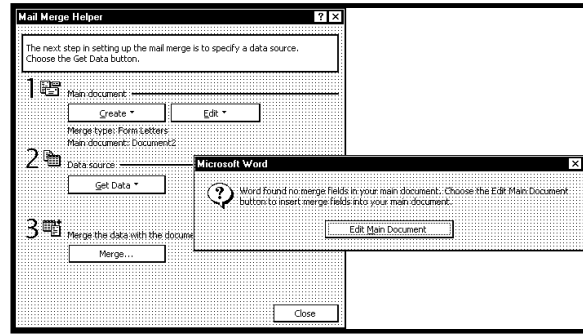
The next step is to create a text box so that you can position the address the proper distance from the lead edge of the piece. Once the page layout is set, you might want to save it as a template for use later.

When you have completed the steps above, the layout should look like the one below.



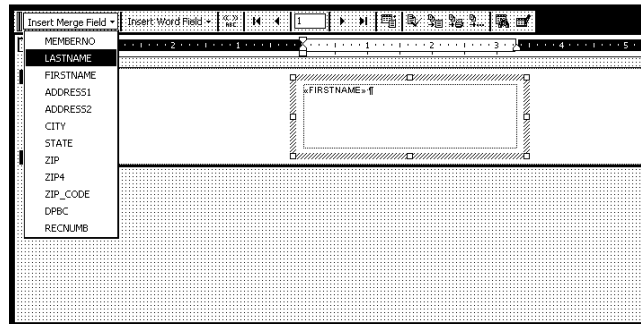
### SECTION 3 OPERATING THE ASTROJET 300/500

Click on **T**ools and then **M**ail Merge. The “Mail Merge Helper” window will open. Click On **C**reate, then **E**nvelopes. The “Microsoft Word” window will open. Click on the **A**ctive Window button, then click on the **G**et Data button. Next, click on **O**pen data source. Locate the data file you intend to use. In our example, we are using a Microsoft Excel file. Select the file and the “Microsoft Excel” window opens. Select the entire spreadsheet and click **O**K.

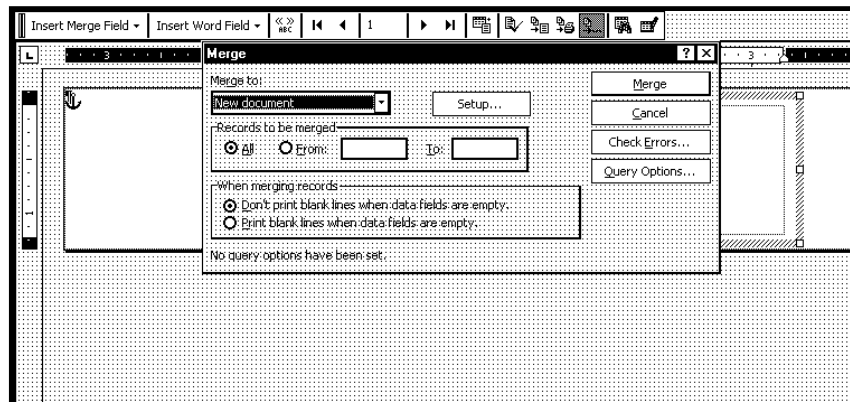


Next click on **E**dit **M**ain Document and then click on **C**lose.

Use the “Mail Merge” toolbar and click on **I**nsert Merge Field and begin to build the layout by inserting the address fields.



When you have completed setting up the layout, click on the **M**ail Merge icon on the toolbar and the “Merge” window will open.



In the **M**erge to menu there are several choices for where how the data is exported. The two that concern us are “New Document” and “Printer”. If you choose “New Document”, the merge will be created in your word application with a separate record for each address. If you choose “Printer”, the merge will send directly to the Printer and each record will be printed.

The next selection is “Records to be merged”. You can select **A**ll or **F**rom:

The last selection is “When merging records”. The default is “Don’t print blank lines when data fields are empty.” This should be left checked.

Clicking on **M**erge will start merging the documents.

If you chose to send the merge directly to the Printer and the Printer is connected to the computer and turned ON, the Printer will start. Pressing the **E**NTER key will start the printing process.

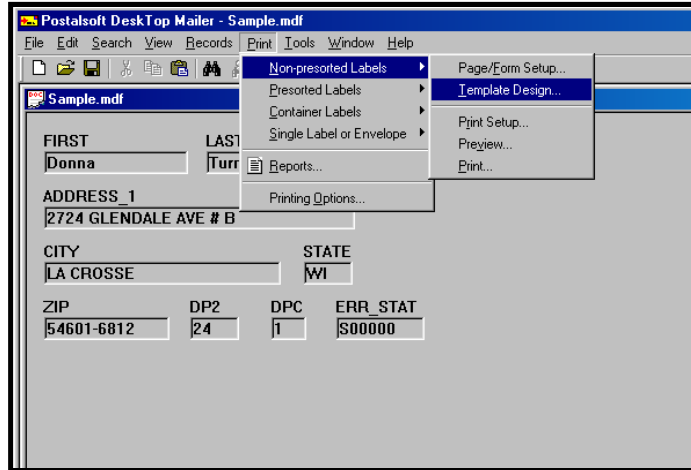
If you have a graphic or fixed text to be printed with the data, refer to the section on Overlays.

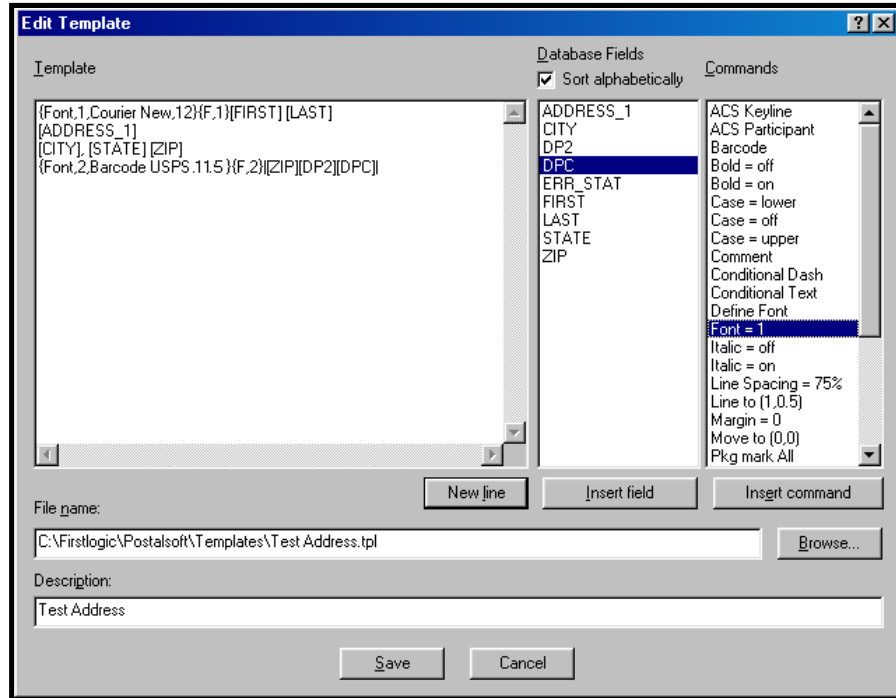


## Create Layout

Once the Barcode font supplied with the AstroJet™ Driver Disk is installed on your computer and the form is set up, the layout that you are using in DeskTop Mailer® must be created.

1. Open the DeskTop Mailer® application and then open the Data file.
2. Click on **Print** and open the **Template Design**. (In the example we are using, Non-presorted Labels. This same step holds true for Presorted Labels).
3. Click on **Template Design** and the “Choose Template for Printing” window will open. Select the template you wish to use from the list, then click on **Edit**. The “Edit Template” window will open. Or select **New...** to create a new template.
4. In our example we are creating a new template and placing the Barcode below the address lines. When creating a new template, first highlight the “Define Font” command and click on **Insert command**. The “Font Selection” window opens. Select the **Font** style, the **Size**, and assign a **Font Number**. Then click **OK**.
5. Highlight the “Font = 1” command and click on **Insert command**. Then highlight **FIRST** in the **Database Fields** list and click on **Insert field**. Repeat this for the next field, and press **ENTER** to go to the next line. Once the address fields are entered on the **Template** the next step is to add the Barcode.
6. The Barcode will become Font 2. Begin by highlighting the “Define Font” command and then click on the **Insert command**. The “Font Selection” window opens. Select the **Barcode USPS** font, **Size 11 - 12**, (choose the correct size for your application, you may use fractional numbers such as 11.5) and assign **Font Number 2** to it. Then click **OK**.
7. Highlight the “Font = 1” command and click on **Insert command**. Then change the 1 in {F,1} to 2.
8. Click **Save**. Insert a “|” line (bar) next and then build the barcode data. In our example it is ZIP, DP2, DPC. Finish this up with another “|”.
9. Now save your template by typing in a unique name in the **File name** box and Click **Save**.





## Printing

To make the AstroJet Printer the default printer for this application, click on **Print**, then select **Printing Options**. When the “Printing Options” window opens, select the **Printers** tab and highlight “Labels: Non-Presorted Labels” or “Labels: Presorted Labels”, then click on the **Change Printer** button. Select the AstroJet Printer from your printer menu. And click **OK**. You are now ready to print the job.

1. If you have not already done this, select **Print**, **Non-presorted Labels**, **Template Design** and select the template you created. Click **Select**
2. Then select **Print**, **Non-Presorted Labels**, **Print** and click **OK**. If the AstroJet Printer is not selected, select it and click **OK** to print the job.





## *Section 4 - Maintenance*

This section covers how to care for the Ink Cartridges, clear paper jams, replace the Sheet Separators, and perform routine maintenance on the Printer.

### *The Inkjet Cartridge*

The AstroJet 300/500 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.

The approximate life of the HP 45 Inkjet cartridges, based on three lines of 20 characters at 10-point size per address, is:

High Quality	50,000 addresses
Standard Quality	100,000 addresses
Letter Quality	150,000 addresses
Draft Quality	200,000 addresses

**NOTE: These figures can vary depending on the font selected.**

#### **To Replace the Inkjet Cartridge:**

- Remove the used Cartridge from the Cartridge Holder by raising the Latch Lever to release the Cartridge, then pull the Cartridge up and out of the Holder.
- Remove the new Inkjet Cartridge from its packaging, taking care not to touch the copper contacts, the metal plate, or the gold printhead. Remove the protective tape from the Printhead.
- The Cartridges are held in place by a lever mounted on the Inkjet Cartridge Holder. Release the lever by raising it vertically.
- With the Cartridge's Printhead pointing down, slide the Cartridge into the Holder and push down and toward the contacts in the Holder.
- Make sure the Cartridge is seated in the holder then close the lever to secure the Cartridge in the holder. Do not force the lever into place.
- Repeat the above for the remaining Cartridges.

### **CAUTION**

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

## SECTION 4 MAINTENANCE

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### Storage

#### **Short-term Storage** (less than 2 days or less than 1 day in a hot and dry environment)

Leave the Cartridge in the AstroJet 300/500 for short periods of time, 1 day or less.  
The next time that the AstroJet 300/500 is used, the Printhead may have to be cleaned and purged.

#### **Long-term Storage** (more than 2 days or more than 1 day in a hot and dry environment)

Keep the Printhead in an area that is relatively free of dust and paper particles that is not too dry.

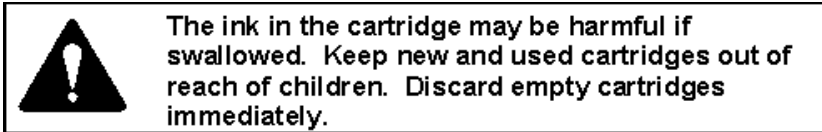
Place the Cartridges in a Tupperware® container with a damp sponge or towel to maintain humidity and prevent the Printhead from drying out.

When the Cartridges are ready to be used again, the Printhead will need to be cleaned.

### Disposal

The Cartridge 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 getting ink off of hands.



### 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.

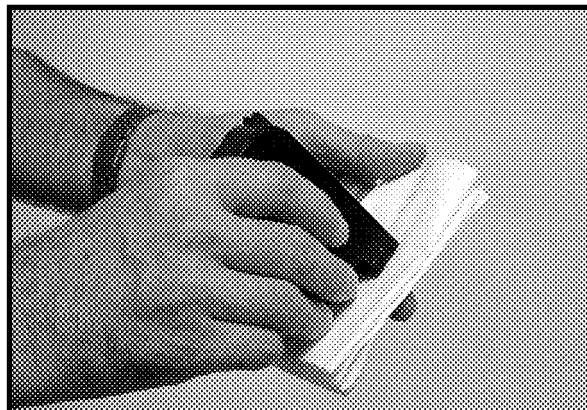
#### *Cloth should be:*

- ✓ Soft
- ✓ Fiberless
- ✓ Moistened with water (Distilled is best but tap water will work)

#### *Cloth should not be:*

- ✗ Abrasive
- ✗ Made of small fibers
- ✗ 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 area.



## Purging the Nozzles

If the Printhead sits inactive for a period of time, 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 AstroJet 300/500 Printer. It can be accessed from the LCD Panel on the Printer from the **MENU** key. If this does not solve the problem then proceed as follows:

1. Wipe the Printhead with a wet cloth as described in "*Cleaning the Printhead*" above.
2. Perform the Purge routine from the Printer by pressing the **MENU** key momentarily and then the “+” key. Load media and press the **ENTER** key to purge. Repeat if necessary.
3. Wipe the Printhead again with a moist cloth.

**NOTE: For more information, see Troubleshooting Printheads in Section 5 – Troubleshooting Guide.**

## Jams in the AstroJet 300/500 Printer

If a jam occurs, **STOP the Printer**. Up to 10 missed addresses can be recovered at the Printer Control Panel. (See *Section 3 – Operating the Astrojet 300/500* “Print Recovery After Jam”.)

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 may not be usable. Media that meets Postal stiffness requirements for automated feeding is acceptable in the AstroJet 300/500.
4. Envelopes caught under the flap of another envelope or stuck to one another may cause jamming.

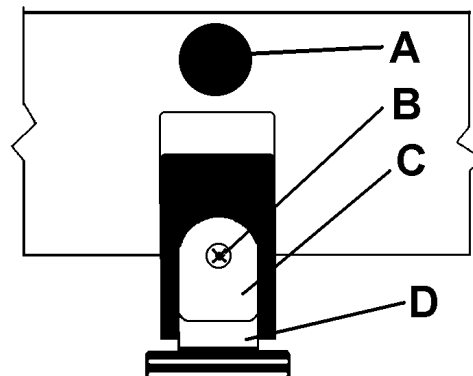
## Removing Jammed Media

1. It may be necessary to move one or more of the Printheads to gain access to the jammed media. Take care in removing jammed media to prevent damage to the Printheads. All pieces of the jammed media must be removed from the feed path.
2. Follow instructions, *Section 3 – Operating the Astrojet 300/500* “Print Recovery After Jam”.

## Replacing the Sheet Separators

The Sheet Separators insure separation of the pieces as they are being fed. They do wear and must be replaced from time to time. If you experience double sheet feeding and cannot adjust the Separators to prevent it, they should be replaced. Replacement of the Sheet Separators is not difficult, simply follow the steps below:

1. Turn off the AstroJet 300/500 and unplug it from the power source.
2. Release the Separator-by loosening knob [A] and move the Paper Side Guides to their maximum opened position.
3. Lower the Separators so that they touch the Feed Roller.
4. Remove the screw [B] and the Separator support [C]. Then remove the Separator [D] by prying it out of the Holder.
5. Install a new Separator in place and replace the Separator Support and screw.



## *Cleaning*

### **WARNING**

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

The Printer 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. To properly clean the Printer, unplug it from the power receptacle and remove 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.
- **External Areas:** May be cleaned with any standard household cleaner which is non-abrasive and does not contain plastic harming solvents.

### **CAUTION**

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

## **Feed Rollers and Forwarding Rollers**

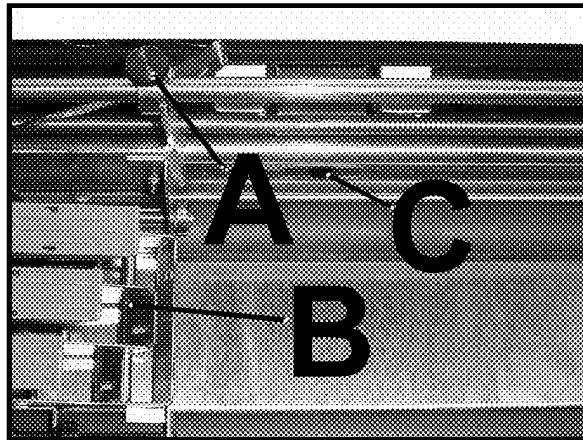
The Feed and Forwarding Rollers can become glazed with paper lint and ink from the media. They should be regularly cleaned with a mild abrasive household cleaner on a damp cloth.

Avoid using solvents on the Rubber Rollers.

## **Cleaning the Media Sensor**

Periodically check the Media Sensor [C] located in the Print Carriage area of the Printer section. The Sensor can be accessed by loosening the Print Carriage locking screw [A] and sliding the Print Carriage [B] toward the rear of the machine.

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.



## *Section 5 – Troubleshooting Guide*

The following Troubleshooting Guides are provided to assist you in solving any problems that might occur with the AstroJet 300/500 Printer or its software. We have tried to make them as complete as possible. The best advice we can offer is to make sure that the system is set up properly, plugged in, that it has an adequate supply of ink before attempting to troubleshoot any problem.

### *HP Inkjet Print Cartridges*


CONDITION	PROBLEM	SOLUTION
<b>Black streaks in text</b> <del>This is a sample of text showing black streaks in the copy.</del>	Lint or paper dust on Printhead.	Clean the Cartridge Nozzles with a clean lint-free cloth moistened with distilled water.
<b>Cartridge will not print</b>	Sheet is blank even after it has gone underneath Cartridge(s).	Check to make sure the tape is off the Printhead. Remove and reinsert the Cartridge into the Carriage Holder. Install a new Print Cartridge.
<b>White streaks in text or graphics</b> 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 the Cartridge Nozzles with a clean lint-free cloth moistened with distilled water. Clean Interconnects. Remove and reinsert the Cartridge into the Holder. Insert a new Print Cartridge.

## WARNING

**DO NOT REMOVE THE SIDE COVERS OF THE PRINTER!  
THERE ARE HIGH VOLTAGES PRESENT BEHIND THE COVERS!**

**SECTION 5  
TROUBLE SHOOTING**

*The Printer*

<b>CONDITION</b>	<b>PROBLEM</b>	<b>SOLUTION</b>
<b>Extra lines; losing data</b>	Database problem	Check data in database program
<b>Improper output (address information out of order, mis-feeding, etc.)</b>	Wrong Interface settings Static electricity  Dirty Media Sensor	Check software or database on PC. Close AstroJet Control Panel software, then turn Printer OFF and ON. Clean Media Sensor.
<b>Media jams</b>	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".
<b>No communication</b>	Improper cabling / connector Unit not receiving power	Use proper cable ( <i>see Operator Manual</i> ). Check plug connections, ON/OFF Switch and Fuse on Back Panel ( <i>see Operator Manual</i> ).
<b>Not printing on media</b>	Media not positioned properly	Adjust Printhead vertically. Adjust margin setting in layout software.
<b>Print too light or missing character dots</b>	Clogged or dirty Printheads Running out of ink	Purge or clean Cartridges. Replace Inkjet Cartridges.
<b>Blurry address</b>  	Image is not sharp	Printhead gap too high. Adjust Printhead closer to the media.
<b>Split line of type</b> <b>Astro Machine Corp.</b> <b>630 Lively Blvd.</b> <b>Elk Grove Village, IL 60007</b>	Line of type is placed across two Printheads	Reposition the text in the layout so that it does not print across two Printheads. Adjust the positioning of the two Printheads in relationship to each other using the Head Alignment Tool Properties window of the PCL Driver.
<b>Uneven split line of type</b> <b>Astro Machine Corp.</b> <b>630 Lively Blvd.</b> <b>Elk Grove Village, IL 60007</b>	Some but not all of a line of type across two Printheads matches up.	Reposition the text in the layout so that it does not print across two Printheads. Check the Sheet Separator adjustment. Separators should just touch the media. Check that the Printhead is set at the proper height. A Printhead that is too high will cause slippage in the media as it is passing under the Heads.

## Appendix A – AstroJet 300/500 Specifications

<b>PRINT TECHNOLOGY</b>	Inkjet, Three HP 45 High Capacity Inkjet Cartridges
<b>ADDRESS SPEED</b>	AstroJet 300 – Up to 7,200/hr - #10 Envelopes AstroJet 500 – Up to 22,000/hr - #10 Envelopes
<b>PRINT QUALITY</b> (Dots Per Inch)	High Quality                    600 x 600 dpi Standard Quality                600 x 300 dpi Letter Quality                    600 x 200 dpi Draft Quality                     600 x 150 dpi
<b>IMAGE AREA</b>	1-1/2-inches x 14 inches
<b>PRINT ORIENTATION</b>	Normal and Reverse
<b>INK MONITOR</b>	Via Display
<b>FONTS</b>	All TrueType fonts available on PC
<b>GRAPHICS, LOGOS, AND BARCODES</b>	Allows printing of graphics, logos, and barcodes
<b>MATERIAL SIZE</b>	Length – 5" to 14" Width – 3" to 14"
<b>MATERIAL THICKNESS</b>	Up to 1/8"
<b>FEEDER CAPACITY</b>	Up to 300 #10 envelopes
<b>MEMORY</b>	12 MB
<b>PRINT COLORS</b>	Versatile Black and General Black, Red, Blue, Green, and Yellow
<b>INK</b>	Water-based, may require drying assistance for coated stock
<b>SOFTWARE</b>	Windows™ Printer Drivers for Windows™ 98, 2000, NT, ME, and XP
<b>DIAGNOSTICS</b>	Built into firmware
<b>FIRMWARE UPDATE</b>	Via PC interface in flash PROMS.
<b>PC INTERFACE</b>	Parallel and USB
<b>COUNTERS</b>	One operator resettable job counter, one permanent lifetime counter
<b>DUTY CYCLE</b>	<b>AstroJet 300</b> - 18 million addresses total or 300,000 per month over a 5-year life cycle. <b>AstroJet 500</b> – 45 million addresses total or 750,000 per month over a 5 year life cycle.
<b>DIMENSIONS</b>	19" H x 21" L x 20.5" W (482.6 mm H x 533.4 mm L x 520.7 mm W)
<b>WEIGHT</b>	53 lbs. (24.1 kg.)
<b>ELECTRICAL</b>	115VAC or 240VAC 50/60 Hz
<b>OPTIONS</b>	HP Red, Green, Blue or Yellow, or Versatile Black plus General Black, Conveyor/Stacker, Drop Tray

**All Specifications Subject To Change Without Notice**

## ***Appendix B – Supplies and Optional Hardware***

The following supply items and optional hardware are available from your Astro Machine Distributor:

### ***Supplies***

Red Inkjet Cartridge	HPC6168A
Green Inkjet Cartridge	HPC6169A
Blue Inkjet Cartridge	HPC6170A
Yellow Inkjet Cartridge	HPC6173A
Versatile Black	HPC8842A
General Black ( <i>works on high gloss media when used with dryer</i> )	IQ2392

### ***Optional Hardware***

Conveyor /Stacker Available  
Drop Tray



- Key	3, 11	Feed Delay	13
+ Key	3, 11	Feed Stop	10
<b>A</b>			
Accessory Connector	2	Feed, Automatic	10
Address Recovery	10	Feed, Setup	6
Adjusting Resolution	12	Font, Install Barcode	17
Adjusting Speed	12	Fuse	2
Adjusting, Printheads	14	<b>I</b>	
Automatic Feed	10	Inkjet Cartridges	6, 21, 22, 25, 28
<b>B</b>			
Barcodes, DeskTop Mailer®	17	Installing Barcode Font	17
Batch Counter	10	Installing Cartridges	6, 10
BIOS Version	11	Installing Printer Driver	7
Bulk Ink	11	Inverse Printing	14
<b>C</b>			
Cartridge Disposal	22	<b>J</b>	
Cartridge Installing	6	Jam Recovery	10
Cartridge, Replacement	21	Jams	23, 26
Cartridge, Storage	22	<b>L</b>	
Cartridges, Troubleshoot	25	Layout	15, 18
Choose Location	5	Layout, DeskTop Mailer®	18
Circuit Breaker	2	Location, Choose	5
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