



ASTROJET 2600P/2800P PRINTER OPERATOR MANUAL



Astro Machine Corp.
630 Lively Blvd.
Elk Grove Village, IL 60007
Phone: (847) 364-6363
Fax: (847) 364-9898
www.astromachine.com

SAFETY PRECAUTIONS

THIS EQUIPMENT PRESENTS NO PROBLEM WHEN USED PROPERLY. HOWEVER, CERTAIN SAFETY RULES SHOULD BE OBSERVED WHEN OPERATING THE ASTROJET 2600P/2800P 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 wall outlet located near the machine and easily accessible. 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 for 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 trapped 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 the equipment, walls or furniture.
- ✓ DO NOT remove covers. Covers enclose hazardous parts that should only be accessed by a qualified service representative. Report any damage of covers 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.

AstroJet™ is a registered trademark of Astro Machine Corp.
Hewlett-Packard is a registered trademark of Hewlett-Packard Corporation.
Windows 95 and Windows 98 are registered trademarks of Microsoft Corporation.
IBM is a registered trademark of International Business Machines.
All other trademarks are the property of their respective holders.

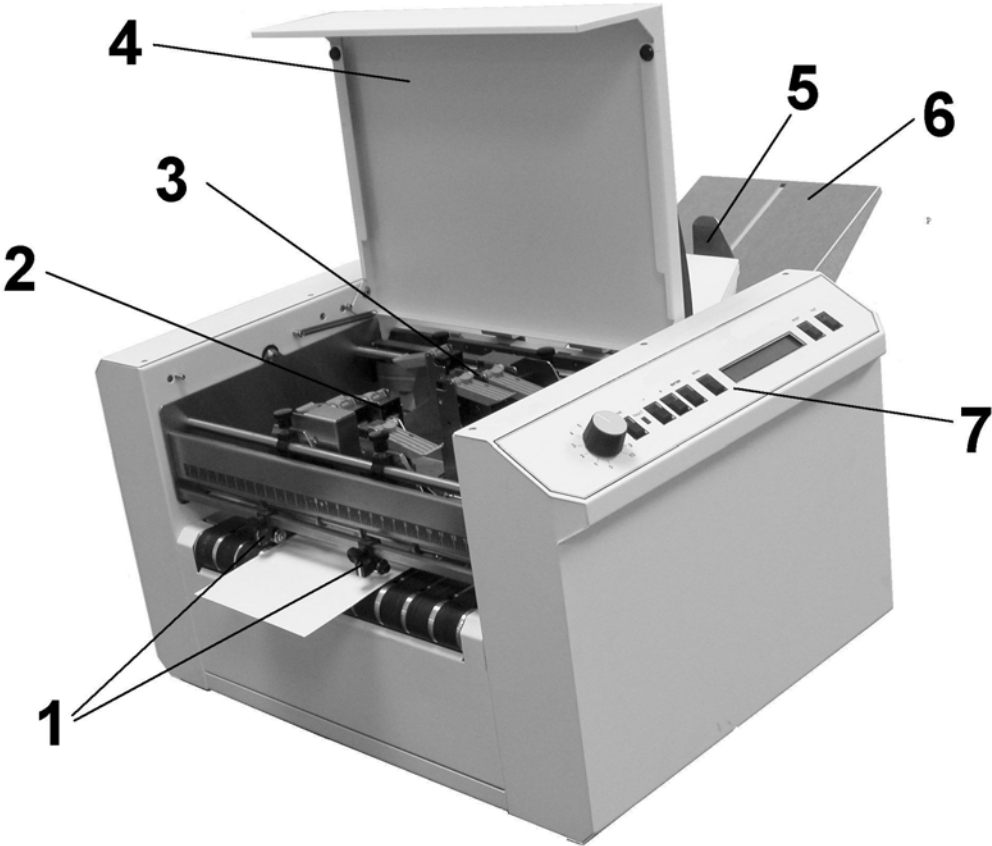
All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage and retrieval system, without permission in writing from the publisher

Table of Contents

Section 1 – Getting Acquainted	1
Operator View	1
Rear View	2
Control Panel	3
Section 2 – Installing the Printer	5
Choosing a Location	5
Connecting the AstroJet 2600P/2800P	5
Connecting the Computer	5
Installing the Inkjet Cartridges	6
Setting up the Feed	6
Installing the Printer Driver	7
Section 3 – Operating the AstroJet 2600P/2800P	9
Printer Control Panel	9
Printer Driver Properties	10
Printing from Microsoft Word	14
Print Recovery after Jam	16
Section 4 – Maintenance	17
The Inkjet Cartridge	17
Jams in the Printer	19
Replacing the Sheet Separators	19
Replacing the Feed Rollers	20
Cleaning	21
Section 5 – Trouble Shooting	23
HP Inkjet Print Cartridges	23
The Printer	24
Appendices	25
Appendix A – Specifications	25
Appendix B – Supplies and Optional Hardware	26
Index	27

Notes

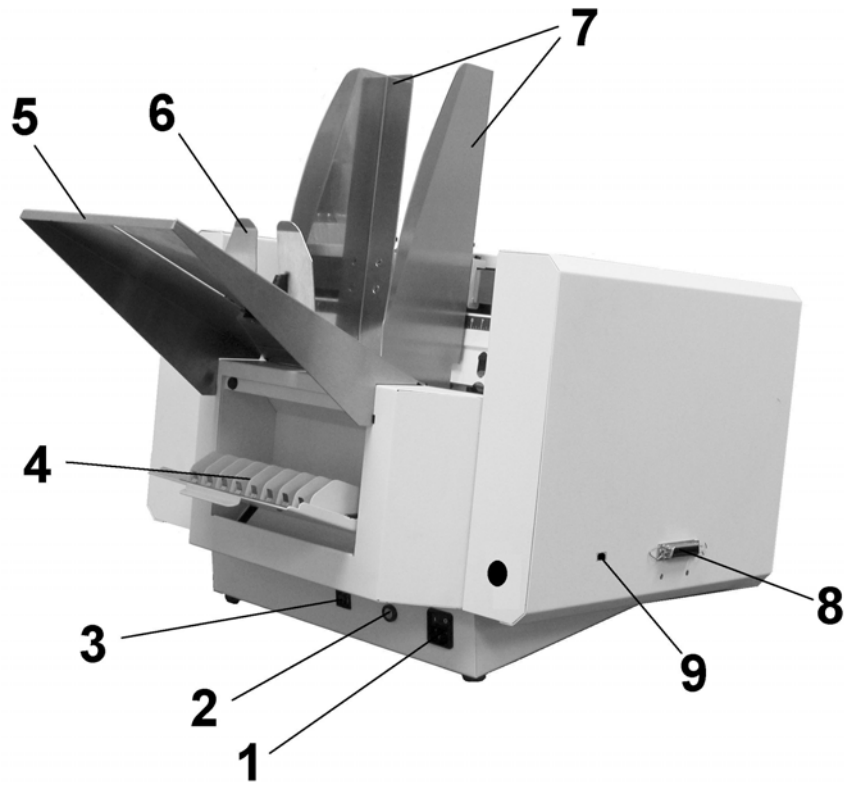
Section 1 – Getting Acquainted



AJ 2600P Shown

Operator View

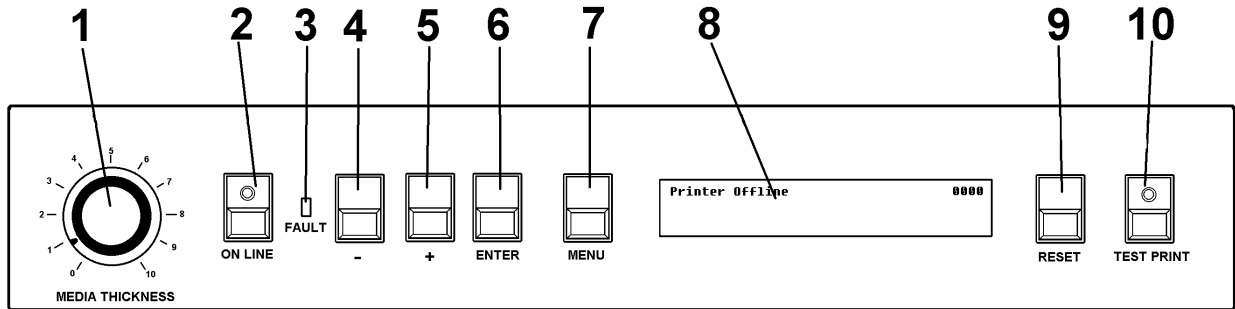
1.	Exit Guides – These guides help the media to exit the printer.
2.	Print Head Assembly – The AstroJet 2600P is equipped with six printheads arranged on two rails and can print an image up to 3” wide. The AstroJet 2800P is equipped with eight printheads arranged on two rails and can print and image up to 4” wide.
3.	Medial Sensor – The media sensor is located behind the print head assembly.
4.	Safety Cover – The safety cover encloses the printheads.
5.	Rear Paper Guide – This guide is positioned at the rear of the media.
6.	Rear Paper Support – The media is supported while being fed.
7.	Control Panel – The controls for the printer are located here. The knob is the media thickness control.



AstroJet 2600P Shown

Rear View

1.	Main Power Switch and Power Receptacle – The power cord is plugged in here and the switch turns the printer ON and OFF.
2.	Main Power Fuse – This fuse protects all of the electronic circuits in the printer.
3.	Motor Circuit Breaker – The motor circuit breaker protects the motor from overloads.
4.	Cartridge Docking Station – The ink cartridges are stored here when not in use.
5.	Rear Paper Support – The media is supported while being fed.
6.	Rear Paper Guide – This guide is positioned at the rear of the media.
7.	Side Guides – The side guides position the media in the printer.
8.	Parallel Port – Connects the printer to the parallel port on your computer.
9.	USB Printer Port – Connects the printer to your computer using the USB port.



Control Panel

1.	MEDIA THICKNESS – The knob on the right side of the control panel is used to adjust the height of the print heads to compensate for different media thickness.
2.	ON LINE key – The indicator on this key lights when data is sent to the ASTROJET 2600P/2800P and they are ready to begin printing. This key also turns the printer off line so that the menu mode can be accessed.
3.	FAULT Indicator – This indicator lights when there is a problem with the printing process.
4.	- key – In the menu mode this key will scroll to the previous selection.
5.	+ key – When the printer is in the menu mode this key will scroll to the next selection.
6.	ENTER key – This key starts and stops the printing.
7.	MENU key – This key causes the printer to enter the menu mode where several operator functions can be accessed.
8.	OPERATOR DISPLAY – Indicates the printer’s status including menus and error messages.
9.	RESET key – This key will reset the printer to its wait state.
10.	TEST PRINT key – Pressing this key will put the printer in the test mode and send a sample copy to check the printer’s output.

NOTE: A complete description of the functions and operation of the printer keys can be found in Section 3 – Operating the ASTROJET 2600P/2800P.

Section 2 – Installing the Printer

Before using the 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 2600P/2800P Printer Driver software on the computer

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 Printer

Plugging in the Printer

Make sure that the main power switch of the AstroJet 2600P/2800P Printer is in the OFF position.

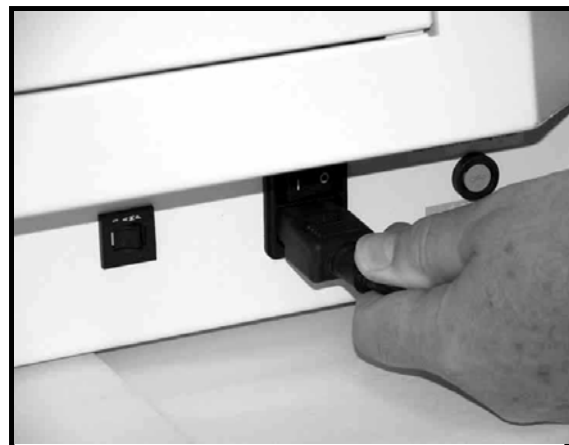
1. Connect one end of the power cord to the rear of the AstroJet 2600P/2800P in the corresponding receptacle.
2. Depending on the version 115 volt or 220 volt, plug the other end into a 115 or 220 Volt AC, 50/60 Hz. Grounded outlet.

CAUTION

Do not use an adapter plug or extension cord to connect the printer to the wall receptacle.

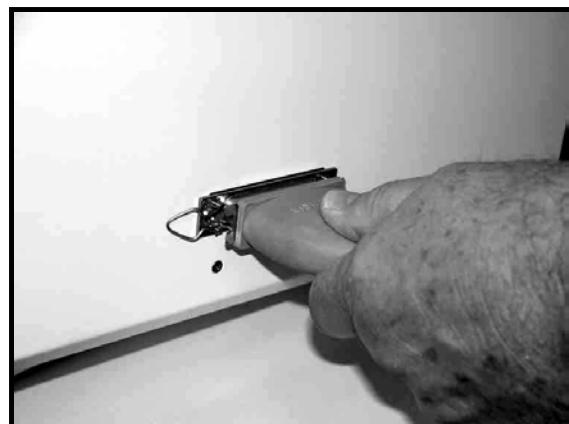
Do not use outlets controlled by wall switches.

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



Connecting to the Computer

Plug the parallel printer cable from your computer into the rear of the printer and latch the two locking clips. You may also connect the printer through a USB connection if you are using Windows ME, 2000, NT, or XP. **The cable used to connect the AstroJet 2600P/2800P to the computer must not exceed 6 feet long.**

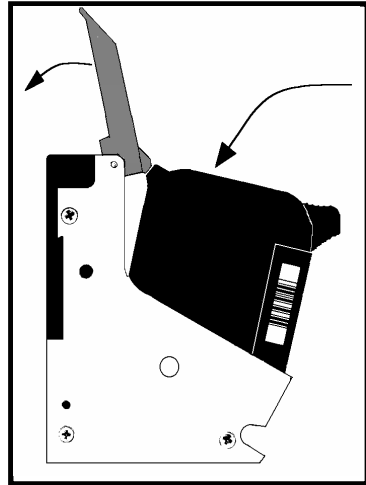


SECTION 2 INSTALLING THE PRINTER

Install the Inkjet Cartridges

The AstroJet 2600P/2800P can be configured with up to six inkjet cartridges. The cartridges are installed as follows:

- 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 vertical.
- With the cartridge's printhead pointing down, slide the cartridge into the holder and push down and toward the contacts in the holder.

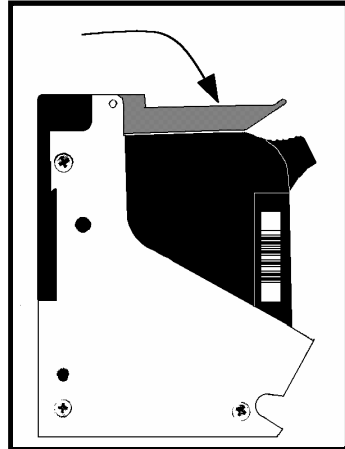


- Make sure the cartridge is seated in the holder then close the latch lever to secure the cartridge in the holder. Do not force the lever into place. (See the diagram.)
- Repeat the above for the remaining cartridges.

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

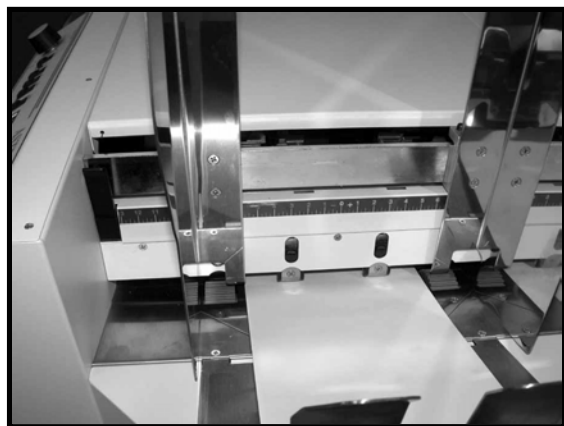


The ink in the cartridge may be harmful if swallowed. Keep new and used cartridges out of reach of children. Discard empty cartridges immediately.

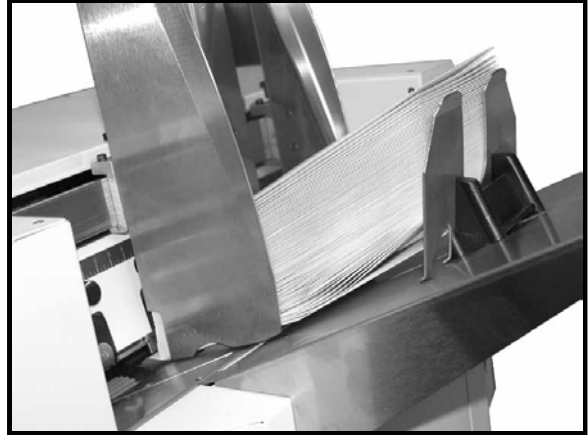


Setting up the Feed

1. Release the separator-locking lever located on the operator's side of the feeder and raise the separators to the up and locked position. Move the side guides out to their extreme open position. Place one piece of media in the center of the feed table.
2. There are four separators on the feeder. Use the two center separators for narrow media and all four separators for wide media. Place the media under the separators and lower the separators so that they rest on the media.
3. Rotate the locking lever up to lock the separators in place.



4. Loosen the knobs on the side guides. Adjust the side guides to within 1/32-inch of the media. Then tighten the knobs.
5. Adjust the back guide so that the media is raised approximately 1/2-inch and rests on the curve of the back guide. When running 10 inch or longer or heavy media you may have to set the back guide so that it just touches the back of the media.



6. Feed a piece of media through the printer and adjust the two exit guides so that they ride on the media. To prevent smearing, make sure that the exit guides do not track over any printed information.



7. Turn the AstroJet 2600P/2800P on and then turn the media thickness knob to set the initial print head height as follows:

Media Thickness	Dial Setting
.004" to 1/32"	0 to 2
1/32" to 1/8"	2 to 3
1/8" to 5/16"	3 to 7
5/16" to 3/8"	7 to 10

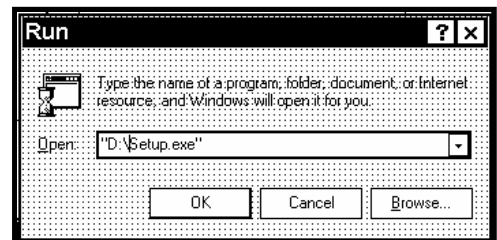
NOTE: These are initial settings. It may be necessary to adjust the MEDIA THICKNESS control to optimize the print quality.

8. Press the **ONLINE** key, and then press the **ENTER** key, to test feed media.

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. Follow the steps below to install the driver:

NOTE: The driver for the printer should be installed using the steps below.

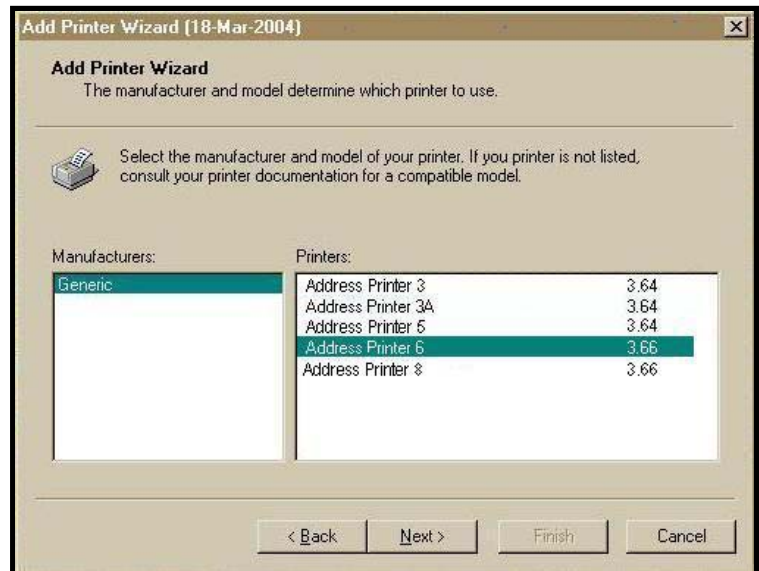


SECTION 2 INSTALLING THE PRINTER

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 on **START**. Then click on **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 **Next>**.
4. Type in your Name and Company and click **Next>**.
5. Select the printer port **LPT1**. Then click **Next>**. The “Add Printer Wizard” will appear. Select your printer from the table below, then click **Next>**

Printer	Driver
AstroJet 2600P	Address Printer 6
AstroJet 2800P	Address Printer 8

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 2600P/2800P

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 2600P/2800P Driver.

This Section further assumes that you have connected the ASTROJET 2600P/2800P to your computer.

Printer Control Panel

When you first turn the printer **ON**, the light in the **TEST PRINT** key lights and the display becomes active. At this point, the printer is ready to print if it is connected to your computer.

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:

ENTER key

The **ENTER** key is used to start the printer printing under production situations. When the printer is placed in any of the menu modes, the **ENTER** key is used to choose the options available.

TEST PRINT key

Pressing the **TEST PRINT** key momentarily places the printer in the test print mode. The word “Working” appears in the lower half of the display and 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.

To restore the printer to the normal ready mode press the **ON LINE** key to take the printer off line and then press and hold the **RESET** key until the light on the **TEST PRINT** key blinks. The printer is then restored to its normal ready state.

Pressing and holding the **TEST PRINT** key will cause the printer to enter the “Service Menu” where the various functions of the printer can be tested. To exit the “Service Menu” turn the printer **OFF**, the **ON** again. 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 restore the printer to its normal print mode, turn it **OFF** then **ON**.

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. 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:

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 **OFF** the printer will not reset this counter.

SECTION 3 OPERATING THE ASTROJET 2600P

Purge – The purging function is useful to clear the printhead nozzles when the machine has been sitting idle for a period. To activate the purge, press the **ENTER** key and feed media. To stop the purge press, **ENTER** again.

Print Enhancement – Pressing the “+” or “-“ key will bring this message up in the display. The print enhancement feature is used when printing to ensure that the nozzles on the printhead 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 will turn this function ON or OFF. The function will remain as changed until the operator changes it again. Turning the printer ON and OFF will not affect the setting.

Installing New Printheads – The printer is capable of telling you when a printhead is running low of 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 – The version of the BIOS is displayed in this menu when the “+” key is pressed once. From time to time, it may be necessary to upgrade the BIOS in the printer. When this is done, the new BIOS version can be checked in this manner.

Bulk Ink – This feature is not used on the AstroJet 2600P/2800P. No provisions are made to install the larger cartridges.

+ / - key

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

ON LINE key

The printer automatically goes on line and the light in the **ON LINE** key lights when there is information from the computer to print. Pressing the **ON LINE** key during the printing operation will take the printer off line and stop the printing. To reset the printer to its ready state, turn it off line then press and hold the **RESET** key until the light in the **TEST PRINT** key blinks.

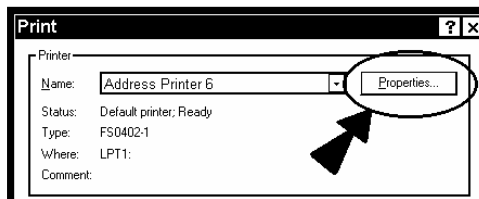
RESET key

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 off line.

Printer Driver Properties

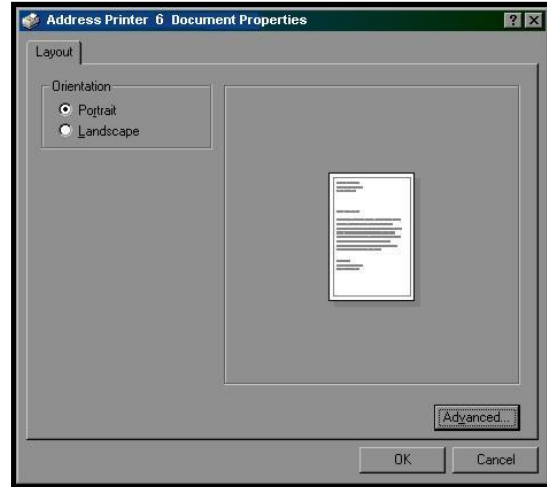
NOTE: The references in this manual are to the AstroJet 2600P printer. They also apply to the AstroJet 2800P printer. The difference is that the AstroJet 2600P printer has six printheads and the AstroJet 2800P has eight printheads.

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 2600P/2800P and how to use them to customize the output of your printer.

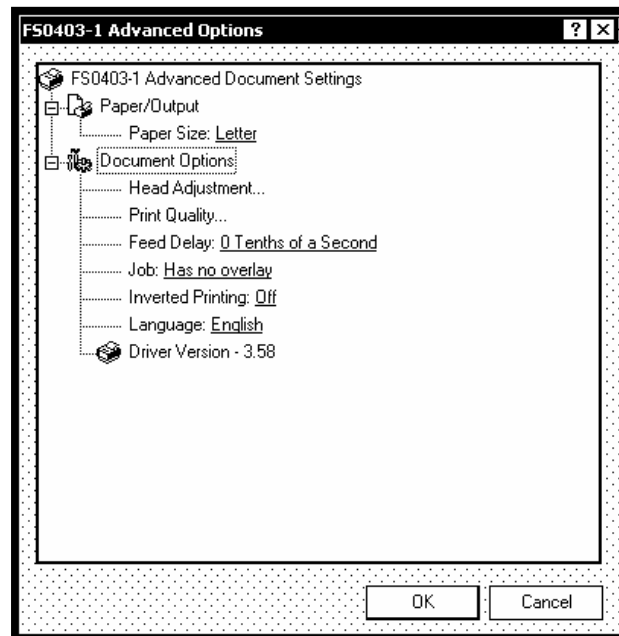
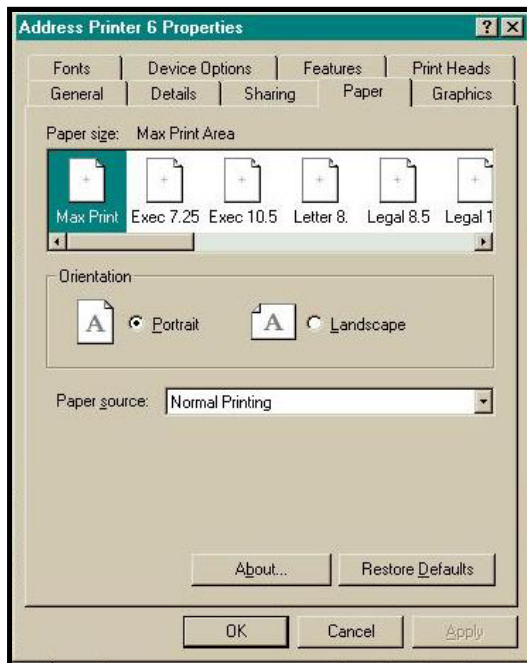


To start printing click on **F**ile, then **P**rint. The Print window will open. If you wish to print the job click on **O**K. If you wish to use the special features built into the AstroJet 2600P/2800P drivers. Clicking on the **P**roperties button will open the properties window in Windows 95, 98, NT, or ME.

If you are using Windows 2600 P 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 95, 98, NT, and ME will be on the left. The windows for Windows 2600 P and XP will be on the right.



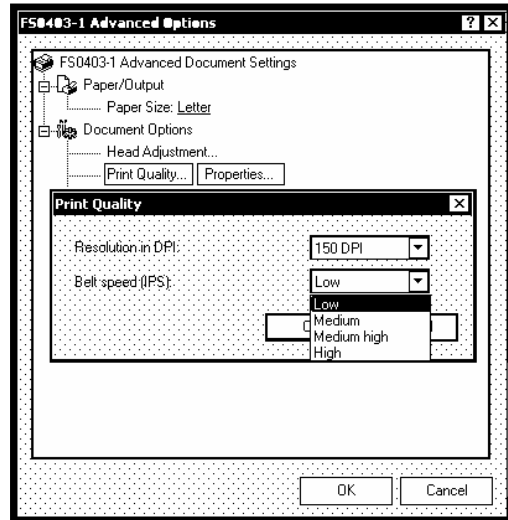
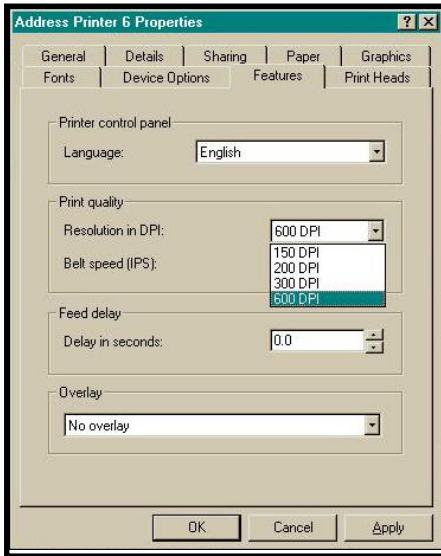
When the properties window opens you are presented with several tabs in Windows 95 and 98. The following are standard windows printer driver functions and should be left at their defaults: **G**raphics, **F**onts, and **D**evice **O**ptions. The **F**eatures and **P**rint **H**eads tabs are used to setup, 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, however change the speeds to a lower speed as follows:

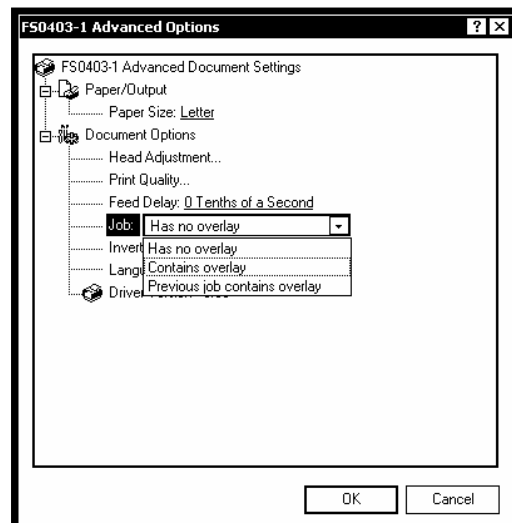
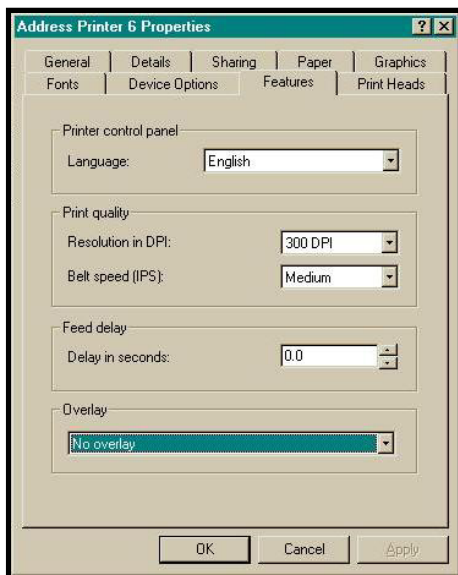
SECTION 3 OPERATING THE ASTROJET 2600P



Resolution	Speeds available
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 printed. 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** and then click on **Overlay**. Select “Contains overlay” from the box, and then click on **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 drop down menu open the “Print” window for the application. Click on **Properties** then on the **Features** tab. Then click on the drop down 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.

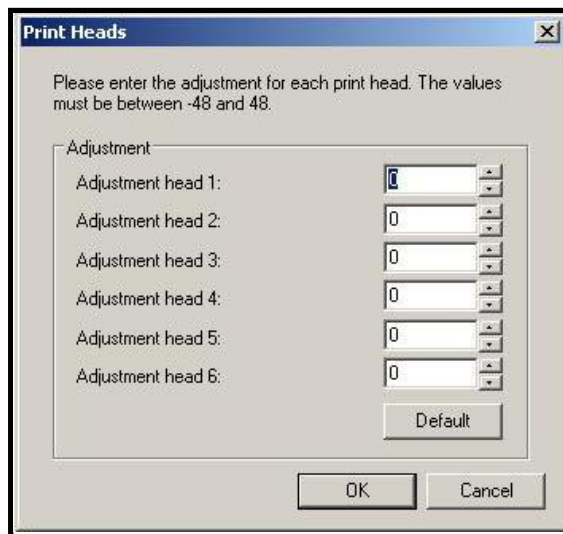
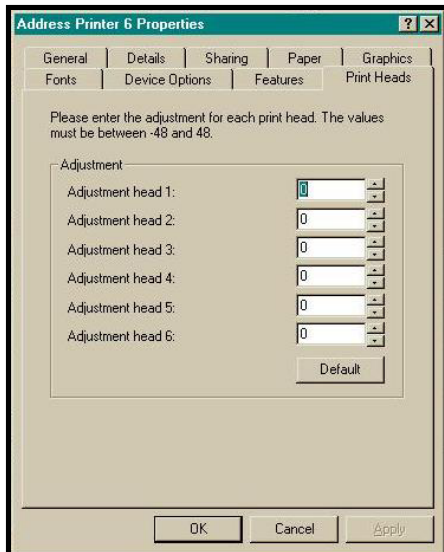
NOTE: Turning the printer OFF, then ON will clear the overlay and the job.

Print Heads Tab

The purpose of the Print Heads tab is to permit slight (0.001-inch) adjustment to the position of the print heads 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

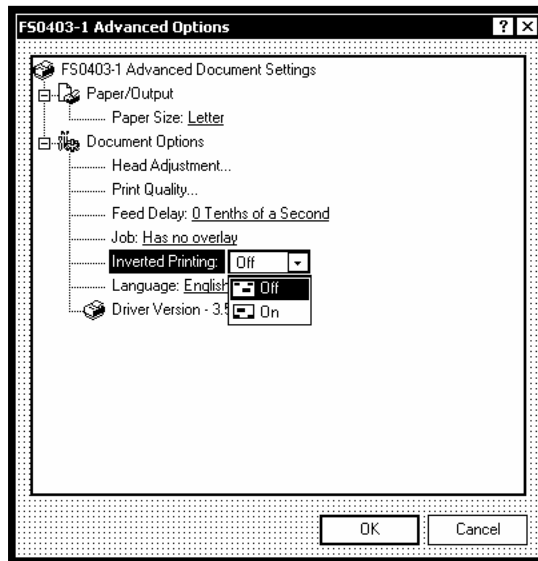
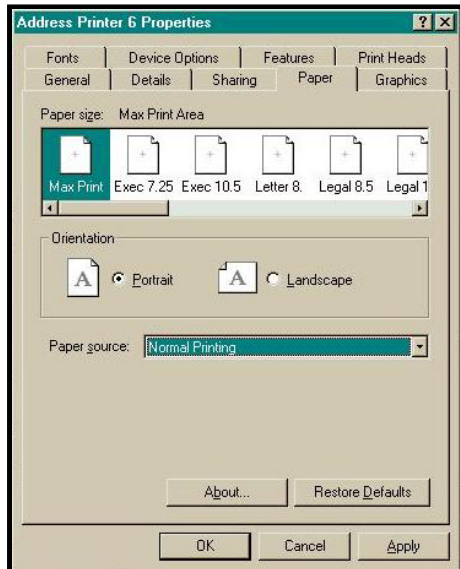
The Paper tab contains one element that is used to reverse or invert the printing on the AstroJet 2600P/2800P.

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 because of 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.

SECTION 3 OPERATING THE ASTROJET 2600P

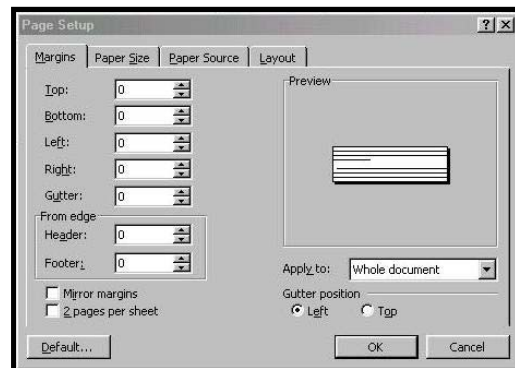


Printing from Microsoft Word

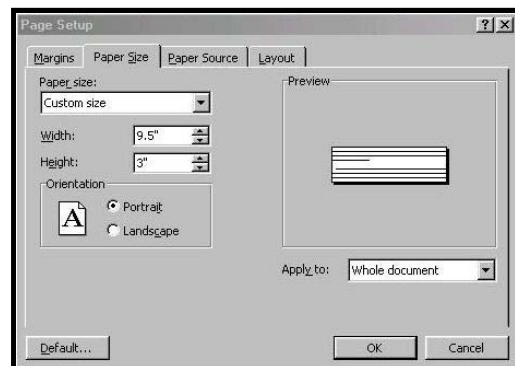
If you are not using a specific program designed for mailing applications it is possible to print your mail pieces using Microsoft Word. This section will cover how to layout a piece and to print from Microsoft Word.

To begin open a new page and turn on the tool bar for Mail Merge. Under Print, select the Address Printer 6 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 setup so that the setting will be registered.

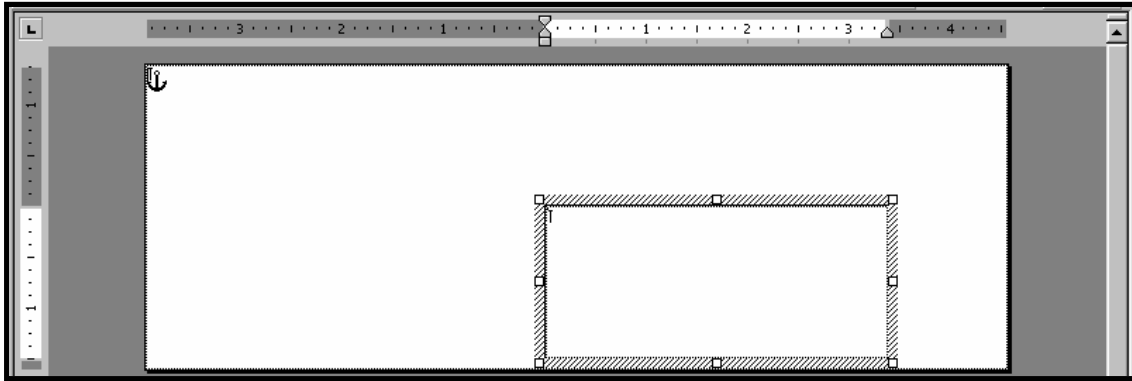


Next, select the **Page Size** tab and Custom Page. The size of the layout should be 3-inches high for the AstroJet 2600P or 4-inches high for the AstroJet 2800P, by the length of the piece you are intending to print. In our example, we have selected the width of a # 10 envelope, 9.5-inches. The orientation of the piece is always **Portrait**. The effective printing area of the ASTROJET 2600P is 3-inches by 17-inches and 4-inches by 17 inches for the ASTROJET 2800P. When you have completed this step click OK.



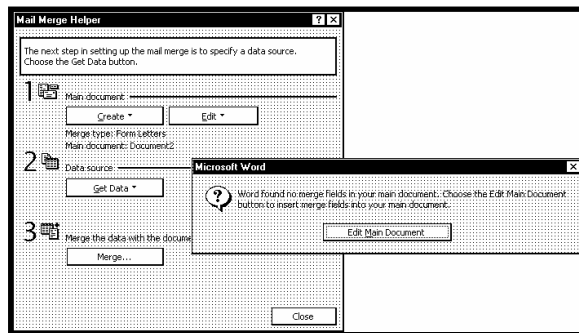
The next step is to create a text box so that you can position the address the proper distance from the lead edge of the piece. Once the page layout is set, you might want to save it as a template for use later.

When you have completed the steps above the layout for an AstroJet 2600P should look like the one below.



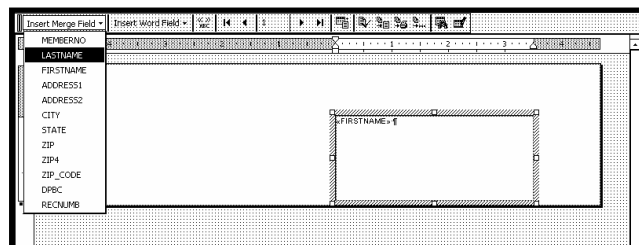
NOTE: When setting up a layout for the ASTROJET 2600P/2800P, be aware that the printheads are aligned in four banks and these banks can be aligned so that you can print up to 3” wide with the AstroJet 2600P or 4” wide with the AstroJet 2800P on your media, or spread the printing over the width of the media. There are two printheads that will print 1” or 1 1/2” of information depending on the printer and two single heads that will print 1/2” of information depending on the printer model. How you position them is up to the requirements of the job.

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, and 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 entire spreadsheet and click **O**K.



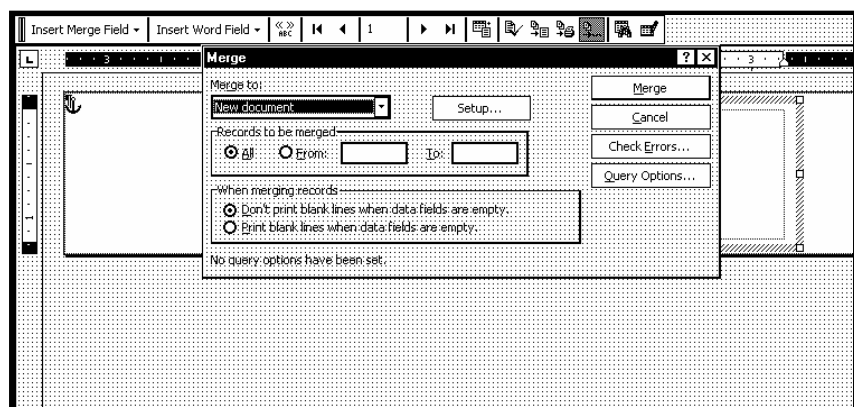
Next, click on **E**dit **M**ain Document and then click on **C**lose.

Use the Mail Merge Tool Bar, click on Insert 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 tool bar 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 concerns us is “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



SECTION 3 OPERATING THE ASTROJET 2600P

“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 **All** or **From**.

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 **Merge** will start the process of 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 **ENTER** 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.

Print Recovery After Jam

If the media should jam in the printer during the run, it is possible to recover up to 10 pieces that might be lost. If a jam occurs, the printer control panel will display “Jam: Reprint Lost pieces”.

To recover the lost pieces do the following:

1. Press the **MENU** key and use the + key to step to the “Address Recovery” routine.
2. Press the **ENTER** key and the following display will appear “Enter: Recover 1 piece”.
3. Use the + key to select the number of pieces you wish to recover.

NOTE: The next two pieces are in the printer buffer when the jam occurred, so if you want to recover the piece that jammed step to 2 pieces. If you want to recover, the piece before the piece that jammed and the next piece enter three. You can recover from 2 to 10 pieces that were printed by using the + key to step to the number of pieces you wish to recover.

4. Next, press the **ENTER** key again to register the number of pieces to be recovered.
5. Then press the **ENTER** key again to restart the printer.
6. You may repeat this process as many times as required. When you reach the end of the database if the last piece jams, then enter 1 piece to be recovered.

Section 4 - Maintenance

This section covers how to care for the ink cartridges, clear paper jams, replace the sheet separators, and perform routing maintenance on the printer.

The Inkjet Cartridge

The 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 51645A Inkjet cartridges based on three lines of 20 characters at 10-point size per address is:

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.

To Replace the Inkjet Cartridge:

- Remove the used cartridge from the cartridge holder by raising the latch lever to release the cartridge, and 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 vertical.
- 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.

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.

SECTION 4 MAINTENANCE

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

Place the cartridges in the Cartridge Storage area located at the rear of the printer, or

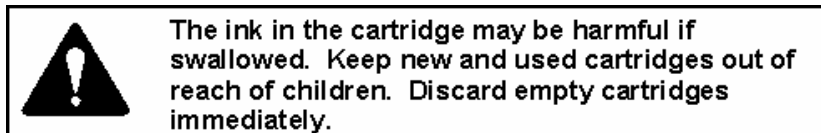
Place the cartridges in a Tupperware container with a damp sponge or towel to maintain humidity and prevent the printhead from drying out.

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.

If there should be an ink spill, use soap and water to clean up any problem areas. Abrasive soap works well to get the ink off 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 with the printhead with a wet fiberless cloth.

Cloth should be:

- ✓ Soft
- ✓ Fiberless
- ✓ Moist with Water (Distilled is best but tap works)

Cloth should not be:

- ✗ Abrasive
- ✗ Made of small fibers
- ✗ Dry or containing 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, 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

2600P/2800P/2800P 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 refer to the **Troubleshooting Print Heads in Section 5 – Trouble Shooting Guide.**

Jams in the ASTROJET 2600P/2800P 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 2600P/2800P “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 (turn 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 2600P/2800P.
4. Envelopes that are caught under the flap of another envelope or stuck to one another may cause jamming.

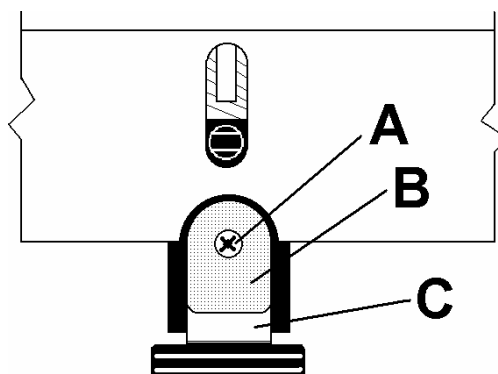
Removing Jammed Media

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 print heads. All pieces of the jammed media must be removed from the feed path.
2. Follow the instructions in *Section 3 – Operating the ASTROJET 2600P/2800P* “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. Just follow the steps below:

1. Turn off the printer and unplug it from the power source.
2. Release the separator-locking lever and move the paper side guides to their maximum open position.
3. Lower the separators so that they touch the feed roller.
4. Remove the screw [A] and the separator support [B.] Then remove the separator [C] by prying it out of the holder.
5. Install a new separator in place and replace the separator support and screw.



SECTION 4 MAINTENANCE

Replacing the Feed Rollers

To replace the feed rollers on the AstroJet printer follow the steps below:

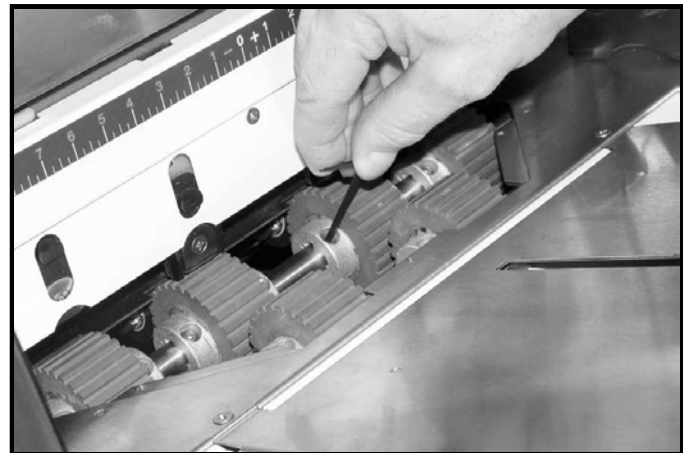
1. Before removing the feed roller access plate, unplug the power to the printer.
2. Using a Phillips screwdriver, remove the three screws from the feed roller access plate.



3. Remove the feed roller access plate.



4. Rotate the feed roller shaft so that the screws are face up and use a 3/32-inch Allen wrench to remove the two button head cap screws. This will permit you to remove one half of the feed roller. Rotate the shaft until the two screws holding the second half of the feed roller in place are accessible. Remove those screws also. Install the feed roller half and replace the screws. Rotate the shaft, replace the second feed roller half, and fasten with the remaining screws.
5. Replace the feed roller access plate and fasten with the four Phillips screws.



Cleaning

The ASTROJET 2600P/2800P

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.

The internal areas are 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.

The exterior of the machine 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.

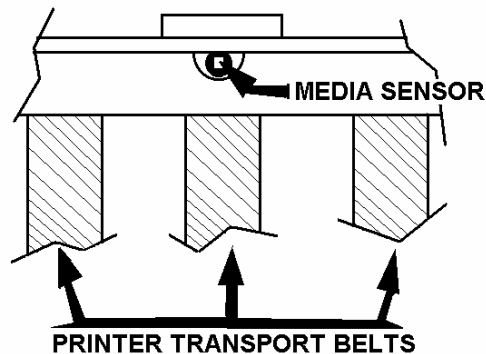
Feed Rollers and Forwarding Rollers

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 located in the print carriage area of the printer section. 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 – Trouble Shooting Guide

The following trouble shooting guides are provided to assist you in solving any problems that might occur with the ASTROJET 2600P/2800P 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 setup properly, plugged in, that it has an adequate supply of ink before attempting to trouble shoot any problem.

HP Inkjet Print Cartridges

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 the cartridge nozzles with a 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 the tape is off the printhead. Remove and reinsert the cartridge into the carriage holder. Install a 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 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.

The Printer

CONDITION	PROBLEM	SOLUTION
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 data base on PC. Close AstroJet control panel software, the turn Printer of and 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 Operator Manual). Check plug connections, on/off switch and fuse on back panel (see Operator Manual).
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.
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 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 in the AstroJet software control panel or in the Properties window of the PCL version 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 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.

WARNING

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

Appendix A – ASTROJET 2600P/2800P Specifications

PRINT TECHNOLOGY	AstroJet 2600P Inkjet, 6 HP 51645A High Capacity Inkjet Cartridges AstroJet 2800P Inkjet, 8 HP 51645A High Capacity Inkjet Cartridges
ADDRESS SPEED	Up to 26,000/hr - #10 Envelopes
PRINT QUALITY (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
IMAGE AREA	3" X 17" (2600P) 4" X 17" (2800P)
PRINT ORIENTATION	Normal and Reverse
INK MONITOR	Visible on Display
FONTS	All TrueType fonts available on PC
PRINTS	Prints graphics, logos, and barcodes
MATERIAL SIZE	Length – 5" to 17" Width – 3" to 13.5"
MATERIAL THICKNESS	Up to 3/8"
FEEDER CAPACITY:	Up to 750 #10 envelopes
MEMORY	64 MB
PRINT COLORS	Standard and Versatile Black, Red, Blue, Green, and Yellow
INK	Water based may require drying assistance for coated stock
SOFTWARE	Windows™ Printer Drivers for Windows™ 95, 98, 2000, NT, ME, and XP
DIAGNOSTICS	Resident in firmware
FIRMWARE UPDATE	Flash PROM update.
PC INTERFACE	Centronics Parallel and USB
COUNTERS	One operator resettable job counter, one permanent lifetime counter
DUTY CYCLE	60 million addresses total or 1,000,000 per month over a 5-year life cycle.
DIMENSIONS	25" H x 28" L x 22" W (635 mm H x 711 mm L x 559 mm W)
WEIGHT	80 lbs. (36.4 kg.)
ELECTRICAL	AstroJet 2600P/2800P 115VAC or AstroJet 2600P/2800PE 240VAC, 50/60 Hz
OPTIONS	Conveyor/Stacker and 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 Dealer:

Supplies

Black Inkjet Cartridge	HP 51645A
Fast Drying Black Inkjet Cartridge	HP 6195A
Yellow Inkjet Cartridge	HPC6173A
Red Inkjet Cartridge	HPC6168A
Green Inkjet Cartridge	HPC6169A
Blue Inkjet Cartridge	HPC6170A
Versatile Black	HPC8842A

Optional Hardware

Conveyor / Stacker Available
Drop Tray

- Key	3, 10	Main Power Switch	2
+ Key	3, 10	Media Sensor	20
A		Media Side Guides	1
Accessory Connector	2	Media Thickness Knob	1, 7
Adjusting Resolution	12	Menu Key	3, 9
Adjusting Speed	12	Motor Circuit Breaker	2
Adjusting, Print Heads	13	MS Word	14
B		O	
Batch Counter	9	On Line Key	3, 10
BIOS Version	10	Operator Display	3
Bulk Ink	10	Options	26
C		Overlay	12
Cartridge Disposal	18	P	
Cartridge, Replacement	17	Parallel Port	2, 5
Cartridge, Storage	17	Plugging In	5
Circuit Breaker	2	Ports, Printing	2, 5
Cleaning Cartridges	17	Power Receptacle	2
Cleaning Media Sensor	21	Power Switch	2
Cleaning Printer	21	Print Enhancement	10
Cleaning Printhead	18	Print Head Adjustment	13
Cleaning Rollers	21	Print Head Installation	10
Communication	24	Print Recovery	16
Computer, Connecting	5	Printer Control Panel	1
Connecting Computer	5	Printer Control Panel	9
Conveyor	26	Printer Driver	7,10
D		Printer LCD Display	1
Delay, Feed	12	Printhead, Cleaning	18
Driver Properties	10	Printing	10, 11, 24
E		Printing from MS Word	14
Enter Key	3, 9	Printing, Inverse	13
F		Purge	10
Fault Indicator	3	Purging	18
Features Tab	11	R	
Feed Delay	12	Rear Media Guide	1
Feed, Setup	6	Rear Paper Support	1
Fuse	2	Recovering from Jam	16
I		Removing Jams	19
Inkjet Cartridges	6, 17, 23, 26	Replacing Cartridges	17
Installing Cartridges	6, 10	Replacing Separators	19
Inverse Printing	13	Reset Key	3, 10
J		Resolution	12
Jams	16, 19, 24	S	
L		Safety	Inside Front Cover
Layout	15	Safety Cover	1
M		Separator Locking Knob	2
Mail Merge	15	Setup Feed	6
Main Power Fuse	2	Setup Overlay	12
		Setup Page	14
		Sheet Separators	6, 19
		Side Guides	6

INDEX

Specifications	25
Speeds	12
Storage, Cartridges	17
Supplies	26
T	
Test Print Key	3, 9
Total Count	10
Trouble Shooting	20
U	
USB Port	2, 5
W	
Windows 2600 P	11
Windows 95	11
Windows 98	11
Windows ME	11
Windows NT	11
Windows XP	11

Copyright © 2005 **ASTRO MACHNE CORP.**
Elk Grove Village, IL 60007
10/13/2005
Part Number: 200-AJ2600/2800PCL
