



ASTROJET 1000P 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

SAFETY PRECAUTIONS

THIS EQUIPMENT PRESENTS NO PROBLEM WHEN USED PROPERLY.
OBSERVE SAFETY RULES WHEN OPERATING THE ASTROJET 1000P PRINTER.

BEFORE USING THE PRINTER, 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 power cord supplied with the machine. Plug it into a properly grounded, easily accessible wall outlet located near the machine. Failure to properly ground the machine can result in severe personal injury and/or fire.
- ✓ Power cord and wall plug are the primary means of disconnecting the machine from 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 it 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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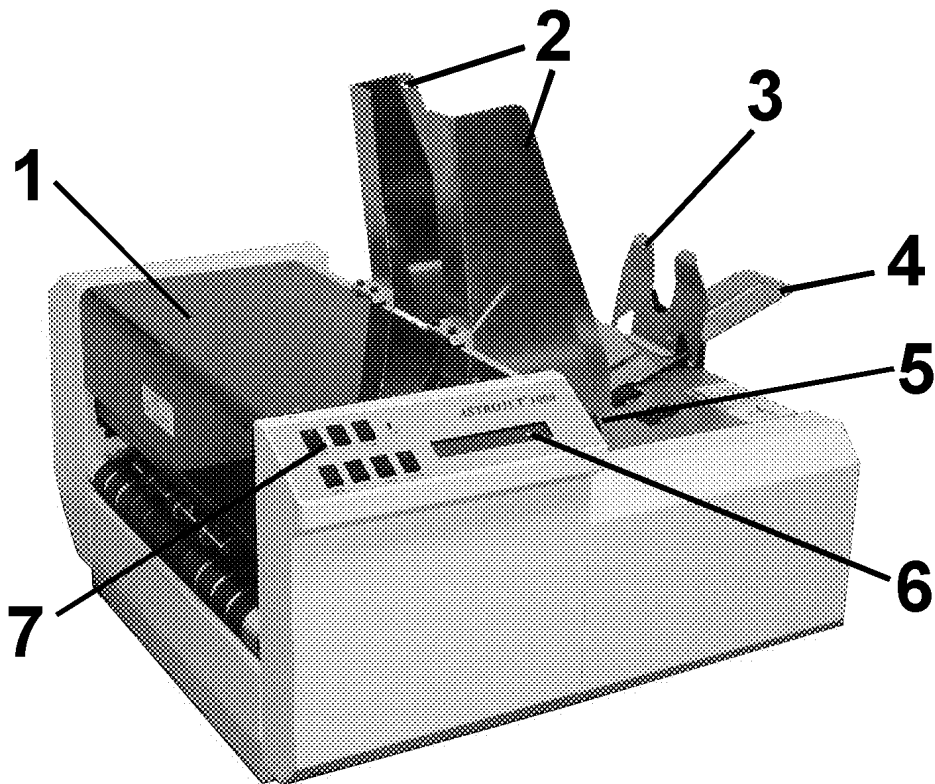
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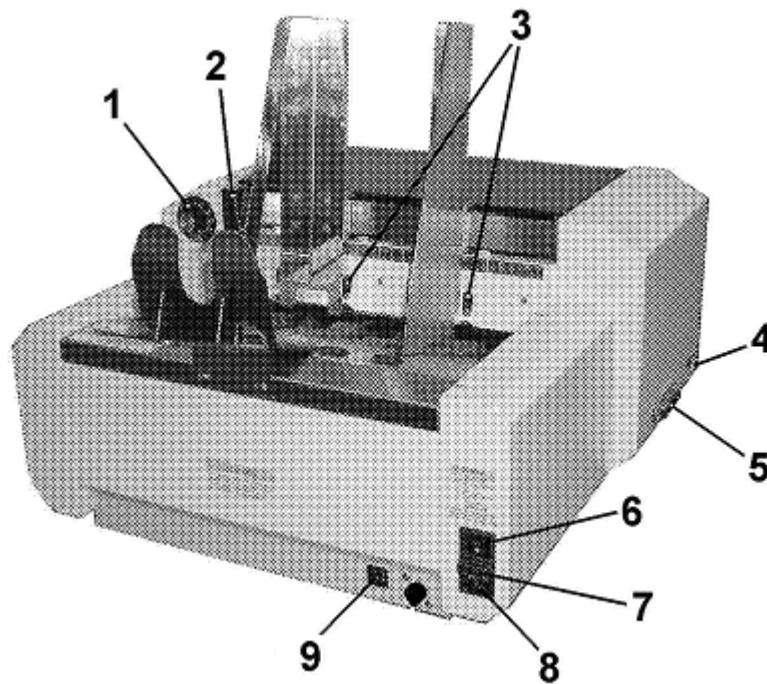
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SECTION 1 – *Getting Acquainted*



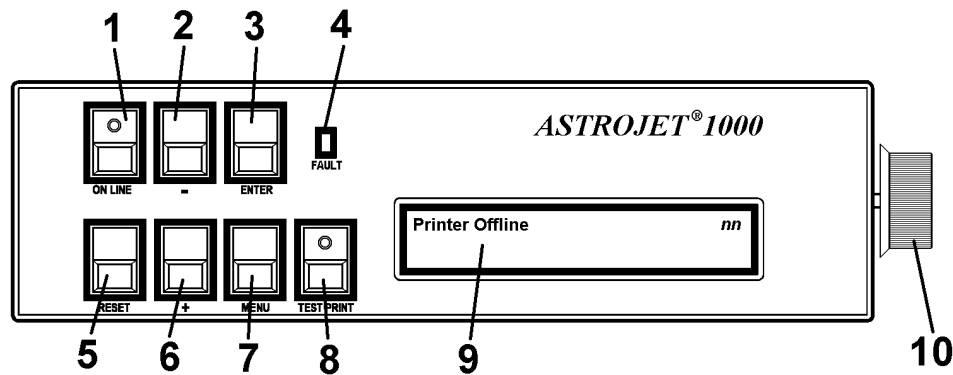
Operator View

1.	Safety Cover – Encloses Printheads. When raised, it interrupts feeding of media and stops Printer.
2.	Media Side Guides – Help guide media to Printheads.
3.	Rear Media Guide – Holds media against Front Plate.
4.	Rear Media Support – Holds longer media in position.
5.	Media Thickness Adjustment Knob – Used to set Printheads at proper height for printing on media.
6.	Printer LCD Display – Displays information about Printer status.
7.	Printer Control Panel – Keys are used to operate Printer.



Rear View

1.	Media Thickness Control Knob – Adjusts height of Printheads.
2.	Sheet Separator Locking Lever – Locks Separators in place after it is adjusted.
3.	Sheet Separator – Separates each piece of media as it is feed.
4.	USB Port – Connects Printer to your computer using your USB Port.
5.	Parallel Port – Connects Printer to Parallel Printer Port on your computer.
6.	Main Power Switch – Turns Printer ON and OFF.
7.	Main Power Fuse – Protects all electronic circuits in Printer.
8.	Power Receptacle – Power cord plugs in here.
9.	Motor Circuit Breaker – Protects Printer's Motor from overload.



Control Panel

1.	ON LINE key – Indicator lights when data is sent to Printer, printing is ready to begin. This key also turns Printer offline to access Menu Mode .
2.	- key – In Menu Mode , scrolls to the previous selection.
3.	ENTER key – Starts and stops printing.
4.	FAULT Indicator – Indicator lights when there is a problem with printing process.
5.	RESET key – Resets Printer to “standby” state.
6.	+ key – In Menu Mode , scrolls to the next selection.
7.	MENU key – Used to enter Menu Mode to access operator functions.
8.	TEST PRINT key – Puts Printer in Test Mode and prints a sample copy to check Printer's output.
9.	OPERATOR DISPLAY – Shows Printer's status including menus and error messages.
10.	MEDIA THICKNESS ADJUSTMENT KNOB – Adjusts height of Printheads to compensate for different media thicknesses.

NOTE: A complete description of the functions and operation of the Printer Keys can be found in Section 3 – Operating the ASTROJET 1000P.

NOTES

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SECTION 2 – *Installing the Printer*

Before using the Printer:

- Choose a location for Printer
- Plug in Printer and connect it to computer
- Install Inkjet Cartridges
- Set up feed on Printer
- Install Astrojet 1000P Printer Driver and BIOS Manager software on the computer

Choose a Location

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

Connecting Printer

Plugging in Printer

Make sure that Printer's Main Power Switch is turned OFF.

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

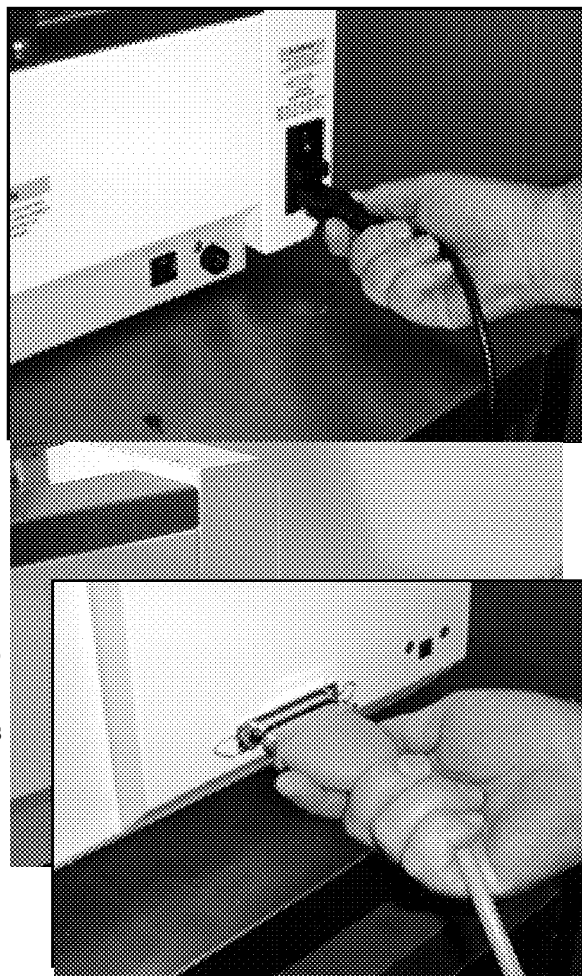
CAUTION

DO NOT USE ADAPTER PLUGS OR EXTENSION CORDS TO CONNECT THE PRINTER TO THE WALL OUTLET.
DO NOT USE OUTLETS CONTROLLED BY WALL SWITCHES.
DO NOT USE OUTLETS THAT SHARE THE SAME CIRCUIT WITH LARGE ELECTRICAL MACHINES OR APPLIANCES.

Connecting to Computer

Plug the Parallel Printer Cable from your computer into the rear receptacle on the Printer. Latch the two locking clips. **Cable used to connect the Printer to the computer must not exceed 6 feet long.**

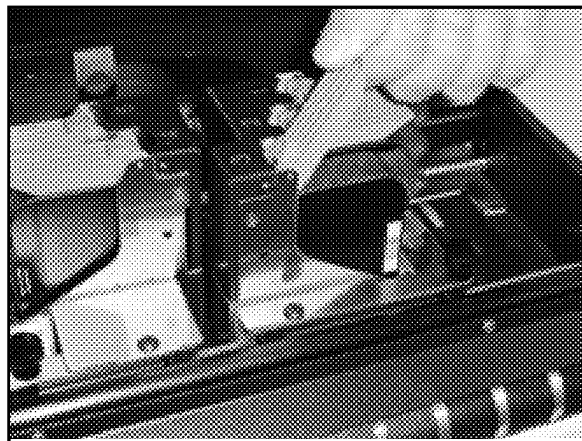
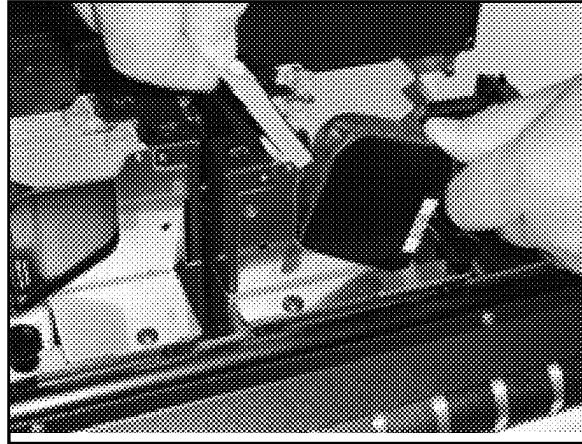
NOTE: Parallel Port may be used for all versions of Windows. USB Port is used only for Windows XP and later versions.



Install Inkjet Cartridges

Printer can be configured with 5 Inkjet Cartridges. **To install the Cartridges:**

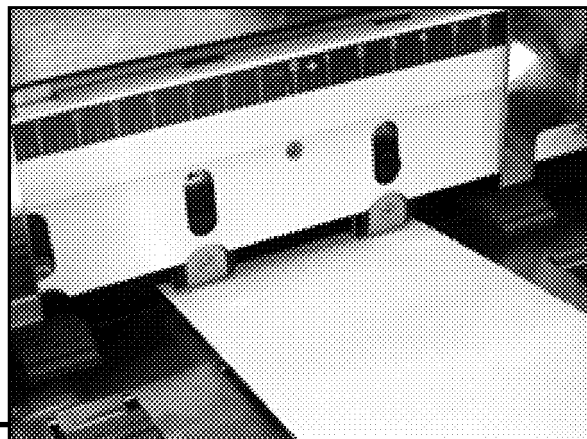
1. Remove Inkjet Cartridge from packaging, taking care not to touch copper contacts, metal plate, or gold printhead. Remove protective tape from Printhead.
2. Open Latch Lever mounted on Inkjet Cartridge Holder.
3. With Cartridge's Printhead pointing down, slide Cartridge into Holder. Push down and toward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



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 Feed

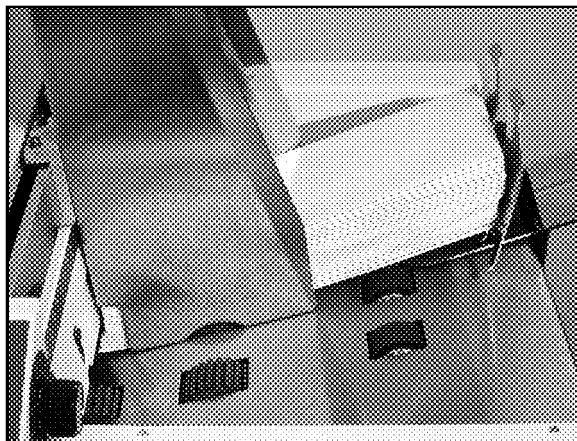
1. Release Separator Locking Lever located on operator's side of Feeder. Raise Separators and lock in position. Move Side Guides to outermost open position. Place one piece of media in center of Feed Table.
2. Four Separators on Feeder. Use the two Center Separators for narrow media and all four Separators for wide media. Place the media under the Separators and lower the Separators so that they rest on the media.



3. Rotate Locking Lever up to lock Separators in place.

4. Adjust Side Guides to within 1/32-inch of media. Set Rear Guide so that media is raised approximately 1/2-inch and rests on curve of Rear Guide.

NOTE: When running 10-inch or longer or heavy media you may have to set Rear Guide so that it just touches the back of the media.



5. Turn Printer ON.
Turn Media Thickness Knob to set initial printhead height as follows:

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

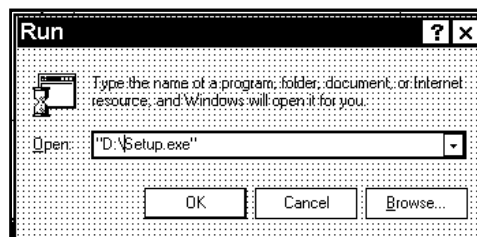
Media Thickness	Dial Setting
0.004" to 1/32"	0 to 2
1/32" to 1/16"	2 to 3
1/16" to 1/8"	3 to 7
1/8" to 1/4"	7 to 10

6. Press the **ON LINE** key, then press **ENTER** to test feed media.

Installing Printer Driver

Printer Driver (*included*) must be installed on your computer before you install the AstroPrint Software.
Follow the steps below to install the Driver:

1. Close any applications running on your computer
Restart the computer before installing the Driver.
2. Install the CD in the CD Drive. Click **START**. Then click **RUN**, then type the following:
D:\Setup.exe (where D is the CD drive) then click **OK**.
3. “Add Printer Wizard (*n.nn*)” window opens.
Click **Next>**.
4. Type in your Name and Company. Click **Next>**.
5. Select printer port **LPT1**. Click **Next>**. “Add Printer Wizard” appears. Select your Printer from the table below, then click **Next>**

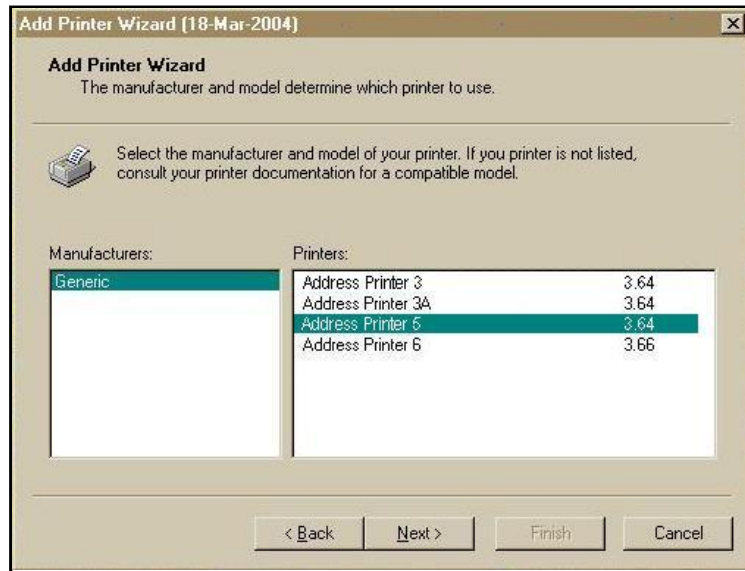


Printer	Driver
AstroJet 1000p	Address Printer 5

SECTION 2

INSTALLING THE PRINTER

6. Next screen allows you to **"Name Your Printer"**. Unless another Printer has 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 Printer*

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 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 Address Printer 5 Driver.

This Section further assumes that you set up the feed and connected the Astrojet 1000P to your computer.

Printer Operation

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

To print, Printer must be on line and when it is, display changes to; "**Printer Online / Waiting for Data**". In this mode, when a job is sent, Printer will be ready to print when **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. Printer Control Panel Keys are used to access various functions that help the operator control the Printer.

TEST key

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

NOTE: If the Printer is set to start automatically (see Menu key below) the Printer starts printing the Test Print once it is loaded without your having to press the ENTER key. In this case, pressing ENTER stops the paper feed.

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

Press and hold **TEST** key to make Printer enter "**Service Menu**" where various Printer functions can be tested. To exit "**Service Menu**", press **TEST** key a second time. "**Service Menu**" is used primarily by service personnel to diagnose problems should they occur. Use "+" or "-" keys to scroll through the menu. Press **ENTER** to test the function.

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

MENU key

Used to access special features built into the Printer and to customize Printer operation. Basic features are accessed by pressing **MENU**. Use the "+" or "-" keys to access the features.

Features available under this mode of operation are as follows:

NOTE: If ON LINE key is ON, you cannot enter the Menu mode. Take Printer offline by pressing the ON LINE key.

Media Thickness Setup – First item to appear in the display is "**Media Thickness Setup**," (if Printer is equipped with an **Automatic Media Thickness Control**). You can use this feature to preset the Printhead height for various media thicknesses.

SECTION 3

OPERATING THE PRINTER

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

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

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

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

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

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

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

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

Pause Type: – 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 – Setting is for standalone desktop units not used in line with other mailing equipment. Printer stops feeding media for a set amount of time after it **“sees”** a **“break mark”**. This allows time for the operator to pack or separate that set of printed pieces before the next set starts. Use the **“+”** or **“-”** keys to access this feature. Press **ENTER** to turn this function ON or OFF.

Conveyor Speed Up – This feature is used 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 can tell you when a Printhead is running low on ink. To use this feature, press **MENU**. Then use **“+”** or **“-”** keys to highlight **“Enter when head (n) is filled”**. Press **ENTER** and install a new Cartridge. Repeat for each Cartridge you install. When **ENTER** is pressed, display changes to **“Head (n) has a new cartridge”**. To check ink levels in the Cartridges, press and hold **TEST PRINT** until **“Service Menu”** appears. Use **“+”** or **“-”** keys to scroll to **“Service Menu: Ink Levels, 100%100%100%”**. This shows how much ink is left 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, ink levels will not be accurate.

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

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

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

Bulk Ink – Not used on this model Printer. No provisions are made to install 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, display shows “**Printer Online / Waiting for Data**” and the light is 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, display shows “**Printer Offline / ENTER for Paper Feed**”. In this condition Printer can feed paper. This is useful for setting up the Feeder.

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

ENTER key

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

RESET key

Used to clear the Printer Memory and return it to the wait state. Key only functions if Printer is off line.

Purge While Printing

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

Press **ON LINE** to pause current job.

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

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

Press **ON LINE**, then **ENTER** to get back to normal printing.

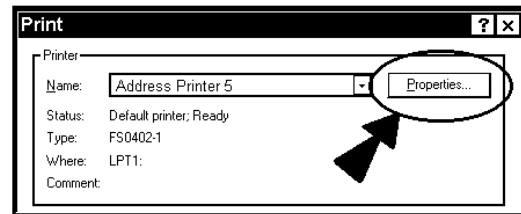
NOTE: If a media jam occurs during the purge; after purging, use Address Recovery to get back to normal printing. Otherwise you will lose records.

Printer Driver Properties

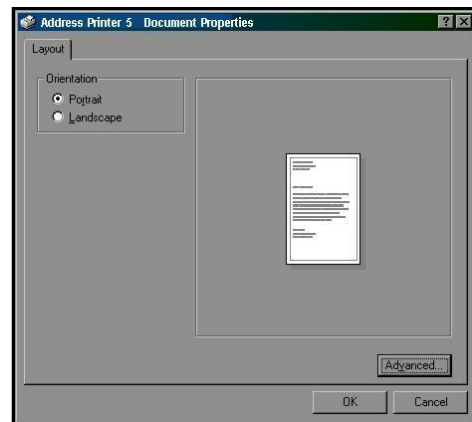
Printer Driver describes to the Printer how to print your job. It controls Printer operation and allows you to send fixed and variable text and graphics to the Printer. Within your data management software is a “**Print**” function. In that “**Print**” function is a **Properties** button. It is through **Properties** that you control Printer output. The following describes the **Properties Windows** for the **Address Printer 5 Driver** and how to use it to customize Printer output.

SECTION 3 OPERATING THE PRINTER

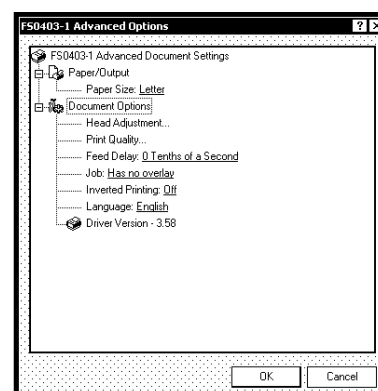
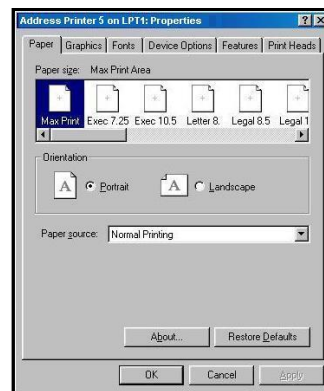
To start printing, click **F**ile, then **P**rint. The Print window opens. To print the job, click **O**K. To use the special features built into the **Address Printer 5 drivers**, click the **P**roperties button to open the Properties Window in Windows 95, 98, NT, or ME.



If you are using Windows 2000 or XP, the window at right opens. Clicking **A**dvanced opens 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 2000 and XP will be on the right.

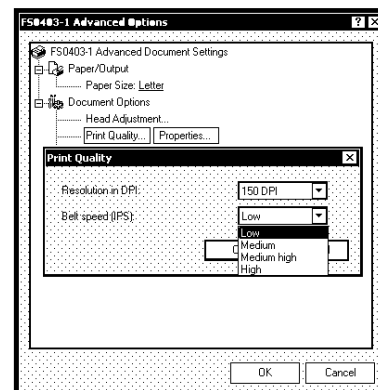
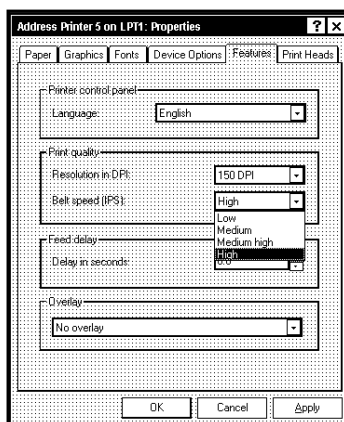


When the **P**roperties window opens you are presented with several Tabs in Windows 95, 98. The following are standard Windows Printer Driver functions and should be left at their defaults: **G**raphics, **F**onts, and **D**evice Options. The **F**eatures and **P**rint Heads tabs are used to set up, change, and adjust the Printer.



Features Tab

Features Tab/Advanced Options, (depending on the operating system), is used to change 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. First feature, “**P**rint **Q**uality” has two settings: (1) **R**esolution of print quality, (2) for appropriate **S**peed. Changing **r**esolution to a higher number (e.g. 200 DPI to 600 DPI) increases image quality. When **r**esolution is changed, **B**elt **S**peed (IPS) is automatically changed to the optimum speed for the resolution selected.

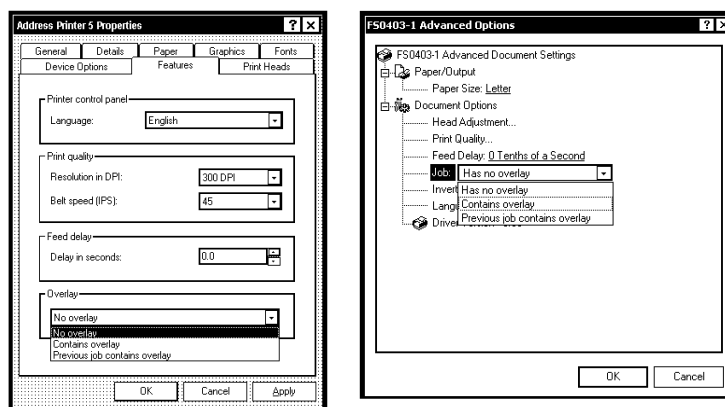


You can change the speeds to a lower speed as follows:

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

Feed Delay is used to put more space between pieces as they are printed. This allows the first piece printed more time to dry before next piece is printed. Adjustment range is in 0.1-second increments. Feature works at all speeds.

Overlay is used to save time printing when you combine a database with fixed information or graphics. 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 **Features** and 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.

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 **Properties**, then the **Features** tab. Then click on the dropdown menu under “Overlay” and click “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 **ENTER**.

If you wish to print a second job using the same overlay, open that job and send it to the Printer. If the next job does not contain an overlay, then click **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 clears the overlay and the job.

Print Heads Tab

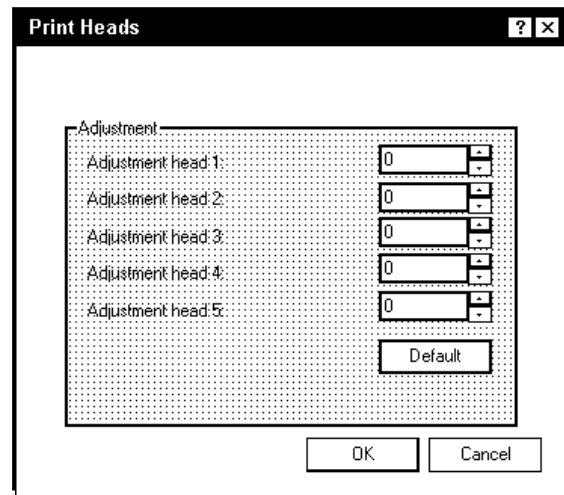
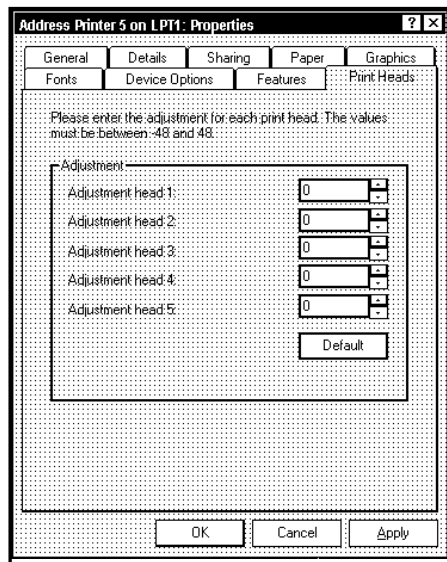
Permits slight (0.001") adjustments to the positions of the Printheads in relation to each other. The adjustment is used to precisely align the three Printheads when printing graphics or type that extends beyond the width of one Printhead. Each Head can be moved +/- 0.048" in 0.001" increments.

To move the Printhead **toward** the lead edge of your layout, move it in the “-” direction.

To move the Printhead **away** from the lead edge, move it in the “+” direction.

SECTION 3 OPERATING THE PRINTER

When the Printer is turned OFF, any changes made this way return to the original settings.



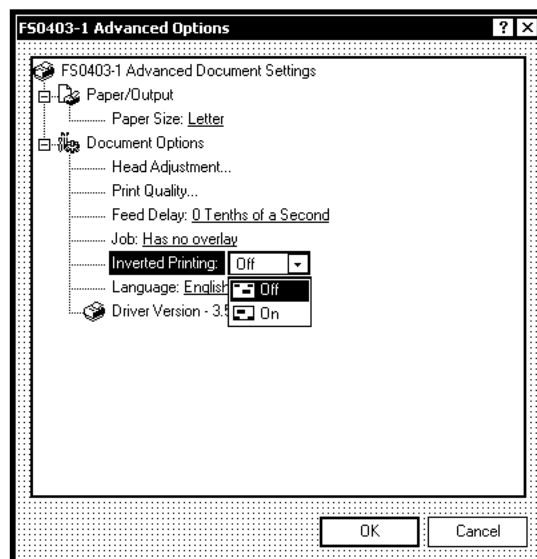
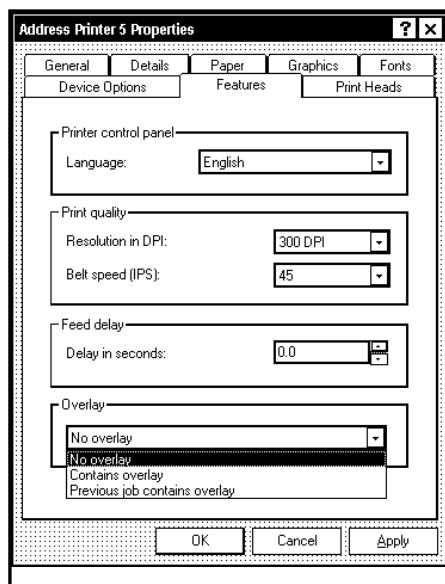
Inverse Printing

The **Paper tab** contains one element that is used to reverse or invert the printing on the AstroJet 1000P.

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 **Paper tab**, then **Paper Source** permits you to reverse the print direction 180 degrees.

Remaining 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.**

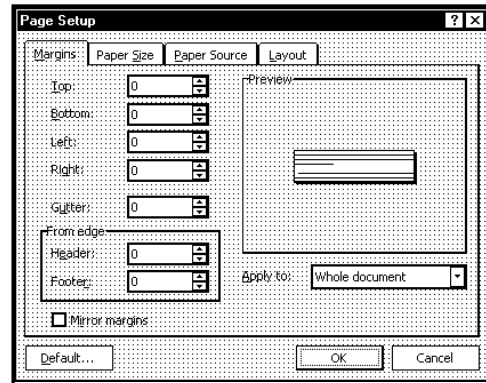


Printing from Microsoft Word

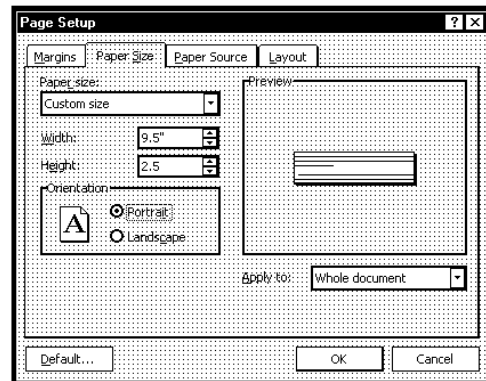
If you are not using a specific program designed for mailing applications it is possible to print your mail pieces using Microsoft Word. This section covers how to layout a piece and to print from Microsoft Word.

To begin, open a new page and turn on the toolbar for “**Mail Merge**”. Under “**Print**” select the **Astrojet 1000P** as the default Printer. Go to **Page Setup** in the **File** menu. Set all margins to “0”.

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

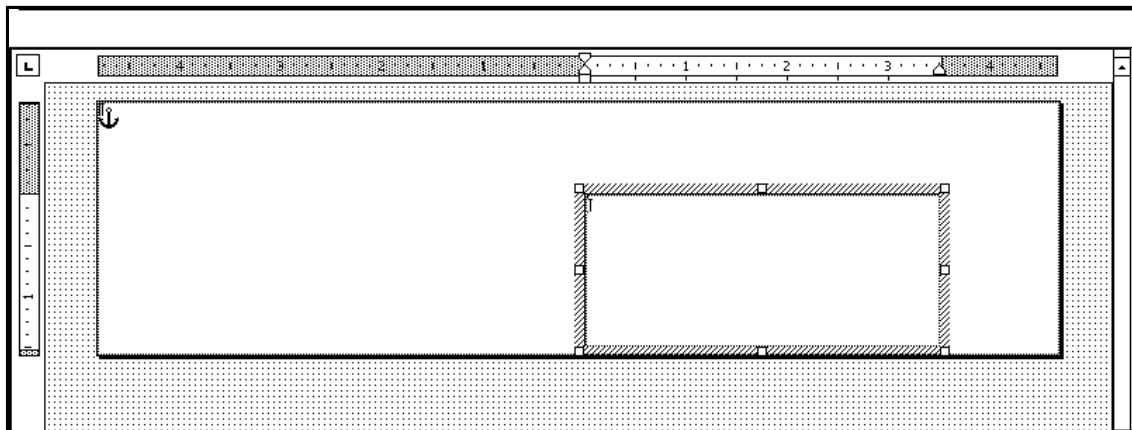


Next, select the **Page Size** tab and **Custom Page**. Size of the layout should be 2.5" high by the length of the piece you intend to print on. (*This example uses width of a #10 envelope, 9.5".*) Orientation of the piece is always **Portrait**. Effective printing area is **2.5" by 15"**. Click **OK** after completing this step.



Next, 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.

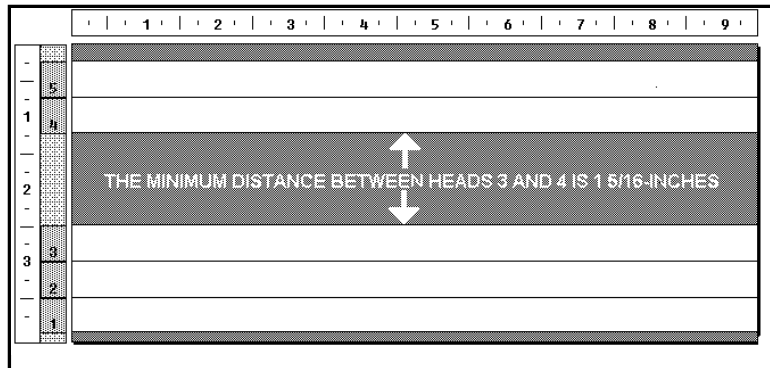
When you have completed the steps above the layout should look like the one below.



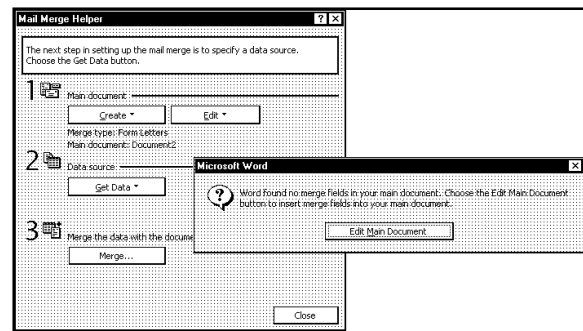
SECTION 3 OPERATING THE PRINTER

NOTE: When setting up a layout for the Astrojet 1000P, be aware that the Printheads are aligned in two banks and these banks face each other.

Minimum distance between Printheads 1, 2, and 3 and Printheads 4 and 5 is 1-5/16". In effect, this permits you to print the return address on Heads 4 and 5 with an indicia and the variable address on Heads 1, 2, and 3. When printing in this manner it is a good idea to use the "Overlay" feature for the fixed information. The actual head layout on a #10 envelope appears at right.

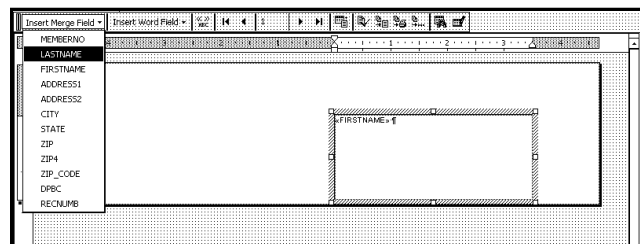


Click **T**ools, then **M**ail Merge. "Mail Merge Helper" window opens. Click **C**reate, then **E**nvelopes. "Microsoft Word" window opens. Click the **A**ctive Window button, then click the **G**et Data button. Next, click **O**pen data source. Locate the data file you intend to use. *This example uses a Microsoft Excel file.* Select the file and the "Microsoft Excel" window opens. Select the entire spreadsheet and click **O**K.



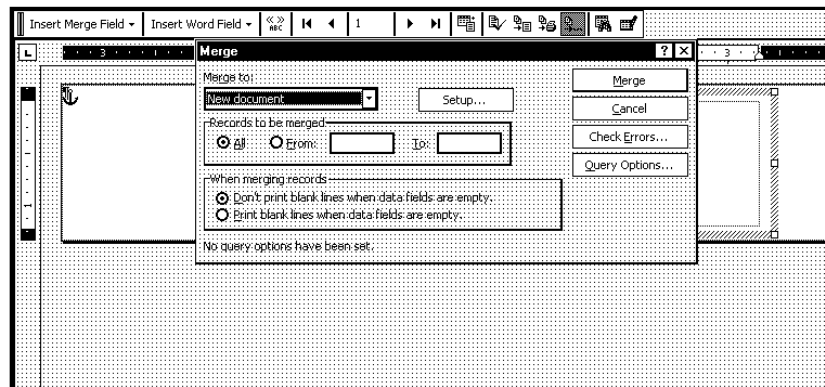
Next, click **E**dit **M**ain Document then click **C**lose.

Use the **M**ail Merge toolbar and click "Insert Merge Field" and begin to build the layout by inserting the address fields.



When you finish setting up layout, click **M**ail Merge icon on toolbar and "Merge" window opens.

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



Next selection is “**Records to be merged**”. Select **A**ll or **F**rom:

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

Clicking **M**erge starts 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. Press **ENTER** to start the printing process.

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

Printing from DeskTop[®] Mailer

Preparation

Install Barcode Font

In order to be able to print Postal Barcodes on the AstroJet[™] Printers when using DeskTop Mailer[®] you must first install the **BarCode USPS** font that is supplied on the driver disk that accompanied the Printer.

To install the font:

1. Click **S**TART, then **S**ettings, then open **C**ontrol Panel.
2. Double click **F**ONTS folder. When **F**ONTS folder window opens, click **F**ile, then **I**nstall New Font...
3. “**Add Fonts**” window opens. Find “**BCUSPS.ttf**” file on the CD and select it.
4. Click OK and font is installed in the **F**ONTS folder.
5. Close the **F**ONTS window and the **C**ONTROL PANEL window.

Set Print Method

Disable the **Label Toolbox** before printing with the AstroJet[™] Printer using DeskTop Mailer[®]. Click **T**ools. When “**Options**” window opens, click **P**rinting Method.... Under “**Printing Engine**” activate the “**Disable Label Toolbox**” option. Click **O**K. Next click **C**lose.

Using Barcodes with DeskTop Mailer[®]

Edit Form

Set up the layout form to match the AstroJet[™] Printer that you are using:

1. Click **P**rint, then, in this example, **N**on-presorted Labels and then **P**age/**F**orm Setup...
2. When the “**Select Form**” window opens, click **E**dit.
3. The “**Edit Form**” window opens.
4. **Fill in the information as follows:**
 - a. **Labels Across Page** = 1
 - b. **Width of label** = any number up to the maximum print length of the Printer used.
 - c. **Form Left & Right Margins** = depends on the size of the form and the width of the printing area required.
 - d. **Width between labels** = 0.
 - e. **Form Width** = the length of the piece you are printing on.
 - f. **Labels down page** = 1

SECTION 3

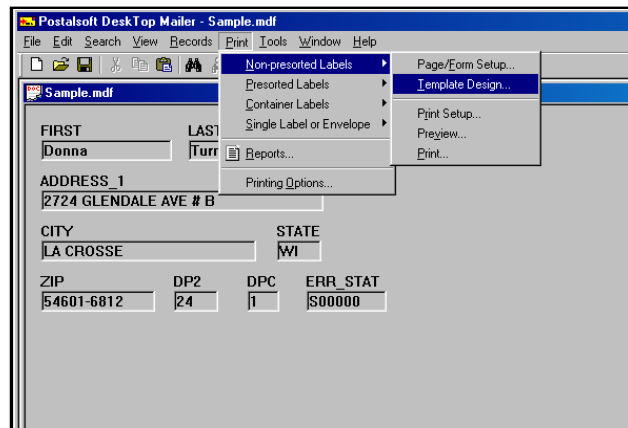
OPERATING THE PRINTER

- g. **Height of label** = is equal to the number of Printheads on the AstroJet Printer used, times 1/2". This example uses a 5-head printer, therefore the height is 2-1/2".
 - h. **Form Top & Bottom Margins** = should be set at 0.100 to insure that none of the data is lost.
 - i. **Height between labels** = 0.000
 - j. **Form Height** = the height of the Printhead area or slightly larger.
5. Name the form in the **Form name** box and click **OK**.

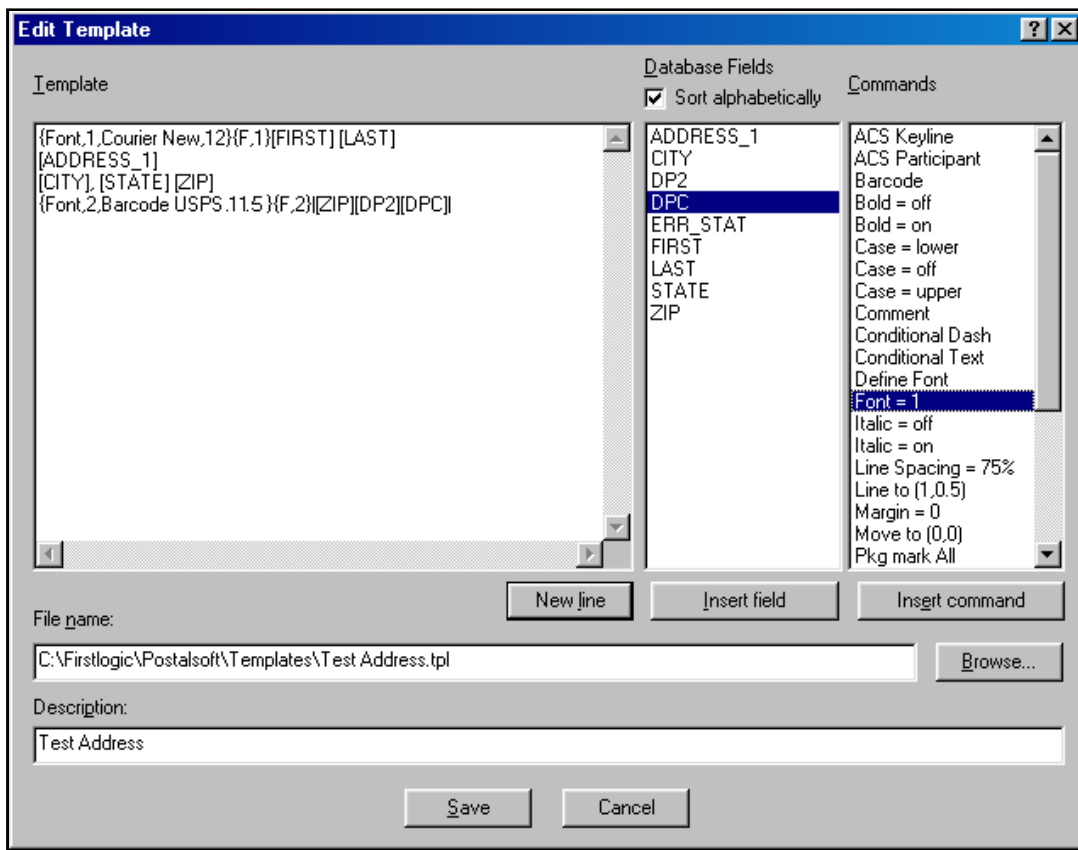
Create Layout

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, then open the Data file.
2. Click **Print** and open the **Template Design**. (In this example, *Non-presorted Labels*. This same step holds true for *Presorted Labels*.)



3. Click **Template Design** and the “Choose Template for Printing” window opens. Select the template you wish to use from the list, then click **Edit**. “Edit Template” window opens. Or select **New...** to create a new template.
4. In this 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**”. “Font Selection” window opens. Select **Font** style, **Size**, and assign a **Font Number**. Click **OK**.
5. Highlight the “**Font = 1**” command and click **Insert command**. Then highlight **FIRST** in the **Database Fields** list and click “**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, then click “**Insert command**”. “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. Click “**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 this example it is ZIP, DP2, and DPC.) Finish this up with another “|”.
9. Now save your template by typing in a unique name in the **File name** box, then click **Save**.



Printing

To make the AstroJet Printer the default printer for this application, click **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 the **Change Printer** button. Select the AstroJet Printer from your printer menu. Click **OK**. You are now ready to print the job.

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

[illegible]

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.

Inkjet Cartridge

Inkjet Cartridges must be replaced when out of ink, when print quality is poor, or when purging and cleaning have not helped the image quality. Approximate life of the HP 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 Inkjet Cartridge:

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

Leave Cartridge in Printer for short periods of time, 1 day or less.

Next time that Printer is used, 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 Printhead in an area that is relatively free of dust and paper particles that is not too dry.

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

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

Disposal

Cartridges may be disposed of in a normal manner.

In case of an ink spill, use soap and water to clean up any problem areas. Abrasive soap usually removes ink off of hands.



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

Cleaning Printhead

Maintain good print quality by keeping Printheads clean. During printing process, ink spray, paper fibers, and dust build up on Printheads. This build-up eventually degrades print quality. If you notice problems with print quality, or to just prevent a build-up from occurring, wipe Printhead with a wet fiberless cloth.

<i>Cloth should be:</i>	<i>Cloth should not be:</i>
<ul style="list-style-type: none">✓ Soft✓ Fiberless✓ Moistened with water (<i>Distilled is best but tap water works</i>)	<ul style="list-style-type: none">✗ Abrasive✗ Made of small fibers✗ Dry or contain chemical additives

Wipe slowly across the long-axis with Printhead facing down (*as shown*).

DO NOT apply excessive force, since 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 Printer. It can be accessed from the LCD panel on the Printer using the **MENU** key. If this does not solve the problem then proceed as follows:

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

NOTE: For more information refer to Troubleshooting Printheads in Section 5 – Troubleshooting Guide.

Jams in 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 Printer*, “Print Recovery After Jam”.)

Some possible reasons for jamming are:

1. Feeding more than one piece of media.
2. Damaged media, such as 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 Printer.
4. Envelopes caught under the flap of another envelope or stuck to one another may cause jamming.

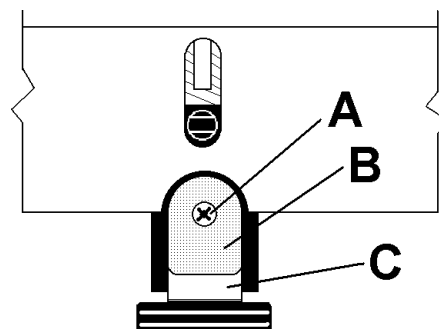
Removing Jammed Media

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

Replacing Sheet Separators

Sheet Separators insure separation of the pieces as they are being fed. They wear and must be replaced periodically. If you experience double sheet feeding and cannot adjust the Separators to prevent it, they should be replaced. **Replacing the Sheet Separators is not difficult:**

1. Turn OFF and unplug Printer.
2. Release Separator Locking Lever and move Media Side Guides to maximum open position.
3. Lower Separators so they touch the Feed Roller.
4. Remove screw [A] and Separator Support [B]. Then pry Separator [C] out of Holder.
5. Install a new Separator and reinstall Separator Support and screw.



Replacing Feed Rollers

1. Before removing Feed Roller Access Plate, unplug Printer.
2. Use a Phillips screwdriver to remove four screws from Feed Roller Access Plate. Remove Access Plate.

3. Determine which type of Roller (**A or B**) is installed on Printer. (**Type B** replaced **Type A** which was installed on machines manufactured before May 2012.)

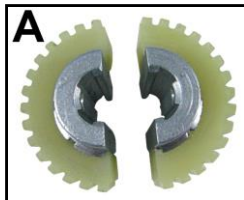
NOTE: All replacement Feed Roller Assemblies are type B.:

[A] Ridged tread, 2 pc. Feed Roller.

To Remove:

Rotate Feed Roller Shaft so Feed Roller mounting screws are face up.

Use a 3/32-inch Allen wrench to remove two button head cap screws. Remove one half of Feed Roller. Rotate Shaft until two screws holding second half of Feed Roller are accessible. Remove those screws, then remove second half of Feed Roller.

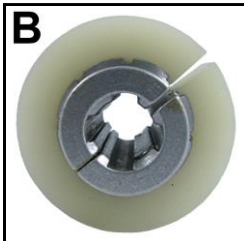


[B] Smooth tread, 1 pc. Feed Roller.

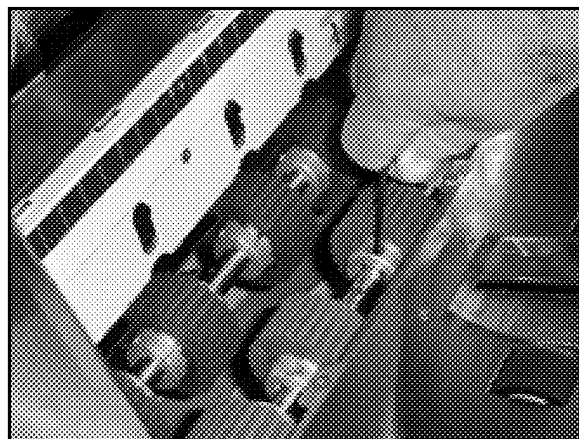
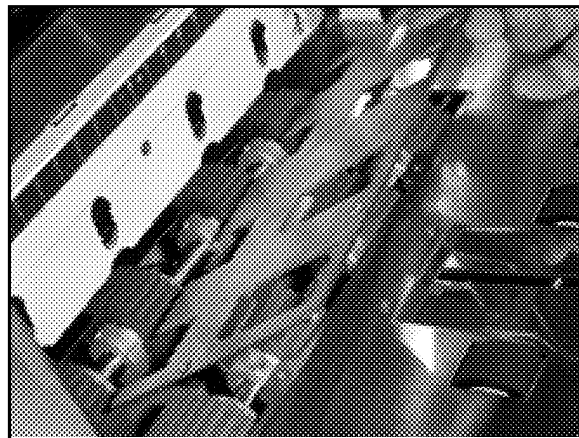
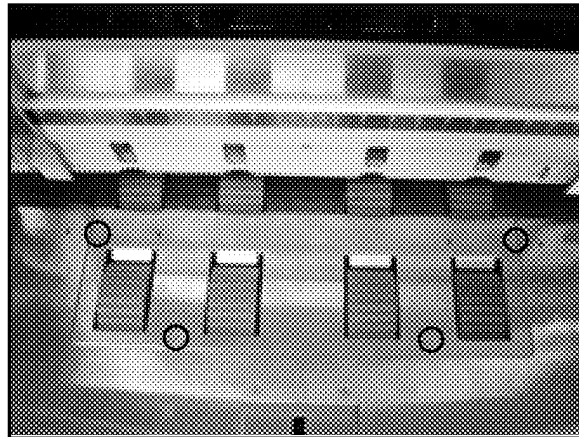
To Remove:

Rotate Feed Roller Shaft so Feed Roller mounting screws are face up.

Use a 3/32-inch Allen wrench to remove two button head cap screws. Rotate shaft until remaining two screws holding Feed Roller are accessible. Remove those screws, then open and remove Feed Roller.



4. Fit new Feed Roller around Shaft, align holes and replace two screws. Rotate Shaft and reinstall remaining two screws.
5. Replace Feed Roller Access Plate and fasten with four Phillips screws.



Cleaning

WARNING!

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

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 using a vacuum with a soft brush attachment to help loosen the dust particles. Take care not to damage the PC Boards or electrical wiring.
- **Exterior Areas:** May be cleaned with any standard non-abrasive household cleaner that does not contain plastic-harming solvents.

CAUTION

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

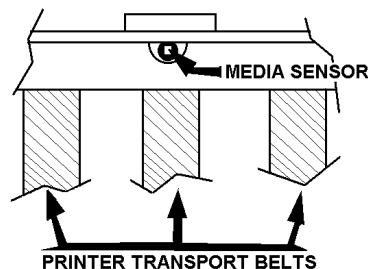
Feed Rollers and Forwarding Rollers

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 Media Sensor

Periodically check Media Sensor (*located in Print Carriage area of Printer*). Sensor should be clean and free of accumulated paper dust. Use a vacuum with a soft brush attachment or dry compressed air to remove dust.



NOTES

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


SECTION 5 – *Troubleshooting Guide*

Troubleshooting Guides are provided to assist you in solving any problems that might occur with the Printer or its software. We 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 troubleshoot 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 Cartridge Nozzles with a clean lint-free cloth moistened with distilled water.
Cartridge will not print	Sheet is blank even after running under Cartridge(s).	Check to make sure protective tape is removed from Printhead. Remove and reinsert Cartridge into Carriage Holder. Install new Print Cartridge.
White streaks in text or graphics Michael Jones Astro Machine Corp. 630 Lively Blvd. Elk Grove Village, IL 60007-1234	Lint or dust blocking Printhead holes. Poor contact between Printhead and Printhead Holder.	Clean Cartridge Nozzles with a clean lint-free cloth moistened with distilled water. Clean Interconnects. Remove and reinsert Cartridge into Holder. Insert new Print Cartridge.

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	Check software and/or database on PC.
	Static electricity	Close AstroJet Control Panel Software, turn Printer OFF/ON.
	Dirty Media Sensor	Clean Media Sensor.
Media jams	Double feeding	Adjust Sheet Separators on Feeder.
	Media is curled or bent	Uncurl media.
	Media is too thin	Media must be at least 0.008”.
No communication	Improper cabling/connector	Use proper cable (see <i>Operator Manual</i>).
	Unit not receiving power	Check plug connections, ON/OFF Switch and Fuse on back panel (see <i>Operator Manual</i>).
Not printing on media	Media not positioned properly	Adjust Printhead vertically.
		Adjust margin setting in layout software.
Print too light or missing character dots	Clogged or dirty Printheads	Purge or clean Cartridges.
	Running out of ink	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 text in layout so it does not print across two Printheads. Adjust positioning of the two Printheads in relation to each other using Head Alignment Tool in AstroJet Software Control Panel or in Properties Window of 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 text in layout so it does not print across two Printheads. Check Sheet Separator Adjustment. Separators should just touch media. Check that Printhead is set at proper height. If set too high, it will cause media to slip as it passes under the Heads.

WARNING!

DO NOT REMOVE PRINTER'S SIDE COVERS!
HIGH VOLTAGES PRESENT BEHIND COVERS!

APPENDIX A – *Specifications*

PRINT TECHNOLOGY	Inkjet, Five HP 45 High Capacity Inkjet Cartridges
ADDRESS SPEED	22,000/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	2-1/2" x 15"
PRINT ORIENTATION	Normal and Reverse
INK MONITOR	Via Display
FONTS	All TrueType fonts available on PC
GRAPHICS, LOGOS, AND BARCODES	Allows printing of graphics, logos, and barcodes
MATERIAL SIZE	Length: 5" to 15" Width: 3" to 13.5"
MATERIAL THICKNESS	Up to 1/4"
FEEDER CAPACITY	Up to 500 #10 envelopes
MEMORY	12 MB
PRINT COLORS	Versatile Black and General 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	Built into firmware
FIRMWARE UPDATE	Via PC interface in flash prompts.
PC INTERFACE	Parallel and USB
COUNTERS	One operator resettable job counter, one permanent lifetime counter
DUTY CYCLE	51 million addresses total or 850,000 per month over a 5-year life cycle.
DIMENSIONS	11.5" H x 19.56" L x 20" W (292.1 mm H x 496.8 mm L x 508 mm W)
WEIGHT	69 lbs. (331.4 kg.)
ELECTRICAL	115VAC or 240VAC, 50/60 Hz
OPTIONS	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 Dealer:

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	

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