



COMPLETE SOLUTIONS FOR ON-DEMAND CD & DVD PRODUCTION



PUMA 

Photo-Quality CD/DVD Inkjet Printer

**OPERATING & MAINTENANCE
MANUAL**

**Thank you for purchasing the Verity Systems
Puma Disc Printer.**

OPERATING & MAINTENANCE MANUAL

Document Reference No. TP 004 833 (Rev 1.01)

Production Standard

ZZ 004 833

VERITY SYSTEMS LTD

2 Eastern Road
Aldershot
Hampshire
GU12 4TD
United Kingdom

Tel: +44 (0) 1252 317000
Fax: +44 (0) 1252 316555
Email: sales@veritysystems.com

VERITY SYSTEMS, INC.

5441 Merchant Circle, Unit A
Placerville
California
95667
United States

Tel: (530) 626-9363
Fax: (530) 626-9395
Email: ussales@veritysystems.us

www.veritysystems.com

**WARNING**

To avoid electrical shock hazards, unit covers should only be removed by authorized personnel.

**COPYRIGHT**

This document is the property of Verity Systems and it may not be reproduced, copied or exhibited to a third party without the written permission of Verity Systems.

**ENVIRONMENTAL PROTECTION**

Waste electrical products should not be thrown away with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.

Verity Systems reserves the right to amend or modify the specifications and design criteria applying to these products.

SOFTWARE WARRANTY (LIMITED)

If you discover physical defects in the media on which the software is distributed or in the User's Manual, *Verity Systems* will replace the media or manual for a period of ninety (90) days after the purchase by the retail customer. You must return the disk or manual to *Verity Systems* or an authorized *Verity Systems* dealer within the warranty period accompanied by proof of purchase.

VERITY SYSTEMS DISCLAIMS ALL IMPLIED WARRANTIES ON THE PRODUCT, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY, PERFORMANCE AND FITNESS FOR A PARTICULAR PURPOSE. *Verity Systems* WILL NOT BE LIABLE FOR ANY BUG, ERROR, OMISSION, DEFECT, DEFICIENCY, OR NONCONFORMITY IN ANY SOFTWARE. **AS A RESULT, THE SOFTWARE IS SOLD "AS IS", AND THE PURCHASER ASSUMES THE ENTIRE RISK AS TO ITS QUALITY AND PERFORMANCE.**

VERITY SYSTEMS SHALL IN NO EVENT BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, CONTINGENT OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY DEFECT IN THE SOFTWARE OR ITS DOCUMENTATION INCLUDING DAMAGES FROM LOSS OF DATA, EVEN IF VERITY SYSTEMS OR AN AUTHORIZED VERITY SYSTEMS DEALER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. YOU AGREE THAT VERITY SYSTEMS' LIABILITY, ARISING OUT OF CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR WARRANTY SHALL NOT EXCEED ANY AMOUNTS PAID BY YOU FOR THIS PRODUCT.

Any written or oral information or advice given by Verity Systems dealers, distributors, agents or employees will in no way increase the scope of this warranty. Nor may you rely on such oral or written communication. Some states do not allow the exclusion or limitation of implied warranties or liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

TABLE OF CONTENTS

Section 1	INTRODUCTION	7-8
1.1	Overview.....	7
1.2	Features.....	7
1.3	Specifications.....	7-8
Section 2	BOX CONTENTS	8
Section 3	CONNECTING YOUR PUMA	9
Section 4	BUTTONS & LIGHTS	9-10
4.1	Cancel Button.....	9
4.2	Print Cartridge Status Light.....	9
4.3	Resume Button & Light.....	9
4.4	Power Button & light.....	9
4.5	CD Tray Button.....	10
Section 5	INSERTING A DISC INTO THE PUMA	10
5.1	Inserting a Standard CD/DVD.....	10
5.2	Inserting a CD Business Card & Mini Disc.....	10-11
Section 6	INSERTING/CHANGING PRINT CARTRIDGES	11
Section 7	INSTALLING PRINTER SOFTWARE	12-13
Section 8	INSTALLING CD LABEL DESIGNER (Graphics Software)	13
Section 9	USING CD LABEL DESIGNER & PRINTING A DISC	13-15
Section 10	SETTING PRINTER PREFERENCES	16-24
10.1	Paper/Quality.....	16-17
10.2	Basics.....	17-18
10.3	Colour.....	19
10.4	Services.....	20
10.5	Mask Settings.....	20-21
10.6	Calibration.....	22-24

Section 11 ERRORS	25
Section 12 TECHNICAL SUPPORT	26
Appendix A OTHER GRAPHICS SOFTWARE PACKAGES	27-34
CorelDRAW & Photoshop.....	27
Create a Page.....	27
Introducing the Mask.....	27
Understanding the Mask Interface.....	28-30
Mask Type.....	28
Enable Mask.....	28
Standard Area Settings.....	29
Hub Area Settings.....	29-30
Mask Origin.....	30
Parameter Unit.....	30
Templates.....	30
Appendix B Recommendations & Maintenance	31-33
Standard Terms & Conditions	34-37

SECTION 1: INTRODUCTION

1.1 Overview

Verity Systems, world leading developers & manufacturers of optical disc duplication and printing systems, has launched a brand new, drawer mechanism CD/DVD printer: the Puma.

Working in partnership with Hewlett-Packard, the Puma brings professional print quality to the in-house production of CDs, DVDs, CD Business Cards and Mini CDs, delivering outstanding photo quality images directly onto the surface of discs, enabling customers to choose colourful backgrounds and images that reflect their company.

What's more, the Puma has been specifically designed to provide maximum versatility and high-speed printing and can be used in a variety of settings. The PC-based Puma offers professional desktop printing for the low volume/small business user, while the Puma can also be used in conjunction with an autoloader or automated disc duplicator for fast, unattended printing of greater quantities.

1.2 Features

- Professional, photo quality CD & DVD inkjet printer
- Desk-top printer
- Combine with autoloader
- Direct to surface colour inkjet printing
- Laser-sharp printing
- Perfect clean crisp graphics
- High speed printing
- 4800 dpi resolution with 16.7 million colours
- Hewlett-Packard inkjet Technology
- Genuine HP inks
- Ultra small ink drops (about 32 per dot)

1.3 Specifications

Minimum System Requirements:	Windows 2000: Pentium 133MHz, 64Mb RAM; Windows XP: Pentium 233 MHz, 128 Mb RAM
Power Requirement:	100 to 240 VAC, 50/60Hz
Environment:	Recommended operating temperature: 15 to 365 °C Recommended operating humidity: 20 to 80% RH non-condensing
Dimensions:	Width: 17.6" (447mm) Depth: 14" (356mm) Height: 6" (152.4mm) Net Weight: 5.5kg/12.12lbs (approx. without cartridges)
Media Support:	Prints directly onto the surface of inkjet printable 120mm CDs & DVDs, 86x61mm rectangular and 80mm x 61mm & 80mm x 63mm saddle CD business cards & 80mm mini discs
Connectivity:	Bi Universal Serial Bus. 2.0 Full Speed (USB), centronics parallel IEEE-1284 compliant.
Maximum Resolution:	Black: Up to 1200 dpi Colour: 4800 x 1200 optimised dpi colour printing on premium photo papers with 1200 x 1200 dpi input dpi resolution. Full colour spectrum of 16.7 million colours. HP PhotoREt III Colour Management System

Print Speed:	25% mono coverage @ normal, text quality approx.* 16 seconds per disc 25% mono coverage @ normal, inkjet quality approx.* 19 seconds per disc 100% full colour coverage @ normal, inkjet quality approx.* 24 seconds per disc 100% full colour coverage @ best Inkjet (PhotoRet) approx.* 52 seconds per disc 100% full colour coverage @ photo quality (PhotoRet), approx.* 134 seconds per disc (*Speeds given are approximations and are dependant on file size, disc coverage and processing speed)
Cartridges:	Dual Ink Cartridges: C8856A Black Ink Cartridge C8857A Tri-Colour Ink Cartridge

SECTION 2: BOX CONTENTS

Carefully remove your Verity Systems Puma from its shipping carton and verify that all parts are present. If there are missing or damaged parts contact *Verity Systems* or an authorised distributor immediately.

You should find the following:

- *Verity Systems* Puma
- Power Cable
- USB Cable
- Quick Start Guide
- CD, including Printer Driver, User Manual, Test Image, Templates
- 2 Blank Printable CDs
- One C8856A Black Ink Cartridge & One C8857A Tri-Colour Ink Cartridge
- CD Label Designer Graphics Software CD



Note:

Be sure to remove all pieces of protective tape. Remove the tape holding down the printer lid. Open the lid and remove the piece of foam holding the CD Tray in place.



Note:

If your Verity Systems Puma is damaged during shipment, please contact the freight carrier first, then, contact your distributor or Verity Systems. You should save your shipping materials so that if the need arises, you can return your Puma for service. This packaging was designed specifically for shipping your Puma. Other packaging may not be suitable.

SECTION 3: POWER ON

1. Connect the power cable to the printer and plug into the power supply.
2. Power up the Puma by pressing the Power Button. (See Fig. 1)
3. The Power Button light will flash for a short period then remain illuminated.

SECTION 4: BUTTONS & LIGHTS

The Printer Buttons let you turn the printer on & off, cancel a print job, open & close tray or resume printing. The lights give you visual clues about the status of the printer.

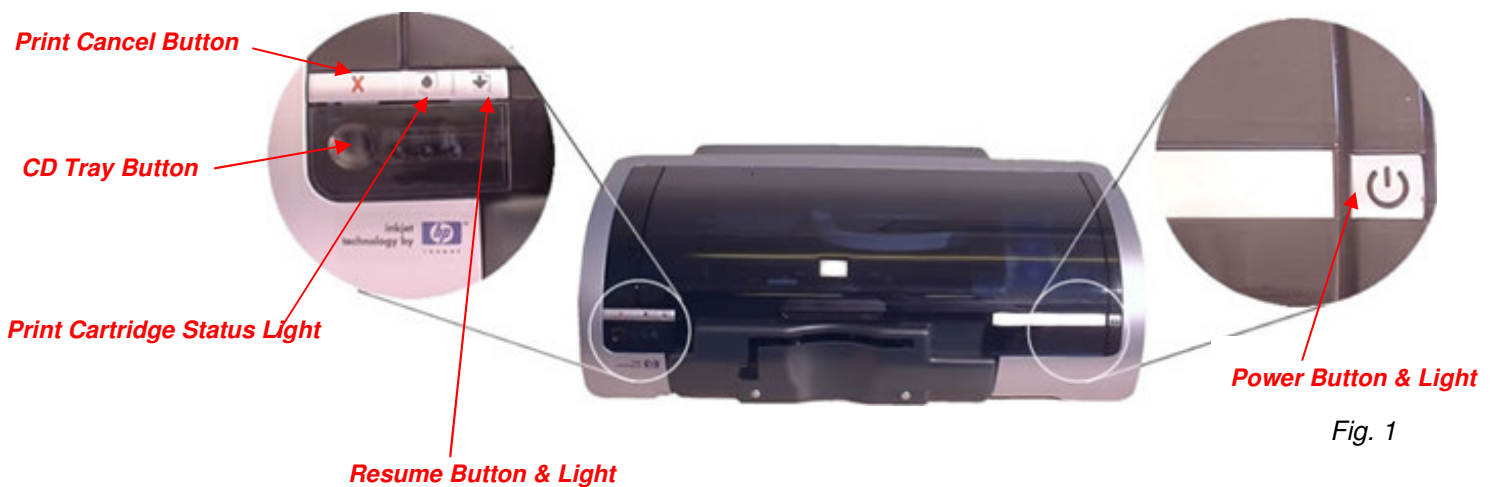


Fig. 1

4.1 Print Cancel Button

Pressing the Print Cancel Button cancels the current print job.

3.2 Print Cartridge Status Light

This light flashes when a print cartridge is low in ink or incorrectly installed, or the printer's top cover is open.

4.3 Resume Button & Light

This light will flash when an action is required such as loading a CD or clearing a CD jam. When the action is completed, press the Resume Button to continue printing.

The Puma also has a **multiple print capability**. If a multiple print command is sent from a PC, the first CD is printed as normal. Then when the CD tray is ejected, the resume light will flash. Place a new CD into the tray and press the Resume button. The CD tray will retract and the CD will be printed and so on for the number of copies requested.

4.4 Power Button & Light

The Power Button turns the printer on and off. It may take a few seconds for the printer to turn on after you press the Power button. The green light flashes when the printer is processing.



Caution!

Always use the Power button to turn the printer on and off. Using a power strip, surge protector, or a wall-mounted switch to turn the printer on and off may cause printer failure.

4.5 CD Tray Button

Pressing this button will slide the CD tray back and forth into the printer.

SECTION 5: INSERTING A CD INTO THE PRINTER

5.1 Standard (120mm) CDs & DVDs

With your Puma switched on, push the CD Tray Button on the front of the printer (see Fig.1 on the previous page) and the CD tray will slide out. Place a CD onto the tray ensuring that the disc sits against the two pins at the front of the tray as shown below in Fig. 2



Position the CD so that the edge of the CD sits against the edge of the two pins.

Fig. 2

When you send your image to printer, the CD Tray will tray slide back into the printer and printing will commence.

5.2 CD Business Cards & Mini Discs (option)

The Puma will also print directly onto inkjet printable CD Business Cards (rectangular and saddle/hockey rink) and Mini Discs, via the special adaptors (Fig. 3), which can be purchased separately (see your dealer for details). The adaptors come in two parts.

1. Open the CD tray by pressing the CD tray button on the front of the printer.
2. Place Part 1 of the adaptor onto the CD tray making sure that the 2 pins on the tray fit snugly into the corresponding holes on the adaptor part (Fig. 4).

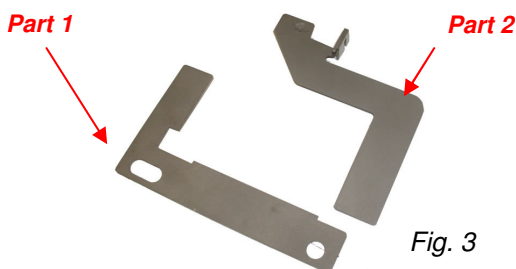
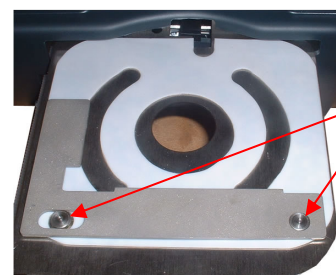


Fig. 3



Fit Part 1 onto the 2 locating pins on the CD tray

Fig. 4

3. Open the printer cover
4. Using your hand, slowly slide the CD tray back into the printer until approximately 1 inch of the CD tray remains protruding from the front of the printer.
5. Fit Part 2 of the adaptor matching the pin on the adaptor to the hole on the CD tray (Fig 5 & Fig. 6).

Locator hole on CD tray

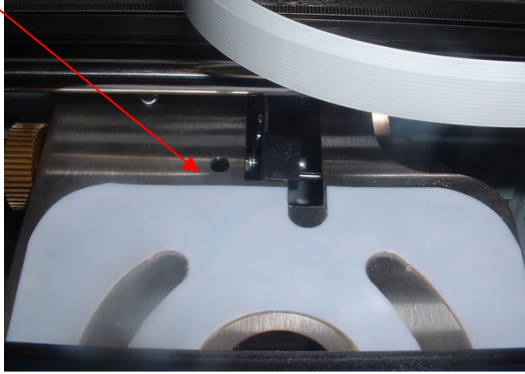
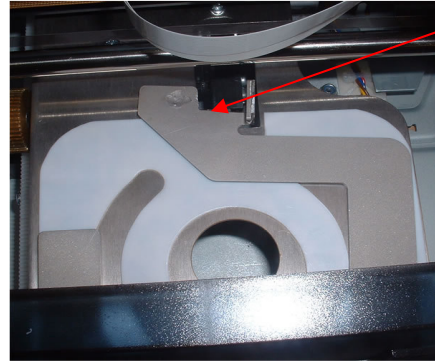


Fig. 5



Fit adaptor part into locator hole

Fig. 6

6. Close the printer cover and press the CD tray button so that the CD tray slides out.
7. Place the inkjet printable CD Business Card or Mini Disc into the adaptor, ensuring that it sits completely flat (Fig. 6).
8. As the tray slides back into the printer, Part 2 of the adaptor closes against the discs and holds it securely in place for printing.

SECTION 6: INSERTING/CHANGING THE PRINT CARTRIDGES

1. Press the Power Button to turn on the printer
2. Open the top cover
3. Lift the print cartridge latch to the open position (Fig. 7)
4. Slide the print cartridge out of the cradle (Fig. 8)
5. Remove the plastic tape from the print cartridge (Fig. 9)
6. Hold the cartridge so that the copper strip is on the bottom and rear
7. Slide the cartridge firmly into the cradle, colour on the left, black on the right. (Fig. 10)
8. Push down the print cartridge latch until it snaps closed. Close the top cover.

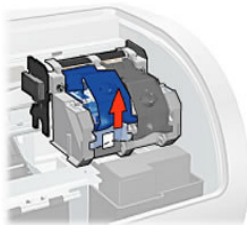


Fig. 7

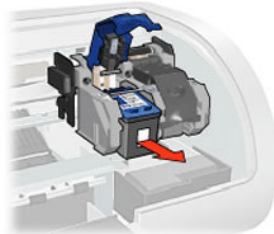


Fig. 8

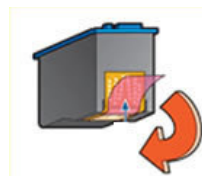


Fig. 9



Fig. 10

SECTION 7: INSTALLING THE PRINTER SOFTWARE



Note:

Your Puma **should not** be connected to your PC during the initial software installation. If connected, **remove the USB and power cables from the printer**. There may be variations in the following instructions depending on operating system (2000 or XP) and configuration.

1. Place the Printer Driver CD into the CD-ROM drive of your PC. The **Verity_Puma** installation wizard should automatically start.
2. Follow the on-screen instructions, clicking **Next** when prompted. When prompted, click **Install** to begin installation.
3. The **Digital Signature Not Found** message box will appear (see Fig.11). You will be asked if you wish to continue installation, select **Yes**. In Windows XP, select **Continue Anyway**.
4. On the final screen click **Finish**.
5. Connect the Puma to your PC via the USB cable.
6. Connect the power cable to the back of the Puma and plug into the power supply. Switch on the printer.
7. If the **Digital Signature Not Found** message box appears again, select **Yes** to continue installation. In Windows XP, select **Continue Anyway**.
8. The **Found New Hardware** box will appear on screen, which will search for the driver. In Windows XP select **No, not at this time** and click **Next**.
9. At the next box, select **Install the software automatically (Recommended)** and click **Next**.
10. If the **Digital Signature Not Found** message box appears again, select **Yes** to continue installation. In Windows XP, select **Continue Anyway**.
11. When prompted, click **Finish**.



Fig. 11



Note:

The message, which appears above, is merely precautionary from Windows and it is not necessary to stop the installation.



Note:

If your PC does not recognize the new Puma hardware when you first connect it to your PC, you should load the print driver via the **Add Printer** icon on your Printer settings:

- a. Place the Print Drive CD into your PC's CD-ROM drive
- b. On you PC's desktop, select **Start, Settings** and **Printers**
- c. Double click the **Add Printer** icon and follow the on screen instructions

- d. When prompted, select **Local Port**
- e. When the Wizard asks for the name of the printer, click the *Have Disk* button and navigate to the **enu/drivers/win2k_xp/Puma.inf** file on the CD-ROM and select **Open** and then **OK**.
- f. The driver will begin to install on your PC.
- g. Whenever prompted click **Next**.
- h. When complete, select **Finish** and the Verity Systems Puma print driver icon will appear in your printer settings
- i. The **Digital Signature Not Found** message box (see Fig. 11) will appear. You will be asked if you wish to continue installation, select **Yes**. In Windows XP, select **Continue Anyway**.

SECTION 8: INSTALLING CD LABEL DESIGNER (Graphics Software)

The CD Label Designer software allows you to create stunning designs for your discs. There may be variations in the following instructions depending on your operating system (2000 or XP) and configuration.

1. Insert the CD Label Designer software disc into the CD-ROM drive in your PC and the installation wizard should automatically start.
2. Click **Next** when prompted to continue. Read the license agreement, and tick the box to confirm that you agree.
3. Continue to click **Next** when prompted to continue with the installation.
4. Click finish following the installation to confirm.
5. When you start the software for the first time, you will be prompted to enter a registration key; this is printed on the label on the CD Label Designer wallet.

SECTION 9: USING CD LABEL DESIGNER SOFTWARE

Double click the CD Label Designer icon on your desktop, or select the program from your start menu.

CD Label Designer will automatically default to a blank label (Fig. 12), here you can create your own label using the software, or you can open a previously saved project.

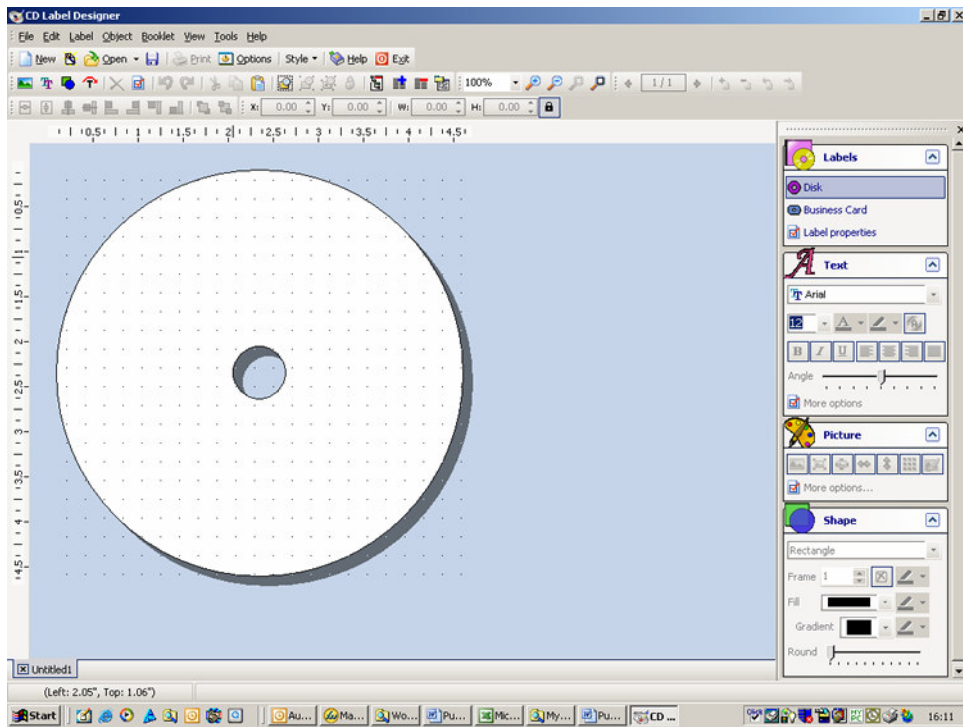


Fig.12

To open a saved project, click

File → Open, browse for your file, then click Open.

The toolbar in CD Label Designer allows you to import graphics, add text, and add shapes to your design.



CD Label Designer also enables you to add track listings and many other features. The software is very similar to many Windows applications in terms of functionality. When you have finished creating your label, save the project by clicking File → Save. Enter a filename and click the Save button.

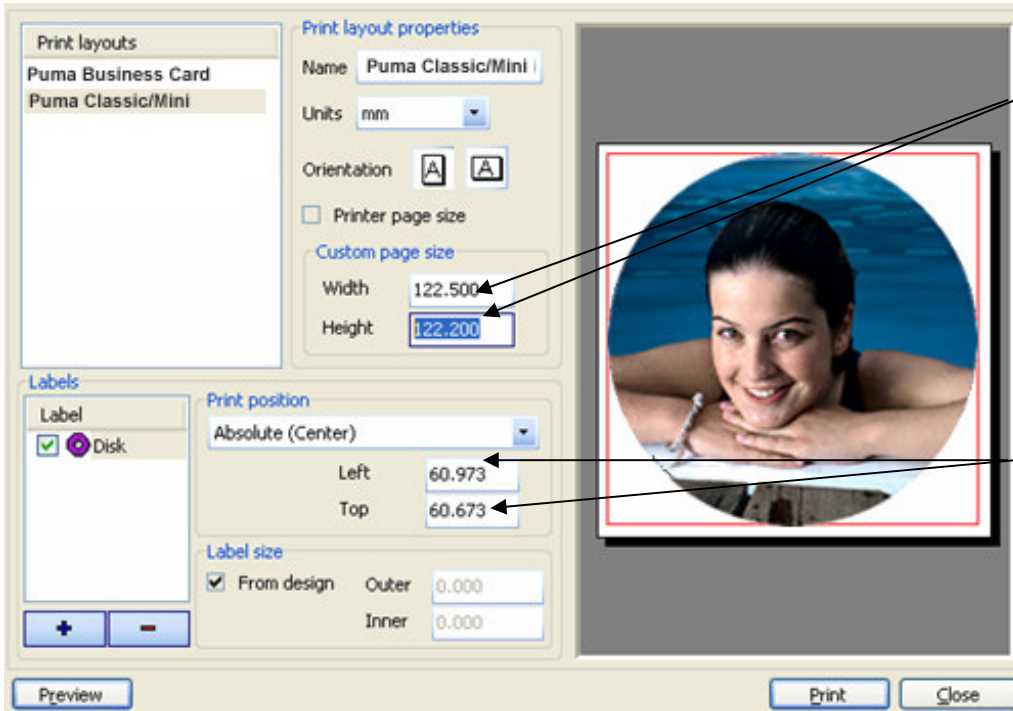
To print a disc:

- Click on File → Print.
- Ensure the printer selected at the top of the Window is the Puma
- Ensure the 'Print Layout' selected on the left hand side of the window is the 'Puma Classic/Mini'
- Click on the Print button.



Note:

Every Puma is factory set for the correct position however, CDs can vary in size and it may be necessary to make minor adjustments. The print position can be adjusted in the Print window within CD Label Designer.



These options adjust the dimensions of the label – entering in lower values will decrease the printable area, higher values will increase it.

If the printed image is off centre on your disc, you can adjust these values to change the position of the disc.

Increasing the Left value will move the print to the right, increasing the Top value will move the print down.

Fig. 13

When you are happy that the template is in the correct position, place a blank CD into the CD tray. Select **Print** again.

These values will be saved for future prints, so you will only have to adjust these settings once.

SECTION 10: SETTING PRINTER PREFERENCES

You can choose a number of printing options on your Puma from the Printer Preferences menu.

10.1 Paper/Quality

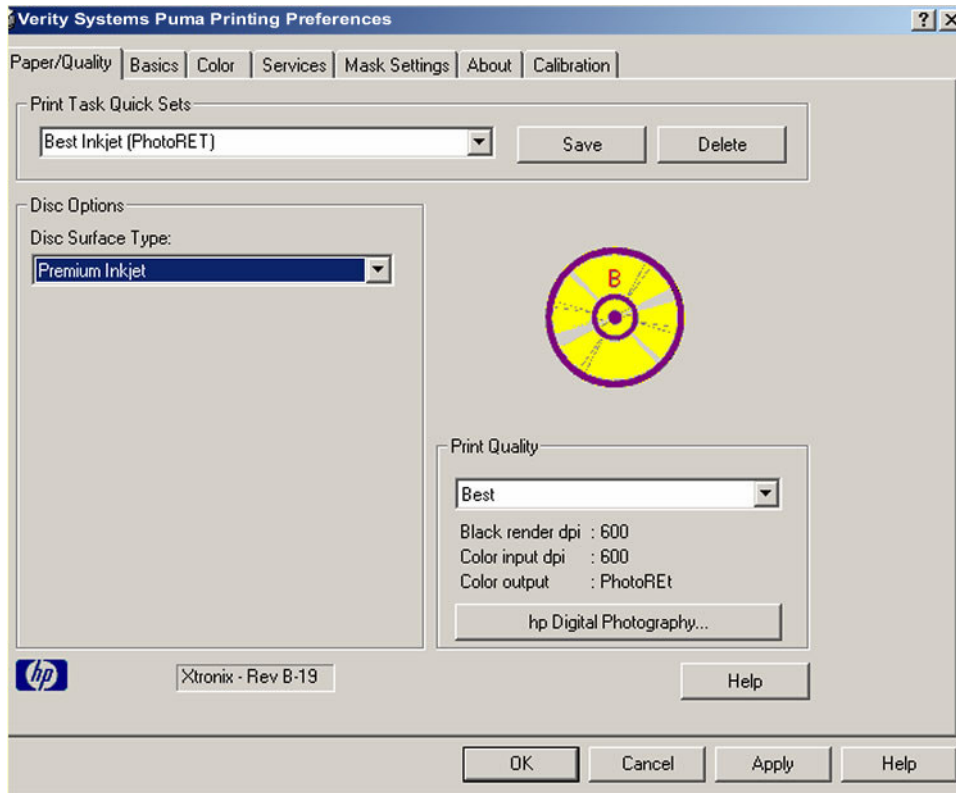


Fig. 17

This screen allows you to select the appropriate output quality for your disc.

Disc Surface Type

Select the type of surface you want to print on from this drop down list. Choose from: *White Inkjet; Premium Inkjet; Other Inkjet; Premium Glossy; Premium Plus Glossy; Premium Matt; Colorfast Glossy; Glossy; 4800x1200dpi; Other Photo Quality; Text Quality*

The choice you make here will depend on the image you wish to print. If you are printing basic text, select *Text Quality*. If printing basic graphics, select *White Inkjet*. For images where only the very best will do, such as high-resolution photos, select *Premium Inkjet* or *Premium Matt* or *Glossy*.

Print Quality

There are 6 options to choose from:

- **FastDraft:** Prints at the fastest speed while using the least amount of ink.
- **Fast Normal:** Prints faster than *Normal* mode and at a higher quality than *FastDraft*.
- **Normal:** Prints faster than *Best* and at a higher quality than *Fast Normal*.
- **Best:** Provides high quality printing
- **Maximum dpi:** Provides the highest quality printing but requires longer to print than *Best* and requires a large amount of disk space.

Print Task Quick Sets

In addition to using the *Disc Surface Type* and *Print Quality* options to set your output quality, the Puma is pre-programmed with nine print settings:

- Default
- Premium Photo Quality Matt (4800x1200 dpi)
- Premium Photo Quality Glossy (4800x1200 dpi)
- Photo Quality Matt (PhotoRET)
- Photo Quality Glossy (PhotoRET)
- Best Inkjet (PhotoRET)
- Normal Inkjet (600x600 dpi)
- Normal Text (300x300 dpi)
- Fast Text (300x300 dpi)

Selecting a setting will automatically select the most suitable disc surface and print quality for the job in hand.

Example

If you select *Premium Photo Quality Matt (4800x1200 dpi)*, the *Disc Surface Type* is automatically set to *Premium Matt* whilst the *Print Quality Type* is automatically set to *Maximum dpi*.

You can delete these pre-programmed settings and even create your own using the *Save* and *Delete* buttons.

10.2 Basics

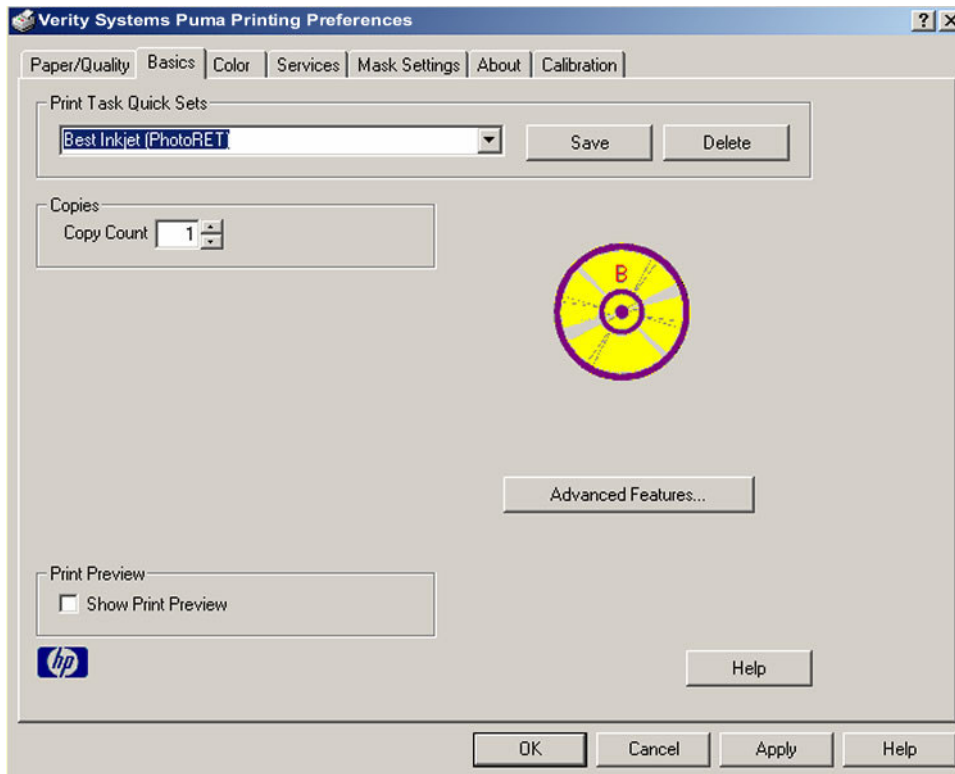


Fig. 18

This tab allows to you:

- a. Select multiple copies to print in the *Copies* field.

- b. Click the *Print Preview* checkbox and a preview of your print image will automatically appear on screen each time you print.
- c. Select *Advanced Features* and you are presented with the following options (Fig.19):

Ink Volume: Select this feature to lessen or increase the amount of ink used to print a document.

Dry time: Select this feature to increase the time the printer holds a document

After printing if ink on your printed document smears.

Low Memory Mode: Select this option to allow the draft to be printed if your computer does not have enough memory or disk space to print a document.

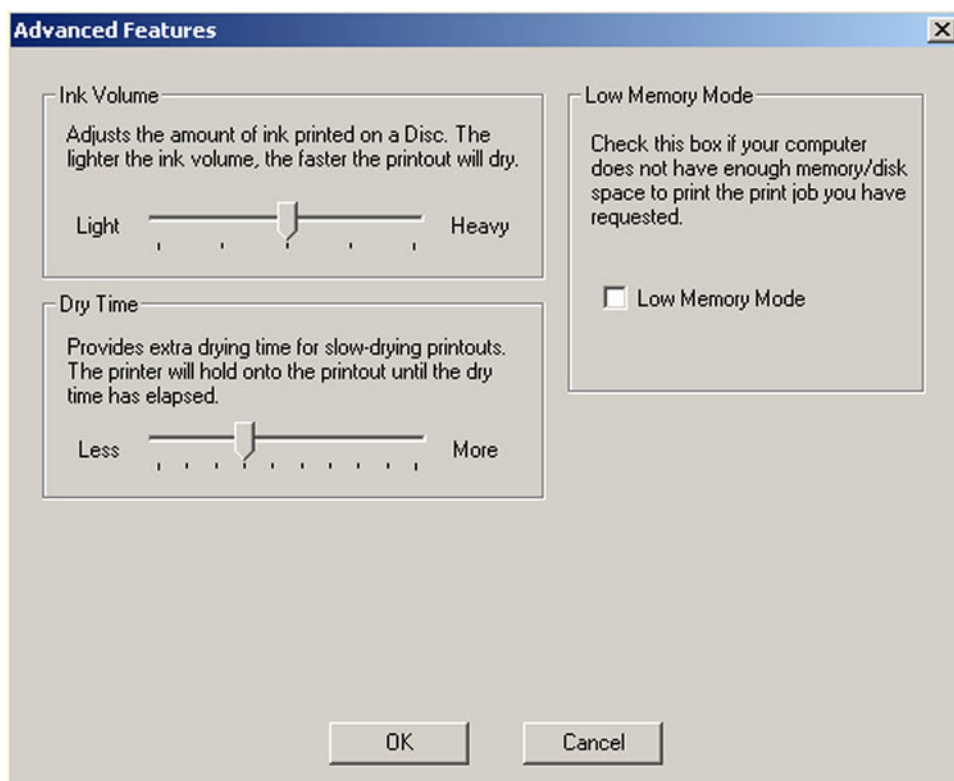


Fig. 19

10.3 Colour

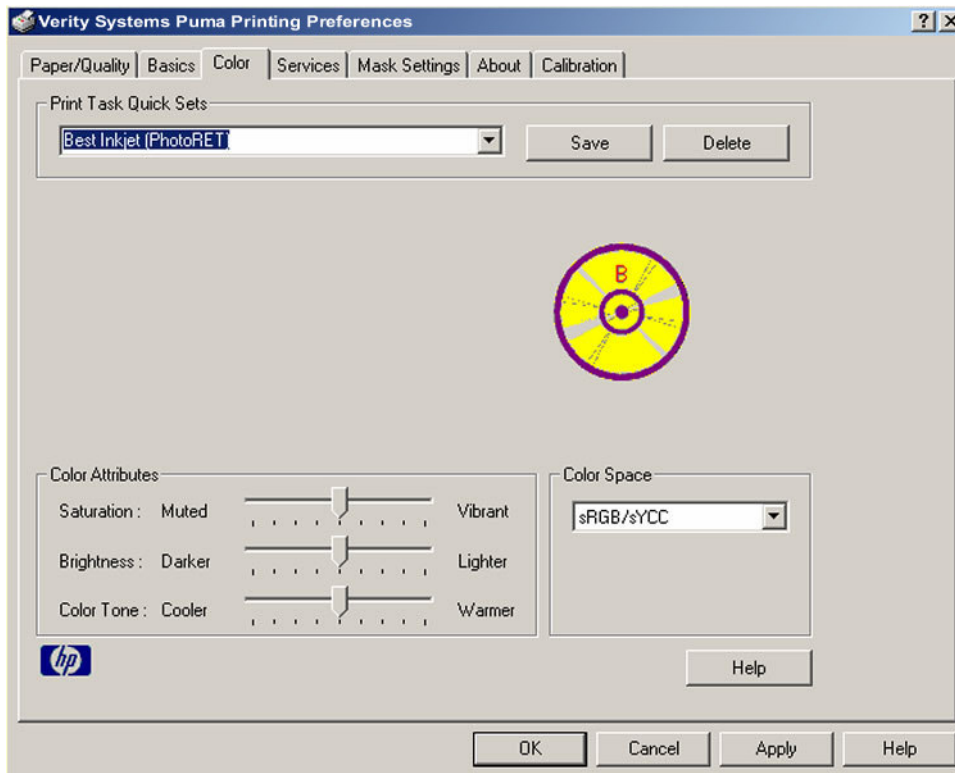


Fig. 20

- Saturation:** Intensity of printed colour
- Brightness:** Lightness or darkness of printed colours
- Colour Tone:** Warmth or coolness of printed colours
- Colour Space:** Defines the range of colours that can be printed.
sRGB/sYCC is an appropriate colour space for most print jobs.
Adobe RGB is an emerging colour space that offers more colours than *sRGB/sYCC*, but which only works for images.

10.4 Services

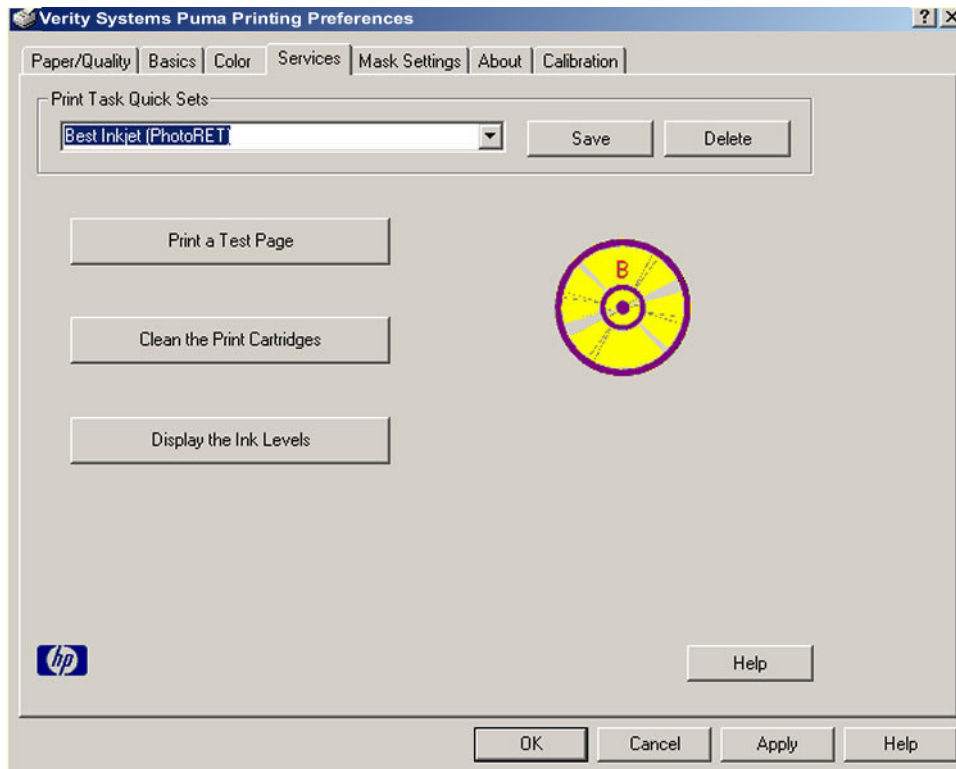


Fig. 21

- Print a Test Page:** Prints a test image onto a CD (ensure you have a disc in the Puma before selecting this option).
- Clean the Print Cartridges:** Cleans the print cartridges & prints out a test image (Ensure you have a disc in the Puma before selecting this option).
- Display Ink Levels:** Estimates the amount of ink left in each cartridge. (Displays only when printing)

10.5 Mask Settings

The Puma's built in mask determines the printable area for your image and prevents your image from being printed outside the printable area of the CD media you are using or onto the CD tray of the printer itself.

This mask should be used when printing discs **using any design software program other Than the CD Label Designer software which is included with your printer**; for example, CorelDRAW or Photoshop.

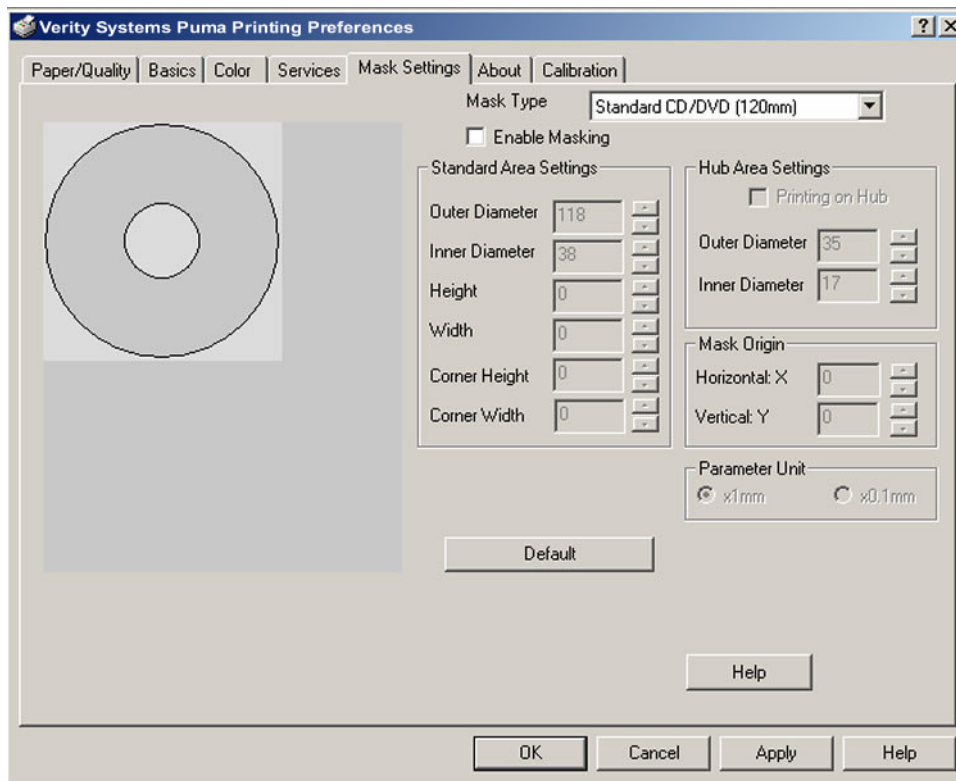


Fig. 22

- Mask Type:** Select the mask that matches the media to which you wish to print on. Choose from the following:
 - Standard CD/DVD (120mm)
 - Business Card Rectangle (86x 61mm)
 - Business Card Rectangle (80 x 61mm)
 - Mini CD (80mm)
- Enable Mask:** Click this checkbox to switch the Puma’s mask on or off.
IMPORTANT. If you are using CD Label Designer software, you **MUST** switch off the mask.
- Standard Area Setting:** Adjust the printable area of your design.
- Hub Area Setting:** To print on the central hub of a CD, check this box and adjust dimensions accordingly.
- Mask Origin:** To alter the origin of the mask when printing through a graphics package other than CD Label Designer.
- Parameter Unit:** Select the size of unit you wish to make changes with, I.e., either 1mm or 0.1mm increments.

For more information on using the Puma mask and using graphics software other than CD Label Designer, see Appendix A

10.6 Calibration

Your Puma comes from the factory pre-calibrated to print the image in the centre of the CD. However, during the life of the printer it may be necessary to recalibrate it to ensure a perfect image position on the CD. This tab allows you to fine-tune the position of the printed image with the CD.

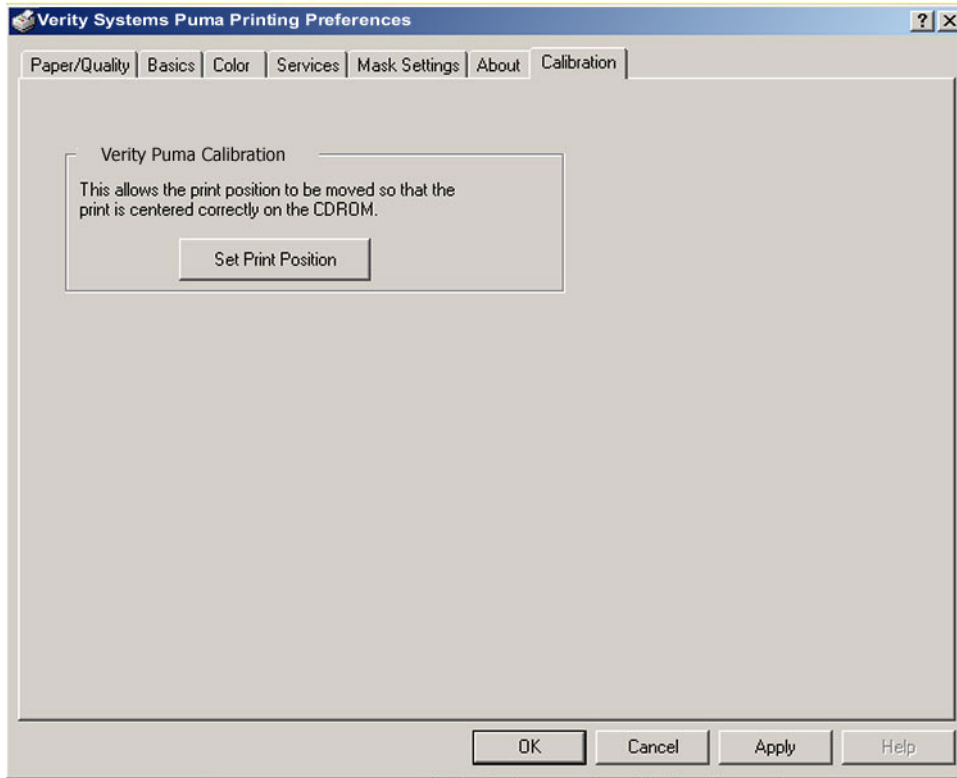


Fig. 23



Note:

In order to set the calibration, the Puma must be attached to your PC via the USB cable. Calibration will not work if the printer is connected via the parallel port.

Click the *Set Print Position* button, the Calibration Screen appears (See Fig. 24).

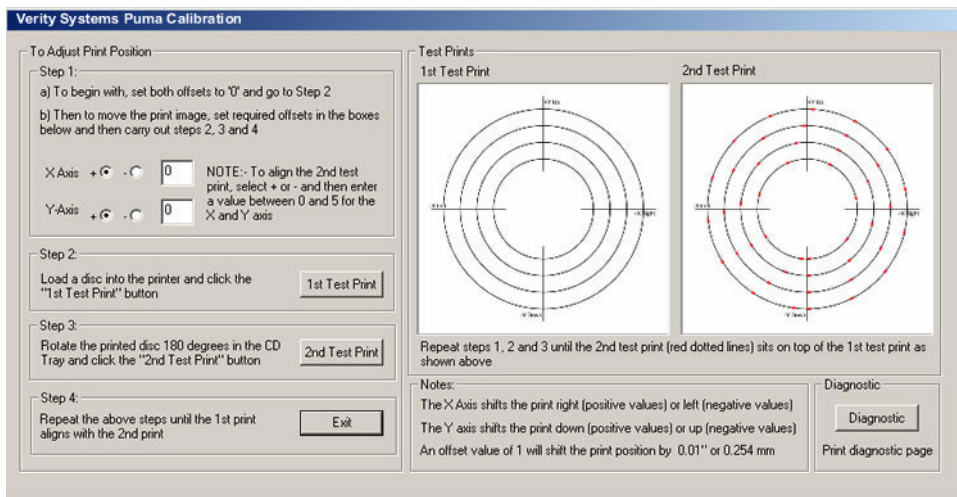


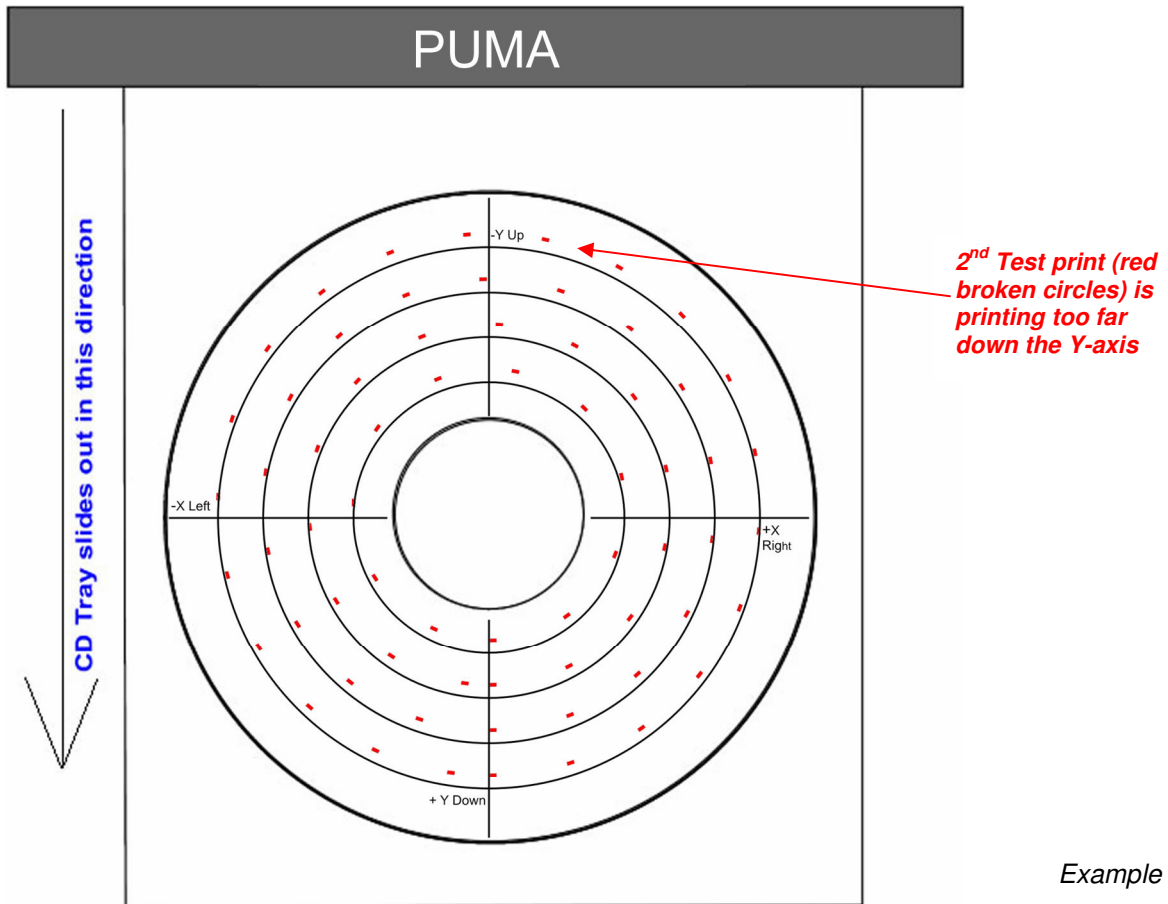
Fig. 24

Follow the on screen instructions.

1. Step 1: Set both offsets to '0'. This is the default setting.
2. Step 2: Place a disc onto the CD tray and retract the tray into the printer. Click '1st Test Print'. A series of solid black circles will print onto the disc as shown in Fig. 24 on the previous page.

3. Step 3: rotate to discs 180 degrees in the CD tray and retract the tray once more into the printer. Click '2nd Test Print'. A series of broken, red circles will print onto the disc as shown in Fig. 24 on the previous page.
4. If the printer is in calibration, the 2nd Test Print should sit directly on top of the 1st. If this is not the case, the 'Offsets' need to be adjusted.
5. Adjust the Offset

Example 1

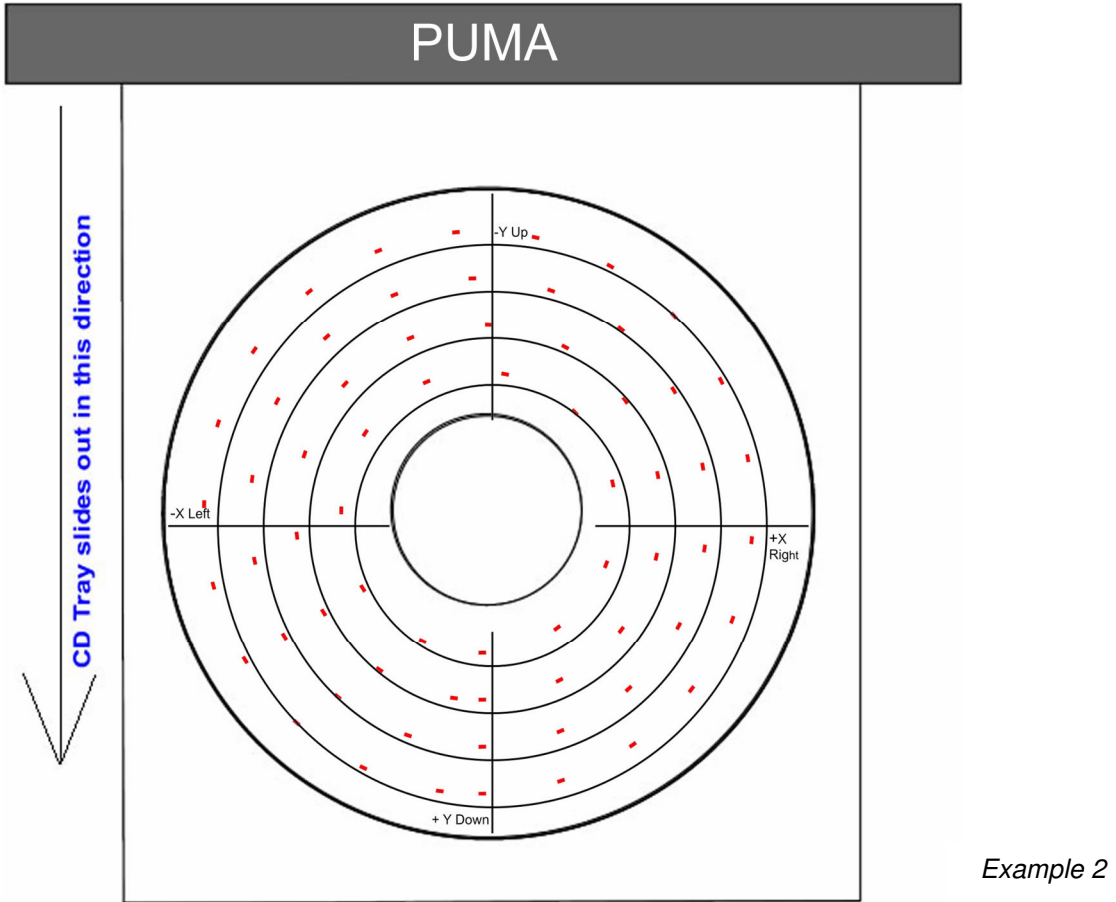


Example 1

The 2nd test image prints out of line as shown in Example 1 (the red broken circles are printing perfectly on the X-Axis, but too far down on the Y-Axis). To bring the two test prints together you would need to adjust the Y-axis by a negative value.

Under Step 1 on the Calibration screen, select the negative ('-') check box next to the Y-axis and enter a value between 1 and 5. An offset value of 1 will move the print position by 0.01" or 0.254mm.

Example 2



The 2nd test image prints out of line as shown in Example 2 (the red broken circles are printing too far right on the X-axis and too far down on the Y-axis). To bring the two test prints together you would need to adjust the X-axis by a negative value and the Y-axis by a negative value.

Under Step 1 on the Calibration screen, select the negative ('-') check box next to the X-axis and the Y-axis and enter a value in each between 1 and 5.

6. Once you have entered a value, repeat Steps 2, 3 and 4 until both Test prints align.

Some trial an error will be required in order to get the alignment exactly right.

7. When you have completed the calibration, hit the *Exit* button, the numbers you have entered are stored inside the printer's memory so the calibration you have set will remain if the printer is powered down or disconnected from the PC.

SECTION 11: ERRORS

You can identify many common problems using the lights on the printer's control panel. The following list highlights common errors and the recommended corrective measures:

Print Cancel Button
Print Cartridge Status Light
Resume Button & Light
Power Button light

1. Printer Cartridge light is On or Flashing

The top cover is open Close the cover

Problem with print cartridge Verify correct cartridge is installed and that installation is correct

Cartridges may be low in ink If this is the case, the printer cartridge light will stop flashing once the top cover is opened or the printer is printing. The problem is not related to the ink volume if the light continues to flash when the top cover is opened.

2. Power Light is Flashing

The printer is preparing to print. The light stops flashing when the printer has received all data.

3. All Lights are flashing

The printer may need to be restarted.
Press the Power Button to turn off the printer, then press the Power Button again to restart the printer.

If the lights continue to flash, press the Power Button to turn off the printer. Disconnect the printer from the power source. Reconnect the printer to the power source. Press the Power Button to turn on the printer.

SECTION 12: TECHNICAL SUPPORT

You should first attempt to get technical assistance from your dealer or distributor.

Verity Systems support personnel can be reached at:

VERITY SYSTEMS LTD

2 Eastern Road
Aldershot
Hampshire
GU12 4TD
United Kingdom

Tel: +44 (0) 1252 796901
Fax: +44 (0) 1252 316555
Email: uksupport@veritysystems.com
Open GMT Time

VERITY SYSTEMS, INC.

5441 Merchant Circle, Unit A
Placerville
California
95667
United States

Tel: (530) 626-9363
Fax: (530) 626-9395
Email: ussupport@veritysystems.com
Open PST Time

APPENDIX A: Using other Graphics Software Packages

CoreIDRAW & Photoshop

While CD Label Designer offers a quick and easy method for designing CDs, if greater control & more flexibility is what you need, you may wish to use a package such as Photoshop or CoreIDRAW to design your discs.

Create A Page

If you wish to use CoreIDRAW or Photoshop graphics software to create an image to print on the Puma, we recommend you start by creating a page 120 mm x 120 mm in your design software.

Introducing the Mask

Unlike other CD & DVD printers on the market, the Puma boasts a unique and easy to use mask, which makes the accurate printing of CDs from graphics software packages such as CoreIDRAW & Photoshop easier than ever before.

The Puma mask looks something like Fig. A. The shaded area represents the mask itself and through the use of the mask, the printer is prevented from printing an image onto this area.

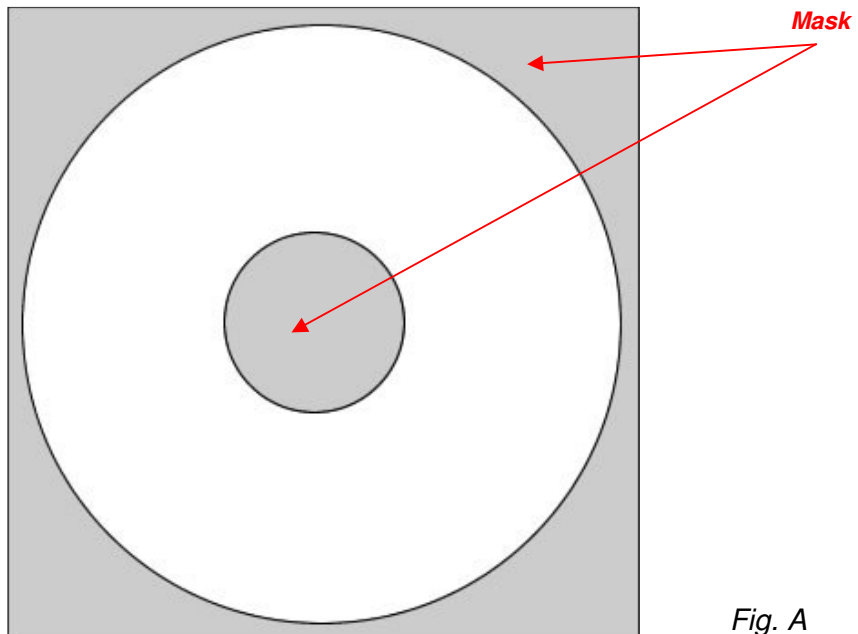


Fig. A

Understanding the Mask Interface

The Puma mask interface, located in the Printer Preferences, looks like this:

Selected mask will be displayed here

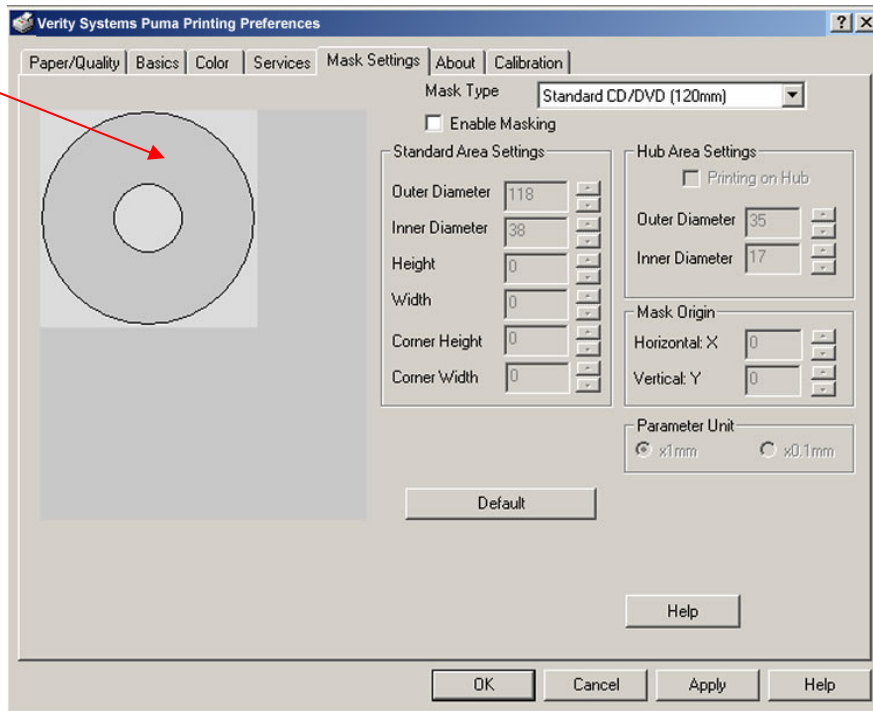


Fig. B

Using the mask, adjustments can be made to match exactly the size of media you wish to print. Each of the features included on the mask interface is described on the following pages:

Mask Type:

The Puma has pre-determined masks for the following types of media:

- Standard CDs & DVDs (120mm)
- Business Card Round (63mm) (i.e. Saddle/Hockey)
- Business Card Round (61mm) (i.e. Saddle/Hockey)
- Business Card Round (58mm) (i.e. Saddle/Hockey)
- Business Card Rectangular (58mm)
- Business Card Rectangular (63mm)
- Mini CDs (80mm)

Select the media you wish to print from the drop down list and a picture of that mask will appear on the interface (see Fig. B).

Enable Mask:

Ensure this box is checked.

Standard Area Settings:

This feature allows you to adjust the print area of the mask. You can amend the following dimensions:

Outer Diameter – Can be used when printing standard 120mm CDs & DVDs and Mini Ds



Note:

The maximum print area for a CD is 120mm in diameter. The mask will not accommodate and the printer will not print beyond this diameter.

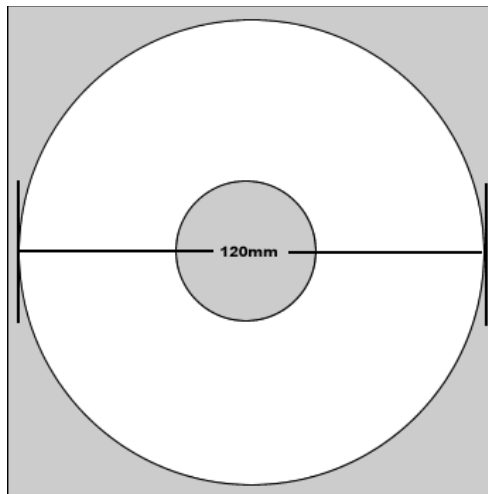


Fig.C

However, this outer diameter can be reduced to accommodate the slightest variation in printable media.

- Inner Diameter:** This can be increased or decreased in size
- Height:** To adjust the height of the mask for CD business cards
- Width:** To adjust the width of the mask for CD business cards
- Corner Height:** To adjust the corner height of the mask for CD business cards
- Corner Width:** To adjust the corner width of the mask for CD business cards

Hub Area Settings:

To print on the hub of your chosen media, first check the “Printing on Hub” checkbox as shown in Fig. D.

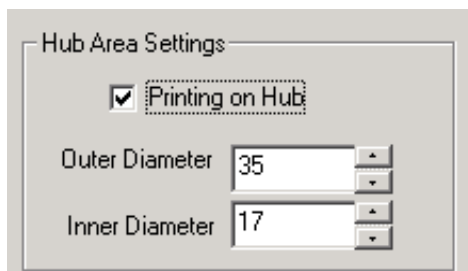


Fig. D

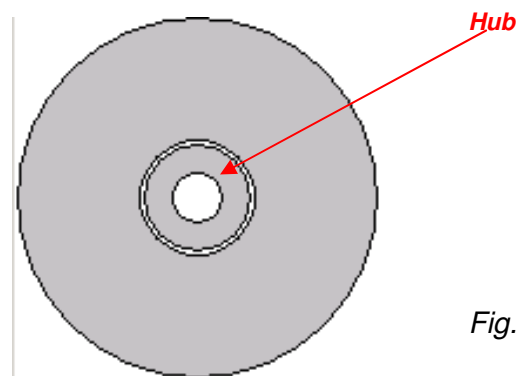


Fig. E

The mask interface displays the hub.
 Once again the **Outer & Inner** diameters of the hub can be adjusted to fit your media's requirements exactly. See Fig. B.

Mask Origin:

The Calibration tab should be used to align your print image with the CD, however, the masks origin can also be used to more the position of the image by entering values in the X & Y axis.

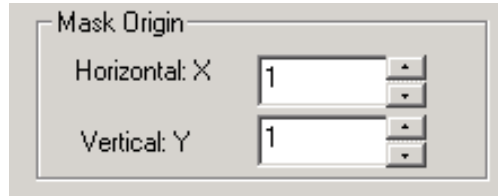


Fig. F

As you will see from the above diagram (Fig. F), the maximum distance you can move the mask is 1mm in any direction. It is therefore advisable to change the unit of parameter from x 1mm to x0.1mm as shown below in Fig. G This way, tiny movements can be made to align the mask perfectly.

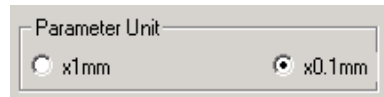
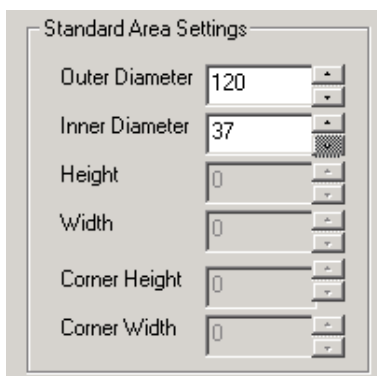


Fig. G

Parameter Unit:

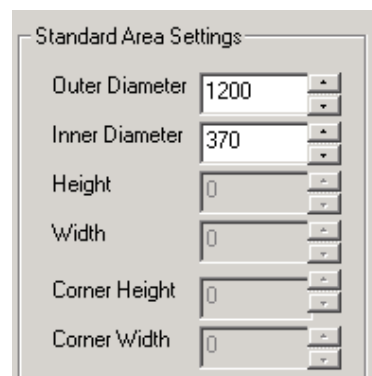
As mentioned above, the parameter unit can be changed from x1 mm to x 0.1 mm movements allowing you to adjust your mask by tiny increments at a time so that a perfect mask can be achieved.

Changing this setting to x 0.1 mm will result in all measurements on the Mask interface being shown as tenths of a millimetre as shown in Fig. H



Parameter Unit = x1mm

Fig. H



Parameter Unit = x0.1mm

Templates:

To help you position your images correctly in either CoreIDRAW 11 or Photoshop7, templates are included on the CD enclosed.

These templates should be used as guides as to where to position your graphics in relation to the media you wish to print.

APPENDIX B: RECOMMENDATIONS & MAINTENANCE

Positioning your Puma

- ◆ Ensure your Puma is placed on a flat surface.
- ◆ Ensure there is sufficient ventilation around your printer.
- ◆ Avoid places subject to dust, moisture & vibrations.

Maintaining your Printer

- ◆ **DO NOT** force the print cartridge cradle – always follow the correct procedures for changing ink cartridge (see section 5).
- ◆ **DO NOT** manually force the CD tray into the printer
- ◆ From time to time the CD tray of the Puma may collect deposits of ink where an image has printed directly onto the CD tray. To clean the tray simply wipe with a moist cloth.
- ◆ **DO NOT** put your hand or any other object inside the printer while it is printing.
- ◆ **DO NOT** spill liquid onto the printer

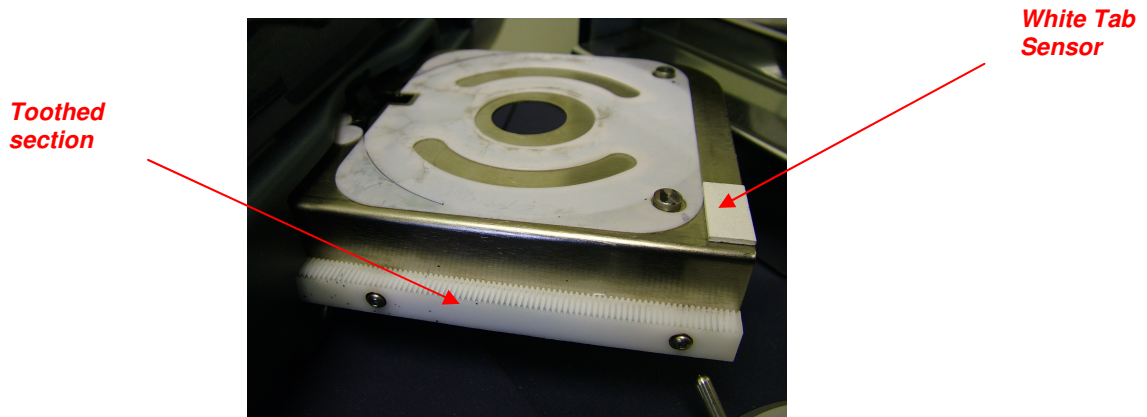
Getting the Most out of Your Puma

- ◆ If you wish to print photo-quality graphics onto your CDs & DVDs, the higher the input the higher the output.
- ◆ Use jpegs, tiff files that are 300dpi resolution

Cleaning Procedure

The following procedures will cure most print quality issues such as distorted images/text and banding. If printing does appear to be off-centre, these procedures should also provide a suitable remedy.

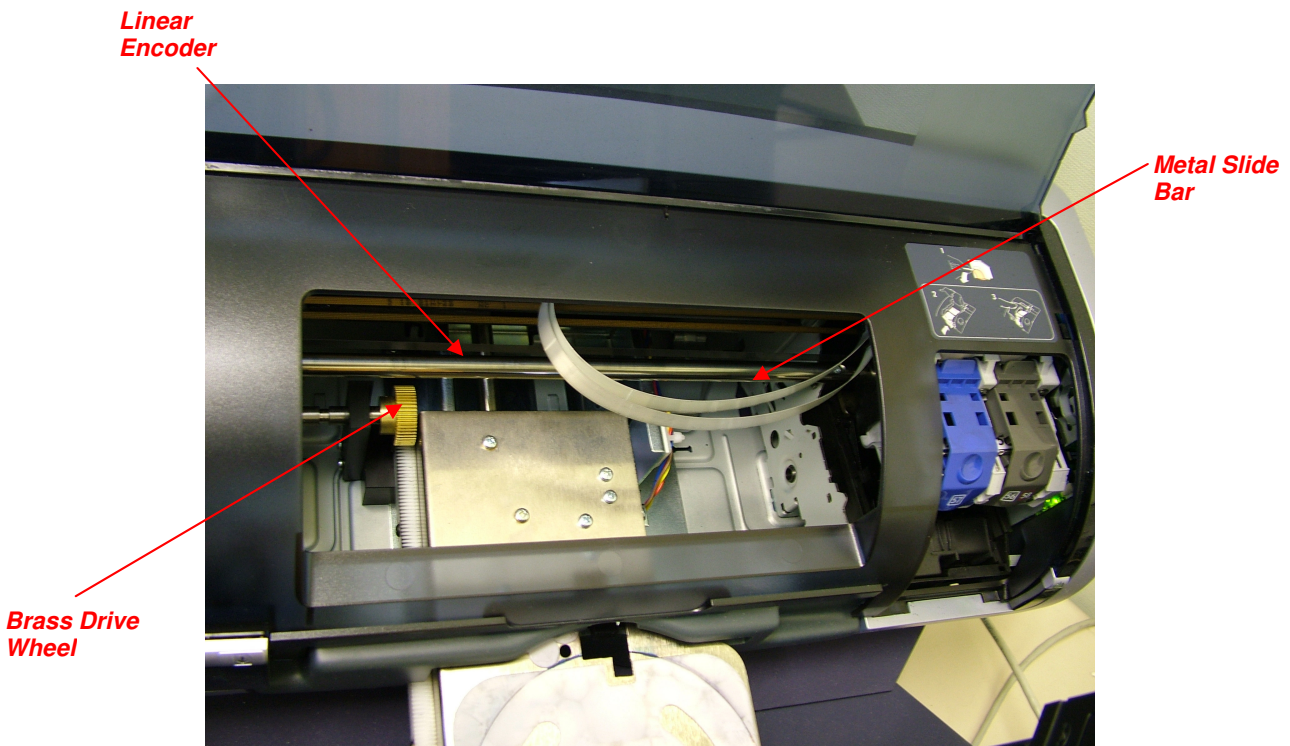
1. Eject the printer tray. On the front left hand corner of the tray is a white tab (see image below). This tab is an optical sensor for the printer and should be kept brilliant white. To clean it, use a fresh pencil eraser.



- On the left hand side of the tray there is a toothed drive section (see image above). If this drive section is dirty, it may effect the tray action. This can cause print quality issues and distorted images.

The toothed section is very easy to clean. Simply brush it gently with a soft damp (not wet) toothbrush or similar, and wipe away any excess with a soft cloth.

- With the printer lid open, you will see the brass cog/wheel (see picture below) that drives the printer tray. Clean this in the same way as the toothed section using a soft damp toothbrush. Again remove any excess with a soft cloth.



- The print carriage moves left to right on a metal slide bar (see picture above). Over time, this can become contaminated with ink/dirt. To clean, simply dampen a lint-free cloth with some light machine (or 3-in-1) oil, and wipe along the slide bar. This will clean and lubricate the bar at the same time.

5. Approximately 20mm (3/4 inch) above the slide bar runs the linear encoder (see image above). This encoder tells the print carriage where to stop horizontally. If it becomes contaminated with ink, it may cause banding on the printed disc.

To clean the linear encoder, wipe it with a damp lint-free cloth.

Calibration

The Puma comes with its own calibration tool within the printer driver. If the printed image is slightly off centre, you can re-align and re-centre the printed image.

For more information regarding calibration, please refer to section 10.6 (page 23) of the printer user manual.

STANDARD TERMS AND CONDITIONS OF SALE

In these conditions "Verity Systems" is Verity Systems Limited, having its registered office at Verity House, 2, Eastern Road, Aldershot, Hampshire, GU12 4TD, UK. And the "Purchaser" is an individual or company with whom Verity Systems contracts.

All orders are accepted by Verity Systems subject to Conditions of Sale set out below

1. GENERAL

These conditions shall prevail over any terms or conditions, which the Purchaser may seek or have sought to impose. Any conditions in the Purchaser's Order will be binding only so far as they are compatible with these Terms and Conditions and are expressly accepted by a Director of Verity Systems in writing.

2. ERRORS

Clerical errors may be corrected by Verity Systems at any time.

3. PRICES

The prices quoted are Ex Works and exclude Value Added Tax/sales tax. Any published list price shall be subject to revision without notice according to Verity Systems prices ruling at the time of delivery.

4. SETTLEMENT TERMS

Punctual payment is the essence of the Contract and the Purchaser will pay interest at the rate of 2% per month or part thereof of any overdue payments. Provided that the Purchaser has produced references which are in Verity Systems' opinion are satisfactory Settlement Terms will be net 30 days from delivery. In all other cases payment shall be in advance upon submission by Verity Systems of a pro forma invoice.

5. DELIVERY

All times quoted for delivery are from receipt from the purchaser of a written order to proceed. Unless otherwise agreed in writing any quoted delivery date shall only be an estimate thereof and shall not be essence of the Contract. Whilst all reasonable endeavours will be made to comply with estimated delivery dates Verity Systems does not accept any liability in respect of failure or delay in delivery. Where a Purchaser's Order calls for a number of items Verity Systems reserves the right to deliver all or any as soon as they are available at Verity Systems' premises and the Purchaser shall honour all statements presented in respect of such deliveries in accordance with the Settlement Terms. Notification to the Purchaser by Verity Systems that the goods are available for delivery to an independent carrier or to the Purchaser or his agent shall constitute delivery to the Purchaser. In all cases the carrier acts as Agent of the Purchaser.

6. EXPORT CONTROL

If the goods or components thereof are licensed by the US Government for ultimate destination within the United Kingdom and any other EEC Country then the goods may not be re-exported without the approval of Verity Systems in writing.

7. INSPECTION AND ACCEPTANCE

THE PURCHASER MUST INSPECT THE PRODUCTS as soon as is reasonably practicable after delivery and shall within 3 working days of delivery give notice to Verity Systems in detail of any defect in the Products or of any other complaint which the Purchaser may have in relation to the Products. Upon acceptance of the goods the Purchaser shall be deemed to acknowledge that the goods so accepted conform in all respects with the specification of the goods ordered. If the Purchaser desires to inspect the goods prior to delivery such inspection must be made at Verity Systems' premises and notification of this requirement must be given in writing at the time of placing the order. If upon inspection the goods are approved by or on behalf of the Purchaser such approval shall constitute acceptance of the goods. If no such inspection is made the Purchaser shall be deemed to have accepted the goods when they are delivered to him or his agent or carrier unless the Purchaser gives written notice to the contrary to Verity Systems within three working days of delivery. If the Purchaser fails to give such notice, the Products shall be conclusively presumed to be in all respects in accordance with the contract and free from any defect which would be apparent on reasonable examination and the Purchaser shall be deemed to have accepted the Products

accordingly. The Purchaser acknowledges that Verity Systems does not write software comprised in Products sold by it and, accordingly, the Purchaser acknowledges that it is its sole responsibility to check (by the application of appropriate diagnostic software) for the presence of computer viruses in software comprised in Products before such Products are used or disposed of. In the event that the Purchaser establishes to Verity Systems' reasonable satisfaction that the Products are not in accordance with the contract or are so defective, the Purchaser's sole remedy in respect of such non-accordance or defects shall be limited as Verity Systems may elect to the replacement of the Products or refund of the purchase price or, where sums are owed by the Purchaser to Verity Systems, the issue of a credit note against the return of the Products.

THE PURCHASER MUST REFUSE PARCELS DELIVERED TO HIM IN A DAMAGED CONDITION.

In no circumstances shall Verity Systems be liable to compensate the Purchaser in damages or otherwise for non-delivery or late delivery of the Products or for any loss consequential or otherwise arising from non-delivery or late delivery.

8. CANCELLATION OF ORDER

If at any time the Purchaser cancels an order for goods or services which Verity Systems specifies to be "non-standard", i.e. not detailed on the current price list, Verity Systems shall be entitled to claim as damages an amount equal to 75% of the value of the order. For standard goods or services damages would equate to 50% of the value of the order. These amounts the Purchaser agrees represents a genuine pre-estimate of Verity Systems' loss. Upon the cancellation of any order, Verity Systems shall have the right to realize at its discretion after 60 days all monies, securities or goods pledged with or held by it on behalf of the Purchaser and to apply the proceeds in or towards the satisfaction of such claim for damages and the Purchaser shall have no claim whatsoever against Verity Systems in connection therewith.

9. PASSING OF PROPERTY AND RISK

The goods shall remain the sole and absolute property of Verity Systems as legal and equitable owner until such times as the Purchaser shall have paid to Verity Systems the agreed price. From delivery of the goods the Purchaser acknowledges that he is in possession of the goods solely as bailee for Verity Systems as shall as bailee insure and keep the same insured in the name of Verity Systems in their full reinstatement value in some reputable insurance office and indemnify Verity Systems for any uninsured loss thereof. For the purpose of recovering the goods Verity Systems may enter any premises where the goods are stored or where they are reasonably thought to be stored and may repossess the same. Until such time as the purchaser becomes the owner of the goods he will store them on his premises in a manner, which makes them readily identifiable as the goods of Verity Systems. The Purchaser is licensed by Verity Systems to agree to sell Verity Systems' goods subject to the express conditions that the entire proceeds thereof are held in trust for Verity Systems and are not mingled with other monies or paid into any overdrawn Bank Account and shall be at all times identifiable as Verity Systems monies. The Purchaser is licensed to use the goods in the manufacture of other goods provided that if the goods being the property of Verity Systems are mixed with goods being the property of the Purchaser or are processed with or incorporated therein the product shall be deemed to be the sole and exclusive property of Verity Systems.

If the goods being the property of Verity Systems are mixed with goods being the property of any person other than the Purchaser or incorporated therein the product thereof shall become or shall be deemed to be owned in common with that other person in proportion to the value of the constituent parts therein. The Purchaser is licensed by Verity Systems to agree to sell on the said product subject to the express condition hereinbefore mentioned in relation to the proceeds of sale thereof.

10. SPECIFICATION

All drawings, specifications and particulars of the goods submitted are approximate only. The descriptions and illustrations contained in catalogues, price lists and other advertising of Verity Systems are intended merely to present a general idea of the goods described therein and shall not form part of the Contract. Whilst every effort is made to ensure that the latest specification is available Verity Systems reserves the right to incorporate new features and to supply products which may not be strictly in accordance with the specification agreed upon, provided that any changes in specification shall not materially prejudice the performance of the goods.

11. FORCE MAJEURE

Verity Systems shall not be liable for failure to perform or delay in performance of any contract or for the loss or damage to goods directly or indirectly caused by force majeure to include acts of God, fire, theft, riot, war, embargo, strike, shortage of labour, delays in delivery of material by suppliers, prohibition or export or import, confiscation or any other occurrence (whether or not of a similar nature to those specified) beyond the control of Verity Systems. No consequences of any such event shall give rise to the recession of the Contract unless in the opinion of Verity Systems the contract becomes incapable of performance.

12. WARRANTY

- a) Verity Systems warrants that the goods will be of good quality and that Verity Systems has title to sell the same. Verity Systems' warranty of workmanship (if provided) shall be effective from the date on which the goods were accepted in accordance with Clause 8 and limited to 12 months from dispatch or such period as may be notified ("the warranty period"). During the warranty period Verity Systems will replace, free of charge, any part or parts of the goods which fail to function as a result of faults caused during their manufacture providing always that such faulty goods are returned carriage paid to Verity Systems' premises. The goods when repaired by Verity Systems will then be returned carriage paid to the Purchaser. Verity Systems shall not be liable under this warranty:
- i) where the defect results from the goods being subjected to abnormal usage or where the defect is due to the act, neglect or default of anyone other than Verity Systems
 - ii) for the replacement or repair of the goods or part or parts thereof where such replacement, or repair becomes impossible as a result of force majeure or any other circumstances beyond Verity Systems' control
 - iii) where the goods or any components or parts thereof are the subject of a separate guarantee given by a third party.
 - iv) where failure is caused by abuse or neglect.
- a) The Purchaser acknowledges that if he has not notified to Verity Systems any particular purpose for which the goods are required all express or implied warranties or conditions statutory or otherwise as to quality of or fitness for any particular purpose of the goods are hereby expressly excluded and Verity Systems shall not (except as set out above) be under any liability whatsoever in respect of defects in goods delivered or for any injury, damage or loss resulting from such defects from any cause whatsoever.

13. LEGAL CONSTRUCTION

except where otherwise stipulated in writing the relations, arrangements and agreements between the parties shall be governed by the laws of England and all disputes which may arise under out of or in connection with any contract between Verity Systems and the Purchaser shall be submitted to arbitration by the London Court of Arbitration in accordance with its Rules for the time being in force. Service of any notices in the course of such arbitration to the address of the Purchaser given in the Contract shall be valid and sufficient. All references in the Terms and Conditions to the masculine gender shall be deemed to include the feminine and neuter genders. Failure or neglect by Verity Systems to enforce at any time any of the provisions hereof shall not be construed a waiver of Verity Systems' rights nor in any way affect the validity of the whole or part of this contract nor prejudice Verity Systems' rights to take subsequent action. The headings of the Terms and Conditions are inserted for convenience or reference only and are not intended to be part of or to affect the meaning or interpretation of any of the terms and conditions of this Contract. In the event that any of these terms, conditions or provisions shall be determined invalid, unlawful or unenforceable it shall be severed from the remaining terms, conditions and provisions that shall continue to be valid to the fullest extent permitted by law.

14. STERLING PROTECTION

any quoted or listed sterling prices are subject to variation in the rate of exchange between sterling and the currency paid by Verity Systems for whole or major components between the date of the contract and the time of the submission of Verity Systems' invoice to the Purchaser. Verity Systems reserves the right to vary the price so that it accords with the said rate of exchange prevailing at the time of Verity Systems' invoice.

15. DEFAULT

If the Purchaser shall default in the performance of any of its obligations under the Contract Verity Systems shall on giving the Purchaser notice in writing have the right without prejudice to any other rights or remedies to take all or any of the following actions:

- a) cancel all or any part of any discount which might otherwise have been due under the terms of the contract;
- b) suspend any outstanding delivery of goods or parts thereof until such default shall have been made good;
- c) recover possession of that part of the goods to which the default relates and the Purchaser shall allow Verity Systems free access to his premises to enable Verity Systems to do so.

No waiver or delay in exercise by Verity Systems of its right under this clause shall be deemed to imply acceptance of the default or any subsequent default. If the Purchaser shall become bankrupt, go into liquidation, have a Receiving Order made against him, or carry on his business under a Receiver Verity Systems shall have the liberty without prejudice to any further remedies under the Contract to terminate the Contract forthwith by notice in writing to the Purchaser or Liquidator and recover possession of all equipment for which full payment of the contract price has not been received in c. above.

Supplied by:

VERITY SYSTEMS LTD

2 Eastern Road
Aldershot
Hampshire
GU12 4TD
United Kingdom

Tel: +44 (0) 1252 317000
Fax: +44 (0) 1252 316555
Email: sales@veritysystems.com

VERITY SYSTEMS, INC.

5441 Merchant Circle, Unit A
Placerville
California
95667
United States

Tel: (530) 626-9363
Fax: (530) 626-9395
Email: ussales@veritysystems.us

Website: <http://www.veritysystems.com>