

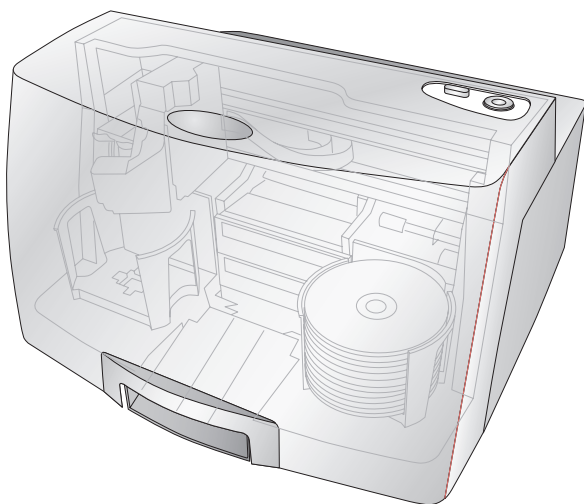
010907-510914-(06)



BravoPro™
DISC PUBLISHER

**Automated Optical Disc
Duplication & Printing System**

USER'S MANUAL
For Macintosh and PC



PRIMERA

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Printing History

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FCC Compliance Statement: This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For Users in the United States: This product is intended to be supplied by a UL listed Direct Plug-In Power Supply marked "Class 2" or a UL listed ITE Power Supply marked "LPS" with output rated 12VDC, 4.5A or higher. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Use of shielded cables is required to comply with the Class B limits of Part 15 of the FCC Rules. You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate and/or obtain warranty service for this equipment.

For Users in Canada: This digital apparatus does not exceed the Class B limits for radio noise for digital apparatus set out on the Radio Interference Regulations of the Canadian Department of Communications. Le present appareil numerique n'emette pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la class B prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

CAUTION!

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THE UNIT TO RAIN OR MOISTURE. TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE EXTERIOR PANELS. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. OPERATE THE UNIT WITH ONLY THE PROPER ELECTRICAL SPECIFICATIONS AS LABELED ON THE PRINTER AND AC ADAPTER.

CAUTION!

**THIS PRODUCT CONTAINS A LASER DIODE OF A HIGHER CLASS THAN 1. TO ENSURE CONTINUED SAFETY, DO NOT REMOVE ANY COVERS OR ATTEMPT TO GAIN ACCESS TO THE INSIDE OF THIS PRODUCT. REFER ALL SERVICING TO QUALIFIED PERSONNEL. THE FOLLOWING LABEL APPEARS INSIDE YOUR UNIT:
CLASS 1 LASER PRODUCT LASER KLASSE 1**

CAUTION!

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION.

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Interactive Feature in this PDF Document

There are interactive features that will allow you to jump to different locations within the document. Each listing in the Table of Contents is interactive. Place the cursor on either the words or the page number. A small hand with a pointing finger icon appears. Click on the line with the icon and the document will jump to that page. If you want to return to the Table of Contents, move the icon to the top of the page and click on the arrow marked TOC. Navigating through the Index is similar. Place the icon on one of the listings or page numbers, click on it, and it will move to that page. The text relating to the Index listing will appear in red. Returning to the Index can be done by clicking on the arrow marked Index.

Section 1: Getting Started

THANK YOU...

...for purchasing the BravoPro™ Disc Publisher. Bravo is the perfect all-in-one solution for producing professional looking CD-R and DVD-R discs. A wide variety of disc formats are supported, including audio CDs, Video Cds, data discs and more. Operation is simple and completely automatic once a job has been started.

To begin using your Disc Publisher, please read this manual carefully. This Operator's Manual is a complete step-by-step guide to quickly and easily create discs with your new Optical Disc Publisher.

A separate Help file is provided with your Publisher that explains the operation of the **PrimoDVD Software**. This is accessible under Primo's Help Menu - Get Help and on the Mac in the Disc Publisher folder in the applications directory.

NOTE ON TERMS AND CONVENTIONS:

From this point forward, the following terms and conventions will apply:

The BravoPro Disc Publisher Pro will be abbreviated simply as the Publisher.

Optical discs, which can include many different types of discs including CD-Rs, CD-RWs, DVD+/-Rs and more are all referred to as CDs or discs. Please note that in order to copy and record DVDs, you will need to have purchased the DVD version of the Publisher.

A. CHOOSING A GOOD LOCATION

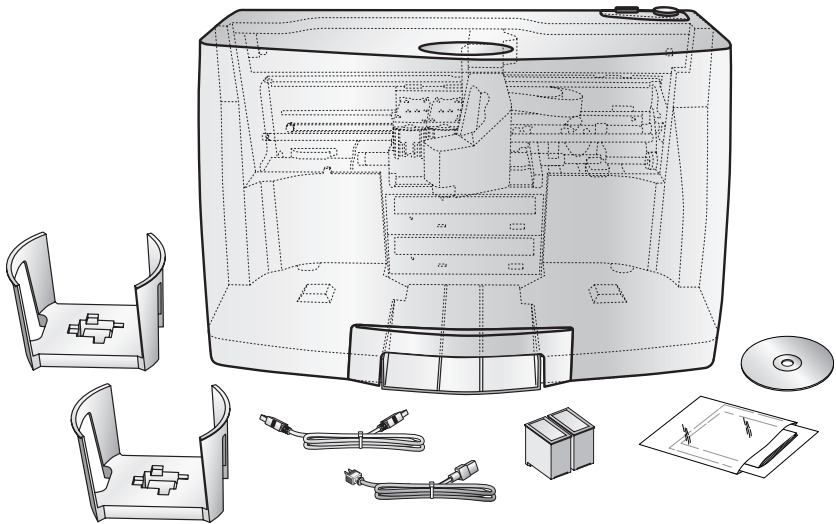
- Place the Publisher in a location with adequate air circulation to prevent internal heat build up. You will need at least 24" (61 cm) of overhead space to allow the top cover to open freely.
- Do not place the Publisher near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

B. UNPACKING AND INSPECTION

While unpacking your Publisher, inspect the carton to ensure that no damage has occurred during shipping. Make sure that all supplied accessories are included with your unit.

The following items should be included:

- Optical Disc Publisher
- Gray Plastic Input and Output Bins
- Power Cord
- One Three-Color (CMY) Ink Cartridge
- One Monochrome Black Ink Cartridge
- QuickStart Installer Disc (for use with both CD-R and DVD-R models)
- USB 2.0 Interface Cable (Beige)
- Warranty Card
- This Operator's Manual, Quick Start Guide and Other Printed Information

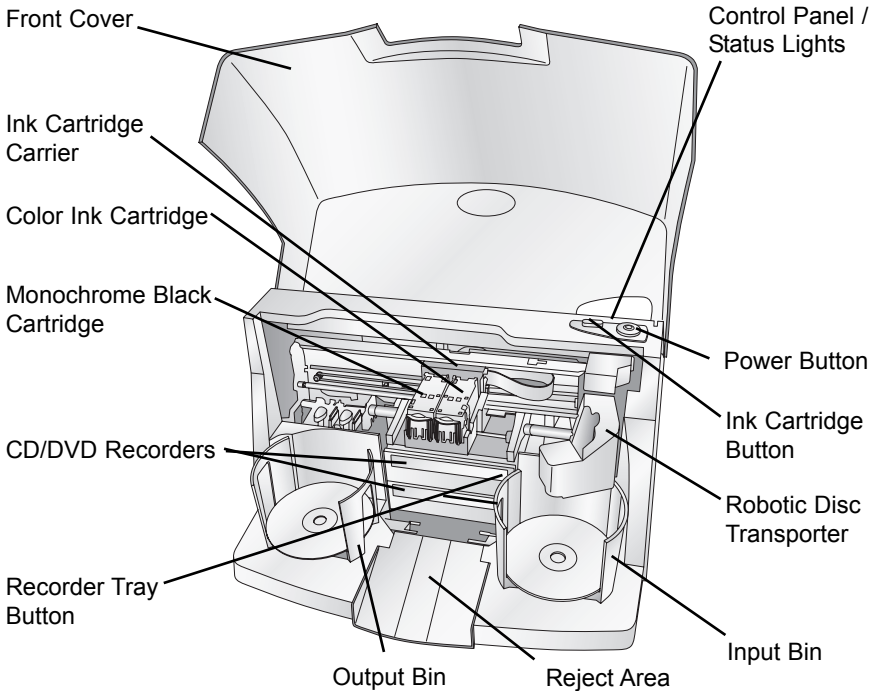


Save the carton and packing materials. They will come in handy later if you ever need to transport the Publisher and/or any of its parts and accessories.

C. IDENTIFYING THE PARTS

Front Panel and Top

This illustration shows the Publisher, its Control Panel, Buttons, LED indicator lights, Input and Output Bins and other components.



The **Robotic Disc Transporter** moves discs from the Input Bin, to a CD/DVD Recorder, to the printer, and finally to the Output Bin.

The **CD/DVD Recorder** is automatically loaded and unloaded by the Publisher's Robotic Disc Transporter.

The **Recorder Tray Button** manually opens or closes the Recorder Tray. In normal operation, the in/out movement of the Recorder Tray is controlled automatically and this button is not used.

The **Control Panel** contains LED Status Lights and Buttons to control the Publisher. The **LED Status Lights** indicate that Power is ON. They also blink in certain patterns to indicate an error or other condition of the Publisher. See Section 5 for a full explanation of the LED Status Light conditions.

The **Power Button** turns the Publisher's power ON and OFF.

When the front cover is opened, the **Ink Cartridge Button** is used to position the Cartridge Carrier for easy ink cartridge replacement. When the front cover is closed, pressing the Ink Cartridge button will open or close the Printer Tray.

The **Input/Output Bins** are situated under the top cover of the Publisher. The bins will hold up to 50 discs. The right-side bin is the Input Bin for blank media; the left-side bin is the Output Bin for finished discs.

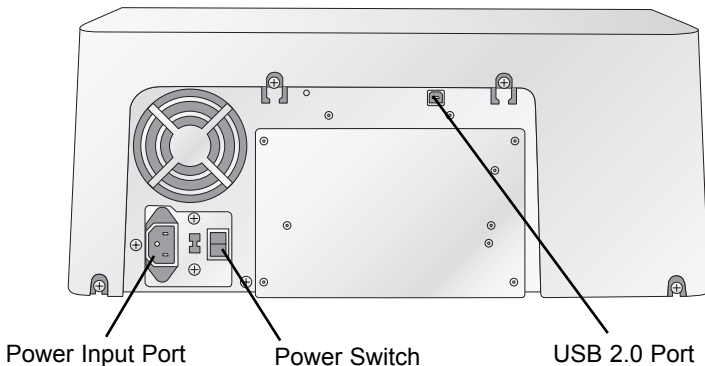
The **Reject Area** is where discs are dropped if they do not pass a software verification test. The discs slide down the ramp out in front of your Publisher.

The **Front Cover** is a durable plastic cover that will protect the Publisher from dust and interference.

The **Ink Cartridge Carrier** holds both a color ink cartridge (right-side pen) and a monochrome ink cartridge (left-side pen).

Rear Panel

This illustration shows the input ports and the power switch found on the rear panel of the Publisher:



The **USB 2.0 Port** is connected to an open USB 2.0 port on your PC with the USB 2.0 cable, included with your Publisher.

The **Power Input Port** connects to the included power cable. The internal power supply is a switching 100V~240V power supply.

The **Power Switch** shuts off all power to the Publisher.

D. PC SYSTEM REQUIREMENTS

Before getting started, it is important for you to verify that your PC meets the minimum system requirements. Here's what you need in order to successfully copy discs at 8x or above with the PrimoDVD 2.1 software:

- 700 MHz or faster Pentium III/IV processor running Windows 2000, XP or Vista.
- 512 MB or greater RAM
- Free hard drive space of at least 10 GB.
- Available USB 2.0 Port. (This looks the same as a USB 1.0 port. Make sure you have a USB 2.0 port for optimal performance)

If your PC does not have these minimum system requirements, system performance may not be acceptable.

E. MAC SYSTEM REQUIREMENTS

Before getting started, it is important for you to verify that your computer meets the recommended system requirements. Here's what you need in order to successfully burn and print with the Dscribe software:

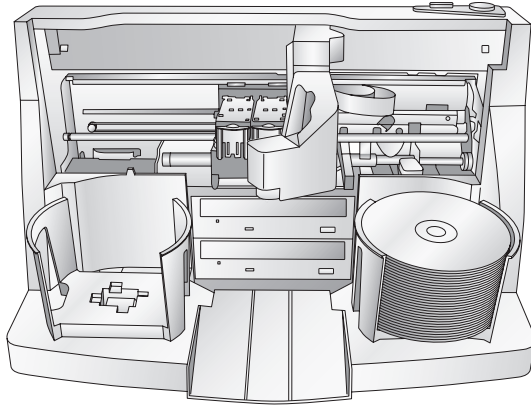
- G4 PowerPC 700MHz or higher running OS X version 10.2 or higher
- 256MB RAM
- Free hard drive space of at least 2 GB (up to 6 GB for DVD)
- Available USB 2.0 Port
- Do not connect the Publisher to any USB hubs or the USB port on your keyboard. It should be connected directly to an onboard USB 2.0 port.

If your computer does not have at least these minimum system requirements, system performance may not be acceptable.

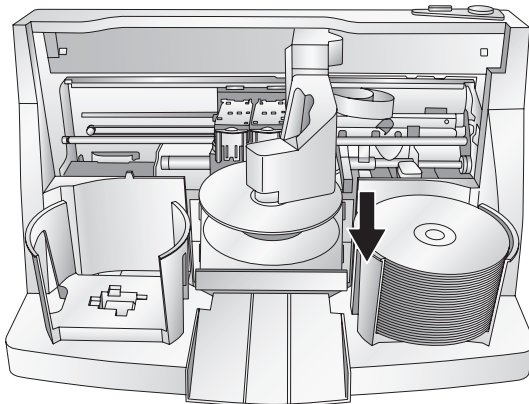
F. OVERVIEW OF OPERATION

Your new Publisher is an automated, precision device intended for continuous-duty publishing of discs. The following is a description of the complete process of duplicating and printing a CD/DVD job on your Publisher:

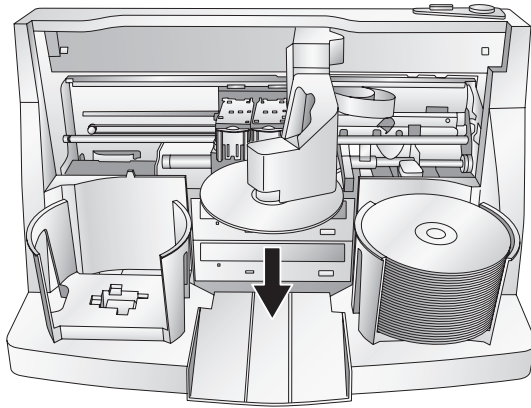
1. Up to 50 blank discs may be loaded at one time into the Input Bin.



2. The Publisher's integrated Robotic Disc Transporter will first check your recorder drives for a disc by attempting to "pick" from the recorder. Then, the Robotic Disc Transporter will pick a disc from the Input Bin.
3. The Recorder Trays open automatically and the Robotic Disc Transporter places a disc into the each of the recorders. After each disc is placed in the recorder, the Robotic Disc Transporter checks the input stack to "see" if two discs were picked.

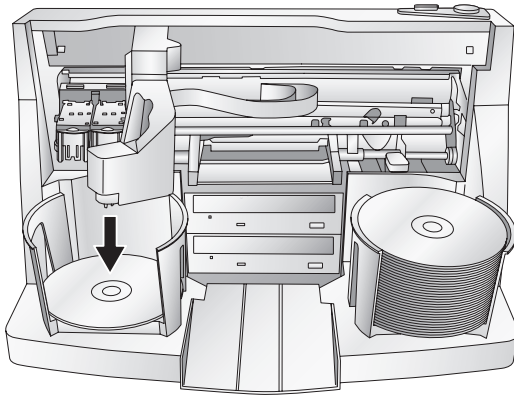


4. The Recorder Trays then automatically shut. If a disc does not record properly (meaning that all or part of that disc is not recordable), the Robotic Disc Transporter picks it out of the **CD Tray** and sends it to the **Reject Area**.



5. The Recorders are now writing to the discs. If you were to fully record a CD with data, audio, video or music (650 MB), recording time is about 3 ½ minutes each. A full DVD records in about 7-15 minutes depending on the speed of the media to which you are recording. Most jobs don't fill the entire disc, so recording time is usually less than this. After recording, the bottom Recorder Tray opens automatically. The Robotic Disc Transporter will lift the disc out of the Recorder Tray. The Recorder Tray will close, and the Printer Tray will open. The Robotic Disc Transporter will lower the disc into the Printer Tray, and the Printer Tray will then automatically close. The Robotic Disc Transporter will now pick the second disc from the top Recorder Tray and temporarily place in the Output Bin.
6. If publishing more than two discs, the Robotic Disc Transporter will load the Recording Drives with blank discs from the Input Bin to start recording the next round. It will then move the second recorded disc from the Output Bin to the Input Bin so that the printed disc can be placed in the Output Bin when finished.
7. Once recording has started on the next round, printing will start with the recorded disc from the previous round. This simultaneous printing and recording greatly increases the throughput of your Publisher.

- Print time varies according to which print mode has been selected (section 3-A). In most cases, print time takes no more than 2 minutes. After printing the first disc, the Publisher's Printer Disc Tray opens automatically. The Robotic Disc Transporter moves the finished disc to the Output Bin.



- The Robotic Disc Transporter will now load the second recorded disc into the Printer Tray for printing.
- The process starts over and repeats until all blank discs are gone or the number you have specified via software are copied and printed.
- Now that you understand the order of operation, it is time to set up your Publisher.

Section 2: Hardware and Software Setup

Setup

This section will describe the step-by-step process of setting up your Publisher. This includes information on how to load the supplies (ink and disc media) necessary to start producing discs.

A. INSTALLING THE PC SOFTWARE

The Installer Disc has a QuickStart menu that will guide you through the process of setting up your duplicator. Please refer to the following for more information on each step:

1. Place the Optical Disc Publisher Installer CD in your CDROM Drive. The Installer application should automatically launch in a few moments. If it does, proceed to Step 2. If it does not automatically launch, follow these steps:
 - Double-click the My Computer Icon, then double-click the icon of the appropriate CD drive containing the Software Installer disc.
 - Double-click INSTALL.exe
2. In the Installer Application, click the **QuickStart Install** button. The on screen instructions will guide you step-by-step through the installation process.

B. INSTALLING THE MAC SOFTWARE

Before installing Discribe please note that all software must be installed on a hard disk. Once you have installed the software, store the original program CD-ROM in a safe place.

Please note that your user account must have administrative rights to properly install a new printer. You can check with your system administrator or check with Apple support to confirm whether or not your account has administrative rights.

Install the software as follows:

- a. Insert the Bravo Installation CD-ROM in your system's CD-ROM drive.
- b. Double-click the CD-ROM icon.

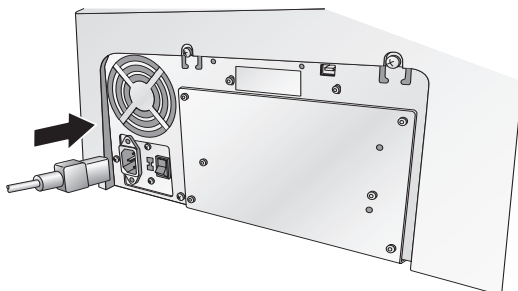
- c. Double-click on the **Disc Publisher Pro Installer.mpkg** file icon. Follow the on-screen instructions.
- d. The volume containing the operating system should be selected for installation. Click the **Continue** button. All components will be installed to their proper locations.
- e. Once the installation has completed, click **Quit**.

You have successfully installed all the necessary software!
Section C below will describe how to connect the Publisher to your Mac.

C. HARDWARE SETUP

Step 1: Applying Power

- Locate the power cord supplied with your Publisher.
- Plug the adapter into a surge protected outlet, and plug the power plug into the power port on the rear panel of the Publisher.



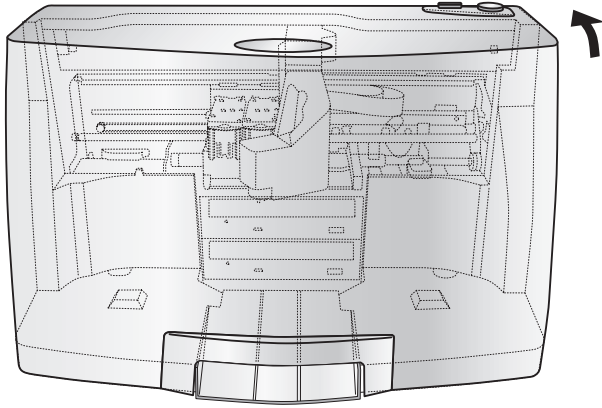
Step 2: Loading Media (Discs)

NOTE: *Your Publisher can print directly onto virtually any brand of inkjet printable-surface CD/DVD media. However, different brands of discs have different printable coatings. Because of this, you may need to adjust the printer driver settings to accommodate your specific brand of CD/DVD media. Refer to Section 3A and 4E for further printer driver information.*

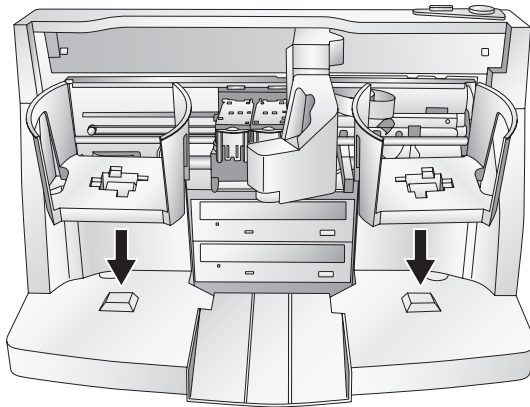
Due to the wide variety of printable-surface CD/DVD media, you may find that certain brands of discs provide higher print quality than others. For maximum print quality, use CD/DVD media authorized by Primera.

Refer to the following steps when loading discs in to the Publisher:

- Open the front cover of the Publisher



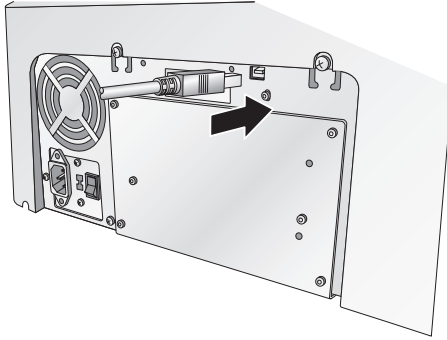
- The Publisher will automatically position the cartridge carrier and Robotic Disc Transporter to the center position allowing for easy access to the bins.



- Load the Input Bin (the bin located on the right-hand side of the Publisher) with 50 blank discs and place the bins on the mounting pegs.

Step 3: Connecting the USB 2.0 Cable

Connect the Publisher to your PC or Mac with your beige USB 2.0 Cable.



If you are using a PC:

If you are using a PC, after a few moments, Windows will tell you it has found new hardware and is looking for software to install it.



Windows XP



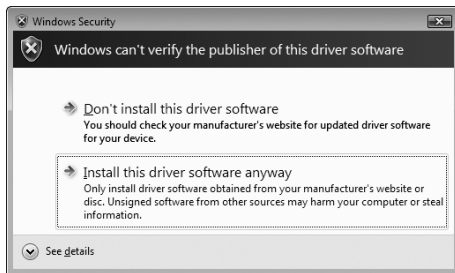
Windows Vista

If you are using Windows XP, select "**Install the software automatically**" and click **Next** or if you are using Windows Vista click "**Locate and install driver software**"

You will see a notice like the one shown below depending on which operating system you are using. Click **Install Anyway** or **Install this driver software anyway** to continue installing the printer driver for your Publisher.



Windows XP Message

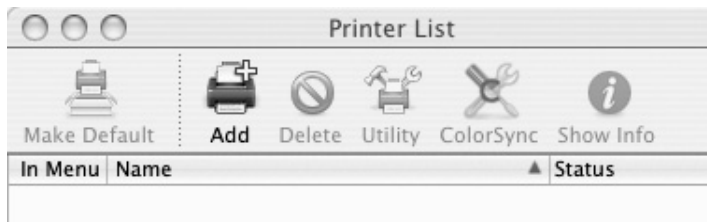


Windows Vista Message

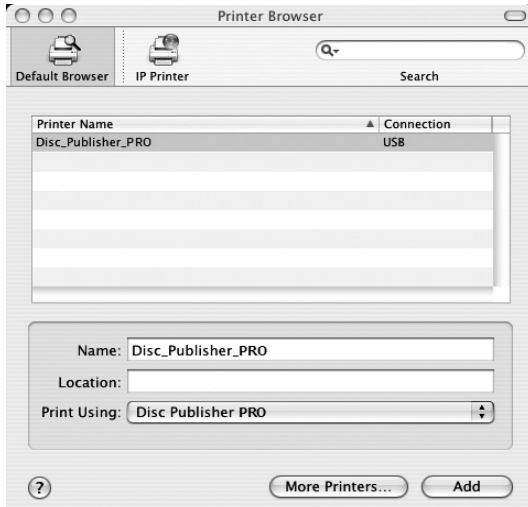
If you are using a Macintosh:

When connecting USB to a Mac it may be necessary to Add the printer via the Printer Setup Utility.


1. Open the Printer Setup Utility located in the Applications - Utilities folder.



2. Click **Add**. Select the Disc Publisher Pro from the list of available printers. Click **Add** again.

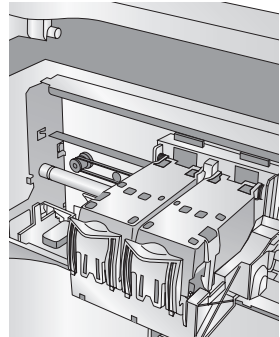
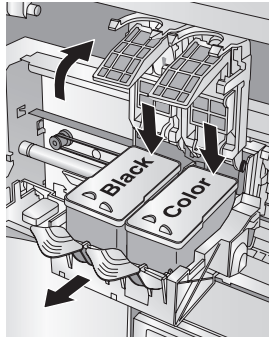
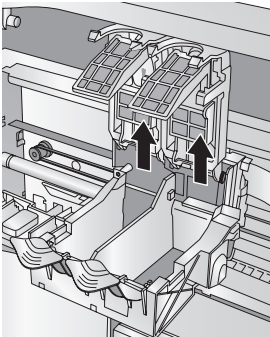


Step 4: Installing Ink Cartridges

- With the cover open, press the Ink Cartridge Button  to move the Ink Cartridge Carrier to the load position and open the ink cartridge covers.
- Remove each ink cartridge from its packaging.
- Slowly remove the tape covering the cartridge's print head.

DO NOT TOUCH THE COPPER AREA!

- Insert the ink cartridges into the carrier, copper end first and snap the cartridge cover in place. Insert the color in the right holder, monochrome black in the left cartridge holder. The cartridge labels are color coded to the cartridge covers.



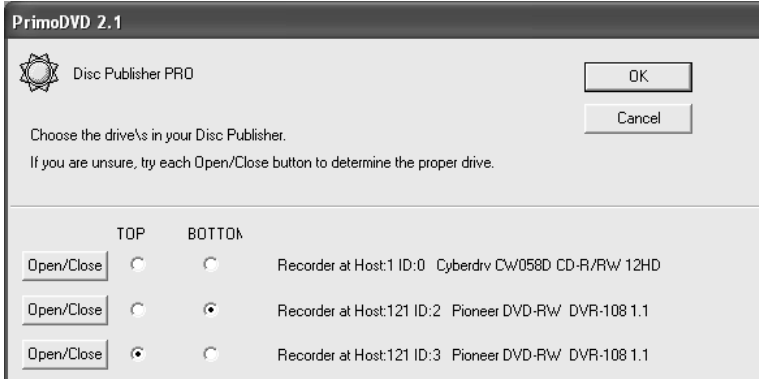
- Close the Publisher's front cover.

D. TUTORIAL: PUBLISHING DISCS ON A PC

This section explains how to create a basic data disc with your Publisher. More detailed information on the applications that are used to operate your Publisher is available in Section 3. Information on publishing discs on a Mac can be found in Section 4.

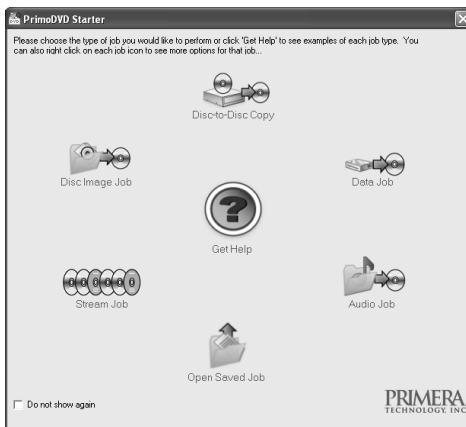
A. Launch PrimoDVD 2.1

Primo DVD 2.1 can be launched from your Start menu. The following screen will appear the first time you launch the program.

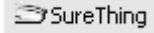


Clicking the **Open/Close** button will help you identify the drive installed in your Publisher. Select the appropriate drives from the list and click **OK**.

B. Once PrimoDVD is opened, choose the job type from the Primo Starter screen.

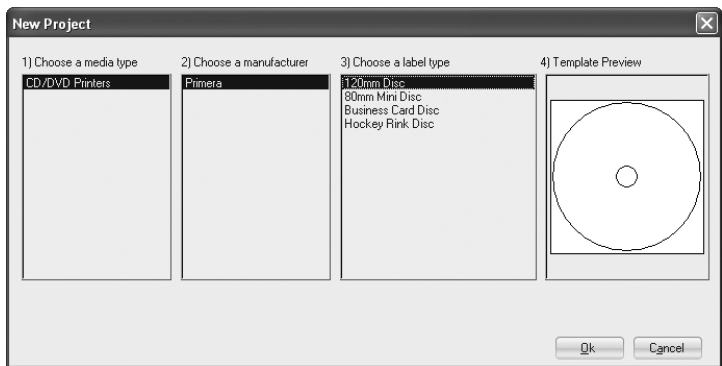


(For information on each job type and its specific use click **Get Help**.)

- C. Once you choose a job type, on the right side of the screen you will see a SureThing button. Click on it.  This will launch the SureThing software.

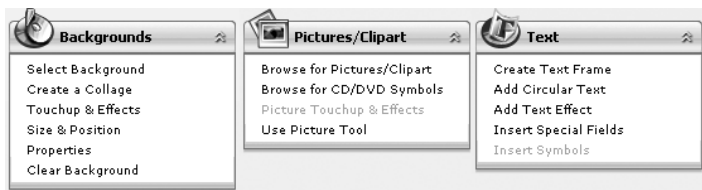
The SureThing Disc Labeler software included with your Publisher is a great tool for creating professional looking discs. You can use SureThing's Smart Designs to quickly label a disc, or easily import your own design in many popular file formats. The Help file included with the SureThing software will provide complete instructions on all the features in this package. (Go to the Help Menu - Contents) The following is a tutorial on creating a basic disc design:

C1. Click **File - New...**



C2. Select **120mm Disc** and click **OK**.

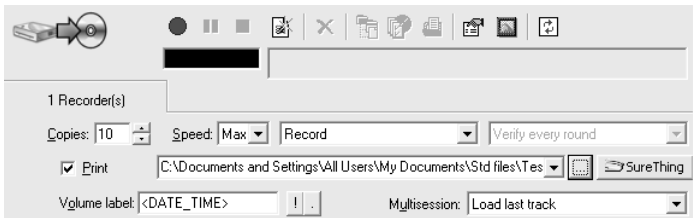
- C3. Using the buttons on the left navigation window, you may add your own background, choose a pre-made background, choose from several text effects or insert a picture. Click the down arrow on the button to view all options.



- C4. You may also use the smart design toggle bar below the disc template to scroll through pre-made design templates.



- C5. Once you are happy with your design, save it as a SureThing Design (*.STD) file format.
- C6. Close SureThing. The label will automatically be associated with your current job in PrimoDVD.
- D. Now that you have designed the label to be printed on your disc, it is time to select the information you wish to write to your disc. Depending on which job type you have selected you can add Data, Audio, Global Images, or setup up a **disc to disc copy**. Refer to the PrimoDVD help file for more specific instructions. (Click on the Help Menu - Get Help)
- E. Select the number of copies. Click the **Record** button to start your job. The Publisher will now record and print your discs.



Section 3: Creating Discs on a PC

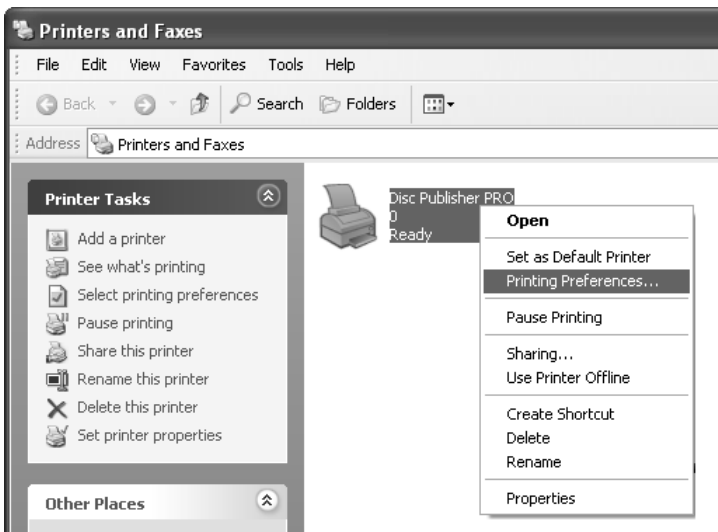
There are two main components to creating discs, printing and burning. SureThing CD Labeler is used to design the printing on your discs. PrimoDVD 2.1 controls the recording and allows you to select the image to be printed to your discs. Both applications will be described in detail in this section.

A. SETTING UP THE PUBLISHER'S PRINTER DRIVER

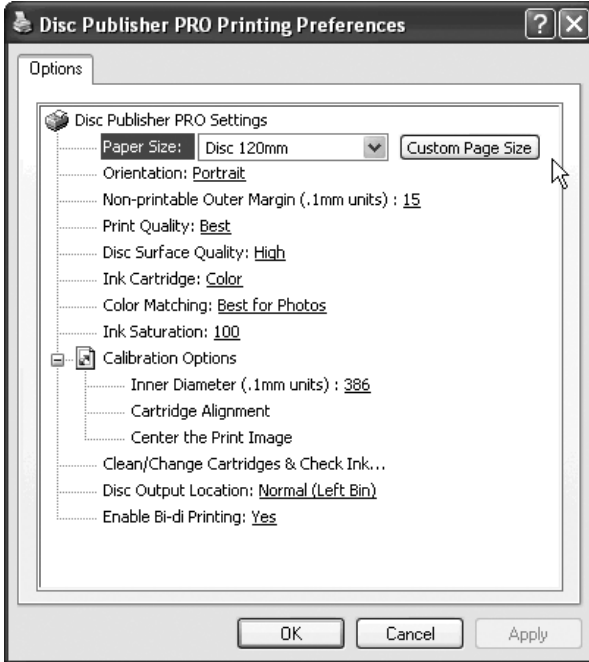
Once the Publisher software has been successfully installed, you will want to take a moment to familiarize yourself with the printer driver settings for your Publisher. These settings affect the print quality of your discs. The default settings of the Publisher printer driver will fit most printing needs. Please refer to the following steps to change or verify your printer driver options:

1. Click the **Start** button. For Windows 2000 point to **Settings** and click on **Printers**. For XP Professional click on **Printers and Faxes**. For XP Home click on **Control Panel**, then click on **Printers and Other Hardware**, then click on **Printers and Faxes**. For Windows Vista click the **Windows** button and choose **Printers**.

Click on the **Disc Publisher Pro** icon with the right mouse button and select **Printing Preferences**.



NOTE: Most applications allow you to change these same printer driver options from their "Print" and/or "Printer Setup" screens. This means that you don't have to go back to the main printer setup window each time you want to change a setting or option in the printer driver. These applications will usually give you the same choices and options, but in a slightly altered format. Some applications do not save your printer driver option changes, but instead only use your changes for the current image or print job.



Paper Size

The paper size option will be set to CD for printing onto printable surface CDs and DVDs. The remaining options apply if you have purchased the business card adapter kit.

Non-printable Outer Margin

Adjust this value to print all the way to the outer edge of a CD. This is useful if you are printing full coverage images. The lower you set this value the farther to the outer edge of the CD you will print. Please note that with most media the printable surface does not extend all the way to the edge of the disc. Because of this you will not normally set this value to zero. You may also want to adjust the inner diameter setting found under the Calibration Options which is explained later in this section.

Resolution

Select the appropriate print quality option for your image. Keep in mind that Normal provides the lowest quality but with the least ink usage. Best provides the highest quality but with higher ink usage. Print speeds also vary slightly between settings. However, speed is affected most by the Disc Surface Quality setting. You may wish to experiment with these options to see which one is best for your particular CD media and print quality requirements.

Print Quality

This setting affects the quality, speed and ink usage of the print. Color matching is also tied to this setting. Start with the default setting for fastest printing and the least amount of ink consumption. If the quality needs improvement move to the next highest setting.

Disc Surface Quality

This setting affects the quality, speed and ink usage of the print. Color matching is also tied to this setting. Start with the default setting for fastest printing and the least amount of ink consumption. If the quality needs improvement move to the next highest setting.

Ink Cartridge

Color + Black is best for images that have large areas of black graphics or text. Although you can print these same images with just the color cartridge, often the blacks will look darker with this setting.

Color Only is default setting and is best for most images. With this setting the printer only uses the color cartridge to produce all colors including gray scale black and white images.

Monochrome Black is for images that have large black areas or black text. This will ensure that no color ink is being used. In some cases printing JPG files using Color + Black for an image that is all black will still cause some color ink to be used.

Monochrome Black is not recommended for gray scale images such as a black and white picture. The ink spits of a black cartridge are not as small as the color cartridge. This allows for faster black printing but at a lower dpi. Using just the black cartridges for such images may result in a grainy image.

Color Matching

Best for Graphics mode is best used for graphical images where accurate color reproduction is not as essential. Images printed in this mode will look more vibrant because more ink is being used to produce them. However, printing images of people may produce skin tones that have a reddish tint.

Best for Photos mode is best used for photographic images where accurate color reproduction is very essential. Images printed in this mode will look lighter than those printed in Photo mode. Skin tones especially will look more natural in this mode.

NOTE: *Exact color matching of the printed discs to the screen may never be possible since there are factors that affect this out of the drivers control. The surface of the disc reacts with the ink in the cartridge to produce the color. For this reason, when printing the same image to different types of labels with different surfaces the printed output can look entirely different.*

Ink Saturation

This option controls the ink saturation of the printed image. When printing onto the printer manufacturer's TuffCoat CD media, this option can be left at its default setting of 100%. When printing onto other brands of printable CD media, you may need to adjust this control in order to optimize the ink saturation for the printable surface of your specific CD media. Click on the up and down arrows to change the ink saturation setting. Lower numbers reduce the overall ink saturation, while higher numbers increase it. If discs do not seem to be drying completely it may be necessary to reduce this value.

Calibration Options

Click on the plus to reveal the following four Calibration options.

Inner Diameter

This value changes the size of the non-printed center. Larger numbers cause the non-printed center to be larger and smaller numbers make the non-printed center smaller. This number is incremented by 0.1mm so a change of 10 for inner diameter changes the diameter by 1mm. Set the diameter to 230 for Primera TuffCoat media.

Cartridge Alignment

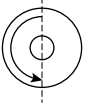
The Cartridge Alignment prints a test print and then automatically scans the print to configure your printer for bidirectional printing and to align the color and black cartridges for Color+Black printing. It is important to perform this calibration every time you change a cartridge. If you forget to perform this calibration you will be prompted to do so before your first print from the new cartridge.

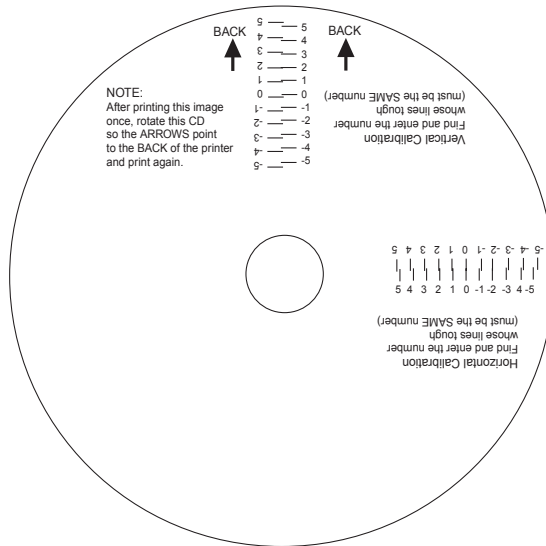
Center The Print Image

NOTE: *Your printer comes from the factory pre-calibrated to print the image in the center of the CD. You can use this adjustment if you need to fine-tune this location.*

If you ever wish to verify your factory-calibrated Vertical and Horizontal calibration settings, you can run a simple calibration procedure to assure that your images will be centered when printed on a CD. To do this, refer to the following steps:

1. Verify that a disc and a color ink cartridge are installed in the Publisher. It is important to use the same disc you normally use for your publishing because different brands of discs may vary slightly in size. Also, verify that the Publisher is powered ON and that it is connected to your computer.

2. Click on the **Center the Print Image** and then the **Properties** button. The printer will begin printing the calibration test print.
3. When the print is complete, rotate disc 180° and put the disc back in the input bin and repeat step 2 using the same disc. 
4. When the second run of the print is complete, you should have a test print that looks similar to the following:

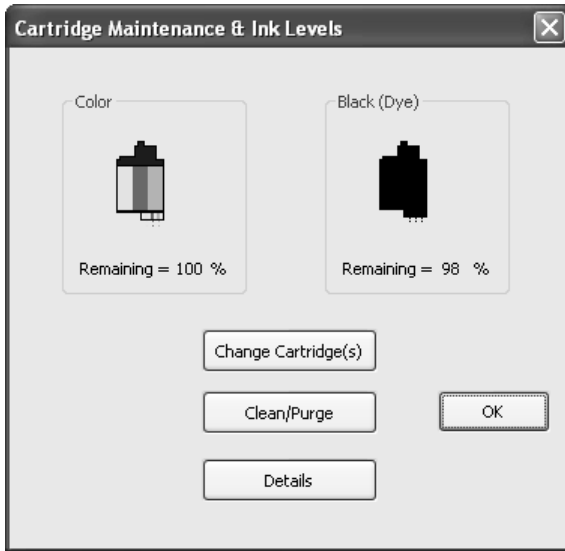


5. Along the Vertical axis of the printed disc, find the number whose lines touch. For example, in the above illustration, Enter the number 2 into the Vertical box of the Calibration window and 0 for the Horizontal axis.
6. Select the **OK** button. Your images should now be centered when printed on a disc.

After your selections have been made, close out of the printer setup window. You are now ready to go to an application program and print. All printer driver selections will stay the same until you change them.

Clean/Change Cartridges & Check Ink Levels

Select this button to display the current ink levels as well as options for cleaning and changing cartridges.



Change Cartridge(s)

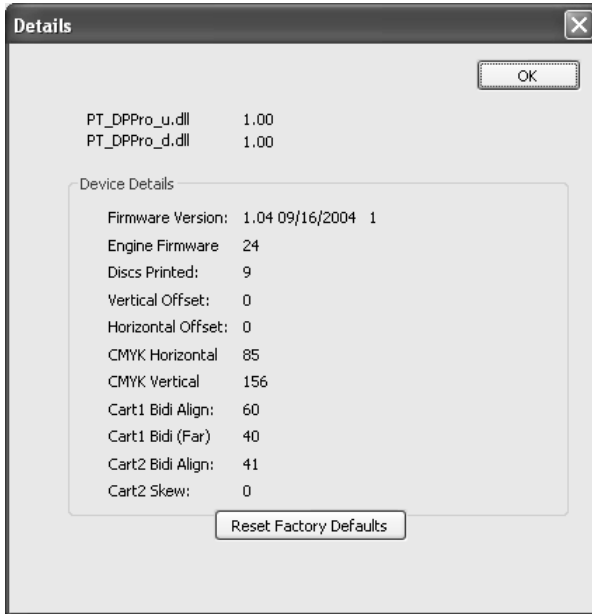
Select the Change Cartridge(s) button to install a new ink cartridge or to switch back and forth between previously used cartridges. After the cartridge has been replaced according to the instructions in Section 2C, Step 4: Installing Ink Cartridges, select either the New Cartridge Installed button or the Old Cartridge Installed button accordingly.

Clean/Purge

Select Clean/Purge button to send a simple test pattern to the printer. Be sure to have a disc in the Publisher's input bin and the front cover closed. The test pattern, shown below, purges ink through nozzles of your ink cartridge to clear any blockages.

Details

Select the Details button for information on the drivers, firmware, alignment and number of discs printed with your Publisher. Click **Reset Factory Default** to set all print centering and cartridge alignment settings back to factory defaults.



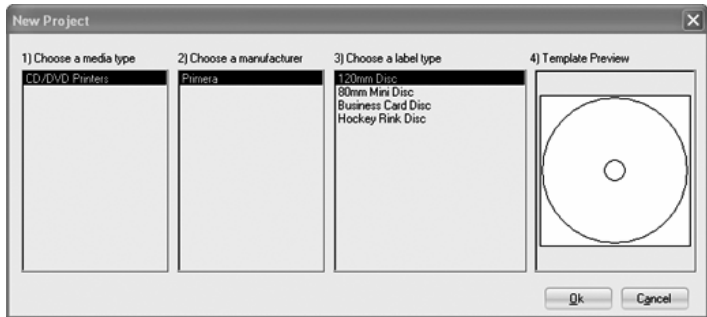
Disc Output Location

This can be set either Normal (Left Bin acts as output), or Kiosk (finished discs deposited out the Front Exit). The default is Normal (Left Bin). Note that this will only have an effect when doing printing only this will have no affect when recording and printing through PrimoDVD. In PrimoDVD, click **Robotics** then **Options** and select the Kiosk Mode check box.

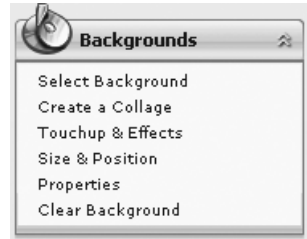
B. CREATING A PRINT LABEL USING SURETHING

The SureThing Disc Labeler software included with your Publisher is a great tool for creating professional looking discs. You can use SureThing's Smart Designs to quickly label a disc, or easily import your own design in many popular file formats. The Help section included with the software will provide complete instructions on all the features in this package. (Go to the Help Menu - Choose Contents) The following is a tutorial on creating a basic disc design:

1. Open the SureThing program. Choose the 120mm DiscTemplate from the window that appears.



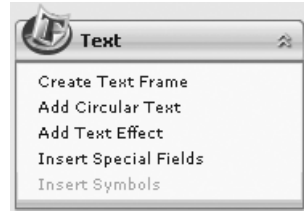
2. Open the background panel by clicking the arrow on the background button. Add your own background to the label by choosing Select Background.
- 3A. Browse to the location of your background image. To avoid skewed or blurry printing make sure your image is 120mm square and of sufficient resolution. We recommend 300 dpi.



- 3B. Instead of your own background, you can also choose from several included Surething backgrounds. To choose one of these images click the **SureThing Background** button in the Browse window that appears when you click **Select Background**. Also, you can easily toggle through the backgrounds by using the toggle bar below the label. Backgrounds are controlled by the far left toggle button.



- 4A. Open the text panel by clicking the arrow on the text button. Add text by selecting one of the options below. To create text that follows the curve of the disc choose Add Circular Text.



- 4B. You may also choose from several SureThing smart designs. These design templates automatically position your text and use certain text effects to give your label a professional look. You can easily toggle through smart designs by using the middle toggle button on the toggle bar below the label.

5. Finally, Open the picture panel by clicking the arrow on the Pictures/Clipart button. Add any logos, graphics or symbols to the label. These graphics will appear on top of the background image. You can size them appropriately by dragging the corner of the selected graphic.
6. When you have completed design work save your label by choosing Save Project in the Actions panel.



C. USING OTHER GRAPHICS PROGRAMS

While SureThing will handle most labeling needs, other graphics programs can be used if you prefer. Because of this we offer the flexibility to create **print files** (*.PRN) from any application.

Your Publisher will support two types of print files in PrimoDVD 2.1:

- *.STD - SureThing CD Labeler
- *.PRN - Print files created through the Publisher Printer Driver

*.STD files

As described earlier, these are files created in SureThing CD Labeler. This is the recommended file type for printing as it offers the most flexibility.

.PRN files

These are files created from virtually any Windows graphics application. Instead of printing to a printer, you print to file. In some programs, you can print directly from that software's Print screen, through the correct **printer driver software** for the brand and model of printer you've installed on your Publisher, to a *.prn file. Adobe Illustrator and CorelDRAW! are examples of such programs. Most of the popular, higher-end graphics applications give you this option of printing directly to a file.

If your graphics software does not allow a direct print to a file, you will need to go into your Windows Control Panel, Printers where you will be able to select File from your list of available printer ports. This will enable the driver to print to a PRN file from any application.

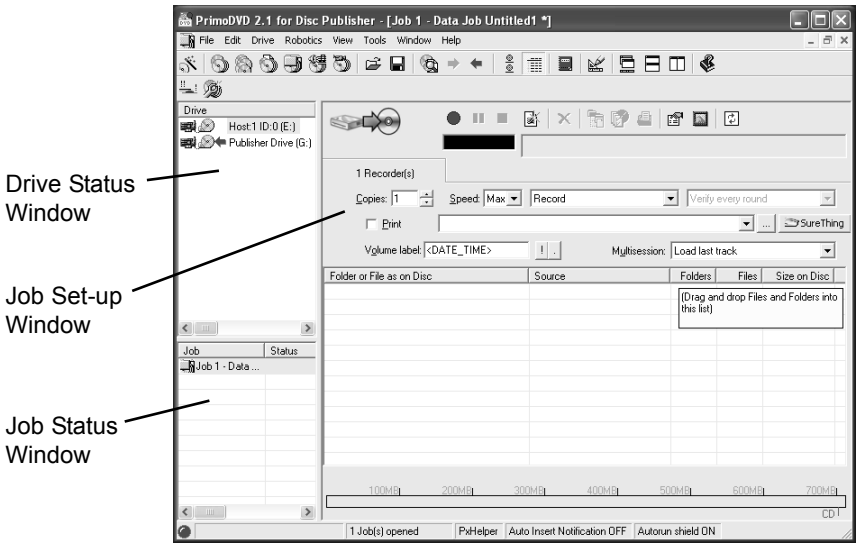
Note: *You must change the port back to the USB port before you can print.*

D. USING PRIMODVD TO CREATE YOUR DISCS

Now that you have a design for your disc, you are ready to publish. The example given in this chapter is for a simple **disc to disc copying** job using **PrimoDVD software**. Please refer to the Help File accessible from Primo's Help Menu for further information on recording discs. Go to Help - Get Help.

Operating Screens

To keep things simple, there is really only one main operating screen you'll need to know about in order to run the **PrimoDVD Software**. It is called the **Application Window** and it looks like this:



Under this window there are several adjustable-size windows that indicate what you've set-up and what's happening: the **Drive Status Window**, the **Job Status Window**, and the **Job Setup Window**. A sub-Window called the **Activity Log** is also available, but it is hidden upon initial boot-up of the software.

Below is a short explanation of each Window. For more information please see the Help file included with the Primo DVD software.

- **Drive Status Window**. Lists all of the available drives for your computer. Usually, your configuration has just three drives: the internal drive in your PC and the Recorders installed in your Publisher.
- **Job Set-Up Window**. This is the space where the setup parameters for each job are displayed. When you select a job by clicking the Job from the Starter Window or by clicking on the File Menu - New Job, a different type of Job Panel will appear in the Job Set-Up Window depending upon the type of job selected. Each Job Panel contains all of

the necessary information to run that job, including source file name, number of copies to make, etc. In addition, the Job Panels report status information during the running of the job.

- **Job Status Window.** As each Job Panel is formed, an entry is made in the Job Status Window at the lower left side of the main **Application Window**. When jobs are started, this list displays the status of each job, including the number of discs copied and the number remaining. This window may be hidden by clicking on the Show Job List Panel under the View menu.

One other sub-window available is called the **Activity Log Panel**. It records all user actions and system responses during the recording process by time of occurrence. If a problem occurs while you're not present in front of the computer, you can browse the log to find out details that may no longer be present on the main screen. The Log may be viewed by clicking on **View: Show Log**. The log may be saved (this happens automatically every time you exit the software). Emptying the log will delete all entries permanently.

Overview of Recording

Three basic recording operations are available: (1) actual recording, (2) test recording, and (3) verifying.

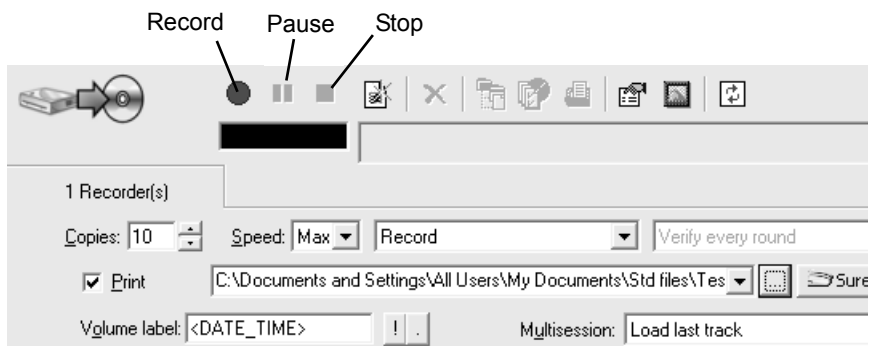
Actual recording is self-explanatory. Discs will be recorded without any testing beforehand. If you have used the Publisher successfully before with a particular brand of media that is highly reliable, you may choose to record without testing or verifying. This will deliver the highest throughput rate of finished discs.

Test recording performs all of the operations of recording with the drive's laser turned on to reading power. A test recording run will determine if the data source will keep up with the recorder's demand.

Verifying will compare the data recorded to the original data. This ensures that the recorded data exactly matches the original. Note that it will take about twice as long to Record and Verify as compared to just Record. All discs that do not verify properly will be rejected.

Please note that if Verify is not enabled, Primo will still reject discs that record improperly. The Verify feature simply double checks the record job to compare that the copy and master contain the same information.

After your job(s) have been set up, each one may be started by clicking on the red "Record" button at the top of the Job Setup Panel. Here's what the **Job Setup Panel** looks like:



While jobs are running, they may be paused or stopped by clicking on the appropriate buttons on the Job Setup Panel. The Pause Button will allow the current recording to finish, then suspends operations on that job. Recording is resumed by clicking the Pause Button again.

The Stop Button will abort any recording in progress and cause the Publisher to transport the disc to the **Reject Area**. It will also terminate that job.

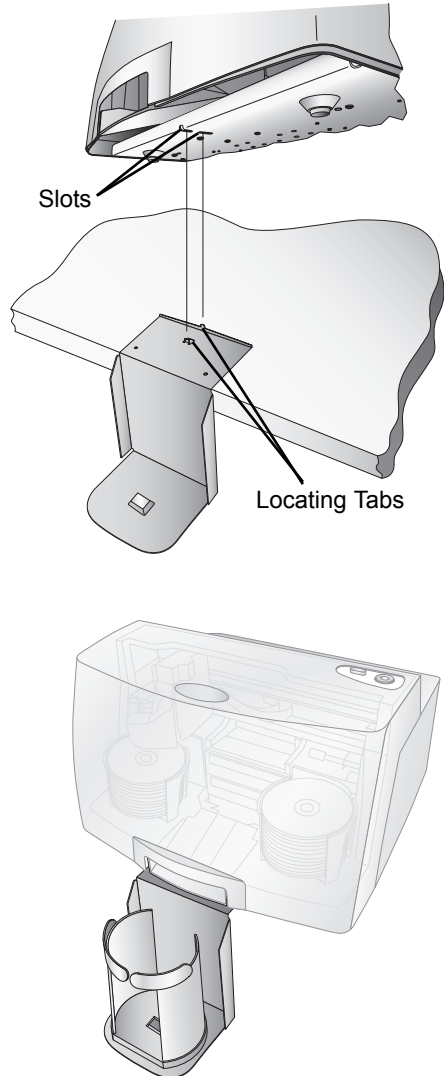
Record, Stop and Pause actions for the currently selected (high-lighted) job may also be selected from the Toolbar at the top of the main Application Screen.

Once a job is started by pressing the Record button, other subsequent jobs can be created in the same manner and queued by pressing the Record Button. These jobs will appear in a queue in the Job Status Window. Primo can queue up to 32 unique jobs.

E. USING KIOSK MODE

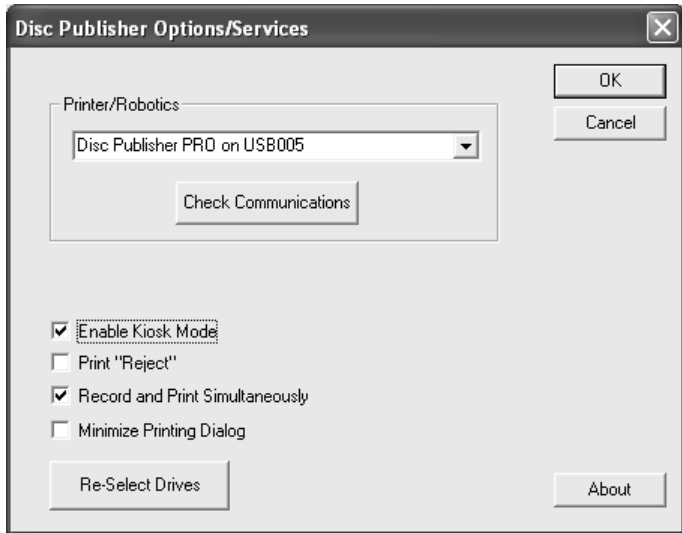
Kiosk Mode allows you to use both of Publisher's Bins as input, doubling your disc capacity from 50 discs to 100 discs. In this mode, the finished discs will be deposited out through the front "reject area" of the Publisher. In Kiosk mode all discs would be ejected in this manner. Rejects can be identified in the stack because they will not be printed in the same manner as successfully recorded discs. Refer to the Kiosk Kit installation instructions below.

- Attach the Output Bin Holder as shown, aligning the **Locating Tabs** on the Output Bin Holder with the **Slots** located on the underside of the Publisher allowing the holder to hang off the edge of the table. Notice the slots do allow for adjusting the position of the output bin. If your discs are not falling into the bin, you will be able to move the bin slightly to align it.
- Place the Output Bin on the Output Bin Holder as shown.



Kiosk mode is enabled as follows:

1. In PrimoDVD 2.1 click **Robotics** then **Options** from the main menu.



2. In the Options dialog box, check the option labeled Enable Kiosk Mode.
3. If you would like the Publisher to physically print the word "Reject" on rejected discs, select the Print "Reject" option. Otherwise, rejected discs will simply be ejected with no printing at all.

F. COPYING A CD OR DVD

Now, you're ready to start an actual recording job. In this example, we'll perform a simple disc to disc copy. More detailed information regarding other types of jobs (data discs, Audio CD, etc.) can be found in the Primo DVD Help files under the Help Menu - Get Help.





Disc to Disc copy can be used to copy any CD or DVD master. This job type reads the master disc from a specified CD/DVD drive on your system to the hard drive of your computer. (This assumes you have checked "Make a temporary image on hard drive and copy from there") The master is stored in the Primo Global Image format (*.gi) in a temporary location on

your computer. Primo uses this temporary file to make all subsequent copies that are requested. The master disc is read only once to create the initial temporary GI file.




Disc to Disc copy is Recommended for all CD or DVD types (Audio CD, Data CD, Software Install Disc, Video CD, DVD, DVD-ROM, etc.).

Step 1 - Select File - New Job - Disc-to-Disc Copy or Select Disc to Disc Copy from the Primo Starter Window. A copy job setup panel will be created in the job setup window.

Step 2 - Select the drive you will use for the reader: right-click on the desired drive (listed in the drive status window) and choose Select/Deselect as Reader from the menu. A bluish green arrow pointing to the right indicates a selected reader drive for a job.

Drive	Status	Description
 Host:1 ID:0 (E:)		Cyberdrv CW058D CD-R/RW
 Host:121 ID:0 (F:)		HI-dt-st CD-RW GCE-8526B
 Publisher Drive Bottom (G:)		Pioneer DVD-RW DVR-108
 Publisher Drive Top (H:)		Pioneer DVD-RW DVR-108

Drive configuration with reader set as computer CD/DVD drive

Drive	Status	Description
 Host:1 ID:0 (E:)		Cyberdrv CW058D CD-R/RW
 Host:121 ID:0 (F:)		HI-dt-st CD-RW GCE-8526B
 Publisher Drive Bottom (G:)		Pioneer DVD-RW DVR-108
 Publisher Drive Top (H:)		Pioneer DVD-RW DVR-108

Drive configuration with reader set as Publisher drive - Recommended

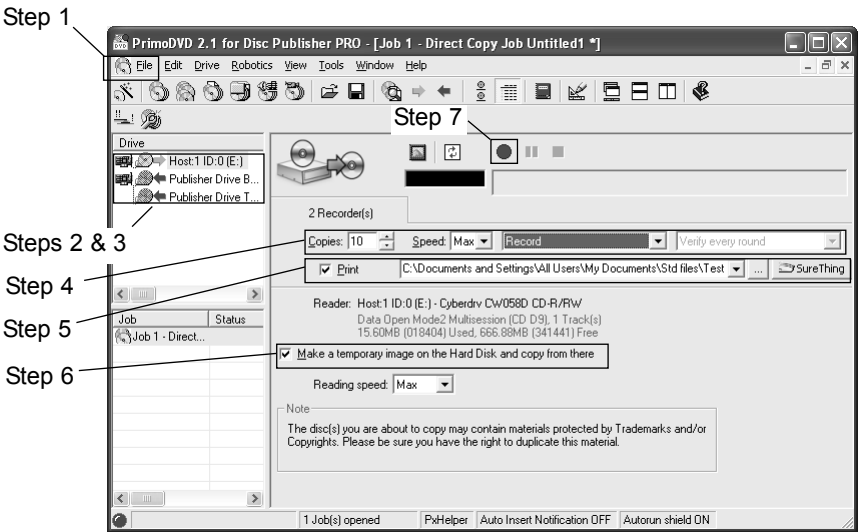
Step 3 - Select the recorder(s) that will record this job by double clicking the drive in the drive status window. A red arrow pointing to the left indicates a selected recorder drive. (This selection may already automatically be made for you by the software)

Step 4 - Select the number of copies and the recording speed.

Step 5 - Check the print box if you want to print a label on the disk. Type the full path and name of your image file into the box, or click on the Browse button to open a standard Windows Open dialog to locate the file. If you have not yet created a label to print on the disc click on the SureThing button to open SureThing and create a label. (Refer to Section 3B for Instructions on how to create a label) Once you close SureThing, The label file will automatically be associated with your job.

Step 6 - Check the box next to "Make a temporary image on hard drive and copy from there". This is recommended for all hardware configurations. Failure to check this box may cause a high number of rejected discs.

Step 7 - Click on the red Record button

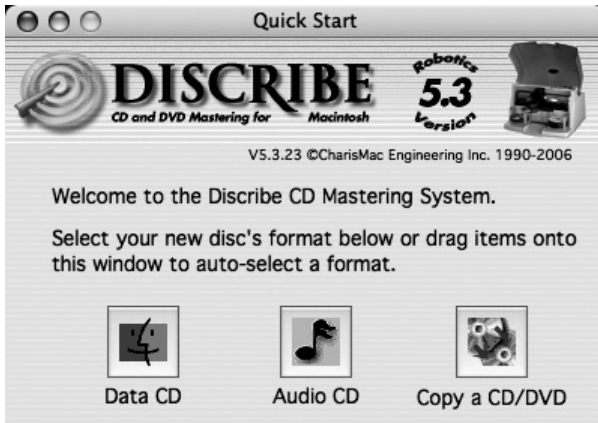


Note: It is possible to use the drive in the duplicator for the Recorder drive and the reader/source drive. This is recommended to reduce recording variables which are introduced by using different drive models for reading and recording.

Section 4: Creating Discs on a Mac

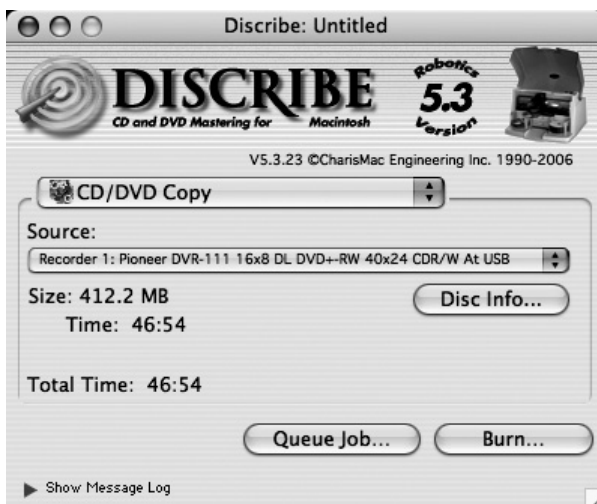
A. TUTORIAL: COPY A CD OR DVD

1. Double click the Discribe Icon to launch the program. You will see a splash screen followed by Discribe's Quick Start Menu.
2. Click the Copy a CD/DVD button.



3. Place your master disc in the Publisher Drive.

Important! You must place your master disc in the drive *AFTER* you open the Discribe software.

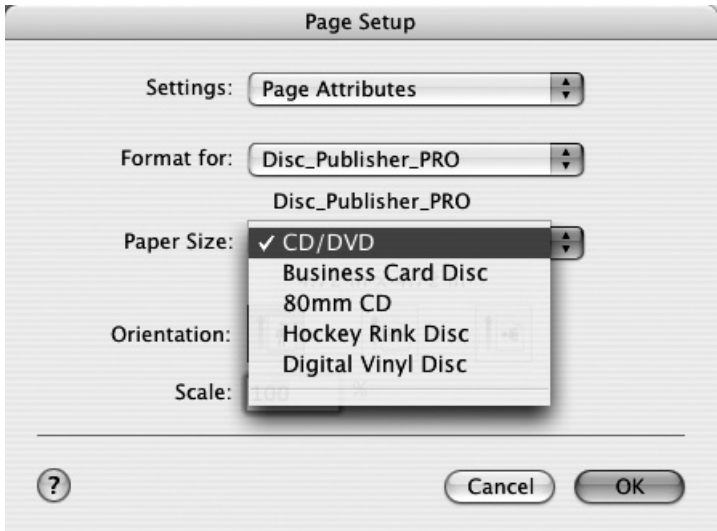
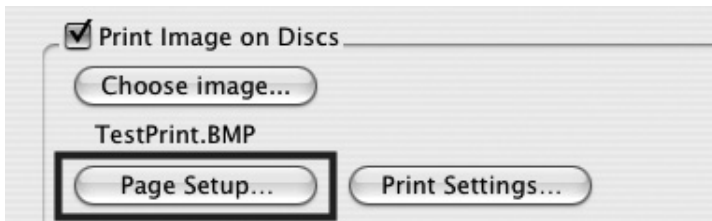


4. Select the drive that contains your master as the source drive.
5. Click the **Burn...** button. At this point, if you are using a BravoPro or XRP for the first time on this computer, you will be prompted, "You must choose a robot and a recorder to write a disc." Click **OK**. The screen below will appear. The robot should automatically be selected. You will need to choose the top and bottom drives. After you make this selection, Discrite will remember it for future jobs. You will not have to select them again. (If you make a mistake or would like to check your selection choose Test Robotics from the Utilities menu.) Click **Open** for each of the drives "1:" and "2:" to determine which drive is on the top and which is on the bottom. Set the location appropriately. Click **OK**. Click "**Burn**" again to proceed to the next step.



6. The **Robot Write Options** window will appear. This window contains selections to help you control the printing of the image, number of discs, recording options and more.
7. Click the **Print Image on Discs** button to enable printing. This will enable other buttons in this pane.
8. Press the **Choose Image** button to select an image to print. This will allow you to select any file type Apple's Preview supports including JPEG, TIFF, PICT, PDE, GIF, BMP and more. Refer to Section 4-C for label format requirements. Labels can be created in any graphics program.

9. **YOU MUST CLICK Page Setup** and set **Format For** to Disc Publisher PRO!



Also set the option to select a paper size to correspond with the type of disc you are using.

10. **Print Settings** will launch the Printer Driver settings when clicked. These settings are described in detail in Section 4-D of this manual.
11. Select the **Number of discs** requested for this job.
12. Once you have selected your image and chosen your preferred settings in the Robot Write Pane, click **Start** to begin recording your job.

Note: *The remaining options on the Robot Write screen can almost always be left at their default values. An explanation of each can be found in section 4B.5.*

B. USING DISCRIBE 5.3

B.1 Starting a Project

The initial Discrcribe starter window provides 3 project types: Audio CD, Data CD and Copy CD / DVD. Choose one. Many more projects are available once the data picker window is open. Once you are in one of the main three project types you may choose any of the other available project types by clicking the drop down box at the top of the screen and selecting one of the projects. For more information on any project type please consult the software users manual that is stored on your computer in the Applications - Disc Publisher folder.



Once you choose a new project type you will be prompted to save the original project. Click **No**.

Add data to any project by dragging the data files to this window or by clicking the **Data** button browse to specific data files or folders. Other popular project types are listed below with a short description of each.

Build a Mac HFS. Use this project type to create a CD for a Macintosh only.

ISO 9660. Use this project type to create a data CD for a Mac and a PC. Using this project type will limit file name lengths to 16 characters.

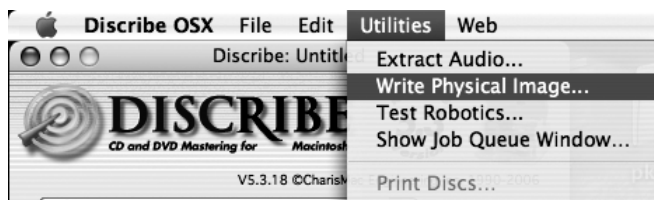
Universal Disk Format (UDF). Use this project type to create a data DVD for a Mac and a PC.

DVD Video/Audio. This project type can be used to create DVD videos from properly formatted Video_TS and Audio_TS folders on your hard drive. Note: Video_TS and Audio_TS folders must first be created by a DVD authoring program.

Disc Copy Image. Use this project to create discs from previously created images made from the Discrite software. An image is an exact snapshot of a disc that can be stored in one easily manageable file on your hard drive. Creating an image is useful for discs that you will need multiple copies of over a long period of time. This project saves time by not requiring you to read in the master before every copy project. Create images by using the Utilities - Write Physical Image command shown in the next section. Note: Only Discrite images will be accepted. Images created through other software or the Macintosh Disc Utility will not be recognized by Discrite.

B.2 Utilities and other Menus

Preferences, utilities and support are available through the menu that appears at the top of the screen when Discrite is active.



B.3 Saving Projects

It is possible to save a project so that you can easily open it again and start it. Saving projects is not possible for CD/DVD copy project. When you save a project, the data and print file locations are stored in a small file on your computer. This is different than a disc image since the actual data and print file are not stored in the project file. Once a project is saved you can queue it. Job queuing is described in the next section.

To save a project simply go to the file menu at any time and choose Save Project As.

B.4 Queue Projects

To queue a project choose the Queue Job button at the bottom of the Data Picker window instead of the Burn button. If you have not yet saved your project, you will be prompted to do so at this time.



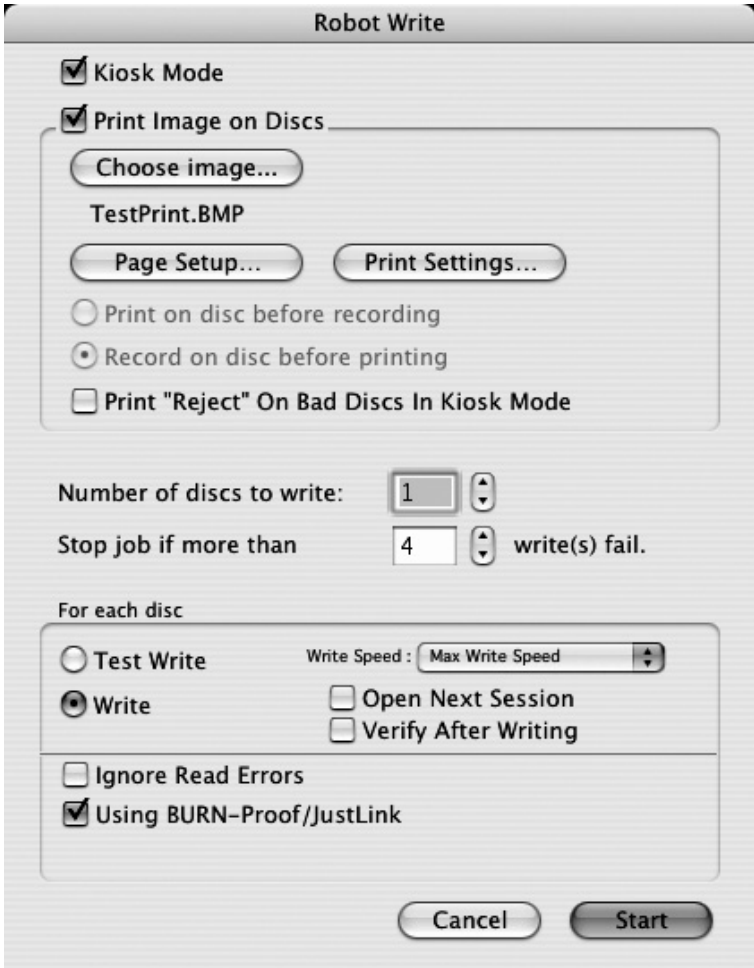
The Robot Write Window described in section 4B.5 will be displayed. Once you choose your print file and burn settings, click **OK**. The Job Queue list window will be displayed. Here you can manage and edit the jobs that are in queue. To start the jobs click **Start Jobs**.



B.5 Robot Write Window

For any project Use the Robot Write Window to choose the print file, change print quality settings and choose the number of copies in a project. Print settings are explained in more detail in section 4D. Other settings on this screen can usually be left at their default values. These options are explained below.

Important Note: For any project you must always click **Page Setup**. Now set Format for to Disc Publisher PRO and Paper Size to CD/DVD.



- **Kiosk Mode** will allow you to increase the capacity of your Bravo from 25 to 50 (BravoPro from 50 to 100) discs by dispensing finished discs out the front of the unit instead of dropping them to the output bin. This allows you to place blank discs in both the input and output bins doubling your capacity. An optional Kiosk Kit is available from your Primera reseller that contains a custom output bin to catch the finished discs as they leave the Bravo.
- Set **Print on disc before recording/ Record disc before printing**. Record disc before printing is recommended for most jobs to avoid printing on discs that do not burn properly. Print Before Recording is used for jobs involving Hockey Rink or Business Card shaped CD-Rs where it is important to print before recording for proper card alignment.
- If using Kiosk Mode, choose whether or not to **Print "Reject"** on Bad Discs in Kiosk Mode. When enabled, this will cause a disc that has failed to verify to be printed with the word REJECT prior to being ejected from the publisher to make it easier for bad discs to be identified in the output stack when using the Kiosk Mode. If this option is not enabled, bad discs will be ejected with no printing at all.
- **Stop Job after Number of Writes Fail** allows you to decide how many consecutive failures the Publisher will accept prior to canceling a job.
- **Test write** sets the burn laser to read intensity and simulates a burn but leaves the discs blank.
- **Write speed** controls the speed of the write. Lower the speed if you are having recording problems.
- Check **Open Next Session** if you are burning data to a disc and you would like to append more data to the disc at a later time.
- Check **Verify After Writing** if you would like Discrite to compare each burned disc against the source for accuracy. This is useful for installation discs where it is extremely important that every bit of data be accurate. This is not as necessary for video or audio discs where a missing bit of data may never be noticeable by human eyes or ears. Checking this option will double the total record time of the project.

- Check **Ignore Read Errors** if you know your master may have scratches but you would like to copy it anyway. Be aware that copies may not be playable or may have noticeable quality problems.
- Always check **BURN-Proof/JustLink**. This prevents bad discs resulting from inadequate hardware

C. PRINTED LABEL FORMAT REQUIREMENTS

Your printer driver allows you to create labels in most any graphics application. The driver will center the image and automatically crop it to the shape of a CD. This means you do not necessarily need a template to create a CD in your favorite graphics program. Simply create a custom page size of 120mm (4.72 inches) square and center your image in that area and the driver will do the rest. The center sizes listed in Section E should guide you in creating your disc. Because the driver crops the image to the shape of a CD, you do not want to make your design round. You will find it is best to "over bleed" your design by filling the whole 120mm area with your image. This ensures the outer and inner diameters will print perfectly round on your disc.

Label Format Requirements:

- 4.72 x 4.72 (120mm) Square Image.
- No Circular Images

To Print and burn simultaneously through the DiscRip program the image will need to be in one of the following supported file formats:

JPEGs, TIFFs, PICTs, PDFs, GIFs, BMP, JPEG 2000, MacPaint, Photoshop, PNG, QuickTime Images, SGI, TGA, and more.

In order to help you design your label, included on the installation disc are templates in eps format. These templates will help you get started designing your label.

To use the template follow these steps:

1. Open the template in Photoshop or Illustrator.
2. Create a new layer for your image or graphics. (Make sure the template layer is on top of the image layer)
3. Place your image or design your graphics on the new layer. Use the template as a guide for image and graphics placement.

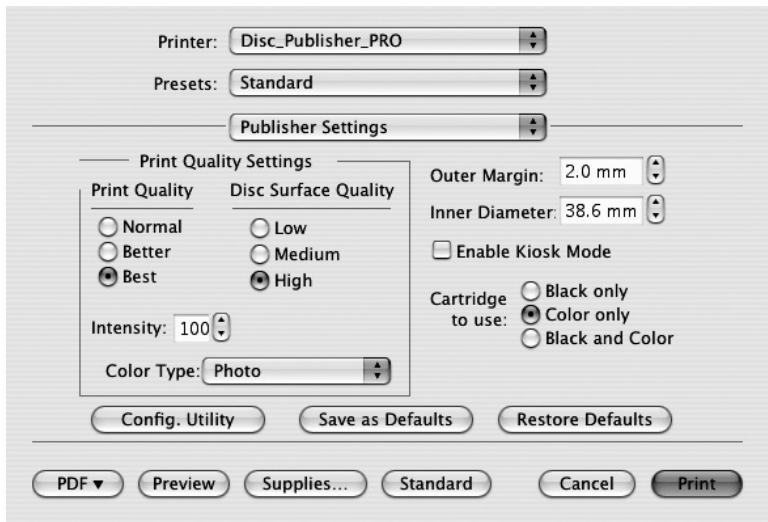
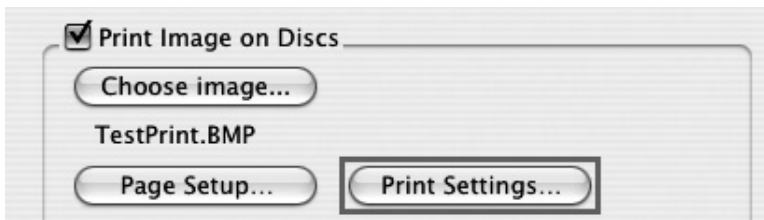
4. Before you print or save your image in another format, either hide the template layer or delete the template layer. The circular shape and center cut out should not be printed. Use it only as a guide to layout your image.

D. PRINTING ONLY

To print simply follow the normal procedure for printing from your graphics application. Select the Disc Publisher Pro as your printer. Select the number of copies. The Publisher will pick and print as many copies as you select.

E. PRINTER OPTIONS

The following section will examine the printer driver settings that affect the print quality of your discs. To access print settings from Discrite click the **Print Settings** button on the Robot Write screen.



The following is a description of the printer driver settings:

- **Cartridge to use**

The **Black and Color** setting will use both cartridges when printing your image. Color will only use the Color Cartridge, and **Black Only** will only use the monochrome cartridge for printing.

- **Kiosk Mode**

Kiosk Mode will allow you to increase the capacity of your Publisher from 50 to 100 discs by dispensing finished discs out the front of the unit instead of dropping them to the output bin. This allows you to place blank discs in both the input and output bins doubling your capacity. Attach the Kiosk Kit to the Publisher using the Kiosk Kit installation instructions that came with your publisher. This setting will be overridden by the Kiosk Mode setting in Dscribe's Robot Write or Job Details Pane.

- **Print Quality**

There are three options for image quality. Keep in mind that Normal provides the fastest print at lower quality while Best delivers the best quality at a slower print speed.

- **Disc Surface Quality**

This setting also affects the Quality of the printed image by altering the color matching profile. Start with the default setting for fastest printing and the least ink consumption. If the quality needs improvement, move to the next highest setting.

- **Color Matching**

Graphic mode is best used for graphical images where accurate color reproduction is not as essential. Images printed in this mode will look more vibrant because more ink is being used to produce them. However, printing images of people may produce skin tones that have a red-dish tint.

Photo mode is best used for photographic images where accurate color reproduction is very essential. Images printed in this mode will look lighter than those printed in Photo mode. Skin tones especially will look more natural in this mode.

NOTE: *Exact color matching of the printed discs to the screen may never be possible since there are factors that affect this out of the drivers control. The surface of the disc reacts with the ink in the cartridge to produce the color. For this reason, when printing the same image to different brands of discs with different printable surfaces the printed output can look entirely different.*

- **Intensity**

The Intensity setting will control the amount of ink saturation on the disc. When printing onto the Primera ToughCoat discs, 96% is usually sufficient. When printing on to other brands of media, or if you would like to print darker colors, you may wish to increase the Intensity setting.

- **Inner Diameter**

The inner diameter refers to the size of the non-printed center on your disc. The size of the center hub can vary from one type of media to the next. This allows you to set the inner diameter in millimeters allowing you to print all the way to the center hub regardless of the type of disc you are using. For the discs that Primera sells, use the following guide for Inner Diameter:

- 23 mm for Primera's Tuff-Coat media
- 24.9 mm for the Hockey Rink Disc, Business Card Disc and 80mm CD

- **Outer Margin**

The Outer Margin refers to where the printing will cut off around the outer edge of your disc. The size of the printable surface can vary from one type of media to the next. This allows you to set the outer margin in millimeters allowing you to print all the way to the edge regardless of the type of disc you are using. The outer margin for Primera's Tuff-Coat Media should be set to 0.7mm.

- **Config Utility**

This button launches the Configuration Utility. This Utility is also available in the Print Center/Printer Setup Utility by selecting the Disc Publisher Pro and clicking the Configure or Utility Icon. This utility is used to report ink levels, clean and change ink cartridges, and align your color and black cartridges for optimal print quality. In addition, this utility will allow you to center and adjust your printed image. Refer to section 4-F of this manual for a detailed description of this program.

- **Save As Default**

The Save As Default button will save the current settings as the system-wide defaults.

- **Restore Defaults**

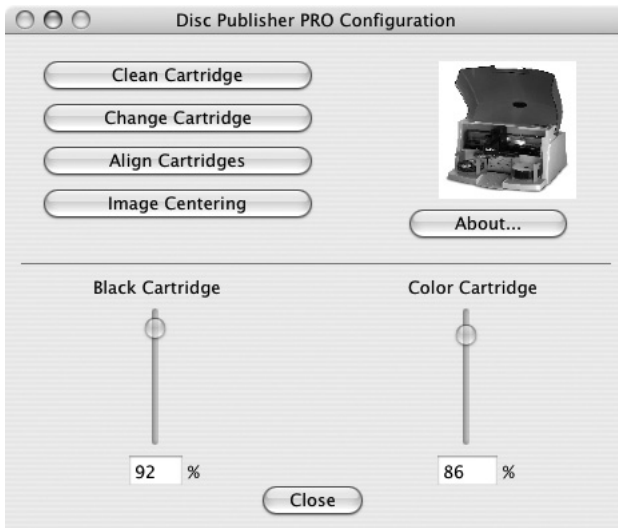
The Restore Defaults button will restore the driver settings to the factory defaults.

F. CONFIGURATION UTILITY

The Configuration Utility is a program that installs with your Publisher software. This utility allows you to monitor ink levels, maintain and calibrate ink cartridges and align printing on the disc. The Configuration Utility can be launched from the Print Center in OSX by doing the following:

1. Click the **Finder**
2. Click the **Applications** Icon
3. Open the Utilities folder.
4. Locate the Printer Setup Utility (Printer Center in OS 10.2).
5. Highlight the **Disc Publisher Pro** and click the **Utility (Configure in OS X v. 10.2)** Icon

You can also launch the Configuration Utility from the Disc Publisher Pro printer settings in any printing application by clicking **File** then **Print** and selecting **Publisher Settings**. In **Publisher Settings** you will find a button to launch the **Configuration Utility**. When launched, the following window appears:



You will see both the Color and Monochrome Ink Levels are displayed. The Color Ink Level represents the lowest color in your cartridge. For instance, if your cartridge has 80% cyan 50% yellow and 65% magenta ink remaining, the level reported would be 50%. You will also see the following buttons:

Clean Cartridge

Cartridges that sit idle in the Publisher for a period of time may start to experience some drying of ink in the tiny nozzles that make up the print head. Clicking the **Clean Cartridge** button will cause the Publisher to pick a disc and place it into the printer tray. The Publisher will then print a simple pattern that will flush ink through the nozzles. The test pattern will also show you if any nozzles are clogged. In the pattern you will see some diagonal lines which should be continuous; breaks in those lines indicate a clogged nozzle. Please note that it may require more than one cleaning to fully clear all nozzles. If the nozzles are not fully clear after a few cleaning prints, it may be necessary to remove the cartridge and actually clean the print head by gently blotting the nozzles with a moist cloth or paper towel and replace it in the Publisher.

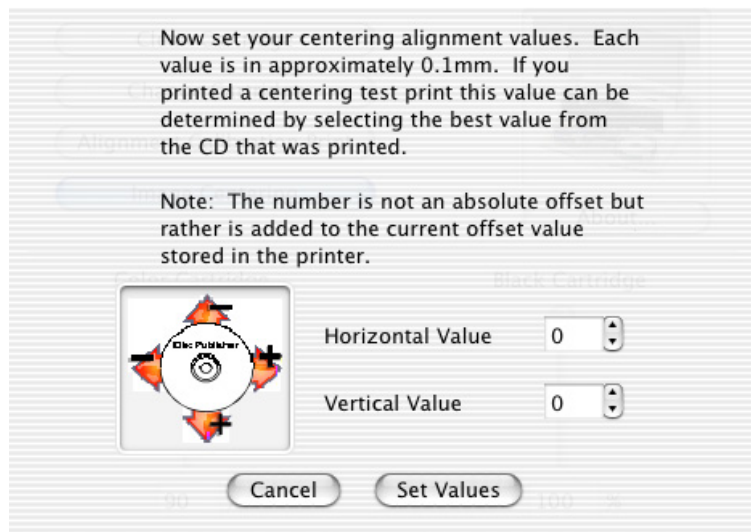
Change Cartridge

If you need to change cartridges, it is a good idea to use the **Change Cartridge** button in the Configuration Utility. This ensures the most accurate tracking of ink levels. To change a cartridge, click the **Change Cartridge** button. The cartridge holder will move to the center of the Publisher to make it easier to install the cartridges. Lift the top cover and install the cartridges as described in section 2 of this manual. Once installed, click the **OK** button and the system will update your cartridge levels.

Alignment Calibration Print

The Cartridge Alignment prints a test print and then automatically scans the print to configure your printer for bidirectional printing and to align the color and black cartridges for Color+Black printing. It is important to perform this calibration every time you change a cartridge. If you forget to perform this calibration you will be prompted to do so before your first print from the new cartridge.

Once the print has finished, you will see the following dialog box:





Look at the finished alignment disc and pick the numbers that come closest to lining up with one another. For instance, on the disc shown in this manual, the vertical alignment is 2 and the horizontal alignment is 0. Enter this in the alignment dialog box.

If you choose not to print the test print, you will simply see the alignment dialog box and can enter values to move the image. The unit of measure is roughly 0.1mm. Making the Horizontal Calibration number smaller or more negative will move the image slightly to the left. Making the Horizontal Calibration a larger value, or more positive will move the image to the right. If the Vertical Calibration number is made smaller, or more negative the image will move slightly up. If the Vertical Calibration is set to a larger value, or more positive value, the image will move down on the disc.

Section 5: Interpreting the Publisher's Indicator Lights

The Power and Busy LED indicator lights located on the top of the Publisher can tell you a lot about what is happening inside the Publisher. To accurately interpret what it means when these lights are on, off, or flashing, please refer to the following:

Ink Cartridge LED 	Power LED 	Publisher
off	on solid	Is ready to receive job
on solid	on solid	Has received a job and is waiting for the Robotic Disc Transporter to load a disc
both lights are slowly blinking alternately with one another		Waiting for a cartridge to be installed and the lid to be closed (See Section 2-A)
both lights are rapidly blinking alternately with one another for 30 seconds		The Publisher is initializing. You will see this pattern when the Publisher is first turned on. Wait until the lights stop blinking before opening software or starting jobs.
flashing rapidly	on solid	The printer tray or ink cartridge carrier has stalled. Press the Ink button to retry the operation.
on solid	flashing rapidly	The Publisher has a cartridge problem. Check to make certain that the cartridges are installed correctly.
repeating pattern of both lights flashing in unison, then one light momentarily on solid.		This indicates low ink warning. If the left light stays solid after the flash, the Color cartridge is low. If the right light stays on after the flash, the BlackMonochrome cartridge should be replaced.

Section 6: Maintenance and Troubleshooting

The Publisher is designed to operate for extended periods of time with very little attention. In fact, no regular maintenance is recommended other than cleaning the outside case.

NOTE: Do NOT attempt to oil or grease the Publisher's Robotic Arm shaft or other components. You will likely cause more harm than good! Any moving parts are designed to operate for the life of the machine with no additional lubrication required.



A. CLEANING THE PUBLISHER

Use a clean, lint-free rag with a small amount of ammonia window cleaner to clean the Publisher's outside case and trays. This type of cleaner is very effective on inks that may accumulate on the printer tray. Stronger cleaning solutions are NOT recommended because they may damage the paint and plastic materials from which the parts are manufactured. Always disconnect your Publisher's power cords before cleaning. Resume operation only after the surfaces are completely dry.

B. PERFORMING A ROBOTIC SELF-TEST

To ensure that everything is working properly, a Self-Test feature is built in to your Publisher. In this mode, the Robotic Disc Transporter will go through the motions of picking and placing a disc to ensure proper working order. This test may be performed without connecting the Publisher to the PC.

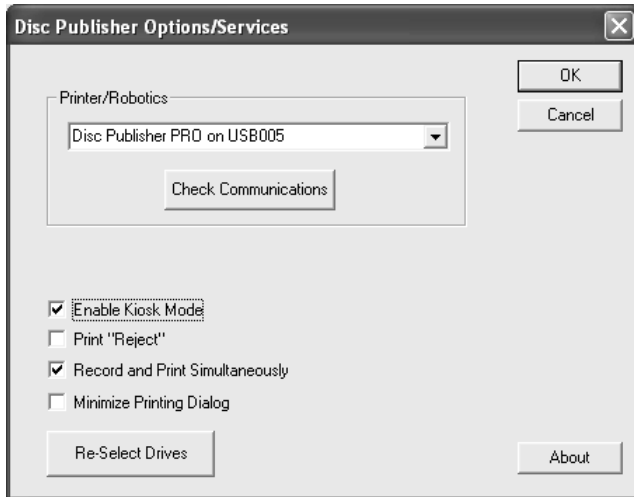
Perform the test by doing the following steps:

- Load some discs into the Input Bin
- Open the top recorder tray by pressing the eject button on the recorder.
- Make sure the Publisher's front cover is closed
- With the Publisher turned on, press the Cartridge Button 
- While holding the Cartridge Button, press the Power Button  until the robotics start to move.
- Release both buttons
- To stop the test, wait until the disc has moved to the Output Bin and press the Power Button.

C. PC SOFTWARE TEST

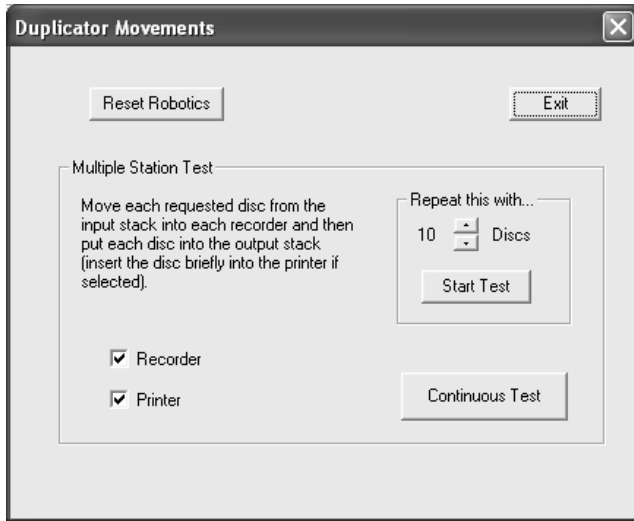
This will confirm that the hardware, software and your PC are all communicating properly with each other properly. Follow the procedures listed on the following pages.

1. Launch the software from your Windows Desktop or program menu. The main **Application Window** will appear. Select the Publisher Drive by clicking on its icon on the left hand side of the screen.
2. From the main Application Window, click on **Robotics**.
3. In the drop-down menu, go to **Options**.
4. Click on **Check Communications**. You will see a dialog box stating, "Communication OK. System Idle." If you do not see this, make sure that all cables are connected securely.



5. Click **OK** to get back to the main screen.
6. Click on **Robotics** again.

7. Select **Manual Movements**.



8. Load at least 4-5 discs into the Input Bin.
9. Click on **Start Test**. The robotic arm will move through its entire sequence automatically. If you specified more than one disc, it will continue until the number you specified is completed or it runs out of discs.

D. MAC SOFTWARE TEST

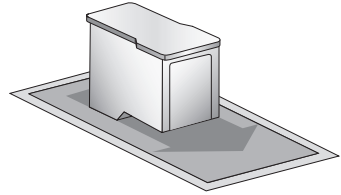
This will confirm that the hardware, software, and your computer are all communicating properly. To perform a software test please do the following:

1. Launch Discribe.
2. Click one of the options from the quick-launch menu (i.e. Data CD).
3. Select Test Robotics from the Utilities Menu.
4. Click the **Test Robot** button.
5. You can select where you want discs to go during the test and the number of times to repeat the test. Click **Start**. The Publisher will perform your test.

E. CLEANING THE INK CARTRIDGE

It may be necessary to clean the ink cartridge nozzles if you notice reduced print quality, or if you suspect an cartridge nozzle has become slightly dried out or clogged. If you are having print quality problems, follow the steps below:

1. Remove the print cartridge.
2. Moisten a lint-free cloth with water.
3. Hold the cloth against the nozzles for three seconds. This will “wick” some additional ink onto the damp cloth.
4. Wipe in one direction only.
5. Repeat the process.



F. CLEARING A MEDIA JAM

If a disc should become jammed inside the printing area of the Publisher, with the lid closed press the Cartridge Button. This will eject the Printer Tray. Then open the lid. The Cartridge Carrier will move to the center position automatically. **WAIT FOR THE CARTRIDGE CARRIER TO STOP MOVING!** Then carefully move the cartridge carrier assembly to the left to gain access to the printer tray.

G. TRANSPORTING THE PUBLISHER

To prevent damage to the Publishers robotic arm during shipment, it is important to properly secure it.

To prepare for transport, remove the ink cartridges and disc holders, close the front cover and then do the following:

1. With the front cover closed, switch off power to the unit.
2. Press and hold the Cartridge Button.
3. While continuing to hold the Cartridge Button, switch on power to the unit.

Continue to hold the Cartridge Button for five seconds. After several more seconds, the robotics will undock and the arm will lower. Power will shut off automatically once the robotics are in transport position. If you have the cardboard spacer that was shipped with the unit, replace the spacer inside the unit and close the cover. If you don't have the cardboard spacer, secure the arm and cartridges to the sides of the unit with tape and close the cover.

H. TECHNICAL SUPPORT

If you have difficulties in operating your Publisher, the procedures in this manual and the software User's Guide should, in most cases, solve the problem. If you still have difficulty, contact the technical support number listed on the insert included in the supply pack that came with your Publisher.

Section 7: Technical Specifications

Model	Optical Disc Publisher Pro
Configurations	CD-R Publisher DVD+/-R Publisher
Printing Method	Ink-Jet
Printing Resolution	4800 x 1200 dpi, 2400 x 1200 dpi, 1200 x 1200 dpi, 600 x 600 dpi
Ink Types	Dual Cartridges: One 3-color (CMY) cartridge, and one Black Monochrome (K)
Media Types	Ink-Jet Printable Surface CD-R, CD-RW, DVD-R, DVD RAM, DVD+R, Dual Layer DVD+R.
Maximum print width	4.724" (120mm)
Minimum PC System	Intel™ Processor III/IV 750 MHz or higher, 256MB RAM minimum, 512 MB recommended, available PCI slot, one free USB 2.0 port
Minimum MAC System	G4 PowerPC 700MHz or higher running Mac OS Version 10.2 or higher, 256MB RAM minimum, 2GB free hard disk space (6GB for DVD)
Disc Capacity	50 disc input, 50 disc output (default) 100 disc input, 100 disc output (Kiosk Mode)
Recordable Formats	CD-R: CD-Audio (CD-DA), CD-ROM, CD-I, Video-CD, MP3 to CD-Audio (on the fly, no hard drive overhead required)
Operating Systems	Window 2000, 2003, XP, and Vista Mac OSX Version 10.2 or higher
Interface	USB 2.0 port
Power Requirement	100-120VAC / 220-240VAC (switch-selectable), 50/60Hz, 1.0A
Weight	27.5 lbs. (12.5kg)

Dimensions	17.8"W x 11"H x 17.6"D (452.12mmW x 279.4mmH x 447.4mmD)
EMC Certifications	FCC Class B, CE
Safety	UL, UL-C, CE
Warranty	One year return-to-depot

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