



MICROBOARDS[®]
Technology

G4 Auto Printer

For Mac OS X



Users Manual



Any unauthorized modification to this equipment may result in the revocation by the FCC of the user's authority to operate this equipment.

NOTE: 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:

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



This product is in conformity with the EMC Directive (89/336/EEC) through compliance with the following European standards: EN 55022, EN 55024. The CE mark has been affixed in accordance with the CE Marking Directive 93/68/EEC.

Canadian Department of Communications (DOC) Statement

This Class B digital apparatus complies with the Canadian ICES-003 Issue 4:2004. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

TABLE OF CONTENTS

Introduction	5
What's Included	5
System Requirements.....	6
Assembly and Ink Installation	6
Assembly Instructions	6
G4 Auto Printer Assembly	6
Installing Ink Cartridges	7
Supported Ink Cartridges.....	7
Loading / Replacing Ink Cartridges.....	7
Installation of Drivers and Software.....	8
Driver Installation.....	8
Connecting to a Mac.....	8
Adding the G4 Auto Printer	8
Front Control Panel.....	9
Printer Alignment	9
Alignment.....	9
Creating Disc Labels.....	10
Loading Discs	10
Printing Discs.....	10
Microboards Utility	11
Clean Pen.....	11
Device Information.....	11
Test	11
Disc Printing	12
Support.....	12
Supplies.....	12
Registration	12
Recycling	12
Supply Levels	12
Using DiscLabel Labeling Software.....	14
Printing your Disc Labels	14
Saving your Disc Labels as a PDF.....	14
Troubleshooting	15
Printer not printing:	15
Disc Loading error	15
Disc not Advancing:	15
Low Ink indication	15
Printing off the Printable Surface	16
Out of Media Indicator on Front Printer Panel	16
Printing Specifications.....	16
Technical Support.....	16

Introduction

The Microboards G4 Auto Printer is an auto-loading CD, DVD, and BD disc printer with a 50 disc capacity. Microboards and HP co-developed the printer technology, allowing up to 4800 x 1200 dpi printing.

Smile Software's DiscLabel Label Design Software

The Microboards G4 Auto Printer Installation disc includes a copy of DiscLabel Limited from Smile Software for use in designing and printing disc labels on your G4 Auto Printer. The DiscLabel application is full-featured for printing discs on the G4 Auto Printer. Advanced features such as printing jewel case inserts or disc labels on equipment other than a Microboards Disc Printer can be added with an upgrade to the Full version, available from Smile Software.

To upgrade to the Full version, visit Smile Software's website, smilesoftware.com. Click the link to DiscLabel for information on pricing and to purchase the upgrade

What's Included

When unpacking your G4 Auto Printer system, the following items should be included:

- G4 Auto Printer
- G4 Auto Printer Quick Start Guide
- Print Sample
- Power Cord
- Cleaning Disc
- Users Manual (This document)
- Microboards G4 Auto Printer Install CD
- Input Bin rods (already installed)
- 1 **V102C** Tri-color ink cartridge
- 1 **V101B** Black ink cartridge
- USB Printer Cable
- Disc output assembly

If any of these items are missing, please contact your distributor or Microboards Technology Technical Support department at 952-556-1639.



System Requirements

The Microboards G4 Auto Printer has the following minimum requirements and compatibilities:

Operating System

Mac OS 10.6 or 10.10

Processors

Intel Processor is required

System Memory

Minimum 1 GB of system memory

Hard Drive

A separate internal 7200 RPM hard drive is recommended for storing your data. Using the same hard drive as the operating system can cause the system to perform slowly.

USB Connection

USB 2.0 is required. USB 1.1 is not supported, as using USB 1.1 will result in significantly longer recording times and the potential for recording failures.

Assembly and Ink Installation

Assembly Instructions

G4 Auto Printer Assembly

Remove the G4 Auto Printer system from the shipping box and confirm you received all of the items.

Place the G4 Auto Printer on a stable, flat surface. You will need room both in front and behind the system, as discs will be accessed from both locations.

The Input Bin posts are pre-installed, with the wide post to the right.

The 50-disc Output Bin is shipped in place under the front cover. Lift the cover to remove the packaging tape from the Output Bin.



Installing Ink Cartridges

Supported Ink Cartridges

The G4 Auto Printer uses 1 tri-color ink cartridge and 1 black ink cartridge. The part numbers for these cartridges are V102C (color) and V101B (black). If other cartridges are installed, the G4 Auto Printer will not function. These cartridges are available from any Microboards reseller.

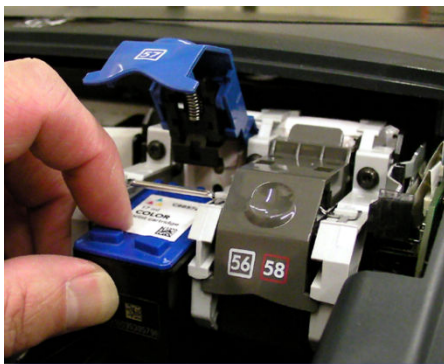
Refill kits or non-Microboards ink cartridges are not recommended for use in the G4 Auto Printer system. Use of non-Microboards cartridges will cause the printer to fail. Use of refilled cartridges may cause the G4 Auto Printer to fail and may affect your warranty.

Loading / Replacing Ink Cartridges

Cartridges can be changed while the G4 Auto Printer is on. The Out of Ink LED will light if any cartridge is beginning to run low on ink.

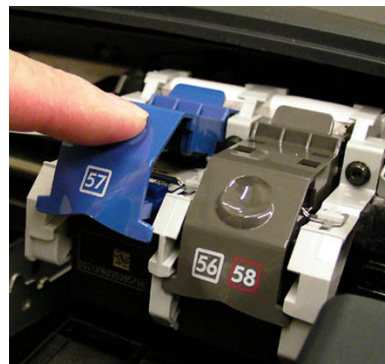
- With the printer on, open the front cover.
- Lift the cartridge latch by lifting the center of the front of the latch.
- If replacing an empty ink cartridge, remove the cartridge that needs changing by sliding the cartridge towards the front of the Printer.
- Remove each new print cartridge to be installed from its packaging.
- Remove the protective covering from the printheads before installing the cartridges.
- Slide the correct ink cartridge into the correct slot – color on the left, black on the right.
- Lower each cartridge latch until it locks into place by applying gentle pressure to the finger depression. **Do not try to force the latch down.**
- Close the front cover.
- Wait for the cartridge priming cycle to complete before sending any print jobs to the printer. The priming cycle will take approximately 70-80 seconds.

Any time you change ink cartridges, you should always wait until the printer has primed the cartridges before sending it a print job. The priming cycle will take 70-80 seconds to complete after the door is closed.



Inserting or Removing a Cartridge

After lifting the cartridge latch, slide the cartridge back to insert, or forward to remove.



Lowering the Cartridge Latch

The latch on the right is the correct position. The left latch is being closed.

Installation of Drivers and Software

Driver Installation

Drivers must be installed on a hard disk. Once you have installed the software, store the original installer disc in a safe place.

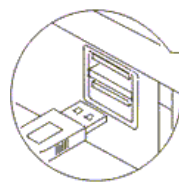
1. Insert the Installation CD in your system's disc drive. Open the disc icon when it appears on the desktop.
2. If you will be using DiscLabel to design your print images, simply copy the **DiscLabel** file from the installation disc to any location on your Mac.
3. Double-click on the **Microboards Disc Printer.mpkg** icon. Follow the on-screen instructions, read and agree to the end user license agreement.
4. When prompted, enter your administrator password.
5. When prompted, click **Install**.
6. Once the installation has completed, click **Finish**.

Connecting to a Mac

DO NOT CONNECT YOUR G4 AUTO PRINTER BEFORE RUNNING THE INSTALLER LOCATED ON THE INSTALLATION DISK!!

The connection between the Mac and the Microboards G4 Auto Printer is done with one USB 2.0 cable.

1. Plug in the AC power cord to the back of the G4 Auto Printer.
2. Confirm that the power is turned ON to both the G4 Auto Printer and on your Mac.
3. Connect the square shaped end of the USB cable to the back of the G4 Auto Printer.
4. Connect the flat, rectangular end of the USB cable into a USB 2.0 port in your Mac.



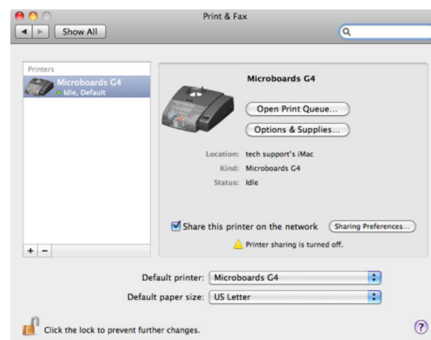
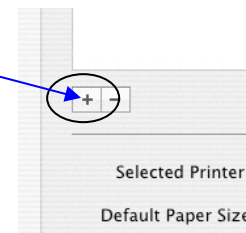
Adding the G4 Auto Printer

Once the drivers and software have been installed and the G4 Auto Printer connected, the Microboards G4 Printer needs to be added.

1. Click **System Preferences** in the Dock and select Print & Fax.
2. If the Microboards G4 is not already showing, click the **Add** or **+** button to add a printer.

Select **Microboards G4** from the list and click the **Add** button.

3. Once the G4 Auto Printer has been added, it will appear in the available printers list as shown below.



Front Control Panel

The AC power switch located on the back of the G4 Auto Printer must be turned on first in order to supply power to the Front Control Panel.

The **Power Button** on the front panel of the G4 Auto Printer turns the G4 Auto Printer Printer on and off. It may take a few seconds for the G4 Auto Printer Printer to turn on after you press the Power Button. This does not affect power to the drive within the G4 Auto Printer.

To turn off the power to the printer using the Control Panel, you will need to press and hold the Power Button for 3 seconds. Once the Ink Light, Media Light, and Power Light begin flashing, you can release the Power Button.

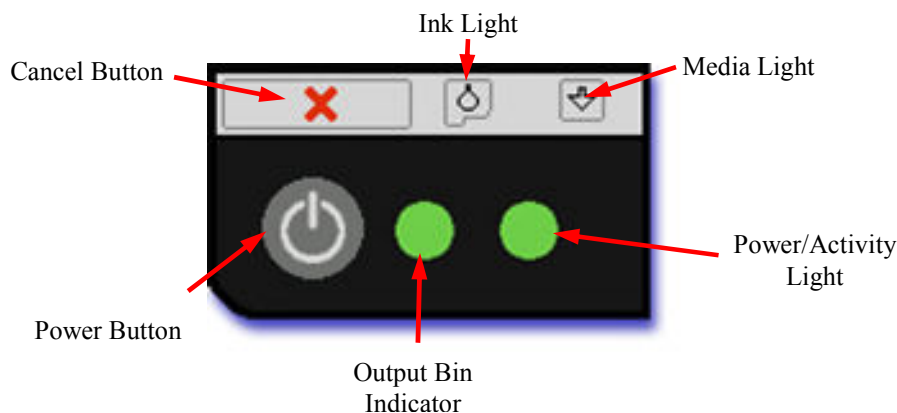
The green **Power/Activity Light** flashes when the printer is active, either while printing or initializing.

The **Cancel Button** can be used to discontinue printing. When using PrintWrite, this will only affect the current disc being printed. If printing through other applications, this will either cancel the entire print job or just the current disc depending on the label being printed and the application being used. Any disc being printed when the Cancel button is pressed will be ejected into the Output bin.

If a disc is not detected during printing, the **Media Light** will flash. Verify that you have discs in the input hopper and press the Media Light to load and print the next disc.

The **Ink Light** will come on if the ink cartridge is low or empty.

The **Output Bin Indicator** will light if the Output Bin is full, and will flash as a reminder to clean the rollers.



Printer Alignment

Verify the printer alignment the first time you use the Publisher. You may need to align your printer before the printed images will be centered on your media. Changing the brand or type of media you are using may also require small alignment adjustments.

Alignment

- Click **System Preferences** in the Dock.
- Select **Print & Fax**.
- Double-click the **Microboards G4** icon.
- Click the **Printer Setup** button.
- Click the **Utility** button to open the Microboards Toolbox.
- Click the **Open Printer Utility** button.
- Click the **Disc Printing** icon.
- Enter the alignment changes into the **Top** and **Left Side** boxes. These settings change the size of the top and left margins, respectively. Decreasing the values moves the image up or to the left, increasing adjusts down or to the right.
- Click the **Apply Now** button.
- Verify the alignment by printing a full coverage image. The image should print centered on the disc. If not, adjust the **Top** and **Left Side** alignment values according to the graphic on the Alignment tab and repeat.



Using the G4 Auto Printer

Creating Disc Labels

The first step is to create a disc label of the correct size, 12cm x 12cm. You may use any application you prefer to create your labels (see page 14 for information on creating labels using DiscLabel).

Included on the Installation disc are 2 eps-format templates for you to use. These are essentially blank files of the correct size that show where the outer edge of the disc and the inner hub will be the image when your disc label designs are printed. One is for use with non-hub printable media (36mm hub), while the other is to be used with hub printable media. Simply copy your artwork into these files to create an easy disc label.

These files do not need to be used, but are provided for an easy reference when creating labels.

Loading Discs

The next step is to load your G4 Auto Printer with discs. The system will accept CD or DVD 120 mm (12 cm) inkjet printable discs. If the disc does not have an inkjet printable surface, the ink will not adhere to the surface of the disc. The G4 Auto Printer will only accept 12 cm discs. Business card or 8 cm discs are not supported by this system.



Figure 1

Load the first 5 or 6 discs flat, as seen in figure 1.

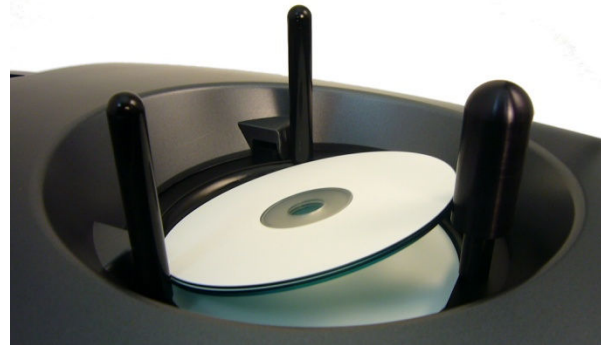


Figure 2

Load the rest of the discs at an angle, against the wide input rod, as seen in figure 2.

The G4 Auto Printer will hold a maximum of 50 discs. DO NOT load more than 50 discs in the system, as this may cause the discs to feed incorrectly.

Printing Discs

While the Microboards G4 Auto Printer will print from any application, you should always choose the **Microboards G4** printer and **120mm disc** in the **Format For** and **Paper Size** Page Setup selections, respectively.

Please note that the Paper Size setting may need to be set each time an image is printed, depending on the Operating System and application you are using.

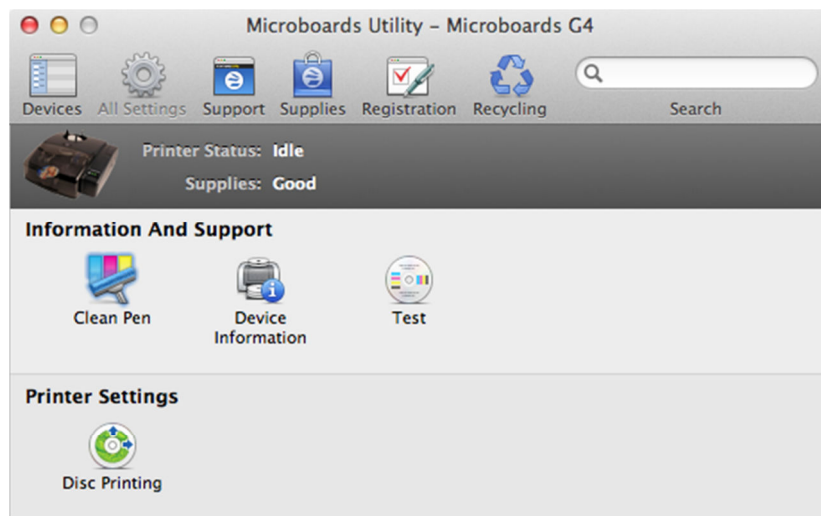
It is highly recommended that the image you are printing is 120mm by 120mm. Having a different size image may result in the improper placement of the image on the disc.

Printing prior to burning any media is not recommended!!

Microboards Utility

Access the Microboards Utility by selecting the **System Preferences** from the Dock. Select **Print & Fax**. Highlight the Microboards G4 icon and click the **Printer Setup** icon. Click the **Utility** button, then the **Open Printer Utility** button.

You can also select **Open Printer Utility** from the **Utilities** menu in PrintWrite. The Utility will allow you to access the Printer information as shown below.

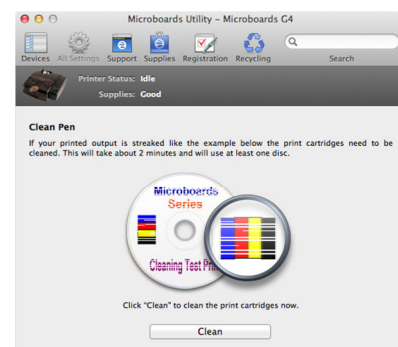


Clean Pen

The Clean Pen function allows you to run a cleaning cycle on the ink cartridge.

At least one disc must be in the input hopper for the utility to function.

Click the **Clean** button once a disc has been loaded to the belts. If the resulting disc shows streaks similar to those shown in the image on this page, you may need to run the Clean utility again.



Device Information

Click the **Device Information** icon to view Model and Firmware Version of your Microboards G4 printer.

Test

To confirm the computer is communicating with the G4 Auto Printer, print a Test Disc. This can be done with one of the inkjet printable CD's included with your G4 Auto Printer, or an inkjet compatible disc you may already have. To print the Test Disc:

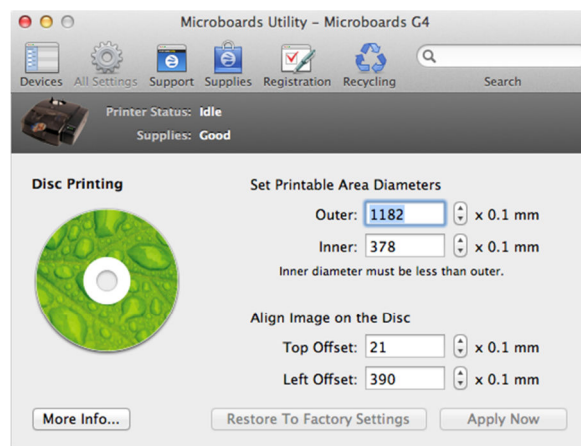
- Load at least one piece of printable media in the Input hopper.
- From the Microboards Toolbox, select **Test**.
- Click the **Test** button.
- Once printing is complete, the disc will be ejected into the output hopper.

Disc Printing

The Outer and Inner **Diameters** will change the size of the area to be printed. To avoid excessive ink buildup, these values should never be set so that the G4 Auto Printer is printing off the media.

The **Alignment** values will move the print image on the disc in 0.1 mm increments.

The **Restore to Factory Settings** button will restore the values to the default values. The Top and Left Side values will be changed to 0.



Support

Clicking the **Support** button will open the Microboards Technology Support website in your default internet browser. This function requires an internet connection.

Supplies

Clicking the **Supplies** button will open the Microboards Technology website in your default internet browser. This function requires an internet connection.

Registration

Clicking the **Registration** button will open your default internet browser to the Microboards Product Registration webpage. When registering your G4 Auto Printer, please be sure you are including the correct serial number, which will be on the back of the G4 and on the box product label. This function requires an internet connection.

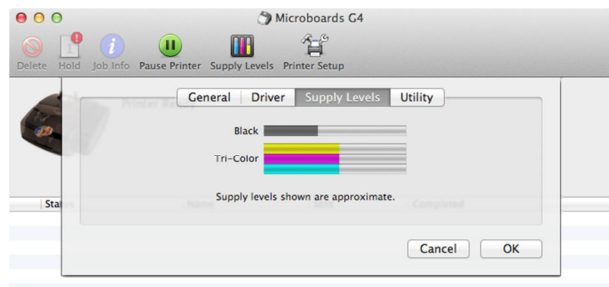
Recycling

Clicking the **Recycling** button will open the Microboards Technology website in your default internet browser to provide you with information on recycling used ink cartridges. This function requires an internet connection.

Supply Levels

To check the remaining ink levels in the cartridges in your G4 Auto Printer, access the Supply Levels by selecting the **System Preferences** from the Dock. Select **Print & Fax**. Highlight the Microboards G4 icon and click the **Supply Levels** icon.

The **Supply Levels** page shows the remaining ink in the Black Cartridge and the lowest amount of ink remaining in the Tri-Color Cartridge.



NOTE: If you place a used cartridge in the G4, the ink levels may not be reported correctly. If the Microboards G4 can identify the cartridge, it may report the correct ink levels; if not, it will assume that the ink cartridge is new and will show ink levels of 100%.

Before each disc is printed, the ink levels are checked. If the level of any one color has reached 10%, a warning message will be displayed on your Mac and printing will be temporarily suspended. You can either change the cartridge at this point, or continue printing using the same cartridge.

If you continue with the same cartridge, printing will continue uninterrupted until the ink level reaches 5%. The low ink level warning will be displayed once more. Again, either change the cartridge or continue.

Once the ink level reaches 3% or less, the warning will be displayed before each print.

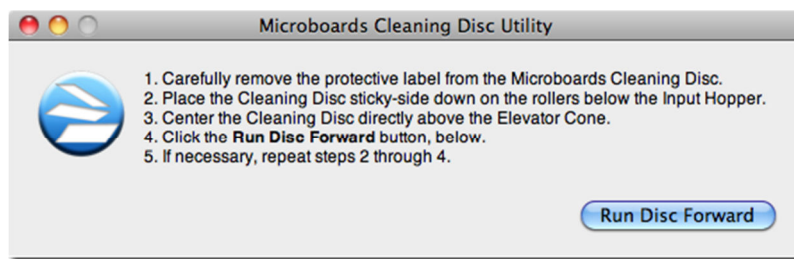
It is strongly recommended that you replace the cartridge at this point.

Cleaning Disc Utility

The rollers that the Microboards G4 uses to advance the disc will occasionally need to be cleaned as they pick up dust, lint, and other airborne debris. A Cleaning Disc was included with your Microboards G4 and should be used when the rollers become dirty.

Follow these directions to clean the rollers using the Cleaning Disc:

1. Open the Microboards **Cleaning Disc Utility**, located in the *Applications\Microboards* folder



2. Remove the paper label from the Cleaning Disc
3. Place the Disc sticky-side down on the back roller, centered over the cone of the elevator
4. Click the **Run Disc Forward** button. This will run the disc forward through the G4.
5. If you are operating the Microboards G4 in a dusty environment, you may need to perform this more than one time; repeat steps 3 and 4 as needed.

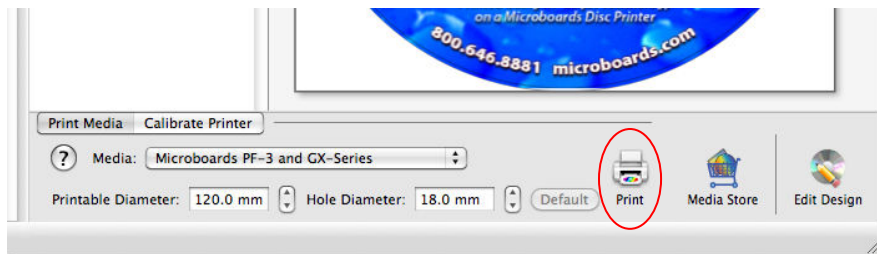
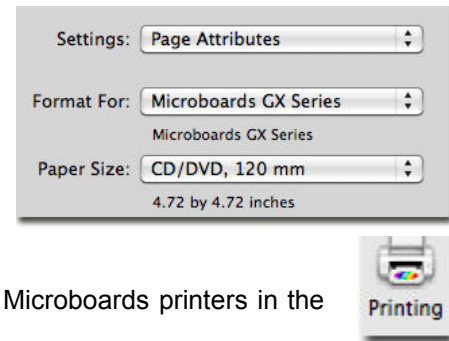
In most cases, you will be able to use your Cleaning Disc more than one time. The number of times a Cleaning Disc can be used will depend on how much material is on the rollers. Additional Cleaning Discs can be purchased from any Microboards certified reseller.

Using DiscLabel Labeling Software

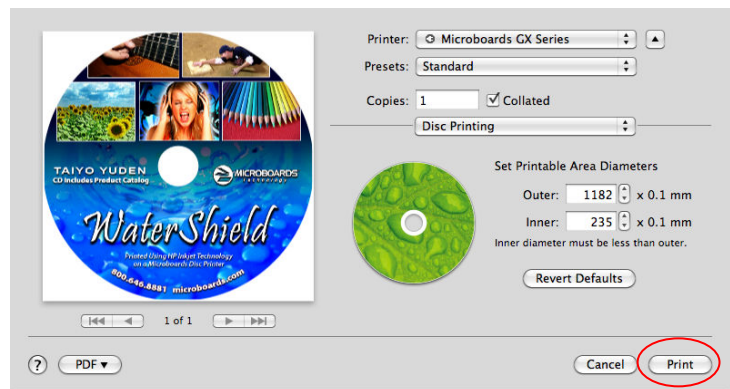
Printing your Disc Labels

Follow these steps to print your disc labels directly from DiscLabel to a Microboards G4 Auto Printer:

1. Check the **Page Setup** settings under the **File** menu. Be sure the **Microboards G4** and **CD/DVD, 120 mm** are selected. Click **OK** when these settings are correct.
2. Click the **Printing** button in the lower right corner.
3. Select **Microboards PF-3, G4 and GX-Series** from the list of Microboards printers in the **Media** drop-down list.
4. Verify the **Printable** and **Hub Diameters**. It is recommended that the **Hub Diameter** setting be left at the default, as the G4 Auto Printer will mask the image based on the diameter settings that are specified in the printer itself.



5. Click the **Print** button when you are ready to make the final print settings before printing your disc label.
6. Select the **Microboards G4** printer, enter the number of **Copies** you want, then select **Disc Printing** to verify the **Printable Area Diameters**; use the diameter settings that are appropriate to the media type you are using.
7. Click the **Print** button in the lower right corner when you are ready to print.



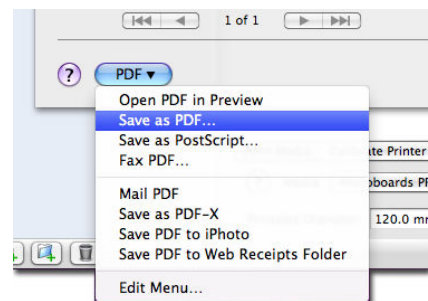
Saving your Disc Labels as a PDF

If you want to print the disc label at a later time without using Smile Software's DiscLabel application, follow the directions for printing the label through step 6.

Instead of clicking the **Print** button in step 7, click the **PDF** button in the lower left corner of the Print window. Select **Save as PDF...** from the drop-down menu.

Choose the location and the name of the file to be saved and click the **Save** button.

Once the file is saved in PDF format, you can print from any application that can display PDF files directly to your Microboards G4 Auto Printer. The PDF file can also be used for printing to a Microboards G4 Auto Printer on other Macs on which Smile Software's DiscLabel application is not installed.



Troubleshooting

Printer not printing:

1. Confirm the G4 Auto Printer is plugged into a power source and is turned on. The ON/OFF switch is located at the back of the unit, above the power cable connector.
2. Confirm the green light on the power button is lit on the Control Panel. If AC power is on and the green light is off, press the power button on the Control Panel and wait for several seconds. If the light still does not come on, contact Microboards Technical Support.
3. Confirm the G4 Auto Printer is connected to the computer. This can be checked by clicking on Start, going to Settings and selecting Printers. Confirm the printer is listed and is active.
4. Confirm that the **Microboards V102C and V101B Ink Cartridges** are being used. The G4 Disc Publisher will not function with any other cartridge!
5. Check the Output bin! If it is full, you will not be able to print or publish more discs until you empty the completed discs from your Microboards G4.



Disc Loading error

1. If a disc is not loaded correctly, an error message will be displayed on your Mac. Check to see if there are any discs on the belt. Remove any discs that are left on the belt.
2. Lift the cover and check for any discs on the front deck of the G4 Auto Printer. Remove any discs found on the belts. Close the cover.
3. Next, reload the input bin and click the OK button on the error message to continue. The system will load the next disc and continue printing the remaining discs for that job.

Disc not Advancing:

If a disc is not moving to or through the print zone correctly, the rollers in the G4 Disc Publisher may need cleaning. A Cleaning Disc was included with your G4 Disc Publisher.

To use the disc, select **Cleaning Disc Utility** from the **Utilities** menu. Remove the paper label from the Cleaning Disc and place the disc sticky-side down on the back roller, with the center of the disc above the elevator. Click the **Run Disc Forward** button.

You may need to perform this more than one time in order to clean the rollers, especially in a dusty environment.

The number of times the Cleaning Disc can be used will depend on how much material is on the rollers. Additional Cleaning Discs can be purchased from any Microboards certified reseller.

Low Ink indication

Before each disc is printed, the ink levels are checked. If the level of any one color has reached 10%, a warning message will be displayed on your Mac and printing will be temporarily suspended. You can either change the cartridge at this point or continue printing using the same cartridge.

If you continue with the same cartridge, printing will continue uninterrupted until the ink level reaches 5%. The low ink level warning will be displayed once more. Again, either change the cartridge or continue.

Once the ink level reaches 3% or less, the warning will be displayed before each print.

It is strongly recommended that you replace the cartridge at this point.

If you notice poor ink quality or a missing color in your prints at any time, replace the ink cartridge.

Printing off the Printable Surface

The printer is not aligned correctly. See page 9 for details.

Out of Media Indicator on Front Printer Panel

This will occur if the input hopper is empty or is loaded incorrectly. If the input hopper is empty, load more discs and press the Out of Media indicator.

If media is in the input hopper, unload all discs. Reload the media according to the instructions on page 10 and press the Out of Media indicator.



Printing Specifications

Print Speed:

Depends upon percentage of coverage and print mode selected

Photo:

- Approx. 115 seconds for 100% full-color coverage, Photo Best Mode
- Approx. 80 seconds for 100% full-color coverage, Photo Normal Mode

Text & Graphics:

- Approx. 65 seconds for 100% full-color coverage, Text & Graphics Best Mode
- Approx. 25 seconds for 100% full-color coverage, Text & Graphics Normal Mode
- Approx. 30 seconds for 20% coverage Text & Graphics Best Mode
- Approx. 20 seconds for 20% coverage Text & Graphics Normal Mode

Print Technology:

HP Inkjet

Print Quality, Black: up to 1200 dpi

Print Quality, Color: up to 4800 x 1200
optimized dpi

Warranty:

One Year Limited Warranty

Ink Cartridge Types:

Microboards V102C (Color) and V101B
(Black)

Media Types:

Printable-surface 120mm CD-R, BD-R or
DVD-R

Maximum Print Width:

4.72" (120mm)

Connectivity:

USB 2.0 required

Power Supply:

Auto Detect AC Power:
90VAC – 240VAC, 47Hz – 63Hz

Memory:

8 MB

Technical Support

For technical questions or support issues, contact Microboards Technology technical support:

United States

PH: 952-556-1639

FAX: 952-556-1628

support@microboards.com

www.microboards.com

Europe

PH: +44 (0) 845 230 7800

www.microboards.co.uk

Japan

PH: 03-3561-2266

www.microboards.co.jp

Please have the Model and Serial Number of your G4 Auto Printer available when contacting Technical Support.

