



MICROBOARDS[®]
Technology

GX-1 Disc Publisher

For Mac OS X



Users Manual

TABLE OF CONTENTS

INTRODUCTION	5
WHAT'S INCLUDED	5
SYSTEM REQUIREMENTS	6
ASSEMBLY AND INSTALLATION	6
ASSEMBLY INSTRUCTIONS	6
<i>GX-1 Disc Publisher Assembly</i>	6
INSTALLING INK CARTRIDGES	7
<i>Supported Ink Cartridges</i>	7
<i>Loading / Replacing Ink Cartridges</i>	7
LOADING DISCS	8
FRONT PANEL INDICATORS AND BUTTONS.....	8
INSTALLATION OF DRIVERS AND SOFTWARE.....	9
<i>Driver and DiscrIBE Installation</i>	9
CONNECTING TO A MAC	9
<i>Adding the GX-1 Printer</i>	9
PRINTER ALIGNMENT	10
ALIGNMENT.....	10
<i>Print Alignment CD</i>	10
MICROBOARDS TOOLBOX	11
INK LEVEL.....	11
TEST	11
CLEAN	12
UTILITY	12
SUPPORT.....	12
REGISTER	12
THE GX-1 DISC PUBLISHER AND DISCRIBE	13
PRINT ONLY WITHOUT DISCRIBE	13
TROUBLESHOOTING	14
PRINTER NOT PRINTING	14
DISK LOADING ERROR	14
LOW INK INDICATION	14
PRINTING SPECIFICATIONS	15
TECHNICAL SUPPORT	15

Introduction

The Microboards GX-1 Disc Publisher is a single drive, 50 disc, print and record system. The GX-1 combines industrial strength printing and recording into a single, easy to use duplicator. The system includes one 16x DVD recorder. Microboards and HP co-developed the printer technology, allowing up to 4800 x 1200 dpi printing. The Discribe software is a dynamic interface for both beginners and power users. Easily record DVD Video, DVD data, Audio CD's, Data CD's, Video CD's and much more.

Other features include:

- Asynchronous print and record function
- Creation of audio CD's from MP3, aiff, or wave files
- Full support for CD Text, Pre-Gap, UMac and ISRC
- Batch mode, allowing up to 25 different masters to be used at a time.
- Multi-borders support.
- Integrated print function.

What's Included

When unpacking your GX-1 Disc Publisher system, the following items should be included:

- GX-1 Disc Publisher print and record system
- GX-1 Disc Publisher Quick Start Guide
- Print Sample
- Power Cord
- Alignment CD's
- Blank Printable CD's
- Users Manual (This document)
- Microboards GX-1 Disc Publisher Install CD (Includes drivers, and CharisMac Discribe software)
- Microboards GX-200HC Color Ink cartridge (14ml)
- USB Printer Cable
- Input Bin rods (already installed)
- 50 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 GX-1 Disc Publisher has the following minimum requirements and compatibilities:

Operating System

Mac OS 10.3.9 or above.

Processors

G 4 Power PC Processor, running at 1.2 GHz or faster; **-or-** G 5 with Intel Processor.

System Memory

Minimum 512 MB of system memory. 1GB is recommended for DVD recording operation.

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 Installation

Assembly Instructions

GX-1 Disc Publisher Assembly

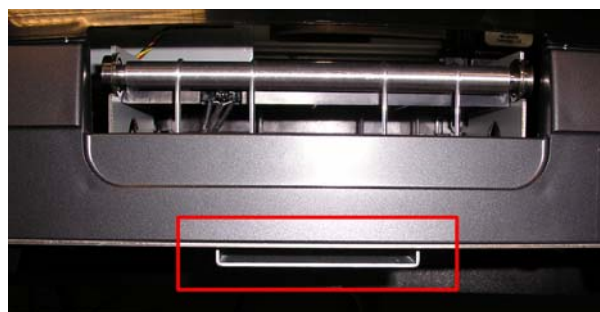
Remove the GX-1 Disc Publisher system from the shipping box and confirm you received all of the items.

Place the GX-1 Disc Publisher on a stable, flat surface. You will need room both in front and to the left of the system, as discs will be accessed from both locations.

The input bin posts are pre-installed, with the wide post to the front.

The Reject Bin is pre-installed on the left side of the GX-1 Disc Publisher. This bin, which slides out when you know discs have been rejected.

Slide the 50-disc Output Bin into the channel between the feet at the front of the GX-1 Disc Publisher, shown below.



Installing Ink Cartridges

Supported Ink Cartridges

The GX-1 Disc Publisher uses a single color ink cartridge. The part number for this cartridge is GX-200HC. If other cartridges are installed, the GX-1 Disc Publisher will not function. These cartridges are available from any Microboards reseller.

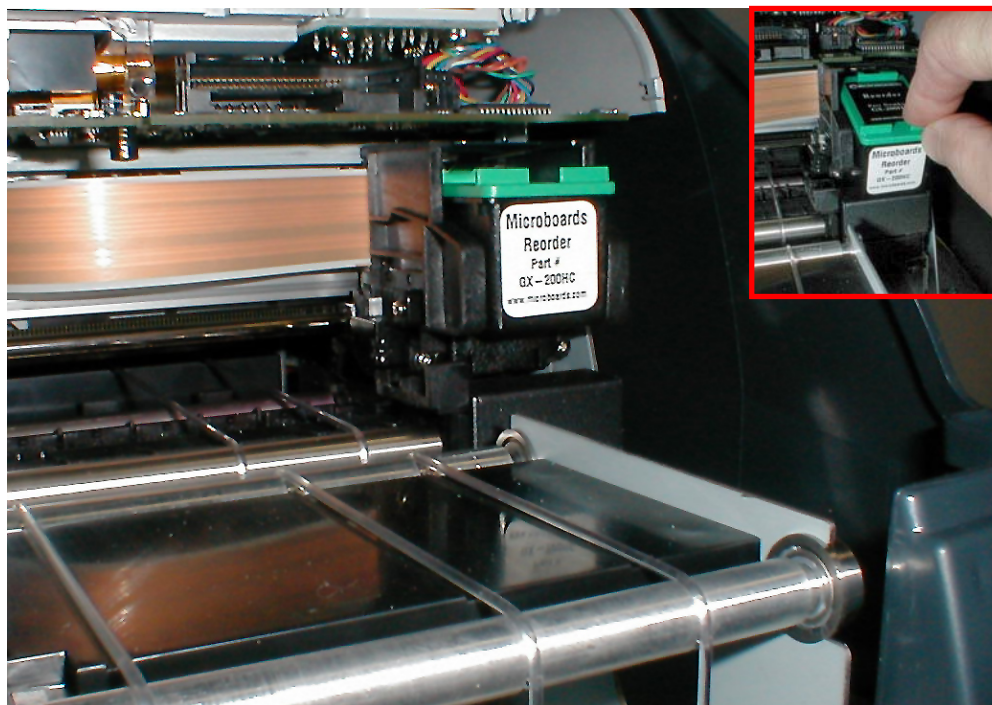
Refill kits or non-Microboards ink cartridges are not recommended for use in the GX-1 Disc Publisher system. Use of these types of cartridges will cause the printer to fail. Use of these types of cartridges will void the warranty.

Loading / Replacing Ink Cartridges

Cartridges can be changed while the GX-1 Disc Publisher is on, but it should never be turned on without an ink cartridge in place.

The GX-1 Disc Publisher system ships with one GX-200HC color ink cartridge.

- Remove the front cover. The print cartridge cradle will be on the right side of the GX-1 Disc Publisher, as shown below.
- Tilt the old cartridge forward to release the cartridge from the cradle, as shown in the inset below.
- Lift the old cartridge out of the cradle.
- Remove the new print cartridge from its packaging and carefully remove the plastic tape. Hold the print cartridge so that the copper strip is at the bottom.
- With the front of the new ink cartridge tilted down, slide the cartridge into the cradle.
- Tilt the front of the cartridge back up to lock the ink cartridge in place.
- Replace the front cover.



Loading Discs

The next step is to load your GX-1 Disc Publisher with output 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 GX-1 Disc Publisher will only accept 12 cm discs. Business card or 8 cm discs are not supported by this system.

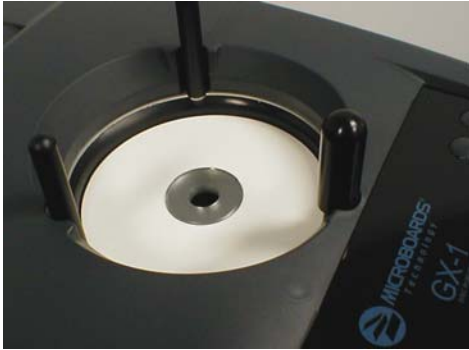


Figure 1



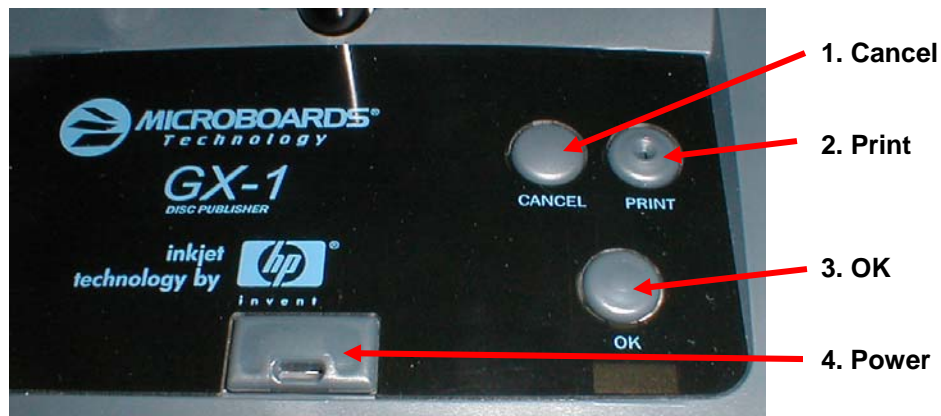
Figure 2

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

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

The GX-1 Disc Publisher 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.

Front Panel Indicators and Buttons



1. Cancel Button – Pressing the Cancel button cancels the current print job.
2. Print Button – The light on this button will flash when printing is in progress.
3. OK Button – This button will only be used when you are prompted to do so while processing discs.
4. Power Button and Light – The Power button turns the GX-1 Disc Publisher on and off. It may take a few seconds for the GX-1 Disc Publisher to turn on after you press the Power button. The green light at the base of the Power button flashes when the printer is processing.

NOTE: The AC power switch located on the back of the GX-1 Disc Publisher must be turned on first in order to supply power to the Front Panel.

Installation of Drivers and Software

Driver and Discribe Installation

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

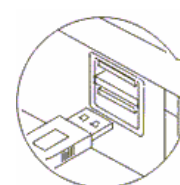
1. Insert the Installation CD in your system's disc drive. Open the disc icon when it appears on the desktop.
2. Open either the **Microboards PowerPC** or **Microboards Intel** directory, depending on which processor your Mac has. If you are not sure, do not guess! Click the Apple icon in the menu bar and select **About This Mac**; the **Processor** will be listed.
3. Double-click on the **Microboards Installer.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 **Restart**.

Connecting to a Mac

DO NOT CONNECT YOUR GX-1 DISC PUBLISHER BEFORE RUNNING THE INSTALLER LOCATED ON THE INSTALLATION DISK!!

The connection between the Mac and the Microboards GX-1 Disc Publisher is done with one USB 2.0 cable.

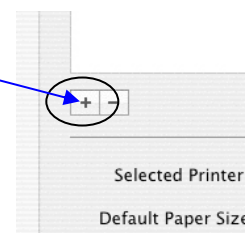
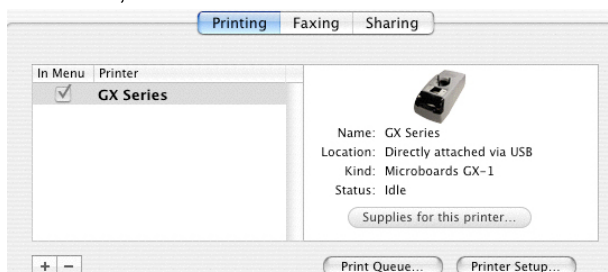
1. Confirm that the power is turned OFF on the GX-1 Disc Publisher and on your Mac.
2. Install a GX-200HC Ink Cartridge (see page 7).
3. Plug in the AC power cord to the back of the GX-1 Disc Publisher. **Do not turn on power to the GX-1 Disc Publisher until an ink cartridge has been installed.**
4. Connect the square shaped end of the USB cable to the back of the GX-1 Disc Publisher.
5. Connect the flat, rectangular end of the USB cable into a USB 2.0 port in your Mac.
6. Turn on the GX-1 Disc Publisher.



Adding the GX-1 Printer

Once the drivers and software have been installed and the GX-1 connected, the GX-1 Series Printer needs to be added.

1. Click **System Preferences** in the Dock.
2. Select **Print & Fax**, then click the **Add** or **+** button to add a printer.
3. Select **GX Series** from the list and click the **Add** button.
4. Once the GX-1 Series Printer has been added, it will appear in the available printers list, as shown below.

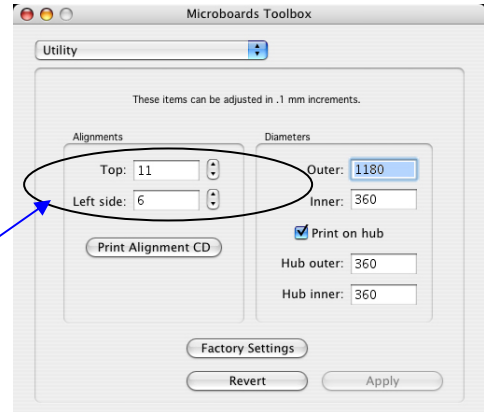


Printer Alignment

Alignment

The GX-1 Disc Publisher system has been aligned at the factory. The factory alignment values are on a label on the back of the GX-1 Disc Publisher. Follow these steps to enter the factory values:

- Click **System Preferences** in the Dock.
- Select **Print & Fax**.
- Click the **Set Up Printers...** button.
- Highlight the Microboards GX Series icon.
- Click the **Utility** button to open the Microboards Toolbox.
- Select **Utility** from the Toolbox list.
- Enter the values listed with the GX-1 Disc Publisher into the Top and Left Side boxes.
- Click the **Apply** button.
- Test the alignment by printing an Alignment CD (see below).



Print Alignment CD

There are factory default alignment values for the **Top** and **Left Side** values for your GX-1 Disc Publisher, referring to the top and left margin sizes, respectively. These can be found on the label on the back of the GX-1 Disc Publisher. You may need to adjust the values, depending on the images you are printing or the media on which you are printing.

1. Place an Alignment CD (see figure 1) directly on the belts below the input hopper. The robotics will not load the disc for you.
2. Click the **Print Alignment CD** button.
3. The alignment guide will be printed on the disc (see figure 2).
4. Confirm the numbers that cross the circle.
5. If the circle does not cross the alignment guide at both zero points, change the **Top** and **Left Side** alignment values by the number at which the circle does cross the guide (See figure 3).
6. Once the new numbers are entered, click **Apply**.

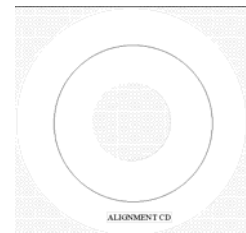


Figure 1

The Alignment CD pattern should ONLY be printed with the printer fully aligned and in Photo Best or Photo Maximum dpi resolution.

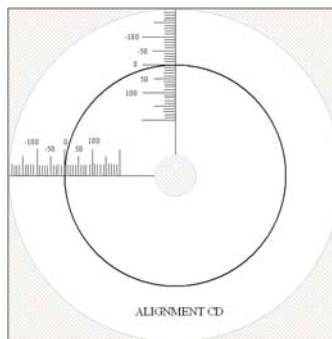


Figure 2

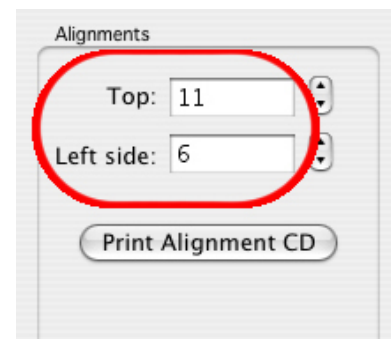


Figure 3

Microboards Toolbox

Access the Toolbox by selecting the **System Preferences** from the Dock. Select **Print & Fax**. Highlight the Microboards GX Series icon and click the **Utility** icon. The Toolbox pages will appear in the following order.



Ink Level

The **Ink Levels** show how much remains of all 3 colors, Cyan, Magenta and Yellow.

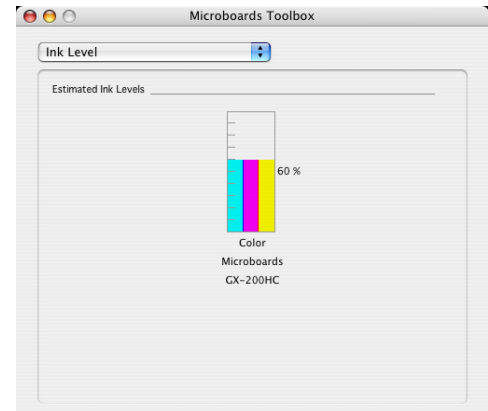
NOTE: If you place a used cartridge in the GX-1, the ink level may not be reported correctly. If the GX-1 can identify the cartridge, it may report the correct ink levels; if not, it will assume that the ink cartridge is new and will show ink levels of 100%.

Before each disc is printed, the ink levels are checked. If the level of any one color is 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.



Test

To confirm the computer is communicating with the GX-1 Disc Publisher, print a Test Disc. This can be done with one of the inkjet printable CD's included with your GX-1 Disc Publisher, or an inkjet compatible disc you may already have. To print the Test Disc:

- Place the inkjet printable media directly onto the belts below the input hopper. The robotics will not load the disc for you.
- From the Microboards Toolbox, select **Test**.
- Click the **Test** button.
- Once printing is complete, the disc will be ejected into the output hopper.

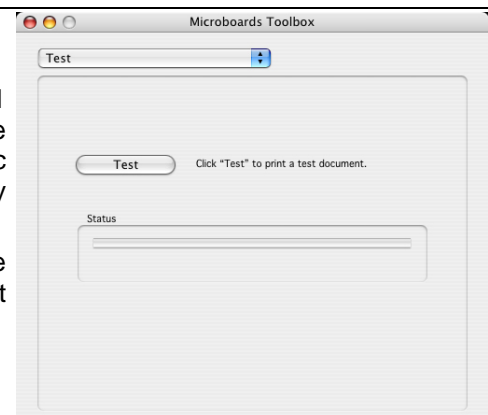


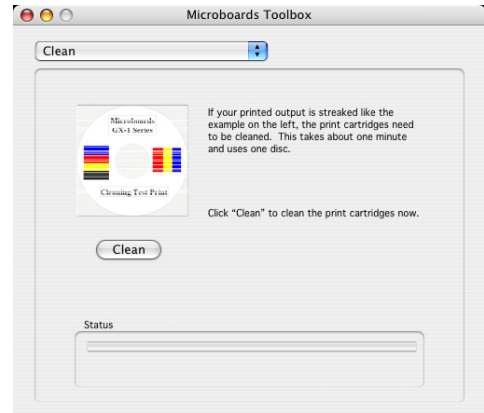
Figure 3

Clean

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

Like the Test disc, a disc must be placed directly on the belts below 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.



Utility

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

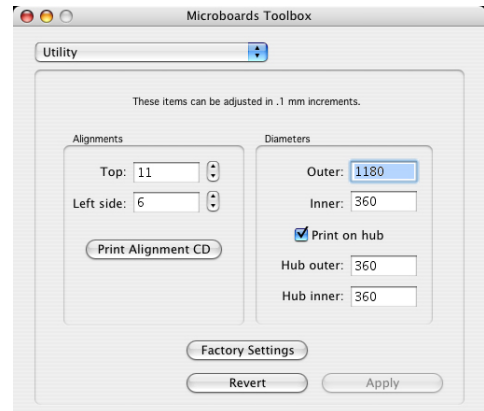
The Outer and Inner **Diameters** will change the size of the area to be printed. To avoid excessive ink buildup, these values should never be set so that the GX-1 Disc Publisher is printing off the media.

If you have media with a printable inner hub separated from the rest of the disc by an unprintable ring, you can set the inner and outer hub diameters appropriately. If you are using media with a continuous print surface, the Print on Hub setting should not be checked.

Print Alignment CD will print out the alignment pattern. This should only be done using a pre-printed alignment CD.

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

Revert will discard any changes you have made since the **Apply** button was clicked.



Support

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

Register

Clicking the **Register** button will open your default internet browser to the Microboards Product Registration webpage. When registering your GX-1 Disc Publisher, please be sure you are including the correct serial number, which will be on the back of the GX-1 and on the box product label. This function requires an internet connection.

The GX-1 Disc Publisher and Discribe

Discribe is the application used to control the Burn and Print functionality of the Microboards GX-1. It is able to set up publishing jobs, load the GX-1, burn to the loaded disc, unload the disc, and then print the image you have selected.

Discribe should automatically find your GX-1 Disc Publisher and initialize the robotics and printer when the application is opened. If the GX-1 does not initialize, you should verify the robotics selection. This may happen if you have more than one robotic system connected to the Mac.

To check the robotics, select **Test Robotics...** from the Discribe **Utilities** menu.

If you have more than one robotic system connected to your Mac, you will need to have the **Microboards GX** selected as the **Robot**. To verify that you have made the correct selections, click the **Test Robot** button and follow the directions provided in the test page.



The **Open** and **Close** buttons are used to verify that the correct drive has been selected. If a drive other than that in the Microboards GX-1 responds to these buttons, the correct drive has not been selected.

Click **OK** when the robotics are set correctly.

Please see the Discribe for Microboards Disc Publishers manual for more information on using Discribe.

Print Only without Discribe

While Discribe does include a Print Only function under the Utilities menu, you can print from any application to the GX-1 Disc Publisher. When printing using the GX-1 Disc Publisher from any application, you should always choose **GX Series** and **120mm disc** in the **Format For** and **Paper Size** Page Setup selections, respectively.

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.

The robotics will not be available to load the media from any application other than Discribe, so you will need to load the media manually. There are 2 important considerations to keep in mind when loading media manually:

- Each disc must be manually placed on the belts below the input hopper rather than in the input hopper itself.
- You can only load one disc at a time. If you place more than one disc on the belts at once, or place a disc on the belts before the belts have completed the unloading of the prior printed disc, the printer will generate an error and must be power cycled to clear the error.

Printing prior to burning any media is not recommended!!

Troubleshooting

Printer not printing

1. Confirm the GX-1 Disc Publisher 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 front panel. If AC power is on and the green light is off, press the power button firmly and wait for several seconds. If the light still does not come on, contact Microboards Technical Support.
3. Confirm the GX-1 Disc Publisher is connected to the computer, with a USB cable. This can be checked by clicking on Start, going to Settings and selecting Printers. Confirm the printer is listed and is active. If the icon is not active, make sure the Use Printer Offline is not selected. Also check to make sure the correct printer port is selected.



Disk 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 GX-1 Disc Publisher. 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.

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 Specifications

Print Speed:

Depends upon percentage of coverage and print mode selected
Approx. 45 seconds for 100% full-color coverage, Photo Normal Mode
Approx. 20 seconds for 100% full-color coverage, Text & Graphics Best Mode
Approx. 12 seconds for 20% coverage Text & Graphics, Normal Mode

Ink Cartridge Types:

Microboards GX-200HC

Media Types:

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

Maximum Print Width:

4.72" (120mm)

Power Supply:

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

Warranty:

One Year Limited Warranty

Print Technology:

HP Thermal Inkjet
Print Quality, Black: 600 x 600 dpi, with HP PhotoREt
Print Quality, Color: up to 4800 x 1200 optimized dpi, with HP PhotoREt
Color Technology: HP PhotoREt

Memory:

64MB

Connectivity:

USB 2.0 required

Technical Support

For technical questions or support issues, please contact Microboards Technology technical support at PH: 952-556-1639, FAX: 952-556-1628, by email at support@microboards.com or on the web at <http://www.microboards.com>.