CharisMac Engineering, Inc.

MICROBOARDS® Technology

CharisMac Discribe

Version 6.0

for

Microboards Disc Publishers

For Mac OS X

Users Manual

Microboards Technology LLC Version 1.0

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Introduction

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Microboards Disc Publishers all use Discribe as the Mac application that controls the robotics during Burn-and-Print operation. Each model may have variations in the input/output capacity, number of drives available, and the Print-Only Mode process.

GX-2 Disc Publisher

Input/Output Capacity:	50 discs
Number of Drives:	1 recorder drive
Print-Only Mode:	Uses Discribe to print discs

The GX-2 Disc Publisher is designed for office desktop use and is the perfect solution for businesses and organizations requiring short runs of discs.

MX Series Disc Publishers

Input/Output Capacity:	100 discs
Number of Drives:	MX-1: 1 recorder drive
	MX-2: 2 recorder drives
Print-Only Mode:	Prints directly out of any application

The MX-1 and MX-2 Disc Publishers are ideal for organizations that need to produce anywhere from one to thousands of discs! Designed for industrial environments, the MX comes with either 1 (MX-1) or 2 (MX-2) high-speed DVD/CD recorders and the industry's fastest, lowest cost-per-disc inkjet printer, all integrated into a robust publishing solution.

Discribe and Driver Installation

If you have not already done so, Discribe and the Microboards Drivers must be installed on a hard disk. Once you have installed the software, store the original installer disc in a safe place. Please refer to the GX-1 User's Manual for additional hardware installation information.

1. Insert the Microboards Installation CD in your system's disc drive.
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 the **Microboards Installer.mpkg** icon in the appropriate directory. 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**.
7. Restart your Macintosh to complete the installation.

Discribe and the Microboards Drivers are now installed!

Discribe Overview

Open the Discribe application. The Discribe Robotic window will open, giving you access to the various project types, formats, robotic setup controls, and job options. The image below shows the Robotic window with the **Job Options** settings open; clicking the **Job Options** button will close the window.
Choose one of the types you wish to use on the discs to be written by Discribe in your CD/DVD duplicator. For more information on the specific types, please see below.

Project Types

Discribe allows the creation of discs of 5 basic project types. Click the type you will be using.

- **Data** – Creates a basic data. There are 4 formats available within the Data project type: Macintosh HFS, ISO9600, DVD (UDF), and DVD Video/Audio (UDF). The format can be selected in the list box to the left of the Total Size.
- **Audio CD** – Builds a Red Book standard audio CD that can be played back in any CD player which supports the media to which you have written. You can also create a CD Extra disc from the Audio CD type by checking the **CD Extra** box and adding the data.

  CD Extra is a multi-session disc that contains Audio tracks in the first session and data in the second session. Data session is in the ISO 9660 format.
- **Copy a Disc** – Allows you to copy from a disc to blank discs either directly or via a cache file on the hard disc. If the source is one of your writers then Discribe will always cache the disc to a temporary file on your hard disk.
- **Disc from an Image** – Uses an image saved by Discribe (and some other disk image types) to write discs.
- **Stream** – Stream is more of a process than a project type. It sets your robotic duplicator up to be a master disc copying station. In the robot's input bin you would put the desired number of blanks with the master on top. When the process is started Discribe determines that there is a master on top, caches it's contents to a temporary file on your hard disk and proceeds to write to as many blank disks as it finds. You can stack as many masters and blanks as your input spindle will hold continuing the pattern from the bottom; blanks, master, blanks master, blanks, master and so on. Print images can even be queued up so that each set of blanks get a desired printed image.

Robotics

Use the list box to select the correct Publisher system.

If you need to confirm the robotics configuration, click the **Pick Burners**. The **Open** and **Close** buttons can be used to verify that the correct drive has been selected. If a drive other than that in the Microboards MX responds to these buttons, the correct drive has not been selected.

The MX-1 model will only have a drive selected for Burner 1. Burner 2 should show **No Drive Selected**.

Once the drives are verified close that window and press the **Test Robotics** button. Click the **Start** button to test the robotics. The steps taken will depend on the options checked. You will need one disc for each burner selected.

Close this window when the test is complete.

Number of Discs to Burn

Enter in the number of discs you need to create for this job. You can use the arrows to the right to change the number or type in the number.

Print Options

These controls are used to set the print image, page setup, and print settings.

Print Label

Check this box to print the selected label. If no label is selected, you cannot check the box.

Label and Preview

There are 2 methods of selecting an image to print as the disc label. You can click the **Choose Label** button and browse for the image. Once selected, the image name will appear above the buttons and a preview of the image will appear to the left of the buttons. Alternately, you can drag-and-drop the selected print file into the preview area.

When you select a label by either method, the **Print Label** box will automatically be checked.

Page Setup

When printing using the Microboards Disc Publisher for any type of disc printing, you should always select the Microboards Disc Publisher printer and **120mm disc** in the **Format For** and **Paper Size** Page Setup settings, respectively.

Access this window to the right by clicking the **Page Setup** button on the Discribe window.

Print Settings

The Print Settings button provides you with access to the print driver settings. The available settings will vary depending on the model of Microboards Disc Publisher you have. Please see your Disc Publisher User's Manual for more information.

Job Options

Click the Job Options button to reveal the advanced job settings that are available.

Test Burn

Check this box to simulate a duplication. Please note that some media types, such as DVD+R, do not support simulation and will be burned regardless of this setting.

Open Next Session

Checking this box will leave the copied discs open. However, these discs will not be able to be burned to again through the Disc Publisher.

Verify After Burning

Check this box to run a verification on the burned disc against the source. Checking this box will decrease throughput.

Stop Job if more than…

This setting is used to halt the job if the number of failures reaches the value entered. 4 is the default value.

Clear Robot First

Checking this box will tell the Disc Publisher to clear all drives before the job begins.

CD Write Speed and DVD Write Speed

By default, these 2 options are set to **Best**. Discribe will determine the best burn speed based on the drive model and the media that is loaded into the drives. **Best** is the recommended value for these speeds.

Queue Job vs. Burn

If you have a number of jobs to create at once, you should use the **Queue Jobs** button once each job is ready to go. This allows you to build the next jobs and place them in the queue. As each job reaches the top of the queue, it will become the active job and will burn accordingly, which allows you to set up several jobs to run in sequence.

If you click the **Burn** button, Discribe will not allow you to create a new job until the job that is running is complete.

Which is better?

Queuing jobs is more efficient, as you can set up multiple jobs to run sequentially. However, if you are mixing jobs using more than one media type, you will need to make certain that the number of discs available matches the number of discs selected to burn for each job. If, for instance, you are queuing a DVD data job and an Audio CD job, you will have to load the correct number of DVDs for the DVD data job, then the correct number of CDs for the Audio CD job. If you do not count correctly, you will end up with a DVD job being attempted to a CD, or an Audio CD job trying to burn to a DVD. In either case, the disc will fail. Even if you count and load the correct number of each media type, the discs will no longer be in the correct sequence if there is a burn failure during all but the last job.

You will not experience that problem if you are burning individual jobs. Since each job must complete before you can start to build the next, you will be able to load the correct media before the start of each job. You lose the ability to build new jobs while a job is running, however.

As a rule of thumb, if you are burning multiple jobs to the same media type, using the **Queue Job** button will be better for you. If you are mixing media types between jobs, **Burn** is a safer option.

Creating Projects

For Data and Audio CDs, the building of a job within Discribe follows the same basic procedure for each project type and format:

1. Select the Project Type and format.
2. To add the desired data (files, audio tracks, etc.) to the project you can drag data directly to the Discribe window, or you can click the **+** button to browse for your data.
    a. Select the files or folders you wish to include on the disc and click **Open**. The items you highlighted will appear in the file list.
    b. If you are adding files from several locations, you can perform this step more than once, selecting the files from the other location.
3. Select the correct Microboards Disc Publisher from the Robotics list box.
    a. If necessary, use the **Pick Burners** and **Test Robotics** buttons to verify that you have the correct hardware configuration.
4. Enter the **Number of discs to burn**.
5. If printing, drag-and-drop the image to burn into the preview pane to the left of the print function buttons. You can also browse for the image by clicking the **Choose Label** button. Using either method, the **Print Label** check will be entered, and the name of the file will show.
6. Verify that the **Page Setup** and **Print Settings** are correct.
7. Click the **Job Options** button to set the advanced Job Options, such as selecting a Test Burn, verifying the data after burning, how many rejects are acceptable, etc.
8. Click the **Queue Job** button to place the job in the burn queue, or if there are no jobs currently in the queue, click the **Burn** button to begin the duplication process.

Data Disc

This is the least restrictive project type. Within the Data project type are 4 available formats, selectable in the list box to the left of the Total Size:

1. **Macintosh HFS** – For Mac users this is the preferred method for writing discs. This format creates an HFS volume out of files and folders added to the HFS Picker. Also, this is the default format when clicking the “Data CD” button or dragging data to the Discribe Quick Start menu. This is not the preferred method of writing discs if you intend to distribute discs to PC users.
2. **ISO 9660** – Creates a standard ISO type disc for use with windows based PCs, which is useful if you intend to distribute discs to users in the Windows environment.
3. **DVD (UDF)** – Creates a DVD disc which utilizes the Universal Disc Format (UDF) and is intended for general file mastering. Because the disc is UDF it will be readable in any OS which supports reading UDF discs (Mac and Windows XP included).
4. **DVD Video/Audio (UDF)** – Format allows you to add any pre-encoded DVD Video files (in a VIDEO_TS folder) to the job for burning a final DVD Video disc.

Select the appropriate format depending on how the discs will be used.

Audio CDs

Use this project type to create Disk-At-Once (DAO) Red Book Standard Audio CDs playable in any CD player which supports your media type. Discribe requires AIFF audio files to be used for Audio CDs. Tracks of other types will attempt to be converted into AIFF tracks when added to the Audio Picker window.

The tracks will be numbered, and can be rearranged by dragging an audio file up or down in the list. The **PreGap** defaults to 2 seconds, but can be changed. The track Title and Time are displayed, as well.

CD Extra

You can also use this project type to create CD Extra discs. CD Extra CD-ROMs are CDs which contain Audio and Data on the same CD. It is essentially a two session CD-ROM, on which Discribe writes the Audio tracks first, then the data second. This prevents Audio CD players from mistakenly reading a data track first and potentially damaging your speakers.

After selecting the audio files you wish to burn to the disc, place a check in the **CD Extra** checkbox, then click the enabled **Data** button. Add the data as you would for a Data project. You can click between the **Data** and **Audio CD** projects to view the selected items for each portion of the disc.

CD/DVD Copy

A very useful function is the Discribe direct CD to CD or DVD to DVD copy function. This function allows you to use another CD or DVD reader or writer to be selected as your read device and then write the data directly from that drive to the CD or DVD writer of your choice.

1. Select **Copy a Disc** as the project type.
2. Select your **Source** drive; this is the drive that will contain your master disc. This can be any drive attached to your Mac, even one of the drives built into your robot. The example above shows a 5-track audio CD being used as the source.
3. If the source disc is in your robot or the **Cache To File** option is checked, Discribe will copy the source disc to a temporary file on your Mac.
4. Select the correct Microboards Disc Publisher from the Robotics list box.
    a. If necessary, use the **Pick Burners** and **Test Robotics** buttons to verify that you have the correct hardware configuration.

5. Enter the **Number of discs to burn**.
    a. If printing, drag-and-drop the image to burn into the preview pane to the left of the print function buttons. You can also browse for the image by clicking the **Choose Label** button. Using either method, the **Print Label** check will be entered, and the name of the file will show.
6. Verify that the **Page Setup** and **Print Settings** are correct.
7. Click the **Job Options** button to set the advanced Job Options, such as selecting a Test Burn, verifying the data after burning, how many rejects are acceptable, etc.
8. Click the **Queue Job** button to place the job in the burn queue, or if there are no jobs currently in the queue, click the **Burn** button to begin the duplication process.

Disc from an Image

Copies a disc image previously saved to your hard disk by Discribe using the **Write to Image File** function under the **Job** menu.

Creating an Image

1. Select the Project Type and select the files you want to save.
2. Once your project has been created choose **Write to Image File** from the Discribe **Job** menu. Enter a name for the image and save location and click **Save**.

Writing the Image

1. Select the **Disc from an Image** project type.
2. Click the **Choose Image File** button and select the saved file. The number of tracks, time, and size of the image will be displayed.
3. Select the correct Microboards Disc Publisher from the Robotics list box.
    a. If necessary, use the **Pick Burners** and **Test Robotics** buttons to verify that you have the correct hardware configuration.
4. Enter the **Number of discs to burn**.
    a. If printing, drag-and-drop the image to burn into the preview pane to the left of the print function buttons. You can also browse for the image by clicking the **Choose Label** button. Using either method, the **Print Label** check will be entered, and the name of the file will show.
5. Verify that the **Page Setup** and **Print Settings** are correct.
6. Click the **Job Options** button to set the advanced Job Options, such as selecting a Test Burn, verifying the data after burning, how many rejects are acceptable, etc.
7. Click the **Queue Job** button to place the job in the burn queue, or if there are no jobs currently in the queue, click the **Burn** button to begin the duplication process.

Stream

Stream is a feature that allows you to stack master disks followed by blank disc(s) in the robot's input bin. Discribe will analyze each disc and determine whether the disk is blank or if it contains data. If Discribe encounters a master disc (a disc with data on it) it will read or cache the disc's contents and then write that cached data to the following blank discs.

Print images can also be selected for as many masters as have been placed in the input spindle.

1. Select **Stream** as the project type.
2. Add Print Images to the list by clicking the **+** button and browsing for the image, or by dragging and dropping image files into the list. The first print image in the print images list will be used for the first master's blanks, the second image for the second master's blanks and so on. You can re-order the selected print images by dragging an entry up or down in the list.
3. Load your masters and blank media into the input hopper. Copies of the first master will be use the first image listed as the print image, copies of the second will use the second image, and so on.

   Any copies on which you intend to print must be processed first. If, in the example above, there is a third master to be processed in Stream mode, it would have to be loaded into the input hopper after the blank discs for the second master. You cannot place a master that is not associated with a print image before a master that is associated with a print image.
4. Select the correct Microboards Disc Publisher from the Robotics list box.
   a. If necessary, use the **Pick Burners** and **Test Robotics** buttons to verify that you have the correct hardware configuration.
5. Verify that the **Page Setup** and **Print Settings** are correct. Since the print images are selected above, the image preview and **Choose Image** button are not available.
6. Click the **Job Options** button to set the advanced Job Options, such as selecting a Test Burn, verifying the data after burning, how many rejects are acceptable, etc.
7. Click the **Queue Job** button to place the job in the burn queue, or if there are no jobs currently in the queue, click the **Burn** button to begin the duplication process.

Print Only

To run a Print Only job, all you need to do is select a Print Label in the main window, using any project type. To print the image, select **Print** from the **File** menu. As with printing during a burn-and-print job, you should always verify the Page Setup and Print Settings before printing (see page 6).

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