User Manual

For Discmakers Reflex Disc Duplicator

V 3.5.4

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Chapter 1: Introduction & Manual Overview

This system is a reliable, high performance, high speed, standalone manual tower system. With its professional industrial design and simple user interface, it will make your duplicating experience easier than ever.

Before you start:

Before you start using this system, please read the following to ensure proper operation:

1. **Important Notice:**
   The type of system you purchase will determine the type of discs you are able to copy. For example, if you purchased a CD only system, then you will only be able to copy onto recordable CD formats. If you purchased a DVD system, then you can copy on to recordable DVD and CD formats. If you purchased a Blu-ray system, then you can copy onto recordable Blu-ray, DVD, and CD formats.
   If you have a Blu-ray capable system, the terms CD or DVD can be substituted for Blu-ray within the text of this user manual.

2. **System Limitations:**
   The system will not copy any CD, DVD, or Blu-ray discs that have Copy Protection encoding. Typically, the movies purchased or rented from a retail store will contain copy protection.

   In addition to the copy protection limitation, the system cannot copy across formats. This means that it is not possible to copy a DVD master onto a recordable CD or vice versa. In addition, target discs must have the exact same capacity as the source disc. This means that it is not possible to copy a single layer DVD or Blu-ray Disc onto a double/dual layer DVD or Blu-ray Disc or vice versa.   The recordable blanks <u>must</u> be the same format and maximum capacity as the master disc.

3. **Temperature Warning:**
   If the system was stored in a location where the temperature dropped below 32ºF (0ºC) within the past 24 hours, please leave the system in a warm room with temperatures at least 65ºF (19ºC) for 4 hours prior to powering it on for the first time. Failure to do so may cause irreparable harm and prevent the system from functioning.

4. **External Connection Warning:**
   In order to operate the system as a standalone unit (no connection to the computer), all USB and/or Firewire connection(s) must be turned off. If by chance, the USB/Firewire connection(s) are activated, please refer to "Appendix A: Optional External Device (USB 2.0/Firewire 1394) Setup Guide"

5. **Maintenance:**

   It is of the utmost importance to operate and maintain the system in a clean, dust-free environment. Dust is recognized as the most common contributing factor to optical drive failure. We strongly suggest you place an air purifier next to the system and frequently use an air duster (canned air) to clear off any dust on the surface of the system.

   Do not try to use the air duster to clean the system while the reader/writer trays are open. In doing so it is possible to inadvertently blow dust into the drive and damage the recording device.

   Warning

6. **Proper Shutdown:**

   To avoid possible system failures, it is essential to shutdown the system properly. To shutdown the system, press the "Shutdown" button just below the display, then press "ENT" (Enter) and follow the on-screen instructions to properly shutdown the system. Turning off the duplicator without performing this function will increase the risk of damaging the system.

Package Contents:
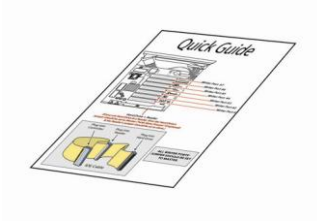
Quick Start Guide

Standard Operation User Manual
Booklet or CD

OR
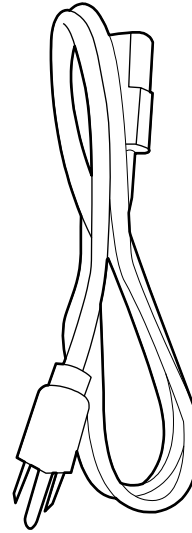
Power Cord Cable

Chapter Overview:

Chapter 2: Getting to Know Your System
> This chapter describes the physical features of the Reflex duplicator and introduces how it is operated.

Chapter 3: Basic Operations Guide
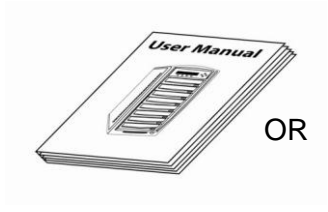> This chapter describes how to perform basic operations such as Making Copies, Changing Burn Speed, etc.

Chapter 4: Menu Overview
> This chapter describes the function of every menu and setting.

Appendix A: Optional External Device (USB 2.0/Firewire 1394) Setup Guide
> This section describes how to configure the duplicator for use by a PC via the optional USB or Firewire Interface.

Appendix B: Troubleshooting
> This section provides many solutions to frequently asked questions and provides insight on system error codes.

Appendix C: Safety & Regulatory Information
> This section provides environmental, health, safety and other regulatory information.

Chapter 2: Getting to Know Your System

System Overview

Note The below image is one representation of the duplicator casing. Your case's appearance may vary but will have similar characteristics.
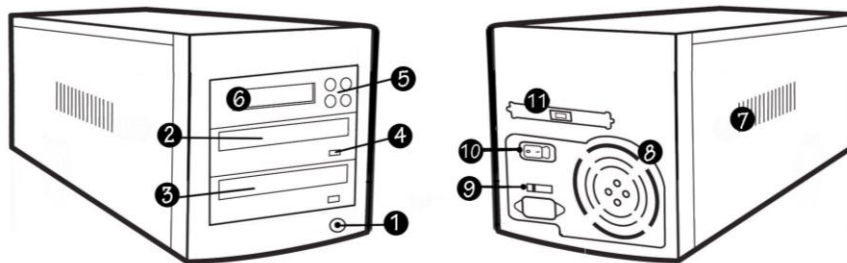
Figure 1-1 System Controls and Display

The components shown in Figure 1-1 are:

1. System Power On/Off Button
2. Optical Disc Reader
   (Referred to as "Reader" throughout this manual)
3. Optical Disc Writer
   (Referred to as "Writer" throughout this manual)
4. Eject Button
5. Keypad
6. LCD Screen
7. System Ventilation Vents
8. Power Supply Fan
9. Power Voltage Switch (110v/220v) (not available on all models)
10. Power Supply On/Off Switch (not available on all models)
11. USB or Firewire External Connection

LCD Front Panel

*The below image is for reference only. Your key assignment and appearance may differ.

 : Up (Menu/Option Scroll Up)

 : Down (Menu/Option Scroll Down)

 : Forward; Enter; OK; Execute the selected function

 : Backward; Escape; go back to the previous function

Input Characters/Numbers

When operating the system, certain functions may require the user to enter a name or value. Such cases could be entering the Counter quantity.

To enter an alpha numeric character, use the up or down button to scroll through the numbers or letters, using the "ENT"/Enter or "ESC"/Escape button to move the cursor position right or left. When the entry is complete, move the cursor to OK and press the "ENT"/Escape button.

The below example is meant to illustrate how to enter a counter value

For example, to enter a quantity of "199", do the following:

```
Specify Counter:
[    ] OK?
```

a) Press the down button until "0" is displayed.
b) Press the "ENT"/Enter button once to move the cursor to the next position.
c) Press the down button repeatedly until "1" is displayed.
d) Press the "ENT"/Enter button once to move the cursor to the next position.
e) Press the down button repeatedly until "9" is displayed.
f) Press the "ENT"/Enter button once to move the cursor to the next position.
g) Press the down button repeatedly until "9" is displayed.
h) Press the "ENT"/Enter button repeatedly to move the cursor to OK. Then, press the "ENT"/Enter button once to submit the selection and proceed to next step.

When entering a number, the device normally asks for a 4 digit number. If the desired number is less than 4 digits, fill the leading spaces with 0s (any leading zeros will be skipped). An example of this would be 0234 (Two hundred and thirty four) or 0010(ten).

Chapter 3: Basic Operations

Make Disc-to-Disc Copies

This process will copy a master disc onto one blank disc. A good condition master disc and a lower (than maximum) recording speed are recommended for higher success rates and better quality duplications.

Section1: Making Copies from the Reader (when the Reader is selected as the source drive).

Step 1: Use the up or down arrow button to navigate to the Copy menu:

```
DISCMAKERS        X.xx
 1.Copy
```

Step 2: Press the "ENT"/Enter button to enter the Copy menu. If the counter function is enabled, it will be displayed at this point. If the counter screen is not displayed, skip to step 4.

```
Counter:
No Counter
```

The Counter feature will let you choose how many copies you want to make for your project. It allows the system to count the number of copies you've made for this job and prompt you when the desired number has been achieved.

The Counter feature is for convenience only, and will allow the user to make more copies than the amount desired, if so required.

If uninterrupted copies are desired, no counter input is required (It will still count the number of copies made for the particular job, but it will not notify the user when to stop.) To temporarily disable the counter, press "ENT"/Enter button when "No Counter" is displayed on the 2nd line of the screen below:

```
Counter:
No Counter
```

Alternately, the following procedure is used to specify a quantity for when controlled duplication is required or desired:

a) Press the up or down button to the following screen:

```
Counter:
Specify Counter
```

b) Press the "ENT"/Enter button to submit. The screen will display Specify Counter:

```
Specify Counter:
[    ] OK?
```

c) Please refer to the "Input Name and Number" section of "Chapter 2: Getting to know your System" on how to enter the desired amount. Then press "ENT"/Enter to continue to the next step.

Step 3: Once the Counter selection is submitted, the screen will display that it is Preparing and Waiting. Drives that do not contain discs will be automatically opened to accept media:

```
Preparing
Waiting for Master
```

OR

```
Preparing
Waiting for Blanks
```

If either one of the above screens is displayed for more than 2 minutes after inserting the master disc or blank discs, please check the quality of the discs.

Step 4: After placing the master disc and blank discs in the drive(s), please allow 5-10 seconds for the system to detect them.

Once the system determines that all drives are ready, the process will start automatically.

```
Processing...
Please Wait
```

Step 4: After several seconds of processing time, one of the following Copy progress screens will appear. The left-hand screen is shown when "Specify Counter" is selected and the right-hand screen is shown when "No Counter" is selected.

"Specify Counter"   "No Counter"

```
Copying...     4012MB
   0/21   10%    401MB
```

```
Copying ...     4012MB
      0   10%    401MB
```

- 4012MB indicates the total capacity of the master disc.
- 0/21 indicates a project size of twenty-one copies of which zero copies have been made thus far.
- 10% indicates the current percentage of the copying process.
- 401MB indicates the current amount of data that has been copied from the master disc.

- 4012MB indicates the total capacity of the master disc.
- 0 indicates zero copies have been made thus far.
- 10% indicates the current percentage of the copying process.
- 401MB indicates the current amount of data that has been copied from the master disc.

i **Note** It is normal to see the progress indicator stay at 0-10% and 100% for approximately 30 seconds for CD duplication and up to 1 minute for DVD duplication. This is caused by the initialization and finalizing stages.

Step 5: Once the duplication run is completed, the successful copies will be ejected and the following screen will be displayed if a counter value was specified for the project.

```
Pass 21 Fail 0
Job Completed! Press OK to Finish
```

Press "ENT"/Enter to go back to main menu.

i **Note** If any discs fail to burn (bad copy) the failed discs will not be ejected from the drive automatically. The drive containing the failed disc will remain closed and the user will have to manually press the eject button to retrieve the disc. If the disc in question is a write-once item (i.e. CD-R) it must be discarded as it is not reusable.

Select the Duplication Speed

This procedure is used to adjust the duplication speed if necessary. By default, the duplication speed will be set to the optimal speed for each format and setting. However, under some circumstances, it may be necessary to reduce the duplication speed. Such circumstances typically are as follows:

➢ **Poor Blank Media Quality.** When the blank media quality is substandard, lowering the duplication speed is necessary to make quality copies.
➢ **Poor Master Disc Quality.** If the master disc is in poor condition, lowering the duplication speed will greatly reduce failure rates.
➢ **Duplication Quality.** Overall, the lower the recording speed, the higher the quality of completed duplicates. If time permits, Disc Makers recommends lowering the recording speed by several degrees in ensure the highest quality of duplicated discs.

With the duplicator completely powered off, press the power button. Once the unit has completed its startup sequence, the screen will display:

```
DISCMAKERS        X.xx
1. Copy
```

Step 1: Use the up or down arrow to scroll to the Setup menu. Press ENT/Enter to select.

```
DISCMAKERS        X.xx
X. Setup
```

Step 2: Scroll to the Select Burn Speed menu

```
DISCMAKERS        X.xx
X. Select Burn Speed
```

Press "ENT"/Enter button to enter the Select Burn Speed menu and the screen will display:

```
Select Burn Speed
CD to CD
```

Step 3: Select the Correct Speed Type
There are different types of recording speeds based on the disc format and source:

- **CD to CD:** Copying to CD-R/RW media from a pre-loaded a CD master disc in the Reader/Writer.
- **DVD to DVD:** Copying to DVD±R media from a DVD master disc in the Reader/Writer.
- **DVD-DL to DVD-DL:** Copying to Double/Dual Layer Recordable DVD media from a Double/Dual Layer DVD master disc in the Reader/Writer.
- **BD to BD:** Copying to BD-R/RE media from Blu-ray master disc in the Reader/Writer.(only available if Blu-ray drives are installed)

Depending on the type of duplication job(s) and individual system restrictions, it is necessary to select the correct speed type in order for this setting to take effect. To select speed types, press the up or down button to adjust and press the "ENT"/Enter button to submit the selection.

Step 4: The screen will progress to the speed selection page. Presented here as an example, the user is changing the CD to CD copy speed from 16x:

```
CD to CD Speed:
16x
```

Press the up or down button to select the desired speed value and then press the "ENT"/Enter to submit the selection.

If the user does not change the drive speed, (or, alternately, the user changes their mind and returns the speed to its original value) the system will NOT respond to the "ENT"/Enter button. Instead, press the "ESC"/Escape button to go back to the main menu.

Step 5: Once the speed setting has been successfully changed, the following screen will be displayed for several seconds:

```
CD to CD Speed:
Adjusted to: 24x
```

The device will then automatically return to the main menu.

```
DISCMAKERS      X.xx
   1. Copy
```

Mix Audio Tracks

The Reflex duplicator system provides several ways to mix audio CDs from several sources.

The user inserts a source audio disc and selects the desired tracks for compilation, repeating this process for each source disc as necessary. When the user is satisfied with the selections, the duplicator will write the tracks to disc in the order they were loaded. This is a Disc-to-Disc duplication process which will produce a disc suitable for playback or for use as a master for further duplication.

The following procedures

Please do this cautiously; if any of the Audio CD tracks you wish to mix are not readable due to scratches or poor quality, the blank CD-R media will be ruined.

Step 1: Use the up or down arrow button to navigate to the Audio menu, press ENT.

```
DISCMAKERS       X.xx
3. Audio
```

Step 2: The dusplicator will display the Preparing screen and any empty recording drives will automatically be ejected to accept blank media:

```
Preparing
Waiting for Master
```

Or

```
Preparing
Waiting for a Blank
```


If either one of the above screens is displayed for more than 2 minutes after you have placed your master disc or blank disc into the drives, please check the disc quality.

Step 3: After you've placed an Audio CD containing the track(s) you wish to copy and a blank CD-R media in the writer drive(s), please allow 5-10 seconds for the system to detect them. After they have been recognized, you should see the following screen:

```
Total: 0 Trk  0m: 0s
 Track 1:   4m:31s
```

- "Total: 0 Trk 0m: 0s" indicates that you have zero track(s) selected and it has zero minutes and zero seconds playtime.
- "Track 1: 4m:31s" indicates currently you are focusing on track one of the Audio CD you've inserted and has a running time of four minute and thirty-one seconds.

Step 4: When you see the above screen, you can press the up or down button to display the playtime of each track on this audio CD and press the "ENT"/Enter button to select the track you wish to be mixed. Selected tracks are marked with a * to the left of the track number on the 2nd line as shown in the below screen.

```
Total: 1 Trk  4m:31s
*Track 1:  4m:31s
```

If the track you have selected will cause the total playtime of all audio tracks to be more than your blank CD-R media capacity, the screen will display:

```
Over Blank Disc Capacity
Press OK to Continue
```

Given the limited space of the screen, the message above will scroll across the screen in order to show the full message.

You need to press the "ENT"/Enter button to return to the track selection menu. The track selected that caused this error message will be de-selected automatically. Then, you can select a different track with smaller playtime.

Step 5: Once you have finished selecting the tracks on this Audio CD you want to mix, you can press the up or down button until you see "Are you done?" on the 2nd line as in the following screen.

```
Total: 6 Trk 26m:17s
Are you done?
```

Step 6: You can now press "ENT"/Enter button to confirm your selection. The system will now start the mixing process as shown in the following screen.

```
Mixing...          1
 10%         4m:31s
```

- "1" indicates that the system is currently transferring track one.
- "10%" indicates that the current transferring progress of the current track, track one.
- "4m:31s" indicates the current running time of that track.

Step 7: Once the mixing process is completed, the following screen will be displayed:

```
Mixing Complete!
Finish Mixing?
```

When you're finished adding tracks, you can choose to finalize the job (mark the completion) by performing the following steps:

a) Press the "ENT"/Enter button when you see "Finish Mixing?" on the 2nd line of the screen as below:

```
Mixing Complete!
Finish Mixing?
```

b) Press the "ENT"/Enter button to submit, and you should see the following confirmation screen:

```
Mixing Complete!
Confirm to Finalize?
```

c) Press the "ENT"/Enter button once to confirm your selection, and you should see the following Finalizing screen (if you choose to mix directly to a blank CD)

```
Finalizing...
Please Wait
```

OR

```
Copying...   H 228MB
   0/1   10%   401MB
```

d) Once the finalizing/copying process is completed, you should see the following screen.

```
Job Completed!
Press OK to Finish
```

You can then press the "ENT"/Enter button and you will be guided back to the main menu.

Alternately, you can choose to mix more tracks from other Audio CD's by pressing the up or down button until you see "Insert Next Master?" on the 2nd line as in the following screen.

```
Mixing Complete!
Insert Next Master?
```

Press the "ENT"/Enter button to repeat Steps 3 through 8.
When the whole process is complete, your mixed copy will be ejected and the following will be displayed:

```
Job Completed!
Press OK to Finish
```

Press "ENT"/Enter button and you will be directed back to the main menu:

```
DISCMAKERS      X.xx
3. Audio
```

Example of Mixing Audio Tracks directly to Blank CD

For the example below, we will mix a new Audio CD from 2 different Audio CD's.
From CD1: song 2, and song 4
From CD2: song 3, song 4 and song 5

1. Go to menu 3. Audio.

    ```
    DISCMAKERS      X.xx
    3. Audio
    ```

2. Press "ENT"/Enter button.

    ```
    Mix Mode:
    Directly to Blank CD
    ```

3. Press "ENT"/Enter button.

    ```
    Preparing
    Waiting for a Blank
    ```

4. Insert Blank CD-R media.

    ```
    Preparing
    Waiting for Master
    ```

5. Insert CD1.

    ```
    Total: 0 Trk  0m:00s
     Track 1:  4m:31s
    ```

6. Press the down button until you see "Track 2" on the 2nd line.

    ```
    Total: 0 Trk  0m:00s
     Track 2:  4m:49s
    ```

7. Press "ENT"/Enter button once.

    ```
    Total: 1 Trk  4m:49s
    *Track 2:  4m:49s
    ```

8. Press the down button until you see "Track 4" on the 2nd line.

    ```
    Total: 1 Trk  4m:49s
     Track 4:  4m:58s
    ```

9. Press "ENT"/Enter button once.

    ```
    Total: 2 Trk  9m:47s
    *Track 4:  4m:49s
    ```

10. Press down button until you see "Are you done?" on the 2nd line.

    ```
    Total: 2 Trk  9m:47s
    Are you done?
    ```

11. Press "ENT"/Enter button once

    ```
    Mixing...          2
      0%         4m:31s
    ```
    ```
    Mixing Complete!
    Finish Mixing?
    ```

12. Press down button until you see "Insert Next Master?" on the 2nd line.

    ```
    Insert Next Master?
    ```

13. Press "ENT"/Enter button once.

    ```
    Preparing
    Waiting for Master
    ```

14. Insert CD2.

    ```
    Total: 2 Trk  9m:47s
     Track 1:  4m:03s
    ```

15. Press down button until you see "Track 3" on the 2nd line.

```
Total: 2 Trk  9m:47s
 Track 3:  4m:47s
```

16. Press "ENT"/Enter button once.

```
Total: 3 Trk 14m:34s
*Track 3:  4m:47s
```

17. Press down button until you see "Track 4" on the 2nd line.

```
Total: 3 Trk 14m:34s
 Track 4:  5m:26s
```

18. Press "ENT"/Enter button once.

```
Total: 4 Trk 20m:00s
*Track 4:  5m:26s
```

19. Press down button until you see "Track 5" on the 2nd line.

```
Total: 4 Trk 20m:00s
 Track 5:  4m:27s
```

20. Press "ENT"/Enter button once.

```
Total: 5 Trk 24m:27s
*Track 5:  4m:27s
```

21. Press down button until you see "Are you done?" on the 2nd line.

```
Total: 5 Trk 24m:27s
Are you done?
```

22. Press "ENT"/Enter button once.

```
Mixing...          3
  0%         4m:47s
```

```
Mixing Complete!
Finish Mixing?
```

23. Press "ENT"/Enter button once.

```
Mixing Complete!
Confirm to Finalize?
```

24. Press "ENT"/Enter button once.

```
Finalizing...
Please Wait
```

```
Job Completed!
Press OK to Finish
```

25. Press "ENT"/Enter button once.

```
DISCMAKERS      X.xx
3. Audio
```

Change the Setup settings

Most of the internal settings and information is stored inside the Setup menu. To explore and modify them is simple. Below is an example how to modify the "Auto Start" setting. Please note that the default setup is set for optimal performance of the system, it is unnecessary to change if you are satisfied with the outcome.

When you turn on your system, after it has booted up, you should see the following signifying your system is ready.

```
DISCMAKERS      X.xx
 1.Copy
```

Step 1: Use the up or down arrow button to navigate to the Setup menu.

```
DISCMAKERS      X.xx
4.Setup
```

Step 2: Press the "ENT"/Enter button to enter the Setup menu and the following screen (or one quite similar) will be displayed:

```
Setup
 1.Select Burn Speed
```

Step 3: Use the up or down arrow button to navigate to the Auto Start setting.

```
Setup
 10. Auto Start
```

Step 4: Press the "ENT"/Enter button to enter the Auto Start setting and you shall see a screen similar to below:

```
Auto Start
Auto
```

Step 5: Use the up or down arrow button to change the value to "Full".

```
Auto Start
Full
```

Step 6: Press the "ENT"/Enter button to submit the change. Once completed, you will be guided back to the setting menu.

```
Setup
 10. Auto Start
```

Step 7: Press "ESC"/Escape button to go back to the main menu.

```
DISCMAKERS       X.xx
5.Setup
```

Note

This change will only be effective for the current usage until you power off the system unless you perform the Save function under the Utilities menu, or perform the Shutdown function under the main menu.

Chapter 4: Menu Overview

1. COPY
This menu will guide you to make copies of discs. For more information, please refer to "Make Disc-to-Disc Copies".

2. ADVANCED COPY OPTIONS
This menu will guide you to make a simulation of the copying process. During this simulation process, all write once recordable discs such as (DVD-R, CD-R) will be reusable. The purpose of performing such simulation is to ensure error free duplication.

Due to the physical limitation of DVD+R/RW & BD-R/RE recordable format, you cannot perform this procedure on these formats. If you do so, you will encounter a failure messages.

If you are using CD-RW/DVD-RW discs as your blank media during the simulation, any content that may have been recorded inside those discs will be permanently ereased.

2.1.   Test + Copy
This menu will guide you to perform the simulation of the copying process and if everything passes during the simulation, the real copying process will be performed. If an error is encountered during the simulation, an error message will be displayed and the copying process will not be initiated.

2.2.   Copy + Compare
This menu will guide you to make copies, after which it will perform an additional comparison process automatically to ensure data accuracy.

2.3.   Copy + Verify
This menu will guide you to make copies, after which, it will perform an additional process to verify playability.

3. AUDIO
This process will guide you to mix an Audio CD from various tracks among different Audio CDs. For more information, please refer to "Mix Audio Tracks" on page 12.

4. SETUP

4.1.   Select Burn Speed
This menu will guide you to adjust the duplication speed on various duplication job types. For more information, please refer to "Select the Duplication Speed" on page 10.

4.2.   Select Source

This menu will guide you to select a Reader/Writer drive as the source drive (the drive which will read the master disc) for Copy related operations. For more information, please refer to section 1 of "Make Disc-to-Disc Copies".

4.3.   Read Error Skip

Normally, when the system encounters a reading error while reading your master disc, the duplication job will be aborted and all the recordable media will be ruined. However, if you believe that your master disc has a small, insignificant error due to physical damages, you can enable the setting to allow the system to skip any read error* it encounters.

*This function will not fix the error; it will only skip it to make the rest of the data readable.

4.4.   CD Writing Mode

This setting will allow you to select which mode you would like to duplicate a CD. There are two different modes, "Disc at Once" and "Track at Once". Unless you understand completely what they mean, we strongly suggest it be set to "Disc at Once."

4.5.   Max Audio, VCD & CDG Speed

Audio CD's and Video CD's do not have internal error checking capability, so duplicating at too high a speed may cause frequent errors. This setting will allow you to adjust the maximum duplication speed for Audio and Video CD.

4.6.   DVD+R High Compatibility Mode

This feature will allow you to enable/disable the DVD+R High Compatibility Mode feature by turning this feature ON or OFF. The purpose of this feature is to increase the compatibility of DVD+R media with a broader range of DVD Video players. This process will increase the amount of time required to duplicate your disc(s).

4.7.   Display and Sound Settings

4.7.1. Buzzer

This setting will allow you to choose whether you want to hear a beep when you press a button or when a task has been completed

4.7.2. Startup Menu

This setting will allow you to choose which menu you would like to see first when you turn on the system.

4.7.3. Screen Saver

Turns the screen saver on or off

4.7.4. Language
This setting will allow you to choose which language you prefer to navigate the controller system of the duplicator.

4.8.   Counter
This option will allow you to enable/disable the Counter feature by turning this feature ON or OFF. This feature will notify you how many discs have been copied and how many discs are left to go.

4.9.   Auto Start
This setting allows you to choose Auto, Full, or Off. If Auto is selected, this feature automatically starts the duplication process when the writer drive detects recordable media inside. If Off is selected, the copy process requires you to press the "ENT"/Enter button to start the duplication. This feature applies to applications inside the operation menu such as COPY, TEST, TEST+COPY, COPY+COMPARE, etc. The Full setting is not used.

4.10.   Load Default
This function will reset all of the options back to the manufacturer's default. Perform this function if your system is acting abnormal. The duplicator will need to be properly Shutdown and powered back on for this to take effect.

4.11.   Advanced Settings
Mixed Media Code: This function will allow the duplicator to copy using media with different media codes (i.e. different brands or speed ratings). Caution - this should not be selected unless there is a specific problem as it will slow burn speeds.

5. UTILITIES

5.1.   Disc Info
If you are uncertain about the type of blank recordable media you are using, the system is equipped with the disc info function to help identify and notify you of the disc information encoded within. This feature will identify your blank recordable media's format; capacity; manufacturer ID; as well as the media's certified writing speed. Please note that limited information will be displayed for media in the Reader drive.

5.2.   System Info
This menu contains information on the system firmware currently installed on your duplicator.

5.3.   Device Info
This menu contains information on the drives installed in your duplicator. This information includes but is not limited to manufacturer, model number, etc.

5.4.   Update Firmware
This function will update the software for your system. To update, you need to insert a manufacturer Certified Update CD into the Reader and select this function by pressing the "ENT"/Enter button. We strongly suggest you do not upgrade your system's firmware unless recommended by the manufacturer.

5.5.   Test Options

5.5.1. Compare
This function is used to perform a bit-by-bit comparison of the master and any number of duplicates.

5.5.2. Verify
This function is used to verify playability of finished duplicates.

5.5.3. Test Master
Approximately 50% of failures reported by our system are caused by errors in the master disc which our reader couldn't overcome. This type of failure often leads to the user unwittingly wasting a great deal of media attempting to duplicate a faulty master. If you suspect a defective master, use this function to verify the integrity of its data.

5.6.   Manage Accounts
This menu will allow the Administrator to perform user administrative tasks. This feature is disabled by default. Prior to activating this feature, the duplicator recognizes all users as the only activated user defined as the administrator. The pre-defined password for this menu is "0000".

5.6.1. View User
This menu allows you to view current existing user accounts

5.6.2. Create User
This menu allows you to create additional user accounts with personalized settings. During this process, you will be prompted to enter a new user name (up to 8 alphanumeric letters or numbers) and user password (a 4 digit number) for a new account.

5.6.3. Edit User
This menu allows you to change the existing user account's name and password. During this process, you will be asked to select the existing account and then you will be prompted to enter the new user name and new user password for the account.

5.6.4. Delete User

This menu allows you to delete existing user accounts. During this process, you will be asked to select the existing account to be removed.

User "Admin" is the administrative account, you can NOT change the user name for this account, but you will be able to change the password for this account.

5.7. Erase

This menu will guide you to erase your rewriteable discs in the Writer Tray. There are two options to erase rewriteable discs:

5.7.1. Full Erase

It will erase the entire disc which will make it impossible to be recovered.

5.7.2. Quick Erase

It will erase the index ("Table of Contents") of the rewritable disc but not the data section.

5.8. External Connection

This feature will allow you to activate/deactivate the USB or Firewire port on the back of your system. This option will allow one or more Writers on the system to be controlled by a PC. This feature will only be visible if supported USB or Firewire connections were installed.

*Please note that system needs to be restarted when this setting is changed.

6. SHUTDOWN

This function saves any system settings that you have entered and makes sure it is safe to turn off your system. Once you see the Ready to Power OFF message, then you can safely turn off the machine via the Power Switch. Turning off your system without performing this function will increase the risk of damaging your system.

7. AUTOCOPY

This function will allow the system to operate the disc-to-disc copy function without any user inputs for ease of operation.

Appendix A: External Device (USB 2.0/Firewire 1394) Setup Guide (Optional)
*This only applies if you have USB 2.0 or Firewire connections installed

If there's a switch next to the USB/Firewire Port:
1. Power off your system
2. Set the USB2.0/Firewire switch to "ON" position at the back of your system (away from the LED lights)
3. Use a standard USB 2.0/Firewire cable to connect your computer to your system.
4. Power on your system.
5. Your computer will recognize a number of external devices depending on the system you purchased.

If there is NOT a switch next to the USB/Firewire Port:
1. Use the standard USB 2.0/Firewire cable to connect your computer and your system.
2. Power on your system.
3. Go into menu 5 "Utilities"
4. Go into submenu 10 "USB Connection" or "External Connection"
5. Press up or down button to change the setting to "ON".
6. Press "ENT"/Enter button to submit your selection.
7. The system will either restart by itself or prompts you restart it manually by powering the system off and back on.
8. Your computer will recognize a number of external devices depending on the system you purchased.

The above instructions are for enabling the USB/Firewire port. If you wish to disable the USB/Firewire connection, perform the same instructions except either set the USB 2.0/Firewire switch to "OFF" or change the USB Connection/Firewire Connection setting to "OFF".

Every PC related product has compatibility issues. Even though the USB 2.0/ Firewire connection(s) have been thoroughly tested before the unit was shipped out of the factory, there's still a slight chance that your PC/Mac computer is not compatible with the unit's USB 2.0/ Firewire connection. If that happens, please contact your PC/Mac manufacturer for possible configuration changes, or try using the duplicator connected to a different PC/Mac computer.

Appendix B: Troubleshooting

Frequently Asked Questions

1. No display on the LCD or the unit does not operate when the power switch is on.
- ✓ Check the power cable connection and that the environment for the power outlet is normal.
- ✓ Make sure the power voltage on the duplicator matches the voltage of your power outlet.
- ✓ If the system was stored in a location where the temperature dropped below 32ºF (0ºC) within the past 24 hours, leave the system in a warm room with temperatures at least 65ºF (19ºC) for 4 hours prior to powering it on.

2. The system does not recognize the master disc.
- ✓ Check the format of the master disc or the master itself for damage.
- ✓ Your master disc may be copy protected. Virtually all retail discs are have copy protection encoded on them from the factory and <u>cannot</u> be duplicated in one of our devices.
- ✓ Use one of the Writers to read your master disc by selecting one of writers as the Copy source (*please refer to section 1 of Make Disc-to-Disc Copies"* -) If it works, make a copy of your master disc and treat the copy as the new master. Then set the Copy source back to the Reader and try again.

3. Buttons do not function.
- ✓ The duplicator may be processing a task. Give it some time and try the button again. If it still doesn't work, turn off the machine, restart the machine after a minute and try again.

4. Copy completed but the copies are not readable / executable?
- ✓ Use "compare" feature to check the copied disc.
- ✓ Based on our experience, the quality of your media plays a big role on this part. Try to use high quality media to prevent such problems.
- ✓ Please use another BD/DVD/CD player/ROM to test the copied media. Some drives BD/DVD/CD Player/ROM may not be compatible with recordable BD/DVD/CD disc.

5. The failure rate is high.
- ✓ Lower the "write speed" and try again.
- ✓ Quality of blank media may be poor.
- ✓ Quality of master disc may be poor.

6. Do I need to upgrade my system's firmware?
- ✓ Unless your system is getting unstable, we strongly suggest not upgrading your system's firmware. Please contact our Tech Support if your system is getting unstable.

7. Cannot boot-up or fails to upgrade firmware.
- ✓ Contact our Tech Support.

8. Why won't some writers copy?

✓ If those writers are associated with USB 2.0 or Firewire IEEE 1394 connections, please make sure the USB 2.0 or Firewire connection is off and restart your system. For more information, *please refer to "Appendix A: External Device (USB 2.0/Firewire 1394) Setup Guide".*

✓ Reset duplicator settings to default. (Troubleshoot #9, see below)

✓ Contact our Tech Support.

9. How do I reset my system back to default?

a) Go to menu 4. Setup.

```
DISCMAKERS       X.xx
4. Setup
```

b) Press the "ENT"/Enter button.

```
Setup
 1.Select Burn Speed
```

c) Press down button until you see "Load Default" on the 2nd line

```
Setup
11.Load Default
```

d) Press "ENT"/Enter button.

```
Load Default
Press OK to Continue
```

e) Wait for 3-4 seconds.

```
Setup
11.Load Default
```

f) Press "ESC"/Escape button.

```
DISCMAKERS       X.xx
4. Setup
```

g) Press down button until you see "Shutdown" on the 2nd line.

```
DISCMAKERS       X.xx
7. Shutdown
```

h) Press "ENT"/Enter button.

```
Shutdown
Press OK to Shutdown
```

i) Press "ENT"/Enter button.

```
System Checking OK!
Ready to Power Off
```

j) Power off the system and power it back on. All settings should be restored back to default.

Error Code

Typically the system will show an error message and error code if a problem occurs. Please reference the below diagram for a description of the error codes and the recommend solution:

Error Code	Error Message	Description & Recommended Solutions
200	Source Disc Empty	Description: The intended master disc is detected and identified successfully, but it is a blank disc. Possible Solution: Double check the master disc to ensure it contains data.
201	Bad Master	Description: The master disc is detected but is not identified within 3 minutes. Possible Solution: Check the master disc for physical defects or data errors.
202	No Targets!	Description: The blank disc(s) are missing when the job has already started. Possible Solution: Please make sure blank discs are placed in writer trays.
203	Burner Mixed or Firmware Version Mixed	Description: The model or firmware version of the writer drives are not all identical. Possible Solution: This typically happens when you recently replaced a writer drive. Please contact Tech Support.
204	Targets & Master Not Compatible!	Description: The master disc and targets (blanks) do not have same format. Possible Solution: Please go to "Disc Info" in "Utilities" to make sure the master disc and the blank discs are the same format, (for example, using a CD Master and CD blank discs).
205	Targets Not Blank!	Description: The target (blank) discs are detected and identified as neither RW discs nor blank discs. Possible Solution: Please go to "Disc Info" in "Utilities" to make sure the intended blank discs are empty.

Error Code	Error Message	Description & Recommended Solutions
206	Targets & Master Size Mismatch!	Description: When the error code occurs during the Compare process, the size of the master disc and the successfully copied disc(s) do not match. When the error code occurs during a Copy related process, the capacity of the blank disc(s) is less than the data size of the master disc. Possible Solution: When the error code occurs during the Compare process, contact Tech Support. When the error code occurs during a Copy related process, please go to "Disc Info" in "Utilities" to make sure the blank disc's capacity is large enough to fit the data size of the master disc.
207	Targets M Code Mixed!	Description: The blank discs contain different manufacturer codes. Possible Solution: Go to "Disc Info" in "Utilities" to make sure every blank disc has the same media ID (M-Code). Replace the one(s) that are different if necessary.
208	Targets are not RW discs!	Description: The target(blank) discs are not Rewritable discs Possible Solution: Go to "Disc Info" in "Utilities" to make sure every blank disc is a rewriteable disc.
209	Master Disc is CSS Protected!	Description: The master disc is copy-protected. Possible Solution: This master disc contains copy-protection.Try a different master disc.
210	Bad Discs!	Description: The target (blank) disc(s) are detected but can not be identified. Possible Solution: Double check the blank disc(s) quality.
211	This format can not be tested!	Description: The target (blank) disc(s) is DVD+R, DVD+RW, DVD+R DL, BD-R or BD-RE. Possible Solution: Above disc formats are not supported by the Test function.

Error Code	Error Message	Description & Recommended Solutions
212	DVD is not supported!	Description: Your system does not support the DVD format. Solution: Purchase a system that supports DVD.
213	DVD-RAM is not supported!	Description: Your system does not support the DVD-RAM format. Solution: Purchase a system that supports DVD-RAM.
214	Blu-ray is not supported!	Description: Your system does not support the Blu-ray format. Solution: Purchase a system that supports Blu-ray.
230	Not enough HDD space	Description: The hard drive does not have enough free space to store the master. Possible Solution: Free up hard drive space by deleting unnecessary partitions/images.
231	Redundant Name	Description: The name entered has already been used in the system. Possible Solution: Enter a different name, or rename the existing file name which is in conflict before you re-enter this name.

232	Format Failed!	Description:
		The system is not able to format the hard drive. A detailed error code will be displayed at the end of the error message in the following format
		Example: Format Failed (Error:232) (XX-YY),
		  XX: The index of the hard drive which generated the error
		  YY: The error code
		
		Possible Solution:
		Possible Hard Drive defect; contact Tech Support.

233	Hard Drive Corrupted	Description: The hard drive's information is corrupted. Possible Solution: Please re-format the hard drive.
235	Hard Drive Access Error	Description: There's an error when accessing the hard drive. Possible Solution: Possible Hard Drive defect; contact Tech Support.

Error Code	Error Message	Description & Recommended Solutions
240	Wrong Password!	Description: The password entered is not correct Possible Solution: Confirm the correct password was entered or try a different password.
241	Login Failed	Description: An incorrect password was entered 3 times consecutively Possible Solution: Wait for 5 minutes, then try to use the correct password for next the attempt. If the problem persists, call Tech Support.
250	Source Cannot Be HDD	Description: The source is configured as the hard drive when trying to perform the Mix Audio Tracks function. Possible Solution: Change the Copy source to the Reader.
251	Copy Audio Error	Description: An error occurred during the mixing process of your audio CD. Possible Solution: Try a different master or blank disc.
252	Not Audio CD	Description: The Master Disc is not an Audio CD when preparing the mixing process. Possible Solution: Verify your master disc is an Audio CD.
253	Over Blank Disc Capacity	Description: The total size of the selected tracks is larger than the capacity of the target blank disc during the track selection process. Possible Solution: Try to select an alternative track with a smaller capacity.
260	No Update File	Description: The system can NOT locate the Firmware Update File during the Update Firmware process. Possible Solution: 1. Confirm the file is not a "zip" file. If it is, please extract it before you burn it into a CD. 2. Confirm the update file is written as "Mode 1" Data CD. Usually a Data CD created with Windows XP or Roxio's Drag-to-Disc is not in this format. Please use a burning program like Nero Burning ROM. *(continued – next page)*

Error Code	Error Message	Description & Recommended Solutions
		3. Make sure there are no other discs in the system and try to insert the update disc into another tray to perform the operation.
261	Wrong update File	Description: The Firmware Update File is not compatible with your system or the Firmware Update File is corrupted. Possible Solution: 1. Try to re-download the Firmware Update File.
262	Unknown flash model	Description: The Firmware Update File is compatible with your system. Possible Solution: 1. Try to contact Tech Support for the proper Update file.
263	User Abort	Description: A job is aborted when the user holds the ESC/Escape button for more than 5 seconds during a job run. Possible Solution: Restart the job when ready with the proper master disc & blank discs.

Appendix C: Safety & Regulatory information

Safety Introduction

Notices and Safety

Please read the following instructions carefully before operating this device and refer to them as needed to ensure the continued safe operation of your machine.

These products and supplies have been designed and tested to meet strict safety requirements. These include safety agency evaluation and certification, and compliance with electromagnetic regulations and established environmental standards.

The safety and environment testing and performance of this product have been verified using certified materials only.

Unauthorized alterations, which may include the addition of new parts/devices, may impact the product certification. Please contact your sales representative for more information.

Symbols

All warnings and instructions marked on or supplied with the product must be followed.

This symbol alerts users to areas of the equipment where there is the possibility of personal injury.

FCC Notices for USA

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 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, 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 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.

(Reference CFR 47 *Part 15 Section 15.21)*
Changes or modifications to this equipment not specifically approved by the manufacturer may void the user's authority to operate this equipment.

Safety Information

Operational Safety Information

This equipment and related supplies have been designed and tested to meet strict safety requirements. These include safety agency examination, approval, and compliance with established environmental standards.

To ensure the continued safe operation of your equipment, follow these safety guidelines at all times:

Do These:

- Always follow all warnings and instructions that are marked on or supplied with the equipment.

- Before cleaning this product, unplug the product from the electrical outlet. Always use materials specifically designated for this product: the use of other materials may result in poor performance and create a hazardous situation.

- Always exercise care when moving or relocating equipment.

- Always locate the machine on a solid support surface (not on plush carpet) that has adequate strength to support the weight of the machine.

- Always unplug this equipment from the electrical outlet before cleaning.

Do not use aerosol cleaners. Aerosol cleaners can be explosive or flammable when used on electromechanical equipment

Never Do These:

- Never use a ground adapter plug to connect the equipment to a power outlet that lacks a ground connection terminal.

- Never attempt any maintenance function that is not specifically described in this documentation.

- Never obstruct ventilation openings. They are provided to prevent overheating.

- Never remove covers or guards that are fastened with screws. There are no operator serviceable areas within these covers.

- Never locate the machine near a radiator or any other heat source.

- Never push objects of any kind into the ventilation openings.

- Never place this equipment where people might step on or trip on the power cord.

Electrical Safety Information

1. The power receptacle for the machine must meet the requirements stated on the data plate on the rear of the machine. If you are not sure that your electrical supply meets the requirements, please consult your local power company or an electrician for advice.

2. The socket outlet shall be installed near the equipment and shall be easily accessible.

3. Use the power cable that is supplied with your machine. Do not use an extension cord or remove or modify the power cord plug.

4. Plug the power cable directly into a correctly grounded electrical outlet. If you are not sure whether or not an outlet is correctly grounded, consult an electrician.

5. Do not use an adapter to connect any equipment to an electrical outlet that lacks a ground connection terminal.

6. Do not place this equipment where people might step or trip on the power cable.

7. Do not place objects on the power cable.

8. Do not push objects into slots or openings on the machine. Electrical shock or fire may result.

9. Do not obstruct ventilation openings. These openings are used to provide proper cooling to the machine.

Electrical Supply

1. This product shall be operated from the type of electrical supply indicted on the product's data plate label. If you are not sure that your electrical supply meets the requirements, please consult a licensed electrician for advice.

2. Always connect equipment to a correctly grounded power outlet. If in doubt, have the outlet checked by a qualified electrician.

 This equipment must be connected to a protective earth circuit. This equipment is supplied with a plug that has a protective earth pin. This plug will only fit into an earthed electrical outlet. **This is a safety feature.** If you are unable to insert the plug into the outlet, contact a licensed electrician to replace the outlet.

Disconnect Device

The power cable is the disconnect device for this equipment. It is attached to the back of the machine as a plug-in device. To remove all electrical power from the equipment, disconnect the power cable from the electrical outlet.

Emergency Power Off

If any of the following conditions occur, turn off the machine immediately and **disconnect the power cable(s) from the electrical outlet(s).** Contact an authorized Service Representative to correct the problem:

- The equipment emits unusual odors or makes unusual noises.

- The power cable is damaged or frayed.

- A wall panel circuit breaker, fuse, or other safety device has been tripped.

- Liquid is spilled into the machine.

- The machine is exposed to water.

- Any part of the machine is damaged

Maintenance Information

1. Any operator product maintenance procedures will be described in the user documentation supplied with the product.
2. Do not carry out any maintenance on this product which is not described in the customer documentation
3. Use supplies and cleaning materials only as directed in the Operator section of this manual.
4. Do not remove covers or guards that are fastened with screws. There are no parts behind these covers that you can maintain or service.

Do not use aerosol cleaners. Aerosol cleaners can be explosive or flammable when used on electromechanical equipment.

Certification

This product is certified by the following Agency using the Safety standards listed

Agency	Standard
Underwriters Laboratories Inc.	UL60950-1
Underwriters Laboratories Inc.	CSA C22.2 No. 60950-1-03
SPORTON International Inc.	EN 55022:1998/A1:2000/A2:2003 Class B, EN 61000-3-3:1995/A1:2001, EN 55024:1998/A1:2001/A2:2003

Regulatory Information

Certifications in Europe: *CE Mark (European Union)*

The CE mark applied to this equipment symbolizes the manufacturer's declaration of conformity with the following applicable Directives of the European Union as of the dates indicated:

2006/95/EC

December 12, 2006 Council Directive 2006/95/EC as amended. Approximation of the laws of the member states related to low voltage equipment.

2004/108/EC

 December 15, 2004 Council Directive 2004/108/EC as amended. Approximation of the laws of the member states related to electromagnetic compatibility.

A full declaration of conformity, defining the relevant directives and referenced standards, can be obtained from your Authorized local dealer.

In order to allow this equipment to operate in proximity to Industrial Scientific and Medical (ISM) equipment, the external radiation from the ISM equipment may have to be limited or special mitigation measures taken.

Warning

Appendix D: Technical Support Information

Website
Please visit our website at http://www.discmakers.com/techsupport/techsupport.asp for videos, manuals and quick start guides for your duplicator.

If you require further assistance with this unit, our technical support staff will be happy to assist you. There may be a cost associated with any repairs if your warranty has expired.

Email
Please contact us by email at techsupport@discmakers.com

Telephone
Call toll-free (800) 468-9353. Our Technical Support department is open Monday through Friday, 9AM to 5PM Eastern Standard Time.