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Chapter 1: Introduction

1. Overview

Welcome

The CUBE LightScribe autoloader is a reliable, high performance, high speed, standalone robotic CD, DVD and/or Blu-Ray (Optional) autoloader with the LightScribe printing feature. With its industrial design and simple user interface, it makes your duplicating experience easier than ever.

With the CUBE LightScribe autoloader, offers a capacity of 25 discs that can duplicate or print continuously for 24 hours. It even supports multiple master job duplication as well. You get the highest quality duplication and printing all at an extremely affordable price. The CUBE LightScribe autoloader is the most reliable and affordable autoloader on the market.

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

BD/DVD Duplication Limitations

The autoloader will not copy any BD/DVDs that have Copy Protection encoded in the content. Typically, most Blu-Ray movies or DVD movies you purchase or rent contain Copy Protection.

In addition to the copy protection limitation, the autoloader will only copy a single layer Blu-Ray/DVD disc to another single layer Blu-Ray/DVD recordable media. If your autoloader has double layer Blu-Ray/DVD capability, you can copy a double layer Blu-Ray/DVD disc to another double layer Blu-Ray/DVD recordable media, but you cannot duplicate a single layer Blu-Ray/DVD disc to double layer Blu-Ray/DVD recordable media or vice versa.

Temperature Warning

If the autoloader was stored in a location where the temperature dropped below 32° F (0° C) within the past 24 hours, leave the autoloader in a warm room with temperatures at least 65° F (19° C) for four hours prior to powering it on for the first time. Failure to do so may cause irreparable harm and prevent the autoloader from functioning.

Maintenance

It is very important to operate and keep the autoloader in a dust free, clean environment since dust is the number one killer of CD/DVD/Blu-Ray recording devices. Failure to do so can severely damage your autoloader. We strongly suggest that you constantly use an Air Duster (Canned Air) to clear off any dust on the surface of the autoloader.

Note: Do not try to use an Air Duster to clean the autoloader while the writer trays are open. In doing so, you may inadvertently blow dust into the recording device and damage it.

Proper Shutdown

To avoid possible system failures, you need to shut down the autoloader properly. To shut down the autoloader, scroll to menu 16. Shutdown and follow the instructions on the screen. Not performing this function increases the risk of damaging the autoloader.

Disc Static and Sticky Media Issues

The most common problems when using an autoloader are the disc static and sticky media issues. These static charge problems cause multiple discs to stick together, resulting in improper operation and more severely, can shock the robotic arm while loading a disc causing the system to freeze. Even though the autoloader has a sticky media separator function to help prevent media from sticking, you should still follow these steps to prevent sticky media from disrupting your operation and protect your system from disc static charge.

This issue is most commonly seen when you buy a 100 pack of blank discs and insert them into the autoloader without any treatment. If you have experienced this kind of problem, please do the following to remove the adhesive static between the discs:

  ➢ Separate the blank discs before you place them into the autoloader's spindle(s). Separating them will greatly reduce the static between discs.

  ➢ If this doesn't achieve the desired outcome, use an air duster (canned air) to blow air around the circular edge of the blank discs as shown in Figure 1-1. This process reduces the static between the discs up to 90%. The amount of air to use depends on factors specific to your environment.
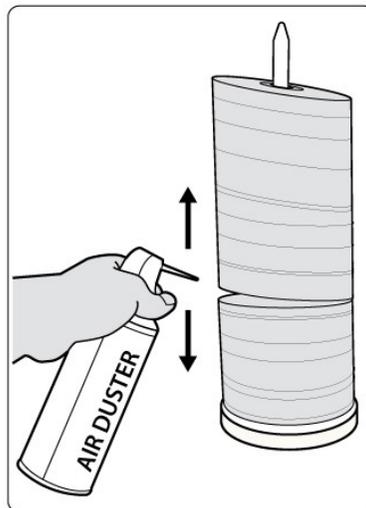
Figure 1-1 Using Canned Air to Reduce Static

  ➢ If you are still having problems, put your media into the refrigerator (NOT in the freezer) for three hours. Afterwards, store it at room temperature for one hour prior to use. Studies show that cold temperature (with no condensation) will also reduce the static charges between objects dramatically.

Spindles vs. Bins
The CUBE LightScribe autoloader has one area for holding CDs, DVDs and/or Blu-Ray Discs as well as the LightScribe printable media. Although the manual refers to them as spindles, many of the messages shown on the LCD display will refer to them as bins in order to create a more concise message. Don't panic. Spindles and bins are the same.

2. The Robotic Platform

The CUBE LightScribe autoloader, with 25 Disc Capacity, has two bins (see Figure 1-3). Each bay holds approximately 25 discs (Actual quantity varies depending on the media thickness). Place the media you wish to copy or print into the Input Bin. The robotic arm will pick discs from Input Bin then place the successfully copied discs onto the Output Bin. If any discs were rejected due to failure, the disc will be ejected and the job will be automatically aborted.

Figure 1- 3 Cube Robotic Duplicator (25 Capacity) Top View
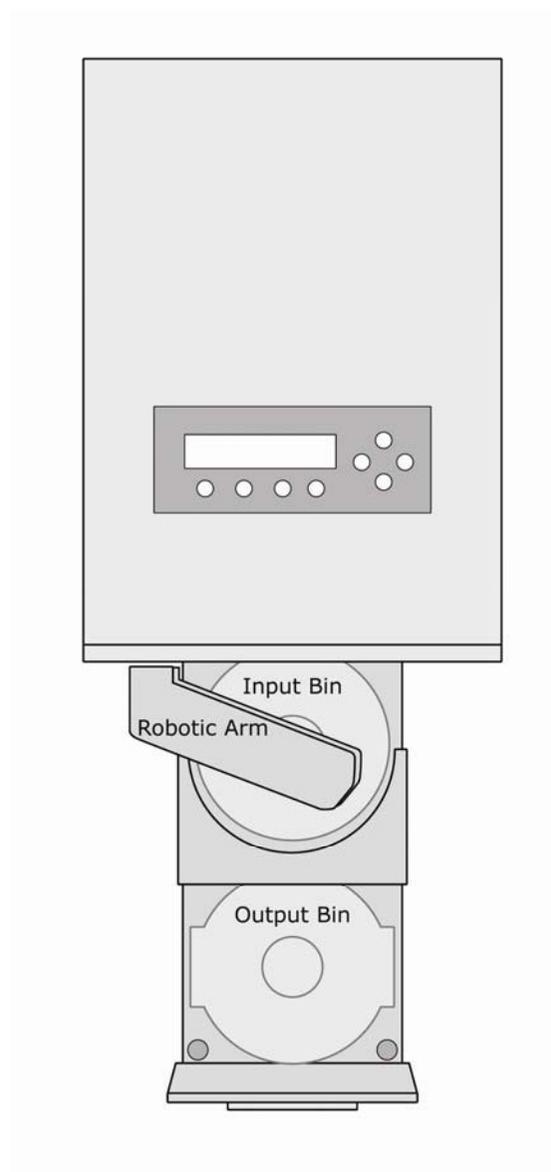
3. The LCD Control Panel
*The below image is for reference only. Your key assignment and appearance may differ.

Figure 1-5 below shows the LCD Control Panel. This panel has a two-line by 20 character LCD display to provide user feedback and eight push buttons to control the operation of this system. The functions for these buttons are shown in Table 1-1.
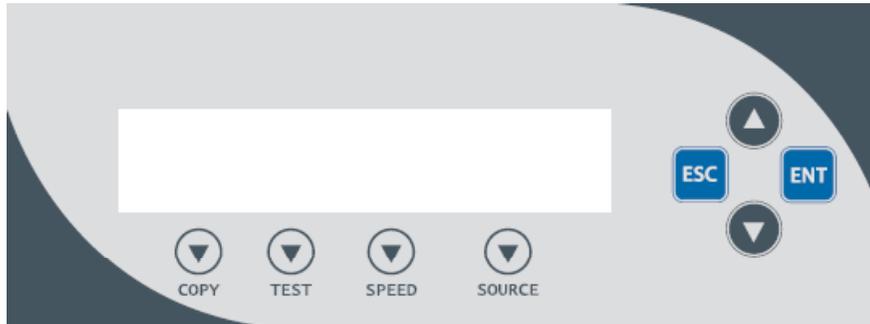
Figure 1-5 LCD Control Panel Layout

Table 1-1: Front Panel Controls

Control	Name	Function
Up (▲)	Up	Scroll up through the menu or list.
Down (▼)	Down	Scroll down through the menu or list.
ENT	Enter	Execute the function. Also referred to as OK in the Menus.
ESC	Escape	Go back to the previous function.
COPY	Copy	Quick key to make a copy. Pressing this key automatically performs the *Copy* job.
TEST	Test	Quick key to make a simulation of the copy process. Pressing this key automatically performs the *Test* job.
SPEED	Speed	Quick key to change the duplication speed. Pressing this key automatically guides you to the functions that allow you to change various duplication speeds.
SOURCE	Source	Quick key to change the master reading source. However, since HDD is the only valid source, no other options are offered at the time of this publication.

4. Menu Overview

This section provides an overview of the menu options. These menu options are explained in detail on the referenced pages.

1. Copy   **page 14**

Use the *Copy* menu or *Copy* quick key to make CD, DVD, or Blu-Ray (Optional) Disc copies. Before you start a copy process, make sure you have selected the correct Master Mode. Please refer to "Single Master and Multi Master Modes" on page 10 for additional information.

If you plan to use Single Master Mode, please make sure you have successfully loaded your master disc to a partition on the Hard Drive.

If you plan to use Multi Master Mode, please make sure you have placed every master disc on top of the corresponding number of blank discs.

For additional information on copying on either Master Mode, see "Making Copies in Single Master Mode" on page 14 or "Making Copies in Multi Master Mode" on page 17.

2. Print   **page 20**

Use the *Print* menu to print label(s) directly onto the label side of your LightScribe printable media. Before you start a printing process, please make sure you have successfully loaded your LightScirbe label file(s) into the Hard Drive via the "Load Label" function under "Print Setup". See page 33 for details.

For additional information on creating/designing your labels, please refer to "Appendix B – Design and Create your Label File" on page 49.

3. Test   **page 22**

Use the *Test* menu or *Test* quick key to simulate the copy process. With simulation, write once recordable discs such as DVD-R, or CDR will be reusable. The purpose of simulation is to ensure error free duplication.

Note: *Due to physical limitations of the BD-R/DVD+R recordable format, if you try to simulate BD-R/DVD+R copying, you will encounter failure messages.*

Warning*: If you are using CD/DVD/BD Rewritable discs as your blank media during the simulation, the content on those discs will be permanently erased.*

4. Compare   **page 23**

Use the Compare function to perform a bit-by-bit comparison between the content of your master disc(s) in the Hard Drive and the contents of all discs it copied. This ensures that all of your copies are identical to original master disc(s).

Note: *The bit-by-bit comparison will only apply on all Blu-Ray Discs, DVDs and Data CDs. A readability check will be applied for other formats like Audio CDs, CD+G, and Video CDs discs due to their lack of error correction mechanisms.*

5. Test + Copy   **page 24**

Use the *Test + Copy* menu option to simulate the copying process initially. Then, the autoloader performs the actual copy process on the blank disc(s) if they passed the simulation. If any part of this process fails, the job will be aborted.

6. Copy + Compare   **page 24**

Use the *Copy + Compare* menu option to make 100% reliable copies. After the copy process is done, the autoloader automatically compares the copies from the content of your original master disc. If any part of this process fails, the job will be aborted.

7. Select Burn Speed   **page 25**

Use the *Select Burn Speed* menu option or the *Speed* quick key to adjust the duplication speed for the various blank disc formats.

8. Select Source   **page 26**

Use the *Select Source* menu or the *Source* quick key to tell the system where the content of the master disc resides during duplication. At this point, Hard Drive is the only option in this setting since it is the only place where the content of the master disc resides during duplication.

9. Master Mode   **page 26**

Use the Master Mode menu to select either Single Master Mode(SM) or Multi Master Mode (MM). For more information on these modes, see "Single Master and Multi Master Modes" on page 10.

10. Erase   **page 27**

Use the Erase menu to erase your Rewritable discs. There are two options:

  ➢ **Full Erase:** This option erases the entire disc, destroying all previously written data in the process.
  ➢ **Quick Erase:** This option erases the index (TOC) of the Rewritable disc, not the data section. It is much faster than Full Erase. However, the data section is still recoverable. If you prefer the old content not be recovered for security purposes, please perform Full Erase.

11. Hard Drive Setup   **page 29**

Use the Hard Drive Setup menu to perform various hard drive-related operations. These operations include loading, renaming, or deleting your images.

12. Print Setup   **page 33**

Use the Print Setup menu to perform various printing-related operations. These operations include loading, renaming, or deleting your print labels.

13. Setup   **page 35**

Use the Setup menu options to control how the autoloader operates. You can scroll between the various options using the ▲**Up or** ▼ **Down** button.

  1. **Language**
       Use this setting to choose the language used to navigate the autoloader. The autoloader officially supports English and Spanish menus. More languages could be added.

2. Read Error Skip

Normally, when the autoloader encounters a read error while reading the master disc, all the duplication will be aborted and all the recordable media in the writers will be ruined. However, if you believe that your master disc has a small, insignificant error due to physical damage, you can utilize this setting to allow the autoloader to skip any read errors that it encounters. It is "Off with Retry" by default.

Important: When this function is "ON", it does not fix the error; it only skips it to continue copying the rest of the readable data. This is recommended for Video and Audio duplication purposes.

3. CD Writing Mode

Use this setting to select the mode you would like use 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 you to set it as "Disc at Once".

4. Max Audio, VCD & CDG Speed

Due to the lack of error checking mechanism for Audio CD, Video CD and CD+G format, duplicating them at too high a speed can cause frequent errors like glitches and skips. Use this setting to adjust the maximum duplication speed for Audio, Video CD and CD+G format to ensure reliable duplication for such formats.

5. Buzzer

Use this setting to choose whether you want to hear a beep when you press a button and when a task has been completed or have it turned off for silent operation.

6. Startup Menu

Use this setting to choose which menu you would like to see first when you turn on the autoloader.

7. Screen Saver

Use this setting to enable or disable the *Screen Saver* feature. When this is en-abled, a screen saver is displayed whenever your autoloader has been idle for a set period of time.

8. Counter

Use the Counter menu to enable or disable the *Counter* feature. The counter tells you how many discs have copied and how many discs are left to go during the duplication process stopping the job once the desired number of copies has been made.

9. DVD+R Compatibility Mode

This feature allows you to turn the *DVD+R High Compatibility Mode* 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.

10. ISRC

This option will allow you to enable/disable copying the ISRC code of an Audio CD. ISRC is the serial number of the audio track that uniquely identifies the song in that audio track. This ISRC code is commonly found in commercial Audio CDs and rarely seen on home made Audio CDs. By enabling this feature, the duplication performance will be lowered.

12. CD Overburn

Most CD-R media is either 650MB or 700MB. The burning starts from the center of the CD and works its way out but stops before the physical edge of the CD. Overburning is a burning method to bypass the limitations of burning further out onto the edge of the CD. This can result in slightly higher storage capacity, however, it has also been known to have compatibility playback issues. Please use it with caution.

14. System Utilities   **page 39**

1. Disc Info

Use the Disc Info utility to identify the type and other information about your blank recordable media.

2. System Info

The System Info menu provides important hardware information such as firmware versions, Duplication/Robot Control Boards types, etc

3. Device Info

This menu allows you to see information about the recording devices built inside your autoloader.

4. Load Default

Use this menu option to reset all of the options back to the manufacturer's default values. You can use this function if your autoloader is acting abnormally.

5. Update Firmware

Use this utility to update the software in your autoloader. To update, insert the manufacturer's Certified Update CD into the 1st tray and make sure no other discs are in rest of the trays. Then you can press the **ENT/Enter** button to update.

Important: You should not upgrade your autoloader's firmware unless your system is becoming unstable or you are advised to do so by Tech Support.

15. Loader Utilities   **page 40**

Use the Loader Utilities menu options to access the various utilities built into the autoloader. You can scroll between the various options using the △**Up or** ▽ **Down** button.

1. Update Robot Firmware

Use this utility to update the software in your autoloaders robot controller. To update, insert the manufacturer's Certified Robot Update CD into the 1st tray and make sure no other discs are in the other trays. Then you can press the **ENT/Enter** button to update.

Important: You should not update your autoloader's robot firmware unless your system is becoming unstable or you are advised to do so by Tech Support.

16. Manage Accounts   **page 41**

Use this menu option to:
➢ Create user accounts and passwords to prevent unauthorized use of the autoloader.
➢ Edit existing user account information, including name and password.
➢ Delete existing user account(s).
➢ Enable/Disable this feature.

17. AUTOCOPY

The Autocopy function is the simplest way to make CD/DVD/Blu-Ray Disc copies. It simplifies the copy process by automatically copying from a Master Disc, which should be placed on top of the first Input Spindle, instead of a preloaded master image on the HDD, to all of the blank discs which follow it. The benefit of this operation is to decrease the time needed to initiate the copy process for a master disc that does not need to be stored on the HDD permanently.

18. Shutdown

Use this menu option to turn off your system. Once you see the "Ready to Power Off" message, you can safely turn off the machine using the power switch. Turning off your autoloader without performing this function increases the risk of damaging it and all settings changed since the last boot up will not be saved.

5. Single Master and Multi Master Modes

There are two ways to make copies using the autoloader:

Single Master Mode:

This mode requires that a single master disc is loaded onto the hard drive prior to initiating the duplication process. This mode is ideal if your job involves one or very few master disc(s).

Multi Master Mode (Batch Mode):

This mode does not require you to manually pre-load your master onto the HDD. Simply place the master disc(s) on top of the corresponding stack of blank discs needed for that particular job. This mode is ideal if you have numerous master discs and fewer copies for each master disc.

The Multi Master mode uses the Reserve partition to temporarily store the content of the current master disc for duplication purpose. Once the task is complete and a new master disc has been detected, the reserve partition's content (of previous master disc) will be replaced with the content of the new master disc.

You can tell immediately which mode you are in by looking at any of the Copy or Test menus:

```
Duplicator     2.20
1. Copy       (SM)
```

```
Duplicator     2.20
1. Copy       (MM)
```

The (SM) indicates Single Master Mode, and the (MM) indicates Multi Master Mode.

For example, if you need to make:

➢ 5 copies of job A
➢ 6 copies of job B
➢ 7 copies of job C

Under Multi Master Mode, you would need to follow the below steps:
1. Make sure the Input Spindle is empty.
2. Place 7 blank discs for job C first on the input spindle.
3. Place the master disc for job C on top of the stacked blank discs for job C.
4. Place 6 blank discs for job B on top of the master disc for job C.
5. Place the master disc for job B on top of the stacked blank discs for job B.
6. Place 5 blank discs for job A on top of the master disc for job B.
7. Place the master disc for job A on top of the stacked blank discs for Job A.

After you have completed these steps, the Input Spindle should be loaded in the order shown in Figure 1-6:

Master A
5 Blank discs for Master A
Master B
6 Blank discs for Master B
Master C
7 Blank discs for Master C

Figure 1-6
The Order of Discs in MM mode

When you start the copy operation, the robotic arm will pick up discs from the Input Spindle and place them into the drives. If any of the discs in the drives contains data, (in this case, that would be the first disc, Master A), the autoloader will copy the entire content of this disc (Master A) onto the internal hard drive while simultaneously copying to all of the blank discs in the remaining writer drives.

Once the copy process is completed, Master disc A and the successfully copied discs will be removed from the drives and dropped on to the Output Spindle. At the same time, the system will pick up the next discs from the input bin and place them in the corresponding writer drive(s). Then the copying process will start over again from the hard drive.

If a new master is detected (in this case, it would be the Master B), the autoloader will complete the previous job, unload the copied discs, and fill the drive tray(s) with blank discs for the next job.

The robotic arm will continue to load media into the drive(s) as the duplicated discs are placed in the Output Spindle. Once a drive (any drive) detects another Master disc, the same process is repeated for the new Master disc.

6. Setting Counters and Assigning Names

Two frequently used tasks are setting counters and assigning names to partitions. Directions for these tasks are given here.

6.1 Setting Counters

The autoloader frequently gives you the option to set a counter so that the machine can keep track of the number of copies made. Follow these steps when you see the Counter Selection Menu:

```
Counter:
No Counter
```

The Counter Selection Menu lets you set how many copies you want to make for your project. The Counter Selection feature tells the autoloader to count the number of successful copies you have made and stop the job when the desired number of successfully copied discs has been reached.

You can select "No Counter" if you prefer to copy continuously with no interruption. (It will still count the number of copies, but it will not notify you when to stop.) To select "No Counter", simply press the **ENT/Enter** button when you see the screen above.

Or, you can select "Specify Counter" between 1 to 9999 by pressing the ▲**Up or** ▼ **Down button** to go to the Specify Counter menu:

```
Counter:
Specify Counter
```

Press the **ENT/Enter** button to select this option. You will see the next *Specify Counter* menu.

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

To specify the number of copies for your project, you need to enter/input a four-digit number.

If you need to specify a number that is less than four digits, fill the leading spaces with zeros (any leading zeros will be skipped). Examples of four-digit numbers are "0234" (two hundred and thirty four), or "0010" (ten).

To enter the number, you need to use the ▲**Up or** ▼ **Down button** to select the number for each digit and use the **ENT/Enter** button or the **ESC/Escape** button to move the cursor position right or left. Once you've finished, move the cursor to "OK" and press the **ENT/Enter** button. For example, if you want to specify a counter value of 21 (twenty one). The 4-digit value would be "0021." To input the desired quantity, do the following:

Make sure the cursor is located at the first position (First blinking position):

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

- ➢ Press the ▼ **Down** button repeatedly until "0" is displayed.
- ➢ Press **ENT/Enter** button once to move the cursor to the next position.
- ➢ Press the ▼ **Down** button repeatedly until "0" is displayed.
- ➢ Press **ENT/Enter** button once to move the cursor to the next position.
- ➢ Press the ▼ **Down** button repeatedly until "2" is displayed.
- ➢ Press **ENT/Enter** button once to move the cursor to the next position.
- ➢ Press the ▼ **Down** button repeatedly until "1" is displayed.
- ➢ Now, "0021" is displayed, press **ENT/Enter** button once and the cursor moves to "OK".

Then, press the **ENT/Enter** button once to submit your counter value. The loader will now start loading disc from the input Spindle and place them into all drive trays.

6.2 Editing Names

When you create either a new user or a partition, you need to assign a name to it. The example shown here shows how to name or rename a partition, but the process for naming or renaming the user name is identical.

During the process of creating a new partition, you will see the Edit Partition Name menu:

```
Edit Partition Name
[        ] OK?
```

To enter the name, use the ▲ **Up** or ▼ **Down button** to select the character and use the **ENT/Enter** or **ESC/Escape** button to move the cursor position. Once you've finished, move the cursor to "OK" and press the **ENT/Enter** button.

The name for a partition can be up to eight characters long, and the characters can be any alpha (A...Z) or numeric (0...9) value. For example, if you want to name the partition for your master disc as "FUN". Then follow this example:

➢ Press the ▼ **Down** button repeatedly until "F" is displayed. (You can also hold the ▼ **Down** button down, and the autoloader will scroll through the alphabet.)
➢ Press the **ENT/Enter** button once to move the cursor to the next position.
➢ Press the ▼ **Down** button repeatedly until "U" is displayed.
➢ Press the **ENT/Enter** button once to move the cursor to the next position.
➢ Press the ▼ **Down** button repeatedly until "N" is displayed.
➢ Press the **ENT/Enter** button once to move the cursor to the next position.
➢ Once you have the name "FUN" displayed, press the **ENT/Enter** button repeatedly until the cursor is moved to "OK".
➢ Then press the **ENT/Enter** button once to submit your name selection.

You will now see the following confirmation screen:

```
Loading Partition?
[FUN.VEF], OK?
```

> **Note:** After you submitted the Partition name, the system will automatically append a suffix of .VEF. However, this does NOT apply for User Name input.

Press the **ENT/Enter** button to confirm.

Chapter 2: Operation
This chapter shows each of the menu options and how they are used.

1. Copy
The Copy menu option or the front panel Copy quick key have two different modes of operation:

> ➢ Single Master Mode: This mode requires that a single master disc is loaded onto the hard drive prior to initiating the duplication process. This mode is ideal if your job involves one or very few master disc(s).

> ➢ Multi Master Mode (Batch Mode): This mode does not require you to manually pre-load your master onto the HDD. Simply place the master disc(s) on top of the corresponding stack of blank discs needed for that particular job. This mode is ideal if you have numerous master discs and fewer copies for each master disc.

These modes are described in detail in "Single Master and Multi Master Modes" on page 10. If you are making copies in Single Master Mode, continue on to the next section. If you are making copies in Multi Master Mode, jump ahead to "Making Copies in Multi Master Mode" on page 17.

1.1 Making Copies in Single Master Mode

This process will copy your master disc on to several blank discs simultaneously. This mode requires that your master disc is loaded into a partition on the Hard Drive. See "Load Partition" on page 30 for instructions on how to do this.

Turn on your autoloader and wait until it has booted up. It may take several minutes for the autoloader to go through its self adaptive test and auto-calibration procedures. You should see the following signifying your autoloader is ready:

1.1.1   Select Single Master Mode

```
Duplicator      2.20
1. Copy         (SM)
```
Make sure the Master Mode is set to Single Master mode (SM). If it is already in Single Master Mode (SM), please skip to step 1.1.2 that starts the copy process. If it is not, use the ▲ **Up or** ▼ **Down** button to navigate to the *8. Master Mode* screen.

```
Duplicator      2.20
8. Master Mode
```
Press the **ENT/Enter** button to enter the *Master Mode* Menu and you will see a screen similar to one of the following:

```
Master Mode:
Multi Master
```

```
Master Mode:
Single Master
```
Use the ▲ **Up or** ▼ **Down** button to select Single Master Mode. Press the **ENT/Enter** button to submit your selection.

1.1.2 Start the Copying Process

Go back to the *1. Copy* Menu. Use the ▲ **Up or** ▼ **Down** button to navigate to the following screen:

```
Duplicator      2.20
1. Copy         (SM)
```

Start the Copy Process. Insert your blank discs on to the Input Spindle and press the **ENT/Enter** button to enter the *1.Copy* menu. You will see the *Choose Partition* menu:

```
Choose Partition
[FUN.VEF] 4012MB
```

Use the ▲ **Up or** ▼ **Down** button to find the partition where your master disc is stored. Press the **ENT/Enter** button to select that Partition. Next, you will see the *Counter Selection* menu:

```
Counter:
No Counter
```

Follow the instructions shown in "Setting Counters" on page 12 to continue. Once the counters have been set, press the **ENT/Enter** button to confirm. You will see the *Preparing* screen:

```
Preparing...
Please Wait
```

After a short interval, the robotic loader will pick the top disc from the input spindle and place it into one of the drives. As this is happening, you will see a screen similar to below:

```
OK:  0 NG:  0 NB:  0
Input Bin > Drive01
```

This information screen shows what is happening. In this case, the loader has taken a disc from the input spindle and is placing it into Drive 1.

The loader will continue to remove discs from the input spindle and place those into drives until either all of the drives are full, or the count that you loaded into the counter is reached.

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

It takes a few seconds for the autoloader to recognize all the discs.

After two or three seconds of processing time, one of the following *Copy Progress* screens will appear.

Counter Specified		No Counter Specified
Copying... H4012MB 0/21 12% 481MB	or:	Copying... H4012MB 0 12% 481MB

Counter Specified:
➤ "H" indicates the source of the job resides in the Hard Drive.
➤ "4012MB" indicates the capacity of the master disc.
➤ "12%"/"481MB" indicates the current progress of the duplication.
➤ "0/21" indicates you have a project size of 21 copies and you have made 0 copies so far.

No Counter Specified:
➤ "H" indicates the source of the job resides in the Hard Drive.
➤ "4012MB" indicates the capacity of the master disc.
➤ "12%"/"481MB" indicates the current progress of the duplication.
➤ "0" indicates you have made 0 copies so far.

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 one minute for DVD/Blu-Ray Disc duplication. That is caused by the initializing and finalizing stages.

```
OK:  3 NG:  0 NB:  0
Drive01 > Output Bin
```
Once the duplication run is completed, the loader will remove the finished disc from a drive and place the successful copy on the Output Spindle or if it is a bad/NG copy, the job will be aborted.

After the loader has placed the copied disc into the Output Spindle, the loader will then pick up another blank disc and load it into the drive.

```
OK:  3 NG:  0 NB:  0
Input Bin > Drive01
```
The copying process will continue until you either run out of blank discs or until the count that you loaded into the counter is reached.

If you run out of blank discs and the job is not complete, the autoloader will give you an opportunity to fill the spindle:

Important: When you add discs to the input spindle, be sure to remove your finished discs from the Output Spindle.

```
Input Bin Empty
Reset Hopper?
```
At this point you can either put more discs on to the input spindle and press the **ENT/Enter** button to continue, or press the **ESC/Escape** button to terminate your project.

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```
Access Drive Log?
```

Upon project termination, you shall see the *Access Drive Log* menu. You can press the **ENT/Enter** button one more time to see the drive log that indicates the number of passes and fails for every drive/tray, or simply press the **ESC/Escape** button to go back to the main menu. If you choose to see the drive log file, you will see a screen similar to below:

```
Drive 1
OK:  1 NG:  0 NB:  0
```

➤ "Drive 1" indicates the below results are for the 1st drive.
➤ "OK: 1" indicates there is "1" successful copy made by this drive.
➤ "NG: 0" indicates there are "0" bad copies created by this drive.
➤ "NB: 0" indicates there are "0" discs in this drive that were not recorded due to non-recording error such as invalid media type, etc.

Use the △ **Up or** ▽ **Down** buttons to look at the drive log file for the various drives. Press the **ESC/Escape** button to return to the *1.Copy* menu

1.2 Making Copies in Multi Master Mode

This mode does not require you to manually load your master on to the HDD. Simply place the master disc(s) on top of the stack of blank discs needed for that particular job. This mode is ideal if you have numerous master discs and fewer copies for each master disc.

The Multi Master mode uses the Reserve partition to temporarily store the content of the current master disc. Once the task is complete and a new master disc has been detected, the reserve partition's content (of the previous master disc) will be replaced with the content of the new master disc.

For more information on Multi Master Mode, see "Single Master and Multi Master Modes" on page 10.

Turn on your autoloader and wait until it has booted up. It may take several minutes for the autoloader to go through its self adaptive test and auto-calibration procedures. You should see the following signifying your autoloader is ready:

1.2.1   Select Multi Master Mode

```
Duplicator      2.20
1. Copy         (MM)
```

Make sure the autoloader is set to Multi Master mode (MM). If it is already in Multi Master mode (MM), please skip to step 1.2.2 that starts the copy process. If it is not, use the △ **Up or** ▽ **Down** button to navigate to the screen *8. Master Mode*.

```
Duplicator      2.20
8. Master Mode
```

Press the **ENT/Enter** button to enter the *Master Mode* Menu and you will see a screen similar to one of the following:

```
Master Mode:
Single Master
```

```
Master Mode:
Multi Master
```

Use the ▲ **Up or** ▼ **Down** button to select Multi Master Mode. Press the **ENT/Enter** button to submit your selection.

```
Duplicator      2.20
1. Copy         (MM)
```

Use the ▲ **Up or** ▼ **Down** button to navigate back to the *1. Copy* Menu.

1.2.2   Start the Copying Process

Place your master discs and blank discs onto the Input Spindle as described in "Single Master and Multi Master Modes" on page 10. In general, the order of the discs on the spindle will be, **from top to bottom**:

> ➢ The master disc for the first job
> ➢ The blank discs for the first job
> ➢ The master disc for the second job
> ➢ The blank discs for the second job
> ➢ The master disc for the third job
> ➢ The blank discs for the third job
> ➢ etc.

Duplication Jobs with different formats among CD/DVD/BD can be intermixed. The autoloader will automatically detect a job's master and blank disc format and copy them when they match.

You should still be at the *1. Copy* Menu:

```
Duplicator      2.20
1. Copy         (MM)
```

Press the **ENT/Enter** button to start the duplication job.

```
Preparing...
Please Wait
```

After a short interval, the robotic loader will pick the top disc (master disc) from the Input Spindle and place it into one of the drives. As this is happening, you will see a screen similar to below:

```
OK:  0 NG:  0 NB:  0
Input Bin > Drive01
```

This information screen shows what is happening. In this case, the loader has taken a disc from the Input Spindle and is placing it into Drive 1.

The loader will continue to take discs from the Input Spindle and place them into drives until either all of the drives are full or the Input Spindle is empty.

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

It takes a few seconds for the autoloader to recognize all of the discs in the trays.

```
Copying...    H4012MB
0      12%      481MB
```

Once all of the discs are detected, the autoloader will detect the master disc and the duplication process will start for the remaining blank discs. When the duplication process is through, the loader will place the master disc and successful copies onto the Output Spindle.

In Multi Master Mode, the robotic arm continues to load more media into the drives from Input Spindle while the duplicated discs are placed in the Output Spindle. Once a new Master disc has been detected by any of the drives, this process will repeat for the new Master disc.

When all of the jobs are complete, and the autoloader detects the Input Spindle is empty, it presents you with the Input Bin Empty message:

```
Input Bin Empty
Press OK to Finish
```

Press the **ENT/Enter** button to continue and you will see the *Access Job Log* screen:

```
Access Job Log?
```

You can press the **ENT/Enter** button one more time to see the job log that indicates the number of passes and fails for every job/Master Disc, or simply press the **ESC/Escape** button to go to the *Access Drive Log* screen. If you choose to see the job log file, you will see a screen similar to below:

```
Master 01
OK:  1 NG:  0 NB:  0
```

➢ "Master 01" indicates the below results are for the 1st master disc.
➢ "OK: 1" indicates there is "1" successful copy made for this master disc.
➢ "NG: 0" indicates there are "0" bad copies created from this master disc.
➢ "NB: 0" indicates there are "0" discs that were not recorded from this master disc due to non-recording errors such as invalid media type, etc.

Use the ▲ **Up or** ▼ **Down** buttons to look at the log file for the various jobs. Press the **ESC/Escape** button to go to the *Access Drive Log* screen

You can press the **ENT/Enter** button one more time to see the drive log that indicates the number of passes and fails for every drive/tray, or simply press the **ESC/Escape** button to go to the main menu. If you choose to see the drive log file, you will see a screen similar to below:

```
Access Drive Log?
```

```
Drive 1
OK:  1 NG:  0 NB:  0
```

Use the ▲ **Up or** ▼ **Down** buttons to look at the drive log file for the various drives. Press the **ESC/Escape** button to return to the *1.Copy* menu

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2. Print

Use the *Print* menu to print label(s) directly onto the label side of your LightScribe printable media. Before you start a printing process, please make sure you have successfully loaded your LightScirbe label file(s) into the Hard Drive via "Load Label" function under "Print Setup". See page 33 for details.

For additional information on creating/designing your labels, please refer to "Appendix B – Design and Create your Label File" on page 49.

To begin the printing process, do following:

Turn on your autoloader and wait until it has booted up. You should see the following signifying your autoloader is ready:

```
Duplicator      2.20
1. Copy         (SM)
```

To start the printing process, place your LightScribe printable discs in to the Input Spindle, with the label side facing down toward the bottom of the bin.

Use the ▲ **Up or** ▼ **Down** button to navigate to 2.Print and press the **ENT/Enter** button. You will see the *Please Select Label screen:*

```
Please Select Label
[FUN.lsi] 25MB
```
Use the ▲ **Up or** ▼ **Down** button to find the desired LightScribe label file on the hard drive. Press the **ENT/Enter** button to select that LightScribe label file. Next, you will see the *Counter Selection* menu:

```
Counter:
No Counter
```
Follow the instructions shown in "Setting Counters" on page 12 to continue. Once the counters have been set, press the **ENT/Enter** button to confirm. You will see the *Preparing* screen:

```
OK:  0 NG:  0 NB:  0
Input Bin > Drive01
```
After a short interval, the robotic loader will pick the top disc from the input spindle and place it into one of the drives. This information screen shows what is happening. In this case, the loader has taken a disc from the input spindle and is placing it into Drive 1.

If your system has more than one drive, the loader will continue to pick discs from the input spindle and place those into drives until either all of the drives are full, or the count that you loaded into the counter is reached.

```
Processing...
Please Wait
```
It takes a few seconds for the autoloader to recognize the disc(s).

After two or three seconds of processing time, one of the following *Copy Progress* screens will appear.

Counter Specified

```
Printing...       H
[FUN.lsi]  0/21 12%
```

➢ "H" indicates the source of the job resides in the Hard Drive.
➢ "FUN.lsi" indicates name of the label file you are printing.
➢ "12%" indicates the current progress of the printing.
➢ "0/21" indicates you have a project size of 21 prints and you have made printed 0 discs so far.

or:

No Counter Specified

```
Printing...       H
[FUN.lsi]  0    12%
```

➢ "H" indicates the source of the job resides in the Hard Drive.
➢ "FUN.lsi" indicates name of the label file you are printing.
➢ "12%" indicates the current progress of the printing.
➢ "0" indicates you have printed 0 discs so far.

Note: It is normal to see the progress indicator stay at 0% and 100% for several minutes due to the initializing and finalizing process.

```
OK:  3 NG:  0 NB:  0
Drive01 > Output Bin
```

Once the printing run is completed, the loader will remove the printed disc from the drive and place the successful printed disc in the Output Spindle. If the printing process failed, the job will be aborted.

After the loader has placed the printed disc into the Output Spindle, the loader will then pick up another LightScribe printable disc and load it into the drive.

```
OK:  3 NG:  0 NB:  0
Input Bin > Drive01
```

The copying process will continue until you either run out of LightScribe printable discs or until the count that you loaded into the counter is reached.

If you run out of LightScribe printable discs and the job is not complete, the autoloader will give you an opportunity to re-fill the spindle:
Important: When you add discs to the input spindle, be sure to remove your finished discs from the Output Spindle.

```
Input Bin Empty
Reset Hopper?
```

At this point you can either put more LightScribe printable discs into the input spindle and press the **ENT/Enter** button to continue, or press the **ESC/Escape** button to terminate your project.

```
Access Drive Log?
```

Upon project termination, you shall see the *Access Drive Log* menu. You can press the **ENT/Enter** button one more time to see the drive log that indicates the number of passes and fails for every drive/tray, or simply press the **ESC/Escape** button to go back to the main menu. If you choose to see the drive log file, you will see a screen similar to below:

```
Drive 1
OK:  1 NG:  0 NB:  0
```

- ➢ "Drive 1" indicates the below results are for the 1st drive.
- ➢ "OK: 1" indicates there was "1" successful print made by this drive.
- ➢ "NG: 0" indicates there were "0" bad prints created by this drive.
- ➢ "NB: 0" indicates there were "0" discs in this drive that were not printable due to a non-printing error such as invalid media type, etc.

If your units has more than one drive, use the ▲ **Up or** ▼ **Down** buttons to look at the drive log file for the various drives. Press the **ESC/Escape** button to return to the *1.Copy* menu

3. Test

Use the *Test* menu or *Test* quick key to simulate the copy process. With simulation, write once recordable discs such as DVD-R, or CDR will be reusable. The purpose of simulation is to ensure error free duplication.

> ***Note:*** *Due to physical limitations of the BD-R/DVD+R recordable format, if you try to simulate BD-R/DVD+R copying, you will encounter failure messages.*

> ***Warning****: If you are using CD/DVD/BD Rewritable discs as your media during the simulation, the content on those discs will be permanently erased.*

Operation in Test menu is identical to operation in Copy menu. See "1. Copy" on page 14 for instructions.

4. Compare

Use the Compare function to perform a bit-by-bit comparison between the content of your master disc(s) in the Hard Drive and the contents of all discs it copied. This ensures that all of your copies are identical to original master disc(s).

> *Note:* *The bit-by-bit comparison will only apply on all Blu-Ray Discs, DVDs and Data CDs. A readability check will be applied for other formats like Audio CDs, CD+G, and Video CD discs due to their lack of error correction mechanisms.*

If you are at the *1. Copy* Menu, do the following:

```
Duplicator      2.20
1. Copy         (MM)
```
Use the ▲ **Up or** ▼ **Down** button to find the *4. Compare* menu.

```
Duplicator      2.20
4. Compare
```
Press the **ENT/Enter** button on *4. Compare* menu to enter the *Choose Partition* Menu and you will see a screen similar to the following:

```
Choose Partition
[FUN.VEF] 4012MB
```
Use the ▲ **Up or** ▼ **Down** button to find the partition where your master disc is stored. Press the **ENT/Enter** button to select that Partition. Next, you will see the *Counter Selection* menu:

```
Counter:
No Counter
```
Follow the instructions shown in "Setting Counters" on page 12 to continue. Once the counters have been set, press the **ENT/Enter** button to confirm. You will see the *Preparing* screen.

```
Preparing...
Please Wait
```
After a short interval, the robotic loader will pick the top disc from the input spindle and place it into one of the drives. As this is happening, you will see a screen similar to below:

```
Loader Processing
Input Bin > Drive 1
```
This information screen shows what is happening. In this case, the loader has taken a disc from the input spindle and is placing it into Drive 1.

The loader will continue to remove discs from the input spindle and place them into the drives until either all of the drives are full, or the count that you loaded into the counter is reached.

```
Processing...
Please Wait
```
It takes a few seconds for the autoloader to recognize all the discs.

The system will then compare the discs in the trays to the content of the master disc residing in the Hard Drive partition you specified. When the comparison job is complete, the autoloader will place the good discs and failed discs into corresponding areas and you will see a PASS/FAIL result screen similar to this:

Counter Specified		**No Counter Specified**
PASS 16 FAIL 0 Job Completed! Press OK to Finish	or:	Input Bin Empty Reset Hoppers?
➢"PASS 16" indicates 16 discs have been compared successfully. ➢"FAIL 0" indicates none of the discs have failed. Press the **ENT/Enter** button to finish		➢"Input Bin Empty" indicates that the system has run out of discs to compare. If you have more discs to compare, you can empty the Output Spindle; place the discs to be compared in the Input Spindle and Press the **ENT/Enter** button to continue. If you have no more discs to compare, press the **ESC/Escape** button to terminate the operation.

5. Test+Copy

With the Test + Copy menu option, the autoloader simulates the copying process, and then makes copies if everything works correctly. If a failure is encountered on a disc during the simulation, it will not be copied during the copying process. The discs that passed the simulation will move on to the copying process. If any part of this process fails, the job will be aborted.

Operation in *Test+Copy* menu is identical to operation in *Copy* menu. See "Copy" on page 14 for instructions.

6. Copy+Compare

The *Copy + Compare* menu option is used to make verified copies. After the copy process is done, the autoloader automatically compares the copies to the master content residing in the hard drive to ensure that they are identical. When the operation is complete, the autoloader automatically places good discs on to the Output Spindle. If any part of this process fails, the job will be aborted.

Operation in *Copy+Compare* menu is identical to operation in *Copy* menu. See "Copy" on page 14 for instructions.

7. Select Burn Speed

The *Select Burn Speed* menu option or the *Speed* quick key is used to adjust the duplication speed for the various disc formats. By default, the duplication speed will be set to the optimal speed. However, under some circumstances you might want to lower down the duplication speed. Those circumstances are:

➢ Poor Blank Media Quality - When your media quality is sub-par, lowering the duplication speed is necessary to make good copies.
➢ Duplication Quality - Overall, the lower the speed, the higher the quality of your duplicates. If you have time, it is a good choice to lower the speed to produce the best quality duplicates.

If you are at the *1. Copy* Menu, do the following:

```
Duplicator      2.20
1. Copy         (MM)
```

Use the ▲ **Up or** ▼ **Down** button to find the 7*. Select Burn Speed* menu.

```
Duplicator      2.20
7. Select Burn Speed
```

Press the **ENT/Enter** button at *6. Select Burn Speed* menu and you will see the *Select Burn Speed* menu similar to below:

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

There are three recording speed types that can be set:
➢ HDD to CD: Copy Hard Drive CD Content to CD-R/RW Discs speed.
➢ HDD to DVD: Copy Hard Drive DVD Content to DVD±R/RW Discs.
➢ HDD to BD: Copy Hard Drive Blu-Ray Content to BD-R/RE Discs.

Depending upon the type of duplication and your autoloader restrictions, you need to select the correct format in order to take effect. To select the recording speed options, use the ▲ **Up or** ▼ **Down** button to find the desired speed for the appropriate format and press the **ENT/Enter** button to enter the menu. You will see a menu similar to this:

```
HDD to CD Speed
32x
```

Use the ▲ **Up or** ▼ **Down** button to find the desired speed. Press the **ENT/Enter** button to set the desired recording speed.

The options that are available are shown in Table 2-1.

Duplication Type	Speeds Available
HDD to CD Speed	1x, 2x, 4x, 8x, 10x, 12x, 16x, 24x, 32x, 40x, 48x, 52x
HDD to DVD Speed	1x, 2x, 2.4x, 4x, 6x, 8x, 12x, 16x, 18x, 20x
HDD to BD Speed	1x, 2x, 2.4x, 4x, 6x, 8x, 12x, 16x, 18x, 20x

Table 2-1 Duplication Speeds

These options might change depending on the CD, DVD or Blu-Ray Disc Writers pre-installed in your system.

> **Note:** *The speed that you choose may be adjusted by the drives and/or the media for optimized duplication.*

Once your selection has been changed successfully, you will see the following screen for 2 seconds:

```
HDD to CD Speed
Adjusted to: 8x
```

You will automatically be returned to the Main Menu.

8. Select Source

The *Select Source* menu or the *Source* quick key is used to set the Master Reading Source. In the autoloader, the Master Reading Source is always the Hard Drive.

9. Master Mode

The *Master Mode* menu is used to select between Single Master mode or Multi Master mode. For more information on the modes, see "Single Master and Multi Master Modes" on page 10.

If you are at the *1. Copy* Menu, do the following:

```
Duplicator      2.20
1. Copy        (SM)
```
Use the ▲ **Up or** ▼ **Down** button to find the 9. *Master Mode* menu.

```
Duplicator      2.20
9. Master Mode
```
Press the **ENT/Enter** button on *8. Master Mode* to enter the menu and you will see one of the following screens:

```
Master Mode:
Single Master
```
```
Master Mode:
Multi Master
```
Use the ▲ **Up or** ▼ **Down** button to choose between Multi Master mode and Single Master mode. Press the **ENT/Enter** button to enter your selection. The system will return you back to the main menu.

10. Erase

Use the *Erase* menu to erase your Rewritable discs.

```
Duplicator      2.20
1. Copy         (SM)
```

Use the ▲ **Up or** ▼ **Down** button to find the *10. Erase* menu.

```
Duplicator      2.20
10. Erase
```

Press the **ENT/Enter** button on *10. Erase* to enter the menu and you will see the following screens:

There are two options:
- ➤ **Full Erase:** This option erases the entire disc, destroying all previously written data in the process.
- ➤ **Quick Erase:** This option erases the index (TOC) of the Rewritable disc, not the data section. It is much faster than Full Erase. However, the data section is still recoverable. In order to ensure all old content on the RW disc is completely ereased and unable to be recovered for security purposes, you must utilize the FULL ERASE function.

```
Erase
Full Erase
```

```
Erase
Quick Erase
```

Use the ▲ Up or ▼ Down buttons to select between the two options and press the **ENT/Enter** button to continue.

```
Counter:
No Counter
```

Follow the instructions shown in "Setting Counters" on page 12 to continue. Once the counters have been set, press **the ENT/Enter** button to confirm.

```
Loader Processing
Input Bin > Drive01
```

The Robotic Arm will initiate and pick the discs to be erased from the Input Spindle and place them into the drives. As soon as the drives are all full, or the number programmed into the counter is reached, you will see the following:

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

The system will check all discs in the drive and prepare them to be erased. As soon as the checking process completes, the Erase RW process starts.

```
Quick Erasing...
0/25
```

The "0" indicates that zero discs have been erased so far. The "25" indicates the number programmed into the counter. Once all the discs have been erased, you will see one of these PASS/FAIL screens:

Counter Specified		No Counter Specified
PASS 25 FAIL 0 Job Completed! Press OK to Finish	or:	Input Bin Empty Reset Hoppers?
➢"PASS 25" indicates 25 discs have been erased successfully. ➢"FAIL 0" indicates no discs have failed the erase process. Press the **ENT/Enter** button to finish		➢"Input Bin Empty" indicates that the system has run out of discs to erase. If you have more discs to erase, you can empty the Output Spindle; place the discs to be erased in the Input Spindle and Press the **ENT/Enter** button to continue. If you have no more discs to erase, press the **ESC/Escape** button to terminate the operation.

11. Hard Drive Setup
The Hard Drive Setup menu consists of following sub-menus:

1	*Select Partition*
2	*Load Partition*
3	*Rename Partition*
4	*Delete Partition*
5	*Partition Info*
6	*Select Loading Drive*
7	*Format Hard Drive*

Each of these menus is discussed in its own subsection.

If you are at the *1. Copy* Menu, do the following:

```
Duplicator      2.20
1. Copy         (SM)
```
Use the ▲ **Up or** ▼ **Down** button to find *11. Hard Drive Setup.*

```
Duplicator      2.20
11. Hard Drive Setup
```
Press the **ENT/Enter** button on *11. Hard Drive Setup* to enter the menu. Use the ▲ **Up or** ▼ **Down** button to select between the options.

11.1 Select Partition

The *Select Partition* submenu is used to select the partition on the Hard Drive that will be used as the default partition choice for various Hard Drive related tasks.

```
Hard Drive Setup
1. Select Partition
```
Press the **ENT/Enter** button to enter the *Select Partition* menu.

```
Choose Partition
[Reserved.VEF]  82MB
```
Use the ▲ **Up or** ▼ **Down** button to select the desired partition. The RESERVED partition is reserved for use by the System under Multi-Master mode.

Note: The RESERVED partition can also be renamed to a customized name in order to keep the content permanently if desired.

```
Choose Partition
[FUN.VEF]     4012MB
```
Press the **ENT/Enter** button to select the desired partition (named FUN in this example).

11.2 Load Partition

The Load Partition menu is used to load a master disc's content into the desired partition on the Hard Drive.

```
Hard Drive Setup
2. Load Partition
```

Press the **ENT/Enter** button to enter the *2. Load Partition* menu.

```
Load Partition [148GB]
Load -> New Partition
```

You now have a choice to load your master disc into a new (empty) partition or overwrite one of the existing partitions (if any exists, including reserved partitions) by inputting and modifying the name you desire or you can simply choose Auto Generate to have the system automatically generate a partition name for you. Afterwards, simply press the ▲ **Up or** ▼ **Down** button to find your desired selection and press **ENT/Enter** to submit your selection. You should see the following screen:

Load -> New Partition

```
Edit Partition Name
[      ] OK?
```

Enter a new partition name as described in "Editing Names" on page 13. For this example, we will name it "HAPPY".

```
Load Partition
[HAPPY   ], OK?
```

The system will display a verification message before continuing. Pres the **ENT/Enter** button to start loading the partition named "HAPPY".

or:

Overwrite [Existing Partition]

```
This will Overwrite
[FUN.VEF   ],OK?
```

Press the **ENT/Enter** button to overwrite the partition named "FUN". Before continuing, the autoloader will ask you again to confirm it.

or:

Load -> Auto Generate

System will automatically create a partition name [NEW-0001].

The master should be placed on the first input spindle. The robotic arm will pick it up and place it into one of the drives, and the contents of the master disc will be loaded into the desired partition.

```
Load Partition OK!
Press OK to Finish
```

Pres the **ENT/Enter** button to finish.

11.3 Rename Partition

When you load your master disc onto a hard drive partition, you are asked to give it a name. However, you can rename it at anytime afterwards. Instructions for this are shown in "Editing Names" on page 13.

11.4 Delete Partition

The *Delete Partition* option deletes an existing partition. Use the ▲ **Up or** ▼ **Down** button to navigate to the *4.Delete Partition* menu.

```
Hard Drive Setup
4. Delete Partition
```

Press the **ENT/Enter** button to enter the *Delete Partition* menu. The autoloader will first ask you to choose the partition to be deleted:

```
Choose Partition
[FUN.VEF]      4012MB
```

Use the ▲ **Up or** ▼ **Down** button to find the partition that you want to delete. Press the **ENT/Enter** button to select the partition.

```
Delete Partition
[FUN.VEF], OK?
```

The autoloader displays the *Delete Partition* confirmation message. Press the **ENT/Enter** button to continue.

```
[FUN.VEF]
Deleted!
```

The autoloader displays the *Deleted* message for two seconds and then returns you to the *Delete Partition* menu.

11.5 Partition Info

The *Partition Info* option provides information about an existing partition. Use the ▲ **Up or** ▼ **Down** button to navigate to the *5. Partition Info* menu.

```
Hard Drive Setup
5. Partition Info
```

Press the **ENT/Enter** button to enter the *Partition Info* menu, and use the ▲ **Up or** ▼ **Down** button to find the partition that you want information about.

```
(002) DVD 4012MB
FUN.VEF
```

➢ The "(002)" field indicates that it is the second partition on the drive.
➢ The "[FUN.VEF]" field shows the name of the partition.
➢ The "DVD" field indicates that the master stored in this partition is a DVD.
➢ The "4021MB" field indicates the capacity of the master's content stored in this partition.

11.6 Select Loading Drive

Select Loading Drive gives you the control of choosing which drive the master should be loaded from when you perform the "Load Partition" feature under "Hard Drive Setup".

Please note that this setting does NOT apply to any feature other than settings within "Hard Drive Setup". If your system has ONLY one writer, there will only be one option available for you to choose.

To change the loading drive, use the ▲ **Up or** ▼ **Down** button to navigate to the *6. Select Loading Drive* menu:

```
Hard Drive Setup
6. Select Loading Drive
```
Press the **ENT/Enter** button to enter the *Select Loading Drive* menu.

```
Drive 1 Port 0
PIONEER DVD-RW DVR-115D
```
Press the ▲ **Up or** ▼ **Down** button to select the desired Drive. Press the **ENT/Enter** button to select the Loading Drive.

The selected drive will now be used to load a partition to the Hard Drive.

11.7 Format Hard Drive

This function formats the Hard Drive. It deletes all partitions and re-initiates the Hard Drive. To format the Hard Drive, use the ▲ **Up or** ▼ **Down** button to navigate to the *7. Format Hard Drive* menu:

```
Hard Drive Setup
7. Format Hard Drive
```
Press the **ENT/Enter** button to enter the *Format Hard Drive* menu.

```
All Stored Data will be erased.
Press OK to Continue
```
Press the **ENT/Enter** button to format the Hard Drive. After the Hard Drive has been formatted, the system will return you to the *Format Hard Drive* menu.

12. Print Setup

The Print Setup menu consists of the following sub-menus:

1   *Load Label*
2   *Rename Label*
3   *Delete Label*
4   *Print Surface Info*
5   *Label Info*

Each of these menus is discussed in its own subsection.

If you are starting from the *1. Copy* Menu, do the following:

```
Duplicator      2.20
1. Copy         (SM)
```

Use the △ **Up or** ▽ **Down** button to find *12. Print Setup.*

```
Duplicator      2.20
12. Print Setup
```

Press the **ENT/Enter** button at *12. Print Setup* to enter the menu. Use the △ **Up or** ▽ **Down** button to select between the following options.

12.1 Load Label

This function allows you to load your LightScribe Label file (.lsi file) from the Label Disc onto the system's internal hard drive.

For instructions on how to generate the LightScribe Label, please refer to "Appendix B – Design and Create your Label File" on page 49.

```
Print Setup
1. Load Label
```

Press the **ENT/Enter** button to enter the *1. Load Label* menu.

```
Loading Master
```

The autoloader will pick up a disc that contains your LightScribe label file and place it into a drive for analyzing.

```
Please Select Label
 1.[Load All Labels]
```

Upon successfully analyzing your label disc, you have the following options:

➢ Load all labels found in the disc – The system can load all LightScribe Label file(s) (.lsi file) detected in the disc into the hard drive. If you choose to do so, please use the △ **Up or** ▽ **Down** button to select [Load All Labels] and press the **ENT/Enter** button to continue.

➢ Select any single label –The system can also load any single LightScribe Label file (.lsi file) detected in the disc into the hard drive. If you choose to do so, please use the △ **Up or** ▽ **Down** button to select the LightScribe label file you wish to load and press the **ENT/Enter** button to continue

```
Loading...      25MB
FUN.lsi   12%   3MB
```

During the loading process, you shall see the screen on the left.

➢   "FUN.lsi" indicates name of the label file you are loading.
➢   "12%"/"3MB" indicates the current progress of loading.
➢   "25MB" indicates the size of the label file you are loading.

```
Unloading Master
```

Upon completing the loading process, the autoloader will pick up the label disc and place it into the output spindle.

```
Load Label Success!
Press OK to Continue
```

Then the system will show the result screen where you can press the **ENT/Enter** button to return to the "Print Setup" menu.

12.2 Rename Label

When you load your LightScribe Label file into a hard drive, the filename of the label file is used as the reference. However, you can also rename it at anytime afterwards. Instructions on how to perform this operation is very similar to the partition name change example, which is shown in "Editing Names" on page 13.

12.3 Delete Label

The *Delete Label* function deletes an existing LightScribe Label file in the hard drive. Use the ▲ **Up or** ▼ **Down** button to navigate to the *3.Delete Partition* menu.

```
Print Setup
3. Delete Label
```

Press the **ENT/Enter** button to enter the *Delete Label* menu. The autoloader will first ask you to choose the label to be deleted:

```
Please Select Label
[FUN.lsi]25M
```

Use the ▲ **Up or** ▼ **Down** button to find the label that you want to delete. Press the **ENT/Enter** button to select the label.

```
Delete Label
[FUN.lsi], OK?
```

The autoloader displays the *Delete Label* confirmation message. Press the **ENT/Enter** button to continue.

```
[FUN.lsi]
Deleted!
```

The autoloader displays the *Deleted* message for two seconds and then returns you to the *Delete Label* menu.

12.4 Print Surface Info

The *Print Surface Info* function provides information about the LightScribe printing device and the LightScribe printable media used in this LightScribe printing device for troubleshooting purposes. Use the ▲ **Up or** ▼ **Down** button to navigate to the *4. Print Surface Info* menu.

In order to display such information, a LightScribe printable disc (printing side face down) must be manually placed into the LightScribe printing device before performing this function.

12.5 Label Info

The *Label Info* function provides in-depth information as to what type of LightScribe media is supported by this label file. This function is only needed for troubleshooting purposes.

13. Setup

The 11.Setup menu options are used to configure various options on the autoloader. The Setup menu consists of the following sub-menus:

1	Language
2	Read Error Skip
3	CD Writing Mode
4	Max Audio, VCD & CDG Speed
5	Buzzer
6	Startup Menu
7	Screen Saver
8	Counter
9	DVD+R Compatibility Mode
10	ISRC
11	Disable Drives
12	CD Overburn
13	Max Failures per Job
14	Max Failures per Drive

Each of these options is discussed in its own subsection.

13.1 Language

This setting allows you to choose the language that you prefer to use when navigating the autoloader. The autoloader supports multiple languages.

```
Setup
1. Language
```

Use the △ **Up or** ▽ **Down** button to select the Language menu and press the **ENT/Enter** button to enter that menu.

```
Language:
English
```
```
Language:
Espanol
```

Use the △ **Up or** ▽ **Down** button to select between the languages and press the **ENT/Enter** button to select that option.

13.2 Read Error Skip

Normally, when the autoloader encounters a read error while reading your master disc, the duplication is aborted and all the recordable media in the writers are ruined. However, if you believe that your master disc has a small, insignificant error due to physical damage, you can enable this setting to allow the autoloader to skip any read errors it encounters.

Note: This function does not fix the error; it only skips it to make the rest of the data readable.

```
Setup
2. Read Error Skip
```

Use the △ **Up or** ▽ **Down** button to select the *Read Error Skip* menu and press the **ENT/Enter** button to enter that menu.

`Read Error Skip` `On`	Use the ▲ **Up or** ▼ **Down** button to select whether *Read Error Skip* is On, Off or Off with Retry and press the **ENT/Enter** button to select that option.
`Read Error Skip` `Off`	➢ On: By select this setting, you instruct the system to skip any Read Errors during the duplication process.
`Read Error Skip` `Off with Retry`	➢ Off: By select this setting, you instruct the system to fail the entire duplication process when a Read Error occurs.

> ➢ Off with Retry: By select this setting, you instruct the system to perform additional retries when a Read Error occurs, however, upon retry attempt failed, the entire duplication process will be failed.

13.3 CD Writing Mode

This setting allows you to select which mode to use to duplicate a CD; "Disc at Once" or "Track at Once." Unless you understand completely what these modes are, we strongly suggest you set it to "Disc at Once."

`Setup` `3. CD Writing Mode`	Use the ▲ **Up or** ▼ **Down** button to select the *CD Writing Mode* menu and press the **ENT/Enter** button to enter that menu.

`CD Writing Mode` `Disc at Once`	Use the ▲ **Up or** ▼ **Down** button to select either *Disc at Once* or *Track at Once*, and press the **ENT/Enter** button to select that option.
`CD Writing Mode` `Track at Once`	

13.4 Max Audio, VCD & CDG Speed

Due to the lack of error checking mechanism for Audio CD, Video CD and CD+G format, duplicating them at too high a speed can cause frequent errors like glitches and skips. Use this setting to adjust the maximum duplication speed for Audio, Video CD and CD+G format to ensure reliable duplication for such formats.

The options are: 1x, 2x, 4x, 8x, 10x, 12x, 16x, 24x, 32x, 40x, 48x, and 52x.

`Setup` `4. Max Audio, VCD & CDG Speed`	Use the ▲ **Up or** ▼ **Down** button to select the *Max Audio, VCD & CDG Speed* menu and press the **ENT/Enter** button to enter that menu.

`Max Audio, VCD & CDG Speed` `16x`	Use the ▲ **Up or** ▼ **Down** button to select the desired maximum writing speed for Audio, VCD and CDG, and press the **ENT/Enter** button to select that option.

> ***Note:*** *The actual speed that is selected may be determined by the drives or by the blank media.*

13.5 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.

```
Setup
5. Buzzer
```

Use the ▲ **Up or** ▼ **Down** button to select the *Buzzer* menu and press the **ENT/Enter** button to enter that menu.

```
Buzzer:
On

Buzzer:
Off
```

Use the ▲ **Up or** ▼ **Down** button to select whether *Buzzer* is on or off, and press the **ENT/Enter** button to select that option.

13.6 Startup Menu

This setting will allow you to choose the menu option that you will see first when you turn on the autoloader. The options are:

   1   Copy
   2   Test
   3   Compare
   4   Test+Copy
   5   Copy+Compare
   6   AutoCopy

```
Setup
6. Startup Menu
```

Use the ▲ **Up or** ▼ **Down** button to select the *Startup Menu* option and press the **ENT/Enter** button to enter that menu.

```
Startup Menu
Copy
```

Use the ▲ **Up or** ▼ **Down** button to select the desired startup menu, and press the **ENT/Enter** button to select that option.

13.7 Screen Saver

This menu allows you to choose whether you want to enable the Screen Saver feature. By enabling this feature, a screen saver will be displayed when your autoloader has been idle for a specific period of time.

```
Setup
7. Screen Saver
```

Use the ▲ **Up or** ▼ **Down** buttons to select the *Screen Saver* menu and press the **ENT/Enter** button to enter that menu.

```
Screen Saver:
On

Screen Saver:
Off
```

Use the ▲ **Up or** ▼ **Down** button to select whether the *Screen Saver* is on or off, and press the **ENT/Enter** button to select that option.

13.8. Counter

This menu allows you to choose whether you want to enable the *Counter* feature. By enabling this feature, the autoloader will prompt you to enter a counter amount and continuously burn discs until it reaches the value set into the counter.

```
Setup
8. Counter
```

Use the △ **Up or** ▽ **Down** button to select the *Counter* menu and press the **ENT/Enter** button to enter that menu.

```
Counter:
On
```
```
Counter:
Off
```

Use the △ **Up or** ▽ **Down** button to select whether the *Counter* is on or off, and press the **ENT/Enter** button to select that option.

For information on entering the counters, see "Setting Counters" on page 12.

13.9 DVD+R High Compatibility Mode

This feature allows you to turn the DVD+R High Compatibility Mode 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).

```
Setup
9.DVD+R High Compatibility Mode
```

Use the △ **Up or** ▽ **Down** button to select the *DVD+R High Compatibility Mode* menu and press the **ENT/Enter** button to enter that menu.

```
DVD+R High Compatibility Mode:
On
```
```
DVD+R High Compatibility Mode:
Off
```

Use the △ **Up or** ▽ **Down** button to select whether the *DVD+R High Compatibility Mode* is on or off, and press the **ENT/Enter** button to select that option.

13.10 ISRC

This option will allow you to enable/disable copying ISRC code of the Audio CD. ISRC is the serial number of the audio tracks that uniquely identifies the song in that audio track. This ISRC code is commonly found in commercial Audio CDs and rarely seen on the home made Audio CDs. By enabling this feature, the duplication performance will be lowered.

```
Setup
10.ISRC
```

Use the △ **Up or** ▽ **Down** button to select the *ISRC* menu and press the **ENT/Enter** button to enter that menu.

```
ISRC
On
```
```
ISRC
Off
```

Use the △ **Up or** ▽ **Down** button to select whether the *ISRC* is ON or OFF, and press the **ENT/Enter** button to select that option.

13.11 CD Overburn

Most CD-R media has a capacity of 650MB or 700MB. The burning starts from the center of the CD and works its way out but stops before the physical edge of the CD. Overburning is a burning method to bypass the disc limitations for the edge of the CD. This can provide slightly higher capacity storage, however, it has also been known to create compatibility issues. Please use it with caution.

```
Setup
12. CD Overburn
```

Use the △ **Up or** ▽ **Down** button to select the 12. *CD Overburn* menu and press the **ENT/Enter** button to enter that menu.

```
CD Overburn
ON

CD Overburn
OFF
```

Use the △ **Up or** ▽ **Down** button to select whether the *CD Overburn* feature is ON or OFF, and press the **ENT/Enter** button to select that option.

14. System Utilities

System Utilities is used to provide information pertaining to the autoloader as well as modification to maintain proper functioning. The System Utilities are:

       1   *Disc Info*
       2   *System Info*
       3   *Device Info*
       4   *Load Default*
       5   *Update Firmware*

14.1 Disc Info

Use the Disc Info utility to identify the type and other information about your blank recordable media.

    Note: *The Disc Info function does not use the robotic capabilities of the system. You must manually insert the discs into the drives.*

```
System Utilities
1. Disc Info
```

Use the △ **Up or** ▽ **Down** button to select the *Disc Info* menu and press the **ENT/Enter** button to enter that menu. The system will proceed to the *Please Insert Disc* menu.

```
Disc Info
Please Insert Disc
```

Place your disc(s) into the drives.

```
Disc Info
3 Disc Detected, GO?
```

After a few seconds, the system will detect the discs and ask you if you want to proceed. Wait until all of the discs have been detected and press the **ENT/Enter** button to continue.

14.2 System Info

The System Info menu provides a lot of hardware information about the autoloader such as firmware versions, Duplication/Robot Control Boards type, etc. You can scroll through the various specifications by pressing the △ **Up or** ▽ **Down** button.

```
System Utilities
2. System Info
```

Use the △ **Up or** ▽ **Down** button to select the System Info menu and press the **ENT/Enter** button to enter that menu.

14.3 Device Info

This menu allows you to see information about the recording devices built inside your autoloader. This information includes, but is not limited to, manufacturer, model number, etc.

```
System Utilities
3. Device Info
```
Use the △ **Up or** ▽ **Down** button to select the *Device Info* menu and press the **ENT/Enter** button to enter that menu.

14.4 Load Default

This function will reset all of the options back to the manufacturer's default settings. You should only perform this function if your autoloader is acting abnormally.

```
System Utilities
4. Load Default
```
Use the △ **Up or** ▽ **Down** button to select the *Load Default* menu and press the **ENT/Enter** button to enter that menu.

```
Load Default
Press OK to Continue
```
Press the **ENT/Enter** button to load the default parameters or the **ESC/Escape** button to return to the *System Utilities* menu.

14.5 Update Firmware

This function will update the software of your autoloader. To update, you need to insert the manufacturer's Certified Update CD into the 1st tray and select this function by pressing the **ENT/Enter** button. We strongly suggest that you do not upgrade your autoloader's firmware unless your autoloader has become unstable or you are instructed to do so by Tech Support.

> ***Warning:*** *When you update the firmware on your system, there may be a chance that you will lose all of the data (contents of master discs) stored in the user HDD partitions. Make sure that you back up all of the data on the HDD before attempting this procedure.*

15. Loader Utilities
The Loader Utilities menu consists of following submenu(s):

1   Update Robot Firmware

15.1 Update Robot Firmware

Use this utility to update the software in your autoloader's robot controller. To update, insert the manufacturer's Certified Update CD into the 1st tray and make sure no other discs are in the other trays. Then you can press the **ENT/Enter** button to update. You should not upgrade your autoloader's robot firmware unless your system is becoming unstable or you are advised to do so by Tech Support.

16. Manage Accounts

This feature allows the administrator to:

➢ Create user accounts and passwords to prevent unauthorized use of this autoloader.
➢ Edit existing user account information, including name and password.
➢ Delete existing user account(s).
➢ Enable or disable "Manage Accounts"

Manage Accounts is disabled by default. Prior to activating the "Manage Accounts" feature, the autoloader recognizes all users as the Administrator. The pre-defined password for this function is "0000." By adding additional users, each individual user has his or her own settings.

To take advantage of this feature, follow these instructions:

➢ Change the Administrator password. Refer to "Edit User Info" on page 42 for additional information.
➢ Create a User Name and Password for each authorized person on this autoloader. Refer to "Create User" on page 42 for additional information.
➢ Enable the "Manage Accounts" feature by turning on the "Password on Bootup" setting. Refer to "Password on Bootup" on page 43 for additional information.

Note: This system comes with a standard license that allows you to create up to 32 users. However, if you desire to create more than 32 users, please contact Tech Support Service regarding our special 64 user license pack.

To access the Manage Accounts feature, you need to perform the following tasks:

```
Duplicator     2.20
14.Manage Accounts
```

Use the ▲ **Up or** ▼ **Down** button to select the *Manage Accounts* menu and press the **ENT/Enter** button to enter that menu. You will be shown the *Enter Password* menu.

```
Enter PWD
[    ]  OK?
```

The system will ask you for the Administrator's Password.

The default Administrator's Password is "0000." To enter, press the ▲ **Up or** ▼ **Down** button to select the first digit of your password and press the **ENT/Enter** button to submit the current digit. You will automatically move to the next digit. Repeat these steps until you've selected all four digits for your password. After you have entered the password, press the **ENT/Enter** button to "OK" the submission of your password.

Once your password is validated, you will be guided to the main Manage Accounts screen:

```
Manage Accounts
1. View User
```

The submenus of Manage Accounts are discussed in the sections that follow.

16.1 View User

This menu allows you to view current existing user accounts.

> *Note: User "Admin" is the administrative account. It will always be there.*

```
Manage Accounts
1. View User
```
Press the **ENT/Enter** button to enter this menu

```
View User
1. [ADMIN   ]
```
Use the △ **Up or** ▽ **Down** button to scroll through the list of users. Press the **ESC/Escape** button to go back to the *Manage Accounts* menu.

16.2 Create User

This menu allows you to create additional user accounts. Each user has their own settings and hard drive partitions. During this process, you will be prompted to enter a new username and user password for a new account.

> *Note: The User name consists of a maximum of eight alphanumeric letters or numbers.*
> *Note: The User password consists of four numbers.*

```
Manage Accounts
2. Create User
```
Press the **ENT/Enter** button to enter this menu.

```
Edit User's Name
[RALPH   ] OK?
```
Enter the user's name using the instructions shown in "Editing Names" on page 13. Press the **ENT/Enter** button to move on to the Enter Password stage.

```
Enter PWD
[0    ] OK?
```
Enter the user's password using the instructions shown in "Setting Counters" on page 12. Press the **ENT/Enter** to complete.

```
User Ralph
Added!
```
The autoloader will display a confirmation message and automatically return you to the Manage Accounts menu.

16.3 Edit User Info

The Edit User Info menu allows you to change the existing user's account 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 this account.

> *Note: User "Admin" is the administrative account, you cannot change the user name for this account, but can change the password for this account.*
> *Note: The User name consists of a maximum of eight alphanumeric letters or numbers.*
> *Note: The User password consists of four numbers.*

```
Manage Accounts
3. Edit User Info
```
Press the **ENT/Enter** button to enter this menu.

```
Edit User Info
1. [ADMIN    ]
```
Use the ▲ **Up or** ▼ **Down** button to scroll through the list of users. Press the **ENT/Enter** button to select user.

```
Edit User's Name
[RALPH    ] OK?
```
Edit the user's name using the instructions shown in "Editing Names" on page 13. Press the **ENT/Enter** button to move on to the *Enter Password* stage.

```
Enter PWD
[0    ] OK?
```
Enter the new password for this user via the instructions shown in "Setting Counters" on page 12. Press the **ENT/Enter** button to complete.

```
User Ralph
Changed!
```
The autoloader will display a confirmation message, and automatically return you to the Manage Accounts menu.

16.4 Delete User

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

Note: The user "Admin" is the administrative account; you can't delete this account.

```
Manage Accounts
4. Delete User
```
Press the **ENT/Enter** button to enter into this menu.

```
Delete User
3. [RALPH    ]
```
Use the ▲ **Up or** ▼ **Down** button to scroll through the list of users. Press the **ENT/Enter** button to select the user to delete.

```
Delete User
[RALPH    ] OK?
```
The autoloader will ask you to confirm the deletion. Press the **ENT/Enter** button to delete the user.

```
User Ralph
Deleted!
```
The autoloader will display a confirmation message, and automatically return you to the Manage Accounts menu.

16.5 Password on Boot up

This menu allows you to enable or disable the Password on Boot-up feature. During this process, you will be asked to select "Yes" or "No" (enable or disable).

```
Manage Accounts
5. Password on Bootup
```
Press the **ENT/Enter** button to enter into this menu.

```
Password on Bootup:
Yes
```
Use the ▲ **Up or** ▼ **Down** button to select either Yes or No. Press the **ENT/Enter** button to enter the selection.

17. AUTOCOPY

The Autocopy function is the simplest way to make CD/DVD/Blu-Ray Disc copies. It simplifies the copy process by not requiring that the project be pre-loaded on the hard drive. Simply place the master disc on top of the first Input Spindle and it will be loaded onto a reserve partition in the HDD. The data is transferred automatically to all of the blank discs which follow it. To make copies in Autocopy mode, you simply:

> ➢ Fill the input spindle(s) with the required number of blank discs
> ➢ Place the Master disc on top of the stack in the first input spindle
> ➢ Press the *15. AUTOCOPY* button

```
Duplicator      2.20
15. AUTOCOPY
```

Fill the input spindle(s) with blank discs. Place the Master disc on top of the stack of blank discs on the first input spindle, and press the **ENT/Enter** button. You will then see the *Counter Selection* menu.

```
Counter:
No Counter
```

Follow the instructions shown in "Setting Counters" on page 12 to continue. Once the counter has been set, press the **ENT/Enter** button to confirm. You will then see the *Preparing* screen:

```
Preparing...
Please Wait
```

After a short interval, the robotic loader will pick the top disc (the Maser Disc) from the input spindle and place it into one of the drives. As this is happening, you will see a screen similar to below:

```
OK:   0 NG:   0 NB:   0
Input Bin > Drive01
```

This information screen shows what is happening. In this case, the loader has taken a disc from the input spindle and is placing it into Drive 1.

The loader will perform the loading process which will transfer the content of your master disc into the reserved partition of the hard drive.

Upon the successful loading process, the system will drop the Master Disc onto the output spindle.

```
OK:   0 NG:   0 NB:   0
Input Bin > Drive01
```

It will then pick up the blank discs from the input spindle and place those into drives until either all of the drives are full, or the count that you loaded into the counter is reached.

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

It takes a few seconds for the autoloader to recognize all the discs.

After two or three seconds of processing time, one of the following *Copy Progress* screens will appear.

Counter Specified		**No Counter Specified**

Copying... H4012MB 0/21 12% 481MB	or:	Copying... H4012MB 0 12% 481MB

➤ "H" indicates the source of the job resides in the Hard Drive.

➤ "4012MB" indicates the capacity of the master disc.

➤ "12%"/"481MB" indicates the current progress of the duplication.

➤ "0/21" indicates you have a project size of 21 copies and you have made 0 copies so far.

➤ "H" indicates the source of the job resides in the Hard Drive.

➤ "4012MB" indicates the capacity of the master disc.

➤ "12%"/"481MB" indicates the current progress of the duplication.

➤ "0" indicates you have made 0 copies so far.

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 one minute for DVD/Blu-Ray Disc duplication. That is caused by the initializing and finalizing stages.

```
OK:  3 NG:  0 NB:  0
Drive01 -> Output Bin
```
Once the duplication run is completed, the loader will remove the finished disc from a drive and place the successful copy on the Output Spindle.

After the loader has placed the copied disc into the Output Spindle, the loader will then pick up another blank disc and load it into the drive.

```
OK:  3 NG:  0 NB:  0
Input Bin > Drive01
```
The copying process will continue until you either run out of blank discs or until the count that you loaded into the counter is reached.

If you run out of blank discs and the job is not complete, the autoloader will give you an opportunity to fill the spindle:

Important: When you add discs to the input spindle, be sure to remove your finished discs from the Output Spindle.

```
Input Bin Empty
Reset Hopper?
```

At this point you can either load more discs on to the input spindle and press the **ENT/Enter** button to continue, or press the **ESC/Escape** button to terminate your project.

```
Access Drive Log?
```

Upon project termination, you shall see the *Access Drive Log* menu. You can press the **ENT/Enter** button one more time to see the drive log that indicates the number of passes and fails for every drive/tray, or simply press the **ESC/Escape** button to go back to the main menu. If you choose to see the drive log file, you will see a screen similar to below:

```
Drive 1
OK:  1 NG:  0 NB:  0
```

- ➢ "Drive 1" indicates the below results are for the 1st drive.
- ➢ "OK: 1" indicates there is "1" successful copy made by this drive.
- ➢ "NG: 0" indicates there are "0" bad copies created by this drive.
- ➢ "NB: 0" indicates there are "0" discs in this drive that were not recorded due to non-recording error such as invalid media type, etc.

Use the ▲ **Up or** ▼ **Down** buttons to look at the drive log file for the various drives. Press the **ESC/Escape** button to return to the *1.Copy* menu

18. Shutdown

This function will make sure it is safe to turn off your autoloader. Once you see the "Ready to Power Off" message, you can safely turn off the machine using the power switch.

Turning off your autoloader without performing this function will increase the risk of damaging your autoloader.

```
Duplicator     2.20
16.Shutdown
```

Press the **ENT/Enter** button to enter into this menu.

```
Shutdown
Press OK to Shutdown
```

Press the **ENT/Enter** button to shut down the autoloader. The autoloader will do all of its internal housekeeping and then display a confirmation message: "Ready to Power Off"

```
Shutdown
Ready to Power Off
```

Press the power button to power off the system.

Appendix A: LightScribe Software Setup Instruction

❖ **Minimum Hardware Requirements**

1. Pentium 3 Class microprocessor or better

2. CD/RW Recorder

3. 32Mbytes of RAM

4. 10Mbytes of free disc space on your hard drive

❖ **Minimum Software Requirements**

1. Windows 2000, XP, 2003 or Vista

Software Installation

1. Insert the LightScribe Installation Disc into the CD drive of your computer.
2. Using the "My Computer" icon or Windows Explorer, click on the CD drive
3. From the CD Drive, double-click the setup.exe to run the setup program.
4. Follow the Installation Wizard to start the installation process, see screen below:
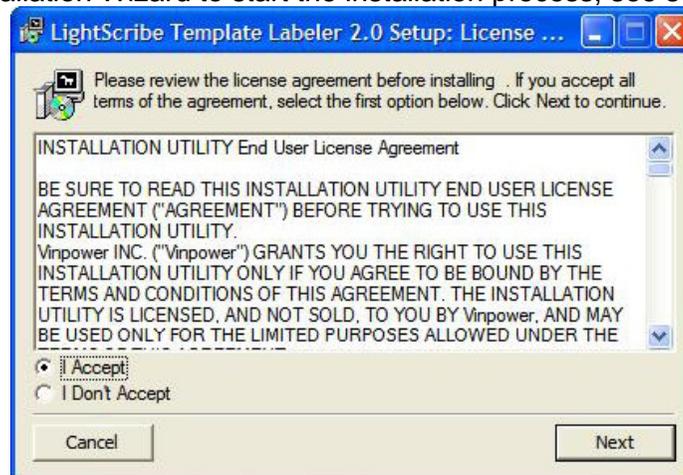
5. During the installation process, you will be prompted for a Product Key. The product key can be found on the Installation Disc.
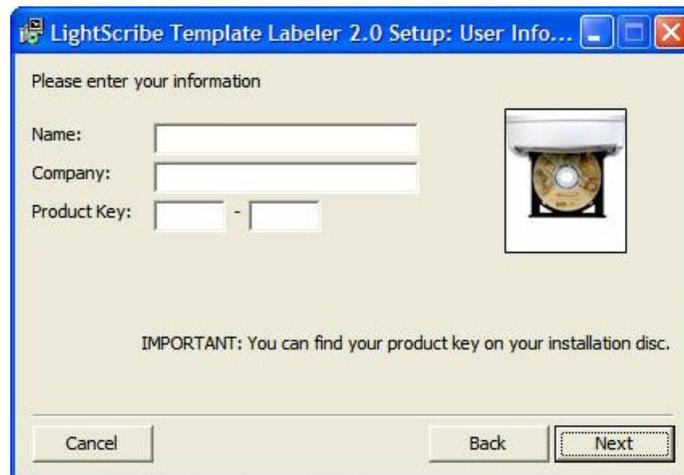
6. You will then be asked to choose the LightScribe writer model that was installed in your duplication system. The default writer that comes with your system should be pre-selected. You can then click Install to continue the installation process.
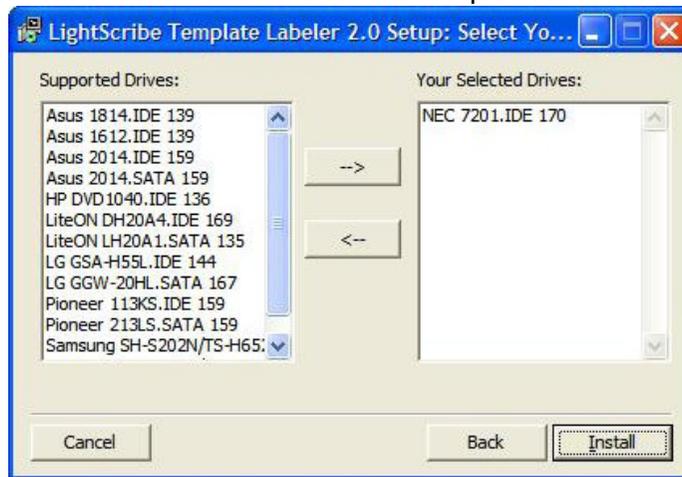

7. During the installation process, the following applications will be installed:

LightScribe System Software   ***Template Labeler***
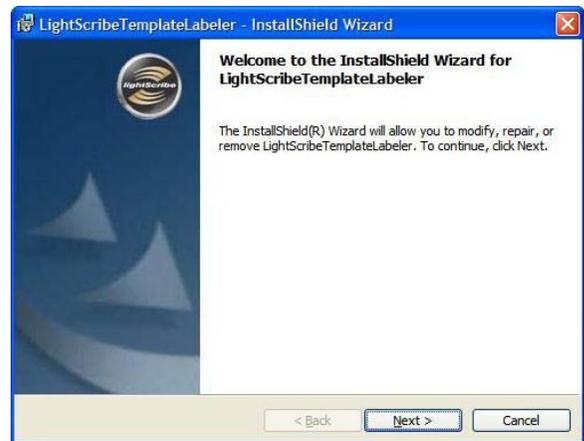
8. Upon successful installation of the above software, click the Finish button to complete the installation.
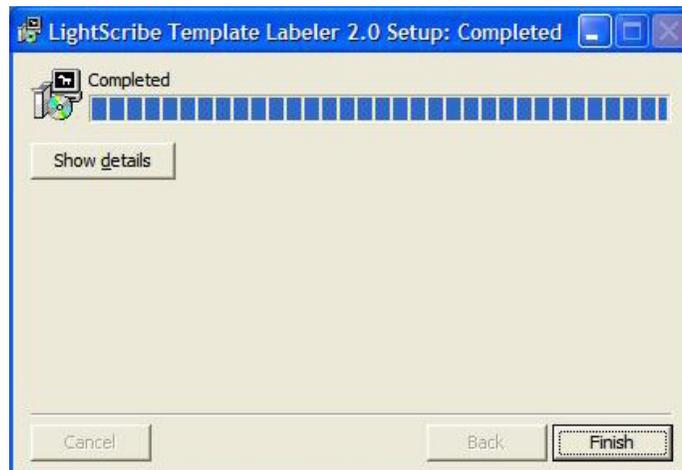
Appendix B: Design and Create Label File

The instructions covered in this section will help you design and create a label from your Cube LightScribe autoloader.

 Please note that you must install the supplied LightScribe software in order to proceed with the instructions below. If you have any difficulties installing the software, please contact Tech Support for assistance.

Section 1: Design your labels with LightScribe Template Labeler and create a LightScribe Label CD

Step 1: Launch the *LightScribe Template Labeler*

- ➢ By clicking the shortcut icon on your desktop.
- ➢ Or you can find the program launch shortcut in **Start > All Programs > LightScribe Direct Disc Labeling > LightScribe Template Labeler**.

 Since we use this software for design and layout purpose, please ignore the "LightScribe Disc Insertion" prompt below by pressing the OK button.
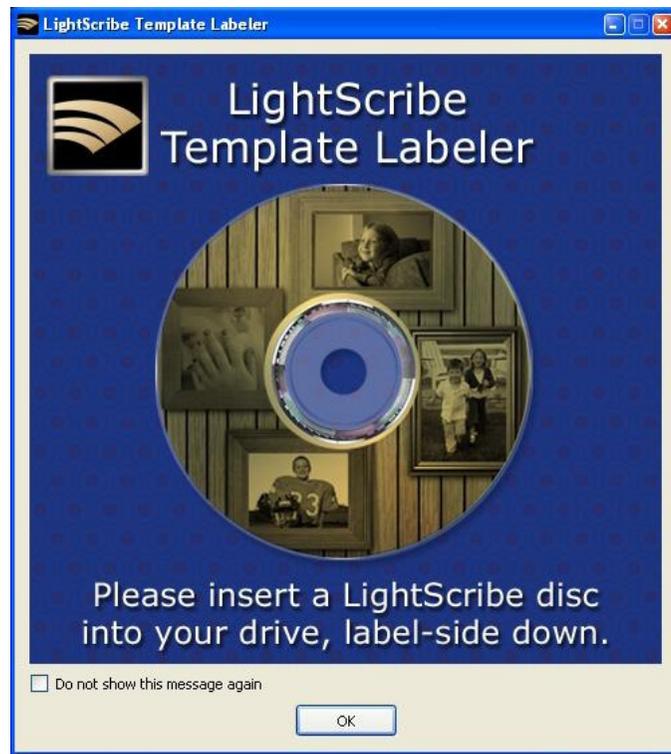
Step 2: Select Template

➢ Choose one of the preinstalled templates, or click on "Get More Templates" to download additional templates. (1)

➢ Select the Category filter function to better view and choose a template. Note that each template may appear in multiple categories. (2)

➢ Click on your Template choice to activate. (3)

If you prefer more advanced design capabilities instead of the pre-designed templates, you can do following:

    a. *Design your own CD label artwork using a more advance design software like Adobe PhotoShop*
    b. *Export your completed CD artwork as a picture format like bmp, jpeg, png, etc.*
    c. *Choose an empty template from the Template Labeler and add the exported CD artwork pictures into the empty template.*
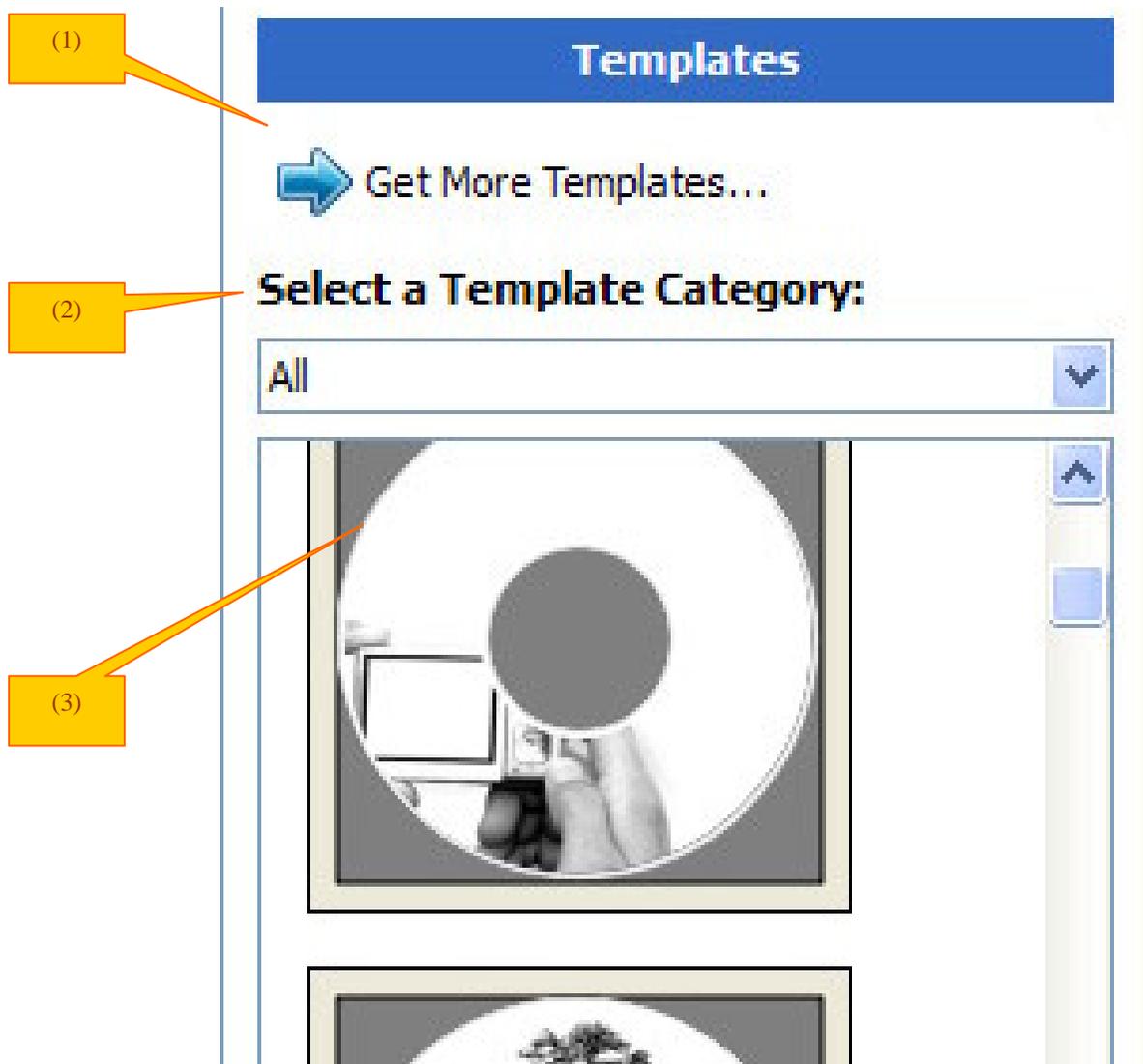
Step 3: Insert Text and/or Pictures

➢ Depending on the template chosen, you may have the option to modify text box(s) or picture(s).

➢ For inserting pictures, just click on the dedicated area to select the picture you'd like to use. (4)

➢ Use the Zoom button or the scroll wheel of your mouse to size the picture, and then drag it to position where you want it within the selection window. (5)

➢ For text, just click on the text field, and then type the text you'd like to appear within the text field. Note you can enter multiple lines of text depending on the template chosen. (6)

Step 4: Preview and Print Label

Step 5: Click on "Preview and Print" to bring up the print window.

➢ Select the "LightScribe Duplicator Label Writer" as the LightScribe Drive. (7)

➢ Select the "Best" contrast mode for the darkest print. (8)

➢ Select the label surface color of the disc you wish to label onto. (9)

➢ If you are satisfied with the preview, click "Print" to begin generating the Duplicator Label file (.lsi files). (10).

You will be asked for the location & the name of the label file(s) you wish to generate. In addition, due to the system display limitation, make sure the file name does not contain any foreign characters other than 26 Greek alphabets, numerical digits, and/or some basic symbols like "-", etc.
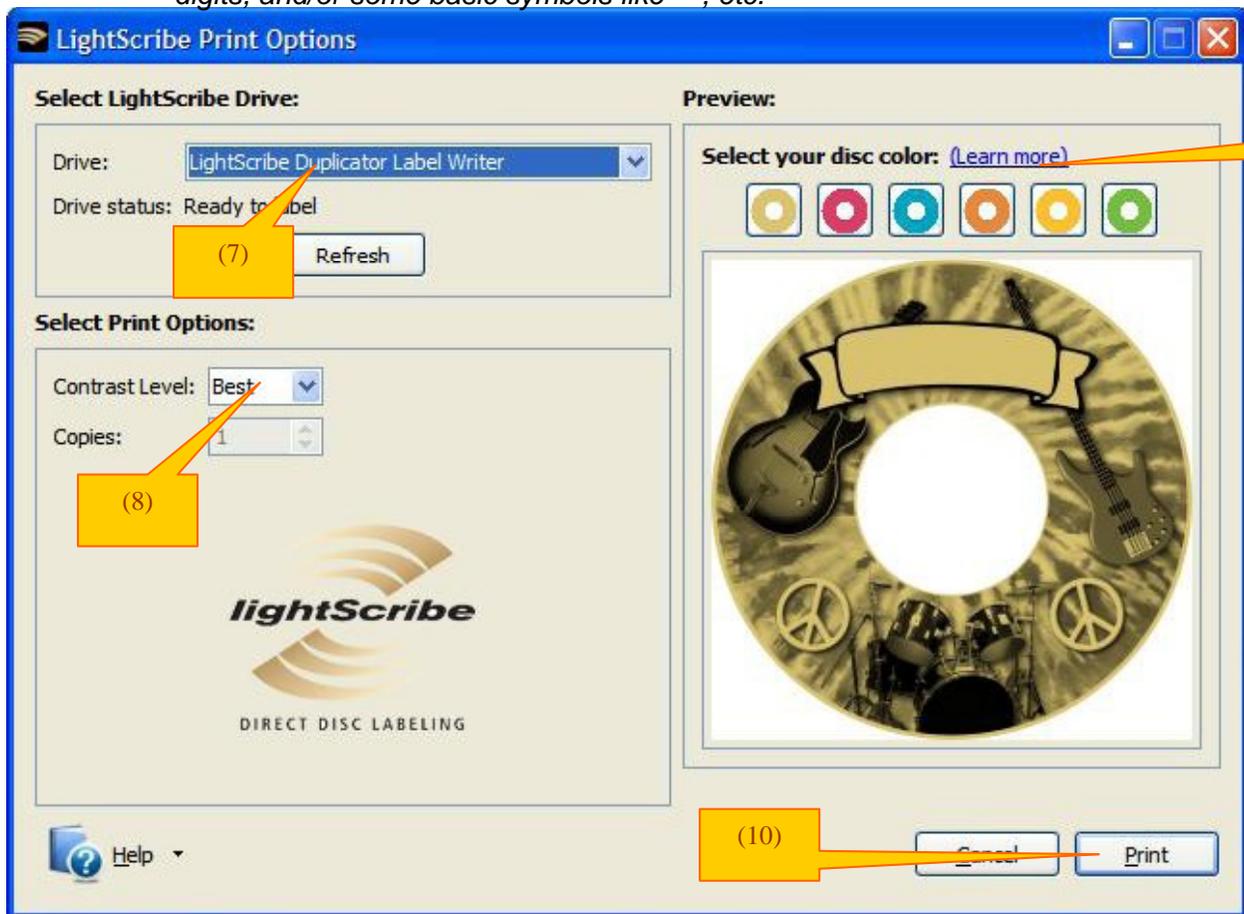
Step 6: Create a Label CD

➢ Locate the label file(s) (.lsi files) on your PC.
➢ Create a Data CD with the label file(s) via a CD/DVD Creating Software; like Nero Burning-ROM or Roxio Classic CD Creator

Do NOT place the label file(s) under any directory/folder of the Label CD. Failure to do so will result in the label file(s) not being recognized by your system.

Appendix C: Trouble Shooting

Why do I get "Label Not Found" error message?
➢ Please verify that the label file does not contain any symbols or foreign characters.
➢ Please verify that the label file has "lsi" extension, like "abc.lsi"
➢ Please verify that the label file is located under the root of your data CD.
➢ Please verify that the Label CD wasn't created under Roxio's Drag to Disc, Nero's InCD or Windows XP or Vista's build-in burning software.
➢ Please verify that the correct writer was selected during the software installation.

No display on LCD or the unit does not operate when the power is on.
➢ Check the connections for the power cable and ensure that the power outlet is working correctly.
➢ Make sure that the rear-panel power voltage setting matches the voltage of your power outlet.
➢ If the autoloader was stored in a location where the temperature dropped below 32°F (0°C) within the past 24 hours, leave the autoloader in a warm room with a temperature of at least 65°F (19°C) for four hours prior to powering the autoloader on.

Drives cannot read disc and shows error message.
➢ Check the format of the master CD/DVD/BD
➢ Check the master CD/DVD/BD itself for damage.
➢ Your master disc may be copy protected. Normally, most of the Blu-Ray or DVD movies and some of the CDs you purchase from stores have copy protection encoded on them.

Buttons do not function.
➢ The autoloader may still be busy performing a task. Give it some time and press the button again. To interrupt the current running process, press the **ESC/Escape** button and hold it for several seconds. If it still doesn't work, turn the machine off, and then restart the machine after a minute.

Copy completed, but the copies are not readable / executable.
➢ Use the "compare" feature to check the copied disc (data discs only).
➢ 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.
➢ Use another BD/DVD/CD player/ROM to test the copied media. Sometimes, your BD/DVD/CD Player/ROM may not be compatible with recordable BD/DVD/CD disc.

The failure rate is high.
➢ Lower the "write speed" and try again. See "Select Burn Speed" on page 25.
➢ The quality of your blank discs may be poor.
➢ The quality of your master disc may be poor.

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

Cannot boot-up or fails to upgrade firmware.
➢ Contact Tech Support.

Can I load data directly from my computer to my autoloader's Hard Drive?
> ➢ No, your autoloader's Hard Drive has a unique file system that computers will not recognize. Thus, you can't perform any read/write operations to the Hard Drive from your computer.

Why won't some drives copy?
> ➢ Reset the system settings back to default. (See "Load Default" on page 40)
> ➢ Drives are consumable parts and every drive has a finite lifespan. After a period of time, they do tend to wear out. Please contact Tech Support Service for assistance.
>   F.Y.I - Replacing any component(s) of the autoloader without Tech Support Service's consent will void the autoloader's warranty instantly.
> ➢ Contact Tech Support.

Why does my autoloader stay at "System Bootup"?
> ➢ The reason the autoloader may remain frozen at system bootup is caused by improper shut down. To solve the problem, contact the Tech Support department. Even though this problem can be solved, all the hard drive information will be lost due to this failure.

How do I reset my autoloader back to default?
> ➢ See "Load Default" on page 40.

Appendix D: List of Robot Error Codes

Code	Short Description	Full Description
R10	Arm did not return to top position	If error code 10 is shown, it represents that the picking arm did not return to the top position within 10 seconds after a command was sent out. The picking arm must return to the top position after each action. This indicates an obstruction or mechanical failure prevented the picking arm from completing the requested action.
R11	Arm did not detect specified location in the allotted time	If error code 11 is shown, it represents that when the picking arm is instructed to pick up a disc, it has failed to detect anything (including the bottom of the bin) within 10 seconds. This would apply to inserting a disc in a drive and not detecting anything within 10 seconds if the Z Maneuver feature is disabled. This error indicates that an obstruction, missing component or mechanical failure has prevented the picking arm from detecting a disc, drive, etc to perform the assigned task.
R12	Unable to move to the next input/output bin	If error code 12 is shown, it represents that the picking arm did not travel to its destination input/output bin from any other bin within 10 seconds. This error indicates that an obstruction or mechanical failure has prevented the picking arm from rotating to the assigned input/output bin.
R13	Unable to move into the drop disc position	If error code 13 is shown, it represents that the picking arm did not reach the "drop" position within 4 seconds when placing a disc to the output bin. The "drop" position represents the safe distance between the picking arm and the spindle where the disc can be placed securely onto the spindle. This error indicates that an obstruction, missing component or mechanical failure has prevented the picking arm from performing the assigned task.
R14	Unable to perform the horizontal Z Maneuver from bin # 1 to the starting point	If error code 14 is shown, it represents that the picking arm did not reach the horizontal starting position for placing a disc into the appropriate drive starting from spindle bin #1 within 4 seconds during the insert process. (This error is only shown when the Z Maneuver is enabled).
R15	Unable to perform the horizontal Z Maneuver from the starting point to the original position	If error code 15 is shown, it represents that the picking arm did not reach the drive position within 4 seconds from the Z position starting point. This takes place when the picking arm has descended to the appropriate drive location and should move horizontally to center the disc over the opened drive tray but fails to do so in the specified allotted time. (This error is only shown when the Z Maneuver is enabled).
R16	Unable to perform vertical Z Maneuver while placing disc in drive tray	If error code 16 is shown, it represents that the picking arm did not descend and place the disc into the opened drive tray within 4 seconds after the picking arm has centered the disc above the opened drive tray. (this error is only shown when the Z Maneuver is enabled).

Code	Short Description	Full Description
R17	Unable to perform the horizontal Z Maneuver from the original position to the starting point	If error code 17 is shown, it represents that the picking arm did not return to starting horizontal position for the reverse Z Maneuver within 4 seconds to return the disc to the output bin. (This error is only shown when the Z Maneuver is enabled).
R20	Input bin empty	If error code 20 is shown, it represents that all of the input bins are empty. This error commonly comes up every time the autoloader does not detect anymore blank media to load into the drives. If this error arises and you are finished, press the left arrow to end the copy process. If you are not finished, restack the blank media from the first input bin to the remaining bins as needed and push **ENT/Enter** button to continue the duplicating procedure.
R21	Input bin missing	If error code 21 is shown, it represents that the input bin is missing. This error indicates that an obstruction, missing component or mechanical failure has prevented the picking arm from detecting the input bin to perform the assigned task.
R30	Unable to locate drive tray for output of the disc	If error code 30 is shown, it represents that the picking arm did not detect an opened tray before reaching its lowest descending limit when attempting to pick up a finished disc from a specified drive tray.
R40	Clear previous error	If error code 40 is shown, it represents that a system command sequence is corrupted. Please abort the current job and start over with a new job.
R50	Drawer not fully opened	If error code 50 is shown, it represents that the disc drawer is not fully opened. If you believe the drawer is opened, please close it and try open it once more until you hear a clicking sound.
R60	Unable to locate drive tray for input of the disc	If error code 60 is shown, it represents that the picking arm did not detect an opened tray before reaching its lowest descending limit when attempting to place a blank disc into a specified drive tray.
R70	Disc dropped during input procedure	If error code 70 is shown, it represents that a disc was picked from an input bin and the picking arm dropped the disc on the way to one of the drive trays.
R71	Failure to pick up a disc from input bin	If error code 71 is shown, it represents that the picking arm failed to pick up a disc from an input bin after 3 continuous attempts.
R80	Disc Remaining On Robotic Arm Not Loaded On To The Drive Tray	If error code 80 is shown, it represents that a disc attempting to be placed on a drive tray remained attached to the robot pick up arm and was not properly dropped into the drive tray.
R90	Disc dropped during output procedure	If error code 90 is shown, it represents that a disc was picked from a drive tray and the picking arm dropped the disc on the way to the appropriate output bin.
R160	Output bin full	If error code 160 is shown, it represents that the output bin is full. This commonly occurs if the input bin was filled with more discs while completed discs were deposited to the output bins increasing the total disc capacity beyond the maximum output capacity.

R176	Cannot detect disc in drive tray	If error code 176 is shown, it represents that the picking arm is attempting to remove a disc from a drive tray and cannot detect the disc. This commonly occurs when the disc was removed from the tray before the picking arm had an opportunity to pick it up.
R192 ~197	Disc miss-loaded in output bin #	If error code 192 ~ 197 is shown, it represents that a disc being returned to the output/NG was not properly dropped from the picking arm onto the output bin 0 ~ 5, respectively, where bin 0 indicates the position right in front of the drive housing.
R255	High static shock error	Too much static electricity built up from the disc(s). This error occurs when the static electricity on the disc is too high. Either the facility produces too much static electricity or the current climate is conducive to high concentration of static electricity. This error is caused by the buildup of an electric static charge which shocks the robotic arm while loading a disc. If this error should occur, the user must completely reboot the system by turning the unit off at the power button. When the unit is turned on again, it should operate normally, but you will need to reprogram the job it was running.

Appendix E: Menu Tree

1. Copy   \<Partition\>   \<Counter\>
2. Print   \<Label\>   \<Counter\>
3. Test   \<Partition\>   \<Counter\>
4. Compare   \<Partition\>   \<Counter\>
5. Test+Copy   \<Partition\>   \<Counter\>
6. Copy+Compare \<Partition\>   \<Counter\>
7. Select Burn Speed   \<HDD to CD | HDD to DVD\>
8. Select Source   \<Hard Drive\>
9. Master Mode   \<SM | MM\>
10. Erase   \<Quick | Full\>
11. Hard Drive Setup
           11.1   Select Partition
           11.2   Load Partition
           11.3   Rename Partition
           11.4   Delete Partition
           11.5   Partition Info
           11.6   Select Loading Drive
           11.7   Format Hard Drive
12. Print Setup
           12.1   Load Label
           12.2   Rename Label
           12.3   Delete Label
           12.4   Print Surface Info
           12.5   Label Info
13. Setup
           11.1   Language
           11.2   Read Error Skip \<On | Off | Off with Retry\>
           11.3   CD Writing Modes
           11.4   Max Audio, VCD, and CDG Speed \<1x, 2x, 4x, 8x, 10x, 12x, 16x, 24x, 32x, 40x & 52x\>
           11.5   Buzzer \<On | Off\>
           11.6   Startup Menu
           11.7   Screen Saver \<On | Off\>
           11.8   Counter \<On | Off\>
           11.9   DVD+R Compatibility Mode \<On | Off\>
           11.10   ISRC \<On | Off\>
           11.11   CD Overburn \<On | Off\>
14. System Utilities
           12.1   Disc Info
           12.2   System Info
           12.3   Device Info
           12.4   Load Default
           12.5   Update Firmware
15. Loader Utilities
           13.1   Update Robot Firmware
16. Manage Accounts
           14.1   View User
           14.2   Create User
           14.3   Edit User Info
           14.4   Delete User
           14.5   Password on Boot up
17. AUTOCOPY
18. SHUTDOWN

Technical Support

If you require further assistance with this unit, our technical support staff can assist you. There may be a cost associated with any repairs if your unit's warranty has expired. In order to efficiently handle all requests we request you start by filling out the Technical Support Form found here:

http://www.duplicatortechsupport.com

Or

Call 1-626-570-1500 (USA)