

**MICROBOARDS<sup>®</sup>**  
*Technology*



# BD-121

## User's Manual

[www.microboards.com](http://www.microboards.com)

Version 1.3



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

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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



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

#### **Canadian Department of Communications (DOC) Statement**

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

## Introduction

The BD-121 BluRay Duplicator is a high speed CD, DVD, and BluRay Recordable duplication system from Microboards Technology, LLC.

The BD-121 is perfect for any user requiring easy copying of audio, video, or Data discs. LED indicators provide the user with status of the duplication process, minimizing the number of failed discs.

Applications suited for the BD-121 include Pro Audio, Multimedia, Government / Education, Software Development, Medical Imaging, and Data Interchange.

## Unpacking your system

When unpacking your duplicator, confirm the following items are included:

- BD-121 duplicator
- Power cable
- USB cable
- Zulu2 recording software Installation Disc

If any of these items are missing, please contact Microboards Technology Technical Support.

**IMPORTANT:** Please keep all the packing for your BD-121 duplicator. If your unit ever needs to be sent in for service, it must be returned in the original packing or the warranty will be voided.

## Installation

- Connect the supplied power cable to the BD-121 duplicator and plug in to a protected power outlet strip or UPS power supply.

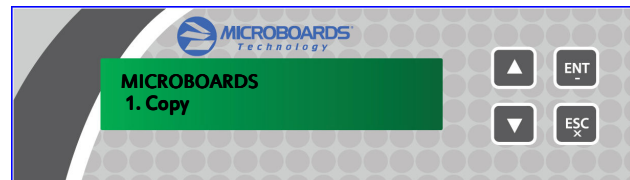
**Note for Installation:**

- 1) Please verify that the voltage switch above the power connection is set correctly for your local power specifications.
  - 2) The socket outlet should be installed near the equipment and be easily accessible.
  - 3) Do not block cooling fans.
- Turn on power to the duplicator.
  - The system will go through initialization and then display: 1. Copy.
  - The system is now ready to use.
  - For USB Mode, connect to a PC via an unoccupied USB port. To access the drive, the External Connection mode must be turned **ON** in the Setup Menu (See page 13).

## Basic Instructions

### Buttons and LCD

There are four buttons and an LCD on the front panel of the BD-121 duplicator.



The LCD display shows the menu items and any status messages that may come up during operation.

| Control | Name | Function   |
|---------|------|--|
| ▲       | Up   | Scroll up through the menu or list.                |
| ▼       | Down | Scroll down through the menu or list.              |
| ENT     | OK   | Execute the function. Also called OK in the Menus. |
| ESC     | ESC  | Go back to the previous function.                  |

## Hardware Description

### Controller Interface And LCD



The BD-121 system consists of 2 BluRay Recorders, USB Connection, and Controller module.

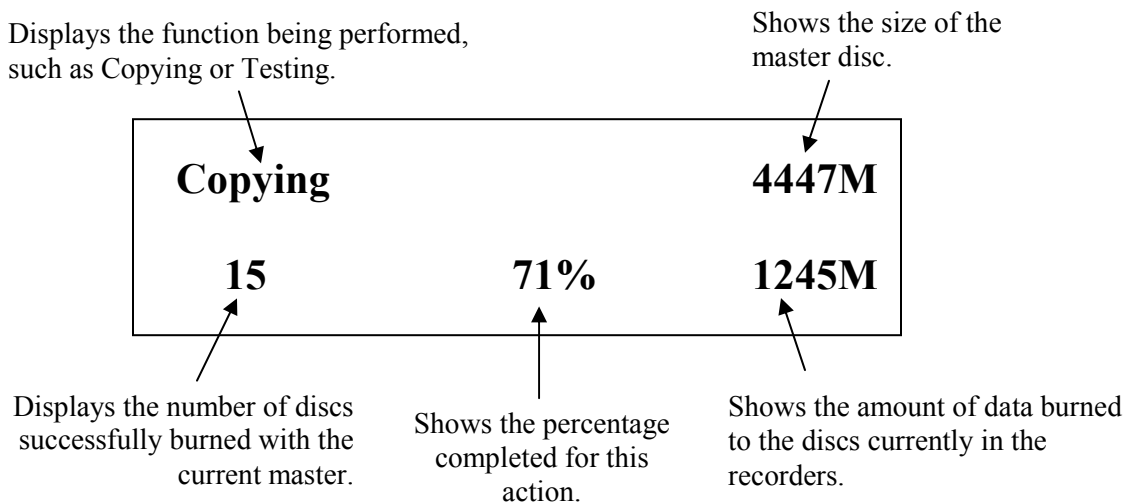
The master discs always go into the selected Source drive (defaults to top recorder).

The blank media will always go into the Recorder drive.

The power switch and power LED are also located on the front of the BD-121 duplicator.

The USB Connection is located on the back of the BD-121.

The LCD display will show the different menu selections and also information pertaining to the recording process. Here is a typical example of what is displayed during the COPY process:



## Main Menu

This section provides an overview of the menu options. These menu options are explained in detail in the Using the QD Series Duplicator section starting on page 9.

### Copy

Use the *Copy* menu to duplicate your master discs. Before you start a copy, make sure you have selected the correct Master Source.

### Test

Use the *Test* menu to simulate the copy process. With simulation, write once recordable discs such as DVD-R, or CDR will be reusable.

**Note:** *DVD+R and BD recordable media are not compatible with simulation mode. If you try to simulate using one of these media types, you will encounter failure messages. If you are using Rewritable discs as your blank media during the simulation, the content on those discs will be permanently erased.*

### Compare

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

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

### Test + Copy

Use the *Test + Copy* menu option to simulate the copying process initially. Then, the duplicator performs the copy process on the blank disc(s) that passed the simulation.

### Copy + Compare

Use the *Copy + Compare* menu option to make 100% reliable copies. After the copy process is done, the duplicator automatically compares the copies from the content of your original master disc.

### Select Burn Speed

Use the *Select Burn Speed* menu option to adjust the duplication speed for the various blank disc formats. For additional information, see **Select Burn Speed** on page 10.

### Select Source

Use the *Select Source* menu option to specify which drive is being used as the master drive.

### Erase

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

### Mix Audio Tracks

Use the *Mix Audio Tracks* menu option to select and burn specific tracks from Audio CDs onto your blank CDs.

### Setup

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

1. **Language**
2. **Auto Start**
3. **Read Error Skip**
4. **CD Writing Mode**
5. **Max Audio, VCD & CDG Speed**
6. **Buzzer**
7. **Startup Menu**
8. **Screen Saver**
9. **Duplication Mode**
10. **Counter**
11. **DVD+R High Compatibility Mode**
12. **ISRC**
13. **Disable Drives**
14. **External Connection**
15. **CD+G Support** (**NOTE: CD+G Duplication is NOT supported – see pg 13**)

## Utilities

The Utilities menu includes a number of functions that are not related to the actual duplication process.

1. **Disc Info**
2. **Prescan**
3. **System Info**
4. **Device Info**
5. **Load Default**
6. **Update Firmware**
7. **Save**

## AutoCopy

The AutoCopy function simplifies the copy process. After the initial round of blanks is burned, you only need to load the drives again and close them. Once the drives detect the new blank media in the drives, duplication begins without you having to touch the control panel.

## 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 duplicator without performing this function increases the risk of damaging it.

# Setting Counters

The BD-121 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 a 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 duplicator to count the number of successful copies you have made and stop the job when the desired number of copies 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 the “No Counter”, simply press the **ENT** 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** 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 input a four-digit number. If you need to specify a number that is less than four digits, fill the leading spaces with zeros. Examples 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** button or the **ESC** button to move the cursor position right or left. Once you've finished, move the cursor to “OK” and press the **ENT** button.

To input the desired quantity, do the following:

- Make sure the cursor is located at the first position (First blinking position):
- Press the **▼ Down** button repeatedly until “0” is displayed.
- Press the **ENT** button once to move the cursor to the next position.
- Press the **▼ Down** button repeatedly until “0” is displayed.
- Press the **ENT** button once to move the cursor to the next position.
- Press the **▼ Down** button repeatedly until “2” is displayed.
- Press the **ENT** button once to move the cursor to the next position.
- Press the **▼ Down** button repeatedly until “1” is displayed.
- With “0021” displayed, press the **ENT** button once and the cursor moves to “OK”.
- Press the **ENT** button once more to submit your counter value and start duplication.



# Using the BD-121 Duplicator

## Copy

This process will copy your master disc to a blank disc.

```
Microboards B.30
1. Copy
```

Use the ▼▲ buttons to navigate to the 1. Copy Menu.

Insert your blank discs in the recorder drives. Next, you will see the *Counter Selection* menu:

```
Counter:
No Counter
```

Follow the instructions shown in **Setting Counters** on page 8 to continue. Once the counters have been set, press the **ENT** button to confirm.

As the blank discs are recognized, the number detected will increase. Press the **ENT** button to start the duplication. If you have Autostart set, duplication will begin either once the recorder has been found to contain blank media or until the Autostart time interval passes.

```
Preparing... 4063MB
1 Discs Detected, Go?
```

After a few seconds of processing time, one of the following *Copy Progress* screens will appear.

```
Copying... 4063MB
0/21 12% 488MB
```

or:

```
Copying... 4063MB
0 12% 488MB
```

- “4063MB” indicates the capacity of the master disc.
- “0/21” indicates you have a project size of 21 copies and you have made 0 copies so far.
- “12%” indicates the current progress of the duplication.
- 488MB indicates the amount of data burned so far.

- “4063MB” indicates the capacity of the master disc.
- “0” indicates you have made 0 copies so far.
- “12%” indicates the current progress of the duplication.
- 488MB indicates the amount of data burned so far.

**Note:** It is normal to see the progress indicator stay at 0%-10% and 100% during duplication. That is caused by the initializing and finalizing stages.

Once the duplication run is completed, the recorder drives will eject and the number of successful and failed discs will be displayed.

```
Pass 1 Fail 0 ( 1)
Waiting for Blanks
```

At this point, you can add more blank discs to the recorder drives and repeat the process. If you have the Counter set, only the number of discs selected will be burned.

## Test

The Test function is useful to determine if your master disc can be successfully read.

```
Microboards B.30
2. Test
```

This process is identical to the Copy process, with the one exception being that the discs will not be burned to if the media supports test mode.

**DVD+R and all BD media do not support test mode.**

**Running rewritable media in Test mode will cause any data on the discs to be erased.**

## Compare

The Compare function is used to compare the master disc with the copied discs. The Compare function will only work with Data masters. If your master disc has audio or video (VCD) on it, the Compare function will not work.

```
Microboards B.30
3. Compare
```

To use the Compare function, press the ▼▲ buttons until 3. *Compare* is displayed.

Place your master disc into the reader drive and your copied discs into the recorder drive.

Press the **ENT** button on the controller interface.

```
Compare          OK: 7
Fail: 0          Diff: 0
```

The duplicator will now compare the copies to the master disc. When completed, the display will read:

Press the ▼ button and the following screen will appear:

```
Src:01          CD-RW
Total:         15.2MB
```

Press the ▼ button again and the following screen will appear. Use the ▼ button to scroll through each drive that was used during the Compare

```
Tgt: 00          CD-RW
Identical
```

## Test + Copy

The Test + Copy function first simulates the burn to the media and then burns to the media if the Test simulation is successful.

```
Microboards B.30
4. Test+Copy
```

**DVD +R and all BD media do not support test mode.**

## Copy + Compare

The Copy + Compare function first burns to the media and then runs a comparison of the burned discs to the master disc.

```
Microboards B.30
5. Copy+Compare
```

## Select Burn Speed

This menu option allows you to change the duplication speed for each of the duplication job types. Available burn speeds will vary, depending on the model of the recorder drives installed in your duplicator. Press the **ENT** button to change burn speeds.

```
Microboards B.30
6. Select Burn Speed
```

Since speeds can be set based on media type being used, press the ▼▲ buttons to navigate to the media type whose burn speed you wish to change, then press the **ENT** button. Use the ▼▲ buttons again to display the burn speed you would like to choose and press **ENT**.

When you have changed the burn speed, press **ESC** to return to the main menu.

## Select Source

Use this menu to select which drive will be used as the master drive, in which you would load your master disc. By default, the top drive is set as the source.

```
Microboards B.30
7. Select Source
```

Press the **ENT** button to change the source drive. Use the ▼▲ buttons to navigate through the drives, pressing **ENT** when the drive you want to use is shown.

It is not recommended that you change the source unless it is necessary to do so.

Additionally, you should never select the bottom drive as the source, as this drive is used for the USB External Connection. If the External Connection is active, the bottom drive will not be available and the source drive will be reassigned to one of the other drives in the duplicator.

## Erase

This menu option is used to erase rewritable media placed in the recorder drives. The Erase function has 2 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 to be recovered for security purpose, please perform Full Erase.

```
Microboards B.30
8. Erase
```

## Mix Audio Tracks

You can use the Mix Audio Tracks feature to combine specific tracks from multiple audio CD masters onto a single disc. Insert your first master disc and at least one blank, then press **ENT** when the display shows **Mix Audio Tracks**.

```
Microboards B.30
9. Mix Audio Tracks
```

After the master audio disc is analyzed and any blank discs recognized, you will be able to select tracks from the master by using the ▼▲ buttons to navigate through the tracks and pressing **ENT** to select the tracks you want to burn.

The top line of the display will show the number of tracks currently selected and the total time of selected tracks. The bottom line of the display will show the track number and time for the current track.

```
Total: 0 Trk 0m:00s
Track 1: 4m:24s
```

If a track is selected for the audio mix, the bottom line will begin with an asterisk ( \* ). In the example to the right, 4 tracks have been selected, totaling 12 minutes 43 seconds; track 6 is 3 minutes and 56 seconds in length and has been selected for burning, as indicated by the asterisk.

```
Total: 4 Trk 12m:43s
*Track 6: 3m:56s
```

When you use the ▼▲ buttons to go past the last track, you will be asked if you are done. Press **ENT** to burn the selected tracks from the current master to the blank media, or **ESC** to add more tracks from the same master. If you want to add tracks from another audio CD, you will have to burn the selected tracks from the current master before doing so.

After pressing **ENT** to burn the tracks, you will be asked if you are finished mixing. If you are, press **ENT** and the burned discs will be finalized. If you want to add tracks from another audio CD, press **ESC** and you will be asked to insert the next master. Follow the same procedure to select and burn tracks for each master disc.

Discs must be finalized before they will be playable.

## Setup

The Setup menu includes many functions that affect the operation of the BD-121 Duplicator. Please see page 12 for more information on the Setup menu options.

```
Microboards B.30
10. Setup
```

## Utilities

The Utilities menu provides you with hardware information and a few maintenance functions. Please see page 14 for more information on the Utilities menu.

```
Microboards B.30
11. Utilities
```

## AutoCopy

The AutoCopy function simplifies the copy process. After the initial round of blanks is burned, you only need to load the drives again and close them. Once the drives detect the new blank media in the drives, duplication begins without you having to touch the control panel (Auto Start must be set to **Auto** or **Full**).

```
Microboards B.30
12. AutoCopy
```

## Shutdown

When turning off your BD-121 Duplicator, it is highly recommended that you do so using the Shutdown menu option. Not only does this function save any system settings that you may have changed in the Setup menu, it also shuts down the duplicator components in a safe way.

|                                  |
|----------------------------------|
| Microboards B.30<br>13. Shutdown |
|----------------------------------|

When the display reads **Ready to Power OFF** after selecting the Shutdown function, you can use the power switch on the front.

## The Setup Menu

The Setup menu includes many settings the user can select to customize the use of the BD-121 duplicator. A description of the options in the setup menu follows.

**Note: Any changes made to these settings will not be preserved on the next reboot if you do not either use the Shutdown menu or manually Save the settings under the Utilities menu.**

### Language

The BD-121 duplicator has multiple language options, with English being the default setting.

### Auto Start

The Auto Start feature is used to automatically start recording, once the master disc and blank discs are inserted into the drives. The Auto Start feature applies to Copy, Test, Test + Copy, Copy + Compare, and Erase.

There are 3 options for this setting, **Auto**, **Full**, and **Off**.

- **Auto**: Starts the duplication process when all detect recordable media or the specified time period has passed after the last-detected blank disc is recognized, allowing you to leave some recorders empty while still using the Auto Start feature. You can specify 30, 20, 10, or 5 seconds for the time period.
- **Full**: Only starts the duplication when all drives report media as being present.
- **Off**: You must press the ENT button to begin the duplication process, regardless of the number of discs loaded.

### Read Error Skip

With Read Error Skip **OFF**, the duplicator will halt any job when the reader encounters an error on your master disc. By changing this setting to **ON**, duplication will continue after finding a read error on the master. **Please note that this does not fix the error, and may result in unusable discs.**

It is strongly recommended that you do not change this setting from the default value of **OFF**.

### CD Writing Mode

This setting allows you to change the CD writing mode between the 2 options, **Disc at Once** and **Track at Once**. The default setting is **Disc at Once**, which should be used unless you have a specific need to change the mode.

### Max Audio, VCD, CDG Speed

Audio CD and Video CD disc formats do not have internal error checking capabilities, so duplicating at high speeds may cause more instances of errors on the copies. This setting allows you to reduce the burn speed of these specific types of discs without lowering the burn speed of Data CD discs.

### Buzzer

The Buzzer function will turn the beeper on the controller **ON** or **OFF**. Using the default of ON, a beep is heard when a button is pressed or when any job completes.

### Startup Menu

Allows you to specify what the default menu item will be when the BD-121 is turned on.

## Screen Saver

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

## Duplication Mode

This setting cannot be changed.

## 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.

## 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.

## 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.

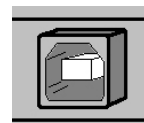
## Disable Drives

This utility allows you to disable specific drives when they are producing high failure rates. Note that if one drive is disabled, however, the BD-121 will no longer have enough drives available to duplicate from your master to a blank disc. This function should not be used.

## External Connection

Use this setting to enable the bottom recorder drive to be used as an external drive connected to your PC via a USB 2.0 connection. Please note that while this setting is **ON**, the BD-121 cannot be used as a duplicator, as no target drive will be available.

To connect the bottom drive to your PC, you will need to connect your PC and the duplicator using the supplied USB cable. Plug the flat end of the USB cable to your PC and the square end to the connection on the back of the duplicator, shown to the right.



Select the Setup menu and use the ▼▲ buttons and press the **ENT** button the display reads *External Connection*. If the display indicates that the connection is **OFF**, use either arrow key to change the setting to **ON**, then press **ENT** to save the setting. The duplicator will be briefly unresponsive as the bottom drive is released from duplication mode. Press **ESC** to leave the Setup menu.

To shut off the External Connection, simply change the External Connection setting to **OFF**. This setting can be changed any time both the tower and bottom drive are idle, but you may need to remove any media from the bottom drive before the drive will be recognized again. You do not need to disconnect the USB cable.

## CD+G Support

Due to BluRay drive limitations, this feature is not supported on the BD-121, and the setting should remain **OFF**.

## The Utilities Menu

A description of the options in the Utilities menu follows. Use the ▼▲ buttons to scroll through the menu, pressing the **ENT** button when the display shows the function you want to perform.

### **Disc Info**

The Disc Info function will display the information regarding the blank recordable media you have loaded in the recorders. The media format, capacity, manufacture ID, and certified writing speed of the media will be displayed.

Information regarding any master disc loaded into the reader drive will also be displayed.

Load your media into the drives before pressing **ENT** when the display shows **Disc Info**. Each drive will be checked to see if media is present. If all drives are not filled, you will be shown the number of discs detected and be prompted to press the **ENT** again.

Use the ▼▲ buttons to scroll through the drives in which media has been detected.

### **Prescan**

The Prescan function is used to verify the readability of the master disc by scanning for bad sectors on the master. Performing the Prescan on your masters before duplicating will help reduce the number of duplication failures caused by a master that contains uncorrectable errors.

You should load your master into the source drive prior to pressing the **ENT** button when the display shows **Prescan**. Your master will be scanned, with the results being displayed when the analysis is complete.

If the results show that the master disc **Failed**, you should not attempt to use that master as a source disc.

### **System Info**

The System Info menu selection displays the model and firmware versions of the installed controller. Use the ▼▲ buttons to scroll through the system information.

### **Device Info**

The Device Info menu selection displays the model and firmware versions of the drives installed in your BD-121 Duplicator. Use the ▼▲ buttons to scroll through the device information.

### **Load Default**

This option restores all Setup and Advanced Setup options to the default settings, as well as the default Burn Speed and the selected Source drive settings.

### **Update Firmware**

Use the Update Firmware menu option to update the programming on your Duplicator. To update the firmware, you will need to have the correct firmware file burned to a CD.

Please note that “drag-and-drop” burn methods such as the Windows XP burn utility generally will not be recognized as valid as the disc format they create is not recognizable by the duplicator. Use a disc burning application such as the Zulu2 Disc Burning application provided with your BD-121 to burn the Update files to a CD.

***Firmware Updates should only be performed after contacting Technical Support to ensure that you are attempting to install the correct firmware for your duplicator.***

### **Save**

This function will save any system settings that you have changed since the last time the duplicator was booted. This function is part of the process that occurs when you run the Shutdown process from the Shutdown menu.

## Specifications – BD-121

| Model         | Recorders | Dimensions, inches<br>(H x W x D) | Weight<br>(lbs) | Buffer<br>(MB) | Power Rating   |
|---------------|-----------|-----------------------------------|-----------------|----------------|--|
| <b>BD-121</b> | 1         | 6.75 x 7.5 x 11.5                 | 11 lbs          | 32             | Rated: 100-240V~, 47-63 Hz<br>Output: 5Vdc, 5A; 12Vdc, 5A<br>85W Max |

- Max Read Speeds: CD 40x, DVD 16X, BD 8X
- Max Write Speeds: CD 32x, DVD 16X, BD 8X
- System Display LED
- Write Method Auto Detect (DAO, TAO)
- Operation Mode COPY, TEST, PRESCAN
- Firmware Upgrade Via CD-ROM
- AC Input: 115/230 VAC; 8/5 AMPS MAX; 50-60Hz
- Maximum Operating Temperature: 25 Degrees C.
- Relative Humidity: 30% - 80% non-condensing.
- Supported Formats: CD-ROM Mode 1 & 2 CD-DA, CD-ROM/XA Video CD, Game CD, Mix Mode, Multisession, HFS CD Bridge, Photo CD, CD Extra, CD Text; DVD-ROM, DVD+R, DVD+RW, DVD+R DL, DVD-VIDEO, BD-ROM, BD-R, BD-RE.

***Due to the limitations of the BluRay drives, CD+G Duplication is NOT supported!***

**CAUTION:** Disconnect AC Power Cord Before Servicing. High Voltages Present with Unit Powered Off and Line Cord Connected.

## Technical Support

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

### United States

PH: 952-556-1639

FAX: 952-556-1628

[support@microboards.com](mailto:support@microboards.com)

[www.microboards.com](http://www.microboards.com)

### Europe

PH: +44 (0) 845 230 7800

[www.microboards.co.uk](http://www.microboards.co.uk)

### Japan

PH: 03-3561-2266

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Please have the Model and Serial Number of your BD-121 available when contacting Technical Support.

# Appendix 1: List of Functions

1. Copy
2. Test
3. Compare
4. Test + Copy
5. Copy + Compare
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## Appendix 2: Error Messages

If an error situation occurs during duplication, the display will show both an error code and an error message.

| Error Code | Error Message                          | Description and Recommended Solutions   |
|------------|--|---|
| 200        | Source Disc Empty                      | The master disc was detected and identified successfully, but is blank.<br><b>Check the master to ensure it contains data.</b>  |
| 201        | Bad Master                             | The master disc is detected but can't be identified.<br><b>Check the master disc for defects or errors.</b>   |
| 202        | No Targets!                            | All blank discs are missing once the job has already started.<br><b>Verify that blank discs are loaded into the recorders.</b>  |
| 203        | Burner Mixed or Firmware Version Mixed | The model or firmware versions of all installed recorders are not the same.<br><b>Drive may have been replaced. Contact Tech Support.</b>   |
| 204        | Targets & Master Not Compatible!       | The master disc and target discs do not have the same format.<br><b>Verify that the master and target discs are the same format (CD master and CD blanks, for instance). You can use Disc Info in the Utilities menu to verify the disc formats.</b>  |
| 205        | Targets Not Blank!                     | Existing data has been detected on the target discs.<br><b>Verify the discs are blank, replace if not.</b>  |
| 206        | Targets & Master Size Mismatch!        | <i>During Compare:</i> The sizes of the master disc and successful copies are different.<br><i>During Copy:</i> The capacity of the blank discs is less than the data size of the master.<br><b>During Compare: Contact Tech Support</b><br><b>During Copy: Use Disc Info in the Utilities menu to verify that the blanks capacity is large enough for the data on the master disc.</b> |
| 208        | Targets are not RW Discs!              | The target discs are not Rewritable during an Erase attempt.<br><b>Verify that each loaded disc is rewritable.</b>  |
| 209        | Master Disc is CSS Protected!          | The master disc is copy protected.<br><b>Copy protected masters cannot be duplicated.</b>   |
| 210        | Bad Discs!                             | The target discs are detected but cannot be identified.<br><b>Replace discs that cannot be identified.</b>  |
| 211        | This format can not be tested!         | Target discs during a Test attempt are DVD+R, DVD+RW, DVD+R DL, BD-R, or BD-RE.<br><b>Disc formats listed above are not supported by the test function.</b>   |
| 230        | Not enough HDD space                   | There is not enough empty space on the hard drive to store the current master.<br><b>Free up hard drive space by deleting unnecessary images or folders.</b>  |
| 231        | Redundant Name!                        | The name entered already exists on the hard drive.<br><b>Either enter a different name or rename the previous file of the same name.</b>  |
| 232        | Format Failed!                         | The hard drive was not able to be formatted. An additional code is displayed as <b>XX-YY</b> , with <b>XX</b> being the index of the drive with the error and <b>YY</b> being the error code.<br><b>Possible hard drive failure; contact Technical Support.</b>   |

| <b>Error Code</b> | <b>Error Message</b>     | <b>Description and Recommended Solutions</b>   |
|-------------------|--------------------------|--|
| 233               | Hard Drive Corrupted     | The hard drive is corrupted and the information on the drive cannot be accessed.<br><b>Reformat the hard drive.</b>  |
| 235               | Hard Drive Access Error  | The duplicator encountered an error when attempting to access the hard drive.<br><b>Possible hard drive failure; contact Technical Support.</b>  |
| 240               | Wrong Password           | The password that was entered is not correct.<br><b>Confirm the correct password is being used or use a different password.</b>  |
| 241               | Login Failed             | An incorrect password was entered 3 times consecutively.<br><b>Wait 5 minutes, then re-enter the correct password. Contact Technical Support if the problem persists.</b>  |
| 251               | Copy Audio Error         | <i>Applies to Mix Audio Tracks.</i> An error occurred during the Mix Audio process. Could be caused by either a master error or a recording error.<br><b>Try a different master or blank disc.</b>   |
| 252               | Not Audio CD             | <i>Applies to Mix Audio Tracks.</i> The master disc is not an Audio CD.<br><b>Verify the master disc is an Audio CD.</b>   |
| 253               | Over Blank Disc Capacity | <i>Applies to Mix Audio Tracks.</i> The total size of the selected tracks is larger than the remaining capacity of the target discs.<br><b>Select alternate track of smaller size, or remove selected track.</b>   |
| 260               | No Update File           | A valid firmware file was not detected on the disc during a Firmware Update attempt.<br><b>1. Confirm the file on the disc is not a “zip” file. If so, extract the file and burn to another disc.</b><br><b>2. Confirm that the update disc was burned as a “Mode 1” Data CD. Drag-and-drop burn methods such as the Windows XP burn utility generally do not use this format and will not be recognized.</b><br><b>3. Verify that there are no other discs loaded in the duplicator. Insert the update disc in another drive tray and repeat.</b> |
| 261               | Wrong Update File        | The Firmware Update File is either not compatible with your duplicator or is corrupted.<br><b>Download and burn Update File again. Contact Tech Support if this error persists.</b>  |
| 262               | Unknown Flash Model      | The Firmware Update File is not for your duplicator.<br><b>Contact Tech Support for the correct file. Have Duplicator Model and Serial Number available.</b>   |
| 263               | User Abort               | A duplication job has been deliberately cancelled by the user by pressing the ESC button for more than 5 seconds during a duplication attempt.<br><b>Once the reason for cancellation has been corrected, restart the job after replacing any partially burned media.</b>  |