

CalOptic EZCD Series

Duplication System

USER MANUAL

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1. Introduction

Thank you for choosing **CalOptic's EZCD** series CD-R/RW duplicator. We believe this equipment will bring you satisfaction and great pleasure in CD duplication.

Features:

1. Stand-alone design, no PC nor software required.
2. Easy operation, no training required.
3. Load, Copy, Compare, Verify, Emulate, Editing, etc.
4. Compatible formats:
 - MODE 1: CD-ROM/XA
 - MODE 2: Photo-CD, CD-I, VCD
 - CD-DA, Multi-session, CD-Plus
5. On-the-fly or through hard drive loading.
6. Track selection available for copying music tracks.

IMPORTANT NOTE:

1. Make sure voltage setting (AC115/230V) is correct.
2. Stable input of power required for normal operation.
3. Duplicator should be placed in a stable area and within a clean & cool working environment.
4. Check, clean the master and CD-R / CD-RW discs before duplication starts.
5. Do not touch recording surface of the CD discs.
6. Do not move the duplicator during operation.

2. Preparing the EZCD Pro Duplicator

1. Unpack the package of duplicator.
2. Check the entire unit. Contact CalOptic immediately if there is any malfunction or damage found to the duplicator during shipping.
3. Make sure that the voltage setting is correct.

3. Operation

1. Power on the system and you will see a self-testing procedure running. The following display will appear:

```
CDxxxx V2.85 2000
CALOPTIC TECHNOLOGY
```

```
detect drives .....
```

```
Copy          G234M14:23
<mode
```

(Default setting may be changed)
G234M23:45 => May be different
or may not exist
G: Partition G of hard drive
234M: Capacity at G partition in MB
14:23Capacity at G partition in Minute

* No message on top-right corner if there is no hard drive installed.

2. Different devices installed in duplicator will require different operation procedures including two main categories:

AA. With hard drive installed

- a. Duplicator will automatically detect the hard drive and create partitions for it (each partition will have 900MB capacity, e.g. 9GB Hard Disk will probably have 10 partitions)
- b. You can select which partition to store the data in the "hdd partition" in Setup Menu.

- c. If there is no data stored in present / selected partition of hard drive, press the MODE switch to select "load" function and place the master disc into the CD-ROM drive which will automatically detect the master, analyze and load data into the present / selected partition. The master disc will be ejected when loading is completed. In case of error, the LCD will show "error" and the master disc will also be ejected automatically. Change another master disc for loading. Master data can be stored in different partition, switch to that particular partition (Please refer to hdd partition) for loading.
- d. Switch to Copy by pressing MODE switch. Place blank CD-R or CD-RW discs into all the CD writers. Duplicator will start copying when all writers detect the CD discs. If you do not need to use all writers for copying, the LCD display will display the number of CD disc detected as " Xstart" (X represents the number of writers that are ready to copy). Press the GO switch and operation will start instantly. There is no limitation on number of disc to be copied in one round (Maximum number varies on different model) or neither there is any limitation on sequence of CD writer to start with. In other words, you may copy one disc only using anyone of the CD writers randomly.
- e. When Copy is completed on all CD writers, those CD discs passed will be ejected automatically (default setting: Passed discs will be ejected. This can be changed according to your need). For continuous duplication, place additional blank discs into the CD writers and repeat the above procedures.
- f. Failed disc(s) will remain in respective CD writer(s) (Default setting: Failed disc NOT ejected. This can be changed according to your need). Press MODE switch will eject those failed CD discs from CD writers or press each eject button on the CD writer to eject disc manually.
- g. The duplicator will prompt you an error message when you try to copy a partition that contains no data. In this case, switch to "Load" function to load data first.
- h. Do not press any switch on duplicator during operation as interruption / termination of operation will cause error and might cause the duplicator to hang up (depend on writers installed). The CD-R discs will be ruined and cannot be used again.

BB. Without hard drive

- a. Switch to Copy by pressing MODE switch. Place blank CD-R or CD-RW disc into all the CD writers. Duplicator will start copying when all writers detect the CD discs. If you do not need to use all writers for copying, the LCD display will display the number of CD disc detected as " Xstart" (X represents the number of writers that are ready to copy). Press the GO switch and operation will start instantly. There is no imitation on number of disk to be copied in one round (Maximum number varies on different model) or neither there is any limitation on sequence of CD writer to start with. In other words, you may copy one disc only using anyone of the CD writers randomly.
- b. When Copy is completed on all CD writers, the passed CD discs will be ejected automatically (Default setting: discs passed will be ejected. This can be changed according to your need). For continuous duplication, place additional blank discs into the CD writers and repeat the above procedures.
- c. Failed disc(s) will remain in respective CD writer(s) (Default setting: Failed disc NOT ejected. This can be changed according to your need). Press MODE switch will eject those failed CD discs from CD writers or press each eject button on the CD writer to eject disc manually.

4. Function

The function explained below is based on factory's default setting. Different settings will cause duplicator to react differently. Please press and hold down the MODE switch while turning on the power; the duplicator will return to factory's default setting.

4.1. Copy

Make sure the present partition in hard drive is correct and contains data (with hard drive installed) or the master CD is put in the CD-ROM drive (without hard drive installed) before copying. Place blank CD-R/CD-RW discs into the CD writers, when all writers detect the CDs, duplicator will start copying automatically. When fewer copies are required, place the required number of blank CD-R/ CD-RW discs into CD writers. Till you see a number "X" of "X"start which matches the number of disc placed in the CD writer(s), press the GO switch manually to start duplication.

When Copy is finished, those discs passed will be ejected automatically and failed ones will be remained in CD writers. Press MODE switch to eject those failed CD discs. Put new CDs in the writers for additional copy. CD-RW discs containing data can also be copied by duplicator if the writers installed are capable of CD-RW writing. Data stored in the CD-RW disc will be quickly erased automatically before copying new data, no special setting or procedure required to erase the old data.

4.2. Copy + Compare

This function will do copying and also comparing the passed discs with the master. Under this function, the discs that passed in copying will be ejected and re- inserted again automatically for compare purpose. The passed discs will be ejected automatically after comparison. The failed CD discs will remain in the writers. Press MODE switch will eject those failed discs.

Only data CD will be compared with the master, VCD or music CD will be verified (self-reading) instead of being compared with the master even "Compare" is selected.

4.3. Emulate

This function performs emulation similar to Copy except that data is not really written onto the CD-R disc. CD-R discs will remain blank when emulation is completed. For CD-RW discs that contain data, emulate will do quick erase of all old data before emulation. Thus, never do emulate on CD-RW discs that contain important data.

Termination halfway of Emulate will not affect the CD-R disc and they will remain blank. But please note that CD-RW discs containing data may be destroyed and cannot be retrieved again.

Some CD writers may not support sudden termination during operation. The duplicator may hang up and you can only reset those writers by re-starting the power.

4.4. Emu + Copy

This function combines the emulation and copy function within one selection. First the machine will do the emulation and then continually copy the disc if there is no error during emulation. The passed discs will be ejected and the failed ones will be remained in the writers. Those failed discs must be removed manually.

4.5. Compare

This function does data comparison between master and target discs. But only data CD-ROM will be compared fully. VCD and music CD will be verified itself only instead of being compared with the master.

4.6. Verify

This function does verification of target discs. Different discs in the CD writer and CD-ROM drive can be verified together simultaneously.

4.7. Load

This function is valid only when hard drive is installed in the duplicator. Please use "Load" function to load master data into the hard drive before performing other function.

Place the master CD disc into the CD-ROM or any one of the CD writers, the duplicator will automatically detect and analyze the master CD and load its data into the current partition of the hard drive.

Hard drive installed on duplicator will be automatically partitioned by 900MB in each partition. Number of partitions available depends on the hard drive's capacity. No pre-formatting or software setup is required to install the hard drive. Each partition in hard drive will be labeled in alphabetical order starting from A, B, C...etc. Current partition number can be selected under "hdd partition" in the Setup menu.

Duplicator will prompt you an error message when you try to copy from a partition that contains no data. Switch to proper partition or use "load" function to load the master data to current partition.

4.8. External

When choosing External function, duplicator will release the control of SCSI devices installed on duplicator to the external SCSI connector. In this case, the duplicator will be working purely as an external SCSI box and you can connect it to the SCSI adapter in PC as an ordinary external SCSI device.

To control the SCSI devices by PC, the connection between duplicator and PC must be installed correctly. Before using this function, power of duplicator must be turned ON first and switch to external function and then power on the PC.

External function will be activated when switching to this function for five seconds. To return to other functions of duplicator, you have to re-start the duplicator.

Note: External function cannot be used on pure IDE model.

4.9. quick erase

This function is only used for a CD-RW disc with data existed. It will quick erase the CD-RW disc and the data on it will be totally erased and disappeared after executing this function.

4.10. Sub-function

In main menu, press and hold down the MODE switch for five seconds, the menu will be switched to sub-function menu and vice versa.

4.10.1. setup

As there are different settings under the setup function to control the duplicator's operation, we suggest using the original default settings for optimal operation. Changes should be made only when you are fully familiar with the function. Also please be noted that the function settings listed below are summary to cover all kinds of duplication controllers or duplication system that we build and might not exist in your duplicator.

4.10.1.1. show drive

This setting shows the devices that connected on duplicator such as CD-ROM, CD writers and hard drive, etc. Most of all, it also displays the version number currently on device which is very important occasionally. For example, the IDE bus TEAC 540E CD-ROM must be version 3.0A and the version for all your CD writers installed on duplicator are suggested to use the same version to avoid any trouble that might occur during duplication.

4.10.1.2. hdd partition group

This setting assigns the current working partition group on hard drive if installed. Press MODE switch to change the setting and press GO to exit. After selecting the partition group, press exit button will bring you to the next sub function as "hdd partition of A" for more selection of the partition number in that group. After choosing the partition number, press the exit button will bring you back to Copy function in the main menu.

The modern hard drives normally contain large capacity. In order to organize and utilize the capacity well, controller will manage the capacity in an idea for two-level management: partition group and partition number. The partition group is somewhat like the category and the partition number is the sub-item in that category. By using this idea, controller can have up to 26 categories; each category has up to 26 partition numbers, total 676 (26x26) partition numbers. For CD controller, each partition normally holds 900MB and for DVD, it holds 4.9GB. Under this management, the capacity on hard drive would not be wasted and beyond the control by our duplicating controller.

After selection, each partition will have two letters to represent such as AC, BD, etc. The AC means A group C partition and BD means B group D partition. If you get a 40GB hard drive installed with the CD controller, you might have 42 partitions from AA to AZ and BA to BP. There will be two groups in your hard drive: A group contains 26 partitions and B group contains 16. All the configuration will be done automatically and you don't have to run special software utility to make these partitioning. Be noted that this setting will disappear if there is no hard drive installed.

4.10.1.3. CD to CD

This setting controls the source location of master data. Select "Yes" to bypass the existing hard drive and you can copy directly from CD to CD or select "No" to copy CD from data stored in current partition of hard drive. This setting will not be saved during reboot of duplicator. You will have to reset it after rebooting if you wish to use CD to CD while there is a hard drive installed.

This setting will disappear if there is no hard drive installed. In this case, there is no option but to copy from CD to CD directly.

Press MODE switch to change setting and GO to bring you to next setting.

4.10.1.4. start writers

This setting controls the number of CD writer that will work in duplicator and normally it should be equal to the number of writers installed in duplicator. Number of writers set is less than that actually installed will limit the working writers. If 4 sets of writer are installed, for example, number setting of 2 will allow using only two writers at one time. Duplicator will start the operation instantly when any two of the four installed writers are ready (disc detected). The rest two writers will be idle.

Press MODE switch will change the setting and press GO to bring you to next setting.

4.10.1.5. write method

This setting controls the writing methods of CD disc including "Disc at once" or "Track at once". "Disc at once" will be the default setting. Some CD writers may support different writing methods. If the method selected is not supported, duplicator will automatically switch to the other one.

Press MODE switch will change the setting and GO switch will bring you to next setting.

4.10.1.6. CD write speed

This setting controls the maximum writing speed of CD writers. Default setting is "32" which will use 32X write speed to write the disc. The reason why it isn't set to max is that the CD-ROM readers in the market cannot access the master disc as fast as the write speed if the write speed reaches 40X or above. Sometimes maximum write speed will cause high failure rate that may be due to poor CD quality or unstable CD writing in high speed. If installed CD-ROM's reading speed can reach higher or even lower, please increase or lower the writing speed manually to get higher successful rate in CD writing.

Press MODE to change the setting and GO to exit.

4.10.1.7. HD to CD write speed (if HDD installed)

This setting controls the maximum writing speed of CD writers when the hard drive is installed in the system. Default setting is "MAX" which will use the highest writing speed of the writers to write CD. Sometimes maximum writing speed will cause high failure rate that may be due to poor CD quality or unstable CD writing in high speed. Under this circumstance, please lower the writing speed under this setting to get higher successful rate. On the contrary, lower value setting will make the writing speed slower and confuse you as a problematic duplicator.

Press MODE to change the setting and GO to exit.

4.10.1.8. DVD write speed (for DVD controller only)

This setting controls the maximum writing speed of DVD writers. Default setting is "MAX" which will use the highest writing speed of the writers. Sometimes maximum writing speed will cause high failure rate that may be due to poor DVD quality or unstable DVD writing in high speed. Under this circumstance, please lower the writing speed under this setting to get higher successful rate in DVD writing. On the contrary, lower value setting will make the writing speed slower and confuse you as a problematic duplicator.

Be noted that there is a special situation for un-authorized blank DVD disc that will be locked and restricted in some DVD writers for its writing speed. This special situation is not under CalOptic's control.

Press MODE to change the setting and GO to exit.

4.10.1.9. CD-ROM drive

CD-ROM drive can be selected manually. Default setting is "AUTO" and the duplicator will select the CD-ROM drive automatically. If IDE CD-ROM drive is installed, the setting option will be in series like IDE1, IDE2, CDR1.0, CDR1.3, CDR1.4, CDR1.5, etc.,. The number shown depends on the devices that detected by duplicator itself. The IDE1 and IDE2 are for IDE1 port and IDE2 port. The CDR1.0 means SCSI channel 1 and #ID0. The CDR1.4 means SCSI channel 1 and #ID4. Please be noted that the "AUTO" setting is effected only that CD-ROM connected on the first SCSI channel, if CD-ROM connected on SCSI channels other than #1, you will have to select it manually. Pure IDE bus controller will have options like ATA1, ATA2, ...etc.

Press MODE to change the setting and Go to exit.

4.10.1.10. Autoloader

This duplicator can be used as an independent controller for external auto-loading mechanism. If autoloader is installed, this setting must be "Yes". Default setting is "No".

The external auto-loading mechanism must be qualified and approved by CalOptic. Any non-approved equipment may damage the duplicator and affect operations.

Press MODE to change the setting and GO to exit.

4.10.1.11. load nonblank disc

This setting is mainly for Autoloader and controls the loading of non-blank disc in any CD writer. If setting is "Yes", whenever there is a non-blank disc detected by the CD writer, the duplicator will go to "Load" function automatically and start loading the data from that non-blank disc into current partition of hard drive. Through this function, you can control the Autoloader to copy multi-master CDs fully automated.

Press MODE to change the setting and GO to exit.

4.10.1.12. CD-DA load speed

Normally, when reading music track, the CD-ROM drive will automatically lower the reading speed significantly. Unstable reading

situation may happen if we use the maximum default speed of CD-ROM drive to read music track. This will affect the quality of music CD duplicated. This setting can select the speed of music track loading to enhance stability of music track reading. Default setting is "AUTO".

Press MODE to change the setting and GO to exit.

4.10.1.13. eject disc

This setting controls the ejection of discs by CD writer. Three options are available: "Always" means the CD writers will always eject the CD discs no matter whether operation is successful or failed. "No" means all discs will remain in CD writers when job is done and you will have to eject discs from the CD writers manually. "Pass" setting will only eject the passed discs automatically and leave the failed one in the CD writers. Press MODE switch will eject those failed CDs.

Press MODE to change the setting and GO to exit.

4.10.1.14. Buzzer

This setting controls ON and OFF of buzzer. Default setting is "On". Press MODE switch to change and GO to exit.

4.10.1.15. CD+G

This setting activates the copy capability of CD+G format. It cannot be copied if the CD writers don't support this format. Default setting is "No".

Press MODE switch to change and GO to exit.

4.10.1.16. copycomp eject

This setting controls the ejection of CD writers' trays under "copy + compare" function. If the setting is "Yes", the trays will eject the passed discs after copying and it will re-insert the same discs again for subsequent comparison. If setting is "No", the trays will not be ejected between copy and compare. The default setting is "Auto" which means ejection of trays will depend on the CD writer. If it supports auto- ejection, the tray will be ejected after copying. If not, the tray will not be ejected even when setting is "Yes".

Press MODE switch to change and GO to exit.

4.10.1.17. Skip read error

This setting controls error skipping during source reading. The default setting is "No". When an error is detected during loading, the duplicator will stop to load and display read error message. If the setting is "Yes", there will be no message shown even there is an error in reading. You can use this function to copy some CD with errors.

Press MODE switch to change and GO to exit.

4.10.1.18. "MODE" 2 compare

This setting can be activated to compare some data format stored in "MODE 2" disc. Default setting is "No".

Press MODE switch to change and GO to exit.

4.10.1.19. Startup command

This setting specifies the first function appeared when duplicator is turned on so as to avoid repeated selection on the same all the time.

Press MODE switch to change and GO to exit.

4.10.1.20. led offset

This setting controls the offset of position for LED display on different kinds of SCSI case.

Press MODE switch to change and GO to exit.

4.10.1.21. lcd mile 2 digits

This setting controls the way of display for processing meter during operation on LCD display, e.g. L12 C12 C12 C12 C12. The "L" represents the "Load" and C represents the "Copy" before the 2-digit number. If you set this option to "Yes", the L and C for the example above will disappear. Set "No" will keep the display as above.

Press MODE switch to change and GO to exit.

4.10.1.22. read cdda index 0

The setting controls the copying of data existed in index0. Set to "Yes" will copy the data and set to "No" will make it empty.

Press MODE switch to change and GO to exit.

4.10.1.23. Power On Wait

The setting controls the detecting time for devices that connected to the duplicating controller card. Default is 15.

Press MODE switch to change and GO to exit.

4.10.2. edit

Edit function, in sub-function, is a track-selecting function that can combine tracks on different CD discs into one single CD disc. For example, you can make a collection of favorite songs from different music CDs and store them into one CD disc.

Switch to "Clear" function to delete the data, if any, in the hard drive's partition intended to store the music tracks. Switch to EDIT by pressing the MODE switch in sub- function, load your master CD into CD drive (if there is no hard drive installed, the blank CD-R or CD-RW discs must be inserted to CD writers for "track at once" copy). Duplicator will analyze the master CD and show total xx tracks on LCD display and finally stop at:

Begin track [+] 0	[Quit]
---------------------------------	--------

Press MODE switch to change the number of track (song) that you wish to start with and then press GO switch to quit. After quitting, the LCD display will stop at:

End track [+] 0	[Quit]
-------------------------------	--------

The number selected must be same or larger than that selected in "Begin track". Same number means you want to select a single track and larger number means you want to select a sequence of tracks in that particular CD. After selecting the "End track", duplicator will bring you back to "Begin track" selection. Repeat the same procedure to collect other tracks in different sequence that you want to copy. If no more tracks will be selected, press GO switch directly at "Begin track" and press once again GO at "End track" to exit. Duplicator will start loading those music tracks selected into the current partition of hard drive. After finishing loading, the master CD will be ejected automatically and LCD will display Pass. You may change the master CD and run the Edit function again to gather more music tracks from different master CDs. When finishing the collection, switch the function to Copy and place blank CD discs or CD-RW discs into CD writers for copying.

If there is no hard drive installed and when selection of music tracks from the master CD in CD-ROM drive is completed, the duplicator will prompt you the message:

Finalize [+] No	[Quit]
-----------------------	--------

If there are still other tracks need to be collected, the setting of Finalize must be "No". Press GO switch to quit and the duplicator will start to copy directly the selected tracks onto blank CD disc. After finishing the copy, the master CD will be ejected automatically and prompt you "Pass" in the LCD display. You will note that the CD discs in target CD writers will not be ejected at this moment. You can change another master CD in the CD-ROM drive. Duplicator will analyze the master data and bring you to the "Begin track" message on LCD. You can repeat the procedures described above to collect more tracks. If the master CD is the last one that you collected, change the setting of Finalize to "Yes" and press GO switch, duplicator will start to copy and close the CD discs in the CD writers. If all of CD discs pass copying, they will be ejected from the CD writers automatically.

Please study the following examples carefully and follow the instructions step by step. You will find it is very easy to collect tracks by the duplicator.

Example 1:

To make a new collection of two CDs listed below with hard drive installed:

No.1 CD: 2, 4, 6-8 songs.
No.2 CD: 3-6, 9, 13-16 songs.

- a. Switch to Clear Master function and press GO switch to clear data in the existing partition of hard drive.
- b. Switch to Edit function.
- c. Place No.1 CD disc into CD drive under the EDIT function and wait for duplicator to analyze it.

- d. Press MODE switch to number 2 at "Begin track" and Press GO switch to quit.
- e. When "End track" is display on the LCD, press GO switch to quit directly since the first song number is 2.
- f. Press MODE switch to number 4 at "Begin track" and Quit. Press GO switch again to quit.
- g. Press MODE to number 6 at "Begin track" and Quit.
- h. Press MODE to number 8 at "End track" and Quit.
- i. Press GO to finish the selection of No. 1 CD.
- j. Duplicator will start to collect the tracks that you selected just now into current partition of hard drive.
- k. After successful loading is finished, duplicator will eject your master CD and show "Pass" on LCD.
- l. Place No.2 CD disc into CD drive and continue the selection of second CD disc.
- m. Repeat procedures (d) to (k) above.
- n. Once the accumulated length of tracks selected has exceeded the maximum 80 min capacity. The duplicator will stop to accept additional tracks.
- o. Switch to "Delete" function to delete the last track stored in current partition in hard drive if necessary.
- p. Switch to Copy to start copying your own collection of music CD.

Example 2:

No.1 CD: All tracks
No.2 CD: 4-6 tracks

- a. Load the No.1 CD disc normally by using LOAD function. Data, if any, in the current partition will be erased and replaced automatically tracks of this CD.
- b. Load No.2 CD disc by using EDIT function but keep the data stored in hard drive. There is no need to do (Clear Master) as described in Example 1 or you will lose the data of No.1 CD disc.
- c. Repeat the other procedures described in Example 1 described in previous page.

4.10.3. delete

When the last music track stored in hard drive is not the one you wish to keep, switch to "delete" function and press GO switch to delete it. You may always use this function to delete the last track stored in the current partition of hard drive.

4.10.4. clear

This function clears the master data stored in the current partition of hard drive. When you want to EDIT a new collection of songs, you must run this function first to clear the current partition of hard drive. Perform this function by pressing GO switch at "Clear" function and LCD will show: "Master cleared".

4.10.5. copy x1

Under some conditions, you will have to reduce the writing speed of CD writer to single speed. Switch to "Copy x 1", all operation will be the same as the COPY except that the writing speed will be single-time only. Writing on CD-R disc under lower speed will offer you a better and more stable quality than under maximum speed. You can use the CD disc copied under lower speed as a master for repeated duplication or use.

4.10.6. emulate x1

Under some conditions, you will have to reduce the emulating speed of CD writer to single speed. Switch to "Emulate x 1", all operation will be the same as the "Emulate write" except that the emulating speed will be single-time only.

4.10.7. copy x2

Occasionally you will have to reduce the writing speed of CD writer to double speed. Switch to "Copy x 2", all operation are same as COPY except that writing speed will be double only.

4.10.8. emulate x2

Under some conditions, you will have to reduce the emulating speed of CD writer to double speed. Switch to "Emulate x2", all operation will be same as the "Emulate write" except that the emulating speed will be double.

4.10.9. copy x4

Occasionally you will have to reduce the writing speed to quadruple. Switch to "Copy x 4", all operation will be the same as the COPY except that the writing speed will be quadruple speed.

4.10.10. emulate x4

Under some conditions, you will have to reduce the emulating speed of CD writer to quadruple speed. Switch to "Emulate x4", all operation will be same as the "Emulate write" except that the speed will be quadruple.

4.10.11. copy x8

Occasionally you will have to reduce the writing speed of CD writer to eight-speed. Switch to "Copy x 8", all operation are the same as COPY except that writing speed will be 8X.

4.10.12. emulate x8

Under some conditions, you will have to reduce the emulating speed of CD writer to eight-speed. Switch to "Emulate x8", all operation will be same as the "Emulate write" except that the emulating speed will be 8x speed.

4.10.13. burn in

This function is a burn-in test function. It will run the emulate write function continuously. Between each cycle of emulate write, the CD discs in CD writers will be ejected automatically and re-insert again for continuous testing. There is no real writing on the blank CD discs and the discs will remain blank as original after test.

4.10.14. update

Functions on duplicator will be improved for better performance or for other reasons. This function will update your firmware to the latest one. Load the CD disc containing the latest firmware data (BIOS CD disc) into CD-ROM drive and the duplicator will find the data and update its firmware automatically. During updating, don't turn off the power of machine since the update will not be finished till machine reset itself. (Note: Turning off the machine during updating might cause severe result such as no booting, etc.)

Procedures to make the BIOS CD disc by yourself:

1. Get the BIOS firmware from CalOptic through e-mail (tech@caloptic.com) Be careful not to download the wrong firmware, it will cause the duplicator to hang up and malfunction.
2. Unzip the BIOS firmware you have got and write the file "**cdxxxx.bin**" into the root directory of a blank CD-R or CD-RW disc. Session of the CD has to be closed. If the same CD disc still has capacity to add more data, it can be used to store newer version of BIOS. When updating the BIOS program from the CD, only the one in last session will be used. Other versions in previous sessions will be ignored.

4.10.15. reset

The reset procedure is required for several reasons such as: First assembling of duplicator, changing new brand of writers in old duplicator, reset with wrong way or bring back the factory default setting according to different usages. Our design provides an easy way for customer to reset their controller boards as below:

1. Turn off the power of duplicator and wait for 10 seconds. If the duplicator is not used at this moment, ignore this step and go to procedure 2 directly.
2. Press and hold down the MODE switch and turn on the power of duplicator at the same (the MODE switch must be held down at least 3 seconds while turning on the power).
3. Leave the finger from MODE switch and check whether there is message of "clear setup" on the top line of LCD display.
4. If the "clear setup" message is not shown, please repeat the whole procedure above but remain the finger on MODE switch all the time during power on till you see the message of "clear setup" on LCD.
5. All setting on duplicator will be restored to its factory default setting after the "clear setup" message shown on the screen, which is a correct reset procedure.
6. There is another kind of reset but with different button. Repeat above procedure but using the GO switch button instead of the MODE switch.

Some writers use shorter data block for transferring but other use larger data block. Using the MODE switch for reset will set the data block to shorter one and using the GO switch to reset will set the controller to use longer data block. Be noted that reset with wrong way might cause duplicator abnormally. Reset again with correct way will bring the duplicator back to normal. (Longer data block will have faster accessing speed.)

CalOptic has no idea what kind of data block each writer will use. Users can reset their duplicators by GO switch first (longer data block) for trial. If the duplication is abnormal, reset again by MODE switch. (Above 80% of writers in the market belong to short data block.)

5. Trouble shooting

1Q: No display on LCD and the unit does not operate when powered on.

A: Please check the connection of power cable and the environment of power outlet is normal.

B: Please check the fan of power supply. It should rotate if power-on. If not, the power supply might have problem.

C: Turn off the power of machine, open the case of duplicator to check whether the power cable is fixed.

2Q: Error message shown on LED:

A: During operation like Copy, Emulate Write, compare and verify, you may press MODE switch to abort the operation. An Error message will be shown on the LCD. Some CD writers, abort will cause the duplicator to hang up and you have to re-start the power to return to normal operation.

B: Failed reading may cause the error message shown on the LCD display. Change the master CD to try again.

C: During operation, if read error, buffer under run or writing error occurs, the LCD will show error message like: Pass xx, failed xx.

D: If there is no device connected and detected by duplicator during power-on, the duplicator will show error message on LCD before entering the main menu.

3Q: CD-ROM doesn't read disc and shows Er message.

A: Check the format of master CD or master CD itself for damage.

B: Use any of the CD-Writers to read the master; if it works, the CD-ROM may be defective or not compatible with CD-ROM.

4Q: Switches do not function.

A: May be still busy on task.

B: Button malfunction.

C: Faulty board.

5Q: COPY completed but CD-R disc is not readable / executable?

A: Use compare to check.

B: Change another CD-ROM drive to test.

6Q: The failure rate is high.

A: Lower the speed of CD-Writers and try again.

B: Quality of blank disc is poor.

C: Check for latest BIOS version.

7Q:- Can't boot-up or fail to upgrade BIOS.

A: Contact your dealer to solve the problem. Please note you may be charged for this.

B: Check the BIOS program is correct since normally customer will download wrong program or simply write the zipped file to CD which should be first unzipped before writing.

C: Failed upgrade might cause failed boot. This can only be solved by returning the control board to agent or factory directly. It is not necessary to return whole system under failed upgrade.

6. Appendix

CONTACT THE DISTRIBUTOR IF TROUBLE OR PROBLEM ARISES. FOR PROMPT FEEDBACK & IMMEDIATE SERVICE, PLEASE ADVISE FULL DETAILS OF THE SYMPTOMS.

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