

ARS-2030/2032

Copy Smart Plus

CD Duplicator
Controller System

User's Manual

ARS-2030



1-to-3

ARS-2032



1-to-7

— **Ver:1.0** —

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Chapter 1 Introduction

1.1 Overview

The users who want to backup their CD normally have go through many steps by turning on their computer, launching the software, setting up various parameters, and tiding up their computer sometimes up to a hours to get a CD backup if the CD backup are more than one. Obviously, a standalone **ARS-2030/2032 Copy Smart Plus** will easily resolve the little inconvenience and drawback mentioned above.

CD Copy Smart Plus is the first CD-to-CD standalone duplicator and does not need to connect to a computer for performance. It provides a flawless function in duplicating any format of compact disks with excellent accuracy. With its professional mechanism design and multi-function LCD panel, CD Copy Smart Plus is easy for any end-user to operate. It is a perfect cost-effective CD-R duplicator for audio, data, and video applications. Four simple pushbuttons panel is designed to provide copy modes selection and copy operation.

1.2 Features

- Standalone IDE to IDE CD Copy controller
- Build-in ACARD SCSTIDE Technology
- 4 (ARS-2030) / 8 (ARS-2032) independent IDE channel
- Self system diagnostics when power on
- Supports Hard Drive image
- Auto format detection
- User friendly interface with message rich LCD display
- Fast copies supports high speed CD-RW writing mode
- Easy operation without software and training are required
- Firmware upgrade via CD-ROM

1.3 Specification

Power requirement - voltage : 5VB+/- 5%
current : 0.5A Max.

Environment - Temperature
Operating 0 °C to 70 °C
Storage -20 °C to 85 °C

Humidity - 15% to 90%

Dimensions - Models: AEC-2030/2032
Length: 200 mm
Width: 146.2 mm
Height: 42 mm

Connectors - 40-pin internal IDE connector

Cable (Optional) - Using ATA-66 (*Cable of length do not use longer than 46cm)

CD Format - CD-ROM (Mode1 & Mode2), CD-ROM/XA (Mode2 form1 & form2), CD-DA, Mixed-Mode, Video CD, CD-I, Karaoke CD, Photo CD (Single & Multi-session), CD-Extra, HFS, CD-Bridge, ISO9660, CD-R, and CD-RW

Writing mode - Auto Detect (DAO, TAO)

Support CD-ROM Drive* - Support CD-ROM Drive: TEAC 40X (CD-540E), F/W 3.0A & expand read speed to 17-40X

Support CD-RW Drive* - Plextor, TEAC, Sanyo, Nichimen, SONY, RICOH

** Please visit ACARD web site to get the newest list (<http://www.acard.com>)
or E-Mail to support@acard.com*

Chapter 2 Installation Procedure

When you get CD Copy Smart Plus, you could find the package in the following possibilities: controller only; whole duplicator without writer installed & completed duplication system.

2.1 Contorller only

1. Before the installation, please prepare the necessary devices as following:
 - CD-ROM drive
 - CD-R/RW drive
 - IDE case (5~10-bay chassis suggested).
 - Hard drive and mobile rack (IDE-bus hard drive-Option)
 - Switching power supply (300W suggested).
2. After the preparation as above and make sure that:
 - All IDE devices must be in Master mode.

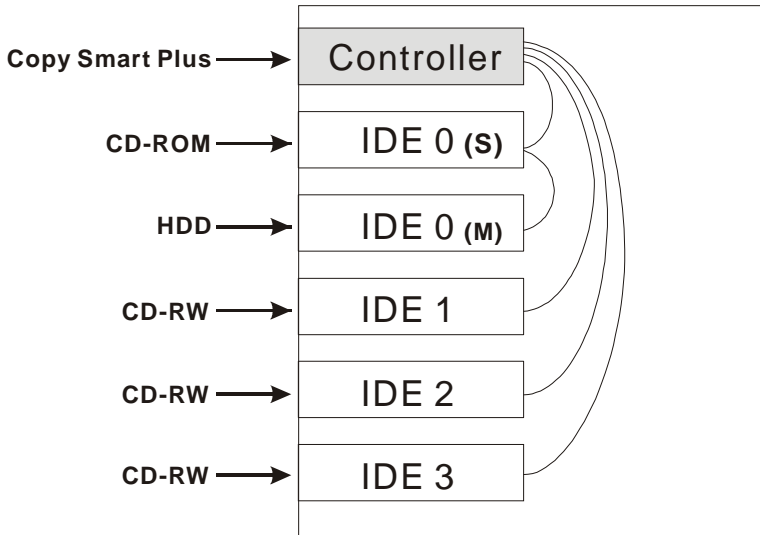
2.2 Whole duplicator without writer installed

- Unpack the package of the duplicators.
- Prepare the CD-R/RW writers according to the recommendation of list for installation. Please check for unlisted CD-RW writer if needed from supplier.
- Assemble the duplicator according to your need.
- Make sure that the voltage setting is correct.

2.3 Completed duplication system

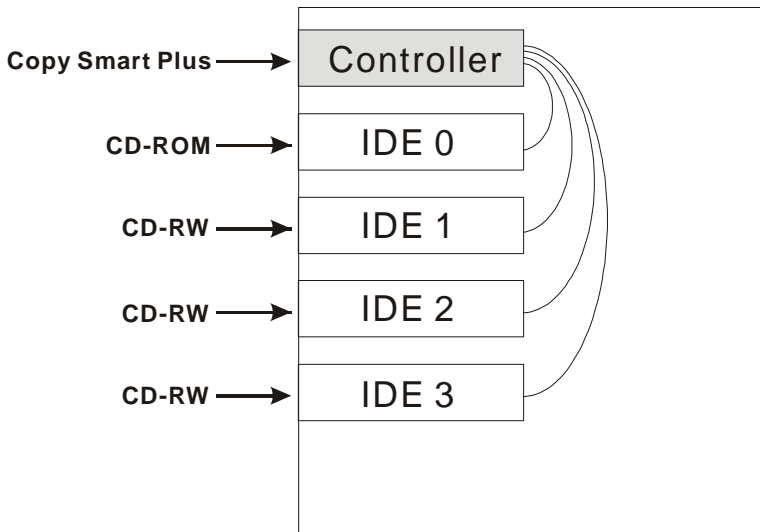
- Unpack the package of duplicators.
- Check the entire unit to see if there is any mal-function or damage found.
- Make sure that the voltage setting is correct.
- Hard drive is an optional installation to the duplication system.

Hardware Connection with Hard Drive for ARS-2030

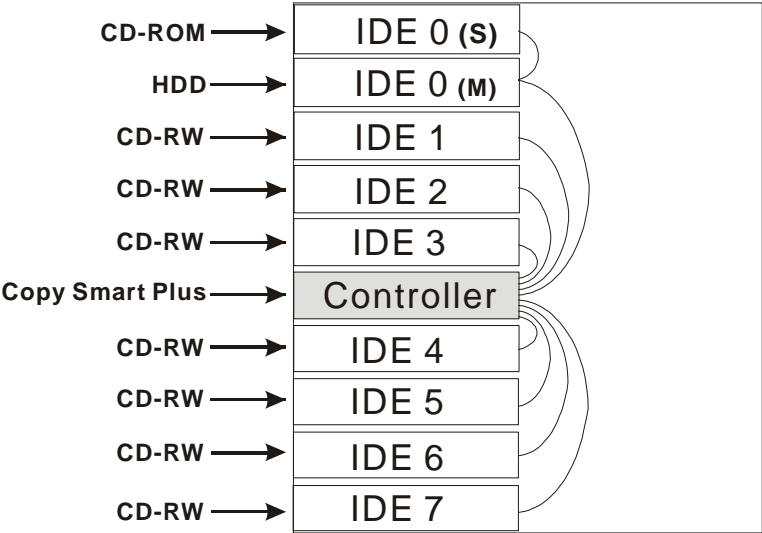


When the system connect with hard drive, the hard drive must connect on IDE 0 port with “Master” setting and the CD-ROM must set with “Slave”.

Hardware Connection without Hard Drive for ARS-2030

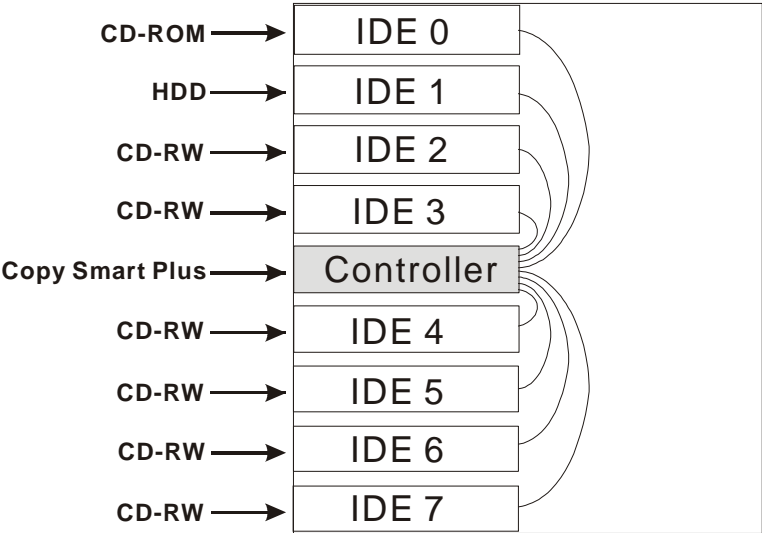


Hardware Connection for ARS-2032

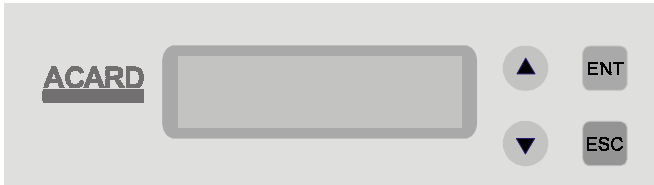






When the system connect with hard drive, the hard drive must connect on IDE 0 port with “Master” setting and the CD-ROM must set with “Slave”.

Hardware Connection for ARS-2032



Chapter 3 Key Functions and Operating Instruction



1. LCD Display Panel: Display main functions and all messages.
2.  : Scroll up through menus or functions.
3.  : Scroll down through menus or functions.
4.  : Execute the function which you select.
5.  : Cancel the function which you select.

When the CD Copy Smart Plus have been checked the hardware installation correctly, power on the system. The CD Copy Smart Plus will process a self-testing for the seconds. After self-testing procedure running, the LCD will show:

- | | |
|---|---|
| <p>1.</p> <p>ARS-2030</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> CD Duplicator
1-3 ver: 1.10B </div> | <p>2.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> Initialize SDRAM..... </div> |
| <p>ARS-2032</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> CD Duplicator
1-7 ver: 1.10T </div> | |
| <p>3.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> Detect Drives..... </div> | <p>4.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> 1. Copy </div> |

Two different main operation procedure are required to install the duplicator with:

1. With hard drive installed

- Duplicator will detect the hard drive and create partitions for it (each partition will have 1G capacity, e.g. 10GB Hard Disk will probably have 10 partitions which it is included 9 working partitions and 1 TEMP partition)
- Use the Select Source to set the hard drive being the target source.
- Then select which partition to store the data in the “Image” in Main Menu.
- If there is no data stored in present/selected partition of hard drive, press the arrow button to select “load” function and place the master disc into the CD-ROM, then press “ENT” button to load data into the present/selected partition. Change another master disc for data loading. Master data can be stored in different partition switch to that particular partition (Please refer to Image) for loading.
- Switch to Copy function by pressing arrow button. Place blank CD-R or CD-RW discs into all the CD writers. Press “ENT” button to start copying when all writers detect the CD discs.
- 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 setting). For continuous duplication, place additional blank discs into the CD writers and repeat the above procedures.
- 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 each eject button on the CD writer to eject disc manually.
- The duplicator will prompt you an error message when you try to copy a partition that contains no data. In this case, please switch to “Load” function to load data first.
- Do not press any button 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 can not be used again.

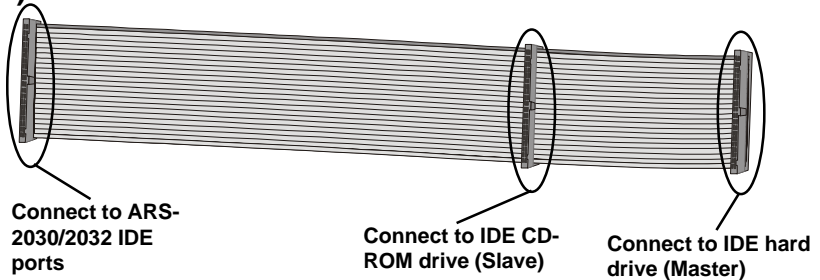
2. Without hard drive installation

- Place master disc to CD-ROM.
- Switch to Copy function by pressing arrow button. Place blank CD-R or CD-RW disc into all the CD writers. Press “ENT” button to start copying when all writers detect the CD discs.
- When Copy is completed on all CD writers, the passed CD disc will be ejected (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.
- 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 ENT button will eject those failed CD discs from CD writers or press each eject button on the CD writer to eject disc manually.

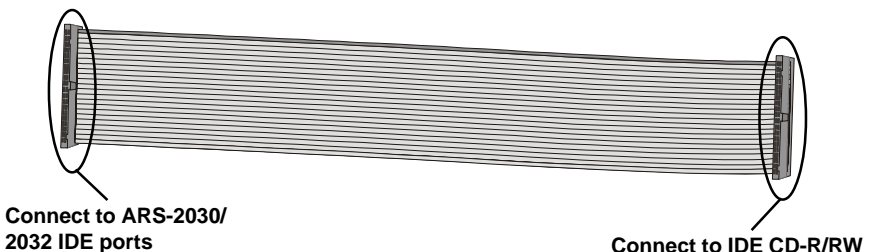
ATA-66 Cable Layout:

Please identify two different kinds of cable before the hardware installation.

1. Three connector for Source devices (CD-ROM / Optional Hard drive)

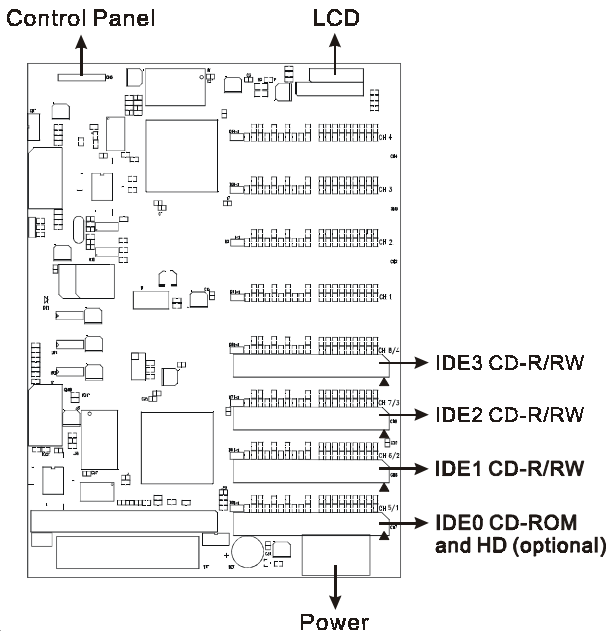


2. Two connector for Target devices (CD-R/RW)

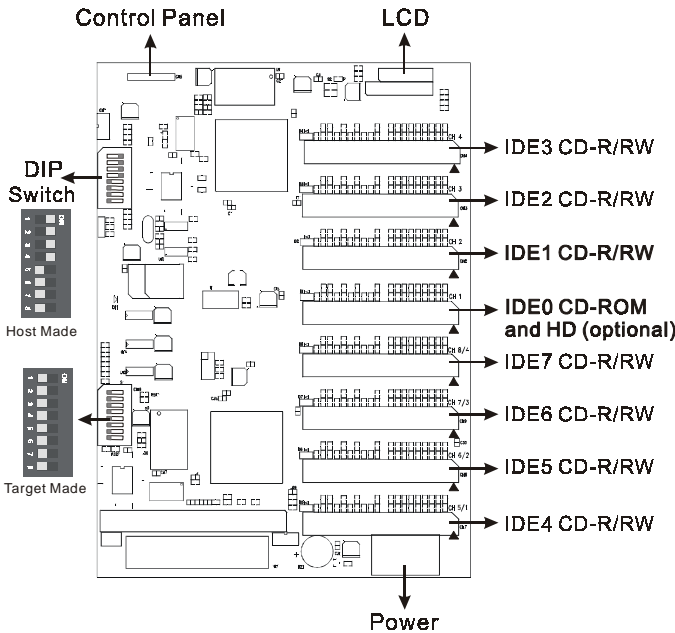


Chapter 4 Board Layout

ARS-2030



ARS-2032



Chapter 5 Function

5.1 Copy

When doing the coping process, the data will really burn into the blank CD-R/RW discs. Before doing the coping process, please make sure the present partition in hard drive if it correct and contains data (with hard drive installed) or the master CD is put in the CD-ROM drive (without hard drive installed) before coping.

1. Copy

Place blank CD-R/CD-RW discs into the CD writers, when all writers detect the CDs, press “ENT” button, duplicator will start copying.

Copying-24X 0%
650.0MB 74:00

LCD will show the process of copying information.

1.Copy
OK: 03

When Copy is finished, those discs passed will be ejected automatically and failed ones will remain in CD writers.

Put new CDs in the writers for additional copy. When the 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.

5.2 Test

This will simulate that the data is really written onto the CD-R/RW disc process. When testing process is completed, the CD-R/RW discs will remain blank.

2.Test

Press “ENT” button to start the disc simulation of copy or press “ESC” to exit.

Erasing disc

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.

Testing-24X 0%
650.0MB 74:00

LCD will show the process of testing information.

2.Test
OK: 03

When the process is finished, the LCD will show the message of the “Test” result.

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.

5.3 Test&Copy

3.Test & Copy

Press “ENT” button to do the disc testing then really write the data on the disc or press “ESC” to exit.

Testing-24X 0%
650.0MB 74:00

Before doing the coping process, the writers will simulate that the data is really written onto the CD-R/RW disc process.

Copying-24X 0%
650.0MB 74:00

When testing process was completed, duplicator will start really writting data onto the CD-R/ RW disc. The CD-R/RW discs will contain data.

3.Test & Copy

OK: 03

When the process is finished, the LCD will show the message of the “Test&Copy” result.

5.4 Verify

This will verify the target of discs if can read correctly in the CD-ROM drive after copying of the discs. Different discs in the CD writer and CD-ROM drive can be verified together simultaneously.

4.Verify

Press “ENT” button to start the disc verify or press “ESC” to exit.

Verify--24X 0%
650.0MB 74:00

LCD will show the process of “Verify” information.

4.Verify

OK: 03

When the process is finished, the LCD will show the message of the “Verify” result.

5.5 Compare

When the comparison of process is going, the data between master and target discs will be compared after discs copy.

5.Compare

Press “ENT” button to do the disc compare or press “ESC” to exit.

Compare-24X 0%
650.0MB 74:00

LCD will show the process of “Compare” information.

Compare OK: 3
Fail: 0 Diff: 0

When the process is finished, the LCD will show the message of the “Compare” result. Then the CD discs will be ejected by CD writer.

Src: 01 CD-ROM
Total: 650.0MB

Press “ENT” button to see the detail of “Compare” information.

Src: 02 CD-RW
Identical

If the compare result is identical, the LCD will show the message as left.

Compare OK: 2
Fail: 1 Diff: 0

When the compare result is failed. The message will show that the number of discs is failed & succeeded.

Src: 01 CD-ROM
Total: 0 Bytes

Press “ENT” button to see the detail of “Compare” information.

Src: 02 CD-RW
TOC not match

If the compare result is failed, the LCD will show the reason of fail message as left.

5.6 Prescan

This function will scan the master of the disc if can read correctly and test the reading speed.

6.Prescan

Press “ENT” button to prescan the disc or press “ESC” to exit.

Scanning-24X 0%
650.0MB 74:00

LCD will show the process of scanning information.

PreScan OK!

If the master of the disc can read correctly, the LCD will show "OK!" message.

PreScan Fail!

If the master of the disc can not read correctly, the LCD will show "Fail!" message.

5.7 Disc Info

This function will show the total of data information from the master disc.

7.Disc Info

Press "ENT" button to show the disc information or press "ESC" to exit.

Total 02 Sessions
Total 10 Tracks

The LCD will show the total sessions and tracks on the master disc.

Total: 74:00
Total: 650 MB

Press "ENT" button again, the LCD will show the total time and capacity on the master disc.

Session 01
Track 01 - 09

Press "ENT" button again and use arrow button to select the session, LCD will show what the information is contained on the session.

Track 01
AUDIO 03:54

Press "ENT" button again and use arrow button to select the track, LCD will show what the information is contained on the track.

5.8 Select Source

This function is provided for user to make a setting of the target source coming from. The source could be selected from CD-ROM, CD-R/RW, or hard drive.

8.Select Source

Press “ENT” button to entry the select source function or press “ESC” to exit..

Src: CD-ROM
01 IDE0 Slave

Then use arrow button to select the CD-ROM, CD-RW or hard drive as the master source.

CD-ROM selected!

When the source is selected, then press “ENT” button. LCD will show the source information as on the left.

Duplicator will prompt you an error message when you select the hard drive as a source and try to copy from a partition that contains without data. Switch to proper partition or use “Image” function to load the master data to current partition.

5.9 Image

This function will be valid when hard drive is installed in the duplicator. Otherwise, this function will be showed “No HDD” on the LCD.

9.Image

Press “ENT” button to enter the selection and press “ESC” to exit.

5.9.1 Load

Place the master CD disc into the CD-ROM or any one of the CD writers, the duplicator will detect and analyze the master CD.

9-01.Image P: A
Load

Press “ENT” button to load data into the current partition of the hard drive.

Load- A -24X 0%
650.0MB 74:00

LCD will show the process of “Load” information.

Image load OK

When the image is succeeded to load into hard drive, the LCD will show as left.

Image Exists
Overwrite?Yes

If there is an image exit in current partition, system will ask to overwrite it. Use arrow button to make “Yes” or “No” selection.

5.9.2 Delete Image

This function clears the master data stored in the current partition of hard drive. After you make a image on the hard drive and then want to empty the image on the hard drive. The “Delete Image” function will delete the current partition of hard drive which user select. To process the function just make a selection and press “ENT” button to delete it.

9-02. Image P: A
Delete Image

When the hard drive of partition contains image, you can use the function to delete it.

Delete Image in
Partition A?Yes

System will make a confirmation to make sure that the partition of image will be deleted. Using arrow button to make “Yes” or “No” selection.

Partition A:
Image is deleted

When the image is successful deleted from hard drive, the LCD will show as left.

5.9.3 Image Info

This function will show the total sessions and tracks in the current partition on hard drive.

9-03.Image P: A
Image Info

Press “ENT” button to show the disc information or press “ESC” to exit.

Total 01 Sessions
Total 01 Tracks

The LCD will show the total sessions and tracks in the hard drive of partition.

Total: 74:00
Total: 650 MB

Press “ENT” button again, the LCD will show the total time and capacity in the hard drive of partition.

Session 01
Track 01 - 01

Press “ENT” button again and use arrow button to select the session, LCD will show what the information is contained in the session.

Track 01
DATA 650.0MB

Press “ENT” button again and use arrow button to select the track, LCD will show what the information is contained in the track.

5.9.4 Compare Image

This setting will compare the image between the target source and the current working partition on hard drive.

9-04. Image P: A
Compare Image

Press “ENT” button to process or press “ESC” to exit.

Comp-A-24X 0%
650.0MB 74:00

LCD will show the process of “Compare” information.

Compare OK: 1
Fail: 0 Diff: 0

When the process is finished, the LCD will show the message of the “Compare” result.

Src: 01 CD-ROM
Total: 650.0MB

Press “ENT” button to see the detail of “Compare” information.

Tgt: 00 HDD P:A
Identical

If the compare result is identical, the LCD will show the message as left.

Compare OK: 0
Fail: 1 Diff: 0

When the compare result is failed. The message will show that the number of discs is failed & succeeded.

Src: 01 CD-ROM
Total: 0 Bytes

Press "ENT" button to see the detail of "Compare" information.

Src: 02 CD-RW
TOC not match

If the compare result is failed, the LCD will show the reason of fail message as left.

5.9.5 Select Partition

This setting help selects the current working partition on hard drive. After selecting a partition, exit will bring you back to Copy function in main menu directly.

9-05.Image P: A
Select Image

Press "ENT" button to change the setting or press "ESC" to exit.

Hard drive installed on duplicator will be partitioned by 1G 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...Z, AA, AB... etc.

Select Working
Partition - A

Using arrow button to select which partition will be worked.

Set Partition to
A

When the partition is set, the LCD will show as left.

5.9.6 Select Src Drive

This setting will select particular drive to be a target source and the data will be coming from.

9-06. Image P: A
Image Src Drive

Press “ENT” button and arrow button to select the source or press “ESC” to exit.

Select Img Src:
01 IDE0 CD-ROM

Then use arrow button to select the CD-ROM or CD-RW as the master source to load the image from.

Load image from
Drive ID-01

When the source is selected, then press “ENT” button. LCD will show the source information as on the left.

5.10 Edit Track

This 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.

10. Edit Track

Press “ENT” button and arrow button to select or press “ESC” to exit.

5.10.1 CD to CD Edit

Select “CD to CD Edit” to select the exit CD track on the CD-ROM then you can copy directly from CD to CD.

10-01. Edit Track
CD to CD Edit

Press “ENT” button to change setting; “ESC” button to bring you to next setting.

Select Track:
1/10 03:25

Follow the LCD to select the track that you want to edit.

Select Track:
+1/10 03:25

Press “ENT” button to select the track. After the track is selected, the “+” will appear. Press “ENT” again will cancel the track that you select to edit.

Select Track:
End 1Trk03:25

Finally, when the track of selection is made. Please use arrow button to move to the “End” manual.

End edit disc
and burn?Yes

Press “ENT” button to finish the disc edition. Using arrow button to make “Yes” or “No” selection.

Copying- 24X Edit
1/10 - > 1/1

LCD will show the process of “CD Edit” copying information.

Burn Complete!
OK: 03

When Copy is finished, the LCD will show the “Burn Complete!” message.

Continue edit
next Disc?Yes

System will ask if to continue edit. Using arrow button to make “Yes” or “No” selection.

Insert next disc

If “Yes” is selected, the source disc will be ejected. Please inset another audio disc to edit.

Select Track:
+2/10 04:25

Follow the step to select the track that you want to edit. Then press “ENT” button to add it on the disc.

Select Track: End 2Trk07:50	Finally, when the track of selection is made. Please use arrow button to move to the “End” manual.
End edit disc and burn?Yes	Press “ENT” button to finish the disc edition. Using arrow button to make “Yes” or “No” selection.
Copying- 24X Edit 1/10 - > 2/2	LCD will show the process of “CD Edit” copying information.
Burn Complete! OK: 03	When Copy is finished, the LCD will show the “Burn Complete!” message.
Continue edit next Disc?No	System will ask if to continue edit. Using arrow button to make the “No” selection then press “ENT” button.
Close all disc's session? Yes	The system will ask to close the disc session. Using arrow button to make “Yes” or “No” selection.
Closing Session Please wait---	LCD will show the process of closing session.

5.10.2 CD to HD

Select “CD to HD” to copy CD data into current partition of hard drive.

10-02. Edit Track CD to HDD Edit	Press “ENT” button to enter the setting; “ESC” button to bring you to next setting.
-------------------------------------	---

Select Track:
1/10 03:25

Follow the LCD to select the track that you want to edit.

Select Track:
+1/10 03:25

Press “ENT” button to select the track. After the track is selected, the “+” will appear. Press “ENT” again will cancel the track that you select to edit.

Select Track:
End 1Trk03:25

Finally, when the track of selection is made. Please use arrow button to move to the “End” manual.

End edit disc
and burn?Yes

Press “ENT” button to finish the disc edition. Using arrow button to make “Yes” or “No” selection.

Load- P0 -24X Edit
1/10 - > 1/1

The source will be loaded to hard drive. LCD will show the process of data loading information.

Image load OK

When “Image Load” is finished, the LCD will show the “Image load OK” message.

Continue edit
next Disc?Yes

System will ask if to continue edit. Using arrow button to make “Yes” or “No” selection.

Insert next disc

If “Yes” is selected, the source disc will be ejected. Please inset another audio disc to edit.

Select Track:
+2/10 04:25

Follow the step to select the track that you want to edit. Then press “ENT” button to add it on the disc.

Select Track:
End 2Trk07:50

Finally, when the track of selection is made. Please use arrow button to move to the “End” manual.

End edit disc
and burn?Yes

Press “ENT” button to finish the disc edition. Using arrow button to make “Yes” or “No” selection.

Load- P0 -24X Edit
1/10 - > 2/2

The source will be loaded to hard drive. LCD will show the process of data loading information.

Image load OK

When “Image Load” is finished, the LCD will show the “Image load OK” message.

Continue edit
next Disc?No

System will ask if to continue edit. Using arrow button to make “Yes” or “No” selection. Select “No” to go next step.

Burn or Move to
partition?Burn

System will ask if to burn into CD or move to partition. Select “Burn” will start to record audio from hard drive into CD.

Copy- P0 -24X 0%
1/2 Trk03:25

LCD will show the process of copying from hard drive to CD information.

Burn Complete !
OK: 03

When burnning is finished, the LCD will show the “Burn Complete !” message.

Burn or Move to
partition? Move

Select “Move” will move the data from hard drive template to partition.

Select Partition A	Select the partition that the data will move into.
Moving to P: A 0%	LCD will show the process of the data is moving.
Moving to P: A OK!	When moveing is finished, the LCD will show the “OK!” message.
Image Exists Overwrite?Yes	If the current partition contains image data, system will ask to overwrite it. Select “No” to keep the data image, “Yes” to overwrite it.
Moving to P: A 0%	LCD will show the process of the data is moving.
Moving to P: A OK!	When moving is finished, the LCD will show the “OK!” message.

5.10.3 Play Audio Track

Select “Play Audio” will make the copy smart plus as a music player.
The user can plug-in the trumpet into the audio out from the device.

10-03. Edit Track Play Audio Track	Press “ENT” button to enter the play audio function; “ESC” button to bring you to next setting.
Select Track: 1/10 03:25	Using arrow button to select which track you are going to play.

Playing Track-1
00:00 / 03:25

LCD will show the information of the track you are playing.

5.10.4 Close Session

Select “Close Session” will make the disc close and can not write any data into. This function can make disc to be read on normal player.

10-04. Edit Track
Close Session

Press “ENT” button to enter the setting; “ESC” button to bring you to next setting.

Close all disc's
session? Yes

System will ask a confirmation to close the disc's session. After this step, the disc can not be written data into.

Closing Session
Please wait---

LCD will show the message of the closing disc's session.

Closing Complete
OK :3 Fail :0

When closing session is finished, the LCD will show the number of discs “OK” and “Fail” message.

5.11 Setup

This function contains a list of options which allows user to change the original default settings. 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.

11. Setup

Press “ENT” button to enter the “Setup” function.

5.11.1 Language (optional)

To set which message of language is shown on the LCD. There are English, Traditional Chinese, Simplified Chinese and Japanese languages are supported on LCD.

11-01. Setup Language

Press “ENT” to change the setting and “ESC” to exit.

5.11.2 Burn Speed

This setting controls the maximum writing speed of CD writers. Default setting is “Auto” 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 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 in CD writing.

11-02. Setup Burn Speed

Press “ENT” to enter the setting and “ESC” to exit.

Burn Speed 24X

Using arrow button to change the burning speed then press “ENT”. (Depend on the CD-RW maximum speed support)

5.11.3 Read Speed

Setting the reading speed of the target source CD-ROM.

11-03. Setup Read Speed

Press “ENT” to enter the setting and “ESC” to exit.

Read Speed 32X

Using arrow button to change the reading speed then press “ENT”. (Depend on the CD-ROM maximum speed support)

5.11.4 Auto Start Drive

This setting controls choose the CD writers will auto start to copy or test when the blank discs insert to CD/RW. Default setting is "Off".

11-04. Setup
Auto Start Drive

Press "ENT" button to enter "Auto Start Drive" and "ESC" to exit.

Auto Start Drive
Off

Using arrow button to change "The number" or "Off" setting then press "ENT" or press "ESC" to go back 11-04 manual.

5.11.5 Strat up menu

This setting controls selects one of the menu items which will become the first menu item to show when turn on duplicator.

11-05. Setup
Startup Menu

Press "ENT" button to enter "Startup Menu" and "ESC" to exit.

Startup Menu
1.Copy

Using arrow button to select menu item setting for the first menu item to show (1 to 11 items) then press "ENT".

5.11.6 Auto Verify

This setting controls On and Off of auto verify the target discs if can read correctly in the CD-ROM drive after copying of the discs. Default setting is "Off".

11-06. Setup
Auto Verify

Press "ENT" button to enter "Auto Verify " and "ESC" to exit.

Auto Verify
Off

Using arrow button to change "On" or "Off" setting then press "ENT" or press "ESC" to go back 11-06 manual.

5.11.7 Auto Compare

This setting controls On and Off of auto compare the data between master and target discs after discs copy. Default setting is "Off".

11-07. Setup
Auto Compare

Press "ENT" button to enter "Auto Compare" and "ESC" to exit.

Auto Compare
Off

Using arrow button to change "On" or "Off" setting then press "ENT" or press "ESC" to go back 11-07 manual.

5.11.8 Auto Prescan

This setting controls On and Off of auto prescan the master of the disc if can read correctly and test the reading speed. Default setting is "OFF".

11-08. Setup
Auto Prescan

Press "ENT" button to enter "Auto Prescan" and "ESC" to exit.

Auto Prescan
Off

Using arrow button to change "On" or "Off" setting then press "ENT" or press "ESC" to go back 11-08 manual.

5.11.9 Eject Disc

This setting controls the ejection of discs by CD writer. Three options are available: “Eject Good Only” setting will only eject the passed discs automatically and leave the failed one in the CD writers. “Eject All Disc” means the CD writers will eject the CD discs no matter whether operation is successful or failed. “Do Not Eject” means all discs will remain in CD writers when job is done and you will have to eject discs from the CD writers manually.

11-09. Setup
Eject Disc

Press “ENT” button to enter “Eject Disc” and “ESC” to exit

Eject Disc
Eject Good Only

Using arrow button to select “Eject Good Only”, then press “ENT” or press “ESC” to go back 11-09 manual.

Eject Disc
Eject All Disc

Using arrow button to select “Eject All Disc”, then press “ENT” or press “ESC” to go back 11-09 manual.

Eject Disc
Do Not Eject

Using arrow button to select “Do Not Eject”, then press “ENT” or press “ESC” to go back 11-09 manual.

5.11.10 Burn on The Fly

This setting controls the writing methods of CD disc. When the setting is “On”, the data will direct copy from source drive to the target drives. When the setting is “Off”, the data will load into a particular temp. partition in the hard drive. Then the copying data will come from the source partition.

11-10. Setup
Burn On The Fly

Press “ENT” button to enter “Burn On The Fly” and “ESC” to exit

Burn On The Fly
On

Using arrow button to change “On” or “Off” setting then press “ENT” or press “ESC” to go back 11-10 manual.

There is no HDD !

If the system does not connect with hard drive, the LCD will show the message as left.

5.11.11 Burn Mode

This setting controls the writing methods of CD disc including “Disc At Once” (DAO) or “Track At Once” (TAO). Default setting is “DAO”. Some CD writers may support different writing methods. If the method selected is not supported, duplicator will automatically switch to the other one.

11-11. Setup
Burn Mode

Press “ENT” button to enter “Burn Mode” and “ESC” to exit

Burn Mode
DAO

Using arrow button to change “TAO” or “DAO” mode setting then press “ENT” or press “ESC” to go back 11-11 manual.

5.11.12 Button Sound

This setting controls On and Off of button sound. Default setting is “On”. Press “ENT” button to change and “ESC” to exit.

11-12. Setup
Button Sound

Press “ENT” button to enter “Button Sound” and “ESC” to exit

Button Sound
On

Using arrow button to change “On” or “Off” setting then press “ENT” or press “ESC” to go back 11-12 manual.

5.11.13 Device Info

This function will show what devices you connect with. When copy control support the devices' brand and type of information will be showed on LCD.

11-13. Setup Device Info	Press "ENT" button to enter the device information and "ESC" to exit.
00 IDE0 Master CD-ROM : TEAC	Using arrow button to select the device or press "ESC" to go back 11-13 manual.
CD-540E 3.0A	Press "ENT" button to see the device information and "ESC" to go back 11-13 manual.
01 IDE1 Master CD-RW : PLEXTOR	Using arrow button to select another device or press "ESC" to go back 11-13 manual.
CD-R PX-W2410A 1.01	Press "ENT" button to see the device information and "ESC" to go back 11-13 manual.
02 IDE2 Master CD-RW : PLEXTOR	Using arrow button to select another device or press "ESC" to go back 11-13 manual.
CD-R PX-W2410A 1.01	Press "ENT" button to see the device information and "ESC" to go back 11-13 manual.

03 IDE3 Master
CD-RW : PLEXTOR

Using arrow button to select another device or press "ESC" to go back 11-13 manual.

CD-R PX-W2410A
1.01

Press "ENT" button to see the device information and "ESC" to go back 11-13 manual.

5.11.14 System Info

This function will show the system of information on the LCD.

11-14. Setup
System Info

Press "ENT" button to enter the "System Info" and see the next information, press "ESC" to exit.

CD Duplicator
1-3 ver: 1.10B

SST: 39SF020
2001 / 11 / 16

The LCD shows ARS-2030 as left.

CD Duplicator
1-7 ver: 1.10T

WINBOND: W49F002U
2001 / 11 / 16 ACARD

The LCD shows ARS-2032 as left.

5.11.15 Quick Erase

This function will quick erase the data on the CD-RW disc. It will take a short time to do it.

11-15. Setup
Quick Erase

Press "ENT" button to enter the "Quick Erase" and "ESC" to exit.

All data will be
lost, erase?Yes

Using arrow button to change "Yes" or "No" setting then press "ENT" or press "ESC" to go back 11-15 manual.

Erasing disc
00:24 (Quick)

LCD will show the process of the erasing disc.

Quick Erase
OK:01 Fail:00

When erasing disc is finished, the LCD will show the message as left. Press “ESC” to go back 11-15 manual

5.11.16 Full Erase

This function will full erase the data on the CD-RW disc. As it will complete to erase the data, it will take a minutes to do it.

11-16. Setup
Full Erase

Press “ENT” button to enter the “Full Erase” and “ESC” to exit.

All data will be
lost, erase?Yes

Using arrow button to change “Yes” or “No” setting then press “ENT” or press “ESC” to go back 11-16 manual.

Erasing disc
03:24 (Full)

LCD will show the process of the erasing disc.

Full Erase
OK:01 Fail:00

When erasing disc is finished, the LCD will show the message as left. Press “ESC” to go back 11-16 manual

5.12 Adv Setup

Some of advance setup function allows user to change the system configuration. Changes should be made only when you are fully familiar with the function. To enter the function, please **press “ESC” button for 2 seconds.**

5.12.1 UnderRun Protect

This setting controls On and Off of Buffer Under Run Protection (ex. Burn Proof, SafeBurn, JustLink, Seamless Link...etc.). Default setting is "On".

12-01. Adv Setup
UnderRun Protect

Press "ENT" button to enter "UnderRun Protect" and "ESC" to exit.

UnderRun Protect
On

Using arrow button to change "On" or "Off" setting then press "ENT" or press "ESC" to go back 12-01 manual.

5.12.2 Overburn

This setting controls turns on the CD writer which has overburn function. Default setting is "Off".

12-02. Adv Setup
Overburn

Press "ENT" button to enter "Overburn" and "ESC" to exit.

Overburn
On

Using arrow button to change "On" or "Off" setting then press "ENT" or press "ESC" to go back 12-02 manual.

5.12.3 Read Error Skip

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

12-03. Adv Setup
Read Error Skip

Press "ENT" button to enter "Read Error Skip" and "ESC" to exit.

Read Error Skip
Off

Using arrow button to change “On” or “Off” setting then press “ENT” or press “ESC” to go back 12-03 manual.

5.12.4 Format Hard Disk

This setting controls will initiate the hard drive and delete al of the Images.

12-04. Adv Setup
Format HDD

Press “ENT” button to enter “Format HDD” and “ESC” to exit.

All data will be
lost, format? Yes

Using arrow button to change “Yes” or “No” setting then press “ENT” or press “ESC” to go back 12-04 manual.

There is no HDD!

If the system does not connect with hard drive, the LCD will show the message as left.

5.12.5 Verify HDD

This will verify the target of entire Hard Disk or any selected parti-
tions of hard drive if it can read correctly.

12-05. Adv Setup
Verify HDD

Press “ENT” button to enter “Verify HDD” and “ESC” to exit.

Verify Disk or
Partition? Disk

Using arrow button to change setting to “Disk” then press “ENT” or press “ESC” to go back 12-05 manual.

Verify Disk or
Partition? Parti

Using arrow button to change setting to “Parti” then press “ENT” or press “ESC” to go back 12-05 manual.

5.12.6 Burn-in

This function is a burn-in test function. It will run the emulate writer 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.

12-06. Adv Setup
Burn-in

Press "ENT" button to enter "Burn-in" and "ESC" to exit.

Burn-in
Test

The data will not be written on the blank CD discs and the discs will remain blank as original after test.

Sel burn-in num:
Run Continuous

Using arrow button to change "RunContinuous", "1~10", "10~100", "100~1000" setting. Press "ENT" or "ESC" button to go back 12-06 manual.

Burn-in
Erase&Copy

The system will repeat to erase and write on the CD-RW discs. It is only for CD-RW discs to do rewriteable.

Sel burn-in num:
Run Continuous

Using arrow button to change "RunContinuous", "1~10", "10~100", "100~1000" setting. Press "ENT" or "ESC" button to go back 12-06 manual.

5.12.7 Update Firmware

This function will update your firmware to the latest one. Place the CD disc which it contain the latest firmware data (firmware CD disc) into CD-ROM drive, the duplicator will find the data and update its firmware automatically. During updating, do not turn off the power of machine since the update will not be finished till machine reset itself.

Procedures to make the firmware CD disc by yourself:

1. Get the firmware from ACARD through e-mail or directly download from the web site: <http://www.acard.com>
2. Unzip the firmware you have got and write the file "**cdxxx.bin**" into the root directory of 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 firmware. When updating the firmware program from the CD, only the one in last session will be used. Other versions in previous sessions will be ignored.

12-07. Adv Setup
Update Firmware

Select source drive to CD-ROM first! Then press "ENT" button to enter "UpdateFirmware" and "ESC" to exit.

Searching F/W---
XXX/XXXXX

System will search the new firmware from the CD and the LCD will show the process as left. When find the new firmware, just press "ENT" button. The system will update it.

5.12.8 Compare Firmware

This function will help to compare with current control firmware version and the update version when the firmware disc was placed into the CD-ROM.

12-08. Adv Setup
Compare Firmware

Press "ENT" button to enter "Compare Firmware" and "ESC" to exit.

5.12.9 H/W Diagnostic

This function will detect what devices are connected with the control. The LCD will showed the information of the hardware.

12-09. Adv Setup H/W Diagnostic

Press “ENT” button to enter “H/W Diagnostic” and “ESC” to exit.

↑ ↓ Enter ESC
Hold ESC to exit

LCD will ask user to do the button test. Following the LCD instruction test each function button.

After the button function testing, the system will self-test SDRAM, the hardware connecting test, and flash test. Every testing process will be shown on the LCD. It just take a minutes to get the results of hardware diagnostic. It is a easy way to know if the system work properly.

Test finished

When testing is finished, the LCD will show the “Test finished” message. Press “ESC” button to go back 12-09 manual.

5.12.10 Load Default

This function will reset whole previous setting back to factory’s default setting. Different settings will cause duplicator to react differently.

12-10. Adv Setup Load Default

Press “ENT” button to enter “Load Default” and “ESC” to exit.

Load Default
Config? Yes

Using arrow button to change setting. When “Yes” is selected, the duplicator will return to factory’s default setting.

Load Default
OK

The LCD message will show the setting have been changed by “OK” as left.

Chapter 6 Trouble Shooting

1. No display on LCD or the unit does not operate when power on.

- Please check the connection of power cable and the environment of power outlet is normal.
- Turn off the power of machine, open the case of duplicator to check whether the power cable is fixed.

2. LCD shows the Error message.

- During operation like Copy, Test, Compare and Verify, you may press ESC button 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.
- Failed reading may cause the error message shown on the LCD display. Change the master CD to try again.
- During operation, if read error, buffer under run or writing error occurs, the LCD will show error message like: Pass xx, failed xx.
- 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.

3. CD-ROM can not read disc and shows error message.

- Check the format of master CD or master CD itself for damage.
- 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.

4. Buttons do not function.

- May be still busy on task.
- Button malfunction.
- Faulty board.

5. Copy completed but CD-R disc is not readable / executable?

- Use compare to check.
- Change another CD-ROM drive to test.

6. The failure rate is high.

- Lower the speed of CD-Writers and try again.
- Quality of blank disc is poor.
- Check for latest firmware version.
- Check the CD-Writer maximum writing speed. Over 24X writing process please copy to hard drive first then to CD.

7. Can not boot-up or fail to upgrade firmware.

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

8. Can not find “12. Adv Setup” function.

- Press “ESC” button for 2 seconds to enter the “Adv Setup”.

9. To cancel the duplicator working process.

- Press “ESC” button for 2 seconds to cancel any “Copy”, “Test”, or “Verify” etc. function while the job is in working process.

Appendix 1

- 1. Copy
- 2. Test
- 3. Test&Copy
- 4. Verify
- 5. Compare
- 6. Prescan
- 7. Disc Info
- 8. Select Source
- 9. Image
 - 9.01 Load (If there is an image exist in current partition, ask overwrite it or select another partition)
 - 9.02 Delete Image
 - 9.03 Image Info
 - 9.04 Compare Image
 - 9.05 Select Image (Size of each partition is 1GB)
 - 9.06 Image Src Drive (Select which drive to load image)
- 10. Edit Track (For AUDIO disc only)
 - 10.01 CD to CD Edit
 - 10.02 CD to HDD Edit
 - 10.03 Play Audio Track
 - 10.04 Close Session
- 11. Setup
 - 11.01 Language (LCD Type1:English)
 - 11.02 Burn Speed (If no disc in CD-RW, list all supported speed else list speed supported by disc)
 - 11.03 Read Speed (Maximum)
 - 11.04 Auto Start Drive (If ready CD-RW number equals to this value, auto start to copy or test)
 - 11.05 Startup Menu
 - 11.06 Auto Verify (On Off)
 - 11.07 Auto Compare (On Off)
 - 11.08 Auto Prescan (On Off)
 - 11.09 Eject Disc (Eject Good Only 2.Eject All Disc 3.Do Not Eject)
 - 11.10 Burn On The Fly (On Off)
 - 11.11 Burn Mode (DAO 2.TAO)
 - 11.12 Button Sound (On Off)
 - 11.13 Device Info
 - 11.14 System Info
 - 11.15 Quick Erase
 - 11.16 Full Erase
- 12. Adv Setup (Press ESC 2 seconds to enter this menu)
 - 12.01 UnderRun Protect (On Off)
 - 12.02 Overburn (On Off)
 - 12.03 Read Error Skip (On Off)
 - 12.04 Format HDD
 - 12.05 Verify HDD
 - 12.06 Burn-in
 - 12.06.01 Erase&Copy
 - 12.06.02 Test
 - 12.07 Update Firmware (Update new version firmware from CD-ROM or CD-RW)
 - 12.08 Compare Firmware
 - 12.09 H/W Diagnostic
 - 12.10 Load Default (Restore System default config)

○ : Meaning default setting

Appendix 2 LCD Message List

Normal LCD Message List :

Message	Description
Initialize SDRAM	Initialize the memory on the system
Detect Drives	Detect what drives is connected with the system
User Abort!	While the function is working, cancel the job
Analyzing....	Analyzing the source disc
Source Drive Not Ready	Source drive is not ready to read
Target Drive Not Ready	Target drive is not ready to write
Source Disc Not Ready	Source disc in not ready for reading
Target Disc Not Ready	Target drive is not ready for writing
Erasing disc	System is erasing the data on the CD-RW disc
Fail to get Drive Info!	The drive information can not recognize
Fail to get Src Disc Info!	Can not read the information from CD disc
Save new config Fail!	The new setting of configuration can not be saved
Load Default Config?	Loading the factory default setting
Src&Tgt can't in the same channel	When doing the comparing, the source and target can not in the same channel
Preparing.....	System is preparing the data and devices connecting for CD recording
Check Target Please Wait.....	System is checking the target device, wait for a while
Audio Disc!!! Can't compare!	Audio disc can not do the comparing
Identical	After comparing, the contains of CD is the same
Read disc error	During the comparing, the disc is read error
Cannot read TOC	CD's TOC data can not read
TOC not match	After comparing, the source and target device' s TOC is not match
Source Disc Empty !!!	The source CD is blank without data
Target overflow	The target of CD do not have enough space to record the source
Target Disc Not Empty!!!	The target of disc is not empty to record

Press a Key to Eject Good Disc	Press any key to eject the good disc after the recording process
Press a Key to Eject Fail Disc	Press any key to eject the fail disc after the recording process
CD-RW does not Support the Func	CD-RW device can not support this function
Hold ESC to exit	Press "ESC" for a seconds to terminate the testing
All data will be lost, erase?	All data on the CD disc will be losing. Confirmation to erase the CD-RW disc
Erase Finished	CD-RW disc have been erased
No Eraseable Disc in CD-RW !!	The CD discs on the CD-RW devices is not erasable disc

The Message of Connecting Hard Drive with Image Loading :

Message	Description
HDD not Format!	The hard drive is not format yet
Format HDD?	The message of formatting hard drive
All data will be lost, format?	All data on the hard drive will be losing. Confirmation of the formatting hard drive
Format HDD OK !	Formatting hard drive have been done
Image load OK	The image have been loaded from CD to hard drive
Image load Fail	The image fail to load from CD to hard drive
HDD too small to handle image!	The hard drive does not have enough space to store the data image (at least 1Gbytes)
No Valid HDD!	The system can not find a valid hard drive
HDD too small	The space of hard drive is too small
No Image in Partition xx	In partition xx does not have a data image
Image Exists Overwrite?	In current partition does exist data image. The confirmation of the overwriting the exist data image partition
Delete Image in Partition xx?	Deleting the data image in partition xx
Partition Damage	The image partition have been damaged
Verify Disk or Partition?	Verify the entire hard drive or just particular partition
Verify Hard Disk OK!	Verify the hard drive successfully
Verify Hard Disk Fail!	Failing to verify the hard drive
Verify Partition Header!	Verify the partition header
Select HD First!	This function must select a formatted hard drive

The Message of Audio Edit :

Message	Description
Lost selected Tracks?	Abort the tracks selected and delete it
End edit disc and burn?	Finishing the music disc edit and start to record the CD
Continue edit next Disc?	Asking to continue editing next music disc or not
Target Overflow Re-Select	The CD disc space is not enough to record the selecting of tracks, please re-select it.
Close all disc's session?	Closing the disc's session and can not allow to record any further data
Can't edit HDD	The hard drive can not edit as a source audio CD
No AUDIO track in this disc	The source of CD disc can not find a audio track
Insert next disc	Asking to insert the next audio disc
Sessions were closed already !	The disc of sessions have been close already
Burn or Move to partition?	Confirmation of direct burning to CD disc or move the data to the partition
Tgt overflow, del last trk?	The CD disc space is not enough to record the selecting of tracks, asking to delete the last track.
Ins empty disc Continue?	Asking to insert a empty disc and continue the process

The Message of Firmware Update :

Message	Description
Invalid firmware Disc	The disc is not contained a valid firmware
Updating F/W	Firmware is updating
Update F/W xxxx to yyyy ?	Confirmation of updating firmware version from xxxx to yyyy
Searching F/W...	Searching for a valid firmware
Check Sum Error!	The firmware check sum error
Source can't be Hard Disk!	During the firmware compare, the source can not be hard drive
Last update F/W OK!	The lasting update firmware is successful
Last update F/W Fail!	The lasting update firmware is fail
Flash ROM fail!	The Flash ROM is fail to write

Appendix 3
Technical Support Form

Email: support@acard.com

http://www.acard.com

Model:	ARS-2030 / ARS-2032		F/W Version:	
Channel	Model		F/W Version	
IDE0 CD-ROM				
IDE1 CD-R/RW				
IDE2 CD-R/RW				
IDE3 CD-R/RW				
IDE4 CD-R/RW				
IDE5 CD-R/RW				
IDE6 CD-R/RW				
IDE7 CD-R/RW				
Hard Disk Configuration				
Hard Disk Model/type				
Capacity				
Firmware version				
Others				
Problem Description				