

# **AmiCDFS**

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**COLLABORATORS**

	<i>TITLE :</i> AmiCDFS		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
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# Contents

<b>1</b>	<b>AmiCDFS</b>	<b>1</b>
1.1	AmiCDFS-Guide Main . . . . .	1
1.2	Introduction to AmiCDFS . . . . .	2
1.3	How to install AmiCDFS . . . . .	2
1.4	Disclaimer . . . . .	3
1.5	Details . . . . .	3
1.6	Important Changes . . . . .	4
1.7	The Mount File . . . . .	5
1.8	Audio Disks . . . . .	7
1.9	Hybrid Disks . . . . .	8
1.10	Benchmarks . . . . .	8
1.11	Technical Details . . . . .	9
1.12	Bugs & Quirks . . . . .	9
1.13	Legal . . . . .	10
1.14	Author . . . . .	11
1.15	History . . . . .	12
1.16	Credits . . . . .	14

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## Chapter 1

# AmiCDFS

### 1.1 AmiCDFS-Guide Main

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AmiCDFS (AmiCDROM) 2.21 (06.06.96)

by Martin Berndt

The ultimate Amiga CD-ROM Filing System  
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This old goodie by Frank Munkert has been reworked to be the fastest and most compatible CD-ROM Filesystem for the Amiga!

Just give it a try, and you will never want to be without it again!

Introduction

How to install AmiCDFS

Details

Bugs & Quirks

Legal Stuff

Who did it?

History

Credits

Read old Manual

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!!! AmiCDFS 2.21 is SHAREWARE !!!  
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## 1.2 Introduction to AmiCDFS

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### Introduction

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AmiCDFS 2.21 is a CD-ROM disk filing system for the Amiga. It supports the ISO-9660 standard (single and multiple sessions), the Rock Ridge Interchange Protocol and the Macintosh HFS format.

The old and obsolete HighSierra Protocol is NOT supported!

The CD-ROM drive is mounted as a DOS device (e.g. CD0:). You can access files and directories on a CD-ROM disk by the usual syntax, e.g. "type cd0:foo/readme.txt".

AmiCDFS 2.21 has been developed with kind permission of Frank Munkert using his old AmiCDROM 1.15 source files, and would have never been possible without his great work. Nevertheless it was a lot of hard work, and so I think it's fair enough to ask you for a small amount of money for MY work. If you agree pay the share, otherwise just let it be, but don't expect any support from me.

AmiCDFS 2.21 is more compatible and faster than any other CD-ROM filing system for the Amiga including commercial ones, so I really think it's worth this small amount of money...

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The future of this product depends on YOU !!!

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## 1.3 How to install AmiCDFS

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### How to install AmiCDFS 2.21

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- Step 1: Copy the supplied Mount and SetPatch commands to C:.  
Read the  
Disclaimer  
notice!
- Step 2: Copy AmiCDFS to L:. If you own a 68020 or better copy AmiCDFS.030 instead and rename it.
- Step 3: Copy the CD0: mount entry file to DEVS:DOSDrivers/ and edit it as described in the next section.
- Step 4: Copy def\_CDDAdisk.info to ENVARC:sys/ if you wish to use CDDA disks. Set the Default Tool as described in a later section of this manual.  
If you are still using Kickstart 2.x copy WBStart-Handler to L:, else copy wbstart.library to LIBS:.
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Step 5: Copy MCDPlayer wherever you want.

Step 6: Reboot your machine.

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## 1.4 Disclaimer

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### Disclaimer

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Mount 40.4 (c) Copyright 1990-1995, Escom AG. All Rights Reserved.

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## 1.5 Details

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### Details

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Important Changes

The Mount File

Audio Disks (CDDA)

Hybrid Disks

Benchmarks

Some Technical Details

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## 1.6 Important Changes

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### Important Changes

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- "cdrom-handler" has been renamed to "AmiCDFS"
- Many obsolete features and parameters have been removed.
- The "Startup" field has been replaced by "Control" (needs Mount v39+).

New template: LC=LOWERCASE/S,TD=TRACKDISK/S,  
BL=BUFFERLINES/K/N,FB=FILEBUFFERS/K/N,  
DC=DISKCHANGE/K/N,TDC=TDCHANGE/S,  
TOSHIBA/S,OLDMODE/S

- The mount files have changed significantly, so it's better to delete the old ones before installing AmiCDFS 2.21.
- The code is fully reentrant now, and will only be loaded once as long as the DosType is the same.
- AmiCDFS has a real LRU-Cache now!

The standard buffers ("Buffers" entry in mount file) are split into BufferLines. One BufferLine will always be read completely (Prefetch). If you do not specify BufferLines or set it to 1 the Buffers are handled as before.

Example: Buffers = 64 and BufferLines = 8 results in  
8 Caches with 8 Blocks (8\*2048 Bytes) each.

- CDCControl will no longer work.
  - DosPacket handling routines have been completely rewritten and should be much more compatible now.
  - "AddBuffers" now returns the number of StdBuffers + FileBuffers.
  - FileBuffer routines rewritten, should be much faster now with very large files.
  - The FileBuffer is a Circular Cache now and though able holding more than one file at a time.
  - Implemented motor control code for some bad device drivers.
  - Diskchange polling is no longer needed with hostadaptors which support diskchange interrupts (like A3000, Mastercard MC702 etc.). If your hardware does not support these you should set DC=3.
  - Diskchange polling may optionally be done using trackdisk commands.
  - The CDDA icon is loaded as "ENV:sys/def\_CDDAdisk.info" now. Its Default Tool is the command to be executed if the user doubleclicks
-

the CDDA icon. If you put a "#" in front of the command it will be executed as a WB application (WBStart-Handler).

- Added a nice 256 color icon for CDDA, normal and NewIcon type. Copy it to "ENVARC:sys/" and set your Default Tool.
- Improved handling of Audio/Data Hybrid CD's.
- Extension for HFS resource forks always is ".rs" now.
- Improved HFS character conversion.
- Holding the CONTROL key while inserting a medium replaces old HFSFIRST option.
- Fixed Lock/Unlock routines and structures.
- DosList handling rewritten to prevent deadlocks.
- Removed some obsolete vendor specific routines.
- Included a bugfixed version of MCDPlayer.
- Replaced some routines by fast assembler code.
- Created 68030 version.
- Recompiled with SAS/C 6.56.

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## 1.7 The Mount File

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### The Mount File

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Your CD-ROM Mount file (e.g. DEVS:DosDrivers/CD0) should look like this:

```

/* $VER: CD0 2.15 (23.04.96)
 *
 * CD-ROM filesystem mount entry
 */

Device          = scsi.device          1)
Unit            = 1                    2)
FileSystem      = L:AmiCDFS
Flags          = 0
BlocksPerTrack = 32
BlockSize      = 2048
Reserved       = 0
LowCyl         = 0
HighCyl        = 11000
Surface        = 1

```

---



```

Buffers          = 64                      3)
BufMemType      = 1                      4)
Mask            = 0x7fffffff             5)
GlobVec         = -1
Priority        = 10
DosType        = 0x43444653
StackSize      = 600
Mount          = 1

Control         = "BL=8 FB=32"           6)

```

```
/* Control field template:
```

```

*
* LC=LOWERCASE/S,TD=TRACKDISK/S,
* BL=BUFFERLINES/K/N,FB=FILEBUFFERS/K/N,
* DC=DISKCHANGE/K/N,TDC=TDCHANGE/S,
* TOSHIBA/S,OLDMODE/S
*/

```

---

1) Insert your Device name here, e.g. "MASOBOSHI.device".

2) Insert the Unit number of your CD-ROM drive here.

3) Number of Standard Buffers (LRU-Cache).

4) Memory type for SCSI Transfers:

```

1          means all Public Memory
3          means Public Chip Memory only
5          means Public Fast Memory only

```

DO NOT USE ANY OTHER VALUES !!!

5) Set the Mask to "0xffffffff" if your Device is only able to do transfers to 24Bit DMA Memory. You needn't care about alignment, because all buffers are always Quad Longword aligned.

6) The following options may be used:

```

LC          Map ISO 9660 names to lower case.
LOWERCASE

```

```

TD          Use trackdisk commands instead of SCSI-direct
TRACKDISK  calls. Only needed for VERY bad device drivers
           and most often AmiCDFS 2.21 will detect these
           automatically.

```

```

BL          Sets the number of lines for the LRU-Cache.
BUFFERLINES The Standard Buffers are split into BufferLines,
           and one line will always be read completely.
           This will speed up all operations significantly!
           If you don't specify a value or set it to 1 the
           Buffers are handled as before.

```

Example:

---

Buffers = 64 and BL = 8 results in  
8 caches with 8 blocks (8\*2048 Bytes) each.

FB  
FILEBUFFERS Sets the number of buffers for file operations  
using the AmigaDOS Read() call.

DC  
DISKCHANGE Enables old diskchange polling, set it to 3 or  
any other useful value if your device does not  
recognize diskchange interrupts.

TDC  
TDCHANGE Use trackdisk instead of SCSI direct calls for  
all diskchange scans. Some devices may work better  
using this option, but you should only try it  
if you have weird problems with diskchanges.

TOSHIBA Some Toshiba drives have difficulties switching  
between Data and XA-Mode. If you encounter any  
problems with PhotoCDs try setting this switch.

OLDMODE Some very old SCSI Host-Adaptors do not work  
correctly with CMD\_READ and block sizes above  
512 bytes. If this option is set AmiCDFS does  
all reading via SCSI-Direct calls, just like  
the old AmigADROM. But this switch should only  
be used if nothing else works!

DO NOT TRY TO USE ANY OTHER OPTION !!!

## 1.8 Audio Disks

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### Audio Disks (CDDA)

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Whenever an audio disk is inserted in your CD-ROM drive, an AppIcon will be displayed on your Workbench screen. If it exists the iconfile ENV:sys/def\_CDDAdisk.info will be used.

If the Default Tool of the icon contains a command name, then AmiCDFS will try to start that program (which should be a CDDA Player) when double-clicking the AppIcon. Otherwise the disk simply starts playing from track 1.

If the first character of the Default Tool entry is a # (Hash) symbol, the according program will be started as a Workbench application using wbstart.library (OS 3.x) or L:WBStart-Handler (OS 2.x).

A bugfixed version of MCDPlayer by Boris Jakubaschk is included in the AmiCDFS 2.21 distribution archive.

These features are not available if the

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TRACKDISK

option is selected or  
the drive doesn't support the needed commands.

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## 1.9 Hybrid Disks

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### Hybrid Disks

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Sometimes disks are dual-format (ISO-9660 and HFS). In this case the ISO-9660 part will always be preferred. If you wish to force mounting the HFS part of such a disk, simply hold the CONTROL key pressed while inserting the disk in your CD-ROM drive.

If a Sound & Data (ISO-9660 or HFS) hybrid disk is inserted, two icons will be placed on your Workbench. You can access the data part like usual while using the audio part with a CDDA Player program.

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## 1.10 Benchmarks

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### Benchmarks

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The following benchmark script has been used to evaluate several Amiga CD-ROM filing systems:

```
c:makedir ram:tools
c:date
c:copy AMINET9:Tools ram:tools all quiet
c:date
c:delete ram:tools all quiet
```

The benchmark system configuration:

```
Amiga 2000 ECS, 68030-50, 68882-50
2 MB ChipRAM, 20 MB 32Bit FastrAM
Masoboshi MC702 with SANYO CRD-254SH QuadSpeed CD-ROM
AmigaOS 3.1, Kickstart 40.70, Workbench 40.42
```

Results:

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AmiCDROM 1.15	AmiCDFS 2.21	AsimCDFS 3.5	CacheCDFS 2.6
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72 sec

32 sec

56 sec

44 sec

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## 1.11 Technical Details

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### Technical Details

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The whole code is fully reentrant now, so that it may be shared among multiple instances of the filing system as long as the  
DosType  
is  
identical.

AmiCDFS 2.21 is now able to read any type of physical device, so it may be used to read Macintosh HFS floppy disks as well.

The drivers task stack is handled by the filing system code itself now to make sure that it is always big enough. So AmiCDFS 2.21 could even be installed as part of a Rigid Disk Block (RDB).

All DOS packet handling code has been rewritten in order to eliminate problems with unknown packet types and to allow implementation of some extra functions. Packets like ACTION\_MORE\_CACHE now return valid results even if they do nothing.

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## 1.12 Bugs & Quirks

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### Bugs & Quirks

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No real bugs are known, yet!

AmiCDFS 2.21 has been tested on many different hardware configurations, including IDE/ATAPI drives, PCMCIA adaptors and several SCSI drives.

If you encounter any difficulties, please check the following topics:

- Are you using a IDE/ATAPI CD-ROM drive?

Every device has to emulate a SCSI-2 drive, so everything depends on how good this emulation is. Try setting "TD" in Control field if nothing seems to work.

- Diskchanges are not recognised properly?
-

It is possible that your device driver does not support diskchange interrupts. Report it to the manufacturer and try setting "DC=3" and/or "TDP" in Control field.

- PhotoCDs are not recognised properly on a Toshiba drive?

Try setting the "TOSHIBA" switch in Control field.

- All data CDs are "NDOS" and cannot be read?

If you are using a very old SCSI Host-Adaptor (HardFrame, Supra etc.) try setting the "OLDMODE" switch in Control field.

- Are you using any bad software?

If you're using very nasty hacks or programs like MCP, please don't report any bugs. It is useless to expect any program to work properly while trashing important functions of your Operating System!

- Anything else?

Send me a mail describing your problems and your configuration!

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## 1.13 Legal

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### Legal Stuff

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AmiCDFS 2.21 is SHAREWARE !!!

If you use it permanently please send me a donation of US\$ 15 (DM 20).  
Please add \$5 when you send me a cheque to cover clearing charges.

Bank Account for money transfer (German users only):

R.Berndt    Konto 393439-438    BLZ 36010043    Postbank Essen

THANK YOU FOR YOUR SUPPORT !

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### Copyright

AmiCDFS 2.21 is written and copyright © 1996 by Martin Berndt. No parts of this program may be altered by any means (this includes editing, reprogramming, crunching, resourceing etc.), except archiving.

### Disclaimer

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The author is in no way liable for any changes made to any part of the program, or consequences thereof as he is in no way liable for damages or loss of data directly or indirectly caused by this software.

#### Distribution

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Neither fees may be charged nor profits may be made by distributing this piece of software. Only a nominal fee for costs of magnetic media may be accepted, the amount of US \$5 shouldn't be exceeded for a disk containing AmiCDFS. CD Manufactures are specifically granted the right to include this program on CD collections, as long as they are for the Public Domain. But the user still has to pay the Shareware fee!

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## 1.14 Author

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### Author

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Version 1.15    03-Nov-94    (C) 1993,1994 by Frank Munkert

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Version 2.21    06-Jun-96    (C) 1996 by Martin Berndt

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Use 'download <number>' to get the archive you want

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                                 +49-2151-974923  
                                 +49-2151-974961

Login: GAST

Online-Menu: Support-Area

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- 2.8 (27-Mar-96)
    - fixed small bug in SCSI classification code
    - the FileBuffer is a Circular Cache now
  - 2.9 (30-Mar-96)
    - added  
OLDMODE  
switch to support some very  
old SCSI Host-Adaptors (HardFrame, Supra etc.)
  - 2.10 (07-Apr-96)
    - AmiCDFS now really works with HFS floppy disks  
and HFS harddisk partitions
    - included example mount file for MAC0
    - fixed some small bugs
  - 2.11 (10-Apr-96)
    - improved and bug-fixed HFS handling routines
    - DosEnvec will now always have valid entries if  
SCSI\_ReadCapacity was successful
    - LineCache will be switched off when mediumsize  
cannot be determined or when using a SCSI  
device in Trackdisk mode
  - 2.12 (13-Apr-96)
    - fixed bug in Symbolic link handling
    - fixed bug in SCSI\_ReadCapacity
  - 2.13 (16-Apr-96)
    - implemented support for Protection bits
    - improved Symbolic link handling
  - 2.14 (20-Apr-96)
    - DosList handling completely rewritten in order  
to prevent deadlock problems
  - 2.15 (24-Apr-96)
    - improved Diskchange routines
    - replaced TDPOLLING switch by  
TDCHANGE
  - 2.16 (25-Apr-96)
    - LineCache Prefetch will be switched off ↔  
on  
Audio/Data hybrid disks now to avoid illegal  
sector accesses
    - improved LineCache efficiency
  - 2.17 (05-May-96)
    - hopefully fixed a problem with some device  
drivers causing a disk to become NDOS when it  
was already inserted while mounting
  - 2.18 (27-May-96)
    - improved and optimised Cache routines making  
AmiCDFS another 10% faster
  - 2.19 (29-May-96)
    - added character conversion for RockRidge file  
names containing colons
    - small improvements in startup code
  - 2.20 (30-May-96)
    - fixed serious bug in DosList handling
  - 2.21 (06-Jun-96)
    - improved routine for initial media check
- 
-



