

003165b8-0

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Chapter 1

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1.1 GroovyPlayer Documentation

You are reading the

GroovyPlayer 1.0 AmigaGuide Help
Created by Alan on 4 November 1996 at 14:17 am

1	Introduction
2	Motivation
3	Quick Start
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1.2 Introduction to GroovyPlayer

You have just gotten hold of a speedy SCSI-2/ATAPI audio CD player, which was designed to be a high end program, beating all other software available on the Amiga in terms of both look and features.

Well, I'm not sure if I have reached this goal or not - you decide. In fact, this program is the result of 4.5 months of hard work, started without any documentation but with abounding enthusiasm. I even did some little research in this field and took a look at several CD players on the Amiga, the Mac and the pc, and I also analyzed a "real" CD player (Technics) to brush up a little on advanced features.

The program does not have too serious requirements: you need a CD-ROM drive

(of course...), a device driver for it (usually atapi.device or scsi.device, but any SCSI-2 compliant device should work), KickStart 3.x and about 200K of free memory. Note: you do NOT need to mount CD0: (that is, any CD-ROM filesystem) in order to use GroovyPlayer - you only need the device.

So, let's proceed to installation/usage, or to the quick start section if you are very impatient (like I am...:-).

I would like to thank all the people who contributed to the preparation of this program and all those who decided (or will decide :-) to register.

1.3 The motivation behind GroovyPlayer

I purchased a CD-ROM drive a couple months ago, and the retailer bundled three or four (freeware/shareware) CD players with it. I was happy when I first connected the drive and it worked without a hitch, so I thought I'd listen to my audio CD (the only one I had :-).

Unfortunately, the programs did not do much beyond playing the CD, offering nothing more than play/pause, stop (did not work), eject, skip and some kind of random access. Oh yes, volume, too: one of the programs (PlayCD, to be precise) allowed me to control the audio volume. I wanted something more!

During the long months of development it turned out that PlayCD is a very-very compatible program. In fact, it is the only program that can handle every ATAPI CD-ROM drive, even the cheapest oh-lets-just-throw-everything-inside drives. This level of compatibility is just a dream for GroovyPlayer, although I used (borrowed...) at least 5 different drives in an effort to ensure compatibility.

1.4 Let's go, man!

Installation:

Either use the provided Installer script, or:

- Copy the contents of the 'Fonts' sub-directory to your FONTS: directory/assign.
- Copy GroovyPlayer anywhere you want.
- Decrunch the LZX archive titled 'CDTitles.lzx'.
- Copy the contents of the 'CD Titles' sub-directory anywhere you want.
- Copy the contents of the 'ENVARC' sub-directory to your ENVARC: directory/assign.

Usage:

- Start the program (WB or CLI, all the same).
-

- If you use a CD-ROM device driver other than the default ('scsi.device'), a requester will pop up, followed by the preferences window. Define the name and the unit number of your driver, save your settings, then quit.
- That's it - you can restart GroovyPlayer and it works! (Please, read the Usage section, too, as it ain't always easy to figure out about all the weird functions).

1.5 The features of GroovyPlayer

GroovyPlayer has the following features:

- Supports standard SCSI-2 and ATAPI drives
 - All standard CD player functions including play/pause, skip, search, stop, eject and random track access
 - Nice front-end that adapts to your screen depth and palette (a la Empe...)
 - Track list including name of author, CD title and track titles, compatible with MCDPlayer (so you can use your saved list files)
 - NEW! • Double-clicking on a track name in the List window will start playing that track
 - NEW! • 'Smart List' switch enables the user to program the player from the list window, which appears and disappears automagically as discs are inserted/ejected
 - NEW! • List window shows the number and length of the track selected/being played
 - Support for multimedia CD's (compact discs with data track(s) and at least one audio track)
 - Adjustable volume (256 levels) and balance (left/right 0% to 100%)
 - NEW! • Logarithmic volume option (for smoother and faster control)
 - Mute function (3 selectable gain levels)
 - Random shuffle
 - Repeat mode (repeat all tracks, programmed tracks or tape selection)
 - Intro mode (listen to the first x seconds of each track)
 - Fade out (immediately or at the end of the intro)
 - Program mode (max. 100 tracks; recall button for retrieving finished programs)
 - Tape mode (selectable/user definable tape length (like C-60 or C-90),
-

layout tracks to side A/B of tape)

- Adjustable preferences with various settings
- Informative LCD-like display including current track and index, track numbers, titles, several time counters and a status indicator LED (play/pause/ffwd/rev)
- Programmed entirely in MC68020 assembly (fast!)
- ...and more! (click [here](#) to find out about new functions since 1.0 BETA)

1.6 How to install GroovyPlayer?

Installation is very simple:

You can use the Installer script for installation, just click on the appropriate icon. Or, alternatively you can:

- Copy the contents of the 'Fonts' sub-directory to your FONTS: directory/assign;
- Copy GroovyPlayer anywhere you want;
- Copy the contents of the 'ENVARC' sub-directory to your ENVARC: directory/assign;
- Depack the LZX archive titled 'CDTitles.lzx'
- Copy the contents of the 'CD Titles' sub-directory anywhere you want

and you are ready to go!

- Start the program (WB or CLI, all the same).
- If you use a CD-ROM device driver other than the default ('scsi.device'), a requester will pop up, followed by the preferences window. Define the name and the unit number of your driver, save your settings, then quit.
- That's it - you can restart GroovyPlayer and it works! (Please, read the Usage section, too, as it ain't always easy to figure out all the weird functions).

1.7 Using the program

Using the standard functions is pretty straightforward, so I won't steal your time explaining it. However, some hints may come handy for more advanced functions.

Direct track access: The buttons for this function (1-20, 0, +) are located in

the middle of the window. Track numbers above 20 can be specified by first pressing +, then entering the two digits using the buttons 0 to 9. Track numbers outside the 1-99 range will be rejected (an audio CD can hold up to 99 tracks as specified in the standard).

Repeat: When this button is active, the entire CD (in normal mode), the current program (in program mode) or the tape side being played (in tape mode) will be repeated again and again.

Mute: Cuts the volume by 5/10/15 dB (selectable in preferences)

Intro: When activated, only the first x seconds of each track will be played (adjustable in preferences)

Fade Out: Currently this button has two functions: if you press it during playback and the Intro button is not active, the program fades the current audio track out (the volume drops to zero), then pauses playing. If the Intro button has been active, the Fade mode is entered, and every track will be faded out after the intro is played (the length of the played intro can be set in the Preferences window (see Prefs button)).

Random: Shuffles tracks in a random order. If you press this button while playing, the CD keeps playing the current track, but all other tracks will be shuffled.

Program: This button takes you into program mode. The display in program mode shows the number of entries in the program, while in the INDEX number position (right to the track number in the upper left corner of the display) you can see the number of the currently selected track. The small yellow numbers at the bottom also indicate selected tracks. You can add tracks to the program with the direct track access buttons (1-20, 0, +), delete the last program item using the Clear button, or even cancel programming by pressing the Program button again. When you are finished, you can start playing the program using the Play/Pause button. If you press the Stop button either during or after playing the programmed tracks, the current program will be cleared and you get back to normal mode, but you can retrieve the previous program by pressing the Recall button.

Recall: Recalls the last program you used (which had probably finished or been interrupted using the Stop button).

Clear: If you press this button in program mode, GroovyPlayer will delete the last track you selected, leaving you with one less track in the current program. If the program is empty or you are not in program mode (you haven't pressed the Program button), it does nothing.

Tape: This button takes you into tape mode. Subsequent presses advance the current tape length counter (you can follow it on the display). Once you have traversed through all predefined tape length settings (currently C-45, C-50, C-60, C-80, C-90), a blinking cursor appears on the display and you can enter a custom tape length using the 0-9 direct access buttons. Remember that a cassette has two sides, thus if you enter e.g. 47, the program will create a track layout for a (virtual) tape that has two sides 23.5 minutes long each. After selecting the desired tape length and waiting for a while (waiting lets the program know that you do not want to change the setting any more), GroovyPlayer creates a track layout and displays the tracks to be recorded on side A as lines above the small yellow numbers, and the tracks for side B

below these numbers. A mode LED in the lower left corner of the display also appears to indicate the active side. Remaining tape length is displayed in the TOT. REMAIN time counter field. The Play/Pause button starts playing to tape. The active side can be exchanged using the Side A/B button (activating this button will STOP playing, so be careful).

Prefs: see preferences.

List: see list window.

1.8 The Preferences window

This window offers several changeable program settings. The window contains the following gadgets:

- General Settings

These settings affect general aspects of GroovyPlayer's operation.

Winding speed: The number of seconds in one jump while you are holding down the cue/review button. Should be between 1 and 99999.

Fading speed: Sets the speed for volume fading. Should be between 1 and 10, with 10 being the fastest speed (in this case the program inserts no delay between SCSI volume commands to the drive, so its speed is a tad dependant on the drive itself).

Task priority: The priority of the MAIN task of GroovyPlayer.

Skip back delay: If you activate the Realistic I<< checkbox, then hitting the I<< (skip back) gadget will take you to the previous track only if the time elapsed from the current track is less than or equal to the value (in seconds) set here. For example, if you specify 3 for this value, it means that the I<< button will jump back to the beginning of the same track UNLESS you press it within 3 seconds after the song began. This simulates the behavior of standard CD players.

Delay tracks: If there isn't enough delay on a CD between tracks (for example you want to record a Jean-Michel Jarre CD to tape...), you can insert extra delay here. When the program is waiting between tracks, you will see a steady red (well, red on my Workbench :-) pause LED on the display.

Intro length: The length of the intro in seconds. Should be between 5 and 99999.

Mouse repeat delay: If you hold down one of the volume or balance buttons, you will see that the number advances one, then there is a delay, and the number only starts 'running' if you keep the button down (this works in a similar fashion to the keyboard). You should experiment with this value, because it is a tad CPU speed dependant - the default setting is 30, which works fine on my machine.

Iconify to: When you press the iconify gadget on the player (right beside the depth gadget), the program either puts up an AppIcon on the Workbench or connects itself to the list of AppMenuItems (the items in the Tools menu on

the Workbench).

Log. volume: If activated, the volume setting will be logarithmic, which is both faster and smoother, especially for lower volumes. (Well, that's my opinion, and that's why I decided to let you choose.)

Stop on exit: If this button is ticked, playing will be stopped when you decide to exit the program.

AutoPlay CD's: Newly inserted CD's will be started automatically if this switch is active.

Hot program: Normally, you are not allowed to program a CD player while it is playing (I mean a 'real' player). This setting is overridden if you tick this gadget. The upper line of the display (the time counters) keep going during programming except the INDEX number, which shows the ordinal number of the current program entry (see Usage).

Realistic I<<: See Skip back delay.

Smart List: The list window is normally 'dumb' in a sense that it does not recognize what happens in the main window. When this checkbox is active, it will 'listen' to your CD, and always show information on the current track as well as appearing/disappearing intelligently when you insert/eject a CD.

PlayMode: When the program is in normal mode (that is, neither in program or tape mode), it compiles a default program to use for playing CD's. This default setting can either be 'forward' (play tracks sequentially), 'reverse' (start with the last track and proceed towards the beginning) or 'random shuffle' (see Random button).

Mute gain: This cycle gadget is used to change the mute gain applied when you press the Mute button. Its predefined settings are -5 (lightest), -10 and -15 dB (strongest).

Select buttons: You can select a drawer (not a file) with these two gadgets for the AppIcon path and the CD title directory respectively.

• Startup/Exit Settings

The settings here will only be used upon startup/exit, so you have to save the preferences and restart the program to see any change.

PubScreen: The name of the public screen GroovyPlayer should open on.

SCSI device: Enter the name of the device here that handles your CD-ROM drive (e.g. 'atapi.device', 'scsi.device', 'squirrelscsi.device' etc.). Case is important!

SCSI unit: You also have to specify a unit number (SCSI ID) for your device. The program allows for unit numbers 0 through 7, and it's no problem if you don't know it: just try one, and GroovyPlayer will tell you if it works or not. You can try different numbers until one works. If you have 'atapi.device', then your (first) harddisk will probably be unit 0, so the number 1 seems the best choice in this case (unless, of course, you have two harddrives, in which case you should try number 2 first).

Default PlayMode: Default setting for the active playmode when the program starts up. See PlayMode for further info.

Window size: Gabriel/UNITED FORCE told me that the feet of GroovyPlayer are ugly. Well, I think he's a cool guy, so why wouldn't I give him a chance to wipe'em out? I have to say something though: I LIKE those feet, Gabriel, so I'll leave them on.

Repeat on/Intro on/Mute on: The corresponding buttons will be active and appear lit when you start the program.

- Path Settings

This is where you can define paths for the program.

Icon image: This is where the icon image resides for the AppIcon to use when you iconify GroovyPlayer (provided that you set the 'Iconify to' cycle gadget to AppIcon).

CD Titles: The location where CD title files can be found. If you set a wrong path, the program will display <UNKNOWN CD> for every audio CD you insert, and the title list will consist of <unknown title>'s.

In addition to the above, the Restore prefs button will restore the settings that were active when you opened the Preferences window. It is useful if you change too many settings and you discover that you don't really need them.

1.9 The List window

This simple window enables you to edit and save/use author names, titles and track titles for your CD's. The upper two gadgets are self-explanatory. The number of entries in the listview is equal to the number of tracks on the CD, so you only have to go through those <unknown title>'s and enter the details, then hit the 'Save' button.

Some other functions have been added to the list window in the final release:

- You can doubleclick on a track name, and GroovyPlayer will start playing it right away. If you are in program mode, the doubleclicked track will not be played but added to the program.
 - Track number and length are displayed to the left of the track list, and if the Smart List checkbox in the Preferences window is active, they are updated and the current track title gets selected in the listview as tracks are played.
 - If the Smart List checkbox in the Preferences window is ticked, the List window will also appear and disappear as you insert or remove a CD. Smart, eh?
 - The 'About...' requester is also available in the list window (from the
-

Project menu) :-)))

1.10 Known bugs in this version

I hope no one will spot the 12944 bugs I deliberately left in the program. Er... just kidding.

There shouldn't be too many bugs in GroovyPlayer. After fixing the zillion bugs in the beta version and adding (+debugging) new functions I tested it thoroughly with CyberGuard, and no hits occurred during the test, while I tried my best to hang the program.

Of course, this does not mean it is bugless, and bug reports are always welcome (accompanied with hardware config information) - see the Author section.

1.11 The future of GroovyPlayer

My plans include:

- The tape function is very soon to be optimized to be able to layout non-contiguous tracks (this will be MUCH better than now, but I need some time and a CALM STATE OF MIND at last to do this). It means for example that CD's with a mix of extremely long (say, over 15 minutes) and normal tracks will consume less tape room, since the program will be able to substitute the best fitting track for every time slot available.
- A med-res (640x256 or 1:2) version (for PAL users) (85% ready)
- The next version will surely be based on MUI, because I'm fed up with having to program/manage GadTools structures, font sensitivity etc. manually.
- More advanced list functions (drag and drop program editing, save/load programs for discs etc.)
- Enhance memory efficiency even further (anyone wanna gimme a powerful chunky GFX crunch routine?)
- Full locale support (it is currently restricted to the Preferences and List windows)

1.12 Acknowledgments

I am very grateful to the following people for their programs/assistance:

Boris Jakubaschk - for MCDPlayer (the source helped me a lot, and my list files are also made MCDP-compatible)

Thomas Klinger - for the GFX in Empy (yeah, you probably have noticed where the GFX inspiration came from...)

Victtorio Kritty - for his help with the AMIGA logo

Peter McGavin - for his chunky-to-planar conversion routine I borrowed

Ian OConnor - for Designer, the program I used for the GUI (I am planning to use MUI in the deluxe version, though, but definitely NOT because Designer is bad or something - it is a great piece of software, however, I think MUI is a rare example of near perfection on the AMIGA as it is)

Louise/AMIGAonly, Dirty Shame of Rings and Gabriel/UNITED FORCE - for their valuable comments, bug reports and help with testing

Stef - for his help in writing the Installer script

Pethő Szabolcs - for his help in distributing the program

Jay Miner - you know why, guys: for The Amiga.

... and all those who registered GroovyPlayer when they received the beta version (you know, registration is kinda unpopular in Hungary...)

1.13 About the author

My real name is Miklós Árpád, and I am Hungarian. I have had an Amiga since 1990, and this is one of the greatest experiences of my life. I remember when I first had the chance to look at the ROM Kernel Manual (I swapped 5 Amiga Magazines to get it), it was raw excitement and pleasure just to read and (try to) understand what these guys have managed to design.

I'd appreciate your comments and ideas, and I won't be hurt if you send me some money - I would even appreciate if someone sent me his own product to share as registration fee, but if you can't or you're too lazy (like me...), just give me a thought or two. Unfortunately, I don't have an email address (I used to :-|), but feel free to call me or drop me a fax or a letter:

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1.14 Registration

The BETA version of GroovyPlayer is freeware. Period.

The registration for the final version of GroovyPlayer costs 250.- HUF or \$5 or 8 DM for Amiga freaks outside Hungary. I think this is a fair chance to get your name in the About requester :-)...

Of course if 100000 people registered, I would be the happiest person in the Universe, but this is not very likely to happen.. but it's OK. Anyway, you can send postal orders to my address if you want, but I would prefer the 'cash in an envelope' method. Thanks!

1.15 For those tech freaks...

Hi, tech freak!

The program spawns up to three processes that communicate with each other. This means that you can edit the list or adjust the preferences while the CD player display is 'alive'. Even the 'About' requesters are asynchronous (I used BuildEasyRequest() followed by calls to SysReqHandler() to find out when the user satisfied the requester).

The graphics are stored in chunky format, since it is much easier to remap a chunky image to adjust to current Workbench colours. This also means that if you compress the program (145 KB), you get a 30 Kb archive - the chunky format compresses pretty well.

The TEXT_KIND GadTools gadget in V39 is badly broken, but I hope you won't notice it, because I tinkered enough with the coordinates to fix it for most fonts and situations. By the way, I don't like people saying their software doesn't work well due to a 'bug' in the OS. I know there are bugs in it, but aren't we called programmers to solve problems instead of whining because there are some? And you know what? The first time I will complain about a bug in the best microcomputer OS of the world is when I'm able to conceive and program a ten times better one.

That means never.

1.16 GroovyPlayer development history

GROOVYPLAYER RELEASE VERSIONS

- V1.04
 - no more memory leaks: forgotten FreeAslRequest fixed... :-(
 - GroovyPlayer would sometimes forget saved window positions, and appear in the lower right corner when started next time... BUT NOT FROM NOW!
- V1.01-1.03
 - several tiny bugs fixed
 - can now really be started in any copies (well, if you started two or more GroovyPlayers, then pressing the STOP button wouldn't stop playing, because (at least one of) the others resumed playing due to a small error)
- V1.01
 - enhanced startup behavior (GroovyPlayer won't stop CD playing anymore when

started, even on crap drives, except for SAMSUNG SCR-631)

- fixed unfortunate momentary interruption bug between tracks (well, buy a Jean Michel Jarre CD and you'll see what I mean...)

• V1.0

- fixed several minor bugs
- implemented several functions (iconify, fading speed, delay tracks, logarithmic volume, realistic skipback, smart list, window size, restore prefs, ASL requesters
- 99% internal multitasking (all windows run simultaneously except for ASL requests (they cannot :-()
- slight size optimization (~5K)

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#### BETA VERSIONS

#### • V1.0B3

- fixed CD title oertype bug (thanks to Louise for the bugreport)
- fixed program forgetting bug (thanks to Dirty Shame for the bugreport)
- fixed "Random Shuffle" gadget oertype bug (thanks to Gabriel for the bugreport)
- fixed repeat bug
- improved memory management -> executable is 40K shorter
- new interrupt driver -> does not use the valuable CIA resource anymore (that is, GroovyPlayer can now run in any number of copies)
- implemented keyboard commands
- implemented list window functions (gadgets on/off, play on doubleclick)
- CD door handling improved -> autoclose at startup, tracks can be launched even when the door is open
- AutoPlay works with small number gadgets

#### • V1.0B2

- fixed SONY CDU-55E bug
- fixed al200\_atapi.device bug
- minor bugfixes in gfx engine

#### • V1.0B

- first beta release

## 1.17 Keyboard commands

Several keyboard equivalents have been implemented in the final release of GroovyPlayer. These are the following:

|       |   |             |
|-------|---|-------------|
| p     | - | Play        |
| s     | - | Stop        |
| e     | - | Eject       |
| i     | - | Iconify     |
| space | - | Toggle mute |

```

escape, q      -      Quit

crsr ->,
num enter,
num +          -      Next track

crsr <-,
num *,
num -          -      Previous track (see also Realistic I<<)

num 1-9        -      Direct access to tracks 1-9
num .          -      Direct access to tracks 1-99 (two digits follow)
num 0          -      (can be used to specify tracks >9 after 'num .')
```

## 1.18 Standards and Compatibility

To tell you the truth, the compliance of ATAPI CD-ROM drives available today ranges from abysmal to medium, and that's no kidding. Even my drive (SAMSUNG SCR-630) has a bug due to which I had to cut the RESET line on the IDE cable. Most drives respond to basic commands like SCSI\_CMD\_PLAYAUDIO12 or SCSI\_CMD\_PAUSE/RESUME, but many of them just ignore volume adjustment or even the stop command (!).

Below you will find a brief list of problematic drives that do not or barely function in my system (A1200 + Blizzard 1260 + 16M fast RAM).

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SONY CDU-55E    | - Does not respond properly to SCSI_CMD_PLAYAUDIO12. Bug circumvented, drive is 100% usable - you won't even notice the bug.                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Wearnes CDD-120 | - Fails to return proper value for time played from the current track. This drive bug will be circumvented in the next release. Drive usable, but sometimes program/tape or even normal mode fucks up due to the wrong timing information returned.                                                                                                                                                                                                                                                                                                   |
| SAMSUNG SCR-630 | - Reset handling problem (locks IDE bus after software reset). Bug fixed by cutting reset lead on the IDE cable. Otherwise the drive functions perfectly and quickly.                                                                                                                                                                                                                                                                                                                                                                                 |
| SAMSUNG SCR-631 | - Volume control doesn't work. Bug cannot be fixed, it seems like this drive is part of the Win'95 hype (it has a sticker on its back claiming its windoze compatibility, BUT LISTEN: a friend of mine told me that the volume control didn't work on a pentium using win'95 either!!! SAMSUNG probably think everyone will use CD drives on soundcard-equipped pc's, and then users can change the volume on the sound card anyway - these drives SUCK. And it also stops playing when I read the table of contents from the CD (it is done when you |



start GroovyPlayer... :-( )

Aztech CDA-268-03I - Kinda strange drive. It plays OK until the 8th or sometimes even as far as the 10th track, then stops responding to the SAME commands and throws an abundance of sense errors at my poor program, which in turn informs the user about this with a nice flashing red SCSI ERROR line... I'm working on the solution.