

AMP

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WRITTEN BY		July 31, 2024	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

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Chapter 1

AMP

1.1 AmiDog's Movie Player - The Movie Player for your PPC Amiga!

AmiDog's Movie Player v2.02 (010216)

Copyright 1998-2001 Mathias "AmiDog" Roslund

Introduction	- What is this?
Requirements	- What does it require?
Features	- What can it do?
Installation	- How to install?
Usage	- How do I use it?
FAQ	- Have someone asked this?
Shareware	- What does this mean?
Disclaimer	- Who's responsible?
Known bugs	- Are there any known bugs?
History	- What's new?
Future	- What will be added?
Contact	- How to contact me?

Visit the homepage at <http://www.amidog.com/amp/>

1.2 AmiDog's Movie Player - Introduction

This is a Movie Player for Amigas equiped with a PPC board.

I started writing this in november 1998 since there were no MPEG players for PPC which had good AGA support. And as you can see, the AGA support is probably one of the best in any movie player for the Amiga.

Already from the beginning I planned to add support for more media types than MPEG, but it's not until recently (v1.20) that I've had the time to do so.

This product is released as Shareware, which means that you can freely use it

for a period of 30 days, but then you must send the author a small fee.

Now start the player and enjoy the speed of your PPC board!

1.3 AmiDog's Movie Player - Requirements

Hardware:

- * Amiga 1200/3000/4000 with a PowerPC board
- * 16 MB RAM
- * OS 3.0

Software:

- * WarpUP v4.0
- * CGFX v3 or later for CGFX support

1.4 AmiDog's Movie Player - Features

AMP currently support the following multimedia types:

- * MPEG1/2 video with sound (optional) and automatic frameskip.
- * MP2/MP3 audio streams.
- * FLI/FLC (most chunks supported, please report any problems).
- * AC3 streams, both standalone and embedded in MPEG2 streams.

The features include:

- * Fast AGA support with 8 HAM modes and optional triple buffering
- * CGFX support with optional triple buffering.
- * Fast audio playback using audio.device or AHI.
- * CLI interface using ReadArgs or MUI GUI.
- * Window support on any depth CGFX and AGA screens.
- * Overlay support using cgxvideo.library.

1.5 AmiDog's Movie Player - Installation

Just copy it to any place on your HD.

The keyfile you get when you register should either be placed in the same directory as the AMP executable or in the S: assign.

1.6 AmiDog's Movie Player - Usage

- * General usage

Quit AMP by pressing ESC or closing the window.

While running you may seek in the movie by either using the slider in window mode, or pressing the keys 0-9 which will seek to 0-90% of the movie.

* Starting AMP from Workbench

Just doubleclick the AMP-GUI icon.

* Starting AMP from CLI

Remember to increase the stack to 500k to be on the safe side.

Then start AMP this way: AMP <moviefile> <options>

The following commandline options are supported:

REQUESTER/S	: use an ASL requester to get the screenmode (def: BestMode).
PAL/S	: use PAL screenmodes (def: BestMode).
GRAY/S	: Gray output (def: color).
HAM/S	: HAM output (def: color).
HAMDEPTH/N	: HAM depth (6 or 8 bitplanes, def: 8).
HAMWIDTH/N	: HAM width (1, 2 or 4 HAM pixels per RGB pixel, def: 2).
HAMHQ/S	: HAM high quality (def: normal quality).
SLORES/S	: Super lores on (def: off).
GRAYDEPTH/N	: Gray depth (4, 6 or 8 bitplanes, def: 8).
LOWCOLOR/S	: 8bit CGFX (used for BestMode).
HIGHCOLOR/S	: 15/16bit CGFX (used for BestMode).
TRUECOLOR/S	: 24/32bit CGFX (used for BestMode).
WINDOW/S	: use a window on Workbench for playback (def: off).
NOSPEEDHACK/S	: disable speed hack (def: on).
DEBUG/S	: use this if you have problems and send me the output (def: off).
VERBOSE/S	: gives additional information while/after playing (def: off).
OVERLAY/S	: enable overlay support (def: off).
STEREO/S	: play and decode stereo audio (def: off).
NOVIDEO/S	: no video playback, only audio.
NOAUDIO/S	: no audio playback, only video.
VCDDEVICE/K	: device of the CD-ROM for VCD playback (def: atapi.device).
VCDUNIT/N	: unit of the CD-ROM for VCD playback (def: 2).
VCDTRACK/K	: the VCD track to play (def: 1).
AHI/S	: use AHI instead of audio.device (def: off).
TRIPLE/S	: enable triple buffering (def: off).
FILTER/S	: turn on audio filter (def: off).
READALL/S	: read the entire movie to memory before playing (def: off).
DIVISOR/N	: audio frequency divisor (1, 2 or 4, def: 2).

1.7 AmiDog's Movie Player - FAQ

What are these settings for?

HAM Width
HAM Quality
SLores

1.8 AmiDog's Movie Player - FAQ - HAM Width

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To understand this you must first know the basics about how HAM modes work. I'm not an expert on this, and just before christmas last year (1998), I didn't know much at all. Anyway, here goes.

On a HAM screen a pixel is either one from the 16/64 colors in the palette or a "finetuned" version of the pixel next to the left, that is, you can modify one of the three color components Red, Green, or Blue (RGB). Two bits per pixel is used to determine if "finetune" or palette color should be used. That is why a HAM6 screen is 6bit but only gives you a 16 color palette (4bit).

This means that to get one specific RGB value, you must either make sure that it's one of the 16/64 colors in the palette, or you must use three (3) pixels on screen to achieve the correct RGB values. This is why AMP supports different HAM widths.

As you might know, there are no 3-width screenmodes available, for example, there are 320*256 (1-width), 640*256 (2-width) and 1280*256 (4-width) for PAL. So to be able to get the right RGB value, one must use a screen which is four (4) times as wide as it is high. Since one then will get the right RGB value, these screens are often callen 12bit/18bit since you get 4/6bit per RGB component and there are a total of three components per pixel ($2^{(4+4+4)}=2^{12}=12\text{bit}$, $2^{(6+6+6)}=2^{18}=18\text{bit}$).

The major let down by using 4-width is that it only works on PAL/NTSC/HighGFX and that it's terribly slow. That's where the 1-width and 2-width modes come in. They try to achieve the best possible quality with less pixels.

The 1-width and 2-width uses a simple but very efficient theory about in which order the RGB components should be changed to get the best quality while only changing one or two of them per pixel.

AMP can play just about any movie in any HAM width mode, but if the image is too big it will be cropped and you will only see the middle of the image.

1.9 AmiDog's Movie Player - FAQ - HAM Quality

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Please read the text about HAM Width first if not already done.

The only HAM width which has a high quality mode is the 1-width one. When using high quality AMP will use a predefined palette as well as using the normal "finetuning". For each pixel, AMP will calculate something called "color distance" to determine if it should use one of the 16/64 colors in the palette, or "finetuning". This ofcourse makes it slower, but the quality is much better.

1.10 AmiDog's Movie Player - FAQ - SLores

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The Amiga actually supports something called Super Lores which isn't used very often. It's simply the same as a Lores screenmode but with half the height, i.e. PAL Lores is 320*256, and PAL Super Lores is 320*128. I found out that Super Lores also work on Hires screens, i.e. PAL Hires Super Lores is 640*128.

AMP forces PAL when using Super Lores, so don't enable it unless you have a monitor which can handle PAL, or your Amiga is connected to your TV.

With Super Lores, only half the amount of pixels need to be converted from YUV to HAM or 8bit color. C2P only has to be performed on half the amount of data and only half the amount of data need to be copied to CHIP memory. Also, since the screenmode is very small, less CHIP memory bandwidth is used by the custom chipset (AGA) which makes this mode very fast, but the quality is ofcourse reduced making the image a bit more blocky. Super Lores works with both HAM, 8bit color and gray.

1.11 AmiDog's Movie Player - ShareWare

After your free trial period of 30 days, if you decide to keep using AMP you must register. There are two ways to register AMP, just choose the one you prefer.

1. Online registration through Reg.Net, just point your browser at:
<https://secure.reg.net/product.asp?ID=8311>
2. Put 15 USD, 10 UKP, 30 DM, 100SEK or equal amount of any other currency in an envelope and send it to:

Mathias Roslund

Sveav. 2b, nb
S-702 14 Orebro
Sweden

NOTE1: Cheques are NOT accepted since it's very expensive to cash them.

NOTE2: I need your name and e-mail address to be able to send you your keyfile ↔
!

1.12 AmiDog's Movie Player - Disclaimer

Remember! You use this piece of software at your own risk!
I can never be held responsible for any sort of damage caused
to your software or hardware by the use of this product!

1.13 AmiDog's Movie Player - Bugs

* None known.

There might be unknown bugs, so you use it at your own risk!

1.14 AmiDog's Movie Player - Contact

Bugreports, suggestions, comments or anything else you may
want to contact me about can preferably be sent by e-mail to:

amp@amidog.com

You may however also contact me by normal mail:

Mathias Roslund
Sveav. 2b, nb
S-702 14 Orebro
Sweden

1.15 AmiDog's Movie Player - Future

* Add AVI/QT/NSF support again.
* ...

1.16 AmiDog's Movie Player - History

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- v2.00 - 001229
 - First official AMP2 release.
 - v2.01 - 010106
 - AMP used to free two never allocated signals, fixed.
 - GUI: Now works when started from a partition with a space in the name.
 - GUI: Added a version string to the .cfg file and placed it in S:.
 - GUI: Added DEVS: as default path for the device drivers.
 - GUI: Bumped version to v1.01 due to the changes.
 - v2.02 - 010216
 - GUI: Will now check for the presence of a VCD before trying to play it.
 - GUI: If the VCD has more than one track, the GUI will ask which to play.
 - GUI: Bumped version to v1.02 due to the changes.
 - 16bit output now is 16bit again and not 15bit as with previous AMP2 ↔ releases.
 - Optimized the VCD code somewhat, improving playback speed with almost ↔ 10%.
 - Fixed the crash on exit bug in the MPEGV decoder.
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