

mhi_MASPro

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Chapter 1

mhi_MASPro

1.1 MHI MAS Player Pro Driver Documentation

MHI MAS Player Pro Driver

V1.2 (C) 2001 Paul Qureshi

This software is released under the terms of the BSD licence, see the 'Licence' section for more details. Source code is available in the mhi_dev archive.

Contents:

Introduction Introduction to MHI and MPEG audio

Using the driver How to get the driver going

Developer notes Hints for developers

Author Contact me about anything

History What has changed

BSD licence This software is free!

1.2 Introduction

The MAS Player Pro driver for MHI lets you use your MAS Player Pro with any MHI compatible software (such as AmigaAMP).

This driver has been programmed in a mix of C and assembler for maximum speed. Performance is generally good. On my Cyberstorm MK II 060 I estimate that when playing a 160kb/sec MP3 file with AmigaAMP there is around a 5% slow down in the system.

The two most important factors that alter the performance of the driver are your CPU and custom chip access speed. Some 060 cards are very slow at accessing the custom chips for instance, and some 030s are very fast.

Generally, you should have good performance on an 030 at 50MHz, i.e. the system will still be highly usable for other things. I am using an 030 at

40MHz on my A600 as an in-car MP3 player, and that works just fine. An O20 will do too, although a 68000 will only manage 128kb/sec MP3s.

This version of the driver supports the following:

- Multi-bit rates (up to 320bps)
- Volume control
- Bass, treble and prefactor control
- Panning control
- Optimised for O20+

This driver was created with the help of Dirk Conrad, who was very helpful in providing information and code to help me out. Thanks Dirk!

1.3 Development History

V1.0:

- internal test release
- basics working

V1.2 Final:

- volume and tone control working
- optimised code a little
- 4 byte memory leak fixed

V1.4:

- added support for latest MAS Players (thanks Dirk!)
- fixed MHIQuery() returns for tone control
- updated to meet MHI 1.1 standard
- increased interrupt frequency, more load in slow CPUs

but now supports higher bit rates

- added panning control

1.4 Developer notes

The MAS3507 DSP is, unfortunately, a bit picky about how it's used. There are a few things you should take note of to support it fully. Unfortunately, MHI cannot compensate for these problems as yet.

Firstly, don't send more than about three volume change commands per second to the MAS. The I2C bus on the MAS3507 is very slow and using it requires that the serial data stream used to transmit MPEG data is paused. If you attempt to change volume too often, the sound will skip and you may even crash the I2C bus of the MAS and prevent further volume changes until it is reset (dealloc and realloc your MHI handle).

The MAS3507 does not support prefactors below 50. This means that it cannot boost sound using its prefactor control, only cut it. This is not a major problem, and your application should provide the full 0 to 100 range for prefactor control.

1.5 Contacts

You can reach me at:

paul.queshi@btinternet.com

I am part of the Amiga Support Association round table, and am on the ASA mailing list. Feel free to drop by the web site at:

www.amigasupport.co.uk

1.6 Using the MAS Player Pro driver

First, install the driver with the supplied install script. The driver (mhimaspro.library) will be copied to Libs:MHI/, and you can of course do this manually. Put this AmigaGuide wherever you like, by default the installer will copy it to HELP:.

To make any MHI compatible program use the driver, simply select it in the programs preferences.

If you don't any sound, first try a different audio file. The driver only plays MPEG audio streams (such as MP3s), however some software puts strange headers on the files which might stop them working. The MAS Player itself does not play a few streams for some reason. If none of that helps, make sure the MAS Player Pro is plugged in properly and try Dirk Conrads software with it. If you still have problems, [contact](#) me.

1.7 Legal stuff

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