

# **Maestix-AHI**

Richard Körber

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<b>COLLABORATORS</b>
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	<i>TITLE :</i> Maestix-AHI		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY	Richard Körber	August 22, 2024	

<b>REVISION HISTORY</b>
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NUMBER	DATE	DESCRIPTION	NAME

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## Chapter 1

# Maestix-AHI

### 1.1 Table Of Contents

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AHI driver for the MaestroPro sound board

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1. **Introduction** how it all started
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- A. **Address** of the author
- B. **F A Q** questions and answers
- C. **History** all changes
- D. **Credits** Thank you!

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Maestix AHI (C) 1997 Richard Körber -- All Rights Reserved -- FreeWare

### 1.2 Introduction

INTRODUCTION

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AHI is a kind of Retargetable Audio System, written by Martin Blom.

It supports several sound boards, and now also the MacroSystem's MaestroPro digital sound board.

This wasn't a piece of cake to do, since the MaestroPro is somewhat special. For example, AHI isn't much into changing sampling rate lists, but as you know, the sampling rate of the board depends on the incoming signal's rate.

Thus, the usage of the AHI driver is somewhat different (see the chapter about its [usage](#) ).

Richard Körber

## 1.3 Requirements

### REQUIREMENTS

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MaestixAHI requires:

- 68020 or higher. A 68000 version is available from the [Author](#) upon request. You do not need a FPU.
- The maestix.library V40.10 or higher (V40.00 won't do!)
- AHI V4 (it might also run with V2, but I tested it on V4).
- A MaestroPro sound board (of course).

The old Maestro isn't supported, and will never be!

## 1.4 Copyright

### COPYRIGHT

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Please read the following parts carefully.

If you do not agree to these Copyright notes, you must delete this archive and all related files.

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### COPYRIGHT

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NOTE: You accept the following terms by starting the software, even for a test drive only.

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MaestixAHI is © 1997 Richard Körber. All rights reserved.

You only have the right to use the software, but no rights on the software itself. Disassembling, resourcing and all other ways of reverse engineering is forbidden.

#### FREEWARE

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MaestixAHI is FreeWare. You are allowed to use the packet without paying a fee or similar to the author. Of course I would appreciate a small donor! ;-)

#### COPYING

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You can copy the packet as long as it remains entire and unchanged. You are allowed to compress the packet using a customary compression software (as lha, lzh, lzx, dms). You must not compress single files of the packet (e.g. PowerPacker or Imploder).

#### DISTRIBUTION

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You must not exceed an usual price on the market for your working and material. This means a maximum of 5 DM (or the equivalent amount in other currencies) for disks and 35 DM for CD-ROMs containing a PD software collection.

I explicitly permit the distribution via AmiNet, Meeting Pearls, Fred Fish and other well-known PD series.

I also explicitly permit Martin Blom to add MaestixAHI and the maestix.library to the AHI main archive.

#### LIABILITY

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You are using the program as it is, with all flaws, and on your own risk! I grant no warranty for the software meeting a special purpose. This software may cause financial damage or harm people.

#### LIMITATIONS

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You are not allowed to use this software and its results

- for fascism or military purposes
- if you do not agree to the copyright note

In this case you must delete the software and all related and generated files immediately!

#### CONTENTS OF THE PACKAGE

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The package is only entire with these files:

MaestixAHI/devs/AHI/maestropro.audio

MaestixAHI/devs/AudioModes/MAESTROPRO

MaestixAHI/MaestixAHI.guide

MaestixAHI/MaestixAHI.guide.info

MaestixAHI.info

COPYRIGHTS AND TRADEMARKS

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AHI is © Martin Blom <lcs@lysator.liu.se>

MaestroPro is © MacroSystem, Witten, Germany

Maestix is © Richard Körber <shred@chessy.aworld.de> and  
should usually be a part of this archive too.

URL: <http://www.is-koeln.de/einwohner/shred/>

## 1.5 Address

### A D D R E S S

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You can reach me through one of the following ways:

#### E MAIL

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Use e-mails if ever possible. My address is:

shred@chessy.aworld.de

richard.koerber@koeln.netsurf.de

Please do not send mails larger than 40KB without prior permission.

If you should have serious trouble reaching me, check my web page for  
other e-mail addresses.

#### SNAIL MAIL

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If you do not have an e-mail account, you may also write a snail mail.

Include a preformatted floppy disk and sufficient stamps if you want to  
get an update this way!

Richard Körber

Hornstraße 20

51465 Bergisch Gladbach

Germany

#### WORLD WIDE WEB

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Updates are available through my web page. URL:

<http://www.is-koeln.de/einwohner/shred/>

<http://shredzone.home.pages.de>

SUPPORT BBS

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You can also get the latest update from my official support BBS

Eratosthenes in Germany.

Number: +49-228-239522 (V.34, ISDN)

Login: SUPPORT (no password required)

Board: /SUPPORT/SHRED

Please note that even though the BBS is also to use in English,  
the main language is German.

PRETTY GOOD PRIVACY

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If you feel that way, you may also use PGP (note that the use of  
PGP is restricted in some countries). My PGP public key is attached  
below.

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Type Bits/KeyID Date User ID

pub 1024/3D5D331D 1997/01/08 Richard Koerber <shred@chessy.aworld.de>

-----BEGIN PGP PUBLIC KEY BLOCK-----

Version: 2.6.3i

mQCNAjLTMucAAEEAOMY/3jzWBFV2Annp6/VPhZQqF81btsqjyRR670uOELH+iO  
PXkrXX7IEo1vtNbKAc/MKDkc2p4g5159yK2OoZkoqFsCs1JXzFLVfAM41tvaNG0  
RTibFJAYCZ03umli5q4EtCj1DCMMeZGzmyAO9mpfuyIC+k6qu/NEvrU9XTMdAAUR  
tChSaWNoYXJkIETvZXJiZXIgaPHNocmVkaGNoZXNzeS5hd29ybGQuZGU+iQCVAwUQ  
M0R4IfNEvrU9XTMdAQGe5gQAizTK/KmKyMt5GtQQL1PW7m7tmZYBqglwtbSf7RBF  
fnntdkyeTQvRlbfjSAKjMYD0ZV34JtjMPJrRifIF6J6abSMQ1xT8IrEpyV8JrRcW  
Tjb4YEz+qEqo0Pj+l/87fgez1vUpTz19C5R5KNqHBk7/icCBGKuoLGtAmR6oifj4  
PKc=

=GI6y

-----END PGP PUBLIC KEY BLOCK-----

## 1.6 FAQ

F A Q

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MaestixAHI crashes all the time!

Make sure you have maestix.library V40.10 or higher installed. V40.00 won't do it!

From some programs (e.g. AUDIO:), I only hear the sound on the left channel. (It is also rather quiet.)

Start AHI-Prefs and set the audio mode of Unit 0 to one of the '++' modes. You will gain best volume results if you set the number of channels to 2.

Output sounds somewhat wierd

Are you using the wrong AudioMode? If so, your processor is too slow. Try to increase the number of buffers and/or the buffer size. This will sometimes help a little.

The player locks up

You must make sure that the player's task has a priority below 120. If this is a problem, increase the driver's task priority (AHImproTaskPri).

AUDIO: still locks up

Make sure you have AHImproTaskPri properly set. Or just delete this file from ENVARC: and ENV:.

Playback stumbles if I use the system during playback

This is because some AHI player use a task priority of 0, and they send rather small buffers. You will get a little improvement if you raise the player's task priority to about 15 (never raise it to AHImproTaskPri or above!). Sometimes, giving more playback buffers (AHImproPBBufNumber) will also reduce down this effect.

MaestixAHI is extremely instable or fails all the time

Delete your env variable settings, e.g. using this shell line:

delete Env:AHImpro#?

delete EnvArc:AHImpro#?

## 1.7 History

### HISTORY

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V2.3 (28.10.1997)

- Increased task priority to 120, AUDIO: works now
- AudioModes: Stereo++ modes implemented again (Quick before)

V2.2 (27.9.1997)

- Adjustments via env variables added
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- Improved execbase access: speed improvement on DraCo and all accelerated Amiga
- Driver loads even if maestix.library isn't available [Martin Blom] V2.1 (25.9.1997)
- AudioModes reworked, Quick is not necessary any more
- Bugfix: Input was not selectable
- Bugfix: Record buffers were not properly initialized
- Bugfix: AHI \*requires\* 1 as "TRUE" (this is rather a bug in AHI) V2.0beta (13.9.1997)
- After several crashes and tests, I finally managed to write an AHI driver that seems to work. ;-)

## 1.8 Credits

### C R E D I T S

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I wish to thank all the people who wrote me! :-)

I also want to credit:

Martin Blom for AHI and his lots of help

Thomas Wenzel for his help

Frank Wille for PhxAss, the best FreeWare assembler available

Dietmar Eilert for his great Editor GoldEd

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\\// -- Amiga - Cow inside --

\\X/

## 1.9 Install

### I N S T A L L

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#### INSTALLATION

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Make sure that maestix.library and AHI is properly installed.

Just copy the devs drawer of this packet to DEVS:, and this guide file into wherever you store good documentations. ;^)

Then open a shell and enter the command

AddAudioModes REFRESH

or just reboot your system. That's all... :-)

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## 1.10 Usage

### U S A G E

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#### MODE ID

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You can use MaestixAHI like the other AHI drivers, just by selecting it. Anyhow, there is a slight difference. AHI cannot handle a list of sampling rates that depend on the selected input and its signal. Thus, you must select the AudioMode corresponding to the signal of the desired input.

MaestixAHI offers these AudioModes:

MaestroPro: Fix 48k (ModeID E0001)

Select this Mode if you have no signal attached to the selected input. MaestixAHI then uses the internal 48kHz source. Of course, there is no recording available in this mode.

MaestroPro: Input 48k (ModeID E0002)

You have a 48kHz source connected. This is e.g. a DAT recorder. Full duplex recording is possible.

MaestroPro: Input 44.1k (ModeID E0003)

You have a 44.1kHz source connected. This is a CD player, or a DAT recorder playing a CD copy, or some other digital devices. Full duplex recording is possible.

MaestroPro: Input 32k (ModeID E0004)

You have a 32kHz source connected to the selected input. This is e.g. a DSR receiver or a DAT recorder in Long Play mode. Full duplex recording is possible.

MaestroPro: Fix 48k++ (ModeID E0005)

Like "Fix 48k", but with stereo++ (panning) mode.

MaestroPro: Input 48k++ (ModeID E0006)

Like "Input 48k", but with stereo++ (panning) mode.

MaestroPro: Input 44.1k++ (ModeID E0007)

Like "Input 44.1k", but with stereo++ (panning) mode.

MaestroPro: Input 32k++ (ModeID E0008)

Like "Input 32k", but with stereo++ (panning) mode.

#### SPEED

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MaestixAHI is quite fast, since the audio data are directly transmitted to the MaestroPro hardware. Anyhow, you will gain the best speed when

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using stereo output.

I already managed to listen to MPEG-III sounds in full CD quality using this driver on the DeliTracker. Anyhow, you will need at least an 68040/50 and some luck. On a 68060/50 system, the system is still useable while playing MPEG-III sounds! :-)

## 1.11 Env Variables

### ENV V A R I A B L E S

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You can modify MaestixAHI parameters by setting these env variables:

#### AHImproTaskPri

This is the task priority of the AHI audio task. You should never set it below 5 for proper operation. The system will deadlock if the task priority is too low. Beware!

Type: numerical, range -128..127

Default: 120

Example: SetEnv AHImproTaskPri 35

#### AHImproPBBufNumber

This is the number of playback buffers to be allocated. A higher value results in a higher resistance against multitasking dropouts, but it is also more memory consuming and results in a longer pause before playback.

Type: numerical, range 2..65535

Default: 4

Example: SetEnv AHImproPBBufNumber 8

#### AHImproRecBufNumber

This is the number of record buffers to be allocated. A higher value results in a higher resistance against multitasking dropouts, but is is also more memory consuming.

Type: numerical, range 2..65535

Default: 4

Example: SetEnv AHImproRecBufNumber 8

#### AHImproRecBufSize

This is the size of each record buffer in bytes. A higher value results in a higher resistance against multitasking dropouts, but also extends the reaction time of the recording software. The buffer size must be a multiple of 4. Use a multiple of 1024 to

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get best performance.

Type: numerical, range 256..2147483647 (< 2GB ;-)

Default: 4096

Example: SetEnv AHImproRecBufSize 16384

If you use very small buffers (< 1024), you should give at least  
8 record buffers!

NEVER get out of the described range. This will lead to unexpected  
behaviour and/or system crash.

If you want to make the adjustments permanent, please remember to copy  
them into "ENVARC:", e.g. using this shell line:

copy ENV:AHImpro#? ENVARC:

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