

PS2_adapter

COLLABORATORS

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REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

Contents

1	PS2_adapter	1
1.1	PS2_adapter.guide	1
1.2	Introduction	1
1.3	Disclaimer	2
1.4	Description	2
1.5	How to build it	4
1.6	Installation	5
1.7	Known problems	5
1.8	Buying the adapter	6
1.9	Shareware	6
1.10	Thanks	7
1.11	Contacting the authors	7

Chapter 1

PS2_adapter

1.1 PS2_adapter.guide

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How To Use Standard PS/2 Simms In An AMIGA 3000 (T)  
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```

Version 1.1

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* Shareware *

Introduction

Disclaimer

Description

How to build it

Installation

Known Problems

Authors

Shareware

Buying the adapter

Thanks

1.2 Introduction

Introduction

=====

Back in 1990 when the Amiga 3000 was released, ZIP Rams were

widespread and commonly used.

Nowadays things have changed. Simms dominate the market, and ZIP Rams are very expensive (if you can find some !). At this time 4MB SC ZIP Ram for the A3000 are sold for ~400 DM while you can get an 8MB PS/2 Simm for only 250 DM. You get the idea ...

The second reason for this project was, that when you want to install a 040/060 cpu-card, you must also use Simms on this card to get the maximum speed out of it. If you already used them in conjunction with our adapter there's no need to buy new Ram. Just remove them from the adapter and put them on the cpu-card.

Some of you might now think of another reason for using our hack: if you ever want to switch to a PC, you can still use the RAM you bought a long time ago. But we don't accept that as a valid reason to build our hardware, so better forget about it fast ;-)

1.3 Disclaimer

IMPORTANT:
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We are not responsible for any damage you may cause while trying to rebuild or install this hack in your computer !

If you don't have much experience with projects like this, it may be a good idea to let someone else build it for you, or to buy a complete adapter directly from us.

1.4 Description

Description
=====

This hack only works in the model A3000 and maybe A3000T. I couldn't test it in an A3000T because I don't have access to one. If the adapter physically fits into the A3000T, it will work.

After you build the adapter, you'll have to plug it into the empty ZIP sockets on the A3000 motherboard.

From now on you will be able to use standard PS/2 Simms (with or w/o parity) in your A3000. Two Simm-sockets are available which can be used in one of the following ways:

Socket I	Socket II	Total Memory

4MB Simm	Empty	4 MB
4MB Simm	4MB Simm	8 MB

4MB Simm	8MB Simm	12 MB
8MB Simm	Empty	8 MB
8MB Simm	8MB Simm	16 MB

```

*****
*
* IMPORTANT: If you only use one Simm, you MUST plug it into Socket I *
*
*           If you use one 4MB and one 8MB Simm, you MUST plug the *
*           4MB Simm into Socket I ! *
*
*****

```

Use the five jumper blocks, see top view J1-J5, to configure your Ram:

	1 2	3 4 5
1x4MB	o o	o o o
	o o	o o o
2x4MB	o o o o	o o o
1x4MB & 1x8MB	o o o o	o o o o o o
1x8MB	o o o o	o o o
2x8MB	o o o o	o o o o o o

```

*****
*
* Make sure that jumper J852 on the motherboard *
* is in position 1-2 *
*
* (If you used 1MBx4 DRAMs before, this is already *
* the case) *
*
*****

```

1.5 How to build it

Building the adapter

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REQUIREMENTS:

- Two PS/2 Simm sockets (72 pin)
 - A PCB
 - 16 rows connectors with 10 pins each
 - 5 jumper blocks
 - 3 short pins
 - some wire
- o Use the PostScript file layout.ps to generate a PCB-layout of the adapter.
 - o With the layout, you can now produce a PCB which connects the two Simm sockets on top of it, to the ZIP sockets on the A3000 motherboard.
 - o Drill holes in the PCB. Do this either by hand, or use the file 'drl01.drl' to control a Gerber compatible drilling-machine, if you can access one.
 - o Install the wire-bridges, see top view (red connections).
 - o Next, solder the Simm sockets to the board, then the jumper blocks and finally the connectors to the ZIP sockets.
- (Don't forget the three separate connectors C1-C3)
- o All that's left to do now is to solder some connections by hand. They couldn't be included on the PCB because of space limitations.

Pin[socket]	Simm

02[2]	40
15[2]	10
06[4]	
08[4]	47
09[4]	34
02[5]	41
03[5]	07
13[5]	14
14[5]	15
16[5]	16

07[7] 52

1B -> 44[II] -> 34[II]
2B -> 33[I] -> 45[I]
33[II] -> 45[II]

Refer to PCB bottom view for more information.

1.6 Installation

Installation
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The easiest way to install the adapter in your A3000 is to remove the motherboard completely, and put it on a hard surface.

Locate ZIP-Ram socket U850, and put socket #1 of your adapter on top of it. The rest of the PCB sockets belong to the ZIP sockets as follows:

2 -> U851
3 -> U852
4 -> U853
5 -> U854
6 -> U855
7 -> U856
8 -> U857

If you turn your adapter slightly now, you should notice that at one point it just 'falls' into place. This is the right position. Check it anyway, because inserting the adapter into the wrong place can damage your computer and/or your Simms.

When you are sure about the position, press the adapter down, to finally install it in your machine.

Now you can install your Simm(s), put the short pin(s) in the right position and test your new Ram.

1.7 Known problems

Known problems
=====

- If you get a yellow screen right after startup, make sure that the

daughterboard is installed correctly.

- The message 'Error, can't get memory' can be caused by several problems. It could be an incorrect installed adapter, a defective Simm, or, most likely, a bad PCB or wrong/missing connection.
- If you notice a slight decrease in Ram speed after you installed the PS/2 Simms, it's likely that you used static column ZIP Rams before. PS/2 Ram works in page mode which is a little bit slower.

This isn't really a problem, but it's worth mentioning.

1.8 Buying the adapter

Buying the adapter
=====

If you don't want to build this project yourself, you can order a complete and tested adapter.

Please contact me under this address first, to see if they are still available.

[Price is DM 120 or \$80 plus P&P.]

Jochen Koob
Hemsbergstrasse 25
64625 Bensheim

Germany

email: jkoob@wish.swb.de

1.9 Shareware

Shareware
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If you build this adapter and use it successfully, you should consider paying the shareware fee.

Since this is a hardware project, and therefore not protectable with a keyfile or a demo version, we rely solely on your cooperation.

Please note that we won't support anyone, apart from general questions, who hasn't payed the shareware.

Send the shareware fee DM 20 or \$20 to the address below:

Jochen Koob
Hemsbergstrasse 25

64625 Bensheim

Germany

Bank : Sparkasse Bensheim
Bank code number: 509 500 68
Account number : 145 469 3

1.10 Thanks

Special thanks to:
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- Dave Haynie

For answering our mails and clearing a few things up.

1.11 Contacting the authors

Contacting the authors
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If you have questions or suggestions, please contact us.

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