

PS\2 -> ZIP Board for A3000 Desktop (V1.3)

(Project: SimmfonieA3000)

Mounting

First thing you'll have to do is dismantling the A3000 nearly completely. It's the same like installing the ZIP memory, of course, even you'll have to have a better overview than for installing ZIPs. Later the adapter will cover the ZIP-Banks completely.

We found out some people were trying to install it "very easy" and it didn't work. Please don't do like this...follow the instructions and it'll work fine for you. The possibility the adapter is placed into wrong sockets is high if you ignore the instructions!

As written before, only the Mainboard should be left installed into case when you start...front of the machine to you. Now have a look to the adapter. Hold it in your hand with view to the short text on it like shown in picture 1. There is one Pin (marked as P1) topleft (and an additional beside it) it's not connected to anything and was done for orientation only. This pin has to be placed to the leftmost position into ZIP-socket U855. By the way: Right, there are three sockets skipped ahead of it...

The Pins at the bottom of the adapter have to be placed to the row of the ZIP socket (U850) which nearest to you. To make sure it will be placed correctly we recommend you to tip over (~45°) the left side (maybe more or less) to have a view to the three contact Pins at the right of the adapter(two of them are again only for orientation). These Pins have to be located to the ZIP sockets U855, U854 and U850. Now you can tip back the board carefully. All contacts should match into "their" sockets.

You should check if it's really located correctly and then push it carefully and equally!!! down. If you don't do it equally some contacts might break. The Mainboard might deflect slightly while pushing it down. If you find out the adapter isn't placed correctly you can liften it up again but do it really equal to protect the contacts.

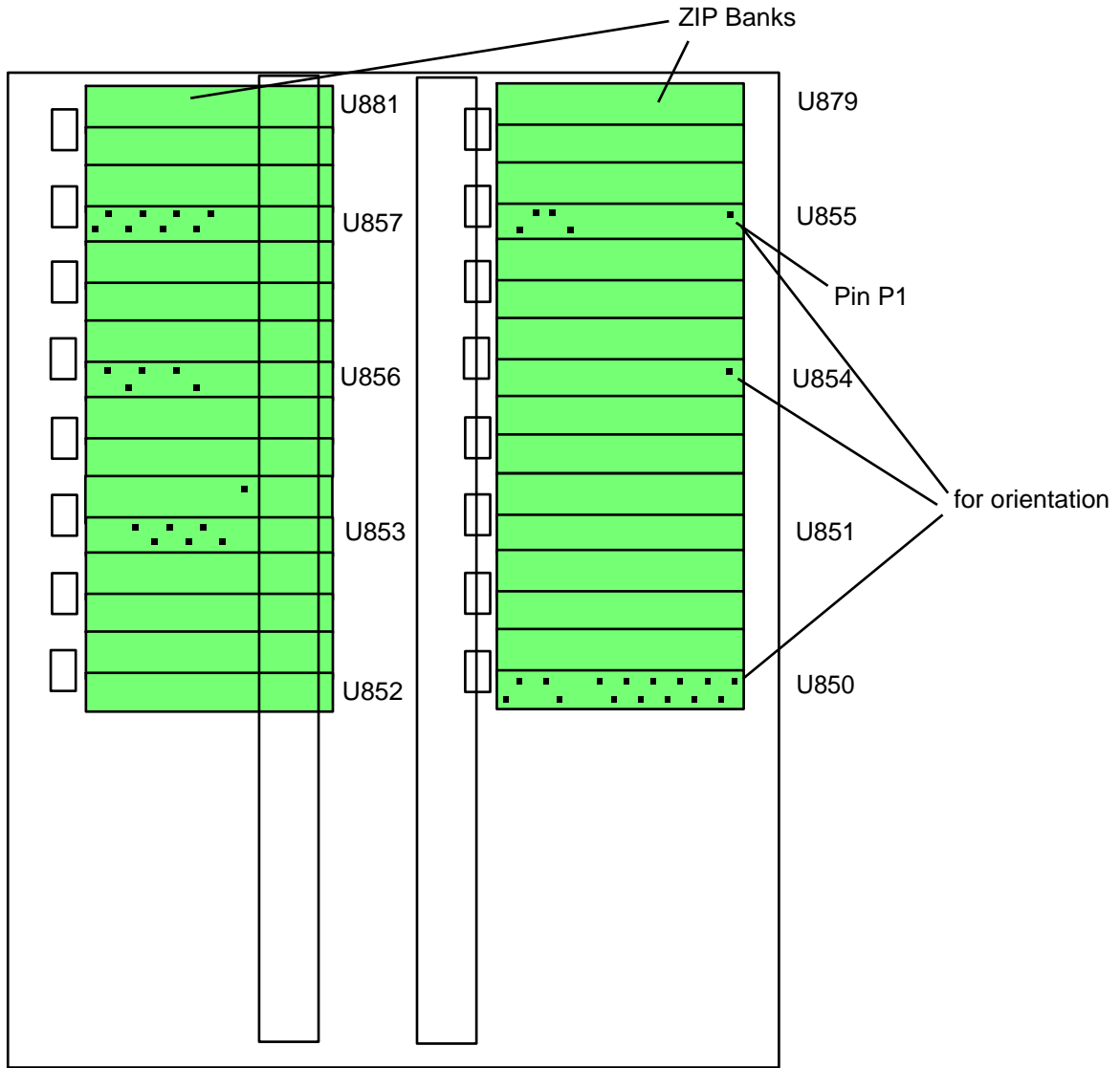
Configuration

● On the A3000 mainboard there is a Jumper marked as J852. It has to be placed to position 1-2 (1MBx4) like when using this type of ZIPs (3 of them for 4MB). The memory located on the SIMMs will be the same type with different case.

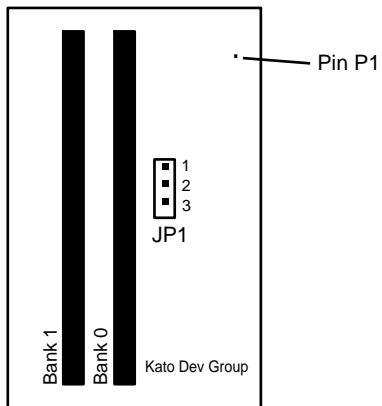
It's possible to use two Jedec72, PS/2 (or how you call them) SIMM modules. Therefore it's best to use 3MB modules to be capable to get full 16MB of FastRAM. For sure 4MB modules may be used too...even mixing is possible.

● On the board itself there is marked how to set the Jumper and where to place which module. Please be carefull even if you expand it later. It won't be explained here because it should be very easy to understand. Wrong jumper settings may kill the modules over longer terms and even memory will be missing and will force you to dismount the machine again.

Backside



fronside



Picture 1

The PS/2 (Jedec72) modules Organisation:

Since a few month it's getting more difficult to get the right modules therefore it's explained here (same for A4000 and even most PCs). If you take 4MB modules they have to be SingleBanked which is in common equal to SingleSided. On the other hand if you take 8MB modules they have to be DoubleBanked which is in common equal to DoubleSided. For background: The A3000 has got 4 banks of memory each 8 ZIPs. The adaptor doesn't really change this. On the modules there are the same 8 chips (sometimes even the same type) per bank. In principle a 8MB module is two 4MB modules each on one side...but that was easy and is past. There are even DoubleSided 4MB and SingleSided 8MB modules that's no a problem, but some are "FALSE"-banked for their size.

It's not possible to write down all working modules or so, you'll have to ask your dealer. At all it's very unusual you'll get wrong modules but we wanted to tell it to you. The A3000/A4000 design is limited to 16MB of Ram on Mainboard (plus Chipmem). Due this limitation it's not possible to use 16MB modules even one of them is different to 2*8MB/4*4MB and won't work for you.

Physical size:

It's not correct to say all modules will work, because there are some modules (mainly from Compaq, AFAIK) which are significant higher and won't match into the limited room inside the A3000. Even if you're in contact with different memory modules ever day, you won't see them (might be removed from a Compaq-Computer or so). Therefore pay attention if you take used stuff.

Speed:

It's known some people use special "StaticColumnMode" ZIPs in A3000(T) to get faster memory access (15-20%). This is unfortunately impossible with SIMM modules. They are no longer available in "StaticColumnMode". On the other hand there are limitations due bugs in the chipset, which disables this feature often.

The prototypes of the adaptor where checked in A3000s with new chipset (Ramsey-07, DMAC-04, Buster-11) which is slightly faster (SCSI) and freed by some bugs. With this machines it was possible to use the "SKIP-Mode" which is known from the A4000s. By using this mode (via an programm on Aminet) together with fast 60ns SIMMs it was possible to increase memory performance to the same level like with SC-RAM (s.a.).

We didn't recognise old A3000s could fail while using it, but they do in common. Therefore we changed this part of the manual. If you're interested trying it with old A3000s (more exactly with original chipset) send out a mail. There is a Jumper to do so (16Mhz/25MHz)... By the way, the A3000 isn't capable to take any benefit from using modules with Enhanced Data Output (EDO) it's not worth buying them.

Final:

Thanks to betatesters Pascal Pfefferkorn, Michael Schuster und Jörn Plewka for their help and tips. Have fun with SIMMfonie!

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