

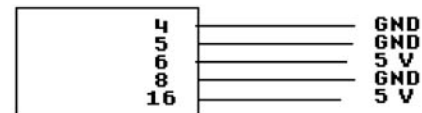
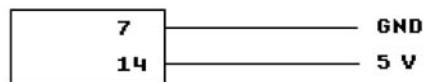
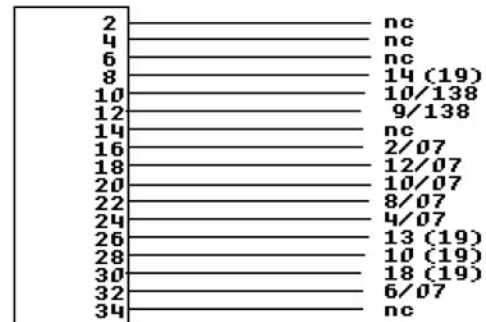
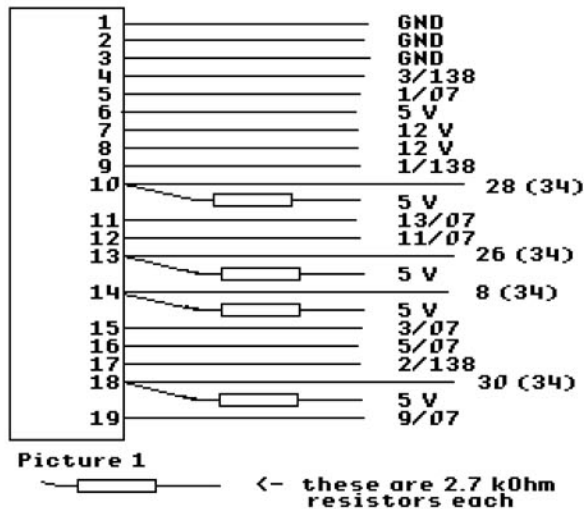
Homebrew replacement Floppydiskadaptor for MS-DOS drives on the AE PC Transporter card

In 2012 i purchased a PC-Transporter card from Applied Engineering. Unfortunately i had no chance to also buy an so called "Transdrive" from Applied Engineering too - although such a drive is required to operate the PC-Transporter card. Without such drive it's not really possible to activate the PC-Transporter card, because you can't boot MS-DOS from an Apple diskdrive.

So after the card was tested by only using the card internal function menu - the further usage was set apart waiting for either the chance to get in touch with an original "Transdrive" from Applied Engineering or if that requires too much time by making a substitute adaptor. In the meantime i decided to make a homebrew Adaptor as substitute for the use with a regular PC-Floppy drive replacing the "Transdrive". I remembered that in the mid 80's in the German User magazine from AUGÉ (Apple User Group Europe) a page had been published with a description how to connect a MS-DOS floppydrive to the PC-Transporter. In the mid of 2013 i started scanning the USE MAGAZIN from AUGÉ to get them in digital format ready for my archive. When i scanned the Issue that contained that mentioned page splitted the copy of that page apart and saved a copy to my "pending projects" directory.

Here is a copy of that page:

How to connect a Standard-MSDOS-Drive (360k-5.25" or 720k-3.5") to an AEPC-Transporter Card.



(Translated from a publication in the German AUG-User-Magazine 7/88)

You need the following parts:

- 1 or 2 Shugart-Bus-Connectors (female, 34pins)
- 1 Apple Disk-Port-Connector (male, 19pins)
- about 50 cm of cable (which allows you to connect 19 pins)
- about 50 cm of cable for the 34-pin-Shugart-connectors
- 1 IC 7407N
- 1 IC 74LS138/1
- 2 capacitors of each 100nF
- 4 resistors of each 2.7kOhm
- 2 sockets (better) for the ICs
- 1 little testing board

The best way to build this adapter (interface?) is to do it with a little board (about 3 by 3 inches). First solder the two sockets, then solder each of the described connections - one by one.

The second MSDOS-Drive is connected parallel to the first - adresssing is done by setting the drive-select-jumper to D1, if the first is D0 (or D2, if the first was D1).

The PICTURE 1 on the attached PCT.DRIVES.PIC shows the first set of connections - the one from the 19pin-Apple-Disk-Connector! - you have to make. Syntax: (1/07 means: connected to Pin 1 of the IC 4707; 2/138 means connected to pin 2 of the 74138; 28 (34) means a connection to pin 28 of the 34pin-Shugart-Connector. GND means connected to ground. All the resistors in this picture have a value of 2.7 kOhm.)

The numbers in the box on the left side represent the pins of the 19 pin Apple-Disk-Connector.

PICTURE 2 shows the additional connections referring to the 34pin-Shugart-connector. (Syntax is the same as above, 10 (19) means connect to pin 10 of the 19 pin Apple-disk-connector, nc means "not connected", of course :-!)

All odd pins of this connectors have to be connected to GROUND!

Now for the additional connections you have to make on the two ICs:

7407: Pin 7 -> Ground, Pin 14 -> 5V. (PICTURE 3)

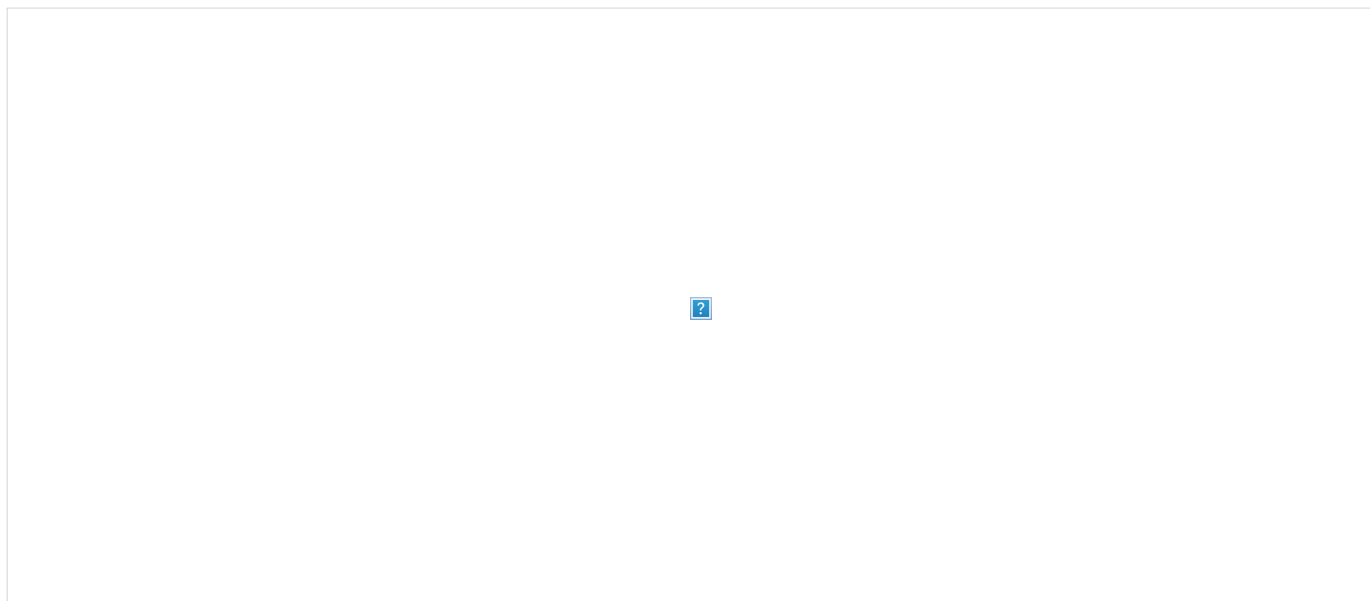
74138: Pins 4,5,8 -> Ground, Pins 6,16 -> 5V. (PICTURE 4)

Now connect Pins 7 and 14 of the 7407 via one of the capacitors, the same goes with the pins 8 and 16 of the 74138.

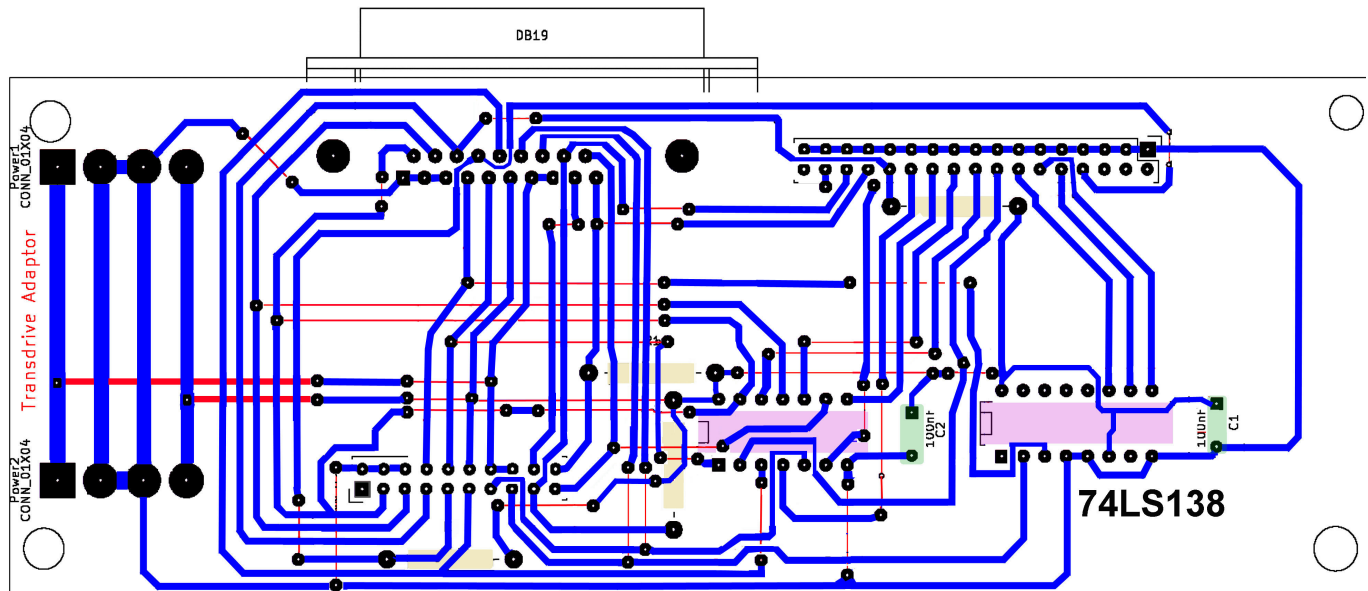
Daisy Chaining not implemented, sorry - if you need it badly: ask back - but you'll do it at your own risk! The Apple-Platinum-drive is much more expensive than a MSDOS-drive!

Now in september i picked up that page and started with the task. First of all i decided that i didn't want to wire up that with simple experimental board, but instead i wanted to use a real PCB instead. At the other hand after i had transferred the plan into my PCB- design software i had to realize that either normal use the PCB would require at least a double sided PCB - but i wanted to avoid at the one hand delay of 14 days caused by sending the gerber files to a PCB-manufacturer and waiting for shipment of the finished PCBs and at the other hand such a task would have cost at least 100 to 150 Euro - even for such a tiny board.

Then while changing the design - to reduce the wirebridges requested - if i would reduce the PCB to a single sided layer - i also thought about the possibility of making two boards - one for pulling "straight through" a 20 pin flatribbon cable from PS-Transporter Card to the adaptor - or as alternate version - another PCB with a fixed 19-pin DB19 shell connector which would permit to use a "straight through" 19-wire cable with DB-19 connector at both sides prepared for mounting in fixed position in a case with 2 MS-DOS drives.



In the population picture above the requested wirebridges are drawn in red color.



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