DDD1/5 EXPANSION CARD and SOUND CHIP SET
(Including ZIF card instructions)

Owners Manual (Ver5)

Thanks for buying this expansion card and sound rom chip set, please read the following instructions to get the best out of using this card. The cards feature a high quality printed circuit board using gold contacts to ensure a good connection in the socket at all times. The Chip socket can take both 28 pin and 32 pin ROM sound chips.

The expansion card can only have 1 rom chip fitted at a time.

Please see the document "ROM CHIP LIBRARY" , for details on the rom chips currently available.

The rom chips are interchangeable on the expansion cards, the expansion card featuring a ZIF (zero insertion force) socket allows quick changing of rom chips. The turned pin socket version offers a more streamlined fit in the DDD1 Card sockets for DDD1 machines that have a card "cover" on the front of the machine

Expansion card instructions.

The card is designed to be very reliable, but please observe the following precautions to ensure long life.

Handle the card gently, handle by the edges were possible, do not touch the contacts at the end of the card. Do not drop or bend the card, do not leave in a hot place such as in the sun or in a car on a hot day or let the card get wet, if anything is spilled on to the card, gently wipe off with a soft cloth and allow dry naturally,(don't use any strong cleaning agents). Avoid scratching the card or writing on it.

Installing the card

The expansion card fits into any free card slot, except the RAM card slot on the DDD-1.

You can insert up to 4 cards on the DDD-1 and 2 cards on the DDD-5.

Before inserting the card it is advisable to make sure your machine is switched off.

Insert the card gently(contact end first), holding the card (at the end where the chip is), at the edge corners (Sound chip facing upwards)into any free slot on the DDD1/5 (see pictures below)

Keep the card straight when inserting, do not use excessive force, you will feel a slight resistance as the card engages with the card slot socket, when you can't push the card any further, it is fully installed.
(see pictures below)
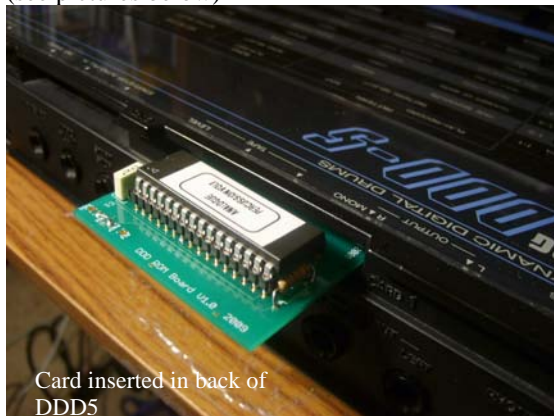
Card inserted in back of DDD5
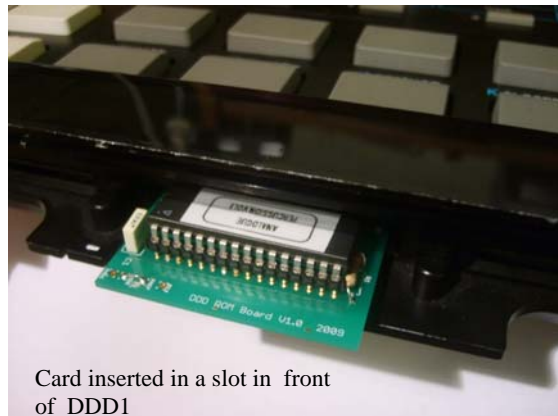
Card inserted in a slot in front of DDD1

After inserting the card, switch on the DDD1/5.

The DDD-1, will perform a ROM card check

when the check is done on the slot where the card is inserted , it should read "OK!" on the screen. The DDD 5 does this automatically as well when switched on, but does not display a message on the screen.

Changing the Sound chip (Turned Pin Socket type)
The sound chip can be removed so that you can install a different chip with different
Sounds. More chips will be available soon with many different percussion sounds, so that a sound Library
can be built up. The chips come in 2 versions, either 28 pins or 32 pins.
Do not attempt to change chip if you are not sure how to do it, the PCB or chip can be easily damaged. If in
doubt, please consult an electronics technician or your local
Electronics/computer shop might even do this for you for a small charge.
.You can use a special tool, called an **IC removal tool**, available from your local electronics store. If the
tool is not available, you can try the method described below.
Using a small flat bladed screwdriver (a precision screwdriver is ideal), place the end of the screwdriver
blade carefully under one end of the sound chip. Take care not to damage the components near the ends of
the chip (see diagram) or scratch the circuit "tracks " on the PCB. **Now, gently lift the chip upwards at
the center of one end of the chip.** When the chip has moved upwards a little at one end, do the same on
the other end of the chip until that end has lifted slightly.(See Fig 3+4 ,top of page 3)
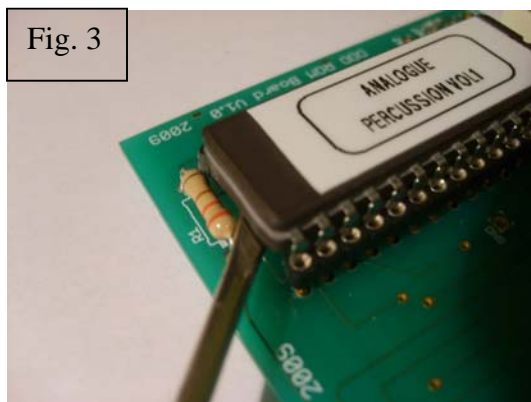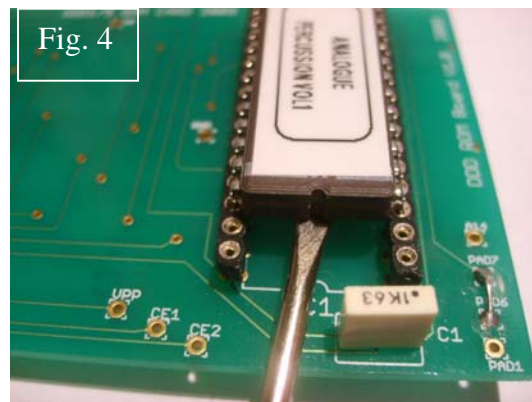

Fig. 3

Fig. 4

Repeat this action again until the chip comes out of the socket. Take your time doing this, try not to lift one
end of the chip too much, so the pins(legs) on the chip do not bend. With practise this will become easier ,
the key is to just prise the chip upwards a little at a time on each end, until it come out of the socket
To insert a chip into the socket.
Make sure the pins(legs) on the chip are straight before inserting the new chip, it is advisable to get a **chip
straightening tool** from your local electronics store, such as Maplins.
Make sure the notch on the chip is near the white printed notch legend and label " IC1 " on the expansion
card (**with 28 pin chips, leave the last 4 holes on the socket free**) and line the chip Pins(legs) with the
socket holes, gently push the chip in slowly, check the pins are not bending ,if they do bend , take the chip
out, straighten the pins, then try again.

**With 28 pin
chips. Leave
last 4 holes free
on socket !!**

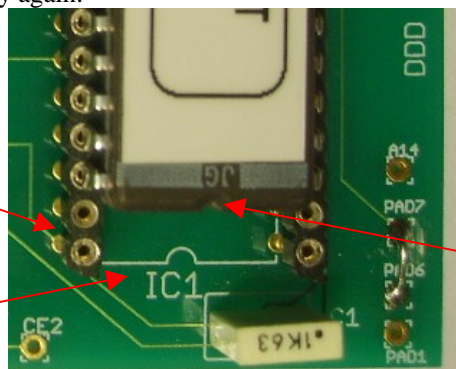Notch printing on
PCB shows correct
fitting of the chip

Fig.5

Notch on IC must be
facing this way
round when fitted in
the socket

The next page shows how to remove the chip from expansion cards fitted with alternative IC socket. The method of removal is basically the same.
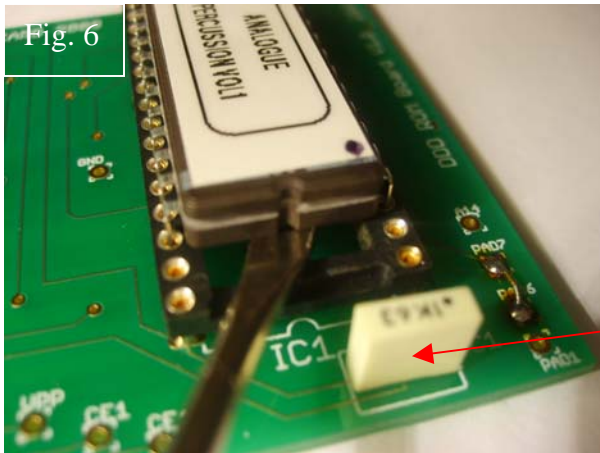

Take care not to damage the capacitor!!
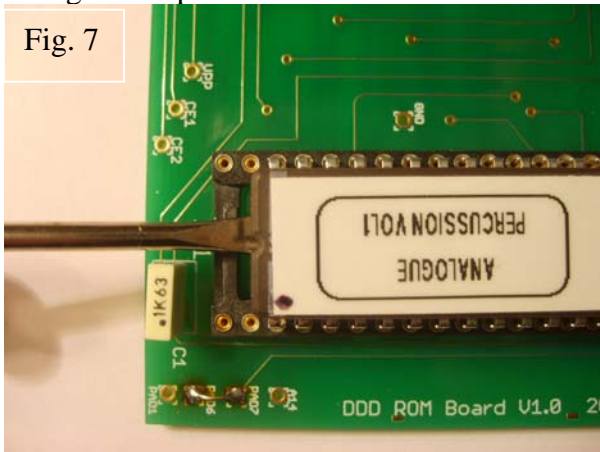
lifting the chip with alternative fitted IC socket

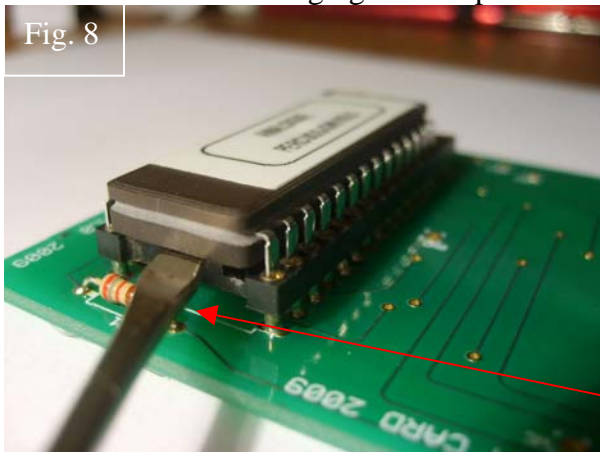
take care to avoid damaging the components on the card

Take care not to damage the Resistor!!

Changing the Sound chip on the ZIF socket expansion card

The chips are easily changed on this card, but please observe the following points.
Use only light force on the socket lever when moving it, do not force it.
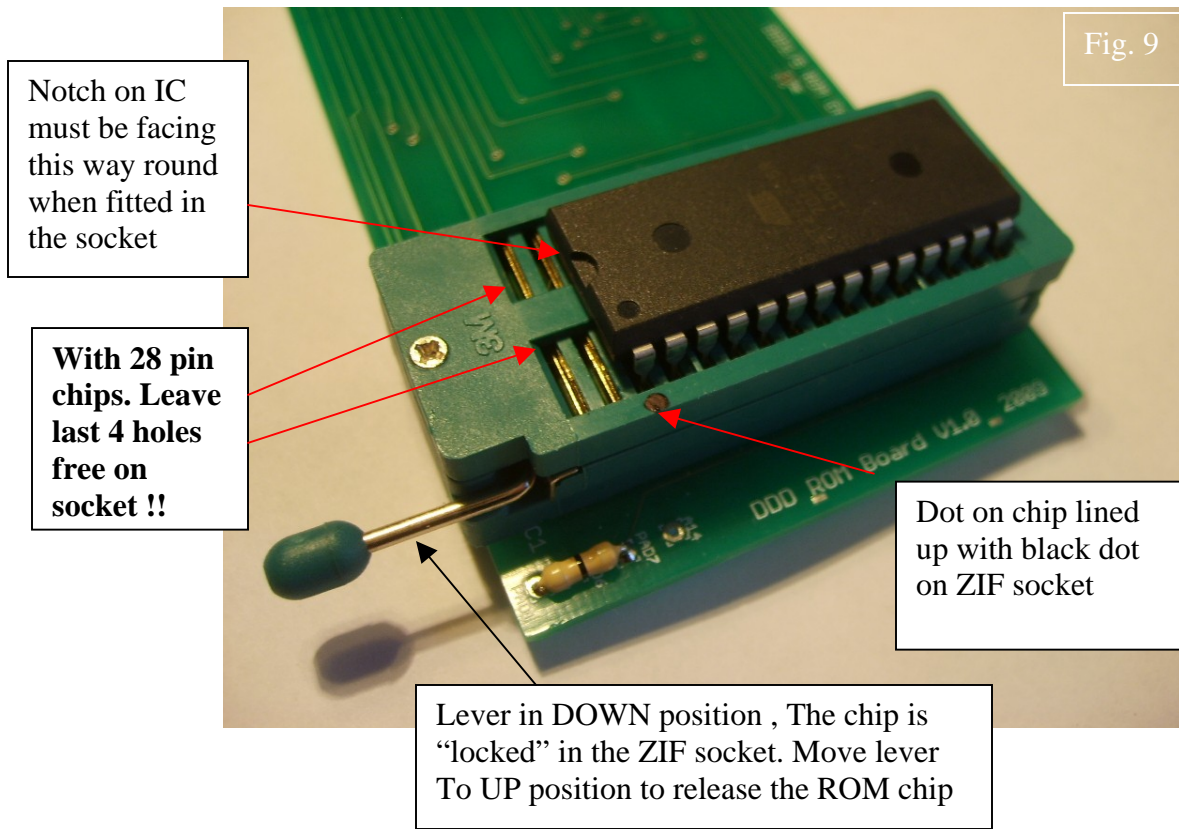
To insert 28 pin chip:
Ensure lever is in the UP (pointing upwards) position
Hold the rom chip by the ends and ensure it is the correct way round, with pin 1 lined up with the black dot on the ZIF socket(see photo).
 Place the rom chip into the socket , making sure the chip pins line up with the socket holes,make sure pins do not bend. When the chip is in the ZIF socket move the lever to the DOWN position.
To remove rom chip , move lever to the UP position.

Fig 9.The picture below shows a 28 pin ROM chip fitted the correct way round in the ZIF socket.

Notch on IC must be facing this way round when fitted in the socket

With 28 pin chips. Leave last 4 holes free on socket !!

Dot on chip lined up with black dot on ZIF socket

Lever in DOWN position , The chip is "locked" in the ZIF socket. Move lever To UP position to release the ROM chip

Fig. 9

Fig.10

Dot on chip lined up with black dot on ZIF socket

Notch on IC must be facing this way round when fitted in the socket

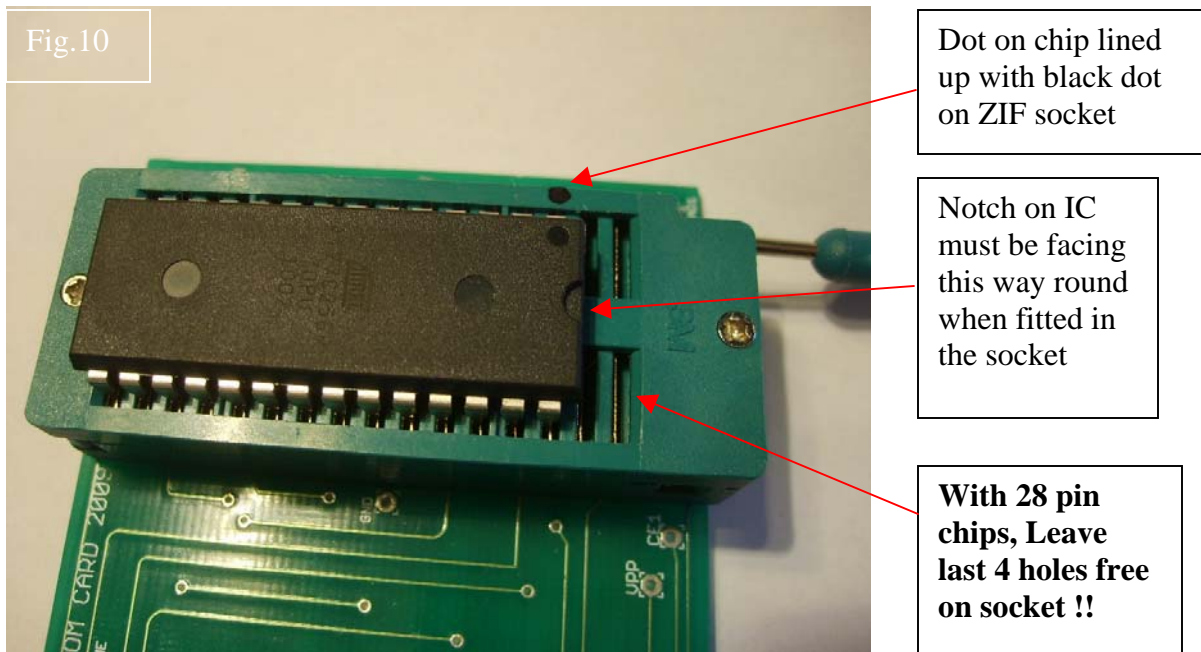**With 28 pin chips, Leave last 4 holes free on socket !!**

Fig10. picture above showing correct fitting of the 28 pin ROM chip in ZIF socket

PROBLEMS/Troubleshooting

The DDD-1/5 machines are now over 20 years old, some machines may have never had a card inserted into the slots, therefore over time, the card sockets in the slots may get dirt and dust in them, and the electrical contacts in the sockets themselves may get oxidization on them, making the socket unable to make a proper connection with ROM cards. It also depends where the machine has been stored, in the past (in damp, humid or dusty conditions) It is possible to fix this and the following steps have been found to be successful in cleaning the card slot sockets.

If the Machine does not accept the expansion card (DDD-1 says "**No Card**" or "**Error**") ,switch off and gently re-insert the card again, take the card out and repeat a few times, this will help to clean the contacts inside the machine. You can also try using compressed air in an aerosol(the type used for cleaning computers keyboards etc)to remove any dust or particle or small objects, don't pour or spray contact cleaner into the machine.

Ensure the contacts on the Expansion card are clean, avoid touching the contacts with your fingers, wipe any marks off the contacts using a soft cloth

Eventually your machine should accept the card and the more the slot is used, the problem should disappear.

If there are still problems with the sounds, it could also be due to the socket having wear in it, this means that the socket contacts will not make a tight enough fit with the contacts on the expansion card . To solve this problem, you can stick a strip of good quality electrical insulation tape (20mm x 52mm approx) along the underneath of the contact end of the card, this will give the card more grip when inserted in the socket , and can help stop errors occurring due to vibration or movement.

If there are Clicks in playback, this can be solved by setting sounds to polyphonic " P " in the pad settings. Zipper or lo bit quantize noise can sometimes be heard when setting tune value to different tunings, this is a normal characteristic of the DDD1/5 machines playback of samples (even original korg cards do this on certain sounds).This can even be an advantage sometimes, as "circuit bent " lo fi sounds can be created with certain sounds and tuning be altered as the pattern is played using the SEQ PARAMETER function.

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