TITAN ACCELERATOR IIe

Section 1

STEP 1. DON'T TAKE THE ACCELERATOR IIE OUT OF THE PINK ANTI-STATIC BAG
        YET.
STEP 2. Turn off the power to your Apple.
STEP 3. Put a piece of aluminum foil on the table next to your Apple.
STEP 4. Take the cover off the Apple.
STEP 5. Make a list of the contents of each slot in a table like the one
        below:

        Slot 0 _____   Slot 4 _____
        (or aux slot)
        Slot 1 _____   Slot 5 _____
 nk bag
        and put the board on the aluminum foil. Make sure each pin is
        touching the aluminum foil to prevent static buildup.
STEP 9. Find the block of small switches on your Accelerator IIe board.
        Switches 1 to 7 correspond to slots 1 to 7. For each slot with a
        time sensitive device (refer to your slot table), set the
        corresponding switch OFF. Set switch 8 OFF. Set all the other
        switches ON.
STEP 10. Find the block of jumpers on the upper right of the Accelerator
        IIe. Refer to figure 2. There are 7 jumper positions. The top
        jumper goes with slot 1, the next with slot 2, etc. The bottom
        jumper goes with slot 7. Now for each slot where you have any type
        of memory board, remove the corresponding jumper(small plastic
        gadget). If you have an Apple IIe, ignore the auxiliary slot. For
        an AppleII or II plus, the Accelerator IIe will not recognize a
        memory board in slot 0. Thus there is no jumper for slot 0. We
        recommend that you put the Accelerator IIe in slot 0 of an Apple
        II or II Plus.
STEP 11. Make sure the power is turned off for your Apple.Touch the power
        supply again. Now plug the Accelerator IIe into the slot 0 on your
        Apple II or II Plus, or into any available slot on your Apple IIe.
        Slot 3 is a good choice for the Apple IIe, since the Accelerator
        IIe wil work in slot 3 whereas most other cards won't.
STEP 12. Replace the cover to the Apple.
STEP 13. If you do NOT have a Z-80 card, skip this step. If you have a
        Microsoft Z-80 Softcard or another Z-80 card which uses DMA, you
        must use the preboot disk which came with your Accelerator IIe
        before you run any Z-80 (CP/M) software. You do not need the
        pre-boot if you have a Z-80 card which does not use DMA. Consult
        your Z-80 card manual if in doubt.

            To use the pre-boot, just boot the Accelerator IIe pre-boot
        disk. It is already set for the "desireable" option, which is what
        you need. Now remove the pre-boot disk, insert your regular CP/M
        disk, and press the space bar. Run your programs as usual. Your
        CP/M software will not speed up, since it is not using the
        Accelerator's 6502. To get back to 6502 operation for DOS or
        Pascal, you must reboot the system. Just turn off the power and
        back on to get the accelerated 6502 operation.
STEP 14. All your software (except CP/M programs requiring a Z-80 card)
will now run approximately 3-1/2 times faster! If you want to slow
down (in order to play games, perhaps), you can use the pre-boot
disk provided with your Accelerator IIe board. Just boot this disk
before you run your game. Move the cursor to the "slow down"
position with the right arrow key. Now remove the pre-boot disk,
insert a regular DOS or Pascal disk, and press the space bar. Run
your program as usual.
Step 15. For more information, read Section II at your convenience

LIMITATIONS:

1.   The Accelerator IIe will not speed up CP/M software running on a
Z-80 card. All other applications will run approx. 3-1/2 times
faster.

2.   The Accellerator IIe is not compatable with the Corvus Omninet or
other DMA (direct memory access) devices.

3.   The Accellerator IIe will not access the second bank of a Saturn
32k RAM Board, although the built in language card on the
Accellerator IIe effectively replaces this second bank.

4.   A few programs are not compatible with the CMOS 6502 because they
treat newly implemented op-codes as no-ops.

                SECTION 2 - Accellerator IIe INFORMATION

PROCESSOR

        The Accellerator IIe is based on a CMOS 6502 microprocessor
running at 3-1/2 MHZ. This replaces the Apple's 1 MHz 6502
processor for all computation. The Accellerator's clock is derived
from the 7M signal on the expansion bus. The frequency is divided
by 2 for normal operation of the Accelerator. Synchronization of
off-board cycles is accomplished by cycle stretching.

        CMOS parts are particularly sensitive to static
electricity, and for this reason the Accellerator IIe should be
handled with some care. Ground yourself by touching the Apple's
power supply before removing the Accellerator IIe from its
anti-static bag. Place the board on a piece of aluminum foil or
other conductor to set the switches and jumpers. Be sure every pin
on the back of the board is touching the conductor during the
operation. Once the board is plugged in, never touch it without
first touching the power supply. Avoid excess handling of the
Accellerator IIe. The board should always be kept either in its
anti-static bag or in one of the Apple's slots.

MEMORY

CONTROL PORT

        The Accelerator IIe operating mode may be controlled by
execution of a machine language write cycle or BASIC poke according to
table 1:

                        Table 1
_____
                Data to
Address   write   Function
_____
  C086   05H   High speed (normal operating
                                   mode, set on power-up)

  C086   01H   Low speed

  C086   0AH   Disable

I think this should give enough information to write a simple basic
program to set the speed of the card or disable it.

        Paul   pbauer@mit.edu

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_____

 Mitchell spewed forth:

 SCC(| I picked up some odds and ends on the weekend (still going
      | through it) and one interesting item is a Titan Accelerator II

I have two, I think they're pretty neat.

 SCC(| First off, how did this accelerator differ from the TransWarp
      | and ZipChip in terms of functionality and compatibility? I would
      | like to install it in my Apple IIe and use with recent software,
      | like ProTERM. There is a bank of eight switches and seven jumpers

Simply put: The two blocks correspond to the slots in a //e. The first
block is for time-dependant slots (drives, printer, etc.) -- flip these
switches OFF if there's something time sensitive in it. The second is
for any memory you have in (if you are using a][/][+ the card goes in
the aux slot 0, and goes in any other slot on a //e, so there is no
jumper for slot 0) -- pull the jumper OFF for any slot with memory.

 SCC(| As for working with the card, when I plug it in most software
      | will refuse to run. An "Unable to load ProDOS" message appears if
      | I try and start most things up (removing the boards fixes this).

I have no clue. The Titan card replaces having a 65C02 in some
applications but not others (Angel likes it, Shrink It does not).

      | Also odd, if I press control-reset, I see garbage off the to side
      | of the screen, like this:

The card does retain a charge; my experience says that one has to power
down for 15-20 seconds before rebooting to not get garbage. As for a
control-reset, I haven't done that much lately. :)

 SCC(| Is the board not properly configured or does it sound
      | defective? All the chips are socketed (minus the silver "Titan
      | Technologies" box in the corner) but I'm not sure which chips

The only thing I know is that you have to slow the thing down -- speed
is 3.5MHz -- to reset any system clock you have, and some programs don't
really like it (this happened with some BBS program I was setting up).
The POKE there is: 49286,x where x=5 for fast and x=1 for 1MHz, and
x=10 to turn the thing off completely (a dangerous choice).

The card does wonders for me in Publish It! 4, speeds up the pagination
in AppleWorks, and doesn't do anything special in ProTerm except change

the tone of the "connect" sounds. :)

 * 2qwk! 2.03 * "Cold meat, mutton pies/Tell me when your mother dies" -boy
--   --
yet another annoying post by brian.hammack@rook.wa.com -- deal with it.