Apple II Disk II Information

http://www.doc.ic.ac.uk/~ih/doc/stepper/others/example3/diskii_specs.html
22 January 2006

In article <36i1u3$gp8@senator-bedfellow.MIT.EDU> biomorph@athena.mit.edu (Bayard Wenzel) writes:

>Ok. So i was wondering if someone could tell me about the interface
>with the drives on the apple2. like, which i/o addresses do what, and
>what exactly they signify. a pointer to some kind of on-line documentation
>would be most ideal, but even the sparcest summary of the card interface
>would be nice.
>
>I could also do with some understanding of the plug to external drives,
>even just a list of what each pin corresponds to (power, gnd, clock, ack,
>req, blah, blah, blah).

The pinouts of the current Apple II disk connectors are listed in Apple II Miscellaneous Technical Note #6: IWM Port Description, available on ftp.apple.com.

I have a file that I wrote up a while ago about the programming interface to the 5.25-inch disk drive hardware. I'll attach it below. If you're also interested in the 3.5-inch drive on the IIGS, then ftp to cco.caltech.edu, cd to /pub/apple2/info, and get the file "iwmstuff".

Other things worth reading are _Beneath_Apple_DOS_ and _Beneath_Apple_ _ProDOS_ by Don Worth and Pieter Lechner.

-----(beginning of attached file)-----

The 5.25" drive is controlled by the interface card's I/O locations, found at memory locations $C0n0 through $C0nF, where "n" is a hexadecimal digit from 9 to F, depending on what slot the card is in (9 is slot 1, A is slot 2, and so on). These sixteen I/O locations are paired to form eight "switches"--referencing location X turns the switch off, and referencing location X+1 turns it on.

Addr.	Name	Purpose
$C0n0	PHASE0	Stepper motor phase 0
$C0n2	PHASE1	Stepper motor phase 1
$C0n4	PHASE2	Stepper motor phase 2
$C0n6	PHASE3	Stepper motor phase 3

```
; RECAL -- routine to recalibrate head to track 0
; Call this if you don't know what track you're on
; Inputs:  X-reg = slot number * 16
; Assumes disk drive is already turned on
; (Warning:  This routine is noisy!)
;
RECAL    LDA #$50            ;Pretend we're on phase 80 (track 40)
         STA CURPH
         LDA #0              ;Go to track 0
         JMP TRKMOVE1        ;Do it
```

If you want to position the head over one of the unused tracks (the 3 o'clock and 9 o'clock tracks), enter the subroutine at TRKMOVE1 instead of TRKMOVE. This skips the conversion of the operating system's track number into the physical track number.

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           - Neil Parker
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Neil Parker                 No cute ASCII art...no cute quote...no cute
nparker@cie-2.uoregon.edu   disclaimer...no deposit, no return...
nparker@cie.uoregon.edu     (This space intentionally left blank:           )
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