Parallel Interface Card: Product Description (11/96)

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TOPIC ---

This article describes the Apple II Parallel Interface card and includes other related information.

DISCUSSION ---

DB-25 Connector Pinout

DB-25 Connector	Signal Name
1	Data In, Bit 0
2	Signal Ground
3	Data In, Bit 2
4	Signal Ground
5	Data Out, Bit 0
6	Data Out, Bit 1
7	Blocked
8	Data Out, Bit 2
11	Data Out, Bit 5
12	Data Out, Bit 6
13	Data Out, Bit 7
14	Data In, Bit 4
15	Strobe Out
16	Acknowledge In
17	Data In, Bit 1
18	Data In, Bit 7
19	Data In, Bit 5
20	Signal Ground
21	Data In, Bit 6
22	Data Out, Bit 3
23	Data Out, Bit 4
24	Signal Ground
25	Data In, Bit 3

Switch Settings
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Strobe Length
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1 microsecond -> SW1-1:Off, SW1-2:Off, SW1-3:Off
3 microseconds -> SW1-1:On, SW1-2:Off, SW1-3:Off
5 microseconds -> SW1-1:Off, SW1-2:On, SW1-3:Off
7 microseconds -> SW1-1:On, SW1-2:On, SW1-3:Off
9 microseconds -> SW1-1:Off, SW1-2:Off, SW1-3:On
11 microseconds -> SW1-1:On, SW1-2:Off, SW1-3:On
13 microseconds -> SW1-1:Off, SW1-2:On, SW1-3:On
15 microseconds -> SW1-1:On, SW1-2:On, SW1-3:On

Strobe Polarity

Positive -> SW1-4:Off
Negative -> SW1-4:On

Ack Polarity

Positive -> SW1-5:Off
Negative -> SW1-5:On

Firmware Select

Parallel (LF) -> SW1-6:Off
Centronics (No LF) -> SW1-6:On

Interrupts

Disable -> SW1-7:Off
Enable -> SW1-7:On

Interrupts should be enabled for the Apple III and disabled for the Apple II.

Switch Setting Explanations

Different peripherals (non-Apple printers, etc.) may use I/O signals that have different duration and polarity. The STROBE LENGTH, STROBE POLARITY, and ACK POLARITY switch settings on the Parallel Interface Card (2PIC) give you the flexibility to communicate with these other devices. For the I/O signal characteristics of the device you are connecting with, read its manual.

Controlling Bit 8

The following program enables you to control bit 8, used by some printers to select expanded or normal print mode or to enable alternate or graphics

character sets. DOS 3.2 or DOS 3.3 is required to use this routine, which also works in the Apple III in Emulation mode.

Determine which slot your interface card is in and the corresponding slot code from the table. Replace "<slot>" with the slot number and "<code>" with the code when typing in the program.

slot	1	2	3	4	5	6	7
code	C1	C2	C3	C4	C5	C6	C7

Enter the monitor with Call -155 and type:

```
3B0:A9 <slot>
:20 95 FE
:A9 80
:20 ED FD
:A9 C5
:85 36
:A9 03
:85 37
:4C EA 03
:29 7F
:0D CD 03
:4C 02 <code>
:80
```

To check your typing, type: 3B0L

Compare your listing to the one below configured for slot 1.

```
03B0-   A9 01       LDA   #$01
03B2-   20 95 FE    JSR   $FE95
03B5-   A9 80       LDA   #$80
03B7-   20 ED FD    JSR   $FDED
03BA-   A9 C5       LDA   #$C5
03BC-   85 36       STA   $36
03BE-   A9 03       LDA   #$03
03C0-   85 37       STA   $37
03C2-   4C EA 03    JMP   $03EA
03C5-   29 7F       AND   #$7F
03C7-   0D CD 03    ORA   $03CD
03CA-   4C 02 C1    JMP   $C102
03CD-   80          ???
```

Enter 3D0G to return to Basic.

Save the driver to disk by typing: BSAVE CEN 730, A$3B0, L$1E

Load the driver and initialize the interface before using the printer. From command mode, type:

```
BLOAD CEN 730
Call 944
```

Or from a program: 100 Print D$;"BLOAD CEN 730" : Call 944, assuming that D$ is a CTRL-D.

To switch back to the video monitor for output type: PR#0
or in a program enter: 200 Print D$;"PR#0"

To reconnect the printer, all that is required is: Call 954, or from a program: 300 Call 954

To set normal print mode, type POKE 973,0; type POKE 973,128 to set the expanded print mode POKE.

Cable Pinouts

Here is a sample pinout for an Apple II parallel card to a parallel printer.

20-Pin DIL Connector (Female)		Amphenol Connector (Male)
1	----------	14
2	----------	10
8	----------	1
10	----------	2
11	----------	3
12	----------	4
13	----------	5
14	----------	6
15	----------	7
16	----------	8
17	----------	9
20	----------	16

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