



TABLE 1		Pin Numbers			Jumpers		
U2 part#	type	1	23	26	27	P2	P3
62256	32K RAM	A14	A11	A13	/WE	1-2,4-5	1-3,2-4
6264	8K RAM	A11	VDD	/WE		3-4	1-3,2-4
* 6116	2K RAM	/WE	VDD			3-4	2-3
27256	32K EPROM	VDD	A11	A13	A14	2-3,4-5	1-3,4-6
28C256	32K EEPROM	A14	A11	A13	/WE	1-2,4-5	1-3,2-4
27128	16K EPROM	VDD	A11	A13	VDD	2-3,4-5	1-3,4-5
2764	8K EPROM	VDD	A11	NC	VDD	2-3	1-3,4-5
28C64	8K EEPROM	VDD	A11	NC	/WE	2-3	1-3,2-4
* 2732	4K EPROM	A11	VDD			3-4	1-3
* 2716	2K EPROM	VDD	VDD			3-4	3-5

\* is a 24-pin IC: put its pin 1 into socket pin 3.  
 P4 power / pin 6 /ON: GND to Run, Open for Standby.  
 + serial / pin 5 TX: TTL serial out.  
 connector / pin 4 RX: TTL serial in.  
 / pin 3 VDD: +3 to +5 VDC (3 AA cells etc)  
 / pin 1 GND: Common for power (VSS).

**SERIAL I/O**  
 For RS-232 (-5v to -12v idle, +5v to +12v active):  
 - RXD Receive Data on J2-20  
 - TXD Transmit Data on J2-15  
 For TTL (+3.3v to +5v idle, 0v to +0.5v active):  
 - RX Receive Data on P4-4, or P1-26  
 - TX Transmit Data on P4-5, or P1-12  
 For stand-alone operation (CPU card only):  
 - short /WE to /MWR (P1-10 to P1-11)  
 - short RUN to VDD (P1-13 to P1-14)

For PC Parallel Port: Set S8 DOWN, S0-7, S9-11 UP.  
 Rev.B: Add Q1 /CE=0 if TPB=1 & A15=0. Add C6=82pF.  
 R8-10=470K, was 100K. RUN on P4-2. I/O port=4-7, was 5 or 7. Drill "O" for 1804 to open VCC.  
 Rev.C: R4,8-10=499K, was 470K. C6=100pF, was 82pF.  
 Rev.D: R2=6.8K, was 15K. Add R14, D12. Swap J1-P1 labels. Add jumper options Q0-Q3, A/B, N0-2, Q1.  
 Rev.E: Add room for larger C5 (up to 0.22F).  
 Rev.F: C1=1.8MHz resonator, was 20pF. R1-R2 now trimpot.  
 Rev.G: Add U8, C6. Add serial I/O to J2 using Q and EF3.  
 D8 is red for Q=1 (TXD active), green for EF3 pin=1 (RXD active).  
 Rev.H: Add D14. R4 was /CLEAR now GND. Q1=FJN3307, was 2N7000. R5=10K, was 100K.  
 Rev.H2: Add Q1+Q2 for /A15 inverter. Replace R15 with P6 serial RXD jumper. Add D15.  
 Rev.I: P4 now 6-pin (use Sparkfun #9718 USB-serial cable). Add Q6, R15. Add D15 UNDER PCB across C8. P4 /ON is RUN+LED: GND=run clock, 1802, LEDs; VDD or open=standby.  
 Rev.J: Fix Q4 silkscreen. Add D15. Add Q7 to invert serial out (Q=0 is idle, LED off).  
 Rev.K: R1=10meg, was trimpot. U4=74HC00, was 4093. Eliminate C6, R7. U4D was osc, now controls U8 /CE. U8: unscramble A0,2-4, add jumpers to swap pins 1-27 for EPROM.  
 Rev.K2: U6=74HC541, was 74HC244. R8-10=470K, was 499K. D11=1N4734, was 1N5231.

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Title		
1802 Membership Card and Front Panel Card		
Size	Document Number	REV
B	C:\ORCAD\SHEET\1802\DEV4K2.SCH	K2
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