



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 in.
 connector / pin 4 RX: TTL serial out.
 / 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 pin 20
 - TXD Transmit Data on J2 pin 15
 For TTL (+3v to +5v idle, 0v to +0.5v active):
 - RX Receive Data on P4 pin 4
 - TX Transmit Data on P4 pin 5

For PC Parallel Port set S0-7, S9-11 UP, S8 DOWN.
 Rev.B: Add Q1 to set U2 /CE=0 when TPB=1 & A15=0.
 R8-10 was 100K, now 470K. Add RUN on P4-2.
 Add C6=82pF. Add feedthru "O" (drill for 1804 to open VCC). I/O port was 5 or 7, now 4-7.
 Rev.C: R4,8-10=499K, was 470K. C6=100pF, was 82pF.
 Rev.D: R2=6.8K, was 15K. Add R14 for RS-232 input.
 Add D12. Swap P1-J1 labels. Add jumpers Q0-Q3 and A/B for 8 outputs on J2. Add N0-3 and Q1 options to stack two Membership Cards to double memory and I/O.
 Rev.E: Add room for larger C5 (up to 0.22F).
 Rev.F: Remove R2 (R1 now does its job). Replace C1 with 1.8 MHz ceramic resonator.
 Rev.G: Add U8. Change C6 to bypass cap for U8. 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 was 2N7000 now FJN3307. R5 was 100K now 10K.
 Rev.H2: Add Q1+Q2 for /A15 inverter. Replace R15 with P6 serial RXD jumper. Add D15.
 Rev.I: P4 now 6-pin (Sparkfun #9718 USB-serial cable). Add Q6, R15. D15 mounts 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).

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Title		
1802 Membership Card and Front Panel Card		
Size	Document Number	REV
B	C:\ORCAD\SHEET\1802\DEV4J.SCH	J
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