



U2 parts:

Pin	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
45256	8K	RAM	All	VCC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6254	8K	RAM	All	VCC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6116	2K	RAM	All	VCC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
27256	32K	ROM	VCC	All	A13	A14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
27128	16K	ROM	VCC	All	A13	VCC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2764	8K	ROM	VCC	All	NC	VCC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2732	4K	ROM	All	VCC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2718	2K	ROM	All	VCC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

\* Is a 24-pin chip; put its pin 1 into socket pin 3.  
 P4 power pin 1 VDD; #3 to #5 VCC (3 AA cells etc.)  
 connector. pin 1 RUN; to pin 1 to run, open stops osc.  
 pin 3 LED; to pin 4 enables LEDs, open/off.  
 pin 4 COMMON for power (GND, VSS).

- Notes:
1. Uses C1-7 D0-12 J1-2 P1-4 Q1 R1 R3-14 S0-11 U1-9.
  2. Boards stack: Front Panel on top; Membership Card on bottom, both component side up.
  3. For 1804, drill feedthru "0" to open VCC.
  4. To use J2, set S0-7, S9-11 UP, S8 SS DOWN.
  5. Rev.B: Add Q1 to gate U2 VCC with TP3 & A15.
  6. Rev.C: R4 and R8-10 were 470K, now 499K. C6 was 82pF, now 100pF.
  7. Rev.D: R2 was 15K, now 6.8K. Add R14 for RS-232 Inert. Add D12. Add J2 signal names. Swap P1-J1 designators. Add jumpers A/B.
  8. Add NO-N2 & Q1 options to stack 2 Membership Cards w/o memory or I/O conflict.
  9. Rev.E: Increase C5 to 0.22F, add room for larger C5.
  9. Rev.F: Remove R2. Replace C1 with 1.8 Mhz ceramic resonator.

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Title  
 COSMAC ELF Membership Card (1 and 2 of 2)  
 Size/Document Number  
 B C:\ORCAD\SHEET\1802\DEV4F.SCH  
 Date: May 12, 2013 Sheet 1 of 1