

JOLT

2K PROM HARDWARE MANUAL

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JOLT 2K PROM CARD SPECIFICATION

- o Sockets for up to eight 1702A PROMs
- o Card enable - jumper selectable in groups of 2K bytes
- o MOS inputs (address and data)
- o TTL drive outputs (data)
- o Ready/wait line one-shot
- o 25°C or better operation
- o 4.25" x 7" printed circuit card
- o Compatible with other family cards

2K PROM BOARD
ENGINEERING ADDENDUM

IMPORTANT

On the JOLT CPU card, add a single wire from J1-1 to U1-2.
This wire allows the 2K PROM board to control the ready line.

JOLT 2K PROM CARD

General Description

The JOLT 2K PROM card provides capability for up to 2K x 8 of ultraviolet erasable PROM (programmable read-only memory). The card contains sockets for up to 2K x 8 of memory using 1702 or 1702A type PROMs. Input address and data lines are buffered to provide minimum system bus loading. Output data lines are fully buffered with high current drivers and are enabled when any socket location on the card is addressed.

Card Enable

The card decoder (74154) is enabled using P.C. card jumpers. The location of these jumpers determine the address of the card. By changing these jumpers, the same JOLT 2K PROM card can be used as any of 32 blocks of 2K for a maximum of 64K. All address and data lines go to the J1 connector. The following table lists the proper jumpers for different address locations.

Jumpers Identification On JOLT 2K PROM Card										User PROM Address (Hex)
<u>E</u>	<u>D</u>	<u>C</u>	<u>B</u>	<u>A</u>	<u>A15</u>	<u>A14</u>	<u>A13</u>	<u>A12</u>	<u>A11</u>	
10	8	6	4	1	0	0	0	0	0	0000-07FF
10	8	6	4	2	0	0	0	0	1	0800-0FFF
10	8	6	3	1	0	0	0	1	0	1000-17FF
10	8	6	3	2	0	0	0	1	1	1800-1FFF
10	8	5	4	1	0	0	1	0	0	2000-27FF
10	8	5	4	2	0	0	1	0	1	2800-2FFF

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Jumpers Identification On JOLT 2K PROM Card										User PROM Address (Hex)
<u>E</u>	<u>D</u>	<u>C</u>	<u>B</u>	<u>A</u>	<u>A15</u>	<u>A14</u>	<u>A13</u>	<u>A12</u>	<u>A11</u>	
10	8	5	3	1	0	0	1	1	0	3000-37FF
10	8	5	3	2	0	0	1	1	1	3800-3FFF
10	7	6	4	1	0	1	0	0	0	4000-47FF
10	7	6	4	2	0	1	0	0	1	4800-4FFF
10	7	6	3	1	0	1	0	1	0	5000-57FF
10	7	6	3	2	0	1	0	1	1	5800-5FFF
10	7	5	4	1	0	1	1	0	0	6000-67FF
10	7	5	4	2	0	1	1	0	1	6800-6FFF
10	7	5	3	1	0	1	1	1	0	7000-77FF
10	7	5	3	2	0	1	1	1	1	7800-7FFF
9	8	6	4	1	1	0	0	0	0	8000-87FF
9	8	6	4	2	1	0	0	0	1	8800-8FFF
9	8	6	3	1	1	0	0	1	0	9000-97FF
9	8	6	3	2	1	0	0	1	1	9800-9FFF
9	8	5	4	1	1	0	1	0	0	A000-A7FF
9	8	5	4	2	1	0	1	0	1	A800-AFFF
9	8	5	3	1	1	0	1	1	0	B000-B7FF
9	8	5	3	2	1	0	1	1	1	B800-BFFF
9	7	6	4	1	1	1	0	0	0	C000-C7FF
9	7	6	4	2	1	1	0	0	1	C800-CFFF
9	7	6	3	1	1	1	0	1	0	D000-D7FF
9	7	6	3	2	1	1	0	1	1	D800-DFFF
9	7	5	4	1	1	1	1	0	0	E000-E7FF
9	7	5	4	2	1	1	1	0	1	E800-EFFF
9	7	5	3	1	1	1	1	1	0	F000-F7FF
9	7	5	3	2	1	1	1	1	1	F800-FFFF

Address Buffers

Address lines A0-A15 are buffered on the card. A8-A15 are used to drive the (U6-74154) decoder which selects the one of eight 1702A PROMs. A12-A15 are complemented and used as possible inputs to the card enable gate (U5-7400). Buffered address lines A0-A7 drive directly to the 1702As.

Control Lines

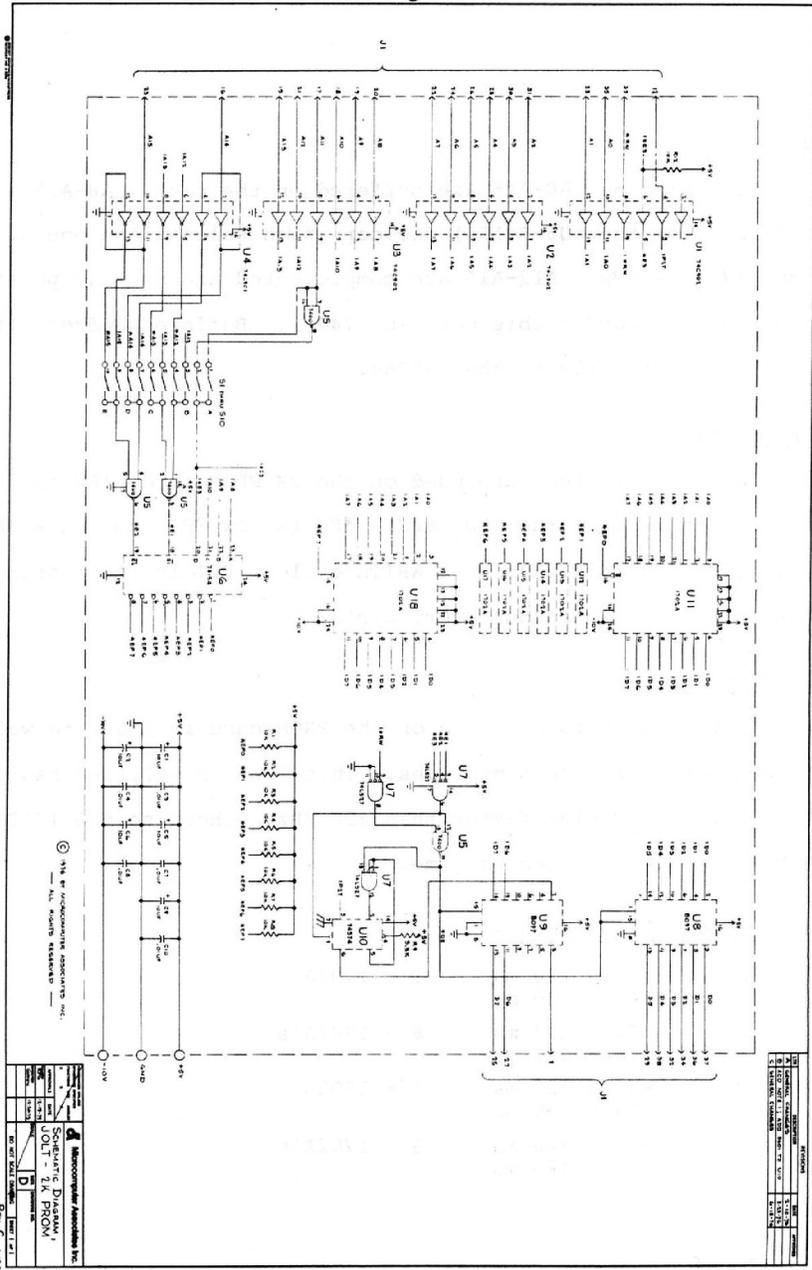
Two control lines are used on the 2K PROM card, *RW and P2T. Both originate from the CPU card. *RW is low (0v) during a READ cycle and high (+5v) during a WRITE cycle. P2T is the system phase 2 and is continuous every cycle.

READY One-Shot

A READY line is provided on the PROM card in order to wait the CPU for slow access memories. This line is only necessary if the CPU is running faster than 620 KHz, otherwise the 1702A PROMs have adequate access time.

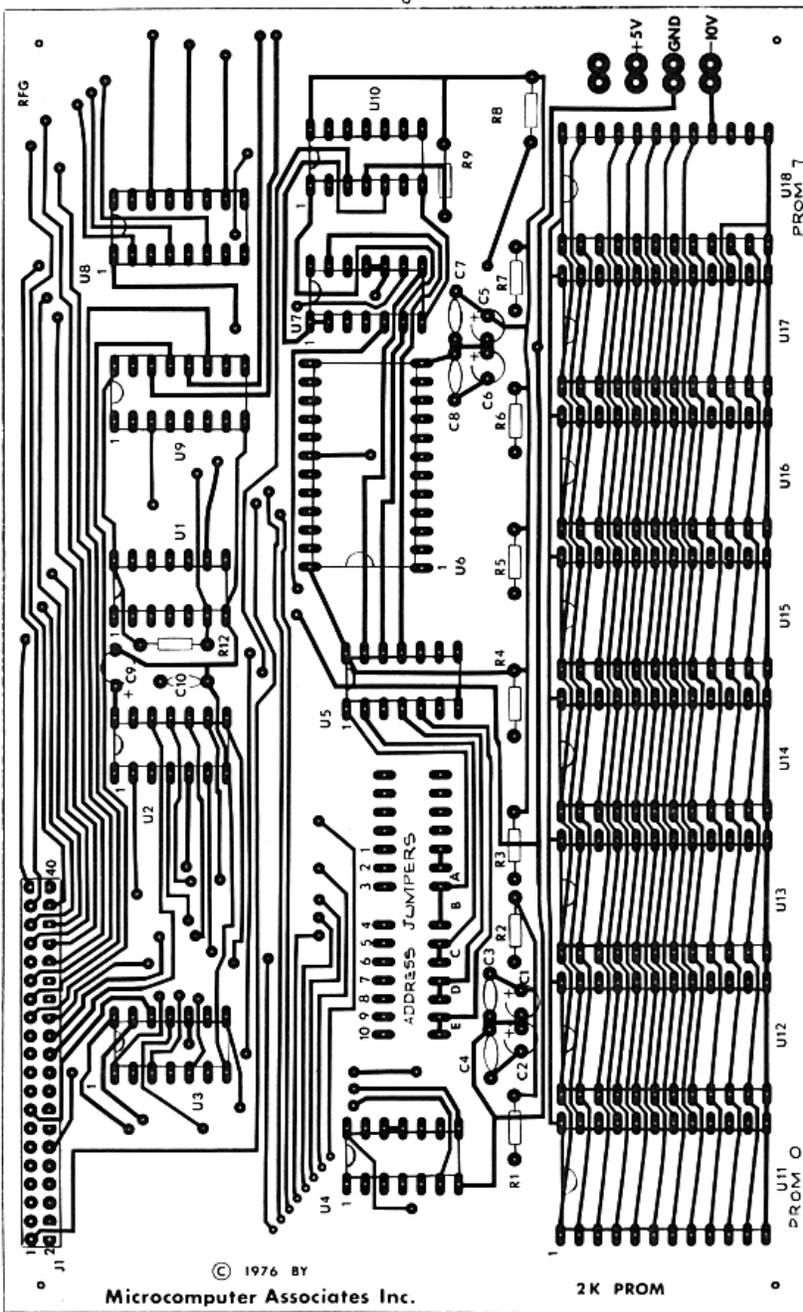
Power Supply Requirements

TYPICAL	+5v @ 200 ma	1 - 1702A
	-10v @ 30 ma	
	+5v @ 200 ma	8 - 1702A's
	-10v @ 240 ma	
MAXIMUM	+5v @ 320 ma	1 - 1702A
	-10v @ 60 ma	
	+5v @ 320 ma	8 - 1702A's
	-10v @ 480 ma	



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Schematic Diagram	
JOLT - 1K PROM	
REV. C	4-83



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2K PROM