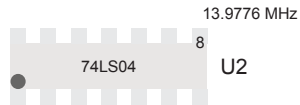


!!! WARNING !!!

I EXPLICITLY WARN YOU THAT YOU MAY PERMANENTLY DESTROY YOUR HARDWARE IF YOU MAKE ANY TECHNICAL CHANGES TO IT. I DO NOT ACCEPT ANY RESPONSIBILITY OR LIABILITY WHATSOEVER IF YOU CARRY OUT MODIFICATIONS TO YOUR HARDWARE ON THE BASIS OF MY PERSONAL TECHNICAL DOCUMENTATION. IF YOU MAKE ANY MODIFICATIONS TO YOUR HARDWARE, YOU DO SO AT YOUR OWN RISK. EVEN TOUCHING SENSITIVE COMPONENTS SUCH AS CPU, RAM, ... CAN CAUSE THEM TO BE IRREVOCABLY DESTROYED (ELECTROSTATIC DISCHARGE - ESD).

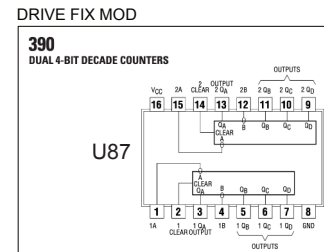
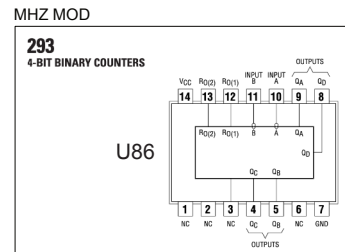
!!! WARNING !!!



4 or 5 MHz on a Kaypro II



- auxiliary line
- PIN 1
- ┆ PIN bent up
- 5 MHz
- 4 MHz

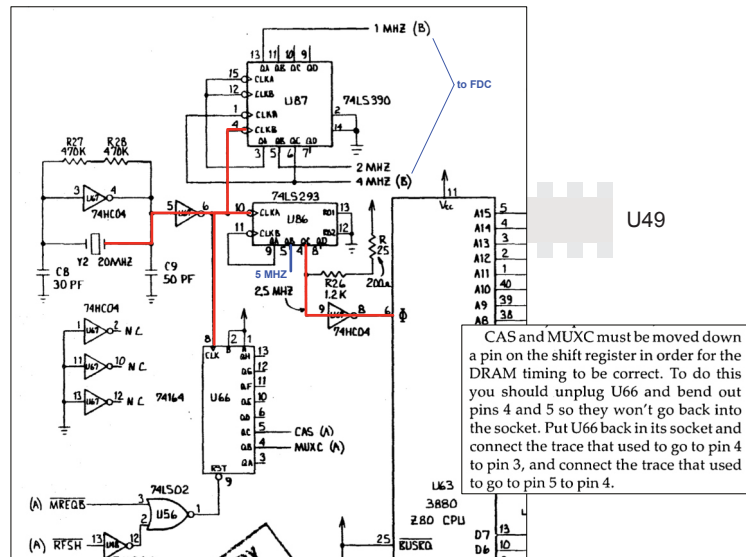


Kaypro II/4 MOD 2,5 MHz TO 4 MHz

U#	DEVICE	DEVICE	DESCRIPTION
	2,5MHZ	4MHZ	
U2	74HCU04	74HCU04	HEX INVERTER
	74LS04	74LS04	HEX INVERTER
U33	74LS157	74S157	8 TO 4 LINE DECODER
U34	74LS157	74S157	8 TO 4 LINE DECODER
U39	74LS00	74LS00	QUAD 2 INPUT POSITIVE NAND
U47	2716	2732	EPROM
U48	74LS04	74LS04	HEX INVERTERS
U49	74LS241	74LS241	OCTAL BUFFERS/LINE DRIVER
U63*	Z80	Z80B	CPU (6 MHz)
U64	74LS243	74LS243	QUAD BUS TRANSCEIVER
U65	74LS243	74LS243	QUAD BUS TRANSCEIVER
U66	74164	74164	8-BIT SHIFT REGISTER
U67	74HCU04	74HCU04	HEX INVERTER
	74LS04	74LS04	HEX INVERTER
U86	74LS293	74LS293	DECADE COUNTER
U87	74LS390	74LS390	DUAL DECADE COUNTER

* REPLACEMENT NECESSARY
74HCU04 & 74LS04 = HEX INVERTERS (CMOS OR TTL)

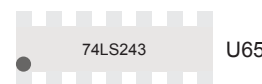
U#	PIN#	I/O	MHz	DRIVE FIX
U87	1	input	4	1A <- QC
U87	3	output	2	1QA
U87	4	input	20	1B <- Y2
U87	5	output	???	QB
U87	6	output	4	QC
U87	7	output	4	QD
U87	9	output	400 KHz	2QD
U87	10	output	400 KHz	2QC
U87	11	output	1?	2QB
U87	12	input	2	2B <- 1QA
U87	13	output	1	2QA -> FDC
U87	15	input	2	2A <- 1QA



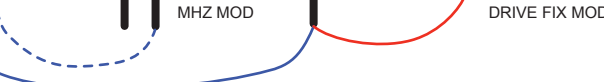
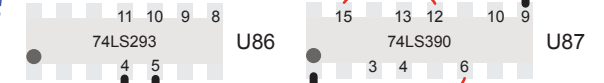
CAS and MUXC must be moved down a pin on the shift register in order for the DRAM timing to be correct. To do this you should unplug U66 and bend out pins 4 and 5 so they won't go back into the socket. Put U66 back in its socket and connect the trace that used to go to pin 4 to pin 3, and connect the trace that used to go to pin 5 to pin 4.



U63 - PIN 6 = CPU CLK



R26



U#	PIN#	I/O	MHz
U86	10	input	20
U86	9	output	10
U86	11	input	10
U86	8	output	1,25
U86	5	output	5
U86	4	output	2,5

Reference source:
Micro Cornucopia, #11, April 1983, page 24
Micro Cornucopia, #12, June 1983, page 24
By David Thompson

New revised by Thomas Brase
(according to my Kaypro II)
www.retrocnp.de
09.02.2022, V1.1