ZX80 CIRCUIT DIAGRAM

EDGE CONNECTOR

5V	9V	SLOT	0V	0V	$\overline{\phi}$	A0	A1	A2	A3	A15	A14	A13	A12	A11	A10	A9	A8	A7	A6	A5	A4	$\overline{\text{ROMCS}}$	BOTTOM
1B	2B	3B	4B	5B	6B	7B	8B	9B	10B	11B	12B	13B	14B	15B	16B	17B	18B	19B	20B	21B	22B	23B	
1A	2A	3A	4A	5A	6A	7A	8A	9A	10A	11A	12A	13A	14A	15A	16A	17A	18A	19A	20A	21A	22A	23A	TOP (COMPONENT SIDE)
D7~	RAMCS	SLOT	D0~	D1~	D2~	D6~	D5~	D3~	D4~	$\overline{\text{INT}}$	$\overline{\text{NMI}}$	$\overline{\text{HALT}}$	$\overline{\text{MREQ}}$	$\overline{\text{IORQ}}$	$\overline{\text{RD}}$	$\overline{\text{WR}}$	$\overline{\text{BUSAK}}$	$\overline{\text{WAIT}}$	$\overline{\text{BUSRQ}}$	$\overline{\text{RESET}}$	$\overline{\text{M1}}$	$\overline{\text{REFSH}}$	

5V C1 47n

0V

A15 A14 A13 A12 A11 A10 A9 A8 A7 A6 A5 A4 A3 A2 A1 A0

5V

$\overline{\text{WR}}$ — 2114 SRAM IC3 — D7~ D1~ D0~ D2~ — RAMCS — 0V

5V

$\overline{\text{WR}}$ — 2114 SRAM IC4 — D4~ D3~ D5~ D6~ — 0V

$\overline{\text{INT}}$

5V

CPU ϕ — Z80 CPU IC1

9x1K

R4 R5 R6 R7 R8 R9 R10 R11 R12

D4~ D3~ D5~ D6~ D2~ D7~ D0~ D1~

5V

R21 220K R22 1K R23 1K

+C10 1 μF

0V

5V

74LS 157 IC8 — A0~ A1~ A2~ A3~ — GND — 0V

R1 1K — 0V

5V

USA 60HZ 525 LINES ONLY

74 LS 365 IC10 — $\overline{\text{KBD}}$ — GND — 0V

5V

74 LS 165 IC9 — D4 D3 D5 D6 D2 D7 D0 D1 — 0V

B A C

5V

74 LS 373 IC5 — GND — 0V

2ϕ

C9 47pF

R2 470

0V

5V

R3 1K

A15~

$\overline{\text{HALT}}$

X1 6.5 MHz — 0V

5V

R24 1K

$\overline{\text{MREQ}}$

VIDEO

$\overline{\text{RFSH}}$

$\overline{\text{MREQ}}$

R19 2K2

A14~

M1

R27 1K — 0V

2ϕ

C15 47pF — 0V

5V

R20 330

C11 47pF

R25 470 — 0V

CLK SD RQ

CPU ϕ 3.2 MHz

ϕ

5V

R16 R17 R13 R14 R15

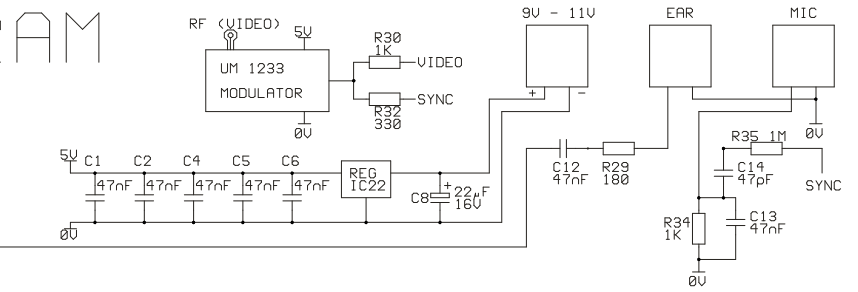
47K x 5

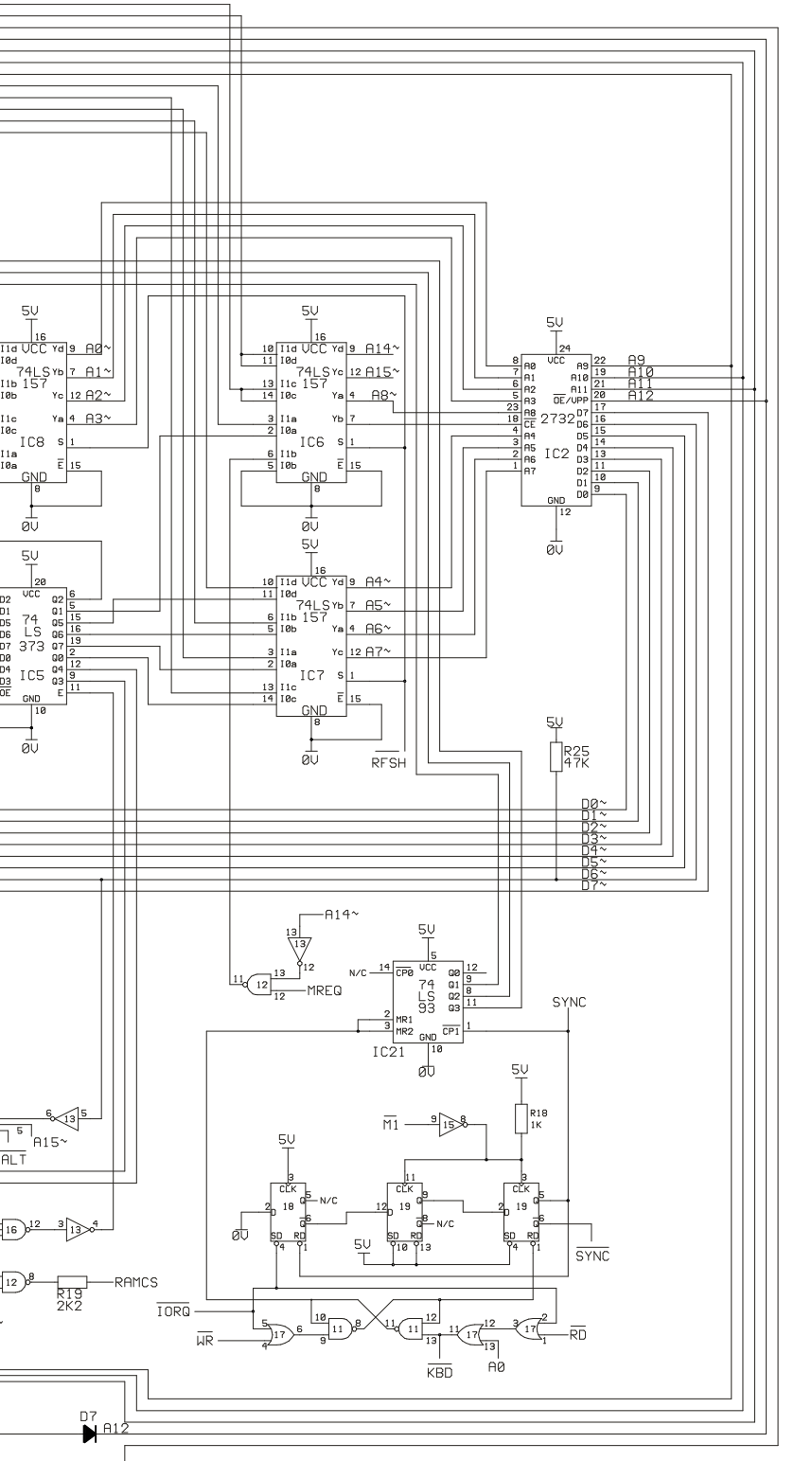
A11 D6 — 1 2 3 4 5 6 7 8 9 0 — D7

A10 D5 — Q W E R T Y U I O P — D8

A9 D4 — A S D F G H J K L NEW LINE — D9

A8~ D3 — SHIFT Z X C V B N M . SPACE — D10





IC	CODE	TYPE
1	Z80A	CPU
2	2732	EPROM
3	2114	SRAM
4	2114	SRAM
5	74LS373	3-STATE OCTAL LATCH
6	74LS157	QUAD 2 TO 1 MUX
7	74LS157	QUAD 2 TO 1 MUX
8	74LS157	QUAD 2 TO 1 MUX
9	74LS165	8 TO 1 SHIFT REGISTER
10	74LS365	HEX 3-STATE BUFFER
11	74LS00	QUAD 2-INPUT NAND GATE

IC	CODE	TYPE
12	74LS00	QUAD 2-INPUT NAND GATE
13	74LS04	HEX INVERTING GATE
14	74LS05	HEX INVERTER WITH OCO
15	74LS05	HEX INVERTER WITH OCO
16	74LS10	TRIPLE 3-INPUT NAND
17	74LS32	QUAD 2-INPUT OR GATE
18	74LS74	DUAL D-TYPE FLIP FLOP
19	74LS74	DUAL D-TYPE FLIP FLOP
20	74LS86	QUAD 2-INPUT XOR GATE
21	74LS93	BINARY COUNTER
22	L78M05CV	5V 500mA REGULATOR