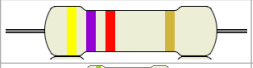
TRS80_Model_I_Jap20_E1

Reference	Qty	Value	Component	Description	Comment
PCB	1	-	Replica Board		
C1, C4, C6, C12, C14, C40	6	10uF 16V		C_Polarized	
C2, C8, C20, C22, C23, C24, C25, C26, C28, C29, C31, C32, C34, C35, C37, C38, C39, C41, C44, C45, C46, C47, C49, C51, C52, C53, C54, C55, C56, C58, C59, C63, C64, C65, C66, C67, C68, C69, C71, C72	40	0.1uF 12V		Unpolarized capacitor	
C3, C7, C13, C15	4	0.01uF 24V		Unpolarized capacitor	
C5	1	220uF 16V		C_Polarized	
C9	1	2200uF 35V		C_Polarized	
C10	1	10000uF 16V		C_Polarized	
C11, C16, C48, C57	4	1nF		Unpolarized capacitor	
C17, C18	2	220pF		Unpolarized capacitor	
C19	1	100uF 16V		C_Polarized	
C27, C30, C33, C36	4	0.1uF 25V		Unpolarized capacitor	
C43	1	100pF		Unpolarized capacitor	
C50	1	2.7nF		Unpolarized capacitor	
C60	1	47pF		Unpolarized capacitor	
C70	1	22uF 16V		C_Polarized	
CN1	1	-	Generic connector, single row, 01x20	Keyboard Connector	
CR1	1	MDA202		Bridge Rectifier	
CR2	1	1N4735	D_Zener	Zener diode	
CR3	1	1N5231	D_Zener	Zener diode	
CR4, CR5, CR6, CR7, CR8	5	1N4148	D	Diode	
J1, J2, J3	3	Front View	DIN-5_180degree	5-pin DIN connector (5-pin DIN-5 stereo)	
JP1, JP2, JP3, JP9	4	-	Single Jumper	See description on Github or schematics	
JP4, JP5, JP6, JP7, JP8, JP10	6	-	Double Jumper	See description on Github or schematics	
K1	1	Relay_SPDT	Relay	Cassette Interface Relay	
Q1	1	C1815	NPN BJT Transistor		
Q2, Q5	2	A1015	PNP BJT Transistor		
Q3	1	TIP29A	TIP29A	Q_NPN_BCE	
Q4	1	2N6594	2N6594	Q_PNP_BEC	Replacement RS2040, MJ2955G
Q6	1	MJE34	MJE34	Q_PNP_BCE	Replacement TIP32C
-	1	-	Heatsink	Q4 Heatsink	
-	1	-	Screw	M3x10mm	
-	1	-	Nut	M3	
-	1	-	Heatsink	Q6 Heatsink	Smaller than original; no need to be big
-	2	-	Screw	M4x10mm	
-	2	-	Nut	M4	
-	1	-	Thermal Grease	For Q4 and Q6	Apply with Q-Tip or similar
R1, R32	2	100		Resistor 0.25W (brown, black, brown, gold)	
R2, R18, R19, R28	4	1.2k		Resistor 0.25W (brown, red, red, gold)	
R3, R4	2	7.5k		Resistor 0.25W (violet, blue, red, gold)	
R5	1	220k		Resistor 0.25W (red, red, yellow, gold)	
R6	1	75		Resistor 0.25W (violet, green, black, gold)	
R7	1	47		Resistor 0.25W (yellow, violet, black, gold)	
R8, R75, R101, R102, R103, R104, R105, R106, R107, R108, R109, R110	12	330		Resistor 0.25W (orange, orange, brown, gold)	
R9	1	120		Resistor 0.25W (brown, red, brown, gold)	
R10	1	270		Resistor 0.25W (red, violet, brown, gold)	
R11, R31, R34, R49	4	10k		Resistor 0.25W (brown, black, orange, gold)	
R12, R37	2	220		Resistor 0.5W (red, red, brown, gold)	
R13	1	68		Resistor 0.25W (blue, grey, black, gold)	
R14	1	2.7k		Resistor 0.25W (red, violet, red, gold)	
R15	1	750		Resistor 0.25W (violet, green, brown, gold)	
R16	1	0.33		Resistor 2W (orange, orange, silver, gold)	
R17, R23	2	1k		Resistor 0.25W (brown, black, red, gold)	

R20	1	100k		Resistor 0.25W (brown, black, yellow, gold)	
R21, R24, R25	3	3.3k		Resistor 0.25W (orange, orange, red, gold)	
R22	1	1.5k		Resistor 0.25W (brown, green, red, gold)	
R26	1	2.2k		Resistor 0.25W (red, red, red, gold)	
R27	1	12k		Resistor 0.25W (brown, red, orange, gold)	
R29	1	2k		Resistor 0.25W (red, black, red, gold)	
R30	1	5.6		Resistor 3W (green, blue, gold, gold)	
R33, R51	2	1M		Resistor 0.25W (brown, black, green, gold)	
R35	1	680k		Resistor 0.25W (blue, grey, yellow, gold)	
R36	1	1.8M		Resistor 0.25W (brown, grey, green, gold)	
R38, R42	2	360k		Resistor 0.25W (orange, blue, yellow, gold)	
R39	1	10		Resistor 0.25W (brown, black, black, gold)	
R40, R41, R48, R54, R55, R64, R65, R66, R67, R68, R69, R70, R71, R72, R74, R76, R77	17	4.7k		Resistor 0.25W (yellow, violet, red, gold)	
R43	1	560k		Resistor 0.25W (green, blue, yellow, gold)	
R44, R45, R46, R47, R50	5	470k		Resistor 0.25W (yellow, violet, yellow, gold)	
R52, R53	2	8.2k		Resistor 0.25W (grey, red, red, gold)	
R56, R57	2	910		Resistor 0.25W (white, brown, brown, gold)	
RP1, RP2	2	4.7k	8 Resistor Network	9-pin bussed Resistor network	
S1	1	Power	SW_4PST	Black Cap	+ red & black cap
S2	1	Reset	SW_DPST	Red Cap	+ red cap
Y1	1	10.6445 MHz	Crystal	Two pin crystal	10.6MHz replacement
Z1, Z2	2	LM723C	LM723C_1	Linear Regulator (adjustable)	
Z3	1	75452	75452	Dual-Peripheral Drivers for High-Current, High-Speed Switching	
Z4, Z56	2	74LS175	74LS175	4-bit D Flip-Flop, reset	
Z5	1	74LS10	74LS10	Triple 3-input NAND	
Z6, Z65	2	74LS92	74LS92	Divide by 12 counter	
Z7, Z28, Z34, Z35	4	74LS93	74LS93	Divide by 2 & 8 counter	
Z8, Z13, Z14, Z27, Z29, Z36	6	74LS157	74LS157	Quad 2 to 1 line Multiplexer	
Z9, Z10	2	2114	2114	1K Static RAM (SRAM 4-bit)	
Z11	1	74LS174	74LS174	Hex D-type Flip-Flop, reset	
Z12, Z23	2	74LS245	74LS245	Octal Bus Transceivers with 3-State Outputs	
Z15, Z16, Z17, Z18, Z19, Z20, Z21, Z22	8	4116	4116	16kBit x 1 Bit Dynamic RAM	
Z24, Z30, Z59, Z66	4	74LS367	74LS367_Split	Hex buffer 3-State outputs	
Z25	1	LM3900	LM3900	Quad operational amplifier	
Z26	1	74LS14	74LS14	Hex Schmitt-Trigger Inverters	
Z31, Z47	2	74LS132	74LS132	Quad 2-input NAND Schmitt trigger	
Z32	1	74C00	7400	Quad 2-input NAND gate	A 74HC04 or 74HCT04 will work in a pinch, but it will not be a nice stable picture.
Z33, Z46	2	74LS04	74LS04	Hex Inverter	
Z37, Z38	2	-	18-Pin Socket	18-Pin Machined Socket	One is optional
Z37, Z38	2	MCM6670	MCM6670P	128 x 7 x 5 Character Generator	One is optional; Adapter needed; parts below
Z39	1	74LS153	74LS153	Dual Multiplexer 4 to 1	
Z40, Z64, Z67	3	74LS32	74LS32	Quad 2-input OR	
Z41	1	74LS30	74LS30	8-input NAND	
Z42, Z43	2	-	24-Pin Socket	24-Pin Machined Socket	
Z42	1	2364_20L	2364_20L	2364 64kBit (8kb x 8) PROM	Adapter needed; parts below
Z43	1	2332_20L_21L	2332_20L_21L	2332 32kBit (4kb x 8) PROM	Adapter needed; parts below
Z44	1	74LS00	74LS00	Quad 2-input NAND gate	
Z45, Z54	2	74LS02	74LS02	Quad 2-input NOR gate	
Z48	1	Z80CPU	Z80	Z80 CPU	
Z49, Z68	2	74LS244	74LS244	Octal Buffers with 3-State Outputs	
Z50	1	7404	7404	Hex Inverter	Used for clock. Make sure to use a 7404, not a 74LS04. If you do, you might have to add a capacitor to the circuit.
Z51, Z52	2	74LS08	74LS08	Quad 2-input AND gate	
Z53, Z62, Z63	3	74LS74	74LS74	Dual D Flip-flop, Set & Reset	
Z55	1	74LS20	74LS20	Dual 4-input NAND	
Z57, Z58	2	74LS166	74LS166	Shift Register 8-bit, parallel load	

Z60	1	74LS11	74LS11	Triple 3-input AND	
Z61	1	74LS139	74LS139	Dual 2-line to 4-line Decoder/Multiplexer	
-	1	-	Jumper Wire	Connecting GND trace	See documentation
-	1	-	Port Cover	DIN-5 Port Cover	
-	1	-	Keyboard Connector Kit	Cable and headers for Mainboard and Keyboard	Solder angled header inward towards Z76
Z37, Z38	2	PCB	Character Generator	Character Generator PCB (MCM7760/4)	One is optional. Assemble with components below; no solder jumper needed
Z37, Z38	2	4.7k	Network Resistor; 7-Pin	Pull-up resistors	One is optional.
Z37, Z38	2	-	40-Pin Header	Machined Header	One is optional. Cut to length to 9 pins (2x)
Z37, Z38	2	-	5-Pin DIP Switch	Character ROM selector	One is optional. Add in 10-14 pads
Z37, Z38	2	-	ROM	CharGen 32rf	One is optional.
Z42, Z43	2	PCB	System ROM	System ROM PCB (2364/2332)	Assemble with components below; no SMD or solder jumper needed
Z42, Z43	2	4.7k	Network Resistor; 4-Pin	Pull-up resistors	
Z42, Z43	1	-	40-Pin Header	Machined Header	Cut to length to 12 pins (3x + 1x from above)
Z42, Z43	1	-	3-Pin DIP Switch	System ROM A	Add in 13-15 pads; cut perforation on ROM B adapter
Z42, Z43	2	-	ROMs	System ROM A (Z33) & ROM B (Z34)	
Z42, Z43	1	-	4-Wire Cable	Twisted	Solder 3 inner pads below and 1 outer pad (any of the 3); Repeat with same color on same pads on other adapter

Instructions at https://www.retrostack.org

Mainboard: https://github.com/RetroStack/TRS-80-Model-I-Jap50-E1
Character Generator: https://github.com/RetroStack/MCM776x_CharGen_Adapter
System ROMs: https://github.com/RetroStack/2332_2364-ROM_Adapter