

System 1 Trainer BOM

RefDes	Value	Description	Notes	Supplier Part No.	Quantity	
					Trainer	CPU
C1,2,5,6,7,9,12,13,106,109,110	100nF	Ceramic capacitor (0.2")	C12,13 only required if IC13 fitted		9	8
C8,11	33uF/25V	Electrolytic capacitor (axial)	C11 only required if IC13 fitted		1	1
C14	6.8pF	Ceramic capacitor (0.1")	value to suit crystal		1	1
C101	100pF	Ceramic capacitor (0.1")	not fitted		0	0
C102,104	1nF	Ceramic capacitor (0.2")			2	2
C103	10nF	Ceramic capacitor (0.2")			1	1
C105	10uF/10V	Tantalum bead capacitor (0.2")			1	1
C107		Ceramic capacitor (0.2")	not fitted		0	0
C108	22nF	Ceramic capacitor (0.2")			1	1
D1,2	FYQ-3641AUHR	4-digit 7-segment display	only required for Trainer		2	0
IC1	6502	8-bit processor			1	1
IC2	INS8154	PIA			1	1
IC3	6116	2K x 8bit SRAM			1	1
IC7	2716/32	2K/4Kx8 EPROM			1	1
IC9	74LS20	Dual 4-input NAND			1	1
IC10	74LS139	Dual 2 of 4 decoder			1	1
IC11	74LS04	Hex inverters			1	1
IC12	74LS00	Quad 2-input NAND gate			1	1
IC13	7805	5V regulator			1	1
IC101,102,106	4024B	Binary counter			3	3
IC103	4011B	Quad 2-input NAND gate			1	1
IC104	4013B	Dual D type flip-flop			1	1
IC105	4001B	Quad 2-input NOR gate			1	1
IC107	LM358	Dual opamp			1	1
IC108	7445	BDC to decimal decoder/driver	only required for Trainer		1	0
LK1	0.1" Header x 3	EPROM configuration	select either IC7 as 2716 or 2732		0	1
LK2	0.1" Header x 3	EPROM configuration	select either IC7 as 2716 or 2732		0	1
LK3	wire link	Connects 5V to Bus pin A1	fit for CPU		0	1
LK4	wire link	Connects NIHITONE to PA5	fit for CPU		0	1
LK5	wire link	Connects PL3 (ext DC) directly to 5V	only fit if IC13 not fitted		1	0
LK6	wire link	Connects PL3 (ext DC) to 5V regulator input	only fit if IC13 fitted		0	0
PL1	20-way	20-way 3M header	only required for CPU (keyboard)		0	1
PL2	DIN41612 AB 64-way	Right angle plug	only required for CPU (backplane)		0	1
PL3	2.1mm	Power jack socket	only required for Trainer	RS 448-382	1	0
PL4a	3- or 5-pin 180°	PCB DIN socket *	only required for CPU	RS 167-3722 or 167-4028	0	1
PL4b	5-pin 180°	PCB DIN socket	only required for Trainer	RS 491-087	1	0
R1,3,4,103,106,107,109,110,113,115,116	4K7	Resistor 250mW	R109,110,116 only required for Trainer		11	8
R2	100K	Resistor 250mW			1	1
R5	220K	Resistor 250mW				
R101	3K9	Resistor 250mW			1	1
R102,108,112	47K	Resistor 250mW			3	3
R104	1K0	Resistor 250mW			1	1
R105,111	10K	Resistor 250mW			2	2
R114	470K	Resistor 250mW			1	1
S1-8,17-24	White	Tactile switch (0-9,A-F)	only required for Trainer	either D6 or Omron B3F-5050 + B32-1360	16	0
S9-16	Yellow	Tactile switch (Commands)	only required for Trainer	either D6 or Omron B3F-5050 + B32-1340	8	0
S25	Red	Tactile switch (Reset)	only required for Trainer	either D6 or Omron B3F-5050 + B32-1380	1	0
XTAL	1MHz HC49u	Crystal (series mode)	not parallel mode	Digi-Key ECS-10-13-1XH	1	1
IC	8-pin	DIL socket	IC107		1	1
IC	14-pin	DIL socket	IC9,11,12,101-106		9	9
IC	16-pin	DIL socket	IC10,108		2	1
IC	24-pin	DIL socket	IC3,7		2	2
IC	40-pin	DIL socket	IC1,2		2	2
PCB					1	1
Offboard Parts						
	5HP 3U	Front panel with handle and fittings	only required for CPU	Verotec 957-235349	0	1
		Panel brackets	only required for CPU	Verotec 173-12525	0	pair
	M2.5 x 10mm	Pan head screws	only required for CPU		0	4
	M2.5	Nuts	only required for CPU		0	4
	7.5mm clear	Stick-on-feet	only required for Trainer		6	0
	M3 x 6mm	Nylon pan head screw	only required if IC13 fitted		1	1
	M3	Nylon nut	only required if IC13 fitted		1	1

* use 3-pin for System computers to avoid a clash with Econet