

Mostly DIY RF / P3ST Transceiver Parts List

Draft (1 Feb 2024)

Motherboard		
Ref	Qty	Value
D1, D2, D3, D4,	4	1N4148 DO-35
J1, J5,	22	Female socket header 1x4
K1, K2, K3,	3	TX2-12V
K4,	1	J102K1CS312VDC.20
RG174	6ft	

Audio Output Amp		
Ref	Qty	Value
C1,	1	100μF electrolytic, radial, pins 0.1"
C2,	1	10μF electrolytic, radial, pins 0.1"
C3,	1	470μF electrolytic, radial, pins 0.1"
C4,	1	22μF electrolytic, radial, pins 0.1"
C5, C6,	2	220μF electrolytic, radial, pins 0.1"
J1, J2,	2	Pin header, 1x4, right-angle
Q1,	1	2N2222A (TO-18)
R1,	1	100K 1/4W carbon film
R2,	1	47K 1/4W carbon film
R3,	1	100 1/4W carbon film
R4,	1	2.2K 1/4W carbon film
R5,	1	1K 1/4W carbon film
R6,	1	2.2 1/4W carbon film
U1,	1	LM380N, 14-pin

BFO Mixer		
Ref	Qty	Value
U1,	1	ADE-1
J1, J2,	2	Pin header, 1x4, right-angle

VFO Mixer		
Ref	Qty	Value
U1,	1	ADE-1
J1, J2,	2	Pin header, 1x4, right-angle

P3ST_Parts

Final Lowpass Filter		
Ref	Qty	Value
C1, C4,	2	220pF NP0/C0G ceramic
C2, C3,	2	330pF NP0/C0G ceramic
C5,	1	47pF NP0/C0G ceramic
L1, L3,	2	T50-6 toroid (0.670μH)
L2,	1	T50-6 toroid (0.608μH)
J1, J2,	2	Pin header, 1x4, right-angle

Front-End Bandpass		
Ref	Qty	Value
C1, C3,	2	14.8pF trim capacitor
C2,	1	1.5pF hand-made "gimmick"
C4, C5,	2	39pF trim capacitor
J1, J2,	2	Pin header, 1x4, right-angle
L1, L2,	2	T50-6 toroid (2.3μH)

IF Module		
Ref	Qty	Value
C1, C2, C3, C9, C20,	5	0.1μF ceramic X7R radial
C4, C5, C6, C7, C8,	5	0.1 ceramic X7R radial
C10,	1	0.1μF ceramic X7R radial
C11,	1	C?
C12, C13, C14, C15, C16, C17, C18, C19, C21, C22, C23, C24, C25, C26,	14	C
J1, J2, J3,	3	Pin header, 1x4, right-angle
L1, L4,	2	22μH molded axial
L2, L3,	2	T50-6 toroid (
Q1, Q2,	2	2N2222A (TO-18)
R1,	1	100 1/4W carbon film
R2, R8,	2	680 1/4W carbon film
R3, R9,	2	3K 1/4W carbon film
R4, R7,	2	1K 1/4W carbon film
R5, R11,	2	10 1/4W carbon film
R12,	1	50 1/4W carbon film
Y1, Y2, Y3, Y4, Y5, Y6, Y7, Y8, Y9, Y10,	10	Crystal, HC49u, 4.915MHz

Microphone Amp		
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P3ST_Parts

Ref	Qty	Value
C1,	1	100μF electrolytic, radial, pins 0.1"
C2,	1	470μF electrolytic, radial, pins 0.1"
C3,	1	10μF electrolytic, radial, pins 0.1"
C4,	1	0.22μF, ceramic
C5,	1	22μF electrolytic, radial, pins 0.1"
J1, J2,	2	Pin header, 1x4, right-angle
J4	2	Pin header, 1x3
Q1,	1	2N2222A (TO-18)
R1,	1	47K 1/4W carbon film
R2,	1	100K 1/4W carbon film
R3,	1	100 1/4W carbon film
R4,	1	1K 1/4W carbon film
R5,	1	2.2K 1/4W carbon film
R6, R7,	2	4.7K 1/4W carbon film

RF Amp		
Ref	Qty	Value
C1,	1	0.01μF, ceramic
C2, C4, C5,	3	0.1μF, ceramic
C3,	1	0.047μF, ceramic
J1, J2,	2	Pin header, 1x4, right-angle
L1,	1	20μH, molded
Q1,	1	2N2222A (TO-18)
R1, R3,	2	3K 1/4W carbon film
R2,	1	680 1/4W carbon film
R4,	1	10 1/4W carbon film
R7,	1	330 1/4W carbon film

Driver & Final Amp		
Ref	Qty	Value
C1,	1	0.01μF
C2, C4, C5, C6, C7, C8, C10, C11, C12,	9	0.1μF
C3,	1	0.047μF
C9,	1	220 electrolytic
J1, J2, J3,	3	Pin header, 1x4, right-angle
L1, L2,	2	22μH, molded
L2,	1	22μH, molded
Q1,	1	2N2219A

P3ST_Parts

Q2,	1	IRF510 MOSFET TO-223
R1, R3,	2	2.7K 1/4W carbon film
R2,	1	680 1/4W carbon film
R4, R7,	2	10 1/4W carbon film
R8,	1	270 1/4W carbon film
R9,	1	1K 1/4W carbon film
R10,	1	51 1/4W carbon film
RV1,	1	10K trim pot
T1,	1	Transformer_Bifilar_CT_Toroid
U1,	1	LM317L, 3.3V regulator TO-92

Digital VFO/BFO		
Ref	Qty	Value
C2, C4,	2	220 SMD
C11, C12,	2	10µF SMD
D1,	1	PMEG2010ER SMD
D3,	1	LED SMD
J1, J2,	1	Pin header, 1x4, right-angle
L1,	1	680µH SMD
R5,	1	1K SMD
U1,	1	Si5351A_Adafruit
U2,	1	Seeed_XIAO
U3,	1	TLV1117LV-3.3 Regulator, SMD

Grouped

P3ST Master Buy List / Lot of 50

Qty	Value	Vendor #	Carted	Ordered
100	0.01uF			
100	0.047uF			
1150	0.10uF			
50	0.22uF			
350	T50-6	0.44 Kitsandparts		Y
100	100uF			
50	10K			
100	10uF			
100	10uF SMD			
100	14.8pF			
200	1N4148	DK 4878-1N4148CT-ND		
100	220 SMD			
100	220pF			
150	220uF			
100	22uF			
150	22uH			
50	2N2219A			
250	2N2222A			
100	330pF			
100	39pF			
100	470uF			
50	47pF			
50	680uH SMD			
100	ADE-1			
14	C			
1	C?			
100	Conn_01x03			
1100	Conn_01x04_Male right-angle			
500	Crystal, 4.915MHz			
1100	Female header 01x04	DK S7002-ND		
50	IRF510			
50	J102K1CS312VDC.20	2449-J102K1CS312VDC.20-ND		
50	Jumper block			

Grouped

50	LED SMD			
50	LM317L_TO92			
50	LM380N-14			
50	PMEG2010ER SMD			
250	R10			
150	R100			
100	R100K			
250	R1K			
50	R1K SMD			
50	R2.2			
100	R2.2K			
100	R2.7K			
50	R270			
50	R330			
200	R3K			
100	R4.7K			
100	R47K			
50	R50			
50	R51			
200	R680			
	RG174			
50	Si5351A_Adafruit			
50	TLV1117LV-3.3 Regulator			
50	FT50-43	0.50 kitsandparts		
150	TX2-12V	DK 255-1032-5-ND		
50	XIAO			