

PARTS LIST LOW BAND VHF HMS SERIES

This section contains parts lists for the Low Band VHF HMS SERIES power amplifier. It has the top assembly listing followed by listings of the various sub assemblies, down to the component part level.

LOW BAND VHF HMS SERIES TOP ASSEMBLY

Qty	Part Description	TPL Part Number
1	RF Deck	HMS-RFDECK-PA1-SA
1	48V Air Duct Assembly	V14-101904-2-SA
1	Interconnect Board Assembly	T-101943-SA
1	Control Board Assembly	T-101299-N-SA
1	Digital Display Assembly	T-101921-SA
1	LED PCB Assembly	T-101947-SA
1	HMS Wire Harness Assembly	WH-HMS-SA
1	Mechanical Assembly for HMS	MECH-1-HMS-SA
1	48 VDC 600 Watt Power Supply	PS48-55

Mech for HMS Series

MECH-1-HMS-SA

Qty.	Reference Number	Part Description	TPL Part Number
1		Panel Front	V14-101902
1		Panel Rear	V14-101903
1		Air Baffle	V14-101908
1		Screen, Front Panel	V14-101909
1		Chassis, Amp	V14-101901
1	P1	Receptacle, AC, Male	SW CRAFT EAC-309
1		Line Cord ASSY	APEX JR
1		Fuse Holder	J2-109
1	SW2	Switch, Rocker NKK M2018TJW01-FA-1A	J1-131A
1	SW1	Switch, AC ON/OFF, Rocker	J1-119
5		LED Holder LH48	J3-114

PARTS LIST (continued)

Mech for HMS Series

MECH-1-HMS-SA

Qty.	Reference Number	Part Description	TPL Part Number
2		Spacer	H2-116
2		Resistor 5mOhm 10W	C2-270
2		Terminal Block	F3-108

Air Duct Assembly

V14-101904-2-SA

Qty	Reference Number	Part Description	TPL Part Number
1		New HMS Air Duct	V14-101904
2	C3, C4	1000uF 35V	A4-121A
2		10kOhm 1/4W	C1-196
1		24 AWG Female	F1-142-1
1		Terminal, Molex	F1-148
1		Plug Fe 0.1" C	F1-161
1		Molex Recpt F	F2-177
2		Terminal Strip	F3-105
2	Fan 1, 2	24VDC Fan	F2-177
2		4-40 X 1/4 PH	G1-202
8		6-32 X 3/8 PH	G1-304

PARTS LIST (continued)

Panel Meter Board
T-101921-SA

Qty	Reference Number	Part Description	TPL Part Number
1		PC Board	T-101920
1		LCD Display, Optrex	HMS-
4	C2,C3,C5,C6	.1uF CER CAP	A5-268
1	R1	100Ohm RESISTOR	C1-124
1	R3	100Ohm RESISTOR	C1-148
1	C4	10uF TANT CAP 35V	A4-127
9	C7,C1,C9,C11, C13,C15,C17,C19, C21	150p CER CAP	A5-152
1	R7	20k POT	C3-113
2	R5,R6	22k RESISTOR	C1-204
1	R2	330Ohm RESISTOR	C1-160
1	U2	TLC2543CN IC	B7-170
1	U1	MC1404 IC	B6-112
1	U3	M68HC705-2JP IC	B7-165
8	C8,C10,C12,C14, C16,C18,C20,C22	1uF TANT CAP PANASONIC ECS-F1CE 110 5k	A4-140
1	U4	MC34064 IC	B6-111
1	Y1	RESONATOR	B8-125
1	Q1	2N2907 PNP TRANSISTOR	B2-149
1	J2	Header 3	F1-160
1	R4	2M,1/4W RESISTOR	C1-250
1	JP1	Header 2 MOLEX 22-03-2021	F1-160A
1	J3	Header 7X2 MOLEX 15-44-3214	F2-178
1	J1	Header Ribbon Type 3M 2514-6002-UB	F2-224
3	RP1,RP2,RP3	RESISTOR ARRAY PANASONIC EX8F6V223G 8 PIN SIP	C4-104

PARTS LIST (continued)

Interconnect Board
T-101943-SA

Qty	Reference Number	Part Description	TPL Part Number
1		PCB Interconnect	T-101942
1	J4	Cinch P/N 009-00341-1 REF 50-44SN-3	F2-114-1
1	JP1	Jumper Breakaway Header MOLEX 22-03-2031	F1-204
1	J1	Header MOLEX 22-27-2041	F1-134
1	J2	Header Ribbon Type 3M 2510-6002-UB	F2-220
1	J6	Header MOLEX 22-27-2031	F1-160
1	J3	Header MOLEX 22-27-2101	F1-138
1	J5	Header Ribbon Type 3M 2514-6002-UB	F2-224
1	J8	Header Ribbon Type 3M 2526-6002-UB	F2-228
1	J7	Header MOLEX 22-27-2121	F1-129

LED Board
T-101947-SA

Qty	Reference Number	Part Description	TPL Part Number
1		PC Board, LED	T-101947
4	D1,D2, D3,D4	LED Flashing Red	J3-113
1	D5	Green LED	J3-107
6		LED Standoff, Bivar ELM2-280	H2-175
1	J1	Header Ribbon Type 3M 2510-6002-UB	

HMS Control Board
T-101298-N-SA

Qty	Reference Number	Part Description	TPL Part Number
1		PC Board Control Board	T-101298-N
8	C6,C11,C12,C13, C14,C20,C21,C22	.001uF CER CAP	A5-172
7	C1,C3,C5,C7,C8, C9,C10	.1uF CER CAP	A5-268

PARTS LIST (continued)

HMS Control Board
T-101298-N-SA (continued)

Qty	Reference Number	Part Description	TPL Part Number
1		PC Board Control Board	T-101298-M
8	C6,C11,C12,C13, C14,C20,C21,C22	.001uF CER CAP	A5-172
7	C1,C3,C5,C7,C8, C9,C10	.1uF CER CAP	A5-268
5	C2,C15,C16,C17, C18	.22uF CAP	A5-270A
1	R2	00hm JUMPER	BUSS WIRE
8	R7,R8,R46,R49,R 59 R62,R64,R68	1.0k RESISTOR	C1-172
2	R44,R47	1.0m RESISTOR	C1-244
1	R54	2.2k RESISTOR	C1-180
2	R4,R6	3.0k RESISTOR	C1-183A
7	R18,R20,R31,R34, R41,R60,R78	100Ohm RESISTOR	C1-148
2	R55,R56	100k RESISTOR	C1-220
9	R28,R32,R36,R58, R63,R65,R66,R74, R83	10k RESISTOR	C1-196
3	VR1,VR6,VR7	10TP20k 10 TURN POT	C3-106
12	D1,D3,D4,D5,D6, D7, D9, D13, D14, D15, D17, D18	1N4148 DIODE	B3-110
1	D2	1N751A ZENER DIODE	B3-119
5	R21,R22,R33,R43, R52	20k RESISTOR	C1-203
1	R35	220Ohm RESISTOR	C1-156
2	Q4,Q5	2N4401 TRANSISTOR	B2-100A
2	Q8,Q9	2N4403 TRANSISTOR	B2-149A
1	R61	750Ohm RESISTOR	C1-169

PARTS LIST (continued)

HMS Control Board,
T-101298-N-SA (continued)

Qty	Reference Number	Part Description	TPL Part Number
2	R31,R38	330Ohm RESISTOR	C1-160
1	C4	33uF ELECT CAP	A4-113A
3	R45,R48,R50	4.7k RESISTOR	C1-188
1	R53	47k RESISTOR	C1-212
4	R23,R73,R80,R81	49.9k RESISTOR	C1-213A
1	R67	5.6k RESISTOR	C1-190
2	R30,R39	510Ohm RESISTOR	C1-165
2	R70,R79	8.2k RESISTOR	C1-194
2	D19,D20	1N963B 12V ZENER DIODE	B3-101
4	R72R76,R77,R82	499k RESISTOR	C1-237A
2	U1,U3	LM324N IC OP AMP	B7-124
1	U2	LM7805CT IC DC REG	B7-139
6	Q1,Q2,Q3,Q6,Q11 Q12	MPS-A14 TRANSISTOR	B2-139
1	U8	LM339 QUAD COMPARATOR	B7-154
3	VR3,VR4,VR5	P5k POT	C3-102
1	SW1	SW SPDT SWITCH	J1-108
1	Q7	TIP105 TRANSISTOR	B2-104
2	R24,R69	5.49k RESISTOR	C1-388A
1	D8,	1N749A ZENER DIODE	B3-127
2	R3,R5	2.0K 1% RESISTOR	C1-179A
1	R74	15k RESISTOR	C1-200
1	VR8	10k POT 10 TURN	C3-101
4	R8,R13,R25,R29	100K 1% RESISTOR	C1-220A
1	U7	LMC662 DUAL OP AMP	B7-144
2	U5,U6	MAX4172 I - V CONVERTOR	B7-143
1	U4	LM78L08 REGULATOR	B7-139A

PARTS LIST (continued)

CABLE ASSEMBLIES

Qty	Reference Number	Part Description	TPL Part Number
1	W4	19" 10 conductors IDC ribbon.	WH10-COND-SA
1	W6	29" 14 conductors IDC ribbon.	WH14-COND-SA
1	W7	8" 25 conductors IDC ribbon.	WH25-COND-SA
1		Harness	WH-INT-AC-SA

PA1-3XF-HMS FINAL ASSEMBLY REV. A

Qty	Reference Number	Part Description	TPL Part Number
1		PCB	T-102284
1	C1	50pF MINI SEMCO	A1-106A
1	C2	404 ARCO	A-118
2	C3, C4	100pF ATC CAP	A2-191
6	C6, C7, C16, C17, C18, C19	1000pF ATC CAP	A2-178A
2	C9, C8	.047uF CHIP CAP	A2-188
8	C10, C11, C22, C24, C29, C30, C36, C39	.1uF CHIP CAP	A2-190
1	C12	35pF MINI SEMCO	A1-105A
1	C13	350pF MINI SEMCO	A1-111A
1	C15	465 ARCO	A1-120
4	C21, C23, C26, C28	10uFx35V ELCR. CAP	A2-204
6	C25, C27, C32, C34, C35, C38	1000pF CHIP CAP	A2-172
2	C40, C37	10uFx50V ELCR. CAP	A2-204
2	D1, D2	BAV99LT1 DUAL DIODE	B3-175
1	J1	RF IN TYPE N CONN.	
1	J2	RF OUT TYPE N CONN.	
1	L1	5T, 25 DIA AIR COIL	E6-103

PARTS LIST (continued)

Qty	Reference Number	Part Description	TPL Part Number
2	L2, L3	11T AIR COIL	E2-104
2	L3, L2	2T .130" AIR COIL	
2	L4, L5	NOTE 1. AIR COIL	
2	L6, L7	2T AIR COIL	
2	L8, L9	3T, .3" AIR COIL	
1	L10	5T .25DIA AIR COIL	E6-103
2	Q1, Q2	MRF151 RF PWR. TRANS.	B2-253
2	RT1, RT2	10k @ 25C THERMISTOR	C2-115-2
2	R1, R2	2k 10T POT.	C3-202
2	R5, R3	1k CHIP RES	C5-102
2	R4, R6	4.3k CHIP RES	C5-432
2	R7, R8	200Ohm FLANG RES	C2-281
2	R10, R9	100Ohm CHIP RES	C5-101
2	R11, R12	150Ohm CHIP RES	C5-151
1	T1	9:1 RF TRANSFORMER	E8-120
2	T2, T3	BALUN	E5-107A
2	U1, U2	LM78M08BDT V. REG.	B7-280
2	C31, C33	100pF CHIP CAP	A2-148

 LOW PASS FILTER/DIRECTIONAL COUPLER
 35-43 MHz T-102290-SA

Qty	Reference Number	Part Description	TPL Part Number
1		LPF/DIR. COUPLER PCB	T-102290
4	C1, C2, C7, C8	43pF METAL CLAD CAP.	A1-105B
4	C3, C4, C5, C6	75pF METAL CLAD CAP.	A1-108
2	C9, C11	100pF CHIP CAP.	A1-148
2	C10, C12	0.1uf CHIP CAP.	A1-190
2	D1, D2	SMD SCHOTTKY DIODE	B3-180
1	D3	SOT 23 DUAL DIODE	B3-175

PARTS LIST (continued)

LOW PASS FILTER/DIRECTIONAL COUPLER

35-43 MHz T-102290-SA

Qty	Reference Number	Part Description	TPL Part Number
1	RT 1	10kOhm SMD THERMISTOR	C2-115-2
2	R1, R2	50 Ohm SMD RES.	C2-111A
2	L1, L3	COIL, 8T #16 AWG	E6-106
1	L2	COIL, 9T #16 AWG	E6-107

LOW PASS FILTER/DIRECTIONAL COUPLER

43-50 MHz T-102290-1-SA

Qty	Reference Number	Part Description	TPL Part Number
1		LPF/DIR. COUPLER PCB	T-102290
2	C2, C8	30pF METAL CLAD	A1-104B
2	C4, C6	50pF METAL CLAD	A1-106
2	C9, C11	100pF CHIP CAP.	A2-148
2	C10, C12	0.1uF CHIP CAP.	A2-190
2	D1, D2	SMD SCHOTTKY DIODE	B3-180
1	D3	SOT 23 DUAL DIODE	B3-175
1	RT1	10kOhm SMD THERMISTOR	C2-115-2
2	R1, R2	50Ohm SMD RES.	C2-111A
2	L1, L3	COIL, 7T #16 AWG	E6-105
1	L2	COIL, 8T #16 AWG	E6-106
2	C1, C7	43pF METAL CLAD CAP	A1-105B
2	C3, C5	75pF METAL CLAD CAP	A1-108

PARTS LIST (continued)

RF INPUT SENSOR T-102294-SA

Qty	Reference Number	Part Description	TPL Part Number
1		RF Input Sensor PCB	T-102294
1	C1	3.9pF CHIP CAP ATC	A2-122
1	C2	100pF CHIP CAP.	A2-148
2	C3	0. 1uF CHIP CAP.	A2-190
1	C4	1000pF CHIP CAP.	A2-172
1	D1	SMD SCHOTTKY DIODE	B3-180
1	R1	100Ohm 1/4 W SMD	C5-101
1	L1	1.0uH COIL SMD	E2-1R0
1	ATT1	10dB Attenuator	C2-330