

BILL OF MATERIAL								
Item	Position			Quantity	Description	Manufacturer	Part No.	McM Part No.
1	C58, 94, 105, 141, 52, 225, 183 -1			7	Capacitor 1p5, 0.25p	Murata	GRM39C0G1R5C50	
2	C24, 66, 125, 142, 149 -1			5	Capacitor 3p9, 0.25p	Murata	GRM39C0G3R9C50	
3	C89, 97 112, 116, 138, 139			20	Capacitor 6p8, 0.25p	Murata	GRM39C0G6R8C50	
	145, 147, 151, 153, 166, 190							
	156, 158, 160, 162, 164, 168,							
	182, 185 -1							
4	C55, 56, 73, 100, 104,106,114,143,			14	Capacitor 10p, 0.5p	Murata	GRM39C0G100D50	
	165, 178, 194,197, 200, 226 -1							
5	C23, 60, 126, 227, 229 -1			5	Capacitor 27p, 5%	Murata	GRM39C0G270J50	
6	C33, 76, 134-1			3	Capacitor 39p, 5%	Murata	GRM39C0G390J50	
7	C44, 47, 113, 127, 128, 135 -1			6	Capacitor 47p, 5%	Murata	GRM39C0G470J50	
8	C22, 39, 64, 98, 99, 110, 179, 191 -1			8	Capacitor 56p, 5%	Murata	GRM39C0G560J50	
9	C87, 90, 224 - 1			3	Capacitor 68p, 5%	Murata	GRM39C0G680J50	
10	C1, 53, 214, 215, 216, 217, 240, 241,			15	Capacitor 100p, 5%	Murata	GRM39C0G101J50	
	243, 244, 205, 246, 177, 209, 210-1							
11	C18, 25, 49, 67,157,206,159,163,256			17	Capacitor 1n, 10%	Murata	GRM39X7R102K50	
	167, 169, 184, 188, 83, 247, 248, 249 -1							
12	C30, 38, 72, 219, 230, 250, 255-1			7	Capacitor 3n9, 10%	Murata	GRM39X7R392K50	
13	C12, 28, 29, 31, 43, 45, 46, 50,			40	Capacitor 10n, 10%	Murata	GRM39X7R103K50	
	51, 54, 61, 63, 71, 86, 88,							
	92, 93, 96, 102, 108, 111, 115,							
	121, 122, 129, 130, 131, 133,							
	136, 137, 204, 207, 208, 231, 238							
	176, 189, 196, 199, 211 -1							
14	C17-1			1	Capacitor 100n, 0805, 10%	Murata	GRM40X7R104K50	
15	C4, 5, 8, 9, 10, 13, 15,			56	Capacitor 100n, 10%	Murata	GRM39X7R104K16	
	16, 21, 26, 32, 34, 35,							
	36, 37, 40, 41, 42, 48, 62, 65, 68,							
	70, 74, 75, 77, 78, 79, 80, 81							
	82, 84, 85, 91, 117, 119, 120,							
	132, 212, 221, 223, 233, 235, 236,							
	237, 239, 242, 170, 174, 181,							
	186, 192, 201, 213, 245, 254-1							
16	C2, 3, 6, 27, 69, 107, 150, 152, 171			23	Capacitor 4.7u	Murata	GRM42_6X5R475K16	
	218, 220, 222, 232, 234, 11, 14							
	172, 180, 195, 198, 202, 203, 253-1							
17	C7-1			1	Capacitor 330u, 20%	NipponChemid	LXY35VB330MJ20	
18	C57, 59, 101, 109, 175-1			5	Capacitor, trimmer, 6.5-30pF	Murata	TZBX4Z300BB110	
19	C95, 103, 118, 123, 124,			18	(No Connect) Capacitor 0603			
	140, 144, 146, 148, 155, 228, 154,							
	161, 173, 187, 193, 251, 252-1							
20	C20, 19-1			2	(No Connect) Capacitor 0805			
21	X3-1			1	Crystal 145.825MHz, 5ppm	Mercury Utd.	H49MJ145.825S_10/5/-10/+70	
22	X1-1			1	Crystal 10.250MHz, 30ppm	Mercury Utd.	M49,10.250-30pF_30/30/-10/+70	
23	X4-1							



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Item	Position		Quantity	Description	Manufacturer	Part No.	McM Part No.
34	Q3-1		1	Transistor, MOSFET P-channel 60V 39A	Vishay-Siliconix	SUB65p06-20	
35	Q22-1		1	Transistor, MOSFET P-channel	Fairchild	IRF9520	
36	Q30, 40-1		2	Transistor, FET N-channel	Philips	BF511	
37	Q4, 5, 8, 13, 17, 19, 20, 21,		25	Transistor, NPN	Philips	BC847B	
	23, 24, 28, 31, 32, 34, 36, 37,						
	38, 39, 41, 44, 45, 46, 48, 49, 50-1						
38	Q29, 33, 35-1		3	Transistor, PNP	Philips	BC857B	
40	Q1, 2, 9, 42, 43-1		5	Transistor, JFET N-channel	Siliconix	SST4393	
41	Q18-1		1	Transistor, NPN	Philips	BFG97	
42	Q6, 7, 10, 11, 12, 15, 16, 25,		11	Transistor, NPN 1GHz	Philips	BFR93A	
	26, 27, 47-1						
43	Q14-1		1	Transistor, NPN	Siemens	BFP450	
44	J7-1		1	15 pin HD D-sub socket.	Kycon	K66-E15S-N	
45	F3-1		1	Fuse 10A	Littelfuse	R451010	
46	L23, 24, 26, 27, 28-1		5	Inductor, 43nH, 5%	Coilcraft	B10T	
47	L5, 12, 22, 29-1		4	Inductor, 61nH (44NB), 20%	Toko	E558ANA-100054	
48	L7, 14, 15, 16, 17, 18, 19, 20,		14	Inductor, 100nH, 5%	Coilcraft	0805CS-101XJBC	
	21, 25, 30, 31, 32, 38						
49	L8, 10, 11, 13-1		4	Inductor, 820nH, 10%	Murata	LQG21NR82K10	
50	L1, 3, 4, 6-1		4	Inductor, 4.7uH, 10%	Murata	LQG21N4R7K10	
51	L33, 34, 35, 36, 37-1		5	Inductor, 68uH, 10%	KOA Speer	LPC4045TED680K	
52	L2, 9-1		2	Inductor, 1mH, 5%	API Delevan	S1812-105J	
53	TR1, 2-1		2	Transformer, 5A current compensated	Kaschke KG	183.822	
54	F13, 4-1		2	Filter 10.700MHz +/- 7.5kHz	Mercury Utd.	10M15B-SMD	
55	F17, 8-1		2	Filter 21.400MHz +/- 7.5kHz	Mercury Utd.	21M15B-SMD	
56	F11, 2, 5, 6-1		4	Filter 450kHz +/- 7.5kHz	Murata	SFGCG450EX	
57	F19, 10, 11-1		3	Filter 159MHz+/-4MHz	Samsung	S159PN	
58	J5-1		1	Header, 34way, 2mm pitch shrouded, notch polarised	Plastron	SMBH-34-B	
59	R255, 256 -1		2	Resistor 1R, 1%, 0.63W, 50V, 0603	Philips	232270461008	
60	R61, 76, 108, 135, 138, 145, 146-1		7	Resistor 10R, 1%, 0.63W, 50V, 0603	Philips	232270461009	
61	R55, 57, 70, 103, 104, 105,		25	Resistor 47R, 1%, 0.63W, 50V, 0603	Philips	232270464709	
	106, 112, 114, 115, 117, 120, 123,						
	128, 130, 133, 184, 185, 191,						
	232, 233, 270, 271, 282, 287-1						
62	R65, 66, 67, 68, 126, 127, 129,		17	Resistor 100R, 1%, 0.63W, 50V, 0603	Philips	232270461001	
	151, 167, 218, 220, 230,						
	231, 267, 279, 280, 281 -1						
63	R34, 64, 77, 119, 121, 124, 125,		11	Resistor 220R, 1%, 0.63W, 50V, 0603	Philips	232270462201	
	136, 139, 228, 266 -1						
64	R8, 94, 229, 269, 301-1		5	Resistor, 470R, 1%, 0.63W, 50V, 0603	Philips	232270464701	
65	R20, 30, 35, 58, 59, 78, 107, 137, 140,		23	Resistor 1k, 1%, 0.63W, 50V, 0603	Philips	232270461002	

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Item	Position	Quantity	Description	Manufacturer	Part No.	McM Part No.	
68	R19, 24, 33, 45, 50, 53, 54, 60, 63, 90	30	Resistor, 3k3, 1%, 0.63W, 50V, 0603	Philips	232270463302		
	95, 98, 99, 250, 251, 110, 113, 141,						
	149, 162, 183, 199, 200, 201, 209,						
	210, 275, 283, 294, 304-1						
69	R1, 3, 4, 12, 14, 15, 17, 22, 25, 37, 39,	61	Resistor 10k, 1%, 0.63W, 50V, 0603	Philips	232270461003		
	40, 41, 49, 56, 69, 71, 72, 73, 74, 80,						
	82, 83, 84, 87, 93, 101, 102, 118,						
	122, 142, 157, 158, 160, 169, 170,						
	173, 174, 180, 193, 194, 195, 196,						
	204, 205, 207, 213, 215, 217, 221,						
	234, 235, 246, 249, 264, 272, 274,						
	288, 289, 290, 291-1						
70	R2, 5, 11, 16, 38, 81,	11	Resistor, 15k, 1%, 0.63W, 50V, 0603	Philips	232270461503		
	178, 202, 222, 225, 252-1						
71	R254-1	1	Resistor, 22k, 1%, 0.63W, 50V, 0603	Philips	232270462203		
72	R31, 148, 150, 163, 203, 226, 245-1	7	Resistor, 33k, 1%, 0.63W, 50V, 0603	Philips	232270463303		
73	R28, 92, 161, 186, 206, 208, 278,	9	Resistor 39k, 1%, 0.63W, 50V, 0603	Philips	232270463903		
	292, 293-1						
74	R179	1	Resistor 68k, 1%, 0.63W, 50V, 0603	Philips	232270466803		
75	R6, 7, 9, 18, 26, 27, 29, 32, 42, 43,	41	Resistor 100k, 1%, 0.63W, 50V, 0603	Philips	232270461004		
	44, 46, 51, 52, 85, 86, 88, 89,						
	96, 97, 156, 166, 168,						
	171, 172, 176, 177, 181, 189,						
	211, 223, 224, 236, 239, 257, 258,						
	259, 260, 261, 262, 284 -1						
76	R13, 21, 23, 47, 48, 75,	15	Resistor 470k, 1%, 0.63W, 50V, 0603	Philips	232270464704		
	212, 214, 237, 240, 241,						
	242, 243, 247, 248 -1						
77	R253-1	1	Resistor 100K NTC, 5%, SMT	Murata	NCP21WF104J03R		
78	R159-1	1	Resistor 100K NTC, 5%	BC Components	232264063104		
79	R36, 79, 164, 198, 227, 238-1	6	Resistor, potentiometer 1k		3364W-1-102E		
80	R100, 132, 219, 302, 303-1	5	(No Connect) Resistor 0603				
81	U22-1	1	RS485 transceiver	Maxim	MAX489ESD		
82	U7, U12-1	2	Mixer, 50-500MHz 7dBm	Mini Circuits	ADE-1		
83	U23-1	1	Voltage regulator 5V	Motorola	M78M05CDT		
84	U4-1	1	Voltage regulator 8V	Motorola	M78M08CDT		
85	U13, 15, 17-1	3	Operational Amplifier, rail-to-rail	National Semi	LMC7101BIM5		
86	U16-1	1	Dual synthesiser	National Semi	LMX1601		
87	U2, 3-1	2	8-bit shift register	Philips	74HC594T		
88	U6, 10-1	2	FM IF system	Philips	SA606DK		
89	U19-1	1	Audio amplifier (stereo)	Philips	TDA1557Q		
90	U21, 24-1	2	Audio amplifier 1W	Philips	TDA7052AT		
91	U5, 8, 18-1	3	Operational Amplifier, Quad SO14	Texas Inst	LM224D		
92	U1-1	1	Opto-coupler	Toshiba	TLP181		
93	PC1-1	1	Printed Circuit Board	Norbit/Elprint	41053-5	84-501 Issue 1	
94		1	Screening Can			84-683	
		6	Self Tapping Screw 2.5x6			84-692	
95		1	PSU Cable Assy & Choke			84-530	
96		1	Label, batch and serial number indication, printed	Critchley	CR105-T1K10S		
97	J28-1	1	Pin header 3way, gold 2.54mm pitchx8.5mm	Harwin	M20-9990305 (or equivalent)		
98		1	Jumper socket, 2.54mm pitch, black	Harwin	M7567-05 (or equivalent)		
ENG APP.		CHANGE	DATE	ISSUE	TITLE	DRAWING NO.	SHEET
ORH		C2063	06/12/01	1	DSC VHF RF BOARD	84-500L	3 OF 3
CHECKED		C2092	04/02/02	2			
NT		C2134	27/02/02				
DRAWN		C2168	26/04/02	3			
JM							