

SECTION 4 – REPAIR PARTS

PARTS LIST AND ORDERING DATA 4-1

PARTS LIST 4-5

PARTS LIST AND ORDERING DATA

If you live in the United States, you may order parts from Yaesu Electronics Corporation. In other countries, you should order parts from the Yaesu agent for your country. In countries where Yaesu is not currently represented, you may order spare parts directly from Yaesu Musen Company, Ltd. in Tokyo.

When ordering, please specify the exact model number of the transceiver that the part is for. Many parts are standard, such as resistors and disc ceramic capacitors, but you should use particular care when ordering such items as electrolytics, tantalum capacitors, and the like.

The parts list to follow identifies the board that the parts belong to, as well as the circuit designation and part description. A "Part Number" is also specified, and this number will allow immediate identification by our parts department of the item you require. (**See note below.)

Shipment of parts from Yaesu USA is usually made by UPS, COD. Allow at least a week for the parts department to process your order. You will receive prompt notification that your order has been received, and if parts are back ordered, or if additional information is required, you will be so informed.

PARTS ORDER EXAMPLE

QUANTITY	TRANSCIVER IDENTIFICATION	LOCATION	**PART NUMBER	CIRCUIT DESIGNATION
1	FT-101ZD	PB-1960A	G4800510C	Q ₁₀₁ (3SK51-03)

**Note: In earlier transceivers, no part numbering system was used in the manual. For this reason, the nomenclature "3SK51" will suffice for the part number. All FT-101ZD transceivers have a part number for each component.

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YAESU MUSEN COMPANY, LTD. — C.P.O. BOX 1500, TOKYO, JAPAN
 YAESU ELECTRONICS CORPORATION — 15954 Downey Avenue, Paramount, CA 90723
 YAESU ELECTRONICS CORPORATION — 9812 Princeton-Glendale Rd., Cincinnati, OH 45246

ORDER BLANK

QUANTITY	TRANSCIVER IDENTIFICATION	LOCATION	PART NUMBER	CIRCUIT DESIGNATION

I authorize shipment via: ☐ Best Way ☐ Parcel Post
☐ UPS ☐ Other

Ship To: Name: _____
 (Print or Type) Address: _____
 City: _____ State: _____ Zip: _____
 Country: _____

REPAIR PARTS

YAESU MUSEN COMPANY, LTD. — C.P.O. BOX 1500, TOKYO, JAPAN
 YAESU ELECTRONICS CORPORATION — P.O. Box 498, Paramount, CA 90723
 YAESU ELECTRONICS CORPORATION — 9812 Princeton-Glendale Rd., Cincinnati, OH 45246

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QUANTITY	TRANSCEIVER IDENTIFICATION	LOCATION	PART NUMBER	CIRCUIT DESIGNATION

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 Country: _____

PARTS LIST

MAIN CHASSIS			C5	K30279062	Dipped mica 500 WV 3000 pF
Symbol No.	Parts No.	Description			(DM19-302K5)
		IC, TRANSISTOR	C66	K31306800	Moulded mica 1 KWV 80 pF
Q2	G31049600	TR 2SA496(O)	C17	K02279001	Ceramic 500 WV 1 pF
Q1	G3206160	" 2SB616	C10	K02279002	" " 5 pF
Q4	G34023500	" 2SD235(O)	C18	K02279003	" " 47 pF
Q3	G1090070	IC μ PC14308	C11	K00279001	" " 200 pF
Q5	G1090080	" μ PC78L08	C20	K00279002	" " 470 pF
			C16	K00309001	" 1 KV 3 pF
			C15	K02309002	" " 5 pF
		DIODE	C14	K02309003	" " 100 pF
D1	G2090029	Ge 1N60	C3	K00329002	" 1.5 KWV 460 pF
D2-5	G2015550	Si 1S1555	C9	K00359001	" 3 KV 100 pF
D6	G2090001	" 10D1	C1	K12359001	" " 1000 pF
			C29, 34, 35, 41, 64	K13170103	" 50 WV 0.01 μ F
			C12, 22-24, 39, 40, 56, 58, 60, 68, 69	K13170473	" " 0.047 μ F
		RESISTOR			
R22, 24	J01245220	Carbon film 1/4W TJ 22 Ω	C27, 28, 36	K12279004	" 500 WV 0.0047 μ F
R23	J00245330	" " " VJ 33 Ω	C30, 32, 33, 54, 55, 61	K12279002	" " 0.01 μ F
R14	J01245560	" " " TJ 56 Ω	C2, 25, 26	K12329002	" 1.4 KV 0.0047 μ F
R7, 11	J01245101	" " " " 100 Ω	C31, 37	K12329001	" " 0.01 μ F
R18	J01245821	" " " " 820 Ω	C42-51	K21270002	Feed thru 500 WV 0.001 μ F (ECK-L2H102PE)
R4, 5	J01245102	" " " " 1 k Ω	C63	K40120476	Electrolytic 16 WV 47 μ F
R6	J01245152	" " " " 1.5 k Ω	C65	K40120337	" " 330 μ F
R19	J01245182	" " " " 1.8 k Ω	C70	K40120106	" " 10 μ F
R17	J01245222	" " " " 2.2 k Ω	C67	K40100336	" 10 WV 33 μ F
R20	J01245474	" " " " 470 k Ω	C71	K50177104	Mylar 50 WV 0.1 μ F
R2	J10276100	Carbon composition 1/2W GK 10 Ω			
R9, 10 (with L5, L6)	-	" " " " 56 Ω			
R3	J10276101	" " " " 100 Ω			
R1	J10276222	" " " " 2.2 k Ω			
					VARIABLE CAPACITOR
			VC1	K90000026	YB-250 250 pF
			VC2	K90000016	C134E125
		POTENTIOMETER			
VR1	J60800035	VM11AB06A5M1112 10 k Ω B			
VR2	J62800032	DM10A039A 500 k Ω B/20 k Ω B			
VR3	J62800033	DM10A039A 5 k Ω A/5 k Ω B			
VR4	J60800043	VM10A592A 5 k Ω A			TRIMMER CAPACITOR
VR5, 6	J60800036	VM10A592A 5 k Ω B	TC1	K91000007	TSN120C 10P x 2
VR7	J62800034	DM10A39A 5 k Ω B/5 k Ω A			
VR8	J60800037	VM10A654A 1 k Ω B			
VR9, 10	J60800038	VM10A654A 5 k Ω B			
VR11	J60800039	VM10AB08A 5 k Ω B			INDUCTOR
			L1	L0020534B	#220534B
			L2	L0020611	#220611
			L3	L1020065	#220065
			L4	L1020064	#220064
		CAPACITOR	L5, L6 (R9, R10)	L1020308	#220308
C13, 19, 21	K30276271	Dipped mica 500 WV 5 pF " " " 270 pF (LCQ1727271K5)	L7	L1190001	EL0710-251K 250 μ H
C8	K30276331	" " 500 WV 330 pF (DM-15-331K5)	L8	L1190017	FL-SH-102J 1 mH
C7	K30276621	" " 500 WV 620 pF (DM19D621K5)	L9	L0020705	#220674
C6	K30279052	" " 500 WV 1100 pF (DM19-112K5)			

REPAIR PARTS

		TRANSFORMER			
T1	L0020544	#220544			
T2	L0020011	#220011			
T3	L0020074	#220074			MULTI JACK
			MJ1	P4090001	121S-10B-105A
			MJ2	P4090007	220D-20B-205A
			MJ3	P4090002	121S-14B-105A
		METER			
M1	M0090002	Y-45-02 #250042			
					PLUG
			P1 (with wire)	P1090079	5047-12A (#240129B)
			P2 (")	P1090080	5047-13A (#240130B)
		SPEAKER	P3 (")	P1090082	5047-15A (#240131B)
SP1	M4090005	SA-92Y 4 Ω 3 W	P4 (")	P1090086	5047-19A (#240132)
			P5 (")	P1090082	5047-15A (#240133)
			P6 (")	P1090075	5047-08A (#240134)
			P7 (")	P1090072	5047-05A (#240135)
		POWER TRANSFORMER	P8 (")	P1090082	5047-08A
PT1	L3030028	52-74 (#230028)	P9 (")	P1090079	5047-12A } (#240137)
			P10 (")	P1090083	5047-16A }
			P18 (")	P1090070	5047-03A (#240129)
		RELAY	P11, 14, 22	P0090045	SQ4052
RL1	M1190004	FRL-263 D012/04CS01	P15	P0090002	SI5908
RL2	M1090002	MX2P	P16	P0090005	SI-7502
			P19	P1090070	5047-03A
			P20	P1090075	5047-08A
			P21	P0090075	P-7015
		RELAY SOCKET			
RLS1	M1490010	263H204			FUSE
RLS2	M1490001	PX08	F1	Q0000005	5 A (100V-117V)
				Q0000004	3 A (200V-234V)
		SWITCH			
S1	N0050041	#250041 (SRS)			FUSE HOLDER
S2	N0050007	#250044 (RS2-4-11)	FH1	P2000001	SN1001 #2
S3 *(Lot 1-7)	N0190025	ESR-E485R20	FH2	P2000003	F3265
S3 *(Lot 8-)	N0190037	ESR-E486R20			
S4, 5	N7090005	WD9223			
					PILOT LAMP
		COOLING FAN	PL1	Q1000026	BF311-04071A
FAN1	M2090001	2SB10A	PL2-5	Q1000033	K0252-6-8
		RECEPTACLE		Q5000010	Thru terminal FT-SM1
J1, 3	P1090004	SG7814		Q4000002	" A339 (HV)
J2	P0090011	FM144S		Q6000042	Terminal block ML-3182 20P
J4	P1090033	D6-701B00		Q6000004	Terminal board 1L2PS (2-0)
J5 (with wire)	P1090062	1625-09R-1 (#240128A)		Q6000007	" 1L3PS (2-0-1)
J6	P1090014	SI7501-1		Q6000011	" 1L4PS (2-0-2)
J7	P1090028	M-BR-06B		Q6000003	" 1L2PS (1-0-1)
J8	P1090040	SA607B00		Q6000008	" 1L3PS (3-0)
J9-14, 18	P1090025	STR-01			
J15	P1090005	SG-8050			
J16	P1090045	AC9-PF			
J17	P0090047	QS-DB6-ML			
J19	P1090111	J-7015			

***** LED B BOARD *****			C102, 108	K00175101	Ceramic	50WV SL	100 pF
PB-1390	F0001390	P.C. Board	C103-106,	K13170103	"	"	0.01 μ F
D9	G2090060	GD4-203-SRD	110-112,				
			114,115,117,				
			119-124				
			C101, 118	K13170473	"	"	0.047 μ F
			C113	K40120106	Electrolytic	16WV TT	10 μ F
RF UNIT							
Symbol No.	Parts No.	Description					
	C0019600	RF unit with components					TRIMMER CAPACITOR
PB-1960A	F0001960A	P.C. Board	TC101	K91000019	ECV-1ZW	10 x 40	10 pF
		FET & TRANSISTOR					INDUCTOR
Q103, 104	G3800190G	FET 2SK19GR	L101, 102	L1190038	FL-5H271K		270 μ H
Q105, 106	G4800400M	" 3SK40M					
Q101	G4800510C	" 3SK51-03					
Q102	G3090019	" J310					
Q107	G3090010	TR 2N4427					TRANSFORMER
			T101,103,105	L0020209		#220209	
			T102, 104	L0020221		#220221	
		DIODE					
D104	G2010070	Ge (GB) 1S1007					
D101-103	G2015550	Si 1S1555					JACK
			J101-103	P1090018			SQ3081
		RESISTOR					
R119	J00245479	Carbon film 1/4W VJ 4.7 Ω					
R126, 127	J00245100	" " " " 10 Ω	NB-FIX UNIT				
R110	J00245820	" " " " 82 Ω	Symbol No.	Parts No.	Description		
R106-108, 116, 120, 121, 130	J00245101	" " " " 100 Ω		C0019610	NB-FIX unit with components		
			PB-1961B	F0001961B	P.C. Board		
	J00245221	" " " " 220 Ω					
R111,113,114, 128,129	J00245331	" " " " 330 Ω					
R112	J00245471	" " " " 470 Ω					TRANSISTOR
R118	J00245821	" " " " 820 Ω	Q201-204	G3303720Y	2SC372Y		
R105	J00245102	" " " " 1 k Ω	Q205, 206	G3315830	2SC1583		
R117	J00245152	" " " " 1.5 k Ω					
R102, 122	J00245272	" " " " 2.7 k Ω					
R104, 109	J00245562	" " " " 5.6 k Ω					DIODE
R115	J00245822	" " " " 8.2 k Ω	D201-204	G2090029	Ge	1N60	
R124	J00245223	" " " " 22 k Ω	D205-209	G2015550	Si	1S1555	
R103	J00245393	" " " " 39 k Ω					
R123	J00245563	" " " " 56 k Ω					
R125	J00245124	" " " " 120 k Ω					
R101	J10246225	Carbon composition 1/2W GK 2.2 M Ω					RESISTOR
			R208,216,224, 230,238,239,	J00245101	Carbon film 1/4W VJ		100 Ω
			R204	J00245221	" " " "		220 Ω
		CAPACITOR	R222, 236	J00245471	" " " "		470 Ω
C125	K30173030	Dipped mica 50 WV 3 pF	R231-233,235	J00245561	" " " "		560 Ω
C107	K30173040	" " " " 4 pF	R206,215,221, 234,237	J00245102	" " " "		1 k Ω
C116	K30176471	" " " " 470 pF					
C126	K02179009	Ceramic " CH 22 pF	R207	J00245222	" " " "		2.2 k Ω

REPAIR PARTS

***** LED B BOARD *****			C102, 108	K00175101	Ceramic	50WV SL	100 pF
PB-1390	F0001390	P.C. Board	C103-106,	K13170103	"	"	0.01 μ F
D9	G2090060	GD4-203-SRD	110-112,				
			114,115,117,				
			119-124				
			C101, 118	K13170473	"	"	0.047 μ F
			C113	K40120106	Electrolytic	16WV TT	10 μ F
RF UNIT							
Symbol No.	Parts No.	Description					
	C0019600	RF unit with components					TRIMMER CAPACITOR
PB-1960A	F0001960A	P.C. Board	TC101	K91000019	ECV-1ZW	10 x 40	10 pF
		FET & TRANSISTOR					INDUCTOR
Q103, 104	G3800190G	FET 2SK19GR	L101, 102	L1190038	FL-5H271K		270 μ H
Q105, 106	G4800400M	" 3SK40M					
Q101	G4800510C	" 3SK51-03					
Q102	G3090019	" J310					
Q107	G3090010	TR 2N4427					TRANSFORMER
			T101,103,105	L0020209	#220209		
			T102, 104	L0020221	#220221		
		DIODE					
D104	G2010070	Ge (GB) 1S1007					
D101-103	G2015550	Si 1S1555					JACK
			J101-103	P1090018	SQ3081		
		RESISTOR					
R119	J00245479	Carbon film 1/4W VJ 4.7 Ω					
R126, 127	J00245100	" " " " 10 Ω	NB-FIX UNIT				
R110	J00245820	" " " " 82 Ω	Symbol No.	Parts No.	Description		
R106-108, 116, 120, 121, 130	J00245101	" " " " 100 Ω		C0019610	NB-FIX unit with components		
			PB-1961B	F0001961B	P.C. Board		
	J00245221	" " " " 220 Ω					
R111,113,114, 128,129	J00245331	" " " " 330 Ω					
R112	J00245471	" " " " 470 Ω					TRANSISTOR
R118	J00245821	" " " " 820 Ω	Q201-204	G3303720Y	2SC372Y		
R105	J00245102	" " " " 1 k Ω	Q205, 206	G3315830	2SC1583		
R117	J00245152	" " " " 1.5 k Ω					
R102, 122	J00245272	" " " " 2.7 k Ω					
R104, 109	J00245562	" " " " 5.6 k Ω					DIODE
R115	J00245822	" " " " 8.2 k Ω	D201-204	G2090029	Ge 1N60		
R124	J00245223	" " " " 22 k Ω	D205-209	G2015550	Si 1S1555		
R103	J00245393	" " " " 39 k Ω					
R123	J00245563	" " " " 56 k Ω					
R125	J00245124	" " " " 120 k Ω					
R101	J10246225	Carbon composition 1/2W GK 2.2 M Ω					RESISTOR
			R208,216,224, 230,238,239,	J00245101	Carbon film 1/4W VJ	100 Ω	
			R204	J00245221	" " " " 220 Ω		
		CAPACITOR	R222, 236	J00245471	" " " " 470 Ω		
C125	K30173030	Dipped mica 50 WV 3 pF	R231-233,235	J00245561	" " " " 560 Ω		
C107	K30173040	" " " 4 pF	R206,215,221, 234,237	J00245102	" " " " 1 k Ω		
C116	K30176471	" " " 470 pF					
C126	K02179009	Ceramic " CH 22 pF	R207	J00245222	" " " " 2.2 k Ω		

REPAIR PARTS

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REPAIR PARTS

		MINI CONNECTOR	C612	K02179023	Ceramic	50WV CH	180 pF
J501	P0090043	5048-19A	C640	K02179026	"	" "	240 pF
J502	P0090040	5048-15A	C608	K02179027	"	" "	270 pF
J503	P0090037	5048-08A	C601-603, 605-607, 609-611, 613-615, 617-619, 621-623, 625-627, 629-631, 633-635, 637-639, 641	K13170103			0.01 μ F
J504	P0090042	5048-05A					
J505	P0090041	5048-03A					
	R0042800	HEAT SINK					
PREMIX LOCAL UNIT							
Symbol No.	Parts No.	Description					
	C0019650	PREMIX LOCAL unit with					
		components					CRYSTAL
PB-1965	F0001965	P.C. Board	X601	H0100411	HC-18/U	15.9875 MHz	#210147
			X602	H0101480	"	17.9875 MHz	#210148
			X603	H0101490	"	21.4875 MHz	#210149
			X604	H0101500	"	28.4875 MHz	#210150
		TRANSISTOR	X605	H0101510	"	35.4875 MHz	#210151
Q601-610	G3303720Y	2SC372Y	X606	H0101520	"	42.4875 MHz	#210152
			X607	H0101530	"	42.9875 MHz	#210153
			X608	H0101540	"	43.4875 MHz	#210154
			X609	H0101550	"	43.9875 MHz	#210155
		DIODE	X610	H0101560	"	19.4875 MHz	#210156
D601-610	G2015550	Si 1S1555					
							TRANSFORMER
		RESISTOR	T601-610	L0020017		#220017	
R604,608,612, 616,620,624, 628,632,636, 640	J00245101	Carbon film 1/2W VJ 100 Ω					
R642	J00245181	" " " " 180 Ω					
R603,607,611, 615,619,623, 627,631,635, 639	J00245102	" " " " 1 k Ω	SELECT SWITCH UNIT				
			Symbol No.	Parts No.	Description		
				C0019660	SELECT SW unit with components		
			PB-1966C	F0001966C	P.C. Board		
R641, 643	J00245122	" " " " 1.2 k Ω					
R602,606,610, 614,618,638	J00245183	" " " " 18 k Ω					
R622,626,630, 634	J00245333	" " " " 33 k Ω					DIODE
R601,605,609, 613,617,621, 625,629,633, 637	J00245563	" " " " 56 k Ω	D701	G2090001	Si	10D1	
							RELAY
			RL701	M1190002	FBR211A D012M		
		CAPACITOR					
C604	K30176331	Dipped mica 50WV 330 pF					SWITCH
C624,628,632, 636	K02175470	Ceramic " CH 47 pF	S701	M4090006	6B0003CC2060		
C620	K02175680	" " " 68 pF					
C616	K02175101	" " " 100 pF					

REPAIR PARTS

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REPAIR PARTS

C906	K41140338	Electrolytic 25WV 3300 μ F				CAPACITOR
			C1017	K13170473	Ceramic 50WV	0.047 μ F
			C1016	K12279003	" 500WV	0.0022 μ F
			C1005, 1006, 1013-1015, 1018	K12279004	" "	0.0047 μ F
RL901	M1190003	RELAY FRL-264 D012/04CS-01				
			C1010	K12279002	" "	0.01 μ F
			C1009	K40240106	Electrolytic 250WV	10 μ F
	Q5000011	Wrapping terminal C	C1011	K40240336	" "	33 μ F
	Q5000004	Test point D	C1012	K40240476	" "	47 μ F
			C1001-1004	K40270106	" 450WV	10 μ F
			C1007, 1008	K40260226	" 350WV	22 μ F
RECT. B UNIT						
Symbol No.	Parts No.	Description				
	C0019680	RECT. B unit with components		Q5000011	Wrapping terminal C	
PB-1968B	F0001968B	P.C. Board				
		TRANSISTOR				
Q1003	G3106390	2SA639	CAPACITOR UNIT			
Q1001	G3107330	2SA733	Symbol No.	Parts No.	Description	
Q1002	G3303720Y	2SC372Y		C0019690	CAPACITOR unit with components	
			PB-1969A	F0001969A	P.C. Board	
		DIODE				
D1004, 1005, 1008-1011	G2015550	Si 1S1555			RESISTOR	
			R1101, 1102	J10276474	Carbon composition 1/2W GK 470k Ω	
D1002, 1003, 1012	G2090002	" 10D10				
D1006, 1007	G2090001	" 10D1				
D1001	G2090081	" SM1-12			CAPACITOR	
			C1101, 1102	K43270003	Electrolytic 500WV 200 μ F (CE-62LW)	
		RESISTOR				
R1021	J00245102	Carbon film 1/4W VJ 1 k Ω				
R1011, 1016, 1020	J00245472	" " " " 4.7 k Ω				
R1013, 1015	J00245103	" " " " 10 k Ω	TRIMMER A UNIT			
R1014	J00245123	" " " " 12 k Ω	Symbol No.	Parts No.	Description	
R1017-1019	J00245223	" " " " 22 k Ω		C0019700	TRIMMER A unit with components	
R1012	J00245563	" " " " 56 k Ω	PB-1970	F0001970	P.C. Board	
R1010	J20306562	Metallic film 1W 5.6 k Ω				
R1022	J20306390	" " " " 39 Ω				
R1005	J20336391	" " 2W 390 Ω				
R1006	J20336471	" " " " 470 Ω			CAPACITOR	
R1008	J20336222	" " " " 2.2 k Ω	C1203	K30176331	Dipped mica 50WV	330 pF
R1007	J20336332	" " " " 3.3 k Ω	C1208	K30176391	" " "	390 pF
R1009	J20336473	" " " " 47 k Ω	C1202	K30176651	" " "	650 pF
R1023	J10276474	Carbon composition 1/2W GK 470 k Ω	C1207	K30209001	" " "	1000 pF
			C1201	K30209003	" " "	1500 pF
			C1206	K02173100	Ceramic 50WV CH	10 pF
		POTENTIOMETER	C1205	K02179012	" " "	30 pF
VR1001	J50708103	V18K3-2 10 k Ω B	C1204	K02175820	" " "	82 pF

		TRIMMER CAPACITOR		C1407	K30276391	Dipped mica 500WV	390 pF
TC1203	K91000032	B2PY	100 pF	C1402	K30276651	" " "	650 pF
TC1202	K91000052	B4PY	220 pF	C1401	K30279055	" " "	1500 pF
TC1201	K91000033	B7PY	470 pF				
TC1206	K91000013	ECV-1ZW	20 x 32 20 pF				
TC1204, 1205	K91000016	"	50 x 32 50 pF				
						TRIMMER CAPACITOR	
				TC1404, 1405	K91000031	B1PY	40 pF
				TC1402, 1403	K91000032	B2PY	100 pF
		INDUCTOR		TC1401	K91000033	B7PY	420 pF
L1201	L0020545	Trap coil	#220545				

REPAIR PARTS

[illegible]

		SWITCH	***** DISPLAY board *****		
SW1801	N4090011	2B0005FC206	PB-1978	F0001978	P.C. Board
					DISPLAY LED
			DS2101-2106	G2090069	HP5082-7623
LED BOARD					
Symbol No.	Parts No.	Description			
	C0019740	LED board with components			
PB-1974A	F0001974A	P.C. Board			SOCKET
			QS2101-2106	P3090038	314AG-37D
		LED			
D1901-1906	G2090060	GD4-203SRD	***** COUNT. DECODE board *****		
			PB-1979	F0001979	P.C. Board
		RESISTOR			
R1901, 1902	J01245102	Carbon film 1/4W TJ 1 k Ω			IC, TRANSISTOR
			Q2208-2213	G1090046	IC MSM561RS
			Q2202-2207	G1090033	" SN74LS196N
			Q2201	G3104960Y	TR 2SA496Y
LEVER SWITCH BOARD					
Symbol No.	Parts No.	Description			RESISTOR
	C0019750	LEVER SW board with components	R2204-2245	J00245101	Carbon film 1/4W VJ 100 Ω
PB-1975A	F0001975A	P.C. Board	R2203	J00245181	" " " " 180 Ω
			R2202	J00245271	" " " " 270 Ω
			R2201	J00245471	" " " " 470 Ω
		RESISTOR			
R2006	J01245560	Carbon film 1/4W TJ 56 Ω			
R2005	J01245101	" " " " 100 Ω			CAPACITOR
R2001	J01245121	" " " " 120 Ω	C2201	K13179001	Ceramic 50WV 0.01 μ F
R2002	J01245391	" " " " 390 Ω	C2202-2204	K71137685	Tantalum 6.3WV 6.8 μ F
R2008	J01245562	" " " " 5.6 k Ω			
R2004	J00245683	" " " VJ 68 k Ω			
					CONNECTOR
			J2201	P1090043	3024-13C
		SWITCH			
S2001-2004	N3090002	SLE62301		Q5000007	Board Joint 163740
S2005	N3090008	SLE64251			
			***** COUNTER MAIN board *****		
			PB-1980A [▲]	F0001980A	P.C. Board
			PB-1980B [*]	F0001980B	P.C. Board
COUNTER UNIT					
Symbol No.	Parts No.	Description			IC, FET, TRANSISTOR
	C0019800	COUNTER unit assembly	Q2302	G1090032	IC MC10116
PB-1978		(Display board)	Q2305	G1090023	" MSM5564
PB-1979		(Count, decode board)	Q2309	G1090033	" SN74LS196N
PB-1980A [▲]		(Main board)	Q2304	G1090169	" SN74S00N
		▲ 655.36 kHz CRYSTAL TYPE	Q2306	G1090093	" SN74LS04N
PB-1980B [*]		(Main board)	Q2307, 2308	G1090079	" μ PA54H
		* 6553.6 kHz CRYSTAL TYPE	Q2310	G1090065	" μ PC14305

REPAIR PARTS

Q2301	G4800510C	FET	3SK51-03			TRIMMER CAPACITOR
Q2303	G3090008	TR	MPS3640	TC2301 [▲]	K9100030	ECV-1ZW 40 x 53 40 pF
Q2312 [*]	G1090034	IC	SN74LS90N	TC2302 [*]	K91000029	ECV-1ZW 20 x 53 20 pF
Q2313 [*]	G3303800Y	TR	2SC380TM-Y			
						INDUCTOR
		DIODE		L2301	L1020012	35 μ H #220012
D2301-2312	G2015550	Si	1S1555	L2302	L1190020	150 μ H
		CRYSTAL				SWITCH
X2301 [▲]	H0100250	HC-14/W	655.36 kHz	S2301, 2302	N7090016	DSS208
X2301 [*]	H0102272	HC-18/U	6553.6 kHz			
						PLUG
		RESISTOR		P2301	P0090045	SQ4052
R2316, 2326 [*]	J00245101	Carbon film 1/4 WS VJ	100 Ω	P2302	T9201360	1625-09P-1 #240136
R2301, 2311	J00245221	" " " " "	220 Ω	(with wire)		
R2319	J00245331	" " " " "	330 Ω			
R2305, 2317	J00245471	" " " " "	470 Ω			
R2308-2310, 2312, 2314, 2322	J00245511	" " " " "	510 Ω	J2301	P0090044	3022-13A
				J2302	P9201380A	3021-03 #240138A
R2304, 2313, 2315, 2325 [*]	J00245102	" " " " "	1 k Ω	DC-DC CONVERTER (OPTION)		
				Symbol No.	Parts No.	Description
R2306, 2307	J00345222	" " " " "	2.2 k Ω			TRANSISTOR
R2327 [*]	J00245392	" " " " "	3.9 k Ω	Q3201, 3202	G3090002	T20A6 with insulator
R2302	J00245103	" " " " "	10 k Ω			
R2303, 2323 [*] , 2324 [*]	J00245153	" " " " "	15 k Ω			RESISTOR
				R3202	J31306339	Wire wound 1W 3.3 Ω
R2321	J00245223	" " " " "	22 k Ω	R3201	J20376221	Metallic film 5W 220 Ω
R2320	J00245473	" " " " "	47 k Ω			
R2318	J00245104	" " " " "	100 k Ω			
						CAPACITOR
				C3202	K52247474	Metallized paper 250WV 0.047 μ F
		BLOCK RESISTOR		C3201	K41140227	Electrolytic 25WV 220 μ F
RB2301	J40900001	RK1/16B8R	4.7 k Ω			
						CONNECTOR
		CAPACITOR		P3201	P0090066	AC9M
C2308	K02175120	Ceramic 50WV CH	12 pF			
C2311 [▲]	K06175150	" " UJ	15 pF		T9012720	DC POWER CORD
C2324 [*]	K06175270	" " "	27 pF		Q0000009	FUSE 20 A
C2312 [▲]	K06175470	" " CH	47 pF			
C2325 [*]	K02175151	" " "	150 pF			
C2326 [*]	K06179018	" " UJ	330 pF	ACCESSORIES		
				Symbol No.	Parts No.	Description
C2301-2305	K13179001	" " "	0.01 μ F			AC POWER CORD
C2324-2326 [▲]	K13170473	" " "	0.047 μ F			
C2314, 2315	K51176331	Styrol "	330 pF		T9012380A	2 wire, 2 prong plug
C2323	K50177102	Mylar "	0.001 μ F		T9012481A	3 wire without plug
C2316	K50177332	" " "	0.0033 μ F		T9012582A	3 wire, 3 prong plug (UL)
C2317	K50177103	" " "	0.01 μ F		T9012484	3 wire, 3 prong Australian plug
C2327-2330 [*]	K13179001	" " "	0.01 μ F		T9012683A	3 wire, 2 prong EU plug
C2313, 2331 [*] -2333	K50177473	" " "	0.047 μ F		P0090065	CONNECTOR PLUG QS-P6FL
					P0090018	PIN PLUG STP58
C2306, 2307, 2309	K70127106	Tantalum 16WV	10 μ F		P0090035	ACC PLUG PA602B04
					Q0000005	FUSE (100V-117V) 5A
C2310	K40129001	Electrolytic "	330 μ F		Q0000004	" (200V-234V) 3A
C2318-2322	K21170002	Feed thru 50WV	0.001 μ F			

AM UNIT				CAPACITOR			
Symbol No.	Parts No.	Description					
	C0020400	AM unit with components		C2420	K30176331	Dipped mica 50 WV	390 pF
PB-2040	F0002040	P.C. Board		C2416	K02175390	Ceramic " CH	39 pF
				C2417, 2426	K02175101	" " "	100 pF
				C2418	K02175151	" " "	150 pF
		FET & TRANSISTOR		C2401	K02175221	" " "	220 pF
Q2404	G3800190G	FET	2SK19GR	C2419, 2421-	K13170103	" " "	0.01 μ F
Q2406	G4800510C	"	3SK51-03	2423, 2428,			
Q2405, 2406,	G3303800Y	TR	2SC380TM-Y	2429, 2434,			
2407				2436, 2437-			
Q2401	G3307320G	"	2SC732TM-GR	2440, 2445			
Q2402, 2409	G3318150Y	"	2SC1815Y	2447 2449			
				C2425, 2427,	K13170473	" " "	0.047 μ F
		DIODE		2430-2433,			
D2406	G2090029	Ge.	1N60	2436, 2439			
D2401, 2402,	G2015550	Si.	1S1555	C2451	K50177102	Mylar "	0.001 μ F
2404, 2405				C2407	K50177222	" "	0.0022 μ F
				C2410, 2415,	K50177103	" "	0.01 μ F
		CRYSTAL		2435, 2438,			
X2401	H0100423	HC-18/U	8988.3 kHz	2447, 2449			
				C2402	K50177473	" " "	0.047 μ F
		RESISTOR		C2414	K50177224	" " "	0.22 μ F
R2441, 2457	J00245470	Carbon film	$\frac{1}{4}$ W VJ 47 Ω	C2405, 2450,	K40170105	Electrolytic "	1 μ F
R2455	J00245560	" "	" " 56 Ω	2453			
R2411, 2414,	J00245101	" "	" " 100 Ω	C2452	K40140475	" 25 WV	4.7 μ F
2418, 2422,				C2406, 2408,	K40126106	" 16 WV	10 μ F
2425, 2432,				2409, 2424,			
2434, 2447				2454			
R2406, 2423	J00245331	" "	" " 330 Ω	C2446	K40126476	" " "	47 μ F
R2445, 2452	J00245471	" "	" " 470 Ω	C2403	K40126107	" " "	100 μ F
R2409, 2419,	J00245102	" "	" " 1 k Ω	C2413	K40126227	" " "	220 μ F
2429, 2435,							
2436, 2438-							
2440							
R2437	J01245102	" "	" TJ 1 k Ω	TC2402	K91000012	ECV 1ZW 10 x 32	10 pF
R2431	J00245272	" "	" VJ 2.7 k Ω	TC2401	K91000013	" 20 x 32	20 pF
R2401, 2410,	J00245332	" "	" " 3.3 k Ω				
2453, 2456							
R2454	J01245332	" "	" TJ 3.3 k Ω	L2401, 2403	L1190016	FL5H-101K	100 μ H
R2404	J00245392	" "	" VJ 3.9 k Ω	L2402	L1190017	FL5H-102K	1 mH
R2420	J00245472	" "	" " 4.7 k Ω				
R2442, 2444	J00245562	" "	" " 5.6 k Ω				
R2402, 2424,	J00245103	" "	" " 10 k Ω	T2401	L0020141	R12-4171	
2446, 2449							
R2407	J00245123	" "	" " 12 k Ω	J2401, 2404	P1090016	SQ3056	
R2405, 2433	J00245153	" "	" " 15 k Ω	J2402	P0090041	5048-03A	
R2430	J00245183	" "	" " 18 k Ω	J2403	P0090037	5048-08A	
R2443, 2450	J00245223	" "	" " 22 k Ω	P2401	P0090075	P-7015	
R2403	J00245273	" "	" " 27 k Ω				
R2408, 2412,	J00245333	" "	" " 33 k Ω		Q5000011	Wrapping terminal C	
2421					B4025945B	P.C.B. support D	
R2416	J00245393	" "	" " 39 k Ω				
R2427	J00245563	" "	" " 56 k Ω				
R2428	J00245683	" "	" " 68 k Ω				
R2417, 2426,	J00245104	" "	" " 100 k Ω				
2451							
		THERMISTOR					
TH2401	G9090003	D33A					

