

TROUBLESHOOTING

Note: For remedy, replace or repair defective part(s) or component(s).

Symptom	Cause
Unit does not turn on.	<ul style="list-style-type: none"> ● Defective power switch (VR1–SW). ● Blown fuse (F1 2A 250V). ● Broken DC power cable (ACC). ● Poor solder connection or other open connection in power circuit.
No channel memory back up. No receive sound.	<ul style="list-style-type: none"> ● Blown fuse (F2 0.5A 250V). ● Broken DC power cable (BAT). ● Defective external speaker jack. ● Poor contact on microphone jack. ● Defective push switch on microphone. ● Defective internal speaker. ● Defective D3, VR1, Q8 or semiconductors in RX circuit.
No noise.	<ul style="list-style-type: none"> ● Defective IC2 or IC3. ● Defective IC(s) and transistor(s) in all audio stages in receiver section. Compare with voltages noted on "VOLTAGE CHART" to find defective part(s). ● Defective SQUELCH circuit: IC2, VR2 and VR3.
No transmission.	<ul style="list-style-type: none"> ● Defective microphone. ● Defective push switch on microphone. ● Improper adjustment of carrier oscillator. If you have checked all channels and obtain no RF output, check V.C.O. and/or signal trace through transmitter circuit. ● Defective antenna jack JK1. ● Defective L7, L9, and L10. ● Defective Q23 (E–C open).
No modulation.	<ul style="list-style-type: none"> ● Defective microphone. ● Defective modulator (poor audio output). ● Inoperative microphone amplifier: IC3, and Q14. ● Defective microphone jack. ● Defective AMC circuit: Q12, Q13 and D9. ● Defective Q15.
No squelch.	<ul style="list-style-type: none"> ● Defective IC2 (2/2). ● Improper adjustment of VR3. (For remedy, readjust VR3. See "ALIGNMENT").
RX indicator does not light.	<ul style="list-style-type: none"> ● Defective LD202 or Q32.
TX indicator does not light.	<ul style="list-style-type: none"> ● Defective LD203 or R120.

Symptom	Cause
No channel up/down on unit.	<ul style="list-style-type: none"> ● Defective CHANNEL switch SW 1. ● Defective channel up/down circuitry: D20, Q16, D5, Q17, D6 and IC1. ● Defective wire (W1).
No channel up/down on mic.	<ul style="list-style-type: none"> ● Defective switch SW302 and SW303. ● Defective wire for microphone jack pin number of 2 (open).
No PA	<ul style="list-style-type: none"> ● Defective switch SW2. ● Defective PA VOLUME VR1-2. ● Defective PA speaker jack JK-3.
No CH9/OUT.	<ul style="list-style-type: none"> ● Defective switch SW3. ● Defective IC1.

ELECTRICAL PARTS LIST

CB Unit

Ref. No.	Description	RS Part No.	Mfr's Part No.
	PCB Assembly, Main consists of the following:	US CA	MH00553 MH00743
CAPACITORS			
C1	Ceramic NPO 220 pF 50 V ± 5%		CCJBK221J*
C2	Ceramic NPO 220 pF 50 V ± 5%		CCJBK221J*
C3	Ceramic NPO 33 pF 50 V ± 5%		CCJBK330J*
C4	Ceramic NPO 22 pF 50 V ± 5%		CCJBK220J*
C5	Ceramic 0.01 μF 16 V ± 10%		CGJRG103KM
C6	Electrolytic 22 μF 16 V ± 20%		CEACG226M*
C7	Ceramic 0.01 μF 16 V ± 10%		CGJRG103KM
C8	Electrolytic 4.7 μF 50 V ± 20%		CEACK475M*
C9	Ceramic 0.01 μF 16 V ± 10%		CGJRG103KM
C10	Electrolytic 10 μF 25 V ± 20%		CEACI106M*
C11	Ceramic 0.01 μF 16 V ± 10%		CGJRG103KM
C12	Ceramic NPO 12 pF 50 V ± 5%		CCJBK120J*
C13	Ceramic NPO 100 pF 50 V ± 5%		CCJBK101J*
C14	Electrolytic 22 μF 16 V ± 20%		CEACG226M*
C15	Ceramic 0.01 μF 16 V ± 10%		CGJRG103KM
C16	Electrolytic 22 μF 16 V ± 20%		CEACG226M*
C17	Ceramic 1000 pF 16 V ± 10%		CGJRG102KM
C18	Ceramic SL 2 pF 50 V ± 0.25pF		CCJVK2R0C*
C19	Electrolytic 22 μF 16 V ± 20%		CEACG226M*
C20	Ceramic 0.01 μF 16 V ± 10%		CGJRG103KM
C21	Electrolytic 22 μF 16 V ± 20%		CEACG226M*
C22	Ceramic 1000 pF 16 V ± 10%		CGJRG102KM
C23	Ceramic 0.047 μF 16 V ± 10%		CGJRG473KM
C24	Ceramic 0.047 μF 16 V ± 10%		CGJRG473KM
C25	Ceramic 0.01 μF 16 V ± 10%		CGJRG103KM
C26	Electrolytic 4.7 μF 50 V ± 20%		CEACK475M*
C27	Ceramic SL 33 pF 50 V ± 5%		CCJVK330J*
C28	Ceramic 0.047 μF 16 V ± 10%		CGJRG473KM
C29	Ceramic 0.022 μF 16 V ± 10%		CGJRG223KM
C30	Electrolytic 22 μF 16 V ± 20%		CEACG226M*
C31	Ceramic 0.022 μF 16 V ± 10%		CGJRG223KM
C32	Electrolytic 3.3 μF 50 V ± 20%		CEACK335M*
C33	Ceramic 0.01 μF 16 V ± 10%		CGJRG103KM
C34	Electrolytic 1 μF 50 V ± 20%		CEACK105M*
C35	Ceramic 0.022 μF 16 V ± 10%		CGJRG223KM
C36	Ceramic 0.022 μF 16 V ± 10%		CGJRG223KM
C37	Electrolytic 33 μF 16 V ± 20%		CEACG336M*
C38	Ceramic 2200 pF 16 V ± 10%		CGJRG222KM
C39	Ceramic 2200 pF 16 V ± 10%		CGJRG222KM
C40	Ceramic 2200 pF 16 V ± 10%		CGJRG222KM

Ref. No.	Description				RS Part No.	Mfr's Part No.
C41	Ceramic	3000 pF	16 V	± 10%		CGJRG332KM
C42	Ceramic	0.022 µF	16 V	± 10%		CGJRG223KM
C43	Electrolytic	33 µF	16 V	± 20%		CEACG336M*
C44	Ceramic	0.012 µF	16 V	± 10%		CGJRG123KM
C45	Ceramic	330 pF	50 V	± 10%		CKJEK331K*
C46	Electrolytic	220 µF	16 V	± 20%		CEACG227M*
C47	Electrolytic	4.7 µF	50 V	± 20%		CEACK475M*
C48	Electrolytic	4.7 µF	50 V	± 20%		CEACK475M*
C49	Electrolytic	1 µF	50 V	± 20%		CEACK105M*
C50	Ceramic	0.068 µF	16 V	± 10%		CGJRG683KM
C51	Ceramic SL	180 pF	50 V	± 5%		CCJVK181J*
C52	Electrolytic	47 µF	10 V	± 20%		CEACE476M*
C53	Ceramic	1000 pF	16 V	± 10%		CGJRG102KM
C54	Electrolytic	47 µF	10 V	± 20%		CEACE476M*
C55	Ceramic SL	100 pF	50 V	± 5%		CCJVK101J*
C56	Electrolytic	47 µF	10 V	± 20%		CEACE476M*
C57	Ceramic	0.068 µF	16 V	± 10%		CGJRG683KM
C58	Electrolytic	330 µF	10 V	± 20%		CEACE337M*
C59	Electrolytic	220 µF	16 V	± 20%		CEACG227M*
C60	Electrolytic	47 µF	10 V	± 20%		CEACE476M*
C61	Ceramic	0.01 µF	16 V	± 10%		CGJRG103KM
C62	Ceramic	0.018 µF	16 V	± 10%		CGJRG183KM
C63	Ceramic	0.056 µF	16 V	± 10%		CGJRG563KM
C64	Ceramic	0.047 µF	16 V	± 10%		CGJRG473KM
C65	Ceramic	4700 pF	16 V	± 10%		CGJRG472KM
C66	Ceramic	0.018 µF	16 V	± 10%		CGJRG183KM
C67	Ceramic	0.047 µF	16 V	± 10%		CGJRG473KM
C68	Electrolytic	33 µF	16 V	± 20%		CEACG336M*
C69	Electrolytic	1 µF	50 V	± 20%		CEACK105M*
C70	Electrolytic	0.22 µF	50 V	± 20%		CEACK224M*
C71	Ceramic	3300 pF	16 V	± 10%		CGJRG332KM
C72	Ceramic	0.056 µF	16 V	± 10%		CGJRG563KM
C73	Ceramic	0.01 µF	16 V	± 10%		CGJRG103KM
C74	Ceramic NPO	56 pF	50 V	± 5%		CCJBK560J*
C75	Ceramic NPO	30 pF	50 V	± 5%		CCJBK300J*
C76	Ceramic	0.01 µF	16 V	± 10%		CGJRG103KM
C77	Electrolytic	1 µF	50 V	± 20%		CEACK105M*
C78	Electrolytic	100 µF	16 V	± 20%		CEACG107M*
C79	Tantalum	0.47 µF	16 V	± 20%		CSEED474M*
C80	Ceramic	0.15 µF	16 V	± 10%		CGJRG154KM
C81	Ceramic N220	82 pF	50 V	± 5%		CCJHK820J*
C82	Ceramic N220	24 pF	50 V	± 5%		CCJHK240J*
C83	Ceramic N220	68 pF	50 V	± 5%		CCJHK680J*
C84	Ceramic N220	47 pF	50 V	± 5%		CCJHK470J*
C85	Ceramic	0.01 µF	16 V	± 10%		CGJRG103KM
C86	Ceramic SL	100 pF	50 V	± 5%		CCJVK101J*
C87	Ceramic N220	68 pF	50 V	± 5%		CCJHK680J*
C88	Ceramic N220	56 pF	50 V	± 5%		CCJHK560J*
C89	Ceramic	0.01 µF	16 V	± 10%		CGJRG103KM
C90	Ceramic	0.01 µF	16 V	± 10%		CGJRG103KM

Ref. No.	Description	RS Part No.	Mfr's Part No.
C91	Ceramic NPO 5 pF 50 V ± 0.25pF		CCJBK5R0C*
C92	Ceramic 0.01 µF 16 V ± 10%		CGJRG103KM
C93	Ceramic 1000 pF 16 V ± 10%		CGJRG102KM
C94	Ceramic NPO 100 pF 50 V ± 5%		CCJBK101J*
C95	Ceramic 0.01 µF 16 V ± 10%		CGJRG103KM
C96	Electrolytic 4.7 µF 50 V ± 20%		CEACK475M*
C97	Ceramic 0.01 µF 16 V ± 10%		CGJRG103KM
C98	Ceramic NPO 7 pF 50 V ± 5%		CCJBK7R0J*
C99	Ceramic NPO 100 pF 50 V ± 5%		CCJBK101J*
C100	Ceramic 0.01 µF 16 V ± 10%		CGJRG103KM
C101	Ceramic 0.01 µF 16 V ± 10%		CGJRG103KM
C102	Ceramic NPO 220 pF 50 V ± 5%		CCJBK221J*
C103	Ceramic NPO 33 pF 50 V ± 5%		CCJBK330J*
C104	Ceramic NPO 68 pF 50 V ± 5%		CCJBK680J*
C105	Ceramic NPO 82 pF 50 V ± 5%		CCJBK820J*
C106	Ceramic 0.022 µF 16 V ± 10%		CGJRG223KM
C107	Ceramic NPO 150 pF 50 V ± 5%		CCJBK151J*
C108	Ceramic NPO 220 pF 50 V ± 5%		CCJBK221J*
C109	Not used		
C110	Ceramic 0.022 µF 16 V ± 10%		CGJRG223KM
C111	Ceramic 0.022 µF 16 V ± 10%		CGJRG223KM
C112	Ceramic 0.022 µF 16 V ± 10%		CGJRG223KM
C113	Ceramic 0.022 µF 16 V ± 10%		CGJRG223KM
C114	Ceramic 0.01 µF 16 V ± 10%		CGJRG103KM
C115	Ceramic 0.01 µF 16 V ± 10%		CGJRG103KM
C116	Ceramic 0.022 µF 16 V ± 10%		CGJRG223KM
C117	Ceramic 0.01 µF 16 V ± 10%		CGJRG103KM
C118	Ceramic 1000 pF 16 V ± 10%		CGJRG102KM
C119	Ceramic 0.022 µF 16 V ± 10%		CGJRG223KM
C120	Ceramic 4700 pF 16 V ± 10%		CGJRG472KM
C121	Ceramic 0.01 µF 16 V ± 10%		CGJRG103KM
C122	Electrolytic 220 µF 16 V ± 20%		CEACG227M*
C123	Ceramic 0.01 µF 16 V ± 10%		CGJRG103KM
C124	Ceramic 0.01 µF 16 V ± 10%		CGJRG103KM
C125	Ceramic 0.022 µF 16 V ± 10%		CGJRG223KM
C126	Ceramic 0.047 µF 16 V ± 10%		CGJRG473KM
C127	Electrolytic 1000 µF 16 V ± 20%		CECCG108M*
C128	Ceramic 0.022 µF 16 V ± 10%		CGJRG223KM
C129	Ceramic 0.056 µF 16 V ± 10%		CGJRG563KM
C130	Electrolytic 4.7 µF 50 V ± 20%		CEACK475M*
C131	Electrolytic 1 µF 50 V ± 20%		CEACK105M*
C132	Ceramic 0.01 µF 16 V ± 10%		CGJRG103KM
C133	Ceramic 6800 pF 50 V ± 10%		CJVEK682KM
FILTERS			
CF1	Ceramic SFE10.7MJ-A or		392300560B or
	10.7MJ-A		392390010A
CF2	Ceramic CFU455HT		392100611A
DIODES			
D1	Silicon 1N4148		SDSI00062- or SDSI00064- or SDSI00149-

Ref. No.	Description	RS Part No.	Mfr's Part No.
D2	Silicon 1N4148		SDSI00062- or SDSI00064- or SDSI00149-
D3	Germanium 1N60P		SDGE00001P or SDGE00003P
D4	Silicon 1N4148		SDSI00062- or SDSI00064- or SDSI00149-
D5	Silicon 1N4148		SDSI00062- or SDSI00064- or SDSI00149-
D6	Silicon 1N4148		SDSI00062- or SDSI00064- or SDSI00149-
D7	Silicon 1N4148		SDSI00062- or SDSI00064- or SDSI00149-
D8	Silicon 1N4148		SDSI00062- or SDSI00064- or SDSI00149-
D9	Silicon 1N4148		SDSI00062- or SDSI00064- or SDSI00149-
D10	Silicon 1N4148		SDSI00062- or SDSI00064- or SDSI00149-
D11	Silicon 1N4148		SDSI00062- or SDSI00064- or SDSI00149-
D12	Silicon 1N4149		SDSI00062- or SDSI00064- or SDSI00149-
D13	Silicon 1N4002		SDSI00007-
D14	Silicon 1N4002		SDSI00007-
D15	Varicap ITT310		SDVC00005-
D16	Silicon 1N4148		SDSI00062- or SDSI00064- or SDSI00149-
D17	Silicon 1N4148		SDSI00062- or SDSI00064- or SDSI00149-
D18	Silicon 1N4148		SDSI00062- or SDSI00064- or SDSI00149-
D19	Silicon 1N4148		SDSI00062- or SDSI00064- or SDSI00149-
D20	Zener RD5.6E	RANK:B1	SZRD5.6EB1
D21	Silicon 1N4002		SDSI00007-

Ref. No.	Description	RS Part No.	Mfr's Part No.
ICs			
IC1 IC2 IC3 IC4 IC5	LC7185 NJM4558D KIA7217AP MC78L08ACP MC78L08ACP		SILC7185- - SINM4558D- SIKA7217A- SIMC78L08A SIMC78L08A
JACKS			
JK1 JK2 JK3	M-Type 3.5mm 3.5mm	81116 HSJ0615-01-010 HSJ0615-01-010	193010011A 191201330A 191201330A
COILS			
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12 L13 L14	Coil Inductor Inductor Not used Inductor Inductor Inductor Air Inductor Inductor Coil Air Air Choke	27MHz S7 1C038 100μH LAL03NA 100μH LAL03NA 10μH K LAL03NA 1.0μH K LAL03NA 1.8μH K LAL03NA VR5.5-9.5T or 5.5 × 9.5T × 0.6 0.47μH K LAL03NA 1μH K or 1μH K 27MHz S10 3C054 or 27MHz D10 3C053 HR5.5-9T or 5.5 × 9T × 0.6 VR5-7.5T or VR5-7.5T 0.2mH EI19 CH020 or EI - 19 HF/C2220R-V	143100381A 142011510A 142011510A 142011150A 142012880A 142012830A 141010100A or 141090030A 142012840A 142310920A or 142310921A 143310540A or 143310530A 141110710A or 141190200A 141002080A or 141010090A 144010200A or 144090030A
TRANSISTORS			
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17	2SA733(P) 2SC1674(L) 2SC1675(L) 2SC1675(L) 2SC930(E) 2SC945(P) 2SC945(P) 2SC945(P) 2SC945(P) 2SC945(P) 2SC945(P) 2SC945(P) 2SC945(P) 2SC945(P) 2SC945(P) 2SC945(P) 2SC945(P)		ST2A733- -P ST2C1674-L ST2C1675-L ST2C1675-L ST2C930- -E ST2C945- -P ST2C945- -P ST2C945- -P ST2C945- -P ST2C945- -P ST2C945- -P ST2C945- -P ST2A733- -P ST2C945- -P ST2C945- -P ST2C945- -P ST2A733- -P ST2C945- -P

Ref. No.	Description	RS Part No.	Mfr's Part No.
Q18	2SA733(P)		ST2A733- -P
Q19	2SA733(P)		ST2A733- -P
Q20	2SC945(P)		ST2C945- -P
Q21	2SC945(P)		ST2C945- -P
Q22	2SC945(P)		ST2C945- -P
Q23	2SA733(P)		ST2A733- -P
Q24	2SC945(P)		ST2C945- -P
Q25	2SC945(P)		ST2C945- -P
Q26	2SA733(P)		ST2A733- -P
Q27	2SC945(P)		ST2C945- -P
Q28	KTC 2036(B)		STKC2036-B
Q29	KTC 2075(A)		STKC2075-A
Q30	2SC945(P)		ST2C945- -P
Q31	2SC945(P)		ST2C945- -P
Q32	2SC945(P)		ST2C945- -P
RESISTORS			
R1	Carbon	1.5 k ohm 1/2W ± 5%	RCSHP152J*
R2	M-Glaze	560 ohm 1/10W ± 5%	RG0TV561J*
R3	Carbon	2 k ohm 1/6W ± 5%	RC0XP202J*
R4	Carbon	1 k ohm 1/6W ± 5%	RC0XP102J*
R5	Carbon	56 K ohm 1/6W ± 5%	RC0XP563J*
R6	M-Glaze	100 ohm 1/10W ± 5%	RG0TV101J*
R7	Carbon	330 ohm 1/6W ± 5%	RC0XP331J*
R8	Carbon	470 ohm 1/6W ± 5%	RC0XP471J*
R9	M-Glaze	330 ohm 1/10W ± 5%	RG0TV331J*
R10	M-Glaze	100 k ohm 1/10W ± 5%	RG0TV104J*
R11	M-Glaze	100 ohm 1/10W ± 5%	RG0TV101J*
R12	M-Glaze	560 ohm 1/10W ± 5%	RG0TV561J*
R13	M-Glaze	560 ohm 1/10W ± 5%	RG0TV561J*
R14	M-Glaze	10 k ohm 1/10W ± 5%	RG0TV103J*
R15	M-Glaze	470 ohm 1/10W ± 5%	RG0TV471J*
R16	M-Glaze	2.2 k ohm 1/10W ± 5%	RG0TV222J*
R17	M-Glaze	2.2 k ohm 1/10W ± 5%	RG0TV222J*
R18	M-Glaze	22 k ohm 1/10W ± 5%	RG0TV223J*
R19	M-Glaze	1.2k ohm 1/10W ± 5%	RG0TV122J*
R20	Carbon	470 ohm 1/6W ± 10%	RC0XP471J*
R21	M-Glaze	10 k ohm 1/10W ± 5%	RG0TV103J*
R22	M-Glaze	33 k ohm 1/10W ± 5%	RG0TV333J*
R23	M-Glaze	10 ohm 1/10W ± 5%	RG0TV100J*
R24	M-Glaze	470 ohm 1/10W ± 5%	RG0TV471J*
R25	M-Glaze	470 ohm 1/10W ± 5%	RG0TV471J*
R26	M-Glaze	1 M ohm 1/10W ± 5%	RG0TV105J*
R27	M-Glaze	68 k ohm 1/10W ± 5%	RG0TV683J*
R28	M-Glaze	560 ohm 1/10W ± 5%	RG0TV561J*
R29	Carbon	6.2 k ohm 1/6W ± 5%	RC0XP622J*
R30	M-Glaze	100 k ohm 1/10W ± 5%	RG0TV104J*
R31	M-Glaze	47 k ohm 1/10W ± 5%	RG0TV473J*
R32	M-Glaze	47 k ohm 1/10W ± 5%	RG0TV473J*
R33	M-Glaze	39 k ohm 1/10W ± 5%	RG0TV393J*
R34	M-Glaze	160 k ohm 1/10W ± 5%	RG0TV164J*
R35	M-Glaze	33 k ohm 1/10W ± 5%	RG0TV333J*

Ref. No.	Description	RS Part No.	Mfr's Part No.
R36	M-Glaze 100 k ohm 1/10W ± 5%		RG0TV104J*
R37	M-Glaze 180 k ohm 1/10W ± 5%		RG0TV184J*
R38	M-Glaze 330 k ohm 1/10W ± 5%		RG0TV334J*
R39	Carbon 33 k ohm 1/6W ± 5%		RC0XP333J*
R40	M-Glaze 10 k ohm 1/10W ± 5%		RG0TV103J*
R41	M-Glaze 3.6 k ohm 1/10W ± 5%		RG0TV362J*
R42	M-Glaze 18 k ohm 1/10W ± 5%		RG0TV183J*
R43	M-Glaze 18 k ohm 1/10W ± 5%		RG0TV183J*
R44	M-Glaze 18 k ohm 1/10W ± 5%		RG0TV183J*
R45	M-Glaze 1 k ohm 1/10W ± 5%		RG0TV102J*
R46	Carbon 10 k ohm 1/6W ± 5%		RC0XP103J*
R47	Carbon 4.7 k ohm 1/6W ± 5%		RC0XP472J*
R48	M-Glaze 4.7 k ohm 1/10W ± 5%		RG0TV472J*
R49	M-Glaze 10 k ohm 1/10W ± 5%		RG0TV103J*
R50	M-Glaze 150 k ohm 1/10W ± 5%		RG0TV154J*
R51	M-Glaze 470 ohm 1/10W ± 5%		RG0TV471J*
R52	M-Glaze 560 k ohm 1/10W ± 5%		RG0TV564J*
R53	M-Glaze 47 k ohm 1/10W ± 5%		RG0TV473J*
R54	M-Glaze 39 k ohm 1/10W ± 5%		RG0TV393J*
R55	M-Glaze 2.2 k ohm 1/10W ± 5%		RG0TV222J*
R56	M-Glaze 330 k ohm 1/10W ± 5%		RG0TV334J*
R57	M-Glaze 10 k ohm 1/10W ± 5%		RG0TV103J*
R58	Carbon 10 k ohm 1/6W ± 5%		RC0XP103J*
R59	M-Glaze 1.1 k ohm 1/10W ± 5%		RG0TV112J*
R60	Carbon 680 ohm 1/6W ± 5%		RC0XP681J*
R61	M-Glaze 22 k ohm 1/10W ± 5%		RG0TV223J*
R62	M-Glaze 100 k ohm 1/10W ± 5%		RG0TV104J*
R63	M-Glaze 82 ohm 1/10W ± 5%		RG0TV820J*
R64	M-Glaze 33 k ohm 1/10W ± 5%		RG0TV333J*
R65	M-Glaze 10 ohm 1/10W ± 5%		RG0TV100J*
R66	M-Oxide 270 ohm 2W ± 5%		RX0 2P271J*
R67	Carbon 10 k ohm 1/6W ± 5%		RC0XP103J*
R68	Carbon 1 k ohm 1/6W ± 5%		RC0XP102J*
R69	Carbon 1.8 k ohm 1/6W ± 5%		RC0XP182J*
R70	M-Glaze 2.2 k ohm 1/10W ± 5%		RG0TV222J*
R71	M-Glaze 18 k ohm 1/10W ± 5%		RG0TV183J*
R72	M-Glaze 1.2 k ohm 1/10W ± 5%		RG0TV122J*
R73	Carbon 2.2 k ohm 1/6W ± 5%		RC0XP222J*
R74	Carbon 56 k ohm 1/6W ± 5%		RC0XP563J*
R75	Carbon 8.2 k ohm 1/6W ± 5%		RC0XP822J*
R76	Carbon 680 ohm 1/6W ± 5%		RC0XP681J*
R77	Carbon 6.8 k ohm 1/6W ± 5%		RC0XP682J*
R78	M-Glaze 3.3 k ohm 1/10W ± 5%		RG0TV332J*
R79	Carbon 47 k ohm 1/6W ± 5%		RC0XP473J*
R80	Carbon 47 k ohm 1/6W ± 5%		RC0XP473J*
R81	Carbon 270 k ohm 1/6W ± 5%		RC0XP274J*
R82	M-Glaze 1 k ohm 1/10W ± 5%		RG0TV102J*
R83	M-Glaze 1 k ohm 1/10W ± 5%		RG0TV102J*
R84	Carbon 10 k ohm 1/6W ± 5%		RC0XP103J*
R85	Carbon 10 k ohm 1/6W ± 5%		RC0XP103J*
R86	M-Glaze 10 k ohm 1/10W ± 5%		RG0TV103J*
R87	Carbon 2.2 k ohm 1/6W ± 5%		RC0XP222J*
R88	M-Glaze 22 k ohm 1/10W ± 5%		RG0TV223J*

Ref. No.	Description	RS Part No.	Mfr's Part No.
R89	M-Glaze 10 k ohm 1/10W ± 5%		RG0TV103J*
R90	M-Glaze 22 k ohm 1/10W ± 5%		RG0TV223J*
R91	M-Glaze 47 k ohm 1/10W ± 5%		RG0TV473J*
R92	M-Glaze 47 k ohm 1/10W ± 5%		RG0TV473J*
R93	M-Glaze 220 k ohm 1/10W ± 5%		RG0TV224J*
R94	M-Glaze 470 ohm 1/10W ± 5%		RG0TV471J*
R95	M-Glaze 2.7 k ohm 1/10W ± 5%		RG0TV272J*
R96	Carbon 2.2 k ohm 1/6W ± 5%		RC0XP222J*
R97	M-Glaze 3.3 k ohm 1/10W ± 5%		RG0TV332J*
R98	M-Glaze 22 k ohm 1/10W ± 5%		RG0TV223J*
R99	M-Glaze 6.8 k ohm 1/10W ± 5%		RG0TV682J*
R100	M-Glaze 1 k ohm 1/10W ± 5%		RG0TV102J*
R101	M-Glaze 470 ohm 1/10W ± 5%		RG0TV471J*
R102	Carbon 1.2 k ohm 1/6W ± 5%		RC0XP122J*
R103	M-Glaze 4.7 k ohm 1/10W ± 5%		RG0TV472J*
R104	Carbon 4.7 k ohm 1/6W ± 5%		RC0XP472J*
R105	M-Glaze 6.8 k ohm 1/10W ± 5%		RG0TV682J*
R106	M-Glaze 180 ohm 1/10W ± 5%		RG0TV181J*
R107	M-Glaze 470 ohm 1/10W ± 5%		RG0TV471J*
R108	Carbon 6.8 k ohm 1/6W ± 5%		RC0XP682J*
R109	M-Glaze 3.3 k ohm 1/10W ± 5%		RG0TV332J*
R110	Carbon 150 ohm 1/6W ± 5%		RC0XP151J*
R111	M-Glaze 220 ohm 1/10W ± 5%		RG0TV221J*
R112	M-Glaze 1 k ohm 1/10W ± 5%		RG0TV102J*
R113	Carbon 15 ohm 1/6W ± 5%		RC0XP150J*
★ R114	Carbon 6.8 ohm 1/2W ± 5%		RCSHP6R8J*
	Carbon 5.1 ohm 1/2W ± 5%		RCSHP5R1J*
	Carbon 5.6 ohm 1/2W ± 5%		RSCHP5R6J*
	Carbon 6.2 ohm 1/2W ± 5%		RCSHP6R2J*
	Carbon 7.5 ohm 1/2W ± 5%		RCSHP7R5J*
	Carbon 8.2 ohm 1/2W ± 5%		RCSHP8R2J*
	Carbon 9.1 ohm 1/2W ± 5%		RCSHP9R1J*
R115	Carbon 470 ohm 1/2W ± 5%		RCSHP471J*
R116	Carbon 10 k ohm 1/6W ± 5%		RC0XP103J*
R117	M-Glaze 1 k ohm 1/10W ± 5%		RG0TV102J*
R118	Carbon 47 k ohm 1/6W ± 5%		RC0XP473J*
R119	Carbon 560 k ohm 1/6W ± 5%		RC0XP561J*
R120	Carbon 1 k ohm 1/6W ± 5%		RC0XP102J*
R121	M-Film 10 ohm 2W ± 5%		RM02P100J*
R122	M-Glaze 220 k ohm 1/10W ± 5%		RG0TV224J*
R123	M-Glaze 100 k ohm 1/10W ± 5%		RG0TV104J*
R124	M-Glaze 100 k ohm 1/10W ± 5%		RG0TV104J*
R125	M-Glaze 2.2 k ohm 1/10W ± 5%		RG0TV222J*
R126	Carbon 47 ohm 1/6W ± 5%		RC0XP470J*
R127	Carbon 82 k ohm 1/6W ± 5%		RC0XP823J*
R128	M-Glaze 100 k ohm 1/10W ± 5%		RG0TV104J*
R129	Not used		
R130	Carbon 47 k ohm 1/6W ± 5%		RC0XP473J*
R131	Carbon 1 k ohm 1/6W ± 5%		RC0XP102J*
R132	M-Film 15 ohm 1W ± 5%		RM01P150J*
R133	M-Glaze 47 k ohm 1/10W ± 5%		RG0TV473J*

Note: The values of the resistors with ★ mark may vary from unit to unit for best performance.

Ref. No.	Description	RS Part No.	Mfr's Part No.
SWITCHES			
SW1	See PCB. Assembly, Channel SW.		
SW2	Slide SSSF-14002A		183112120A
SW3	Slide SSSF-12002A		183112110A
COILS / TRANSFORMER			
T1	Coil 27 MHz S7 IC258		143112580A
T2	Coil 27 MHz S7 IC258		143112580A
T3	IFT 455 kHz S7 11066		131000660A
T4	IFT 455 kHz S7 11027		131000270A
T5	Modulation EI 24 HF1M 2219S		10301005SA or 103390060A
T6	Coil 16 MHz S7 1C259		143112590A
T7	Coil 27 MHz S7 1C260		143112600A
T8	Coil 27 MHz S7 1C260		143112600A
T9	Coil 27 MHz S7 1C258		143112580A
TRIMMER			
TC1	TZ03T200FR or TZ037200FR169		154010220A or 154090050A
POTENTIOMETERS			
VR1	Rotary 10KAX2 L20		171610690A
VR2	Rotary 100KB L20		171211240A
VR3	Semi-Fixed 1KB RVFR6P01A or 1KB T T24R100 or 1KB KVSF637A		177310040A or 175206162A or 177390150A
CRYSTAL			
X1	10.240 MHz HC-18/U		391012040A or 391010310A

	PCB Assembly, Display consists of the following:		MH00554
LEDS			
LD201	UL-1241-17, Module, CHANNEL		555010111A
LD202	ULP-G55B, RX, Green or SLP-255B-81		SL-G00025- or SL-G90019-
LD203	ULP-R55B, TX, Red or SLP-155B, TX		SL-R00056- or SL-R00021-
RESISTORS			
R201	M-Glaze 1.8 k ohm 1/10W ± 5%		RG0TV182J*
R202	M-Glaze 1.8 k ohm 1/10W ± 5%		RG0TV182J*
R203	M-Glaze 1.8 k ohm 1/10W ± 5%		RG0TV182J*

Ref. No.	Description	RS Part No.	Mfr's Part No.
R204	M-Glaze 1.8 k ohm 1/10W ± 5%		RG0TV182J*
R205	M-Glaze 1.8 k ohm 1/10W ± 5%		RG0TV182J*
R206	M-Glaze 1.8 k ohm 1/10W ± 5%		RG0TV182J*
R207	M-Glaze 1.8 k ohm 1/10W ± 5%		RG0TV182J*
MISCELLANEOUS			
	Holder for LED Pin Terminal C7701P DEGR S1-08X15		413102370A 194403140A or 194403142A

	PCB Assembly, Channel SW consists of the following:		MH00555
SW1	Switch, Rotary SRBM-S-036		181110340A

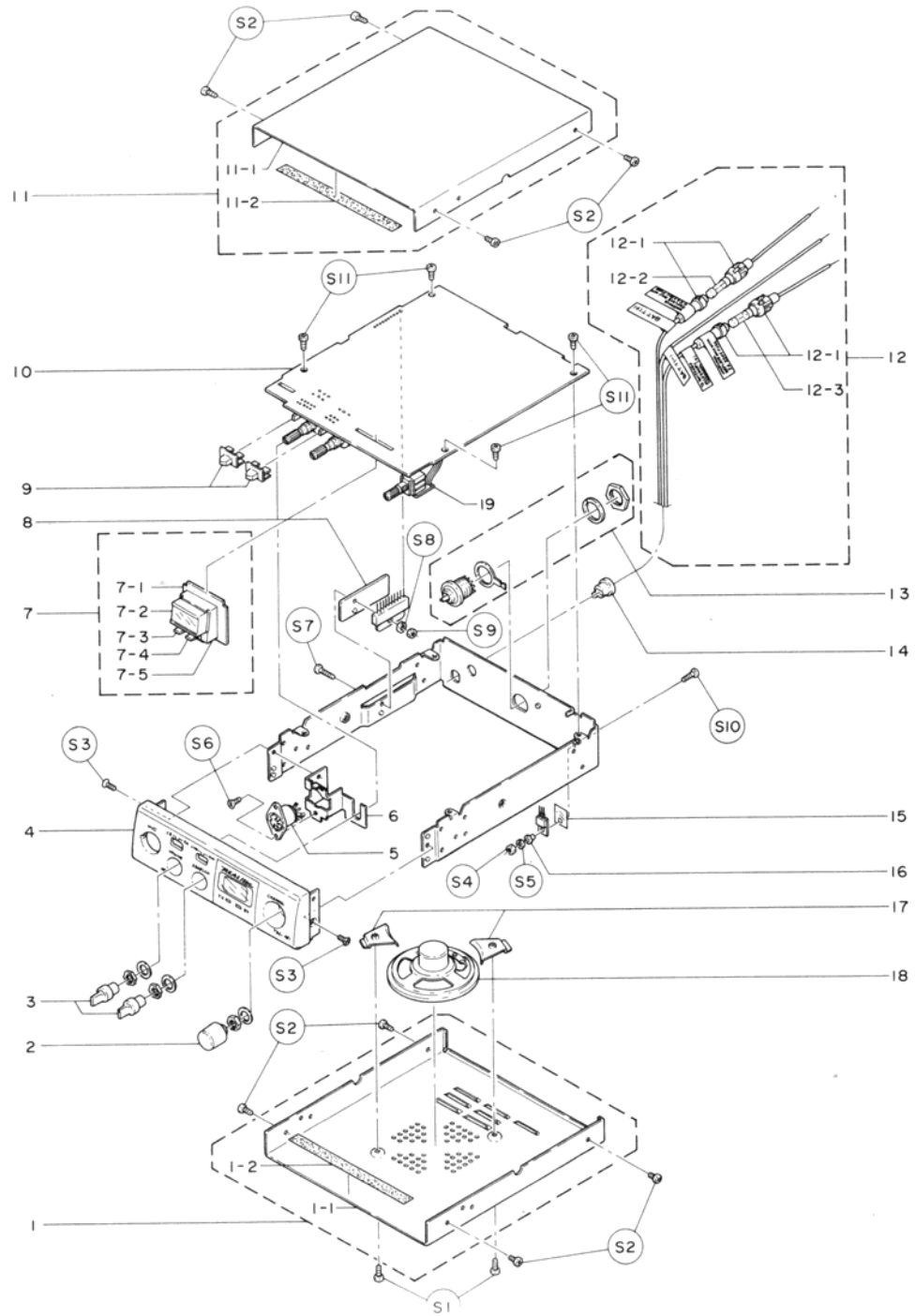
Ref. No.	Description	RS Part No.	Mfr's Part No.
ELECTRICAL PARTS NOT ON PCB			
C401	Capacitor, Ceramic 0.01 µF 16 V ± 10%		CGJRG103KM
C402	Capacitor, Ceramic 0.01 µF 16 V ± 10%		CGJRG103KM
C403	Capacitor, Ceramic 0.01 µF 16 V ± 10%		CGJRG103KM
F1	Fuse, 250V 2A or 250V 2A 3AG		251010040A or 251090060A
F2	Fuse, 250V 0.5A or 250V 0.5A 3AG		251010030A or 251090050A
JK1	Connector, M-Type 81116		193010011A
JK401	Jack, Din TCS2250-01-1011		193401310B
SP1	Speaker, D66 8ohm 0.7W		271011050A

Hand Mic Unit

Ref. No.	Description	RS Part No.	Mfr's Part No.
	PCB Assembly, Hand Mic consist of the following:		MH00560
SW302	Switch, Key KHH15902 or KSM0621A		187010090A or 187090130A
SW303	Switch, Key KHH15902 or KSM0621A		187010090A or 187090130A
R301	Resistor, Carbon 10k ohm 1/6W ± 5%		RC0XP103J*

Ref. No.	Description	RS Part No.	Mfr's Part No.
ELECTRICAL PARTS NOT ON PCB			
C301	Capacitor, Ceramic 0.039 µF 16 V ± 10%		CGJRG393KM
MC301	Microphone Unit EM-80X		273100730A
R302	Resistor, Carbon 4.7 k ohm 1/6W ± 5%		RC0XP472J*
SW301	Switch, Push PZF22-16		182210310A

EXPLODED VIEW / DISASSEMBLY INSTRUCTIONS



Disassembly Instructions :

1. Remove four screws S2 from top cover assembly 11.
2. Remove four screws S2 from bottom cover assembly 1.
3. Remove two screws S3 from front cabinet assembly 4.
4. Remove two knobs 3 and one knob 2 from front cabinet assembly 4.
5. Remove the nuts from the knobs 3 and 2 above.
6. Remove four screws S11 from main PCB assembly 10.

EXPLODED VIEW PARTS LIST

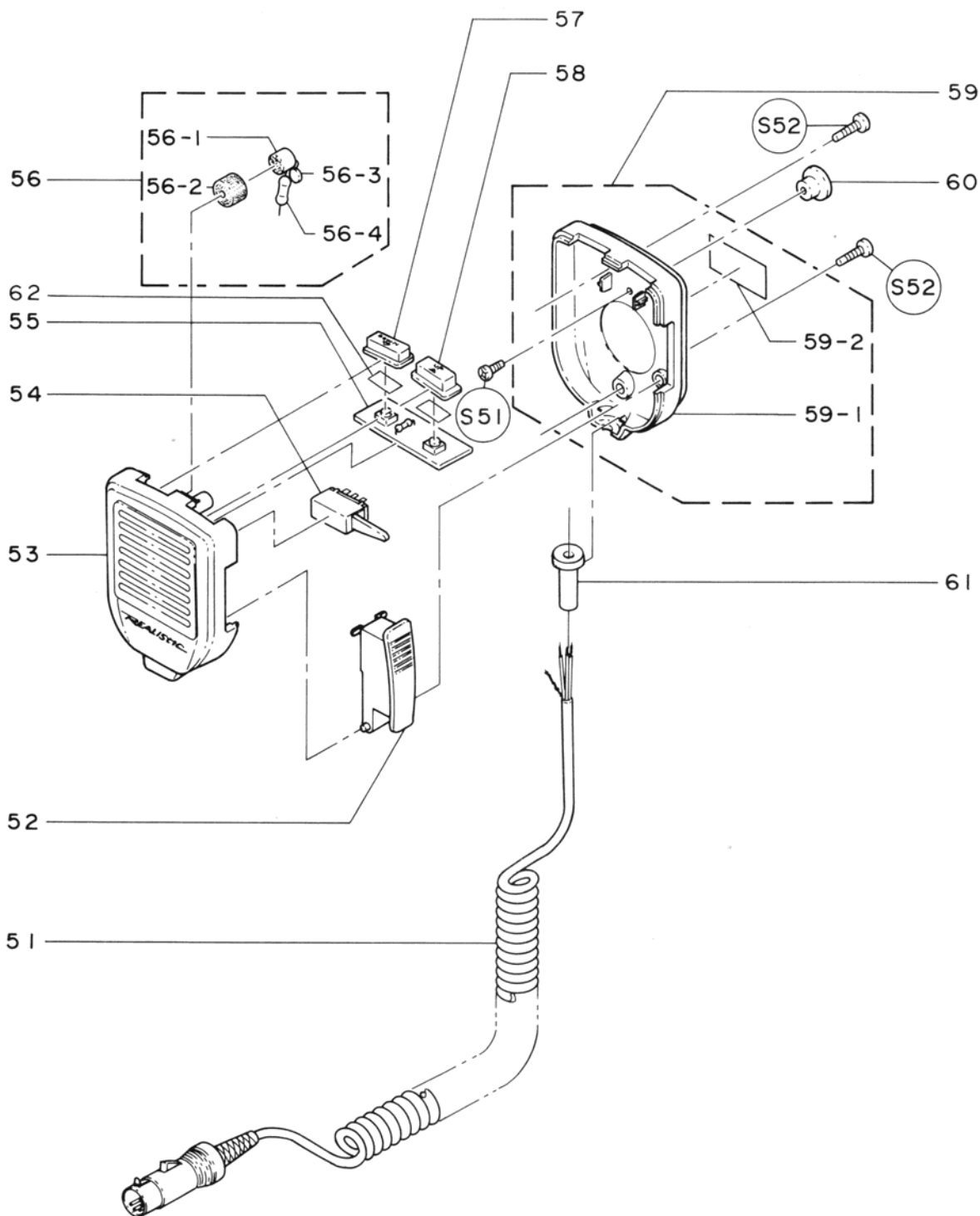
Ref. No.	Description	RS Part No.	Mfr's Part No.
1	Assembly, Cover, Bottom		MH00559
1-1	Cover, Bottom		602210150A
1-2	Blind, Himelon for Bottom Cover		851211370A
2	Knob 25, CHANNEL		652510910A
3	Knob 25, SQUELCH / VOLUME		652510870A
4	Assembly, Cabinet, Front (Non-repairable)		MH00557
	Cabinet, Front		
	Plate, Front		
5	Jack, DIN for Microphone (JK401)		193401310B
6	Holder for Microphone		411116620A
7	Assembly, PCB, Display		MH00554
7-1	PCB 21 for Display PCB		20211072*:A
7-2	Module, LED, UL-1241-17, CHANNEL (LD201)		555010111A
7-3	LED, ULP-G55B, TX, Red (LD203 SLP-155B		SL-R00056- or SL-R00021
7-4	LED, ULP-G55B, RX, Green (LD202) SLP-255B-81		SL-G00025- or SL-G90019
7-5	Holder for LED		413102370A
8	Heat Sink		471010960A
9	Knob 95, CB/CH9		659512920A
10	Assembly, PCB, Main	US CA	MH00553 MH00743
11	Assembly, Cover, Top		MH00558
11-1	Cover, Top		602410110A
11-2	Blind for Top Cover		851211370A
12	Assembly, Holder, Fuse		MH00556
12-1	Holder, Fuse with Lead Wire		197210090A
12-2	Fuse, 250V, 0.5A 250V, 0.5A 3AG		251010030A or 251090050A
23-3	Fuse, 250V, 2A (F1) 250V, 2A 3AG		251010040A or 251090060A
13	Connector, M-type (JK1)		193010011A
14	Bushing, Cord		481000800A
15	Sheet, Insulation for Q29		483011470A
16	Grommet for Q29		481110120A
17	Holder for Speaker		411012400A
18	Speaker, D66 8ohm 0.7W		271011050A
19	Assembly, PCB, Channel SW		MH00555
	Hardware Kit		HWK211550B
S1	Screw, 3x6P/ZnB for SP Holder		HMP03006SB
S2	Screw, Taptite, 3x6BT-C/ZnB for Top/Bottom Cover		HCBC3006SB
S3	Screw, Taptite, 2.6x6FCT-B/ZnY for Front Cabinet		HCCB2606SY
S4	Nut, 3N-1/Ni-3		HANN301-SN
S5	Washer, Spring, 3SW/Ni-3		HAWS30SSSN
S6	Screw, Taptite, 2x6FCT-B/ZnY for Microphone		HCCB2006SY
S7	Screw, 3x8B/ZnY		HMB03008SY
S8	Washer, Spring, 3SW/ZnY		HAWS30SSSY
S9	Nut, 3N-1/ZnY		HANN301-SY
S10	Screw, 3x10B/Ni-3		HMB03010SN
S11	Screw, Taptite, 3x8BT-B/ZnY for Main PCB		HCBB3008SY

Ref. No.	Description	RS Part No.	Mfr's Part No.
	Accessories:		
	Shaft, handle (2 pcs)		432201700A
	Holder for Hanger		411116630A
	Spacer, NEOP Rubber (2 pcs)		852013230A
	Holder for Hand Microphone		411102900A
	Screw, 3 x10B/ZnY (2 pcs)		HMB03010SY
	Washer, Spring, 3SW/ZnY (2 pcs)		HAWS30SSSY
	Washer, 3W/ZnY (2 pcs)		HAWP30SSSY
	Screw, Tapping, 3x8BT-B/ZnY (2 pcs)		HCBB3008SY
	Nut, 3N-1/ZnY (2 pcs)		HANN301-SY
	Bolt, 6x16H/ZnY (2 pcs)		HBH06016SY
	Nut, 6N-1/ZnY (2 pcs)		HANN601-SY
	Washer, 6W/ZnY (2 pcs)		HAWP60SSSY
	Washer, Spring, 6SW/ZnY (2 pcs)		HAWS60SSSY
	Screw, Tapping, 6x20PT-2/ZnY (2 pcs)		HTP56020SY

HAND MIC UNIT EXPLODED VIEW PARTS LIST

Ref. No.	Description	RS Part No.	Mfr's Part No.
	Unit, Hand Mic	US CA	WU00037 WU00071 MH00563
51	Assembly, Cord (Non-repairable) Plug, DIN Cord		
52	Knob 95, Push		659512890A
53	Cabinet, Front		601010630A
54	Switch, Push (SW301)		182210310A
55	Assembly, PCB, Hand Microphone		MH00560
56	Assembly, Microphone		MH00562
56-1	Unit, Microphone, EM-80X (MC301)		273100730A
56-2	Holder, NEOP Rubber for Microphone		413102330A
56-3	Capacitor, Ceramic (C301)		CGJRG393KM
56-4	Resistor, Carbon (R302)		RCOXP472J*
57	Knob 95, DOWN		659512910A
58	Knob 95, UP		659512900A
59	Assembly, Cabinet, Back	US CA	MH00561 MH00793
59-1	Cabinet, Back		601110320A
59-2	Label, Rating	US CA	738013950A 738013951A
60	Piece, Mounting		604010470A
61	Bushing, Cord		481818190A
62	Spacer Himelon t 0.6		851290019A
	Hardware Kit		HWK211550M
S51	Screw, Taptite, 2.6x6PT-B/ZnY for Mounting Piece		HCPB2606SY
S52	Screw, Taptite, 3x14PT-B/ZnB for Front/Back Cabinet		HCPB3014SB

HAND MIC UNIT EXPLODED VIEW



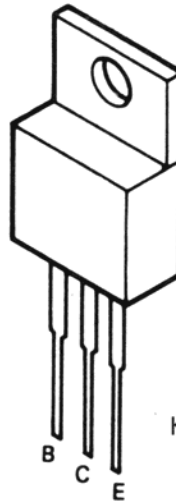
Disassembly Instruction:

Remove two screws S52 from back cabinet assembly 59.

IC AND TRANSISTOR LEAD IDENTIFICATION AND IC INTERNAL DIAGRAM

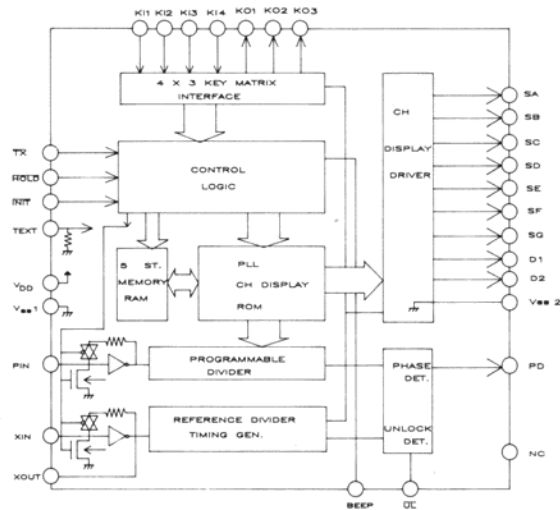
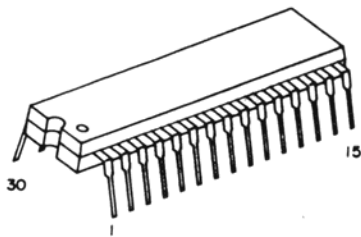


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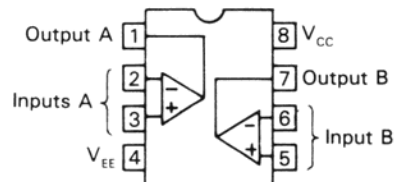
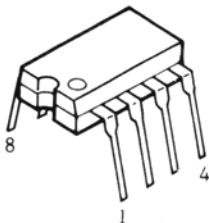


KTC2075

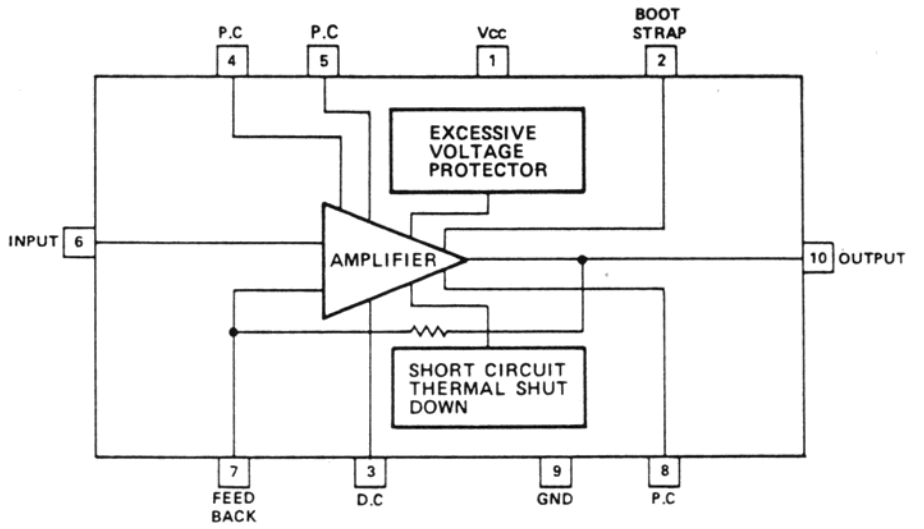
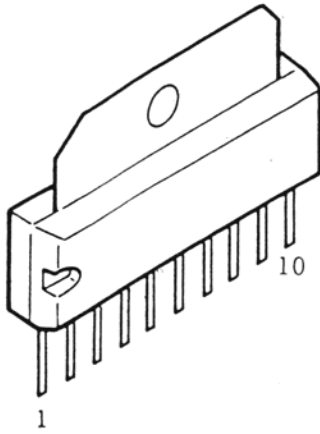
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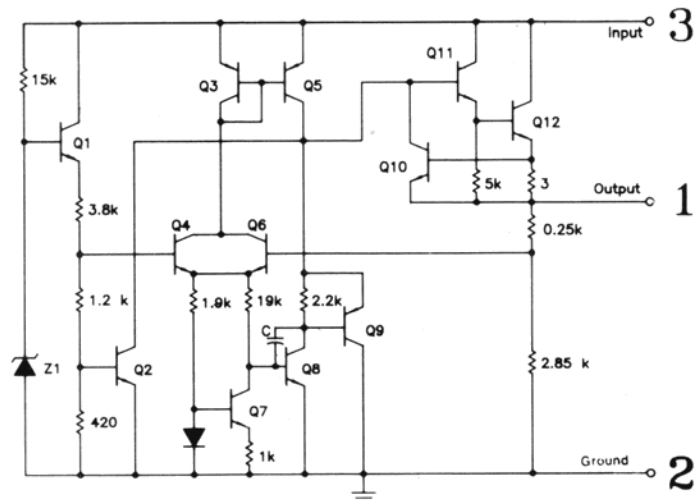
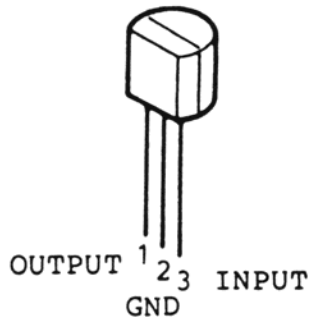
IC2 : NJM4558D



IC3 : KIA7217AP



IC4 / 5 : MC78L08ACP



VOLTAGE CHART

Measuring Conditions:

- Channel Setting : 18
- TX : No modulation
- RX/Public Address : No signal input
- Power Supply : 13.8V DC
- Unit : Volt (DC)

IC1

Pin No.	Mode		
	TX	RX	Public Address
1	4.6	4.6	0.3
2	0.5	0.5	0.1
3	0.5	0.5	4.8
4	4.5	4.5	9.4
5	4.5	4.5	0.2
6	4.5	4.5	0.2
7	4.5	4.5	0.2
8	6.5	6.5	6.8
9	6.5	6.5	6.8
10	0.5	0.5	0.4
11	0	0	0
12	0	0	1.8
13	1.6	1.6	1.6
14	1.8	1.8	1.8
15	2	2	1.8
16	1.8	1.8	1.8
17	0	0	0
18	5	5	0.1
19	3.5	3.5	3.5
20	2	2	1.8
21	0	0	0
22	0	0	0
23	2.5	2.5	2.5
24	7	7	7
25	0	0	7
26	1	1	8
27	1.2	1.2	0
28	0	0	0
29	0	0	0
30	0.6	6.5	0.5

IC2

Pin No.	Mode		
	TX	RX	Public Address
1	3.4 / 1.5	2.2 / 1.5	3.4 / 1.5
2	3.4 / 1	2.2 / 1	3.4 / 1
3	3.2 / 1	2 / 0.8	3 / 1
4	0 / 0	0 / 0	0 / 0
5	1.3 / 1.1	1 / 1	1.3 / 1
6	0 / 5	0 / 5	0 / 5
7	6 / 1.5	4 / 1.4	6 / 1.4
8	6.6 / 6	4.5 / 4.2	6.6 / 6

Note: Squelch Maximum / Minimum

IC3

Pin No.	Mode		
	TX	RX	Public Address
1	13.8	13.8	13.8
2	12	12	13.8
3	3.8	3.8	3.8
4	7.5	8	8
5	1.5	1.5	1.5
6	2.8	2.8	0
7	3.2	3.2	3.3
8	1.2	1.2	1.2
9	0	0	0
10	6.2	6.4	6.8

IC4

Pin No.	Mode		
	TX	RX	Public Address
IN	13.8	13.8	13.8
GND	0	0	0
OUT	8	8	8

IC5

Pin No.	Mode		
	TX	RX	Public Address
IN	13.8	13.8	13.8
GND	0	0	0
OUT	8	8	8

Transistor NO.	Pin Mode	E	C	B	Transistor NO.	Pin Mode	E	C	B
Q1	TX	1.8	6.8	0.3	Q10	TX	0	0	0.6
	RX	1.8	6.8	0		RX	0	0	0.6
	Public Address	1.8	6.8	0		Public Address	0	0	0.6
Q2	TX	0	0	0	Q11	TX	0	7.6	0
	RX	0.1	9.3	1		RX	0	7.6	0
	Public Address	0	0.2	0.7		Public Address	0	7.6	0
Q3	TX	0	0	0.5	Q12	TX	5	0	5.5
	RX	0.1	10	1		RX	5.2	0	6
	Public Address	0	0	0.5		Public Address	1	0	1.6
Q4	TX	0	0	0.7	Q13	TX	0	0.1	0
	RX	1	6.6	1.6		RX	0	0	0
	Public Address	0	0	0.7		Public Address	0	0	0
Q5	TX	0	0	0.7	Q14	TX	0.6	3.5	1.2
	RX	1	10	1.5		RX	0.6	3.5	1.2
	Public Address	0	0	0.7		Public Address	0.7	3.2	1.2
Q6	TX	0	0	0	Q15	TX	0	0	0
	RX	1.6	8.6	2.2		RX	0	0	0.6
	Public Address	0	0	0		Public Address	0	0	0
Q7	TX	0	6.8	0.6	Q16	TX	2	0	1.6
	RX	0	6.8	0.6		RX	2	0	1.6
	Public Address	0	6.8	0.6		Public Address	2	0	1.6
Q8	TX	0.5	0.5	0.9	Q17	TX	0.5	2	0.5
	RX	0.5	0.5	0.9		RX	0.5	2	0.5
	Public Address	0	0	0		Public Address	0.5	2	0.5
Q9	TX	0	2.2	0	Q18	TX	13	5.3	13
	RX	0	2.2	0		RX	13	5.4	12.3
	Public Address	0	2.2	0		Public Address	13	5.4	13

Transistor NO.	Pin Mode	E	C	B	Transistor NO.	Pin Mode	E	C	B
Q19	TX	13	6	13	Q28	TX	0	12	0
	RX	13	6	13		RX	0	0	0
	Public Address	13	6	13		Public Address	0	12	0
Q20	TX	0.5	4	1	Q29	TX	0	12	0
	RX	0.5	4	1		RX	0	0	0
	Public Address	0	7.5	0		Public Address	0	12	0
Q21	TX	4	4	0.6	Q30	TX	0	0	0.5
	RX	4	4	0.6		RX	0	0.1	0.6
	Public Address	7.5	7.5	0		Public Address	0	0	0
Q22	TX	5	7	3.6	Q31	TX	0	0.5	0
	RX	5	7	3.5		RX	0	1	0
	Public Address	5	7	3.6		Public Address	0	0.5	0
Q23	TX	3.2	3.2	2.8	Q32	TX	0	12	0.1
	RX	4	0	3.2		RX	0	0.2	0.7
	Public Address	3.2	3.2	2.8		Public Address	0	0	0
Q24	TX	2.2	12	3					
	RX	0	0	0					
	Public Address	2.2	12	3					
Q25	TX	2.5	7.5	3					
	RX	0	0	0					
	Public Address	2.5	7.5	3					
Q26	TX	13.8	13	13					
	RX	0	0	0					
	Public Address	13.8	13	13					
Q27	TX	0.35	13	4					
	RX	0	20	0					
	Public Address	0.35	13	4					