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Component Outline Main P.C. Board

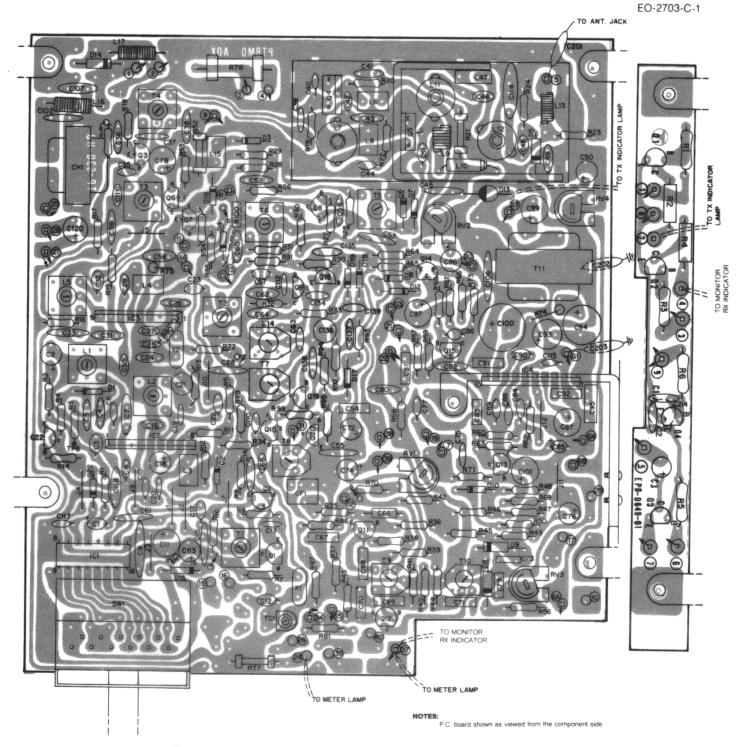
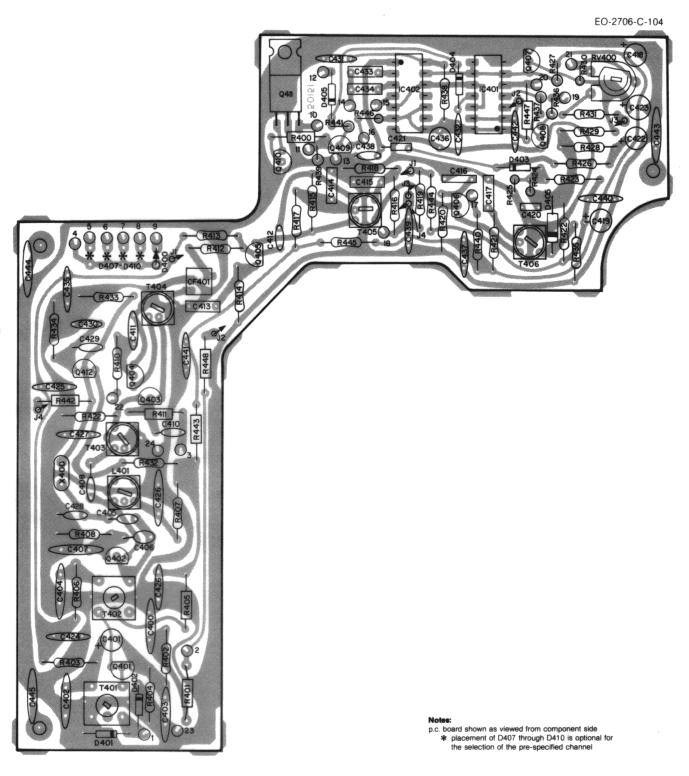


Figure 4-1. Component Outline, Main P.C. Board

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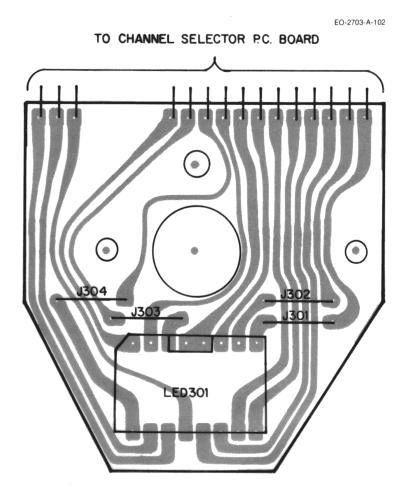
Component Outline Monitor Receiver P.C. Board





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Component Outline LED P.C. Board

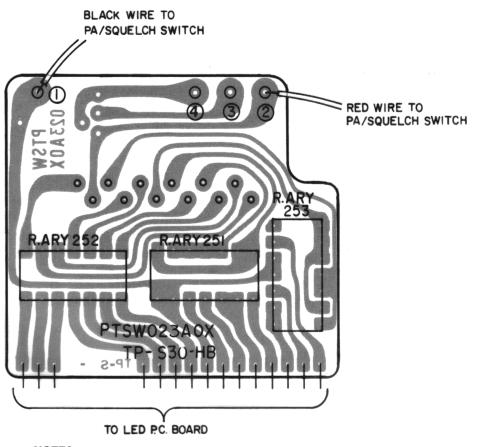




P.C. board shown as viewed from the component side.

Figure 4-3. Component Outline, LED P.C. Board

Component Outline Switch P.C. Board



NOTES:

P.C. board shown as viewed from component side.

Figure 4-4. Component Outline, Switch P.C. Board

EO-2702-A-105

Parts List

Main P.C. Board

Reference Designator	Description	Part No.
	main p.c. board, complete	AP-TBM051FT
	main p.c. board, plated and drilled	PT-BM051AOX
C1	.1uF, 10V, arox	CD-A1AOR1ME
C2	10uF, 16V, electrolytic	CE-ED100ZMN
C3	22uF, 10V, arox	
C4	68pF, 50V, ceramic	CC-CB680KPM
C5	.01uF, 50V, ceramic	CK-CB103PEM
C6	22pF, 50V, ceramic	CC-CB220KPM
C7	330pF, 50V, ceramic	CC-CB331KOM
C8	150pF, 50V, ceramic	CK-CB151KOM
C9	.047uF, 50V, ceramic	CK-CB473ZFM
C10	47pF, 50V, ceramic	СС-СВ470КОМ
C11	47uF, 10V, electrolytic	
C12	18pF, 50V, ceramic	
C13	1000pF, 50V, mylar	
C14	68pF, 50V, ceramic	
C15	.01uF, 50V, ceramic	
C16	33pF, 50V, ceramic	
C17	47pF, 50V, ceramic	
C18	1 uF, 50V, electrolytic	
C19	1000pF, 50V, mylar	
C20	1000pF, 50V, mylar	CQ-MB102KCH
C21	1000pF, 100V, styroflex	
C22	2pF, 50V, ceramic	CC-CB020COM
C23	7pF, 50V, ceramic	
C24	33pF, 50V, ceramic	CC-CB330KPM
025	4pF, 50V, ceramic	CC-CB040CPM
C26	330pF, 100V, styroflex	CQ-SC331KEF
C27	390pF, 50V, ceramic	CK-CB391KBM
C28	.01uF, 50V, ceramic	CK-CB103PEM
C29	68pF, 50V, ceramic	СС-СВ680КОМ
C30	56pF, 50V, ceramic	CC-CB560KOM
C31	.01uF, 50V, ceramic	CK-CB103PEM
C32	2pF, 50V, ceramic	CC-CB020COM
C33	.01 uF, 50V, ceramic	CK-CB103PEM
C34	not used	
C35	68pF, 50V, ceramic	
C36	.01uF, 50V, ceramic	CK-CB103PEM
C37	100pF, 50V, ceramic	
C38	.01uF, 50V, ceramic	
C39	.01uF, 50V, mylar	
C40	330pF, 50V, ceramic	
C41	.01uF, 50V, ceramic	
C42 C43	120pF, 50V, ceramic	
C44	120pF, 50V, ceramic	
C45	.01uF, 50V, ceramic	
C46	120pF, 50V, ceramic	
C46 C47	270pF, 500V, mica	
C48	2pF, 500V, ceramic	
C49	.0047uF, 50V, ceramic	

Reference Designator	Description	Part No.
C50	1 uF, 50V, electrolytic	CE-EG010ALN
C51	27pF, 50V, ceramic	CC-CB270KOM
C52	.01uF, 50V, ceramic	CK-CB103PEM
C53	.047uF, 50V, ceramic	CK-CB473ZFM
C54	.047uF, 50V, mylar	CQ-MB473KCH
C55	.047uF, 50V, ceramic	CK-CB473ZFM
C56	.01 uF, 50V, ceramic	CK-CB103PEM
C57	10pF, 50V, ceramic	
C58	.01uF, 50V, ceramic	CK-CB103PEM
C59	.01uF, 50V, ceramic	
C60	.01uF, 50V, ceramic	
C61	.01uF, 50V, ceramic	
C62	.01uF, 50V, ceramic	
C63	1pF, 50V, ceramic	
C64	.01uF, 50V, ceramic	
C65	18pF, 50V, ceramic	
C66	2.2pF, 500V, minic	
C67	.047uF, 50V, mylar	CQ-MB473KCH
C68	.047uF, 50V, mylar	CQ-MB473KCH
C69	.047uF, 50V, mylar	CQ-MB473KCH
C70	.047uF, 50V, mylar	CQ-MB473KCH
C71	.047uF, 50V, mylar	CQ-MB473KCH
C72	10uF, 16V, electrolytic	CE-ED100ALN
C73	6800pF, 50V, mylar	CQ-MB682KCH
C74	3.3uF, 25V, electrolytic	CE-EE3R3ALN
C75	4700pF, 50V, mylar	CQ-MB472KCH
C76	1 uF, 50V, electrolytic	CE-EG010ALN
C77	.0015uF, 50V, mylar	72A376
C78	47uF, 16V, electrolytic	CE-ED470ALN
C79	.022uF, 50V, mylar	CQ-MB223KCH
C80	2200pF, 50V, ceramic	CC-CB222KBM
C81	.022uF, 50V, mylar	CQ-MB223KCH
C82	220pF, 50V, ceramic	CC-CB221KOM
C83	.01uF, 50V, mylar	CQ-MB203KCH
C84	390pF, 50V, ceramic	CK-CB391KBM
C85	5.6uF, 25V, tantalum	CS-SE5R6MDN
C86	.47uF, 10V, arox	CD-A1AR47ME
C87	33uF, 6.3V, electrolytic	CE-EB330ALN
C88	68pF, 50V, ceramic	
C89	68pF, 50V, ceramic	
C90	470pF, 50V, ceramic	
C91	.068uF, 50V, mylar	
C92	.022uF, 50V, ceramic	
C93	47uF, 16V, electrolytic	
C94	220uF, 16V, electrolytic	
C95	.068uF, 50V, mylar	
C95	3.3uF, 25V, electrolytic	
C98 C97	47uF, 10V, electrolytic	
C98	not used	CE-4E47071 9
C99	47uF, 25V, electrolytic	
C100	1000uF, 16V, electrolytic	
C101	33uF, 6.3V, electrolytic	
C102	.01uF, 50V, ceramic	CK-CB103PEM

Reference		
Designator	Description	Part No.
C103 thru		
C105	not used	
C106	.047uF, 50V, ceramic	. CK-CB473ZFM
C107	047uF, 50V, ceramic	.CK-CB473ZFM
C108 thru		
C109	not used	
C110	18pF, 50V, ceramic	.CC-CB180KOM
C111	82pF, 50V, ceramic	
C112	39pF, 50V, ceramic	
C113	.01 uF, 50V, ceramic	
C114	390pF, 500V, ceramic	
C115	18pF, 50V, ceramic	
C116	not used	
C117		
	4700pF, 50V, ceramic	
C118	.022uF, 50V, ceramic	.CK-CB223ZFM
C119	not used	
C120	33uF, 16V, electrolytic	.CE-ED330ALN
C121 thru		
C133	not used	
C134	3pF, 50V, ceramic	. CC-CB030DOM
C135	220pF, 50V, ceramic	.CC-CB221KOM
C136	.0033uF, 100V, styroflex	
C137	.01uF, 50V, ceramic	
C138	220pF, 50V, ceramic	
CF1	4 element ceramic filter	
CH1	choke coil	.LJ-119H001Y
CT1	20pf, trimmer capacitor	.CT-Z7200H01
D1	ITT410, silicon	QD-CTT410XQ
D2	MZ205, zener	. QD-ZMZ205XE
D3	RD9.1E, zener	.QD-ZRD9EXAA
D4	1S1555, silicon	QD-SS1555XT
D5	1N60, germanium	QD-G1N60XXT
D6	1 S1 555, silicon	.QD-SS1555XT
D7	1S1555, silicon	.QD-SS1555XT
D8	1N60, germanium	.QD-G1N60XXT
D9	1 N60, germanium	.QD-G1N60XXT
D10	1S1555, silicon	
D11	1S1555, silicon	
D12	1\$1555, silicon	
D13	V06C, silicon	
D14	1S1885, silicon	
D15	1S1555, silicon	
D16	1S1555, silicon	
D17	1S1555, silicon	
D18	1N60, germanium	
D19	1N60, germanium	.QD-G1N60XXT
D20 thru		
D21	not used	
D22	1S1555, silicon	
D23	1N4148, silicon	./6AU3/

Reference Designator	Description	Part No.
D24	1N4148, silicon	
D25	1N4148, silicon	
D26	1N4148, silicon	
D27	1N4148, silicon	
	1N4148, silicon	
D28 D28	1N4148, silicon	
D28 D29	1N4148, silicon	
IC1	PLL02A	QQ-OPLL02A0
IC2	TA7310P	QQ-MC3001AT
IC3	TA7310P	
IC4	BA521A	QQ-MB521AX
L1	rf coil, 18 MHz	
. L2	rf coil, 37 MHz	TR-10MB003T
L3	rf coil, 68uH, peaking	LF-680KD01N
L4	rf coil, 1 uH	
L5	rf coil, 27 MHz	
L6	rf coil, 2.2uH, peaking	
L7	rf coil, 27 MHz	
L8	rf coil, 68uH, peaking	
L9	rf coil, .55uH	
L10	rf coil, 1.0uH	
L11	rf coil, 27 MHz	
L12	rf coil, 27 MHz	
L13	rf coil, .40uH	
L14	rf coil, 10.7 MHz	
L15	rf coil, 68uH, peaking	
L16	rf coil, .75uH	
L17	rf coil, .75uH	LD-ADB4024B
Q1	2SC710DE	
Q2	2SC710DE	
Q3	2SC1687	
Q4	2SC1846QRS	
Q5	2SC1306	
Q6	2SC1318QR	
Q7	2SA719PQR	QT-A0719XHN
Q8	2SC1047BC	QT-C1047XBN
Q9	2SC1359BC	
Q10	2SC710D	QT-C0710XBE
Q11	2SC710D	
Q12	2SC829BC	
Q13	2SC828P	
Q14	2SA7190	
Q15	2SC945(L)PQ	QT-C0945LAA
Q16 thru		
Q17	not used	
Q18	2SC829C	
Q19	2SA733PQ	QT-A0733XDA
Q20	2S1327TU	
Q21	not used	
Q22	2SC900UE	QT-C0900XEA

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Reference Designator

Description

Part No.

NOTE: all resistors 5%, ¼ watt, carbon film unless otherwise noted.

R1	3.3kRD-25RJ332N
R2	470 RD-25RJ471N
R3	22k
R4	
	47kRD-25RJ473N
R5 R6	68RD-25RJ680N
	680RD-25RJ681N
R7	27k RD-25RJ273N
R8	15kRD-25RJ153N
'R9	1.5k
R10	not used
R11	82 RD-25RJ820N
R12	2.2k
R13	150 RD-25RJ151N
R14	1MRD-25RJ105N
R15	47RD-25RJ470N
R16	100RD-25RJ101N
R17	5.6k
R18	68RD-25RJ680N
R19	100RD-25RJ101N
R20	220RD-25RJ221N
R21	10, 5%, 1/2w, metal oxide filmRX-HAPJ100B
R22	68RD-25RJ680N
R23	47kRD-25RJ473N
R24	680RD-25RJ681N
R25	330RD-25RJ331N
R26	1kRD-25RJ102N
R27	680RD-25RJ681N
R28	47kRD-25RJ473N
R29	3.3k
R30	100RD-25RJ101N
R31	1.8k
R32	560RD-25RJ561N
R33	470RD-25RJ471N
R34	470kRD-25RJ474N
R35	1kRD-25RJ102N
R36	4.7k
R37	470RD-25RJ471N
R38	47kRD-25RJ473N
R39	220RD-25RJ221N
R40	3.9k
R41	15kRD-25RJ153N
R42	33kRD-25RJ333N
R43	220RD-25RJ221N
R44	47RD-25RJ470N
R45	22kRD-25RJ223N
R46	270kRD-25RJ274N
R47	47kRD-25RJ473N
R48	68kRD-25RJ683N
R49	33kRD-25RJ333N
R50	47kRD-25RJ473N
R51	10kRD-25RJ103N
R52	10, ½ watt, metal oxide filmRX-HAPJ100B

Reference Designator	Description Part No.
753	1kRD-25RJ102N
R54	220RD-25RJ221N
R55	10kRD-25RJ103N
356	820
R57	27k
758	3.3k
759	3.3k
R60	2.2k
R61	not used
R62	10RD-25RJ100N
R63	10k
R64	47RD-25RJ470N
765	1kRD-25RJ102N
R66	4.7k
R67	18k
R68	1k
769	22k
	22k
R70	1.8kRD-25RJ182N
771	
372	not used 4.7kRD-25RJ472N
R73	
R74	100
775	4.7k
R76	not used
R77	270, 1/2 watt, metal oxide film RG-HANJ271E
R78	15, 2 watt, metal oxide filmRX-2ANJ150B
R79	1kRD-25RJ102N
R80	6.8k, solidRC-14GK682N
R81	1.5k
R82	4.7k
R83 thru	
R89	not used
R90	100k
R91	1k
	560k
R92	100k
R93	
R94	820k
R95	4.7k
R96	22kRD-25RJ223N
R97 thru	
R99	not used
R100	3.3k
R101 thru	
R110	not used
R111	2.7k
RV1	10k, semi-fixed resistor RP-GNB1030
	5k semi-fixed resistor
RV2	20k semi-fixed resistor
RV3	20k semi-fixed resistor
RV4	
SW1	switch rotarySR-194020W
T1	rf transformerTR-10DB0028

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Reference		
Designator	Description	Part No.
Т2	rf transformer	TR-10MB005S
ТЗ	rf transformer	TR-10CB001S
Τ4	rf transformer	TR-10CP005S
Т5	rf transformer	TR-10MP003T
Т6	rf transformer	TR-10CA003T
Т7	rf transformer	TR-07MB008N
Т8	if transformer	TR-07LA004N
Т9	if transformer	TR-07LA005N
T10	if transformer	TR-07LA023N
T11	audio transformer	TB-G25B001W
X1	crystal oscillator 10.24000 MHz	XA-S1B9001T
X2	crystal oscillator 10.69500 MHz	XA-S1B9002T
Quantity	Description	Part No.
2	crystal spacer	VK111SC001
1	heat sink, IC4	ML-454AD002
1	heat sink, IC4	MS-327AD005

Monitor Receiver P.C. Board

Description monitor receiver p.c. board, plated and drilled	Part No
monitor receiver p.c. board, plated and drilled	754151
.01uF, 25V, ceramic	
1 uF, 50V, electrolytic	72A430
.01uF, 25V, ceramic	72A440
.01uF, 25V, ceramic	72A440
.01uF, 25V, ceramic	72A440
27pF, 50V, ceramic	72A404
39pF, 50V, ceramic	72A407
.01uF, 25V, ceramic	72A440
2pF, 50V, ceramic	72A444
.01uF, 25V, ceramic	72A440
10pF, 50V, ceramic	72A399
330pF, 50V, ceramic	72A416
2pF, 50V, ceramic	72A444
.047uF, 50V, mylar	72A443
10uF, 16V, electrolytic	72A434
3.3uF, 25V, electrolytic	72A431
.0047uF, 50V, mylar	72A425
.0047uF, 50V, mylar	
1 uF, 50V, electrolytic	
.04/uF, 50V, ceramic	72A419
	2pF, 50V, ceramic .047uF, 50V, mylar .0047uF, 50V, mylar .0047uF, 50V, mylar .0047uF, 50V, mylar

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.

Reference Designator	Description	Part No.
C428	22pF, 50V, ceramic	
C429	560pF, 50V, ceramic	
C430	68pF, 50V, ceramic	
C431	.047uF, 50V, ceramic	
C432	.047uF, 50V, ceramic	
C433	.047uF, 50V, mylar	
C434	.047uF, 50V, mylar	
C435	.047uF, 50V, ceramic	
C436	3.3uF, 25V, electrolytic	
C437	.047 uF, 50V, ceramic	
C438	.0047uF, 50V, mylar	/2A425
C439	.047uF, 50V, ceramic	
C440	.047uF, 50V, ceramic	
C441	.047uF, 50V, ceramic	
C442	.047uF, 50V, ceramic	
C443	.01uF, 50V, ceramic	
C444	.01uF, 50V, ceramic	
C445	.01 uF, 50V, ceramic	72A440
CF401	ceramic filter, 455 kHz	78A067
D401	1N4148	76A037
D402	1N4148	76A037
D403	1N4148	76A037
D404	1N4148	76A037
D405	1N60	
D406	1N4148	
IC401	4001, 2 input, NOR IC	76A114
ÎC402	4066, IC multiplexer	76A333
L401	rf transformer, 10.7 MHz	73A041
Q401	MPS6514	76A140
Q402	MPS6514	
Q403	MPS6513	76A139
Q404	2N5088	76A149
Q405	MPS6514	76A140
Q406	MPS6514	76A140
Q407	MPS5172	76A138
Q408	2N5088	
Q409	MPS5172	
Q410	MPS3702	
Q411	TIP-30	
Q412	MPS6513	
NOTE: all resistors 5%	6, ¼ watt, carbon film unless otherwise noted.	
R400	100k	72A612
R100	100	724540

)	100k	
	100	
2		
}	680	
Ļ	1.5k	
5	100	

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R401 R402 R403 R404 R405

Reference		
Designator	Description Part	No
R406	1.8k	570
R407	470	556
R408	1k	564
R409	1k	564
R410	22k	596
R411	100k	312
R412	1k	564
R413	4.7k	580
R414	470	
R415	47k	
R416	1.5k	
R417	220	
R418	330	
R419	27k	
R420	220	
R421	47	
R422	22k	
R423	270k	
R424	47k	
R425	68k72A6	
R426	47k	
R427	100k	
R428	33k	300
R429	22k	596
R430	1.8k72A5	570
R431	18k72A5	594
R432	1k72A5	564
R433	27k72A5	598
R434	1.5k72A5	568
R435	5.6k	582
R436	10k	588
R437	100k	312
R438	100	540
R439	1k	564
R440	47	532
R441	10k	588
R442	100k	312
R443	100	540
R444	47	532
R445	100	540
R446	100	
R447	100k	612
R448	100	540
RV400	10k potentiometer72A	398
T401	transformer, 27 MHz73A	044
T402	transformer, 27 MHz73A	045
TÃ03	transformer, 10.7 MHz73A	041
T404	transformer, 455 kHz	
T405	transformer, 455 kHz73A	
T406	transformer, 455 kHz73A	
X400	crystal, 16.37 MHz	076

LED P.C. Board

Reference		
Designator	Description	Part No.
	LED p.c. board, complete	AP-TLD015AA
	LED p.c. board, plated and drilled	PT-LD015AOX
LED	SL122	QL-#SL1222C

Lamp Control P.C. Board

Reference Designator	Description	Part No.
	lamp control p.c. board, complete	AP-TZZ005AA
	lamp control p.c. board, drilled and plated	PT-ZZ005AOX
C1	.01uF, 50V, ceramic	CK-CB103PEM
C2	.01uF, 50V, ceramic	CK-CB103PEM
C3	10uF, 16V, electrolytic	CE-ED100ALN
Q1	2SC945ARQ	QT-C0945ADA
Q2	2SC945ARQ	QT-C0945ADA
Q3	2SC945AR	Q⊤-C0945ACA
Q4	2SC945ARQ	QT-C0945ADA

NOTE: all resistors are 5%, ¼ watt, carbon film unless otherwise noted.

R1	10k	RD-14TJ103N
R2	270, ½ W, solid	RC-12GK271N
R3	15k	RD-14TJ153N
R4	330, ½W, solid	RC-12GK331N
R5	330k	RD-14TJ334N
R6	100k	RD-14TJ104N

Switch P.C. Board

Reference			
Designator	Description	Part No.	
	switch p.c. board, complete	AP-TSW023AA	
	switch p.c. board, drilled and plated	PT-SW023AOX	
	1.8k, 1%, ¼W, resistor array	RA-C182M07N	

Chassis Mounted Components

Reference		
Designator	Description	Part No.
C201	180pF, 500V, mica	CM-SD181KCS
C201B	7pF, 500V, ceramić	CC-DE070DOM
C202	.01uF, 50V, ceramic	СК-СВ103РЕМ
C203	.01uF, 50V, ceramic	CK-DB103PEM
C204	.01uF, 50V, ceramic	CK-DB103PEM
C205	.047uF, 50V, ceramic	CK-DB473ZFM

Reference		•
Designator	Description	Part No.
C206	.01uF, 50V, ceramic	CK-DB103PEM
C207	.01uF, 50V, ceramic	CK-DB103PEM
C208	.0047uF, 50V, ceramic	CK-DB472PEM
C209	.0047uF, 50V, ceramic	CK-DB472PEM
C210	.0047uF, 50V, ceramic	CK-DB472PEM
C211	.0047uF, 50V, ceramic	CK-DB472PEM
C212	.0047uF, 50V, ceramic	CK-DB472PEM
C213	.0047uF, 50V, ceramic	CK-DB472PEM
C214	1 uF, 50V, electrolytic	CE-AG010ALN
J1	jack, 2-pin, antenna	YJ-C02S002Z
J2	jack, 5-pin, DIN, microphone	
J3	jack, 3-pin, PA	YJ-T03S003Z
J4	jack, 3-pin, external speaker	YJ-T03S003Z
J5	jack, 2-pin, DC	YJ-B02S001U
D201	1N4001 diode	76A076
M/PL3	meter/lamp	ZM-J2030N07
PL1	lamp, monitor	ZP-A064118U
PL2	lamp, transmitter	ZP-A064119U
R201	100k	RD-14TJ104N
S2	switch, toggle	ST020201ZM
S3	switch, rotary	SR-0304103E
VR1, VR3/S1	50k, 100k, potentiometer, ganged (volume, rf gain, on/off swite	•
VR2, VR4	10k, 10, potentiometer, ganged (squelch)	
	speaker	ZQ-A0920801

Mechanical Parts

Part		tv
Number	Description Q	l y
MZ-421SZ003	bracket, meter1	
ML-121SZ007	bracket, speaker4	
MU-276SW002	bracket, mobile mounting1	
MC-473SZ002	bracket p.c. board1	
MU-773SM053	case, top1	
MU-773SM054	case, bottom1	
MU-677SZ049	chassis	
MX-315SZ001	clamp1	
AC-DC036GEA	cord, power1	
AM-2706##01	excutcheon assembly1	
ASM-2683B#01	frame1	
MB-762SZ053	front panel1	
MZ-331SZ002	hanger, microphone1	
VN-176SB006	knob, channel selector1	
VN-274SM001	knob, volume and squelch2	
VN-176SB002	knob, rf gain, switch2	
VN-276SB008	knob, CB-PA1	

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Accessory Parts

Part		
Number	Description (Qty
BT-PT5013AN	screw, truss head tapping, unit mounting M5x13	
BT-PP4010BZ	screw, pan head tapping, unit mounting M4x102	2
MF-284SN001	thumb screw	2

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