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Component Outline, Main P.C. Board

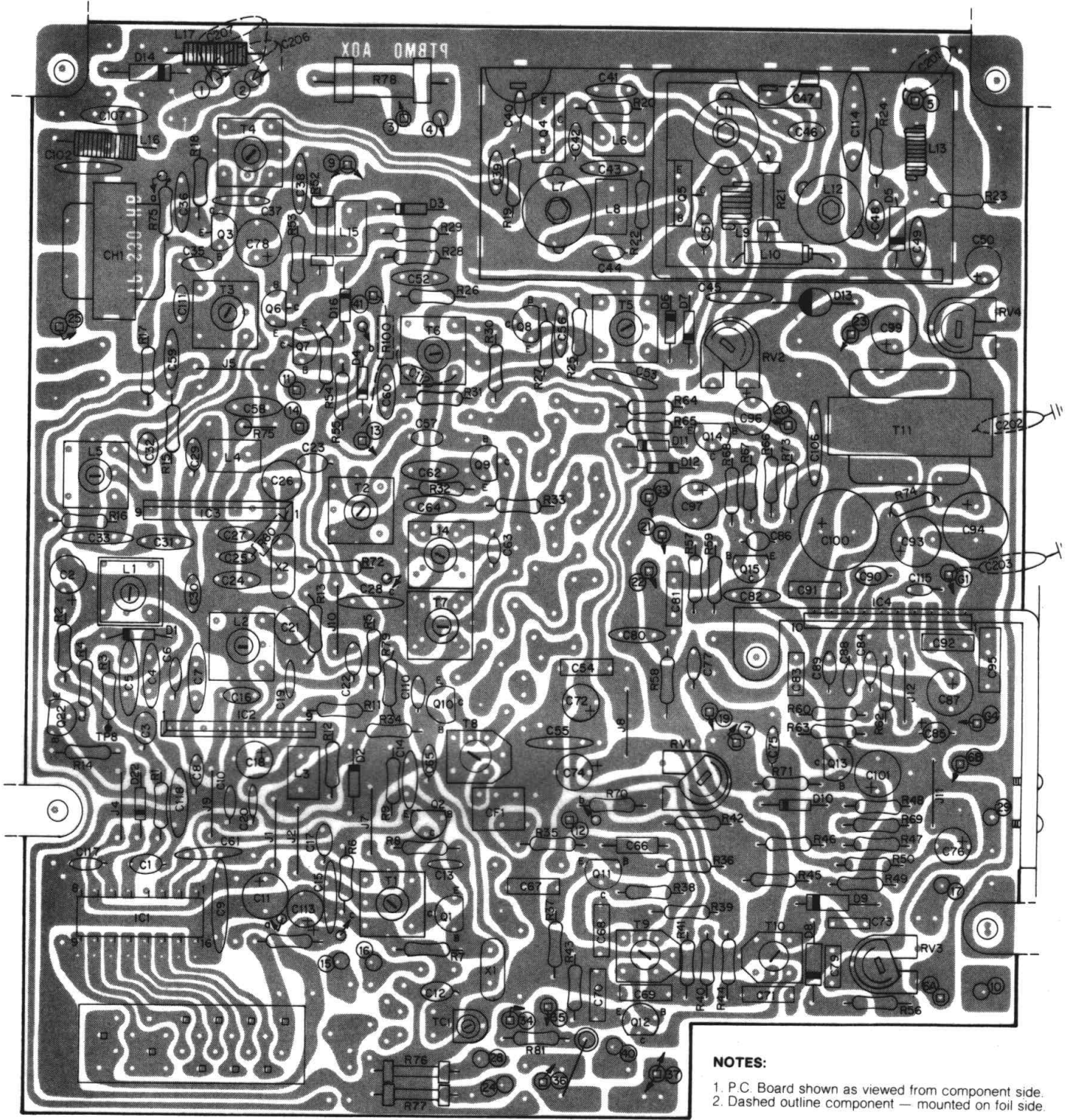
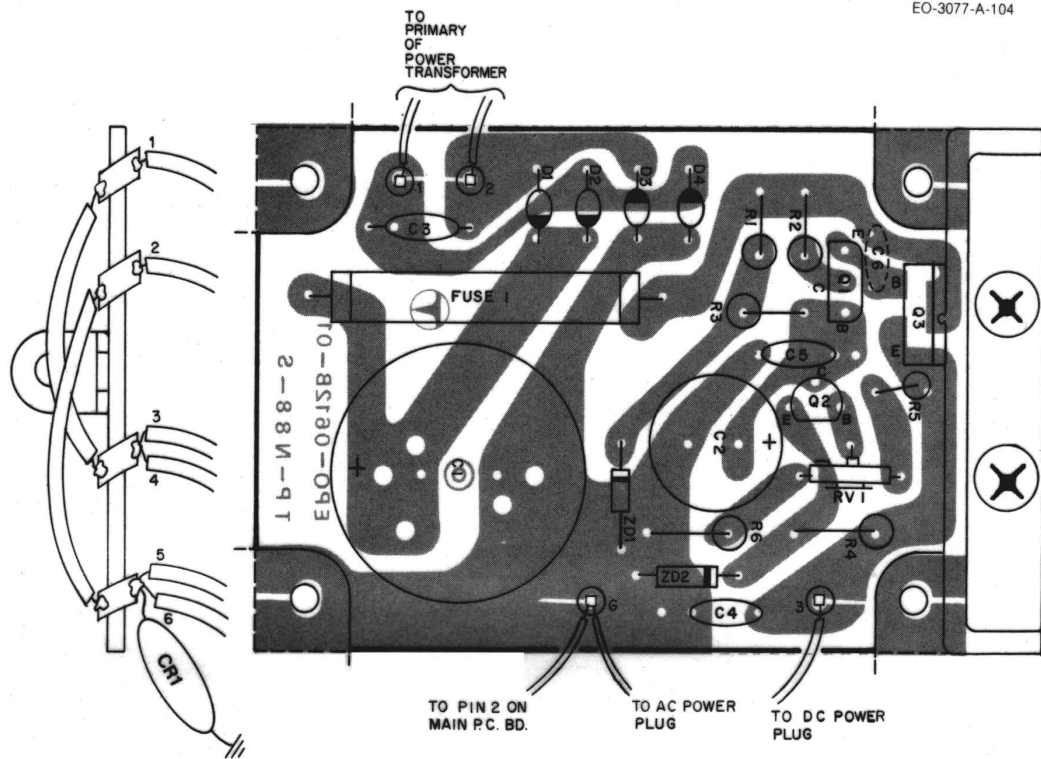


Figure 4-1. Component Outline, Main P.C. Board, Model 3107



Component Outline, Power Supply P.C. Board

**NOTES:**

1. P.C. Board shown as viewed from component side.
2. Dashed outline component - mounted on foil side.

Figure 4-2. Component Outline, Power Supply P.C. Board, Model 3107



Chassis Mounted Components

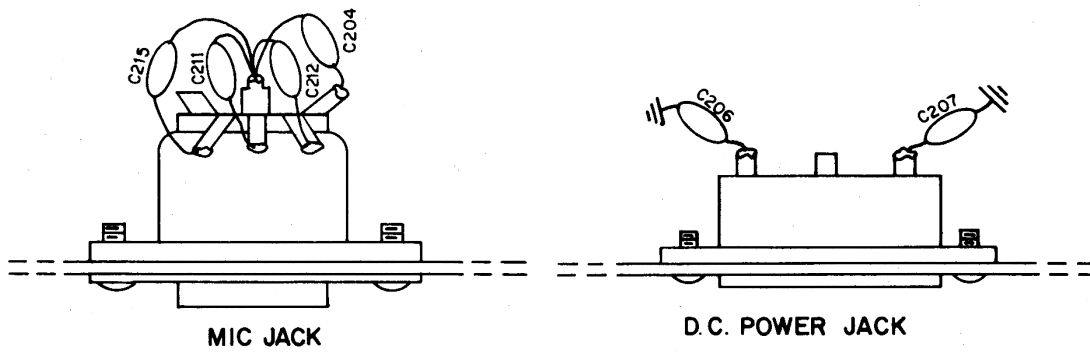
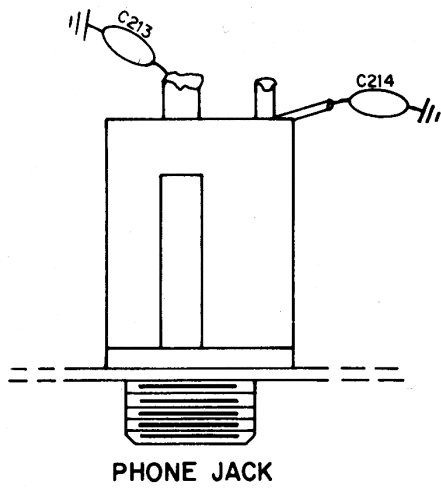
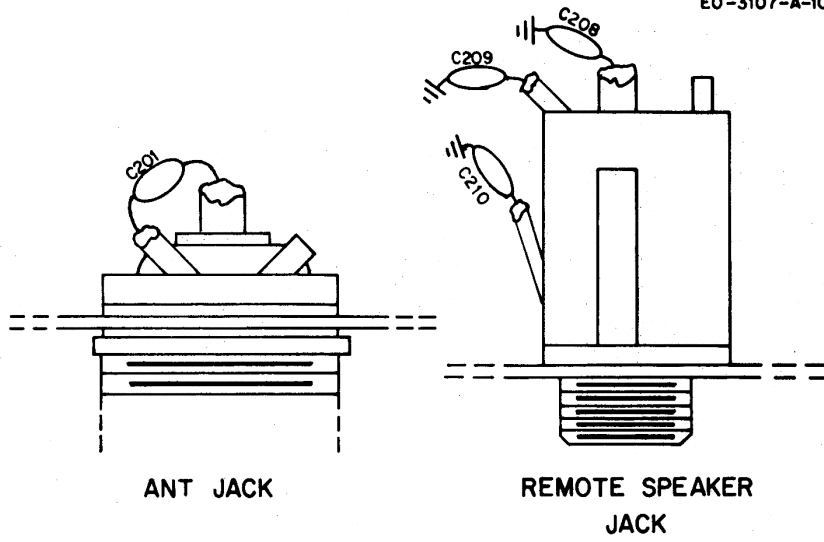


Figure 4-3. Chassis Mounted Components

Parts List

Main P.C. Board

Reference Designator	Description	Part No.
	main p.c. board, complete	AP-TBM051CT
	main p.c. board, complete	AP-TBM051FT
	main p.c. board, plated and drilled	PT-BM051AOX
C1	.1uF, 10V, arox	CD-A1A0R1ME
C2	10uF, 16V, electrolytic	CE-ED100ZMN
C3	.22uF, 10V, arox	DC-A1AR22ME
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	120pF, 50V, ceramic	CC-CB121KOM
C9	.047uF, 50V, ceramic	CK-CB473ZFM
C10	47pF, 50V, ceramic	CC-CB470KOM
C11	47uF, 10V, electrolytic	CE-EC470ALN
C12	(not used)	
C13	1000pF, 50V, mylar	CQ-MB102KCH
C14	68pF, 50V, ceramic	CC-CB680KOM
C15	.01uF, 50V, ceramic	CK-CB103PEM
C16	(not used)	
C17	47pF, 50V, ceramic	CC-CB470KPM
C18	1uF, 50V, electrolytic	CE-EG010ALN
C19	1000pF, 50V, mylar	CQ-MB102KCH
C20	1000pF, 50V, mylar	CQ-MB102KCH
C21	1000pF, 100V, styroflex	CQ-SC102KEF
C22	2pF, 50V, ceramic	CC-CB010COM
C23	7pF, 50V, ceramic	CC-CB070DOM
C24	33pF, 50V, ceramic	CC-CB330KPM
C25	4pF, 50V, ceramic	CC-CB040CPM
C26	330F, 50V, mylar	CQ-MB561KCH
C27	390pF, 50V, ceramic	CK-CB391KBM
C28	.01uF, 50V, ceramic	CK-CB103PEM
C29	68pF, 50V, ceramic	CC-CB680KOM
C30	56pF, 50V, ceramic	CC-CB560KOM
C31	.01uF, 50V, ceramic	CK-CB103PEM
C32	2pF, 50V, ceramic	CC-CB020COM
C33	.01uF, 50V, ceramic	CK-CB103PEM
C34	(not used)	
C35	68pF, 50V, ceramic	CC-CB680KOM
C36	.01uF, 50V, ceramic	CK-C103PEM
C37	100pF, 50V, ceramic	CC-CB101KPM
C38	.01uF, 50V, ceramic	CK-CB103PEM
C39	.01uF, 50V, mylar	CQ-MB103KCH
C40	390pF, 50V, ceramic	CK-CB391KBM
C41	.01uF, 50V, ceramic	CK-CB103PEM
C42	120pF, 50V, ceramic	CC-CB121KOM
C43	220pF, 50V, ceramic	CC-CB221KOM
C44	120pF, 50V, ceramic	CC-CB121KOM
C45	.01uF, 50V, ceramic	CK-CB103PEM
C46	120pF, 50V, ceramic	CC-CB121KOM
C47	270pF, 500V, mica	CM-SD271KCS
C48	2pF, 500V, ceramic	CC-CE020COM
C49	.0047uF, 50V, ceramic	CK-CB472PEM
C50	1uF, 50V, ceramic	CE-EG010ALN
C51	27pF, 50V, ceramic	CC-CB270KOM
C52	.01uF, 50V, ceramic	CK-CB103PEM
C53	.047uF, 50V, ceramic	CK-CB472ZFM
C54	.047uF, 50V, mylar	CQ-MB473KCH
C55	.047, 50V, ceramic	CK-CB473ZFM
C56	.01uF, 50V, ceramic	CK-CB013PEM
C57	10pF, 50V, ceramic	CC-CB100DOM
C58 thru C62	.01uF, 50V, ceramic	CK-CB013PEM

Reference Designator	Description	Part No.
C63	1pF, 50V, ceramic	CC-CB020COM
C64	.01uF, 50V, ceramic	CK-CB103PEM
C65	18pF, 50V, ceramic	CC-CB180KPM
C66	2.2pF, 500V, minic	CG-2HT2KNN
C67 thru C71	.047uF, 50V, mylar	CQ-MB473KCH
C72	10uF, 16V, electrolytic	CE-ED100ALN
C73	6800pF, 50V, mylar	CQ-MB682KCH
C74	3.3uF, 25V, electrolytic	CEEE3RALN
C75	5700pF, 50V, mylar	CQ-MB472KCH
C76	1uF, 50V, electrolytic	CE-EG010ALN
C77	100pF, 50V, ceramic	CC-CB101KOM
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-MB103KCH
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 thru C89	68pF, 50V, ceramic	CC-CB680KOM
C90	470pF, 50V, ceramic	CK-CB471KBM
C91	.068uF, 50V, mylar	CQ-MB683KCH
C92	.002uF, 50V, mylar	CQ-MB223KCH
C93	47uF, 16V, electrolytic	CQ-ED470ALN
C94	220uF, 16V, electrolytic	CE-AD221ZLS
C95	.068uF, 50V, mylar	CQ-MB683KCH
C96	3.3uF, 25V, electrolytic	CE-EE3R3ALN
C97	47uF, 10V, electrolytic	CE-EC470ALN
C98	(not used)	
C99	47uF, 25V, electrolytic	CE-AE470ZLS
C100	1000uF, 16V, electrolytic	CE-ED102ZUN
C101	33uF, 6.3V, electrolytic	CE-EB330ALN
C102	.01uF, 50V, ceramic	CK-CB103PEM
C103 thru C105	(not used)	
C106 thru C107	.047uF, 50V, ceramic	CK-CB473ZFM
C108 thru C109	(not used)	
C110	18pF, 50V, ceramic	CC-CB180KOM
C111	82pF, 50V, ceramic	CC-CB820KOM
C112	18pF, 50V, ceramic	CC-CB180KPM
C113	.01uF, 50V, ceramic	CK-CB103PEM
C114	390pF, 500V, ceramic	CC-CE391KOM
C115	18pF, 50V, ceramic	CC-CB180KOM
C116	(not used)	
C117	4700pF, 50V, ceramic	CK-CB472KBM
C118	.022uF, 50V, ceramic	CK-CB223ZFM
C119 thru C140	(not used)	
C141	.01uF, 50V, ceramic	CK-CB103PEM
CF1	4 element ceramic filter	FB-R455A08M
CH1	choke coil	LJ-119H001Y
CT1	20pF, trimmer capacitor	CT-Z7200H01
D1	ITT410, silicon	QD-CTT410XQ
D2	MZ205, silicon zener	QD-ZMZ205XE
D3	RD9.1E, silicon zener	QD-ZRD9EXAA
D4	1S1555, silicon	QD-SS1555XT
D5	1N60, germanium	QD-G1N60XXT
D6 thru D7	1S1555, silicon	QD-SS1555XT
D8 thru D9	1N60, germanium	QD-G1N60XXT
D10 thru D12	1S1555, silicon	QD-SS1555XT
D13	V06C, silicon	QD-SV06CXXB
D14 thru D16	1S1555, silicon	QD-SS1555XT

Reference Designator	Description	Part No.
IC1	PLL02A	QQ-OPLL02A0
IC2	TA7310P	QQ-MC3001AT
IC3	TA7301P	QQ-MC3001AT
IC4	BA521A	QQ-MBA521AX
L1	rf coil, 18 MHz	TR-10DD003S
L2	rf coil, 37 MHz	TR-10MB003T
L3	rf coil, 68uH, peaking	LF-680KD01N
L4	rf coil, 1uH	LF-1R0KD01N
L5	rf coil, 27 MHz	TR-10CB00ZM
L6	rf coil, 2.2uH, peaking	LF-2R2KD01N
L7	rf coil, 27 MHz	TR-A5CZ001M
L8	rf coil, 68uH, peaking	LF680KD01N
L9	rf coil, 55uH	LA-1KE1Q11A
L10	rf coil, 10uH	LD-ADX3825M
L11	rf coil, 27 MHz	TR-A5CZ002M
L12	rf coil, 27 MHz	TR-A5CZ003M
L13	rf coil, 40uH	LA-1JG1Q10A
L14	rf coil, 10.7 MHz	TR-07MB008N
L15	rf coil, 68uH, peaking	LF-680KD01N
L16 thru L17	rf coil, 75uH	LD-ADB4024B
Q1 thru Q2	2SC710DE	QT-C0170XEE
Q3	2SC1687	QT-C1687XAN
Q4	2SC1846QRS	QT-C1846XAN
Q5	2SC1306	QT-C1306XZA
Q6	2SC1318QR	QT-C1318XDN
Q7	2SA719PQR	QT-A0719SHN
Q8	2SC1047BC	QT-C1047XBN
Q9	2SC1359BC	QT-C1359XBN
Q10 thru Q11	2SC710D	QT-C0170XBE
Q12	2SC829BC	QT-C0829XEN
Q13	2SC828P	QT-C0828XAN
Q14	2SA7190	QT-A0719XAN
Q15	2SC945(L)PQ	QT-C0945LAA
Q16 thru Q21	(not used)	
Q22	2SC900UE	QT-C0900XEA
R1	3.3k, 5%, 1/4W, carbon film	RD-25RJ332N
R2	470, 5%, 1/4W, carbon film	RD-25RJ471N
R3	22k, 5%, 1/4W, carbon film	RD-25RJ223N
R4	47k, 5%, 1/4W, carbon film	RD-25RJ473N
R5	68, 5%, 1/4W, carbon film	RD-25RJ680N
R6	680, 5%, 1/4W, carbon film	RD-25RJ681N
R7	27k, 5%, 1/4W, carbon film	RD-25RJ273N
R8	15k, 5%, 1/4W, carbon film	RD-25RJ153N
R9	1.5k, 5%, 1/4W, carbon film	RD-25RJ152N
R10	(not used)	
R11	82, 5%, 1/4W, carbon film	RD-25RJ820N
R12	2.2k, 5%, 1/4W, carbon film	RD-25RJ222N
R13	150, 5%, 1/4W, carbon film	RD-25RJ151N
R14	1M, 5%, 1/4W, carbon film	RD-25RJ105N
R15	47, 5%, 1/4W, carbon film	RD-25RJ470N
R16		
R16	100, 5%, 1/4W, carbon film	RD-25RJ101N
R17	5.6k, 5%, 1/4W, carbon film	RD-25RJ562N
R18	68, 5%, 1/4W, carbon film	RD-25RJ680N
R19	100, 5%, 1/4W, carbon film	RD-25RJ101N
R20	220, 5%, 1/4W, carbon film	RD-25RJ221N
R21	10, 5%, 1/2W, metal oxide film	RX-HAPJ110B
R22	68, 5%, 1/4W, carbon film	RD-25RJ680N
R23	47k, 5%, 1/4W, carbon film	RD-25RJ473N
R24	680, 5%, 1/4W, carbon film	RD-25RJ681N
R25	330, 5%, 1/4W, carbon film	RD-25RJ331N
R26	1k, 5%, 1/4W, carbon film	RD-25RJ102N

Reference Designator	Description	Part No.
R27	680, 5%, 1/4W, carbon film	RD-25RJ681N
R28	47k, 5%, 1/4W, carbon film	RD-25RJ473N
R29	3.3k, 5%, 1/4W, carbon film	RD-25RJ332N
R30	100, 5%, 1/4W, carbon film	RD-25RJ101N
R31	1.8k, 5%, 1/4W, carbon film	RD-25RJ182N
R32	560, 5%, 1/4W, carbon film	RD-25RJ561N
R33	470, 5%, 1/4W, carbon film	RD-25RJ471N
R34	470k, 5%, 1/4W, carbon film	RD-25RJ474N
R35	1k, 5%, 1/4W, carbon film	RD-25RJ102N
R36	4.7k, 5%, 1/4W, carbon film	RD-25RJ472N
R37	470, 5%, 1/4W, carbon film	RD-25RJ471N
R38	47k, 5%, 1/4W, carbon film	RD-25RJ463N
R39	220, 5%, 1/4W, carbon film	RD-25RJ221N
R40	3.9k, 5%, 1/4W, carbon film	RD-25RJ392N
R41	15k, 5%, 1/4W, carbon film	RD-25RJ153N
R42	33k, 5%, 1/4W, carbon film	RD-25RJ333N
R43	220, 5%, 1/4W, carbon film	RD-25RJ221N
R44	47, 5%, 1/4W, carbon film	RD-25RJ470N
R45	22k, 5%, 1/4W, carbon film	RD-25RJ223N
R46	270k, 5%, 1/4W, carbon film	RD-25RJ274N
R47	47k, 5%, 1/4W, carbon film	RD-25RJ473N
R48	68k, 5%, 1/4W, carbon film	RD-25RJ683N
R49	33k, 5%, 1/4W, carbon film	RD-25RJ333N
R50	47k, 5%, 1/4W, carbon film	RD-25RJ473N
R51	(not used)	
R52	10, 5%, 1/2W, metal oxide film	RX-HAPJ100B
R53	1k, 5%, 1/4W, carbon film	RD-25RJ102N
R54	390, 5%, 1/4W, carbon film	RD-25RJ391N
R55	10k, 5%, 1/4W, carbon film	RD-25RJ103N
R56	820, 5%, 1/4W, carbon film	RD-25RJ821N
R57	27k, 5%, 1/4W, carbon film	RD-25RJ273N
R58	3.3k, 5%, 1/4W, carbon film	RD-25RJ332N
R59	3.3k, 5%, 1/4W, carbon film	RD-25RJ332N
R60	2.2k, 5%, 1/4W, carbon film	RD-25RJ222N
R61	(not used)	
R62	10, 5%, 1/4W, carbon film	RD-25RJ100N
R63	10k, 5%, 1/4W, carbon film	RD-25RJ103N
R64	47, 5%, 1/4W, carbon film	RD-25RJ470N
R65	1k, 5%, 1/4W, carbon film	RD-25RJ102N
R66	4.7k, 5%, 1/4W, carbon film	RD-25RJ472N
R67	18k, 5%, 1/4W, carbon film	RD-25RJ183N
R68	1k, 5%, 1/4W, carbon film	RD-25RJ102N
R69 thru R70	22k, 5%, 1/4W, carbon film	RD-25RJ223N
R71	1.8k, 5%, 1/4W, carbon film	RD-25RJ182N
R72	(not used)	
R73	4.7k, 5%, 1/4W, carbon film	RD-25RJ472N
R74	100, 5%, 1/4W, carbon film	RD-25RJ101N
R75	4.7k, 5%, 1/4W, carbon film	RD-25RJ472N
R76 thru R77	150, 5%, 1W, metal oxide film	RG1ANV151B
R78	15, 5%, 2W, metal oxide film	RX-2ANJ150B
R79	1k, 5%, 1/4W, carbon film	RD-25RJ102N
R80	6.8k, 5%, 1/4W, solid	RC-14GK682N
R81	1.5k, 5%, 1/4W, carbon film	RD-25RJ152N
R82	4.7k, 5%, 1/4W, carbon film	RD-25RJ472N
R83 thru R99	(not used)	
R100	3.3k, 5%, 1/4W, solid	RC-14GK332N
R101 thru R110	(not used)	
R111	2.7k, 5%, 1/4W, carbon film	RD-25RJ272N
RV1	10k, semi-fixed resistor	RP-GNB10301
RV2	5k, semi-fixed resistor	RP-GNB50202
RV3 thru RV4	20k, semi-fixed resistor	RP-GNB20301
SW1	switch, rotary	SR-2240302H

Reference Designator	Description	Part No.
T1	rf transformer	TR-10DB002S
T2	rf transformer	TR-10MB005S
T3	rf transformer	TR-10CB001S
T4	rf transformer	TR-10CP005S
T5	rf transformer	TR-10MP003T
T6	rf transformer	TR-10CA003T
T7	rf transformer	TR-07MB008N
T8	i-f transformer	TR-07LA004N
T9	i-f transformer	TR-07LA005N
T10	i-f transformer	TR-07LA0023N
T11	audio output 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	VK-111SC001
1	heat sink, IC4	ML-454AD002
1	heat sink, IC4	MS-327AD005
1	heat sink, Q5	MU-453AD001

LED P.C. Board

Reference Designator	Description	Part No.
	LED p.c. board, complete	AP-TLD016AA
	LED p.c. board, drilled and plated	PT-LD016COX
	p.c. board joint wire (15 pin)	ZZ-Z0000024
LED301	SL122 anode	QL-#SL1222C

Switch P.C. Board

Description	Part No.
switch p.c. board, complete	AP-TSW020AA
switch p.c. board, drilled and plated	PT-SW020COX
1.8k, 1%, ¼W, resistor array	RA-C182M07N
rotary switch p.c. board, complete	AP-TSW026AA
rotary switch p.c. board, drilled and plated	PTSW026COX

Chassis Mounted Components

Reference Designator	Description	Part No.
C201A	150pF, 500V, mica	CM-SD151KCS
C201B	56pF, 500V, ceramic	CC-DE560DOM
C202	.047uF, 50V, ceramic	CK-DB473ZFM
C203 thru C204	.01uF, 50V, ceramic	CK-DB103PEM
C205	.047uF, 50V, ceramic	CK-DB473ZFM
C206 thru C207	.01uF, 50V, ceramic	CK-DB103PEM

Reference Designator	Description	Part No.
C208 thru C210	.0047uF, 50V, ceramic	CK-DB472PEM
C211	(not used)	
C212	.01uF, 50V, ceramic	CK-DB103PEM
C213 thru C215	.0047uF, 50V, ceramic	CK-DB472PEM
CR1	cr module	CR-E471A01M
J1	jack, antenna	YJ-C02S008Z
J2	jack, 5 pin, DIN, microphone	YJ-D05S001Z
J3	jack, phone	YJ-S03S010Z
J4	jack, phone	YJ-S04S002Z
J5	jack, DC power	YJ-B02S001U
J6	jack, AC power	YJ-A02S001U
M	meter	ZM-J2050N02
PT	power transformer	TP-D68V002Y
PL1	lamp, pilot	ZP-A066103U
PL2	lamp, pilot	ZP-A066103U
Q3	2SD313	QT-D0313XAC
S1	on/off power switch (part of volume control)	RV-AD503A04
SP	speaker	ZQ-A0770802

Power Supply P.C. Board

Reference Designator	Description	Part No.
	power supply p.c. board, complete	AP-TPW005AA
	power supply p.c. board, plated and drilled	PT-TW005COX
C1	2200uF, 25V, electrolytic	CE-T1E22201
C2	100uF, 25V, electrolytic	CE-AE101ALN
C3	.022uF, 50V, ceramic disc	CK-RB223PZM
C4	.01uF, 50V, ceramic	CK-RB103PZM
C5	.047uF, 50V, ceramic	CK-RB473PMM
C6	.022uF, 50V, ceramic	CK-RB223PMM
D1 thru D4	VO6C, silicon	QD-SVO6CXXB
F1	fuse, 250V, 3/4A	ZF-BQ75101U
F2	fuse 250V, 2.5A	ZF-AQ25201U
Q1	(NEC) 2SC900F	QT-C0900XBA
Q2	(NEC) 2SC900F	QT-C0900XBA
R1	220, 5%, 1/2W, solid carbon	RC-12GK221N
R2	47, 5%, 1/2W, solid carbon	RC-12GK470N
R3	100, 5%, 1/2W, solid carbon	RC-12GK101N
R4	820, 5%, 1/2W, solid carbon	RC-12GK821N
R5	1.2k, 5%, 1/2W, solid carbon	RC-12GK122N
R6	820, 5%, 1/2W, solid carbon	RC-12GK820N
RV1	500, potentiometer	RP-ANB50101
ZD1	BZ-162, silicon zener	QD-ZBZ162XJ
ZD2	RD5.6E(C), silicon zener	QD-ZRD56EAA

Reference Designator	Description	Part No.
VR1	50k, potentiometer (volume)	RV-AD503A04
VR2	10k, potentiometer (squelch)	RV-NA103B03

Mechanical Parts

Part No.	Description	Qty
VB-885SB002	case top	1
VB-883SB004	case bottom	1
MB-871SZ011	chassis, main frame	1
MZ-121SZ010	bracket, speaker holding	1
AV-KNOB#044	knob, channel select	1
AV-KNOB#045	knob, volume and squelch	2
YH-F1S3001U	fuse holder	1
MB-763SZ003	panel, rear	1
MU-443SZ003	bracket, phone jack mounting	1
MU-443SZ001	bracket, mic jack mounting	1
AC-AC008ULA	cord, AC power	1
AC-DC034ULA	cord, DC power	1
ME-77PAX002	escutcheon, aluminum	1
VE-76JSB020	escutcheon, metal frame	1
ML-56SAD001	heat sink, power transformer 2SP313	1
MT-15ABD002	spacer, LED board	1
MB-762SM007	rear panel	1

Accessory Parts

Part No.	Description	Qty
ZG-AAZ50111	microphone	1

Schematic Diagram

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P.O. Box 68 State Hwy 31, Km. 4.0
Naguabo, Puerto Rico 00718