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Power Supply

Ref. Des.	Mode	E	В	С
Q1	RX	0	-0.04	-0.04
Q2	RX	0	0	-0.03
Q3	RX	0	0	-0.03

IC 101 (P.L.L. 02A)

Pin. No.	Voltage	Channels Selected
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	4.7 1.8 2.8 4.6 1.5 - 2.5 4.2 0 4.7 4.7 4.7 4.7 4.7 4.7 4.7	N/A N/A N/A N/A N/A All Channels N/A N/A N/A N/A N/A 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 8, 9, 10, 12, 13, 20, 21, 22, 23 4, 5, 6, 7, 11, 12, 13, 17, 18, 19, 23 3, 6, 7, 9, 10, 12, 13, 16, 19, 22 2, 5, 7, 8, 10, 13, 15, 16, 18, 21, 23 N/A

IC 102 (BA 521)

Pin No.	1	2	3	4	5	6	7	8	9	10
Squelched	12.69V	0V	0V	6.76V	6.58V	2.45V	.10V	13.61V	13.64V	13.71V
Unsquelched	6.82V	0V	1.28V	6.67∀	6.67V	6.70V	.98V	8.06V	13.39V	13.7V

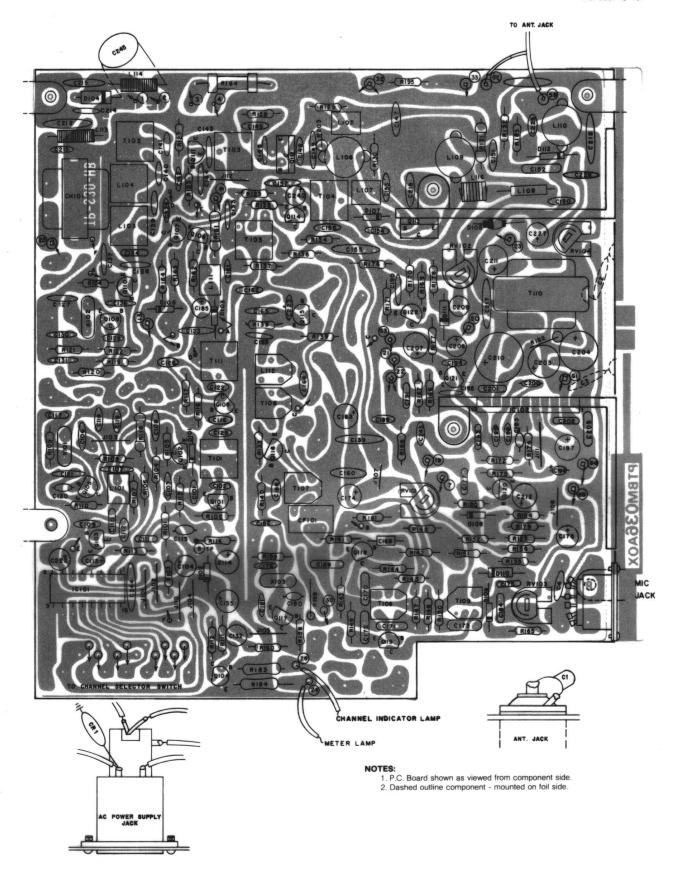
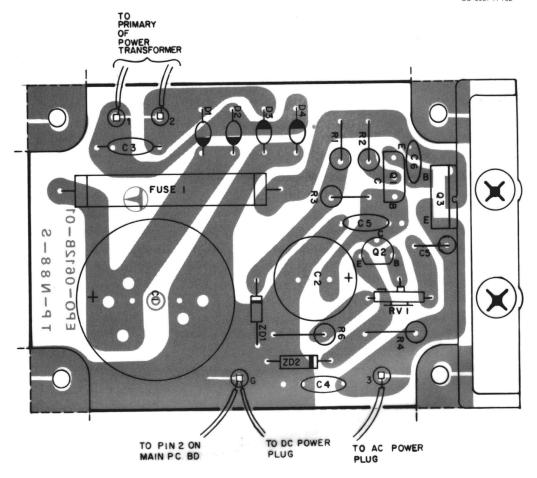


Figure 4-1. Component Outline Main P.C. Board, Model 3087



NOTE

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

Figure 4-2. Component Outline Power Supply P.C. Board, Model 3087

Main P.C. Board

Reference Designator	Description	Part No.
	main, p.c. board, complete	APTBMD36AT PTBMD36AOX
C101 C102	18pF, 50V, ceramic disc	
C103 C104	1pF, 50V, ceramic disc	CC-CB010CCM
C105 C106	(not used) 10pF, 50V, ceramic disc	CC-CB100DOM
C107	.01uF, 50V, ceramic disc	
C108	330pF, 50V, ceramic disc	
C109	330pF, 50V, ceramic disc	
C110	.001uF, 50V, mylar	CO-MB103KCH
C111 C112	39pF, 50V, ceramic disc	
C112	.22uF, 50V, electrolytic	
C114	10uF, 16V, electrolytic	
C115	.1uF, 50V, electrolytic	
C116	16pF, 50V, ceramic disc	
C117	.01uF,50V, mylar	CQ-MB103KCH
C118	56pF, 50V, ceramic disc	CC-CB569KPM
C119	12pF, 50V, cermic disc	
C120	560pF, 50V, ceramic disc	
C121	100pF, 50V, ceramic disc	CC-CB101KPM
C122	15pF, 50V, ceramic disc	
C123	.01uF, 50V, ceramic disc	
C124 C125	100pF, 500V, mica	
C126	12pF, 50V, ceramic disc	
C127	56pF, 50V, ceramic disc	
C128	(not used)	
C129	560pF, 50V, ceramic disc	CK-CB561KBM
C130	82pF, 50V, ceramic disc	CC-CB820KPM
C131	.01uF, 50V, ceramic disc	CK-CB103PEM
C132	560pF, 50V, mylar	
C133	.01uF, 50V, ceramic disc	CK-CB103PEM
C134	(not used)	CE EDIOCALAL
C135 C136	10uF, 16V, electrolytic	
C136	.01uF, 50V, ceramic disc	
C138	.01uF, 50V, ceramic disc	
C139	2pF, 50V, ceramic disc	
C140	2pF, 50V, ceramic disc	
C141	68pF, 50V, ceramic disc	
C142	.01uF, 50V, ceramic disc	
C143 C144	100pF, 50V, ceramic disc	CC-CB101KPM
C144 C145	.01uF, 50V, ceramic disc	
C145	470pF, 50V, ceramic disc	
C147	.01uF, 50V, ceramic disc	
C148	120pF, 50V, ceramic disc	
C149	220pF, 50V, ceramic disc	
C150	.01uF, 50V, ceramic disc	
C151	100pF, 500V, mica	
C152 C153	270pF, 500V, mica	
C153	27pF, 50V, ceramic disc	
C155	.047uF, 50V, ceramic disc	
C156	.01uF, 50V, ceramic disc	
C157	.01uF, 50V, ceramic disc	
C158	(not used)	

	eference	Description	Part No.
D	esignator	Безсприон	ran No.
	C159	.047uF, 50V, ceramic disc	. CK-CB473ZFM
	C160	.047uF, 50V, mylar	.CQ-MB473KCH
	C161	.01uF, 50V, ceramic disc	
	C162	33pF, 50V, ceramic disc	. CC-CB330KPM
	C163	.01uF, 50V, ceramic disc	
	C164	2pF, 50V, ceramic disc	
	C165	.01uF, 50V, ceramic disc	
	C166	10pF, 50V, ceramic disc	. CC-CB100DOM
	C167	(not used)	
	C168	2.2pF, 500V, ceramic disc	. CG-2H2R2KNN
	C169	.047uF, 50V, mylar	. CQ-MB473KCH
	C170	.047uF, 50V, mylar	. CQ-MB473KCH
	C171	.047uF, 50V, mylar	. CQ-MB473KCH
	C172	.047uF, 50V, mylar	.CQ-MB473KCH
	C173	.047uF, 50V, mylar	. CQ-MB473KCH
	C174	3.3uF, 25V, electrolytic	. CE-EE3R3ALN
	C175	.0047uF, 50V, mylar	. CQ-MB472KCH
	C176	1 uF, 50V, electrolytic	. CE-EGO10ALN
	C177	2200pF, 50V, mylar	.CQ-MB223KCH
-	C178	56pF, 50V, ceramic disc	. CC-CB560KPM
	C179	(not used)	
	C180	560pF. 50V. ceramic disc	.CK-CB561KBM
	C181	100pF, 50V, ceramic disc	
	C182	68pF, 50V, ceramic disc	
	C183	10uF, 16V, electrolytic	CE-ED100ALN
	C184	22uF, 50V, ceramic disc	CK-CC222KBM
	C185	47uF, 16V, electrolytic	
	C186 through		OL LITTONEI
	C188	(not used)	
	C189	.0022uF, 50V, ceramic disc	CK-CC222KBM
	C190	.01uF, 50V, ceramic disc	
	C191	.022uF, 50V, mylar	
	C192	150pF, 50V, ceramic disc	
	C193	.01uF. 50V. mylar	
	C194	01uF, 50V, ceramic disc	
	C195	390pF. 50V, ceramic disc	
	C196	5.6uF, 25V, tantalum	
	C197	33uF, 6.3V, electrolytic	
	C198	68pF. 50V, ceramic disc	CC CREOKOM
	C199	68pF, 50V, ceramic disc	CC CBEROKOM
	C200	390pF, 50V, ceramic disc	
	C201	.068uF. 50V, mylar	
	C202	.022uF. 50V, mylar	CO MESSACH
	C203	47. F. 16V. electrolytic	CU-MB223KCH
	C204	47uF, 16V, electrolytic	CE AD2217LC
	C205	.068uF, 50V, mylar	
	C206		CQ-MD003KCH
		(not used)	
	C207	33uF, 6.3V, electrolylic	CE-EB330ALN
	C208	10uF, 16V, electrolylic	CE-ED100ALN
	C209	1 uF, 50V, electrolytic	CE-EG010ALN
	C210	1000uF, 16V, electrolytic	CE-ED102ZUN
	C211	47uF, 25V, electrolytic	CE-AE470ZLS
	C212	33uF, 6.3V, electrolytic	CE-EB330ALN
	C213	.01uF, 50V, ceramic disc	CK-CB103PEM
	C214	.01uF, 50V, ceramic disc	CK-CB103PEM
	C215	.01uF, 50V, ceramic disc	CK-CB103PEM
	C216	.01uF, 50V, ceramic disc	CK-CB103PEM
	C217	.047uF, 50V, ceramic disc	CK-CB473ZFM
	C218 ·	.047uF, 50V, ceramic disc	CK-CB473ZFM
	C219	.047uF, 50V, ceramic disc	CK-CB473ZFM
	C220	.047uF, 50V, ceramic disc	CK-CB4737FM
	C221	(not used)	
	C222	4.7uF, 25V, electrolytic	CF-FF4R77MN
	C223	39pF. 50V, ceramic disc	CC-CB390KOM
	C224	.01uF, 50V, ceramic disc	CK-CR103PEM
	C225	4pF, 500V, ceramic disc	CC-EEU40COM
	C226	1uF, 50V, electrolytic	CE-EGOLOALN
			OL-LUCTUALIN

Designator Reference	Description	Part No.
C227 C228 through	1uF, 50V, electrolytic	.CE-EG010ALN
C241	(not used)	05 50010111
C242	1 uF, 50V, electrolytic	
C243	100pF, 50V, ceramic disc	
C244 C245	2.2uF, 50V, mica	
0240	2.2ui , 50 v , mica	.001-00221100
CF101	ceramic filter	.FB-R455A98M
CH101	choke coil	.LJ-119H001Y
D101 D102	1TT410, silicon MZ205, silicon, zener	
D103	RD9.1E, silicon, zener	. QD-ZRD9EXAA
D104	1S1885, silicon	. QD-SS1885XT
D105	V06C, silicon	
D106	1\$1555, silicon	
D107	1S1555, silicon	
D108 D109	1S1555, silicon	.QD-551555X1
D110	1N60, germanium	. QD-G1N60XXT
D111	1N60, germanium	
D112	1N60, germanium	. QD-G1N60XXT
IC101	PLL02A	
IC102	(TOYO) BA521	.QQ-MBA521AX
L101	rf coil	.LF-220KD01N
L102	(not used)	
L103	rf coil	· TR-10CD004S
L104	rf coil	
L105	rf coil	. LF-2R2KD01N
L106	rf coil	
L107 L108	rf coil	
L109	rf coil	
L110	rf coil	
L111	rf coil	
L112	rf coil	
L113	rf coil	
L114 L115	rf coil	. LD-ADB4024B
L116	rf coil	.LA-1KE1011A
Q101	(MITSUBISHI) 2SC710(D)	.QT-C0710XBE
Q102	(MITSUBISHI) 2SC710(D)	.QT-C0710XBE
Q103	(NEC) 2SC829(B)	
Q104 Q105	(MITSUBISHI) 2SC710(D)(MITSUBISHI) 2SC710(D)	OT-C0710XBE
Q105 Q106	(MITSUBISHI) 2SC1318(Q)	.QT-C1318XAN
Q107	(MITSUBISHI) 2SA719(Q)	.QT-A0719XAN
Q108	(NEC) 2SC1359(B)	. QT-C1359XAN
Q109	(MITSUBISHI) 2SC710(D)	OT-C0710XBE
Q110 Q111	2SC1687	
Q112	(SONY) 2SC1760-3	
Q113	(NEC) 2SC1306	.QT-C1306XZA
Q114	2SC1047(B)	
Q115 Q116	(NEC) 2SC1359(B)(NEC) 2SC829(C)	
Q110 Q117	(MITSUBISHI) 2SC710(D)	.QT-C0710XBE
Q118	(NEC) 2SC829(C)	. QT-C0829XBN
Q119	(NEC) 2SC829(C)	
Q120	2SC372(Y)	.QT-C0372XAT

Reference Designator	Description	Part No.
Q121 Q122	2SC828P.Q 2SC828P	
R101 R102 R103	100, 5%, ¼w, carbon film	RD-25RJ104D
R104 R105 R106	1.5k, 5%, ¼w, carbon film	RD-25RJ152D RD-25RJ221D
R107 R108 R109	100k, 5%, ¼w, carbon film 1.5k, 5%, ¼w, carbon film 100k, 5%, ¼w, carbon film	RD-25RJ104D RD-25RJ152D
R110 R111 R112	2.2k, 5%, ¼w, carbon film 1k, 5%, ¼w, carbon film 100k, 5%, ¼w, carbon film	RD-25RJ222D RD-25RJ102D
R113 R114 R115	3.3k, 5%, ¼w, carbon film	RD-25RJ332D RD-25RJ471D
R116 R117	470, 5%, ¼w, carbon film	RD-25RJ471D RD-25RJ333D
R118 R119 R120	100, 5%, ½w, metal oxide	RD-25RJ152D RD-25RJ104D
R121 R122 R123	1k, 5%, ¼w, carbon film 1k, 5%, ¼w, carbon film 82k, 5%, ¼w, carbon film	RD-25RJ102D
R124 R125 R126	270, 5%, ¼w, carbon film	
R127 R128 R129	68, 5%, ¼w, carbon film 100, 5%, ¼w, carbon film 220, 5%, ¼w, carbon film	RD-25RJ101D
R130 R131 R132	47, 5%, ¼w, carbon film 10, 5%, ½w, metal oxide 47k, 5%, ¼w, carbon film	RD-25RJ470D RX-HAPJ100B
R133 R134 R135	1k, 5%, ¼w, carbon film 680, 5%, ¼w, carbon film 1.5k, 5%, ¼w, carbon film	RD-25RJ102D RD-25RJ681D
R136 R137	100, 5%, ¼w, carbon film 1.8k, 5%, ¼w, carbon film	. RD-25RJ101D . RD-25RJ182D
R138 R139 R140	1k, 5%, ¼w, carbon film 470, 5%, ¼w, carbon film 100k, 5%, ¼w, carbon film	. RD-25RJ471D . RD-25RJ104D
R141 R142 R143	1k, 5%, ¼w, carbon film	. RD-25RJ472D
R144 R145 R146	4.7k, 5%, ¼w, carbon film	. RD-25RJ221D
R147 R148 R149	1.5k, 5%, ¼w, carbon film 27k, 5%, ¼w, carbon film 220, 5%, ¼w, carbon film	. RD-25RJ152D . RD-25RJ273D
R150 R151	47, 5%, ¼w, carbon film	. RD-25RJ470D . RD-25RJ223D
R152 R153 R154	270k, 5%, ¼w, carbon film 47k, 5%, ¼w, carbon film 68k, 5%, ¼w, carbon film	. RD-25RJ473D . RD-25RJ683D
R155 R156 R157	33k, 5%, ¼w, carbon film	. RD-25RJ333D . RD-25RJ473D
R158 R159 R160	100k, 5%, ¼w, carbon film 1.5k, 5%, ¼w, carbon film 1.5k, 5%, ¼w, carbon film	RD-25RJ152D
R161 R162 - R163	22, 5%, ½w, metal oxide 1k, 5%, ¼w, carbon film 390, 5%, ¼w, carbon film	RG-HAPJ220B RD-25RJ102D

Reference Designator	Description	Part No.
R164	10k, 5%, ¼w, carbon film	. RD-25RJ103D
R165	820, 5%. ¼w, carbon film	. RD-25RJ821D
R166	3.3k, 5%, ¼w, carbon film	. RD-25RJ332D
R167	27k, 5%, ¼w, carbon film	. RD-25RJ273D
R168	3.3k, 5%, ¼w, carbon film	. RD-25RJ332D
R169	220k, 5%, ¼w, carbon film	. RD-25RJ224D
R170	22k, 5%, ¼w, carbon film	. RD-25RJ223D
R171	150, 5%, ¼w, carbon film	
R172	2.2k, 5%, ¼w, carbon film	. RD-25RJ222D
R173	(not used)	
R174	10, 5%, ¼w, carbon film	
R175	10k, 5%, ¼w, carbon film	
R176	82, 5%, ¼w, carbon film	
R177	270, 5%, ¼w, carbon film	
R178	680, 5%, ¼w, carbon film	
R179	22k, 5%, ¼w, carbon film	
R180	1.8k, 5%, ¼w, carbon film	
R181	18k, 5%, ¼w, carbon film	
R182	100, 5%, ¼w, carbon film	
R183	270, 5%, ½w, metal oxide	
R184	270, 10%, ½w, solid carbon	
R185	100, 5%, ¼w, carbon film	. KD-25KJ101D
R186 through	(
R193	(not used) 15, 5%, 2w, metal oxide	DV 2AN HEAN
R194	1.5k, 5%, ½w, carbon film	
R195	1.5k, 5%, 74w, Carbon IIIII	. NO-23NJ 132D
R196 through	(not used)	
R199	270, 10%, ½w, solid carbon	RG-HAPJ271B
R200 through	270, 1070, 7. W, 30110 Carbon	
R202	(not used)	
R203	560, 5%, ¼w, carbon film	. RD-25RJ561D
R204	(not used)	
RV101	10k, potentiometer	RP-GNR10301
RV101	2k, potentiometer	RP-GNB10301
NV102	ZK. potentionneter	.111 -014020201
SW101	switch, rotary wafer	.SR-0724102W
T101	rf transformer	.TR-10DA002T
T102	rf transformer	
T103	rf transformer	
T104	rf transformer	
T105	rf transformer	
T106	rf transformer	
T107	i-f transformer	
T108		
T109	i-f transformer	
T110 T111	af transformer	
1111	i-f transformer	. 11-100000001
X101	11.8066 MHz, crystal	.XA-SIB4001N
X102	10.695 MHz. crystal	. XA-S1B3002N
X103	10.240 MHz, crystal	. XA-AIB3001N

Power Supply P.C. Board

Reference	Description	
Designator	Description	Part No.
	power supply p.c. board, complete	
	power supply p.c. board, plated and drilled	PT-TW005COX
C1	2200uF, 25V, electrolytic	
C2	100uF, 25V, electrolytic	
C3	.022uF, 50V, ceramic disc	CK-RB223PZM
C4	.01uF, 50V, ceramic disc	CK-RB103PZM
C5	.047uF, 50V, ceramic disc	CK-RB473PMM
C6	.022uF, 50V, ceramic disc	CK-RB223PMM
D1	VO6C, silicon	QD-SV06CXXB
D2	VO6C, silicon	QD-SV06VXXB
D3	VO6C, silicon	QD-SV06CXXB
D4	VO6C, silicon	QD-SV06CXXB
F1	fuse 250V, ¾A	ZF-BQ75101U
Q1	(NEC) 2SC900F	QT-C0900XBA
Q2	(NEC) 2SC900F	
R1	220, 5%, ½w, solid carbon	RC-12GK221N
R2	47, 5%, ½w, solid carbon	
R3	100, 5%, ½w, solid carbon	
R4	820, 5%, ½w, solid carbon	
R5	1.2k, 5%, ½w, solid carbon	
R6	820, 5%, ½w, solid carbon	
RV1	500, potentiometer	RP-ANB50101
ZD1	BZ-162, silicon, zener	QD-ZBZ162XJ
ZD2	RD5.6E(C), silicon, zener	QD-ZRD56EAA

Chassis Mounted Components

Reference Designator	Description	Part No.
C1	220pF, 500V, mica	CM-SD221KCS
C2	.01uF, 50V, ceramic disc	
C3	.01uF, 50V, ceramic disc	
C4	.01uF, 50V, ceramic disc	
CR1	CR module	
F1	fuse, 250V, 2.5A	ZF-AQ25201U
J1	jack, antenna	YJ-C02S008Z
J2	jack, 5 pin, DIN, microphone	
J3	jack, phone	
J4	jack, phone	
J5	jack, DC power	
J6	jack. AC power	
М	meter	ZM-J2050N02
PL1	lamp, pilot	ZP-A064102U
PL2	lamp, pilot	
PL3	lamp, pilot	

Reference Designator	Description	Part No.
Q3	(SANYO) 2SD313	QT-D0313XAC
S1	on/off power switch (part of volume control)	RV-AD503A04
SP	speaker, 8 ohm	ZQ-A0770802
VR1 VR2	50k, potentiometer (volume control)	
	transformer, power	TP-H68G001K

Mechanical Parts

Part No.	Description	Qty.
AM-3077##01	cabinet assembly, upper	. 1
AM-3077##02	cabinet assembly, lower	. 1
MB-871SZ009	chassis, main frame	
MZ-111SZ002	bracket, speaker holding	. 1
AV-KNOB#044	knob, channel select	. 1
AV-KNOB#045	knob. volume and squelch	
AV-KNOB#046	plate, channel	
MB-763SZ003	panel rear	
MU-443SZ002	bracket, phone jack mounting	
MU-443SZ001	bracket, mic jack mounting	
MC-576XZ001	bracket, rotary switch mounting	
AC-AC008ULA	cord. AC power	
AC-DC034ULA	cord. DC power	
	·	

Accessory Parts

Part No.	Description	Qty.
ZG-AAZ70101	microphone	1

HY-GAIN DE PUERTO RICO, INC.

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