



RadioShack®

Service Manual

19-1110

**HTX-10
10-METER TRANSCEIVER
Catalog Number : 19-1110**

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SPECIFICATIONS

General

Frequency Resolution	AM/FM/SSB 100KHz,10KHz,1KHz STEP
Frequency Range	28.000 MHz to 29.699 MHz
Semiconductors	69 Transistors, 75 Diodes, 9 ICs
Crystals	3 Crystals
Microphone	Built-in Electric Condenser Type with FET Amplifier
Speaker	8 ohm 2W
Antenna Connector	M Type
Dimensions(WHD)	6-1/16"x 2-3/64"x 8-85/100"Inches (154 x 52 x 225)mm
Accessories	DC Power Cord With in-line fuse, Microphone Hanger, Mounting Bracket
Weight	2 lbs 10 ozs (1.18kg)

Measurement Conditions (90% Population)

Power Source	13.8V (DC)
Antenna Impedance	50 ohm
Test Temperature	77°F (25°C)
AM Modulation Frequency	1kHz
SSB Modulation Frequency, Transmit	
Two Tones	500 Hz & 2400 Hz
Single Tone	1 kHz
Min. Signal Input Level	1000uV
Reference Audio Output Power	0.5W
Reference AM Modulation Percentage	1 kHz 30%
Reference FM Modulation	1 KHz/1 KHz Deviation
Audio Frequency, SSB Receive	1 kHz
Audio Output Load	8 ohm resistive

Transmitter Section

Items		Unit	Nominal	Limit	
Frequency Tolerance at 77°F (25°C) at (5 Minutes after switch)	AM	%	±0.0005	±0.003	
	FM	%	±0.0005	±0.003	
	SSB	%	±0.0005	±0.003	
Carrier Power at No Modulation	AM	W	7	6-8	
	FM	W	25	23-30	
	SSB	W PEP	25	23-30	
PEP Power, Single Tones, Modulation Distortion at 1kHz, 50% Modulation 1.2kHz Deviation	AM	%	3	6	
	FM	%	3	6	
Spurious Harmonic Suppression	AM	dB	-70	-60	
	FM	dB	-70	-60	
	SSB	dB	-70	-60	
Carrier Suppression	SSB	dB	40	-38	
Current Drain at No Modulation	AM	mA	4000	4500	
	FM	mA	6000	6500	
	SSB	mA	800	1000	
Current Drain AM: Max Mod FM: Max Mod SSB: Max Watt PEP, Single Tones		mA	4000	4500	
		mA	6000	6500	
		mA	6000	6500	
Modulation Frequency Response (1kHz, 0dB Reference) Lower Frequency	AM	Hz	450	250-650	
	FM	Hz	450	250-650	
	SSB	Hz	450	250-650	
	Upper Frequency	AM	Hz	2500	1500-4000
		FM	Hz	2500	1500-4000
		SSB	Hz	3500	1500-5000
Carrier Power Uniformity, CH to CH at No Modulation	AM	W	±1	±2	
	FM	W	±3	±4	
Microphone Sensitivity AM: For 50% Mod. FM: For 1kHz DEV. SSB: For 10W PEP.		mV	1.5	6	
		mV	1.5	6	
		mV	1.5	6	
AMC Range AM: 50-100% Mod. FM: 1.5-2.5kHz DEV. SSB: 10-30Watts PEP		dB	40	30	
		dB	40	30	
		dB	40	30	
Modulation Capability	AM	%	95	80-100	
RPT Modulation Capability	FM	kHz	0.7	0.4-1.0	
RF Meter (S+3) Indication 1kHz Single Tone	SSB	W	5	4-6	

Receiver Section

Item		Unit	Nominal	Limit
Exterior Maximum Audio Output Power	AM	W	2.5	2
	FM	W	2.5	2
	SSB	W	2.5	2
Interior Maximum audio Output Power	AM	W	1	2
	FM	W	1	2
	SSB	W	1	2
Exterior Audio Output Power at 10% THD	AM	W	1.5	1
	FM	W	1.5	1
	SSB	W	1.5	1
Interior Audio Output Power at 10% THD	AM	W	1	2
	FM	W	1	2
	SSB	W	1	2
THD at 500mW Audio Output	AM: 1mV Input, 30%	%	3	10
	80%	%	5	10
	FM: 1mV Input, 1kHz DEV	%	5	10
	SSB: 1mV Input, 1kHz	%	3	10
	Single Tone RF Gain	AM	dB	60
Control Range at Max Sensitivity Level	FM	dB	60	50-75
	SSB	dB	60	50-75
S/N Ratio at Input 1mV	AM	dB	40	34
	FM	dB	40	34
	SSB	dB	40	34
Squelch Sensitivity at Threshold	AM	uV	0.6	1
	FM	uV	0.6	1
	SSB	uV	0.6	1
Squelch Sensitivity at Tight	AM	uV	1000	320-3200
	FM	uV	1000	320-3200
	SSB	uV	1000	320-3200
Skirt Rejection (± 20 kHz)	AM	dB	70	60
	FM	dB	70	60
	SSB	dB	70	60
S Meter Sensitivity at "S-9" (No Modulation AM)	AM	uV	100	30-320
	FM	uV	100	30-320
	SSB	uV	100	30-320
Image Rejection Ratio fo-(2 x 10.695)	AM	dB	76	60
	FM	dB	76	60
	SSB	dB	76	60
1/2 IF Rejection Ratio fo-(10.695 MHz/2)	AM	dB	70	60
	FM	dB	70	60
	SSB	dB	70	60
Oscillator Dropout Voltage	AM	V	9	11
	FM	V	9	11
	SSB	V	9	11
Current Drain at No Signal	AM	mA	400	500
	FM	mA	400	500
	SSB	mA	400	500
Current Drain at Maximum Audio Output Power	AM	mA	600	1000
	FM	mA	600	1000
	SSB	mA	600	1000
FINE Range	AM	kHz	± 1.5	$\pm 0.8 - \pm 3.0$
	FM	kHz	± 1.5	$\pm 0.8 - \pm 3.0$
	SSB	kHz	± 1.5	$\pm 0.8 - \pm 3.0$

Items		Unit	Nominal	Limit
Desensitization (3dB Desensitivity) at 100uV	AM	dB	50	40
	FM	dB	50	40
	SSB	dB	50	40
(ANC & Noise Blanker Switch Off) Max sensitivity	AM	uV	0.5	1
	FM	uV	0.25	0.5
	SSB	uV	0.25	0.5
Sensitivity for 10dB S/N	AM	uV	0.5	1
	FM	uV	0.16	0.25
	SSB	uV	0.16	0.25
AGC Figure of Merit 100mV for 10dB Change in Audio Output	AM	dB	90	80
	SSB	dB	90	80
	AM	dB	±3	±6
Overload AGC Characteristics from 100mV to 1000mV	SSB	dB	±3	±6
	AM	dB	±3	±6
Overall Audio Fidelity at 6dB Down Upper Frequency	AM	Hz	2000	1500-3000
	FM	Hz	2000	1500-3000
	SSB	Hz	3500	2500-5000
	AM	Hz	400	300-600
	FM	Hz	400	300-600
	SSB	Hz	450	250-650
Cross Modulations,RS Standard	AM	dB	60	50
	FM	dB	60	50
Adjacent Channel Selectivity ±10kHz	AM	dB	60	50
	FM	dB	60	50
IF Rejection Ratio	AM	dB	70	60
	FM	dB	70	60
	SSB	dB	70	60

DISASSEMBLY INSTRUCTIONS

- To remove the Top and Bottom cover (Figure 1).
 - Remove two mounting screws ④.
 - Remove four screws ⑤ from each side of the top and bottom covers.
- To remove the Front panel Assembly (Figures 2, 3 and 4).
 - Remove ring nut ③.
 - Remove six knobs ⑥.
 - Remove four screws ⑦ from each side. Pull the front panel.

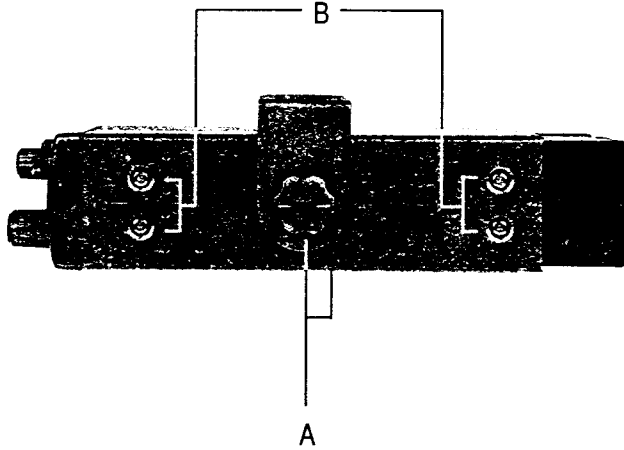


Figure 1

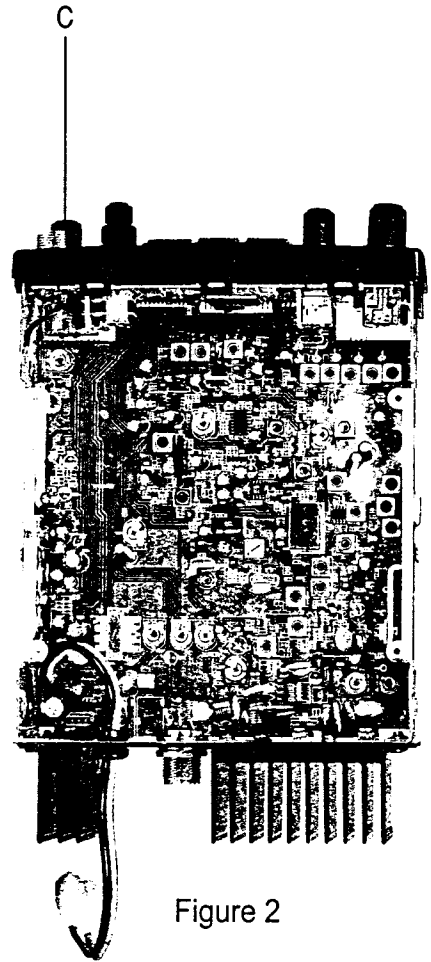


Figure 2

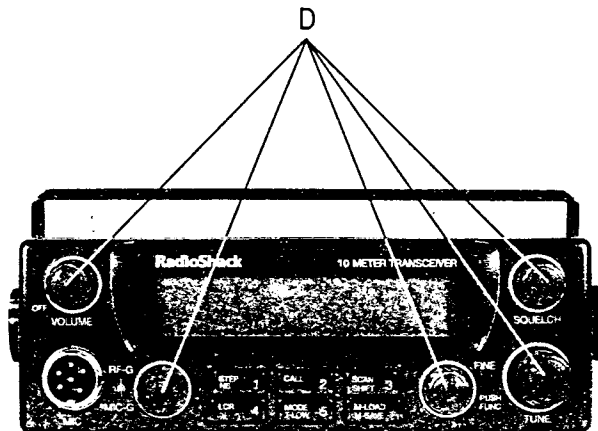


Figure 3

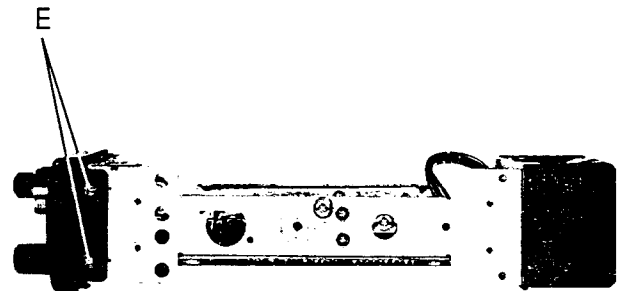
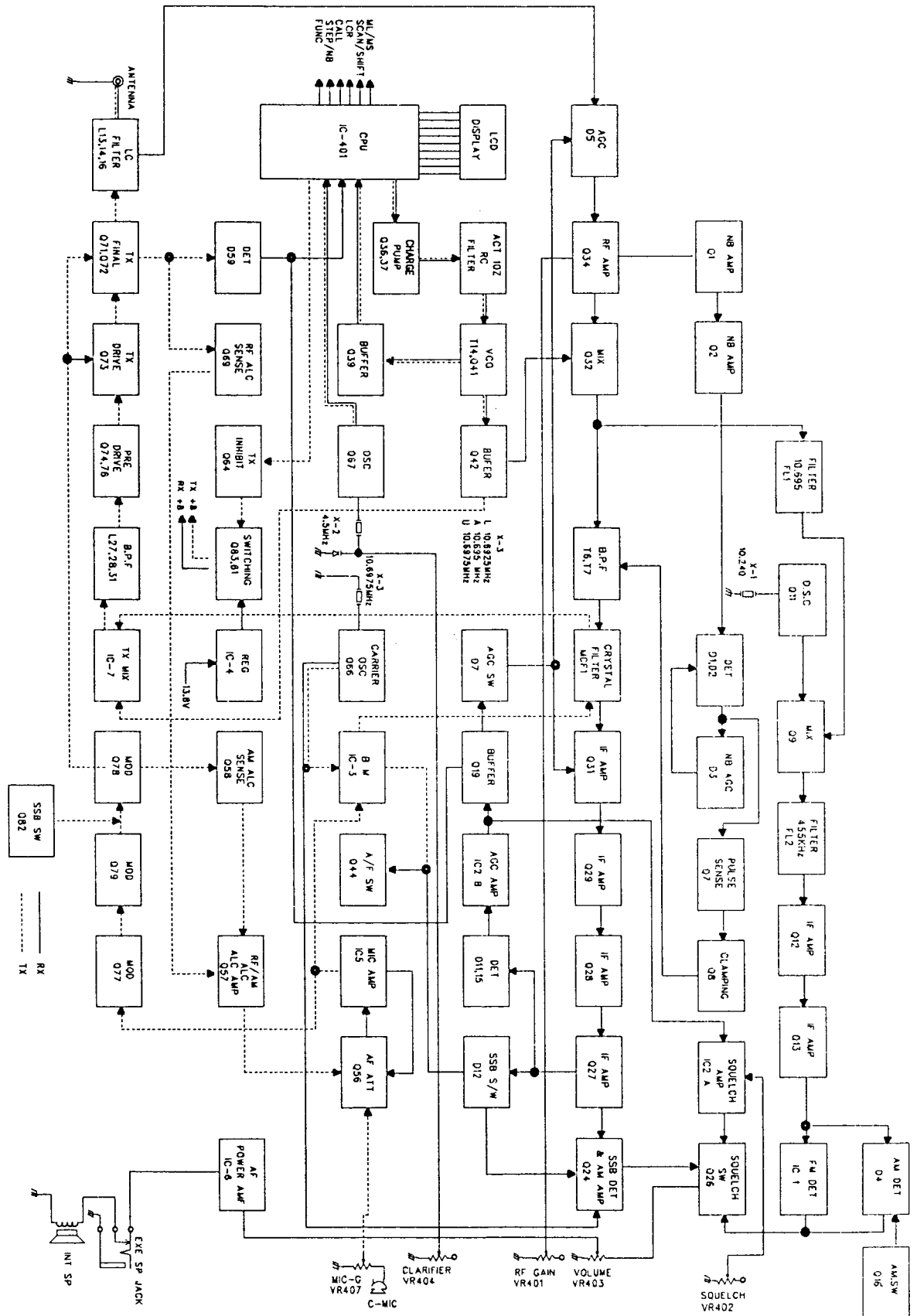
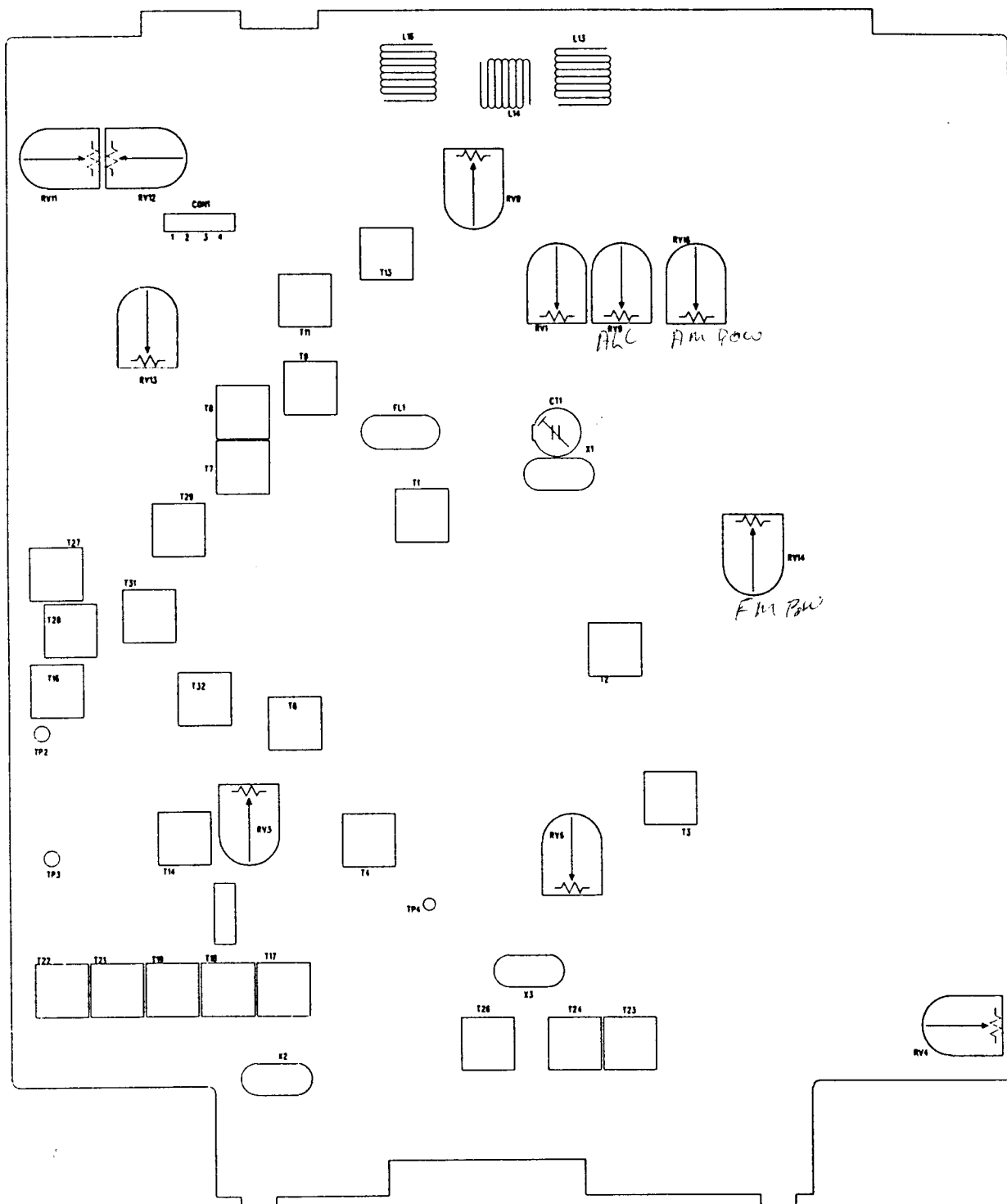


Figure 4

BLOCK DIAGRAM



ALIGNMENT AND ADJUSTMENT



Alignment Parts Locations

PLL Selection

■ Test Equipment Required:

- Oscilloscope (DC-50 MHz)
- Frequency Counter (0-30 MHz)
- DC Power Supply
- DC Voltmeter

■ Test Equipment Connection

FREQUENCY COUNTER

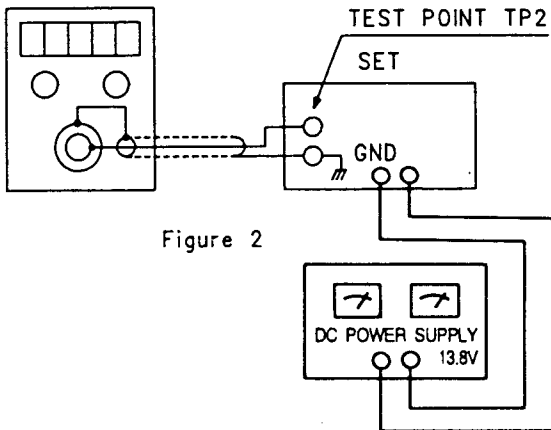


Figure 2

TEST POINT TP3 DC VOLTMETER

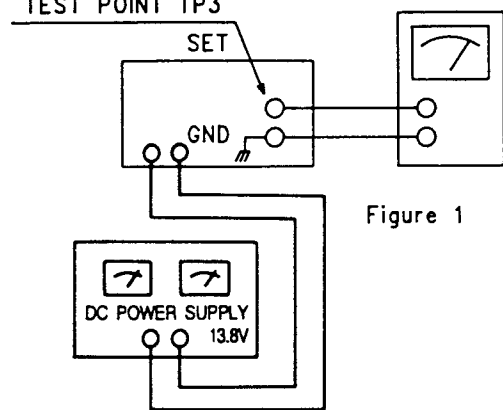


Figure 1

FREQUENCY COUNTER

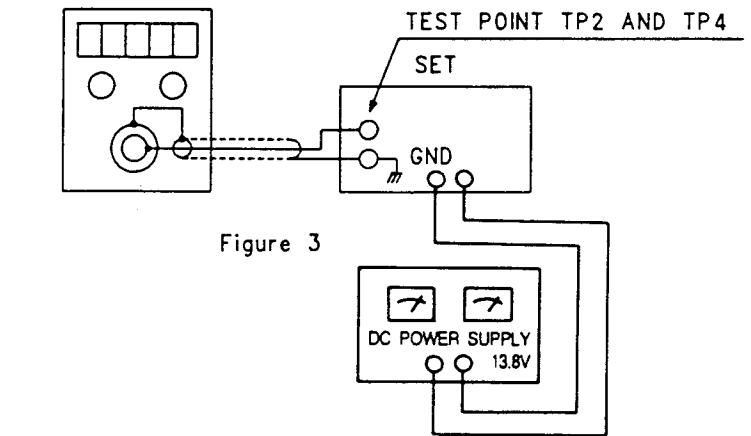


Figure 3

Alignment Procedure

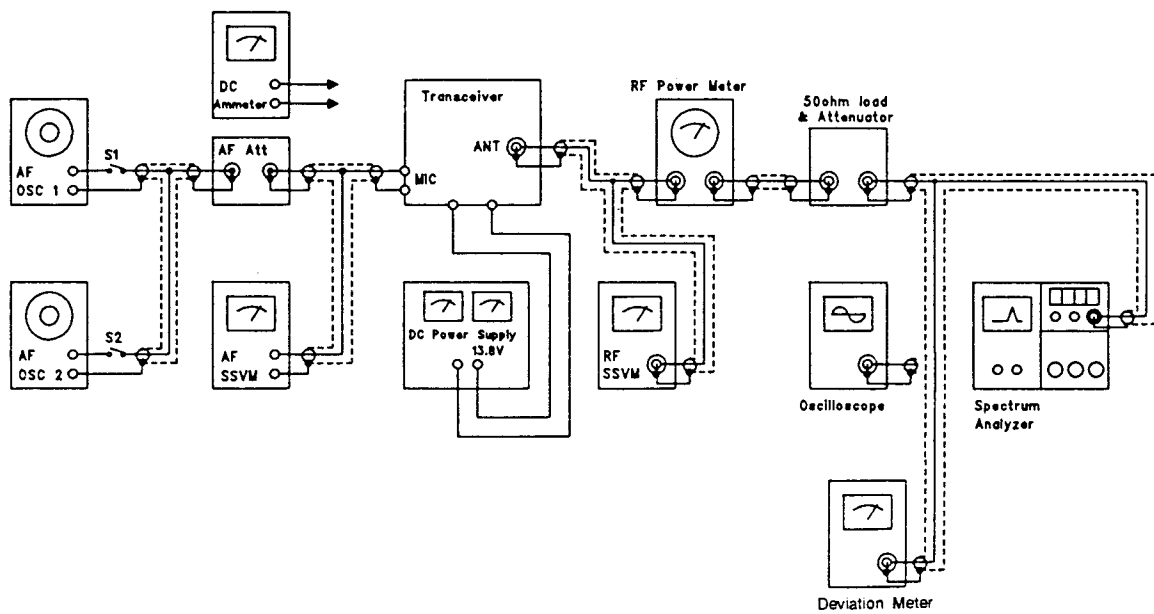
Step	Preset to	Connection	Adjustment
1	Frequency: 28.000MHz AM, RX Clarifier in Center	TP3 Figure1	Adjust T14 for 4V DC reading on DC Voltmeter.
2	Same as step 1. Frequency: 29.699MHz	TP3 Figure1	Check that the voltage is more than 6.5V DC on DC Voltmeter.
3	Same as step 1. Frequency: 28.000 MHz 28.001 MHz 28.002 MHz 28.003 MHz 28.004 MHz	TP2 Figure2	Adjust T17 for 38.695 MHz ± 20 Hz. Adjust T18 for 38.696 MHz ± 20 Hz. Adjust T19 for 38.697 MHz ± 20 Hz. Adjust T21 for 38.698 MHz ± 20 Hz. Adjust T22 for 38.699 MHz ± 20 Hz.
4	Same as step 1. Frequency: 28.000 MHz LSB, RX	TP4 Figure3	Adjust T24 for 10.6925 MHz ± 20 Hz.
5	Same as step 1. Frequency: 28.000 MHz USB, RX	TP4 Figure3	Adjust T26 for 10.6975 MHz ± 20 Hz.
6	Same as step 1. Frequency: 28.000 MHz TX, AM Disconnect MINI JUMPER 1,2 and 3,4 (CON1)	TP4 Figure3	Adjust T23 for 10.6950 MHz ± 5 Hz.

Transmitter Section

■ Equipment Required

- AF Oscillator (two required)
- AF SSVM (Full scale: 1V DC with RF probe)
- DC Ampere meter
- RF Power Meter
- 50 ohm load and Attenuator
- Oscilloscope
- RF SSVM
- Monitor Receiver or Spectrum Analyzer
- DC Power Supply (13.8V / 10Amp.)
- Deviation meter

■ Test Equipment Connection



Alignment Procedure

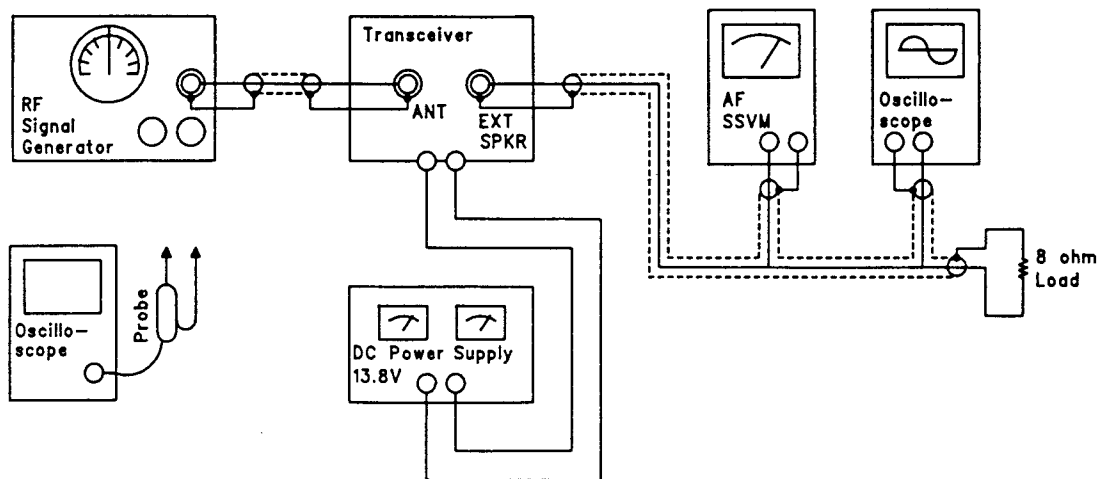
Step	Preset to	Adjustment	Procedure
1	Frequency : 28.000 MHz MODE : TX, USB MOD. : NO MOD. S1 and S2 : OFF	RV13	Break circuit at two mini jumpers. Place DC mA meter in series at (CON1) pin No.2(+LEAD) and pin No.1(-LEAD) and Adjust for 70mA with RV13. (See page 8 alignment parts locations to find mini jumper location ; con1)
2	Same as Step 1.	RV11 RV12	Place DC mA meter in series at (CON1) No.4(+LEAD) and pin No.3 (-LEAD). Set RV12 to counter clock wise maximum position. Adjust for 60 mA.with RV11 and 120mA with RV12.
After steps 1 and 2, restore two mini jumpers.			
3	Same as step 1. OSC1 : 500 Hz OSC2 : 2400 Hz S1,S2 : ON MODE : TX,LSB	T27,28,16, 29,31and T32	Set RV9 to full clockwise rotation (ALC"off"condition). Keep the AF ATT for approx. 28V reading on RF SSVM. Then adjust coils for max reading. Repeat this adjustment several times and reducing the AF input level to the microphone circuit for each adjustment.
4	Same as step 3	T27,28 and T16	Adjust Coils for max. reading on RF SSVM. Check the power difference between 28.000 and 29.699 MHz. If it is over 2V on RF SSVM,readjust coils to obtain within 2V.
5	Same as step 3 OSC1 : 1 KHz S1: ON, S2: OFF	RV9	Adjust oscillator 1 for 5mV reading on AF SSVM, then adjust RV9 for 35V reading on RF SSVM.
6	AM mode S1, S2 : OFF	RV16	Adjust for 7.0W reading on RF Power meter.
7	MODE : FM, TX S1, S2 : OFF	RV14	Adjust for 25 watts reading on RF power meter
8	Same as step AM MODE S1, S2: OFF	RV8	Adjust RV8 so that 5 full bar light on the Transceiver meter.
9	Same as step 5	RV4	Adjust output of oscillator 1 for 200mV reading on AF SSVM, then adjust RV4 for 90 to 95% modulation on Scope.
10	MODE : FM	RV3	Adjust output of oscillator 1 for 200mV reading on AF SSVM, then adjust RV3 for 2KHz deviation on deviation meter

Receiver Section

■ Equipment Required:

- RF Signal Generator (27 MHz Band, 50 ohm output impedance)
- AF SSVM
- Oscilloscope
- DC Power Supply
- 8 ohm load

■ Test Equipment Connection



Alignment Procedure

Note: SG = Signal Generator

Step	Preset to	Adjustment	Procedure
1	Frequency : 29.300 MHz Clarifier : center Volume : fully clockwise RF GAIN : fully clockwise Squelch : fully counter-clockwise NB : off Mode : AM		Set the SG on channel 28.8000 MHz with 1 kHz, 30% modulation.
2	Same as Step 1. MODE: USB, LSB MOD: OFF (SSG)	T13,11,9,6, 7,4	Adjust T13, T11, T9, T7, T6, T4 for max. reading on AF SSVM. Check the sensitivity difference between 28.800MHz and 29.699MHz. If it is over 1 dB, re-adjust T13, T11, T9, T7, T6, T4 to obtain within 1dB.
3	Same as step 1. MODE: AM MOD: 30% (SSG)	T1, 2 CT1	Adjust the level of SG to obtain 2V reading on AF SSVM. Then adjust coils for maximum reading on AF SSVM. Repeat this step reducing the SG output.
4	Same as step 1 MODE: FM MOD: 1K (SSG)	T3	Adjust T3 maximum reading on AF SSVM.
5	Same as step 1 except squelch Squelch : fully clockwise.	RV402	Set the level of SG to 1000uV. Then adjust RV402 so that the AF signal just appear on Oscilloscope
6	Same as step 1.	RV1	Set the level of SG to 100uV. Then adjust RV1 for "S-9" reading on Transceiver meter.

TROUBLESHOOTING

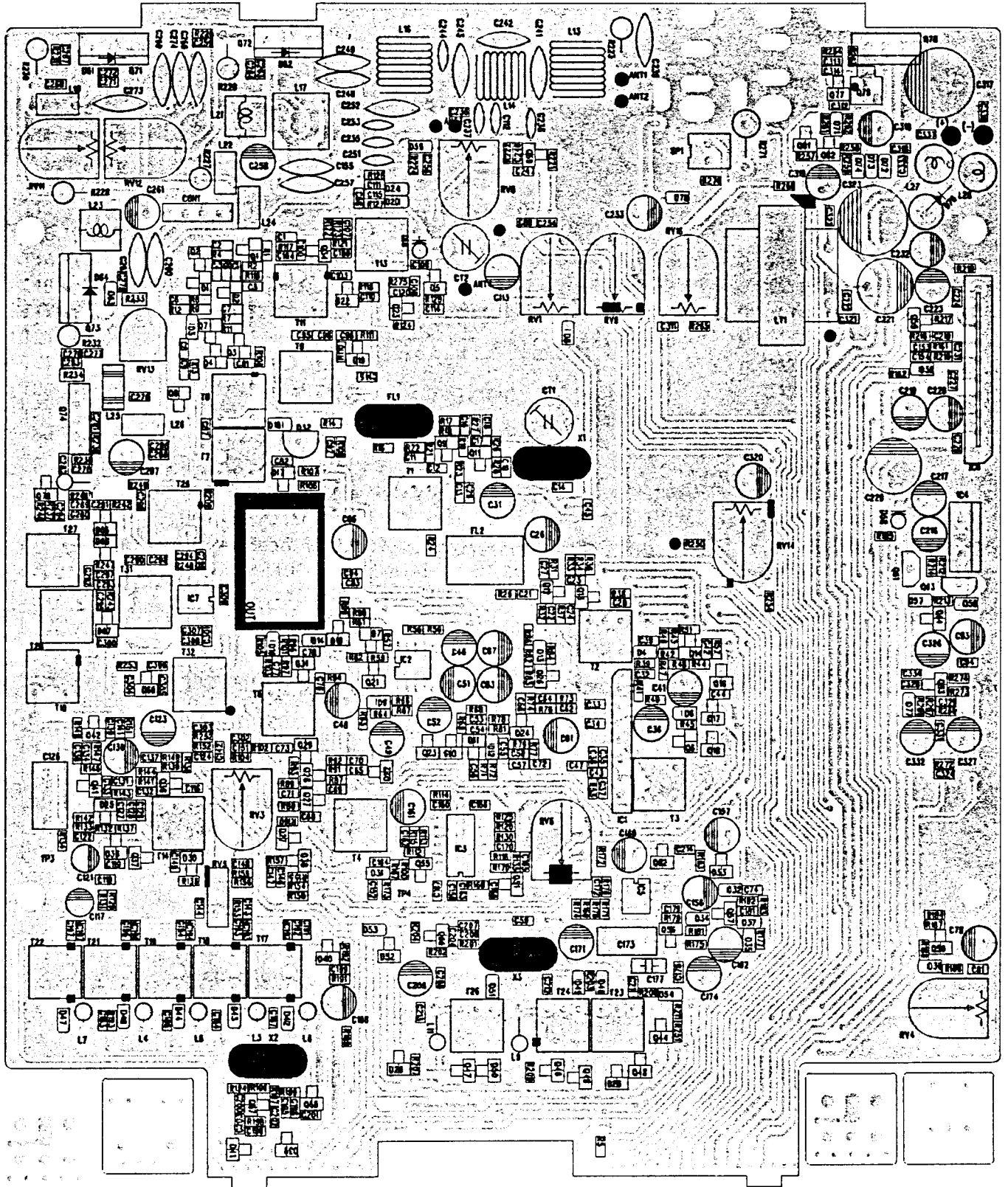
Symptom	Cause and Remedy
Unit Will Not Turn On	<ul style="list-style-type: none"> • Broken/defective DC Power Card • Blown fuse. Be sure you check for the cause. • Defective power switch. • Defective wires or poor soldering in power supply circuit.
No Sound Received:	<ul style="list-style-type: none"> • Defective RF circuit in receiver • Defective noise blanker • Defective audio power IC, IC6 Check Voltage at pin 10 of IC6; if approximately 6V, problem is not with this IC • Squelch is "ON" all the time. If voltage at Base of Q26 is approx 0V with Squelch Control is set to fully counterclockwise position, problem is not in with squelch circuit. Defective Q26 • Check whether the transceiver signal strength meter indicates S9 when a signal (28.800 MHz carrier with 1 kHz, 30% modulation, 100uV level) is supplied to antenna (The meter indication would be as following A and B) A) The meter indicates "S-9". You can assume that antenna through IF stage is OK. No AM.... Checks should be made on Detector (D4) ANL circuit (Q14), Q26 and AF stage (VR402 and IC6). No SSB But AM OK.... Check frequency and level on emitter of Q66. If no signal, checking should be made on X-tals and Q66 No SSB... Checking should be made on Detector Q24, Q26 and AF stage, VR402 and IC6. B) No deflecting of meter. Checking should be made on RF stage Q34 and Q32, IF stage Q31, Q29, Q28 and AGC circuit D11, D15, IC2B. If not, then problem is in PLL circuit. Check frequency on TP2 whether it is listed as in the table (Page 9, Alignment procedure, step4) <ul style="list-style-type: none"> • Defective AGC circuit. • Defective PLL circuit. • Defective antenna connector.
No Noise	<ul style="list-style-type: none"> • Broken or bad contact in microphone connector or push-to-talk switch. • Defective RX power circuit. • Defective RX audio circuit. • Defective PLL circuit. • Defective squelch circuit • Defective PA-CB switch.

Symptom	Cause and Remedy
No Transmission	<ul style="list-style-type: none"> • Broken or bad contact in microphone connector or push-to-talk switch. • Broken or bad contact in antenna connector. • Defect in power supply. • Defect in PLL or Carrier Oscillator (Improper adjustment). • Inoperative microphone amplifier or balance modulator in SSB mode. • Check the frequency at emitter of Q66. If no carrier, check Q66, D48, 49, D51 and X3. • Carrier is OK, but no TX; check the frequency at TP3. If not same as listed in Frequency Table, PLL circuit is defective. If OK, check IC3, Q55, Q64 and Q61. • If no TX on SSB modes and no modulation on AM mode, Mic amplifier or ALC/AMC section is defective. Check Q56, 57, 58 and Q69
No Modulation	<ul style="list-style-type: none"> • Defective microphone. • Defective microphone connector. • Inoperative microphone amplifier (on both AM, FM and SSB modes.)
No Noise Blanker Operation	<ul style="list-style-type: none"> • With NB Switch ON, supply a 28.800MHz carrier signal to antenna and check DC voltage at Q7 base as varying the carrier signal from 1uV to 100uV. • Defective IC401, NB switch (SW407): Check pin 8, 29, 33 of IC401 • Defective noise-blanker circuit: Check Q1, 2, 3, 4, 7, 8 and D1, D2, D3
No Scan	<ul style="list-style-type: none"> • Defective IC401, SCAN switch (SW409): Check pin 31, 29, 32 of IC401 • Defective scan circuit: Check VR402, IC2A
No LCD Display	<ul style="list-style-type: none"> • Defective IC401, LCD, 4.5MHz oscillator: Check Q67, Q406, Q414, Q413, IC402 and pin 35~65, 18, 19 of IC401

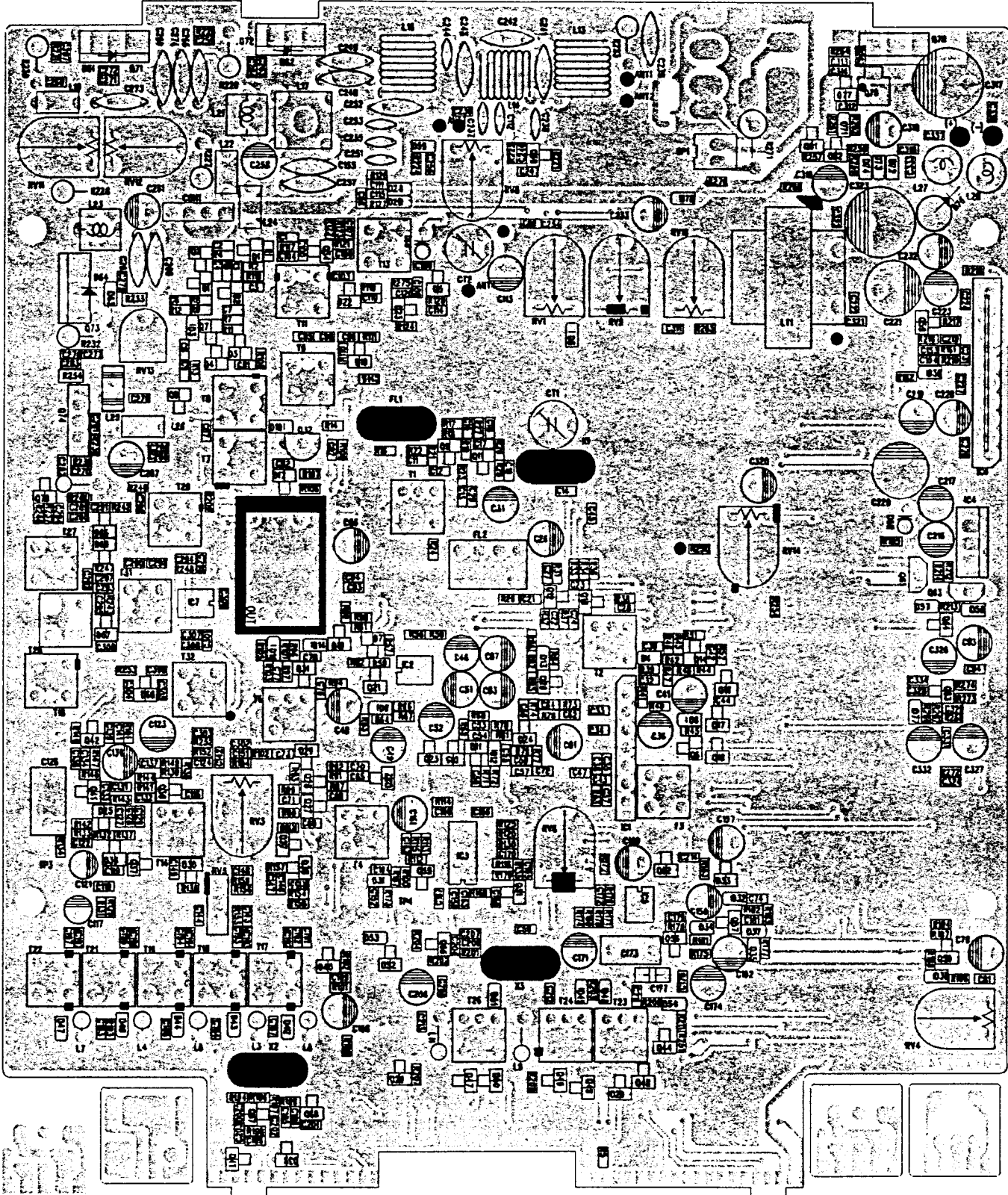
Note : For remedy, replace or repair the defective circuits or component(s).

PRINTED CIRCUIT BOARDS

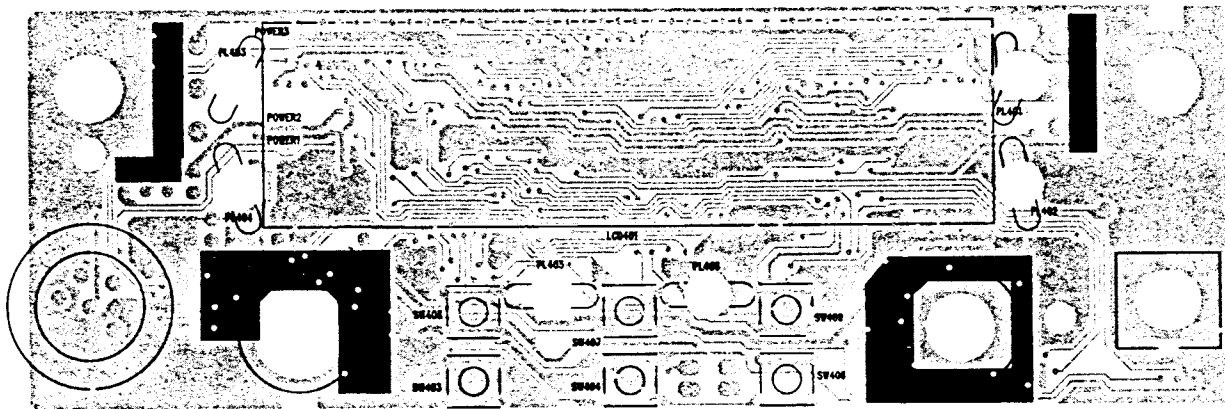
Main PCB (Top View)



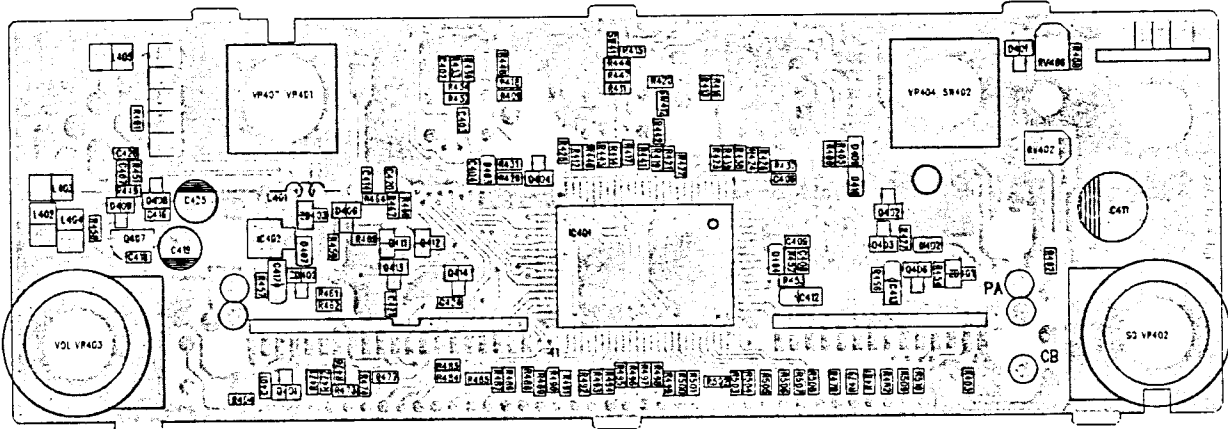
Main PCB (Bottom View)



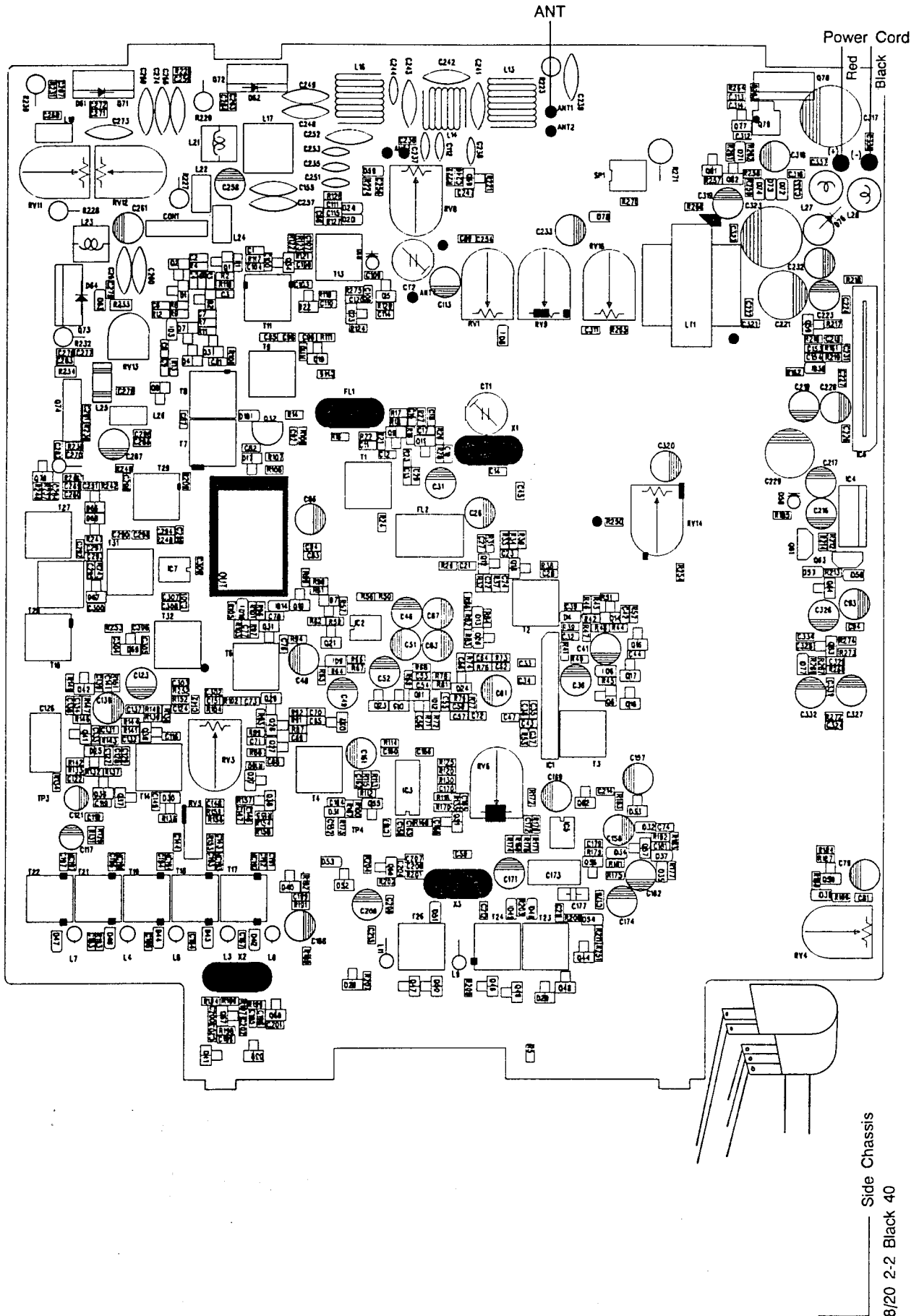
Control PCB (Top View)



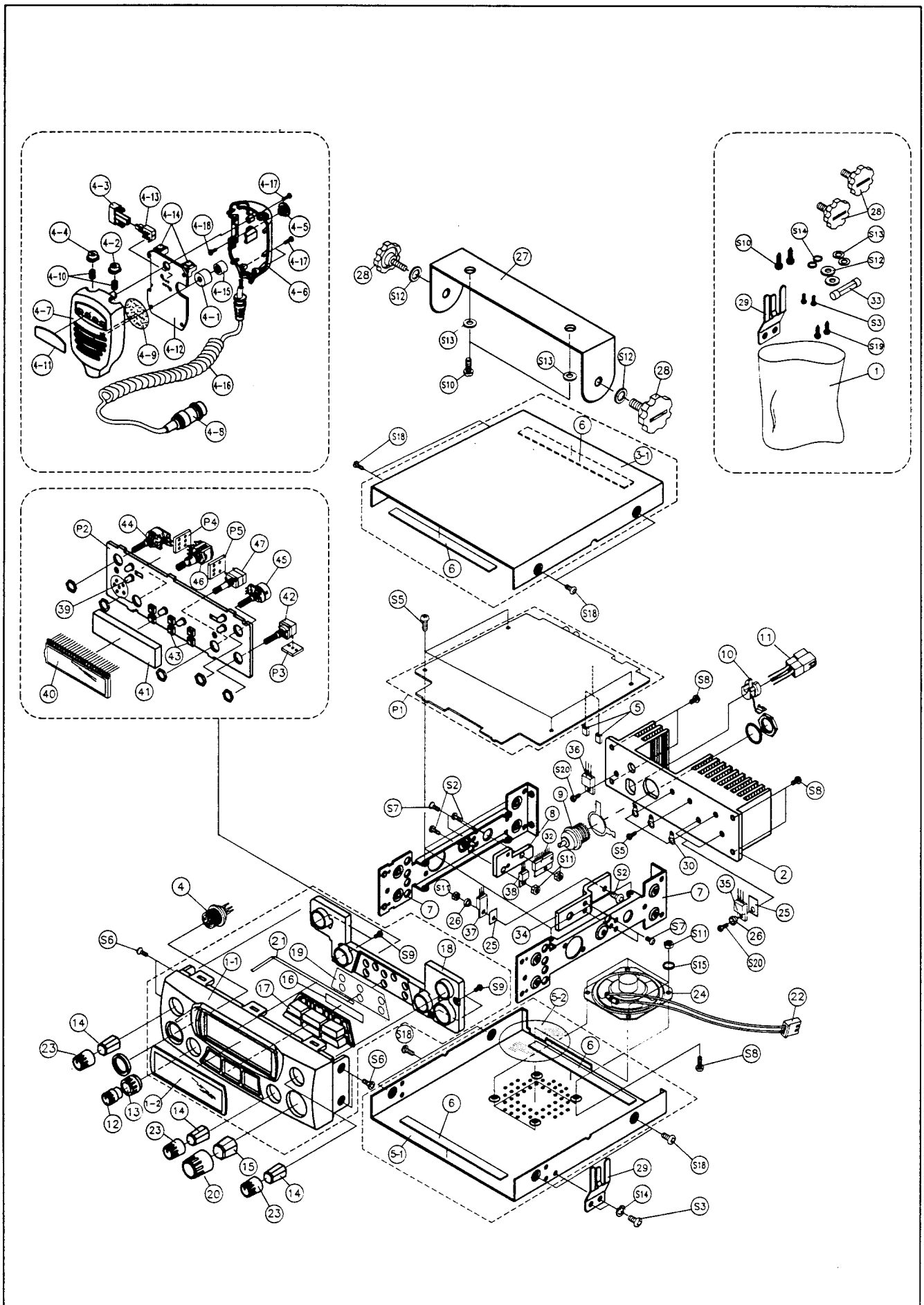
Control PCB (Bottom View)



WIRING DIAGRAM



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

Ref. No.	Description	Mfr's Part No.
ASS'Y-Panel, Front		GAF0HTX10
1-1	Panel, Front (Black), HTX-10/RadioShack	GAF09401B
1-2	Window, LCD HTX-10/RadioShack	GELCO3900
16	Sticker, Function Knob, 45x4x0.1t (Black)	GEKF001XX
17	Knob, Function HTX-10/RadioShack	GKFS485HY
18	Illumination, PC Milky(TRC-485)	GFIX001XX
19	Light, Cover Sheet, PVC 0.3t, Black (TRC-485)	GPRV001XX
21	Shield Plate (Bezel); 120x3x0.2t	GPHDHTXXX
S9	Screw, Pan Head, T/S-2S, 2x5(Zn)Y	GSPT2Z109
ASS'Y-Cover, Top		GVPHHTX10
3-1	Cover, Top, HTX-10(Black)	GVPHTX10Y
6	Felt, Cover, 8x125x1t	GOFC8X125
ASS'Y-Cover, Bottom		GVMHHTX10
5-1	Cover, Bottom, HTX-10(Black)	GVMHTX10Y
5-2	Felt, Speaker, 80piex0.3t	GOF80X03
6	Felt, Cover, 8x125x1t	GOFC8X125
22	Wire, Harness(H), 2P, 120(2), 2-C	GWHA0212A
24	Speaker, PS-7711	JOPS7711X
S8	Screw, Bind Head, M3x6(Black/N-Cotting)	GSBM0BX06
S11	Nut, Hex M3(Zn)	GSNHOZX12
S15	Washer, Spring, M3(Zn)	GSWSOZX21
Hardware Kit		GHARHTX10
S2	Screw, Bind Head, M3x10(Zn)	GSBMOZX39
S5	Screw, Bind Head, T/S-2S, 3x6(Zn)	GSBT2ZX06
S6	Screw, Flat Head, M3x5(Zn)	GSFMOZX57
S7	Flat, Head, T/S-2S, 3x6(Zn)	GSFT2ZX22
S8	Screw, Bind Head, M3x6(Black/N-Cotting)	GSBMOBX06
S9	Screw, Pan Head, T/S-2S, 2x5(Zn)Y	GSPT2Z109
S18	Screw, Tap Tight, BH 3x6(Black/N-Cotting)	GSABB0301
S20	Bind Head, T/S-2S, 3x8(Zn)	GSBT2ZX87
4-17	Screw, Pan Head, T/S-2S, 2.3x8(Black)	GSPT2B208
4-18	Screw, Pan Head, T/S-2S, 3x6(Zn)	GSPT2ZX42
Parts Individual		
P1	ASS'Y, PCB, Main	JPMXHTX10
P2	ASS'Y, PCB, Front	JPFXHTX10
P3	ASS'Y, PCB, Channel	JPSCH0005
P4	ASS'Y, PCB, MIC-G, RF-G	JPSMA0008
P5	ASS'Y, PCB, Fine	JPSF10003
4	Socket, Mic, SIn-16-6(R/S3), W/NUT Ring	GNS166RS3
5	Jumper, Mini, 2.54mm	GWJM2.54X
12	Knob, In, SS-485(SF Black)	GKISS485Y
13	Knob, Out, SS-485(SF Black)	GKOSS485Y
14	Knob, VR Shaft, AE-4200N(Black)	GKV4200LX

15	Shaft, CH Knob, AE-5000(ABS Black)	GKC5000XX
20	CAP, Channel Knob, SI-Rubber(TRC-485) Black	GOKC001XX
23	CAP, Volume Knob, TRC-485, SI-Rubber(Black)	GOKV001XX
39	Pilot Lamp 3pie 30mA 10V	JL3X30X10
40	LCD KXN27730DAP	JLCK27730
41	LCD, Housing, TRC-485	GELH00601
42	Switch, Channel, YPS2101, 20SK, W/NUT	JSC2101XX
43	Tact, DT-1102	JST1105XX
44	SW/Single Round, CSPNS-1624B/20mm, 50KA, W/NUT	JV150KAPB
	Single Round, 161HB-20SK-B50K, W/NUT	
45	Volume, Double Round, 3B100K/15A5K, W/NUT	JV1250KBX
46	VR(Push SW), Single Round, TPHR1 20KC-3B 10K,	JV23B100X
47	W/NUT	JV120KCXX
ASS'Y-Heat Sink, Back		GCHBHTX10
2	Heat Sink, Back, HTX-10(AL6063-75)	GCHBHTXXX
9	ANT, Connector, CH-239(SIN)	GNCAC239X
	(W/NUT) Spring, Washer, Terminal	
10	Cord, Stopper, SR-4P-4	GOMSR4P4X
11	DC, Power Cord(A), SY-550 Mail	GWPSY550X
25	T.R, Mica Sheet, SIL-Pad, 900-S	GOGTSILXX
26	TR, Insulation Bushing, OD6.0xMD3.5xD3.2x2.3t	GOHS6X3X3
30	Terminal LUG, 3pie	GOT03PIEX
35	Transistor, 2SCI969, 2312	JTC1969XX
36	Transistor, KTB778	JTKT778XX
S5	Bind Head, T/S-2S, 3x6(Zn)	GSBT2ZX06
S20	Bind Head, T/S-2S, 3x8(Zn)	GSBT2ZX87
ASS'Y-Chassis, Side		GCCSHTX10
7	Chassis, Side, TRC-485(EGI 1.0t)	GCCST485X
8	I.C, Heat Sink, TRC-485(ALP 4.0t)	GCHT485IX
25	T.R, Mica Sheet, SIL-PAD, 900-S	GOGTSILXX
26	TR, Insulation Bushing, OD6.0xMD3.5xD3.2x2.3t	GOHS6X3X3
32	IC, KIA7217, 6217K	JIIA7217X
34	T.R, Heat, Sink, HAM-485	GCHKH485X
37	Transistor, 2SC2166	JTC2166XX
38	IC, KIA78081A, 7808	JIL78081X
S2	Bind, Head, Screw, M3x10(Zn)	GSBMOZX39
S7	Flat, Head, T/S-2S, 3x6(Zn)	GSFT2ZX22
S11	Nut, Hex, M3(Zn)	GSNHOZX12
Installation Kit		GINSHTX10
27	B.K.T, Mounting, CB-240AF(Black)	GDMB240AY
28	Screw, Mounting, M4x8(Black)	GSMSO4X8L
29	Hanger, MIC, All Model(Ni)	GMHALLMOD
33	Fuse, 250V, 10A(6PieX30L)	JZF250V17
S3	Screw, Bind Head, T/S-2S, 3x6(N-Cotting/Black)	GSBT2BX05
S10	Screw, Truss Head, T/S-1, 5x12(N-Cotting/Black)	GSTT1BX18
S12	Washer, Rubber, OD15xD5.0x2t	GSWRO5X15
S13	Washer, Flat, OD12xD5.2x0.5t(Black)	GSWFOBX18
S14	Washer, Spring, M3(Black)	GSWSOBX19
S19	Screw, Bind Head, T/S-1S, 3x10(Ni)	GSBT1NX20

ASS'Y-Microphone		JPAMHTX10
4-1	Holder, CON MIC, Rubber(PRO-200)	GCOICONRU
4-2	Knob, MIC Down, HTX-10(Light Gray)	GMKDS550A
4-3	Button, Push Memory, 8012(ABS Black)	GMKKM8012
4-4	Knob, MIC UP, HTX-10(Light Gray)	GMKUS550A
4-5	Hanger, Back, 0.75g(Black)(UL94HB)	GMT075GBK
4-6	Cover, MIC Back, SY-550(ABS Black)	GMVBS550X
4-7	Cover, MIC Front, SY-550(ABS Black)	GMVFS550X
4-8	Plug, MIC, N-16-6(P)	GNP166PXX
4-9	Felt, Speaker, 35.5pie x 0.15t	GOF355PX
4-10	Spring, Knob, STS304 0.2t	GRKX001XX
4-11	Plate, MIC, HTX-10/RadioShack	GPM041XXX
4-12	ASS'Y, PCB, Microphone	JPSMHTX10
4-13	Switch, Push, DP-2251N	JSP2262NX
4-14	Switch, Tack, DT-1104A	JST1236XX
4-15	MIC, Condenser, JS-80C(9.7pie)	JZDJS80CS
4-16	Cord, MIC 5C-1S(Black), KSK-56002 300mm/S:7mm	JZM5C1SBX
4-17	Screw, Pan Head, T/S-2S, 2.3x8(Black)	GSPT2B208
4-18	Screw, Pan Head, T/S-2S, 3x6(Zn)	GSPT2ZX42

ELECTRICAL PARTS LIST

Ref. No	Description	Mfr's Part No.
P1	ASS'Y, PCB, MAIN	JPMXHTX10
Coils		
T1	IFT, ST404 7mm	JA404X7XX
T2	IFT, ST405 7mm	JA405X7XX
T3	IFT, ST435 7mm	JA435X7XX
T4	IFT, ST711A 7mm	JA711A7XX
T6	IFT, ST710 7mm	JA710X7XX
T7-8	IFT, ST706 7mm	JA706X7XX
T9	IFT, ST704B 7mm	JA704B7XX
T11	IFT, ST704B 7mm	JA704B7XX
T13	IFT, ST703M 7mm	JA703M7XX
T14	IFT, ST4304 7mm	JA43047XX
T16	IFT, LB344D 7mm	JALB344DX
T17-19	IFT, ST745 7mm	JA745X7XX
T21-22	IFT, ST745 7mm	JA745X7XX
T23-24	IFT, ST718 7mm	JA718X7XX
T26	IFT, ST718M 7mm	JA718M7XX
T27	IFT, ST735B 7mm	JA735B7XX
T28	IFT, ST735M 7mm	JA735M7XX
T29	IFT, ST706 7mm	JA706X7XX
T31	IFT, ST735M 7mm	JA735M7XX
T32	IFT, ST703M 7mm	JA703M7XX
L1	Core, Bead, BF03	JBOBBF03X
L3	Inductor, 100uH(LAL04NA)	JBII101KX
L4	Inductor, 470uH(LAL04NA)	JBII471XX
L6-9	Inductor, 470uH(LAL04NA)	JBII471XX
L11	Inductor, 470uH(LAL04NA)	JBII471XX
L13	Spring, ST096(0.8x6.0x8.5t)	JBIS096XX
L14	Spring, RF-103-B(0.8x6.0x6.5t)	JBISR103B
L16	Spring, RF-103-B(0.8x6.0x6.5t)	JBISR103B
L17	Spring, (B/F, Winding)	JBIS08653
L18	Inductor, 0.47uH(LAL02NA)	JBII471XX
L19-20	Core, Bead, BF03	JBOBBF03X
L22	Core, Bead, BF03	JBOBBF03X
L23	Spring, LE-215(0.8x3.0x4t)	JBISLE215
L24	Core, Bead, BF03	JBOBBF03X
L25	Ring, Core	JBORCCXXX
L26	Core, Bead, BF03	JBOBBF03X
Capacitors		
C1	Ceramic(1608), 1.5P, 50V, CG, +/-0.25pF(Chip)	JCH1R5CCC
C2	Ceramic(1608), 220P, 50V, CG, +/-5%(Chip)	JCH221CJC
C3	Ceramic(1608), 0.022uF, 50V, B, +/-10%(Chip)	JCH223BKC
C4	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C6	Ceramic(1608), 0.0033uF, 50V, B, +/-10%(Chip)	JCH332BKC
C7	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C8	Ceramic(1608), 0.022uF, 50V, B, +/-10%(Chip)	JCH223BKC
C9	Ceramic(1608), 82P,50V, CG, +/-5%(Chip)	JCH820CJC

Ref. No.	Description	Mfr's Part No.
C11	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C13	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C14	Ceramic(1608), 5P, 50V, CG, +/-0.25pF(Chip)	JCH050CCC
C16	Ceramic(1608), 2P, 50V, CG, +/-0.25pF(Chip)	JCH020CCC
C17	Ceramic(1608), 470P, 50V, CG, +/-5%(Chip)	JCH471CJC
C18	Ceramic(1608), 100P, 50V, CG, +/-5%(Chip)	JCH101CJC
C19	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C21	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C22	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C23	Ceramic(1608), 0.001uF, 50V, B, +/-10%(Chip)	JCH102BKC
C24	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C26	Eelect, 50V, 5x11, 3.3uF, +/-20%	JCEFA3R3X
C27	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C28-29	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C31	Elect, 16V, 5x11, 22uF, +/-20%	JCECA22XX
C32	Ceramic(1608), 39P, 50V, CG, +/-5%(Chip)	JCH390CJC
C33	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C34	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C36	Elect, 16V, 5x11, 47uF, +/-20%	JCECB47XX
C37	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C38	Ceramic(1608), 15P, 50V, CG, +/-5%(Chip)	JCH150CJC
C39	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C41	Elect, 50V, 5x11, 1uF, +/-20%	JCEFA1XXX
C42-43	Ceramic(1608), 0.022uF, 50V, B, +/-10%(Chip)	JCH223BKC
C44	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C45	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C46	Elect, 50V 5x11 4.7uF, +/-20%	JCEFA4R7X
C47	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C48	Elect, 50V, 5x11, 2.2uF, +/-20%	JCEFA2R2X
C49	Elect, 16V, 5x11, 47uF, +/-20%	JCECB47XX
C51	Elect, 50V, 5x11, 0.47uF, +/-20%	JCEFAR47X
C53	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C54	Ceramic(1608), 220P, 50V, CG, +/-5%(Chip)	JCH221CJC
C55	Ceramic(1608), 56P, 50V, CG, +/-5%(Chip)	JCH560CJC
C56	Ceramic(1608), 10P, 50V, CG, +/-0.25%(Chip)	JCH100CCC
C57	Ceramic(1608), 47P, 50V, CG, +/-5%(Chip)	JCH470CJC
C58	Ceramic(1608), 0.001uF, 50V, B, +/-10%(Chip)	JCH102BKC
C59	Ceramic(1608), 100P, 50V, CG, +/-5%(Chip)	JCH101CJC
C61	Elect, 16V, 5x11, 47uF, +/-20%	JCECB47XX
C62	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C63	Elect, 16V, 5x11, 22uF, +/-20%	JCECA22XX
C64	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C65	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C66	Ceramic(1608), 0.001uF, 50V, B, +/-10%(Chip)	JCH102BKC
C67	Elect, 50V, 5x11, 4.7uF, +/-20%	JCEFA4R7X
C68-69	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C70	Ceramic(1608), 0.1uF, 25V, B, +/-10%(Chip)	JCH104BKC
C71-72	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C73	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C74	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C76-77	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C78	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC

Ref. No.	Description	Mfr's Part No.
C79	Elect, 16V, 5x11, 47uF, +/-20%	JCECB47XX
C81	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C82-83	Ceramic(1608), 0.0047uF, B, +/-10%(Chip)	JCH472BKC
C84	Ceramic(1608), 0.022uF, 50V, B, +/-10%(Chip)	JCH223BKC
C86	Elect, 16V, 5x11, 10uF, +/-20%	JCECA10XX
C87	Ceramic(1608), 3P, 50V, CG, +/-0.25%(Chip)	JCH030CCC
C88-89	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C91	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C92	Ceramic(1608), 0.001uF, 50V, B, +/-10%(Chip)	JCH102BKC
C93	Elect, 16V, 5x11, 10uF, +/-20%	JCECA10XX
C94	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C95	Ceramic(1608), 10P, 50V, CG, +/-0.25pF(Chip)	JCH100CCC
C98	Ceramic(1608), 5P, 50V, CG, +/-0.25pF(Chip)	JCH050CCC
C100	Ceramic(1608), 10P, 50V, CG, +/-0.25pF(Chip)	JCH100CCC
C104	Ceramic(1608), 0.0047uF, 50V, B, +/-10%(Chip)	JCH472BKC
C106-107	Ceramic(1608), 0.0047uF, 50V, B, +/-10%(Chip)	JCH472BKC
C108	Ceramic(1608), 100P, 50V, CG, +/-5%(Chip)	JCH820CJC
C109-111	Ceramic(1608), 0.0047uF, 50V, B, +/-10%(Chip)	JCH472BKC
C113	Elect, 16V, 5x11, 100uF, +/-20%	JCECC100X
C114-115	Ceramic(1608), 0.0047uF, 50V, B, +/-10%(Chip)	JCH472BKC
C116	Ceramic(1608), 100P, 50V, CG, +/-5%(Chip)	JCH101CJC
C117	Elect, 50V, 5x11, 2.2uF, +/-20%	JCEFA2R2X
C118	Ceramic(1608), 0.001uF, 50V, B, +/-10%(Chip)	JCH102BKC
C119	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C121	Elect, 50V, 5x11, 1uF, +/-20%	JCEFA1XXX
C122	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C123	Elect, 16V, 5x11, 100uF, +/-20%	JCECC100X
C124	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C126	Mylar*, 0.068uF, 50V, +/-10%(Small)	JCMU068XX
C128	Ceramic(1608), 68P, 50V, CG, +/-5%(Chip)	JCH680CJC
C129	Ceramic(1608), 5P, 50V, CG, +/-0.25%(Chip)	JCH050CCC
C131	Ceramic(1608), 1.5P, 50V, CG, +/-0.25%(Chip)	JCH1R5CCC
C132	Ceramic(1608), 47P, 50V, CG, +/-5%(Chip)	JCH470CJC
C133	Ceramic(1608), 270P, 50V, CG, +/-5%(Chip)	JCH271CJC
C134	Ceramic(1608), 100P, 50V, CG, +/-5%(Chip)	JCH101CJC
C136	Elect, 16V, 5x11, 100uF, +/-20%	JCECC100X
C137	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C138	Ceramic(1608), 3P, 50V, CG, +/-0.25pF(Chip)	JCH030CCC
C139	Ceramic(1608), 10P, 50V, CG, +/-0.25pF(Chip)	JCH100CCC
C141-143	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C144	Ceramic(1608), 0.022uF, 50V, B, +/-10%(Chip)	JCH223BKC
C145	Ceramic(1608), 0.0047uF, 50V, B, +/-10%(Chip)	JCH472BKC
C146	Ceramic(1608), 0.1uF, 25V, B, +/-10%(Chip)	JCH104BKC
C147	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C148	Ceramic(1608), 0.068uF, 25V, B, +/-10%(Chip)	JCH683BKC
C149	Ceramic(1608), 15P, 50V, CG, +/-5%(Chip)	JCH150CJC
C151-152	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C153	Ceramic(1608), 0.022uF, 50V, B, +/-10%(Chip)	JCH223BKC
C154	Ceramic(1608), 0.0047uF, 50V, B, +/-10%(Chip)	JCH472BKC
C155	Ceramic, 0.1uF, 50V, +80, -20%(Disk)	JCC104FZD
C156	Elect, 16V, 5x11, 100uF, +/-20%	JCECC100X

* Mylar is a registered trademark of E. I. DuPont de Nemours and company.

Ref. No.	Description	Mfr's Part No.
C157	Elect, 50V, 5x11, 1uF, +/-20%	JCEFA1XXX
C159	Ceramic(1608), 8P, 50V, CG, +/-0.25pF(Chip)	JCH080CCC
C160	Ceramic(1608), 0.1uF, 25V, B, +/-10%(Chip)	JCH104BKC
C161	Elect, 16V, 5x11, 47uF, +/-20%	JCECB47XX
C162	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C163	Ceramic(1608), 0.1uF, 25V, B, +/-10%(Chip)	JCH104BKC
C164	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C165-166	Ceramic(1608), 0.1uF, 25V, B, +/-10%(Chip)	JCH104BKC
C167	Ceramic(1608), 100P, CG, +/-5%(Chip)	JCH101CJC
C168	Ceramic(1608), 0.1uF, 25V, B, +/-10%(Chip)	JCH104BKC
C169	Elect, 50V, 5x11, 0.22uF, +/-20%	JCEFAR22X
C170	Ceramic(1608), 0.1uF, 25V, B, +/-10%(Chip)	JCH104BKC
C171	Elect, 50V, 5x11, 0.22uF, +/-20%	JCEFA1XXX
C172	Ceramic(1608), 470P, 50V, CG, +/-5%(Chip)	JCH471CJC
C173	Mylar, 0.1uF, 50V, +/-10%(Small)	JCMU0R1XX
C174	Elect, 16V, 5x11, 100uF, +/-20%	JCECC100X
C176	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C177	Mylar, 0.01uF, 50V, +/-10%(Small)	JCMU01XXX
C179	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C181	Ceramic(1608), 0.001uF, 50V, B, +/-10%(Chip)	JCH102BKC
C182	Elect, 50V, 5x11, 2.2uF, +/-20%	JCEFA2R2X
C183-184	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C186-187	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C188	Elect, 50V, 5x11, 0.1uF, +/-20%	JCEFA0R1X
C189	Ceramic(1608), 0.001uF, 50V, B, +/-10%(Chip)	JCH102BKC
C191	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C192	Ceramic(1608), 82P, 50V, CG, +/-5%(Chip)	JCH820CJC
C193	Ceramic(1608), 68P, 50V, CG, +/-5%(Chip)	JCH680CJC
C194	Ceramic(1608), 100P, 50V, CG, +/-5%(Chip)	JCH101CJC
C195	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C196	Ceramic(1608), 68P, 50V, CG, +/-5%(Chip)	JCH680CJC
C197	Ceramic(1608), 180P, 50V, CG, +/-5%(Chip)	JCH181CJC
C198	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C199	Ceramic(1608), 120P, 50V, CG, +/-5%(Chip)	JCH121CJC
C200	Ceramic(1608), 390P, 50V, CG, +/-5%(Chip)	JCH391CJC
C202	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C203	Ceramic(1608), 100P, 50V, CG, +/-5%(Chip)	JCH101CJC
C204	Ceramic(1608), 270P, 50V, CG, +/-5%(Chip)	JCH271CJC
C206	Ceramic(1608), 100P, 50V, CG, +/-5%(Chip)	JCH101CJC
C207	Ceramic(1608), 220P, 50V, CG, +/-5%(Chip)	JCH221CJC
C208	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C209	Elect, 16V, 5x11, 10uF, +/-20%	JCECA10XX
C211	Ceramic(1608), 270P, 50V, CG, +/-5%(Chip)	JCH270CJC
C212	Ceramic(1608), 68P, 50V, CG, +/-5%(Chip)	JCH680CJC
C213	Ceramic(1608), 12P, 50V, CG, +/-5%(Chip)	JCH120CJC
C214	Ceramic(1608), 0.1uF, 50V, 25V, B, +/-10%(Chip)	JCH104BKC
C216-217	Elect, 16V, 5x11, 10uF, +/-20%	JCECA10XX
C218	Elect, 16V, 5x11, 47uF, +/-20%	JCECB47XX
C219	Ceramic(1608), 0.001uF, 50V, B, +/-10%(Chip)	JCH102BKC
C221	Elect, 16V, 8x11.5, 470uF, +/-20%	JCECD470X
C222	Ceramic(1608), 0.0047uF, 50V, B, +/-10%(Chip)	JCH472BKC
C223	Elect, 50V, 5x11, 0.47uF, +/-20%	JCEFAR47X

Ref. No.	Description	Mfr's Part No.
C224	Ceramic(1608), 100P, 50V, CG, +/-5%(Chip)	JCH101CJC
C226	Ceramic(1608), 0.068uF, 25V, B, +/-10%(Chip)	JCH683BKC
C227	Ceramic(1608), 150P, 50V, CG, +/-5%(Chip)	JCH151CJC
C228	Elect, 16V, 5x11, 33uF, +/-20%	JCECA33XX
C229	Elect, 16V, 8x11.5, 470uF, +/-20%	JCECD470X
C231	Ceramic(1608), 0,022uF, 50V, B, +/-10%(Chip)	JCH222BKC
C232	Elect, 50V, 5x11.5, 4.7uF, +/-20%	JCEFA4R7X
C237	Ceramic, 1.5P, 50V, CH, +/-0.25pF(Disk)	JCC1R5CCD
C238	Ceramic, 18P, 50V, CH, +/-5%(Disk)	JCC180CJD
C239	Capacitor, Ceramic, 120P CH +/-5%(Disk)	JCC121CJD
C241	Ceramic, 150P, 50V, CH, +/-5%(Disk)	JCC151CJD
C242	Ceramic, 33P, 50V, CH, +/-5%(Disk)	JCC330CJD
C243	Ceramic, 180P, 50V, CH, +/-5%(Disk)	JCC181CJD
C244	Ceramic, 56P, 50V, CH, +/-5%(Disk)	JCC560CJD
C246	Ceramic(1608), 33P, 50V, CG, +/-5%(Chip)	JCH330CJC
C247	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C248	Ceramic, 470P, 50V, CH, +/-5%(Disk)	JCC471CJD
C249	Ceramic, 0.01uF, 50V, B, +/-10%(Disk)	JCC103BKD
C251	Ceramic, 1P, 50V, CH, +/-0.25pF(Disk)	JCC010CCD
C252	Ceramic, 470P, 50V, CH, +/-5%(Disk)	JCC471CJD
C254	Ceramic(1608), 0.022uF, 50V, B, +/-10%(Chip)	JCH223BKC
C256	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C257	Ceramic, 0.01uF, 50V, B, +/-10%(Disk)	JCC103BKD
C259	Ceramic(1608), 0,022uF, 50V, B, +/-10%(Chip)	JCH223BKC
C260	Ceramic, 0.01uF, 50V, B, +/-10%(Disk)	JCC103BKD
C261	Elect, 50V, 5x11, 2.2uF, +/-20%	JCEFA2R2X
C262	Ceramic, 0.047uF, 50V, F, +80%, -20%(Disk)	JCC473FZD
C266	Ceramic, 390P, 50V, CH, +/-5%(Disk)	JCC391CJD
C267	Ceramic(1608), 0.022uF, 50V, B, +/-10%(Chip)	JCH223BKC
C269	Ceramic, 220P, 50V, CH, +/-5%(Disk)	JCC221CJD
C270	Ceramic(1608), 33P, 50V, CG, +/-5%(Chip)	JCH330CJC
C273	Ceramic, 390P, 50V, CH, +/-5%(Disk)	JCC391CJD
C276	Ceramic(1608), 47P, 50V, CG, +/-5%(Chip)	JCH470CJC
C277	Ceramic(1608), 0.0022uF, 50V, B, +/-10%(Chip)	JCH222BKC
C278	Ceramic(1608), 0.1uF, 50V, B, +/-10%(Chip)	JCH104BKC
C279	Ceramic(1608), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C281	Ceramic(1608), 3P, 50V, CG, +/-0.25pF(Chip)	JCH030CCC
C282	Ceramic(1608), 47P, 50V, CG, +/-5%(Chip)	JCH470CJC
C283-284	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C286	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C287	Elect, 16V, 5x11, 22uF, +/-20%	JCECA22XX
C288	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C289	Ceramic(1608), 22P, 50V, CG, +/-5%(Chip)	JCH220CJC
C291	Ceramic(1608), 100P, 50V, CG, +/-5%(Chip)	JCH101CJC
C292	Ceramic(1608), 3P, 50V, CG, +/-0.25pF(Chip)	JCH030CCC
C293	Ceramic(1608), 1.5P, 50V, CG, +/-0.25pF(Chip)	JCH1R5CCC
C294	Ceramic(1608), 100P, 50V, CG, +/-5%(Chip)	JCH101CJC
C295	Ceramic(1608), 68P, 50V, CG, +/-5%(Chip)	JCH680CJC
C296	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C297	Ceramic(1608), 68P, 50V, CG, +/-5%(Chip)	JCH680CJC
C298	Ceramic(1608), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C299	Ceramic(1608), 0.001uF, 50V, B, +/-10%(Chip)	JCH102BKC

Ref. No	Description	Mfr's Part No.
C300	Ceramic(1680), 0.0047uF, 50V, B, +/-10%(Chip)	JCH472BKC
C301	Ceramic(1680), 0.001uF, 50V, B, +/-10%(Chip)	JCH102BKC
C302	Ceramic(1680), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C303	Ceramic(1680), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C304	Ceramic(1680), 18P, 50V, CG, +/-5%(Chip)	JCH180CJC
C306	Ceramic(1680), 39P, 50V, CG, +/-5%(Chip)	JCH390CJC
C307	Ceramic(1680), 330P, 50V, CG, +/-5%(Chip)	JCH331CJC
C308	Ceramic(1680), 82P, 50V, CG, +/-5%(Chip)	JCH820CJC
C309	Ceramic(1680), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C311	Ceramic(1680), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C312	Ceramic(1680), 0.0047uF, 50V, B, +/-10%(Chip)	JCH472BKC
C313	Ceramic(1680), 0.047uF, 25V, B, +/-10%(Chip)	JCH473BKC
C314	Ceramic(1680), 0.001uF, 50V, B, +/-10%(Chip)	JCH102BKC
C316	Ceramic(1680), 100P, 50V, CG, +/-5%(Chip)	JCH101CJC
C317	Elect, 16V, 10x15, 1000uF, +/-20%	JCECM1000
C318	Elect, 16V, 5x11, 33uF, +/-20%	JCECA33XX
C319	Elect, 50V, 5x11, 2.2uF, +/-20%	JCEFA2R2X
C320	Elect, 50V, 5x11, 1uF, +/-20%	JCEFA1XXX
C321-322	Ceramic(1680), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C323	Elect, 16V, 10x15, 1000uF, +/-20%	JCECM1000
C324	Ceramic(1680), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C327	Elect, 50V, 5x11, 0.22uF, +/-20%	JCEFAR22X
C333	Ceramic(1680), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C334	Ceramic(1680), 0.0047uF, 50V, B, +/-10%(Chip)	JCH472BKC
C336	Ceramic(1680), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
C337	Ceramic(1680), 0.01uF, 50V, B, +/-10%(Chip)	JCH103BKC
CT1	Trimmer, 6pie, 60pF	JCR6P60XX
Diode		
D1-2	Schottky(Chip), SB01-05CP	JDSB0105C
D3-4	Switching(Chip), 1SS355	JD1SS355C
D5	RF Switching(Chip), KDV173	JDFKDV173
D6	Switching(Chip), 1SS355	JD1SS355C
D7	Switching(Chip), S226RTK(MMBD1203)	JDS226RTK
D8-9	Switching(Chip), 1SS355	JD1SS355C
D10	Band, Switching, 1SS135	JD1SS135X
D11	Schottky(Chip), SB01-05CP	JDSB0105C
D12	Switching(Chip), 1SS135	JD1SS355C
D14	Switching(Chip), 1SS135	JD1SS355C
D15	Switching(Chip), SB01-05CP	JDSB0105C
D16	Switching(Chip), 1SS355	JD1SS355C
D17	Switching(Chip), S184RTK(MMBD1204)	JDS184RTK
D18	Switching(Chip), 1SS355	JD1SS355C
D20	Switching(Chip), KDS114RTK	JDKDS114C
D23	Switching(Chip), KDV251S	JDKDV251S
D24	Switching(Chip), KDS114RTK	JDKDS114C
D25	Switching(Chip), KDV251S	JDKDV251S
D27	Switching(Chip), S181RTK(MMBD1205)	JDS181RTK
D28-29	Switching(Chip), S184RTK(MMBD1204)	JDS184RTK
D30	Switching(Chip), KDV251S	JDKDV251S
D31-32	Switching(Chip), 1SS355	JD1SS355C
D33	Switching(Chip), S226RTK(MMBD1203)	JDS226RTK

Ref. No.	Description	Mfr's Part No.
D34-38	Switching(Chip), 1SS355	JD1SS355C
D39	Switching(Chip), S184RTK(MMBD1204)	JDS184RTK
D40	Switching(Chip), KDV251S	JDKDV251S
D41	Switching(Chip), S184RTK(MMBD1204)	JDS184RTK
D42-44	Switching(Chip), KDS114RTK	JDKDS114C
D46-49	Switching(Chip), KDS114RTK	JDKDS114C
D51	Switching(Chip), KDS114RTK	JDKDS114C
D52	Switching(Chip), S184RTK(MMBD1204)	JDS184RTK
D53-54	Switching(Chip), 1SS355	JD1SS355C
D56-57	Switching(Chip), 1SS355	JD1SS355C
D58	Rectifier, IN4004	JD1N4004X
D59	Switching(Chip), 1SS355	JD1SS355C
D61-62	Rectifier, IN4001G(Glass)	JD1N4001G
D63	Switching(Chip), 1SS355	JD1SS355C
D64	Rectifier, IN4001G(Glass)	JD1N4001G
D66-69	Switching(Chip), KDV251S	JDKDV251S
D71-74	Switching(Chip), 1SS355	JD1SS355C
D76	Rectifier, IN5401	JD1N5401X
Transformer		
LT1	Choke, E119mm, 2Pin	JECKE119X
Filter		
FL1	X-TAL, HC-18/U, 10.695MHz	JGX10R695
FL2	Ceramic, KBF455CMF	JGC455XXX
MCF1	X-TAL, 10M04DSUNI, 10L04D	JGX10M04X
Integrated Circuits		
IC1	BA403, Detector, FM	JIBA403XX
IC2	(Chip), BA728F, A. G. C.	JIBA728FC
IC3	NJM1496, Balance, Modulator	JINJ1496X
IC4	IC, KIA78081A, 7808	JIL78081X
IC5	(Chip), A4558F, MIC-AMP	JIA4558FX
IC6	IC, KIA7217, 6217K	JIIA7217X
IC7	(Chip), KIA6058F, Mixer	JII6058FX
Resistors		
R1	Thick Film Chip(1680), 560 ohm, 1/10W, +/-5%	JRH560HCX
R2	Thick Film Chip(1680), 100 kohm, 1/10W, +/-5%	JRH100KCX
R3	Thick Film Chip(1680), 2.2 kohm, 1/10W, +/-5%	JRH2R2KCX
R4	Thick Film Chip(1680), 100 kohm, 1/10W, +/-5%	JRH100KCX
R5	Thick Film Chip(1680), 47 kohm, 1/10W, +/-5%	JRH047KCX
R6	Thick Film Chip(1680), 2.2 kohm, 1/10W, +/-5%	JRH2R2KCX
R7	Thick Film Chip(1680), 100 kohm, 1/10W, +/-5%	JRH100KCX
R8	Thick Film Chip(1680), 560 kohm, 1/10W, +/-5%	JRH560KCX
R9	Thick Film Chip(1680), 820 kohm, 1/10W, +/-5%	JRH820KCX
R11	Thick Film Chip(1680), 47 ohm, 1/10W, +/-5%	JRH047HCX
R12	Thick Film Chip(1680), 4.7 kohm, 1/10W, +/-5%	JRH4R7KCX
R13	Thick Film Chip(1680), 22 kohm, 1/10W, +/-5%	JRH022KCX
R14	Thick Film Chip(1680), 1.5 kohm, 1/10W, +/-5%	JRH1R5KCX
R16	Thick Film Chip(1680), 2.7 kohm, 1/10W, +/-5%	JRH2R7KCX

Ref. No.	Description	Mfr's Part No.
R17	Thick Film Chip(1608), 220 ohm, 1/10W, +/-5%	JRH220HCX
R18	Thick Film Chip(1608), 470 ohm, 1/10W, +/-5%	JRH470HCX
R19	Thick Film Chip(1608), 3.9 kohm, 1/10W, +/-5%	JRH3R9KCX
R21	Thick Film Chip(1608), 100 ohm, 1/10W, +/-5%	JRH100HCX
R22	Thick Film Chip(1608), 330 ohm, 1/10W, +/-5%	JRH330HCX
R23-24	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH110KCX
R26	Thick Film Chip(1608), 68 kohm, 1/10W, +/-5%	JRH068KCX
R27	Thick Film Chip(1608), 2.2 kohm, 1/10W, +/-5%	JRH2R2KCX
R28	Thick Film Chip(1608), 4.7 kohm, 1/10W, +/-5%	JRH4R7KCX
R29	Thick Film Chip(1608), 2.2 kohm, 1/10W, +/-5%	JRH2R2KCX
R31	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R32	Thick Film Chip(1608), 470 ohm, 1/10W, +/-5%	JRH470HCX
R33	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R34	Thick Film Chip(1608), 680 kohm, 1/10W, +/-5%	JRH680KCX
R36	Thick Film Chip(1608), 39 kohm, 1/10W, +/-5%	JRH039KCX
R37	Thick Film Chip(1608), 150 ohm, 1/10W, +/-5%	JRH150HCX
R38	Thick Film Chip(1608), 180 ohm, 1/10W, +/-5%	JRH180HCX
R39	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R41	Thick Film Chip(1608), 330 ohm, 1/10W, +/-5%	JRH330HCX
R42	Thick Film Chip(1608), 68 kohm, 1/10W, +/-5%	JRH068KCX
R43	Thick Film Chip(1608), 33 kohm, 1/10W, +/-5%	JRH033KCX
R44	Thick Film Chip(1608), 470 kohm, 1/10W, +/-5%	JRH470KCX
R45	Thick Film Chip(1608), 0 ohm, 1/10W, +/-5%	JRH000HCX
R46	Thick Film Chip(1608), 22 kohm, 1/10W, +/-5%	JRH022KCX
R47-48	Thick Film Chip(1608), 33 kohm, 1/10W, +/-5%	JRH033KCX
R49	Thick Film Chip(1608), 100 ohm, 1/10W, +/-5%	JRH100HCX
R50	Thick Film Chip(1608), 3.9 kohm, 1/10W, +/-5%	JRH3R9KCX
R51	Thick Film Chip(1608), 100 kohm, 1/10W, +/-5%	JRH100KCX
R52	Thick Film Chip(1608), 470 kohm, 1/10W, +/-5%	JRH470KCX
R53	Thick Film Chip(1608), 1.5 Mohm, 1/10W, +/-5%	JRH1R5MCX
R56	Thick Film Chip(1608), 4.7 Mohm, 1/10W, +/-5%	JRH4R7MCX
R57	Thick Film Chip(1608), 2.2 Mohm, 1/10W, +/-5%	JRH2R2MCX
R59	Thick Film Chip(1608), 82 kohm, 1/10W, +/-5%	JRH082KCX
R61	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R62	Thick Film Chip(1608), 39 kohm, 1/10W, +/-5%	JRH039KCX
R63	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R64	Thick Film Chip(1608), 3.9 kohm, 1/10W, +/-5%	JRH3R9KCX
R66	Thick Film Chip(1608), 330 kohm, 1/10W, +/-5%	JRH330KCX
R67	Thick Film Chip(1608), 100 kohm, 1/10W, +/-5%	JRH100KCX
R68	Thick Film Chip(1608), 330 kohm, 1/10W, +/-5%	JRH330KCX
R69	Thick Film Chip(1608), 470 kohm, 1/10W, +/-5%	JRH470KCX
R71	Thick Film Chip(1608), 12 kohm, 1/10W, +/-5%	JRH012KCX
R72	Thick Film Chip(1608), 3.3 kohm, 1/10W, +/-5%	JRH3R3KCX
R73-74	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R76	Thick Film Chip(1608), 3.3 kohm, 1/10W, +/-5%	JRH3R3KCX
R77-78	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R79	Thick Film Chip(1608), 120 kohm, 1/10W, +/-5%	JRH120KCX
R81	Thick Film Chip(1608), 33 kohm, 1/10W, +/-5%	JRH033KCX
R82	Thick Film Chip(1608), 470 ohm, 1/10W, +/-5%	JRH470HCX
R83	Thick Film Chip(1608), 2.2 kohm, 1/10W, +/-5%	JRH2R2KCX
R86	Thick Film Chip(1608), 3.3 kohm, 1/10W, +/-5%	JRH3R3KCX
R87	Thick Film Chip(1608), 68 ohm, 1/10W, +/-5%	JRH068HCX

Ref. No	Description	Mfr's Part
R88	Thick Film Chip(1608), 150 ohm, 1/10W, +/-5%	JRH150HCX
R89	Thick Film Chip(1608), 270 ohm, 1/10W, +/-5%	JRH270HCX
R91	Thick Film Chip(1608), 100 ohm, 1/10W, +/-5%	JRH100HCX
R92	Thick Film Chip(1608), 680 ohm, 1/10W, +/-5%	JRH680HCX
R93	Thick Film Chip(1608), 47 kohm, 1/10W, +/-5%	JRH047KCX
R94	Thick Film Chip(1608), 100 ohm, 1/10W, +/-5%	JRH100HCX
R96	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R97	Thick Film Chip(1608), 680 ohm, 1/10W, +/-5%	JRH680HCX
R98	Thick Film Chip(1608), 33 ohm, 1/10W, +/-5%	JRH033KCX
R99	Thick Film Chip(1608), 5.6 kohm, 1/10W, +/-5%	JRH5R6KCX
R100	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R101	Thick Film Chip(1608), 560 ohm, 1/10W, +/-5%	JRH560HCX
R102	Thick Film Chip(1608), 470 ohm, 1/10W, +/-5%	JRH470HCX
R103	Thick Film Chip(1608), 100 ohm, 1/10W, +/-5%	JRH100HCX
R104	Thick Film Chip(1608), 8.2 kohm, 1/10W, +/-5%	JRH8R2KCX
R105	Thick Film Chip(1608), 1.5 kohm, 1/10W, +/-5%	JRH1R5KCX
R106	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R107	Thick Film Chip(1608), 3.3 kohm, 1/10W, +/-5%	JRH3R3KCX
R108	Thick Film Chip(1608), 100 ohm, 1/10W, +/-5%	JRH100HCX
R109	Thick Film Chip(1608), 390 ohm, 1/10W, +/-5%	JRH390HCX
R112	Thick Film Chip(1608), 2.7 kohm, 1/10W, +/-5%	JRH2R7KCX
R113-114	Thick Film Chip(1608), 100 ohm, 1/10W, +/-5%	JRH100HCX
R115	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R116	Thick Film Chip(1608), 100 ohm, 1/10W, +/-5%	JRH100HCX
R117	Thick Film Chip(1608), 5.6 kohm, 1/10W, +/-5%	JRH5R6KCX
R119	Thick Film Chip(1608), 100 ohm, 1/10W, +/-5%	JRH100HCX
R120	Thick Film Chip(1608), 4.7 kohm, 1/10W, +/-5%	JRH4R7KCX
R121	Thick Film Chip(1608), 680 ohm, 1/10W, +/-5%	JRH680HCX
R122	Thick Film Chip(1608), 2.2 kohm, 1/10W, +/-5%	JRH2R2KCX
R123	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R124	Thick Film Chip(1608), 220 kohm, 1/10W, +/-5%	JRH220KCX
R125	Thick Film Chip(1608), 2.7 kohm, 1/10W, +/-5%	JRH2R7KCX
R126	Thick Film Chip(1608), 1.8 kohm, 1/10W, +/-5%	JRH1R8KCX
R127	Thick Film Chip(1608), 1.5 kohm, 1/10W, +/-5%	JRH1R5KCX
R128	Thick Film Chip(1608), 5.6 kohm, 1/10W, +/-5%	JRH5R6KCX
R129	Thick Film Chip(1608), 2.2 kohm, 1/10W, +/-5%	JRH2R2KCX
R130	Thick Film Chip(1608), 4.7 kohm, 1/10W, +/-5%	JRH4R7KCX
R131	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R132	Thick Film Chip(1608), 47 kohm, 1/10W, +/-5%	JRH047KCX
R133	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R134	Thick Film Chip(1608), 56 kohm, 1/10W, +/-5%	JRH056KCX
R135	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R136	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R137	Thick Film Chip(1608), 100 kohm, 1/10W, +/-5%	JRH100KCX
R138	Thick Film Chip(1608), 1.5 kohm, 1/10W, +/-5%	JRH1R5KCX
R139	Thick Film Chip(1608), 150 kohm, 1/10W, +/-5%	JRH150KCX
R141	Thick Film Chip(1608), 100 ohm, 1/10W, +/-5%	JRH100HCX
R142	Thick Film Chip(1608), 22 kohm, 1/10W, +/-5%	JRH022KCX
R143	Thick Film Chip(1608), 6.8 kohm, 1/10W, +/-5%	JRH6R8KCX
R144	Thick Film Chip(1608), 8.2 kohm, 1/10W, +/-5%	JRH8R2KCX
R146	Thick Film Chip(1608), 100 ohm, 1/10W, +/-5%	JRH100HCX
R147	Thick Film Chip(1608), 3.3 kohm, 1/10W, +/-5%	JRH3R3KCX
R148	Thick Film Chip(1608), 100 ohm, 1/10W, +/-5%	JRH100HCX

Ref. No.	Description	Mfr's Part No.
R149	Thick Film Chip(1608), 330 kohm, 1/10W, +/-5%	JRH330KCX
R151	Thick Film Chip(1608), 1.5 kohm, 1/10W, +/-5%	JRH1R5KCX
R152	Thick Film Chip(1608), 47 ohm, 1/10W, +/-5%	JRH047HCX
R153	Thick Film Chip(1608), 3.3 kohm, 1/10W, +/-5%	JRH3R3KCX
R154	Thick Film Chip(1608), 22 kohm, 1/10W, +/-5%	JRH022KCX
R156	Thick Film Chip(1608), 56 kohm, 1/10W, +/-5%	JRH056KCX
R157	Thick Film Chip(1608), 6.8 kohm, 1/10W, +/-5%	JRH6R8KCX
R158	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R159	Thick Film Chip(1608), 12 kohm, 1/10W, +/-5%	JRH012KCX
R161	Thick Film Thick Film Chip(1608), 2.2 kohm, 1/10W, +/-5%	JRH2R2KCX
R162	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R163	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R167	Thick Film Chip(1608), 100 ohm, 1/10W, +/-5%	JRH100HCX
R168	Thick Film Chip(1608), 330 kohm, 1/10W, +/-5%	JRH010KCX
R169	Thick Film Chip(1608), 12 kohm, 1/10W, +/-5%	JRH012KCX
R170-171	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R172	Thick Film Chip(1608), 22 kohm, 1/10W, +/-5%	JRH022KCX
R173	Thick Film Chip(1608), 4.7 kohm, 1/10W, +/-5%	JRH4R7KCX
R174	Thick Film Chip(1608), 220 ohm, 1/10W, +/-5%	JRH220HCX
R175	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R176	Thick Film Chip(1608), 150 kohm, 1/10W, +/-5%	JRH150KCX
R177	Thick Film Chip(1608), 100 ohm, 1/10W, +/-5%	JRH100HCX
R178	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R179	Thick Film Chip(1608), 4.7 kohm, 1/10W, +/-5%	JRH4R7KCX
R181	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R182	Thick Film Chip(1608), 3.3 kohm, 1/10W, +/-5%	JRH3R3KCX
R183	Thick Film Chip(1608), 15 kohm, 1/10W, +/-5%	JRH015KCX
R184	Thick Film Chip(1608), 220 kohm, 1/10W, +/-5%	JRH220KCX
R185	Thick Film Chip(1608), 0 ohm, 1/10W, +/-5%	JRH000HCX
R186	Thick Film Chip(1608), 2.7 kohm, 1/10W, +/-5%	JRH2R7KCX
R187	Thick Film Chip(1608), 8.2 kohm, 1/10W, +/-5%	JRH8R2KCX
R188	Thick Film Chip(1608), 6.8 kohm, 1/10W, +/-5%	JRH6R8KCX
R189	Thick Film Chip(1608), 4.7 kohm, 1/10W, +/-5%	JRH4R7KCX
R191	Thick Film Chip(1608), 39 kohm, 1/10W, +/-5%	JRH039KCX
R192	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R193	Thick Film Chip(1608), 3.9 kohm, 1/10W, +/-5%	JRH4R7KCX
R194	Thick Film Chip(1608), 6.8 kohm, 1/10W, +/-5%	JRH6R8KCX
R196	Thick Film Chip(1608), 4.7 kohm, 1/10W, +/-5%	JRH4R7KCX
R197	Thick Film Chip(1608), 47 ohm, 1/10W, +/-5%	JRH047HCX
R198	Thick Film Chip(1608), 1.2 kohm, 1/10W, +/-5%	JRH1R2KCX
R199	Thick Film Chip(1608), 2.2 kohm, 1/10W, +/-5%	JRH2R2KCX
R201	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R202	Thick Film Chip(1608), 180 kohm, 1/10W, +/-5%	JRH180KCX
R203	Thick Film Chip(1608), 2.2 kohm, 1/10W, +/-5%	JRH2R2KCX
R204	Thick Film Chip(1608), 220 ohm, 1/10W, +/-5%	JRH220HCX
R206-207	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R208	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R209	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R211	Thick Film Chip(1608), 3.3 kohm, 1/10W, +/-5%	JRH3R3KCX
R212	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R213	Thick Film Chip(1608), 1.5 kohm, 1/10W, +/-5%	JRH1R5KCX
R214	Thick Film Chip(1608), 4.7 kohm, 1/10W, +/-5%	JRH4R7KCX
R216	Thick Film Chip(1608), 1.5 kohm, 1/10W, +/-5%	JRH1R5KCX

Ref. No.	Description	Mfr's Part No.
R217	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R218	Thick Film Chip(1608), 56 ohm, 1/10W, +/-5%	JRH056HCX
R219	Thick Film Chip(1608), 56 kohm, 1/10W, +/-5%	JRH056KCX
R221-222	Thick Film Chip(1608), 470 ohm, 1/10W, +/-5%	JRH470HCX
R223	Thick Film Carbonfilm, 10 kohm, 1/2W(ST), +/-5%	JR0010KCS
R224	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R226	Thick Film Chip(1608), 47 ohm, 1/10W, +/-5%	JRH047HCX
R227-228	Carbonfilm, 180 ohm, 1/2W(ST), +/-5%	JR0180HCS
R229	Carbonfilm, 22 ohm, 1/2W(ST), +/-5%	JR0022HCS
R231	Thick Film Chip(1608), 47 ohm, 1/10W, +/-5%	JRH047HCX
R232	Carbonfilm, 22 ohm, 1/2W(ST), +/-5%	JR0022HCS
R233	Thick Film Chip(2012), 180 ohm, 1/8W, +/-5%	JRC180HCX
R234	Thick Film Chip(2012), 4.7 ohm, 1/8W, +/-5%	JRC4R7HCX
R237	Thick Film Chip(1608), 47 ohm, 1/10W, +/-5%	JRH047HCX
R236	Thick Film Chip(1608), 330 ohm, 1/10W, +/-5%	JRH330HCX
R238	Thick Film Chip(1608), 1.5 kohm, 1/10W, +/-5%	JRH1R5KCX
R239	Carbonfilm, 22 ohm, 1/2W(ST), +/-5%	JR0022HCS
R241	Thick Film Chip(1608), 1.5 kohm, 1/10W, +/-5%	JRH1R5KCX
R242-243	Thick Film Chip(1608), 220 kohm, 1/10W, +/-5%	JRH220KCX
R246	Thick Film Chip(1608), 330 ohm, 1/10W, +/-5%	JRH330HCX
R247	Thick Film Chip(1608), 220 kohm, 1/10W, +/-5%	JRH220KCX
R249	Thick Film Chip(1608), 100 ohm, 1/10W, +/-5%	JRH100HCX
R251	Thick Film Chip(1608), 22 kohm, 1/10W, +/-5%	JRH022KCX
R252	Thick Film Chip(1608), 100 ohm, 1/10W, +/-5%	JRH100HCX
R253	Thick Film Chip(1608), 220 kohm, 1/10W, +/-5%	JRH220KCX
R254	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH033KCX
R257	Thick Film Chip(1608), 2.2 kohm, 1/10W, +/-5%	JRH2R2KCX
R258-259	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R261	Thick Film Chip(1608), 560 ohm, 1/10W, +/-5%	JRH560HCX
R262	Thick Film Chip(1608), 10 ohm, 1/10W, +/-5%	JRH010HCX
R263	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R264	Thick Film Chip(1608), 560 ohm, 1/10W, +/-5%	JRH560HCX
R265-266	Thick Film Chip(1608), 5.6 ohm, 1/10W, +/-5%	JRH5R6KCX
R271	Metal, 10 ohm, 2W(ST), +/-5%	JR0010HES
R273	Thick Film Chip(1608), 1.5 kohm, 1/10W, +/-5%	JRH1R5KCX
Transistor		
Q1-2	(Chip), KTC3879-Y, SOT-23	JTC3879YX
Q3	(Chip), KRA105S, SOT-23	JTA105SXX
Q4	(Chip), KRC114SRTK, SOT-23	JTC114SRT
Q7	(Chip), KTA1505SY, SOT-23	JTA1505SY
Q8-9	(Chip), KTC3879-Y, SOT-23	JTC3879YX
Q11	(Chip), KTC3879-Y, SOT-23	JTC3879YX
Q12-13	(Chip), KTC3879-O, SOT-23	JTC3879OX
Q14	(Chip), KTA1505SY, SOT-23	JTA1505SY
Q16	(Chip), KRC110SRTK, SOT-23	JTC110SRT
Q17	(Chip), KRA105S, SOT-23	JTA105SXX
Q18	(Chip), KRC114SRTK, SOT-23	JTC114SRT
Q19	(Chip), KTC3876SY(WY), SOT-23	JTC3876SY
Q21	(Chip), KRC104SRTK, SOT-23	JTC104SRT
Q22	(Chip), KRC104SRTK, SOT-23	JTC110SRT
Q24	(Chip), KTC3876SY(WY), SOT-23	JTC3876SY
Q26	(Chip), KTC3876SY(WY), SOT-23	JTC3876SY

Ref. No	Description	Mfr's Part No.
Q27-29	(Chip), KTC3879-Y, SOT-23	JTC3879YX
Q31	(Chip), KTC3879-Y, SOT-23	JTC3879YX
Q32	FET, K163	JFK163XXX
Q34	(Chip), 2SC3838, SOT-23	JT2SC3838
Q36-37	(Chip), KTC3875-GR, SOT-23	JTC3875GR
Q38	(Chip), KRC110SRTK, SOT-23	JTC110SRT
Q39	(Chip), KTC3880-SY, SOT-23	JTC3880SY
Q41-42	(Chip), KTC3880-SY, SOT-23	JTC3880SY
Q44	(Chip), KRA105S, SOT-23	JTA105SXX
Q46-47	(Chip), KRA105S, SOT-23	JTA105SXX
Q48-50	(Chip), KRC114SRTK, SOT-23	JTC114SRT
Q51	(Chip), KRC110SRTK, SOT-23	JTC110SRT
Q55-56	(Chip), KTC3876SY(WY), SOT-23	JTC3876SY
Q57	(Chip), KTA1505SY, SOT-23	JTA1505SY
Q58	(Chip), KTC3876SY(WY), SOT-23	JTC3876SY
Q59	(Chip), KRC114SRTK, SOT-23	JTC114SRT
Q61	KTA200-Y, 200, TO-92	JT200YXXX
Q62	(Chip), KRC111SRTK, SOT-23	JTC111SRT
Q63	KTC-200Y, 200, TO-92	JT-200YXX
Q64	(Chip), KRA110SRTK, SOT-23	JTA110SRT
Q66-67	(Chip), KTC3880-Y, SOT-23	JTC3880SY
Q68	(Chip), KRC114SRTK, SOT-23	JTC114SRT
Q69	(Chip), KTC3880-SY, SOT-23	JTC3880SY
Q71-72	Transistor, 2SC1969, 2312	JTC1969XX
Q73	Transistor, 2SC2166	JTC2166XX
Q74	2SC2314F	JTC2314XX
Q76	(Chip), KTC3876SY(WY), SOT-23	JTC3876SY
Q77	(Chip), KTC3876SY(WY), SOT-23	JTC3876SY
Q78	Transistor, KTB778	JTKT778XX
Q79	(Chip), KRA1001(KY), A1001YRTF, SOT-89	JTA1001YR
Q81	(Chip), KTC3880-SY, SOT-23	JTC3880SY
Q82	(Chip), KTC3876SY(WY), SOT-23	JTC3876SY
Semifixed Resister		
RV1	100KB, 8H, 3P	JU100KBHB
RV3	20KB, 8H, 3P	JU20KBHBX
RV4	500B, 8H, 3P	JU500BHBX
RV5	100KB, 8V, 2P	JU100KBVA
RV6	10KB, 8H, 3P	JU10KBHBX
RV8	100KB, 8H, 3P	JU100KBHB
RV9	10KB, 8H, 3P	JU10KBHBX
RV11-12	100 ohm, 8H, 3P	JU100OHBX
RV13	1KB, 6H, 3P	JU1KB6H3X
RV14	100KB, 8H, 3P	JU100KBHB
RV16	5KB, 8H, 3P	JU5KBHBXX
X-TAL		
X1	(HAM. SYC), 10.240MHz(32pF/20ppm)	JX10240XG
X2	(HAM. SYC), 4.5MHz(32pF/5ppm)	JX04500XH
X3	(HAM. SYC), 10.6975MHz(32pF/10ppm)	JX106975A

Ref. No.	Description	Mfr's Part No.
Jack		
J2	Earphone, EJ3503(W/O NUT, PCB)	JZJE3R5PX
Wafer		
CON1 SP1	Flat, Wafer, FW-0640-04 LOW, Profile, LOCK, Wafer, LWL-0640-02	GWCONFW04 GWCONLW02
TIN, Jumper		
W/L19 W/L22 W/L24 W/L26	TIN, Jumper, 6mm, W/L19(Core, Bead) TIN, Jumper, 6mm, W/L22(Core, Bead) TIN, Jumper, 6mm, W/L24(Core, Bead) TIN, Jumper, 6mm, W/L26(Core, Bead)	GWJ06XXXX GWJ06XXXX GWJ06XXXX GWJ06XXXX
End of ASS'Y-PCB, MAIN		
P2	ASS'Y, PCB, Front	JPFXHTX10
Coil		
L401 L402-L405	Inductor, 0.47uH(LAL03NA) Inductor, Chip, 4.7uH(LEM2520)	JBII4R7WX JBII4R7CB
Capacitor		
C411 C401 C402 C403-404 C406 C407-409 C412 C413 C414 C416 C417 C418 C419 C420-421 C424 C425 C426	Elect, 16V, 6.3x11, 220uF Ceramic(1608), 0.01uF, B, +/-10%(Chip) Ceramic(1608), 0.047uF, B, +/-10%(Chip) Ceramic(1608), 0.1uF, B, +/-10%(Chip) Ceramic(1608), 470P, CG, +/-5%(Chip) Ceramic(1608), 0.01uF, B, +/-10%(Chip) Tantalum, Chip, 2.2uF, 16V(A) Tantalum, Chip, 0.47uF, 25V(A) Ceramic(1608), 0.01uF, B, +/-10%(Chip) Ceramic(1608), 0.022uF, B, +/-10%(Chip) Tantalum, Chip, 1uF, 16V(A) Ceramic(1608), 0.022uF, B, +/-10%(Chip) Elect, 16V, 5x11, 47uF Ceramic(1608), 0.047uF, B, +/-10%(Chip) Ceramic(1608), 0.047uF, B, +/-10%(Chip) Elect, 16V, 5x11, 47uF Ceramic(1608), 0.0047uF, B, +/-10%(Chip)	JCECC220X JCH103BKC JCH473BKC JCH104BKC JCH471CJC JCH103BKC JCTC2R216 JCTC47100 JCH103BKC JCH223BKC JCTC01016 JCH223BKC JCECB47XX JCH473BKC JCH473BKC JCECB47XX JCH472BKC
Diode		
D401 D403-404 D406 D407 D408 D409-410 ZD401 ZD403 ZD402	Switching(Chip), S184RTK(MMBD1204) Switching(Chip), 1SS355 Switching(Chip), S184RTK(MMBD1204) Switching(Chip), 1SS355 Switching(Chip), S184RTK(MMBD1204) Switching(Chip), 1SS355 Zener(Chip), BZX6V2 Zener(Chip), BZX5V6, MTZ5.6B Zener(Chip), BZX84C10	JDS184RTK JD1SS355C JDS184RTK JD1SS355C JDS184RTK JD1SS355C JDBZX6V2C JDBZX5V6C JDBZX10V0

Ref. No.	Description	Mfr's Part No.
Integrated Circuits		
IC401	IC, SY-205, LC72322N-9530, CPU	JISY205XX
IC402	IC, (Chip), KIA78L05F, Regulator	JII78L05F
Pilot Lamp		
PL401-405	Pilot Lamp 3mm dia 30mA 10V	JL3X30X10
L.C.D.		
LCD401	LCD KXN27730DAP	JLCK27730
Resistor		
R401	Thick Film Chip(1608), 560 ohm, 1/10W, +/-5%	JRH560HCX
R402	Thick Film Chip(1608), 68 kohm, 1/10W, +/-5%	JRH068KCX
R403	Thick Film Chip(1608), 1.5 kohm, 1/10W, +/-5%	JRH1R5KCX
R404	Thick Film Chip(1608), 5.6 kohm, 1/10W, +/-5%	JRH5R6KCX
R405	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R413	Thick Film Chip(1608), 47 kohm, 1/10W, +/-5%	JRH047KCX
R415	Thick Film Chip(1608), 0 ohm, 1/10W, +/-5%	JRH000HCX
R416	Thick Film Chip(1608), 100 kohm, 1/10W, +/-5%	JRH100KCX
R419	Thick Film Chip(1608), 100 kohm, 1/10W, +/-5%	JRH100KCX
R20	Thick Film Chip(1608), 0 ohm, 1/10W, +/-5%	JRH000HCX
R421-423	Thick Film Chip(1608), 100 kohm, 1/10W, +/-5%	JRH100KCX
R426	Thick Film Chip(1608), 100 kohm, 1/10W, +/-5%	JRH100KCX
R428-429	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R431	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R432	Thick Film Chip(1608), 47 kohm, 1/10W, +/-5%	JRH047KCX
R433	Thick Film Chip(1608), 100 kohm, 1/10W, +/-5%	JRH100KCX
R434	Thick Film Chip(1608), 56 kohm, 1/10W, +/-5%	JRH056KCX
R436-439	Thick Film Chip(1608), 1 Mohm, 1/10W, +/-5%	JRH001MCX
R441-444	Thick Film Chip(1608), 1 Mohm, 1/10W, +/-5%	JRH001MCX
R446-448	Thick Film Chip(1608), 1 Mohm, 1/10W, +/-5%	JRH001MCX
R449	Thick Film Chip(1608), 2.2 kohm, 1/10W, +/-5%	JRH2R2KCX
R451	Thick Film Chip(1608), 47 kohm, 1/10W, +/-5%	JRH047KCX
R452	Thick Film Chip(1608), 12 kohm, 1/10W, +/-5%	JRH012KCX
R453	Thick Film Chip(1608), 100 kohm, 1/10W, +/-5%	JRH100KCX
R454	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R456-457	Thick Film Chip(1608), 1 kohm, 1/10W, +/-5%	JRH001KCX
R458	Thick Film Chip(1608), 4.7 kohm, 1/10W, +/-5%	JRH4R7KCX
R459	Thick Film Chip(1608), 470 kohm, 1/10W, +/-5%	JRH470KCX
R462	Thick Film Chip(1608), 0 ohm, 1/10W, +/-5%	JRH000HCX
R464	Thick Film Chip(1608), 10 kohm, 1/10W, +/-5%	JRH010KCX
R468	Thick Film Chip(1608), 47 kohm, 1/10W, +/-5%	JRH047KCX
R469	Thick Film Chip(1608), 56 kohm, 1/10W, +/-5%	JRH056KCX
R467	Thick Film Chip(1608), 82 kohm, 1/10W, +/-5%	JRH082KCX
R471-472	Thick Film Chip(1608), 100 kohm, 1/10W, +/-5%	JRH100KCX
R473	Thick Film Chip(1608), 0 ohm, 1/10W, +/-5%	JRH000HCX
R474	Thick Film Chip(1608), 470 kohm, 1/10W, +/-5%	JRH470KCX
R476	Thick Film Chip(1608), 470 kohm, 1/10W, +/-5%	JRH470KCX
R477	Thick Film Chip(1608), 0 ohm, 1/10W, +/-5%	JRH000HCX
R478	Thick Film Chip(1608), 100 kohm, 1/10W, +/-5%	JRH100KCX
R482-510	Thick Film Chip(1608), 100 kohm, 1/10W, +/-5%	JRH100KCX

Ref. No	Description	Mfr's Part No.
Switch		
SW403-404 SW406-409	Tact, DT-1102 Tact, DT-1102	JST1105XX JST1105XX
Transistor		
Q401 Q404 Q406 Q407 Q408 Q411 Q412 Q413-414	Thick Film (Chip), KRC110SRTK, SOT-23 Thick Film (Chip), KRC114SRTK, SOT-23 Thick Film (Chip), KTA1505SY, SOT-23 KTC-200Y, KTC-200, TO-92 Thick Film (Chip), KRA105S, SOT-23 Thick Film (Chip), KTC3876SY(WY), SOT-23 Thick Film (Chip), KTA1505SY, SOT-23 Thick Film (Chip), KRC114SRTK, SOT-23	JTC110SRT JTC114SRT JTA1505SY JT-200YXX JTA105SXX JTC3876SY JTA1505SY JTC114SRT
Semifixed Resistor		
RV402	Thick Film (Chip), MVR32, HXBRN473	JU473MVRX
Volume		
VR402 VR403	Single Round, 161HB-20SK-B50K, W/NUT SW/Single Round, CSPNS-1624B/20mm, 50KA, W/NUT	JV1250KBX JV150KAPB
P3 SW401	ASS'Y, PCB, Channel Switch, Channel. YPS2101, 20SK, W/NUT	JPSCH0005 JSC2101XX
P5 VR404/SW402	ASS'Y, PCB, Fine VR(PUSH SW), Single Round, TPHR1 20KC-3B 10K, W/NUT	JPSF10003 JV120KCXX
P4 VR401/407	ASS'Y, PCB, MIC-G, RF-G Volume, Double Round, 3B100K/15A5K, W/NUT	JPSFI0003 JV120KCXX
4-12 C601 C603 C604 R601-603 R602 R603 SW601 SW602-603 4-15 4-16	ASS'Y, PCB, Microphone Capacitor, Elect, 16V, 5x11, 10uF, +/-20% Capacitor, Ceramic, 0.001uF, B, +/-10%(AXIAL) Mylar, Capacitor, 0.1uF, 50V, +/-10%(SMALL) Resistor, Carbonfilm, 22 kohm, 1/16W(ST), +/-5% Resistor, Carbonfilm, 4.7 kohm, 1/16W(ST), +/-5% Resistor, Carbonfilm, 22 kohm, 1/16W(ST), +/-5% Switch, Push, DP-2251N Switch, Tack, DT-1104A MIC, Condenser, JS-80C(9.7pie) Cord, Mic 5C-1S(Black), KSK-56002 300mm/S:7mm	JPSMHTX10 JCECA10XX JCC102BKA JCMU0R1XX JR0022KAS JR04R7KAS JR0022KAS JSP2262NX JST1236XX JZDJS80CS JZM5C1SBX
Cord		
48	Cord, DC Power(B), HTX-10, Femail(10A FUSE)	GWPHTX10X

VOLTAGE CHART

Measurement Conditions:

Power supply voltage : 13.8V DC

Test equipment : Digital Voltmeter (DM332)

Measurement channel : 19 CH

Unless otherwise specified, set controls are as follows:

MODE : AM

SQ : MIN

ANL/NB : OFF

RF GAIN : MAX

CLARIFIER : CENTER

Symbol No.	Name	RX / TX	Base Gate	Collector Drain	Emitter Source
Q1	KTC3879-Y	RX	0.7	2.2	0
Q2	KTC3879-Y	RX	0.7	2.1	0
Q3	KRA105S	RX NB ON	0.1	7	7.1
Q4	KRA114S	RX NB ON	2.3	0.1	0
Q7	KTA1505	RX NB ON	6.5	0.3	7
Q8	KTC3879-Y	RX NB ON	0.3	0	0
Q9	KTC3879-Y	RX	0.85	7.5	0.22
Q11	KTC3879-Y	RX	2.82	3.3	2.2
Q12	KTC3879-O	RX	1.2	6.9	0.52
Q13	KTC3879-O	RX	1.0	7.6	0.2
Q14	KIA1505	RX	0.25	0.27	0.95
Q16	KRC110S	RX FM	7.93	0	0
Q17	KRA105S	RX FM	0.07	7.9	7.9
Q18	KRC114S	RX FM	4.77	0.07	0
Q19	KTC3876	RX	0.14	0.1	0.04
Q21	KRC104S	RX	0.07	0.45	0
Q22	KRC110S	RX	0	0	0
Q24	KTC3876	RX	1.27	4.1	0.84
Q26	KTC3876	RX	0	0	0

Symbol No.	Name	RX / TX	Base Gate	Collector Drain	Emitter Source
Q27	KTC3879-Y	RX	2.92	6.13	2.21
Q28	KTC3879-Y	RX	3.63	6.06	2.92
Q29	KTC3879-Y	RX	0.69	3.63	0
Q31	KTC3879-Y	RX	0.99	8.05	0.36
Q32	FET K163	RX	Gate	Source	Drain
			6.43	0	0.32
Q34	2SC3838	RX	2.0	6.7	1.32
Q36	KTC3875-GR	RX TX	1.0	5.65	0.58
Q37	KTC3875-GR	RX TX	0.58	5.65	0
Q38	KRC110S	TX FM	0.5	2.01	0
Q39	KTC3880	RX TX	0.73	3.65	0
Q41	KTC3880	RX TX	3.47	7.59	2.76
Q42	KTC3880	RX TX	0.73	5.27	0
Q44	KRA105S	RX TX(AM/FM)	0.07	8.04	8.1
Q46	KRA105S	RX TX(LSB)	0.07	8.06	8.1
Q47	KRA105S	RX TX(USB)	0.07	8.04	8.1
Q48	KRC114S	RX TX(AM/FM)	4.28	0.07	0
Q49	KRC114S	RX TX(LSB)	4.95	0.07	0
Q50	KRC114S	RX TX(USB)	4.95	0.07	0
Q51	KRC110S	RX TX(AM/FM)	7.99	0.01	0
Q55	KTC3876	TX SSB	3.9	6.6	3.3
Q56	KTC3876	TX	0.16	0	0.12
Q57	KTA1505	TX	7.2	0.17	8.15
Q58	KRC3876	TX	0.87	7.63	1.58
Q59	KRC114S	TX	7.28	0.01	0
Q61	KTA200	TX	7.35	8.3	8.01

Symbol No.	Name	RX / TX	Base Gate	Collector Drain	Emitter Source	
Q62	KRC111S	TX FM	8.5	0	0	
Q63	KTC200	RX	7.84	8.1	7.1	
Q64	KTA110S	TX	0.13	0	1.06	
Q66	KTC3880	RX	SSB	3.1	6.8	2.5
			AM/FM	0.5	0.3	0
		TX	3.1	6.8	2.6	
Q67	KTC3880	RX TX	3.3	5.66	2.8	
Q68	KRC114S	RX TX(STEP0)	0.2	4.06	0	
Q69	KTC3880	TX SSB	0	7.56	0.8	
Q71	2SC1969	TX AM	0.68	6.2	0	
		TX FM	0.68	11.8	0	
		TX SSB	0.68	13.3	0	
Q72	2SC1969	TX AM	0.68	6.2	0	
		TX FM	0.68	11.8	0	
		TX SSB	0.68	13.3	0	
Q73	2SC2166	TX AM	0.69	6.2	0	
		TX FM	0.69	11.8	0	
		TX SSB	0.69	13.3	0	
Q74	2SC2314	TX	1.2	7.18	0.5	
Q76	KTC3876	TX	1.4	7.2	0.7	
Q77	KTC3876	TX AM	6.7	12.1	6.2	
		TX FM	6.7	11.7	6.2	
		TX SSB	12.3	12.6	12	
Q78	KTB778	TX AM	12.7	6.2	13.5	
		TX FM	12.4	11.8	13.3	
		TX SSB	12.3	12.3	13.3	

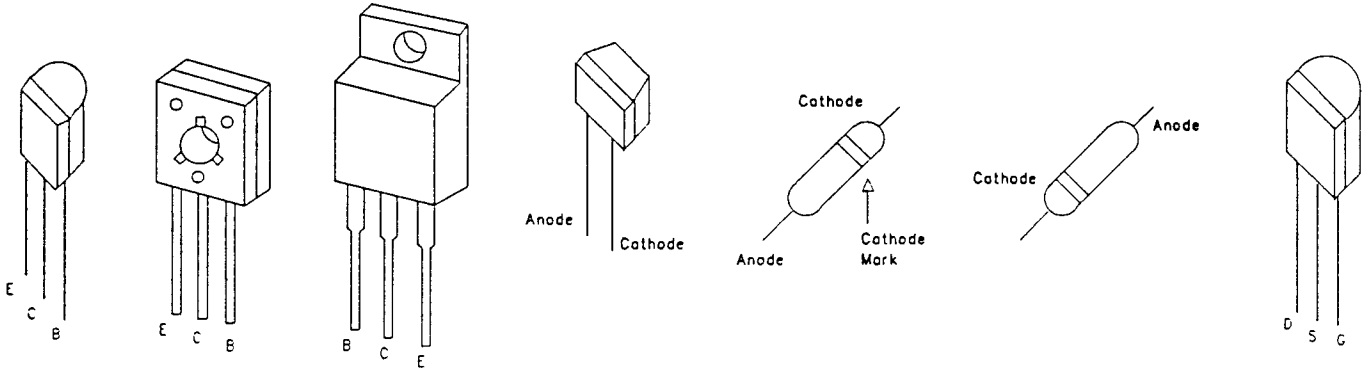
Symbol No.	Name	RX / TX	Base Gate	Collector Drain	Emitter Source
Q79	KRA1001	TX AM	12.1	6.2	12.7
		TX FM	11.7	11.8	12.4
		TX SSB	12.6	12.3	12.3
Q81	KTC3880	TX AM	0	6.2	0
		TX FM	0.9	0.6	0
		TX SSB	0	12.8	0
Q82	KTC3876	TX AM	0.3	12.1	2.3
		TX FM	0.4	11.7	4.9
		TX SSB	7.4	12.6	6.8
Q401	KRC110S	RX(TONE LOW)	4.9	0	0
Q404	KRC114S	TX FM	4.8	0.1	0
Q406	KTA1505	RX TX	7.3	0	5.66
Q407	KTC200	RX TX	10	13.8	9.36
Q408	KRA105S	TX	0.7	5.7	5.7
Q411	KTC3876	RX(P-P)	2.14	4.9	1.64
Q412	KTA1505	RX(P-P)	5.25	0	4.97
Q413	KRC114S	RX(SHIFT ON)	0	1.8	0
Q414	KRC114S	RX(SHIFT ON)	0	1.8	0

Symbol No.	RX / TX	Pin No.	Voltage	Symbol No.	RX / TX	Pin No.	Voltage
IC 1 (BA 403)	RX FM	1	2.03	IC 3 (NJM 1496)	TX	10	3.8
		2	2.03		TX	11	0.1
		3	6.07		TX AM FM	12	4.3
					TX SSB		3.9
		4	0		TX	13	0.1
		5	3.46		TX	14	0
		6	3.48		IC 4 (KIA 7808)	RX TX	1
		7	3.4	2			0
IC 2 (BA 728)	RX	1	0.1	IC 5 (KIA 4558)	TX	3	8.2
		2	0.5			1	4.2
		3	0.01			2	4.2
		4	0			3	4.3
		5	0.1			4	0
		6	0.45			5	3.4
		7	0			6	3.2
		8	7.12			7	7.5
IC 3 (NJM 1496)	TX AM FM	1	0.14	IC 6 (KIA 7217)	RX TX	1	13.9
	TX SSB		3.4				
	TX AM FM	2	2.4		RX TX	2	12.7
	TX SSB		2.7		RX TX	3	4.1
	TX AM FM	3	2.4		RX	4	8.2
	TX SSB		2.7		TX		11.1
	TX	4	3.3		RX	5	1.5
	TX	5	1.3		TX		0.3
	TX	6	3.9		RX	6	3.4
	TX	7	0		TX		3.0
	TX	8	3.6		RX	7	3.4
	TX	9	0		TX		1.5

Symbol No.	RX / TX	Pin No.	Voltage	Symbol No.	RX / TX	Pin No.	Voltage
IC 6 (KIA 7217)	RX	8	1.2	IC 401 (SY-205)	LSB	15	5
	TX		0.1		USB	16	5
	RX TX	9	0		AM	17	5
	RX	10	7		FM	18	4.7
	TX		10.4		+ SHIFT	19	0
IC 7 (KIA 6058)	TX	1	0.9		SHIFT OFF	20	5
		2	1.6		RX TX	21	5
		3	7.2		TONE LOW ON	22	5
		4	1.6		1KHz STEP	23	4.7
		5	0		2KHz STEP	24	4.7
		6	7.1		3KHz STEP	25	4.7
		7	7.1		4KHz STEP	26	4.7
		8	7.2		RX TX	27	5
IC 401 (SY-205)	RX TX	1	2.53		RX TX	28	5
	RX TX	2	0		RX TX	29	5
	TX	3	5.4		RX TX	30	5
	RX TX	4	5		RX TX	31	5
	RX TX	5	0		RX TX	32	0
	RX TX	6	5		RX TX	33	1.65
	RX BEEP ON	7	5 (P-P)		RX TX	34	0
	RX TX	8	0		RX TX	35	0
	RX TX	9	5.6	RX TX	36-65	5 (P-P)	
	RX	10	7.0	RX TX	66	5.6	
	TX		0	RX TX	67	5.6	
	RX TX	11	0	RX TX	68	5	
	RX TX	12	0	TX	69	4.1	
	RX TX	13	5	RX TX	70	2.6	
	RX TX	14	0	RX TX	71	2.6	

Symbol No.	RX / TX	Pin No.	Voltage	Symbol No.	RX / TX	Pin No.	Voltage
IC 401 (SY-205)	RX TX	72	5	IC 402	RX TX	1	13.8
	RX TX	73	5		RX TX	2	0.6
	RX TX	74	0		RX TX	3	5.6
	RX TX	75	2.6				
	RX TX	76	0				
	RX TX	77	0				
	RX TX	78	1				
	RX TX	79	0				
	RX TX	80	2.7				

SEMICONDUCTOR LEAD IDENTIFICATION AND IC INTERNAL DIAGRAM



KTC3192
KTC200
KTA200
KTA200

2SC2314

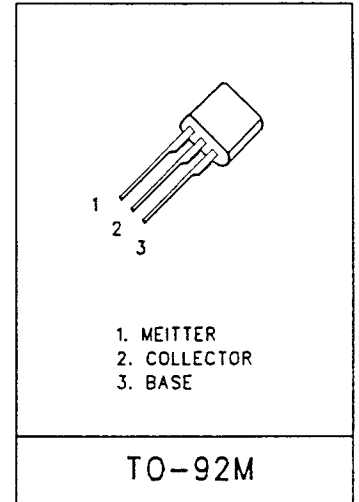
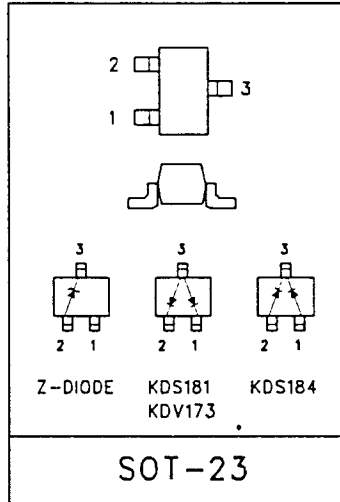
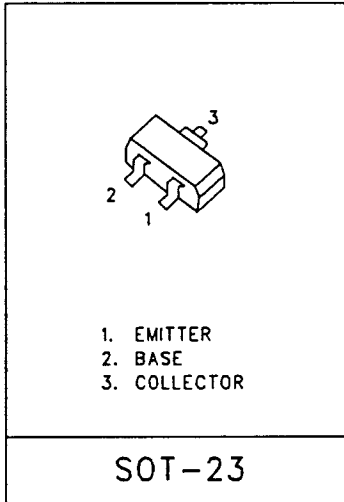
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SVC251

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KDS114

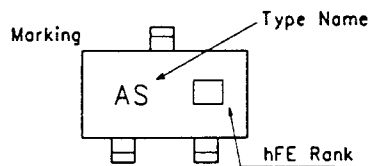
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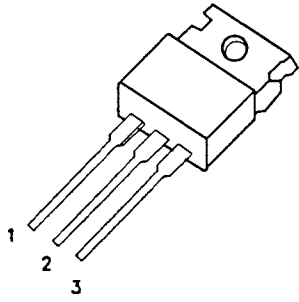
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KRC110S KRA105S
KRA101S KRA150S
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KRC111S

KDS196

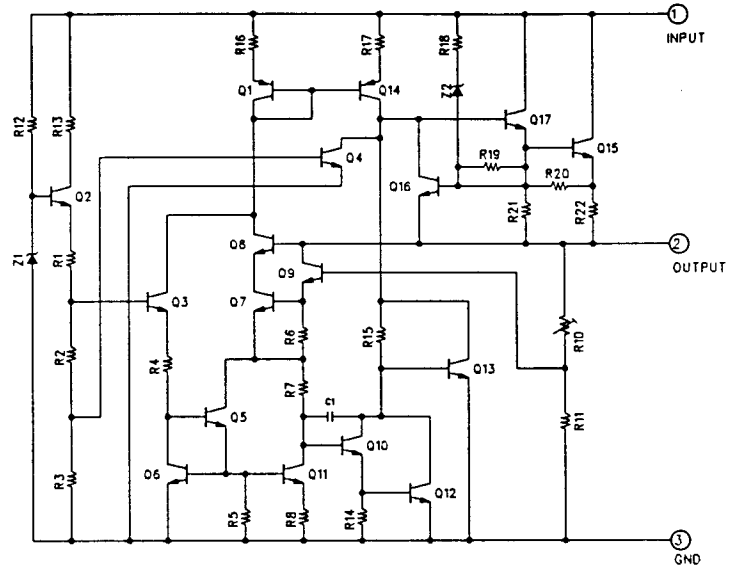
KTC200
KTA200



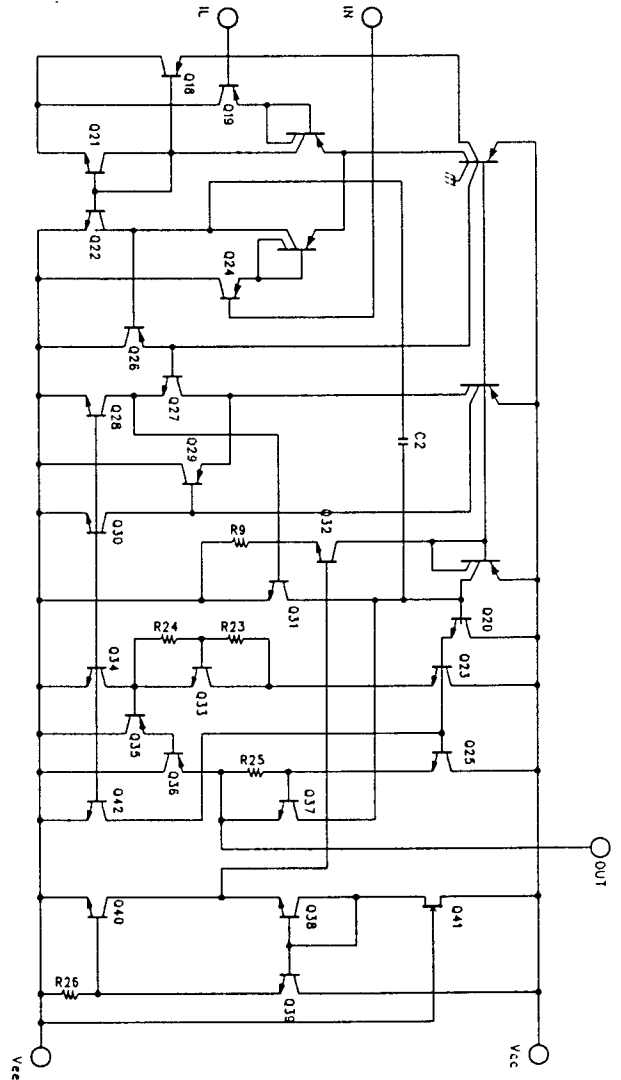
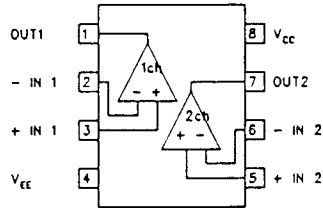
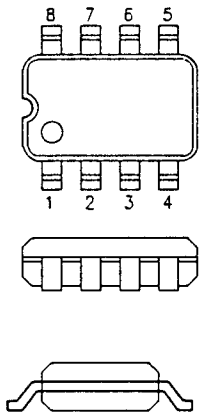
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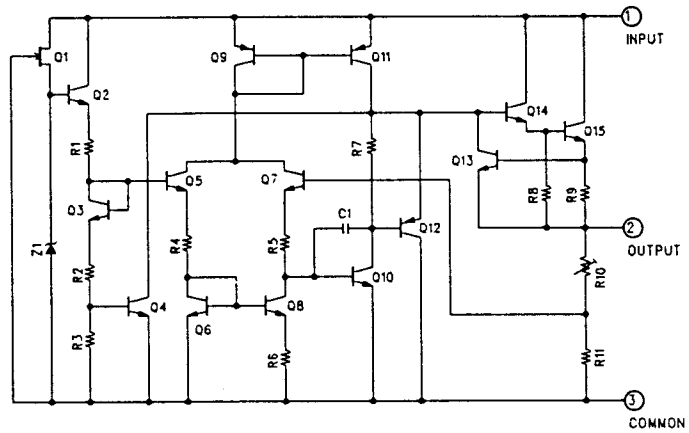
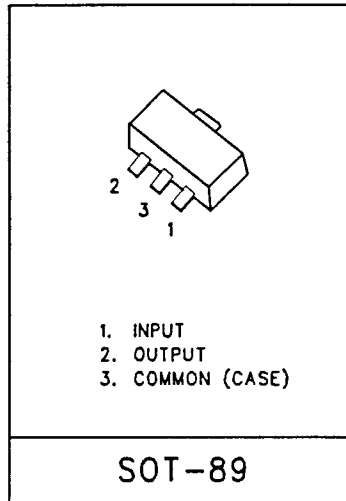
- 1. INPUT
- 2. OUTPUT
- 3. GND (CASE)



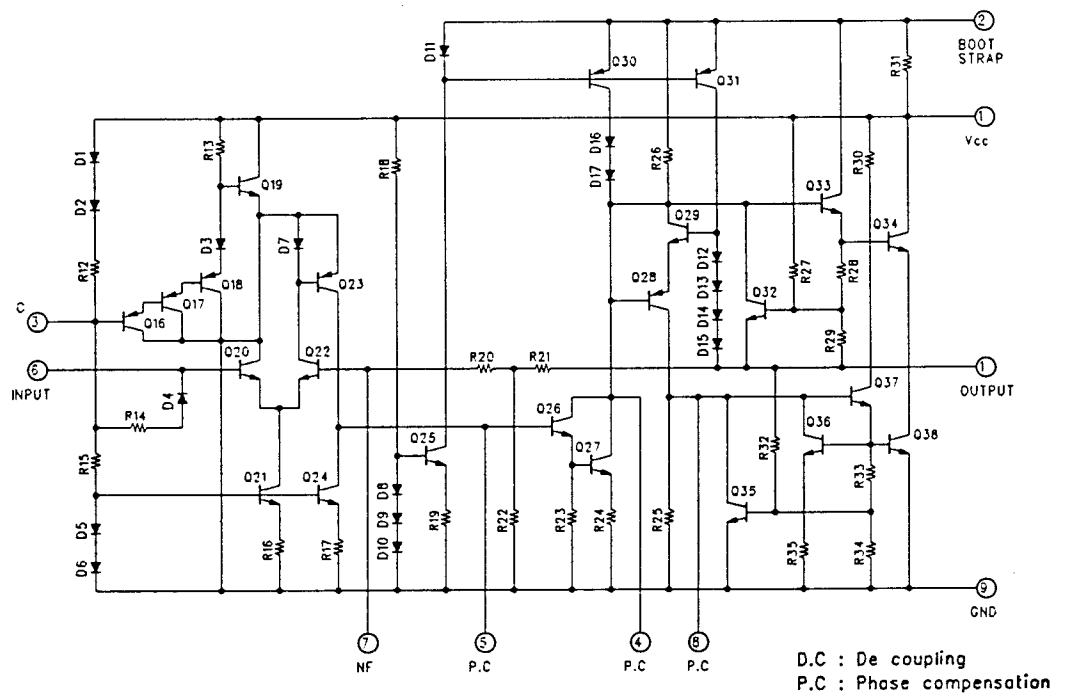
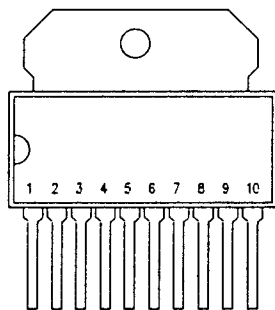
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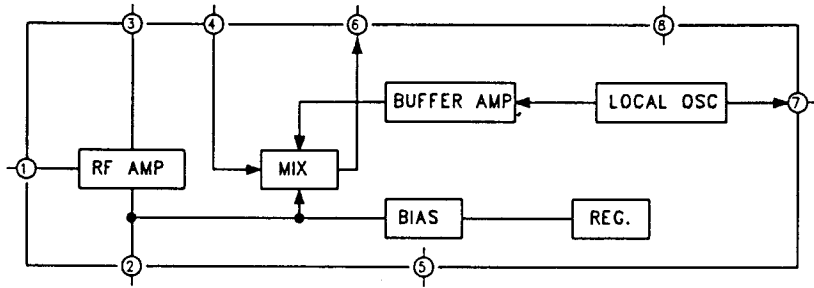
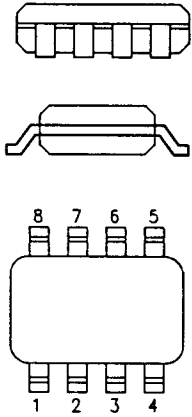
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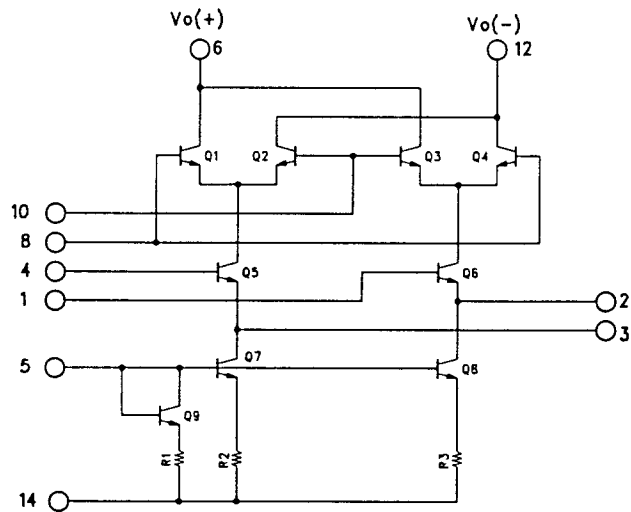
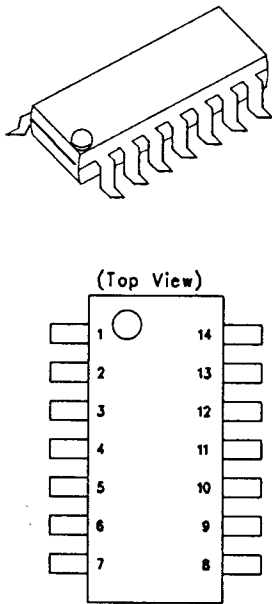
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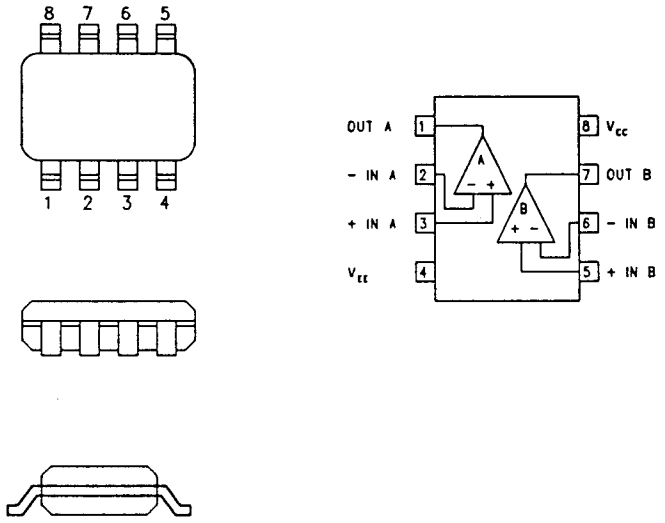
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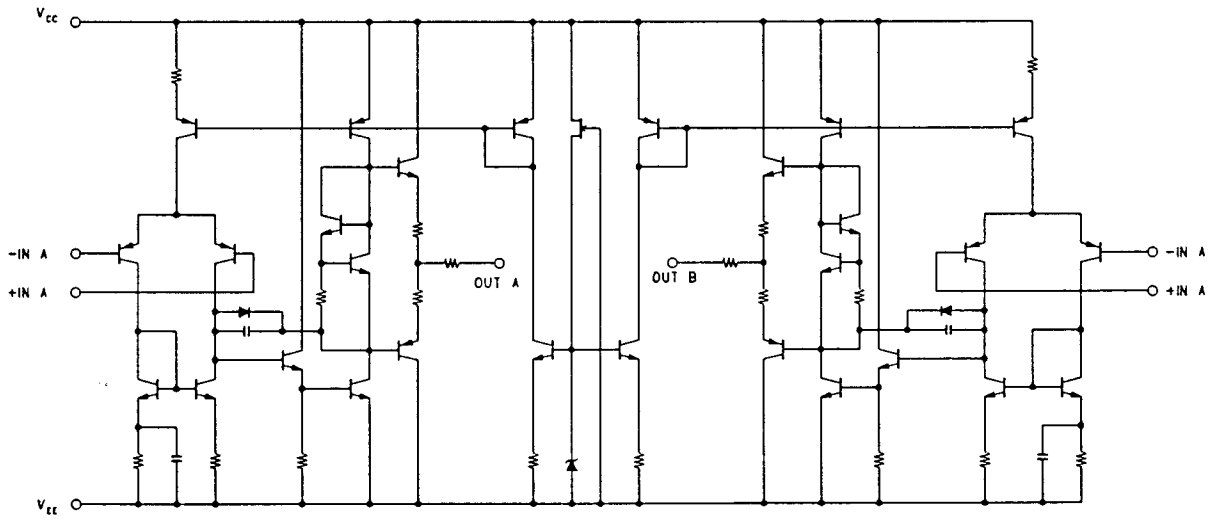
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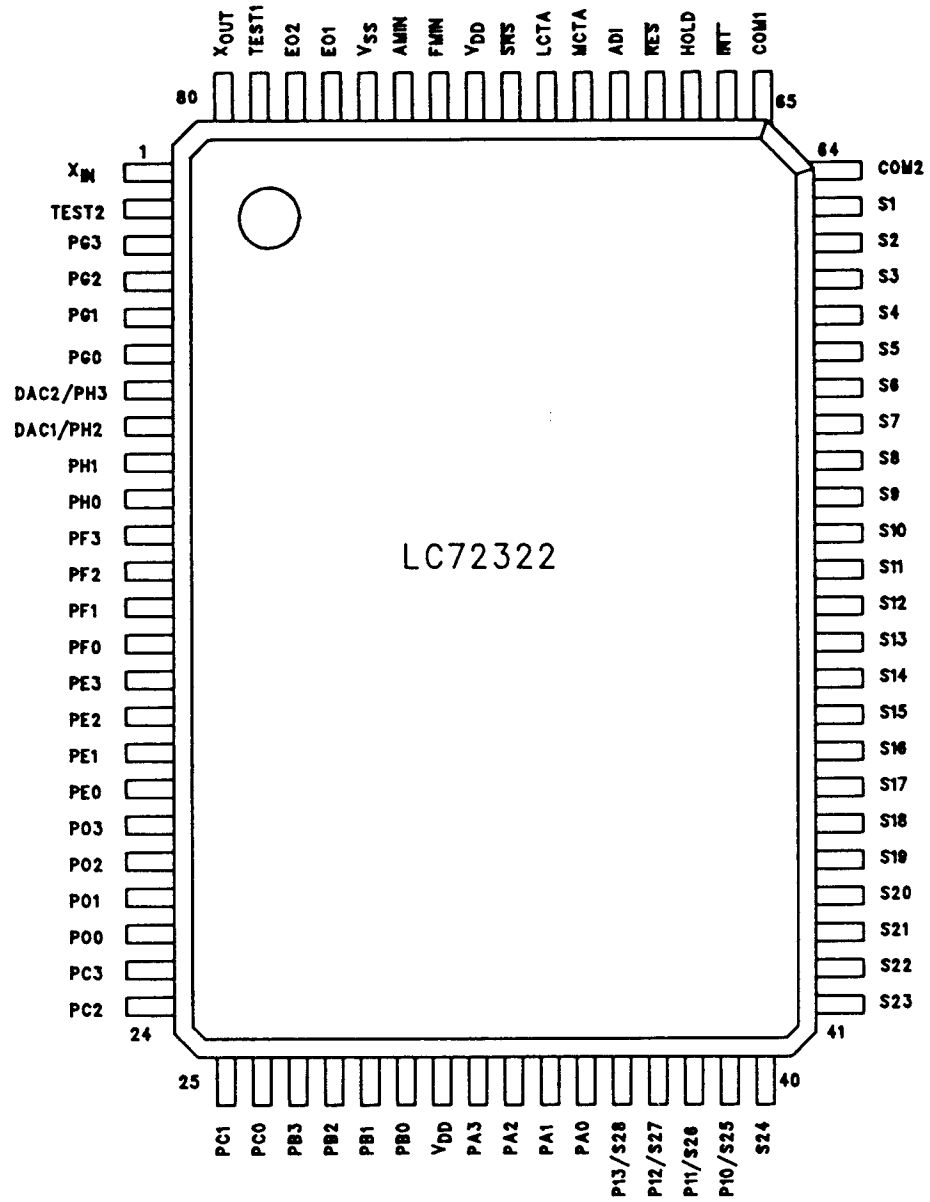
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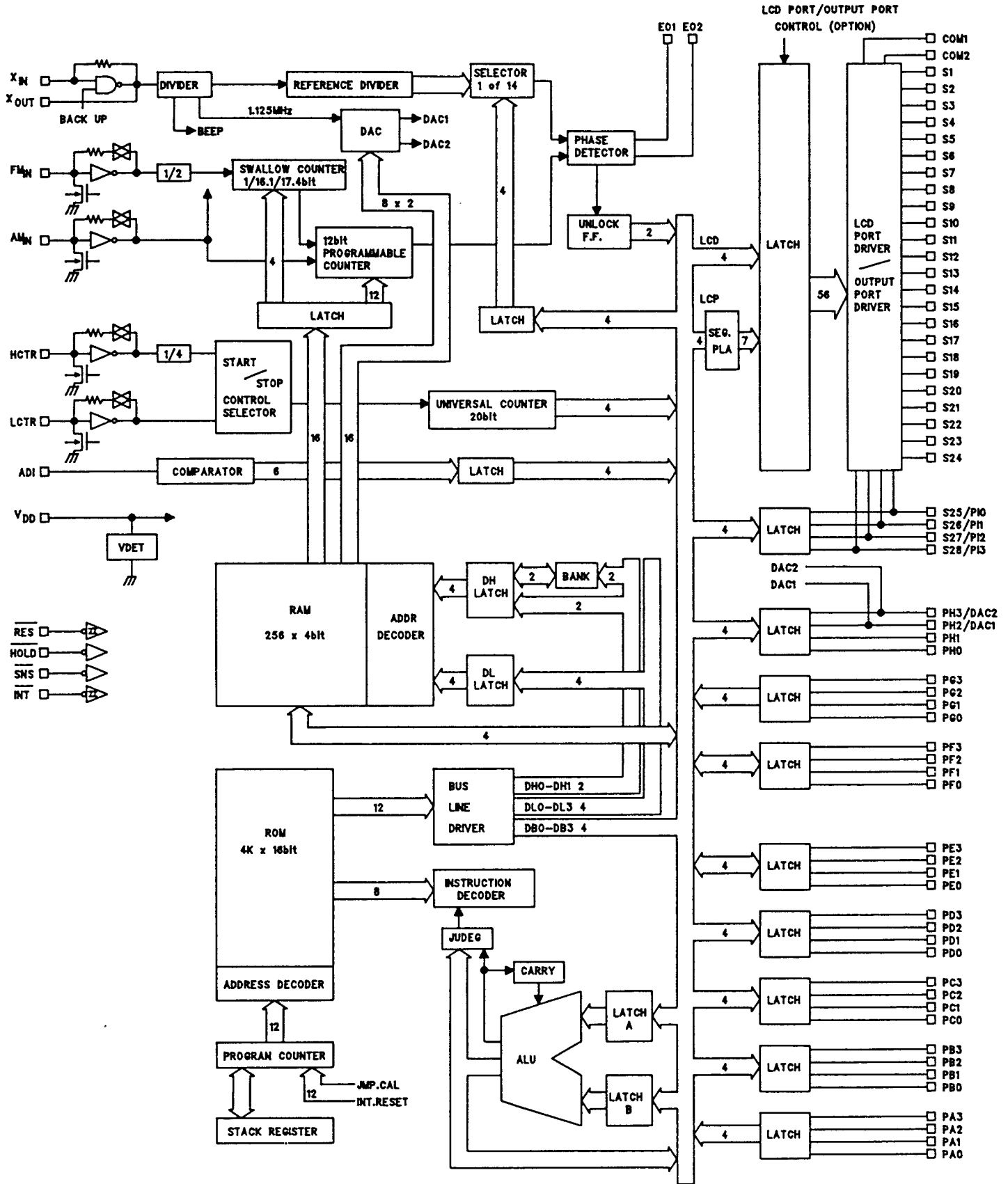
EQUIVALENT CIRCUIT

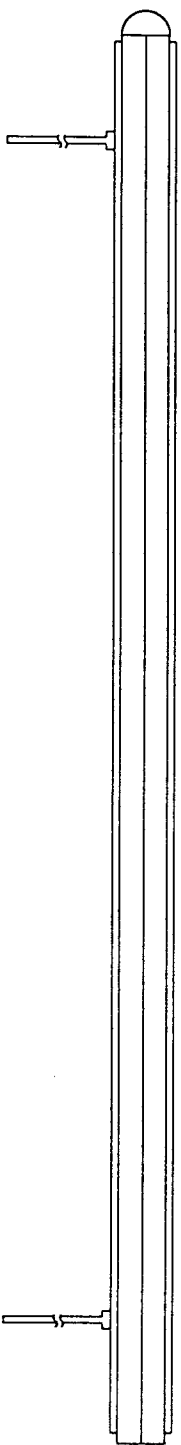
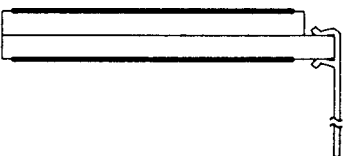
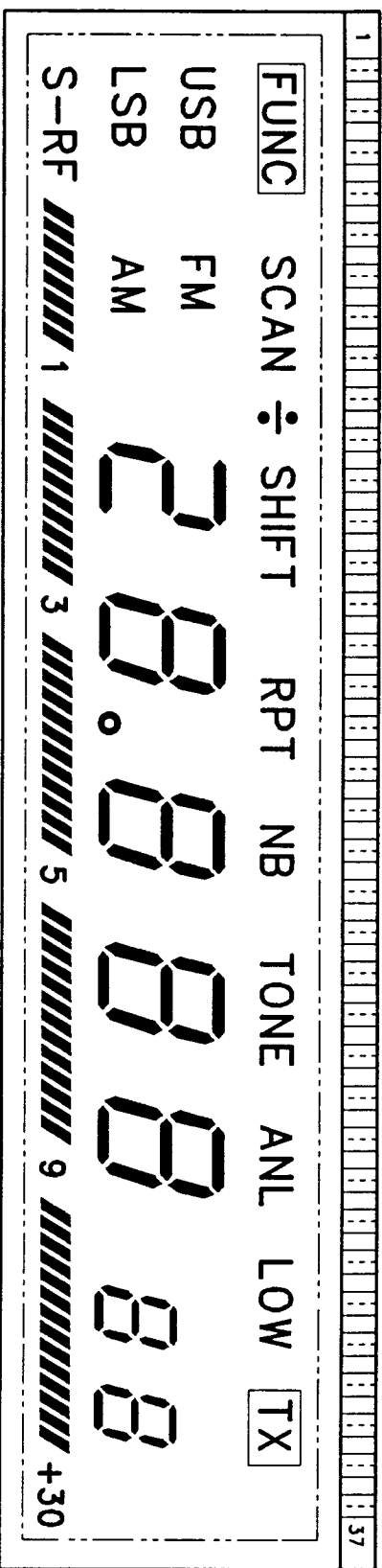


LC72322



LC72322

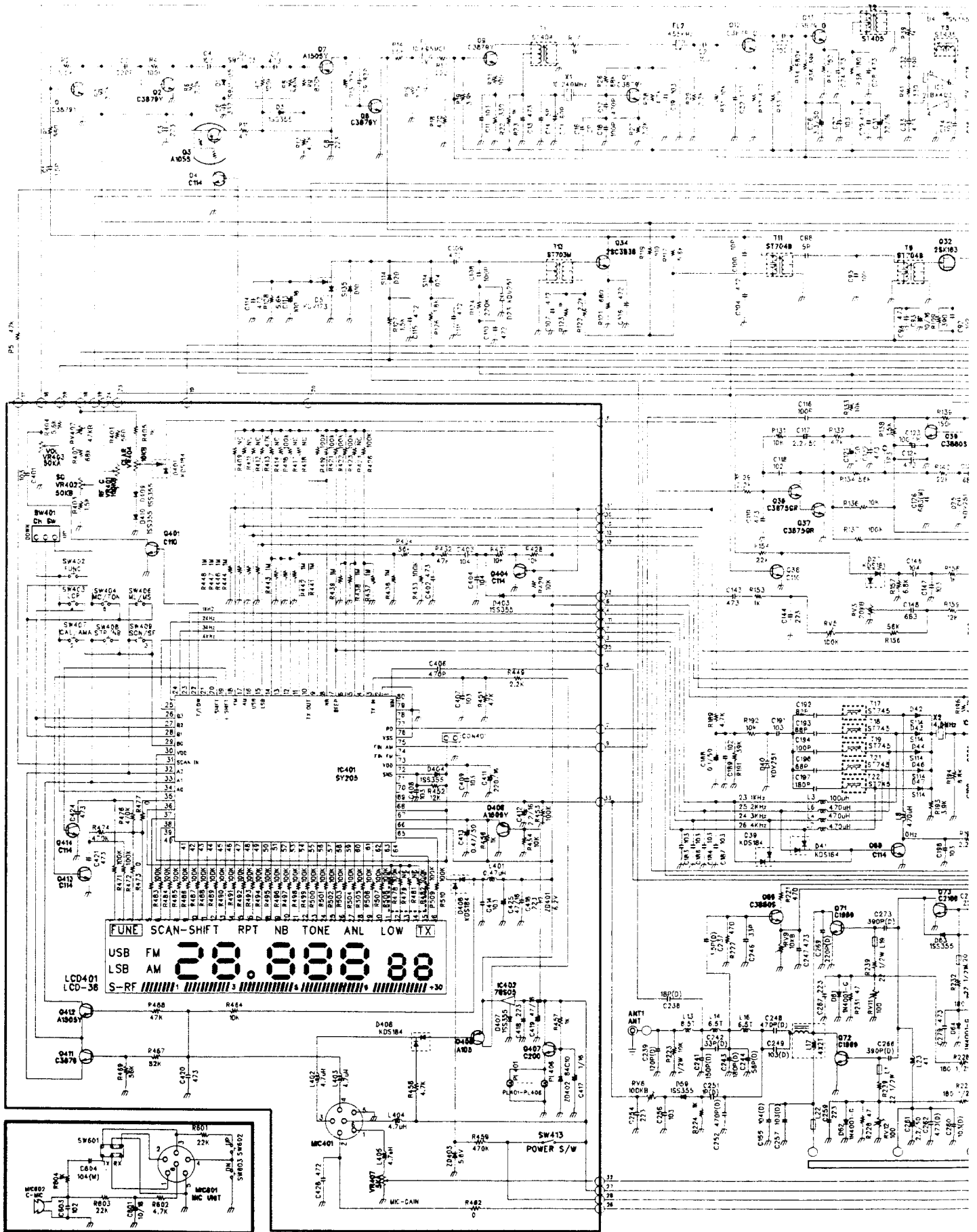




- NOTE
1. C-MOS: LC 7232
 2. 1/2 DUTY, 1/2 BIAS.
 3. 5.0 VOP.
 4. VIEWING DIRECTION 12:00
 5. OPERATION TEMP. -30°C TO +80°C
 6. STORAGE TEMP. -30°C TO +80°C
 7. APPLICATION : CAR-CB
 8. POSITIVE TYPE.
 9. FRONT POL : T/M
REAR POL : T/P

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
K1	K2:SHIFT	S-RF	FUNC	USB	FM	SCAN	10.G	1E	RPT	2A	2D	2E	2F	3A	3D	3E	3F	4A	4D	4E	4F	5A	5D	5E	5F	6A	6D	6E	6F	.	ANL	.	NB	.	COM1
				LSB	AM	S1	1A.C.F.P	1B	2	S2	2C	2G	2B	S3	3C	3G	3B	S4	4C	4G	4D	5S	5C	5G	5B	TX	6C	6G	6B	LOW	.	TONE	.	COM2	

SCHEMATIC DIAGRAM



GRAM (Cat. No. 19-1110)

