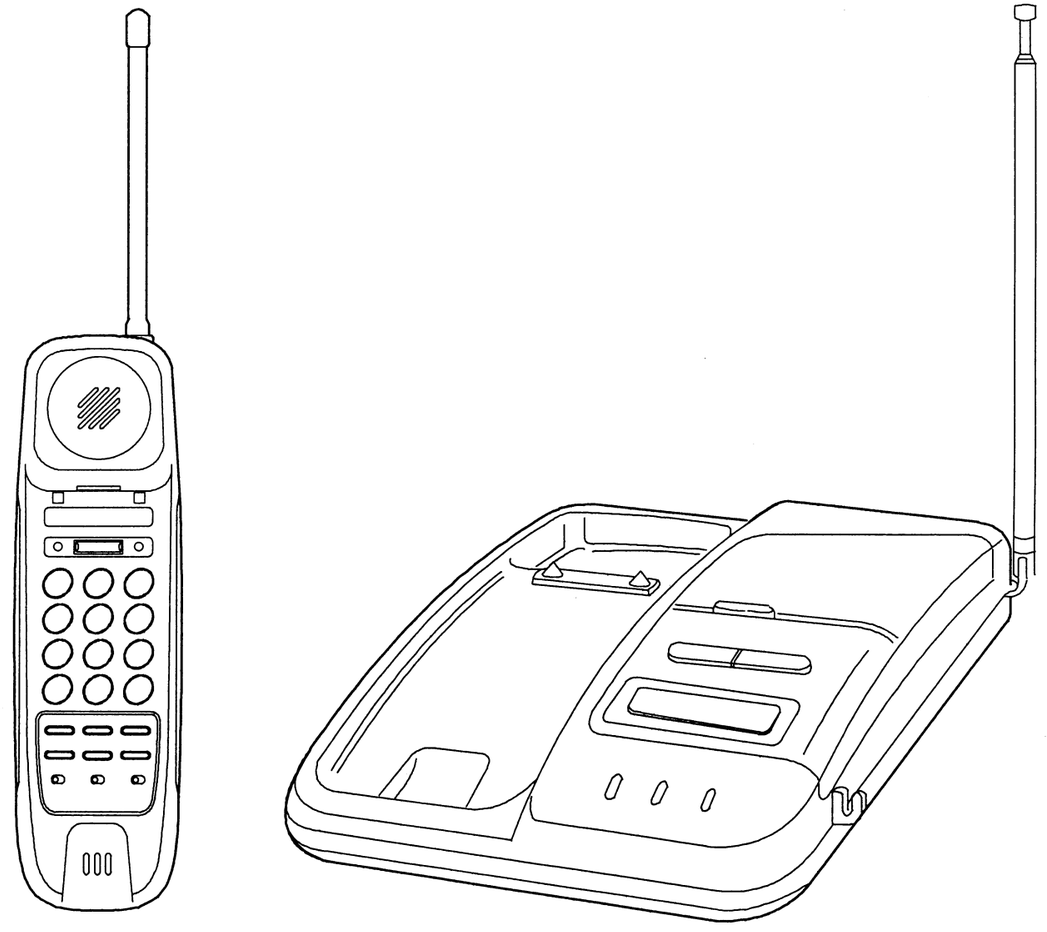
FUNAI

SERVICE MANUAL

SCT-2000

CORDLESS TELEPHONE WITH QUALITY VOICES



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CAUTION

Don't adjust under the environment of jamming radio wave.
Remove the helical antenna of Hand Set to adjust.

THEORY OF OPERATION

BASE UNIT

1. Standby mode

Whenever the base unit is turned on,the IC310 develops +8VDC Which is fed to IC302.And the IC309 develops +8 VDC which is fed to IC301, 304, 305, 601, making them operative. The reset circuit consisting of Q307 brings the pin29 of IC305 (CPU) high after the pin39 has reached high,initializing the CPU and putting the unit into the standby mode. Now, the following circuit are functionable.

RF Circuit
IF Circuit
RX Audio Amplifier
Carrier Detector
RX Local OSC
RX PLL circuit
TX Audio Amplifier

The all MUTE is also made effective by the CPU output port.

2. Charging

Placing the remote unit on the cradle causes the base unit to supply charge current through the charge terminal to the remote unit, feeding current into the base of Q303, which in turn lights the charge LED (D324).

3. Paging

Pressing the intercom switch (S304)in the standby mode places a low on the 23pin of CPU (IC305)which puts the unit into the intercom request mode the CPU places a high on its pin 9,which turns the TX SW on. feeding the TX modulator, and outputs digital code on its pins 18 and 19.The 46MHz transmitter carrier is generated PLL circuit which is consisted IC306 & IC304. The carrier is FM modulated with the digital code,and it is radiated from ANT through TX filter T308,and loading coil T301.

4. Ringing

When an input signal is received at the TEL line, a ring signals triggered by the photo coupler (IC303) and then fed through R372 to pin 12 (ring detector) of IC302.The ring detector output "Lo" during ringing.The low of the output from this ring detector is by pin 33 of the CPU and the unit enters the ring mode in which a digital code is sent out in the same way as in the paging mode.

5. In Use

Setting the remote unit to TALK mode sends a digital code. The carrier frequency is at 49 MHz band when it is sent from the remote unit and passes through T301, T308 and T302 of the base unit, amplified and mixed in IC301, where it is converted to 455kHz by X301 and the demodulated digital code is sent out from pin16 of IC301, passes through an Ope-amp of IC302. The CPU recognize these codes from pins 21 and 22, RESPECTIVELY, and if the security cords match each other, transmits an ACK and sets the unit to IN USE mode.Upon entering IN USE mode with TX activating, pin 20 of the CPU goes high, activating the relay driver, driving RL301 which makes the line off hook and flows the current through the line. The CPU puts the pin 15 low to light PHONE LED (D323),also puts the pin 26 low to disable TALK MUTE.

6. Dialing

(Tone Dialing)

When a tone dialing is made on the remote unit in IN USE mode,a DTMF signal is detected at IC301 and then fed to the Ope-amp of IC302,Q302 where it is further amplified and placed on the line through T303.

(Pulse Dialing)

When a pulse dialing is made on the remote unit in IN USE mode,the remote unit routes a dial code to the base unit which detects the code and if it is a correct one,send a pulse at IC305 pin 20, syncling RL301 to enter the pulse dialing mode.

REMOTE UNIT

1. Receiving

The RF energy of 46 MHz band emitted from the base unit is picked up by the antenna of the remote unit.The pick up signal reaches T1(loading coil) and an RF filter consisting of L1, T1, T2, T3, and T4 and then is amplified mixed and converted to 10.695 MHz frequency by IC1.
The 10.24MHz frequency from X1 is converted to 455KHz, passes through CF2(455KHz filter) and amplified by IC1 (amplifier).
The amplified 455 KHz signal is FM detected by IC1, and the detected signal is output from pin 16 of IC1. That is, the original signal which has been modulated at the base unit is demodulated here at the remote unit, and then output from pin 16 of IC1.

2. Transmitting

When TALK button is pressed in the standby mode,the remote unit enters sending mode with pin 12 of IC101 switching from high to low.
A high to low transition on pin 12 of IC101 is transferred to the collector of Q104 to cause it to go high.
When Q104 is activated, a voltage appearing at collection of Q104 causes IC2 to be activated.
IC2 generates a signal at 49MHz band.
The 16MHz band signal is amplified by IC2, passes through a filter network of T7 and L1 (loading coil), and then emitted from the antenna.

3. Switch scanning

IC101 (MPS) of the remote unit scans SECURITY CODE SW (S104) to recognize its condition as follows:
IC101 causes its pins 10 and 11 to sequentially go low for ashort time, that is, sends scan signals to the switch.
Pins 22 thru 25 of IC101 also connect to the switches as inputs to IC101. IC101 recognizes the setting of the SEQ SW for security code from the high/low statuses of the inputs at the instant that pins 10 and 11 of IC101 are low.

4. TALK mode

Pressing TALK button causes the unit to enter TX ON status, and the code is sent from pins 19 and 20 of IC101 to pin 3 of IC2 from which the code is transmitted. Returning of ACK from the base unit means that the code is coincident. Link is established and the unit enters PHONE mode. Pin 15 of IC101 goes low causing Q2 to turn on MIC. At the same time, pin 14 of IC101 goes low to activate Q105, which in turn, enables Q101 and Q102 to drive the speaker which emits the voice. Pin 8 of IC101 goes low and the LED (D109) lights.

5. ST-BY mode

Pressing again TALK button pulls pin14 of IC101 to high, which causes Q105 to disable Q101 and Q102, silencing the speaker.Pin12 of IC101 also goes high. Pin 8 of IC101 goes high, turning off the LED (D109). The code is sent from pins 19 and 20 of IC101 to the base unit which in turn, sends back ACK. And the unitenters the ST-BY mode.

6. OFF mode

OFF mode is entered when POWER ON/OFF (S101) switch is set to OFF, as explained below. Setting the switch to the OFF position causes +B to be fed to 39pin of IC101 & Reset circuit consisting Q109 & 110.

7. AUTO stand-by

ST-BY mode can be entered by either normal ST-BY or auto ST-BY. To enter normal ST-BY mode, set POWER ON/OFF (S101) switch to ON.To enter auto ST-BY mode, POWER ON/OFF (S101) switch to on.and to TALK mode, and place the remote unit on the charge cradle ofthe base unit.

Normal ST-BY:

a) Setting ST-BY mode turns SW101 on.

Auto ST-BY:

a) Pressing TALK button causes pin 32 of IC101 to go high, to make the unit enter TALK mode.

b) IF the remote unit is on the charge cradle of the base unit,the positive voltage from the battery and the charge terminal pulls Q106 base low. Q106 collector, in turn, pulls IC101 pin 9 low. This establishes ST-BY mode.

OTHERS

1. Intercom mode (remote)

Pressing INTERCOM key in standby or talk mode the intercom code,putting the remote unit to the intercom mode. The internal circuitry, however, remains in the talk mode state.

2. Intercom mode (base unit)

When the intercom code sent from the remote unit is received by the base unit, the code is detected by IC301, passes through the code detector and then recognized by the MCU in the same manner as with TALK. At the same time the base unit sends the ACK and enters intercom mode, followed by the following sequence of operations. IC305 pin 9 goes high, enabling TX ON. IC305 pin 21 goes low, activating ICs 307 and 308. IC305 pin 12 goes high, defeating intercom mute.Immediately after there operations, a beep sound is output from IC101 pin 8 and routed to SW302 which, if on, passes the sound toIC308 amplifier. The amplifier drives the speaker on the baseunit for approx. 2 seconds.

3. Speakerphone

Pressing SW305 (speakerphone switch) while in the standby mode enter speaker mode. IC305 pin 11 goes high, disabling speakerphone mute. IC305 pin 2 goes low, activating ICs 307 and 308. IC305 pin 13 goes low, causing D321 to light.

4. 3 -way

The system enters the 3 way mode by one of the following action:Pressing the speakerphone switch (SW305) while the base unit is in the phone or intercom mode; the remote unit requests phone or intercom in the speakerphone mode. the operations of the circuits in the remote unit are same as with talk made.Incontrast, there are changes in the base unit circuit operations:

IC305 pin 36 goes high, disabling talk mute.
IC305 pin 9 goes high, enabling TX ON.
IC305 pin 10 goes low, enabling 3 way mute.
IC305 pin 12 goes high, disabling intercom mute.
IC305 pin 13 goes low, lighting D321.
IC305 pin 15 goes low, lighting D323.
IC305 pin 21 goes low, activating ICs 307 and 308.

Then the system enters 3 way mode.

5. Channel change

Pressing the channel key while the system is either in the talk mode, intercom mode or 3 way mode causes the remote unit to issue a channel change code, the data on the pins 5 and 6 of the IC101,shift the channel to the correct one and then transmit a channel verification code. The base unit, upon receiving the channel change code, shift the channel to the specified one by changing the data on pins 42 and 43 of IC305 and sends an ACK to the remote unit. The remote unit recognizes this ACK and sends a channel lock code to hold the new channel. When the base unit recognizes the lock code, it locks the channel.

ALIGNMENT PROCEDURES

1. Setup

Feed the power to the base unit through the adaptor supplied.
Open circuit the pin 9 of IC305. Connect the base of Q311 to a voltage divide circuit as shown below. Adjust the trimpot 500Ω so that the voltage on the Q311 base is pulled up to 4.0V.
Adjust to 4.0V.

2. Adjusting TX PLL

Connect a high input impedance measuring instrument to IC304 pin11.
Adjust T307 so that the voltage on the pin of IC304 is 2.3±0.1V.

3. Adjusting RF Voltage

Connect a dummy load across the ANT terminals (see Fig. below).
Connect a high frequency voltmeter to the test point of the dummy load. Adjust T301, T306 and T308 for a maximum RF voltage. AdjustVR301 for 150±10mV reading on the voltmeter.

ANT.TERMINAL
16.6 Ohm
SG
Capacitance across terminal:
16.6 Ohm
66.7 Ohm
9.6 pF without SG
Test point

4. Adjusting TX Frequency

Connect a 4.7μF electrolyte capacitor across IC306 pin 3 and ground path with connect polarity.Connect the RF frequency counter to the test point of dummy load.Adjust TC301 so that the TX frequency is 46.97MHz±100Hz.

5. Adjusting CODE DEV

Turn the system off and on again. Press INT'COM several times.Connect a linear detector to the ANT. Using substitution method,adjust VR305 so that the peak value of the CODE wave on the linear detector is 4.5KHz 0.1KHz dev.

6. Adjusting RX PLL

Connect the high input impedance meter to IC304 pin 13. Adjust T304 for a 2.0 0.1V reading.

7. Adjusting RF SENS

1) Set the SG for 49.97MHz, modulation depth ±2.5KHz with a 1KHz modulation wave and 2mV OUTPUT.
2) Open circuit pins 36 and 20 of IC305.Terminate TEL LINE at 600Ω. Connect the VTVM, SINAD meter and scope across the 600Ω.
3) Adjust T305 so that the 1KHz wave on the TEL LINE develops a maximum peak wave form.
4) Turn and lower the cores of T302 and T303 to the bottom.
5) Set the SG to 10dBμ output. Reverse T302 core unit the TELLINE develops a wave continue turing unit it reaches a peak value. (Don't overturn, stop at the 1st peak.)
6) Set the SG to OdBμ. Readjust T302 for a peak wave amplitude.
7) Reversing T303 core, find the 1st peak level and stop there.

8. Adjusting SQUELCH

Set the SG for 6dB SINAD on TEL LINE. Observing IC305 pin 37 on the scope, set VR601 to the point where the wave form changes from low full high level.

9. Adjusting INT'COM LEVEL

Apply output of the code generator to EXT. Modulation input of the SSG.Set the base unit to INT'COM mode. Set the SSG to 1KHz, 2.5KHz dev. modulation.Terminate the SP out at a 32Ω non-inductive resistor. Set VOL to MAX position.Adjust VR306 so that 32Ω develops 3.0±0.1V.

10. Adjusting VOX SENS

Turn off and on again the system. Set it to SP PHONE mode.Input 35dBμ, 1KHz sine wave to the THL LINE from AF generator.Apply a 7mV, sine wave to the MIC from the AF generator through 1uF capacitor. Set VR303 to the point where the mode changes from RX to TX.

1. TX PLL

1) Feed the PCB with 3.8V from the DC supply.
2) Set the power switch to ON position. Set VO1 switch to Hi-position. Verify more than 15mA current flowing.

CT1 3) Set CT1 (trimmer capacitor) at its center travel andVerify approx. 49.9MHz TX frequency.

T9 4) Connect the digital voltmeter across R38/R35 node (testpoint) and the negative (GND) lead of C47. Adjust T9 for a 2.2 0.1VDC reading.

2. RX PLL

T6 1) Connect the digital voltmeter across R32/R31 node (testpoint) and the negative (GND) lead of C44. Adjust T6 for a 2.0±0.1 VDC reading.

3. TX Frequency

CTL 1) Connect the dummy load (Fig. 1) across the antennal terminals of PCB. With TALK stage, adjust CT1 so that the RF frequency on the ANT terminal is 49.970MHz±50Hz.

4. RX SENS

(Coarse) 1) Connect the dummy load (Fig. 1) across the antenna terminals of the PCB. Set the SSG to the following values and connect to the ANT terminal.
Frequency: 46.970MHz
Moduration frequency: 1.0KHz
Modulation depth (Dev): ±2.5KHz
SSG output: 1.0mV
2) Connect 0.056μF mylar across the SP terminals of PCB instead of SP. Connect the SINAD meter, voltmeter andscope across the capacitor.

T5 3) Adjust T5 so that the SP terminal reads a maximum output.

VR1 4) Turn VR1 fully clockwise (minimum resistance).

L1, T1, T2, T3, T4 5) Adjust L1,T1,T2,T3,and T4 for a maximum sensitivity. Adjust the SG output as necessary.

5. POWER

T7,T8 1) Adjust T7 and T8 for a maximum TX power output.

T1 2) Adjust T1 for a aximum TX power output.

6. RX SENS

(Fine) 1) Adjust L1,T2,T3 and T4 for a maximum RF sensitivity.

L1,T2, T3,T4,T8 2) While observing SINAD meter and scope or RF voltmeter,adjust T8 for a maximum sensitivity without affecting TX power output.

7. TX Power

VR1 1) Adjust VR1 for a 90 mVrms 10 TX power output.

8. MIC SENS

1) Connector a circuit as shown below across MIC terminals of the PCB.
2) Set the AF OSC output for a 15mV rms,1KHz when measured across 3.9KΩ

VR2 3) Adjust VR2 for a 2.5KHz Dev. reading.

9. DTMF Dev

VR3 1) With TONE mode. Press [1] button on the dial plate to send the code. Using the substitutive method, adjust VR3 for a 4.0±0.3KHz of DTMF Dev.

10. Low Batt

VR101 1) Feed 3.35 VDC from the source across CN1. Adjust VR101 to the point where the LOW BATT LED begins to light. Increase the DC voltage up to approx. 3.8V and then while lowering the voltage verify that the LED goes on at 3.35V.

11. SQ SENS

VR4 1) Connect the SSG through the dummy load (Fig. 1).
With modulation off,set the SSG to 6dBμ output when read at its output terminals. Connect the scope across IC101 pin19 and GND. Adjust VR4 to the point where pin19 goes from high to low. Increase the SSG output and then decrease gradually to check that the pin1 falls from high to low at 6dB output at the SSG.

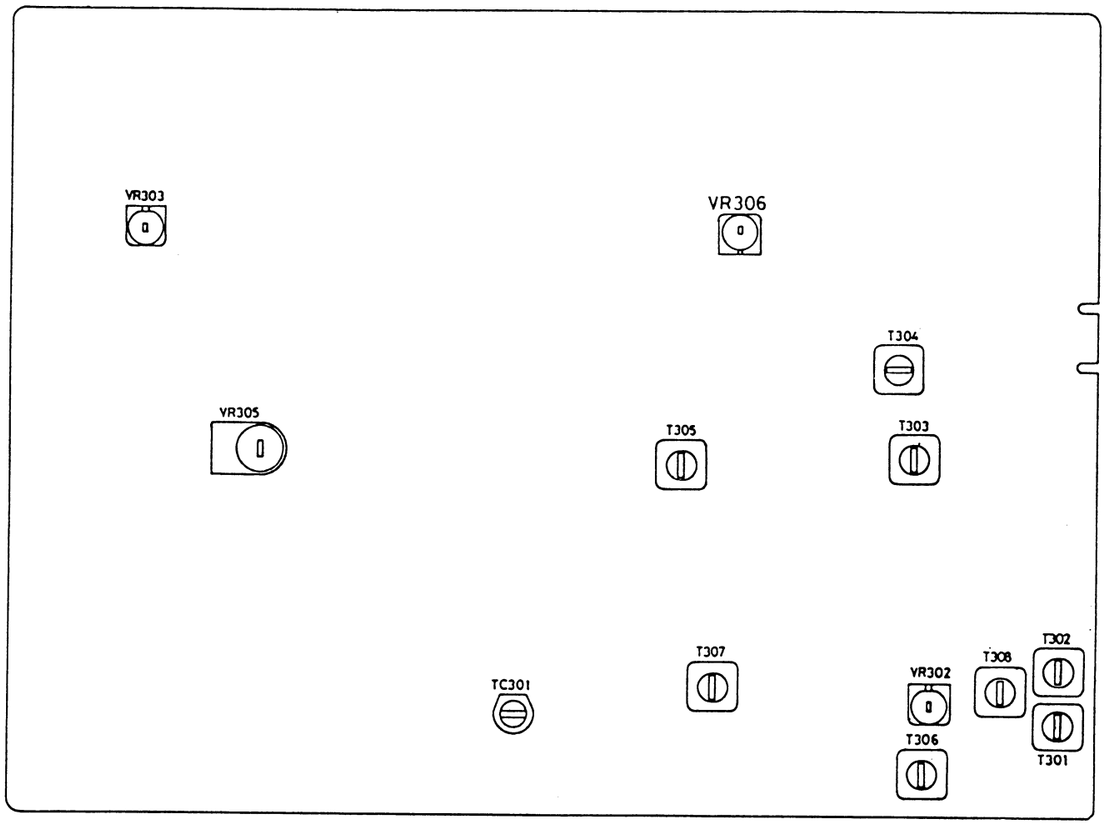
Remote Dummy Load

38.7ohmSG
ANT.TERMINAL
25.8ohm
Capacitance across terminal 3pF without SG

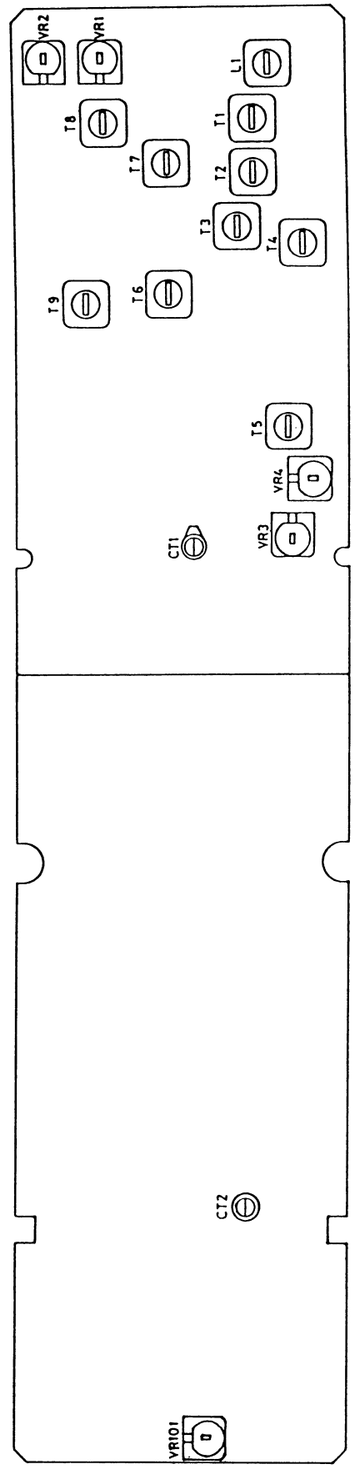
1) Trimmer capacitor C should be less than 6pF to enable comensating for difference in dummy load configuration.
2) Set the C to 4.8pF when measured at ANT reminal without loading the SSG.

ALIGNMENT POINTS

BASE



REMOTE



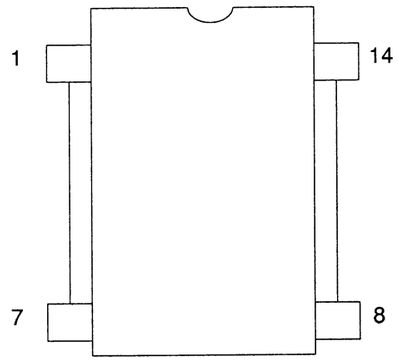
TROUBLESHOOTING GUIDE

Base Unit (Assuming that the security code SW is matching that of he remote unit.)		
Problem	**Check if**	**Check Point**
Power LED won't light	a) No power from AC adaptor b) AC adaptor is good	AC / DC adopter IC309, IC310, D310
No ring accepted	Photo LED won't flash	IC303,IC310,Q304, Q305
No ring sound in Base Unit	Photo LED is flashing	IC308, SP301
No ring sound in remote unit	Photo LED is flashing	IC306, Q311
No charging	CHG LED won't light	Q303,D324
Page won't sound in remote unit	RING sounds	IC305, IC301, S304
TALK won't work		IC601, IC302, Q311, IC306, Q303, Q304, Q305, Q301, Q302
Auto standby won't work	STAND BY is possible	Broken wire, Q303
High noise level		IC306, IC301, ANT Wire Broken
No party's voice		Q306, IC306
No voice to the other party	Party's voice can be heard	IC601, IC302, Q301, Q302
Party's voice is distorted		IC306, Q306
High side tone level		T309
Line is kept accessed No dialing or Flash and redial function are disabled	PHONE LED lights	Q305, RL301 IC301, Q302, Q301 Q302, Q305, RL301
Speakerphone is inactive	a. Speakerphone LED is not lit b. No talk established	IC305, D321 IC307, IC308, SP301, MK301, Q301 Q302
Channel cannot be changed	a. TALK/ST BY switch is functioning	Base - IC304 Remote - IC3
No autoscan	a. Resetting the base and remote units b. Remote- IC3 recovers the function	Base - IC304 Remote - IC3

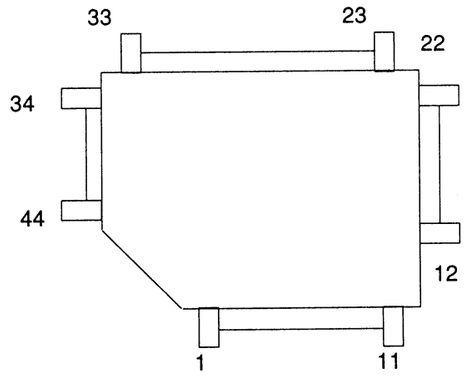
SEMICONDUCTOR LEAD IDENTIFICATION

IC'S

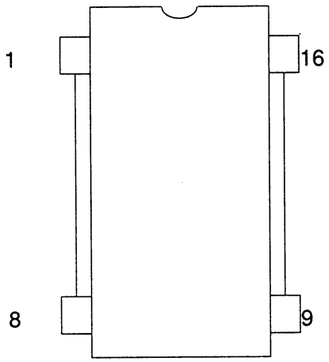
IC302



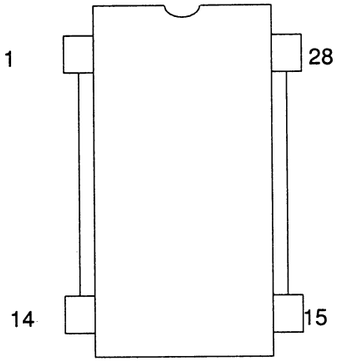
IC101, IC305



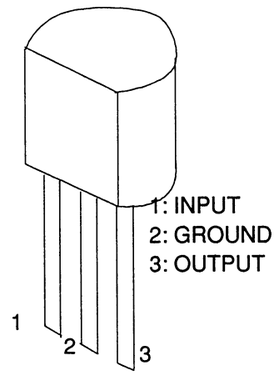
IC3, IC304, IC306



IC1, IC301, IC307

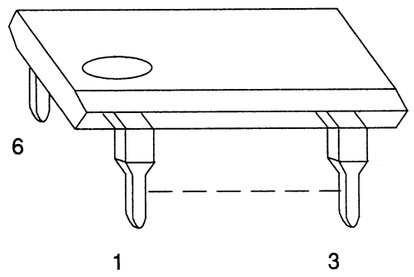


IC309

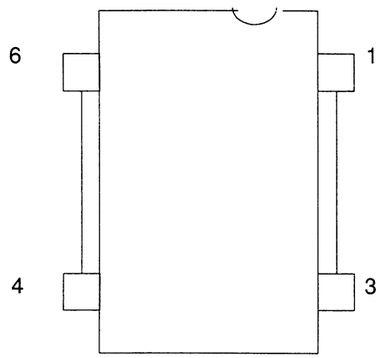


IC303

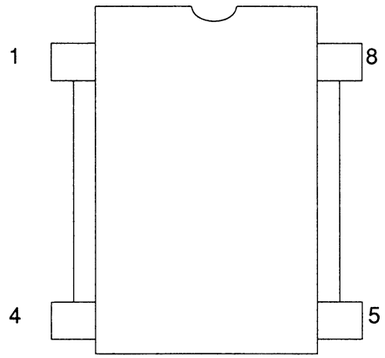
1: LED ANODE
2: LED CATHODE
3: NC
4: EMITTER
5: COLLECTOR
6: BASE



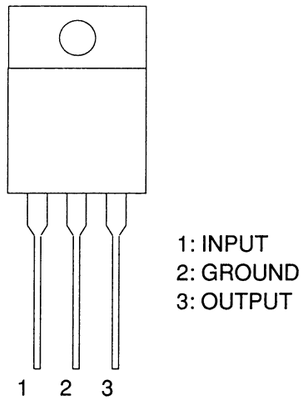
Q5



IC308, IC601

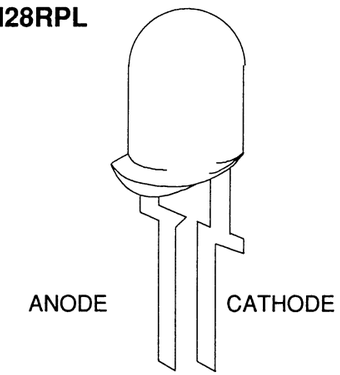


IC310



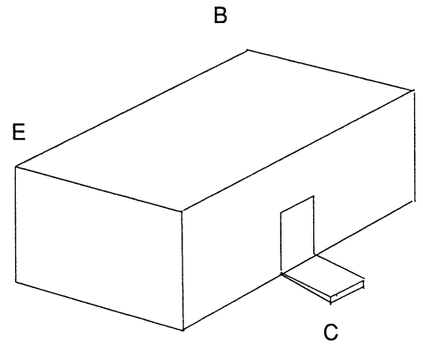
LED'S

LN28RPE
LN28RPL

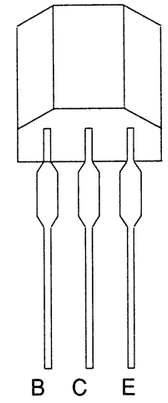


TRANSISTORS

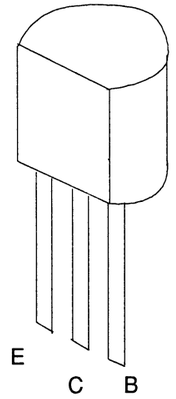
2SAC2413(AP), 2SC2412(BR), 2SA1037(FR), 2SD1757(AAR)



2SC1740(S)

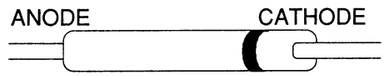


LC945(Q), KSC945C(GR), 2SC1815(Y), LA733(Q), KSA733C(Y), 2SA1015(Y)

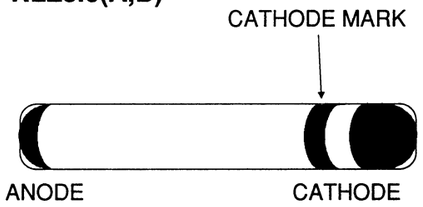


DIODES

1SS133, 1SS176, 1N4002, 1N4004, MTZ5.1(A,B), MTZ5.6(A,B), MTZ10(A,B,C), MTZ3.9(A,B), MTZ22(A,B), 1TT-410, RD5.1E(B), RD5.6E(B), RD3.9E(B), RD22E(B), RD10E(B)



RLS-73, RLZ5.6(A,B)



SEMICONDUCTOR VOLTAGE CHART

REMOTE UNIT

PARTS NO.	PIN NO.	ST-BY	TALK	INT'COM	SP PHONE	3 WAY	CHARGE
IC101	1	3.78	←	←			
14DW580	2	3.78	←	←			
	3	3.78	←	←			
	4	0	←	←			
	5	3.74	←	←			
	6	3.78	←	←			
	7	0	←	←			
	8	3.78	0.04	←			
	9	0.80	←	←			
	10	3.78	←	←			
	11	3.78	←	←			
	12	3.78	0.02	←			
	13	0	←	←			
	14	3.78	0.02	←			
	15	3.73	0.08	←			
	16	0	←	←			
	17	0	←	←			
	18	3.78	←	←			
	19	3.72	←	←			
	20	0	←	←			
	21	0	←	←			
	22	3.78	←	←			
	23	3.75	←	←			
	24	3.75	←	←			
	25	3.75	←	←			
	26	0	←	←			
	27	0.70	←	←			
	28	0.36	←	←			
	29	3.69	←	←			
	30	3.79	←	←			
	31	0	←	←			
	32	3.77	←	←			
	33	3.78	←	←			
	34	1.86	←	←			
	35	3.78	←	←			
	36	3.49	←	←			
	37	0	←	←			
	38	3.78	←	←			
	39	3.78	←	←			
	40	0	←	←			
	41	0	←	←			
	42	0	←	←			
	43	0	←	←			
	44	3.78	←	←			
IC 1	1	3.20	←	←			

PARTS NO.	PIN NO.	ST-BY	TALK	INT'COM	SP PHONE	3 WAY	CHARGE
MC3363DW	2	0.75	←	←			
	3	0	←	←			
	4	0.80	←	←			
	5	2.49	←	←			
	6	3.16	←	←			
	7	1.83	←	←			
	8	3.20	←	←			
	9	2.29	←	←			
	10	2.29	←	←			
	11	2.29	←	←			
	12	2.46	←	←			
	13	0.03	←	←			
	14	3.20	←	←			
	15	0.03	←	←			
	16	1.18	←	←			
	17	1.75	←	←			
	18	3.76	←	←			
	19	3.78	←	←			
	20	0	←	←			
	21	3.20	←	←			
	22	3.20	←	←			
	23	2.07	←	←			
	24	2.32	←	←			
	25	1.09	←	←			
	26	1.09	←	←			
	27	2.10	←	←			
	28	3.20	←	←			
IC 2	1	0.74	2.80	←			
MC2833D	2	0	1.40	←			
	3	0.11	0.99	←			
	4	0	1.33	←			
	5	0	1.37	←			
	6	0	←	←			
	7	0	←	←			
	8	0.68	0.72	←			
	9	0.72	3.17	←			
	10	0.74	3.46	←			
	11	0.71	3.01	←			
	12	0	0.20	←			
	13	0.64	0.90	←			
	14	0.14	2.32	←			
	15	0.32	2.73	←			
	16	0.74	3.39	←			
IC 3	1	1.79	1.77	←			
MC145166DW	2	0	←	←			
	3	0.74	3.66	←			
	4	0	←	←			
	5	0	←	←			
	6	3.72	3.73	←			

PARTS NO.	PIN NO.	ST-BY	TALK	INT'COM	SP PHONE	3 WAY	CHARGE
	7	0	←	←			
	8	3.66	3.62	←			
	9	0	1.31	←			
	10	0	0.13	←			
	11	0	2.18	←			
	12	0	←	←			
	13	2.08	←	←			
	14	1.31	1.30	←			
	15	3.66	3.62	←			
	16	1.81	1.79	←			
Q 1	E	3.55	3.52	←			
	C	3.21	3.46	←			
	B	2.98	2.96	←			
Q 2	E	3.78	2.40	←			
	C	0	2.37	←			
	B	3.71	1.78	←			
Q 3	E	0	←	←			
	C	0.88	←	←			
	B	0.67	←	←			
Q 4	E	0	←	←			
	C	0.61	0.91	←			
	B	0.60	0.66	←			
Q 5	1	3.71	3.70	←			
	2	2.23	2.22	←			
	3	3.71	3.70	←			
	4	2.23	2.22	←			
	5	0.74	3.66	←			
	6	3.79	←	←			
Q 101	E	0	0.19	←			
	C	0	0.87	←			
	B	0	0.76	←			
Q 102	E	0	0.24	←			
	C	0	2.18	←			
	B	0	0.88	←			
Q 103	E	0	←	←			
	C	0	←	←			
	B	0.57	0.07	←			
Q 104	E	3.79	←	←			
	C	0.74	3.66	←			
	B	3.77	3.06	←			
Q 105	E	3.79	←	←			
	C	0	3.75	←			
	B	3.77	3.12	←			
Q 106	E	0.79	←	←	-	-	3.80
	C	0	←	←	-	-	0
	B	0.20	←	←	-	-	3.20
Q 107	E	0.03	←	←			
	C	3.79	←	←			
	B	0	←	←			
Q 108	E	0	←	←			

PARTS NO.	PIN NO.	ST-BY	TALK	INT'COM	SP PHONE	3 WAY	CHARGE
	C	3.79	←	←			
	B	0	←	←			
Q 109	E	0	←	←			
	C	0	←	←			
	B	0.53	←	←			
Q 110	E	0	←	←			
	C	3.68	←	←			
	B	0	←	←			
Q 112	E	0	←	←	-	-	0
	C	1.85	←	←	-	-	0.03
	B	0.10	←	←	-	-	0.53
Q 113	E	0	←	←			
	C	0	←	←			
	B	3.73	←	←			
Q 114	E	0	←	←			
	C	3.77	←	←			
	B	0.33	←	←			

BASE UNIT

PARTS NO.	PIN NO.	ST-BY	TALK	INT'COM	SP PHONE	3 WAY	CHARGE
IC 301	1	4.71	←	←	←	←	
MC3363DW	2	0.74	←	←	←	←	
	3	0	←	←	←	←	
	4	0	←	←	←	←	
	5	4.29	4.31	4.29	4.25	4.32	
	6	4.68	←	4.65	←	←	
	7	3.30	←	3.28	←	←	
	8	4.72	←	4.70	←	←	
	9	3.82	3.80	3.79	←	←	
	10	3.82	3.80	3.79	←	←	
	11	3.82	3.80	3.79	←	←	
	12	3.98	3.87	3.95	←	←	
	13	0	←	←	←	←	
	14	4.72	←	4.70	←	←	
	15	0.55	0.60	0.57			
	16	2.01	2.03	2.02	1.96	2.01	
	17	2.41	2.50	2.43	2.39	2.61	
	18	0	←	←	←	←	
	19	0	←	←	←	←	
	20	0	←	←	←	←	
	21	4.72	←	4.69	←	←	
	22	4.72	←	4.70	←	←	
	23	3.60	3.64	3.57	←	←	
	24	3.50	←	3.47	←	←	
	25	1.08	←	←	←	←	
	26	1.09	←	←	←	←	
	27	1.91	←	1.89	←	←	
	28	4.71	←	4.69	←	←	
IC 302	1	6.75	←	4.03	6.75	4.03	

PARTS NO.	PIN NO.	ST-BY	TALK	INT'COM	SP PHONE	3 WAY	CHARGE
LM324D	2	1.24	←	4.04	1.03	4.04	
	3	4.01	←	←	←	←	
	4	8.06	←	←	←	←	
	5	0.91	←	←	←	←	
	6	0.75	←	←	←	←	
	7	6.46	6.75	←	6.40	6.75	
	8	6.74	3.20	0.48	←	3.20	
	9	0.48	3.20	0.48	←	3.20	
	10	3.16	←	←	←	←	
	11	0	←	←	←	←	
	12	0.80	←	←	←	←	
	13	0.80	←	←	←	←	
	14	6.74	←	←	←	←	
IC 303	1	0	←	←	←	←	
CNY17-2	2	0	←	←	←	←	
	3	0	←	←	←	←	
	4	0	←	←	←	←	
	5	1.19	←	←	←	←	
	6	0.59	←	←	←	←	
IC 304	1	2.07	←	←	2.17	2.07	
MC145166DW	2	4.37	←	←	4.63	4.37	
	3	3.20	←	3.36	0	3.38	
	4	0	←	←	←	←	
	5	0	←	←	←	←	
	6	4.36	←	←	←	←	
	7	0	←	←	←	←	
	8	4.41	←	←	←	←	
	9	0	1.52	←	0	1.52	
	10	0	0.25	←	0	0.25	
	11	0	2.25	←	0	2.22	
	12	0	←	←	←	←	
	13	1.94	←	←	←	←	
	14	1.50	←	←	1.57	1.50	
	15	4.37	←	←	4.63	4.37	
	16	2.10	←	←	2.20	2.10	
IC 305	1	4.41	←	←	←	←	
14DW581	2	4.41	←	←	←	←	
	3	4.41	←	←	←	←	
	4	4.41	←	←	←	←	
	5	4.41	←	←	←	←	
	6	4.41	←	←	←	←	
	7	4.41	←	←	←	←	
	8	0	←	←	←	←	
	9	0.09	3.91	4.03	0.09	4.06	
	10	4.06	4.22	←	4.09	0	
	11	0.02	←	0.16	3.91	4.11	
	12	0	0.24	4.99	0	4.99	
	13	3.51	←	←	0.04	←	

PARTS NO.	PIN NO.	ST-BY	TALK	INT'COM	SP PHONE	3 WAY	CHARGE
	14	3.51	←	0.04	3.51	←	
	15	3.53	0.04	3.53	←	0.04	
	16	0	←	←	←	←	
	17	0	←	←	←	←	
	18	0.21	0.70	←	0.21	0.70	
	19	0	←	←	←	←	
	20	0	0.83	0	0.83	←	
	21	5.37	←	0	←	←	
	22	4.39	←	←	←	←	
	23	4.39	←	←	←	←	
	24	4.39	←	←	←	←	
	25	0.21	←	←	←	←	
	26	0	←	←	←	←	
	27	2.06	←	←	←	←	
	28	2.08	←	←	←	←	
	29	4.34	←	←	←	←	
	30	4.16	←	←	←	←	
	31	0	←	←	←	←	
	32	4.34	←	←	←	←	
	33	4.31	←	←	←	←	
	34	0	0.32	0.22	0	0.48	
	35	4.34	←	←	←	←	
	36	0	3.07	0	0	3.12	
	37	3.70	0	←	3.70	0	
	38	4.41	←	←	←	←	
	39	4.41	←	←	←	←	
	40	0	←	←	←	←	
	41	4.41	←	←	←	←	
	42	4.36	←	←	←	←	
	43	0	←	←	←	←	
	44	4.41	←	←	←	←	
IC 306	1	2.78	←	2.93	2.82	2.96	
MC2833D	2	0	1.17	1.33	0	1.35	
	3	0.07	0.92	←	0.07	0.92	
	4	0	1.81	1.20	0	1.20	
	5	0	0.97	1.21	0	1.32	
	6	0	←	←	←	←	
	7	0	←	←	←	←	
	8	0.82	←	←	←	←	
	9	4.81	←	←	←	←	
	10	0	3.20	3.35	0	3.38	
	11	0	2.92	3.08	0	3.11	
	12	0	0.76	←	0	0.76	
	13	0.55	1.39	←	0.55	1.37	
	14	0	1.86	2.00	0	2.02	
	15	0	2.47	2.65	0	2.65	
	16	0	3.15	3.30	0	3.33	
IC 307	1	0	←	2.21	←	2.27	
MC34018DW	2	0	←	2.30	2.23	2.37	

PARTS NO.	PIN NO.	ST-BY	TALK	INT'COM	SP PHONE	3 WAY	CHARGE
	3	0	←	1.51	1.58	←	
	4	0	←	2.33	2.22	2.44	
	5	0	←	2.77	2.89	2.84	
	6	0	←	0.79	2.76	2.77	
	7	0	←	2.77	2.89	2.83	
	8	0	←	2.70	2.77	2.80	
	9	0	←	0.68	2.89	←	
	10	0	←	0.16	2.68	←	
	11	0	←	2.34	2.45	←	
	12	0	←	2.65	2.73	←	
	13	0	←	2.79	2.89	2.85	
	14	0	←	←	←	←	
	15	0	←	3.28	3.05	←	
	16	8.06	←	←	←	←	
	17	0	←	1.18	1.93	←	
	18	5.39	←	0	←	←	
	19	0	←	←	←	←	
	20	0	←	5.40	←	←	
	21	0	←	2.83	2.89	←	
	22	0	←	←	←	←	
	23	0	←	←	←	←	
	24	0	←	2.11	2.77	←	
	25	0	←	5.30	5.31	←	
	26	0	←	2.29	2.38	2.31	
	27	0	←	1.52	1.57	←	
	28	0	←	2.14	2.16	2.20	
IC 308	1	5.40	←	0	←	←	
MC34119D	2	3.60	←	←	←	←	
	3	3.56	←	3.58	←	←	
	4	3.52	←	3.63	←	←	
	5	3.50	←	3.62	←	←	
	6	8.06	←	8.04	←	←	
	7	0	←	←	←	←	
	8	3.50	←	3.64	←	←	
IC 309	IN	8.07	←	←	←	←	←
MC78L05CP-RA	GND	0	←	←	←	←	←
	OUT	5.05	←	←	←	←	←
IC310	IN	13.52	←	←	←	←	←
MC7808CT	GND	0	←	←	←	←	←
	OUT	8.07	←	←	←	←	←
Q 301	E	0.05	←	←	←	←	
	C	3.09	←	←	←	←	
	B	0.68	←	←	←	←	
Q 302	E	4.42	←	←	←	←	
	C	8.06	←	←	←	←	
	B	5.10	←	←	←	←	
Q 303	E	8.06	←	←	←	←	←

REF. NO.	DESCRIPTION	PART NO.
C30	Chip Cap 68pF/50V (CH)J	12CH680C
C31	Chip Cap 0.022uF/25 (F)Z	12F2223C
C32	Chip Cap 33pF/50V (CH)J	12CH330C
C33	Chip Cap 0.022uF/25V (F)Z	12F2223C
C34	Chip Cap 0.047uF/25V (B)K	12B2473C
C35	Chip Cap 22pF/50V (CH)J	12CH220C
C36	Chip Cap 22pF/50V (CH)J	12CH220C
C37	Chip Cap 18pF/50V (CH)J	12CH180C
C38	Ele Cap 220uF/6.3V	526R227K
C39	Chip Cap 0.022uF/25V (F)Z	12F2223C
C40	Chip Cap 27pF/50V (CH)J	12CH270C
C41	Chip Cap 27pF/50V (CH)J	12CH270C
C42	Chip Cap 0.022uF/25V (B)K	12B2223C
C43	Chip Cap 0.022uF/25V (B)K	12B2223C
C44	Ele Cap 1uF/50V	526W105K
C45	Chip Cap 0.015uF/25V (B)K	12B2153C
C46	Chip Cap 0.015uF/25V(B)K	12B2153C
C47	Chip Cap 1uF/16V	1225105C
C48	Chip Cap 0.022uF/25V (F)Z	12F2223C
C49	Chip Cap 0.022uF/25V (F)Z	12F2223C
C50	Ele Cap 22uF/6.3V	526R226K
C51	Chip Cap 1000pF/50V (B)K	12B3102C
C52	Chip Cap 68pF/50V (CH)J	12CH680C
C60	Chip Cap 2700pF/50V (B)K	12B3272C
C61	Chip Cap 8pF/50V (CH)J	12CH809C
C62	Chip Cap 1uF/16V (F)Z	72F6105C
C63	Chip Cap 0.01uF/25V (B)K	12B2103C
PCB-1BX	Remote Keyboard PCB Ass'y Consists of follows:	1614444-2X
PCB-1B	Remote Keyboard PCB	1614444-2
X101	Crystal (480KHz)	1812760
TC101	Ceramic Trimmer (30pF)	1280188
VR101	Semi Fixed Res 200K ohm	138J941
SW101	Slide Switch (IC-2P)	1621772
SW102	Slide Switch (IC-2P)	1621772
SW103	Slide Switch (IC-2P)	1612772
SW104	Slide Switch (IC-3P)	1621694
IC101	IC (MCU)	14DW580 (9658)
Q101	Transistor	2SC2412K(BR)T96
Q102	Transistor	2SC2412K(BR)T96
Q103	Transistor	2SC2412K(BR)T96
Q104	Transistor	2SA1037K(FR)T96
Q105	Transistor	2SA1037K(FR)T96
Q106	Transistor	2SA1037K(FR)T96
Q107	Transistor	2SC2412K(BR)T96
Q108	Transistor	2SC2412K(BR)T96
Q109	Transistor	2SD1757K(AAR)T96
Q110	Transistor	2SD1757K(AAR)T96
Q112	Transistor	2SC2412K(BR)T96
Q113	Transistor	2SA1037K(FR)T96
Q114	Transistor	2SC2412K(BR)T96
D101	SI Diode	1N4002
D106	Chip Diode	RLS-73-TE-12
D108	Zenner Diode	MTZ3.9(AorB) or RD3.9EB
D109	LED	LN28RPE
D110	LED	LN28RPE
D121	Chip Diode	RLS-73-TE-12
D122	Chip Diode	RLS-73-TE-12
D125	Chip Diode	RLS-73-TE-12

REF. NO.	DESCRIPTION	PART NO.
D126	Chip Zenner Diode	RLZ5.6(AorB) or TE-12
R101	Chip Fix Res(1/10W) 82K ohm	134F823C
R102	Chip Fix Res(1/10W) 33K ohm	134F333C
R103	Chip Fix Res(1/10W) 82 ohm	134F820C
R104	Chip Fix Res(1/10W) 82K ohm	134F823C
R105	Chip Fix Res(1/10W) 220K ohm	134F224C
R106	Chip Fix Res(1/10W) 1.5K ohm	134F152C
R107	Chip Fix Res(1/10W) 22K ohm	134F223C
R108	Chip Fix Res(1/10W) 820 ohm	134F821C
R109	Chip Fix Res(1/10W) 470 ohm	134F471C
R110	Chip Fix Res(1/10W) 120 ohm	134F121C
R111	Chip Fix Res(1/10W) 100K ohm	134F104C
R112	Chip Fix Res(1/10W) (F) 220K ohm	13E2203C
R113	Chip Fix Res(1/10W) (F) 47K ohm	13E4702C
R114	Chip Fix Res(1/10W) 220K ohm	134F224C
R116	Chip Fix Res(1/10W) 330K ohm	134F224C
R117	Chip Fix Res(1/10W) 390K ohm	134F394C
R118	Chip Fix Res(1/8W) 33 ohm	134H330C
R119	Chip Fix Res(1/10W) 100K ohm	134F104C
R120	Chip Fix Res(1/10W) 12K ohm	134F123C
R121	Chip Fix Res(1/10W) 220K ohm	134F224C
R122	Chip Fix Res(1/10W) 220K ohm	134F224C
R123	Chip Fix Res(1/10W) 100K ohm	134F104C
R124	Chip Fix Res(1/10W) 12K ohm	134F123C
R126	Chip Fix Res(1/10W) 100K ohm	134F104C
R127	Chip Fix Res(1/10W) 330K ohm	134F334C
R128	Chip Fix Res(1/10W) 3.3K ohm	134F332C
R129	Chip Fix Res(1/8W) 3.3K ohm	134H332C
R130	Chip Fix Res(1/10W) 10K ohm	134F103C
R131	Chip Fix Res(1/10W) 33K ohm	134F333C
R133	Chip Fix Res(1/10W) 33K ohm	134F333C
R135	Chip Fix Res(1/10W) 100K ohm	134F104C
R136	Chip Fix Res(1/10W) 22K ohm	134F223C
R137	Chip Fix Res(1/10W) 330K ohm	134F334C
R139	Chip Fix Res(1/8W) 15K ohm	134H153C
R144	Chip Fix Res(1/8W) 100K ohm	134H104C
R145	Chip Fix Res(1/10W) 47K ohm	134F473C
R146	Chip Fix Res(1/10W) 100K ohm	134F104C
R147	Chip Fix Res(1/8W) 120K ohm	134H124C
R148	Chip Fix Res(1/8W) 15K ohm	134H153C
R149	Chip Fix Res(1/10W) 100K ohm	134F104C
J102	Chip Fixed Res (1/8W) 0 ohm	134H000C
J103	Chip Fixed Res (1/8W) 0 ohm	134H000C
J104	Chip Fixed Res (1/8W) 0 ohm	134H000C
J105	Chip Fixed Res (1/8W) 0 ohm	134H000C
J106	Chip Fixed Res (1/8W) 0 ohm	134H000C
J107	Chip Fixed Res (1/8W) 0 ohm	134H000C
J108	Chip Fixed Res (1/8W) 0 ohm	134H000C
J110	Chip Fixed Res (1/8W) 0 ohm	134H000C
J112	Chip Fixed Res (1/8W) 0 ohm	134H000C
J113	Chip Fixed Res (1/8W) 0 ohm	134H000C
J114	Chip Fixed Res (1/8W) 0 ohm	134H000C
J115	Chip Fixed Res (1/8W) 0 ohm	134H000C
J116	Chip Fixed Res (1/8W) 0 ohm	134H000C
J117	Chip Fixed Res (1/8W) 0 ohm	134H000C
J118	Chip Fixed Res (1/8W) 0 ohm	134H000C
J119	Chip Fixed Res (1/8W) 0 ohm	134H000C
J121	Chip Fixed Res (1/8W) 0 ohm	134H000C
J122	Chip Fixed Res (1/8W) 0 ohm	134H000C

REF. NO.	DESCRIPTION	PART NO.
J123	Chip Fixed Res (1/8W) 0 ohm	134H000C
J124	Chip Fixed Res (1/8W) 0 ohm	134H000C
C101	Chip Cap 680pF/50V (SL)J	1270681C
C102	Chip Cap 3300pF/50V (B)K	12B3332C
C103	Chip Cap 3900pF/50V (B)K	12B3392C
C105	Chip Cap 0.33/25V (F)Z	72F2334C
C106	Chip Cap 3900pF/50V (B)K	12B3392C
C107	Chip Cap 0.1uF/25V (F)Z	72F2104C
C109	Chip Cap 0.01uF/25V (B) K	12B2103C
C110	Chip Cap 100pF/50V (SL) J	1270101C
C112	Chip Cap 1uF/16V (F)Z	72F6105C
C113	Chip Cap 0.022uF/25V (F)Z	12F2223C
C114	Chip Cap 68pF/50V (CH)J	12CH680C
C115	Chip Cap 100pF/50V (CH)J	12CH101C
C116	Chip Cap 0.022uF/25V (F)Z	12F2223C
C117	Chip Cap 0.022uF/25V (F)Z	12F2223C
C118	Chip Cap 0.033uF/25V (B)K	12B2223C
C119	Chip Cap 0.1uF/25V (F)Z	72F2104C
C120	Chip Cap 2200pF/50V (B)K	12B3222C
C123	Chip Cap 100pF/50V (SL)	7270101C
C151	Chip Cap 680pF/50V (SL)	7270681C
C153	Chip Cap 680pF/50V (SL)	7270681C
	Miscellaneous	
SP-101	Speaker	1520578
SP-102	Ringer	1520576
ECM-101	E.C.M	1530136
BATT-101	Ni-Cd Batt (TYPE A)	3V280R3
BATT-101	Ni-Cd Batt (TYPE B)	3v280R2
LD1	Ribbon Wire (2P)	5750227
LD2	Ribbon Wire (2P)	5750227
LD3	Ribbon Wire (2P)	5750227
LD4	Ribbon Wire (5P)	5750229
WA-201	Wire A'ssy (1P) ANT	G5370-05
WA-202	Wire A'ssy (1P) GND	G5330-06
WA-203	Wire A'ssy GND	G5330-07
WA-204	Wire A'ssy GND	G5330-08
WA-205	Wire A'ssy (2P) MIC	92F60953
WA-206	Lead Wire (1P)	81A606F3

REF. NO.	DESCRIPTION	PART NO.

ELECTRICAL PARTS LIST (BASE)

REF. NO.	DESCRIPTION	PART NO.
PCB-2	**BASE PCB** **Consists of follows:**	**1614742**
(PCB-2A)	Main PCB	1614742A
(PCB-2B)	Control PCB	1614742B
(PCB-2C)	LED PCB	1614742C
(PCB-2D)	Squelch PCB	1614742D
PCB-2AX	BASE Main PCB Ass'y Consists of follows:	1614742AX
PCB-2A	Main PCB	1614742A
CF301	Ceramic Resonator (10.7MHz)	1810307 or 1812085
CF302	Ceramic Filter (455KHz)	1810480 or 1810410
X301	Crystal (10.24MHz)	1811048
X302	Crystal (4.0MHz)	1811251
TC301	Ceramic Trimmer (30pF)	1280179
VR302	Semi Fixed Res. (500 ohm)	128J931
VR303	Semi Fixed Res. (200K ohm)	128J941
VR304	Slide Volume (20K ohm)	5390795
VR305	Semi Fixed Res. (100K ohm)	538N104
VR306	Semi Fixed Res. (100K ohm)	238N326
HIC301	P.C.B A'ssy	31813011
RL301	Lead Relay	1680061
J301	DC Jack	1710086
SW301	Slide Switch (IC-3P)	1621694
SW302	Slide Switch (IC-2P)	1621770
SW303	Push Switch	5622171
SW304	Push Switch	5622171
SW305	Push Switch	5622171
CN301	Connector Base (2P Top)	1740440
CN302	Connector Base (2P Top)	170M980
CN303	Connector Base (2P Top)	1740454
CN304	Connector Base (2P Top)	1740454
CN305	Connector Base (2P SIDE)	1740440
L301	Pot Type Inductor 150mH	1170589or 117D589
L302	Pot Type Inductor 22uH	117D417
L303	Pot Type Inductor 22uH	117D417
L320	Axial Inductor 220uH (K)	2152221
L321	Axial Inductor 220uH (K)	2152221
T301	Casing Coil	113D847
T302	Casing Coil	113D846
T303	Casing Coil	1130793
T304	Casing Coil	1130794
T305	Casing Coil	113D825P
T306	Casing Coil	1130553
T307	Casing Coil	1130795
T308	Casing Coil	113D845
T309	Audio Trans	115M716
IC301	IC (RX)	MC3363DW
IC302	IC (OP AMP)	LM324D
IC303	IC (Photo Coupler)	CNY17-2 (2)
IC304	IC (PLL)	MC145166DW
IC305	IC (MCU)	14DW581 (6408)
IC306	IC (TX)	MC2883D
IC307	IC (SP Phone)	MC34018DW
IC308	IC (Audio AMP)	MC34119D
IC309	IC (Regulater 5V)	MC78L05CP-RA
IC310	IC (Regulater 8v)	MC7808CT

REF. NO.	DESCRIPTION	PART NO.
Q301	Transistor	2SC1740S(S)
Q302	Transistor	LC945 (Q) or KSC945 (GR) or 2SC1815 (Y)
Q303	Transistor	LA733 (Q) or KSC733 (Y) or 2SA1015 (Y)
Q304	Transistor	LC945 (Q) or KCS945(GR) or 2C1815 (Y)
Q305	Transistor	LC945 (Q) or KSC945 (GR) or 2SC1815 (Y)
Q306	Transistor	LC945 (Q) or KSC945(GR) or 2SC1815 (Y)
Q307	Transistor	LC945 (Q) or KSC945 (GR) or 2SC1815 (Y)
Q309	Transistor	LA733 (Q) or KSC733 (Y) or 2SA1015 (Y)
Q311	Transistor	LC945 (Q) or KSC945C(GR)or 2SC1815 (Y)
D301	SI Diode	1SS133 or 1SS176
D302	Zenner Diode	MTZ22 (AorB) or RD22EB
D303	Zenner Diode	MTZ22 (AorB) or RD22EB
D304	SI Diode	1SS133 or 1SS176
D305	SI Diode	1N4004
D306	SI Diode	1N4004
D307	SI Diode	1N4004
D308	SI Diode	1N4004
D309	SI Diode	1SS133 or 1SS176
D310	SI Diode	1N4004
D311	SI Diode	1SS133 or 1SS176
D313	SI Diode	1SS133 or 1SS176
D314	SI Diode	1SS133 or 1SS176
D315	SI Diode	1SS133 or 1SS176
D316	SI Diode	1SS133 or 1SS176
D317	SI Diode	1SS133 or 1SS176
D318	Vari-Cap.Diode	1TT410
D319	Zenner Diode	MTZ10 (AorBorC) or RD10EB
D321	LED	LN38GPH
D323	LED	SLR-54MC3F
D324	LED	SLR-54MC3F
D325	LED	SLR-54MC3F
D326	SI Diode	1SS133 or 1SS176
D330	SI Diode	1SS133 or 1SS176

REF. NO.	DESCRIPTION	PART NO.
D331	SI Diode	1SS133 or 1SS176
D332	SI Diode	1SS133 or 1SS176
D333	SI Diode	1SS133 or 1SS176
R301	Carbon Res.1/6W 2.2K ohm (J)	132A222T
R302	Carbon Res.1/6W 5.6K ohm (J)	132A562T
R304	Carbon Res.1/6W 68K ohm (J)	132A683T
R305	Carbon Res.1/6W 47 ohm (J)	132A470T
R310	Carbon Res.1/6W 220K ohm (J)	132A224T
R311	Carbon Res.1/6W 150K ohm (J)	132A154T
R312	Carbon Res.1/6W 100K ohm (J)	132A104T
R313	Carbon Res.1/6W 2.2K ohm (J)	132A222T
R314	Carbon Res.1/6W 10K ohm (J)	132A103T
R315	Carbon Res.1/6W 15K ohm (J)	132A153T
R316	Carbon Res.1/6W 3.9K ohm (J)	132A392T
R317	Carbon Res.1/6W 68K ohm (J)	132A683T
R318	Carbon Res.1/6W 120K ohm (J)	132A124T
R319	Carbon Res.1/6W 39K ohm (J)	132A393T
R320	Carbon Res.1/6W 330K ohm (J)	132A334T
R321	Carbon Res.1/6W 8.2K ohm (J)	132A822T
R322	Carbon Res.1/6W 12K ohm (J)	132A122T
R323	Carbon Res.1/6W 27K ohm (J)	132A273T
R324	Carbon Res.1/6W 100K ohm (J)	132A104T
R325	Carbon Res.1/6W 100K ohm (J)	132A104T
R326	Carbon Res.1/6W 100K ohm (J)	132A104T
R327	Carbon Res.1/6W 120K ohm (J)	132A124T
R328	Carbon Res.1/6W 8.2K ohm (J)	132A822T
R329	Carbon Res.1/6W 10K ohm (J)	132A102T
R331	Carbon Res.1/6W 68 ohm (J)	132A680T
R332	Carbon Res.1/6W 4.7K ohm (J)	132A472T
R333	Carbon Res.1/6W 150K ohm (J)	132A154T
R334	Carbon Res.1/6W 10K ohm (J)	132A103T
R335	Carbon Res.1/6W 330K ohm (J)	132A334T
R336	Carbon Res.1/6W 2.7K ohm (J)	132A272T
R337	Carbon Res.1/6W 56K ohm (J)	132A563T
R338	Carbon Res.1/6W 27 ohm (J)	132A270T
R339	Carbon Res.1/6W 390 ohm (J)	132A391T
R340	Carbon Res.1/6W 10K ohm (J)	132A103T
R342	Carbon Res.1/6W 390 ohm (J)	132A391T
R343	Metal Oxide Res. 1W 68 ohm (J)	534A680
R344	Carbon Res.1/6W 1M ohm (J)	132A105T
R345	Carbon Res.1/6W 12K ohm (J)	132A123T
R346	Carbon Res.1/6W 100K ohm (J)	1346104K
R348	Carbon Res.1/6W 3.3K ohm (J)	132A332T
R349	Carbon Res.1/6W 15K ohm (J)	132A153T
R350	Carbon Res.1/4W 270 ohm (J)	1346271K
R351	Carbon Res.1/4W 220 ohm (J)	1346221K
R352	Carbon Res. 1/4W 220 ohm (J)	1346221K
R353	Carbon Res.1/6W 390 ohm (J)	132A391T
R361	Carbon Res. 1/6W 10K ohm (J)	132A103T
R362	Carbon Res.1/6W 1K ohm (J)	132A102T
R363	Carbon Res.1/6W300K ohm (J)	132A304T
R364	Carbon Res.1/6W 3.3K ohm (J)	132A332T
R365	Carbon Res.1/6W 470K ohm (J)	132A474T
R367	Carbon Res.1/6W15K ohm (J)	132A153T
R368	Carbon Res.1/6W 8.2K ohm (J)	132A822T
R369	Carbon Res.1/6W 100K ohm (J)	132A104T
R370	Carbon Res.1/6W 270K ohm (J)	132A274T
R372	Carbon Res.1/6W 33K ohm (J)	132A333T
R373	Carbon Res. 1/6W 150K ohm (J)	132A154T

REF. NO.	DESCRIPTION	PART NO.
R374	Carbon Res.82K ohm (J)	132A823T
R375	Carbon Res.220K ohm (J)	132A221T
R376	Carbon Res.47K ohm (J)	132A473T
R378	Carbon Res.390K ohm (J)	132A394T
R379	Carbon Res.1/6W 10K ohm (J)	132A103T
R380	Carbon Res.1/6W 100K ohm (J)	132A104T
R381	Carbon Res.1/6W 4.7K ohm (J)	132A472T
R382	Carbon Res.1/6W 10 ohm (J)	132A100T
R383	Carbon Res.1/6W 1K ohm (J)	132A102T
R384	Carbon Res.1/6W 4.7K ohm (J)	132A472T
R385	Carbon Res.1/6W 2.7K ohm (J)	132A272T
R386	Carbon Res.1/6W 27K ohm (J)	132A273T
R391	Carbon Res.1/6W 270 ohm (J)	132A271T
R392	Carbon Res.1/6W 470K ohm (J)	132A474T
R393	Carbon Res.1/6W 680 ohm (J)	132A681T
R394	Carbon Res.1/6W 820K ohm (J)	132A824T
R395	Carbon Res.1/6W 3.3K ohm (J)	132A332T
R396	Carbon Res.1/6W 47K ohm (J)	132A473T
R397	Carbon Res.1/6W 10 ohm (J)	132A100T
R398	Carbon Res.1/6W 22K ohm (J)	132A223T
R401	Carbon Res.1/6W 18K ohm (J)	132A183T
R402	Carbon Res.1/6W 1K ohm (J)	132A102T
R403	Carbon Res.1/6W 220Kohm (J)	132A224T
R404	Carbon Res.1/6W 27K ohm (J)	132A273T
R406	Carbon Res.1/6W 33K ohm (J)	132A333T
R407	Carbon Res.1/6W 3.3K ohm (J)	132A332T
R408	Carbon Res.1/6W 2.2M ohm (J)	132A225T
R410	Carbon Res.1/6W 3.3K ohm (J)	132A332T
R411	Carbon Res.1/6W 2.7M ohm (J)	132A275T
R412	Carbon Res.1/6W 4.7K ohm (J)	132A472T
R413	Carbon Res.1/6W 4.7K ohm (J)	132A472T
R414	Carbon Res.1/6W 100K ohm (J)	132A104T
R415	Carbon Res.1/6W 1K ohm (J)	132A102T
R416	Carbon Res.1/6W 4.7K ohm (J)	132A472T
R417	Carbon Res.1/6W 5.6K ohm (J)	132A562T
R418	Carbon Res.1/6W 4.7K ohm (J)	132A472T
R420	Carbon Res.1/6W 10 ohm (J)	132A100T
R431	Carbon Res.1/6W56K ohm (J)	132A563T
R434	Carbon Res. 1/6W 100 ohm (J)	132A101T
R435	Carbon Res. 1/6W 220 ohm (J)	132A221T
R436	Carbon Res.1/6W 390 ohm (J)	132A391T
R441	Carbon Res.1/6W 10K ohm (J)	132A103T
R442	Carbon Res.1/6W 47K ohm (J)	132A473T
R443	Carbon Res.1/6W 33K ohm (J)	132A333T
R444	Carbon Res.1/6W 2.2K ohm (J)	132A222T
R445	Carbon Res.1/6W 33K ohm (J)	132A333T
R446	Carbon Res.1/6W 10K ohm (J)	132A103T
R447	Carbon Res.1/6W 100K ohm (J)	132A104T
R448	Carbon Res.1/6W 680 ohm (J)	132A681T
R450	Carbon Res.1/6W 150 ohm (J)	132A151T
R460	Carbon Res.1/6W 6.8K ohm (J)	132A682T
R467	Carbon Res.1/6W 120K ohm (J)	132A124T
R469	Carbon Res.1/6W 10K ohm (J)	132A103T
R701	Carbon Res.1/6W 47K ohm (J)	132A473T
R702	Carbon Res.1/6W 4.7K ohm (J)	132A472T
R703	Carbon Res.1/6W 100 ohm (J)	132A101T
R704	Carbon Res.1/6W 4.7K ohm (J)	132A472T
R705	Carbon Res.1/6W 47K ohm (J)	132A473T
C301	Axial Cap SL 22pF/50V (J)	3S41220T
C302	Axial Cap YB 1000pF/50V (K)	3B42102T
C303	Axial Cap Y 0.01uF/16V (N)	3Y4E103T
C304	Axial Cap YB 330pF/50V (K)	3B42331T

REF. NO.	DESCRIPTION	PART NO.
C305	Axial Cap SL 2.2pF/50V (J)	3S42229T
C306	Ele Cap 100uF/6.3V	526R107S
C307	Axial Cap F 0.1uF/50V (Z)	3F40104T
C308	Semi Cap Y 0.047uF/25V (K)	12Y2473S
C309	Semo Cap Y 0.047uF/25V (K)	12Y2473S
C310	Semi Cap Y 0.047uF/25V (K)	12Y2473S
C311	Mylar Cap 0.015uF/50V (J)	1254153S
C312	P.P Cap 680pF/50V (J)	5230681S
C313	Mylar Cap 0.1uF/50V (J)	1254104S
C314	Mylar Cap 0.1uF/50V (J)	1254104S
C315	Mylar Cap 0.022uF/50V (J)	1254223S
C316	Ele Cap LL 0.22uF/50V (M)	122Z549S
C317	Ele Cap 1uF/50V	126F105S
C318	Axial Cap YB 1000pF/50V (K)	3B42102T
C319	Axial CaP Y 0.015uF/16V (M)	3Y4M153T
C320	Axial Cap X 1500pF/16V (M)	3X4D152T
C321	Ele Cap 0.22uF/50V	126F224S
C322	Ele Cap 2.2uF/50V	526W225S
C323	Semi Cap Y 0.022uF/25V(K)	12Y2223S
C324	Ele Cap 10uF/50V	126F106S
C325	Axial CAP F 0.1uF/50V (Z)	3F40104T
C326	Metalized Film Cap 0.22uF/250V (K)	122Z419K or 122Z420K
C327	Axial Cap YB 470pF/50V (K)	3B42471J
C328	Axial Cap SL 22pF/50V (J)	3S41220T
C329	Ele Cap 10uF/16V	126C106K
C330	Semi Cap Y 0.022uF/25V (K)	12Y2223S
C331	Ele Cap 10uF/50V	126F106S
C332	Ceramic Cap CH 30pF/50V (J)	12CH300S
C333	Ceramic Cap CH 27pF/50V (J)	12CH270S
C334	Ele Cap 220uF/6.3V	126A227S
C335	Axial Cap Y 0.01uF/16V (N)	3Y4E103T
C336	Ele Cap 1uF/50V	126F105S
C337	Ceramic Cap TB 2200pF/50V (K)	12B3222S
C338	Ceramic Cap F 0.1uF/50V (Z)	3F40104T
C339	Ceramic Cap F 0.1uF/50V (Z)	3F40104T
C340	Ele Cap 100uF/6.3V	126A107S
C342	Axial Cap SL 33pF/50V (J)	3S41330T
C350	Axial Cap F 0.1uF/50V (Z)	3F40104T
C351	Ceramic Cap CH 22pF/50V (J)	12CH220S
C352	Ceramic Cap CH 22pF/50V (J)	12CH220S
C353	Axial Cap Y 0.01uF/16V (N)	3Y4E103T
C354	Semi Cap Y 0.056uF/25V (K)	12Y2563S
C356	Ceramoc Cap CH 120pF/50V(J)	12CH121S
C357	Axial Cap YB 100pF/50V (K)	3B42101T
C358	Ceramic Cap CH 100pF/50V (V)	12CH101S
C359	Axial Cap YB 100pF/50V (K)	3B42101T
C360	Axial Cap YB 680pF/50V (K)	3B42681T
C361	Axial Cap YB 1000pF/50V (K)	3B42102T
C362	Axial Cap SL 47pF/50V (J)	3B41470T
C364	Axial Cap SL 2.2pF/50V (K)	3B42229T
C365	Axial Cap SL 33pF/50V (J)	3S41330T
C366	Axial Cap X 4700pF/16V (M)	3X4D472T
C367	Axial Cap F 0.1uF/50V (Z)	3F40104T
C368	Axial Cap Y 0.022uF/16V (M)	3Y4M223T
C369	Ele Cap 100uF/6.3V	126A107S
C370	Axial Cap YB 1000pF/5OV (K)	3B42102T
C371	Axial Cap YB 1000pF/50V (K)	3B42102T
C373	Axial Cap SL 1pF/50V(M)	3S43109T
C379	Ele Cap 220uF/10V	126B227S
C380	Ele Cap 4.7uF/50V	126F475S
C381	Mylar Cap 0.001uF/50V (J)	1254102S

REF. NO.	DESCRIPTION	PART NO.
C382	Ele Cap 4.7uF/50V	126F475S
C383	Ele Cap 4.7uF/50V	126F475S
C384	Ele Cap 47uF/10V	126B476S
C385	Ele Cap 47uF/10V	126F476S
C386	Ele Cap 1uF/50V	126F105S
C387	Ele Cap 47uF/16v	126C476S
C388	Semi Cap Y 0.068uF/25V (K)	12Y2683S
C389	Semi Cap Y 0.047uF/25V (K)	12Y2473S
C390	Semi Cap Y 0.068uF/25V (K)	12Y2683S
C391	Semi Cap YB 1000pF/50V (K)	3B42102T
C392	Ele Cap 1uF/50V	126F105S
C393	Ele Cap 1uF/50V	126F105S
C394	Semi Cap Y 0.068uF/25V(K)	12Y2683S
C395	Ele Cap 100uF/6.3	562R107S
C396	Axial Cap F 0.1uF/50V (Z)	3F40104T
C397	Axial Cap F 0.1uF/50V (Z)	3F40104T
C398	Axial Cap YB 1000pF/50V (K)	3B42102T
C399	Axial Cap F 0.1uF/50V (K)	3F40104T
C400	Ele Cap 4.7uF/50V	126F475S
C402	Ele Cap 220uF/10V	126B227S
C403	Axial Cap F 0.022uF/25V (Z)	3F45223T
C404	Axial Cap F 0.022uF/25V (Z)	3F45223T
C405	Axial Cap YB 270pF/50V (K)	3B42271T
C406	Axial Cap F 0.022uF/25V (Z)	3F45223T
C410	Ele Cap 8200uF/5.5V	122Z359
C411	Ele Cap 10uF/50V	126F106S
C412	Axial Cap F 0.022uF/25V (Z)	3F45223T
C413	Axial Cap F 0.022uF/25V (Z)	3F45223T
C414	Axial Cap F 0.022uF/25V (Z)	3F45223T
C415	Axial Cap F 0.022uF/25V (Z)	3F45223T
C416	Ele Cap 10uF/50V	126F106S
C418	Ele Cap 10uF/50V	526W106S
C419	Axial Cap Y 0.022uF/16V (M)	3Y4M223T
C420	Axial Cap Y 0.01uF/16V (N)	3Y4E103T
C421	Axial Cap YB 1000pF/50V (K)	3B42102T
C460	Axial Cap CH 8.2pF/50V (K)	3C42829T
C461	Axial Cap CH 8.2pF/50V (K)	3C41829T
C462	Axial Cap YB 82pF/50V (K)	3B42820T
C463	Mylar Cap 0.01uF/50V (J)	1254103S
C464	Ceramic Cap CH 15pF/50V (J)	12CH150D
C465	Ceramic Cap CH 100pF/50V (J)	12CH101S
C466	Axial Cap YB 100pF/50V (K)	3B42101T
C470	Ele Cap 10uF/50V	126F106S
C471	Axial Cap F 0.1uF/50V (Z)	3F40104T
C472	Semi Cap Y 0.01uF/25V (K)	12Y2103S
C473	Semi Cap Y 0.01uF/25V (K)	12Y2103S
C474	Axial Cap F 0.022uF/25V (Z)	3F45223T
PCB-2BX	Control PCB Ass'y Consists of follows:	1614742BX
PCB-2B	Control PCB	1614742B
VR304	Slide Volume (20K ohm)	5390795
SW303	Push Switch	5622171
SW304	Push Switch	5622171
SW305	Push Switch	5622171
Q312	Transistor	LA733 (Q) or KSA733 (Y) or 2SA1015 (Y)
Q313	Transistor	LA733 (Q) or KSC733 (Y) or 2SA1015 (Y)

REF. NO.	DESCRIPTION	PART NO.
D321	LED	SLR54VC or LN21RCFH
R431	Carbon Res.1/6W 56K ohm (J)	132A563T
R440	Carbon Res.1/6W 10 ohm (J)	132A100T
R701	Carbon Res.1/6W 47K ohm (J)	132A473T
R702	Carbon Res.1/6W 4.7K ohm (J)	132A472T
R703	Carbon Res.1/6W 180 ohm (J)	132A181T
R704	Carbon Res.1/6W 4.7K ohm (J)	132A472T
PCB-2CX	LED PCB Ass'y Consists of follows:	1614742CX
PCB-2C	LED PCB	1614742
D323	LED	SLR54VC or LN21RCFH
D324	LED	SLR54VC or LN21RCFH
D325	LED	SLR54VC or LN21RCFH
R434	Carbon Res.1/6W 220 ohm (J)	132A221T
R435	Carbon Res.1/6W 390 ohm (J)	132A391T
PCB-2DX	Squelch PCB Ass'y Consists of follows:	1614742DX
PCB-2D	Squelch PCB	1614742
VR601	Semi-Fixed Res. 20k	238J283
CN601	Joint Pin 3P	1700689
IC601	Ope Amp	NJM2904D or LM2904N
D601,602 ,603	SI-Diode	1SS133-T77 or 1SS176-TPA7
R601,603 605,612	Carbon Res. 1/6W 10K(J)	132A103T
R602,609	Carbon Res. 1/6W 1K(J)	132A102T
R604	Carbon Res. 1/6W 15K(J)	132A153T
R606	Carbon Res. 1/6W 390K(J)	132A394T
R607	Carbon Res. 1/6W 68K(J)	132A683T
R608	Carbon Res. 1/6W 3.3K(J)	132A332T
R610	Carbon Res. 1/6W 470K(J)	132A474T
R611	Carbon Res. 1/6W 56K(J)	132A563T
R613	Carbon Res. 1/6W 1.5M(J)	132A155T
R621	Carbon Res. 1/6W 100K(J)	132A104T
R622	Carbon Res. 1/6W 1K(J)	132A102T
C601	Poly-Pro Cap. 390pF/50V (K)	5230391S
C602	Ceramic Cap. CH 27pF/50V (K)	12CH270S
C603,604	Ele-Cap. L.L 1F/50V	526W105S
	Miscellaneous	
SP301	Speaker	1520603
MK301	E.C.M	1530136
WA101	Wire A'ssy (1P) Ant	G5330-01
WA102	Wire A'ssy (2P) Charge	G5330-02
WA103	Wire A'ssy (2P) Mic	G5330-03
WA104	Wire A'ssy (1p) Gnd	G5330-04
WA105	Wire A'ssy (2p) SP	G5330-09
WA106	Ribbon Wire (4p)	44G609FF
WA107	Ribbon Wire (5p)	45G609FF 2
WA108	Lead Wire (1P)	01A617FF
WA109	Lead Wire (1P)	21A610FF

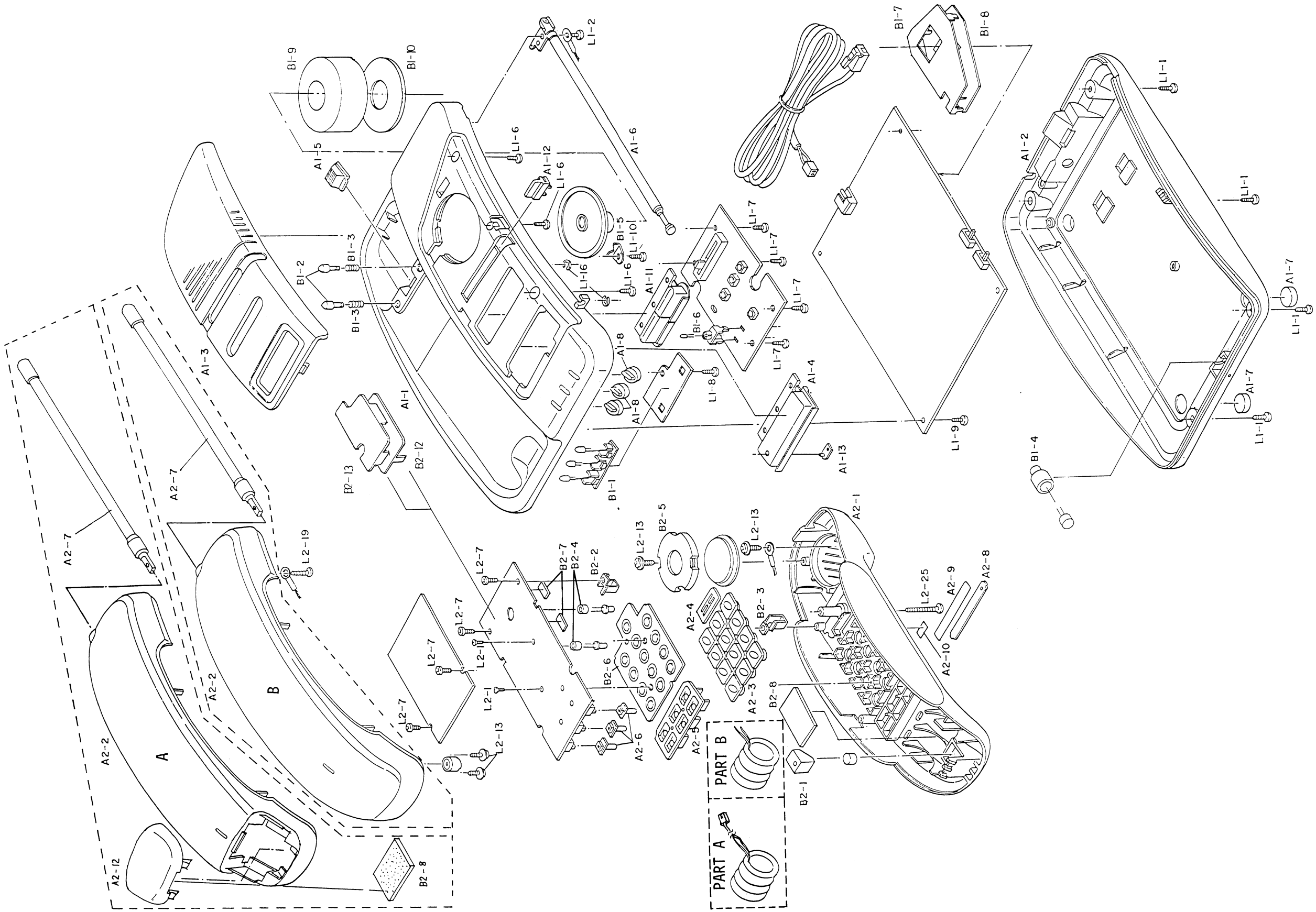
REF. NO.	DESCRIPTION	PART NO.
WA110	Lead Wire (1P)	01A609FF
	Mad Cord	1760749
	AC / DC Adaptor	1813699

MECHANICAL PARTS LIST

REF. NO.	DESCRIPTION	PART NO.
A1-1	BASE TOP CASE	21CT354
A1-2	BASE BOTTOM CASE	21CT376
A1-3	BASE TOP COVER	21FT033
A1-4	PAGE BUTTON	21NT459
A1-5	HAND SET HOOK	21WT244
A1-6	(B) ROD. ANT	27AT030
A1-7	CASE FOOT	21WT150
A1-8	LED WINDOW (A)	21DT014
A1-11	INTERCOM BUTTON	21NT460
A1-12	VOLUME KNOB	21NT441
A1-13	LED WINDOW (C)	21DT016
A2-1	HAND FRONT CASE	21CT381
A2-2	HAND REAR CASE (TYPE A)	21CT357
A2-2	HAND REAR CASE (TYPE B)	21CT393
A2-3	DIAL KEY	21NT442
A2-4	TALK KNOB	21NT443
A2-5	FUNCTION RUBBER	21WT258
A2-6	SLIDE KNOB	21NT444
A2-7	(H) ANTENNA	27AT029
A2-8	NO.LABEL WINDOW	24DT030
A2-9	NO.LABEL	24LT355
A2-10	DATE CODE LABLE	24L3352
A2-11	HAND SET TAG	24LT358
A2-12	BATTERY LID (TYPE B)	21BT032
B1-1	LED HOLDER (A)	21WT214
B1-2	CHG TERMINAL	25B0002
B1-3	CHG TERMINAL SPRING	26W0322
B1-4	MIC HOLDER	21WT033
B1-5	SPEAKER MOUNTAING PIECE	23WT174
B1-6	LED HOLDER (B)	21WT215
B1-7	(B) SHIELD PLATE	23WT183
B1-8	(B) INSULATION SHEET	24WT168
B1-9	S.ARRESTER SETTING PIECE	24TT016
B1-10	SOUND ARRESTER	24WT169
B1-11	FOM TAPE	24W3733
B1-12	FIBER SPACER	24W3681
B2-1	HAND MIC HOLDER	21WT213
B2-2	HAND CHG TERMINAL (L)	23WT177
B2-3	HAND CHG TERMINAL (R)	23WT176
B2-4	(H) LED HOLDER	21WT184
B2-5	SP CUTION	21WT193
B2-6	KEY RUBBER	21WT208
B2-7	INSULATION SHEET (A)	24WT164
B2-8	BATTERY CUSHION (TYPE A)	24WT151
B2-8	BATTERY CUSHION (TYPE B)	24WT205
B2-12	SHIELD PLATE	23WT182
B2-13	(H) INSULATION SHEET	24WT167
S-1	SNOW BOX (BOTTOM)	32ST061
S-2	SNOW BOX (TOP)	32ST062
S-3	GIFT BOX	32JT139
S-4	SHIPPING CARTON	32PT158
S-5	INSTRUCTION BOOK	32GT190
S-8	MEMORY LABEL	32GA207
S-10	BASE HOOK HOLDER	23WT109
S-11	SERIAL LABEL	24LT298
S-12	POLY BAG	Z323340
S-13	POLY BAG	Z313480
S-14	POLY BAG	Z308430
S-15	POLY BAG	Z217260
S-17	ESAFORM SHEET	32FT027
S-18	POLY BAG	Z506100
S-19	BATTERY CAUTION SHEET	32G3355

REF. NO.	DESCRIPTION	PART NO.
L1-1	M3x10 P.TITE SCREW	GCMP3100
L1-2	M3x10 P.TITE SCREW	GCMP3100
L1-6	M3x8 P.TITE SCREW	GLMP3080
L1-7	M3x8 P.TITE SCREW	GLMP3080
L1-8	M3x8 P.TITE SCREW	GLMP3080
L1-9	M3x8 P.TITE SCREW	GLMP3080
L1-10	M3x8 P.TITE SCREW	GLMP3080
L1-16	ø 2E RING	EEU0020
L2-1	M2x6 TAPPING SCREW	DDM3206
L2-7	M2.6x8 P.TITE SCREW	GBMP9080
L2-13	M3x8 P.TITE SCREW	GZMP3080
L2-19	M3x10 P.TITE SCREW	GZMP3100
L2-25	M3x20 P.TITE SCREW	GLMP3200
L3-1	M5x16 TAPPING SCREW	DBM1516
	Mod Cord (Silver)	1760712
	Mod Cord (White)	1760641
	AC/DC Adaptor (Black)	1813183
	AC/DC Adaptor (White)	1813182

EXPLODED VIEW



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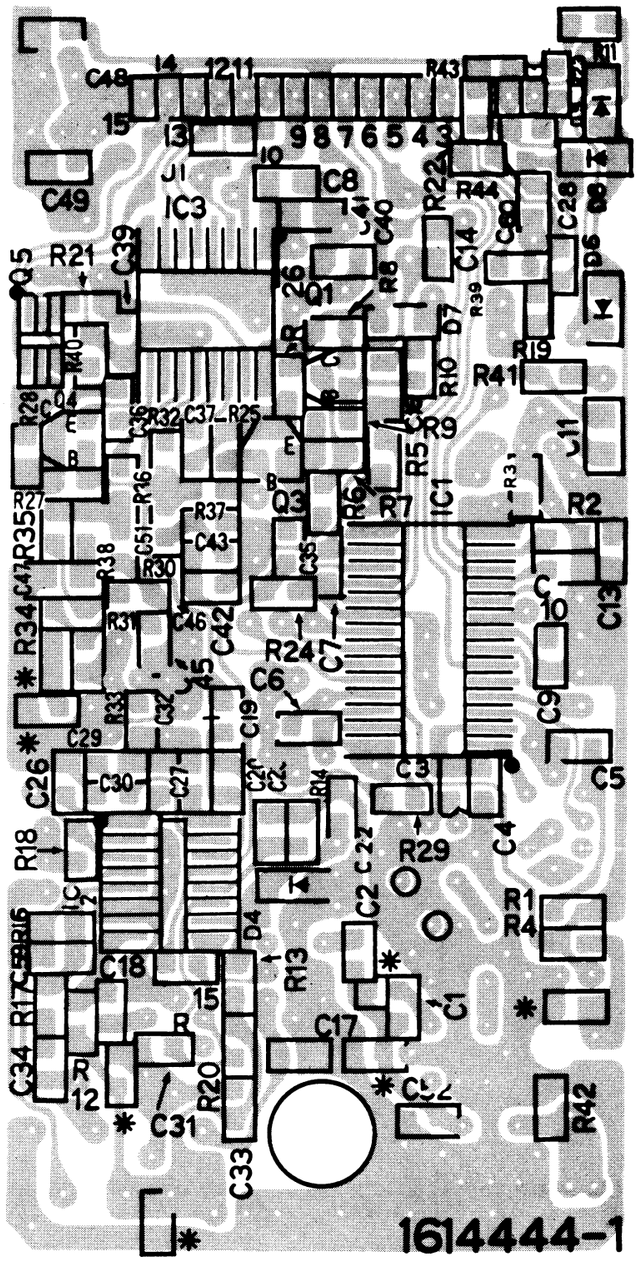
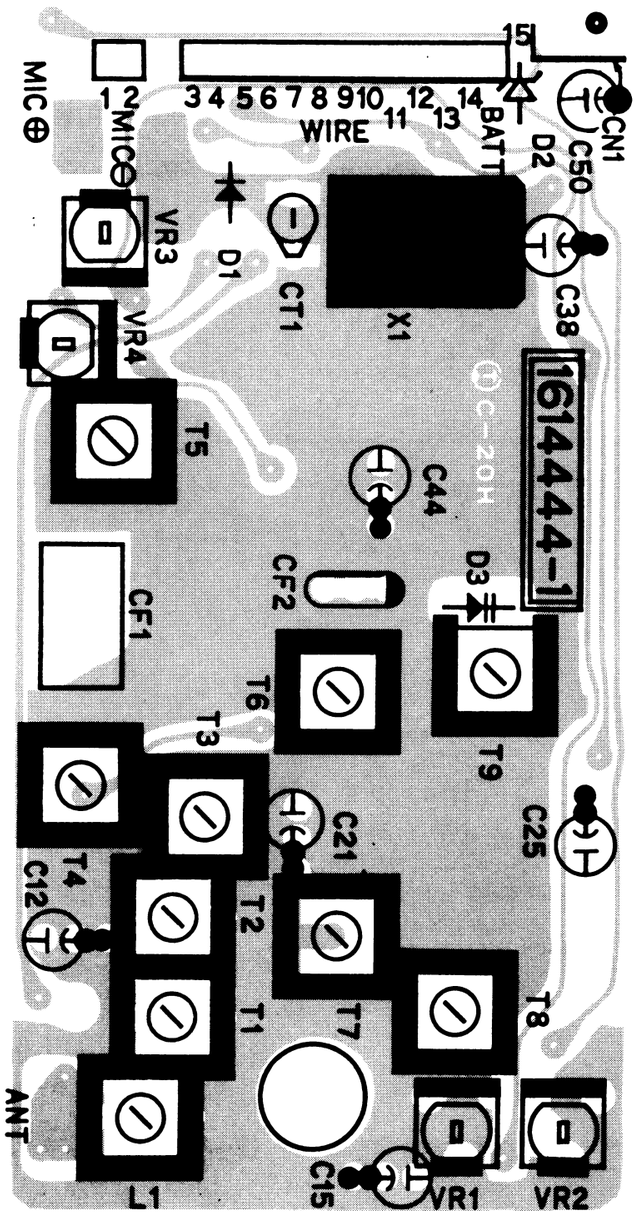
PARTS LAYOUT OF P.C.Board

REMOTE MAIN

TOP VIEW

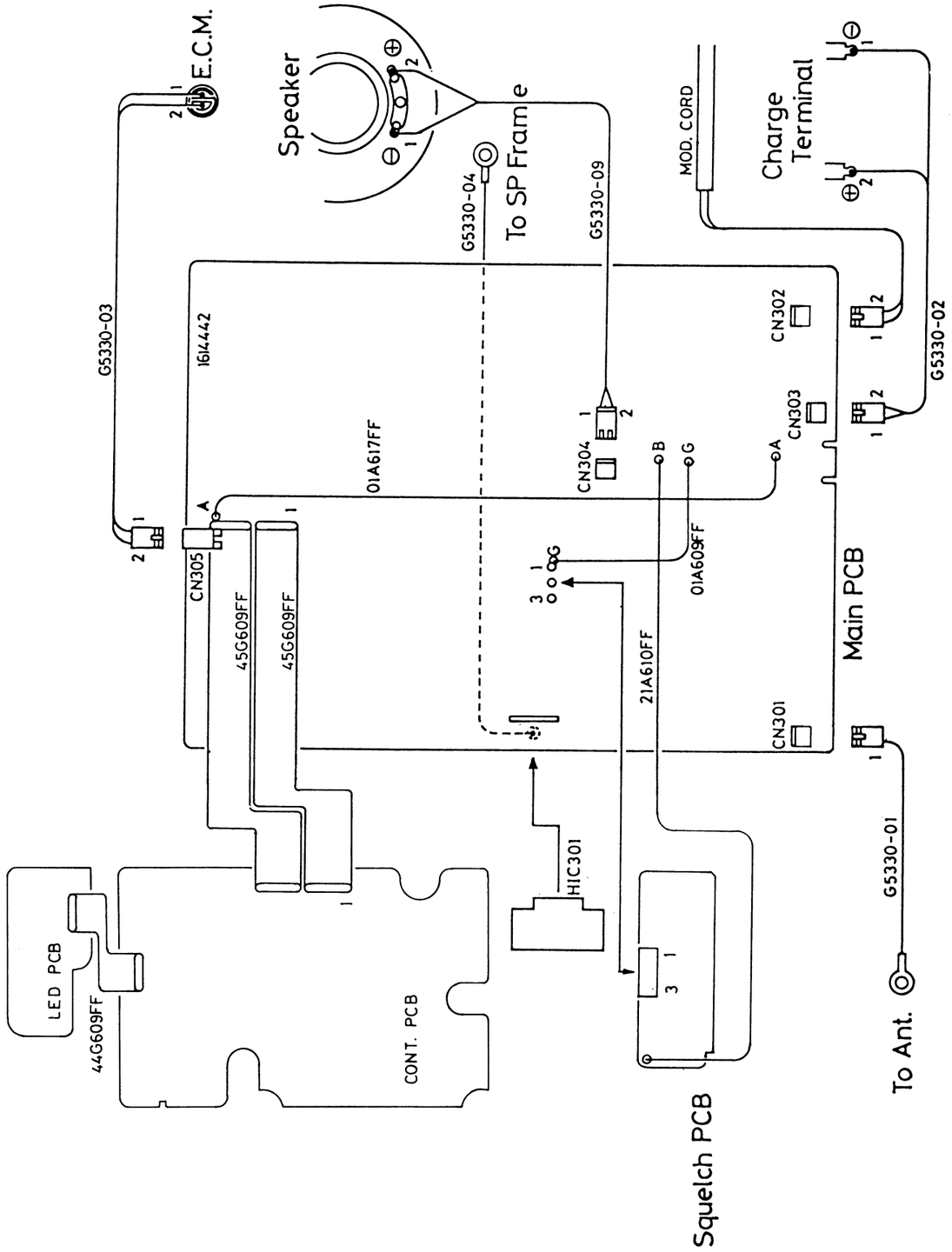


BOTTOM VIEW



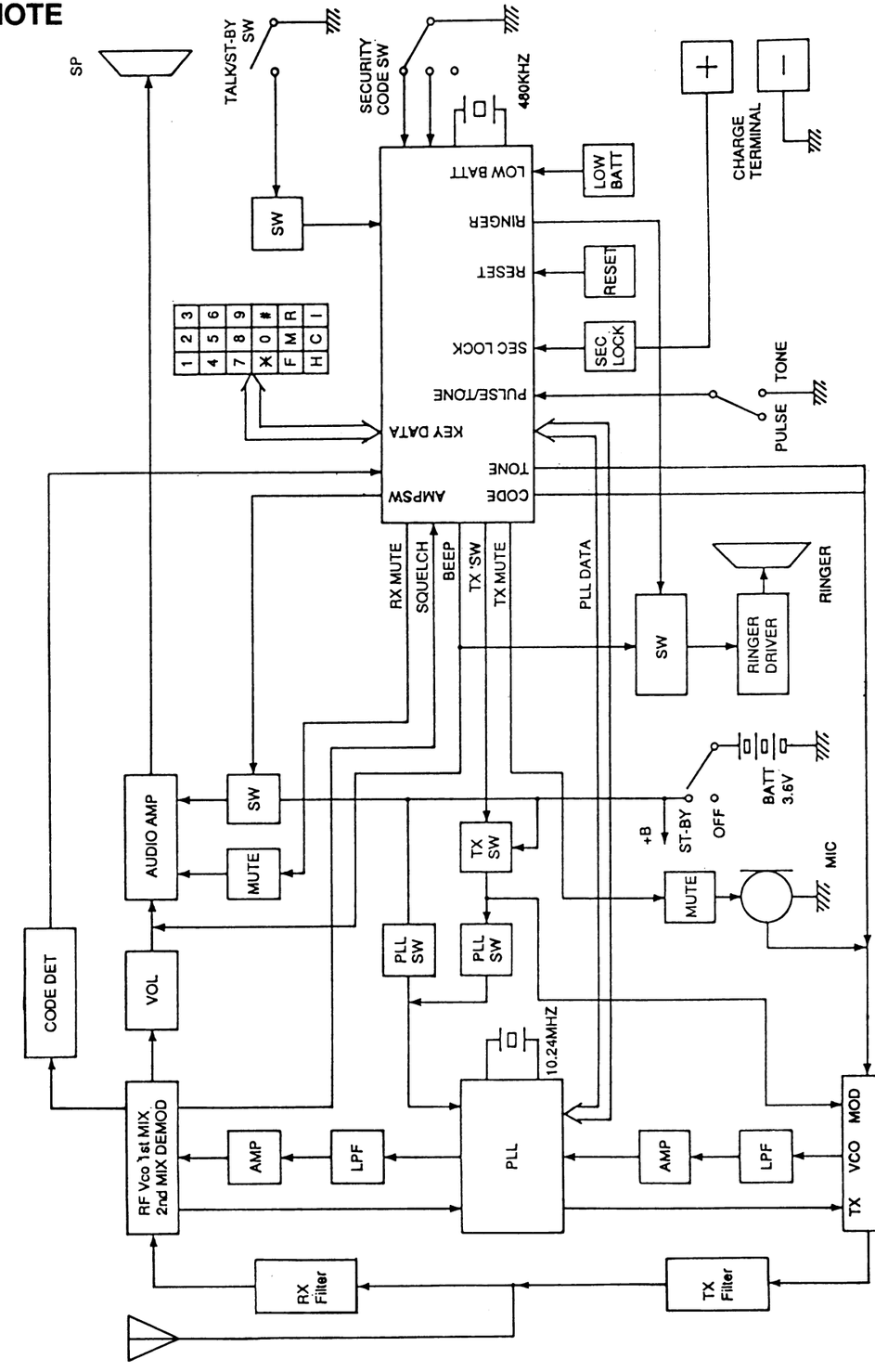
PARTS NO.	PIN NO.	ST-BY	TALK	INT'COM	SP PHONE	3 WAY	CHARGE
	C	0.21	←	←	←	←	7.96
	B	8.05	←	←	←	←	7.35
Q 304	E	0	←	←	←	←	
	C	0	←	←	←	←	
	B	0	0.58	0	0.58	←	
Q 305	E	0	←	←	←	←	
	C	8.06	0.15	8.06	0.15	←	
	B	0	0.71	0	0.71	←	
Q 306	E	0	←	←	←	←	
	C	5.01	2.41	5.01	←	2.41	
	B	0.39	0.63	0.39	←	0.63	
Q 307	E	0	←	←	←	←	
	C	4.34	←	←	←	←	
	B	0	←	←	←	←	
Q 309	E	1.03	1.24	4.03	1.03	4.03	
	C	0	←	←	←	←	
	B	0.46	0.68	4.99	0.46	4.99	
Q 311	E	0	3.20	3.36	0	3.39	
	C	5.04	←	←	←	←	
	B	0.09	3.91	4.03	0.09	4.06	
Q 312	E	3.57	←	←	1.32	←	
	C	0	←	←	←	←	
	B	5.04	←	←	0.61	←	
Q 313	E	3.85	1.30	3.85	←	1.30	
	C	0	←	←	←	←	
	B	5.04	0.60	5.04	←	0.60	

BASE



BLOCK DIAGRAM

REMOTE



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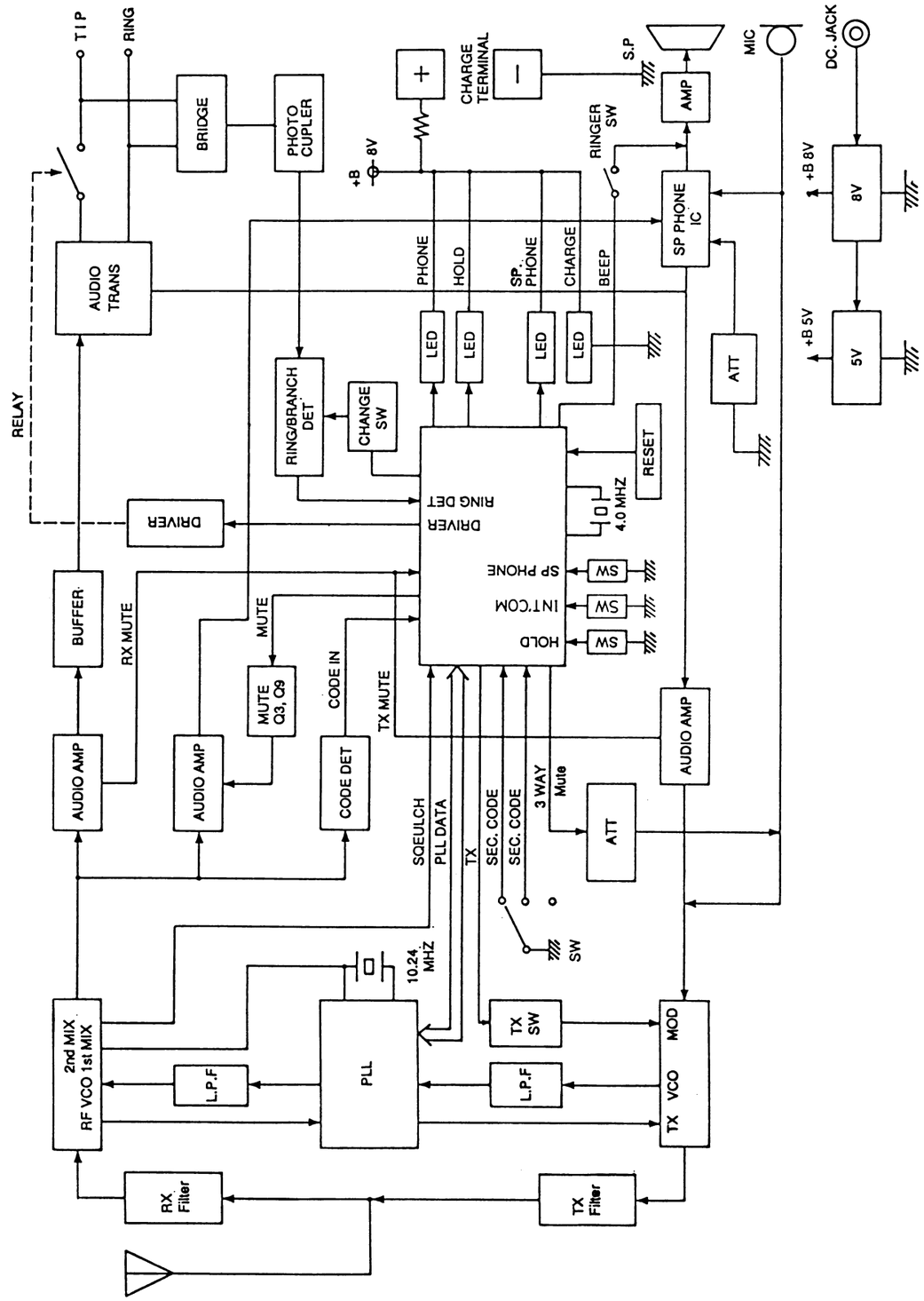

WIRING DIAGRAM

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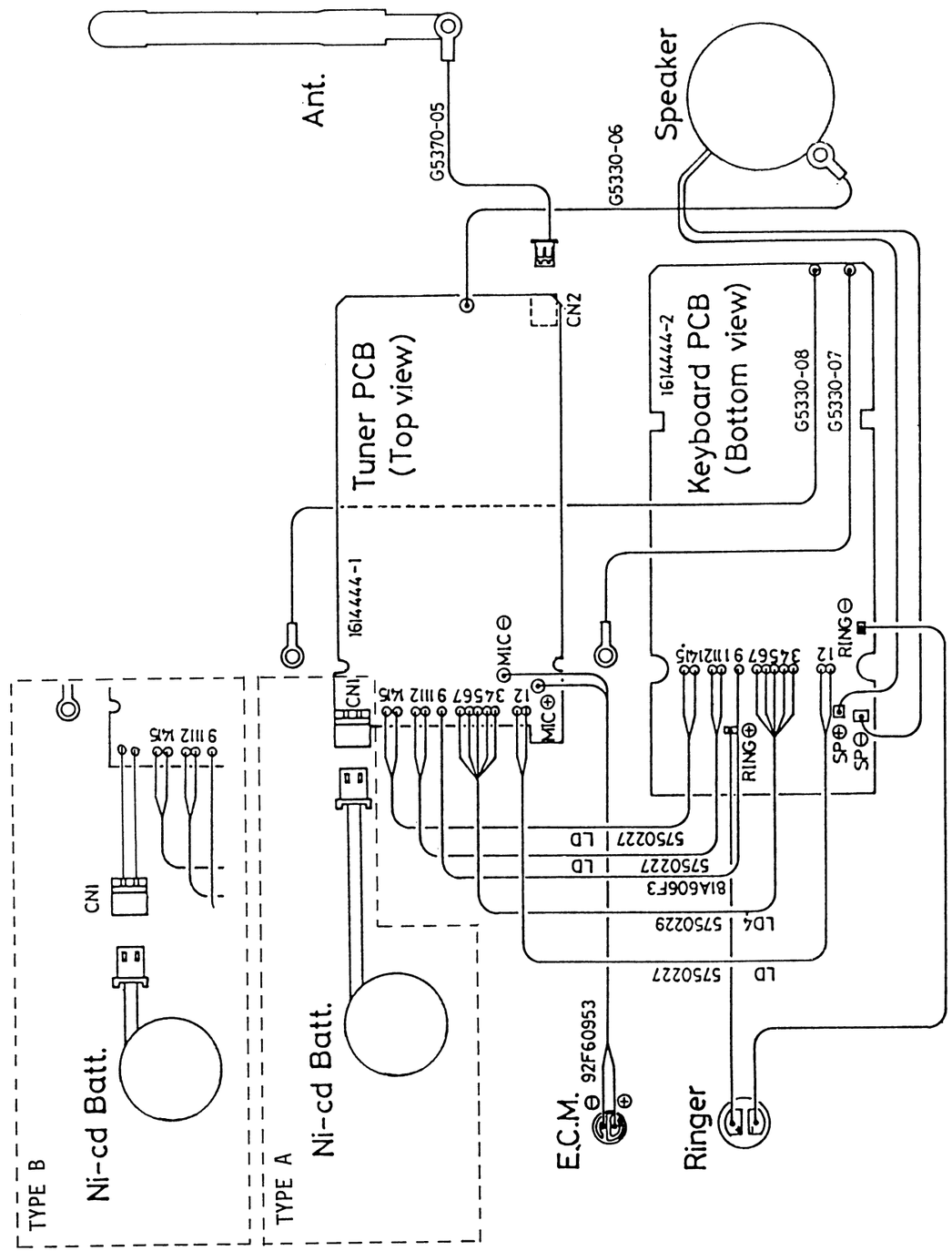
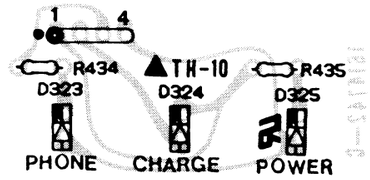
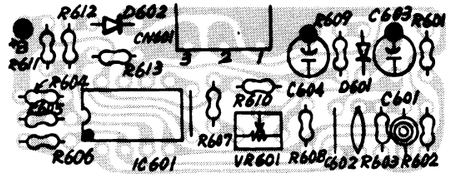


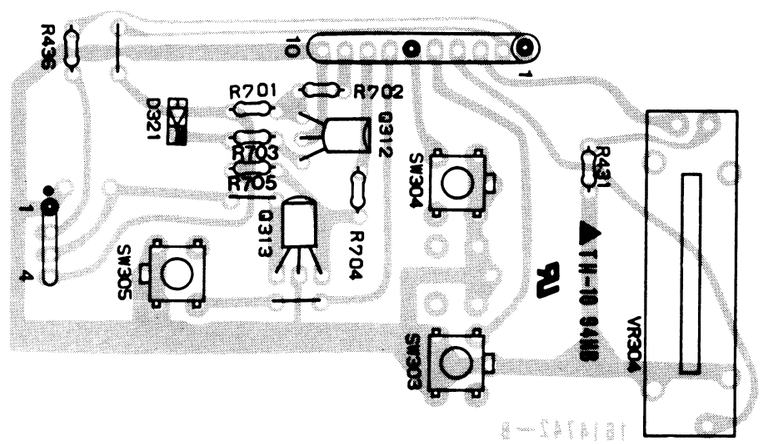
LED PCB



SQUELCH PCB

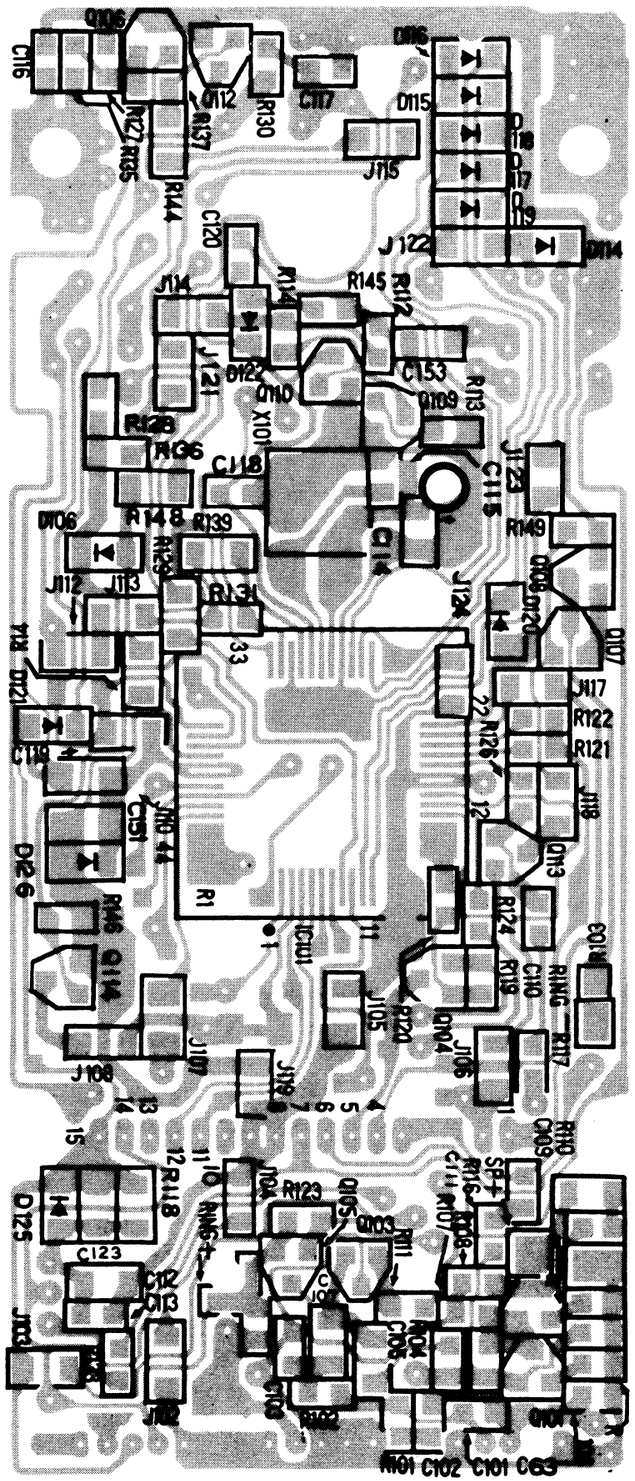


CONTROL PCB

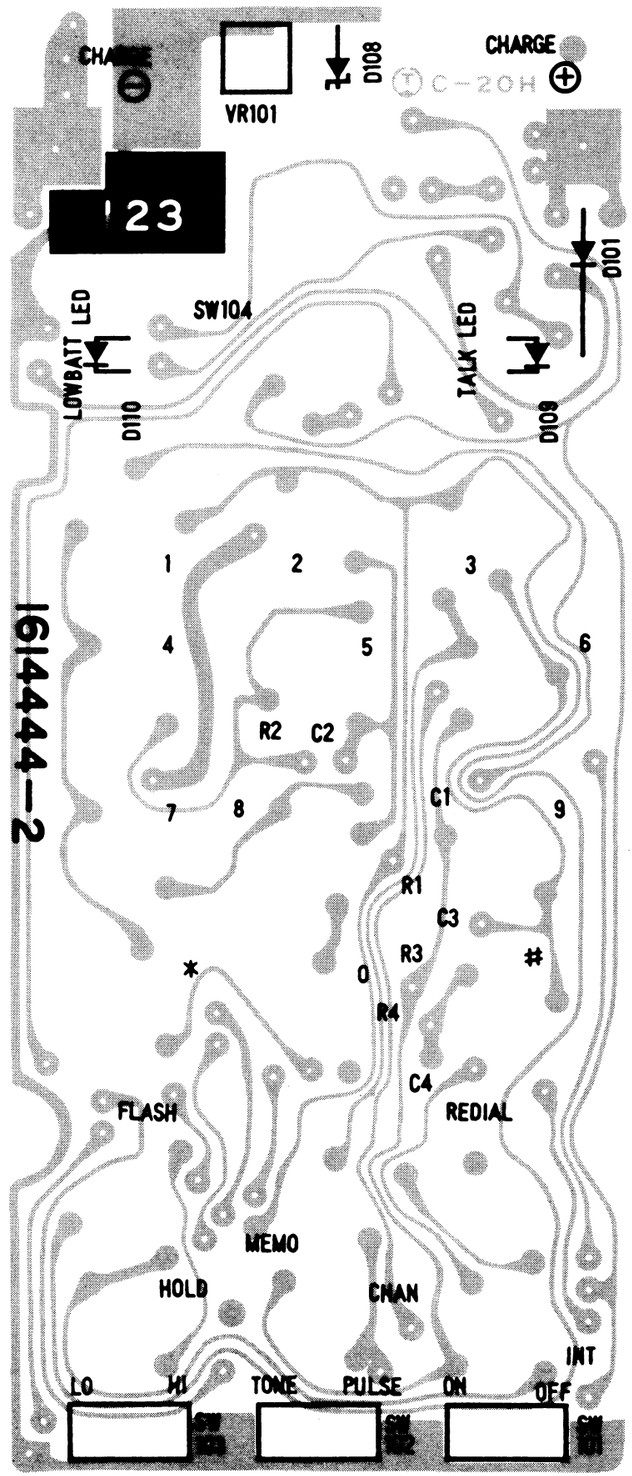


REMOTE KEYBOARD

TOP VIEW



BOTTOM VIEW



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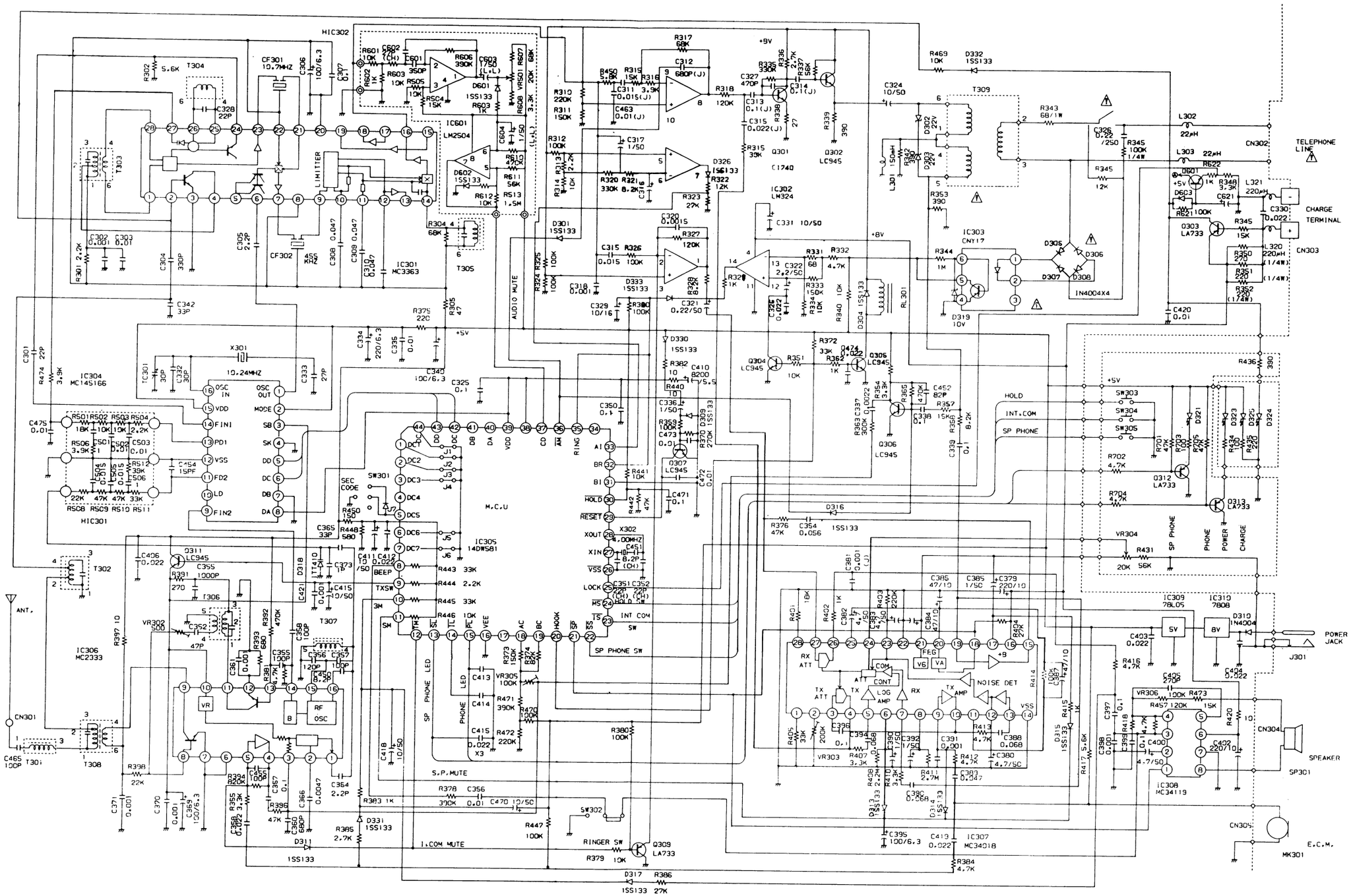

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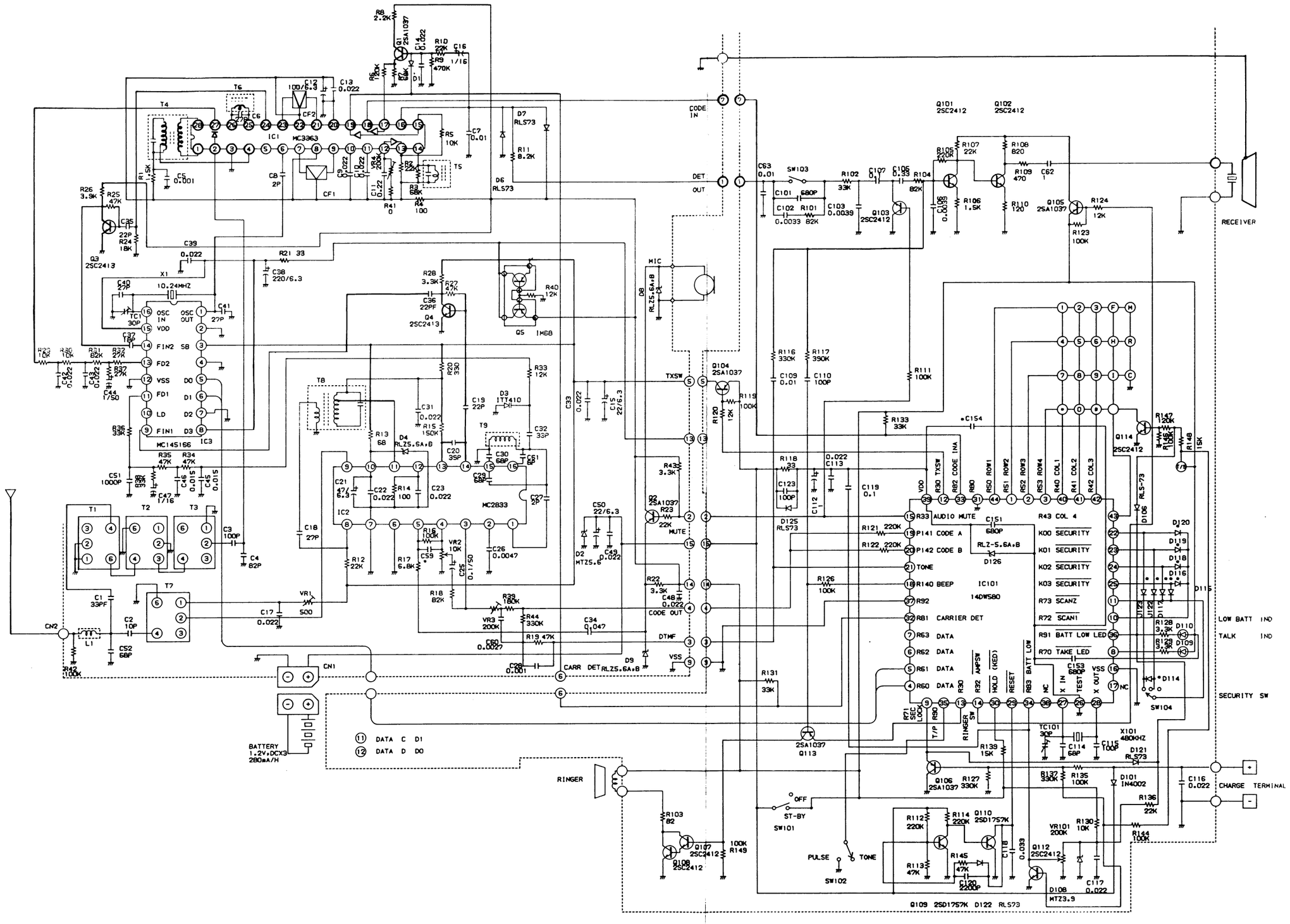
SCHEMATIC DIAGRAM

REMOTE



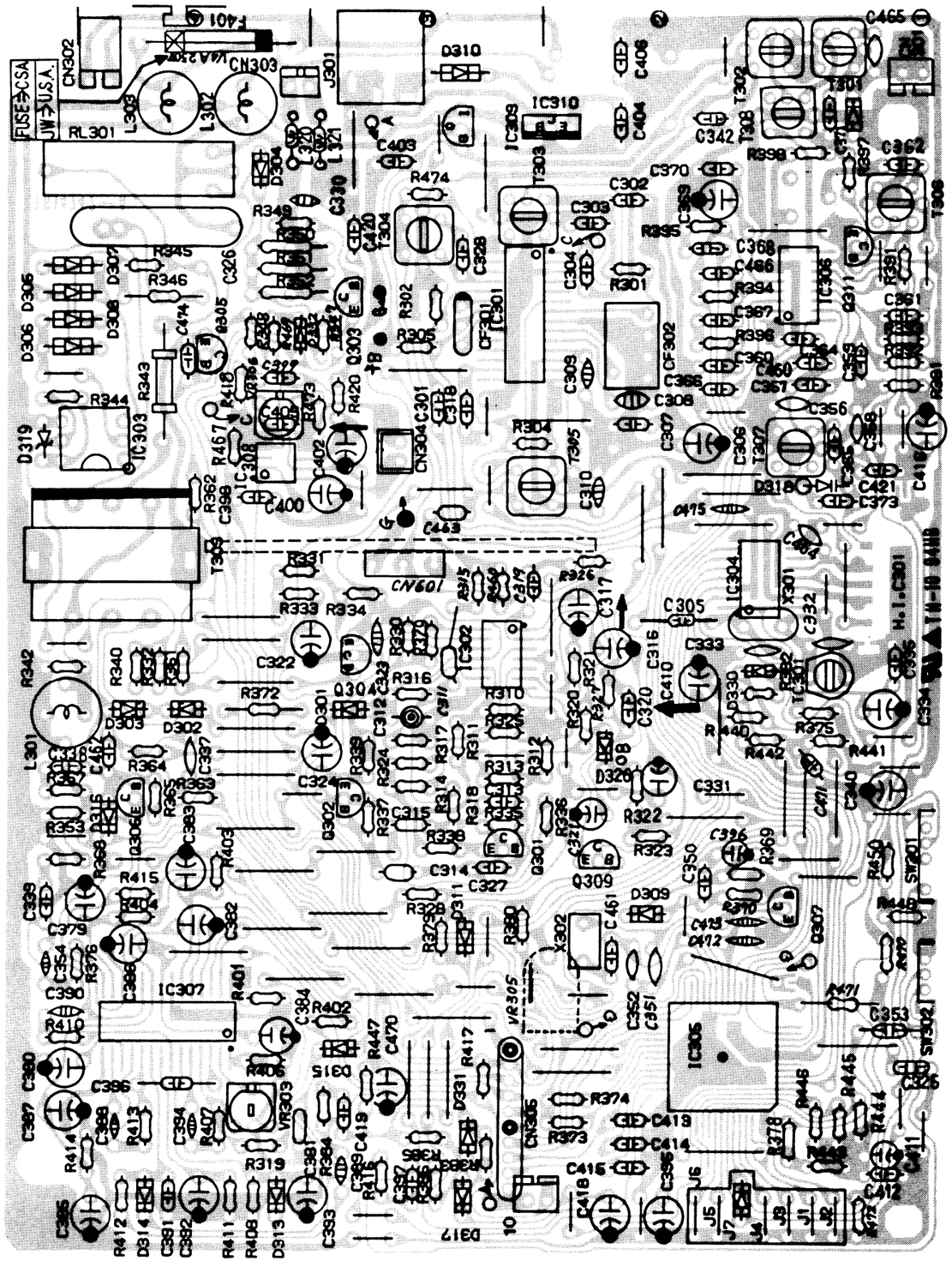
G5378SCH

ELECTRICAL PARTS LIST (REMOTE)

REF. NO.	DESCRIPTION	PART NO.
PCB-1	**PCB** **Consists of follows:**	**1614444**
(PCB-1A) (PCB-1B)	Remote Main PCB Remote Keyboard PCB	1614444-1 1614444-2
PCB-1AX	Remote Main PCB Ass'y Consists of follows:	1614444-1X
PCB-1A	Remote Main PCB	1614444-1
CF1	Ceramic Filter (455KHz)	1810480 or 1810410
CF2	Ceramic Filter(10.7MHz)	1810307 or 1812085
X1	Crystal (10.24MHz)	1811340
TC1	Ceramic Trimer (30pF)	1280179
VR1	Semi Fixed Res 500 ohm	138J931
VR2	Semi Fixed Res 10K ohm	138J936
VR3	Semi Fixed Res 200K ohm	138J941
VR4	Semi Fixed Res 200K ohm	138J941
CN1	Connector Base (Side) BATT(TYPE A)	1700236
CN1	Connector Base (Side) BATT (TYPE B)	WX1G5352001
CN2	Connector Base (Side) ANT	1740775
L1	Casing Coil	113D827P
T1	Casing Coil	113D815P
T2	Casing Coil	113D814P
T3	Casing Coil	113D797P
T4	Casing Coil	113D796P
T5	Casing Coil	113D798P
T6	Casing Coil	113D823P
T7	Casing Coil	113D812P
T8	Casing Coil	113D813P
T9	Casing Coil	113D824P
IC1	IC (RX)	MC3363DW
IC2	IC (TX)	MC2833D
IC3	IC (PLL)	MC145166DW
Q1	Transistor	2SA1037K(FR)T96
Q2	Transistor	2SA1037K(FR)T96
Q3	Transistor	2SC2413K(AP)T96
Q4	Transistor	2SC2413K(AP)T96
Q5	Transistor	IMB8-T108
D2	Zenner Diode	MTZ5.6(AorB)or RD5.6EB
D3	Vari-Diode	1TT410
D4	Chip Zenner Diode	RLZ5.6(AorB)or TE-12
D6	Chip Diode	RLS-73-TE-12
D7	Chip Diode	RLS-73-TE-12
D8	Chip Diode	RLZ5.6(AorB)or TE-12
D9	Chip Zenner Diode	RLZ5.6(AorB)or TE-12
R1	Chip Fix Res(1/10W) 1.5K ohm	134F152C
R2	Chip Fix Res(1/10W) 22K ohm	134F223C
R3	Chip Fix Res(1/10W) 68Kohm	134F683C
R4	Chip Fix Res(1/10W) 100 ohm	134F101C
R5	Chip Fix Res(1/10W) 10K ohm	134F103C
R6	Chip Fix Res(1/10W) 120K ohm	134F124C
R7	Chip Fix Res(1/10W) 68K ohm	134F683C
R8	Chip Fix Res(1/10W) 3.3K ohm	134F332C
R9	Chip Fix Res(1/10W) 470K ohm	134F474C
R10	Chip Fix Res(1/10W) 22K ohm	134F223C

REF. NO.	DESCRIPTION	PART NO.
R11	Chip Fix Res(1/10W) 8.2K ohm	134F822C
R12	Chip Fix Res(1/10W) 22K ohm	13Ft223C
R13	Chip Fix Res(1/10W) 68 ohm	134F680C
R14	Chip Fix Res(1/10W) 100 ohm	134F101C
R15	Chip Fix Res(1/10W) 150K ohm	134F154C
R16	Chip Fix Res(1/10W) 100K ohm	134F104C
R17	Chip Fix Res(1/10W) 6.8K ohm	134F682C
R18	Chip Fix Res(1/10W) 82K ohm	134F823C
R19	Chip Fix Res(1/10W) 47K ohm	134F473C
R20	Chip Fix Res(1/10W) 330 ohm	134F331C
R21	Chip Fix Res(1/10W) 33 ohm	134F330C
R22	Chip Fix Res(1/10W) 3.3K ohm	134F332C
R23	Chip Fix Res(1/10W) 22K ohm	134F223C
R24	Chip Fix Res(1/10W) 18K ohm	134F183C
R25	Chip Fix Res(1/10W) 47K ohm	134F473C
R26	Chip Fix Res(1/10W)3.9K ohm	134F392C
R27	Chip Fix Res(1/10W) 47K ohm	134F473C
R28	Chip Fix Res(1/10W) 3.3K ohm	134F332C
R29	Chip Fix Res(1/10W) 10K ohm	134F103C
R30	Chip Fix Res(1/10W) 10K ohm	134F103C
R31	Chip Fix Res(1/10W) 82K ohm	134F823C
R32	Chip Fix Res(1/10W) 27K ohm	134F273C
R33	Chip Fix Res(1/10W) 12K ohm	134F123C
R34	Chip Fix Res(1/10W) 47K ohm	134F473C
R35	Chip Fix Res(1/10W) 47K ohm	134F473C
R36	Chip Fix Res(1/10W) 33K ohm	134F333C
R37	Chip Fix Res(1/10W) 27K ohm	134F273C
R38	Chip Fix Res(1/10W) 33K ohm	134F333C
R39	Chip Fix Res(1/10W) 180K ohm	134F184C
R40	Chip Fix Res(1/10W) 12K ohm	134F123C
R41	Chip Fix Res(1/10W) 0 ohm	134F000C
R42	Chip Fix Res(1/10W) 100K ohm	134F104C
R43	Chip Fix Res(1/10W) 3.3K ohm	134F332C
R44	Chip Fix Res(1/10W) 330K ohm	134F334C
J1	Chip Fixed Res (1/10W) 0 ohm	134F000C
C1	Chip Cap 39pF/50V (CH)J	12CH390C
C2	Chip Cap 10pF/50V (CH)J	12CH100C
C3	Chip Cap 100pF/50V (CH)J	12CH101C
C4	Chip Cap 82pF/50V (CH)J	1270820C
C5	Chip Cap 1000pF/50V (B)K	12B3102C
C6	Chip Cap 27pF/50V (CH)J	12CH270C
C7	Chip Cap 0.01uF/25V (B)K	12B2103C
C8	Chip Cap 2pF/50V (CH)D	12CK209C
C9	Chip Cap 0.022uF/25V (B)K	12B2223C
C10	Chip Cap 0.022uF/25V (B)K	12B2223C
C11	Chip Cap 0.22/25V (F)Z	72F2224C
C12	Ele Cap 100uF/6.3V	526R107K
C13	Chip Cap 0.022uF/25V (F)Z	12F2223C
C14	Chip Cap 0.022uF/25V (B)K	12B2223C
C15	Ele Cap 22uF/6.3V	526R226K
C16	Chip Cap 1uF/16V	1225105C
C17	Chip Cap 0.022uF/25V (F)Z	12F2223C
C18	Chip Cap 27pF/50V (CH)J	12CH270C
C19	Chip Cap 22pF/50V (CH)J	12CH220C
C20	Chip Cap 39pH/50V (CH)J	12CH390C
C21	Ele Cap 47uF/6.3V	526R476K
C22	Chip Cap 0.022uF/25V (F)Z	12F2223C
C23	Chip Cap 0.022uF/25V (F)Z	12F2223C
C25	Ele Cap 0.1uF/50V	526W104K
C26	Chip Cap 4700pF/50V (B)K	12B3472C
C27	Chip Cap 2pF/50V (CK)D	12CK209C
C28	Chip Cap 1000pF/50V (B)K	12B3102C
C29	Chip Cap 68pF/50V (CH)J	12CH680C

BASE MAIN PCB



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