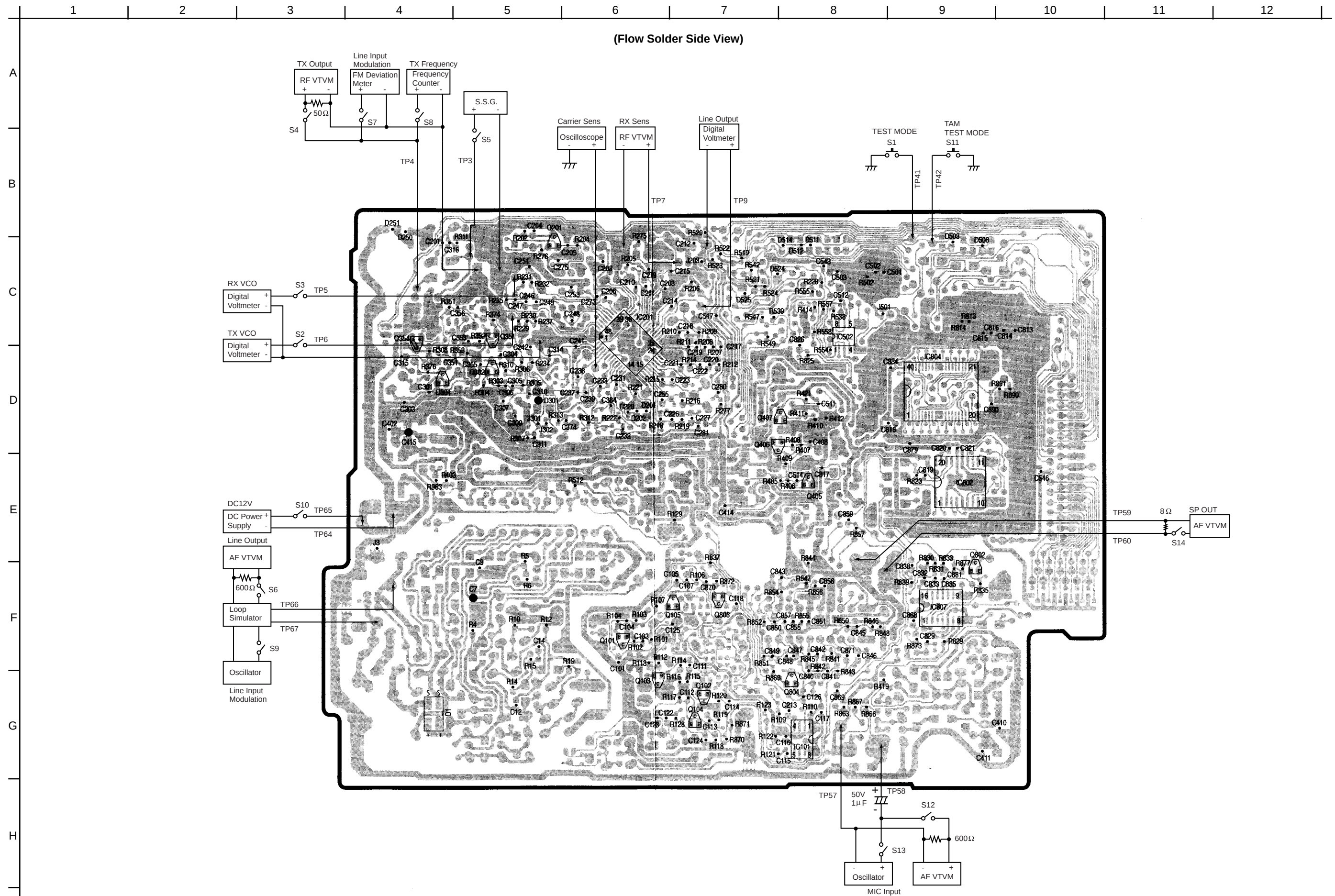
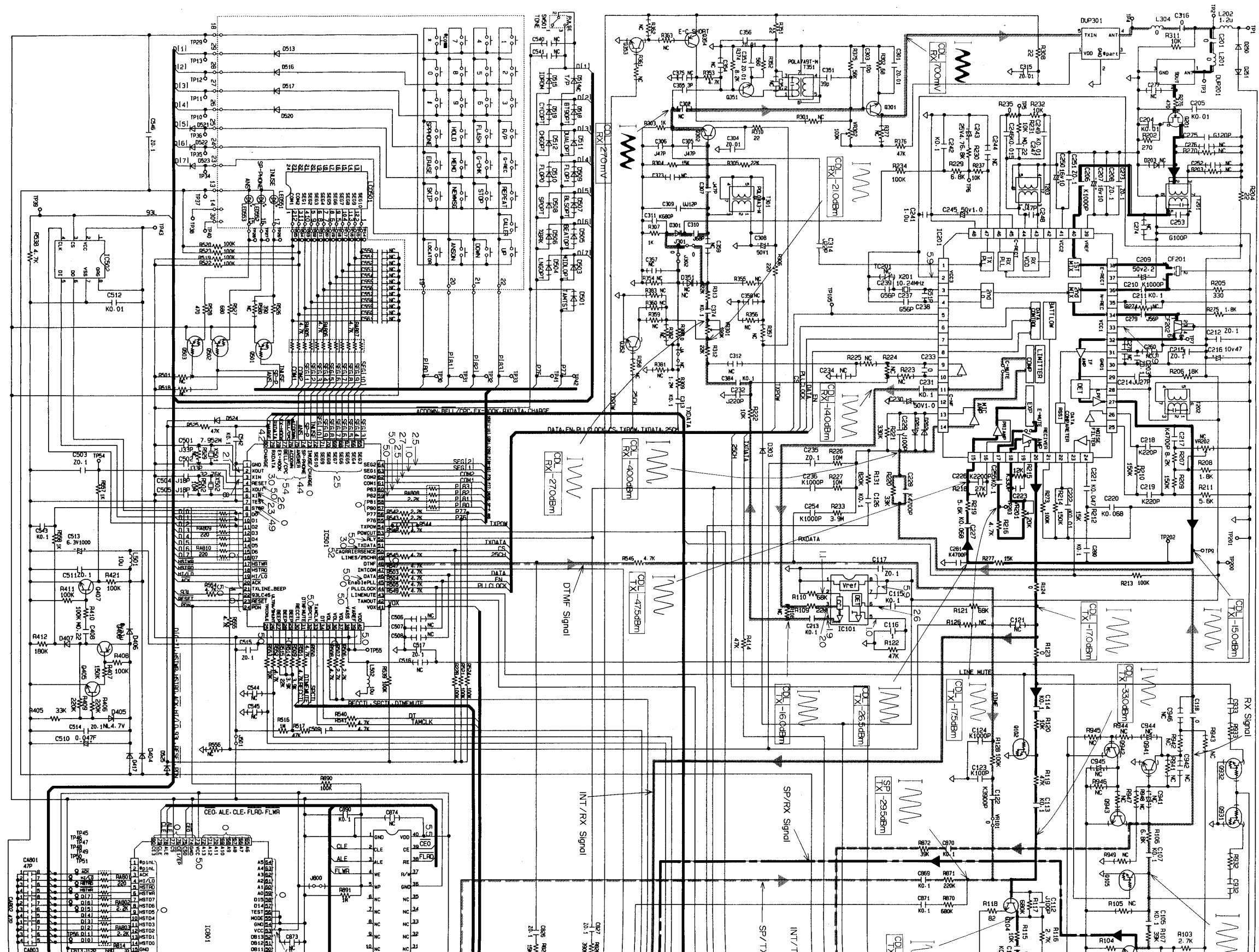


CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

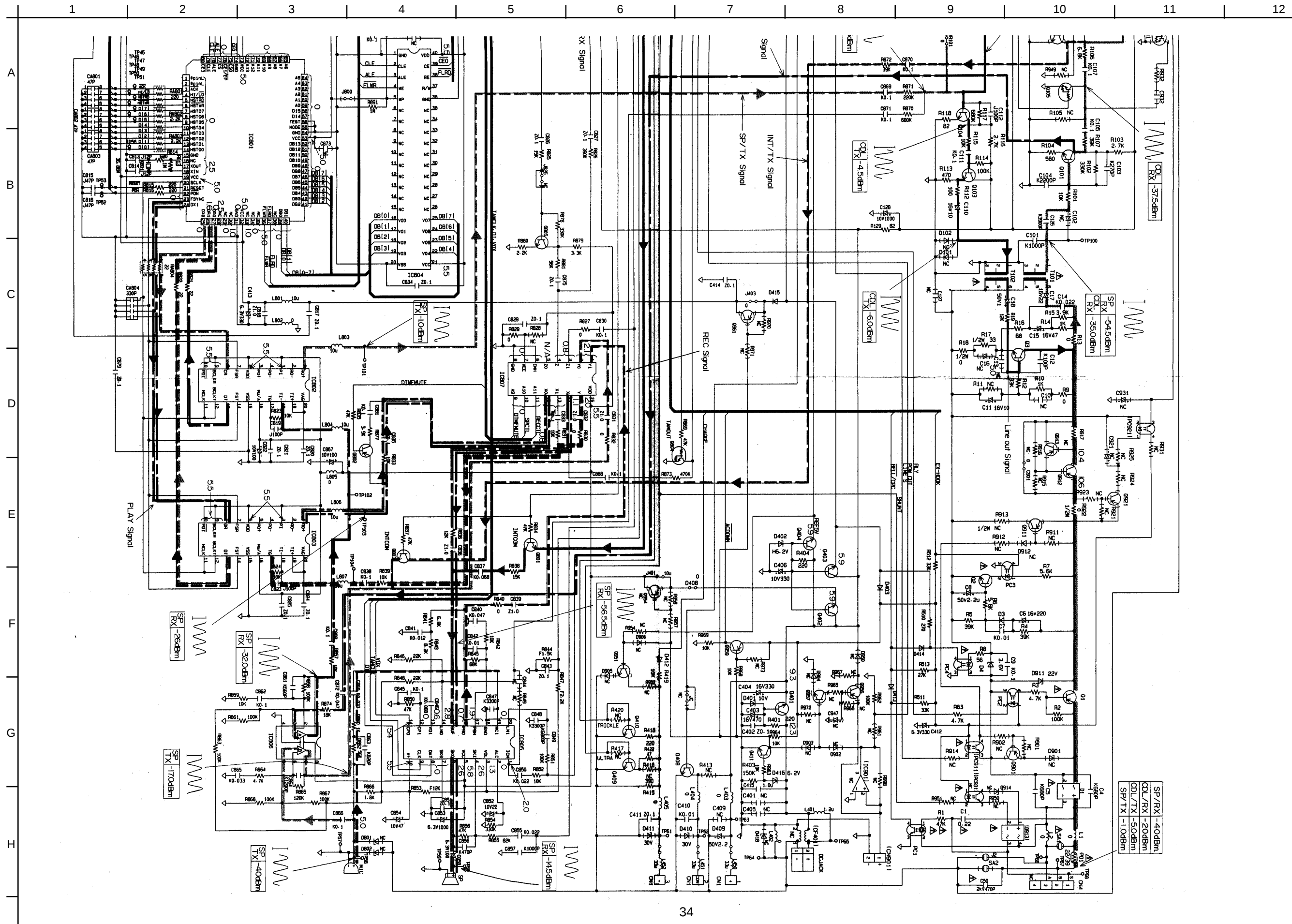
(Flow Solder Side View)



SCHEMATIC DIAGRAM (BASE UNIT)



SCHEMATIC DIAGRAM (BASE UNIT)



RF SPECIFICATION

BASE UNIT

Item	Value	Refer to —.	Remarks
TX Frequency	44.100 MHz $\pm$ 700 Hz	Page 18 (C)	
TX Power	More than 900mV	Page 19 (D)	
Line Modulation factor	3.8 kHz~4.2 kHz	———	Input signal from Tel line: -20 dBm/600 Ω , f=1.0 kHz at CHB Talk
Line Modulation Distortion	Less than 7%	———	Input signal from Tel line: -20 dBm/600 Ω , f=1.0 kHz at CHB Talk
Line Modulation factor (Max.)	4.5 kHz~7.5 kHz	———	Input signal from Tel line: 0 dBm/600 Ω , f=1.0 kHz at CHB Talk
Data Modulation factor	4.5 kHz~7.5 kHz	———	Press Locator switch at CHB Standby

HANDSET

Item	Value	Refer to —.	Remarks
Practical Sensitivity	Less than 9 dB μ V	———	at CHA Talk
Carrier Sensitivity	Less than 30 dB μ V	———	High→Low at CHB Talk
TX Frequency	49.640 MHz $\pm$ 700 Hz	Page 30 (D)	
TX Output	More than 900mV	Page 30 (E)	
Data Modulation factor	4.5 kHz/dev~6.5 kHz/dev	Page 30 (H)	
MIC Modulation factor	2.7 kHz/dev~2.9 kHz/dev	———	Input signal from MIC: -40 dBm/600 Ω , f=1.0 kHz at CHA Talk

HOW TO CHECK THE HANDSET SPEAKER

1. Prepare the digital voltmeter, and set the selector knob to ohm meter.
2. Put the probes at the speaker terminals as shown in Fig.7.

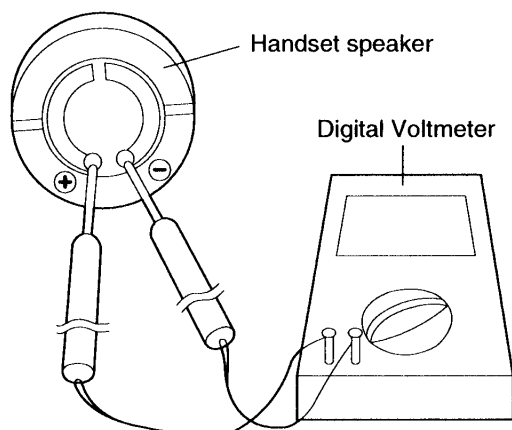
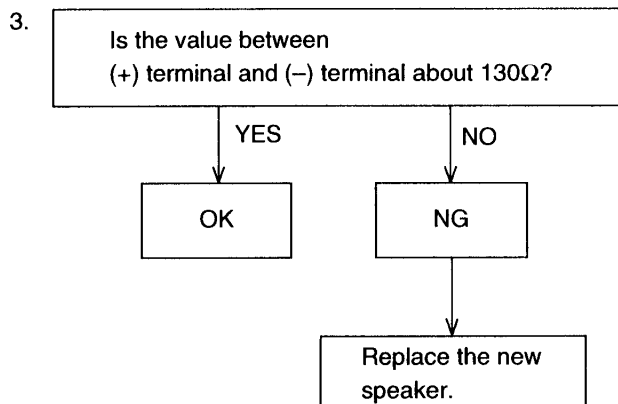
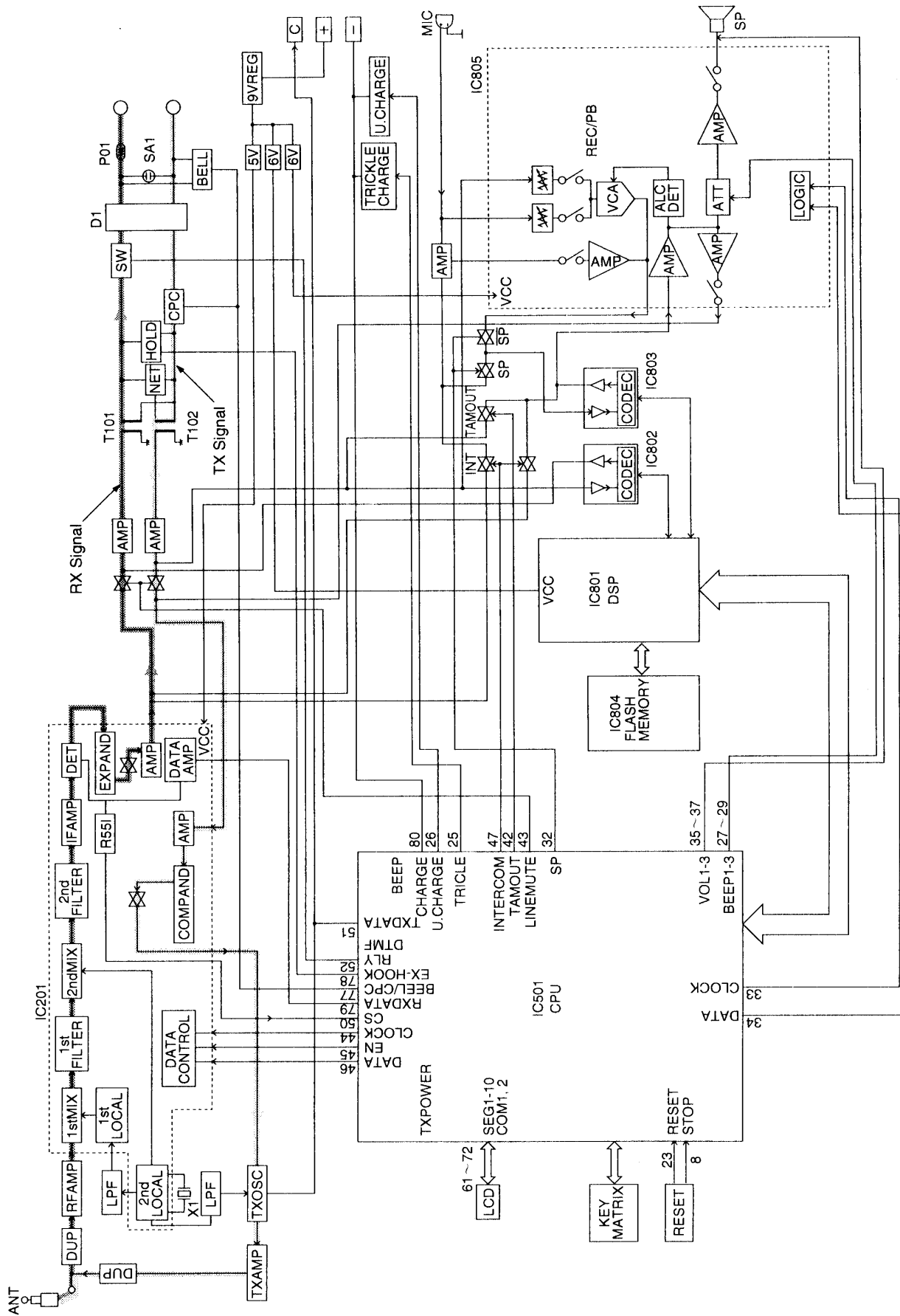


Fig. 7

BLOCK DIAGRAM (BASE UNIT)



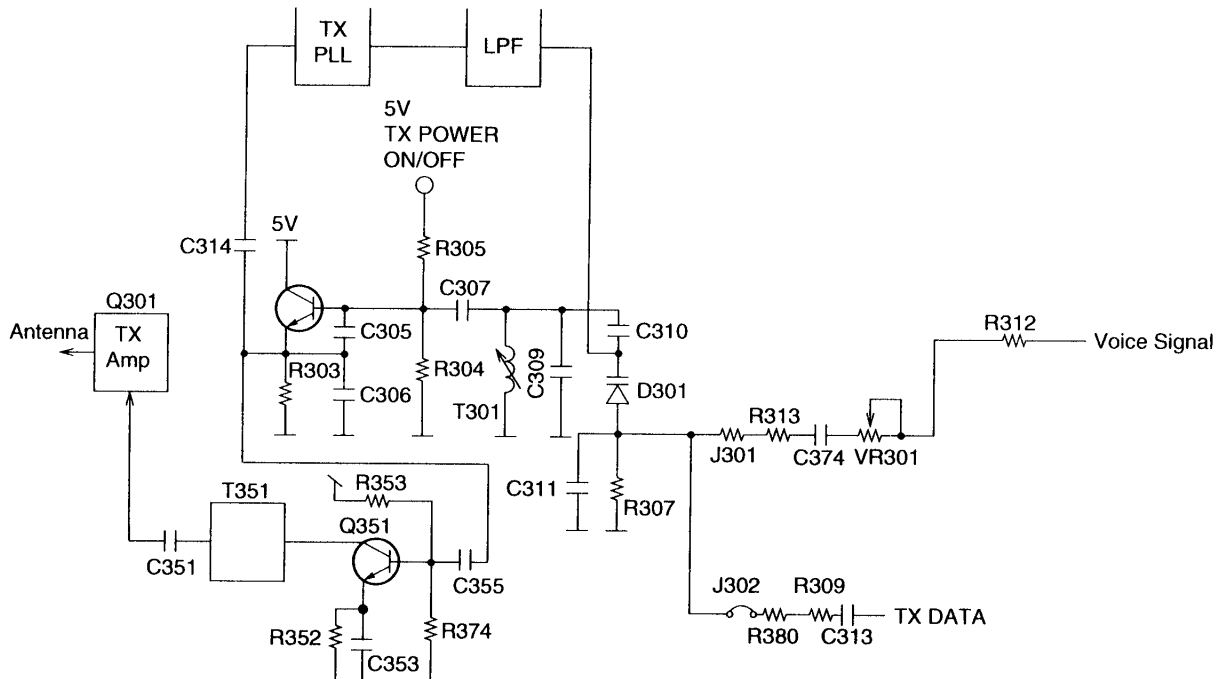
NEW CIRCUIT OPERATION (BASE UNIT)

TRANSMITTER CIRCUIT

The voice signal or data signal sent to the handset is applied in the anode of the variable capacitor diode(VARICAP)D301, as shown on figure.

VR301 is used for changing the voice signal level,thus changing the modulation level.

Circuit Diagram

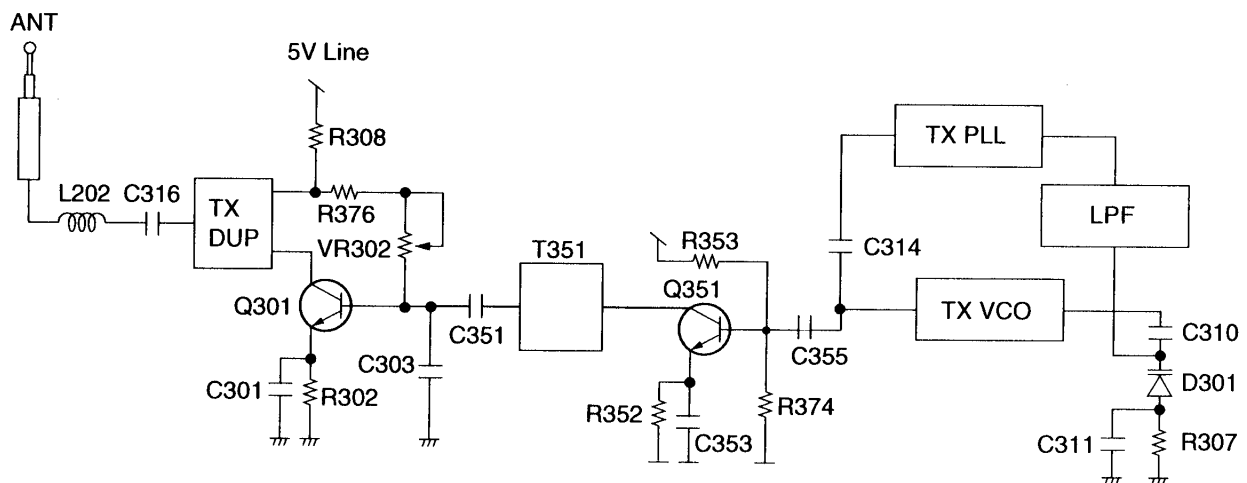


TRANSMITTER OUTPUT AMP CIRCUIT

The signal which is oscillated at TXVCO is amplified by Q302, which is biased by the TX duplexer and whose gain is adjusted by moving T351, VR302.

The signal passes through the duplexer and it is radiated from the antenna.

Circuit Diagram

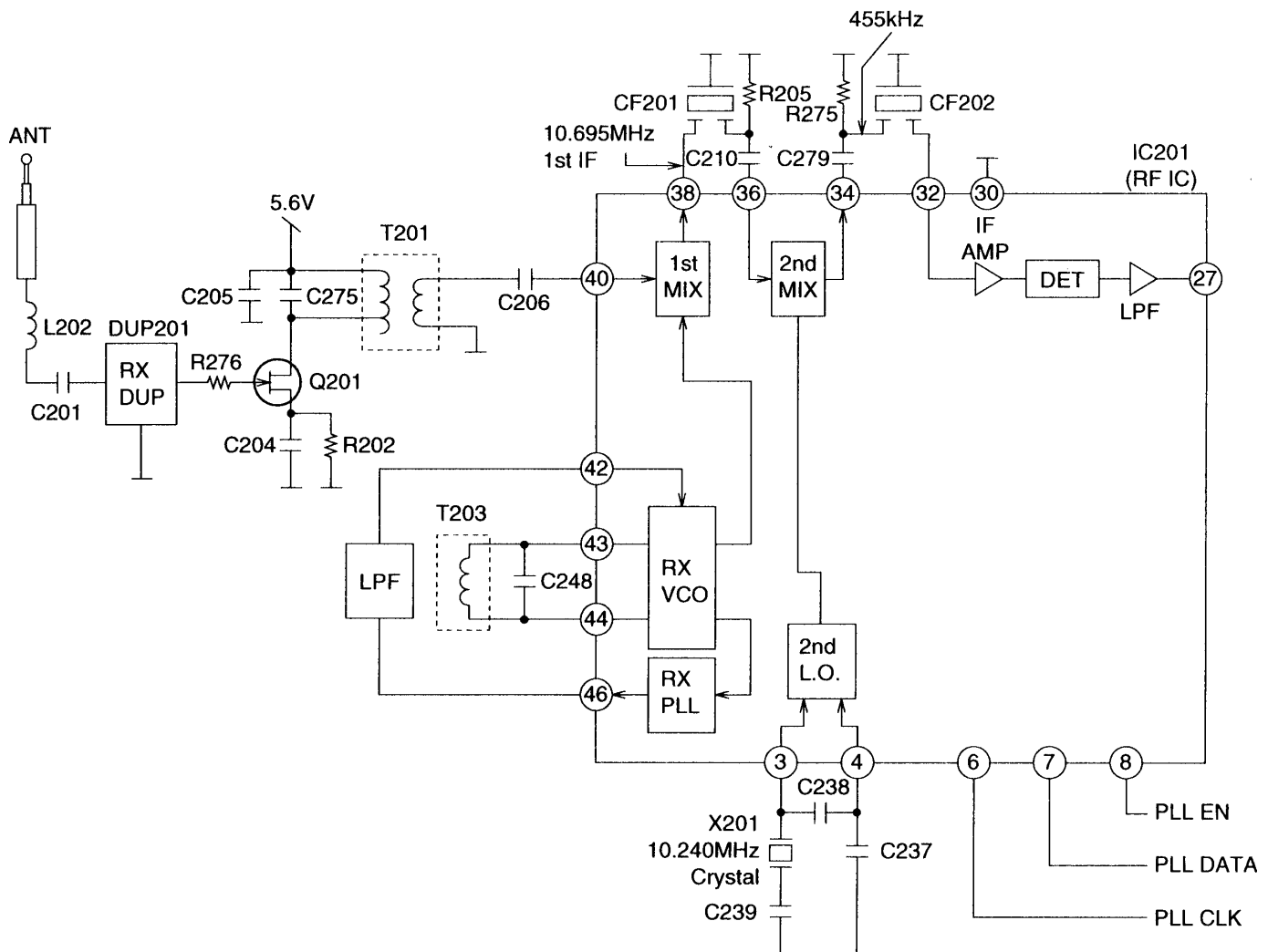


RECEIVER RF IF CIRCUIT
Circuit Operation:

The signal of 49 MHz band (49.46~49.99MHz) which is input from ANT is filtered at DUP201, passes through the filter AMP of 49 MHz band at T201 and Q201, and is input to Pin ④ of IC201.

RX VCO which oscillates at T203 and Pins ④②, ④⑥ of IC201 is input to program control at inside of IC201, 1st local frequency is controlled to assigned channel by serial data which is output, from Pins ④⑫, ④⑬ and ④⑳ of IC501 (CPU), makes loop with Phase Detector Out and RX VCO, and locks 1st local frequency.

The input signal of Pin ④ of IC201 and 1st local frequency output from RX VCO are mixed at inside of IC201, then it passes through CF201, and 1st IF frequency of 10.695 MHz is generated. Farther, the 10.240 MHz and 10.695 MHz which are oscillated at X201 and Pins ④③, ④④ of IC201 are mixed at inside of IC201 and filtered at CF202, and 2nd IF 455 Hz is output.

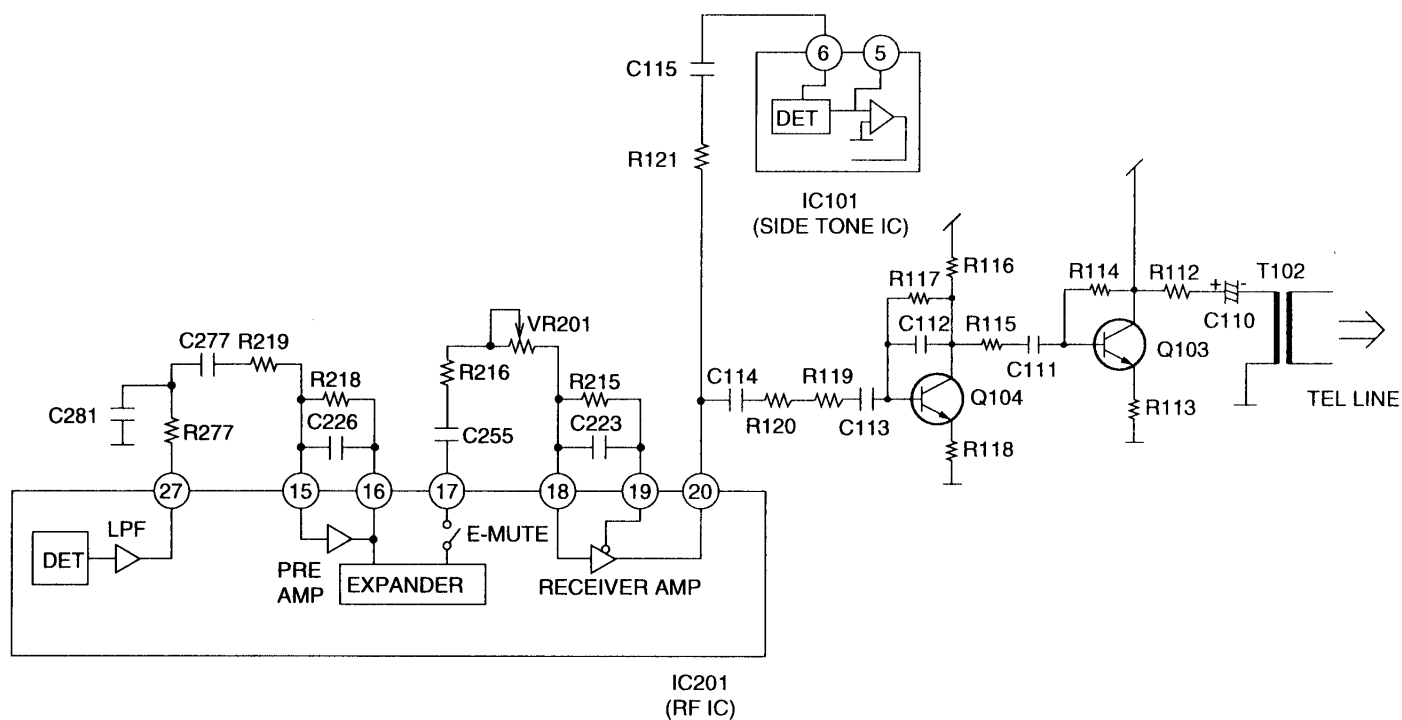
Circuit Diagram


RECEIVER SIGNAL CIRCUIT

Circuit Operation:

1. The detected signal passes through R277→C277→(R219) and it is input to the Pre Amplifier inside of IC201; it passes through the expander and goes out from pin (17) of IC201.
2. The signal passes through C255→R216→VR201→, and it is input to the Receiver Amplifier of IC201, on pin (18).
3. The signal is output from the amplifier on pin (20) of IC201 and it goes thru Q103 and Q104, to the telephone line.
4. The signal is also input to the IC101 (sidetone IC) in pin (6), in order to define the attenuation level of this IC.

Circuit Diagram

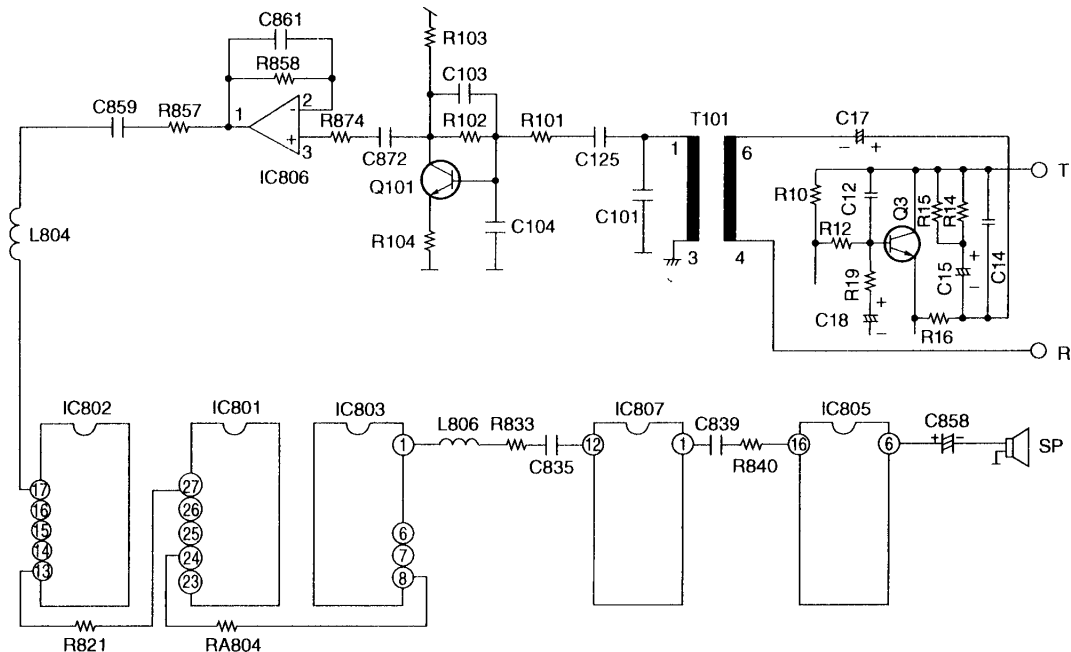


SP-PHONE RX CIRCUIT

Circuit Operation:

Telephone Line → C17 → T101 → C125 → R101 → Q101 → C872 → C874 → Pin ③ of IC806 → Pin ① of IC806 → R857 → C859 → L804 → Pin ①⑦ of IC802 → Pin ①③ of IC802 → R821 → Pin ②⑦ of IC801 → Pin ②④ of IC801 → RA804 → Pin ①⑧ of IC803 → Pin ①① of IC803 → L806 → R833 → C835 → Pin ①② of IC807 → Pin ①① of IC807 → C839 → R840 → Pin ①⑤ of IC805 → Pin ①⑥ of IC805 → C858 → Speaker

Circuit Diagram

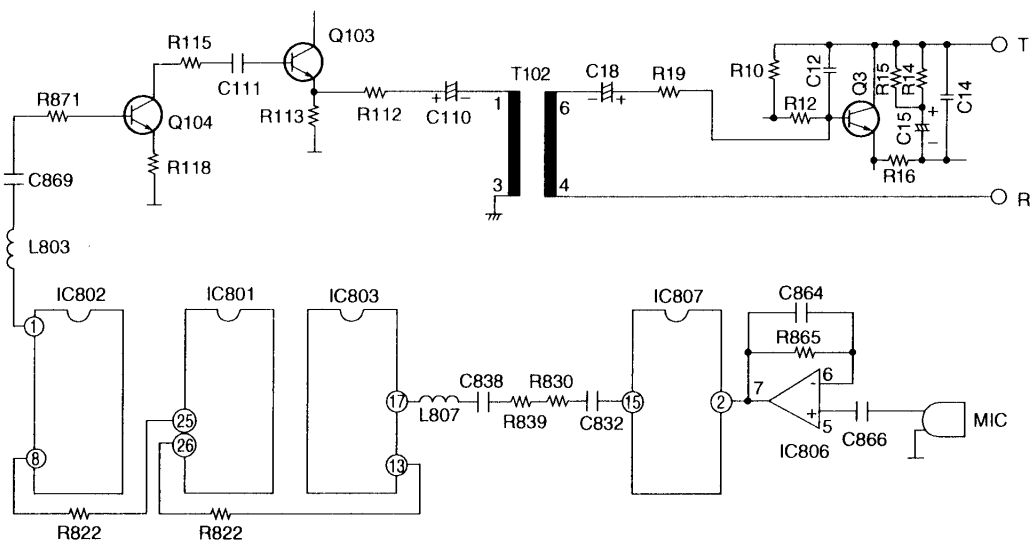


SP-PHONE TX CIRCUIT

Circuit Operation:

MIC → C866 → Pin ⑤ of IC806 → Pin ⑦ of IC806 → Pin ② of IC807 → Pin ①⑤ of IC807 → L807 → R830 → R839 → C838 → L807 → Pin ①⑦ of IC803 → Pin ①③ of IC803 → Pin ②⑥ of IC801 → Pin ②⑤ of IC801 → Pin ①⑧ of IC802 → Pin ①① of IC802 → L803 → C869 → R871 → Base of Q104 → Collector of Q104 → R115 → C111 → Base of Q103 → Emitter of Q103 → R112 → C110 → T102 → C18 → R19 → Q3 → Telephone Line

Circuit Diagram



NORMAL CIRCUIT OPERATION (BASE UNIT)

■ TELEPHONE LINE INTERFACE

Circuit Operation:

● ANSWER

In the idle mode, Q1 is open to cut the DC loop current and decrease the ring load. When ring voltage appears at the Tip (T) and Ring (R) leads (When the telephone rings), the AC ring voltage is transferred as follows:

$T \rightarrow PO1 \rightarrow C1 \rightarrow R1 \rightarrow PC1 \rightarrow IC501 \text{ Pin } (77)$

When the CPU detects a ring signal, Q110 turns on, thus providing an off-hook condition (active DC current flow through the circuit) and the following signal flow is for the voice signal.

$T \rightarrow PO1 \rightarrow D1 \rightarrow Q1 \rightarrow T101 \text{ Pin } (6) \rightarrow T101 \text{ Pin } (4) \rightarrow D4 \rightarrow D1 \rightarrow R$

● ON HOOK

Q1 is open, Q1 is connected as to cut the DC loop current and to cut the voice signal. The unit is consequently in an on-hook condition.

● SPECIFICATIONS

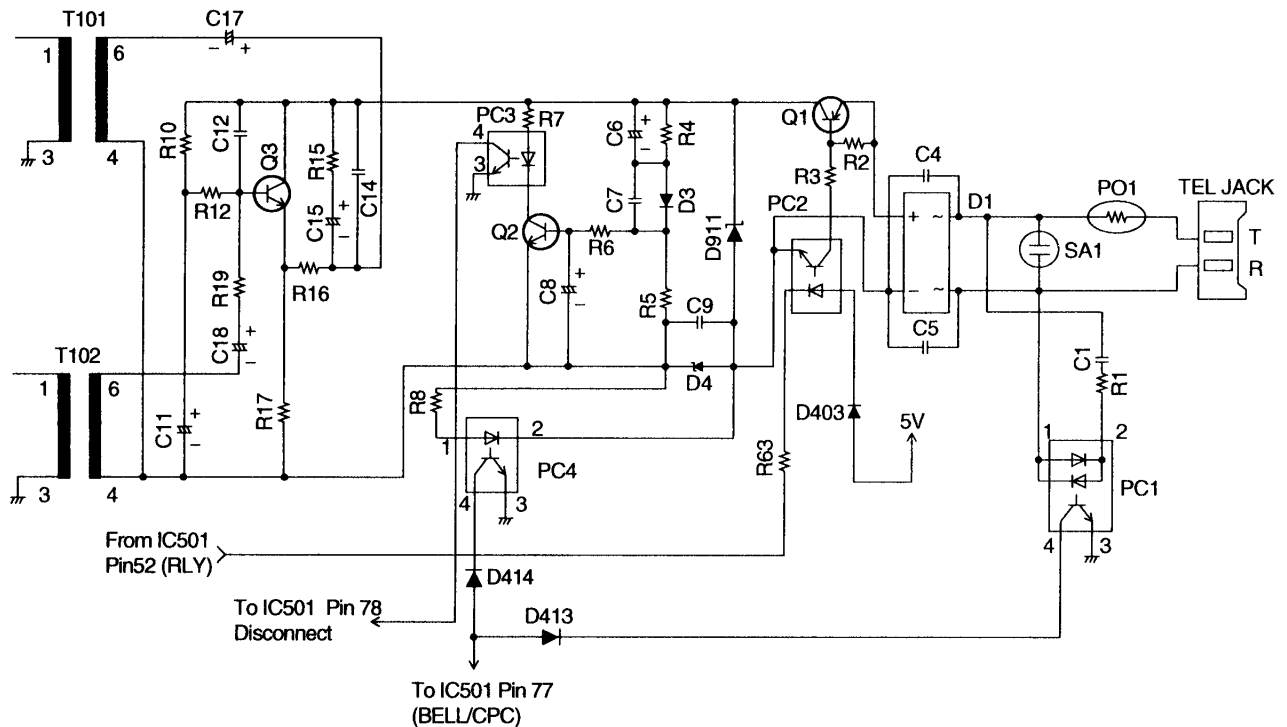
In the on-hook state (idle), the current flows between the telephone line and the unit is as follows:

$T \rightarrow C1 \rightarrow R1 \rightarrow PC1 \rightarrow R$

The DC component is blocked by C1: thereby providing an on-hook condition.

The AC interface impedance is over 47 kΩ; thus, satisfying the telephone company requirements.

Circuit Diagram



■ INTERCOM MODE

- 1) When the base unit PAGE/INT button is pressed, a call monitor signal of 1.95 kHz (intercom sound) is output from Pin ③⑦ of IC501.
- 2) At the same time, Pin ⑤④ of IC501 goes "High", and the transmission state is reached. Then the modulated data signal is output from Pin ⑤① of IC501. Flashing of the INTERCOM LED (LED551) is obtained from Pin ⑦③ of IC501. This status is called "Intercom stand-by".
- 3) The receiving signal flows:
Pin ④⑦ of IC501 → Q801 (Pin ④⑦ of IC501 Low → High) → R838 → C837 → Pin ①⑤ of IC805 → Speaker.
- 4) The transmission signal flows:
MIC → IC806 (Amp) [pin ⑦⑦ is outputted] → Q803 (Pin ④⑦ of IC501 Low → High) → R872 → C870 → R94 → ANT.

■ INITIALIZING CIRCUIT

Function:

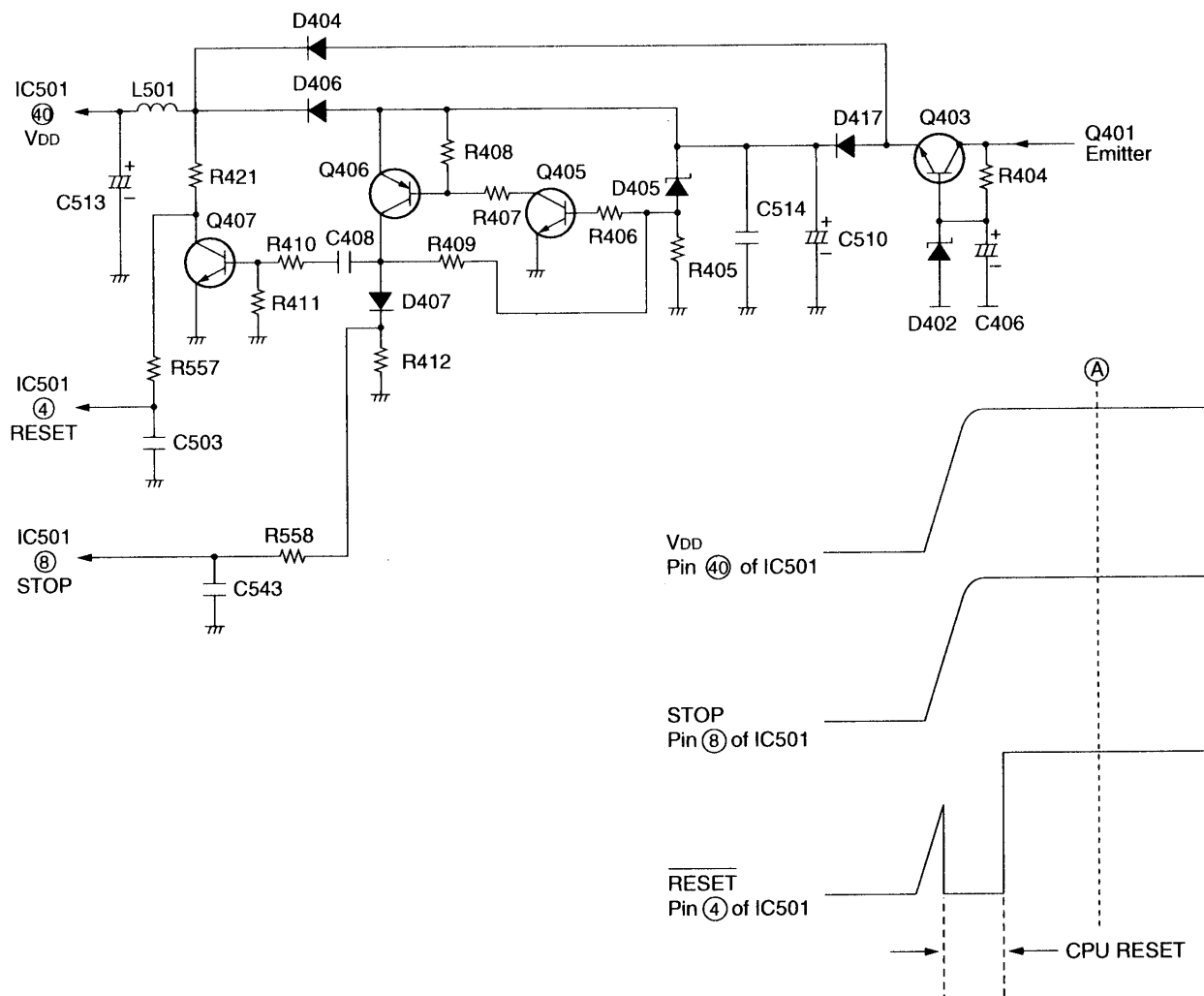
This circuit is used for to initialize the microcomputer when it incorporates an AC adaptor.

Circuit Operation:

When the AC Adaptor is inserted into the unit, then the voltage is shifted by D417 and power is supplied to the CPU.

The set can operate beyond point (A) in the circuit voltage diagram.

Circuit Diagram

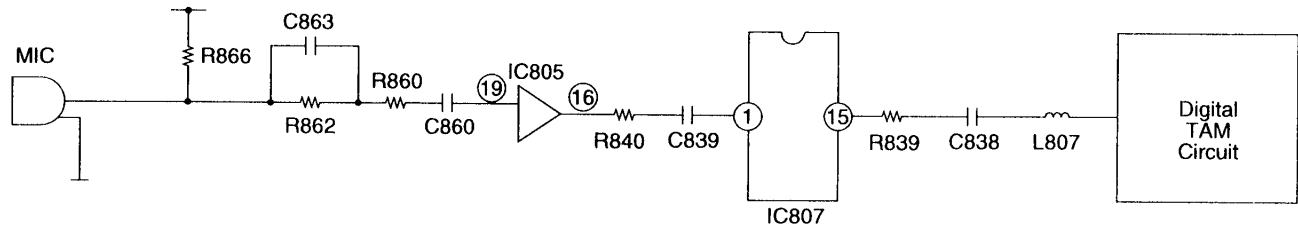


■ GREETING RECORDING CIRCUIT

Circuit Operation:

MIC → R862 → C860 → Pin (19) of IC805 → Pin (16) of IC805 → R840 → C839 → Pin (1) of IC807 → Pin (15) of IC807 → R839 → C838 → L807 → Digital TAM Circuit.

Circuit Diagram

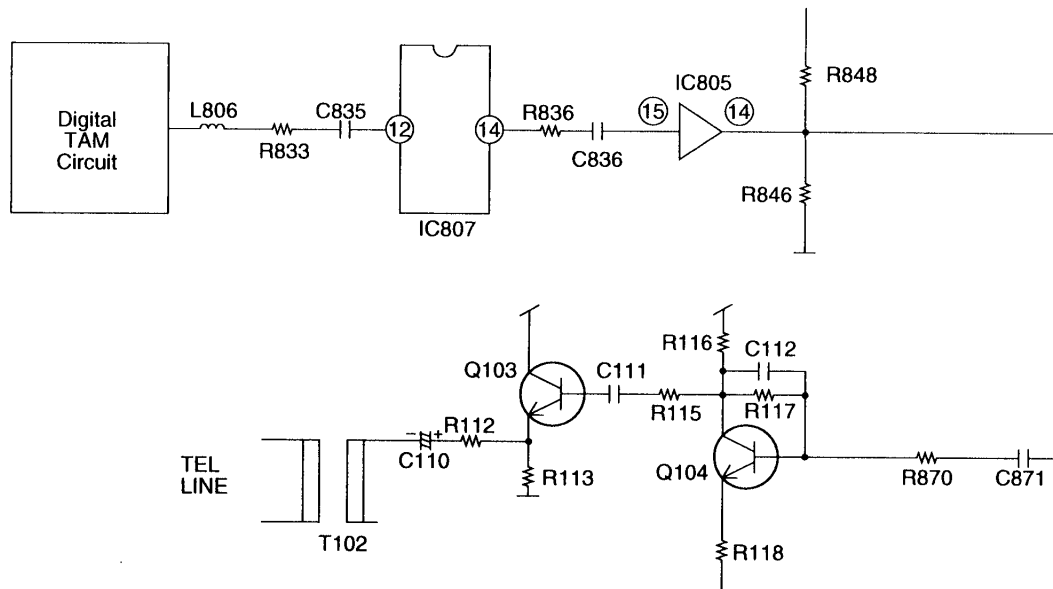


■ GREETING PLAY BACK CIRCUIT

Circuit Operation:

Digital TAM Circuit → L806 → R833 → C835 → Pin (12) of IC807 → Pin (14) of IC807 → R836 → C836 → Pin (15) of IC805 → Pin (14) of IC805 → C871 → R870 → base of Q104 → collector of Q104 → Base of Q103 → emitter of Q103 → C110 → T101 → Telephone Line.

Circuit Diagram

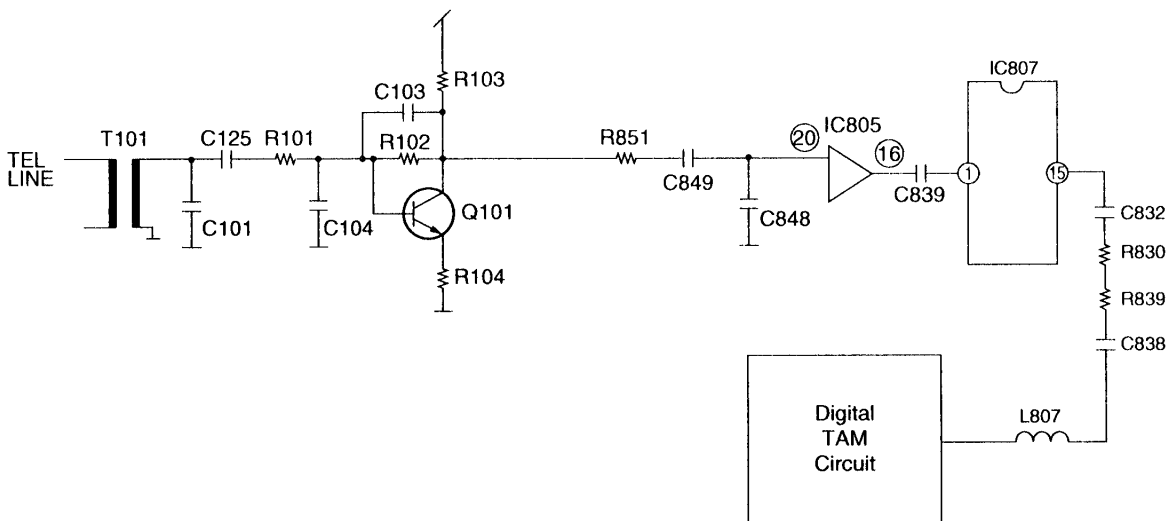


ICM RECORDING CIRCUIT

Circuit Operation:

Telephone Line → T101 → C125 → R101 → Q101 → R851 → C849 → Pin (20) of IC805 → Pin (16) of IC805 → C839 → Pin (1) of IC807 → Pin (15) of IC807 → C832 → R830 → R839 → C838 → L807 → Digital TAM Circuit.

Circuit Diagram

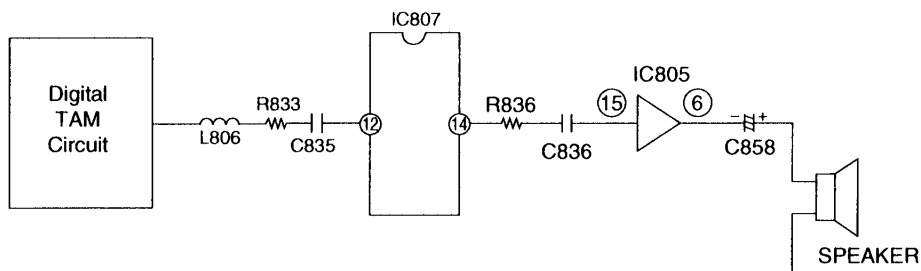


ICM PLAY CIRCUIT

Circuit Operation:

Digital TAM Circuit → L806 → R833 → C835 → Pin (12) of IC807 → Pin (14) of IC807 → R836 → C836 → Pin (15) of IC805 → Pin (6) of IC805 → C858 → Speaker.

Circuit Diagram



AUTO DISCONNECT CIRCUIT

Function:

This circuit is used to detect the fact that another telephone connected to the same line is OFF-HOOK while the unit is in a receiving status or OGM transmitting status.

Circuit Operation:

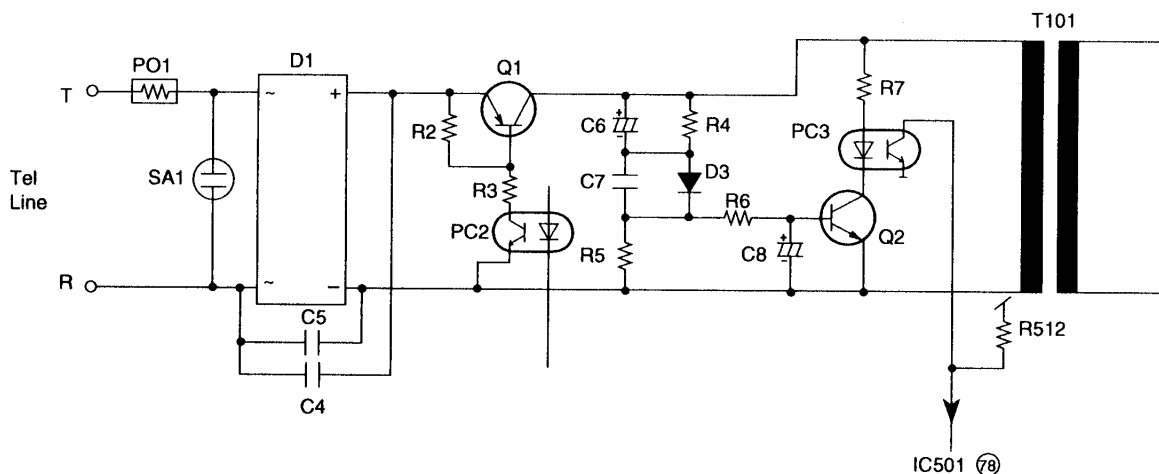
T → PO1 → D1 → Q1 → R4 → D3 → R6 → Q2. During this interval C8 charges and the base of Q1 becomes High, causing Q1 to go ON.

If a parallel-connected telephone is put into an OFF HOOK status, charge ceases to flow to C6, and the base of Q1 becomes Low, causing Q1 to go OFF.

However, the system is designed so that if the voltage fluctuation is small, the charging and discharging of C8 has no effect on the system.

When a line is connected, Q1 goes ON, causing Pin (78) of IC501 to go low. When the line is disconnected, Q1 goes off, causing Pin (78) of IC501 to go high.

Circuit Diagram



POWER SUPPLY CIRCUIT

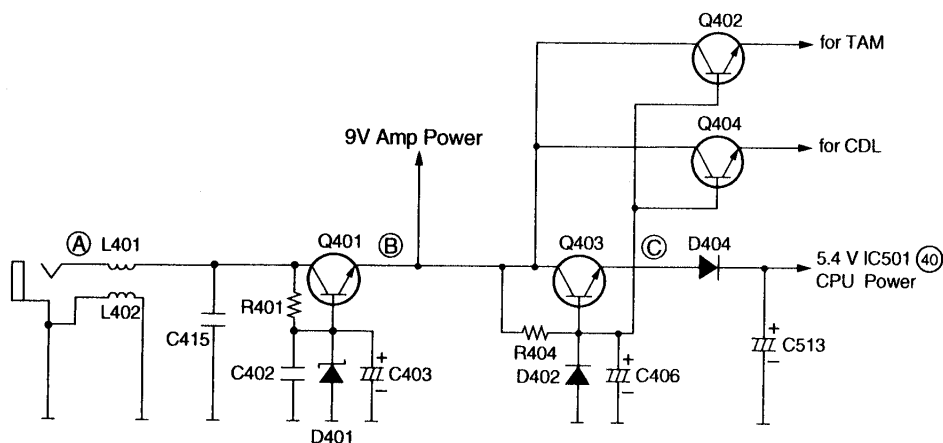
Function:

Power from the AC adaptor passes through a 2-stage regulating block consisting of Q401, Q402, Q403 and Q404 and provides system voltages of 5.4 and 9 V.

Circuit Operation:

Power from the AC adaptor is supplied directly to the plunger. Q401 is a regulated power supply. The voltage at point (B) is regulated to 9 V by the zener voltage of D401 → Amp power. Q402, Q403 and Q404 are a regulated power supply. The voltage at point (C) is regulated to 6 V by the zener voltage of D402. The 6 V voltage is dropped by D414 to 5.4 V.

Circuit Diagram



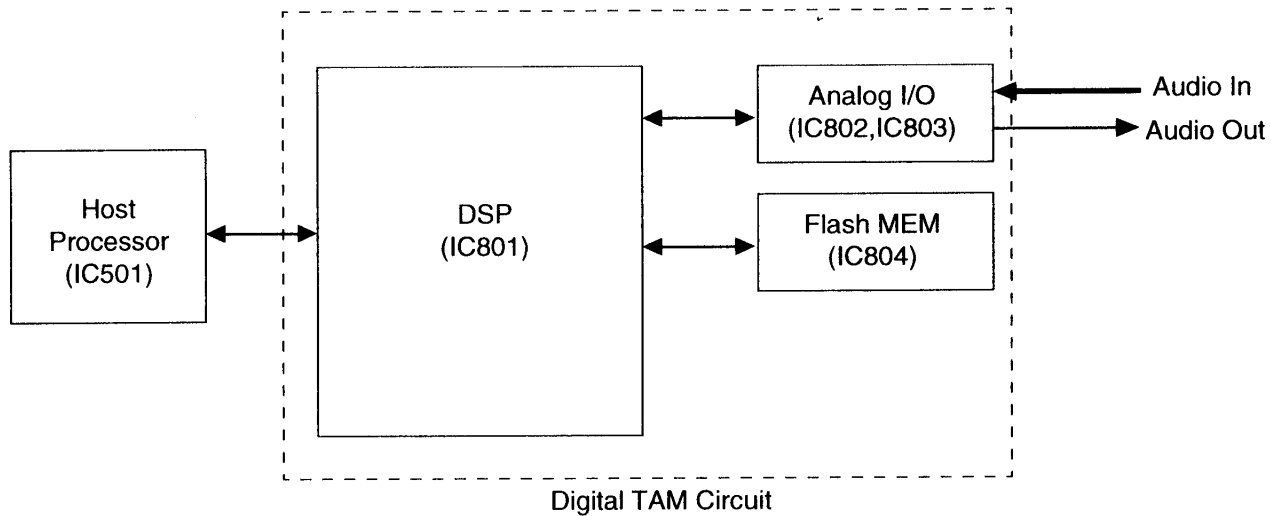
■ DSP (Digital Speech/Signal Processing) CIRCUIT**General Description:**

IC801~IC804 are a digital speakerphone/speech/signal processing system that implements all the functions of speech compression, record and playback, and memory management required in a digital telephone answering machine.

The DSP system is fully controlled by a host processor (IC501), via 8 bit interface. The host processor provides activation and control of all that functions, such as speech Recording, Playback, Tone detecting and Line Monitoring.

The DSP system comprises of following.

- a Digital Signal Processor which includes the firmware implemented functions.
- a Codec (IC802, IC803), which is used as the analog I/O interface.
- an Audio grade Flash MEM (IC804), which is used for stored voice messages, and Synthesized Voice.

**• Voice Message Recording**

The DSP system use a proprietary speech compression technique to record and store voice message in the Flash MEM (IC804). An error correction algorithm is used to enable playback of these messages from the Flash MEM.

• DTMF Detection

The DTMF detection is implemented by the DSP system in software. The DTMF detection is performed during Record, Playback, and Line Monitoring modes of operation.

• Synthesized Voice

The DSP implements synthesized Voice, utilizing the built in speech detector and an external Flash MEM (IC804), which stored the vocabulary.

■ CPC (Calling Party Control) DETECTOR CIRCUIT

Function:

The CPC DETECTOR complements the units shut off, in the ANSWER mode, after the caller hangs up. At this time, the CPC DETECTOR takes over.

The CPC DETECTOR senses the temporary disconnection of the telephone line which occurs after the caller hangs up.

Circuit Operation:

When off-hook, the DC current of telephone line flows as follows:

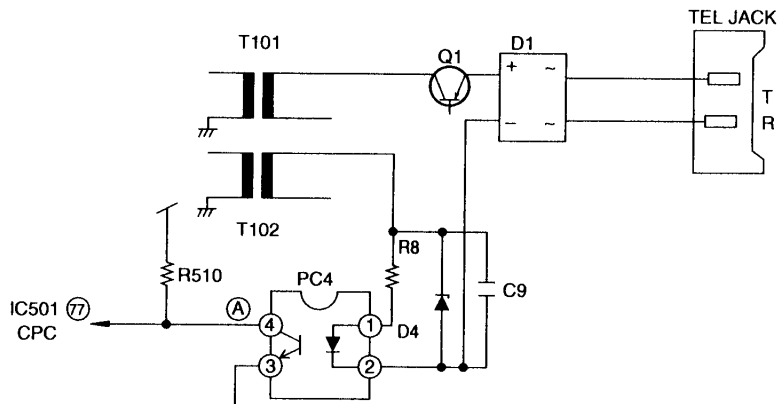
$T \rightarrow D1 \rightarrow T101 \rightarrow R8 \rightarrow PC4 \rightarrow D1 \rightarrow R$

When in the off-hook mode, the collector of PC4 is at Low level.

If an instant break down of the telephone line occurs, the collector of phototransistor goes to a high level from a low level.

(The CPC detector is designed for the instant break down of more than 8 msec. or 600 msec.)

Circuit Diagram

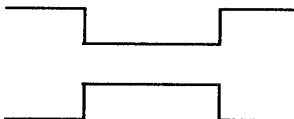


CPC Function

	A	B
OK	more than 8 ms	more than 600 ms
NG	less than 5 ms	less than 350 ms

between
T and R

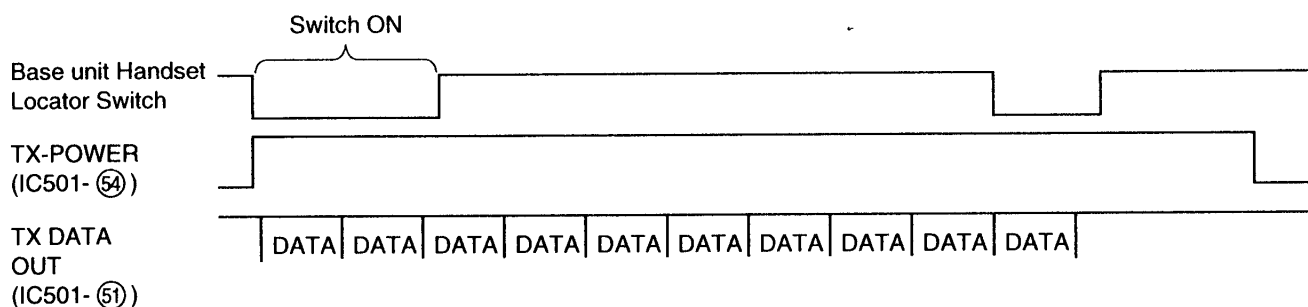
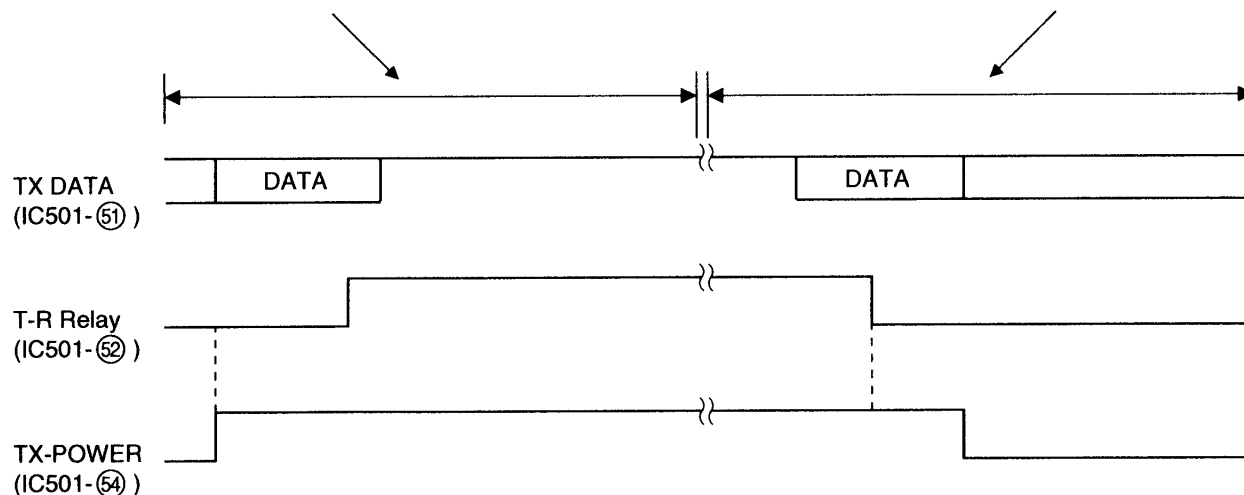
Ⓐ waveform



■ CPU OPERATION
1. TEL MODE

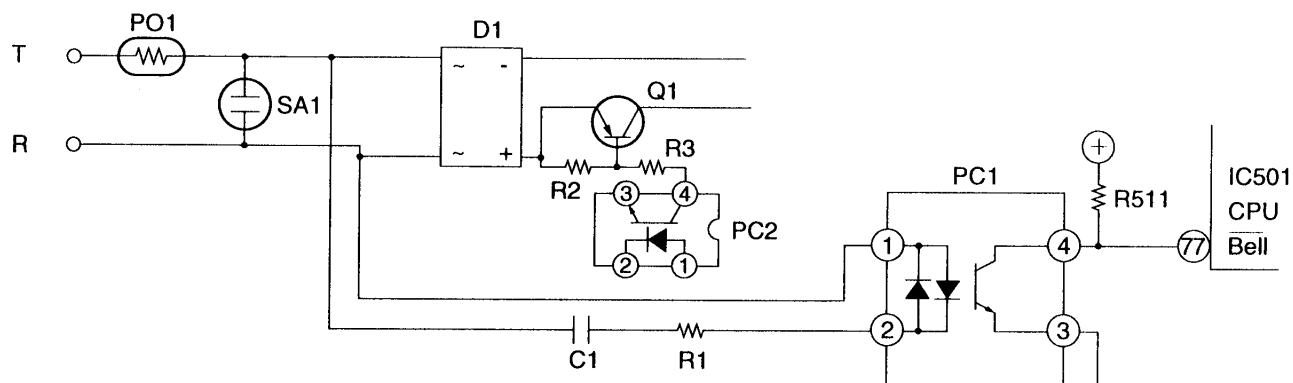
CPU Terminals Operation Mode	18 TX POW	19 TX DATA	21 TR-RLY	41 BEEP
STANDBY	L	H	H	L
TALK	H	H	L	L
Handset → Base Unit Paging	H	DATA OUTPUT	H	
Base Unit → Handset Ring	H	DATA	H	L
Base Unit → Handset Paging	H	DATA	H	
CHARGE	L	DATA	H	L
CH Changing (TALK)	H	DATA	L	L

The base unit mode is :
 OFF : LOW
 LOW : 
 HIGH : 

2. TIMING OF IC501 (CPU) OUTPUT PORT WITH THE BASE UNIT IN HANDSET LOCATOR MODE

3. WHEN PRESSING THE TALK BUTTON OF THE HANDSET
4. THE HANDSET TO OFF


4. RESONANCE PREVENTION CIRCUIT

Circuit Diagram

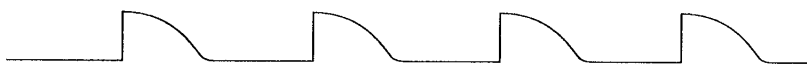


Ring signal

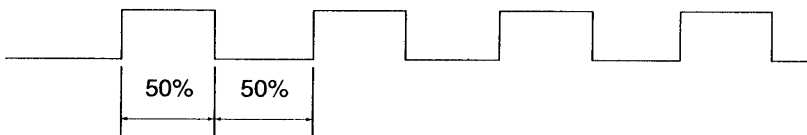
• T-R



• PC1-①



• PC1-④



Make/break ratio when dialing with the handset: 40%: 60%

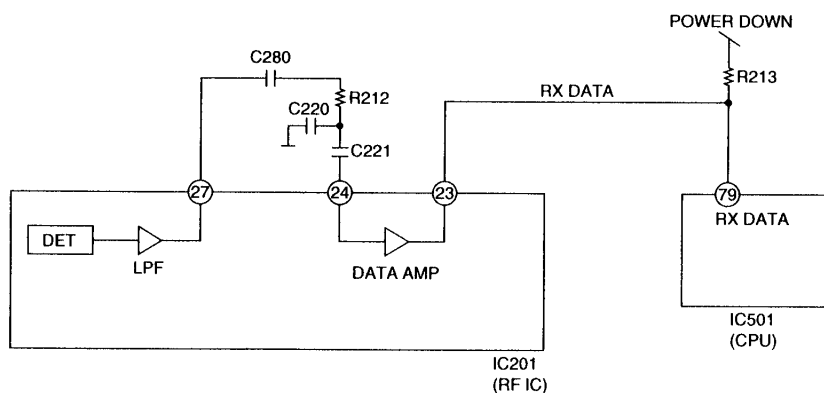
High/low ratio upon ring signal: 50%: 50%

Therefore, if the low/high ratio is greater than 45% at IC501-⑦⑦ (CPU), it is judged as a ring signal.

5. EXPLANATION OF THE DATA RECEPTION CIRCUIT

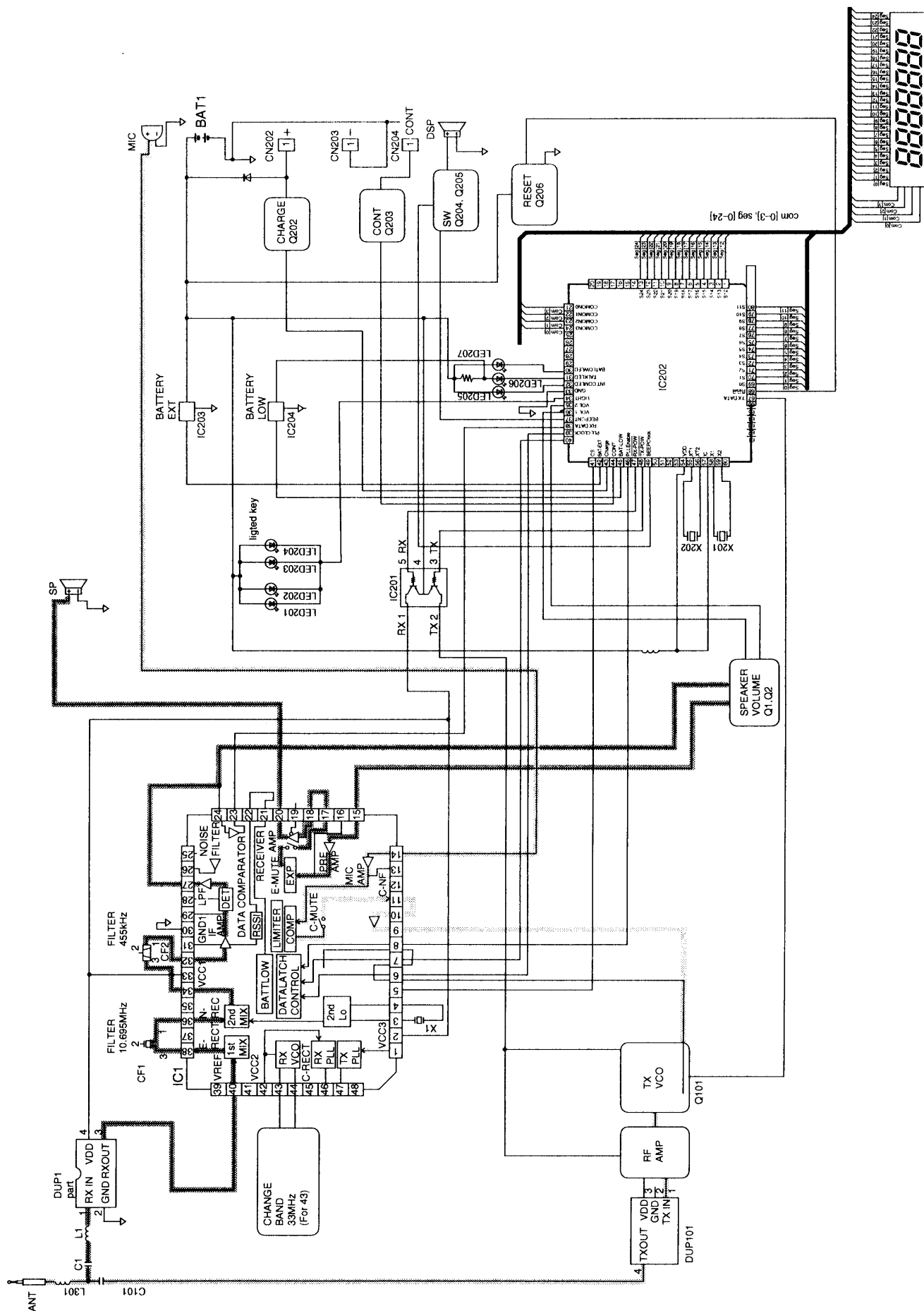
5-1. Signal Flow

Circuit Diagram



In area where the transmission power from the handset is extremely weak, noise is superimposed on the data and the chance of an error can become extremely great upon reception of the data. To help prevent this, the above circuit is used.

BLOCK DIAGRAM (HANDSET)



NEW CIRCUIT OPERATION (HANDSET)

RECEIVER RF IF CIRCUIT

Circuit Operation:

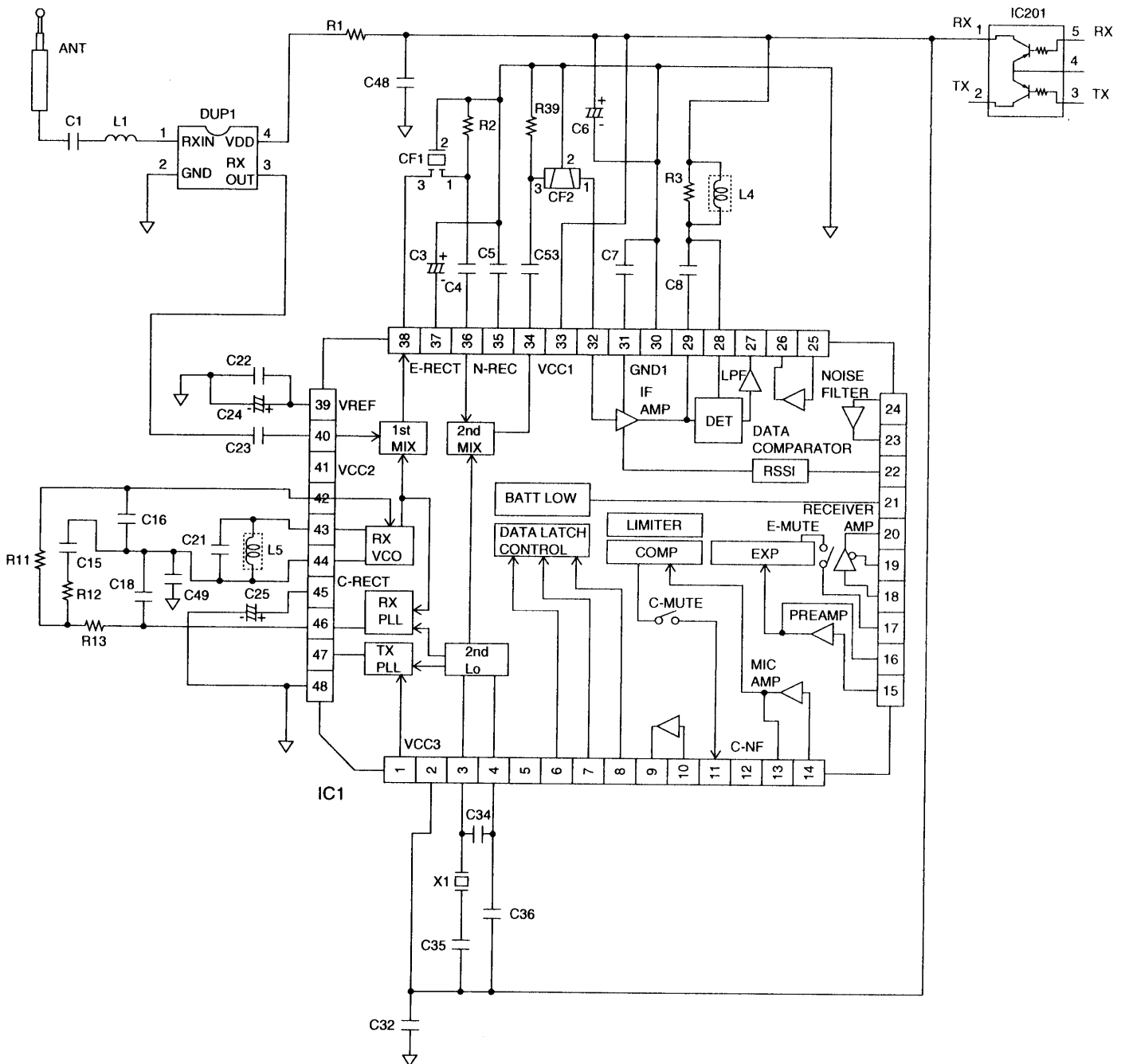
The signal of 46 MHz band (46.61 MHz~46.97 MHz) which is input from ANT is filtered by DUP1, and is input to Pin ④ of IC1. The RX VCO which oscillates at L5 and IC1 is locked to 1st Local frequency by PLL inside IC1.

(PLL is controlled by serial data output from Pin ②⑥, ③① and ③① of IC202.)

An input signal from Pin ④ of IC1 and 1st Local frequency output from RX VCO are mixed inside IC1, pass through CF1, and 1st IF frequency of 10.695 MHz is generated.

Further, 10.240 MHz and 10.695 MHz oscillated at X1, pass through MIXER inside IC1 and are filtered at CF2 and output 2nd IF 455 kHz.

Circuit Diagram



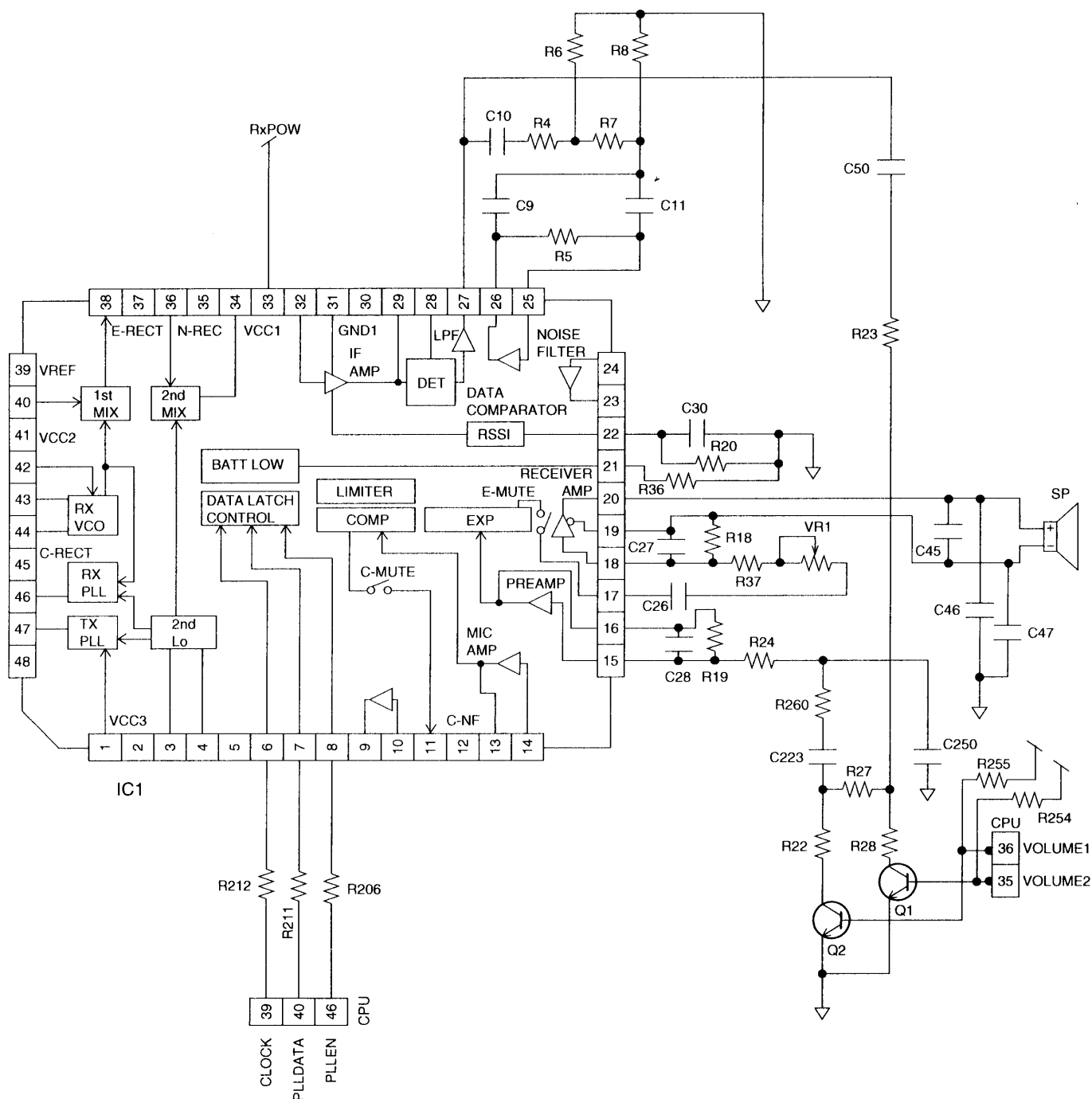
RECEIVER SIGNAL CIRCUIT
Circuit Operation:

After getting the 455kHz signal, it is input to Pin ③② of IC1 and passes through IF AMP and Detector Circuit, then are output to Pin ②⑦.

It is an AF signal flows through C50, R23. Its level is switched by Q2 and Q1 which are controlled by the CPU.

The signal is received at Pin ①⑤ of IC1, then it passes through the following circuits: PRIAMP, Expander and Amplifier: It goes out at Pin ②⑩ and finally is sent to the SP.

Inside IC1, E-MUTE, C-MUTE and PLL circuits are controlled by the serial data that the CPU send from Pins ②⑥, ③① and ③②.

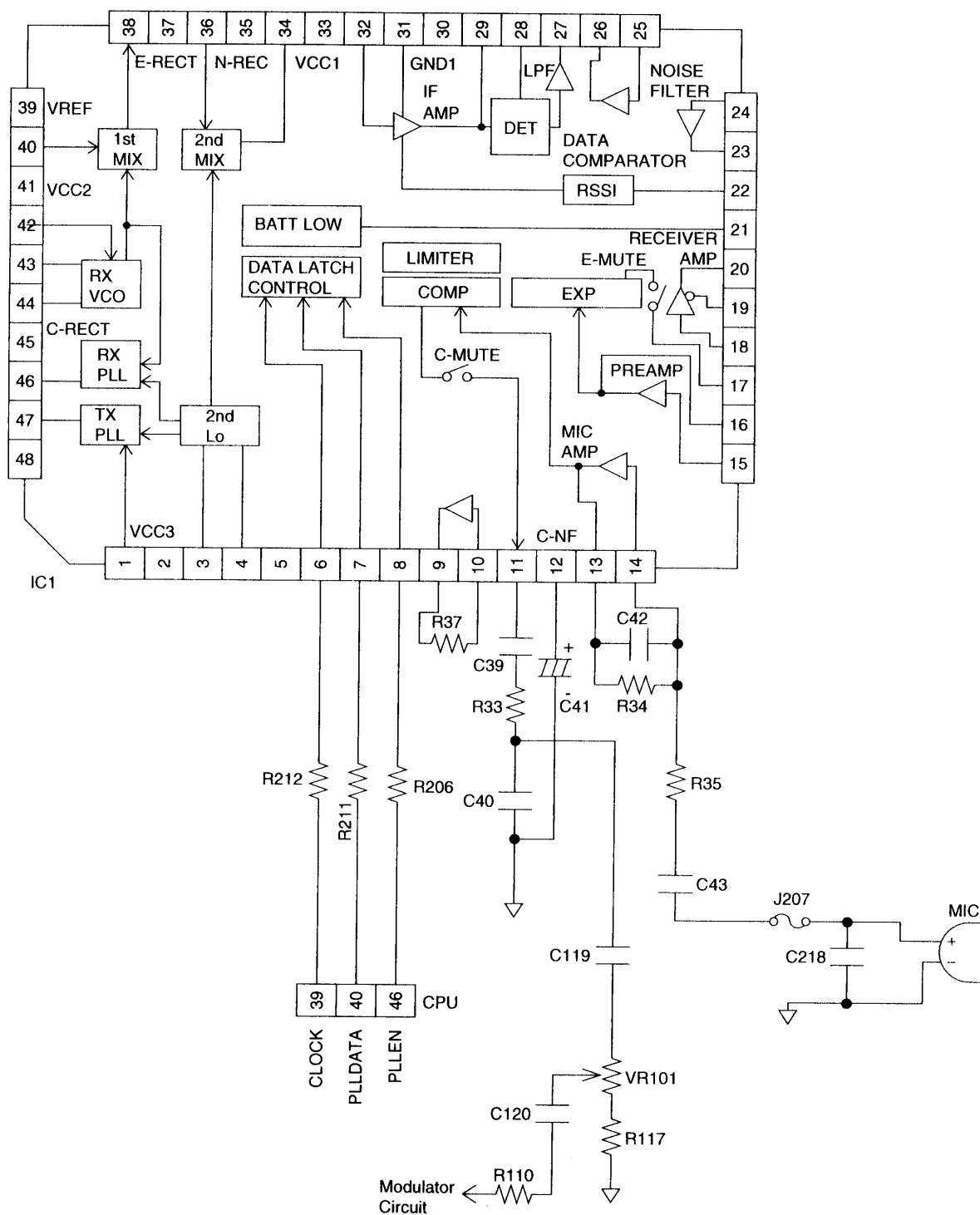
Circuit Diagram


TRANSMITTER SIGNAL CIRCUIT

Circuit Operation:

Input signal from MIC passes through the filters arranged by C43,R35 and C42,R34 and it is input to the Pin ⑭ of IC1. Inside it, the signal passes through the MIC AMP and Compressor circuits and is output to Pin ⑪. It flows through C39, R33, C119 and VR101, then is input to modulator circuit.

Circuit Diagram



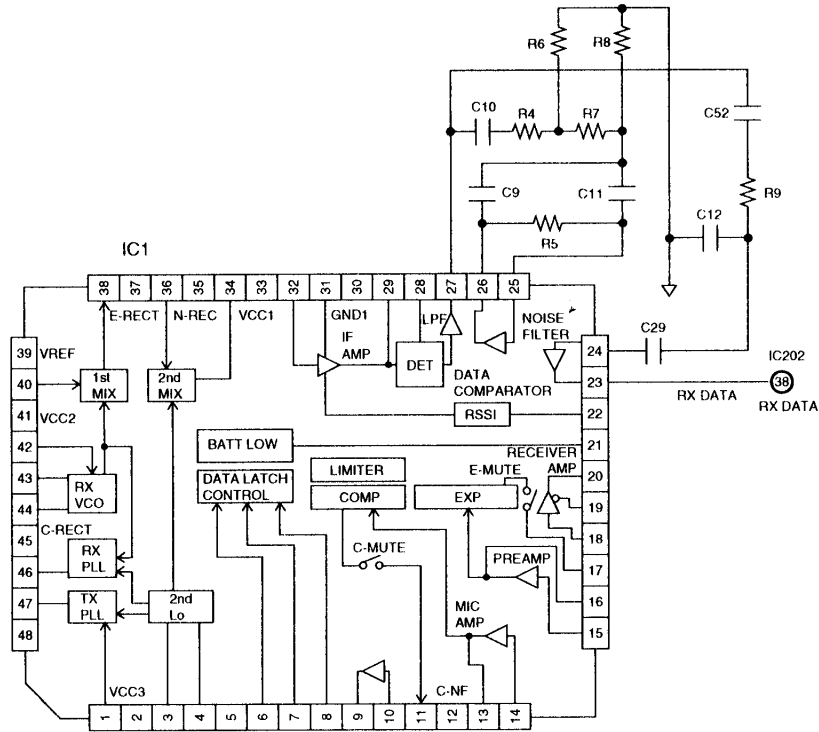
RECEIVER DATA CIRCUIT

Circuit Operation:

Only the data received are passed through the low pass filter conformed by R9 and C12 to be input at pin ②④ of IC1, where its wave form is adjusted.

The resulting signal is output from Pin ②③ and sent to CPU directly.

Circuit Diagram



BATTERY LOW DETECTOR CIRCUIT

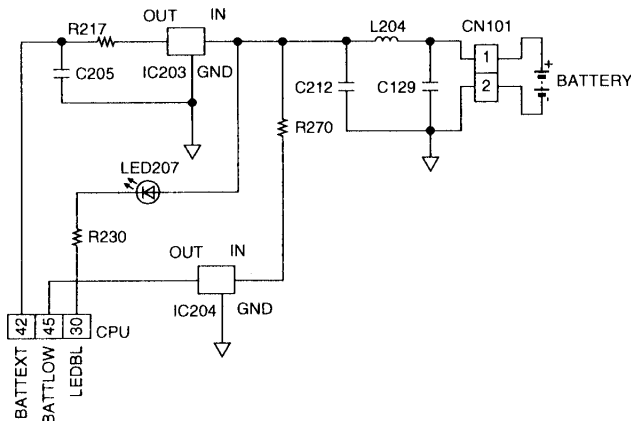
Circuit Operation:

When the battery voltage goes down less than 3.55 V. This level is detected by the input of IC 204, so its output becomes from a high state to low state.

The CPU detects this level by its Pin ③② and battery low indicator lights starts flashing.

The IC203 check the level of the battery, if this level is less than 3.0 V, the output of IC203 becomes to low state, then CPU stops working to keep memory.

Circuit Diagram



NORMAL CIRCUIT OPERATION (HANDSET)

■ CPU OPERATION

CPU Terminals	23 TX DATA	25 RX POW	24 TX POW	41 BEEP	15 TALKLED
Operation Mode					
STANDBY	L	Intermittently H or L	H	H	H
TALK	L	L	L	H	L
Base Unit → Handset Ring	—	L	H	L	FLASHING
Base Unit → Handset Paging	—	L	H	L	H
CHARGE	L	H	H	H	H
During (TALK)	—	L	L	H	L
Handset PULSE DIAL	DATA	L	L	H	L
Handset TONE DIAL	DATA	L	L	H	L
Handset OFF MODE	L	H	H	H	H

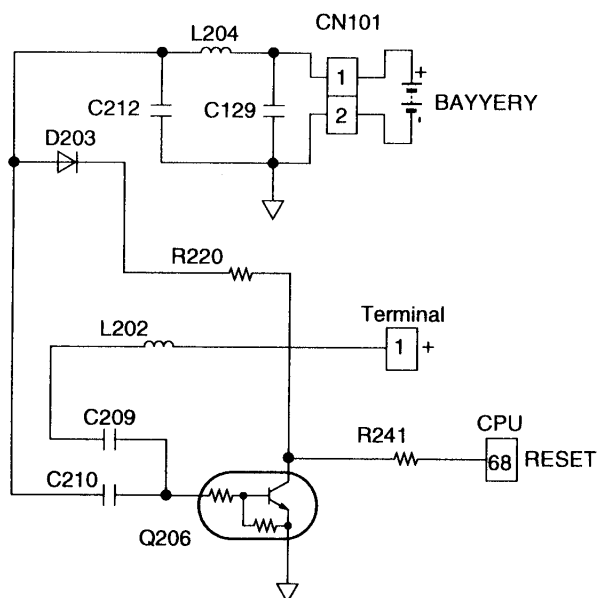
■ RESET CIRCUIT POWER ON/OFF CIRCUIT

Reset circuit:

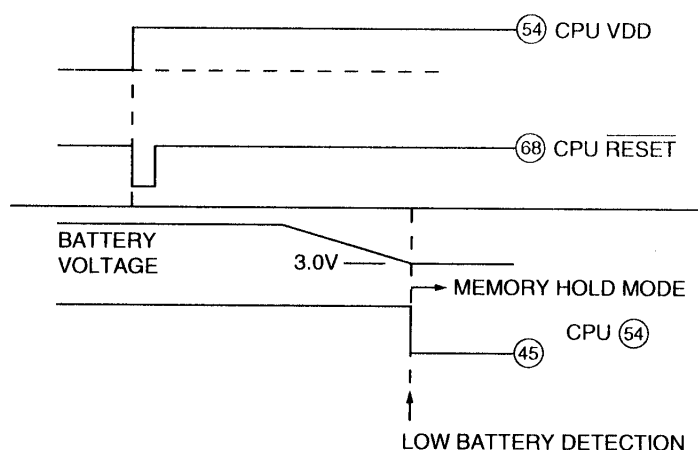
There are two ways to reset CPU.

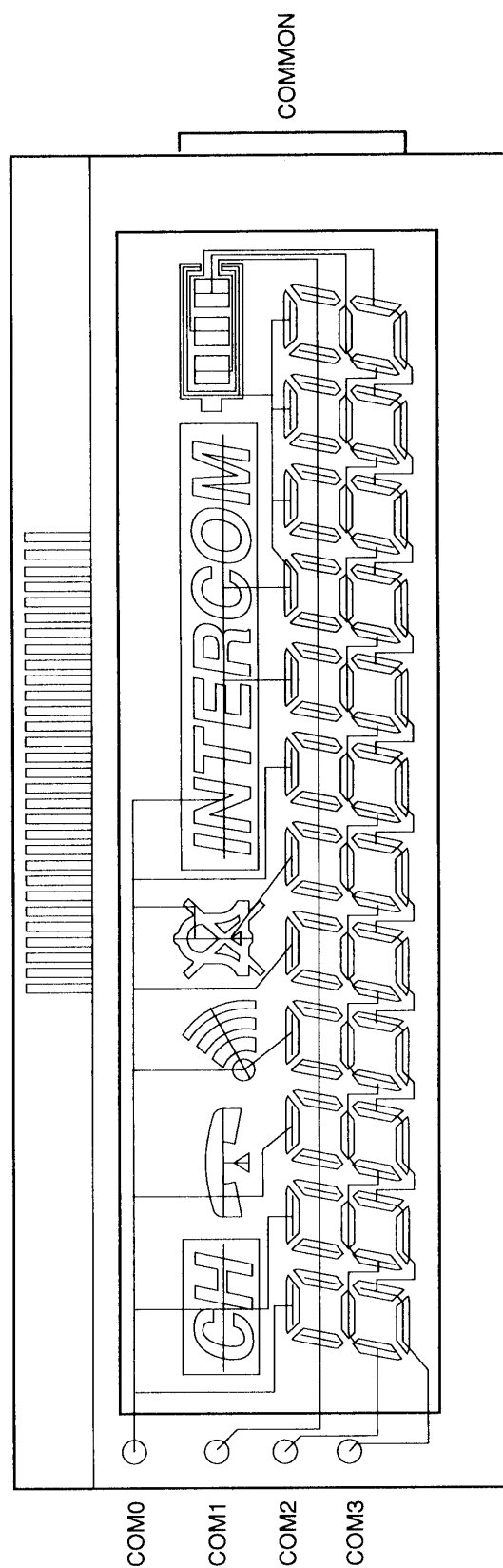
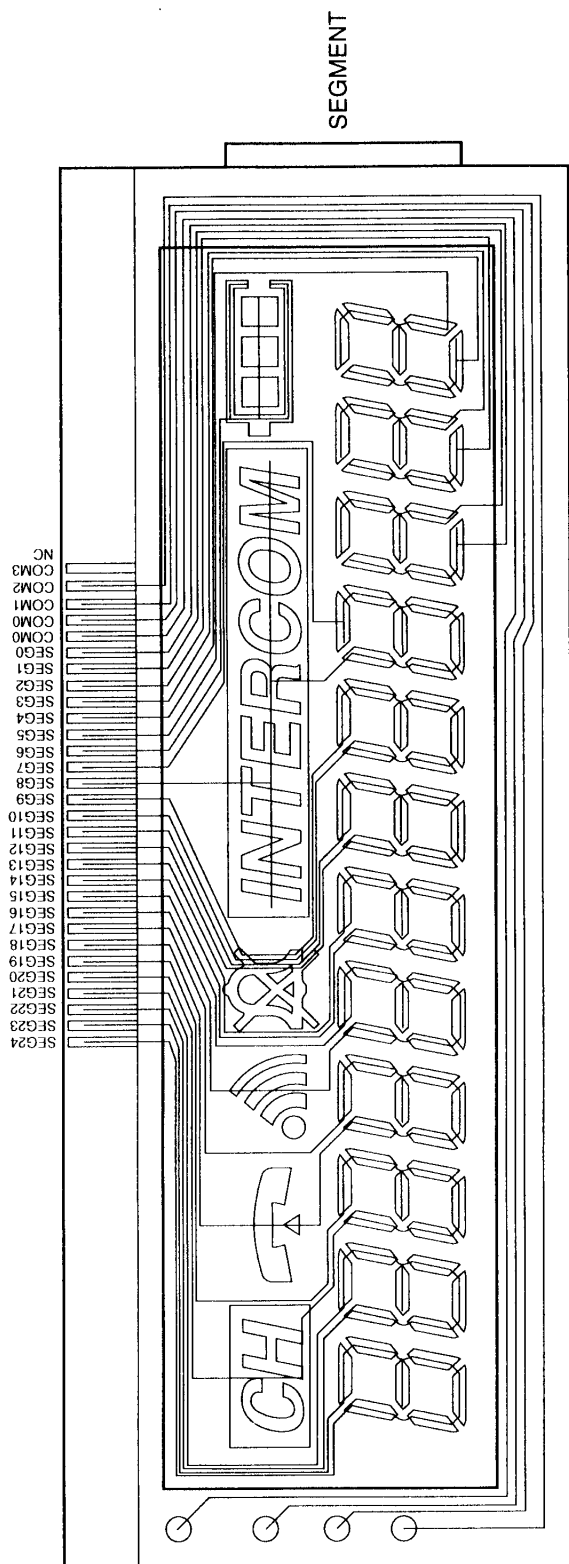
1. When the battery is connected, there is an impulse through C210 then Q206 generates an reset signal which is received in Pin (68) of CPU.
2. When the handset is charged, the impulse is sent through C209, Q206 generates the reset signal and it is sent to Pin (68) of CPU.

Circuit Diagram



Timing Chart





TROUBLESHOOTING GUIDE

Symptom	Refer to page –.	Unit for repair
The base unit does not respond to a call from handset.	18,19	Base Unit
The base unit does not transmit or the transmit frequency is off.		
The transmit frequency is off.		
The transmit power output is low, and the operating distance between base unit and handset is less than normal.		
The reception sensitivity of base unit is low with noise.		
The transmit level is large or small.		
The reception level is large or small.		
The unit does not link.		
The In Use/Charge indicator does not flash.	72,73	
The charge indicator does not light.	73	
The beep is not heard from the handset.	73	
No power/dead.	74	
Does not record.	75	
Does not playback.	75	
Cannot find the synthesized voice.	76	
End of message is clipped when caller hangs up.	76	
When speakerphone works, does not receive.	77	
When speakerphone works, does not transmit.	77	
The movement of battery low indicator is wrong.	39, 40	Handset
The base unit does not respond to a call from handset.		
The base unit does not transmit or the transmit frequency is off.		
The transmit frequency is off.		
The transmit power output is low, and the operating distance between base unit and handset is less than normal.		
The reception sensitivity of base unit is low with noise.		
Does not link between base unit and handset.		
The reception level is large or small.		
The transmit level is large or small.		
After stand-by mode, the handset does not becomes the battery save mode.	78	
The beep is not heard from the handset.	79	
The TALK indicator does not flash.	79	

TROUBLESHOOTING GUIDE (BASE UNIT)

Base Unit Condition:

1. Set the Volume/Ringer button to "MAX".
2. Set the dialing mode selector to "Tone".

When checking the base unit only

Check the base unit as shown by following below flow chart.

Operation

Connect the AC adaptor (KX- A11BMX) plug into DC IN jack and other end into a power outlet (AC 220 V-240 V, 50/60Hz).

Connect the telephone line to tel jack.

Apply the ring signal to tel jack by the loop simulator.

Checking

The Inuse/Charge indicator of base unit will be flashing.

NO

→ Troubleshooting Step 1

OK

(A)

When checking the base unit and handset

Operation

(A)

Charge the handset.

Checking

The Inuse/Charge indicator will light.

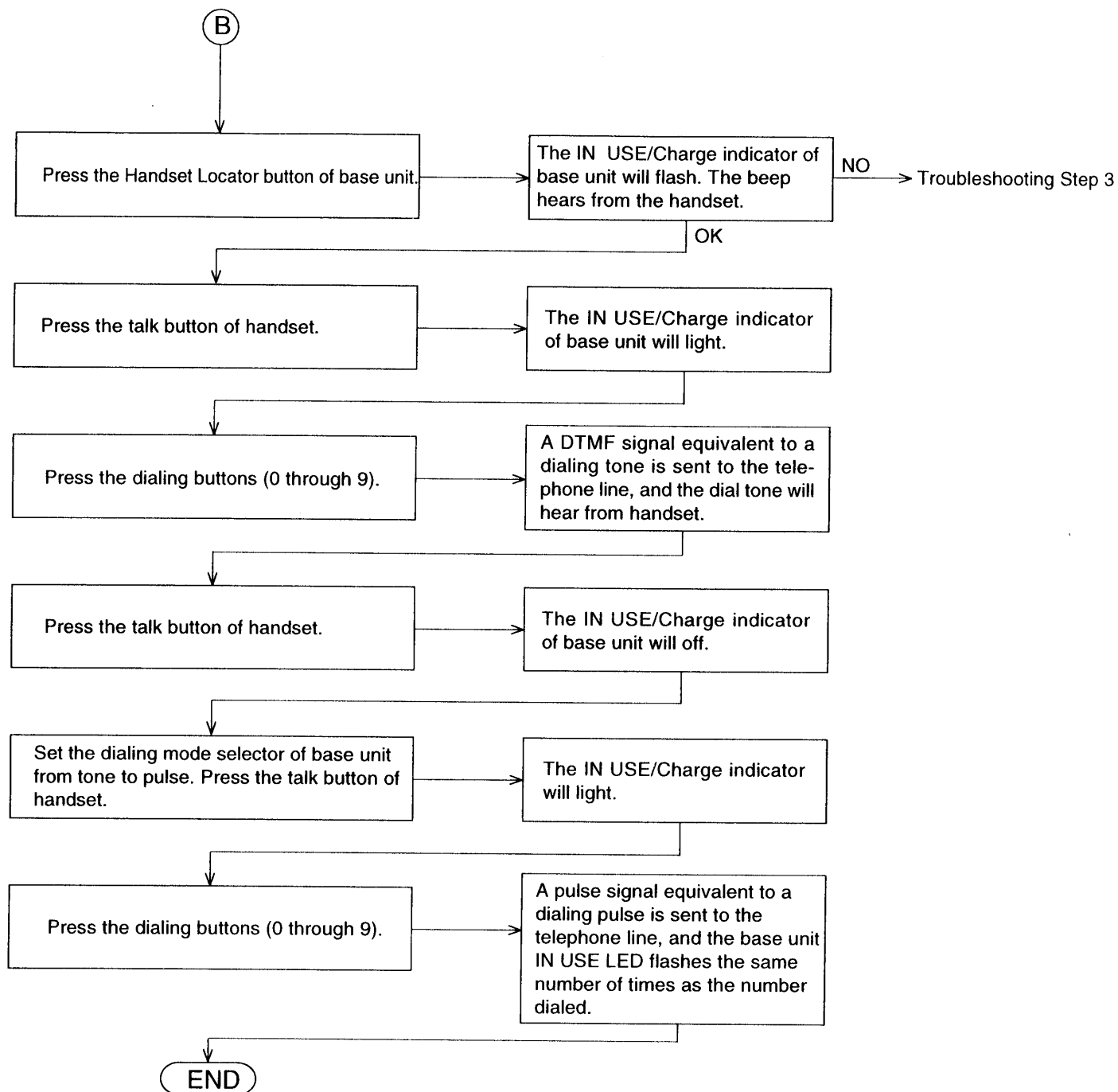
NO

→ Troubleshooting Step 2

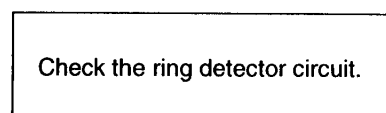
OK

Lift the handset.

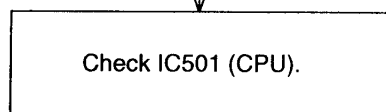
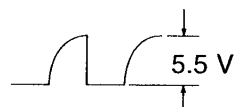
(B)

**Troubleshooting Step 1:**

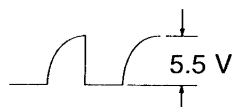
The In Use/Charge indicator (LED551) does not flash.

**Check Point**

① Pin ④ of PC 1 output voltage.

**Check Point**

① Pin ⑦ of IC501 ring input voltage.



Troubleshooting Step 2: The charge indicator does not light.

Check the charge detector circuit.

Check Point

- ① Is the $\ominus$ contact of base unit is low logic level?

Check LED551.

Troubleshooting Step 3:**1) The INUSE/CHARGE indicator does not flash.**

Check IC501(CPU).

Check Point

- ① Is the pin ⑦③ of IC501 (INUSE/Charge output) at a low logic level?

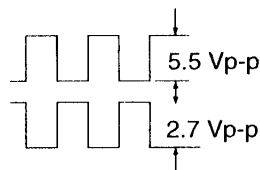
Check LED551.

2) The beep is not heard from the handset.

Check the data transmission during charge mode.

Check Points

- ① Pin ⑤① of IC 501 data output voltage.
② Collector of Q408 output voltage.



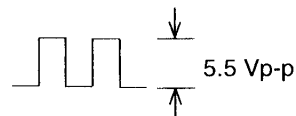
Check during charge mode

Check the modulation circuit (D301).

Check the oscillation circuit.

Check Point

- ① Is the base of Q302 (TX VCO)?
② Is the Pin ④⑦ of IC201?
③ Are the Pins ④④, ④⑤, ④⑥ of IC501 (PLL control)?



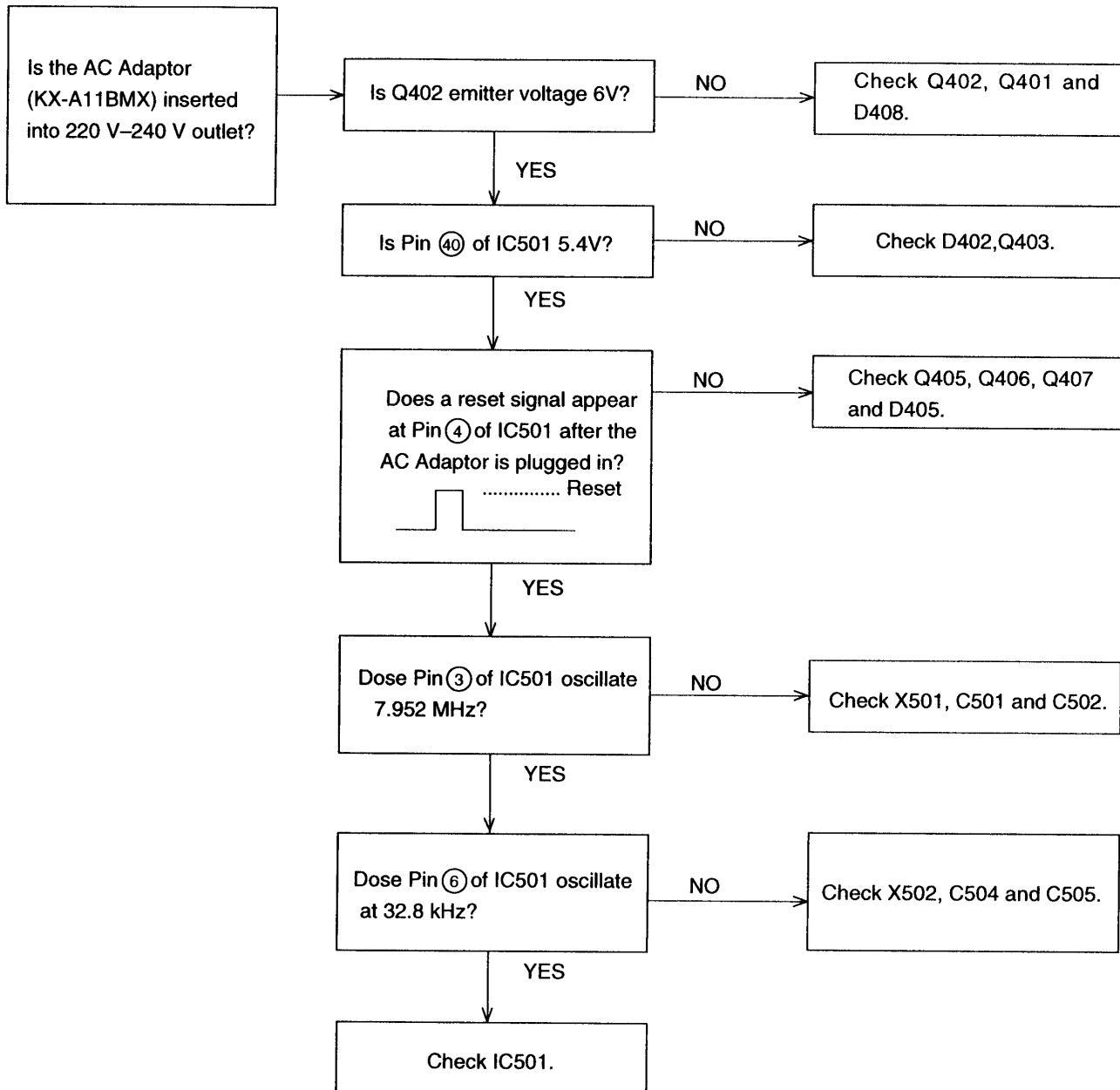
Check the transmitter amplifier.

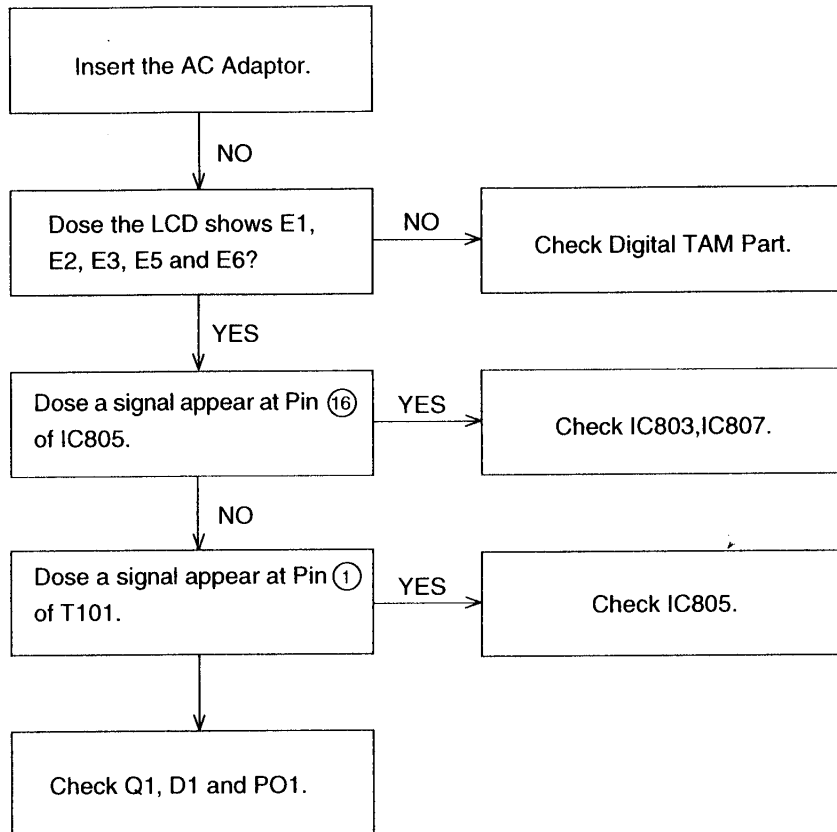
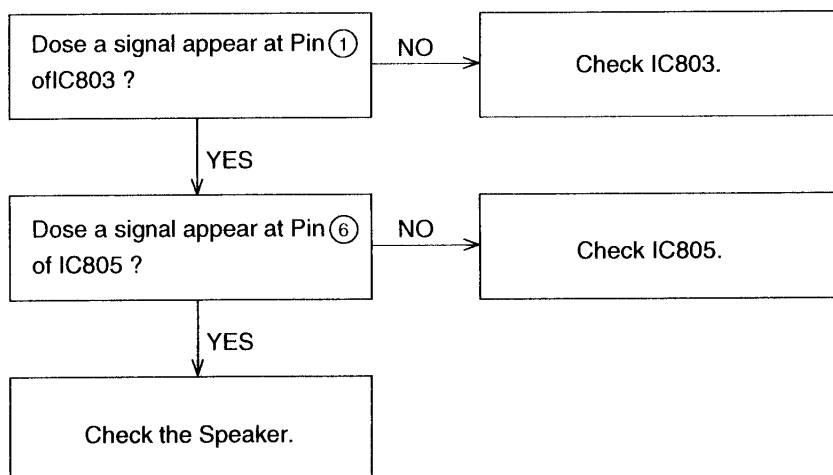
Check Point

- ① Is the base of Q301 (Final power amplifier)?

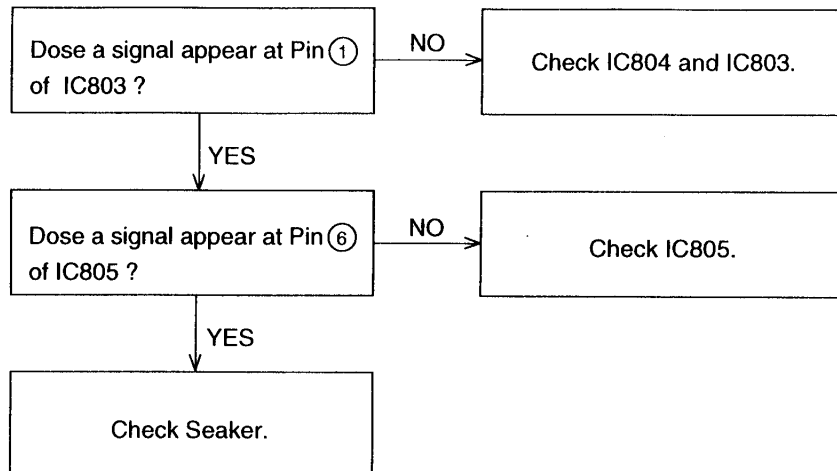
(TAM SECTION)

1. NO POWER/DEAD



2. DOES NOT RECORD**3. DOES NOT PLAYBACK**

4. CANNOT FIND THE SYNTHESIZED VOICE



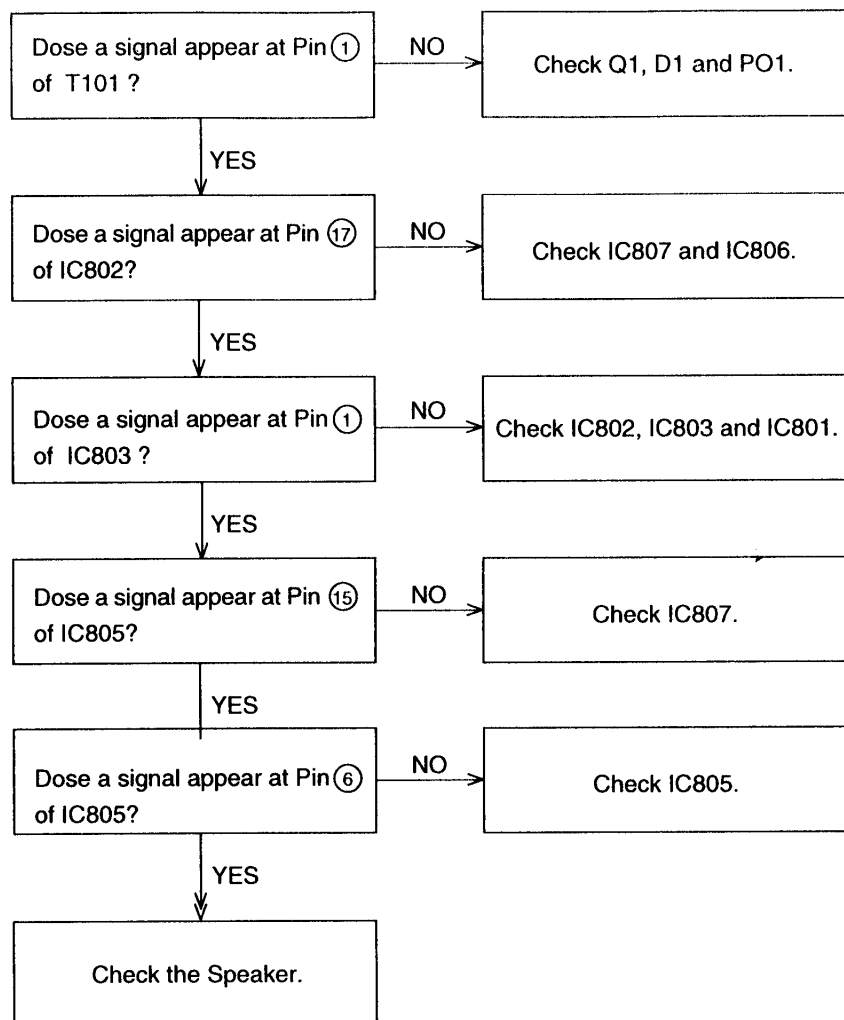
5. END OF MESSAGE IS CLIPPED WHEN CALLER HANGS UP.

When caller hangs up, the KX-TCM546BX-B can detect the following 4 signal type.

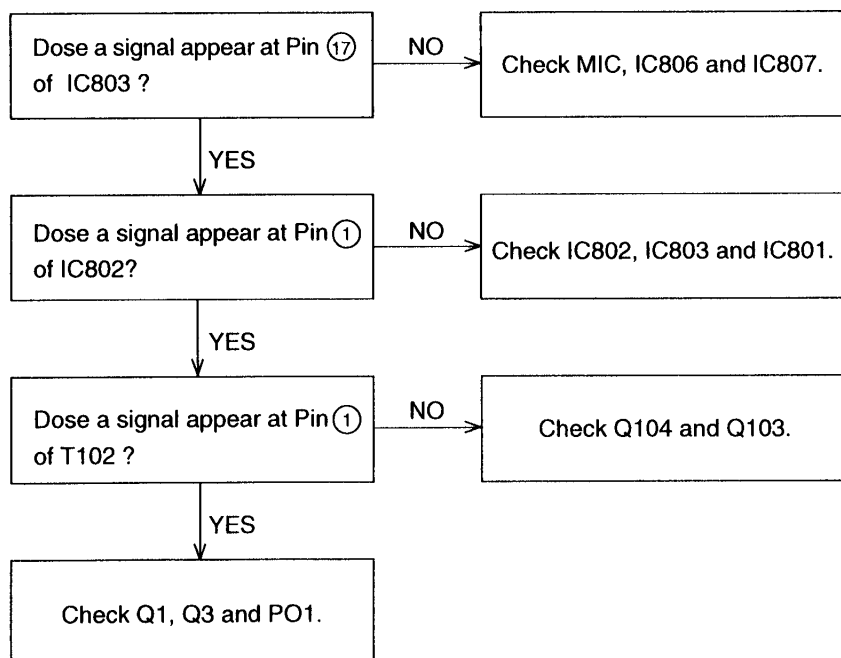
- A. CPC pulse.
- B. Dial tone or other continuous tones.
- C. Silence.
- D. Cycle signals.

- A. Check CPC DETECTOR CIRCUIT (D4, R8, C9, R501 and PC4)
- B, C, D. Check VOX DETECTOR CIRCUIT (IC805, R843, R841, C841 and C846)

6. WHEN SP-PHONE WORKS, DOES NOT RECEIVE.



7. WHEN SP-PHONE WORKS, DOES NOT TRANSMIT.



TROUBLESHOOTING GUIDE (HANDSET)

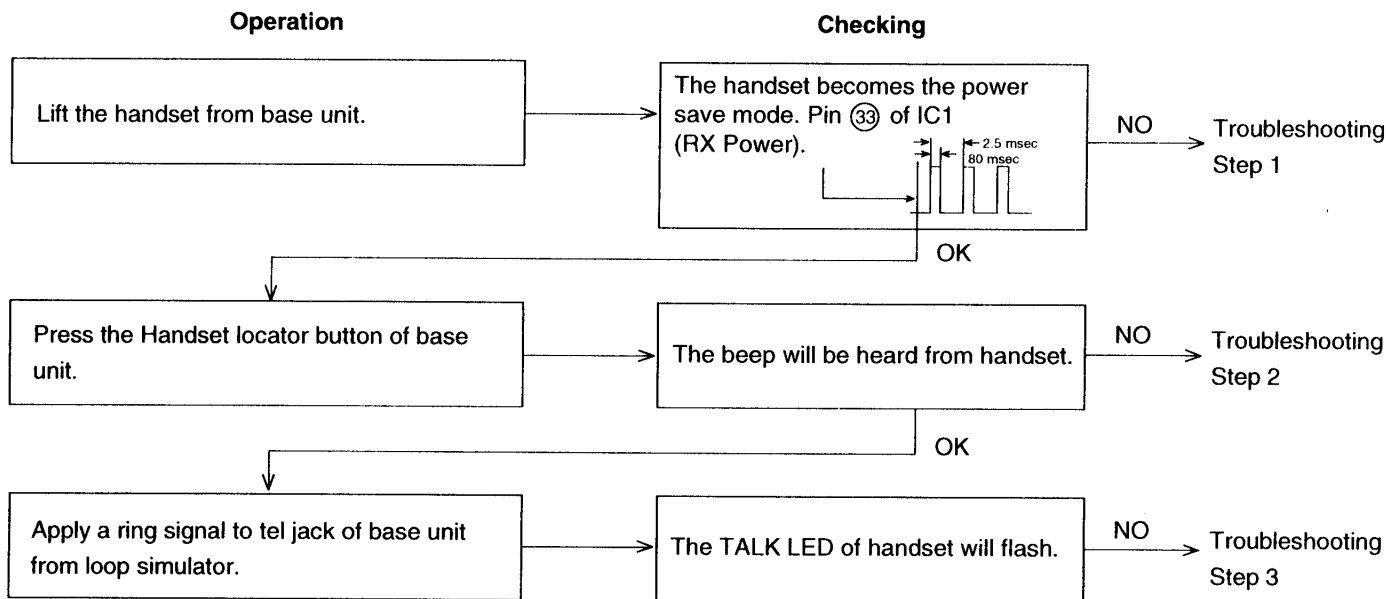
Use the right base unit for this troubleshooting.

Charge the battery of the handset by the base unit.

Base unit condition:

1. Connect the AC Adaptor (KX-A11BMX) plug into DC IN jack and the other end into a power outlet (AC 220 V-240 V, 50/60Hz).
2. Connect the loop simulator (DC 48 V) to tel jack.

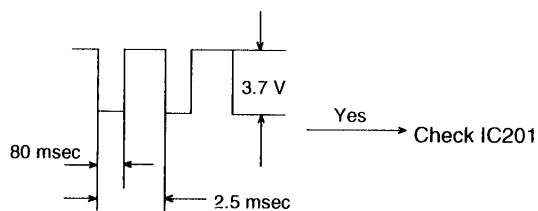
Check the handset as shown by following below flow chart.



Troubleshooting Step 1: The handset does not becomes the battery save mode.

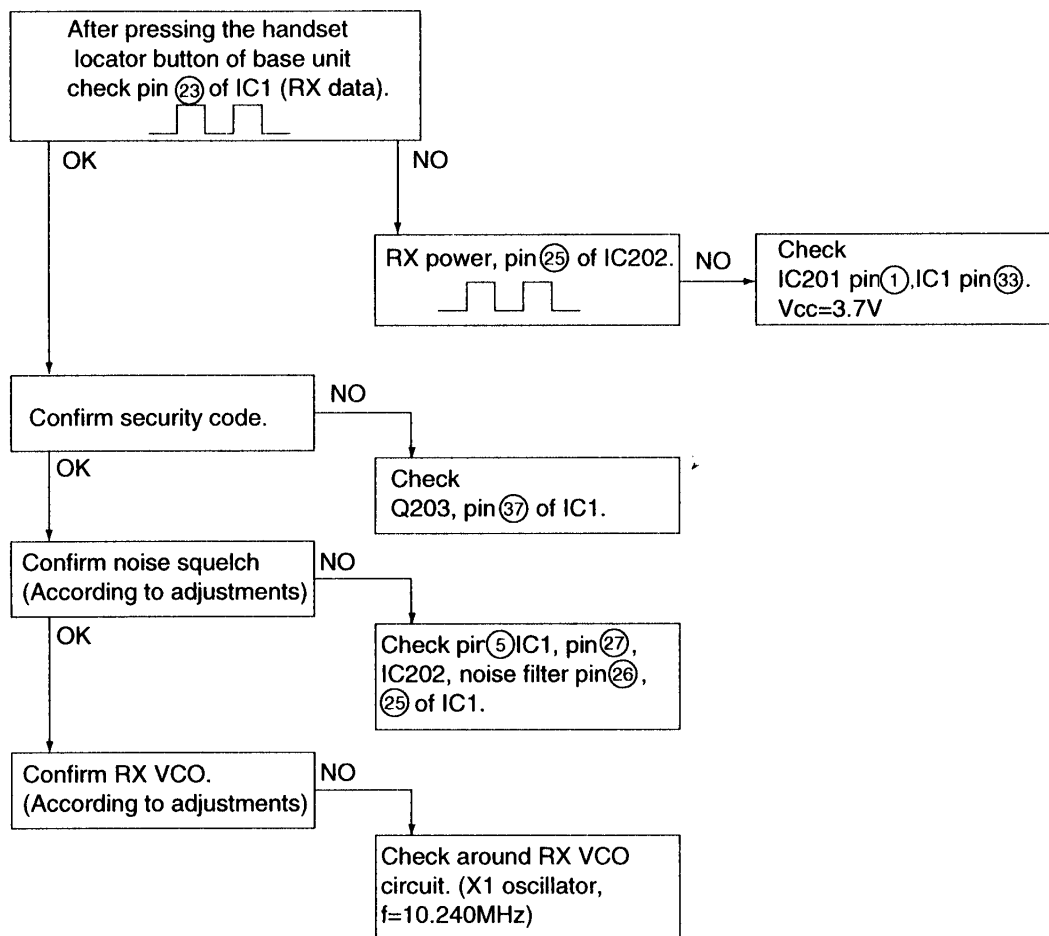
Check point

- (1) Pin ③③ of IC1
RX power output voltage



Troubleshooting Step 2: The Beep is not heard from the Handset.

Check Points

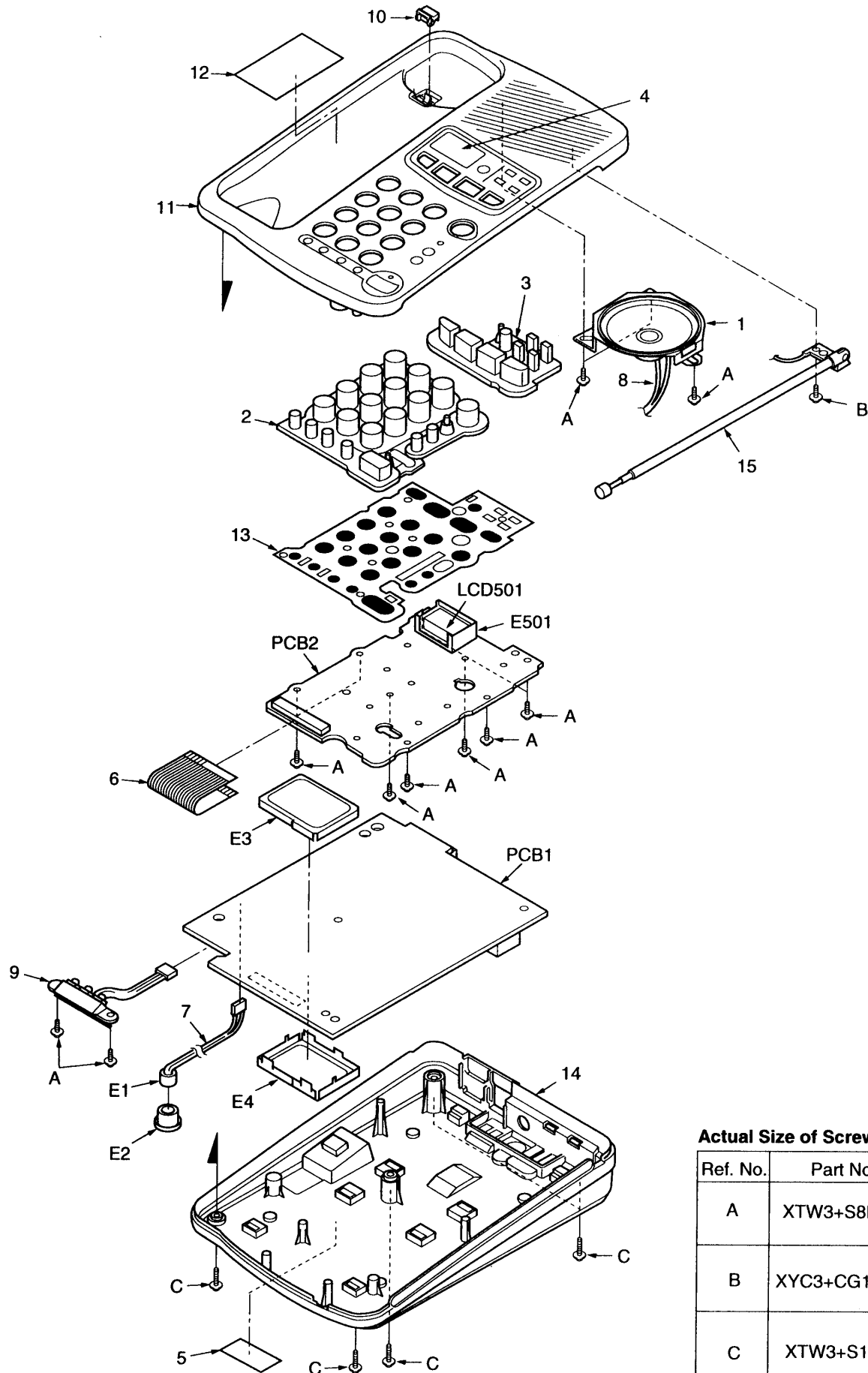


Troubleshooting Step 3: The TALK indicator does not flash (Check the data reception).

Check Point

Check the signal level of receiver data circuit on page 54.

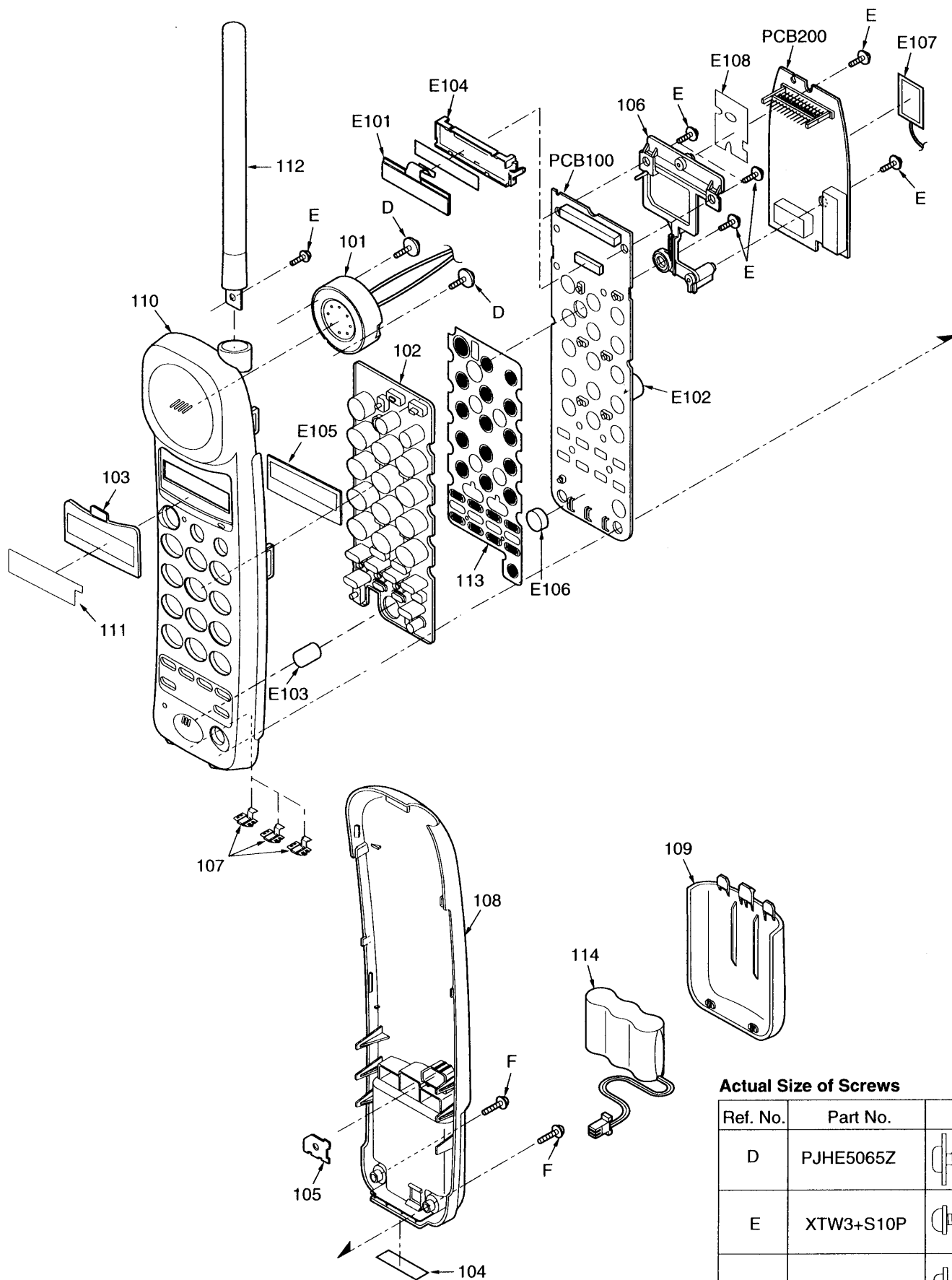
CABINET AND ELECTRICAL PARTS (BASE UNIT)



Actual Size of Screws

Ref. No.	Part No.	Screw
A	XTW3+S8M	
B	XYC3+CG10FX	
C	XTW3+S14P	

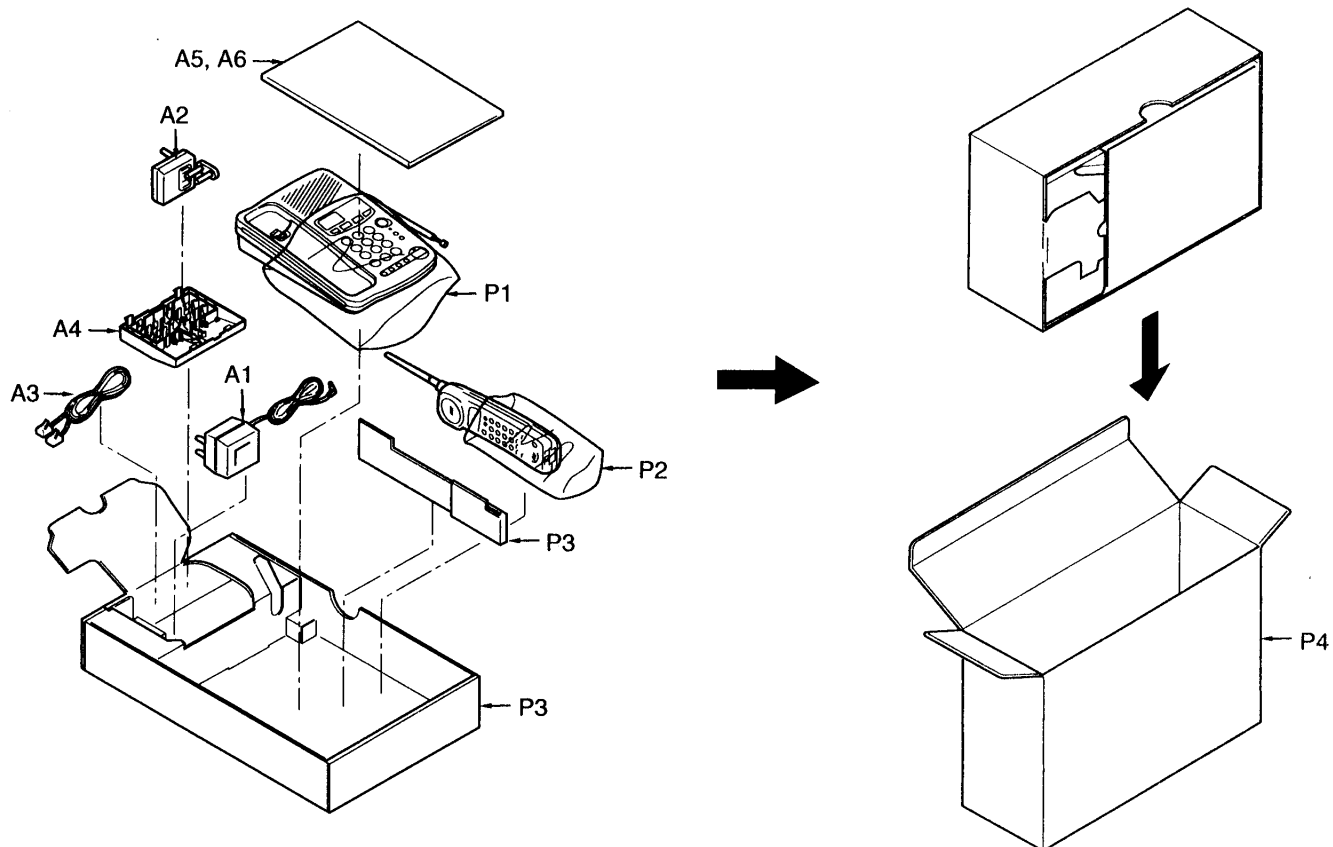
CABINET AND ELECTRICAL PARTS (HANDSET)



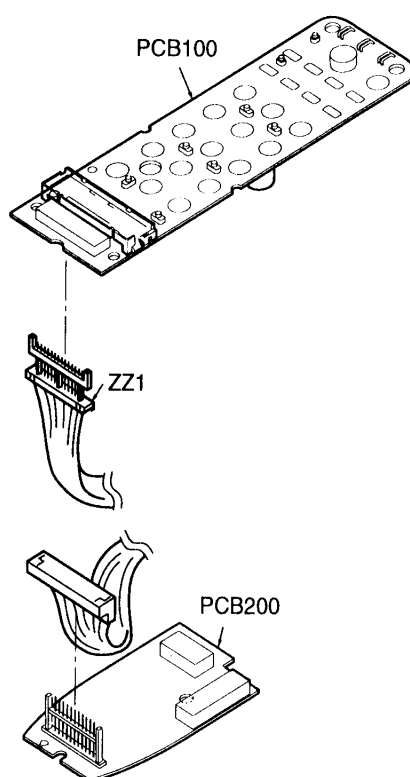
Actual Size of Screws

Ref. No.	Part No.	Screw
D	PJHE5065Z	
E	XTW3+S10P	
F	XTW3+S14P	

ACCESSORIES AND PACKING MATERIALS



TOOL



This replacement parts list is only for the model : KX-TCM546BXB.

REPLACEMENT PARTS LIST

Base Unit

Note:

1. RTL (Retention Time Limited)

The marking (RTL) indicates that the Retention Time is limited for this item.

After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention.

After the end of this period, the assembly will no longer be available.

2. Important safety notice.

Components identified by a Δ mark special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

3. The S mark indicates service standard parts and may differ from production parts.

4. RESISTORS & CAPACITORS

Unless otherwise specified.

All resistors are in ohms (Ω) K=1000 Ω , M=1000K Ω

All capacitors are in MICRO FARADS (μ F) P= μ F

*Type & Wattage of Resistor

Type

ERC:Solid	ERX:Metal Film	PQ4R:Carbon
ERD:Carbon	ERG:Metal Oxide	ERS:Fusible Resistor
ERD:Carbon	ERO:Metal Film	ERF:Cement Resistor

Wattage

10,16:1/8W	14,25:1/4W	12:1/2W	1:1W	2:2W	3:3W
------------	------------	---------	------	------	------

*Type & Voltage of Capacitor

Type

ECFD:Semi-Conductor	ECED,ECKD,ECBT,PQCBC : Ceramic
ECQS:Styrol	ECQE,ECQV,ECQG : Polyester
PQCUV:Chip	ECEA,ECSZ : Electrolytic
ECQMS:Mica	ECQP : Polypropylene

Voltage

ECQ Type	ECQG ECQV Type	ECSZ Type	Others	
1H: 50V	05: 50V	0F:3.15V	0J :6.3V	1V :35V
2A:100V	1:100V	1A:10V	1A :10V	50,1H:50V
2E:250V	2:200V	1V:35V	1C :16V	1J :63V
2H:500V		0J:6.3V	1E,25:25V	2A :100V

Ref. No.	Part No.	Part Name & Description	Pcs/Set
CABINET & ELECTRICAL PARTS			
1	PQAS65P36Y	SPEAKER	1
2	PQBX10284X	BUTTON, 20 KEY	1
3	PQBX10285Z	BUTTON, TAM KEY	1
4	PQGP10134Z2	LCD PANEL	1
5	PQGT13372Z	NAME PLATE	1
6	PQJE10085Z	FLAT CABLE	1
7	PQJS02P24Y	CONNECTOR (for MIC)	1
8	PQJS02P27Z	CONNECTOR (for SP)	1
9	PQJT10136Z	CHARGE TERMINAL	1
10	PQKE10066Z2	HANGER	1
11	PQKM10276X4	UPPER CABINET	1
12	PQQT11232Z	O/I LABEL	1
13	PQSX10056Z	SHEET SWITCH	1
14	PQYF10110V2	LOWER CABINET	1
15	XEAPQK170D	ANTENNA	1

Ref. No.	Part No.	Part Name & Description	Pcs/Set
MAIN P.C.BOARD PARTS			
PCB1	PQWP1M546BXH	P.C.BOARD AS'Y (RTL) Δ	1
IC101	AN6183SAE1	(ICS) IC	1
IC201	PQVITB31224H	IC	1
IC501	PQVI53MF5005	IC	1
IC502	PQVI93LC46XI	IC S	1
IC801	PQVID6471A	IC	1
IC802	PQVIMCL548DW	IC	1
IC803	PQVIMCL548DW	IC	1
IC804	PQVIKM29N4TC	IC	1
IC805	PQVISC111815	IC	1
IC806	PQVINJM4558M	IC	1
IC807	PQVIBU4053BF	IC	1
Q1	2SA1625	(TRANSISTORS) TRANSISTOR(SI) (or 2SA1776Q)	1
Q2	2SC1740S	TRANSISTOR(SI) (or 2SC3311AS or 2SC3330U)	1
Q3	2SC2120	TRANSISTOR(SI)	1
Q101	2SD1819A	TRANSISTOR(SI)	1
Q102	PQVTFB1A4M	TRANSISTOR(SI)	1
Q103	2SD1819A	TRANSISTOR(SI)	1
Q104	2SD1819A	TRANSISTOR(SI)	1
Q105	PQVTFB1A4M	TRANSISTOR(SI)	1
Q201	2SK543	TRANSISTOR(SI)	1
Q301	2SC3356R24	TRANSISTOR(SI)	1
Q302	2SC2412K	TRANSISTOR(SI)	1
Q351	PQVTMSC2295C	TRANSISTOR(SI) (or 2SC2295C) (or 2SC2413KPT146)	1
Q354	PQ4R10XJ000	0	1
Q401	2SD2137	TRANSISTOR(SI)	1
Q402	2SD1994A	TRANSISTOR(SI)	1
Q403	2SD1994A	TRANSISTOR(SI)	1
Q404	2SD1991A	TRANSISTOR(SI)	1
Q405	2SD1819A	TRANSISTOR(SI)	1
Q406	2SB709A	TRANSISTOR(SI)	1
Q407	2SD1819A	TRANSISTOR(SI) (or 2SC4081ST106 or 2SC4155S)	1
Q408	2SD1991A	TRANSISTOR(SI)	1
Q409	2SD1991A	TRANSISTOR(SI)	1
Q410	2SD1991A	TRANSISTOR(SI)	1
Q411	2SD601A	TRANSISTOR(SI)	1
Q501	PQVTDTA114YU	TRANSISTOR(SI)	1
Q502	PQVTDTA114YU	TRANSISTOR(SI)	1
Q503	PQVTDTA114YU	TRANSISTOR(SI)	1
Q801	2SD1819A	TRANSISTOR(SI) (or 2SC4081ST106 or 2SC4155S)	1
Q802	2SB1218A	TRANSISTOR(SI) (or 2SA1576ST106 or 2SA1603S)	1
Q803	2SD1819A	TRANSISTOR(SI) (or 2SC4081ST106 or 2SC4155S)	1
Q804	PQVTFB1A4M	TRANSISTOR(SI)	1

This replacement parts list is only for the model : KX-TCM546BXB.

Ref. No.	Part No.	Part Name & Description	Pcs/Set	Ref. No.	Part No.	Part Name & Description	Pcs/Set
Q805	2SD1819A	TRANSISTOR(SI) (or 2SC4081ST106 or 2SC4155S)	1	T102	PQLT3E3A	I/F TRANSFORMER Δ	1
Q959	2SB1218A	TRANSISTOR(SI) (or 2SA1576ST106 or 2SA1603S)	1	T201	PQLA7A38	COIL	1
		(DIODES)		T202	PQLI2B201	COIL	1
D1	PQVDS1ZB40F1	DIODE(SI)	1	T203	PQLA7A22	COIL	1
D3	MA700A	DIODE(SI)	1	T301	PQL04A3	COIL	1
D4	PQVDMTZ3R6	DIODE(SI)	1	T351	PQLA7A9	COIL	1
D201	MA110	DIODE(SI)	1	J401	PQLQZM100K	COIL	1
D202	MA110	DIODE(SI)	1			(PHOTO COUPLERS)	
D250	MA110	DIODE(SI)	1	PC1	PQVIPCB814K	PHOTO ELECTRIC TRANSDUCER Δ	1
D251	MA110	DIODE(SI)	1	PC2	PQVITLP627	PHOTO ELECTRIC TRANSDUCER Δ	1
D301	PQVDKV1832C3	DIODE(SI)	1	PC3	PQVIPCB817CD	PHOTO ELECTRIC TRANSDUCER Δ	1
D303	1SS119	DIODE(SI)	1	PC4	PQVIPCB817CD	PHOTO ELECTRIC TRANSDUCER Δ	1
D401	MA4100	DIODE(SI)	1			(CRYSTAL OSCILLATORS)	
D402	MA4062	DIODE(SI)	1	X201	PQVCK1024LC5	CRYSTAL OSCILLATOR	1
D403	1SS119	DIODE(SI)	1	X501	PQVCK7952N4Z	CRYSTAL OSCILLATOR	1
D404	1SS119	DIODE(SI)	1	X502	PQVCL3276N6Z	CRYSTAL OSCILLATOR	1
D405	MA4047	DIODE(SI)	1	X801	PQVCJ3686N4Z	CRYSTAL OSCILLATOR	1
D406	1SS119	DIODE(SI)	1			(VARIABLE RESISTORS)	
D407	1SS119	DIODE(SI)	1	VR201	EVNDXAA03B24	VARIABLE RESISTOR	1
D409	ECEA1HKS2R2	2.2	1	VR301	EVNDXAA03B15	VARIABLE RESISTOR	1
D412	1SS119	DIODE(SI)	1	VR302	EVNDXAA03B35	VARIABLE RESISTOR	1
D413	MA110	DIODE(SI)	1			(RESISTOR ARRAYS)	
D414	MA110	DIODE(SI)	1	RA801	EXRV8V221JV	RESISTOR ARRAY, 220	1
D415	1SS119	DIODE(SI)	1	RA802	EXRV8V222JV	RESISTOR ARRAY, 2.2K	1
D416	MA4062	DIODE(SI)	1	RA803	EXRV8V222JV	RESISTOR ARRAY, 2.2K	1
D417	MA700A	DIODE(SI)	1	RA804	EXRV8V220JV	RESISTOR ARRAY, 22	1
D503	MA110	DIODE(SI)	1	RA805	EXRV8V472JV	RESISTOR ARRAY, 4.7K	1
D508	MA110	DIODE(SI)	1	RA806	EXRV8V472JV	RESISTOR ARRAY, 4.7K	1
D511	MA110	DIODE(SI)	1	RA807	EXRV8V472JV	RESISTOR ARRAY, 4.7K	1
D512	MA110	DIODE(SI)	1	RA808	EXRV8V222JV	RESISTOR ARRAY, 2.2K	1
D514	MA110	DIODE(SI)	1	RA809	EXRV8V221JV	RESISTOR ARRAY, 220	1
D521	1SS119	DIODE(SI)	1	RA810	EXRV8V221JV	RESISTOR ARRAY, 220	1
D522	1SS119	DIODE(SI)	1			(CAPACITOR ARRAYS)	
D523	1SS119	DIODE(SI)	1	CA801	EXF1E4470KCV	COMPONENTS PARTS, 47P	1
D524	MA110	DIODE(SI)	1	CA802	EXF1E4470KCV	COMPONENTS PARTS, 47P	1
D525	MA110	DIODE(SI)	1	CA803	EXF1E4470KCV	COMPONENTS PARTS, 47P	1
D911	MA4220	DIODE(SI)	1	CA804	EXF1E4331KSL	COMPONENTS PARTS, 330P	1
		(COILS AND TRANSFORMERS)				(CERAMIC FILTERS)	
L202	PQLQZK1R2K	COIL S	1	CF201	PQVFSFE107MJ	CERAMIC FILTER S	1
L401	PQLQZK1R2K	COIL	1	CF202	PQVFCFH455F1	CERAMIC FILTER	1
L450	PQLQZM330K	COIL	1			(CONNECTORS)	
L451	PQLQZM330K	COIL	1	CN1	PQJP3G38Z	CONNECTOR	1
L452	PQLQZM330K	COIL	1	CN501	PQJS30A19Z	CONNECTOR	1
L501	PQLQZM100K	COIL	1	CHARGE	PQJS03P23Z	CONNECTOR	1
L502	PQLQZM100K	COIL	1	MIC CN	PQJP02B59Z	CONNECTOR	1
L801	PQLQZM100K	COIL	1	SP CN	PQJP02B59Z	CONNECTOR	1
L803	PQLQZM100K	COIL	1				
L804	PQLQZM100K	COIL	1				
L806	PQLQZM100K	COIL	1				
L807	PQLQZM100K	COIL	1				
T101	PQLT3E3A	I/F TRANSFORMER Δ	1				

This replacement parts list is only for the model : KX-TCM546BXB.

Ref. No.	Part No.	Part Name, Description, & Value	Pcs/Set	Ref. No.	Part No.	Value	Pcs/Set
		(OTHERS)					
CN4	PQJJ1TA15Z	JACK, TEL	1	R131	ERJ3GEYJ824	820K	1
DUP201	PQVFH26RX	DUPLEX	1	R202	PQ4R10XJ271	270	S 1
DUP301	PQVFH26TX	DUPLEX	1	R204	PQ4R10XJ220	22	S 1
E1	PQJM122Z	MICROPHONE	1	R205	ERJ3GEYJ331	330	1
E2	PQMG10020Z	SPACER	1	R206	ERJ3GEYJ183	18K	1
E3	PQMC10252Z	SHIELD COVER	1	R207	ERJ3GEYJ822	8.2K	1
E4	PQMC10253Z	SHIELD COVER	1	R208	ERJ3GEYJ182	1.8K	1
J2	PQVDDSP272MR	VARISTOR	1	R209	ERJ3GEYJ154	150K	1
JJ1	PQJJ1B4Y	JACK, DC IN	1				
PO1	PQRPAR390N	THERMISTOR	△ S 1	R210	ERJ3GEYJ154	150K	1
SA1	PQVDDSS301L	VARISTOR	△ 1	R211	ERJ3GEYJ562	5.6K	1
SW501	PQSS2A27W	SWITCH, DIALING MODE SELECTOR	1	R212	PQ4R10XJ153	15K	S 1
				R213	ERJ3GEYJ104	100K	1
				R214	PQ4R10XJ154	150K	S 1
				R215	PQ4R10XJ123	12K	S 1
				R216	PQ4R10XJ472	4.7K	S 1
				R218	PQ4R10XJ273	27K	S 1
				R219	PQ4R10XJ562	5.6K	S 1
				R220	ERJ3GEYJ333	33K	1
				R221	ERJ3GEYJ334	330K	1
				R222	ERJ3GEYJ103	10K	1
				R226	ERJ3GEYJ106	10M	1
				R227	ERJ3GEYJ106	10M	1
				R228	ERJ3GEYJ104	100K	1
				R229	ERJ3GEYJ682	6.8K	1
		(RESISTORS)					
R 1	ERDS2TJ473	47K	1	R230	ERJ3GEYJ682	6.8K	1
R 2	ERDS2TJ104	100K	1	R231	ERJ3GEYJ103	10K	1
R 3	ERDS2TJ472	4.7K	1	R232	ERJ3GEYJ103	10K	1
R 4	PQ4R10XJ393	39K	S 1	R233	ERJ3GEYJ395	3.9M	1
R 5	PQ4R10XJ393	39K	S 1	R234	ERJ3GEYJ104	100K	1
R 6	PQ4R10XJ562	5.6K	S 1	R235	ERJ3GEY0R00	0	1
R 7	ERDS2TJ562	5.6K	1	R237	ERJ3GEYJ103	10K	1
R 8	ERDS2TJ560	56	1				
R10	PQ4R10XJ102	1K	S 1	R273	ERJ3GEYJ104	100K	1
R12	PQ4R10XJ333	33K	S 1	R275	ERJ3GEYJ182	1.8K	1
R14	PQ4R10XJ102	1K	S 1	R276	ERJ3GEYJ471	470	1
R15	PQ4R10XJ392	3.9K	S 1	R277	ERJ3GEYJ153	15K	1
R16	ERDS2TJ680	68	1				
R17	ERDS1TJ330	33	S 1	R302	ERDS2TJ680	68	1
R19	PQ4R10XJ123	12K	S 1	R303	ERJ3GEYJ102	1K	1
				R304	ERJ3GEYJ153	15K	1
				R305	ERJ3GEYJ223	22K	1
R63	PQ4R10XJ472	4.7K	S 1	R306	ERJ3GEYJ221	220	1
				R307	ERJ3GEYJ102	1K	1
R101	ERJ3GEYJ103	10K	1	R308	PQ4R10XJ220	22	S 1
R102	ERJ3GEYJ334	330K	1	R309	ERJ3GEYJ125	1.2M	1
R103	PQ4R10XJ272	2.7K	S 1				
R104	PQ4R10XJ561	560	S 1	R310	ERJ3GEYJ220	22	1
R106	ERJ3GEYJ682	6.8K	1	R311	PQ4R10XJ103	10K	S 1
R107	ERJ3GEYJ393	39K	1	R312	ERJ3GEYJ223	22K	1
R109	ERJ3GEYJ223	22K	1	R313	ERJ3GEYJ223	22K	1
R110	PQ4R10XJ683	68K	S 1	R351	PQ4R10XJ220	22	1
R112	PQ4R10XJ101	100	S 1	R352	PQ4R10XJ561	560	1
R113	PQ4R10XJ471	470	S 1	R353	PQ4R10XJ473	47K	1
R114	PQ4R10XJ104	100K	S 1				
R115	ERJ3GEYJ103	10K	1	R374	ERJ3GEYJ822	8.2K	1
R116	ERJ3GEYJ272	2.7K	1	R376	PQ4R10XJ223	22K	S 1
R117	ERJ3GEYJ684	680K	1				
R118	PQ4R10XJ820	82	S 1	R380	ERJ3GEY0R00	0	1
R119	PQ4R10XJ473	47K	S 1				
R120	PQ4R10XJ103	10K	S 1	R401	ERDS2TJ221	220	1
R121	ERJ3GEYJ683	68K	1	R403	PQ4R10XJ154	150K	S 1
R122	PQ4R10XJ473	47K	S 1	R404	ERDS2TJ221	220	1
R123	ERJ3GEY0R00	0	1	R405	ERJ3GEYJ333	33K	1
R128	ERJ3GEYJ104	100K	1	R406	ERJ3GEYJ224	220K	1
R129	PQ4R10XJ820	82	S 1	R407	ERJ3GEYJ154	150K	1
				R408	ERJ3GEYJ104	100K	1

This replacement parts list is only for the model : KX-TCM546BXB.

Ref. No.	Part No.	Value	Pcs/Set	Ref. No.	Part No.	Value	Pcs/Set
R409	ERJ3GEYJ224	220K	1	R823	ERJ3GEYJ103	10K	1
R410	ERJ3GEYJ104	100K	1	R824	ERJ3GEYJ103	10K	1
R411	ERJ3GEYJ104	100K	1	R825	ERJ3GEYJ153	15K	1
R412	ERJ3GEYJ184	180K	1	R826	ERJ3GEYJ394	390K	1
R414	ERJ3GEYJ473	47K	1	R827	ERJ3GEY0R00	0	1
R415	ERDS2TJ391	390	1	R829	ERJ3GEY0R00	0	1
R418	ERDS2TJ221	220	1	R830	ERJ3GEY0R00	0	1
R419	PQ4R10XJ103	10K	S 1	R831	ERJ3GEYJ103	10K	1
R421	ERJ3GEYJ104	100K	1	R832	PQ4R10XJ000	0	1
R422	ERDS1TJ470	47	1	R833	ERJ3GEYJ103	10K	1
R502	ERJ3GEYJ106	10M	1	R834	ERJ3GEYJ473	47K	1
R503	ERJ3GEYJ472	4.7K	1	R835	ERJ3GEYJ473	47K	1
R504	ERJ3GEYJ472	4.7K	1	R836	ERJ3GEYJ123	12K	1
R505	ERJ3GEYJ472	4.7K	1	R837	ERJ3GEYJ473	47K	1
R506	ERJ3GEYJ222	2.2K	1	R838	ERJ3GEYJ153	15K	1
R507	ERJ3GEYJ272	2.7K	1	R839	ERJ3GEYJ103	10K	1
R508	ERJ3GEYJ472	4.7K	1	R840	ERJ3GEY0R00	0	1
R509	ERJ3GEYJ392	3.9K	1	R841	ERJ3GEYJ682	6.8K	1
R510	ERDS2TJ271	270	1	R842	PQ4R10XJ103	10K	S 1
R511	PQ4R10XJ333	33K	S 1	R843	PQ4R10XJ822	8.2K	S 1
R512	ERJ3GEYJ333	33K	1	R844	ERJ3GEYF152	1.5K	1
R513	PQ4R10XJ273	27K	S 1	R845	ERJ3GEYJ683	68K	1
R514	ERJ3GEYJ392	3.9K	1	R846	ERJ3GEYJ223	22K	1
R515	ERJ3GEYJ223	22K	1	R847	ERJ3GEYF222	2.2K	1
R516	ERJ3GEYJ105	1M	1	R848	ERJ3GEYJ223	22K	1
R517	ERJ3GEYJ473	47K	1	R850	ERJ3GEYJ473	47K	1
R519	ERJ3GEYJ104	100K	1	R851	ERJ3GEYJ104	100K	1
R520	ERJ3GEYJ104	100K	1	R852	ERJ3GEYJ103	10K	1
R521	PQ4R10XJ104	100K	S 1	R853	ERJ3GEYF123	12K	1
R522	ERJ3GEYJ104	100K	1	R854	ERJ3GEYJ334	330K	1
R523	ERJ3GEYJ104	100K	1	R855	ERJ3GEYJ823	82K	1
R524	PQ4R10XJ104	100K	S 1	R856	ERJ3GEYJ473	47K	1
R525	ERJ3GEYJ473	47K	1	R857	ERJ3GEYJ103	10K	1
R526	PQ4R10XJ391	390	S 1	R858	PQ4R10XJ104	100K	S 1
R527	PQ4R10XJ681	680	S 1	R859	PQ4R10XJ103	10K	S 1
R528	PQ4R10XJ471	470	S 1	R860	PQ4R10XJ102	1K	S 1
R538	ERJ3GEYJ472	4.7K	1	R861	PQ4R10XJ104	100K	S 1
R539	ERJ3GEYJ104	100K	1	R862	PQ4R10XJ563	56K	S 1
R540	ERJ3GEYJ472	4.7K	1	R863	PQ4R10XJ104	100K	S 1
R541	ERJ3GEYJ472	4.7K	1	R864	PQ4R10XJ472	4.7K	S 1
R542	ERJ3GEYJ222	2.2K	1	R865	PQ4R10XJ124	120K	S 1
R543	ERJ3GEYJ222	2.2K	1	R866	PQ4R10XJ182	1.8K	S 1
R545	ERJ3GEYJ472	4.7K	1	R867	PQ4R10XJ104	100K	S 1
R546	ERJ3GEYJ472	4.7K	1	R868	PQ4R10XJ104	100K	S 1
R547	ERJ3GEYJ472	4.7K	1	R869	ERJ3GEYJ473	47K	1
R548	ERJ3GEYJ472	4.7K	1	R870	ERJ3GEYJ684	680K	1
R549	ERJ3GEYJ472	4.7K	1	R871	ERJ3GEYJ224	220K	1
R550	ERJ3GEYJ472	4.7K	1	R872	PQ4R10XJ393	39K	S 1
R551	ERJ3GEYJ472	4.7K	1	R873	PQ4R10XJ474	470K	S 1
R552	ERJ3GEYJ472	4.7K	1	R874	PQ4R10XJ183	18K	S 1
R553	ERJ3GEYJ103	10K	1	R877	ERJ3GEYJ392	3.9K	1
R554	ERJ3GEYJ472	4.7K	1	R878	ERJ3GEYJ334	330K	1
R555	ERJ3GEYJ472	4.7K	1	R879	ERJ3GEYJ332	3.3K	1
R557	ERJ3GEYJ102	1K	1	R880	ERJ3GEYJ222	2.2K	1
R558	ERJ3GEYJ102	1K	1	R881	ERJ3GEYJ563	56K	1
R813	ERJ3GEYJ105	1M	1	R890	ERJ3GEYJ104	100K	1
R814	ERJ3GEYJ681	680	1	R891	ERJ3GEYJ105	1M	1
R815	ERJ3GEYJ221	220	1	R962	PQ4R10XJ104	100K	S 1
R816	ERJ3GEYJ221	220	1	R963	PQ4R10XJ103	10K	S 1
R821	ERJ3GEYJ220	22	1	R964	PQ4R10XJ103	10K	S 1
R822	ERJ3GEYJ220	22	1	R968	PQ4R10XJ103	10K	S 1
				R969	PQ4R10XJ103	10K	S 1

This replacement parts list is only for the model : KX-TCM546BXB.

Ref. No.	Part No.	Value	Pcs/Set	Ref. No.	Part No.	Value	Pcs/Set
J3	PQ4R10XJ000	0	1	C209	ECEA1HKS2R2	2.2	S 1
J203	ERJ3GEY0R00	0	1	C210	ECUV1H102KBV	0.001	1
J301	ERJ3GEY0R00	0	1	C211	PQCUV1E104MD	0.1	S 1
J302	ERJ3GEY0R00	0	1	C212	PQCUV1E104MD	0.1	S 1
J501	ERJ3GEY0R00	0	1	C213	PQCUV1E104MD	0.1	S 1
				C214	ECUV1H270JCV	27P	S 1
				C215	ECUV1C104ZFB	0.1	1
				C216	ECEA1EK470	47	S 1
				C217	ECUV1H472KBV	0.0047	1
				C218	ECUV1H221JCV	220P	1
				C219	ECUV1H221JCV	220P	1
				C220	PQCUV1C683KB	0.068	1
				C221	PQCUV1E473MD	0.047	S 1
				C222	PQCUV1H103KB	0.01	1
				C223	PQCUV1H331JC	330P	S 1
				C226	PQCUV1H222KB	0.0022	1
				C227	PQCUV1C683KB	0.068	1
				C228	ECUV1H472KBV	0.0047	1
				C229	ECUV1H101JCV	100P	1
		(CAPACITORS)		C230	ECEA1HKS010	1	S 1
C 1	ECQE2224KF	0.22	1	C231	ECUV1C104KBV	0.1	1
C 4	ECKD2H681KB	680P	S 1	C232	ECUV1H221JCV	220P	1
C 5	ECKD2H681KB	680P	S 1	C233	ERJ3GEY0R00	0	1
C 6	ECEA1CKA221	220	1	C235	PQCUV1E104MD	0.1	S 1
C 7	ECUV1H103KB	0.01	1	C236	PQCUV1H102J	0.001	S 1
C 8	ECEA1HKS2R2	2.2	S 1	C237	ECUV1H560GCV	56P	1
C 9	PQCUV1E104MD	0.1	S 1	C238	ECUV1H510GCV	51P	1
				C239	ECUV1H560GCV	56P	1
C11	ECEA1CKS100	10	S 1	C241	PQCUV1C105ZF	1	1
C12	PQCUV1H101JC	100P	1	C242	PQCUV1E104MD	0.1	S 1
C14	PQCUV1H223KB	0.022	1	C243	ECEA1EU4R7	4.7	1
C15	ECEA1EK470	47	S 1	C245	ECEA1HKS010	1	S 1
C17	ECEA1CKS220	22	S 1	C246	PQCUV1H153KB	0.015	1
C18	ECEA1HKS010	1	S 1	C247	PQCUV1C224ZF	0.22	S 1
				C248	ECUV1H470JCV	47P	1
C50	ECKDNB471MB	470P	1	C249	PQCUV1H103KB	0.01	1
C101	PQCUV1H102J	0.001	S 1	C250	ECEA1CKS100	10	S 1
C103	ECUV1H271JCV	270P	1	C251	PQCUV1E104MD	0.1	S 1
C104	PQCUV1H222KB	0.0022	1	C253	ECUV1H101GCV	100P	1
C105	PQCUV1E104MD	0.1	S 1	C254	PQCUV1H102J	0.001	S 1
C107	PQCUV1E104MD	0.1	S 1	C255	PQCUV1E104MD	0.1	S 1
C110	ECEA1CKS100	10	1	C273	ECUV1C104ZFB	0.1	1
C111	PQCUV1E104MD	0.1	S 1	C275	ECUV1H121GCV	120P	1
C112	ECUV1H101JCV	100P	1	C279	ECUV1H560JCV	56P	1
C113	PQCUV1E104MD	0.1	S 1				
C114	PQCUV1E104MD	0.1	S 1	C280	ECUV1C104KBV	0.1	1
C115	ECUV1C104KBV	0.1	1	C281	ECUV1H472KBV	0.0047	1
C116	PQCUV1C105ZF	1	1				
C117	PQCUV1E104MD	0.1	S 1	C301	PQCUV1H103ZF	0.01	1
C118	PQ4R10XJ000	0	1	C303	ECUV1H100DCV	10P	1
				C304	ECUV1H103KBV	0.01	S 1
C122	PQCUV1H392KB	0.0039	1	C305	ECUV1H470JCV	47P	1
C123	PQCUV1H101JC	100P	1	C306	ECUV1H470JCV	47P	1
C124	PQCUV1H102J	0.001	S 1	C307	ECUV1H470JCV	47P	1
C125	ECUV1H392KBV	0.0039	1	C308	ECEA1HKS010	1	S 1
C126	PQCUV1E104MD	0.1	S 1	C309	ECUV1H120JUV	12P	1
C128	ECA1AM102	0.001	1				
C201	ERJ3GEY0R00	0	1	C310	ECUV1H680JCV	68P	1
C203	ECUV1C104ZFB	0.1	1	C311	ECUV1H681JCV	680P	S 1
C204	PQCUV1H103KB	0.01	1	C313	ECUV1C104KBV	0.1	1
C205	PQCUV1H103KB	0.01	1	C314	ECUV1H220JCV	22P	1
C206	ECUV1H102KBV	0.001	1	C315	PQCUV1H103ZF	0.01	1
C207	ECEA1CKS100	10	S 1	C316	ERJ3GEY0R00	0	1
C208	PQCUV1E104MD	0.1	S 1	C351	ECUV1H390JCV	39P	1

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This replacement parts list is only for the model : KX-TCM546BXB.

REPLACEMENT PARTS LIST

Handset

1. RTL (Retention Time Limited)

Note: The marking (RTL) indicates that the Retention Time is limited for this item.

After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability depends on the type of assembly and the laws governing parts and product retention. At the end of this period, the assembly will no longer be available.

2. Important safety notice

Components identified by the Δ mark indicates special characteristics important for safety. When replacing any of these components, only use specified manufacturer's parts.

3. The S mark indicates service standard parts and may differ from production parts.

4. RESISTORS & CAPACITORS

Unless otherwise specified;

All resistors are in ohms (Ω) K=1000 Ω , M=1000K Ω

All capacitors are in MICRO FARADS (μ F) P= μ F

*Type & Wattage of Resistor

Type

ERC:Solid	ERX:Metal Film	PQ4R:Carbon
ERD:Carbon	ERG:Metal Oxide	ERS:Fusible Resistor
PQRD:Carbon	ERO:Metal Film	ERF:Cement Resistor

Wattage

10,16:1/8W	14,25:1/4W	12:1/2W	1:1W	2:2W	3:3W
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*Type & Voltage of Capacitor

Type

ECFD:Semi-Conductor	ECCD,ECKD,ECBT,PQCBC : Ceramic
ECQS:Styrol	ECQE,ECQV,ECQG : Polyester
PQCUV:Chip	ECEA,ECSZ : Electrolytic
ECQMS:Mica	ECQP : Polypropylene

Voltage

ECQ Type	ECQG Type	ECSZ Type	Others	
1H: 50V	05: 50V	0F:3.15V	0J :6.3V	1V :35V
2A:100V	1:100V	1A:10V	1A :10V	50,1H:50V
2E:250V	2:200V	1V:35V	1C :16V	1J :63V
2H:500V		0J:6.3V	1E,25:25V	2A :100V

Ref. No.	Part No.	Part Name & Description	Pcs/Set
CABINET & ELECTRICAL PARTS			
101	PQAX3P16Z	SPEAKER	1
102	PQBX10317U	BUTTON, KEY	1
103	PQGP10135Y2	LCD PANEL	1
104	PQGT13373Z	NAME PLATE	1
105	PQHG10479Z	SPACER	1
106	PQHR10559Z	RF HOLDER	1
107	PQJT10137Z	BATTERY TERMINAL	3
108	PQKF10212X2	REAR CABINET	S 1
109	PQKK10081Z2	BATTERY COVER	S 1
110	PQKM10299S6	FRONT CABINET	1
111	PQQT11483Z	LCD LABEL	1
112	PQSA10065Y	ANTENNA	1
113	PQSX10057Z	KEYBOARD SWITCH	1
114	PQXA36ASVC	BATTERY	S 1

Ref. No.	Part No.	Part Name & Description	Pcs/Set
MAIN P.C.BOARD PARTS			
PCB100	PQWP1M546BXR	P.C.BOARD ASS'Y (RTL)	1
		(ICS)	
IC201	XN1116	TRANSISTOR(SI)	1
IC202	PQVI3012AE28	IC	1
IC203	PQVIS80730AL	IC	S 1
IC204	PQVIXCC3501P	IC	1
		(TRANSISTORS)	
Q 1	2SD601A	TRANSISTOR(SI)	1
Q 2	2SD601A	TRANSISTOR(SI)	1
		(DIODES)	
Q201	2SD601A	TRANSISTOR(SI)	1
Q202	2SD601A	TRANSISTOR(SI)	1
Q203	2SB709A	TRANSISTOR(SI)	1
Q204	PQVTD123T146	TRANSISTOR(SI)	S 1
Q205	PQVTD123T146	TRANSISTOR(SI)	S 1
Q206	PQVT143XK146	TRANSISTOR(SI)	S 1
		(DIODES)	
D203	MA728	DIODE(SI)	1
D204	PQVDS5688G	DIODE(SI)	1
D207	MA110	DIODE(SI)	1
D211	MA110	DIODE(SI)	1
		(LEDs)	
LED201	PQVDPY1112H	LED	1
LED202	PQVDPY1112H	LED	1
LED203	PQVDPY1112H	LED	1
LED204	PQVDPY1112H	LED	1
LED205	LNJ351M4UKU	LED	1
LED206	LNJ351M4UKU	LED	1
LED207	PQVDBR1112H	LED	1
LED208	PQVDBR1112H	LED	1
		(COIL AND TRANSFORMAERS)	
L201	PQLQZMR68M	COIL	S 1
L202	PQLQZM100K	COIL	1
L203	PQLQZM220K	COIL	1
L204	PQLQZM1R0K	COIL	1
L205	ELJFAR68M	COIL	1
		(CONNECTORS)	
CN101	PQJP2D13Z	CONNECTOR	1
CN201	PQJS12A36Z	CONNECTOR	1
CN205	PQJS30B11Z	CONNECTOR	1
		(CRYSTALS)	
X201	PQVCJ3995N9Z	CRYSTAL OSCILLATOR	1
X202	PQVCL3276N9Z	CRYSTAL OSCILLATOR	1

This replacement parts list is only for the model : KX-TCM546BXB.

Ref. No.	Part No.	Part Name, Description, & Value	Pcs/Set
E101	PQADLM1608CX	(OTHERS)	
E102	PQEFBDB111GP	LIQUID CRYSTAL DISPLAY	1
E103	PQHE10070Z	BUZZER	1
E104	PQHR10573Z	SPONGE	1
E105	PQHS10331Z	LCD HOLDER	1
E106	PQM122Z	SPONGE	1
E107	PQMC10265Z	MICROPHONE	1
E108	PQMC10276Z	SHEILD COVER	1
		SHEILD COVER	1
		(RESISTORS)	
R22	ERJ3GEYJ273	27K	1
R27	ERJ3GEYJ183	18K	1
R28	ERJ3GEYJ822	8.2K	1
R201	ERJ3GEYJ104	100K	1
R202	ERJ3GEYJ334	330K	1
R203	ERJ3GEYJ331	330	1
R204	ERJ3GEYJ331	330	1
R205	ERJ3GEY0R00	0	1
R206	ERJ3GEYJ472	4.7K	1
R207	ERJ3GEYJ331	330	1
R208	ERJ3GEYJ104	100K	1
R209	ERJ3GEYJ331	330	1
R211	ERJ3GEYJ472	4.7K	1
R212	ERJ3GEYJ472	4.7K	1
R213	ERJ3GEYJ473	47K	1
R215	ERJ3GEYJ104	100K	1
R217	ERJ3GEYJ333	33K	1
R219	ERJ3GEYJ104	100K	1
R220	ERJ3GEYJ473	47K	1
R221	ERJ3GEYJ122	1.2K	1
R222	ERJ3GEYJ222	2.2K	1
R223	ERJ3GEYJ103	10K	1
R224	ERJ3GEYJ332	3.3K	1
R225	ERJ3GEYJ104	100K	1
R226	ERJ3GEYJ104	100K	1
R228	ERJ3GEYJ331	330	1
R229	ERJ3GEYJ331	330	1
R230	ERJ3GEYJ152	1.5K	1
R231	ERJ3GEYJ152	1.5K	1
R232	ERJ3GEYJ221	220	1
R234	ERJ3GEYJ332	3.3K	1
R238	PQ4R10XJ103	10K	1
R240	PQ4R10XJ120	12	1
R241	ERJ3GEYJ102	1K	1
R244	ERJ3GEYJ103	10K	1
R251	ERJ3GEYJ273	27K	1
R252	ERJ3GEYJ473	47K	1
R253	ERJ3GEYJ473	47K	1
R254	ERJ3GEYJ104	100K	1
R255	ERJ3GEYJ104	100K	1
R257	ERJ3GEYJ473	47K	1
R260	ERJ3GEYJ153	15K	1
R270	ERJ3GEYJ150	15	1

Ref. No.	Part No.	Part Name, Description, & Value	Pcs/Set
C203	ECEA0GKS221	(CAPACITORS)	
C205	PQCUV1C105ZF	220	1
C208	PQCUV1H103ZF	1	1
C209	PQCUV1C105ZF	0.01	1
		1	1
C210	PQCUV1C105ZF	1	1
C211	PQCUV1H103ZF	0.01	1
C212	PQCUV1H103ZF	0.01	1
C213	PQCUV1H103ZF	0.01	1
C214	ECUV1H330JCV	33P	1
C215	ECUV1H330JCV	33P	1
C216	ECUV1H270JCV	27P	1
C217	ECUV1H270JCV	27P	1
C218	PQCUV1H103ZF	0.01	1
C219	PQCUV1H103ZF	0.01	1
C220	ECUV1E104ZFV	0.1	1
C221	ECUV1E104ZFV	0.1	1
C222	ECUV1E104ZFV	0.1	1
C223	ECUV1C104KBV	0.1	1
C250	ECUV1H182KBV	0.0018	1
RF P.C.BOARD PARTS			
PCB200	PQWP2C256BXR	P.C.BOARD ASS'Y (RTL)	1
IC1	PQVITB31224R	(IC) IC	1
Q101	2SC2295	(TRANSISTORS) TRANSISTOR(SI)	S 1
Q102	PQVTMSC2295C	TRANSISTOR(SI)	1
Q103	2SC3356R24	TRANSISTOR(SI)	1
D101	MA840BTAKU	(DIODES) DIODE(SI)	1
D102	MA840ATAKU	DIODE(SI)	1
L 1	PQ4R10XJ000	(COIL AND TRANSFORMAER: 0	S 1
L 4	PQLI2B201	COIL	1
L 5	PQL04A2	COIL	1
L103	PQLA7A7	COIL	1
L105	PQLA7A22	COIL	1

This replacement parts list is only for the model : KX-TCM546BXB.

Ref. No.	Part No.	Part Name, Description, & Value	Pcs/Set	Ref. No.	Part No.	Value	Pcs/Set
CF1	PQVFSFE107MJ	(CERAMIC FILTERS)	S 1	R102	ERJ3GEYJ220	22	1
CF2	PQVFCFH455F1	CERAMIC FILTER	1	R103	ERJ3GEYJ223	22K	1
				R104	ERJ3GEYJ273	27K	1
				R105	ERJ3GEYJ561	560	1
				R106	ERJ3GEYJ220	22	1
DUP1	PQVFR26RX	(DUPLEXS)	1	R108	ERJ3GEYJ472	4.7K	1
		DUPLEX		R109	ERJ3GEYJ822	8.2K	1
DUP101	PQVFR26TX	DUPLEX	1				
				R110	ERJ3GEYJ393	39K	1
				R112	ERJ3GEYJ100	10	1
				R113	ERJ3GEYJ823	82K	1
VR1	EVNDXAA03B34	(VARIABLE RESISTORS)	1	R115	ECUV1H103KBV	0.01	S 1
		VARIABLE RESISTOR		R116	ERJ3GEYJ683	68K	1
VR101	EVNDXAA03B55	VARIABLE RESISTOR	1	R117	ERJ3GEYJ564	560K	1
				R500	ERJ3GEYJ2R2	2.2	1
				R501	ERJ3GEYJ153	15K	1
				R502	ERJ3GEYJ393	39K	1
X1	PQVCK1024LC5	(OTHERS)	1				
CN1	PQJP12B55Z	CRYSTAL OSCILLATOR CONNECTOR	1			(CAPACITORS)	
				C 1	ERJ3GEY0R00	0	1
				C 3	ECST1EY474	0.47	1
				C 4	ECUV1H102KBV	0.001	1
				C 5	PQCUV1E104MD	0.1	S 1
				C 6	ECEA0JKS470	47	1
				C 7	ECUV1C104ZFB	0.1	1
				C 8	ECUV1H270JCV	27P	S 1
				C 9	ECUV1H221JCV	220P	1
				C10	ECUV1H472KBV	4700P	1
				C11	ECUV1H221JCV	220P	1
R 1	ERJ3GEYJ680	68	1	C12	PQCUV1C683KB	0.068	1
R 2	ERJ3GEYJ331	330	1	C13	PQCUV1C105ZF	1	1
R 3	ERJ3GEYJ183	18K	1	C14	ECEA1CKS100	10	1
R 4	ERJ3GEYJ183	18K	1	C15	PQCUV1C224KB	0.22	1
R 5	ERJ3GEYJ154	150K	1	C16	ECUV1H103KBV	0.01	1
R 6	ERJ3GEYJ681	680	1	C17	PQCUV1C224KB	0.22	1
R 7	ERJ3GEYJ154	150K	1	C18	ECUV1H153KBV	0.015	1
R 8	ERJ3GEYJ562	5.6K	1				
R 9	ERJ3GEYJ153	15K	1	C20	ECUV1H223KBV	0.022	S 1
				C21	ECUV1H220JCV	22P	1
R10	ERJ3GEYJ561	560	1	C22	ECUV1C104ZFB	0.1	1
R11	ERJ3GEYJ822	8.2K	1	C23	ECUV1H471JCV	470P	1
R12	ERJ3GEYJ822	8.2K	1	C24	ECEA1CKS220	22	1
R13	ERJ3GEY0R00	0	1	C25	ECSTAJ1CA225	2.2	S 1
R14	ERJ3GEYJ333	33K	1	C26	PQCUV1C224KB	0.22	1
R15	ERJ3GEYJ272	2.7K	1	C27	ECUV1H102KBV	1000P	1
R16	ERJ3GEYJ473	47K	1	C28	ECUV1H122KBV	1200P	1
R18	ERJ3GEYJ223	22K	1	C29	ECUV1C473KBV	0.047	1
R19	ERJ3GEYJ124	120K	1				
				C30	ECUV1H103KBV	0.01	1
R20	ERJ3GEYJ104	100K	1	C32	ECUV1C104ZFB	0.1	1
R23	ERJ3GEYJ153	15K	1	C34	ECUV1H560GCV	56P	1
R24	ERJ3GEYJ223	22K	1	C35	ECUV1H560GCV	56P	1
				C36	ECUV1H560GCV	56P	1
R33	ERJ3GEYJ332	3.3K	1	C37	ERJ3GEY0R00	0	1
R34	ERJ3GEYJ154	150K	1	C39	ECUV1H103KBV	0.01	1
R35	ERJ3GEYJ103	10K	1				
R36	ERJ3GEYJ104	100K	1	C40	ECUV1H222KBV	2200P	1
R37	ERJ3GEYJ562	5.6K	1	C41	ECEA1HKS010	1	1
R38	ERJ3GEYJ182	1.8K	1	C42	ECUV1H221JCV	220P	1
R39	ERJ3GEYJ222	2.2K	1	C43	ECUV1H103KBV	0.01	1
R101	ERJ3GEYJ561	560	1	C45	ECUV1H102KBV	1000P	1

This replacement parts list is only for the model : KX-TCM546BxB.

Ref. No.	Part No.	Value	Pcs/Set
C46	ECUV1H102KBV	1000P	1
C47	ECUV1H102KBV	1000P	1
C48	ECUV1C104ZfV	0.1	1
C49	ECUV1H103KBV	0.01	S 1
C50	ECUV1C104KBV	0.1	1
C52	ECUV1C104KBV	0.1	1
C53	ECUV1H820JCV	82P	1
C102	ERJ3GEY0R00	0	1
C104	ECUV1H220JCV	22P	1
C105	ECUV1H103KBV	0.01	S 1
C106	ECUV1H680JCV	68P	1
C107	ECUV1H470JCV	47P	1
C108	ECUV1H050CCV	5P	1
C109	ERJ3GEYJ223	22K	1
C110	ECUV1H103KBV	0.01	S 1
C111	ECUV1H220JCV	22P	1
C113	ECUV1H150JCV	15P	1
C114	ECUV1H102KBV	1000P	1
C115	ECUV1H103KBV	0.01	S 1
C116	ECUV1C104ZfV	0.1	1
C117	ECUV1H151JCV	150P	1
C118	ECUV1H3R0BCV	3P	1
C119	ECUV1C104ZfV	0.1	1
C120	ECUV1C104ZfV	0.1	1
C500	ECUV1H103KBV	0.01	S 1
C501	ECUV1H103KBV	0.01	S 1
C502	ECUV1H220JCV	22P	1
C505	ECUV1H030CCV	3P	1

KX-TCM546BxB			
Ref. No.	Part No.	Part Name & Description	Pcs/Set
ACCESSORIES AND PACKING MATERIALS			
A1	KX-A11BMX	AC ADAPTOR	1
A2	KX-J05X	PLUG ADAPTOR	1
A3	PQJA10075Z	TEL CORD	1
A4	PQKL10028Z2	STAND	1
A5	PQQW12013Z	QUICK REFERENCE GUIDE	1
A6	PQQX12073ZZ	INSTRUCTION BOOK	1
P1	XZB23X35Z02	PROTECTION COVER (for BASE UNIT)	1
P2	XZB10X35A02	PROTECTION COVER (for PORTABLE HANDSET)	1
P3	PQPN10618Z	INNER BOX	1
P4	PQPK12652Z	GIFT BOX	1
TOOL			
ZZ1	PQZZ12K11Z	EXTENSION CORD, 12P	1
Note: PQZZ12K11Z is useful for servicing (It make servicing easy).			

