Technology Document

Document Title: ZTE C310 CDMA 1X After-sales Service Manual (Level 2)

Total：26 Pages（cover included）

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ZTE CORPORATION

Modification Record

File No.	Version No.	Drafted	Data	Modification Reason	Main Modification Content
		Wang Hui	2008-01-16	None	None
Notice: 1. Fill in the table while modify the document. 2. The modification reason and main modification content columns are filled in none during first document making.					

目录

1. Product Summary

1.1 Standard Configuration

SN	Name	QTY
1	Handset	1
2	Battery	1
3	Charger	1

1.2 Specification

Mode of Communication: CDMA

Frequency Range: TX 824～849MHz;RX 869～894MHz

Dimension: 45mm×105mm×20mm

Weight: 75g

Antenna: inner antenna

Talk time: ＞160 minutes

Standby time: ＞160hrs

1.3 Function

Telephone books: 200*3group

Alert: 32 chord. 20 for ring tone + 6 for message, group ring tone

Message: 50 for Inbox/Outbox each. group send, up to 10

1.4 Inner Code

Inner Code	Outer Code
ZTEC310	C310

2. Inner Structure and Elements

2.1 Function

Check version: *983*837#
Check ESN NO. : *#06#
Function test: *983*0#

- LCD test: Check if the LCD display has display defects such as line defect, spot defect, and screen contortion
- Ringing tone, vibration test: No exceptional noise, burst noise; vibration even, no noise
- Key test: Check if it is possible to type the correct characters by each key. The strength should be even, and the keys should feel good and elastic
- Audio loop test: Blow to the microphone, and the speaker sends out rustles, but no other noise
- Earphone test: Plug in the headset, blow to the microphone, and the speaker sends out rustles, but no other noise

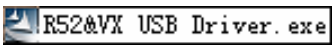
2.2 Software Download

- Software download instruction
  Repaired handset must be updated to the latest version

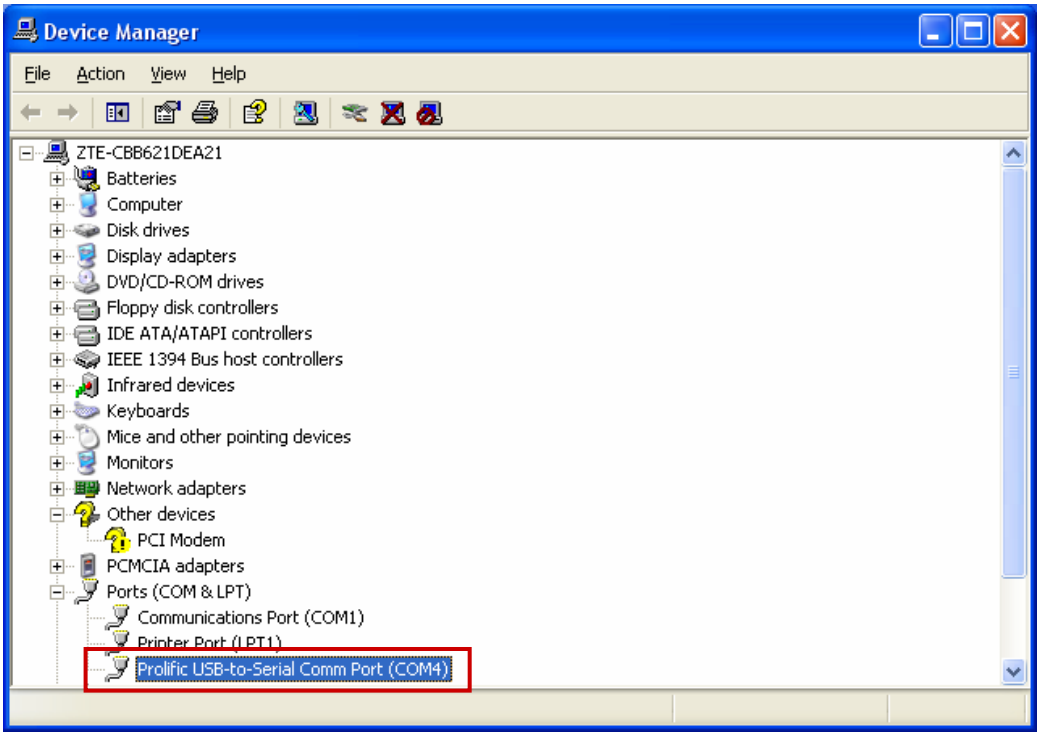
Note

- Handset can be switched on normally with more than 2 grids of battery
- Do not pull the download cable during downloading
- Download data cable
  C310/C350 data cable (code: ISO13032)

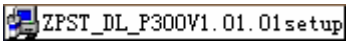
- Data cable driver



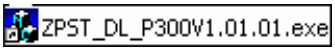
- Connect PC and handset with data cable, check serial port
- Checking route: right click 'My computer'→ 'Management'→ 'Device Manager'→ 'Ports'



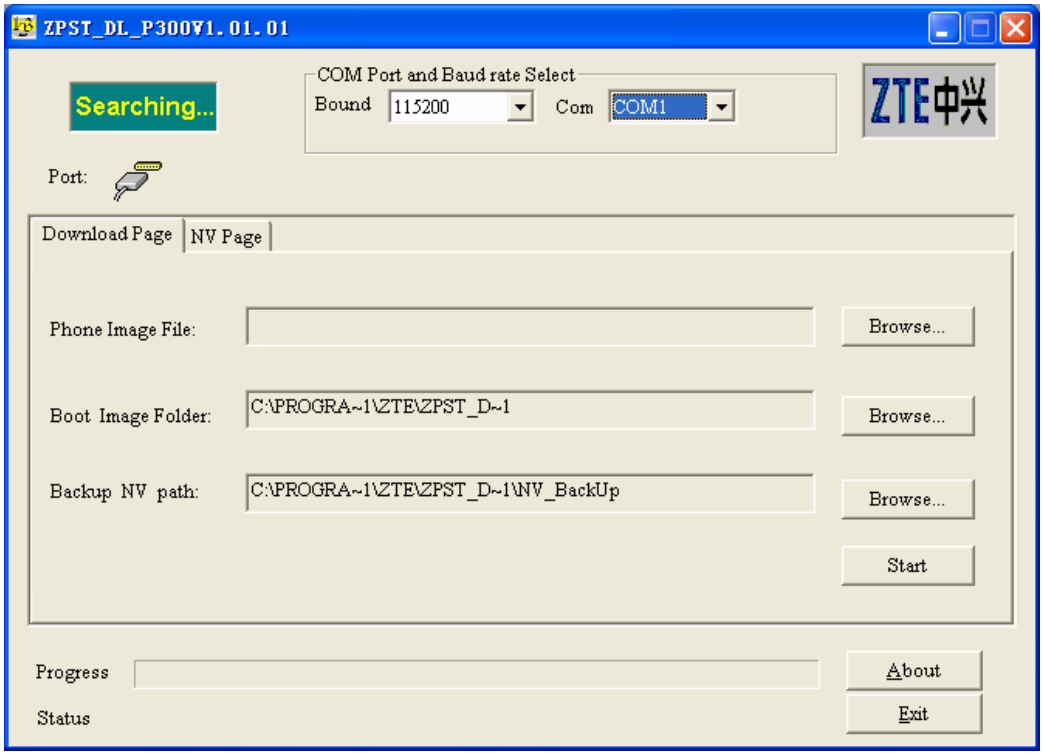
- Download platform: ZPST_DL_P300V1.01.01



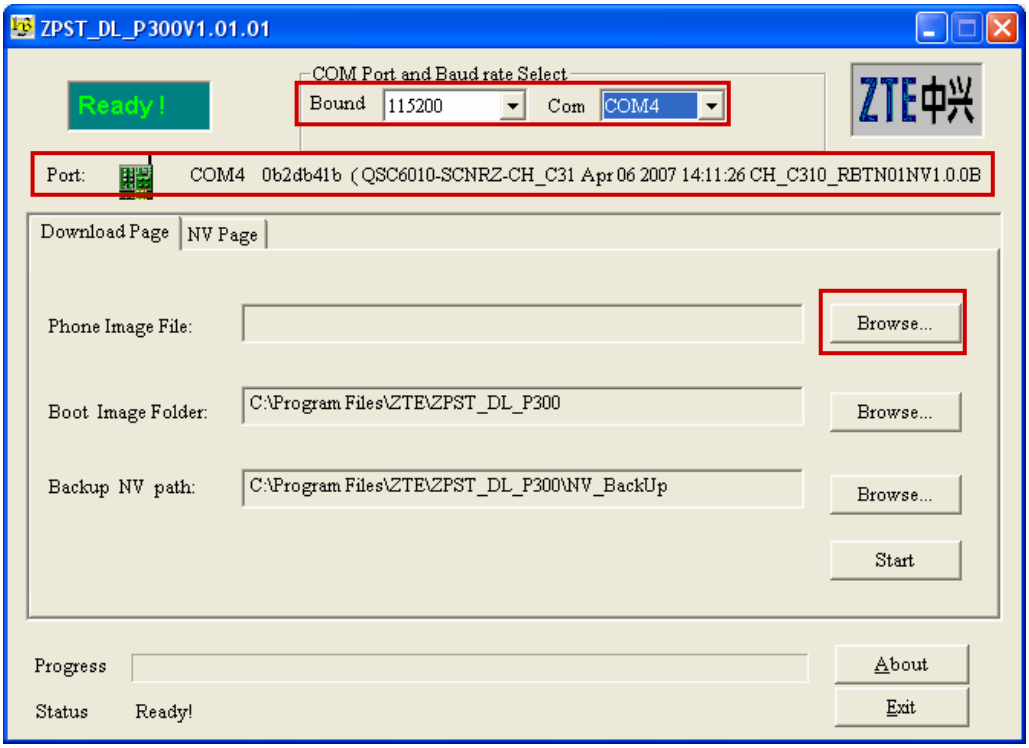
- Double click the icon



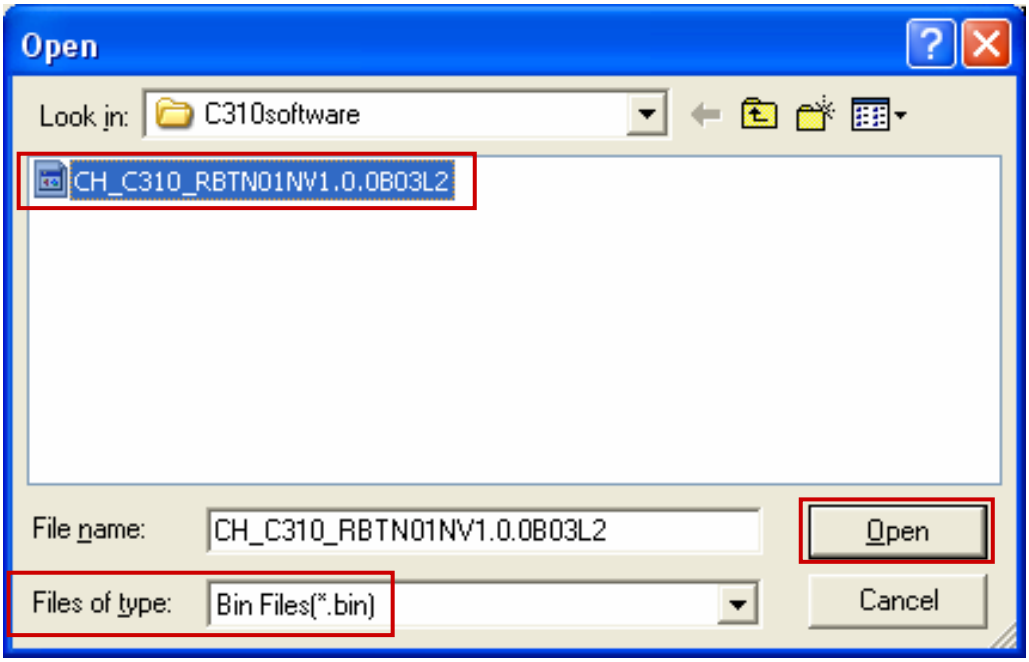
- Main interface



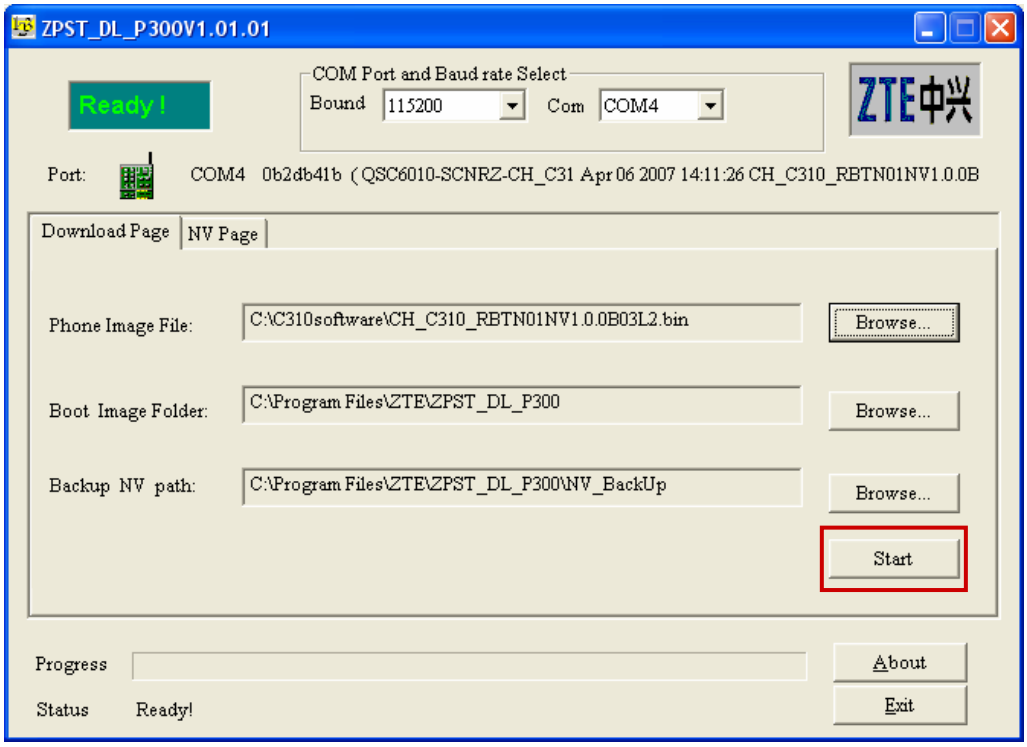
- Select ‘Bound: 115200’
- Select the right serial port (Note: the platform will automatically read version information in the handset after successful serial port selection)
- Click ‘Browse’, select ‘Phone Image File’



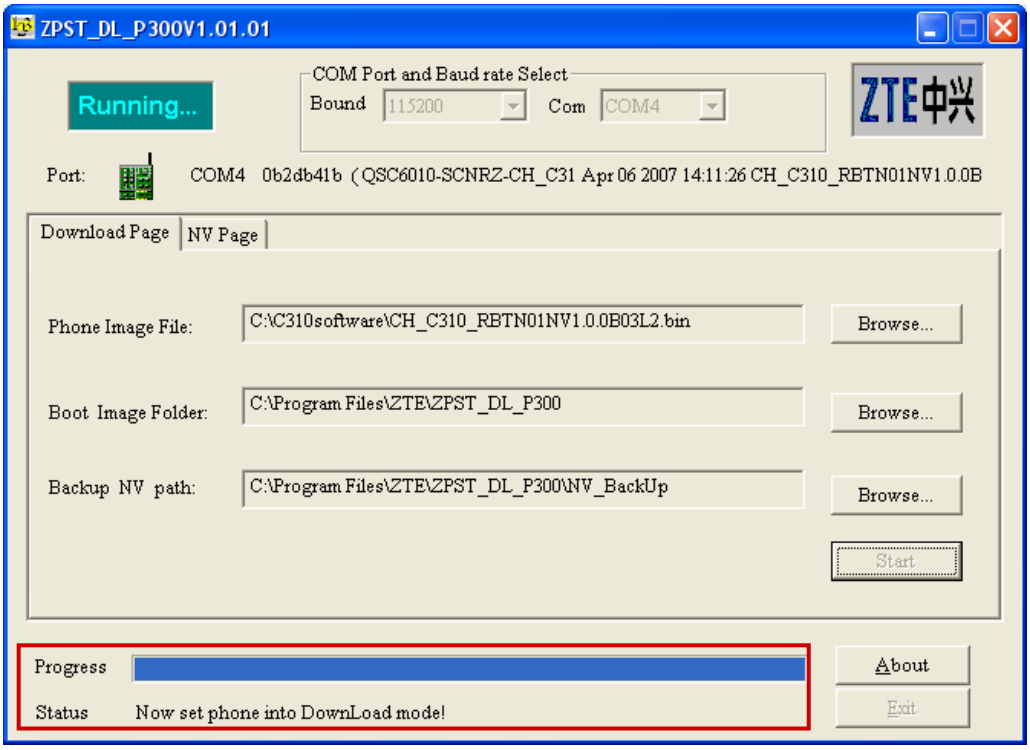
- Select *bin file type → select the correct version software → click ‘Open’



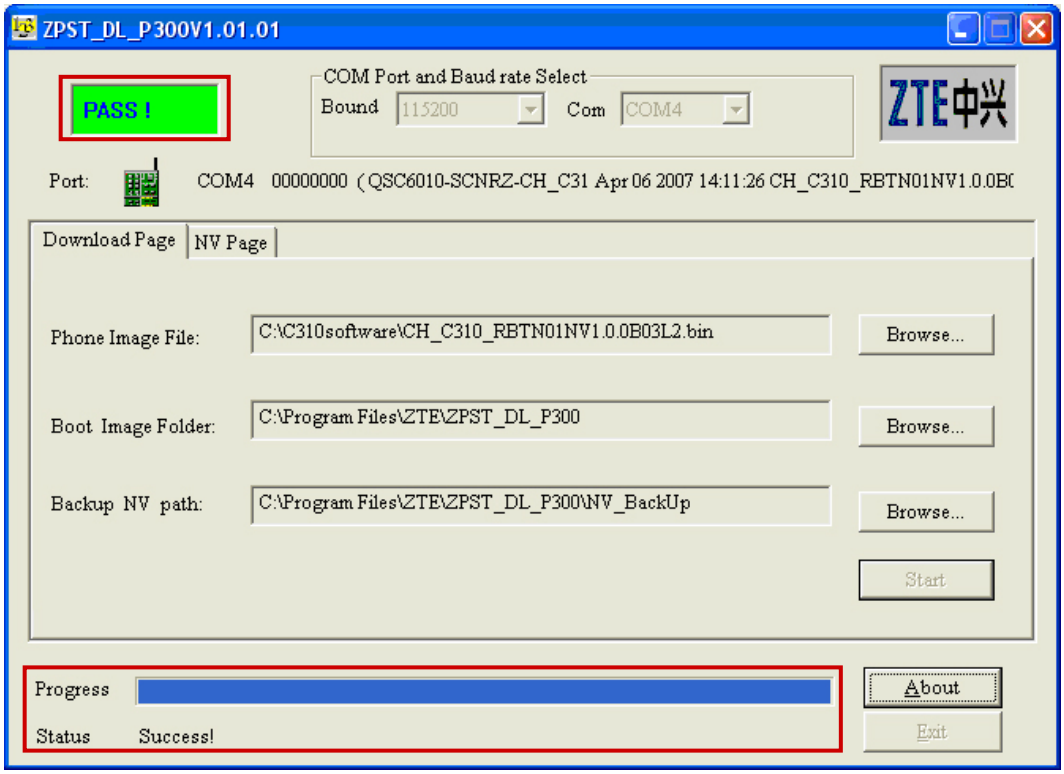
♦ Click 'Start'



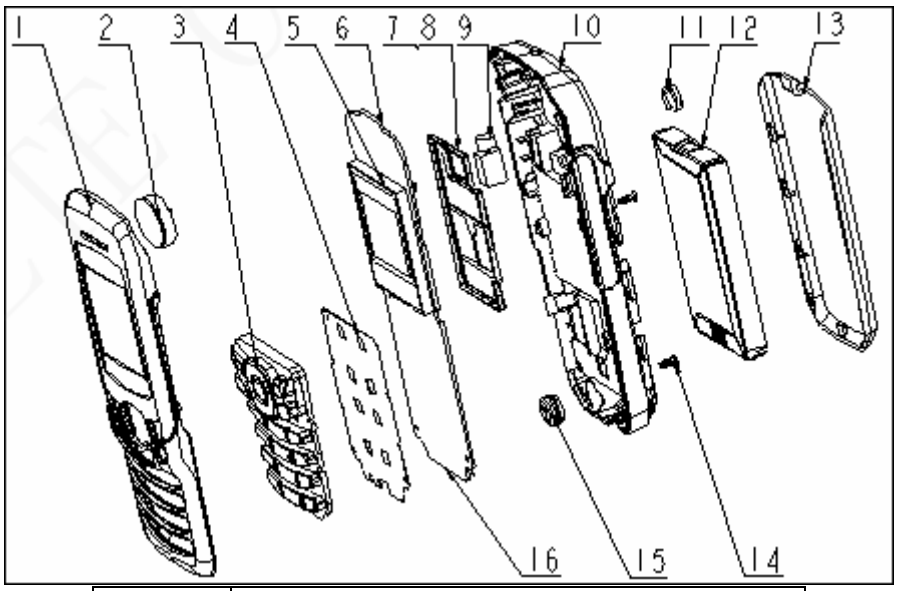
♦ Downloading



♦ Download success



2.3 Explored View

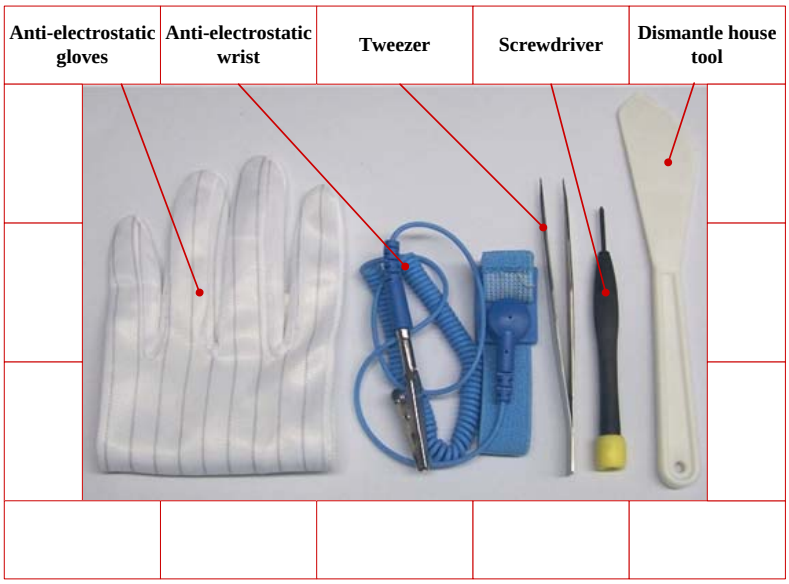


SN	Name
1	ZTEC310 front cover
2	SPEAKER&RECEIVER
3	ZTEC310 keypad
4	ZTEC310 dome
5	LCD
6	ZTEC310 mainboard

7	ZTEC310 shield frame
8	ZTEC310 shield cover
9	motor
10	ZTEC310 back cover
11	ZTEC310 coaxial plug
12	battery
13	ZTEC310 battery cover
14	V767 screws
15	MIC
16	8PINmini-USB connector

2.4 Disassembly Flow

♦ Tools



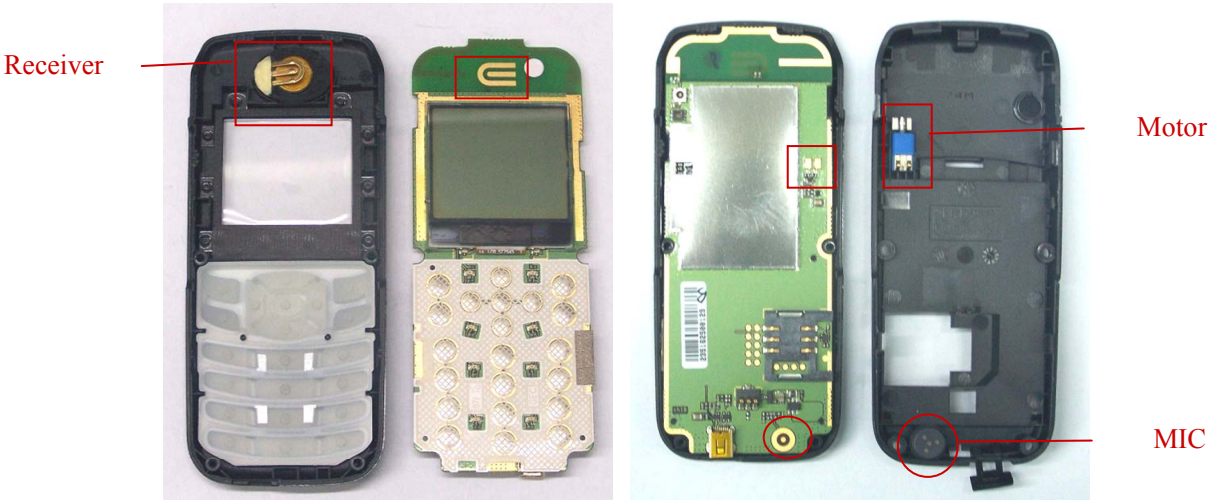
♦ Take off the battery

♦ Pay attention to the position of the battery connector

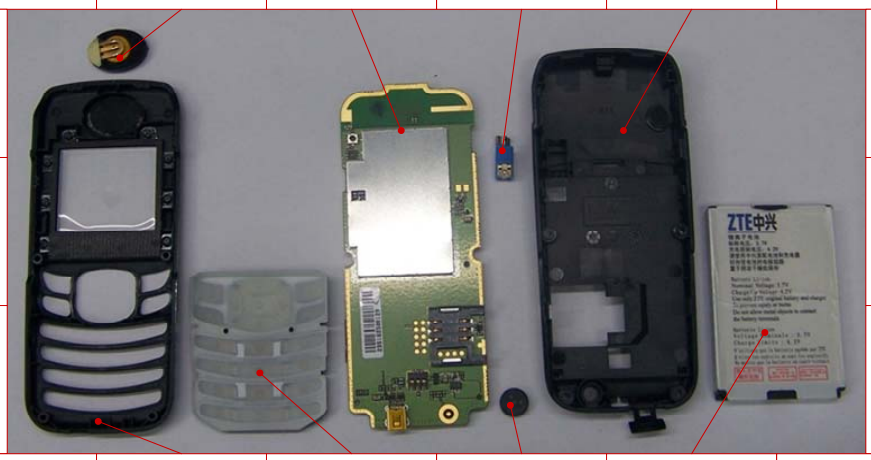
- The positions of four screws

- Separate the front cover and back cover, pay attention to the locks

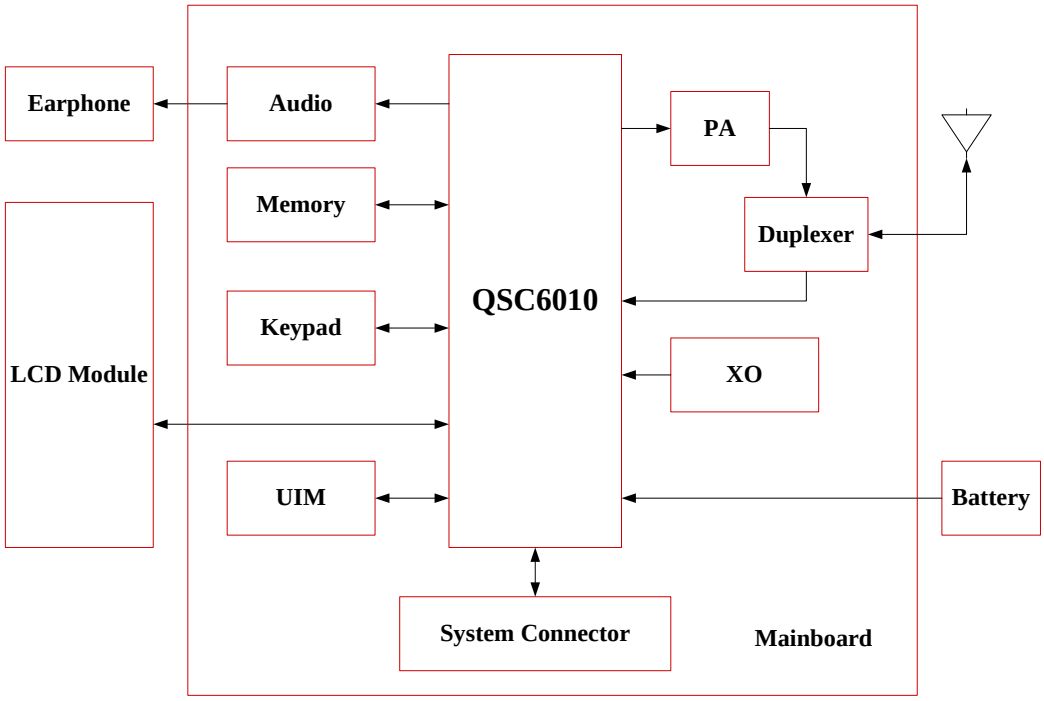
♦ The front/back cover and main board after dismantling



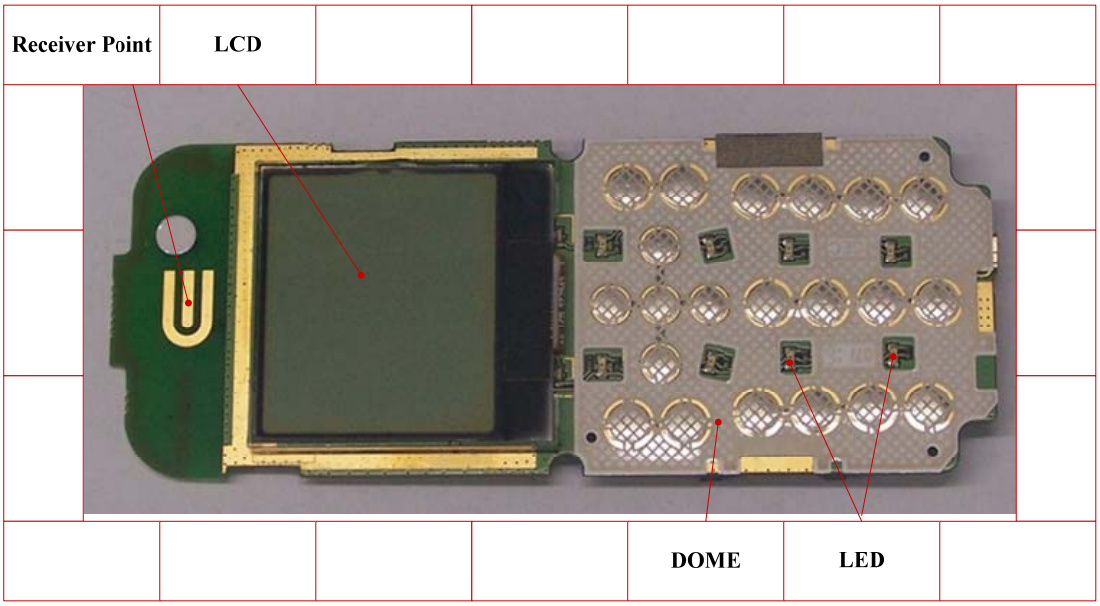
2.5 Components

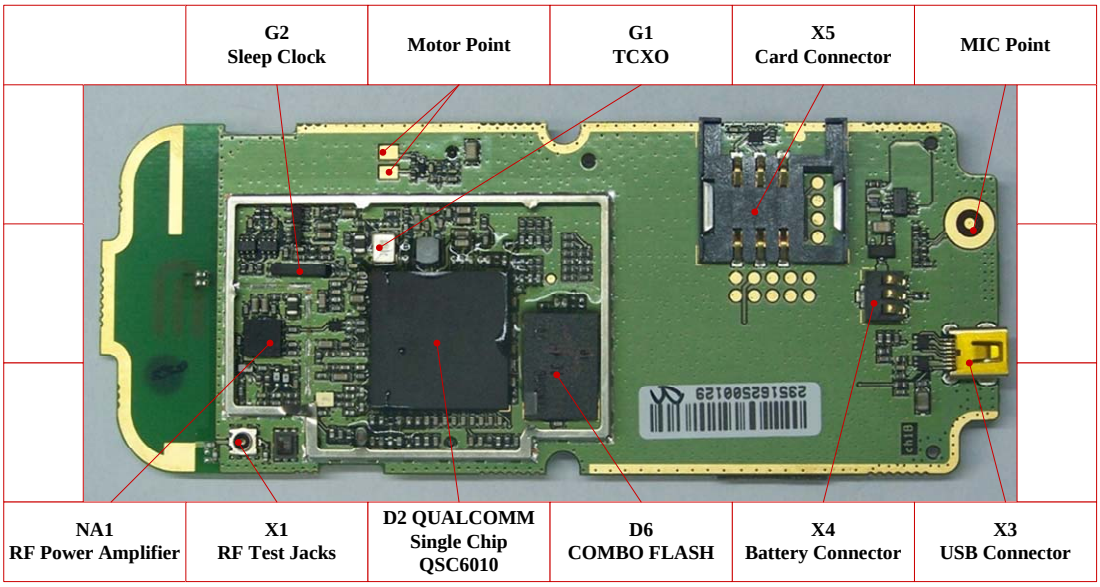
	Receiver /Speaker	Mainboard	Motor	Back Cover	
					
	Front Cover	Keypad	MIC	Battery	

2.6 Principle Block Diagram



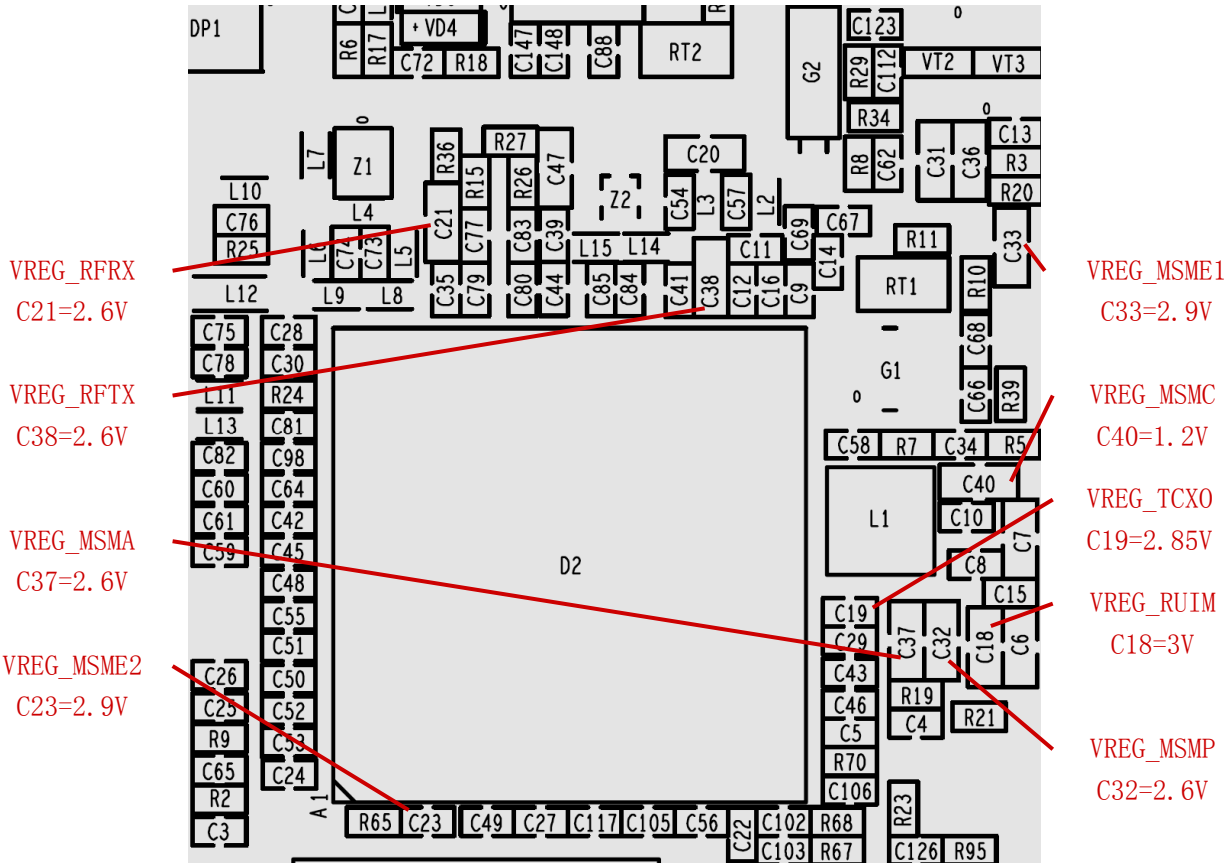
2.7 Basic Device Distributing





2.1 Main test point

Name	Voltage	Test Point	Function
VREG_TCXO	2.85V	C19	Power supply for TCXO of RF circuit
VREG_RFRX	2.6V	C21	Power supply for the front RX
VREG_RFTX	2.6V	C38	Power supply for TX circuit
VREG_RUIM	3V	C18	Power supply for UIM card
VREG_MSMP	2.6V	C32	Power supply for the outer equipment
VREG_MSME1	2.9V	C33	Power supply for BUS
VREG_MSME2	2.9V	C23	Power supply for BUS
VREG_MSMA	2.6V	C37	Power supply for analog circuit of the baseband
VREG_MSMC	1.2V	C40	Power supply for CPU

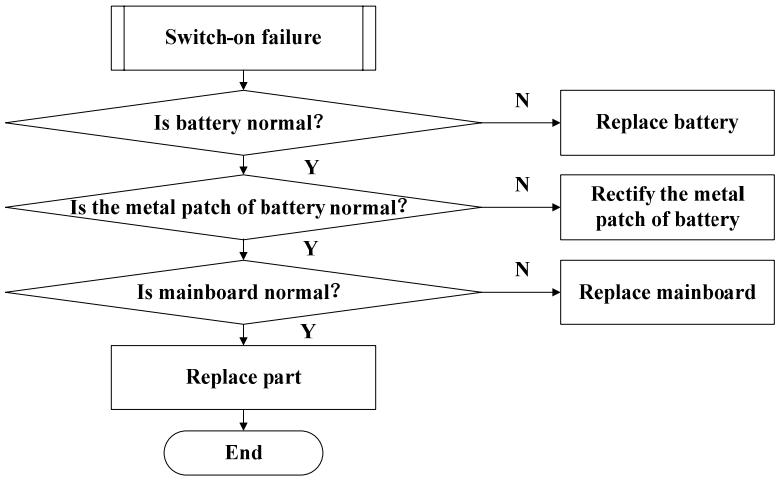


3. Troubleshooting Flow Chart (Level 1)

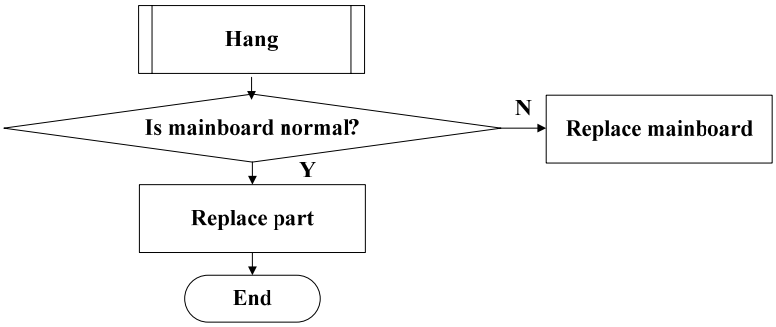
3.1 Structure Failure

For the structure failure, please make the corresponding replacement (refer to section Disassembly Flow)

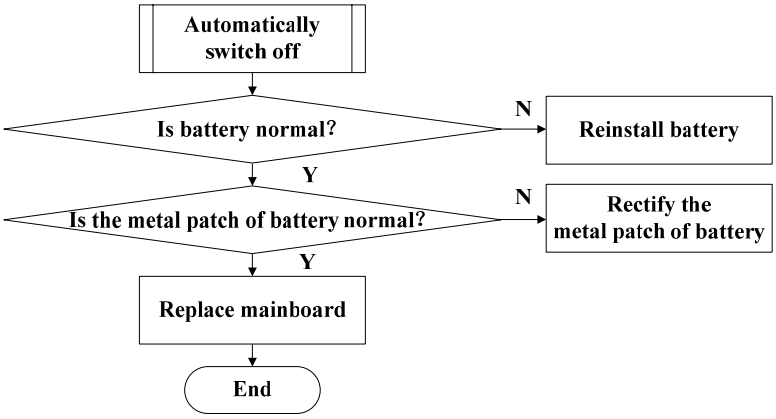
3.2 Switch-on Failure



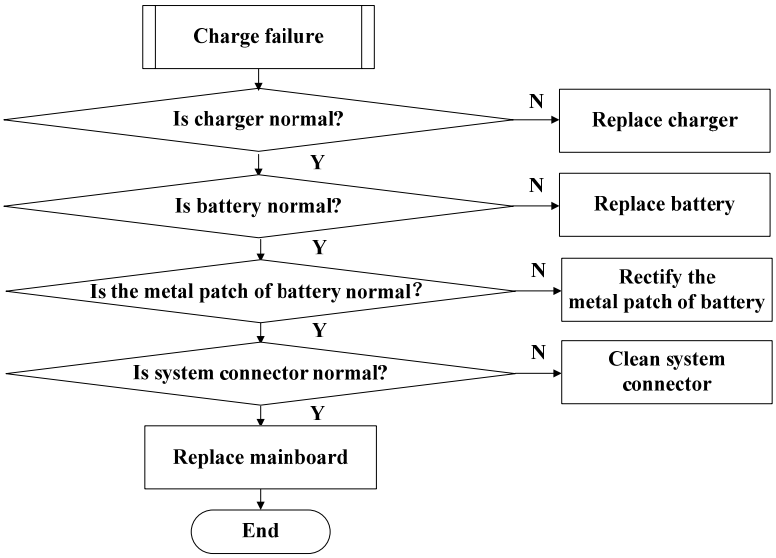
3.3 Hang



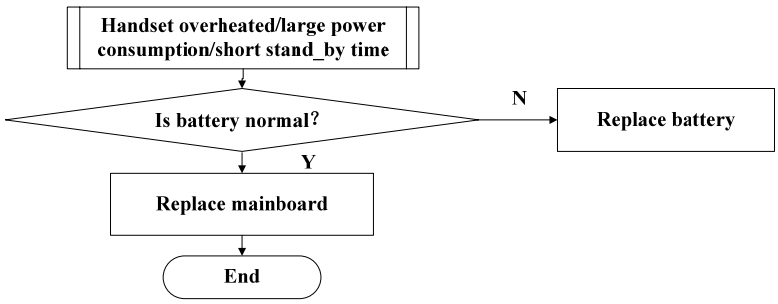
3.4 Automatically Switch Off



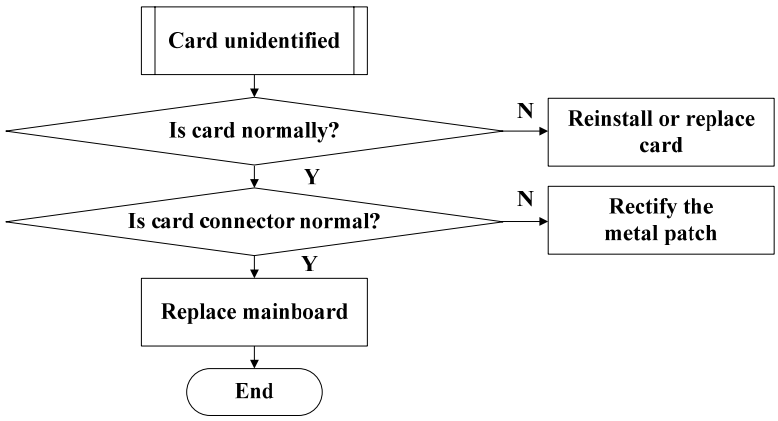
3.5 Charge Failure



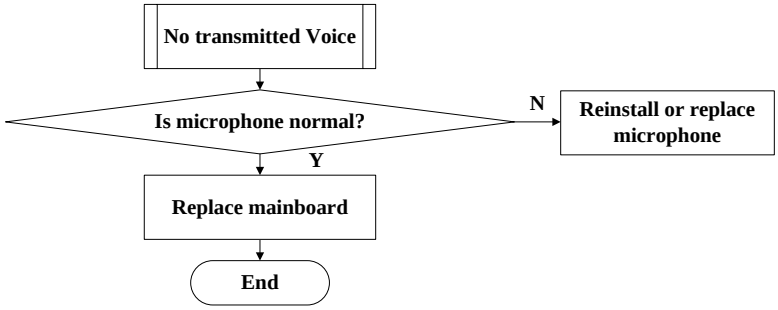
3.6 Handset Overheated/Large Power Consumption/Short Stand _by Time



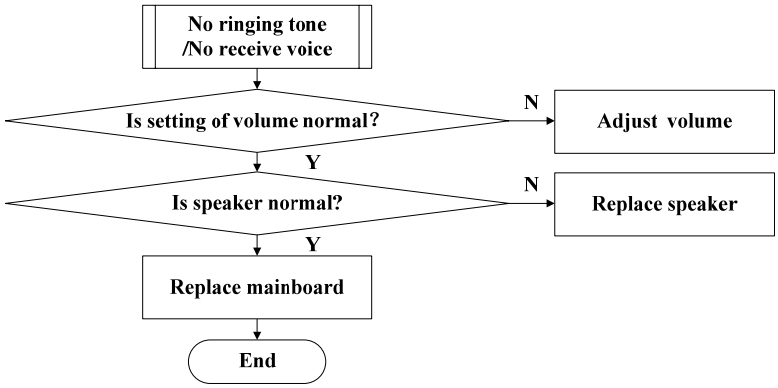
3.7 Card Unidentified



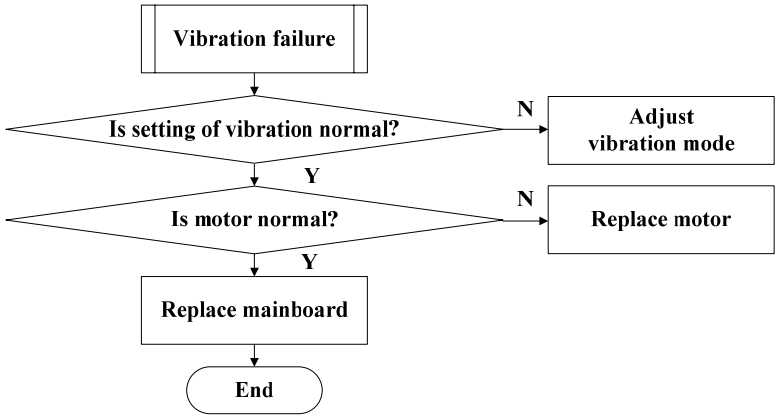
3.8 No Transmitted Voice



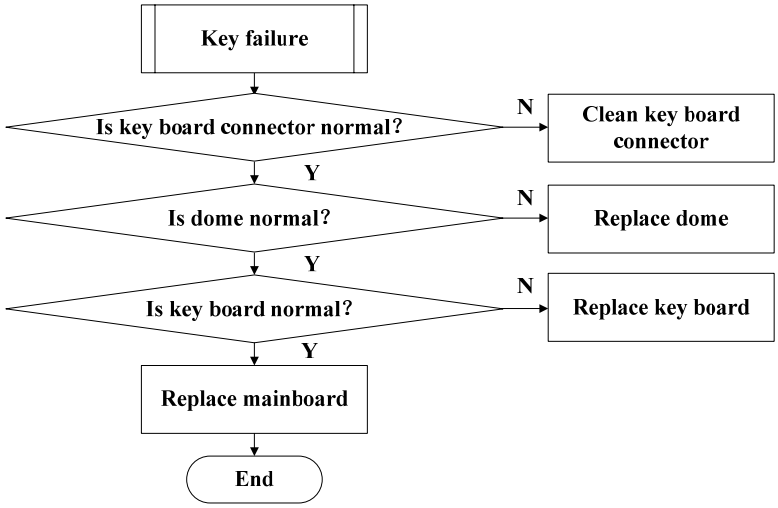
3.9 No Ringing Tone/No Receive Voice



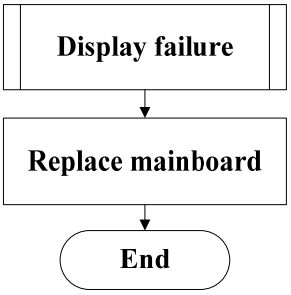
3.10 Vibration Failure



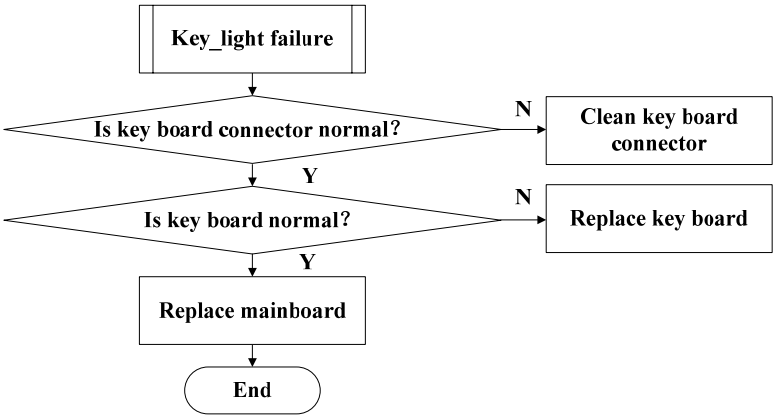
3.11 Key Failure



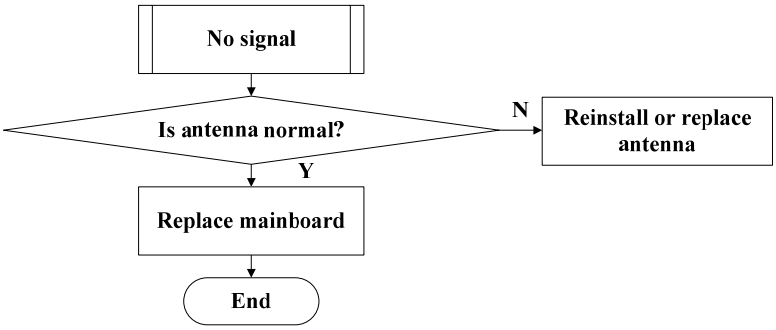
3.12 Display Failure



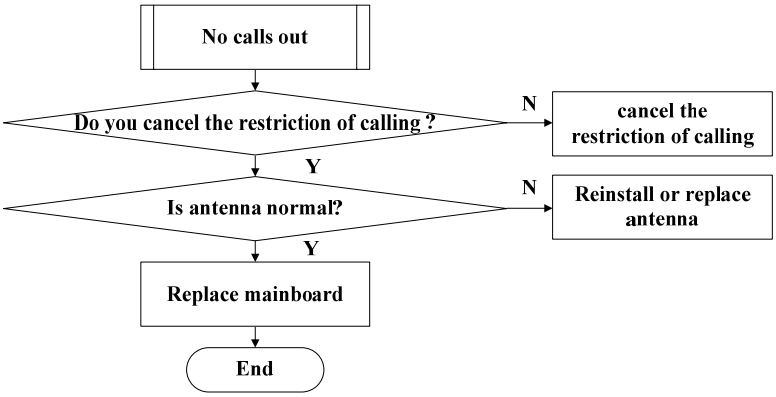
3.13 Key-light Failure



3.14 No signal



3.15 No Calls Out



4. Troubleshooting Flow Chart (Level 2)

4.1 Switch-on Failure

Repair Steps

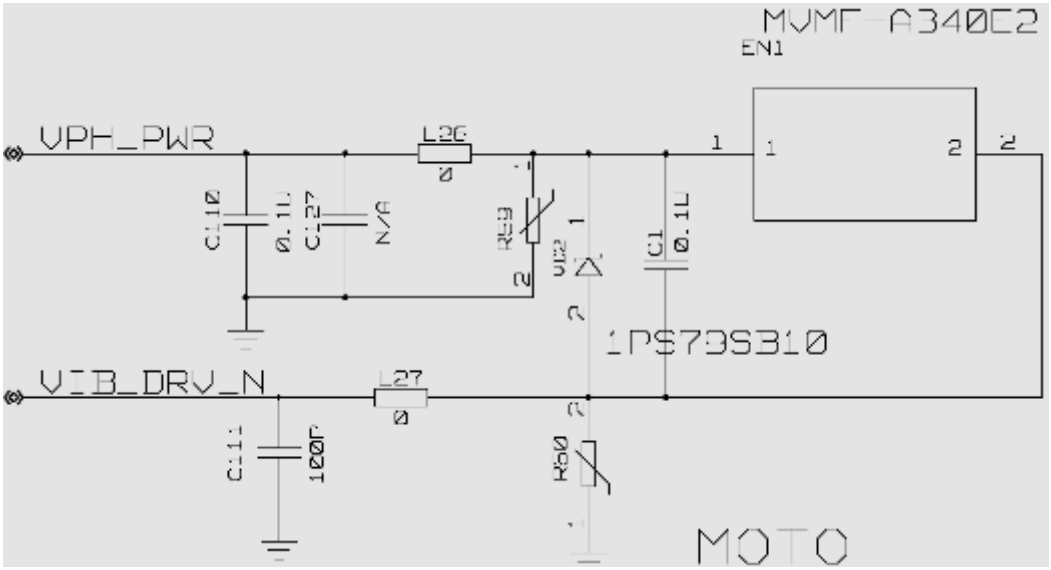
- Check the outputs of LDO
- Check the signal of TCXO. Detect the third pin of it when pressing the switch or connecting it to power supply, replace TCXO if it isn't 19.2MHz; if it is, detect TCXO-OUT (19.2Hz) on the right side of FLASH, check the solder of QSC6010 when TCXO-OUT is not 19.2MHz. if the clock signal is normal, check the main chipset (QSC6010) or the solder of the FLASH
- Check the solder of current clock G2 when handset automatically restart or 'pmapp.c01074' appears on LCD

4.2 Display Failure

Repair Steps

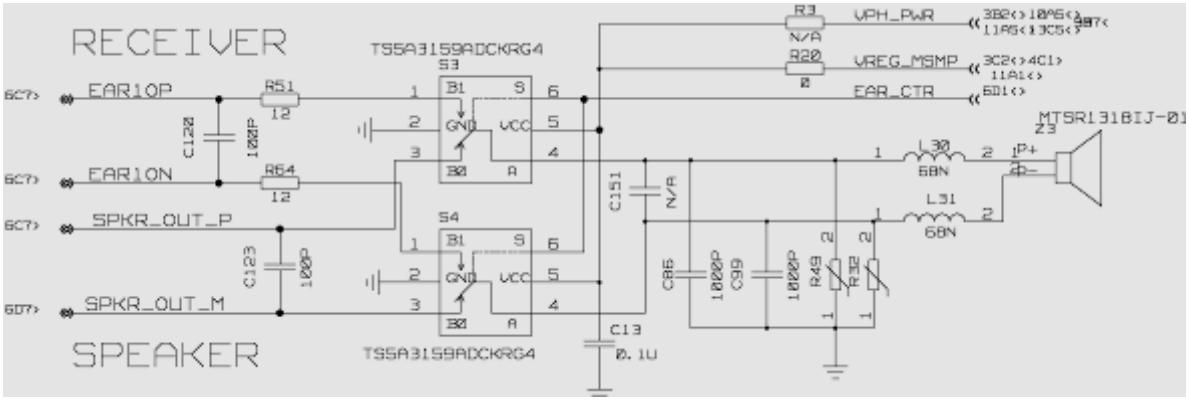
- Check the solder of FPC
- Check LCD
- Check the solder of resistor/capacitor on the LCD circuit

4.3 Vibration Failure



- Check the setting is well or not
- Replace the motor
- Detect voltage output of the motor, you need to check the driver signal of motor if there is no voltage output, low voltage of the driver signal is normal

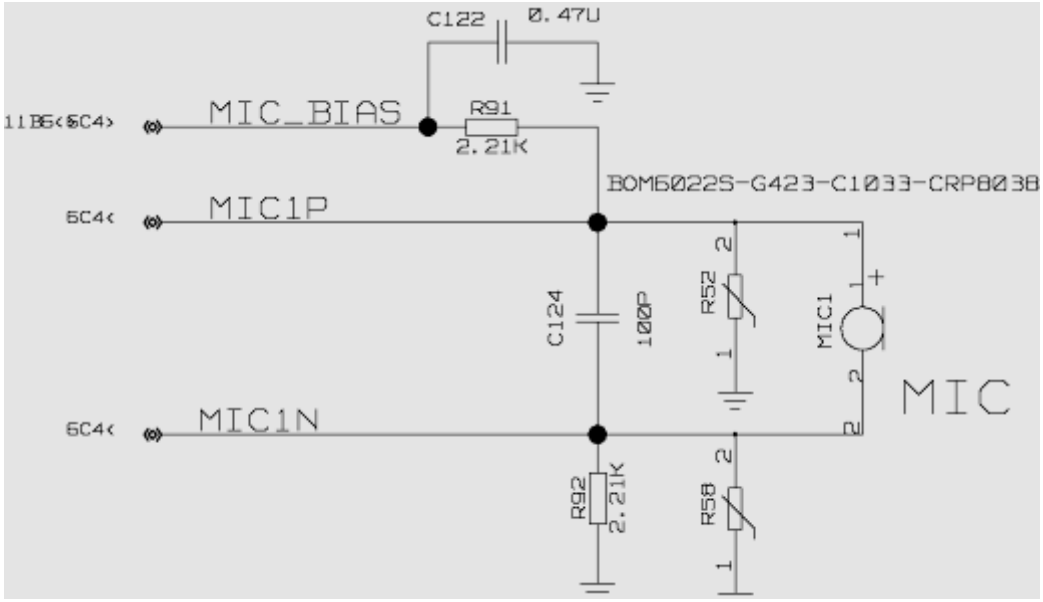
4.4 No Ringing Tone/No Receive Voice



Repair Steps

- Check the setting is well or not
- Replace the receiver
- Check the solder of L30/L31 and ESD components R32/R49
- Check the solder of audio switch

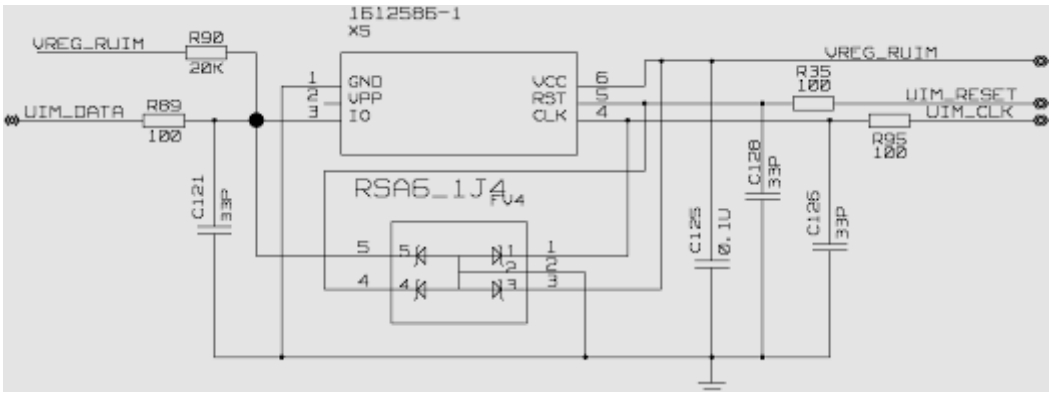
4.5 No Transmitted Voice



Repair Steps

- Check the setting is well or not
- Replace MIC
- Check the solder of related filtering and components in bias circuit

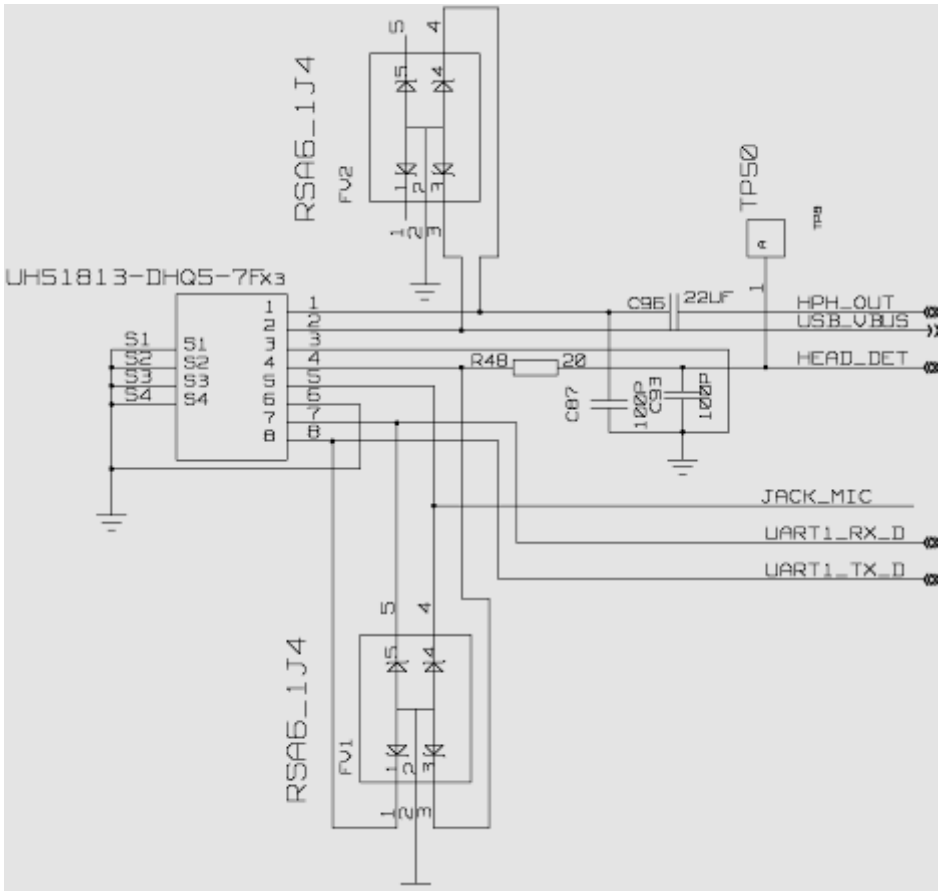
4.6 Card Unidentified



Repair Steps

- Detect the voltage of VREG_RUIM is normal or not
- Check whether the pins of the UIM card connector can touch well with the card connector, then check the solder

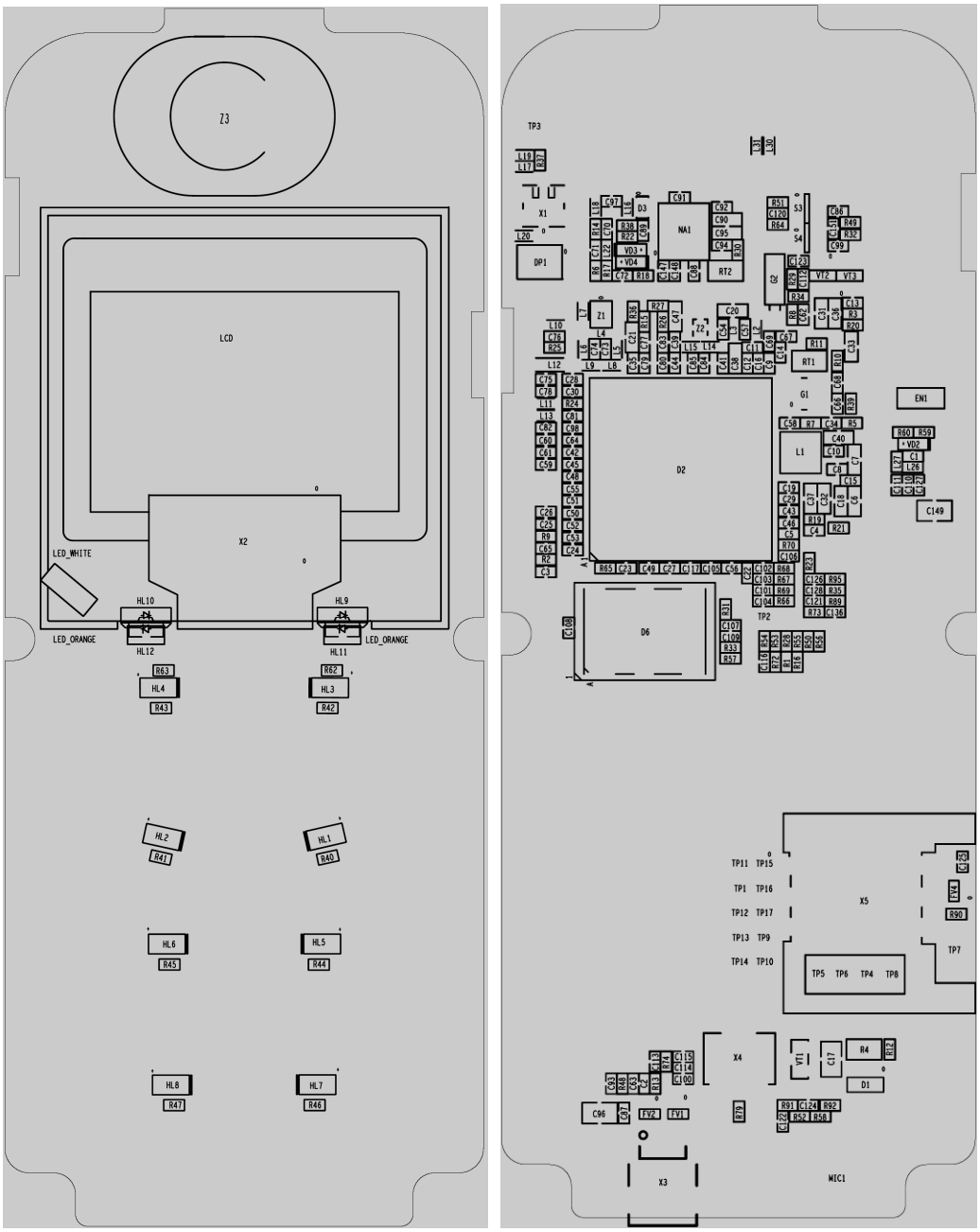
4.7 Charge Failure



Repair Steps

- Check the solder of connector (X3)

5. PCB Board Position Diagram



6. BOM

6.1 Complete Installation BOM

ZTEC300CDMA1X Digital Mobile Phone Complete Installation BOM		
SN	**Material Code**	**Material Name**
1	126754450003B	ZTE C310 Mainboard
2	055401002249	ZTE C310 Back cover
3	055402100011	ZTE C310 DOME
4	056465000082	V767 Screws
5	035040100039	Speaker & Receiver
6	035040300039	MIC
7	035070100031	Motor
8	055401002250	ZTE C310 Battery cover

6.2 Mainboard BOM

ZTEC310CDMA1X Digital Mobile Phone ZTEC310 Main board ZTEC300MB BOM			
SN	**Material Code**	**Material Name**	**Board Position Number**
1	002030200008	SPDT Analog Switch	S3,S4
2	006030200043	COMBOFLASH	D6
3	012090200039	QUALCOMM Single Chip	D2
4	015010200072	RF power amplifier	NA1
5	030012000011	SMD Crystal Resonator	G2
6	030012000048	SMD Crystal Resonator	G1
7	036010100016	SAW Filter	Z1
8	036010100171	SAW Filter	Z2
9	036010200017	SAW Duplexer	DP1
10	042120100016	3 Position Spill Type Battery Connector	X4
11	042120200013	UIM card slot	X5
12	042120300016	8pin Mini-usb Socket	X3
13	042120700001	RF Test Jack (socket)	X1

OMIT（Note: The primary elements position diagrams are given. If all the main board BOMs are needed, please make an application to our document base.）