

Technology Document

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Service Manual (Level 1, 2)

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ZTE CORPORATION

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1. Product Summarize

1.1 Specification

- ✧ **Network:** CDMA
- ✧ **Dimension (high*width*ply) :** 100mm*43.3mm*13.4mm
- ✧ **Weight:** 85g (including standard battery)
- ✧ **Antenna:** Inner antenna
- ✧ **Color:** Black and white
- ✧ **LCD:** FSTN color film 96*64 pixels
- ✧ **Talk Time:** 2~4h
- ✧ **Standby Time:** 80~160h



1.2 Main Functions

- ✧ **Super thin design**
- ✧ **Black and white color**
- ✧ **Hand free record**
- ✧ **Brew download**
- ✧ **Hi-quality stereo polyphone ring tones**
- ✧ **Games**
- ✧ **High capacity of telephone books :** Up to 200 telephone numbers. Group the telephone books.
- ✧ **Receive SMS:** Up to 40.
- ✧ **Send SMS:** Up to 40.
- ✧ **Dialing Quickly:** 2-99 can be set
- ✧ **Send SMS in group**
- ✧ **12 kinds of hi-quality stereo polyphone ring tones**
- ✧ **Ring quantity:** 20(Incoming Tel)+6(SMS)+5 Recording ring (Incoming Tel)
- ✧ **Support BREW ring download**

- ✧ **Support UTK function**
- ✧ **Record function**
- ✧ **Support to use earphone**
- ✧ **Support hand free function**
- ✧ **Inner vibrate**
- ✧ **Support Chinese/English/symbol/figure input method**
- ✧ **Calculator, alarms, scheduler**

1.3 Inner Type

Inner Type	Outer Type
ZTEX175	ZTEX175

2. Inner Structure and Elements

2.1 Disassembly Flow



Tools (From left to right):
Anti-electrostatic glove,
Anti-electrostatic wrist,
Screwdriver,
Tweezers,
Disassembly housing tool.

- ◆ **Take out battery. Pay attention to the positions of six screws.**



- ◆ Take out the screws.



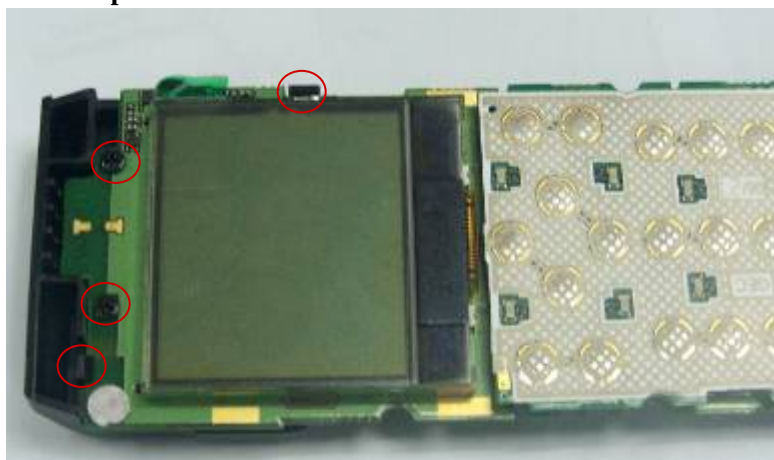
- ◆ Separate the front cover.



- ◆ Take out MB.



- ◆ Pay attention to the positions of the screws and locks.



- ◆ Take out the screws.



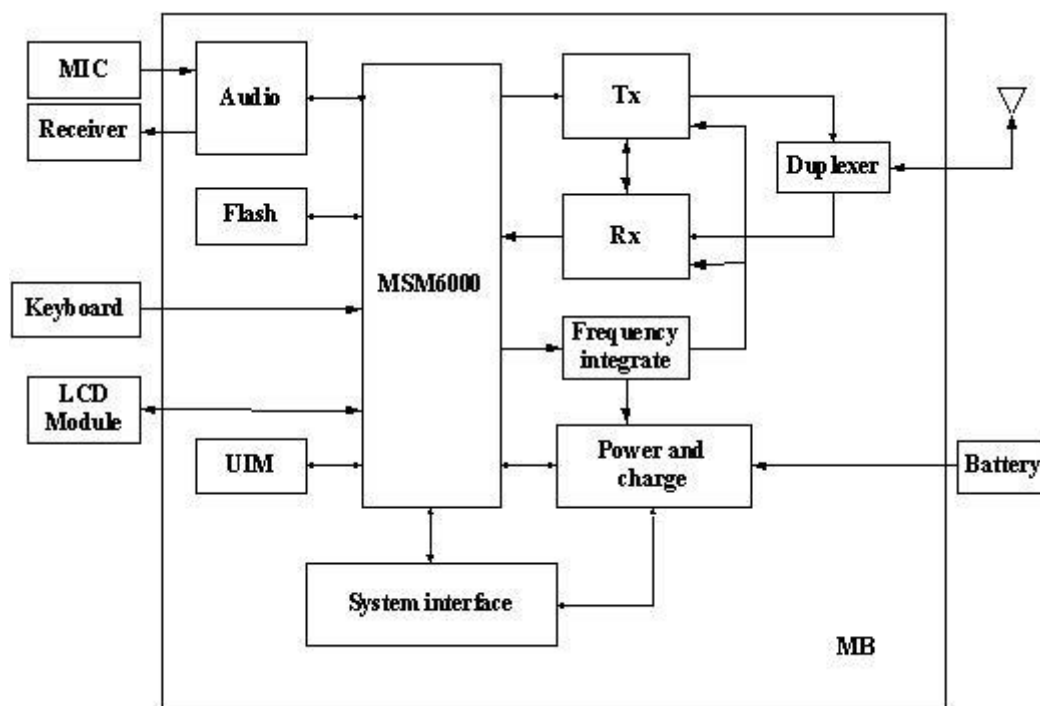
- ◆ Pay attention to the connection positions of motor and receiver.



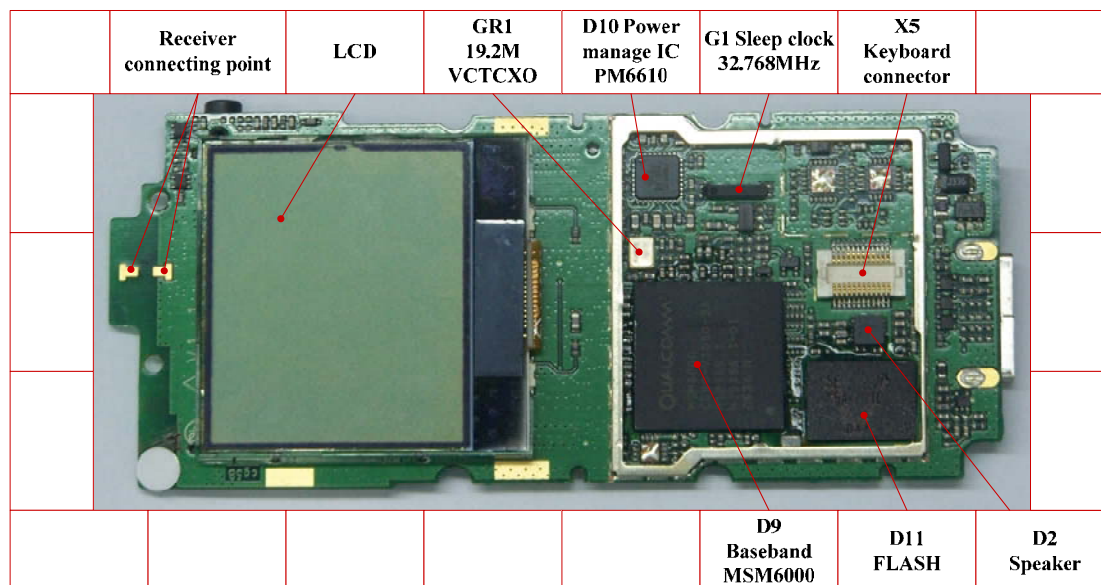
2.2 Composing



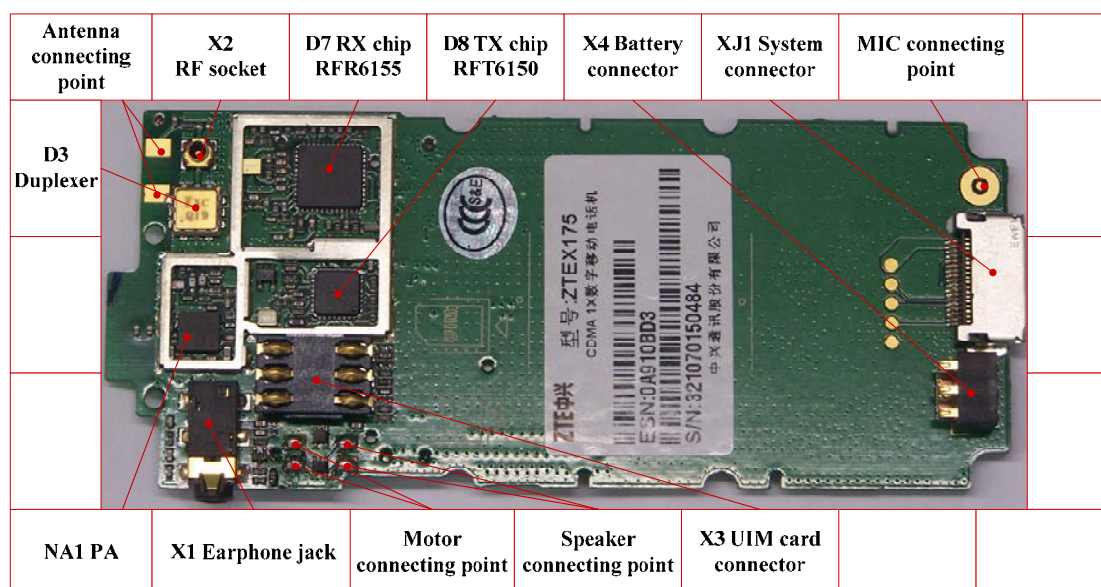
2.3 Block Diagram



2.4 Basic Description

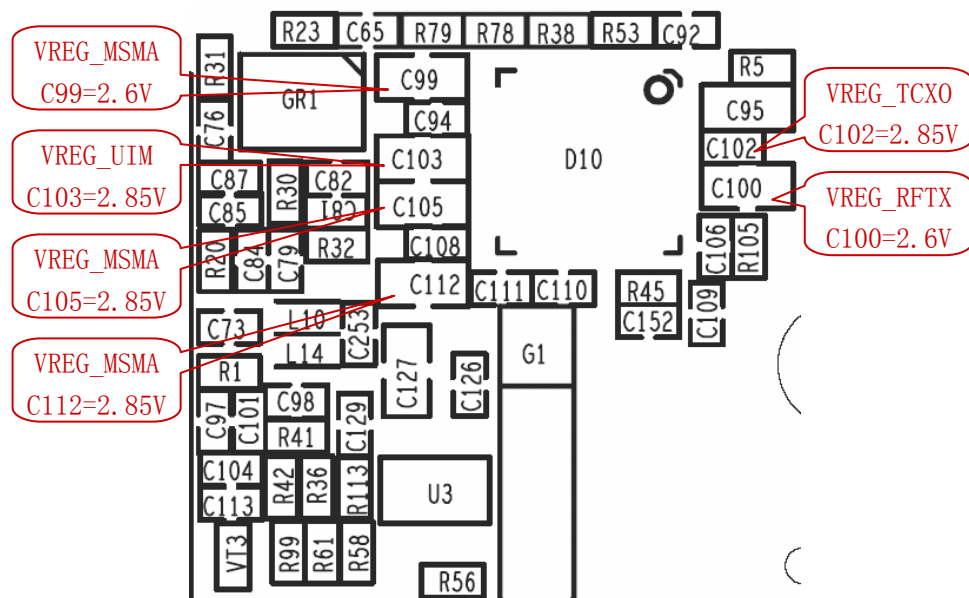


MB Top Distributing



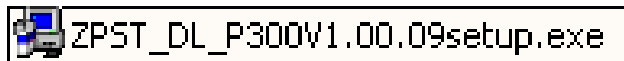
MB Bottom Distributing

Name	Voltage	Test point	Function
VREG_TCXO	2.85V	C92	Power supply to TCXO of RF circuit.
VREG_RFTX	2.6V	C100	Power supply to RFT6122 of TX circuit.
VREG_MSMP	2.85V	C112	Power supply to baseband circuit.
VREG_MSMA	2.6V	C99	Power supply to analog circuit of the baseband.
VREG_MSMC	2.85V	C105	Power supply to the core of MSM6000.
VREG_RUIM	2.85V	C103	Power supply to UIM card.



- ◆ **Version test dictate: *983*837#**
The newest version: CH_X175V1.0.1B02
- ◆ **Function test code: *983*3641# ----OK----** *
Note: Function automatic test includes: display, ringing, vibrator, keyboard (press power key finally), and audio (press power key twice and then exit.)

- ◆ **Software download illuminate**
Each mobile to be repaired should be upgrade to the latest version, and each repaired mobile should be in the latest version.
- ◆ **Install the download platform**
ZPST_DL_P300V1.00.09setup

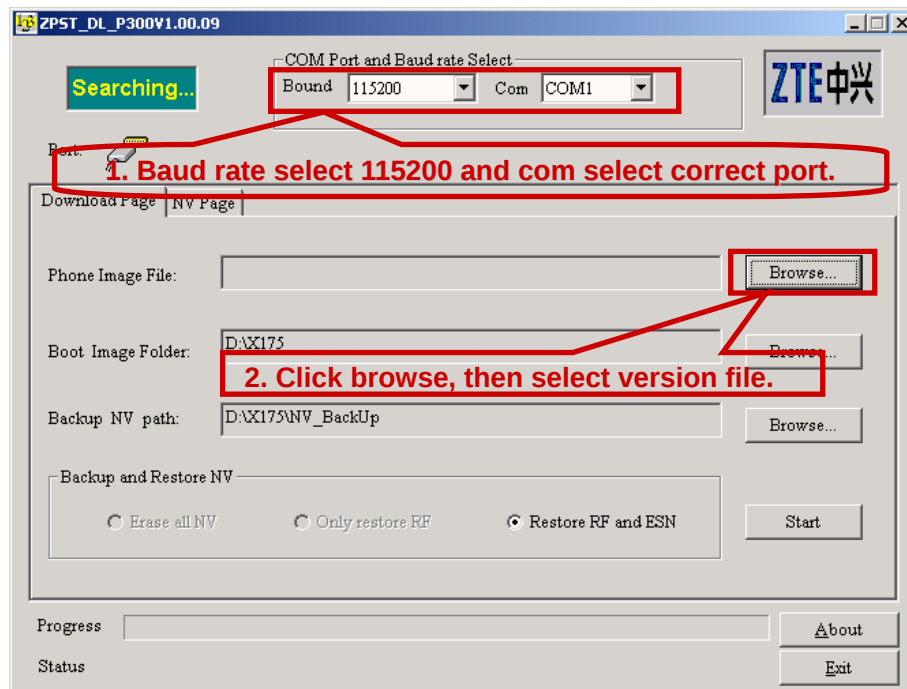


◆ **Data cable**

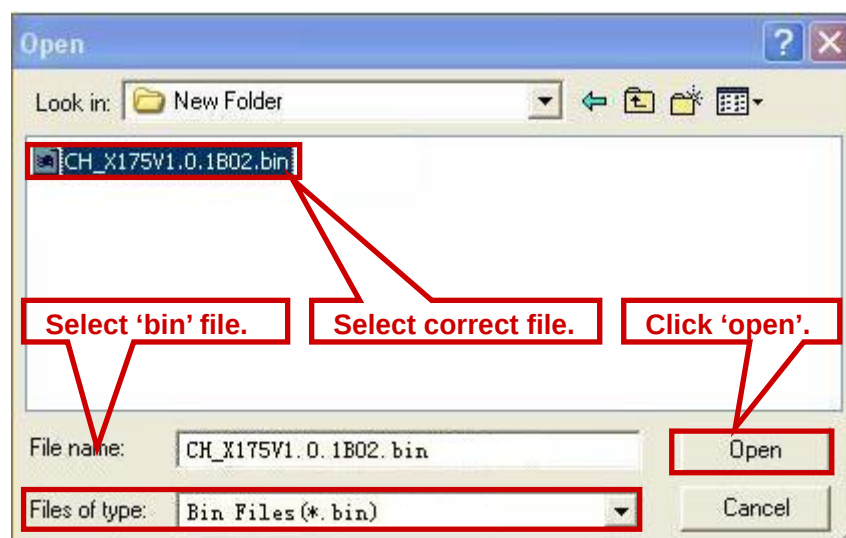
C700 download data cable (code: 050602800284)



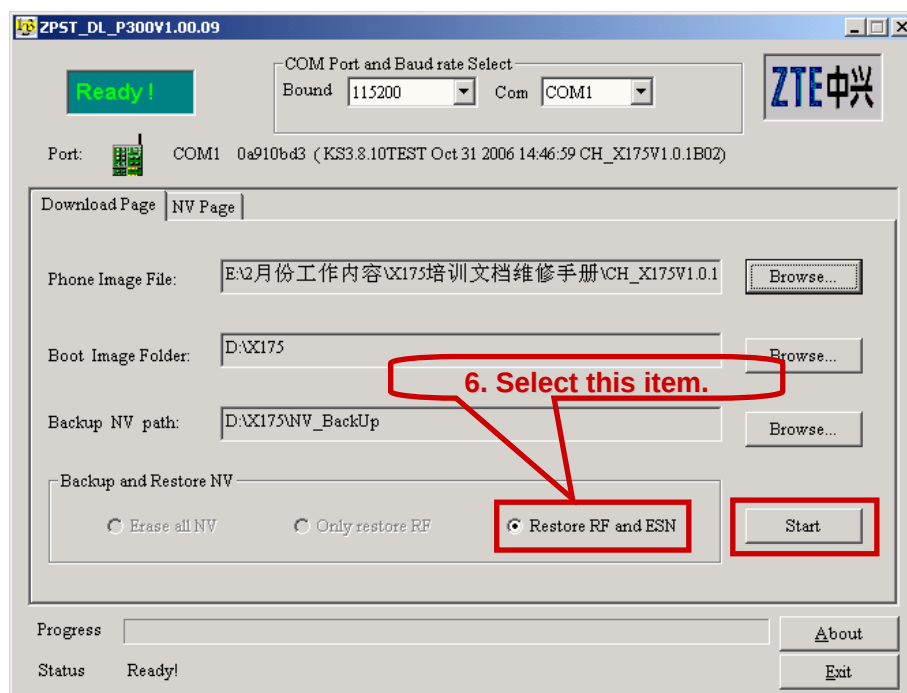
◆ **Click the icon twice after installing.**



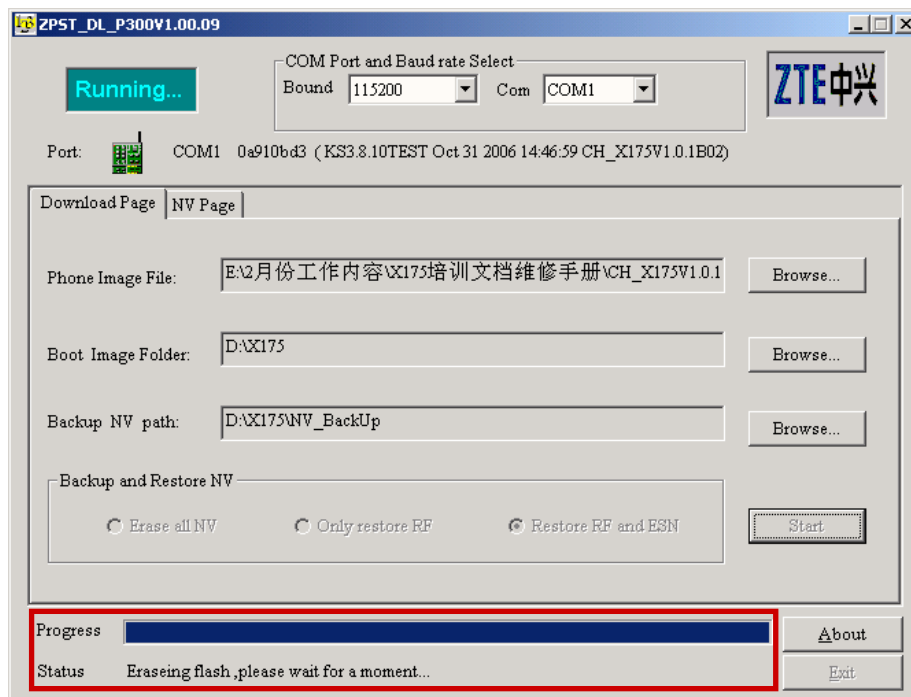
◆ **Select correct version.**



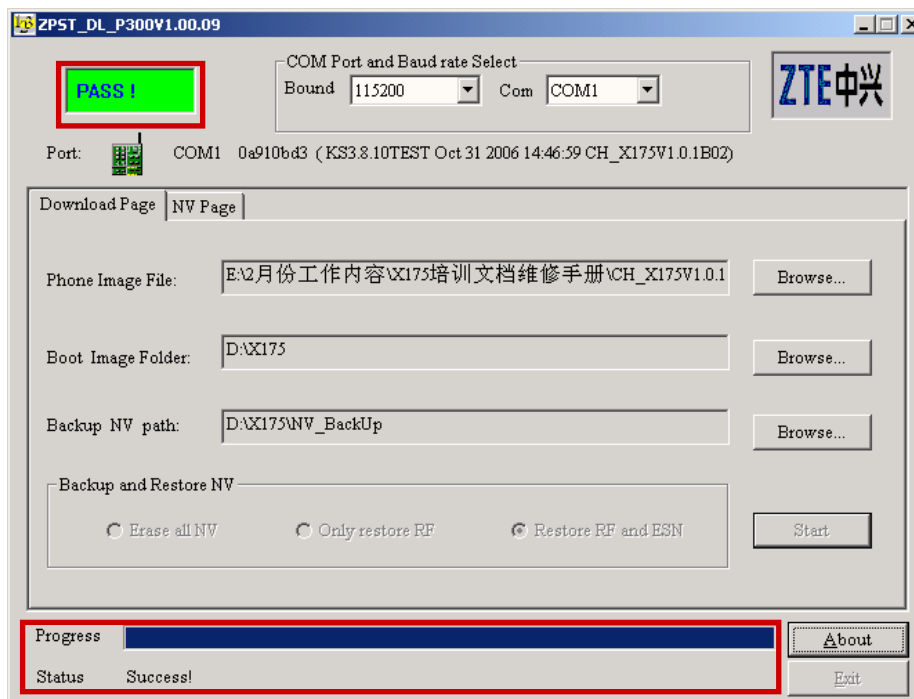
- ◆ Handset connects with data cable. Press the key to switch on. (The battery should keep at least two grids electricity.)
- ◆ Click 'Start', then begin to download



- ◆ Downloading.

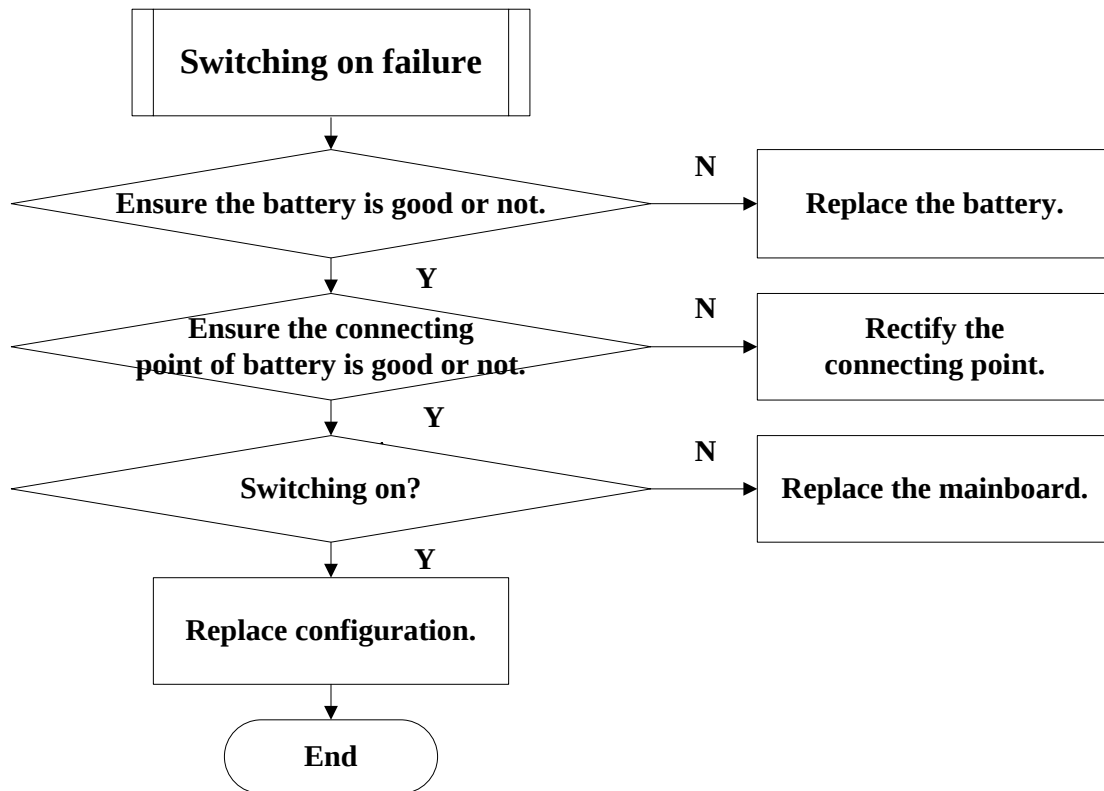


◆ Finish.

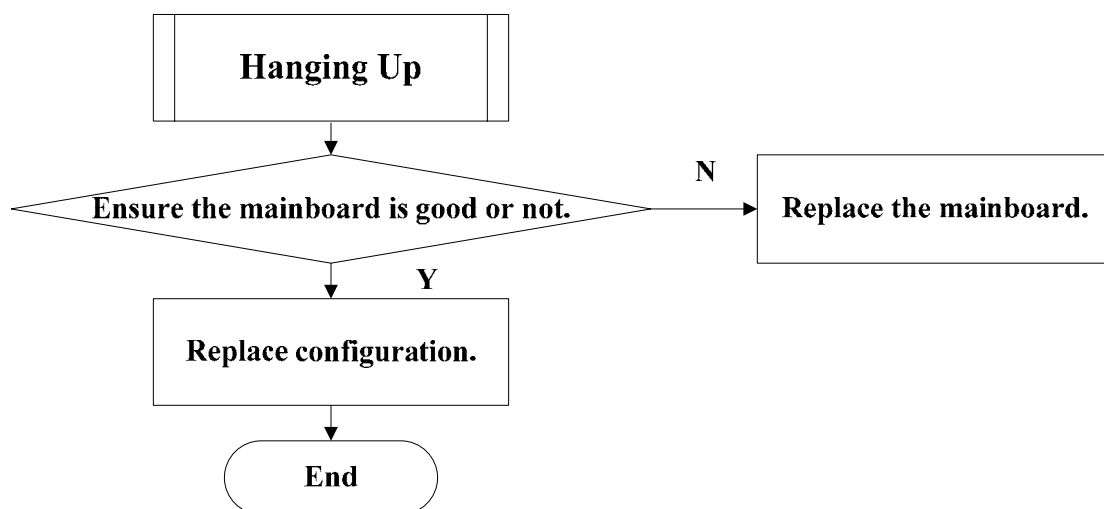


3. Basic flow chart of familiar troubleshooting (Level 1)

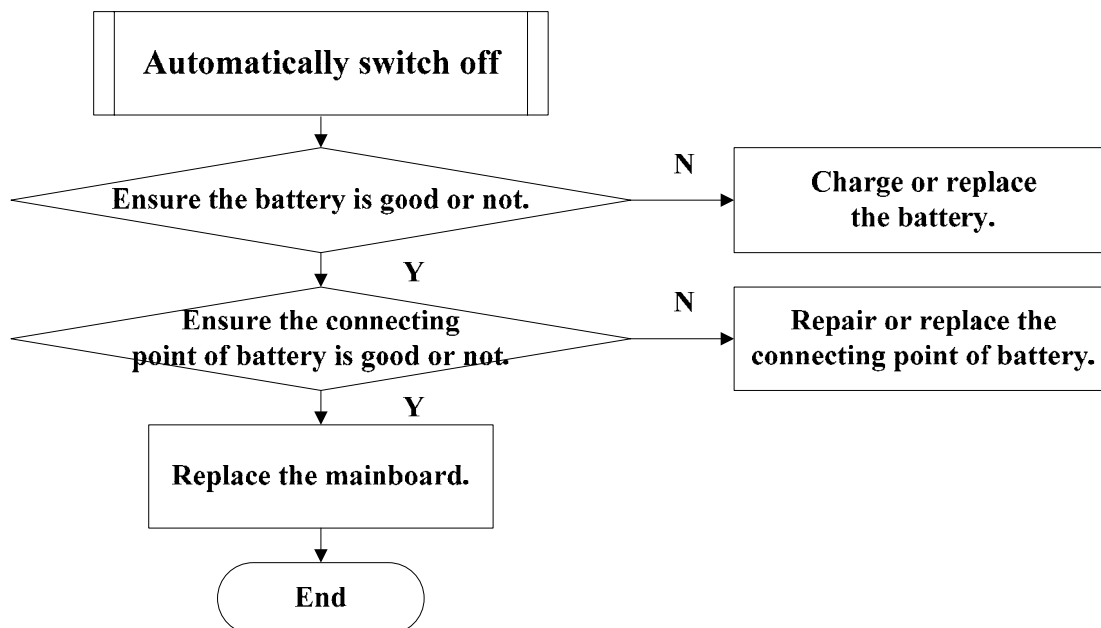
3.1 Switching On Failure



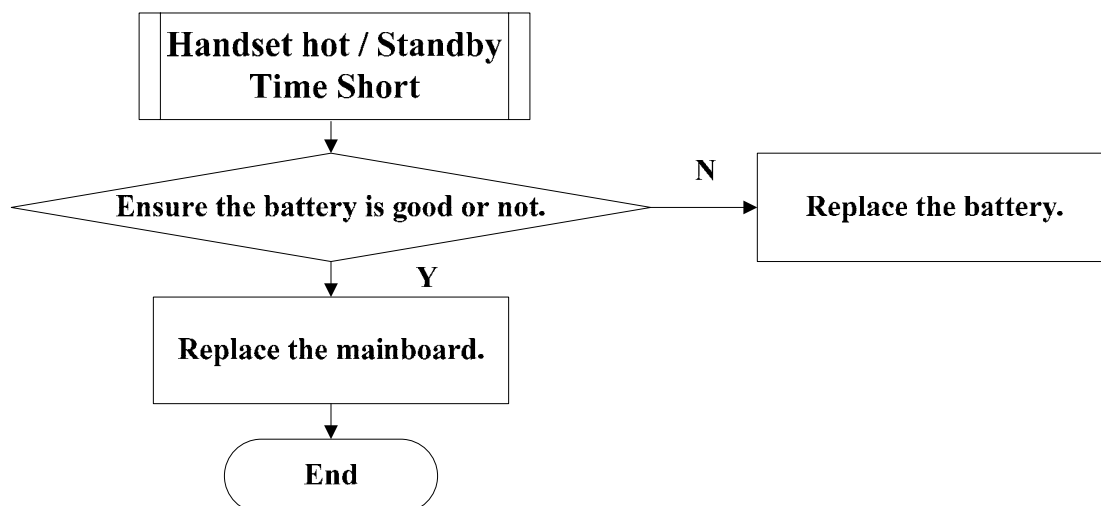
3.2 Hanging Up



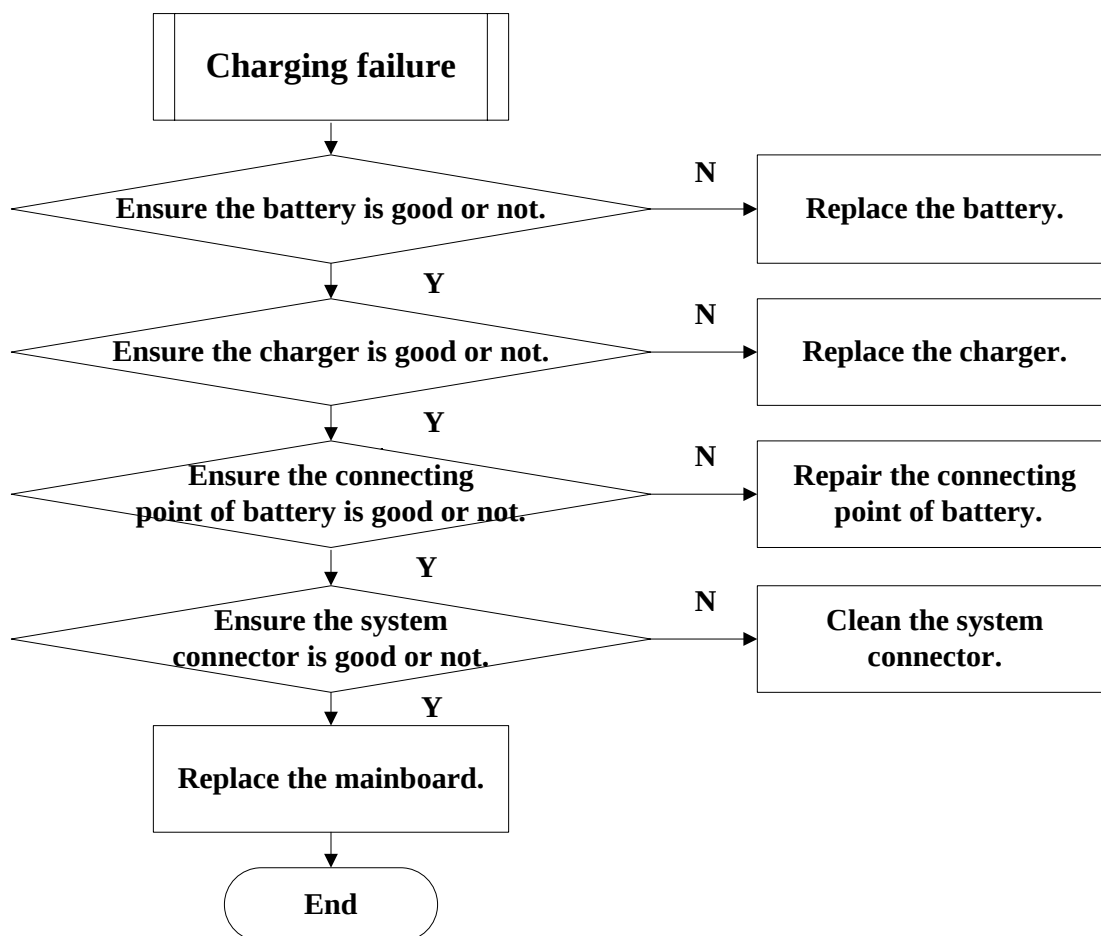
3.3 Automatically Switch Off



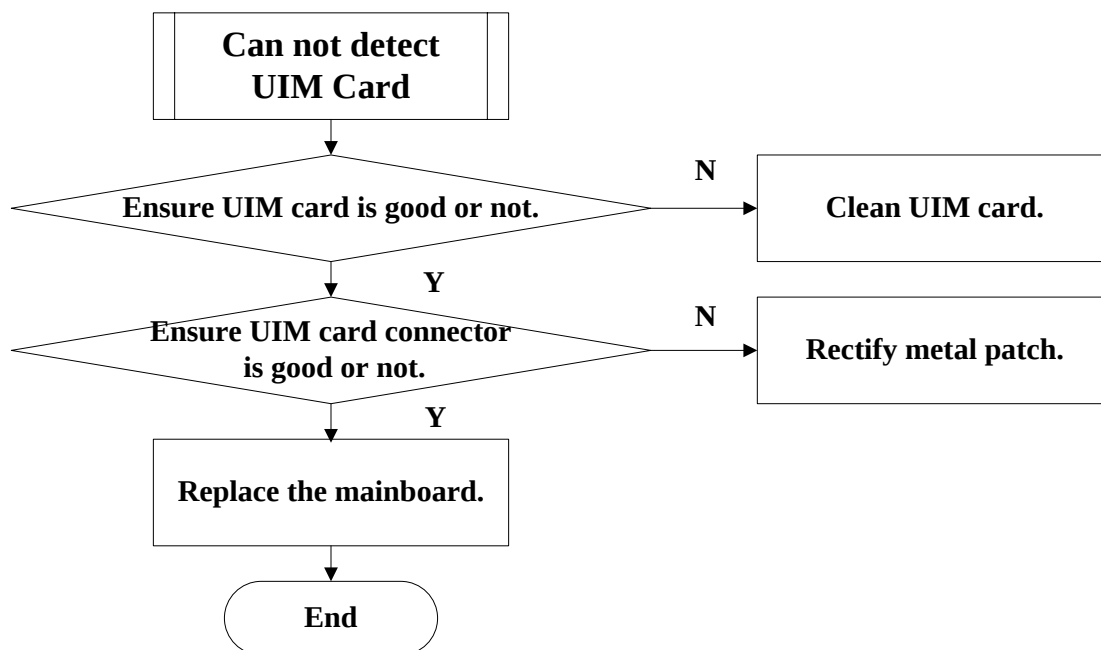
3.4 Handset Hot



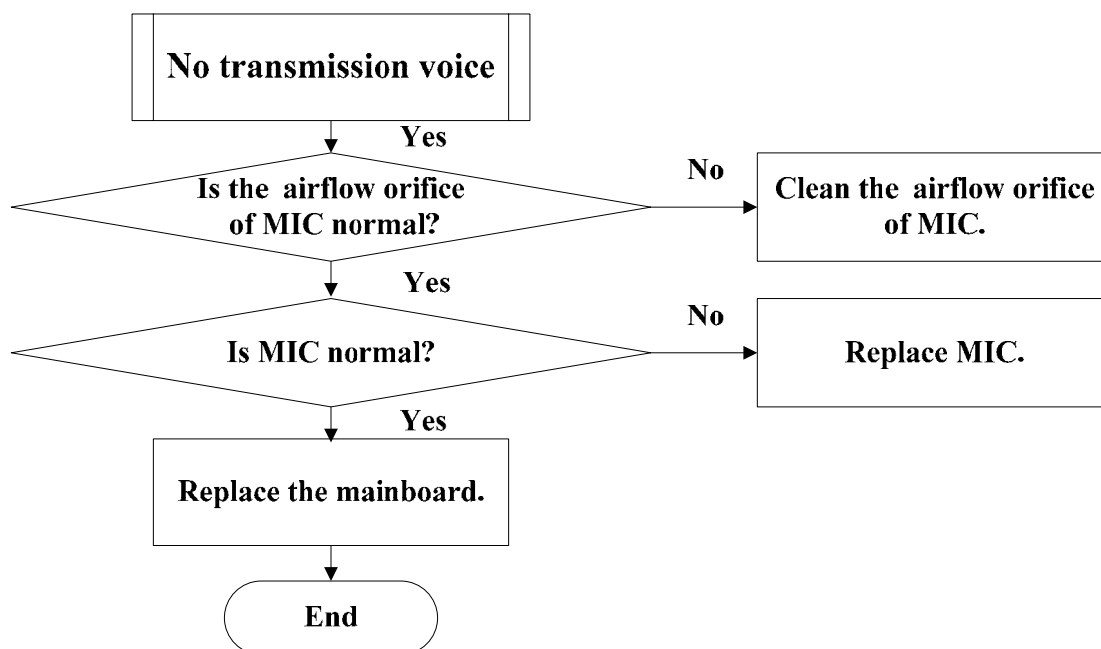
3.5 Charging Failure



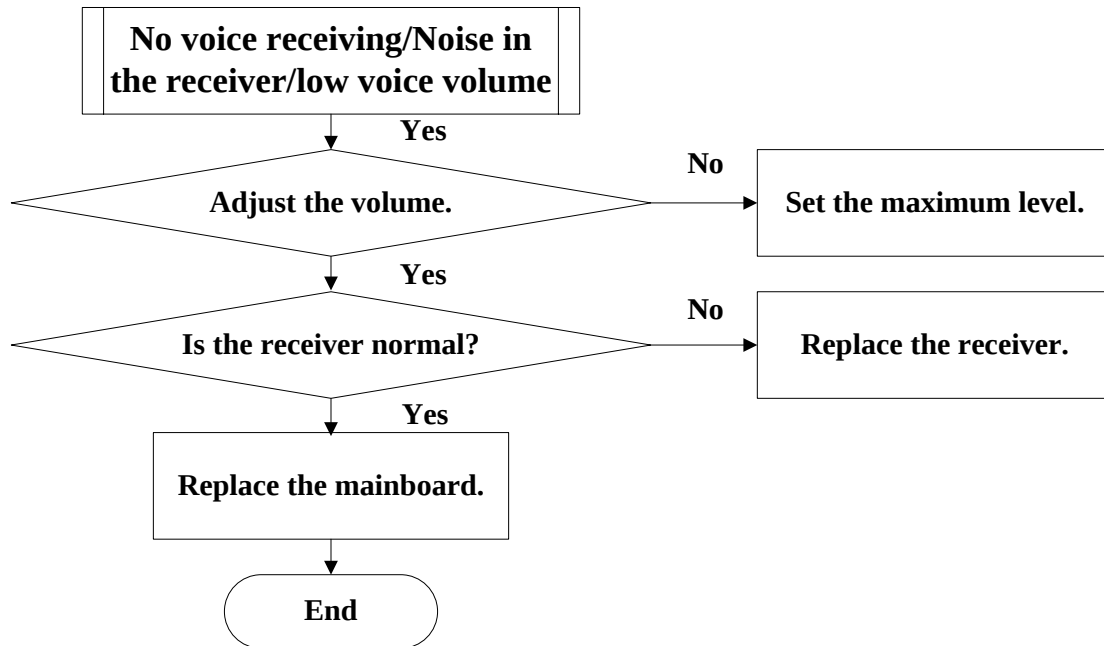
3.6 UIM Card Failure



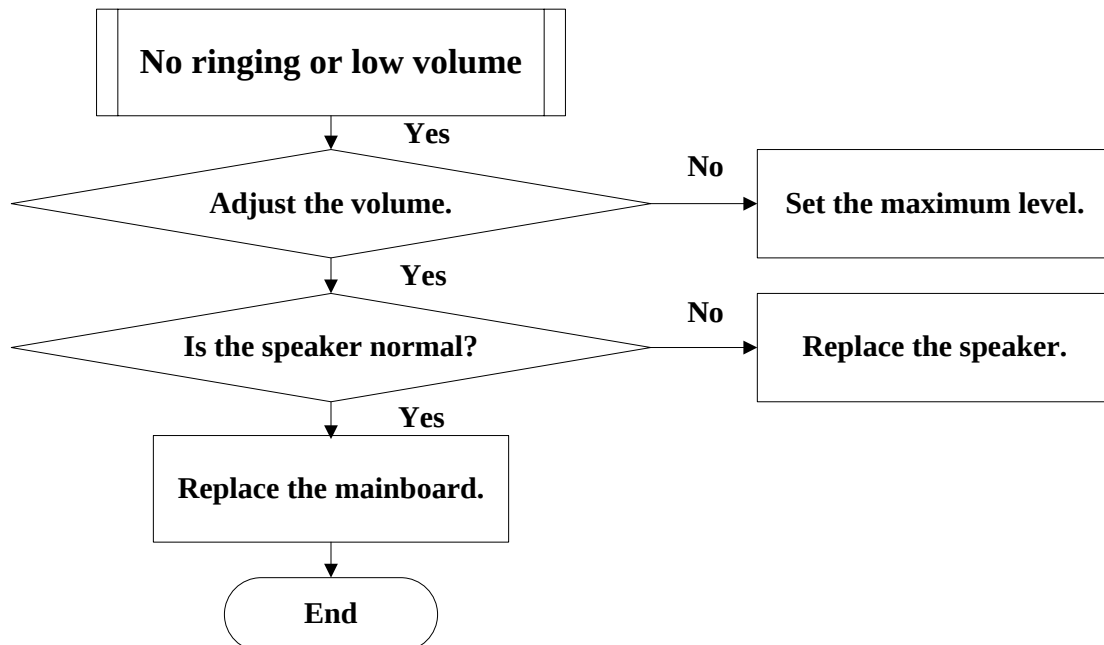
3.7 No Transmission Voice



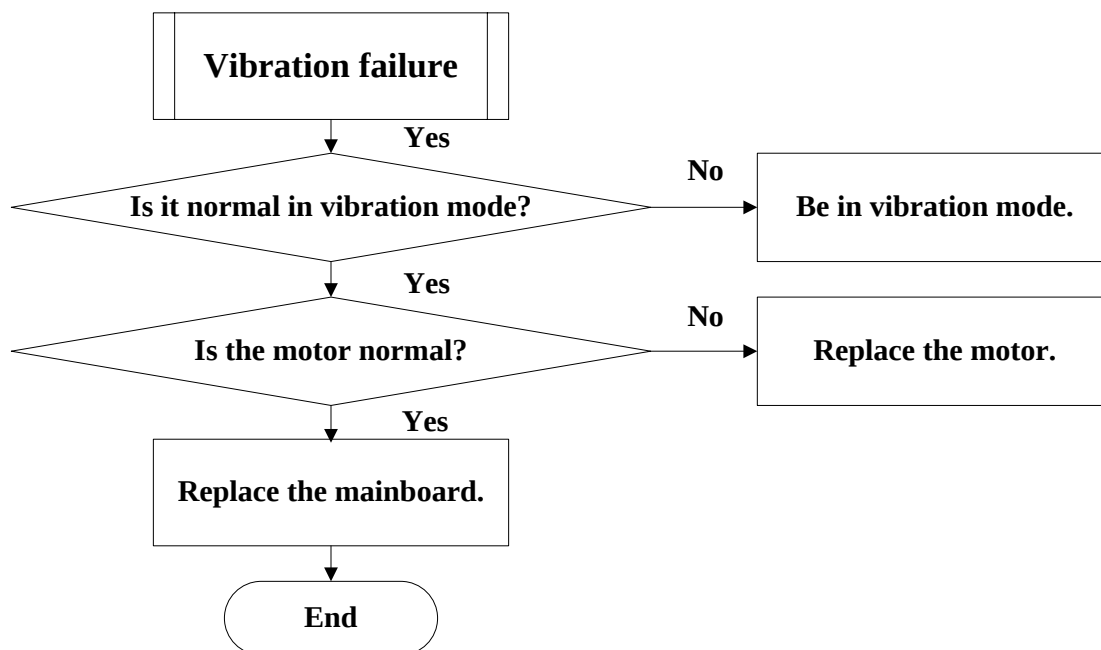
3.8 No voice receiving/Noise in the receiver/low voice volume



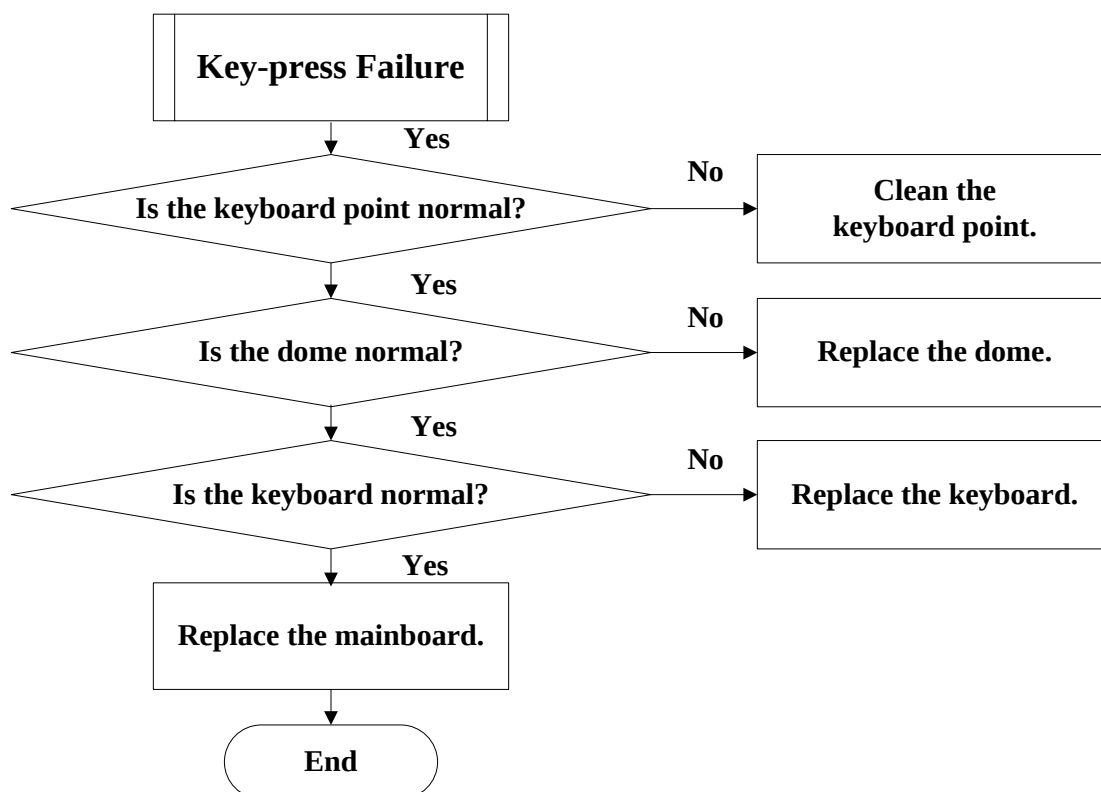
3.9 No ringing or low volume



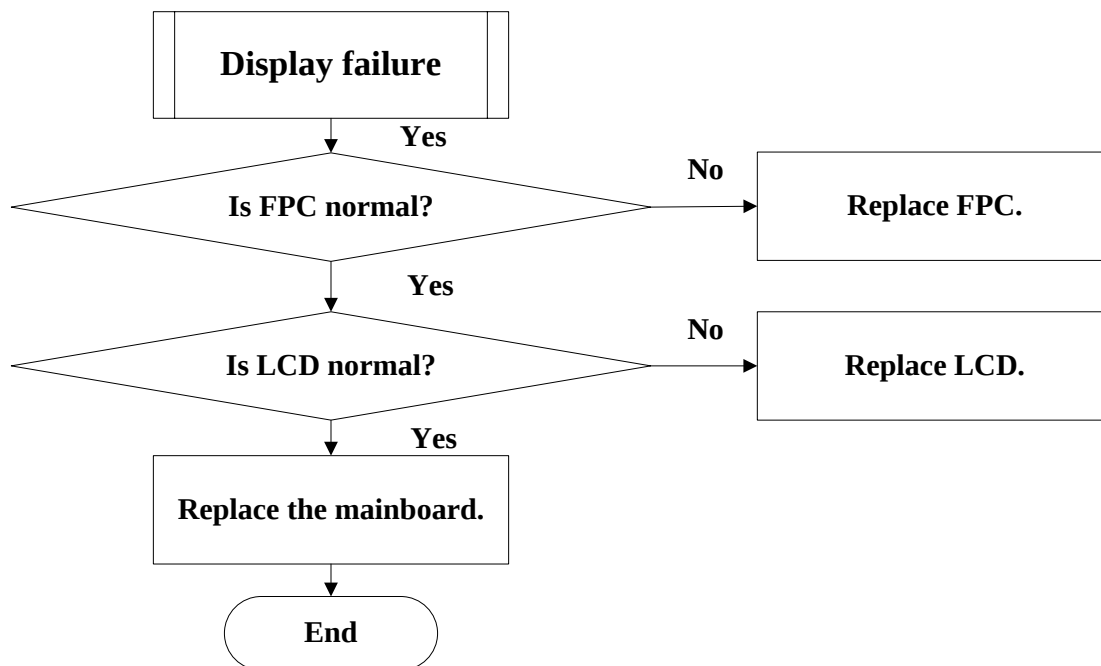
3.10 Vibration Failure



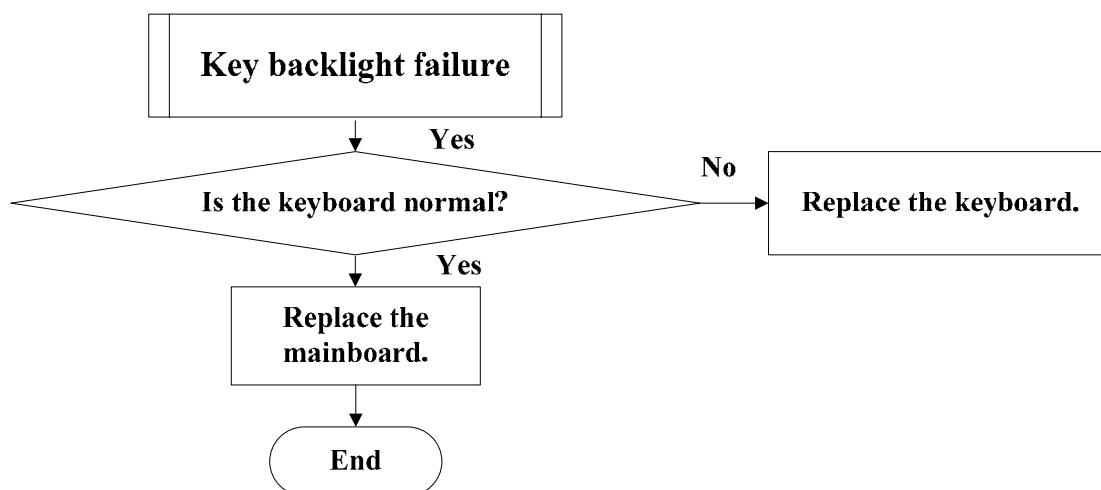
3.11 Key-press Failure



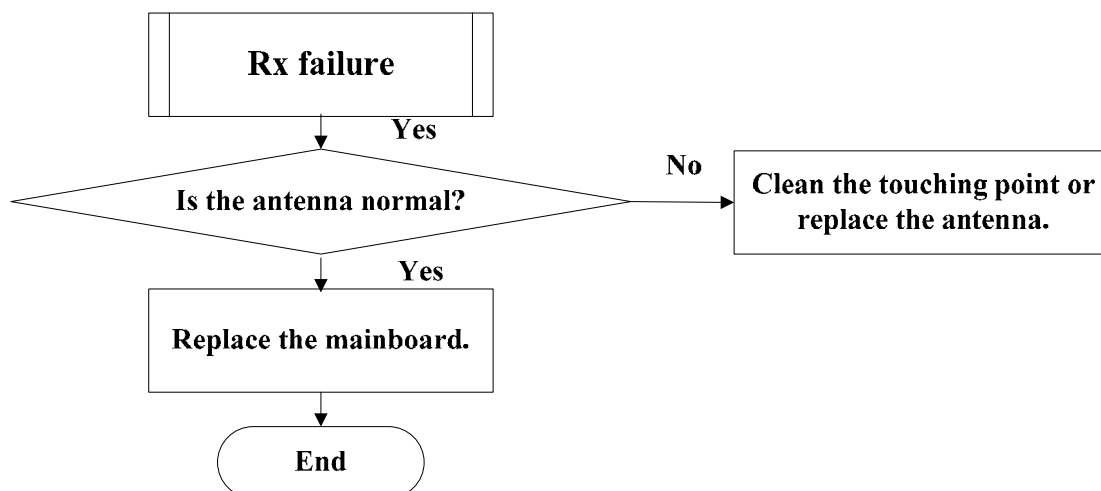
3.12 Display Failure



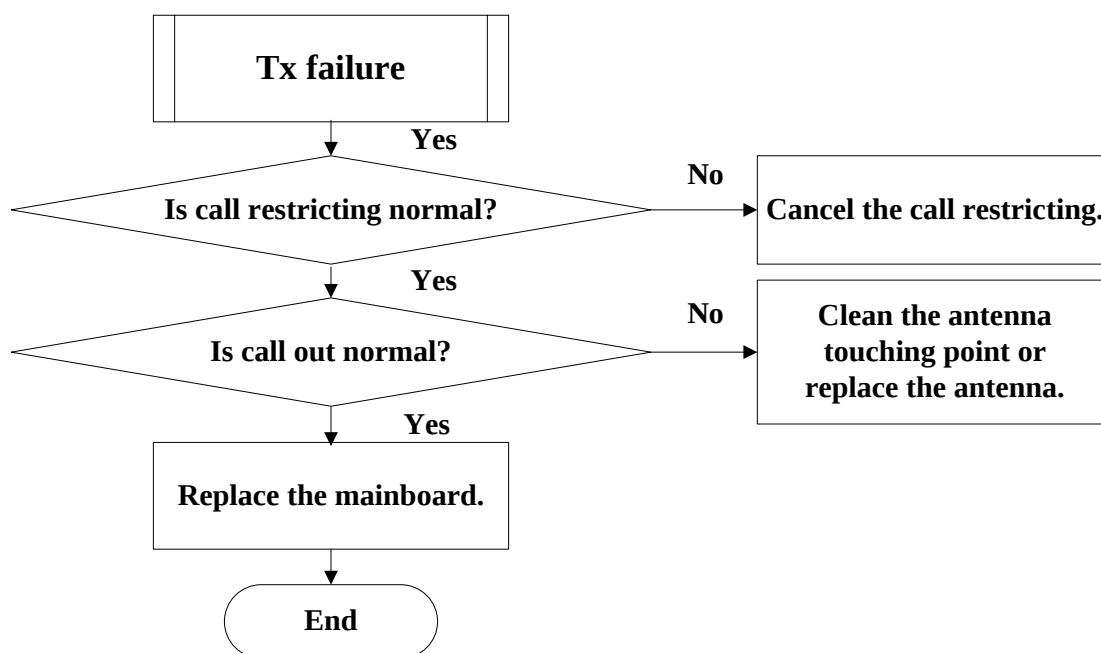
3.13 Key Backlight Failure



3.14 Rx Failure



3.15 Tx Failure



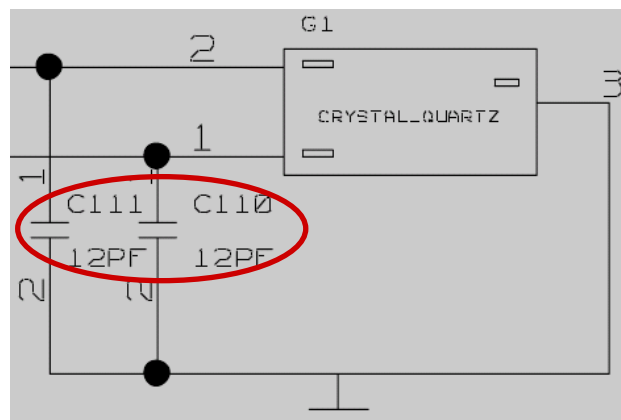
4. Basic flow chart of familiar troubleshooting (Level 2)

4.1 Switching On Failure

Repair Steps:

- Download the software again.
- Test system connector 1pin=4.2V? If not, replace connector/ESD/PA.
- Test the voltage of R89/VD6=4.2V? Check the voltage of PM. If it isn't normal, check the soldering of VD6.
- Check TCXO and the output of P/C/A circuit if they are normal. If not, solder again or replace them.
- Check PS_HOLD signal (R130) if it is high. If it's low, replace R44 with one 10K resistance. If it can be switched on, solder again or replace MSM6000.
- If PS_HOLD signal is normal, check PM_RESET signal of R38 if it is high. If not, solder again or replace PM.
- Check R32=2.85V? If it is normal, check the output frequency of GR1 if it is 19.2MHz. If not, solder again or replace it.
- Replace MB.

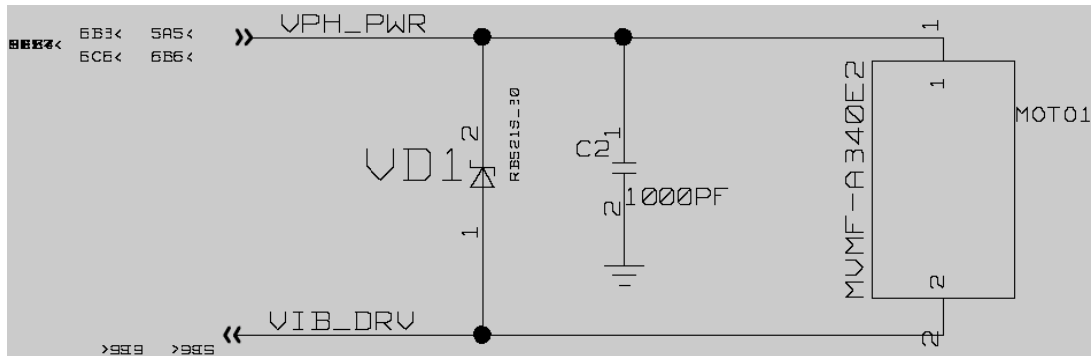
4.2 Automatically Restart



Repair Steps:

- Download the software again.
- Check C110/C111.
- Check 1pin of G1. Check the input of sleep clock if it is normal. Check this signal at the moment of switching on. The handset will restart if check it after switching on. The signal should be 32.768KHz. If not, solder again or replace PM.
- Check the output if it is 32.768KHz. If not, solder again or replace MSM6000.

4.3 Vibration Failure



Repair Steps:

- Check VD1 and C2 if they are soldered well.
- Vibration test. Check VIB_DRV signal if its output is low. If high, solder again or replace PM.
- If it is fail to solder again or replace PM, solder again or replace MB.

FAQ:

- Check VD1 if it is damaged.
- Check motor cable if it is fixed or soldered well.

4.4 LCD Display Failure

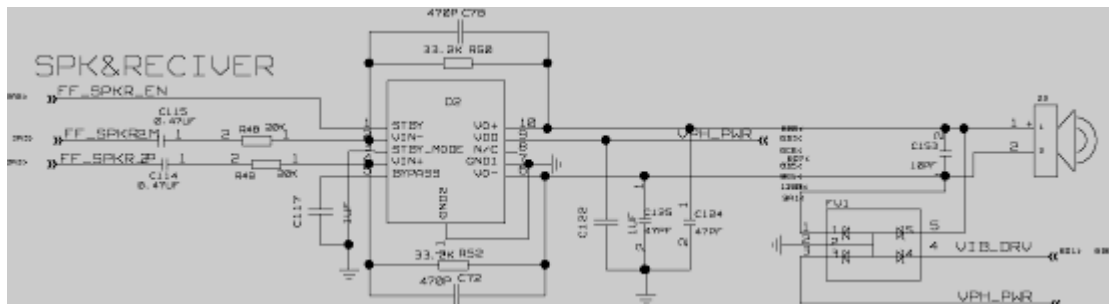
Repair Steps:

- Check LCD if it is soldered well.
- Check the output of LCD_BACKLIGHT signal if it is normal. If not, check MB.
- Check the output of LCD driver IC D5 if it is normal.
- Check LCD power VRFG_MSMP if it is normal.
- Check LCD CS/RESET/ID signal if they are normal. If not, check LCD resistances and capacitances.
- Check MB.

FAQ:

- Check LCD_FPC if it is soldered well.

4.5 Ring Failure



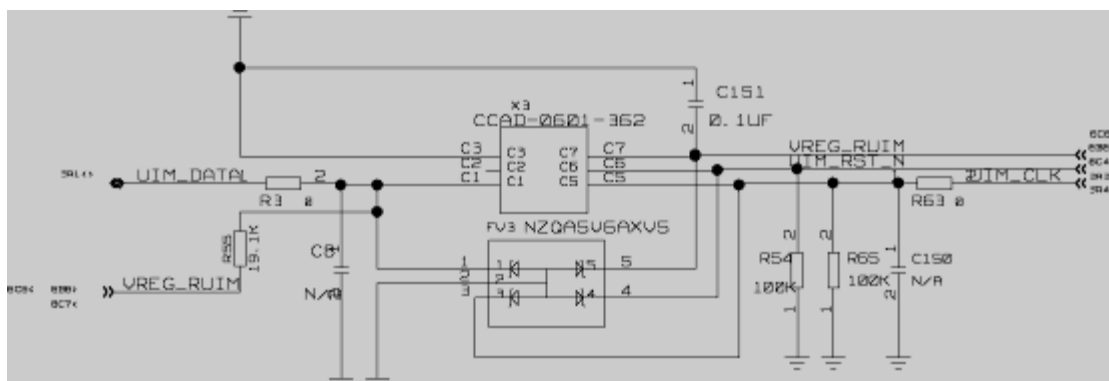
Repair Steps:

- Check SPK if it is soldered well.
- Check ESD FV1.
- Check the input signal of audio PA FF_SPKR_P and FF_SPKR_FN if they are normal.
- Check the output of audio PA if it is normal. If not, solder again or replace it.

FAQ:

- Check the speaker if it is fixed well.
- Check the speaker points.

4.6 Can not detect UIM card

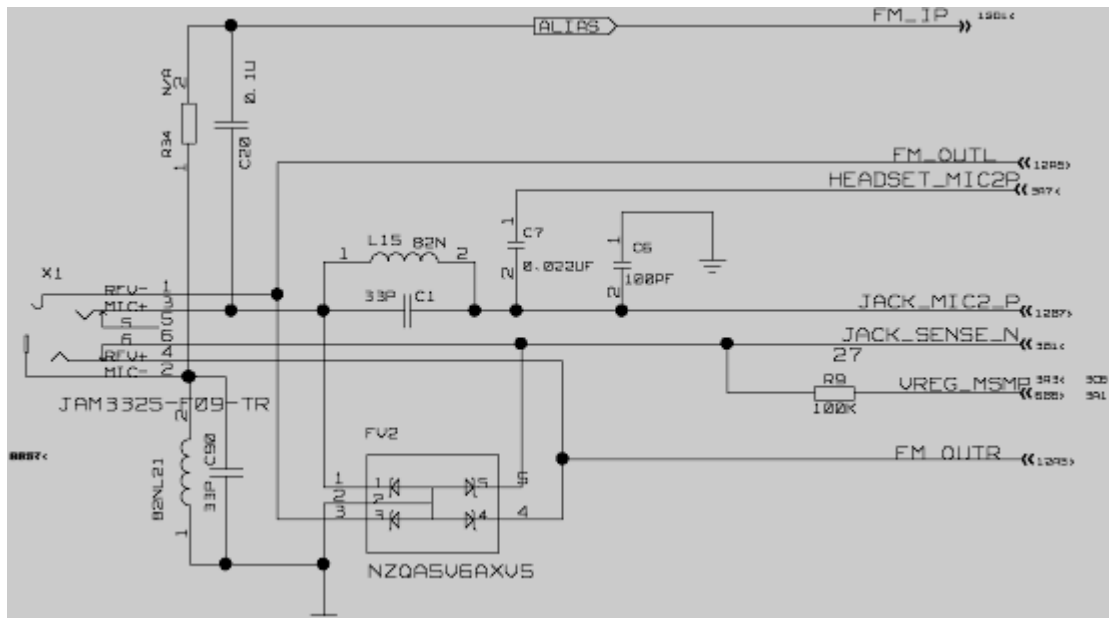
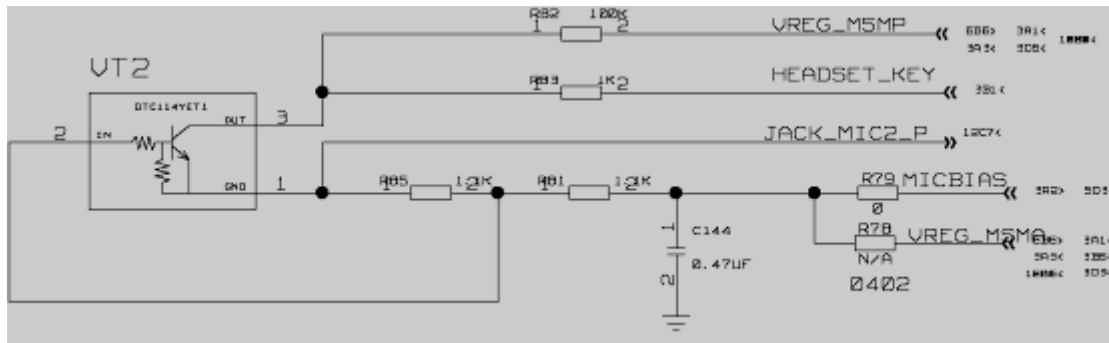


Repair Steps:

- Check FV3/UIM card connector if they are soldered well.
- Check the output of VREG_RUIM at the moment of switching on if it is normal. If not, soldered again or replace PM.
- Check the input of UIM_RESET and UIM_CLK if they are normal. If yes, check the resistance and the capacitances in the circuit. At last, check MB.

- If they are all normal, UIM card connector may be damaged.

4.7 Earphone Failure



Repair Steps:

Can not detect the earphone:

- Check R2 and C4 if they are soldered well.
- Check earphones jack if it is soldered well.
- Check JACK_SENCE_N signal if it is normal. If not, solder again or replace MB.

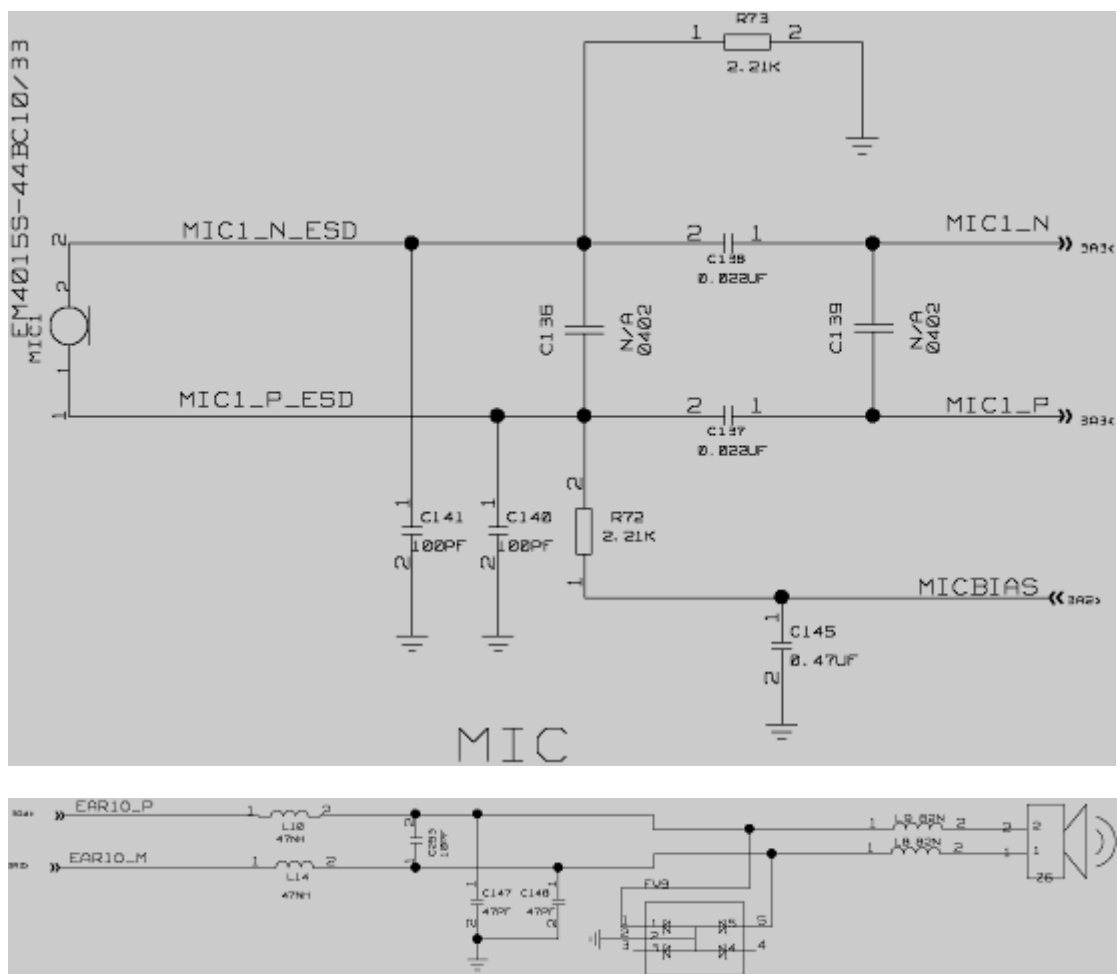
The earphone can't call or hang up:

- Check earphones jack if it is soldered well.
- Check R79/R81/R82/R83/R85 if they are soldered well.
- Check FV2 if it is soldered well.
- Replace the earphone jack.

FAQ:

- Check earphones jack if it is soldered well.
- If it is fail after inserting earphone, check earphone jack first. Then check the output circuit of earphone if it is normal. Check the parts if they are soldered well.
- The handset can detect the earphone. But no ring or no transmission voice. Check ESD if soldering well. Check Tx and Rx circuit. At last check baseband IC if it is soldered well.

4.8 No Echo



Repair Steps:

- Replace MIC.
- Call test according inserting card. Ensure it is Tx or Rx circuit problem.
- Tx circuit problem: check MIC circuit parts if they are soldered well.
- Rx circuit problem: check FV9 if it is soldered well.

FAQ:

- Check MIC circuit parts if they are soldered well.

4.9 Key-press Failure

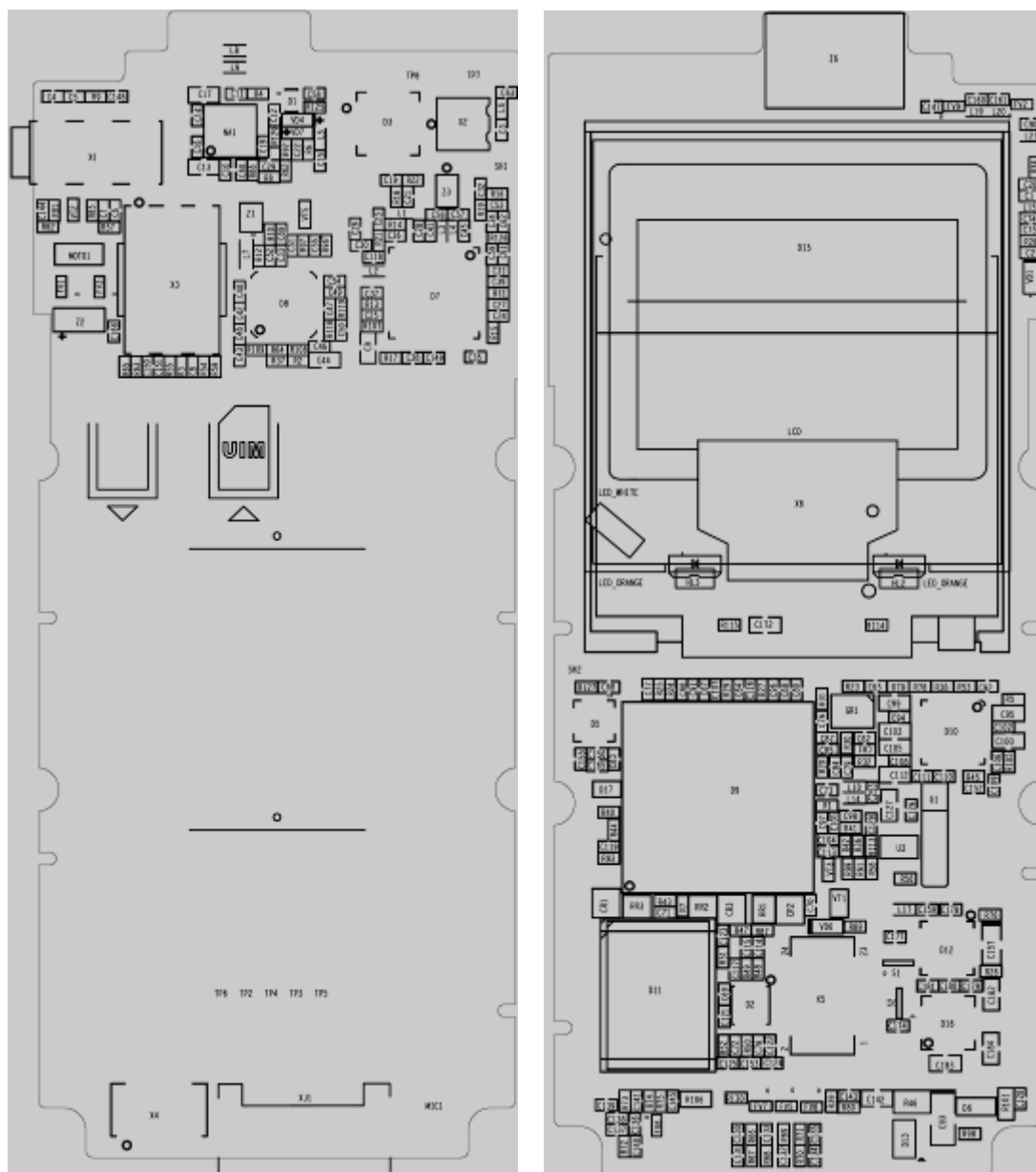
Repair Steps:

- Ensure that it is KB problem or MB problem.
- KB problem: check DOME if it is clean. If not, clean it.
- Check KB connector if it is soldered well.
- Check KB and the resistances if they are soldered well.
- MB problem: if it can be switched on, repair it according to switching on failure.

FAQ:

- Garbled character or key-press failure: check KB connector if it is soldered well.
- KB backlight failure: check LED if it is fail. Check the resistances if they are soldered well.

5. Schematic



6. Part List

6.1 Handset Part List

List No.		L675401001AA02		ZTEX175 CDMA1x Handset Part List
List Name		X175 ZJZP01		
No.	Code		Name	

1	126754050002A	X175 Handset MB
2	126753950002B	X175 Keyboard
3	055401002039	X175 Front Assembly
4	055402000499	X175 KB Assembly
5	055401001837	X175 Back Assembly
6	055402000477	X175 Metal Dome
7	050603100089	X175 Antenna Series
8	055402000500	Cover cap
9	035040300038	Contact Microphone
10	035030100010	LCD Module
11	035070100022	Motor
12	035040400025	Spring Receiver
13	035040100057	Speaker

6.2 MB Part List

List No.	126754050002A	ZTEX175 CDMA1x MB Part List
List Name	ZTE X175 MB	
No.	Code	Name
1	002010500018	Differential Audio Power Amplifiers
2	003010200032	LDO voltage regulator
3	004020200012	ESD Overvoltage Protectors
4	006030200043	COMBO FLASH
5	012090200014	Handset Power Management IC (PM6610)
6	012090200028	Handset RF Transmitter IC (RFT6150)
7	012090200036	Handset RF Receiver IC (RFR6155)
8	012090200033	CDMA Handset Baseband IC MSM6000
9	015010200089	RF Power Amplifier
10	036010100147	SAW Filter
11	036010200015	Duplexer
12	042120100019	3 position spill type battery connector
13	042120300012	System Connector Jacks (slice pin)
14	042120600011	Four-step earphone connector jacks
15	042120200021	UIM Card Connector

Note: this is the main parts list. If you need a detail one, please apply it from local after-sales service manager.