

Technology Document

Document Title: ZTEC169 CDMA 1X After-sales
Service Manual (Level 2)

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Standardized _____

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ZTE CORPORATION

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1. Product Summary

1.1 Standard Configuration

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

1.2 Specification

- ◆ Network: CDMA
- ◆ Dimensions: about 41.3mm*100mm*11.4mm
- ◆ Weight: 85g (battery included)
- ◆ Continuous talk time: 2h – 4h
- ◆ Continuous standby time: 80h – 160h

1.3 Functions

- ◆ Memorize 200 phone numbers in phone book and support grouping
- ◆ Memorize 40 received short messages
- ◆ Memorize 40 sent short message
- ◆ Speed dial: from 2 to 99
- ◆ Support short message group-sending
- ◆ 12 polyphone tones
- ◆ Number of ring tones: 20 for incoming call, 6 for short message and 5 self-recorded ring tones for incoming call
- ◆ Support BREW download
- ◆ Support UTK
- ◆ Support recording
- ◆ Support earphone (selected)
- ◆ Support hand-free function

- ◆ Inner vibration
- ◆ Support several methods of inputting, such as Chinese, English, symbol and number.
- ◆ Calculator, alarming clock and calendar

1.4 Inner Code

Inner Code	Outer Code
ZTEC169	ZTEC169

2. Inner Structure and Elements

2.1 Function Test

Checking ESN

- ◆ Input *#06# to check whether ESN is the same with the label on the handset

Software version test

- ◆ Input *983*837# to check whether the software version is the latest one (If the software doesn't support *983*837# to check, input *983*3641# → select option → select version and check it)

Basic function test

- ◆ Input *983*3641# and press * to enter quick test mode, and test LCD → ring tone → motor → keypad → audio loop → earphone successively then restart.

Main function test

- ◆ 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-press 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 (Note: press 'Power' key at last)
- ◆ 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
Each handset to be repaired should be upgraded to the latest version, that is, each repaired handset should be in the latest version.
- ◆ Note
Handset can be switched on normally.
Download with more than 2 grids of battery.

Do not pull the download cable during downloading.

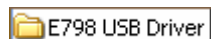
- ◆ Download data cable

E798 data cable (code: ISO11259)



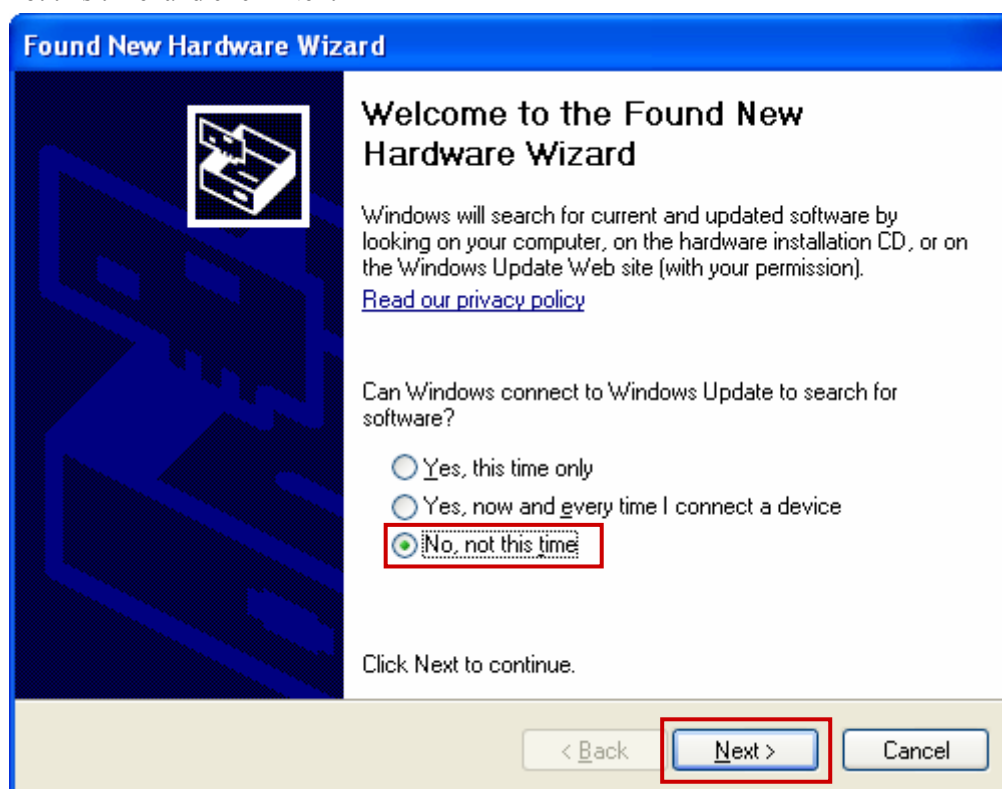
- ◆ Download cable driver

E798 USB download cable driver

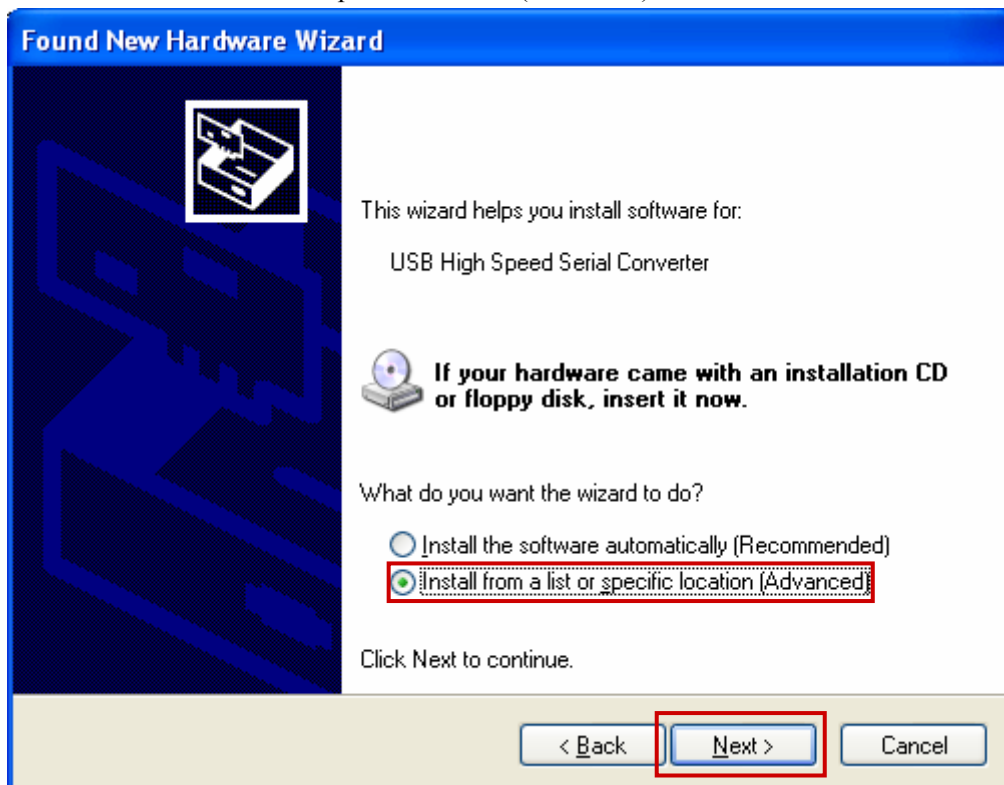


- ◆ Install download data cable driver

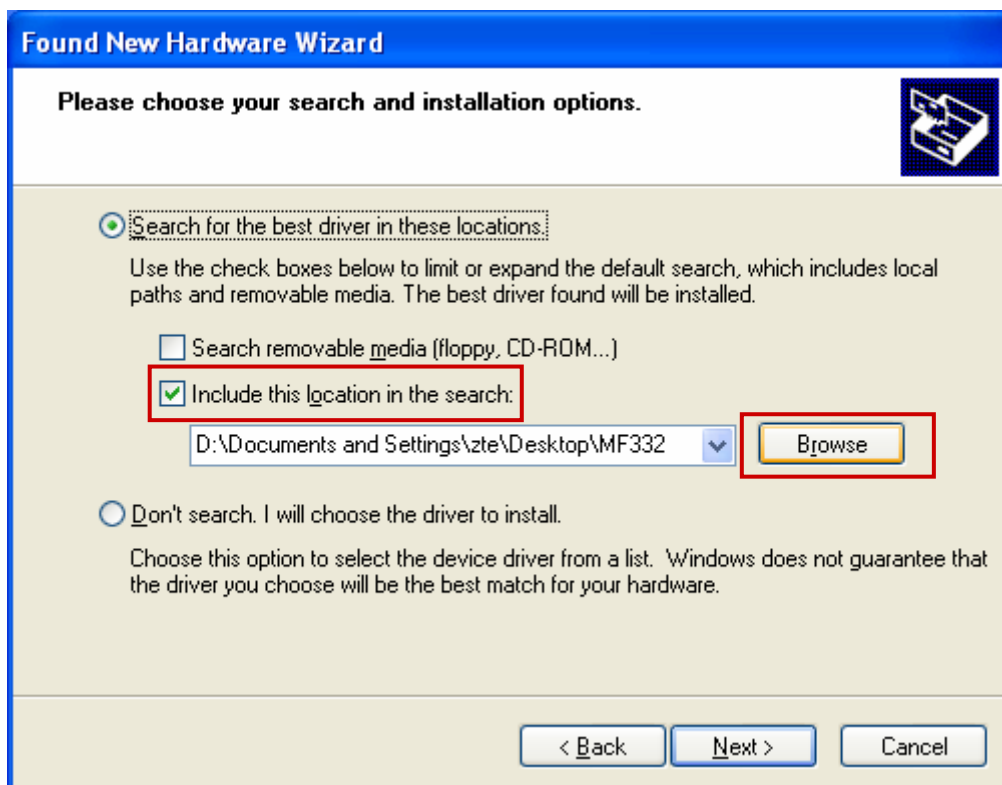
- ◆ Connect download data cable with computer, and the following interface appears: select 'No, not this time' and click 'Next'



- ◆ Select 'Install from a list or specific location (Advanced)' and click 'Next'



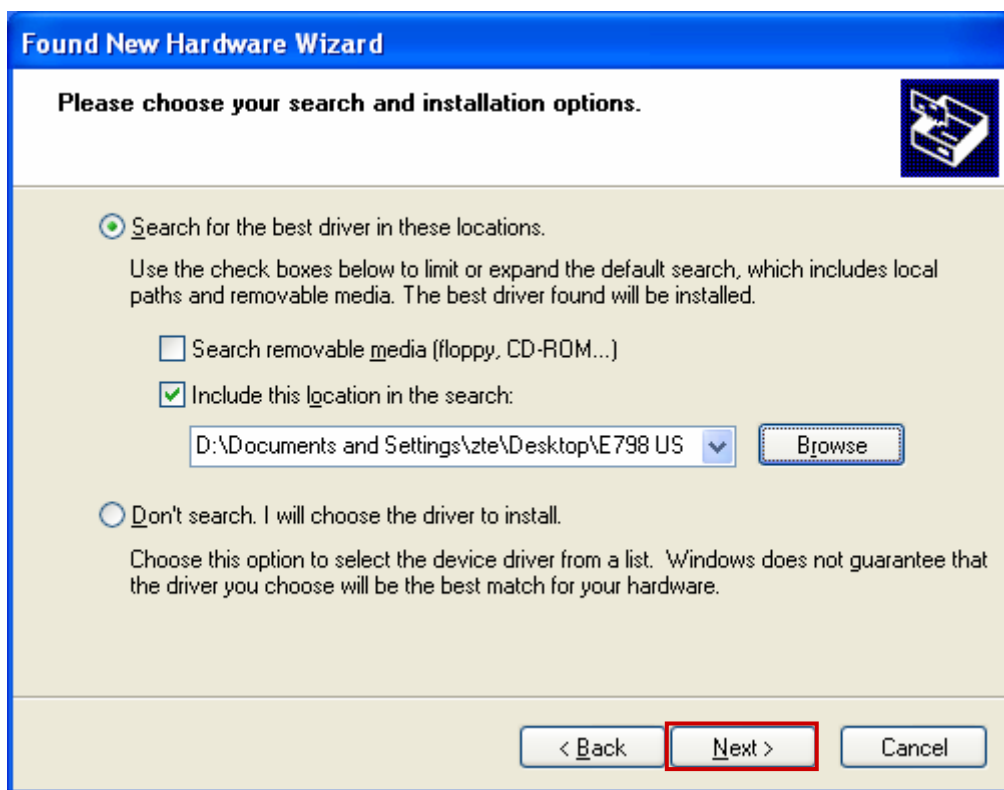
- ◆ Select 'Include this location in the search' and click 'Browse'



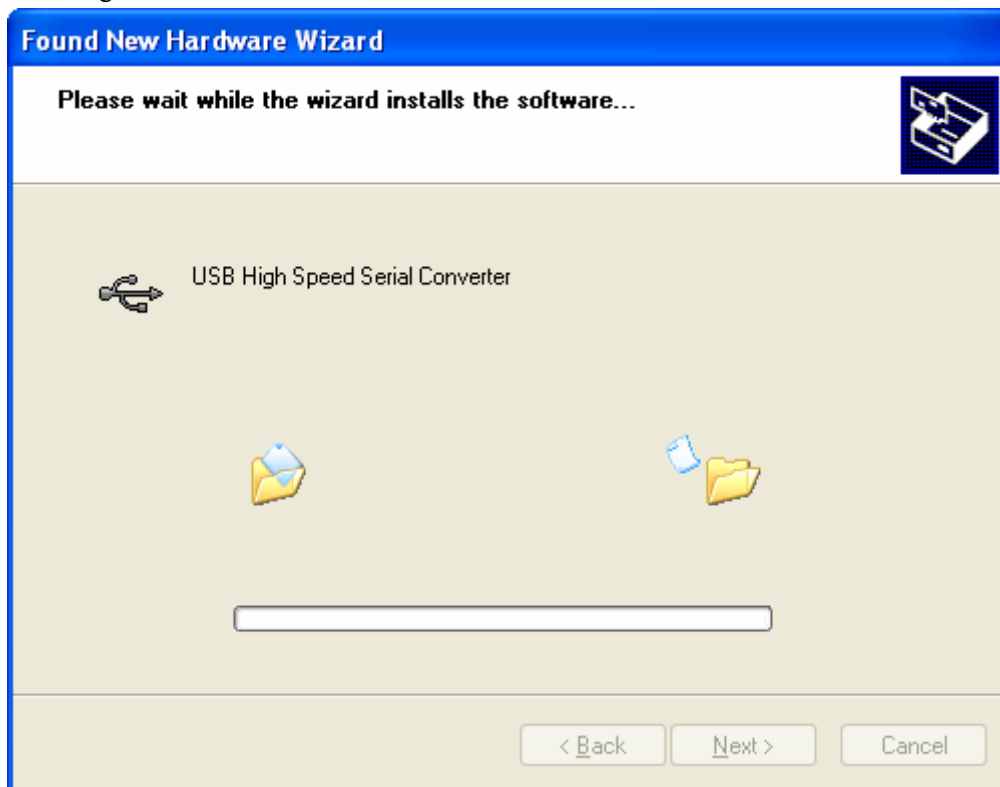
- ◆ Select E798 USB Driver and click 'Ok'



- ◆ Click 'Next'



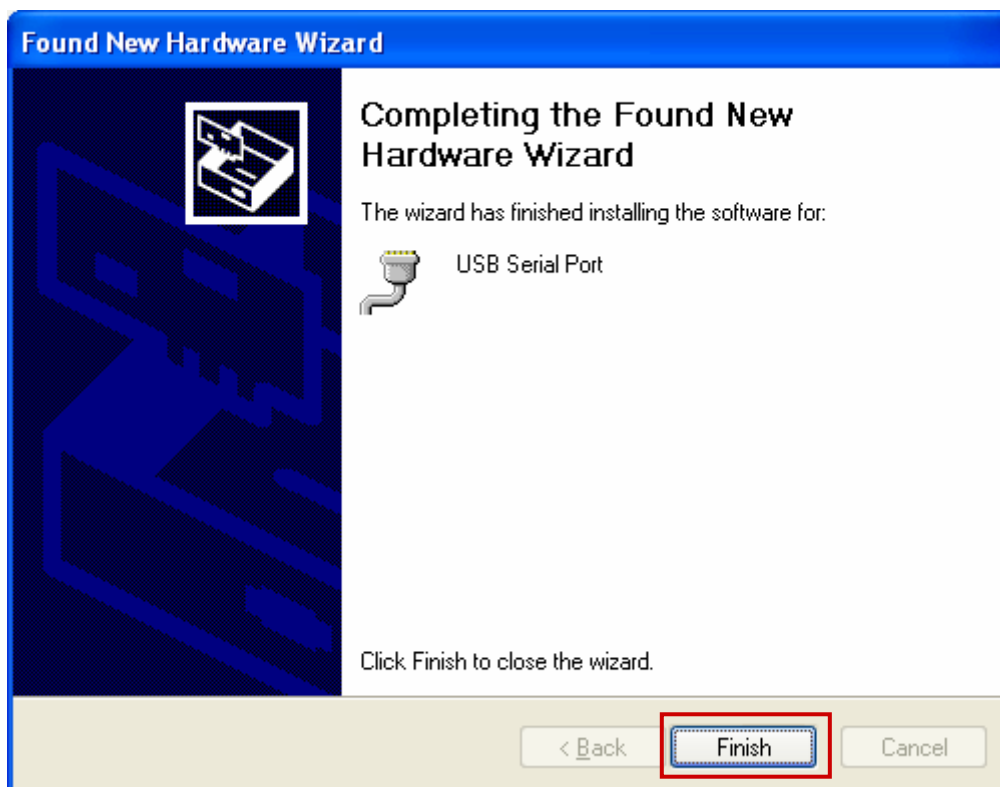
◆ Installing



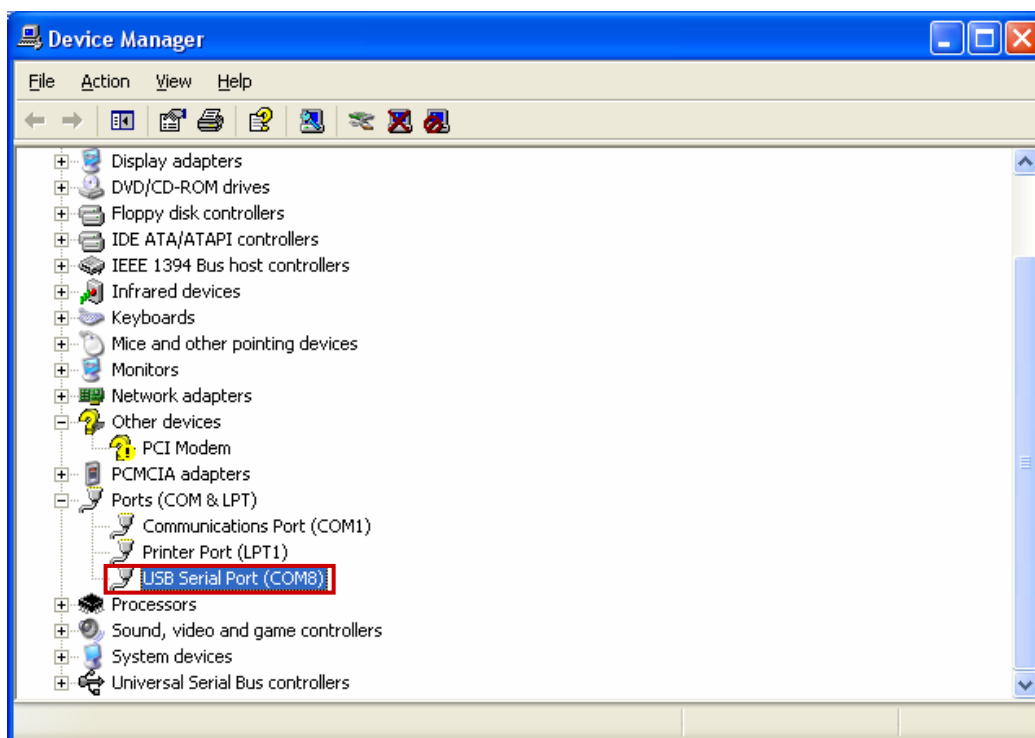
◆ Click 'Continue Anyway'



- ◆ Installation succeeds and click 'Finish'



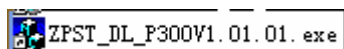
- ◆ Enter 'Device manager' to check ports
- ◆ Checking route: right click My Computer → Properties → Hardware → Device Manager → Ports



- ◆ Install platform: ZPST_DL_P300V1.01.01setup



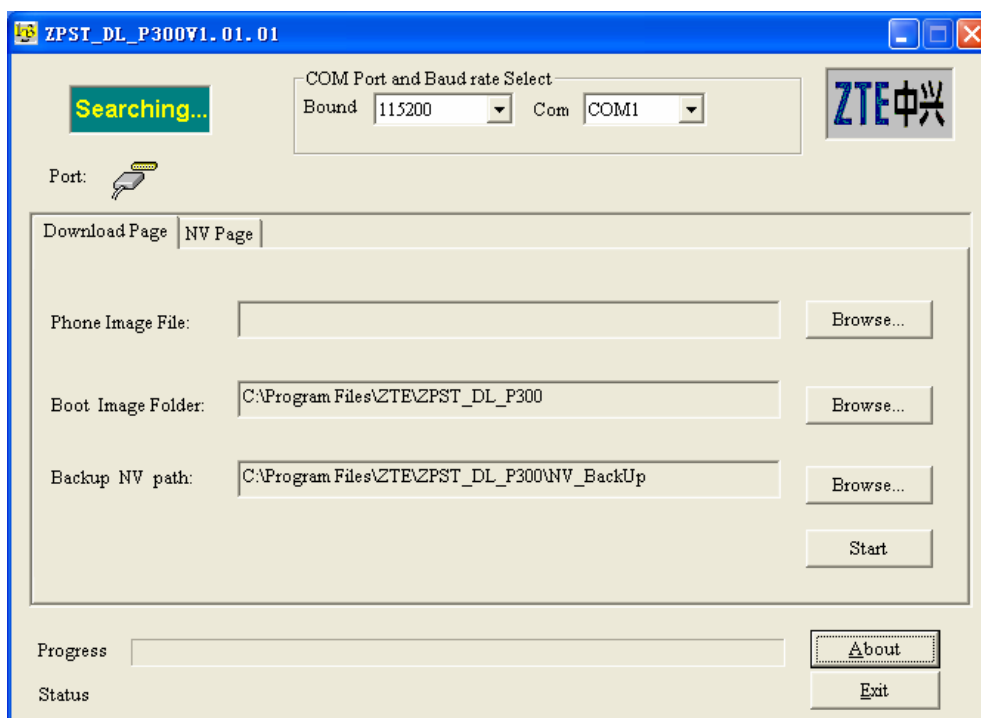
- ◆ After successful platform installation, double click shortcut icon on desktop



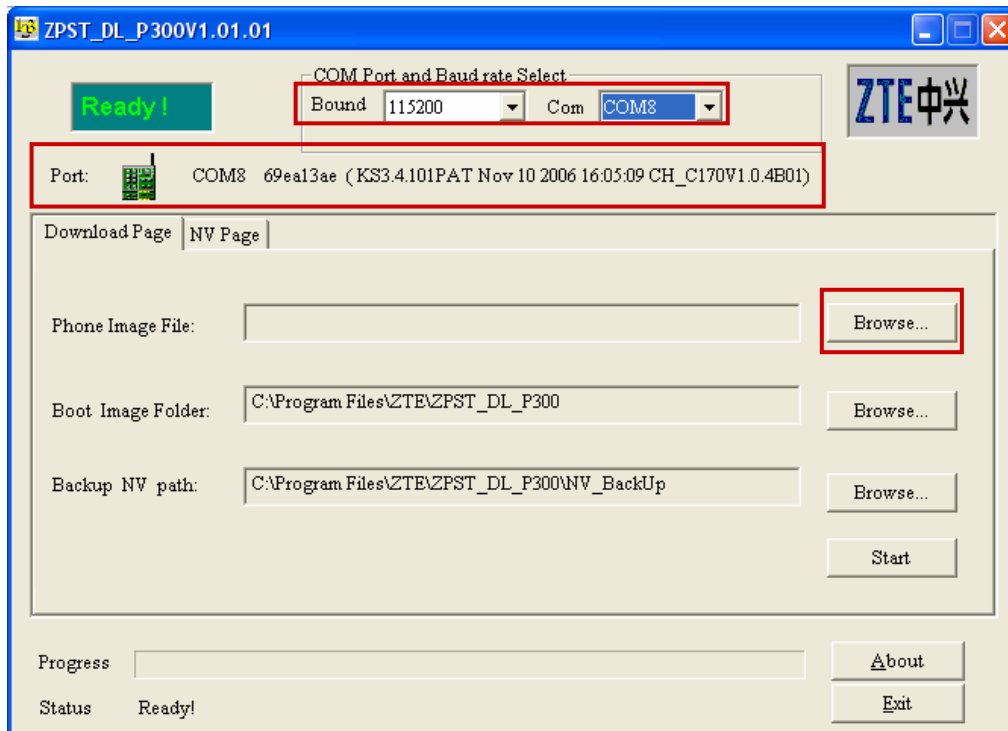
- ◆ Note:

The software download platform of C169 is the same with the one of C170, therefore there is the software download operating interface of C170. However, in real download operation, you should choose right version.

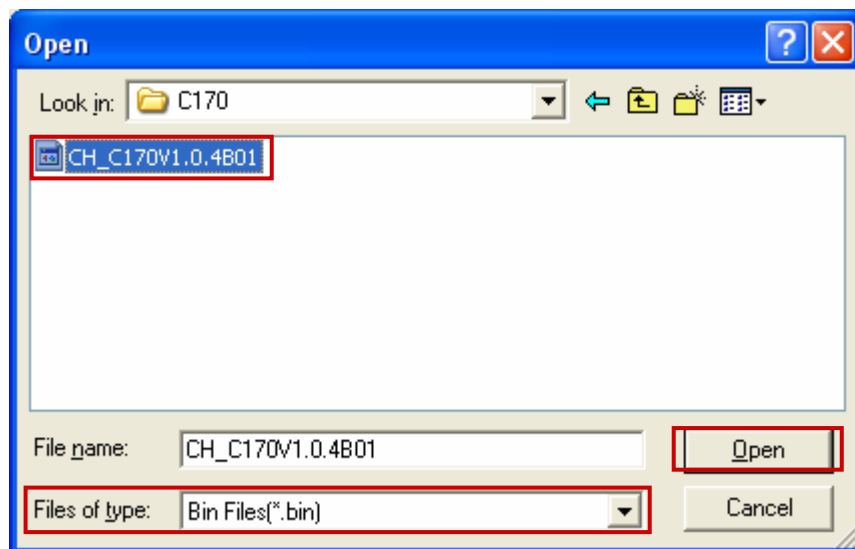
- ◆ Main interface as following



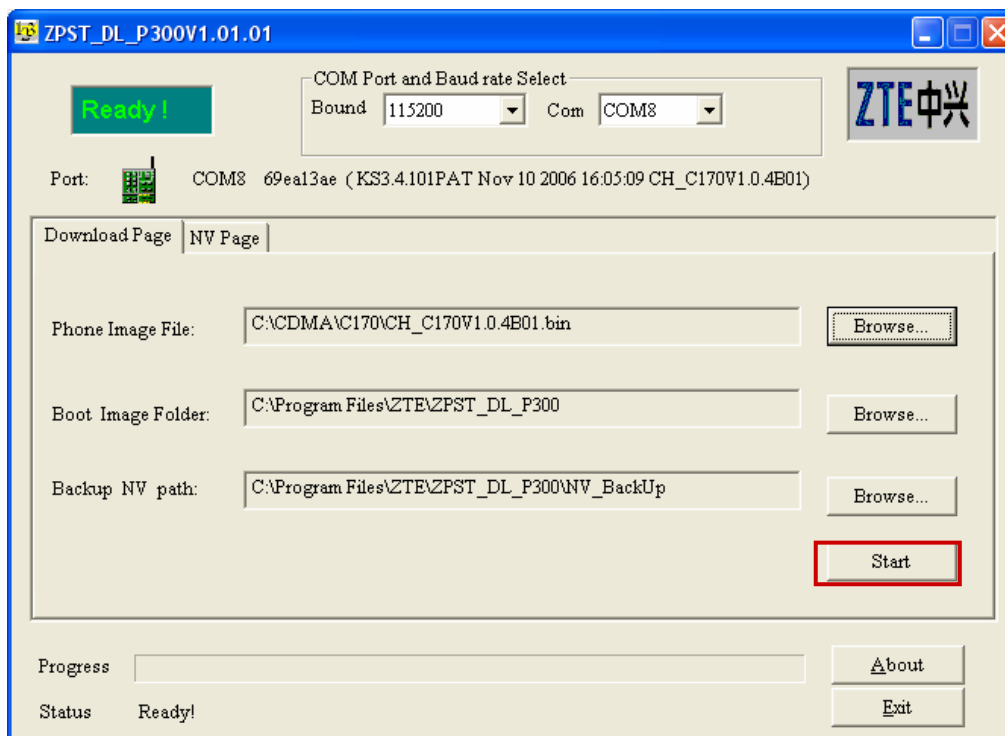
- ◆ Set Bound:115200; set the serial port
- ◆ After the setting of serial port, the platform will automatically show the version information of the handset
- ◆ Click 'Browse' and select version file



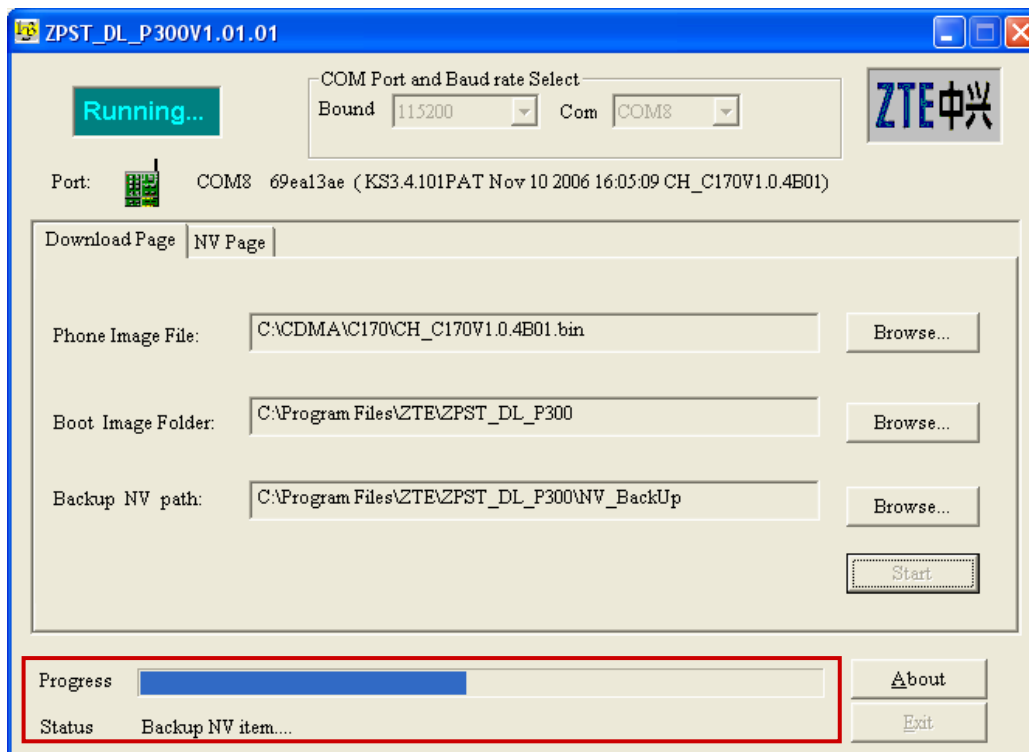
- ◆ Select*.Bin file → Select right version file → click 'Open'



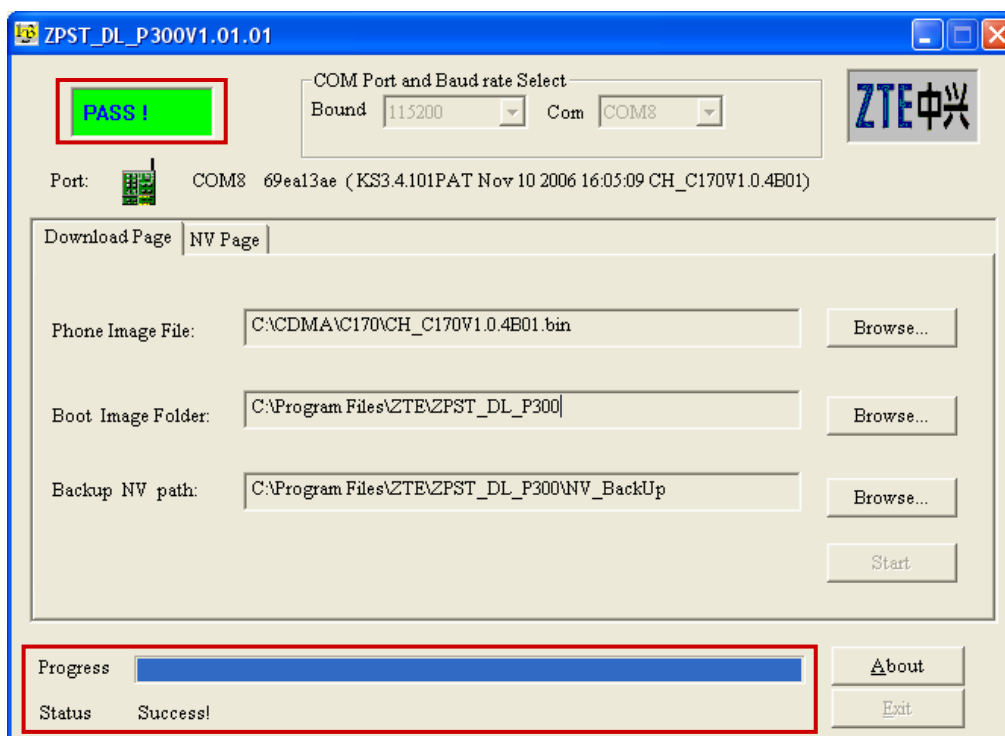
- ◆ Click 'Start' and begin to download



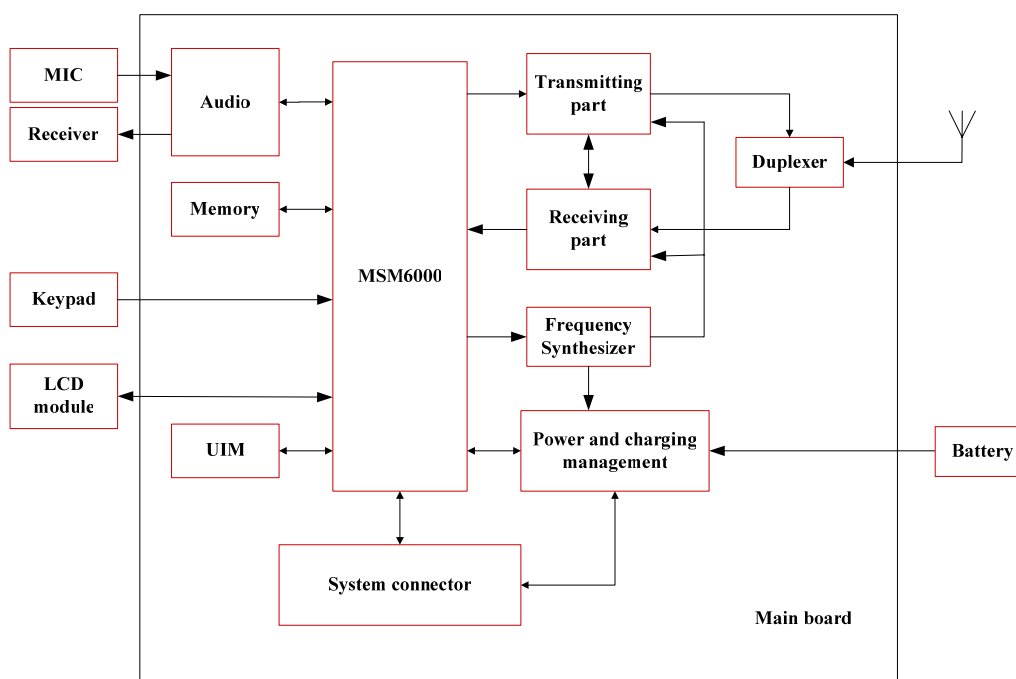
- ◆ Downloading



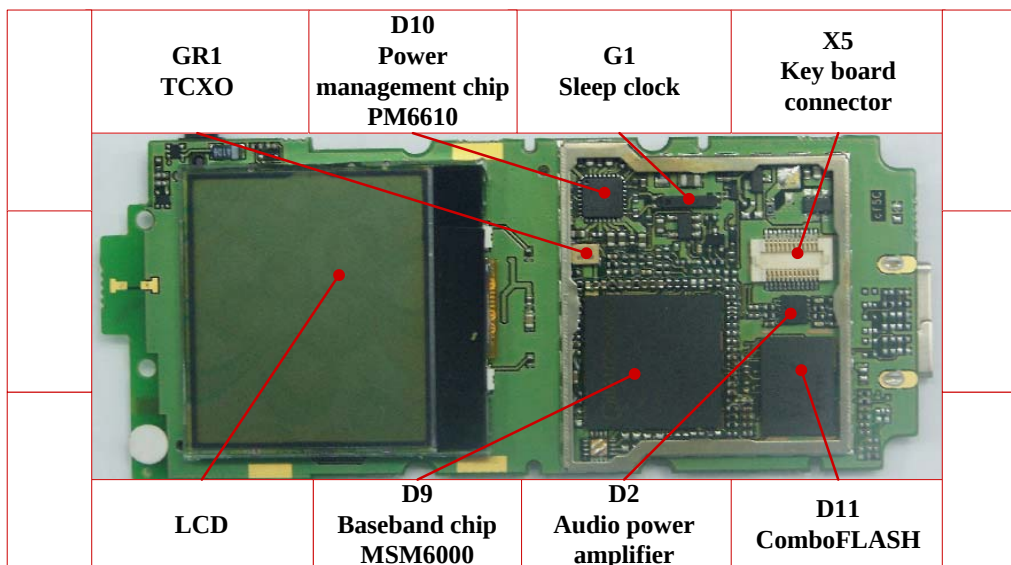
- ◆ Download success



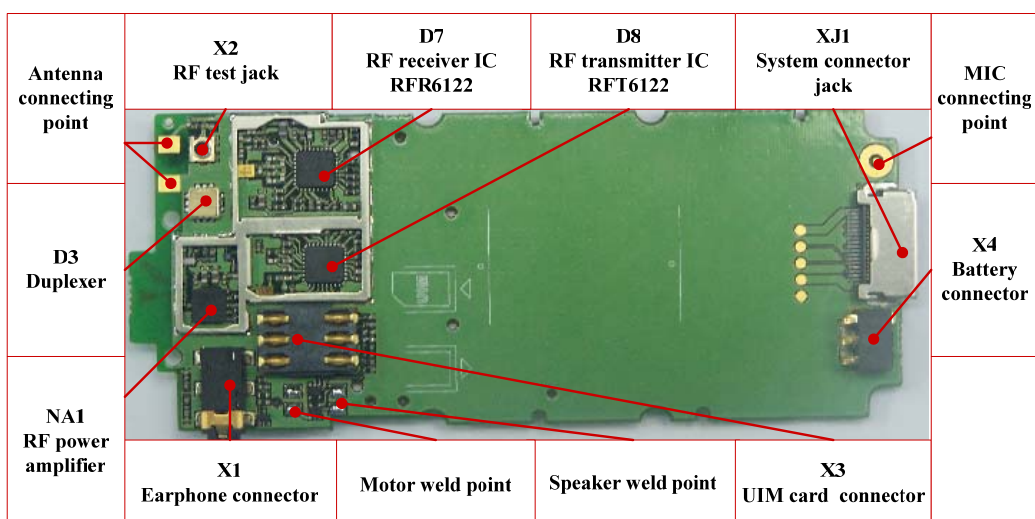
2.3 Block Diagram



2.4 Basic Device Distributing

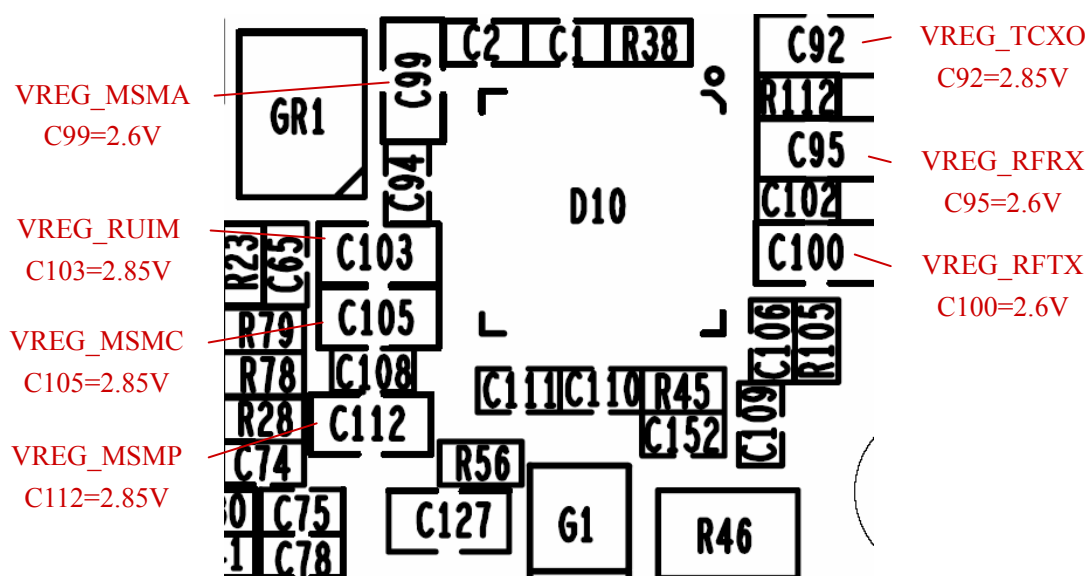


Top Device Distributing



Bottom Device Distributing

2.5 Main test points



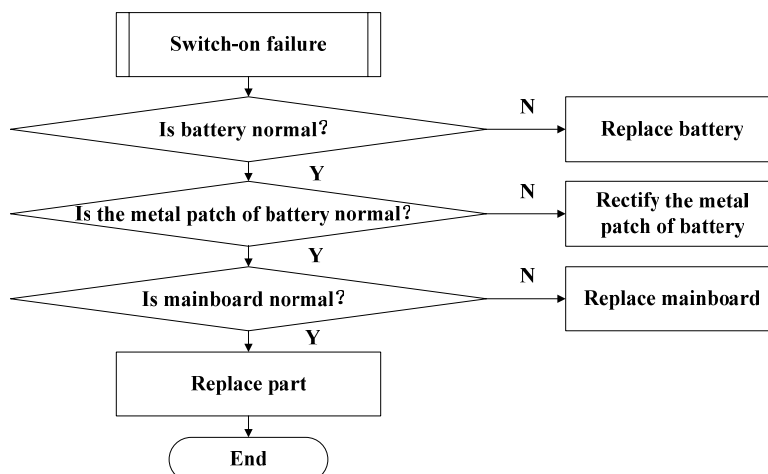
Name	Voltage	Test Point	Function
VREG_TCXO	2.85V	C92	Power supply for TCXO of RF circuit
VREG_RFTX	2.6V	C100	Power supply for RFT6122 of RF transmitter loop
VREG_RFRX	2.6V	C95	Power supply for RF6122 chip of RF receiver front-end
VREG_MSMP	2.85V	C112	Power supply for the outer equipment
VREG_MSMA	2.6V	C99	Power supply for analog circuit of baseband of system
VREG_MSMC	2.85V	C105	Power supply for the core of MSM6000
VREG_RUIM	2.85V	C103	Power supply for UIM card

3. Troubleshooting Flow Chart (Level 1)

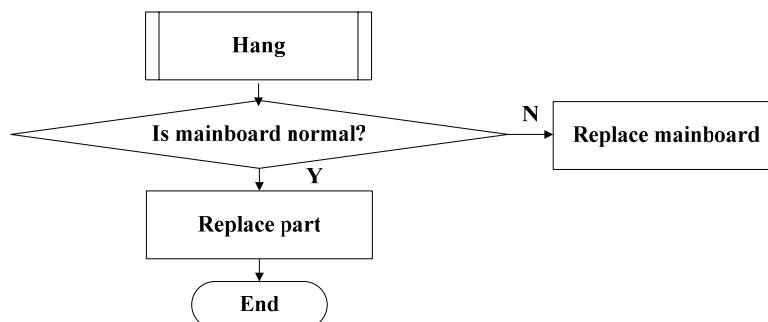
3.1 Structure Failure

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

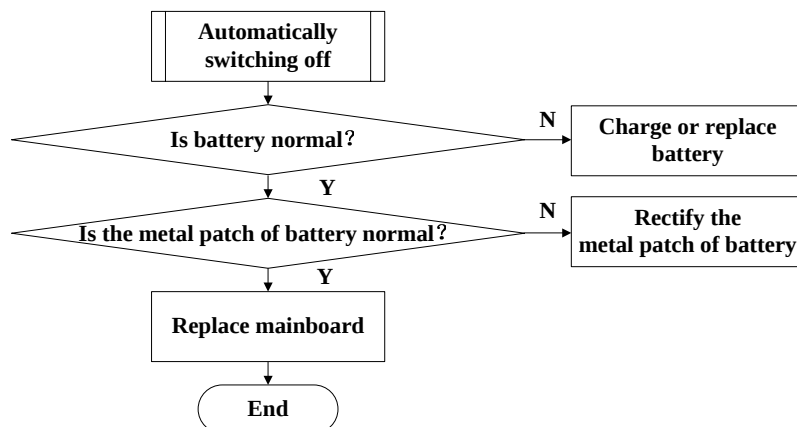
3.2 Switch-on Failure



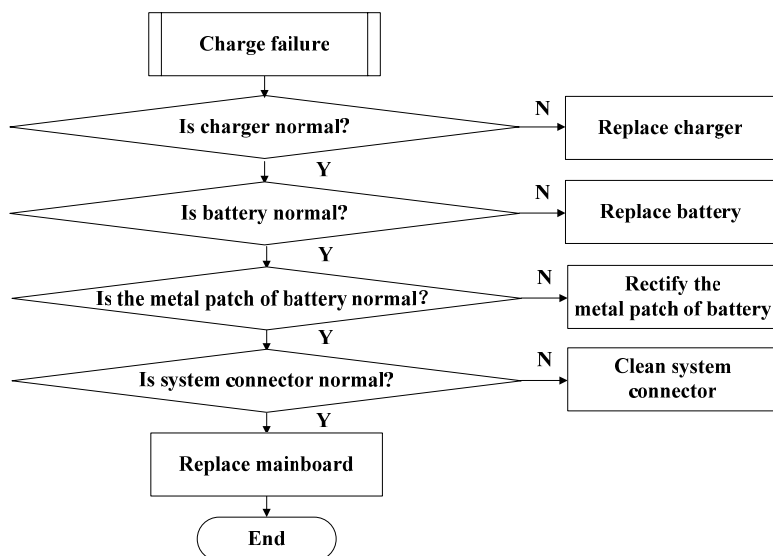
3.3 Hang



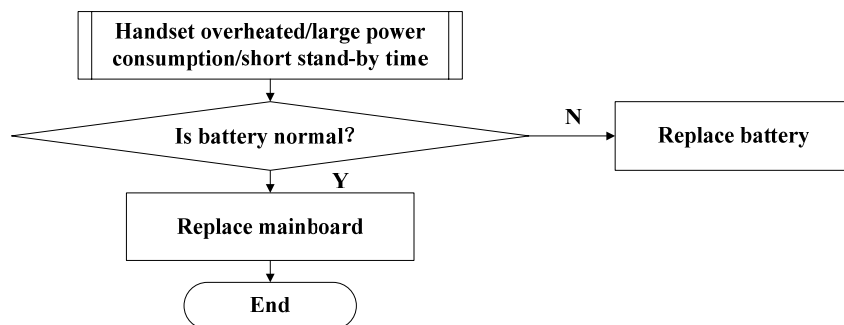
3.4 Automatically Switching Off



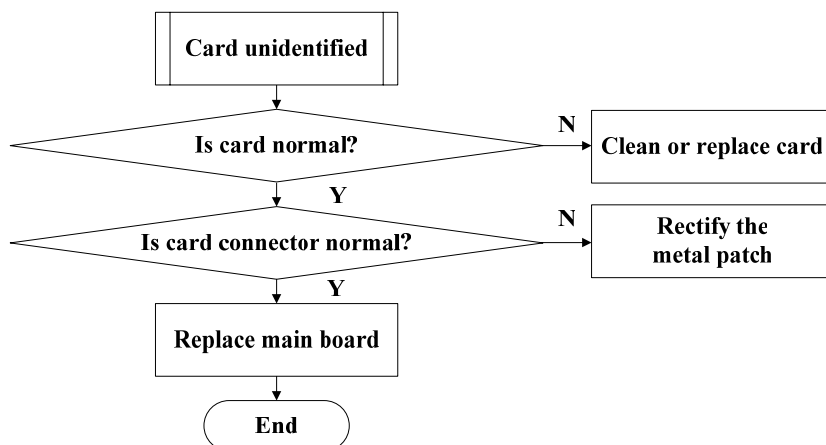
3.5 Charge Failure



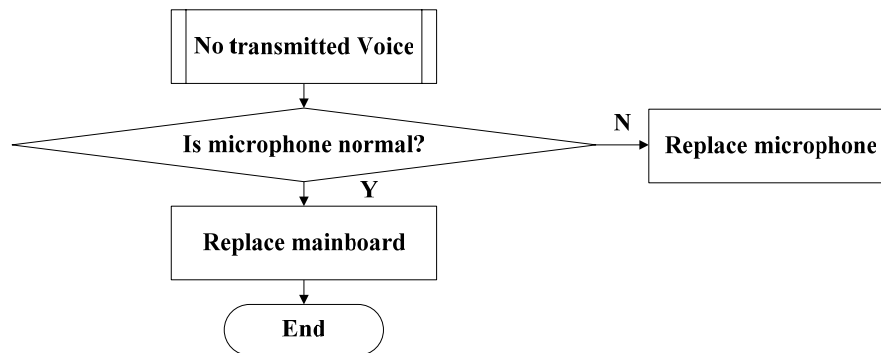
3.6 Handset Overheated/Large Power Consumption/Short Stand-by Time



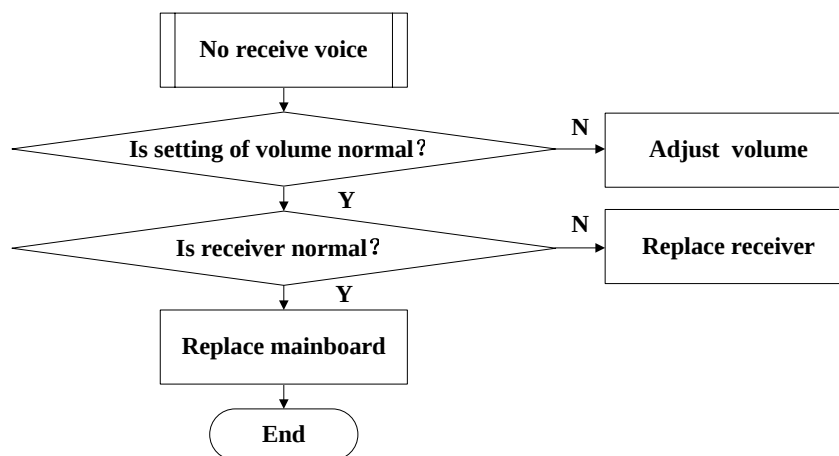
3.7 Card Unidentified



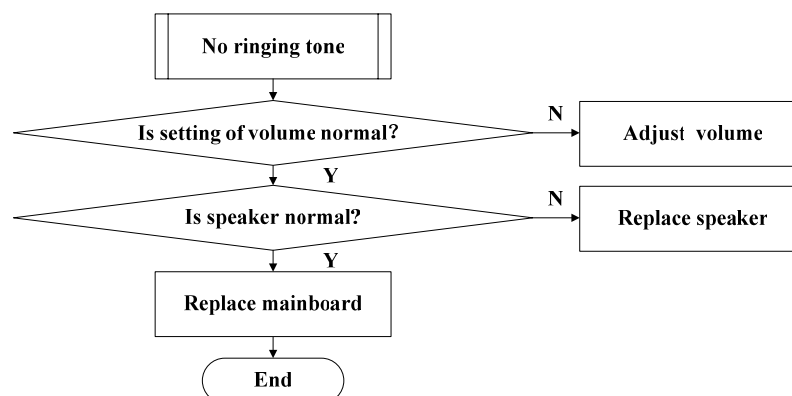
3.8 No Transmitted Voice



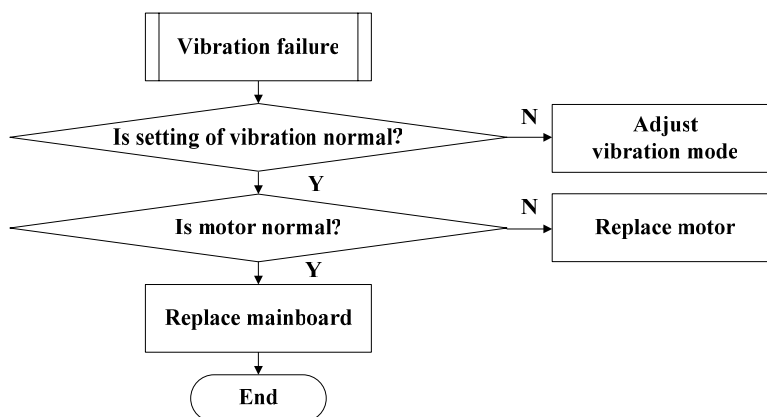
3.9 No Receive Voice



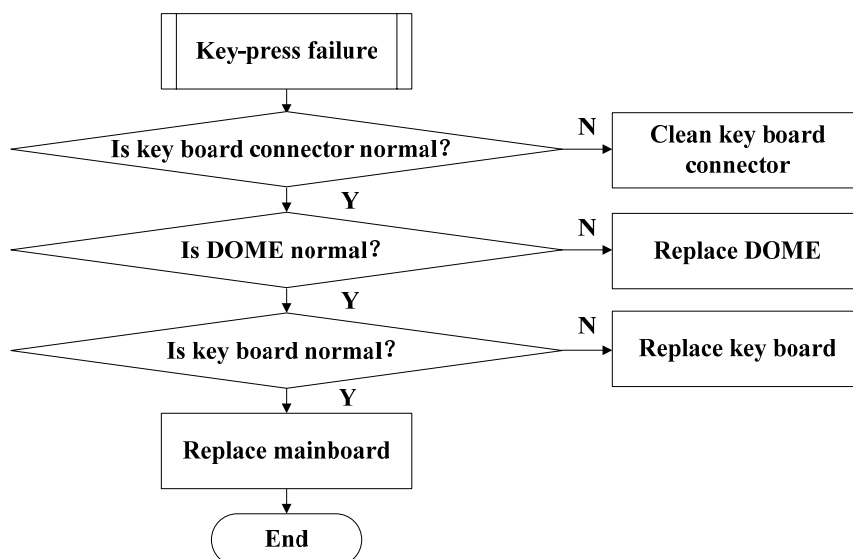
3.10 No Ring Tone



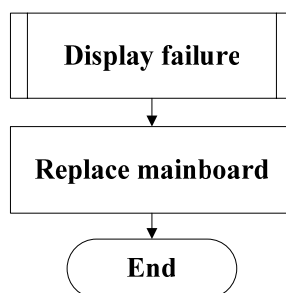
3.11 Vibration Failure



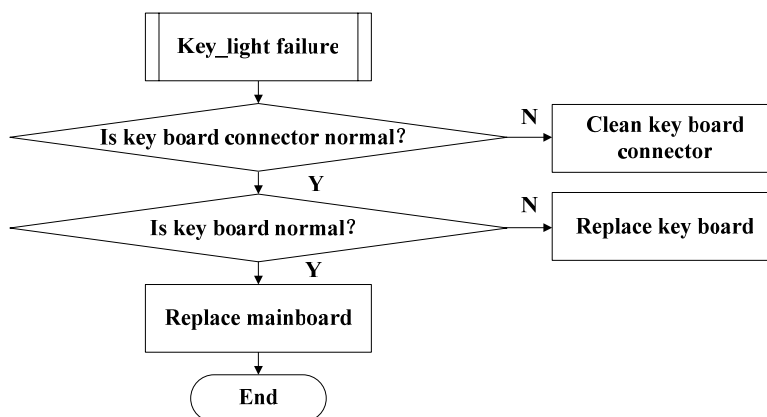
3.12 Key-press Failure



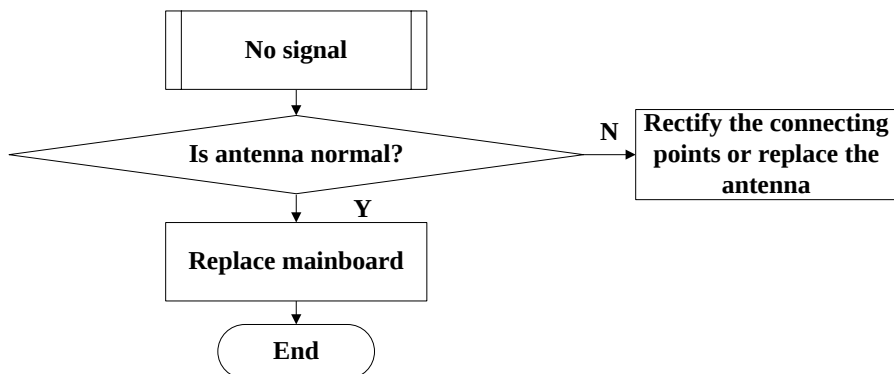
3.13 Display Failure



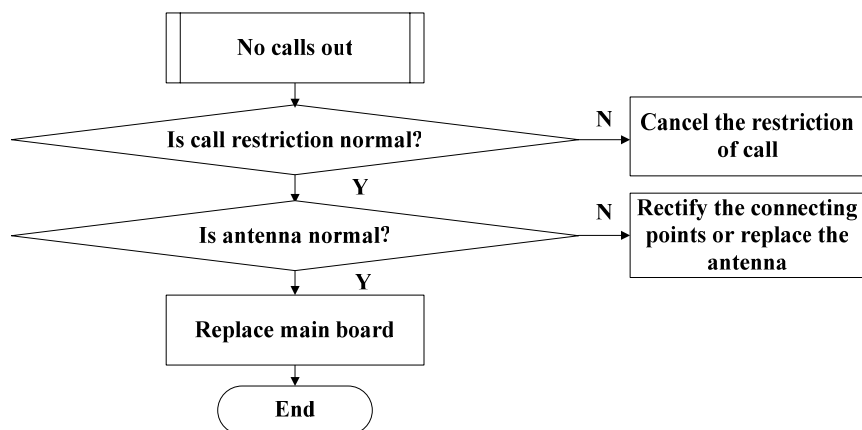
3.14 Key-light Failure



3.15 No Signal

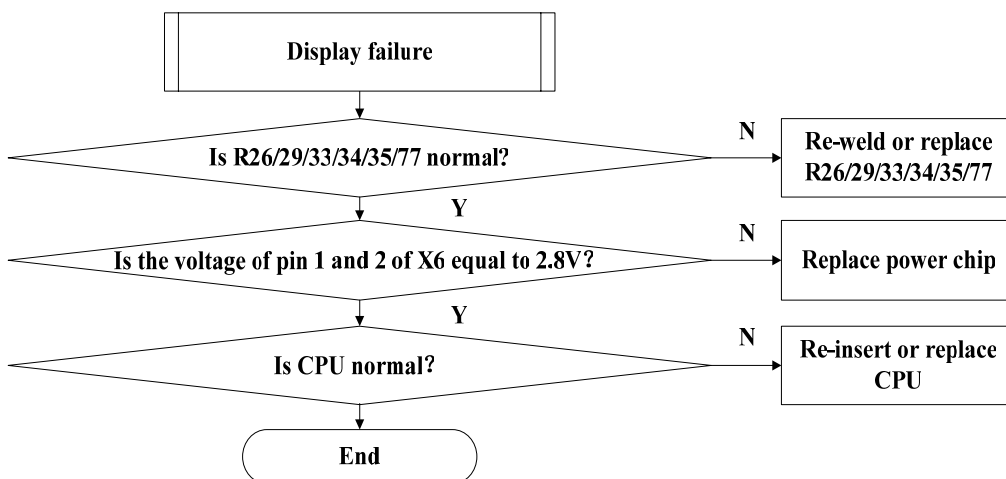
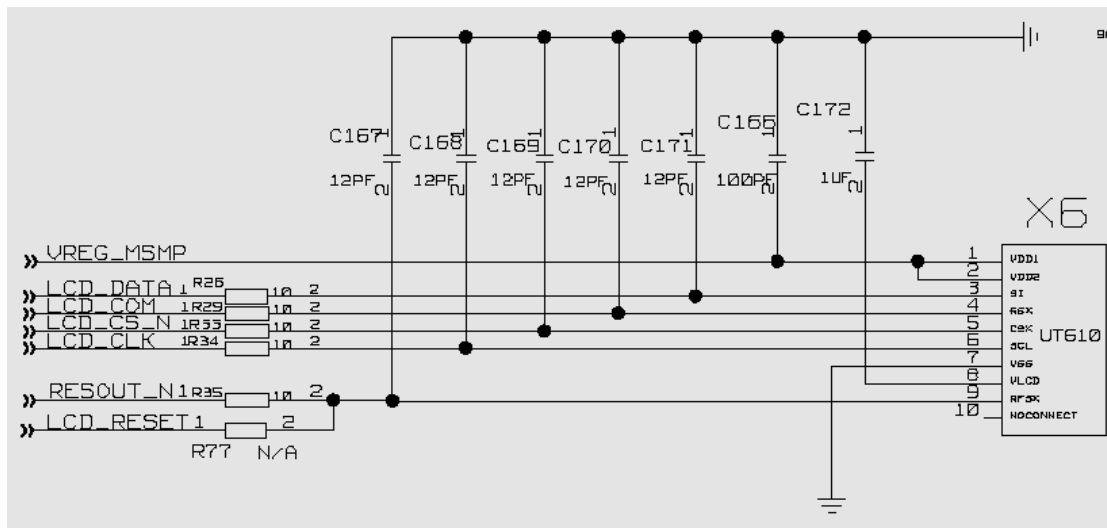


3.16 No Calls Out

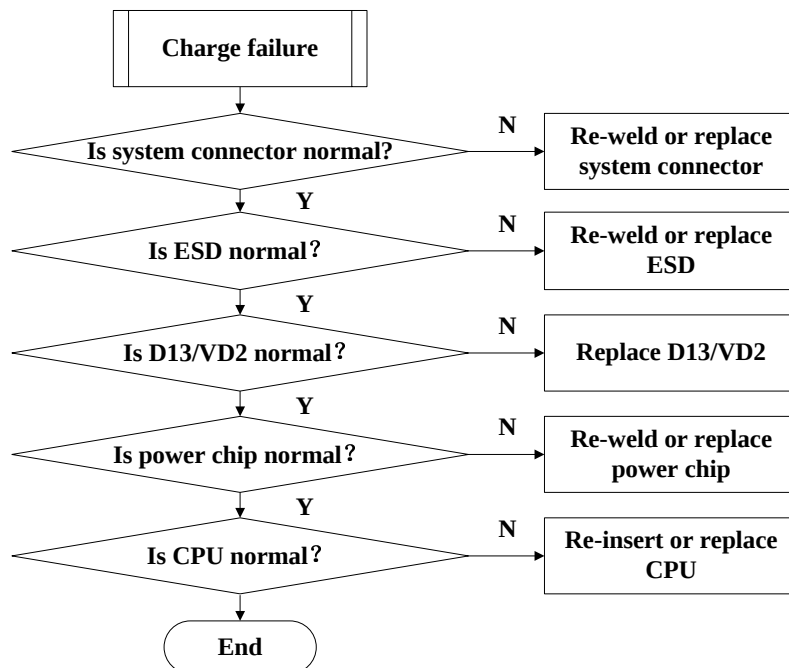


4. Troubleshooting Flow Chart (Level 2)

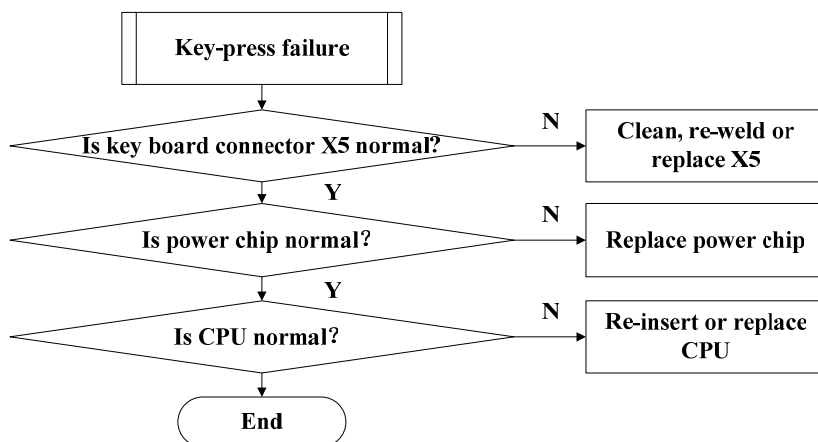
4.1 Display Failure

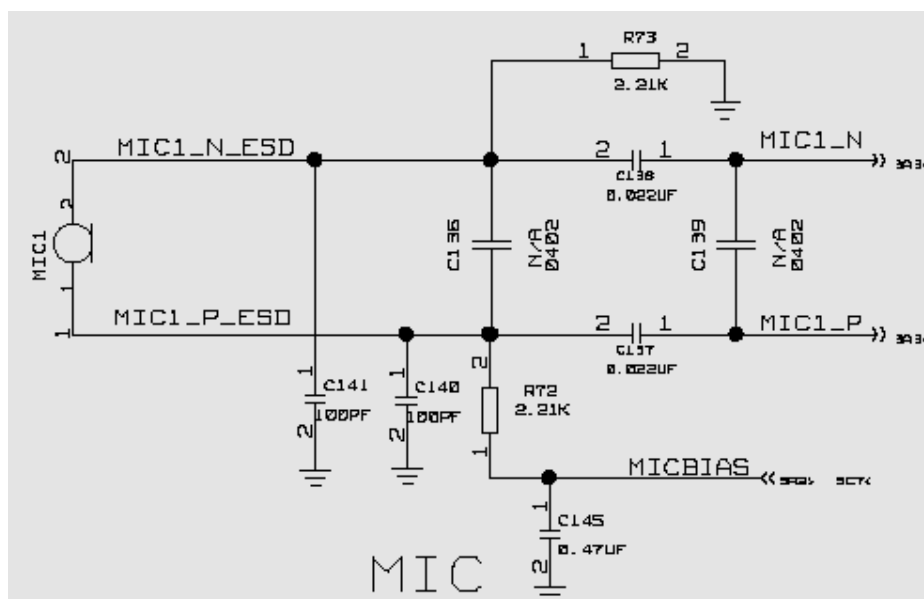
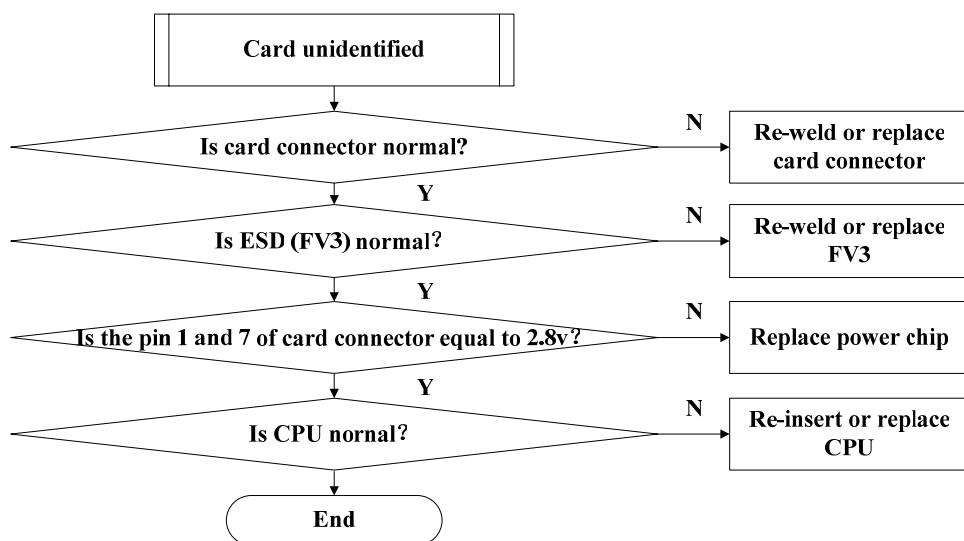
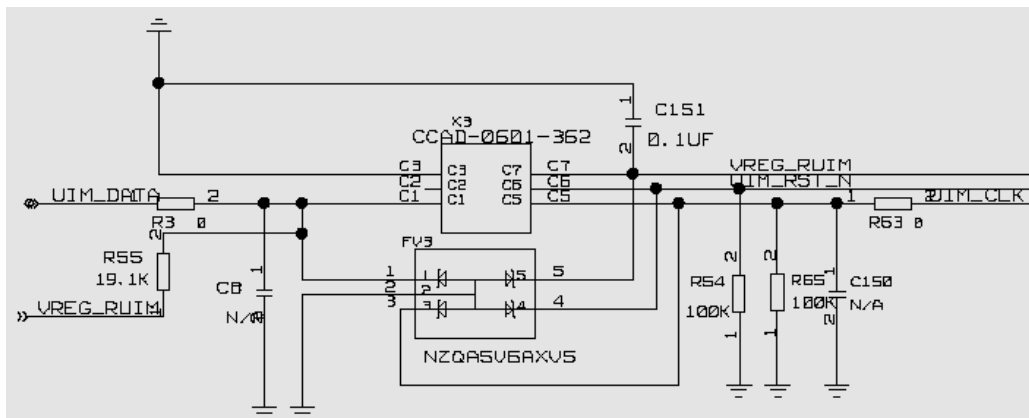


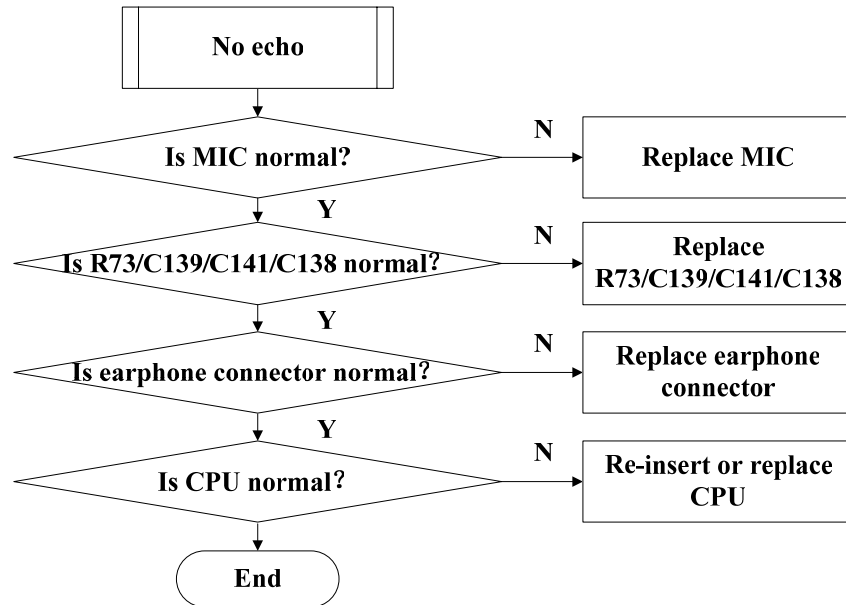
4.2 Charge Failure



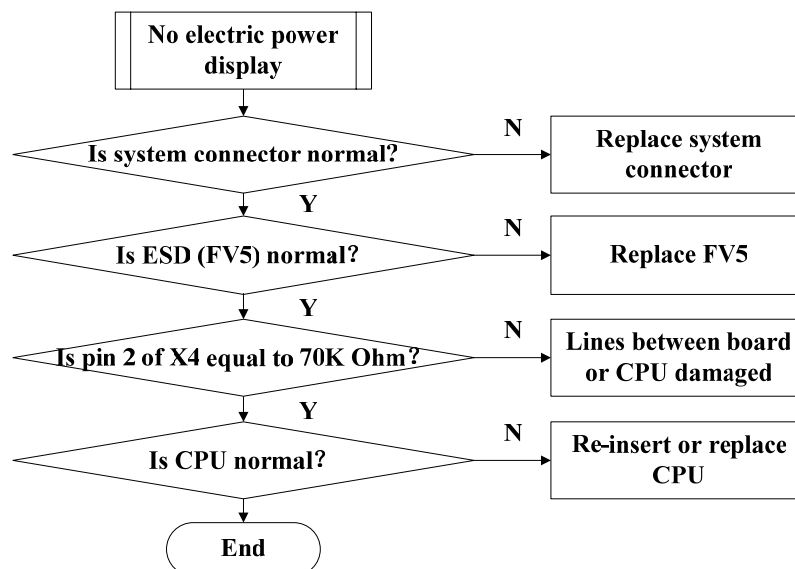
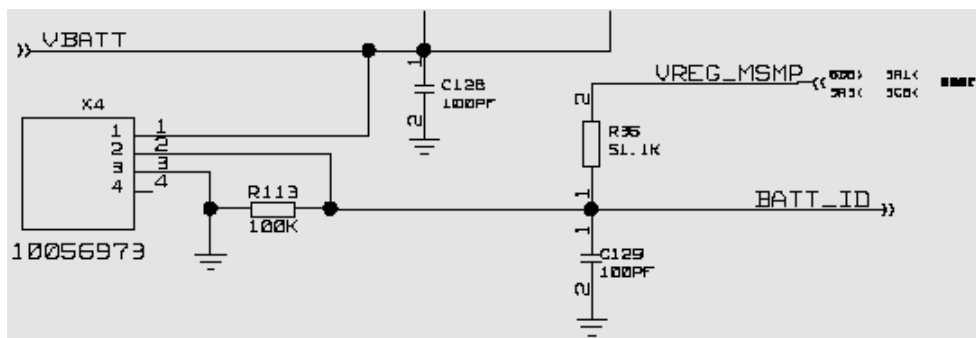
4.3 Key-press Failure



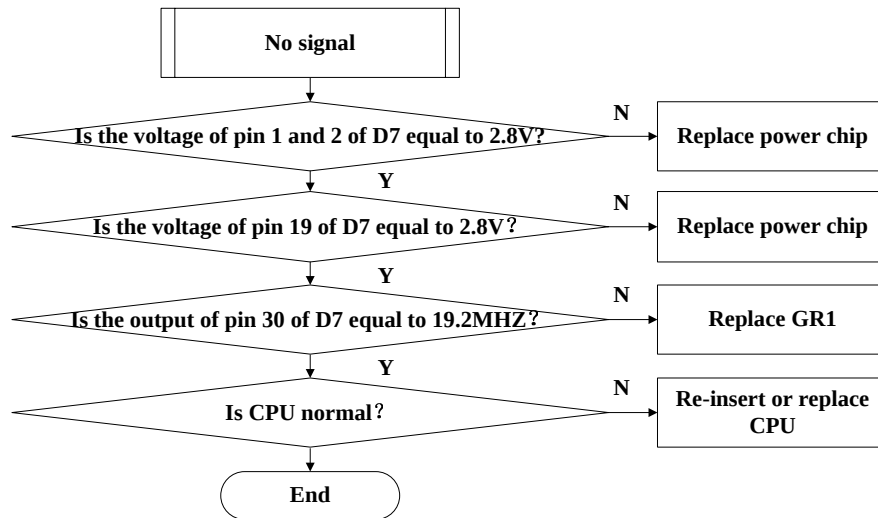




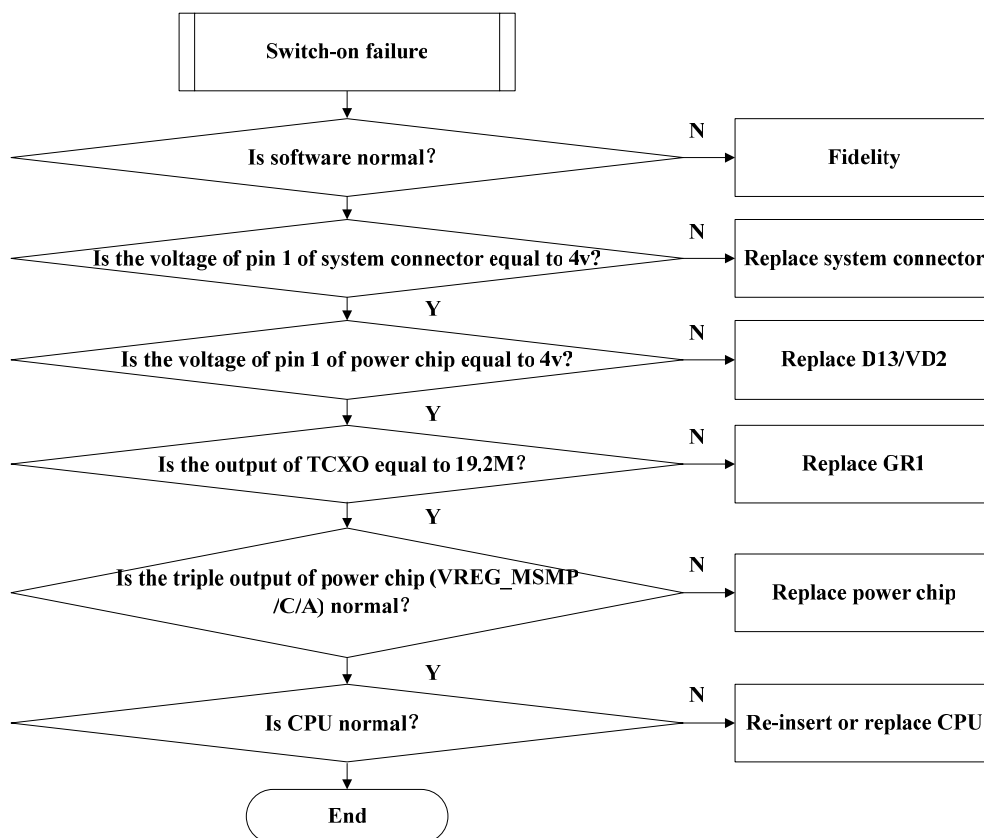
4.6 No Electric Power Display



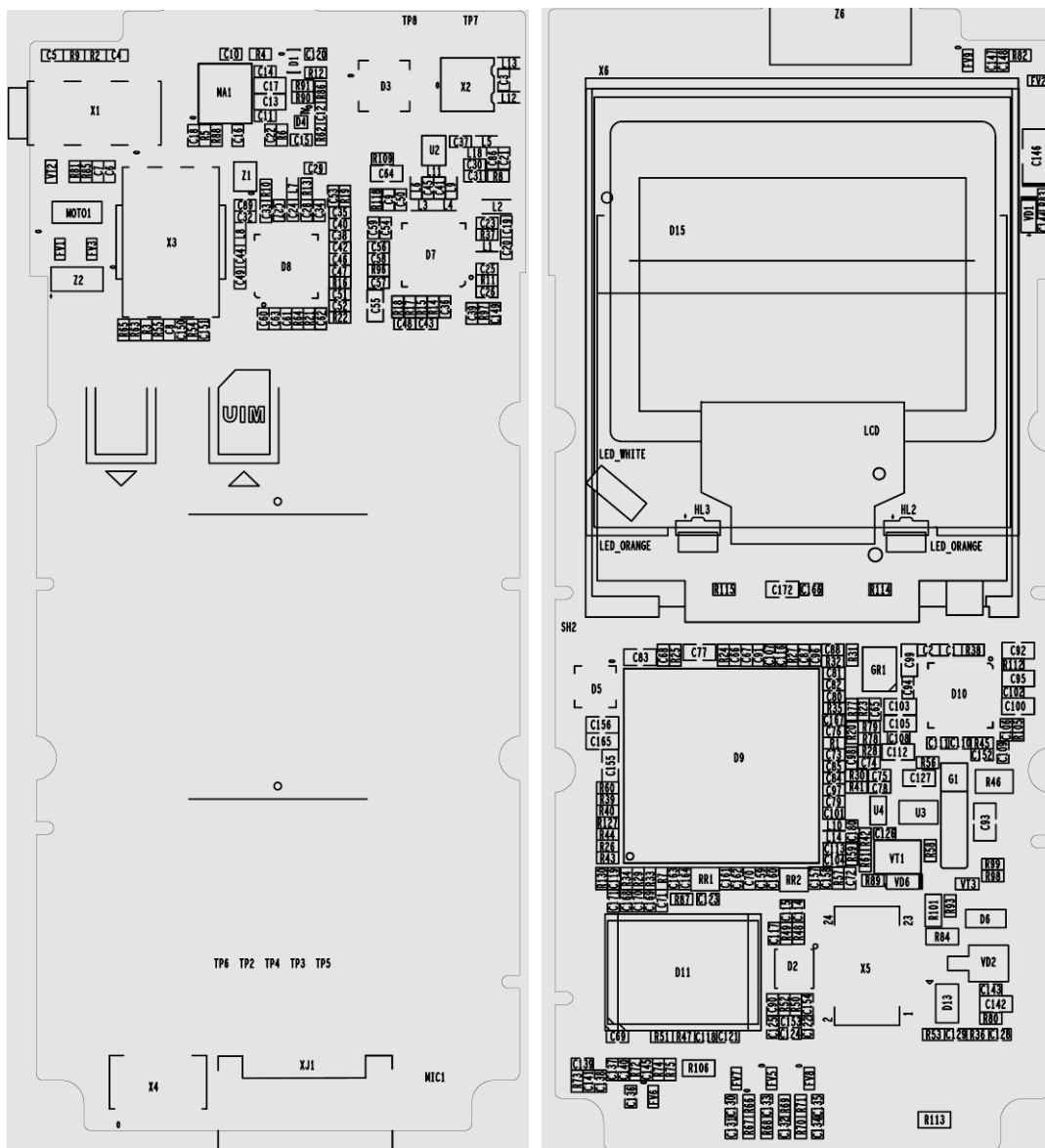
4.7 No Signal



4.8 Switch-on Failure



5. Layout Schematics



6. Parts List

6.1 Handset Parts List

Handset Parts List of C169 Indonesia M8Customized Items		
SN	Material Code	Material Name
1	055401002301	Front cover parts of ZTEC169
2	055401002021	Back cover parts of ZTEC190
3	055402000581	Key board parts of ZTEC190
4	050603100041	Antennal parts of ZTE C170
5	055402000400	P100E1 co-axis plug
6	035040300038	4015 contact MIC
7	035070100022	Vibration Motor
8	035040400025	0711 Spring type receiver
9	035040100057	15-L30H04 Speaker

6.2 Parts List of Main Board

MB Parts List of ZTEC169 CDMA 1X Digital Mobile Phone			
SN	Material Code	Material Name	Board Position No.
1	006030200041	Combo Flash	D11
2	012090200012	Handset RF Receiving Chip (RFR6122)	D7
3	012090200013	Handset RF Sending Chip (RFT6122)	D8
4	012090200014	Handset Power Management Chip (PM6610)	D10
5	012090200033	CDMA Handset Baseband Chip MSM6000	D9
6	042120100019	Triple-chip Right Angel Battery Connector	X4
7	042120200021	UIM Card Connector	X3
8	042120300012	System Connector Jacks (slice pin)	XJ1
9	042120500035	24-pin 0.5-pitch Straight SMT Welding Connector Jacks	X5
10	042120600011	Four-step Earphone Connector Jacks	X1
11	042120700001	RF Test Jacks (socket)	X2

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.)