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1. How to assemble and disassemble LENOVO A536

1.1 The phone disassemble guide

1) Remove battery cover
   Remove battery cover from B cover at the buckle, shown as picture (1) and (2).

2) Remove screws
   Remove the 7 screws as shown below. Use cross head driver to remove the screws.
Screw length to 1 & 2 & 3 & 4 positions are S1.6×L4.1×D2.6×T0.5
Screw length to 4 & 5 & 6 positions are M1.4X2.8

3) Remove B cover
   Separate B cover from A cover at the buckle, then unclench B cover and A cover with a
   plectrum alongside the shell gap.
4) **Disassemble PCBA**

Open the FPC connector of TP, LCD and Camera, and extract all the FPCs. TP FPC is glued to the main board.

Pull off side key FPC from A cover, and remove it from main board with a soldering iron. Side key FPC is glued to the A cover.

Remove the foam on the main board.
Remove the vibrator wire from the main board with a soldering iron.

Remove the speaker from A cover. The speaker is glued on the A cover, need to pry up with tweezers.
The speaker adhesive comes along with the speaker.

Remove the main board from A cover.
5) Remove front camera and MIC rubber
   Open the front camera FPC connector and extract the FPC.
   The camera adhesive comes along with the front camera.

Remove the front camera foam.

Remove two MIC rubbers on the main board. Positions of MIC rubbers are shown below.
6) Remove speaker
   Remove speaker from the main board with a soldering iron.

7) Remove main camera, receiver and vibrator from A cover.
   Main camera, receiver and vibrator are glued to the A cover.
   The adhesives come along with main camera, receiver and vibrator.
1.2 The phone assemble guide

Assemble and disassemble process is opposite
2. Main board and Sub FPC layout introduction

2.1 Main board top view
2.2 Main board bottom view
3. Troubleshooting Procedure

3.1 No boot

Cannot boot

Check whether the power button FPC assembly is good? Change the power key FPC?

Y

If change the power key FPC, then the phone can power on, the root cause is FPC.

N

Power on the alone PCBA, which be provided power by power monitor. Whether the power monitor current is larger than normal?

Y

PCBA is bad, change it.

N

Connect the phone to the computer through the USB line, check the computer device manager if there is equipment pops up.

Y

Download software and try power on it again.

N

Check the battery connector SMT is normal?

Y

Heat the battery connector then try it again.

N

Check PMIC provide power supply to CPU and EMMC are normal?

Y

Change memory chip U501

N

Heat the PMIC or change the PMIC.
3.2 Touch panel have no effect

- Touch panel have no effect
  - Touch panel is not normal?
    - Y: Touch panel is not good, change it.
    - N: The SMT of touch panel connector and EMI filter is not normal?
      - Y: Heat the touch panel connector and EMI filter.
      - N: Using the oscilloscope, the I2C controller line has signal output?
        - Y: Heat the touch panel connector and EMI filter.
        - N: Change CPU chip
3.3 Charging anomaly

3.3.1 The charger is plugged in, without charging display

The charger is plugged in, without charging display

Whether the charging is normal after replace the charger or USB line?

Y Replace the charger

N

Whether the charging is normal after replace the battery? Measure the battery voltage, whether it is less than 3V?

Y Replace the battery

N

Checks the SMT quality of these components include the PMU, USB connector, and the peripheral parts. Whether these parts are SMT good? The phone is work good after heating these parts?

Y OK

N

Replace the PMIC

Y OK

N
3.3.2 Connect the phone and computer through USB line, but not any new device was found in the computer

Connecting the phone and computer through USB line, but not any new device was found in the computer.

Whether the charging is normal after replace the charger or USB line?

Y → Replace the charger

N

Whether the charging is normal after replace the battery? Measure the battery voltage, whether it is less than 3V?

Y → Replace the battery

N

Checks the SMT quality of these components include the PMU, USB connector, and the peripheral parts. Whether these parts are SMT good? The phone is work good after heating these parts?

Y → OK

N

Replace the PMIC

Y → OK

N
3.4 Calling receiver sound has poor quality

Calling receiver sound has poor quality

Measure the resistance of receiver, is the value 32ohm?  
N  Replace the receiver.  
Y

Check whether the contact is good between receiver spring and contact point. Re assemble the receiver and whether the phone work is good.  
Y  OK  
N

Checks the SMT quality of bead. Whether these parts are SMT good? The phone is work good after heating these parts?  
Y  OK  
N

Replace the codec IC
3.5 Speaker has no sound

Speaker has no sound

Replace the speaker, and then does the phone work normal? Whether the speaker spring is normal?

Replace the Sub FPC, and then does the phone work normal?

Checks the SMT quality of these components include the BEAD on the Sub board. Whether these parts are SMT good? The phone is work good after heating these parts?

Replace the codec IC U201
3.6 LCD has no display

3.6.1 Power on and no display

White or black screen and have no display, backlight is good.

The SMT of LCD connector and EMI filter is not normal?

Y → OK

N

Replace the LCD, whether the screen display is normal?

Y → OK

N

Checks the SMT quality of these EMI filter. Whether these parts are SMT good? Whether the powers supply are normal?

Y → OK

N

Checks the SMT quality of LCD connector. Whether these parts are SMT good?

Y → Heat these parts.

N

Replace the CPU (U201)
3.6.2 LCD has no display

LCD has no backlight

Check whether the connection status between the LCD module FPC connector and the motherboard connector is normal, and reconnect the connector whether the phone is working normal.

Y → OK

N

Replace the LCD module, and make sure whether the LCD has the backlight.

Y → OK

N

Check whether the LCD backlight driver output voltage is exceeding 20V.

Y → The backlight circuit is normal, and the LCD module is bad.

N

Checks the SMT quality of LCD backlight driver IC. Whether these parts are SMT good?

Y → OK
3.7 Phone crash

Phone crash

Connecting the phone and computer through USB line, check whether some new device was found in the computer. Y → Download software

N → Check the 32.768KHz crystal is normal? N → Heat the crystal then try it again.

Y → Check PMIC provide power supply to CPU and EMMC are normal? N → Heat the PMIC or change the PMIC.

Y → Replace the memory U501, whether the phone is working normal. Y → OK

N → Change CPU chip
3.8 Key has no effect

Key has no effect

Check whether the connection status between the key FPC and the motherboard connector is normal, and reconnect the connector whether the phone is working normal.

Press the key button, make sure whether the key signal line short to ground net.

Y

OK

N

Replace the key FPC

N

Y

Change CPU chip
3.9 Communication signal abnormality

Communication signal abnormality

Boot into the engineer test mode to make sure whether the phone has the SN or IMEI number.

Y

Write the SN or IMEI number.

N

Check whether the connection status between the ANT cable and the RF connector is normal, and reconnect the connector whether the phone is working normal.

Y

reconnect the connector

N

Try to download program, whether the downloading is successful.

Find the issue part according to the download tool message.

N

Check the modem circuit and whether the intermediate frequency is good.
3.10 Calling receiver has no sound

Calling receiver has no sound

Measure the resistance of receiver, is the value 32ohm?

Replace the receiver.

Check whether the contact is good between receiver spring and contact point. Re assemble the receiver and whether the phone work is good.

OK

Checks the SMT quality of these BEAD, Whether these parts are SMT good? The phone is work good after heating these parts?

OK

Replace the codec IC

OK
3.11 Microphone has no effect

- MIC no effect
  - Checks the SMT quality of parts around the MCI
    - Y: OK
    - N: Change the MIC
      - Y: OK
      - N: Checks the SMT quality of these sub connect, Whether these parts are SMT good?
        - Y: OK
        - N: Replay PMIC
3.12 Display color distortion

- Display color distortion
  - The SMT of LCD connector and EMI filter is not normal?
    - Y → OK
    - N
  - Replace the LCD, whether the screen display is normal?
    - Y → OK
    - N
  - Checks the SMT quality of these EMI filter. Whether these parts are SMT good? Whether the powers supply V are normal?
    - Y → OK
    - N
  - Checks the SMT quality of LCD connector. Whether these parts are SMT good?
    - Y → Heat these parts.
    - N
  - Replace the CPU
3.13 Speaker tone distortion

Replace the speaker, and then does the phone work normal? Whether the speaker spring is normal?

Replace the Sub FPC, and then does the phone work normal?

Checks the SMT quality of BEAD on the Sub board and. Whether these parts are SMT good? The phone is work good after heating these parts?

Replace the codec IC
3.14 Speaker tone smaller

- **Speaker tone distortion**
  - Replace the speaker, and then does the phone work normal? Whether the speaker spring is normal?
    - Y: OK
    - N

- Replace the Sub FPC, and then does the phone work normal?
  - Y: Replace the Sub FPC.
  - N

- Checks the SMT quality of BEAD on the Sub board and. Whether these parts are SMT good? The phone is work good after heating these parts?
  - Y: OK
  - N

- Replace the codec IC
3.15 No charging

Diagram:

- **No charging**
  - **Y** Replace the charger or USB line? OK
  - **N**
    - **Y** Replace the battery? Measure the battery voltage, whether it is less than 3V? OK
    - **N**
      - **Y** Checks the SMT quality of these components include the PMU, USB connector, and the peripheral parts. Whether these parts are SMT good? The phone is work good after heating these parts? OK
      - **N**
        - **Y** Replace the Charger ic OK
3.16 Camera has no effect

3.16.1 Main camera has no effect

No effect

Check Camera module connecting is ok?

Y OK

N

Replace Camera module is OK?

Y OK

N

Check the SMT quality of Camera connect, and reheat it is OK?

Y OK

N

Check EMI filter and SMT is OK?

N Reheat it

Y

Check the CPU SMT quality is OK?

N Reheat and Replace

N
3.16.2 Sub camera has no effect

![Flowchart Diagram]

No effect

Check Camera module connecting is ok?

Y → OK

N → Replace Camera module is OK?

Y → OK

N → Check the SMT quality of Camera connect, and reheat it is OK?

Y → OK

N → Check EMI filter and SMT is OK?

N → Reheat it

Y → Check the CPU SMT quality is OK?

N → Reheat and Replace
3.17 Auto shutdown

Auto shutdown

Check battery temperature detection pin, connector is good? Check battery voltage > 3V?

- Y: Charging battery or replace the connect.
- N: Using power source supply power, observe current.

Using power source supply power, observe current.

- Y: Check the parts is OK?
- N: Download the coder again.

Download the coder again.

- Y: According to the tools prompt, fixed bad components
- N: Check SW vision, SN, IMEI

Check SW vision, SN, IMEI

- Y: Modem chip is ok?
- N: Charging is OK?

Charging is OK?

- Y: Check charge chip is ok?
- N: Check CPU is ok?
3.18 SIM Card has not be detected

Has not be detected

Change SIM card

- Y: Change new SIM card
- N: Change SIM tray.

Change SIM tray.

- Y: Change new SIM tray
- N: Rewrite SN and IMEI number.

Check SN, IMEI have be written?

- Y: OK
- N: Check SMT quality of RF antenna connect.

Check SMT quality of RF antenna connect. Check RF cable.

- Y: OK
- N: Check the SMT quality of transceiver IC, PA and relational component is OK?

- Y: OK
- N: Replace modem IC