



Brandy one touch 990(A/S/M) Level 2 Repair Document



Note: this manual is non-contractual and TCT Mobile phone can modify without prior notice the characteristics of described equipments.

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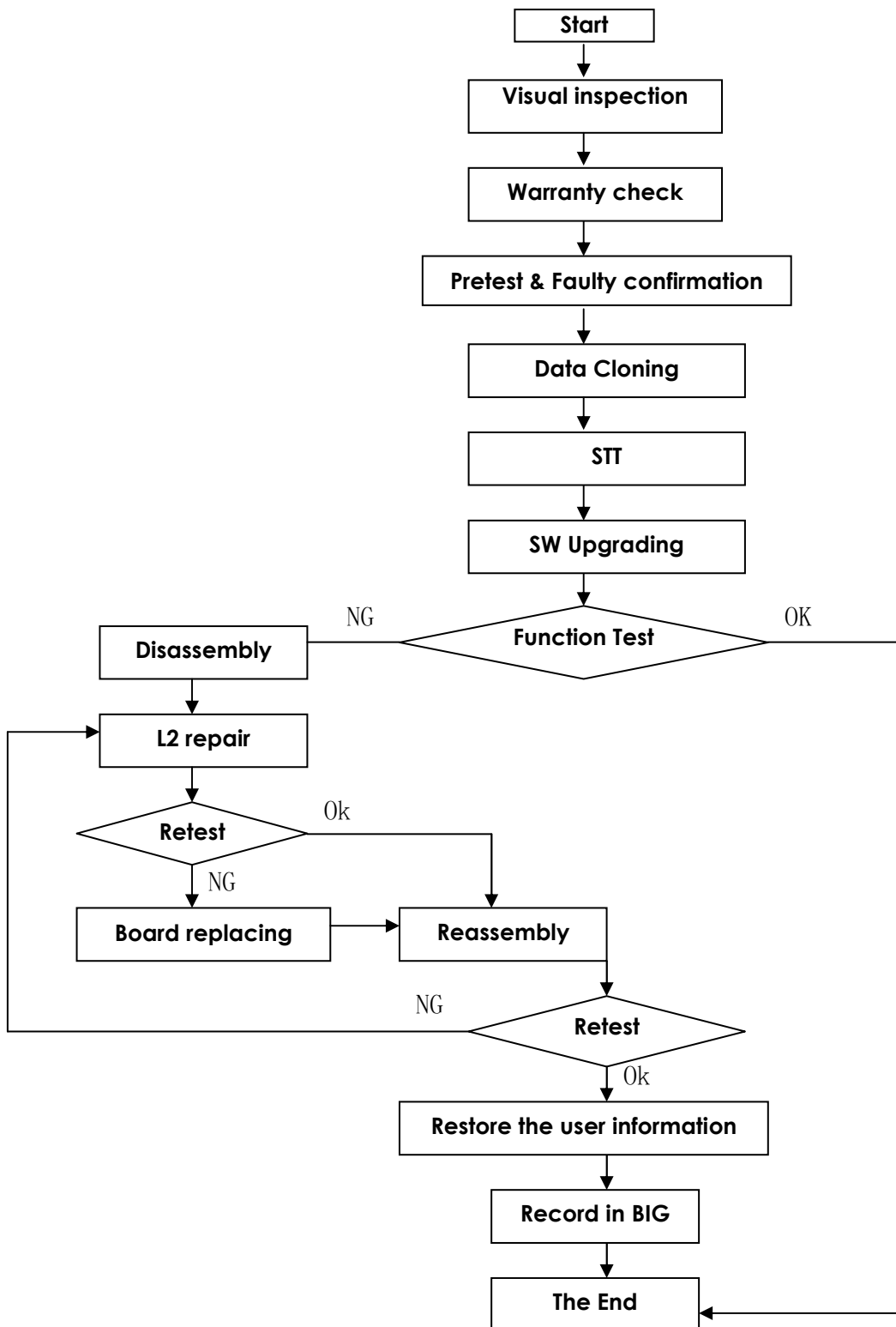
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	Function	Name	Date	Signature
Written by	CPM	Ella	2011-4-25	Ella
Verified by	PM	SP	2011-4-25	SP

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1. LEVEL 2 REPAIR PROCESS



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2. VISUAL INSPECTION AND WARRANTY CHECK

2.1 Warranty Check

Warranty confirmation of L1:

✓ **IMEI sticker check:**

The IMEI number **MUST** be the same with the one on the IMEI sticker. If not, it's out of warranty policy

IMEI label should **NOT** be removed/ scratch or unreadable/ not approved or provided by Alcatel.

✓ **Humidity sticker: Liquid detection on humidity sticker**



sticker OK

Sticker of a good terminal
This terminal is under warranty.



sticker NOK

Sticker of a terminal dived in water
This terminal is out of warranty.

✓ **Visual mechanical check;**

- 1) Corrosion: corrosion on the USB connectors, SIM connectors, and other metal surfaces
- 2) Holes (diam > 1mm): Holes on any surface, including the front casing, furnished frame, battery cover, touch Lens, keypad...
- 3) Big bumps (diam > 1mm): Bumps on any surface, including the front casing, furnished frame, battery cover, touch Lens, keypad...
- 4) Long scratch (length > 3mm): Scratches on any surface, including the front casing, furnished frame, battery cover, touch Lens, keypad...
- 5) Distortion: Bend, twisted or crushed on the h/s, cover/casing or connectors...
- 6) Broken: touch broken, casing/cover broken...
- 7) Fallen off: Keypad tear off, touch lens, connectors fallen off ...
- 8) Gap: External physical damage relating to abnormal use, like front case and frame opened
- 9) Others:
 - Damage caused by disassembly like wrong part assembly, lost of components
 - Use in abnormal environment like too high temperature with plastic melts

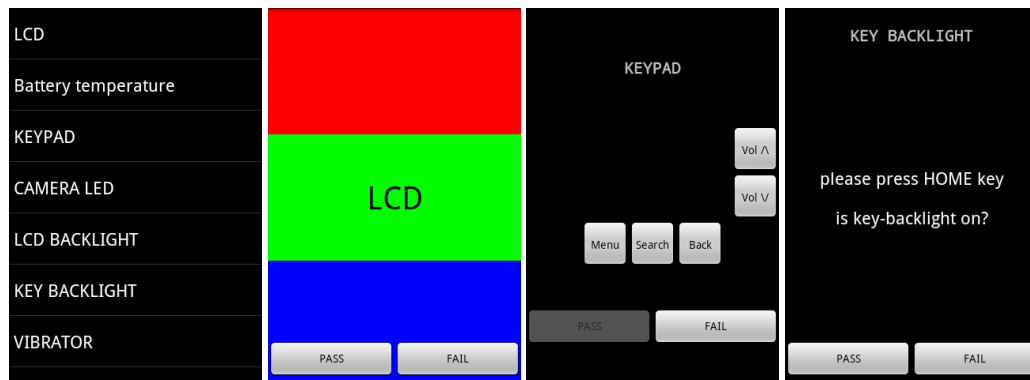
2.2 Pretest

- Power on the cell phone.
- Insert a battery, plug a charger on product, and check the icon on main display.
- If the cell phone asks to input NCK code, which means it's SIM locked, and can only be worked with dedicated SIM card. Use the correct SIM card.
- Enter the super code to unlock the phone if necessary.

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- If power on OK, test step by step with the auto test code:
- - Press *#2886# in power on mode, then all function is list in pic1. you can select which function , you want to test.



- Test LCD. LCD will turn red, green, blue, black, grey, white, Press Pass to continue
- Test battery Temperature test. Press pass if the battery temperature is during 20~50.
- Test keypad. Press every key showed in the screen, the corresponding key on the screen will be disappear. Press Pass to continue
- Test camera LED. If the camera led is lighting, press pass to continue
- Test LCD backlight. The backlight will be auto on and off, if it works all right, press Pass to continue
- Test keypad backlight. Press home key, the key backlight is on, press pass to continue
- Test the vibrator. The phone will vibrate. Press Pass to continue
- Test the front camera. Scene will be shown on the screen. Press Pass to continue.
- Test the main camera. If the camera can work, press pass to continue
- Test SIM. If the SIM is detected, press pass to continue, if do not insert a SIM in phone, will show SIM missing.
- Test FM. Insert headset into phone, then will show FM in, then find a change. Press pass to continue
- Test Bluetooth. BT will initialize to find a device, press pass to continue
- Test WIFI. WIFI will auto find the network if there is a wifi network in your place. Press pass to continue
- Test Gsensor. Put the phone follow the arrow, press pass to continue.
- Test Compass. The black arrow always pint to south direction. Press pass to continue.
- Test light sensor. the phone will auto detect the ambient light. Press pass to continue
- Test proximity sensor. please shadow the sensor, then the far and near will show pass, press pass to continue
- Test GPS.
- Make a call.
- Receive a call.
- If the phone is considered as faulty, upgrade the software (without forgetting to save customer information first - see paragraph 2.6).

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6. DISASSEMBLY and REASSEMBLY of one touch 990 series products

6.1 ESD Safety



Please wear static loop or static glove

6.2 Disassembly tools

You may use the following tools during the disassembly and reassembly procedure:

Plastic Wedge

Screw driver

Tweezers

Soldering iron

Hot wind gun

Camera Jig

Hook

Knife

Please make reference to APPENDIX 1 and find out the pictures of the tools.

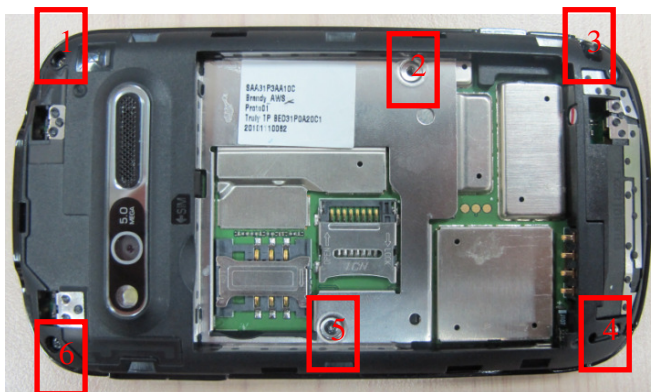
6.3 Disassembly Process

The steps of disassembly one touch 990 are as below.

This module should only be disassembled from bottom to top.

Step 1:

Take off the 6 screws from the furnished frame by screw driver.



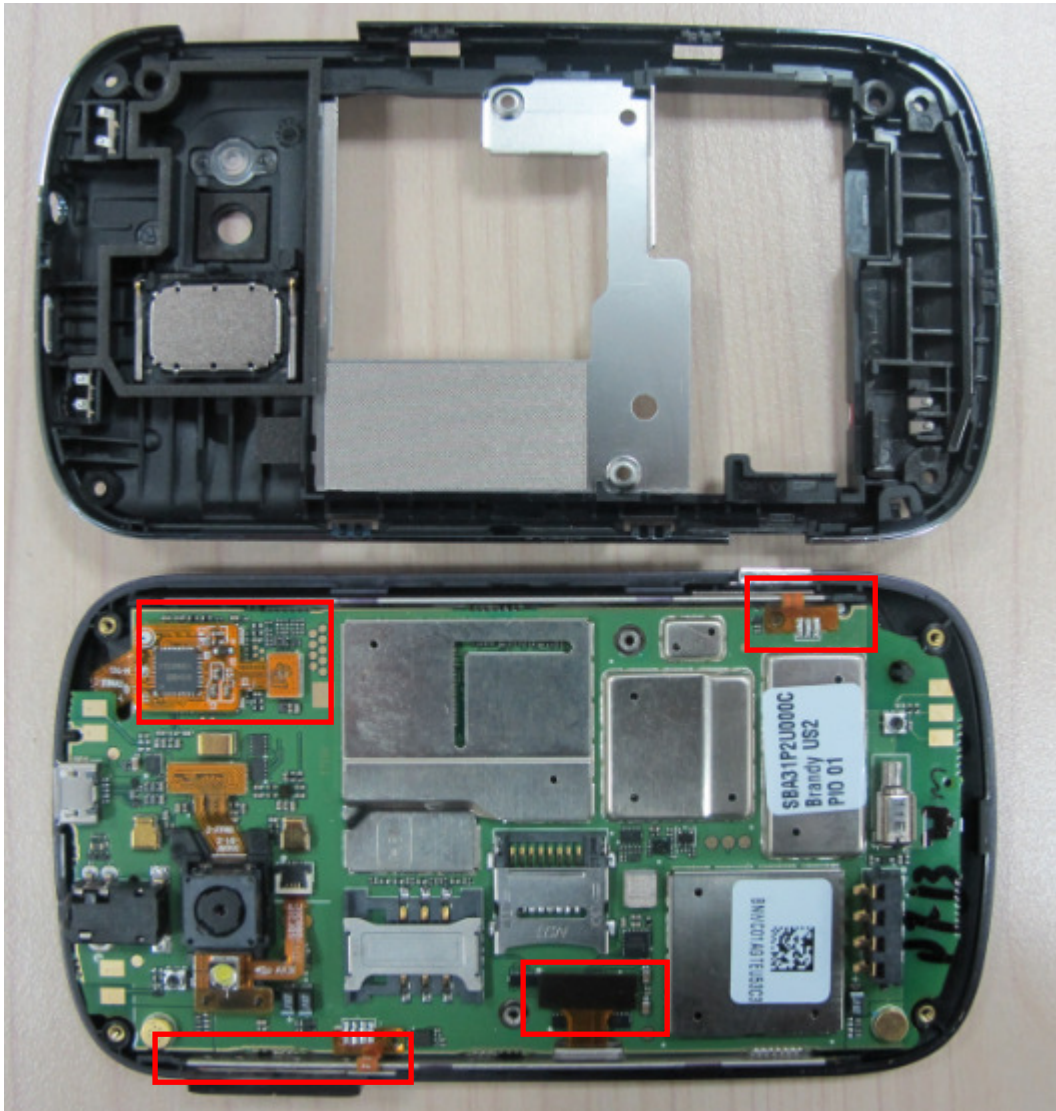
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Step2:

Prize up the furnished frame by plastic wedge and take it off, be careful to remove the touch FPC from main PCBA connector, remove LCD FPC from PCBA. Remove volume key and power on key FPC from the furnished frame.



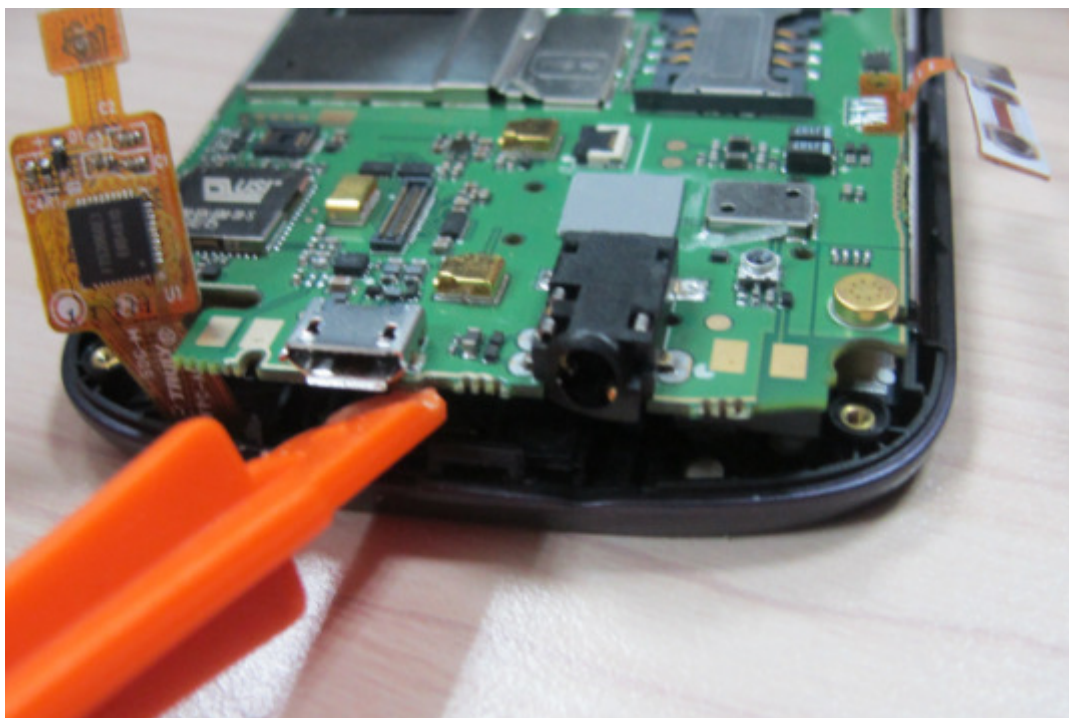
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Step 3:

Prize up the main PBCA and remove it by plastic wedge from furnished front casing.



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**Step 4:**

Disassembly touch lens from the furnished front casing, use the hard Tweezers prop up touch lens as below picture showed. This need very big power, so be care to break the touch lens and Touch lens FPC.



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Step 5:

Dismantle the LCD model from front casing.

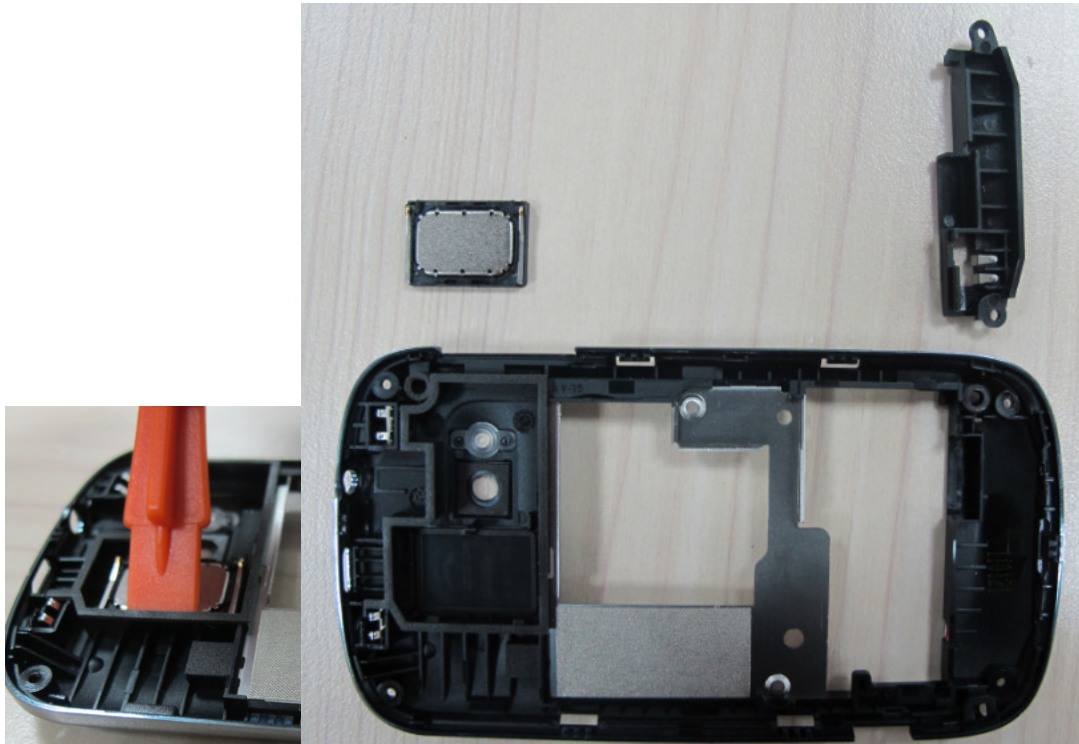


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Step 6:

Remove speaker and antenna from furnished frame by plastic Wedge.



Step 7:

Remove camera and flash light from PCBA, be careful! It is easy to break the FPC.

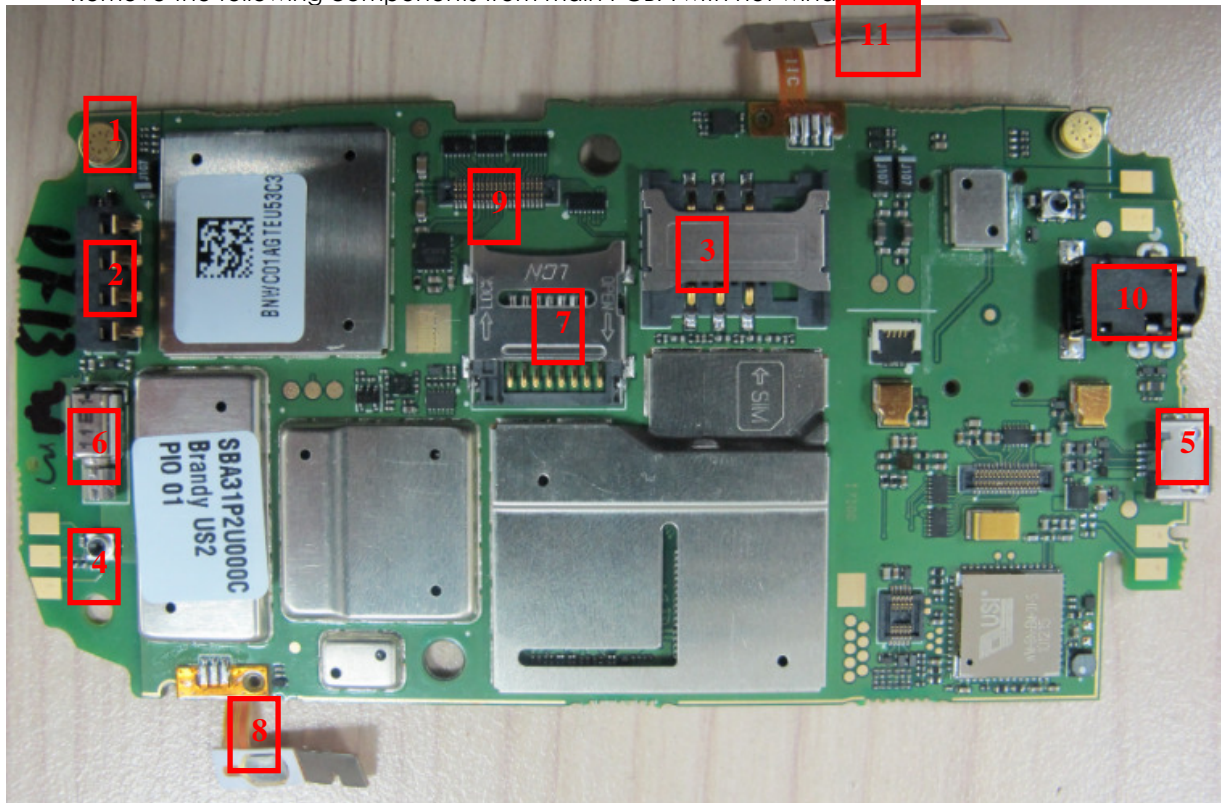


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Step 8:

Remove the following components from main PCBA with hot wind gun.



1-MIC 2-battery connector 3-SIM connector 4-RF connector 5-USB connector 6-vibrator
7-T flash connector 8-Power key FPC 9-LCD module connector 10-audio jack 11- side key
PFC

Disassembly Notice:

Put all the spare parts on right position (don't let all spare parts mixed and put on the clean place to avoid vitiated or stained for each spare part) after disassembly. When taking apart of LCD and key film, take care not to dirty or damage it.

6.4 Reassembly Process

Please make reference to the disassembly process for assembly reverse an order of the disassembly steps.

Attention:

Insert main FPC and assembly main PCBA with furnished keypad casing, lock the main FPC connector to PCBA connector, and then place the side key, Assembly the furnished frame. Note the orientations of the main FPC.

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6.5 Disassembly process evaluation

We list the one touch 990 parts disassembly time, technique levels and disassembly methods as below, for technique levels, Class 1 signifies easy to disassembly, Class 2 signifies normal to disassembly and Class 3 signifies hard to disassembly.

spare part	Time for disassembly	Jigs for disassembly	Difficulty Class	Remark
battery cover	3s	Plastic Wedge	Class 1	
Furnished casing with screws	20s	screwdriver	Class 1	
Remove PCBA from front casing	600s	Plastic Wedge	Class3	
Dismantle voice key and PTT key	8S	screwdriver	Class 1	
Remove function keypad film	5S	screwdriver	Class 1	
Dismantle function keypad frame	5S	Plastic Wedge	Class 1	
Remove LCD shielding ASM	10S	Plastic Wedge	Class 2	Be careful for LCD model damage
Remove side key FPC	15s	Hot wind gun screwdriver	Class 2	Be careful for main PCBA pad damage
Remove PTT key FPC	15s	Hot wind gun screwdriver	Class 2	Be careful for LCD model damage
Remove LCD model from main PCBA	300s	Plastic Wedge	Class 3	Be careful for main PCBA pad and LCD FPC damage
Remove SIM connector	120s	Plastic Wedge	Class 3	The connector is easy to be damaged
Remove audio jack	60s	Hot wind gun screwdriver	Class3	The connector is easy to be damaged
Remove T flash connector	120s	Hot wind gun screwdriver	Class 3	The connector is easy to be damaged
Battery connector	40s	Hot wind gun screwdriver	Class3	The connector is easy to be damaged
Camera model	20s	Plastic Wedge	Class1	

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7. LEVEL 2 REPAIR

This chapter describes the LEVEL 2 repairs that can be done without any diagnostic equipment.

	Problem description	Action And Solution
Charging	Bad or No Charge	1.Check voltage of the battery: if 0V, charge some minutes and check the charge indicator; 2.Check the battery contact, change the battery connector if broken; 3.Check the charge plug on B cover, change it if necessary;
Switch on with battery power	Can 't Switch on	1.Check voltage of the battery; 2.Check the battery contact, change the battery connector if broken; 3.Check the keypad 4.Check BTB connector socket pin
Main display	Missing line or column; no display; bad or no LCD backlight	Check Connection flex (FPC cable),change it if necessary; Replace display module if necessary;
Keyboard	Keyboard backlight or keyboard function	Check keypad film or keypad PCB, change it if necessary
Vibrator	The vibrator does not work	Check the contact on the PCBA (dirty or oxidized), replace the vibrator if necessary;
Network Problem	No emission or No reception	Check the antenna contactor on the B cover; Check the contact on the PCBA (dirty or oxidized);
TF card	No communication between the phone and the TF card	Check the TF connector on the PCBA;
Camera	Camera doesn't work	Check camera module Check also camera FPC broken or not
Audio	Bad or no emission (TX audio from mobile); Bad or no reception (RX audio on mobile); Hands-free problem; Key beep and melody problem	Check microphone, replace it if necessary; Check the contact on the PCBA (dirty or oxidized) Check loud speaker, replace it if necessary; Check the contact on the PCBA (dirty or oxidized)

In case the LEVEL 2 repairs can't solve the problem, or if the board is damaged, exchange the board.

8. BOARD EXCHANGE

In case that LEVEL 2 repair does not solve the failure, it is mandatory to change the board and apply the following process:

- 1) Collect the fault PCBA board (without accessories LCD, and camera), **with microphone and vibrator**.
- 2) Get a new PCBA from swap stock. Reuse those accessories to assemble the mobile.
- 3) Fill in the fault sticker with IMEI number, the fault code, the short code, the Hardware Technical Level, and the software version.
- 4) Send the fault PCBA with fault sticker back to L3 repair center with the suggested packaging method, the detail packaging method please see solution 1 of APPENDIX 2.

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9. OTHER COMPONENT EXCHANGE

The other components exchange like LCD module, keypad, vibrator, receiver, speaker, microphone, camera, FPC connection, audio/camera connector and related mechanical components, please follow the detail steps from paragraph 7(Disassembly and Reassembly process), but need to be very careful to handle the components with related special tool or jig (especially replacing new components) and better to handle it with plastic tools (plastic tweezers and wedge etc.), besides technicians must put on static gloves, fingertips or wear static loop during the whole process of components exchange!

10. STICKERS

Find below the specification concerning the stickers for one touch 990products.

This sticker must be re-printed when the board is changed or upgraded .If the sticker is damaged, the mobile must be excluded of manufacturer warranty.



Certification name	Commercial Name	Product type (and internal name)
CE1588	one touch 990	Brandy EU
RAD158	one touch 990A	Brandy US
RAD159	one touch 990S	Brandy AWS
CE1588 RAD177	one touch 990M	Brandy Brazil
CCC	TCL A990	Brandy TCL-CHINA
CCC	OT 990M	Brandy ALCATEL-CHINA

Label information

Length = 64 mm

Width = 49 mm

Thickness = 0.05mm

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Zone	Variable	Signification
1	-	Type of product : XXXX
2	-	Distributor : For EMEA: TCT Mobile Limited For Latam: TCT MOBILE For CN: 惠州 TCL 移动通信有限公司
3	DATA3	PTS='soft' techn. Release xxx
4	DATA10 or DATA 12	Short code xxxx
5	DATA2	PTM
6	-	Made in (by) ... according to made in file
7	-	China version—CMII:0000000000/ PCS version—FCC ID:RADXXX
8	DATA7	Commercial Ref
9	DATA5	Full IMEI
10	DATA5	Bar code IMEI
11	DATA5 DATA11 DATA2 DATA3 DATA7	DATAMATRIX Code IMEI No. / INDUS. REF. / PTH(PTM) / PTS / COM. REF.
12	DATA4	Date Code xxx
13	Not used-	Commercial Name
14	Not used-	
15	Not used-	
16	Not used-	Special Logo on other project
17		Bluetooth QD ID BXXXXXXX
18	Data18	Enhanced SIM Lock ("E": Enhanced SIM Lock; "N": NO Enhanced SIM Lock, including Normal SIM Lock and No SIM Lock;)
NO	DATA11	3DS (INDUS REF)

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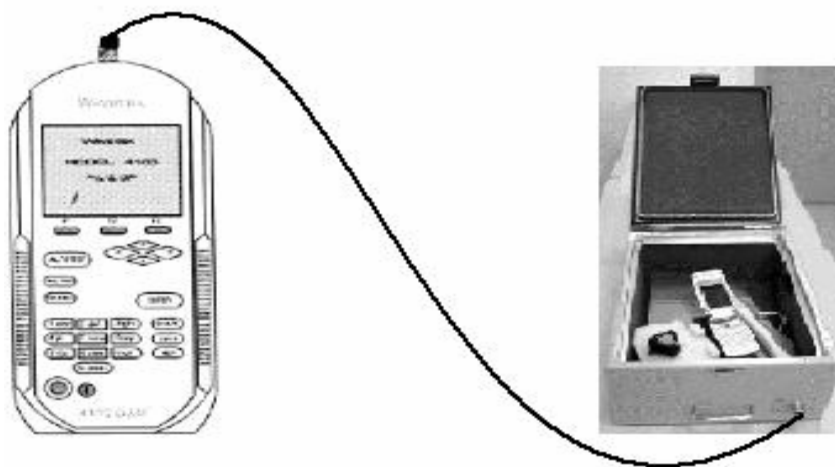
11. FINAL TEST

11.1 Function Test

During the function test, the following items must be checked and validated.

- ✓ Cosmetic aspect of the handset, the Software Technical sticker state on the Board
- ✓ Switch on the handset
- ✓ Default welcome message
- ✓ Press *#2886# on the idle screen to start the auto test (refer to the "Pretest" in Chapter 2)

11.2 Measurement



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APPENDIX 1 Tools and Equipments for L2 Repair Center

➤ Repair Tools and Downloading Tools:



Plastic Stick



Tweezers



Hot wind gun



Screwdriver (TORX6)



Soldering iron



Camera Jig



Knife

➤ Other Mandatory Equipments

- 1) Final test kit (charger, batteries, Back covers)
- 2) Final test interface
- 3) Bench and socket
- 4) Stickers

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APPENDIX 2 Packaging Requirements

➤ **PCBA shipment requirement:**

- 1) **Against Electro-Static.**
- 2) **Avoid PCBA are laid to overlap each other.**
- 3) **Against press outside package.**

- **Solution 1:** Each PCBA is packaged by shielding bag, put each PCBA into each cave of the carton (see picture below).



- **Solution 2:** Stack by special trays (15 trays maximum), put empty trays to fill space inside the carton and all trays should be bound tightly in order to avoid PCBA move out (see picture below).



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