TCT Mobile

Repair Document

Baby D/one touch-890(D)

Multimedia tablet phone
With Android system

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

5. DISASSEMBLY and REASSEMBLY of one touch 890(D)

5.1 ESD Safety


Please wear static loop or static glove

5.2 Disassembly tools

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

Plastic Wedge	**Screw driver**	**Tweezers**
Soldering iron	**Hot wind gun**	**Soldering Jig**
Hook	**Knife**	

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

5.3 Disassembly process

The steps of disassembly one touch 890(D) are as below.

This module should only be disassembled from bottom to top.

Step 1:

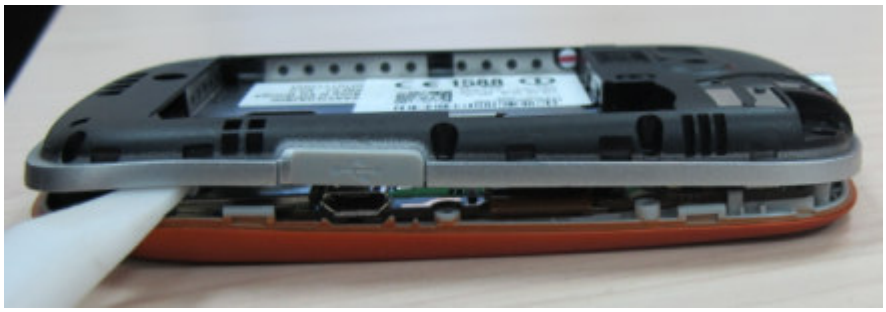
Take off the battery cover by plastic wedge, battery and SIM card if there is.

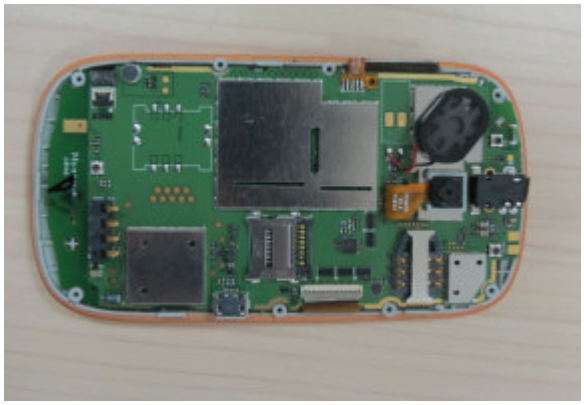
Step 2:

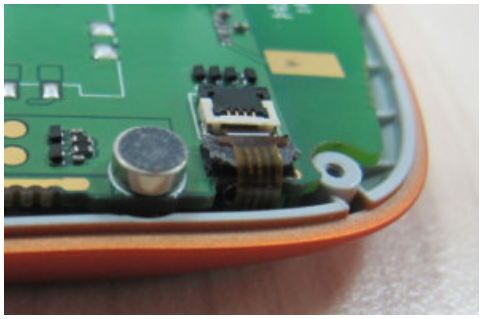
Take off the 8 screws from the furnished frame by the screw driver.

Step3:

Prize up the furnished frame by plastic wedge and take it off, be careful to remove the touch lens FPC .







Step 4:

Prize up the main PBCA and remove it by plastic wedge. Dismantle the side key, vibrator and antenna module from furnished frame and main key from front casing..

Step 5:

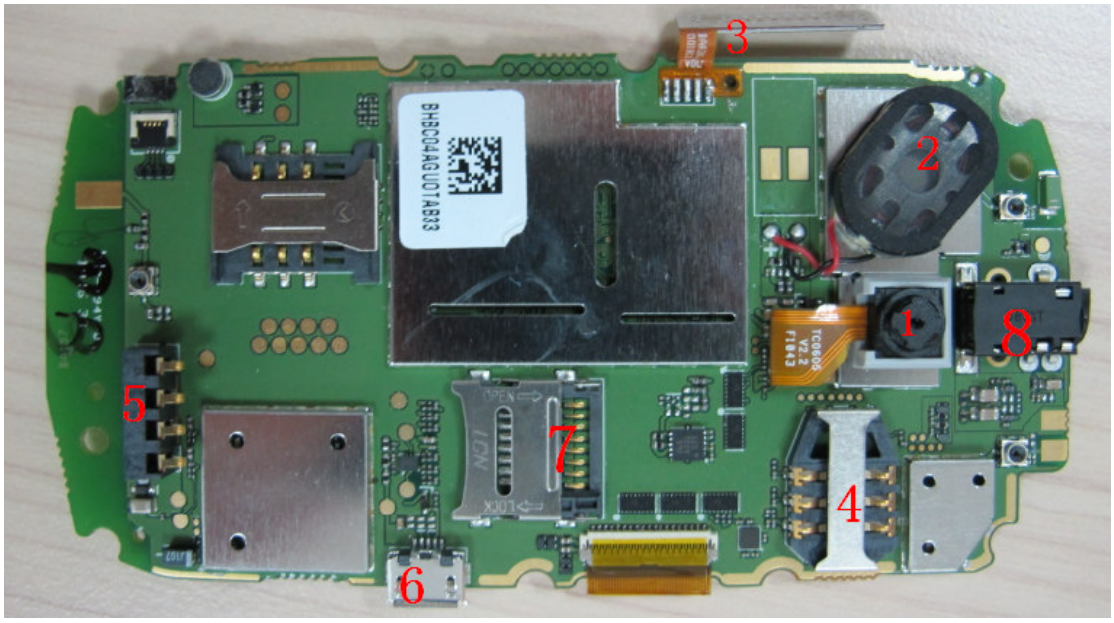
Remove touch lens from furnished front casing.

Step 6:

Remove the side home key FPC and LCD model from main PCBA by plastic wedge & hot wind gun. Remove key film from main PBCA by tweezers.

Step 8:

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



1-camera 2-speaker 3-side key fpc 4-SIM card connector 5-battery connector 6-USB connector 7-T-flash card connector 8-audio jack

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.

5.4 Reassembly Process

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

Attention:

Remind to insert touch lens FPC to main PCBA.

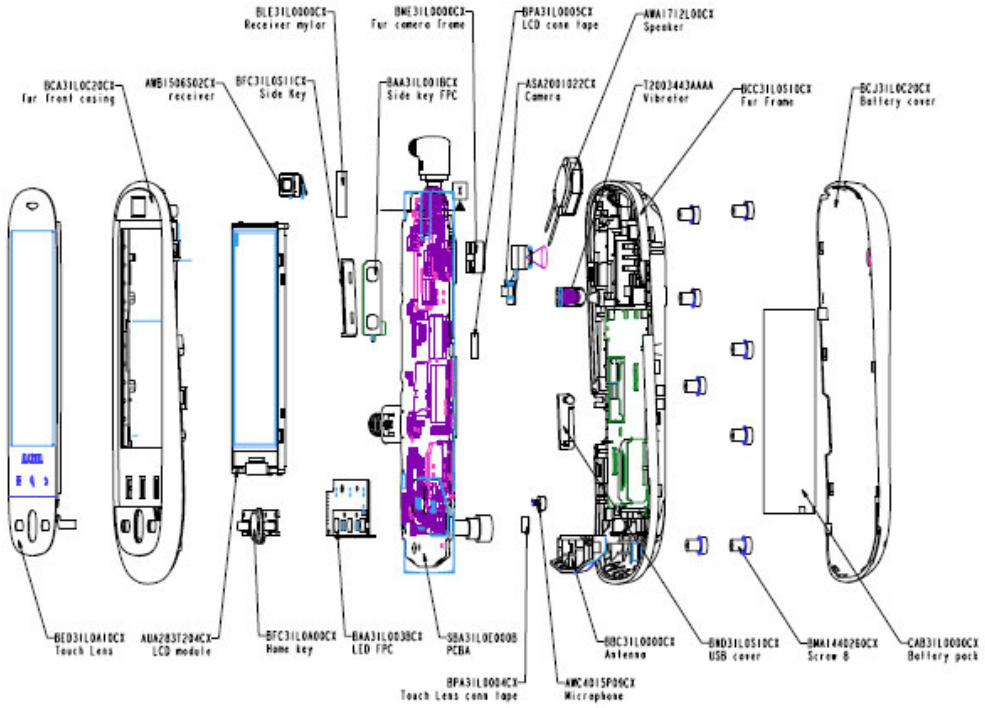
5.5 Disassembly process evaluation

We list the one touch 890(D) 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	2s		Class 1	
Furnished casing with screws	20s	Screwdriver	Class 1	
PCBA	5s	Plastic Wedge	Class 1	
Side key	5s		Class 1	
Side key FPC	15s	Hot wind gun screwdriver	Class 2	Be careful for main PCBA pad damage
LCD module	30s	Hot wind gun screwdriver	Class 3	Be careful for main PCBA pad and LCD FPC damage
SIM connector	15s	Hot wind gun screwdriver	Class 1	The connector is easy to be damaged
Audio jack	15s	Hot wind gun	Class 1	The connector is easy to

		screwdriver		be damaged
T flash connector	15s	Hot wind gun screwdriver	Class 1	The connector is easy to be damaged
Battery connector	15s	Hot wind gun screwdriver	Class 1	The connector is easy to be damaged
Camera model	10s		Class 1	

5.6 Disassembly Complete



6. 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 and Sub 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 bip 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.

7. 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, vibrator, and camera), **with microphone**
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.

8. 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!

9. STICKERS

Find below the specification concerning the stickers for one touch 890(D) products.
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.

Label information
Length = 33 mm
Width = 22 mm
Thickness = 0.05mm

	Model name	Commercial name	IMEI #	Certification name
EU-Single SIM	Baby D	one touch 890	35519004******	CE1588
US-Single SIM	Baby D	one touch 890	35519004******	FCC ID: RAD165
EU-Dual SIM	Baby D	one touch 890D	35519104******	CE1588
China-Single SIM	Baby D	TCL A890	86660600******	CMIIT ID: XXXXXX

The formation on the identification sticker is:

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	- DATA7	Commercial Ref
8	DATA7	
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	-	FCC ID &CE logo
14	-	
15	Not used -	**NOM mark**
16	Not used	**Special Logo**
17		Bluetooth QD ID BXXXXXX
18	DATA18	Enhanced SIM Lock ("E"- Enhanced SIM Lock; "N" -NO Enhanced SIM Lock, including Normal SIM Lock and No SIM Lock;)

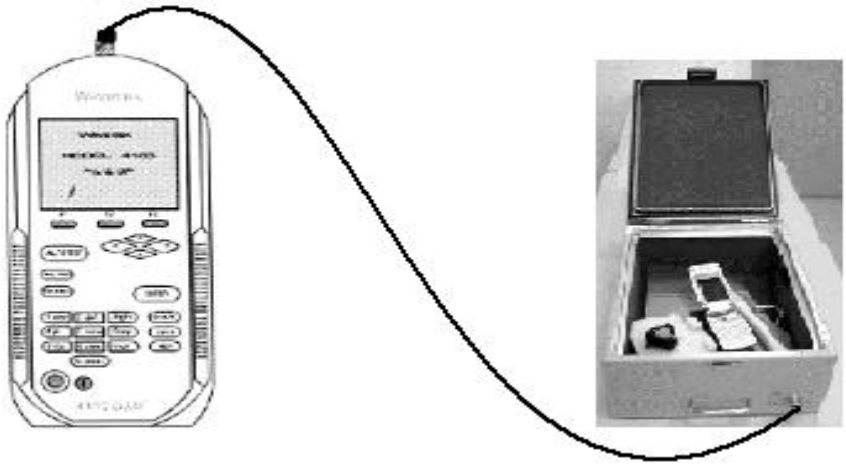
10. FINAL TEST

10.1 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)

10.2 Measurement



Measurements	Channels	Power levels	Tol.min	Tol.max	Conditions
GSM					
Connection Mobile	63*	9	None	None	Radiated meas
Call base from mobile	5*	9	None	None	Radiated meas
Power level measurements	5*	9	22 dBm	28 dBm	Radiated meas
Power level measurement	5*	5	31 dBm	35 dBm	Radiated meas
Peak Phase error measurements	5*	5	0°	20°	Radiated meas
RMS Phase error measurements	5*	5	0°	5°	Radiated meas
Frequency error measurements	5*	5	-90 Hz	+90 Hz	Radiated meas
RX Level (BS power level : -60dBm)	5*	5	45	55	Radiated meas
Power level measurements	120*	5	31 dBm	35 dBm	Radiated meas
Peak Phase error measurements	120*	5	0°	20°	Radiated meas
RMS Phase error measurements	120*	5	0°	5°	Radiated meas
Frequency error	120*	5	-90 Hz	+90 Hz	Radiated meas

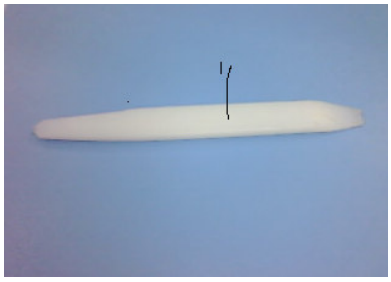
measurements					
RX Level (BS power level : -60dBm)	120*	5	45	55	Radiated meas
DCS					
Power level measurements	515*	0	28 dBm	32 dBm	Radiated meas
Peak Phase error measurements	515*	0	0°	20°	Radiated meas
RMS Phase error measurements	515*	0	0°	5°	Radiated meas
Frequency error measurements	515*	0	-180 Hz	+180 Hz	Radiated meas
RX Level (BS power level : -60dBm)	515*	0	45	55	Radiated meas
Power level measurements	880*	0	28 dBm	32 dBm	Radiated meas
Peak Phase error measurements	880*	0	0°	20°	Radiated meas
RMS Phase error measurements	880*	0	0°	5°	Radiated meas
Frequency error measurements	880*	0	-180 Hz	+180 Hz	Radiated meas
RX Level (BS power level : -60dBm)	880*	0	45	55	Radiated meas
Keyboard test (1)	-	-	-	-	-
Audio test GSM	70*	9	None	None	Radiated meas
Hang up	70*	9	None	None	Radiated meas
Call mobile from BS	700*	9	None	None	Radiated meas
Power level measurements	700*	0	27 dBm	33 dBm	Radiated meas
Audio test DCS	700*	0	None	None	Radiated meas
Hang up	70*	9	None	None	Radiated meas
PCS					
Connection Mobile	661*	5	None	None	Radiated meas
Call base from mobile	513*	5	None	None	Radiated meas
Power level measurements	513*	5	15 dBm	25 dBm	Radiated meas
Power level measurements	513*	0	25 dBm	35 dBm	Radiated meas

Peak Phase error measurement	513*	0	0°	20°	Radiated meas
RMS Phase error measurements	513*	0	0°	6°	Radiated meas
Frequency error measurements	513*	0	-180 Hz	+180 Hz	Radiated meas
RX Level (BS power level : -65dBm)	513*	0	35	55	Radiated meas
Keyboard test (1)	-	-	-	-	-
Power level measurements	880*	0	25 dBm	35 dBm	Radiated meas
Peak Phase error measurements	880*	0	0°	20°	Radiated meas
RMS Phase error measurements	880*	0	0°	6°	Radiated meas
Frequency error measurements	880*	0	-180 Hz	+180 Hz	Radiated meas
RX Level (BS power level : -60dBm)	880*	0	35	55	Radiated meas
Audio test 1900	683*	5	None	None	Radiated meas
Hang up	683*	5	None	None	Radiated meas
Call mobile from BS	683*	5	None	None	Radiated meas
Power level measurements	683*	5	15 dBm	25 dBm	Radiated meas
Hang up	683*	5	None	None	Radiated meas

These values are given for indication, compatible low, middle and high channels have to be found.

APPENDIX 1 Tools and Equipments for L2 Repair Center

➢ Repair Tools and Downloading Tools:



Plastic Stick

Tweezers

Hot Wind Gun

Screwdriver (TORX6)

Soldering Iron

Knife

➢ Other Mandatory Equipments

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

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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