



Yippee 3G/onetouch 900/900M/901(D/A/N/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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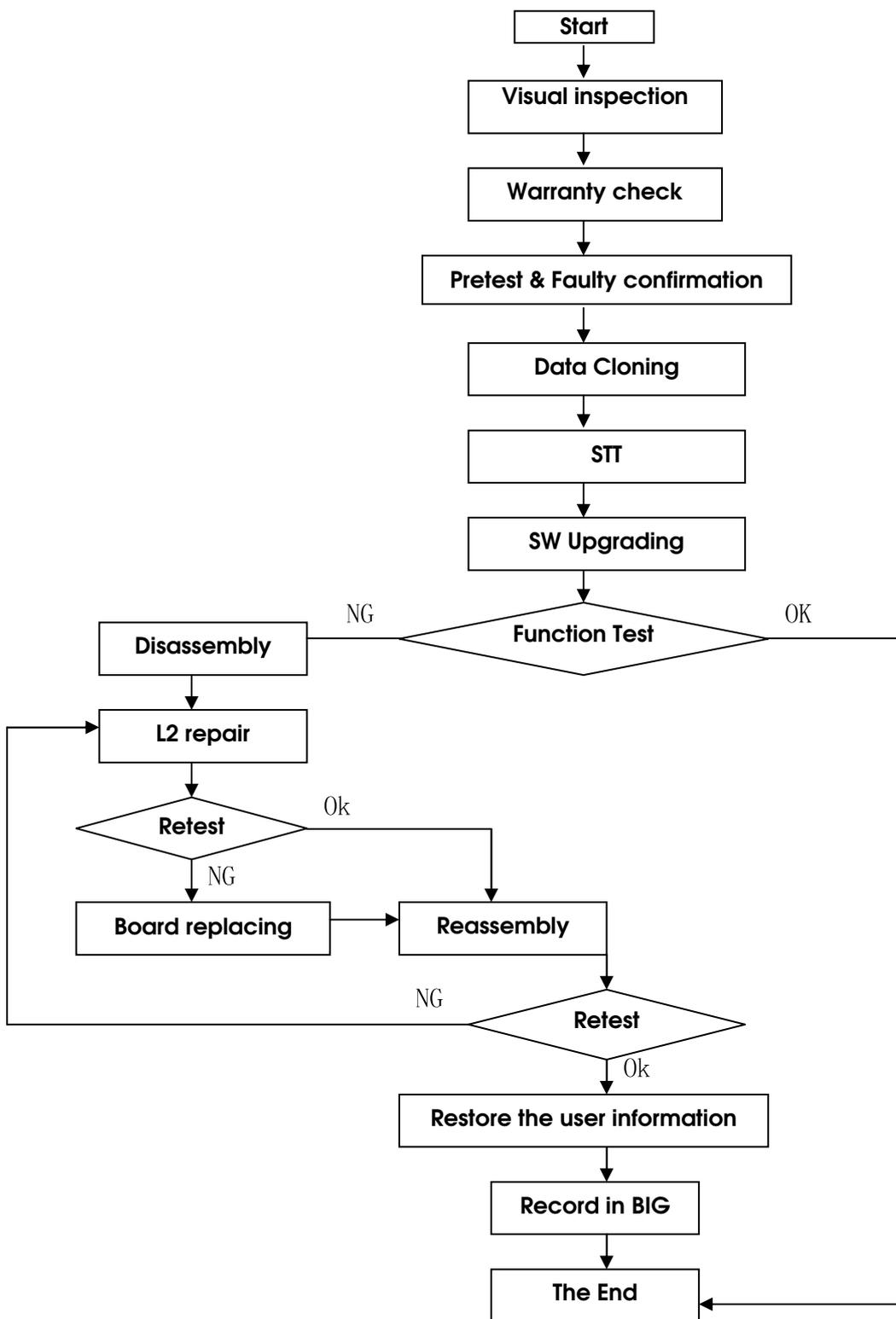
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Edition	Modification	Author	Date
0.1	Draft Creation	Ella	2011-3-7
1.0	Update tools	Ella	2011-3-24

	Function	Name	Date	Signature
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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.
- If power on OK, test step by step with the auto test code:
 - press *#2886# on the idle screen and press left/right choice key to start the auto test
 - Test LCD/keypad backlight. The backlight will be auto on and off, if it works all right, press Pass to continue

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- Test LCD. LCD will turn red, green, blue, white, and black. Press Pass to continue
- Test keypad. Press every key on the keypad, the corresponding key on the screen will be disappear. Press Pass to continue
- Test the vibrator. The phone will vibrate. Press Pass to continue
- Test the camera. Scene will be shown on the screen. Press Pass to continue.
- Test the MIC. Puff near the MIC. If you can hear the sound from the receiver, press Pass to continue.
- Test the receiver. Sounds heard from the receiver. Press Pass to continue
- Test audio. You will hear the melody playing. Press Pass to continue
- Test SIM, Press pass if detect SIM Yes
- Test the memory card. The phone will recognize the card when you insert it. Press Pass to continue
- Test the charger. The phone will recognize the charger when you insert it. Press Pass to continue
- USB test. Insert USB connector to phone in time. Will showed pass.
- Test the headset. Insert the headset and make the voice, you will hear the sound from the headset, press pass to continue
- Test FM, FM will auto search a Freq, press pass to continue
- Test WIFI. WIFI will auto search available network, press pass to continue
- Test Bluetooth. BT will initialize to find a device, press pass to continue
- Make a call.
- Receive a call.
- Reproduce the fault which end user complaint.

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6. DISASSEMBLY and REASSEMBLY of one touch 900/901 series product

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 900 are as below.

This module should only be disassembled from bottom to top.

Step 1:

Take off the battery cover by plastic wedge.

Step 2:

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



Step3:

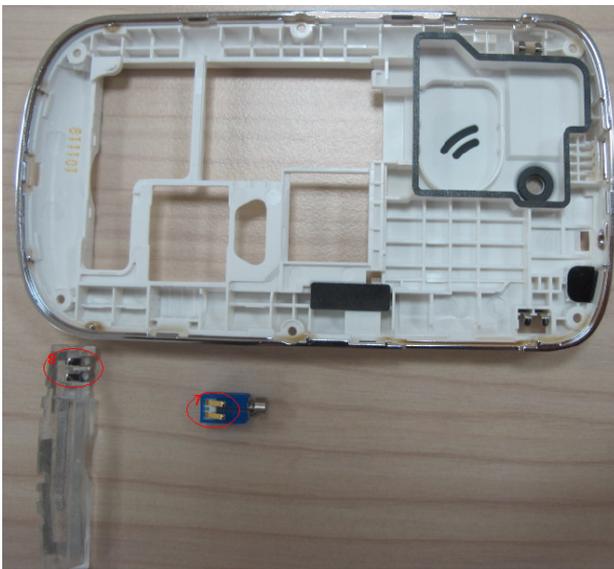
Prize up the furnished frame by plastic wedge and take it off

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Step 4:

Prize up the antenna by plastic wedge, Vibrator Volume Key and PTT Key by tweezers; be careful of the metal pin of antenna and vibrator.



Step 5:

Prize up the main PBCA and remove it by plastic wedge.



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Step 6:

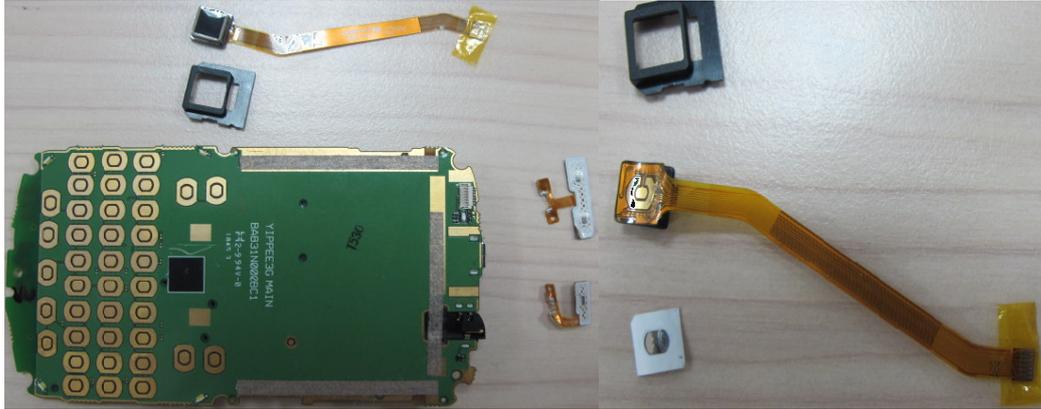
Remove LCD connector tape and LCD module by hot wind gun and tweezers. Be careful of connector 9.



Step 7:

Remove the Volume key FPC ASM and PTT key FPC ASM by hot wind gun and remove the OFN module, Fur OFN support, OFN high pc film and Key film by tweezers.

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Step 8:

Dismantle the keypad, receiver as below picture showed



Step 9:

Remove following components from main PCBA with hot wind gun and Camera Jig.

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9. Speaker 10. Camera 11. Audio Jack 12. USB connector 13. FPC ZIF connector
 14. T-Flash connector 15. Battery connector 16. SIM card connector 17. Microphone
 18. RF connector

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, 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 volume and PTT FPC connector and speaker firstly on main PCBA board and then Assembly OFN module and OFN support and next Place LCD on the right orientation. Note the orientations of the main FPC.

6.5 Disassembly process evaluation

We list the one touch 900/901 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.

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spare part	Time for disassembly	Jigs for disassembly	Difficulty Class	Remark
battery cover	3s	Plastic Wedge	Class 1	
Furnished casing with screws	10s	screwdriver	Class 1	
Remove PCBA from front casing	10s	Plastic Wedge	Class 1	
Dismantle voice key and PTT key	8S	screwdriver	Class 1	
Remove LCD module	15S	Hot wind gun screwdriver	Class 2	Be careful for LCD model damage
Remove Volume 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 OFN module from PCBA	20s	Hot wind gun screwdriver	Class 2	Be careful for main PCBA pad damage
Remove Fur OFN support	10s	screwdriver	Class 3	The connector is easy to be damaged
Remove OFN high pc file	15s	tweezers	Class1	

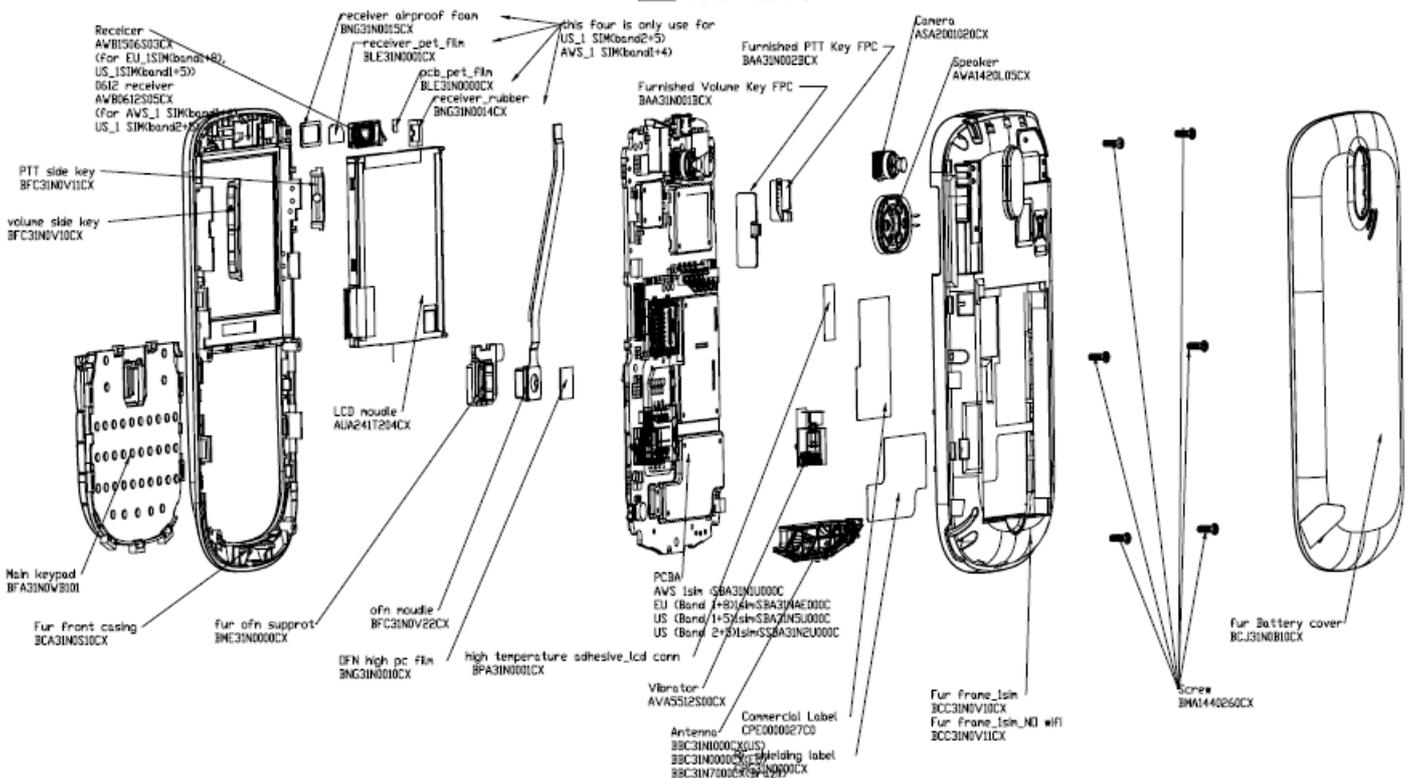
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Remove keypad film	5S	screwdriver	Class 1	
Remove Keypad	10s	screwdriver	Class 1	
Remove Speak	30s	Hot wind gun screwdriver	Class3	Be careful for Main PCBA and The connector is easy to be damaged
Camera model	10s	Camera jig	Class1	
Remove SIM connector	15s	Hot wind gun screwdriver	Class 3	The connector is easy to be damaged
Remove audio jack	15s	Hot wind gun screwdriver	Class3	The connector is easy to be damaged
Remove T flash connector	15s	Hot wind gun screwdriver	Class 3	The connector is easy to be damaged
Battery connector	15s	Hot wind gun screwdriver	Class3	The connector is easy to be damaged

6.6 Disassembly Complete

1SIM



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7. LEVEL2 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, vibrator, and camera), **with microphone, and key metal dome.**
- 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.

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!

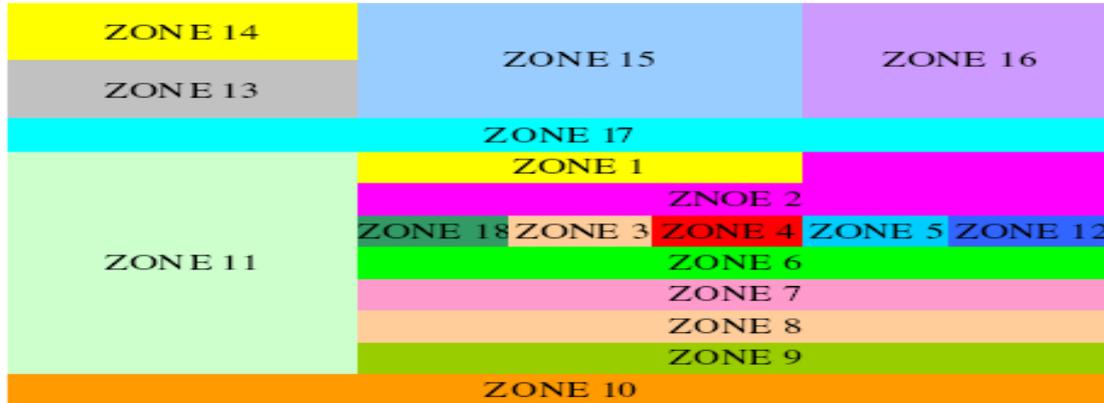
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10. STICKERS

Find below the specification concerning the stickers for one touch 900/901 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.



YIPPEE 3G		
EU	one touch 900	35608104
EU(Dual)	one touch 901D	35608204
LATAM	one touch 901A	01259600
BRAZIL(Dual)	one touch 901N	35708804
AWS	one touch 901S	01261400
BRAZIL(Single)	one touch 901M	01261300
Brazil VIVO PTT version	one touch 900M	01272200

FCC ID number	Commercial Name	Model name (Internal Name)
NA	one touch 900	YIPPEE 3G
NA	one touch 901D for UMTS900/2100 dual SIM	YIPPEE 3G_D
NA	one touch 901N for 850/2100 Dual Sim	YIPPEE 3G_N
RAD161	one touch 901A	YIPPEE 3G_A
RAD162	one touch 901S	YIPPEE 3G_S
RAD163	one touch 901M	YIPPEE 3G_M
RAD186	one touch 900M	YIPPEE 3G_PTT

Label information
 Length = 29.1mm
 Width = 21.3mm
 缺口: 2.5*16.2mm

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Zone	Variable	Signification
1	-	Product name: XXXX
2	-	Distributor : For EMEA: TCT Mobile Limited For Latam: TCT MOBILE For CN: 惠州 TCL 移动通讯有限公司 GSM 双频 GPRS 功能数字移动电话机
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—CMIIT ID:0000000000 / PCS version—FCC ID:RAD***
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	-	Special Logo
14	-	
15	-	
16	-	
17		Remarker (Bluetooth QD ID B*****)
18	DATA18	"E"- Enhanced SIM Lock; "N"- Normal SIM Lock and No SIM Lock;
NO	DATA11	3DS (INDUS REF)

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 measurements	120*	5	-90 Hz	+90 Hz	Radiated meas
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

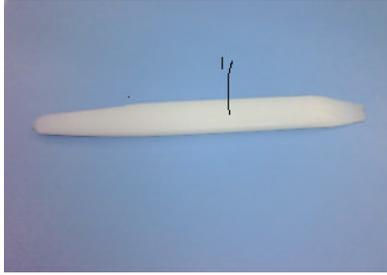
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Peak Phase error measurement	513*	0	0°	20°	Radiated meas
RMS Phase error measurements	513*	0	0°	6°	Radiated meas
Frequency error measurements	513*	0	-180 Hz	+180 Hz	Radiated meas
RX Level (BS power level : -65dBm)	513*	0	35	55	Radiated meas
Keyboard 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



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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