C7
Service Guide

Service guide files and updates are available on the ACER/CSD web; for more information, please refer to :
http://gcsd.acer.com.tw/GCSD_Portal/

PRINTED IN TAIWAN

Revision History

Please refer to the table below for the updates made on the Chicago service guide.

Version	Date	Updates
V00	2012/5/10	First Release
V01	2012/5/22	Update repair flow and EUU/EUUs upgrade process

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damages resulting from any defect in the software.

Conventions

The following conventions are used in this manual:

SCREEN MESSAGES	Denotes actual messages that appear on screen.
NOTE	Gives bits and pieces of additional information related to the current topic.
WARNING	Alerts you to any damage that might result from doing or not doing specific actions.
CAUTION	Gives precautionary measures to avoid possible hardware or software problems.
IMPORTANT	Reminds you to do specific actions relevant to the accomplishment of procedures.

Preface

Before using this information and the product it supports, please read the following general information.

1. This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine. These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.

2. Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

Table of Contents

System Specification

Features

Operating System

- Android Ice Cream Sandwich

Platform

- MSM7227A-1-AA+PM8029+RTR6285A

Support Band

- UMTS 900/2100(EU SKU)
- GSM/GPRS/EDGE
- 900/1800/1900 (Tri-Band EGPRS)

Memory

- 8Gbit NAND Flash + 4Gbit Mobile DDR SDRAM

Wireless Network

- HSDPA : DL 7.2Mbps / UL 384Kbps
- UMTS
- GPRS
- EDGE

WiFi

- 802.11 b/g/n, support WAPI in China SKU

Touch Panel

- Capacitive Multi-touch Panel

Display

- 3.7” WVGA (800x480) 16M Color TFT-LCD

Camera

- 5MP AF camera with LED flashlight

I/O Connector

- Micro-USB, 3.5mm stereo audio jack

USB

- USB 2.0 High Speed

Sensor

- G Sensor
- E-compass Sensor
- Proximity Sensor
- Ambient Light Sensor

Bluetooth

- Bluetooth® 3.0 HS

FM Radio

- Embedded in Qualcomm WCN2243

GPS

- Embedded in Qualcomm RTR6285A

Battery

- 1300mAH

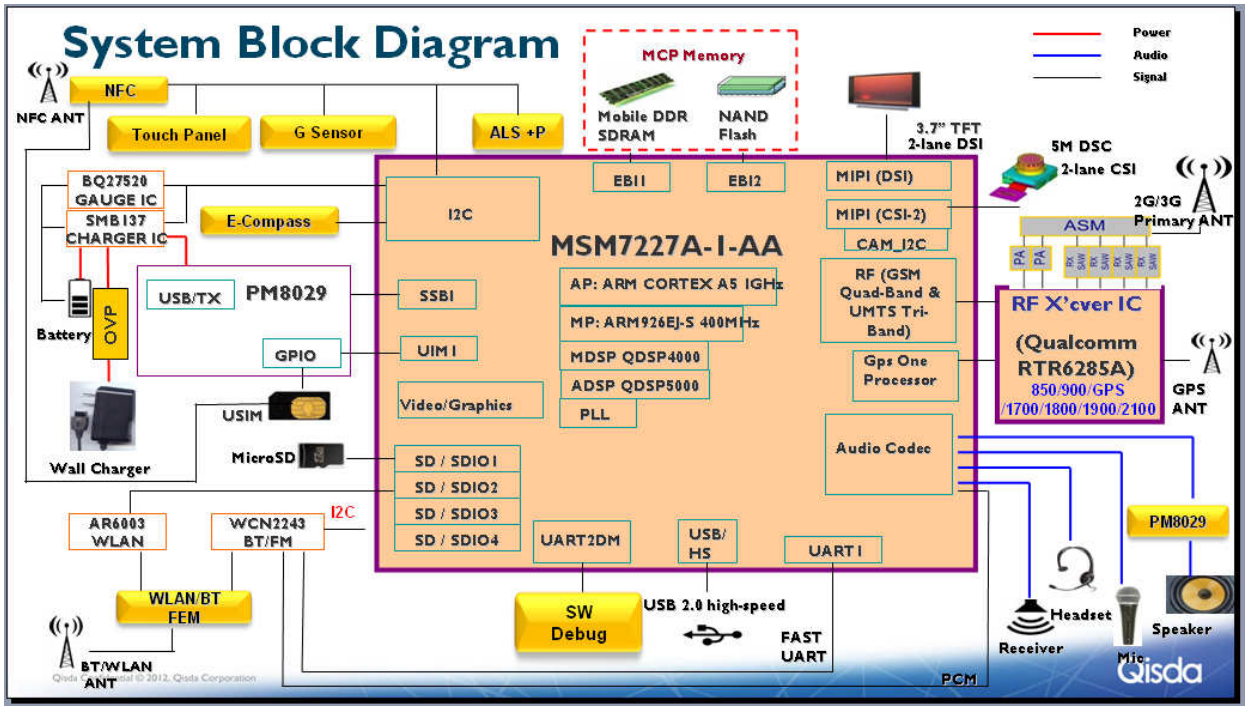
Accessory

- Travel Charger
- 3.5mm Stereo Headset
- Micro USB data cable

System Block Diagram

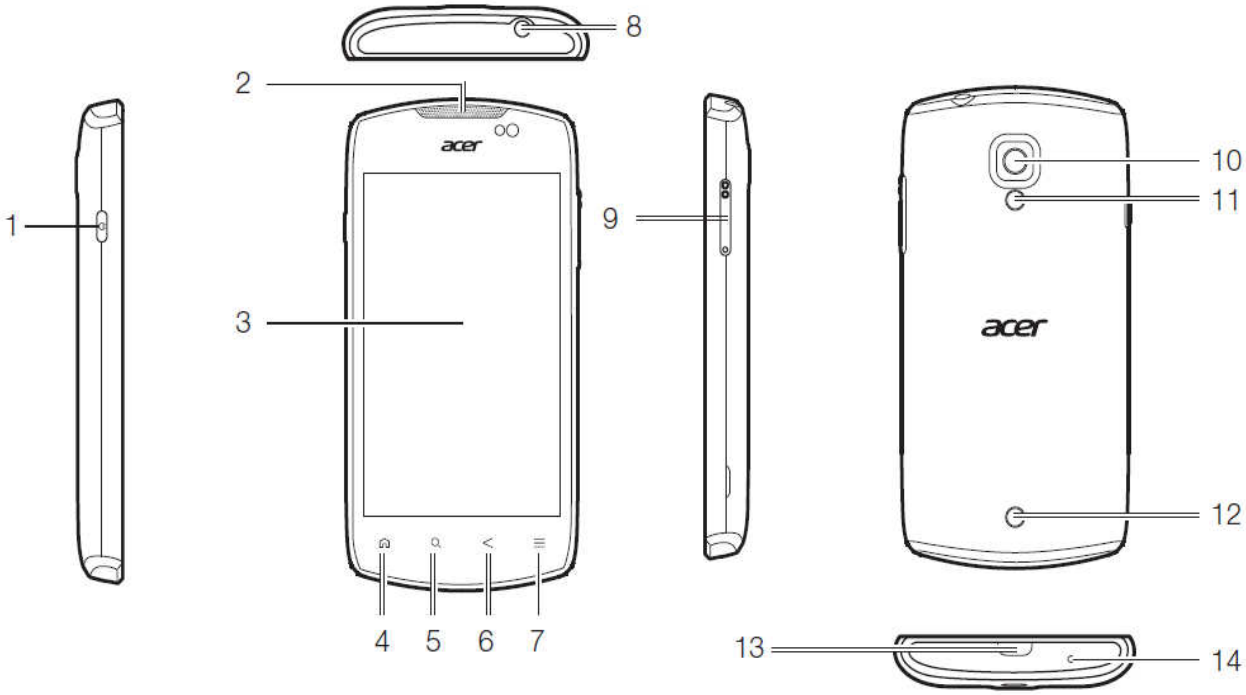
C7 uses Qualcomm GPRS/GSM and WCDMA BB chipset includes MSM7227A-1-AA and PM8029. It supports radio interface for GSM/EDGE 900/1800/1900 and UMTS band support variant: EU 900/2100. For data service, it supports GPRS and WCDMA. For voice service, it supports full-rate, half-rate and AMR (all rates). It also supports data encryption algorithm for GSM network operation.

Following shows the block diagram



Your Acer Smartphone Tour

Views



No.	Item	No.	Item
1	Power button	8	3.5 mm headphone jack
2	Phone speaker	9	Volume up/down button
3	Touchscreen	10	Camera
4	Home button	11	Flash
5	Search button	12	Handsfree speaker
6	Back button	13	Micro USB connector
7	Menu button	14	Microphone

Hardware Specifications and Configurations

Base Band

Item	Specification
Module	Processor: MSM7227A-1-AA (ARM CORTEX A5 1 GHz) PMIC: PM8029
Interface	UMTS 900/2100(EU SKU) GSM/GPRS/EDGE: 900/1800/1900 (Tri-Band EGPRS)

LCD

Item	Specification
Screen Size (inch)	3.7”
Driving Type	IPS w/ a-Si TFT active matrix
Display Mode	Transmissive
Display Resolution (dot)	480 x RGB x 800
Active Area (mm)	48.24 x 80.4
Viewing Angle	80/80/80/80
Contrast Ratio	800
Driver IC	HX8363A
Light Source	8 white LEDs in series
Interface	MIPI 24-bits
LCM Size (mm)	53.94(W) x 90.6(L) x 1.755(T)

Touch Panel

Item	Specification
Module Type	CTP
Module Material	Glass Window/Film sensor Type
Interface	12C
Active Area (mm)	48.24 x 80.4
Window Visible Area(mm)	49.24 x 81.4
Sensing	4 points
Button	4

USB

Item	Specification
USB IF	High-speed USB interface (fully integrated PHY on the MSM device)
Data rate	Support low-speed (1.5 Mbps), full-speed (12 Mbps) and high-speed (480 Mbps)
Clock source	19.2MHz TCXO (system clock)
Compliant spec.	USB2.0

Camera

Item	Specification
Type/Size	1/4” 5M CMOS image sensor (MT9P017_A-5140)
Active Array Size	2592 x 1944
Scan Mode	Progressive
Socket	SMK CLE9132-8701F
Max Frame Rates (fps)	2592x1944 : 15fps
	1920x1080 : 15fps (100% FOV)
	1280x720 : 30fps (binning)
	640x480 : 60fps
F-no.	2.8
Field of View (Diagonal)	67.6°
Focus Range	10cm~∞

GPS

Item	Min.	Typ.	Max	Unit	Conditions
Input frequency	1575.4	1575.42	1576.44	MHz	
Average Hot Start TTFF		1		Sec.	Open Sky signal
Average Cold Start TTFF		35		Sec.	
Tracking Rate		1		Hz	
Sensitivity-Cold Start		-145		dBm	3D fix mode
Sensitivity-Tracking		-160		dBm	1. 2D fix mode 2. At least 1 position fix in 30sec.
Horizontal Accuracy in Open Sky			3	m	
Search Channels/# Satellites Tracked		30/16			50%CEP ,1-2 day age

WLAN

Item	Specification
Module	Qualcomm Atheros AR6003G-BC2B 802.11 b/g/n, support WAPI in China SKU
Type	Single-band 2.4GHz 802.11b/g/n
Features	● Lowest power consumption in the industry with near zero in idle/standby modes, extending battery life ● Integrated on-chip processor to minimize the loading on host processor.

Bluetooth

Item	Specification
Module	Qualcomm WCN2243
Type	Bluetooth® 3.0 HS
Band	2402-2480MHz band

FM Radio

Item	Specification
Module	Embedded in Qualcomm WCN2243
Frequency	76 to 108 MHz with 50 kHz channel spacing.
Features	● Radio data system for Europe (RDS)/radio broadcast data system for USA (RBDS) ● Autonomous search, automatic seek, and manual tuning

Microphone

Item	Specification
Sensitivity	-38 ± 3 dBV/Pa at 1kHz
Impedance	Max. 400 ohm at 1kHz
SNR (A curve)	Nom. 62 dB(A) at 1kHz
Dimension	1.1mm(H)x3.76mm(L)x3.0mm(W) ±0.1mm
Directional Characteristic	Omni-directional
Consumption	Max. 250μA across 1.5 to 3.6 volts
Operating Voltage	DC Min. 1.5V to DC Max. 3.6V

Receiver

Item	Specification
Rated Impedance Z	32Ω
Voice Coil Resistance R	28.8Ω± 10 %
Resonance Frequency	350 Hz ± 15 % (measured @5mW)
Measured char. Sensitivity	85 ± 2 dB (at 5mw in 1cm)

Loud Speaker

Item	Specification
Rated Impedance	8 ohm
Voice coil resistance R	7.4Ω ± 10%
Rated Noise Power	0.5 Watts (in free air)
Short Term Maximum Power	1.0 Watts (in free air)
Characteristic Sensitivity	73 ± 2dB average from 2kHz to 5kH (1W in 1m)
Resonance frequency	800±7.5%Hz (free air)

Battery

Item	Specification	Condition
Nominal Capacity	1300mAh minimum (0.2C)	When discharged at 260mA (0.2C) to 3.0V after 1.0C charge at 25℃
Nominal Voltage	3.7V	25℃± 2℃
Charging Method	CC-CV	
Charge	Standard Charge: 0.2C Quick Charge: 1.0C	0~50℃
Thermistor	10KΩ ± 1%	25℃
Operating Temperature	Charge: 4.2V ± 1%, 0~50℃, 85% RH max	
	Discharge: -20~60℃, 90% RH max	

Software Upgrades

System Requirements

1. You will need a PC/NB with Windows XP 32-bit (Service Pack 2 or above), Windows Vista or Windows 7

2. Ensure the battery level is more than 30%

3. Ensure your PC has larger than 2GB space under C:/

EUUs/EUU Tool Software Upgrades

	Cross SKU	Downgrade	Clean User Data
EUU	X	X	X
EUUs	V	V	V

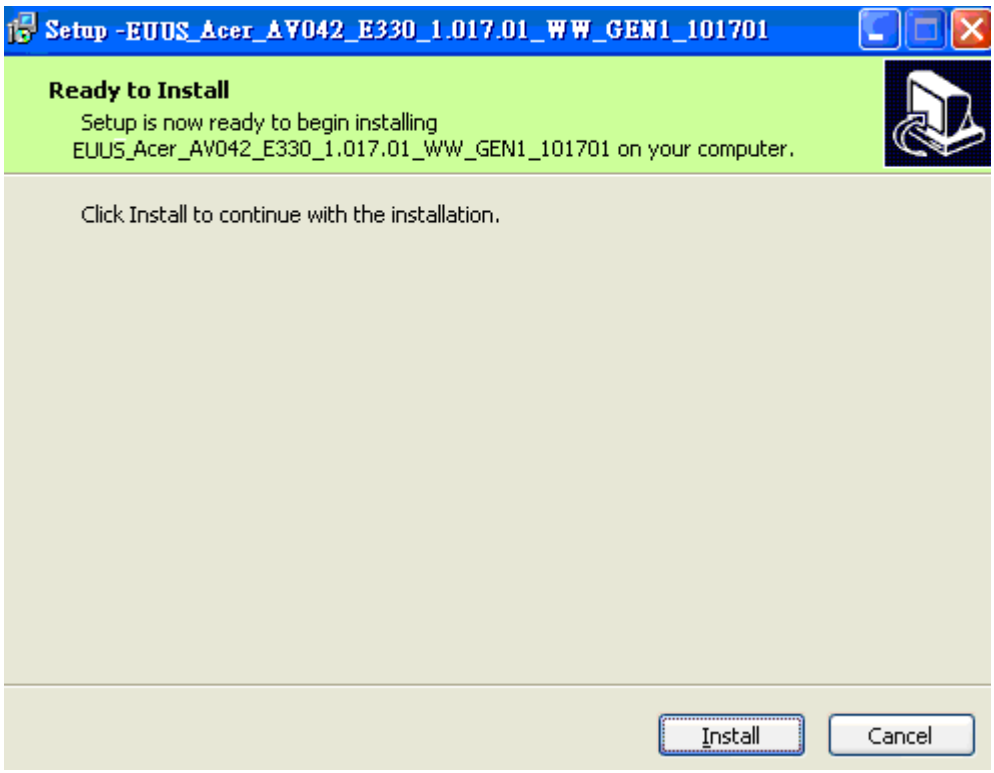
EUUs Tool

NOTED:

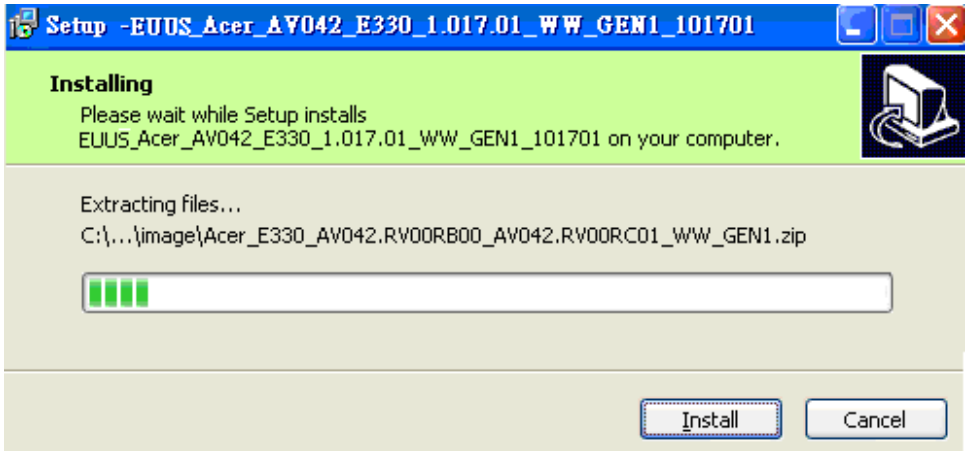
- EUUs tool will **ERASE** all user personal information (including contacts stored in phone) and any programs you have installed. Please back up all necessary data to a PC before updating.
- EUUs tool will do both upgrade and downgrade process, and will not have the limitation on cross SKU upgrade or downgrade.

1. Turn ON the phone and connect it to PC/NB with USB cable. (The installation might fail if you have not turned on the phone and connect it to PC.)

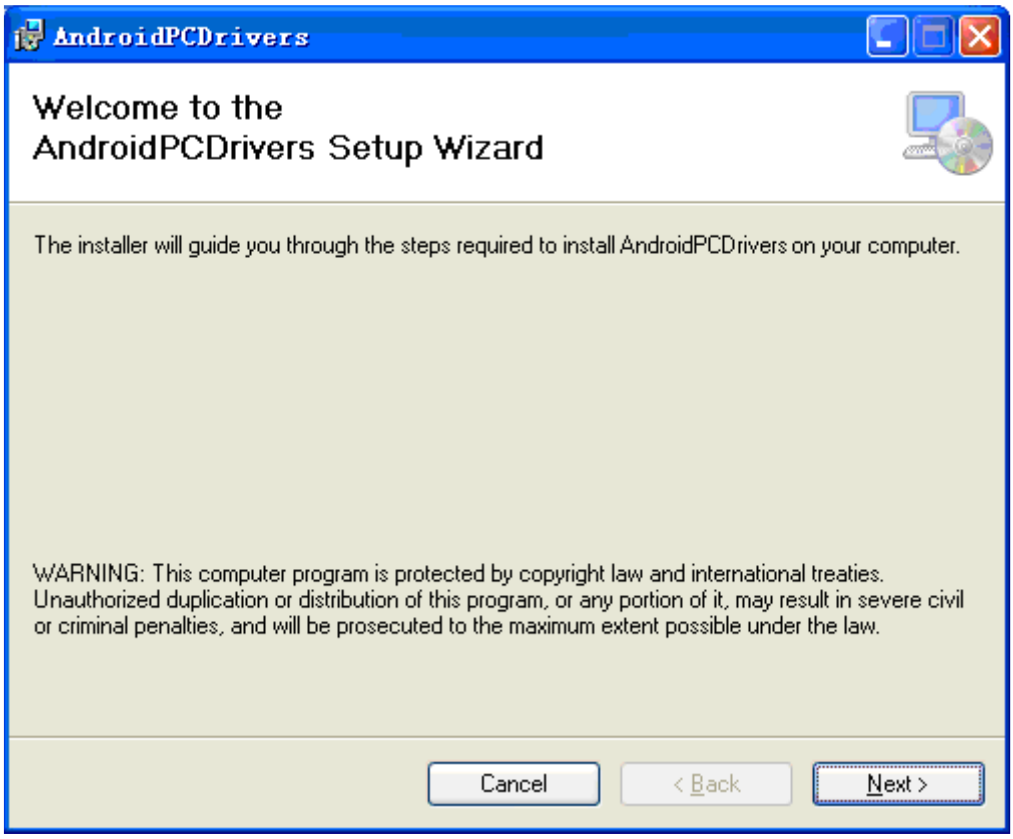
2. Double click the .exe file to start the installation process. If it pop out a warning window, just click continue.



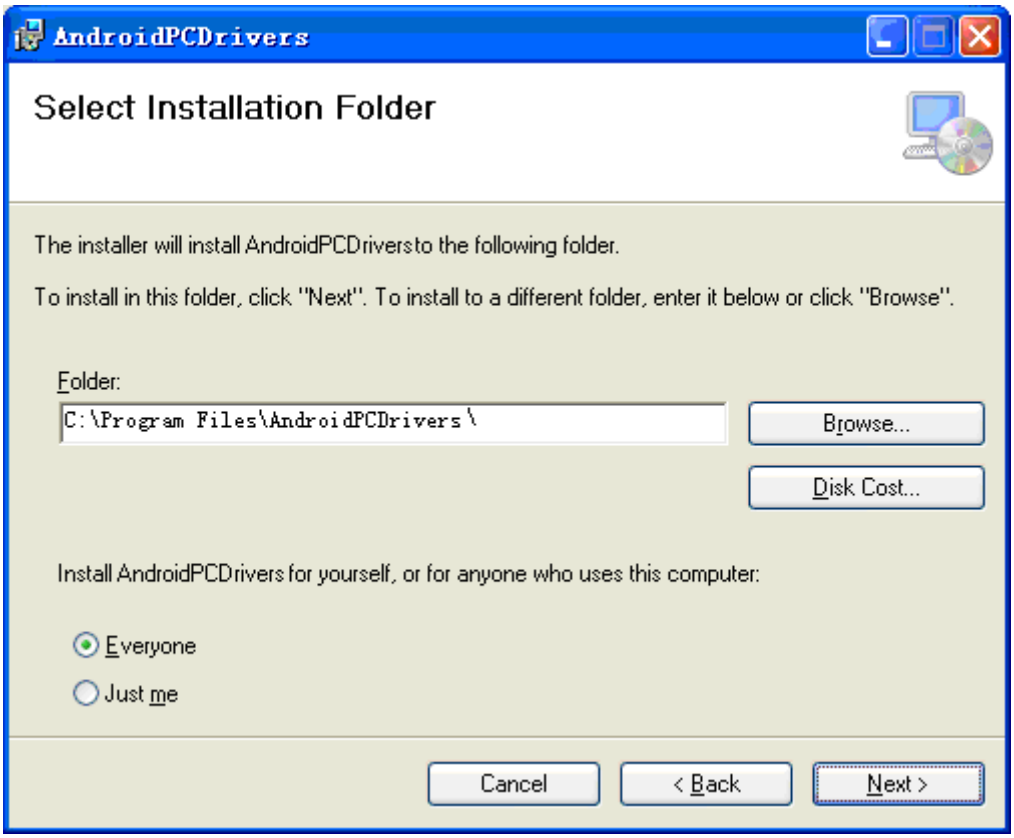
Click install, and wait for the installation finish.



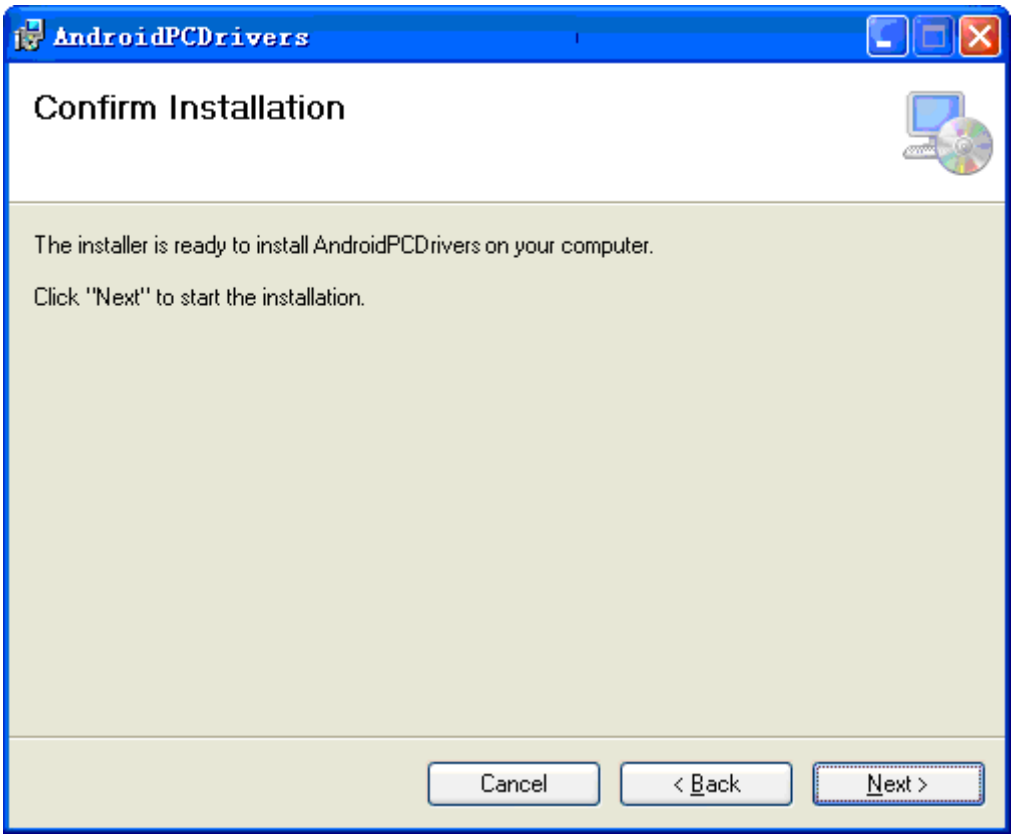
If there is no Android PC Driver in your computer,
the system will pop out the driver installation window to let you install the driver first.



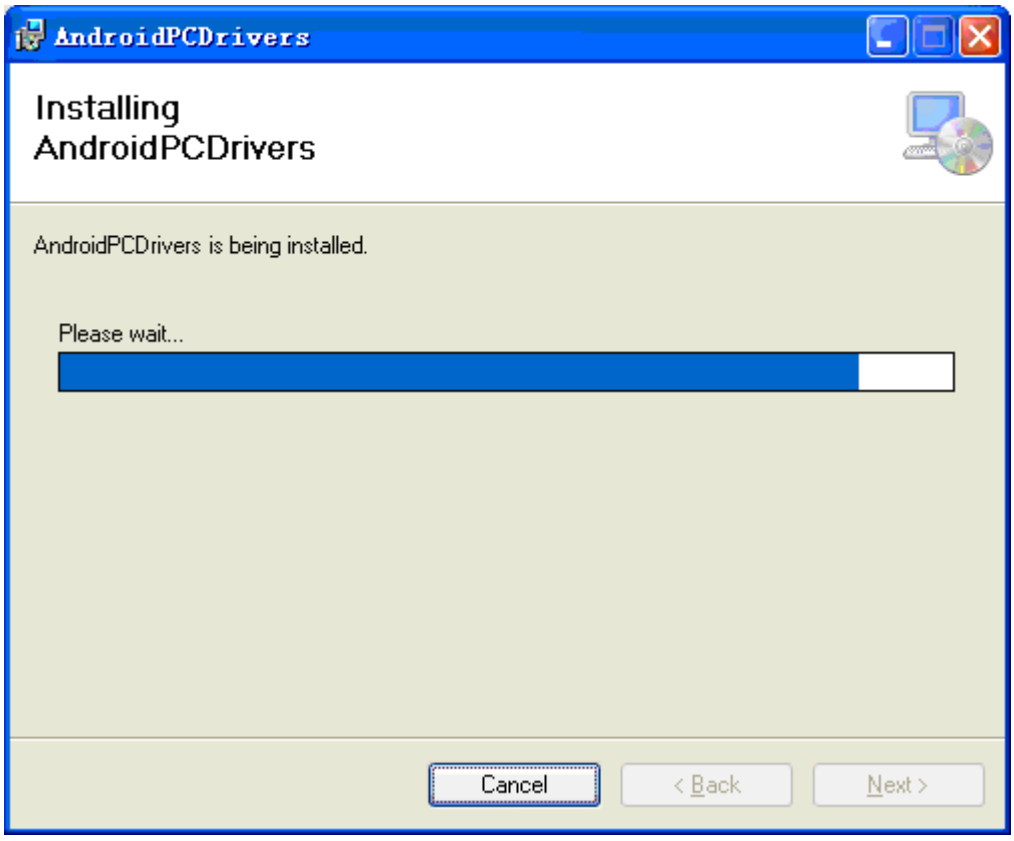
Click “Next”



Click “Next”



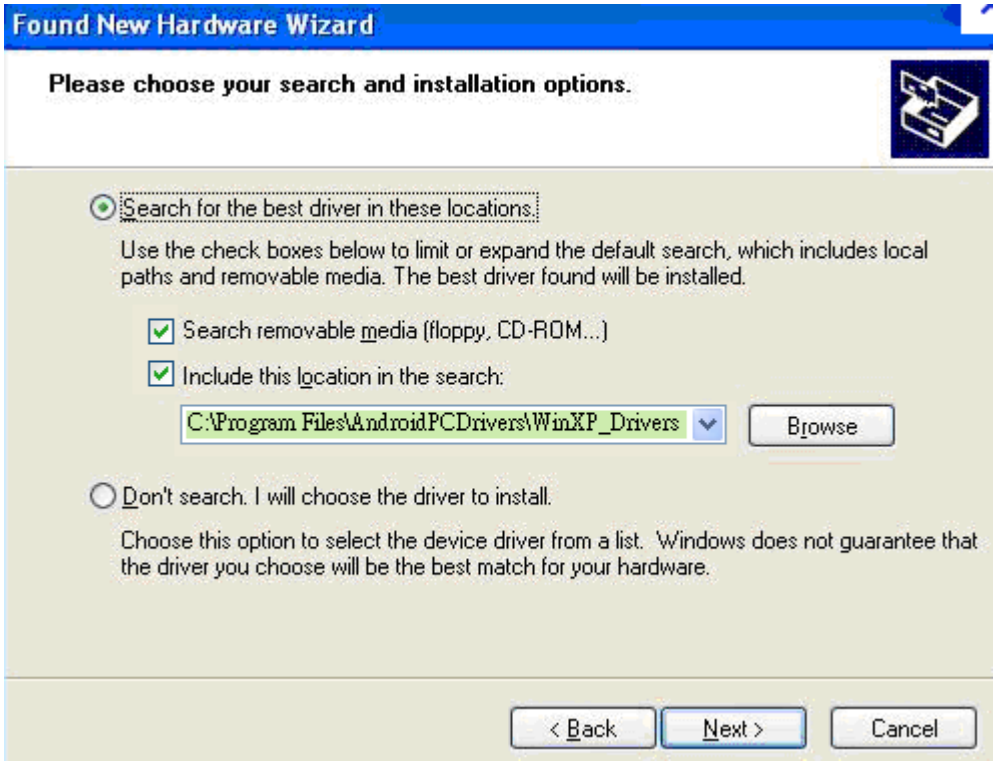
Start installation



Select the third item. “No, not this time.”

Select “Install from a list or specific location”

Select “Include this location in search”,
And Click “Next” to continue..

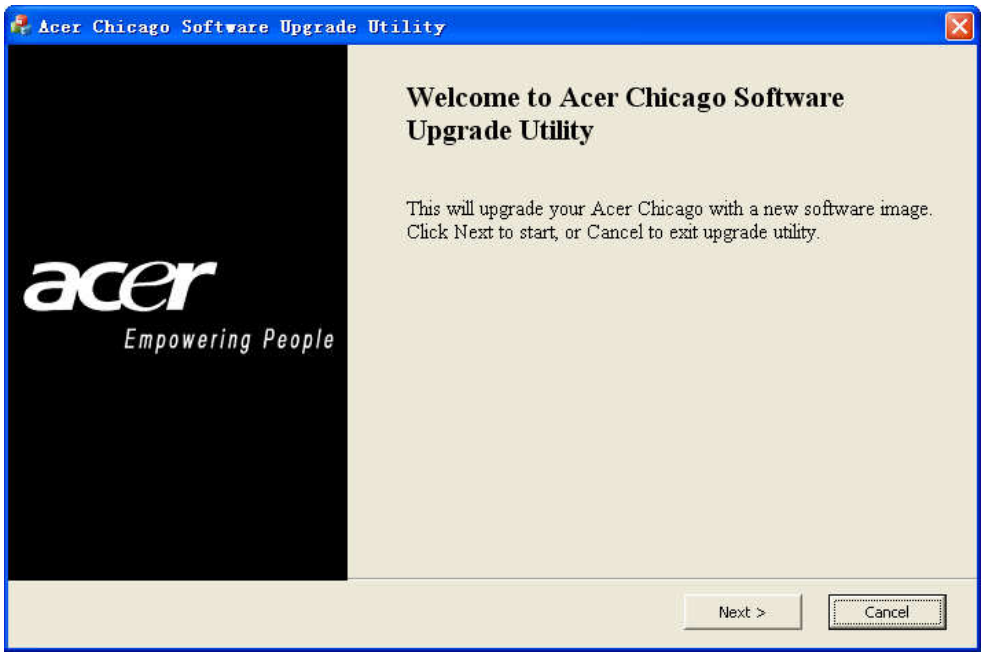


Wait for installation.

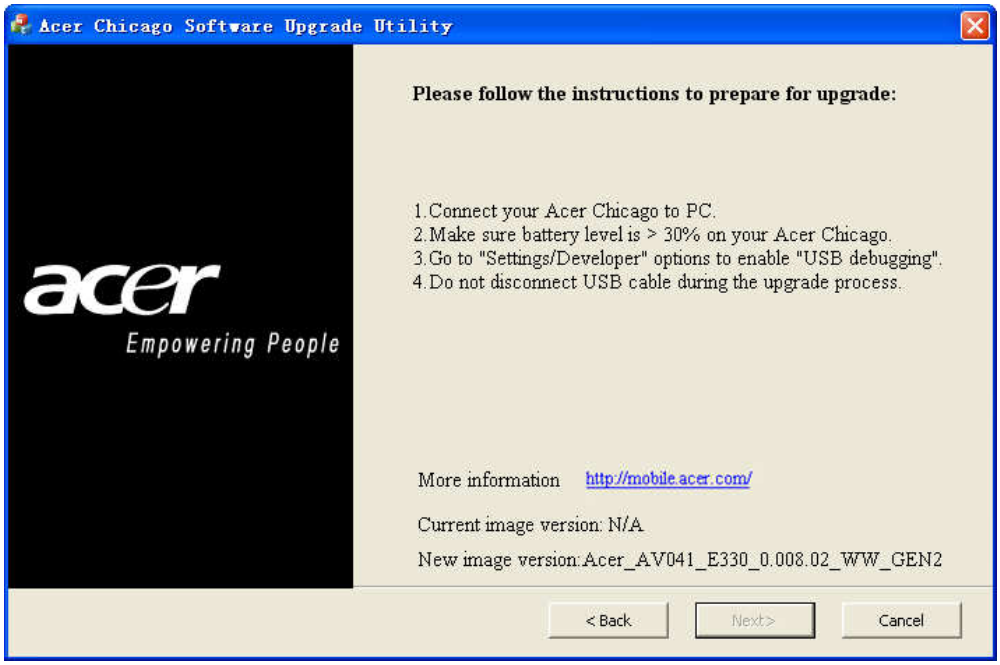
Finish.

The previous steps will repeat about 3 times till all the driver has installed successfully.

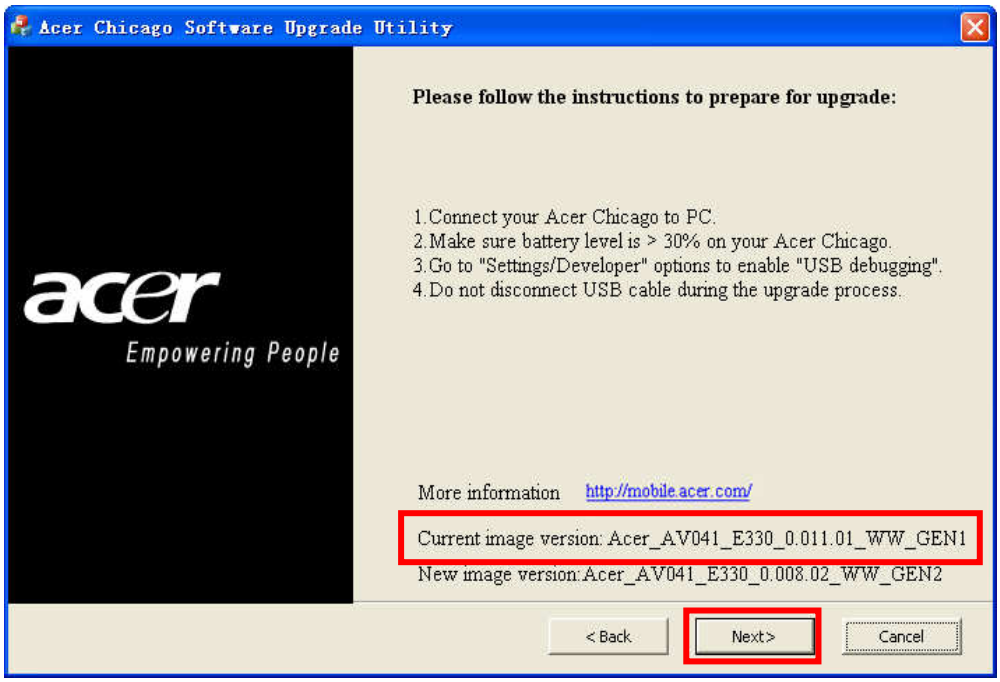
3. The welcome page will be shown as follow after you have finish the installation. Please click “Next”



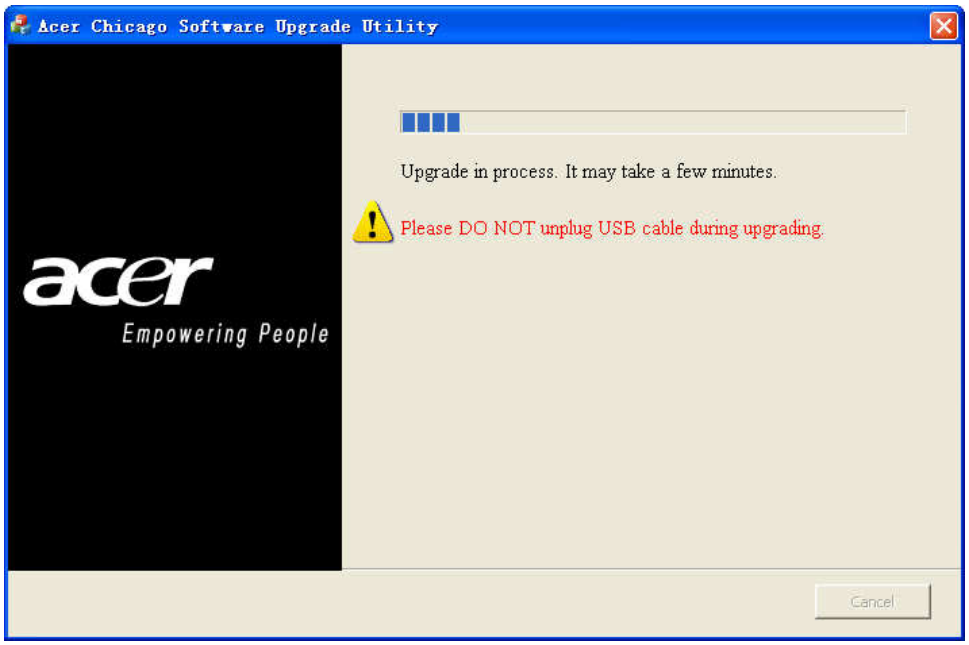
4. Please connect your device to PC/NB at this page. Follow the instruction shown on the page.



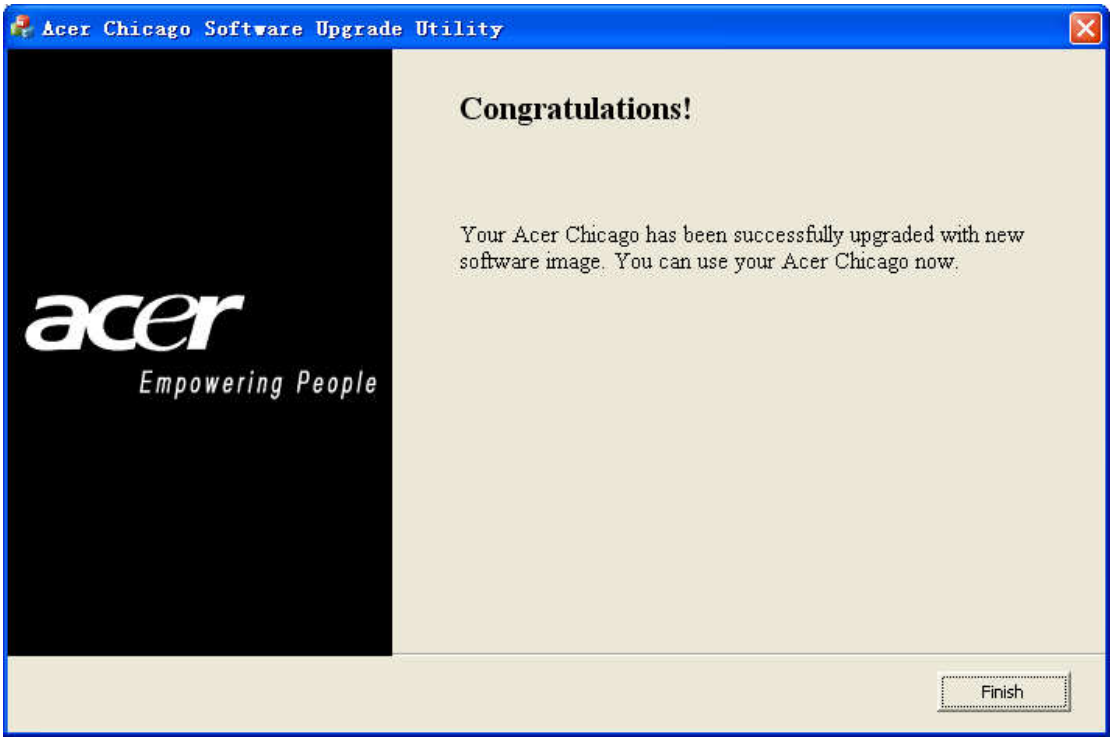
5. After user has connected their phone and enable the “USB debugging” under OS, device SW version will be read and displayed on UI. Once SW version has shown, the “Next” button will be enabled, click “Next”.



6. Upgrading process is running.



7. When the process is completed, UI will indicate the process is successful, and user can remove the device from PC/NB.



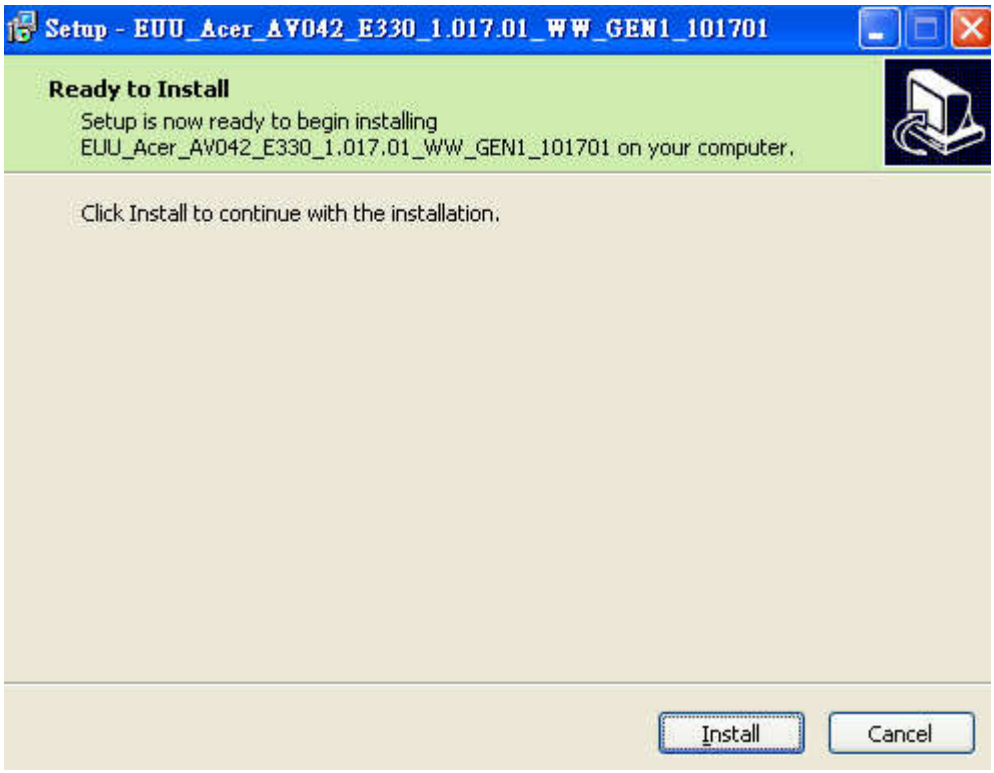
EUU Tool

NOTED:

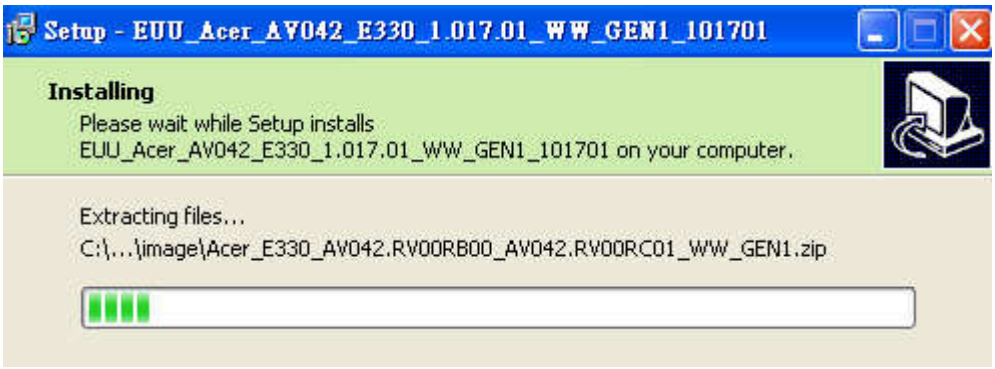
- EUU tool will **NOT** erase users' personal information (including contacts stored in phone) and any programs you have installed.
- EUU tool will only accept the same SW version or later SW version upgrade process, and will have the limitation on cross SKU upgrade.

1. Turn ON the phone and connect it to PC/NB with USB cable. (The installation might fail if you have not turned on the phone and connect it to PC.)

2. Double click the .exe file to start the installation process. If it pop out a warning window, just click continue.



Click install, and wait for the installation finish.



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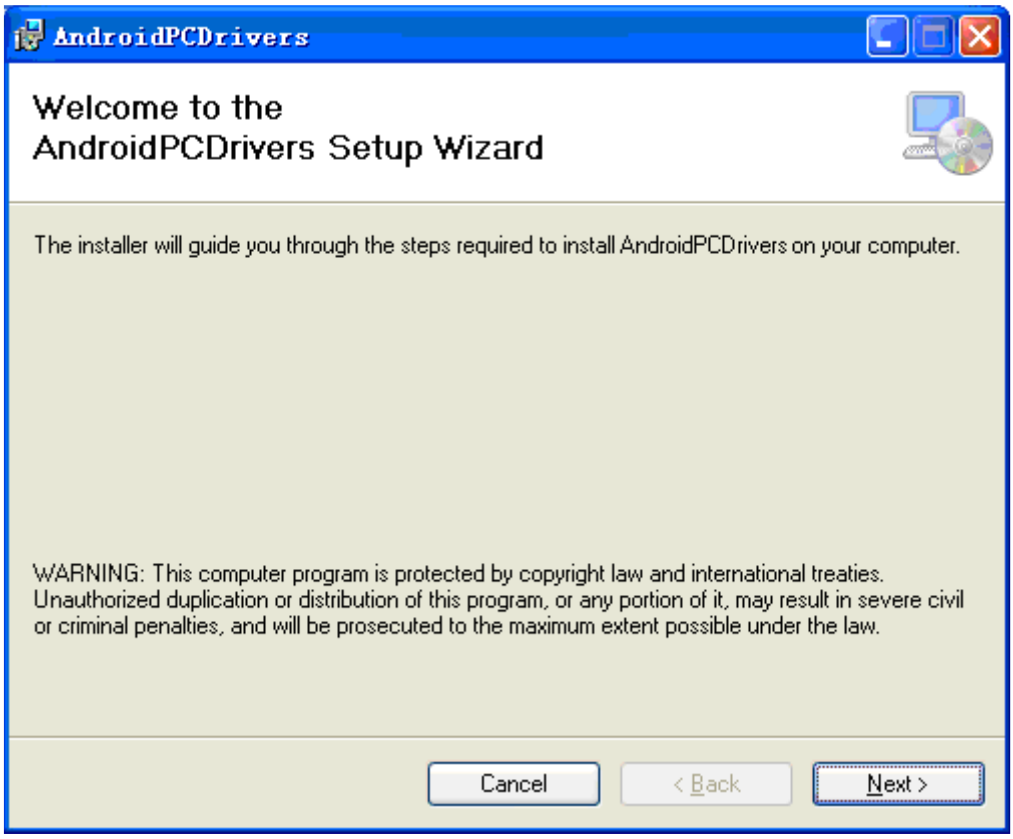
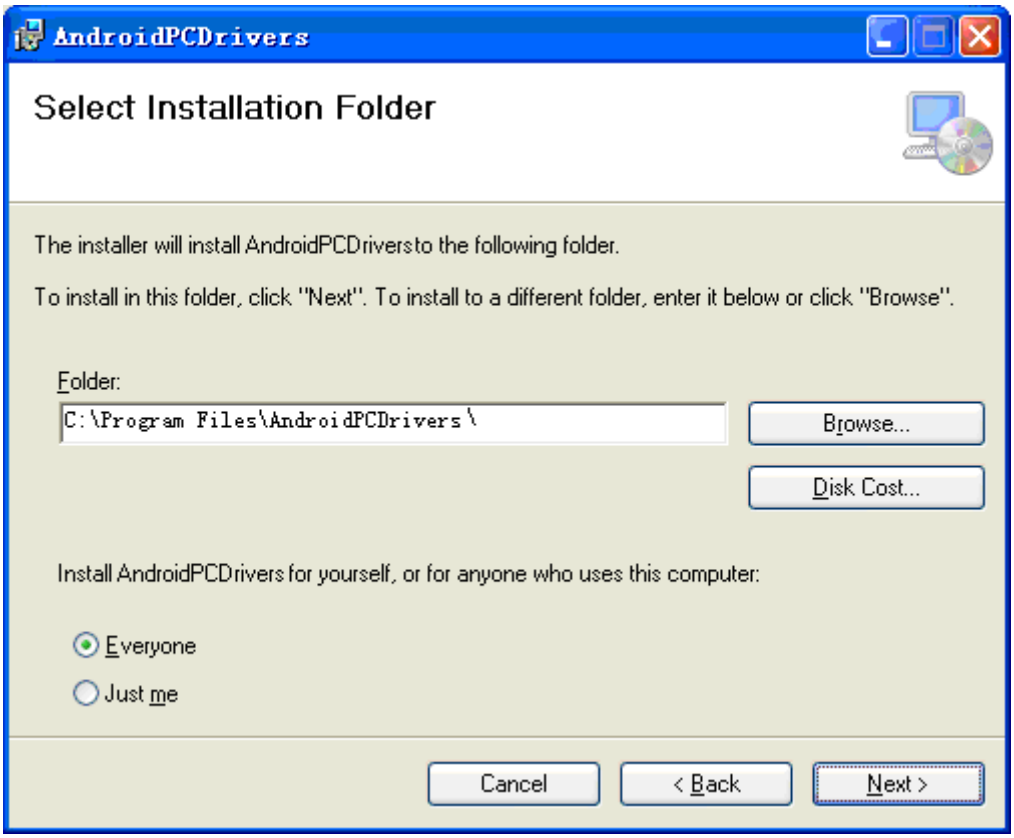


Click “Next”



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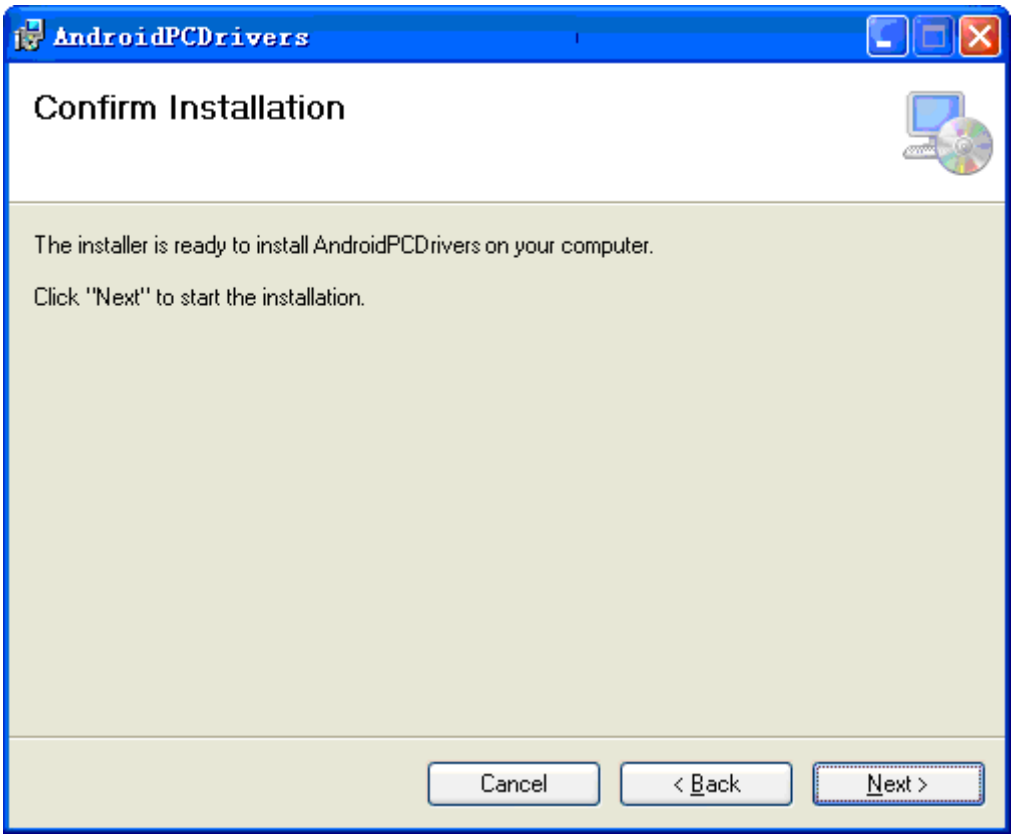
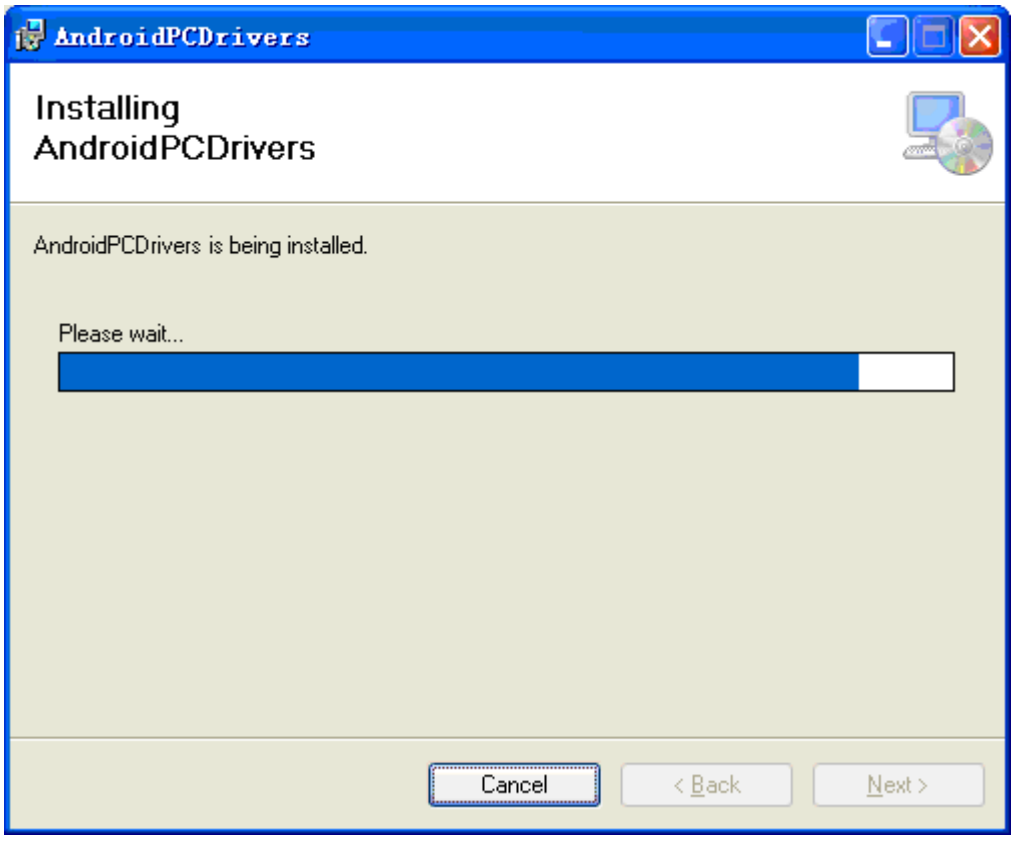


Start installation



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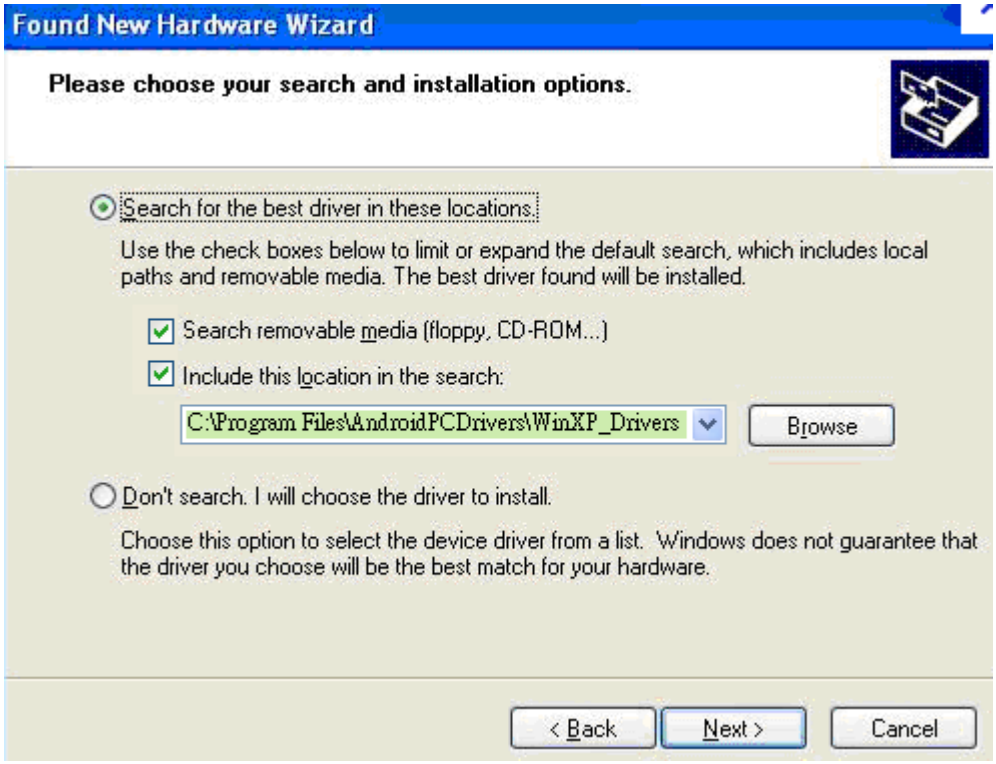

Wait for installation.

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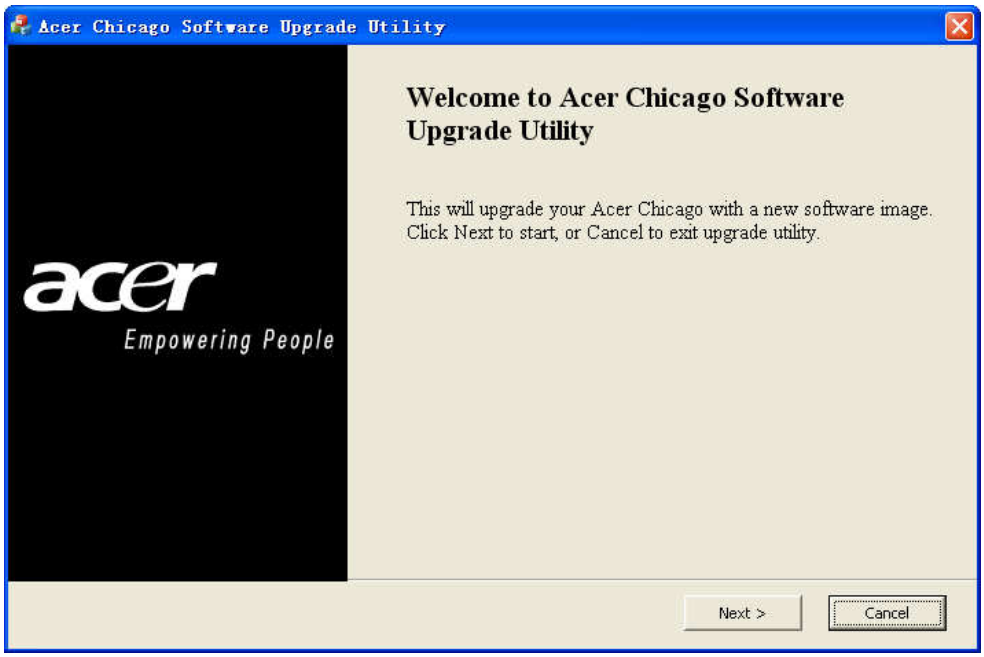

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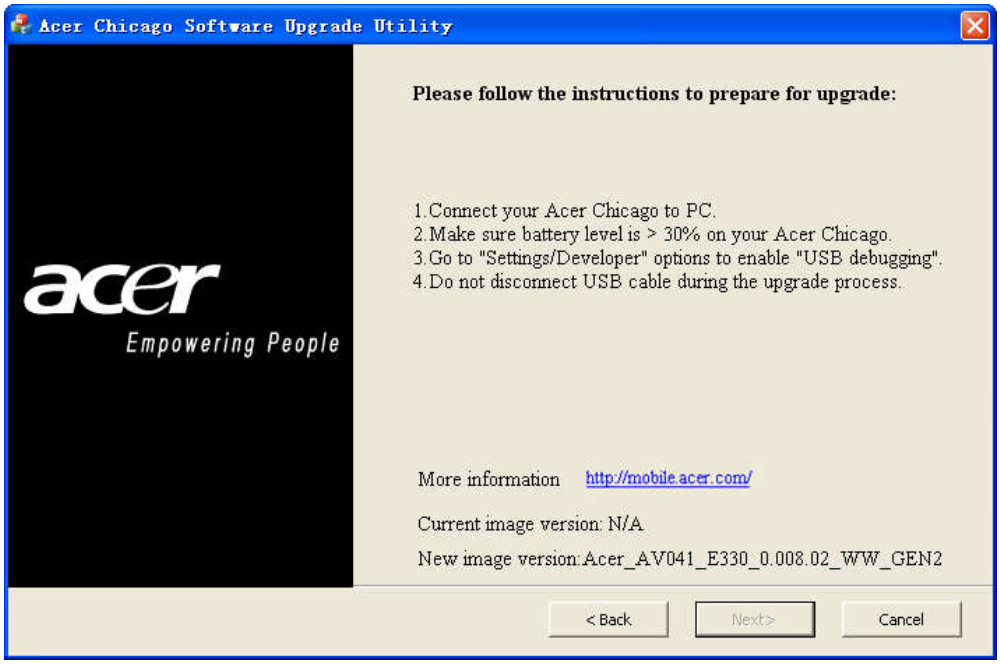

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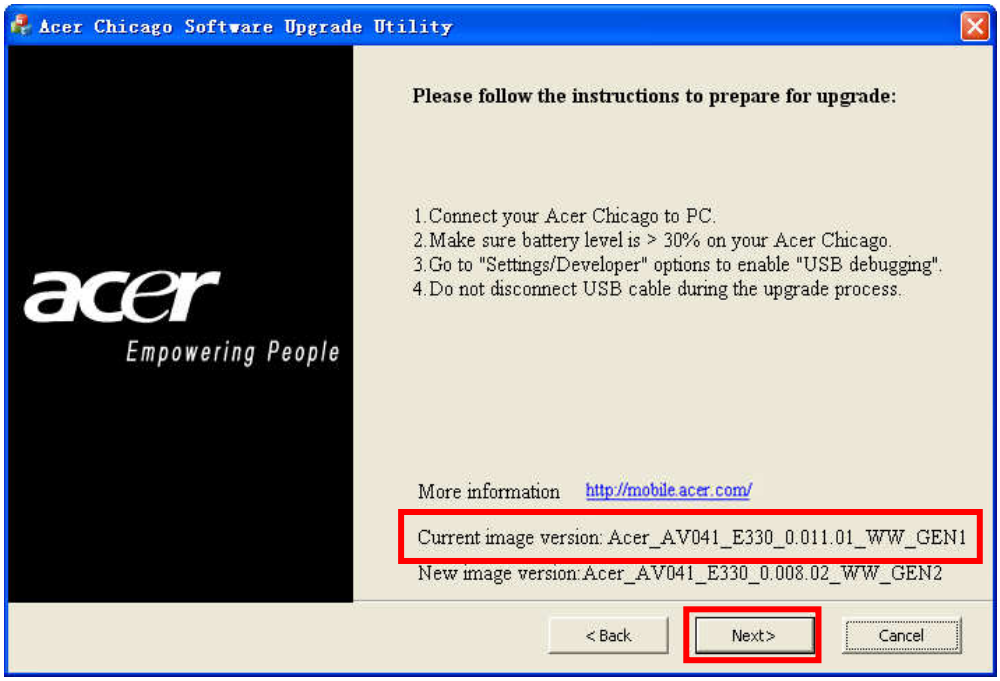
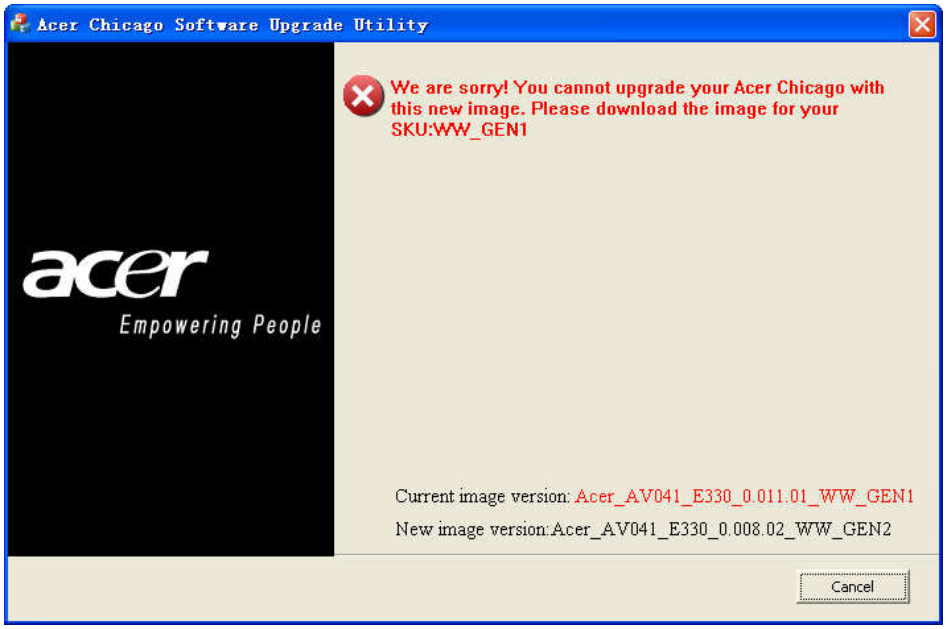
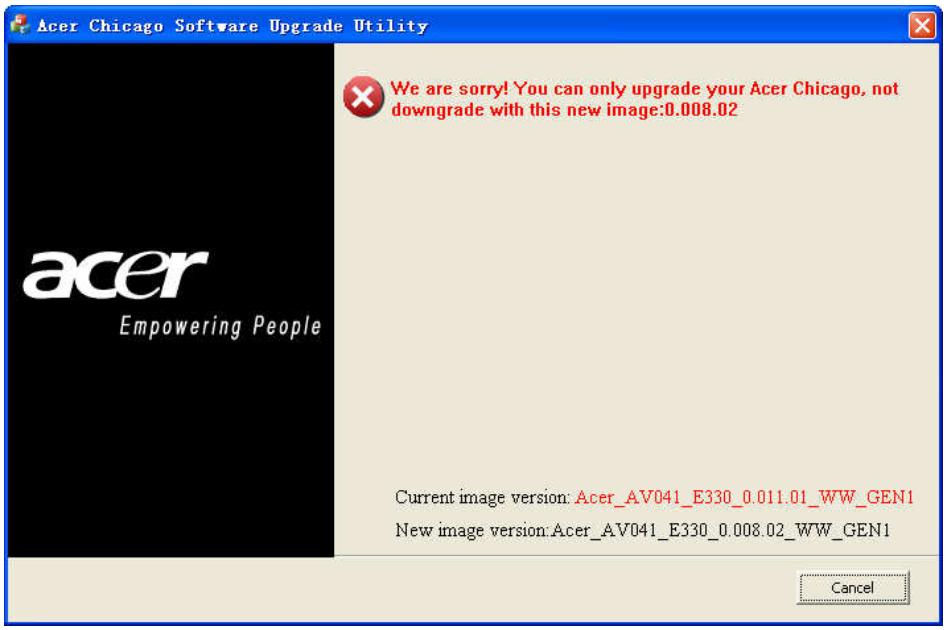


6. EUU tool will check SKU and it only supports upgrade, can't downgrade

甲、 Unmatched SKU:



乙、 Lower SW ersion :



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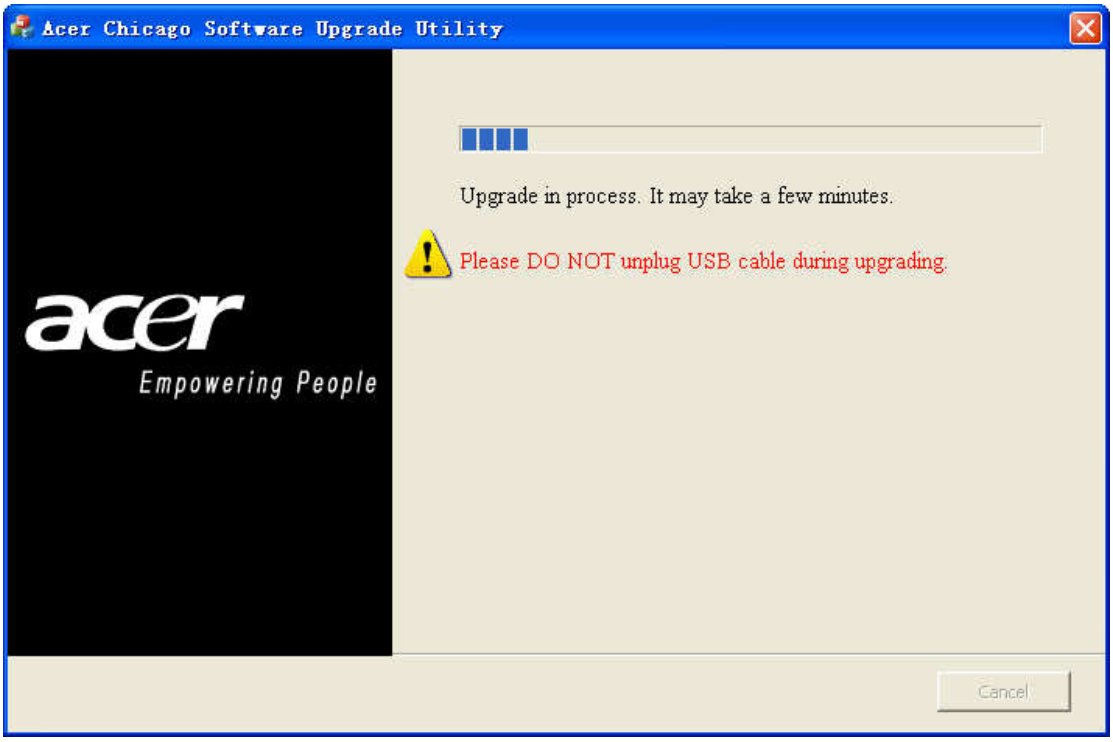
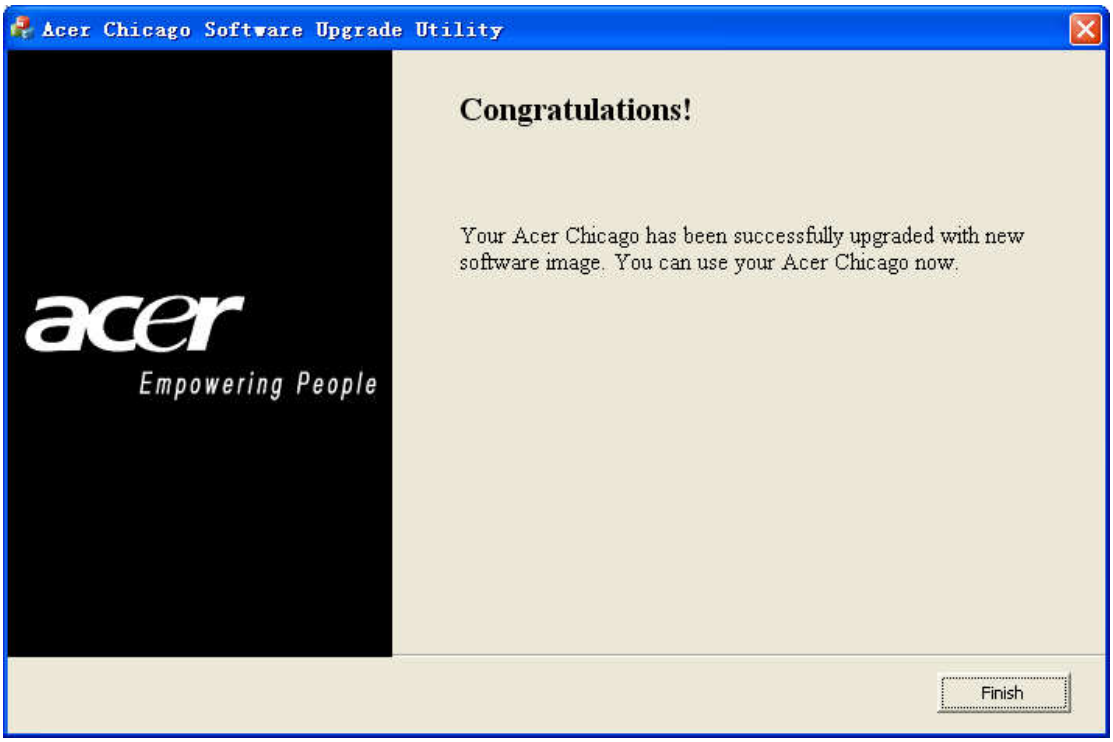


8. When the process is completed, UI will indicate the process is successful, and user can remove the device from PC/NB.

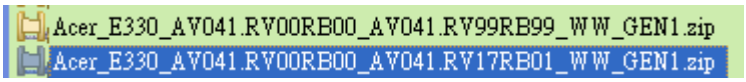


SD Card Software Upgrades

NOTED:

甲、 SD Card DL can do both downgrade and upgrade process
乙、 SD Card DL can do both clean and keep users' data base on your selection.

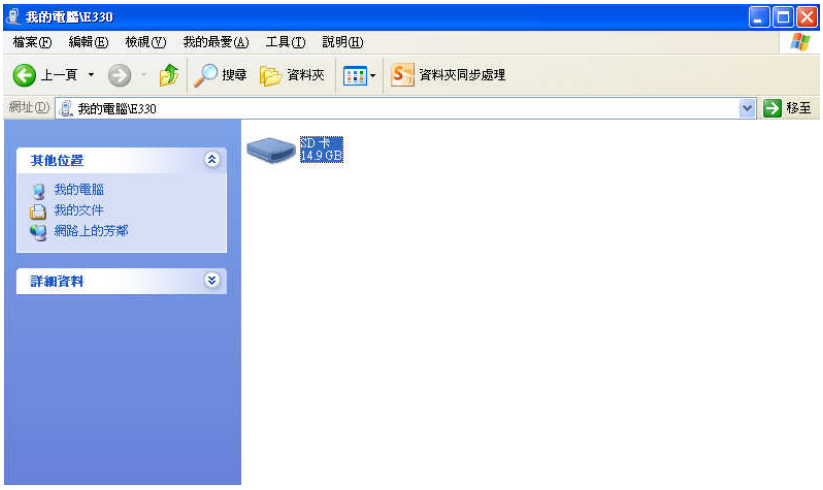
1. Open your SW image folder, and rename the OTA package to **update_acer.zip**



Example:
Before: Acer_E330_AV041.RV00RB00_AV041.RV*17*RB*01*_WW_GEN1.zip
After: **update_acer.zip**

*RV*17*RB*01, 17* and *01* are version name, so it will change base on your SW version.
** *RV99RB99* is RD debug version, **DO NOT** use this one for the SD Card download process.

2. After rename the OTA package to update_acer.zip, copy it into SD root folder.



3. Make sure your SD card with OTA package have already inserted the phone before start the process.

4. Follow the following steps to enter the SD card D/L mode:
   - Turn OFF phone.
   - Press volume up and volume down, then press power key together.
   - The phone will vibrate, and you will see the UI below:

5. Press Volume key to choose the function you want, and press power key to select.
   - Select “SD Download mode” to upgrade the SW and **WITHOUT ERASE** the user data
   - Select “SD Download with factory reset” to upgrade the SW and **ERASE** the user data.

6. Device will reboot automatically after the upgrade process is finish.

Machine Disassembly and Replacement

This chapter contains step-by-step procedures on how to disassemble and reassemble the smartphone for maintenance and troubleshooting.

IMPORTANT: The use of metal tools during disassembly may damage the casing. Use plastic tools where possible.

IMPORTANT: Cover the work area with a clean, dry, lint-free cloth before placing the smartphone face down

Disassembly Requirement

To disassemble the smartphone, you need the following tools:

- Wrist grounding strap and conductive mat to prevent electrostatic discharge
- A clean, dry, lint free cloth to prevent damage to the LCD during disassembly
- Plastic pry less than or equal to 0.96 mm thickness
- Tweezers (plastic and metal)

NOTE: The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatch when putting back the components.

Related Information

The product previews seen in the disassembly procedures may not represent the final product color or configuration.

General Information

Pre-disassembly Instruction

IMPORTANT: Before proceeding with the disassembly procedure, make sure that you do the following:

1. Turn off the power to the system.
2. Unplug the USB adapter and all other cables from the system.
3. Cover the work area with a clean, dry, lint-free cloth to protect the LCD panel.
4. Place the system on a flat, stable surface.

Disassembly Process

The disassembly process is divided into the following sections:

- External components disassembly
- Main unit disassembly

The flowcharts provided in the succeeding disassembly sections illustrate the entire disassembly sequence. Observe the order of the sequence to avoid damage to any of the hardware components.

Main Screw List

Screw	Quantity	Part Number
SCRW M T5 M1.6*4L(3/.7)B-NI	7	8F.00T94.4R0

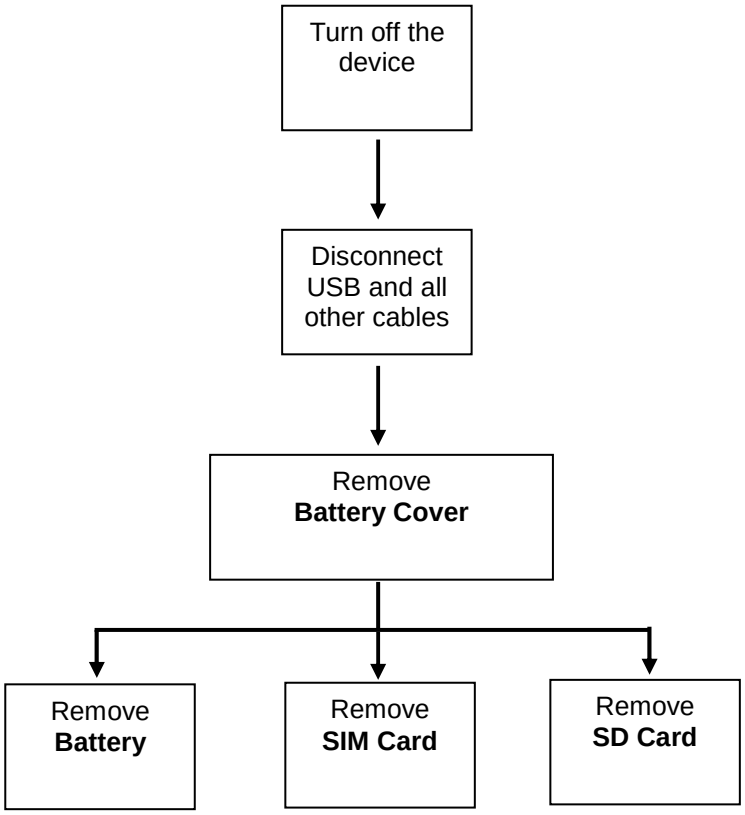
Disassembly Tools

1. Plastic tweezers (contact lens tweezers)
2. A screw driver (T5)
3. Metal tweezers
4. *Camera JIG (Same as A5)
5. Lifter

* Qisda P/N for Camera JIG: CS.5D1K4.CAM

External Module Disassembly Process

External Modules Disassembly Flowchart



Removing the Battery Cover

1. Open the battery cover.

Removing the Battery

1. Insert a thumb into the battery cutout as shown and lift the battery out of the battery bay

Removing the SIM Card

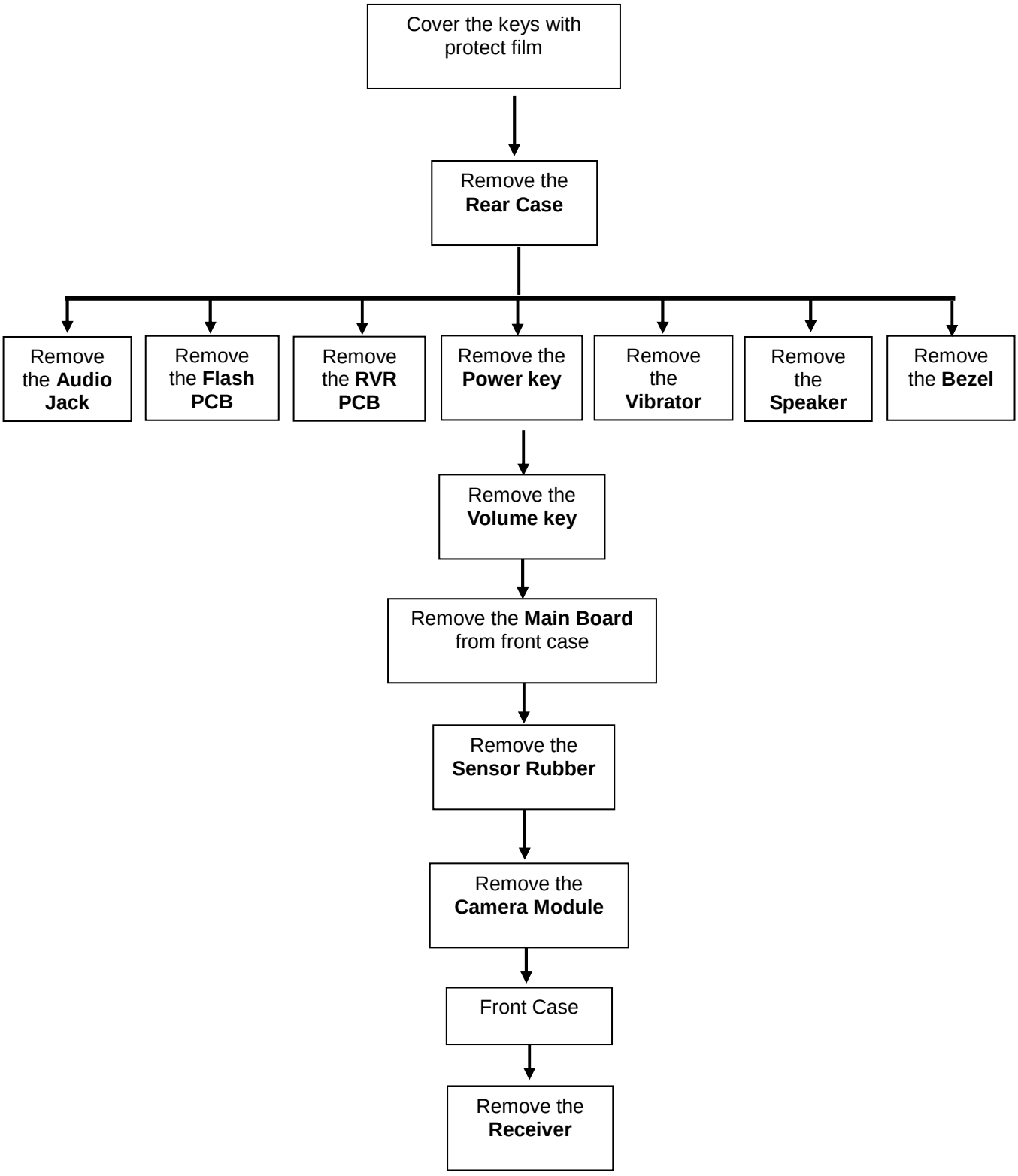
1. Use your fingers to slide out the SIM card

Removing the SD Card

1. Use your fingers to slide out the SD card

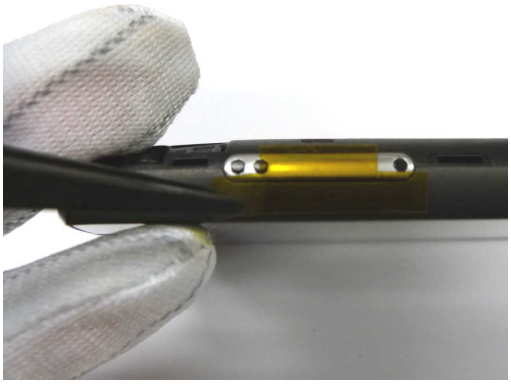
Main Unit Disassembly Process

Main Unit Disassembly Flowchart



Before Start

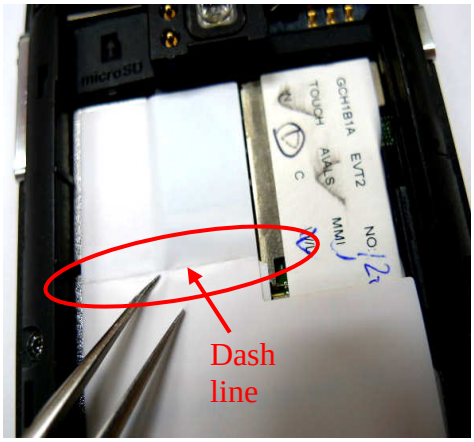
1. Cover all of the keys with protect film to make sure they won't fall off during disassembly. Keys including volume key and power key.

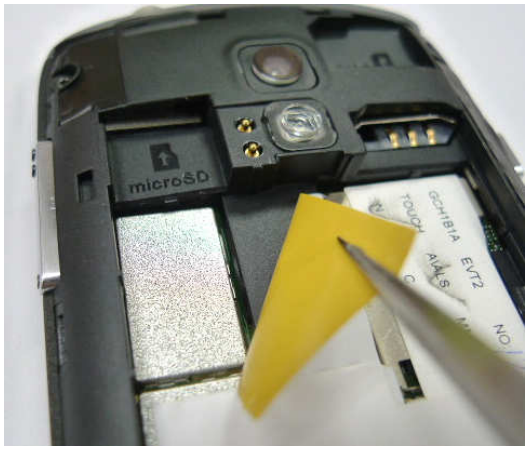


2. Make sure the warranty seal label and water indication label are well located as follow

Removing the Spec Label

1. Remove the upper part (the area above dash line) of spec label.





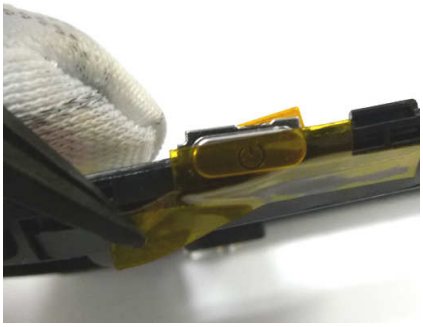
2. Unscrew the six screws

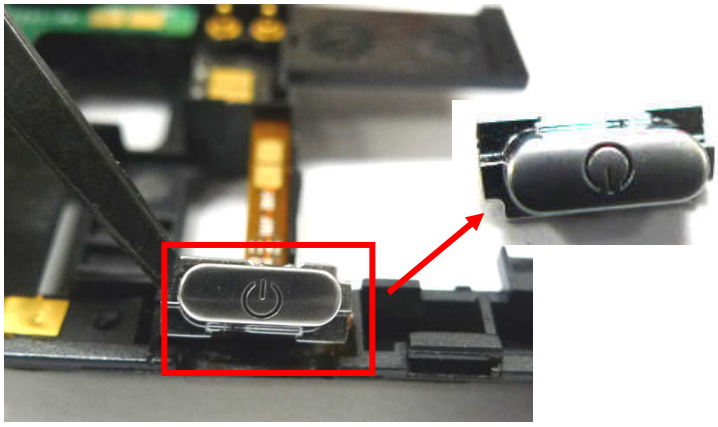
3. Insert the “Lifter” into the gap between the front case and the rear case at the top and side.

4. Bend the rear case upward to disengage the hooks,

Removing the Power Key

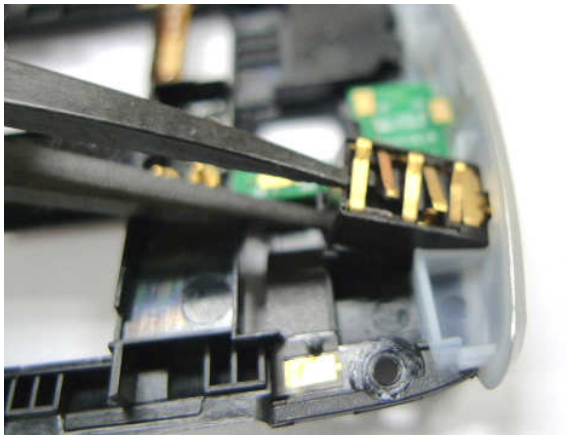
1. Remove the protect film and use plastic tweezers to take out the power key





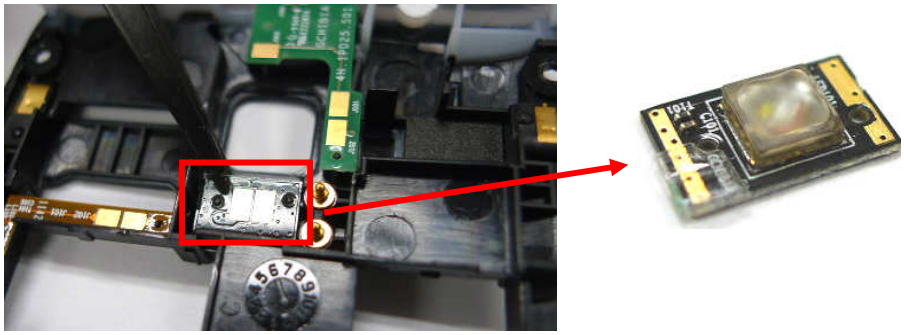
Removing the Audio Jack

1. Use plastic tweezers to release the 3.5mm 4P Audio Jack.



Removing the Flash PCB

1. Use Use your fingers or plastic tweezer to separate the Flash PCB from the rear case

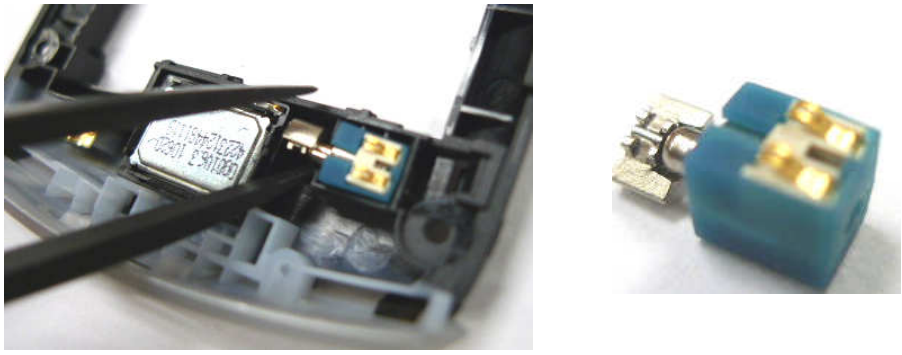


Removing the RVR PCB

1. Use your fingers to separate the RVR PCB from the rear case.

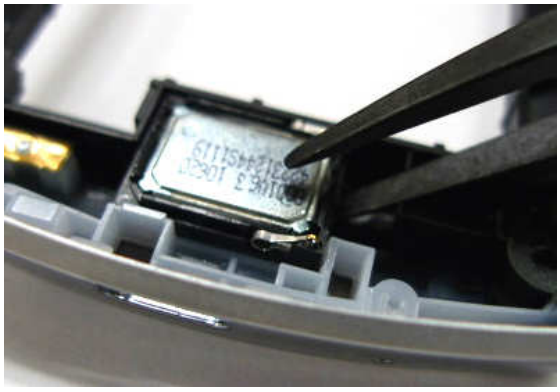
Removing the Vibrator

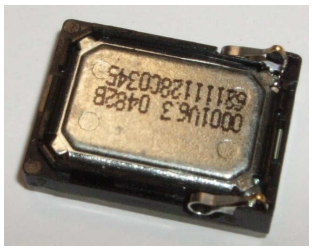
1. Use plastic tweezers to take out the vibrator



Removing the Speaker

1. Use plastic tweezers to release the speaker.





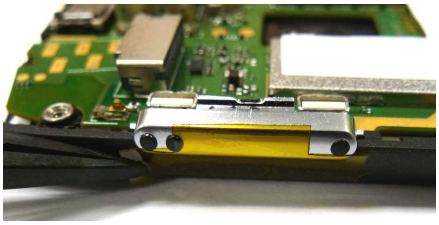
Removing the Bezels

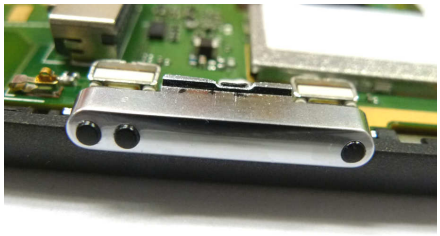
1. Bezel cannot be reuse after removed, please don't remove the bezel if it is not damage.
2. Use the metal tweezer to remove the top bezel.

3. Use metal tweezer to remove the bottom bezel.

Removing the Volume Keys

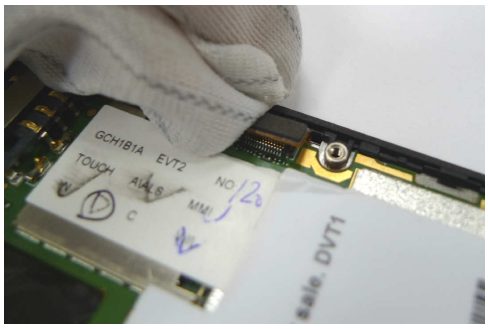
1. Remove the protect film and use take out the volume key

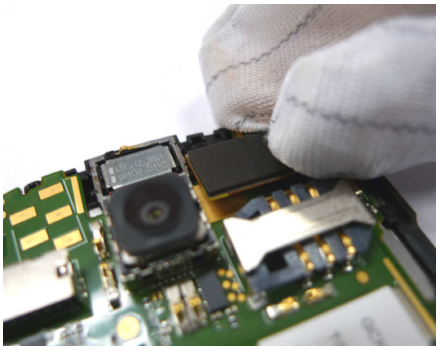


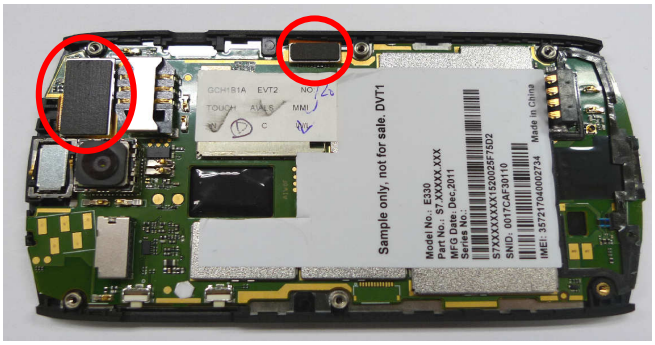


Removing the Main Board

1. Use your fingers to unlock two B to B connector



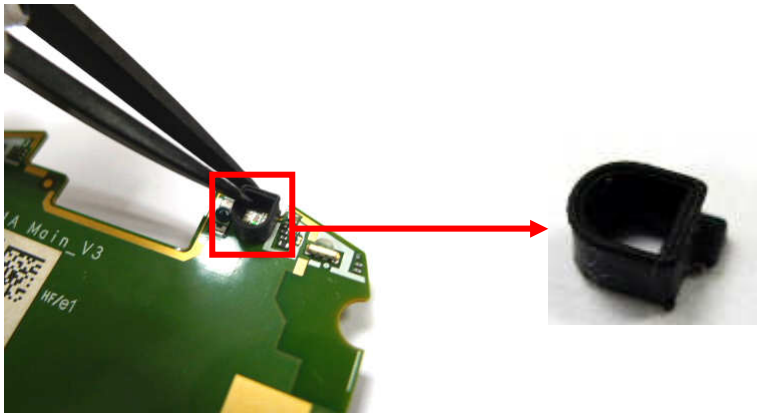




2. Insert the tweezers into the gap between the front case and the main board at the left side, and bend the main board upward to disengage the hooks, and use your fingers to separate the main board from the front case.

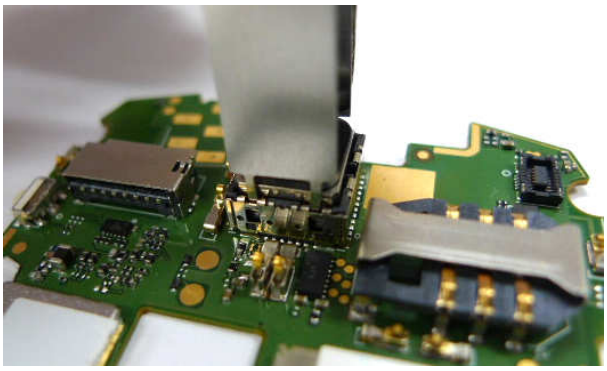
Removing the Sensor Rubber

1. Use your fingers to take off the sensor rubber from the main board



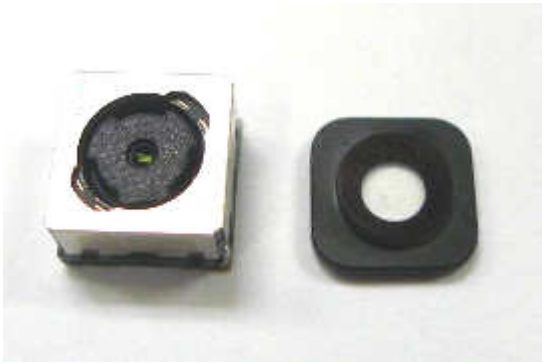
Removing the Camera Module

1. Use Camera JIG to separate the 5M Camera from the main board.



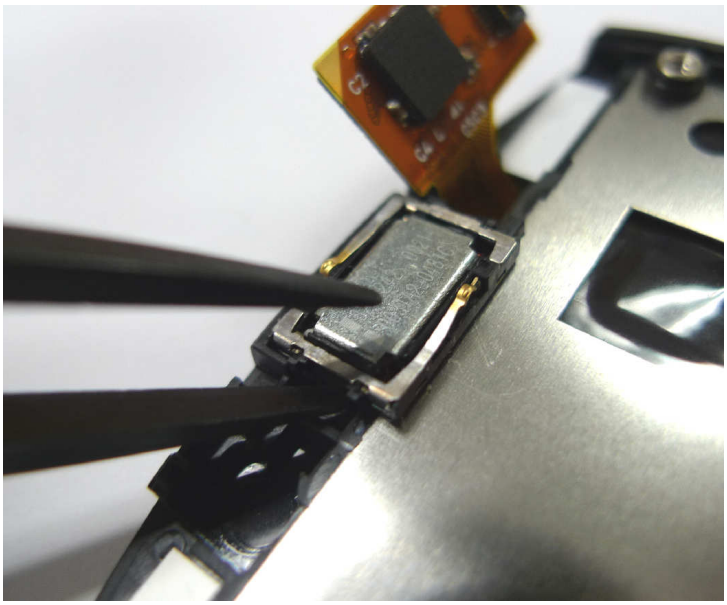
Removing the DSC Lens

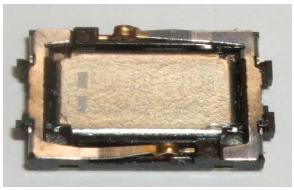
1. Use plastic tweezers to take out the DSC lens.



Removing the Receiver

1. Use plastic tweezers to take out the receiver

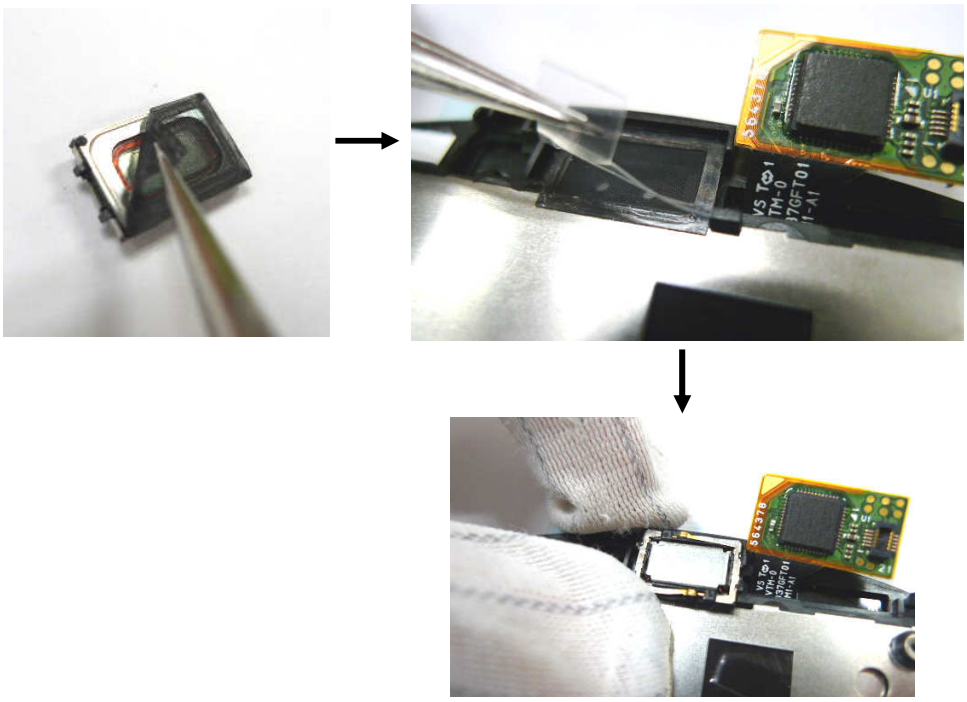




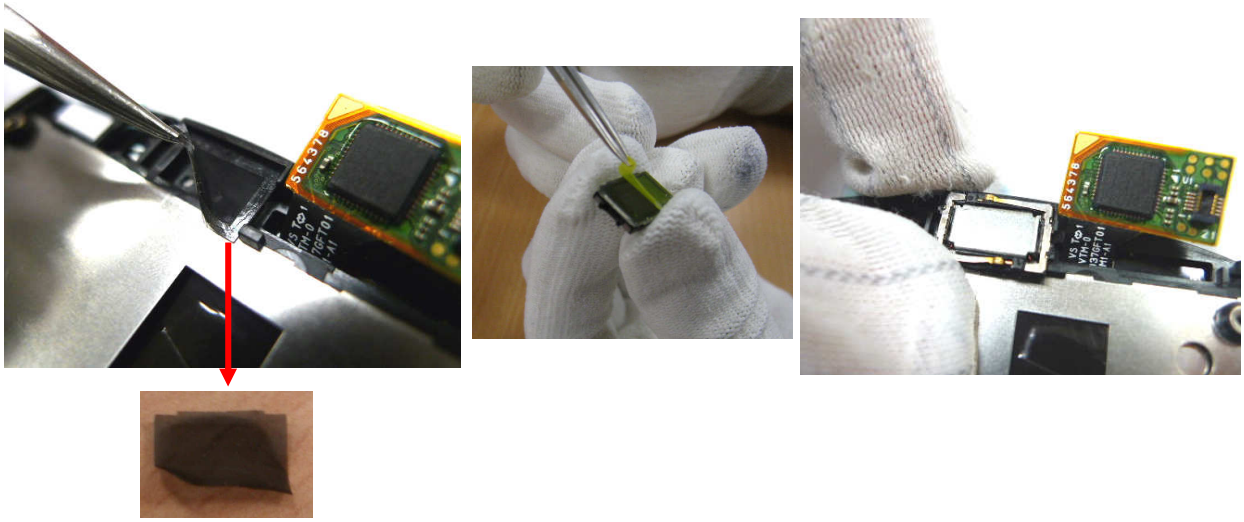
Replacing Internal Module Components

Replacing the Receiver

1. **Case 1:** If you have a brand new TP module (TP module has included the upper case), remember to clean the old receiver mesh, and take off the release paper on upper case first before replace the receiver. Align the receiver with upper surface



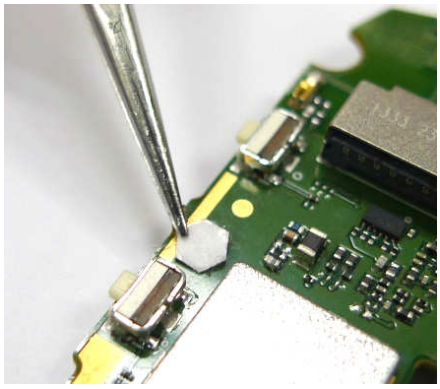
2. **Case 2:** If you have a brand new receiver remember to clear the mesh on the upper case before put the new receiver on the case. Take off the release paper on the new receiver and attach the new receiver on the original upper case.



3. **Case 3:** If you have both new receiver and TP module, both of them will have the mesh, adhesive and release paper with them, please clear the mesh, adhesive and release paper in one of them before assembly the receiver on the TP module.

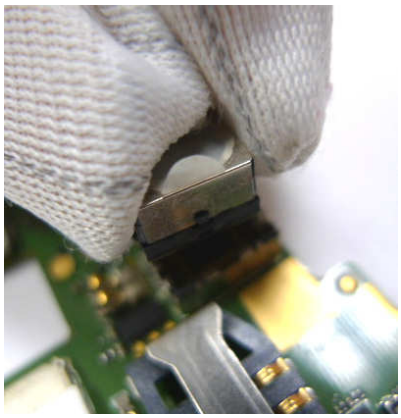
Replacing the Water Indication Label

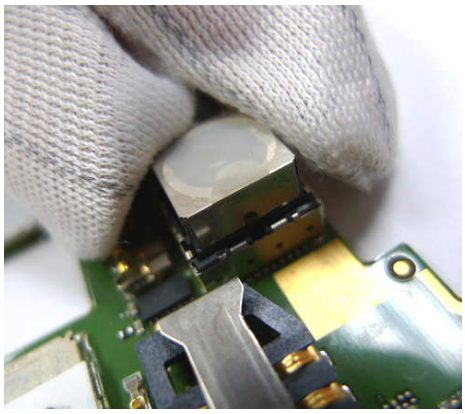
1. Attached a water indication label on Main board between two switches if needed.



Replacing the Camera Module

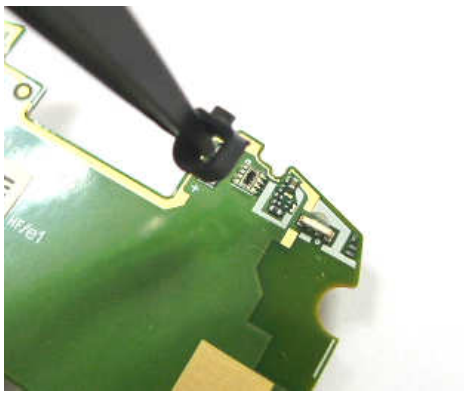
1. Assemble the camera into the socket connector on the main PCB, make sure that it is assemble in right direction.

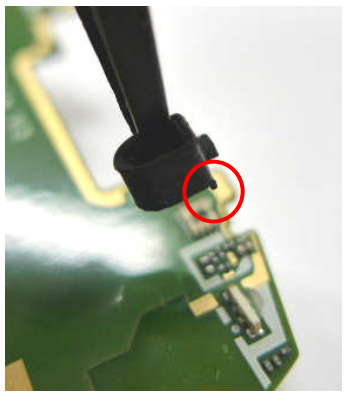




Replacing the Sensor Rubber

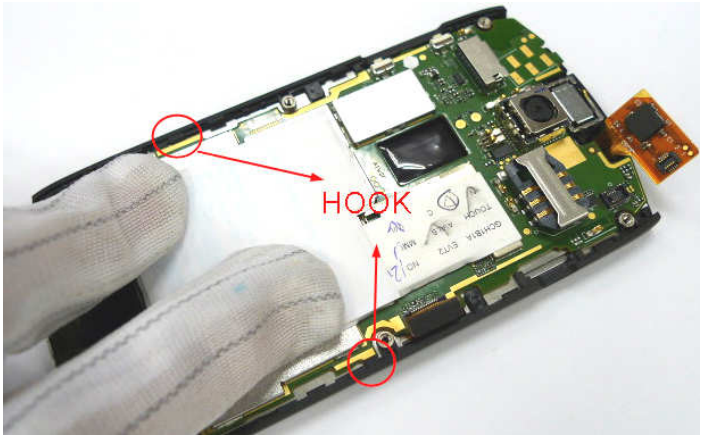
1. Assemble the sensor rubber onto the main board. The foolproof pin should be at the upper right corner.



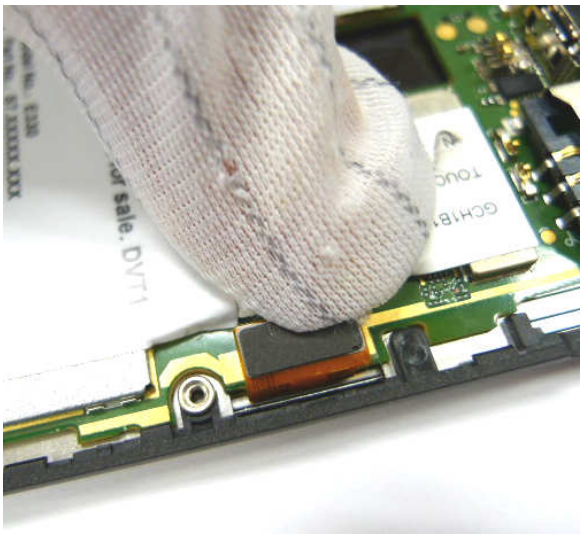


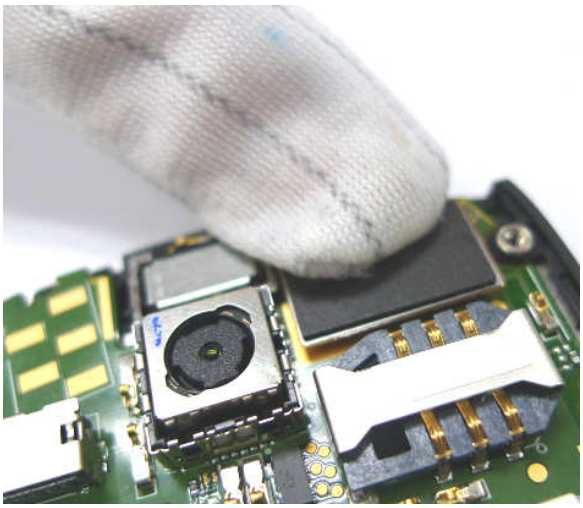
Replacing the Main Board

1. Assemble the main PCB with the front case. Put the bottom of the main PCB into the hole, and then lock the main PCB with two hooks on the front case



2. Lock the two BTB connectors onto the main PCB.

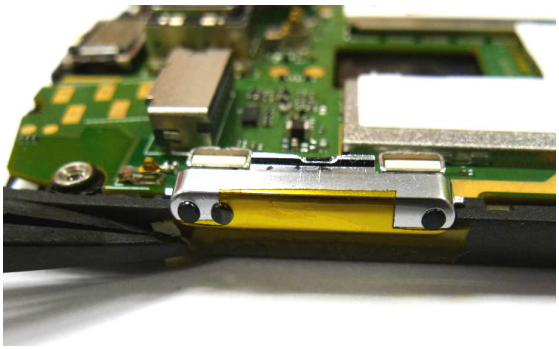




Replacing the Volume Key

1. Assemble the volume key with the front case. Put the volume key onto the front case.

2. Covers the key with protect film to make sure it won’t fall off during assembly.



Replacing the Bezels

1. Rear case does not included top and bottom bezels, remember to order the new bezel together when you have ordered the new rear case.
2. Release top bezel's white release paper on the new rear case.

3. Take a new top bezel and use your finger to attach it carefully on the rear case.

4. Release bottom bezel's white release paper on the new rear case.

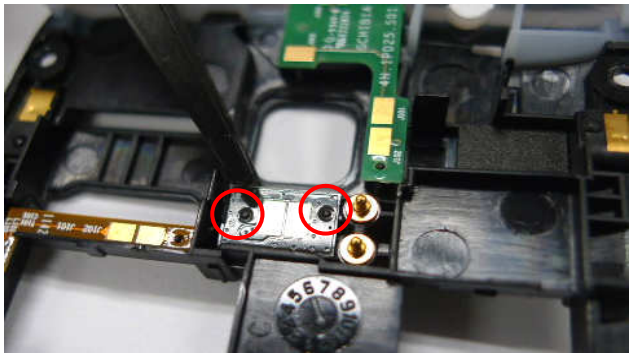
5. Take a new bottom bezel and use your finger to attach it carefully on the rear case.

Replacing the RVR PCB

1. Assemble the RVR PCB onto the rear case with one locating pin.

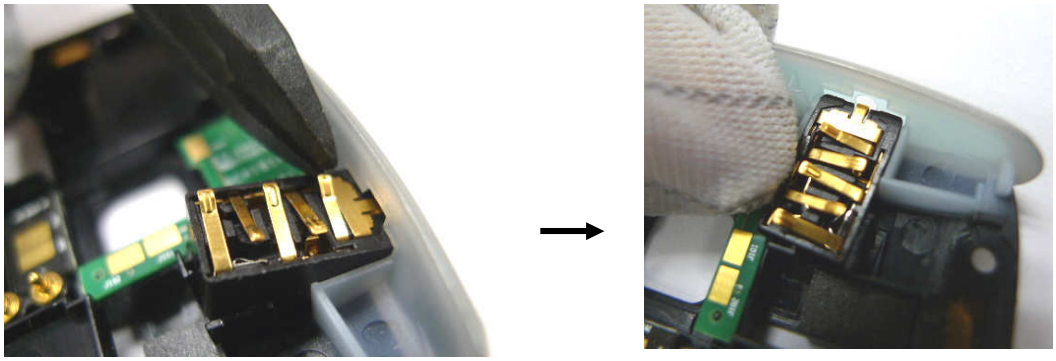
Replacing the Flash PCB

1. Assemble the Flash PCB onto the rear case with two locating pin



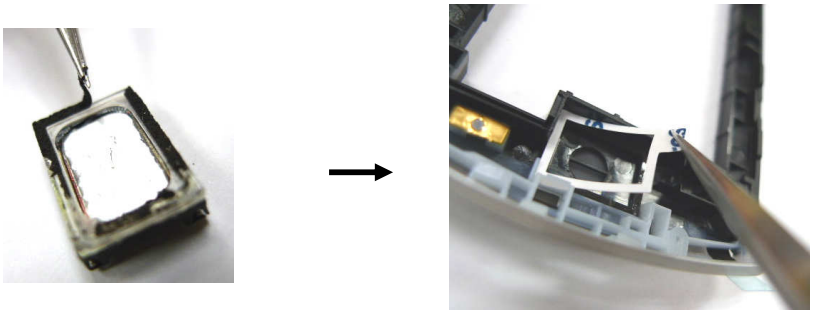
Replacing the Audio Jack

1. Assemble the 3.5mm 4P Audio Jack onto the rear case. Press the top side down first.

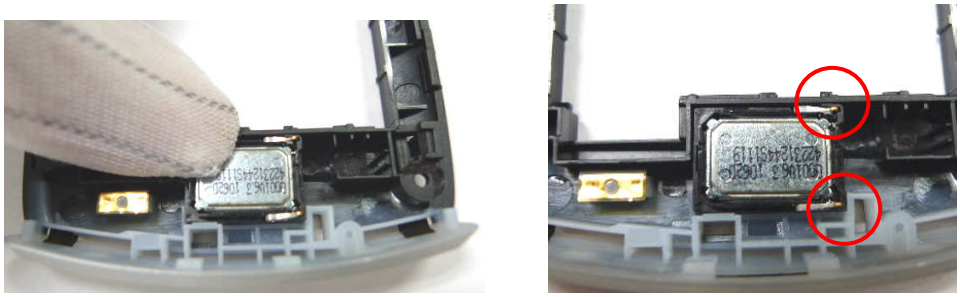


Replacing the Speaker

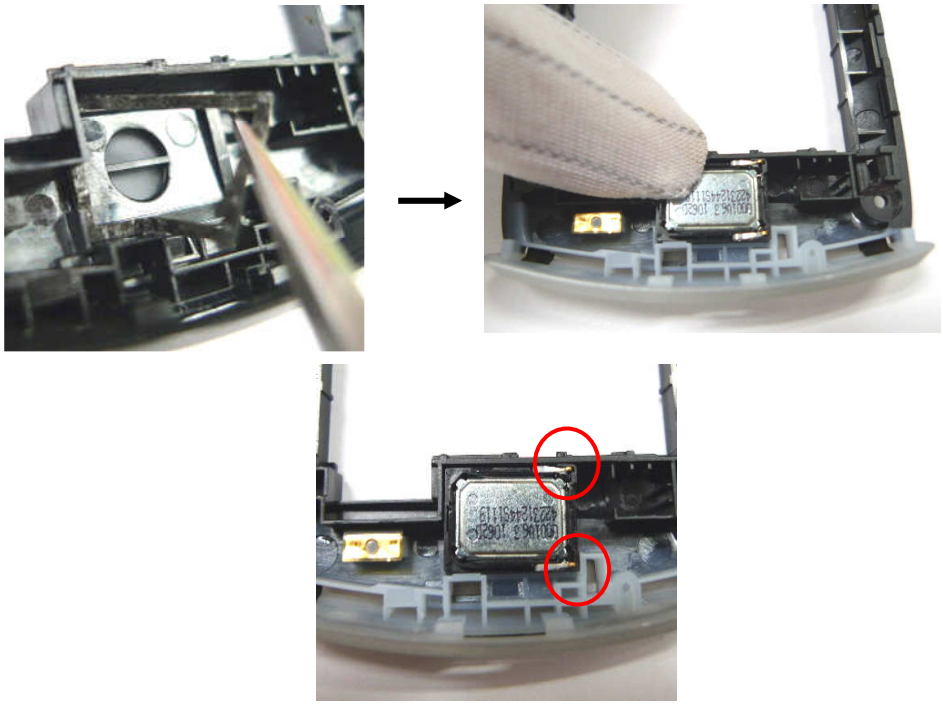
1. **<u>Case 1:</u>** If you have a brand new rear case and wants to replace an old speaker on the new rear case. Please remember to clean the cushion on the old speaker first and take out the white release paper on the rear case before replace the speaker.



Make sure the pin is in the right side.



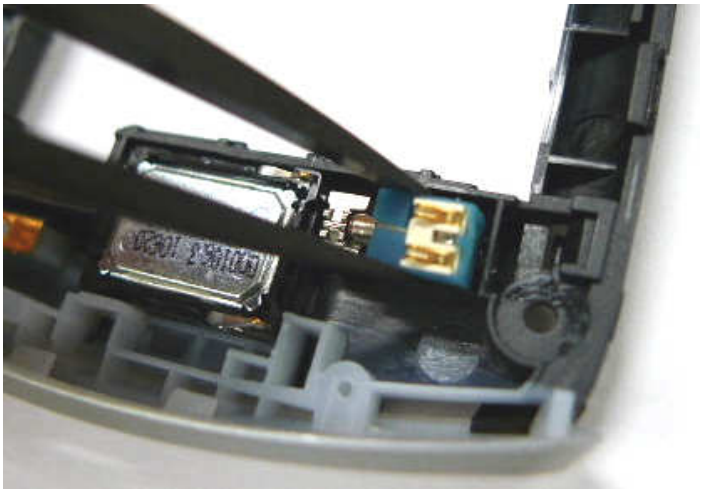
2. **Case 2:** If you have a brand new speaker, and want to put this new speaker on an old rear case, please clean cushion on the old rear case first before assemble the new speaker on the rear case. Make sure the pin is in the right side.



3. **Case 3:** If you have both new SPK and TP module, both of them will have the cushion, adhesive and release paper with them, please clear the cushion, adhesive and release paper in one of them before assembly the SPK on the TP module.

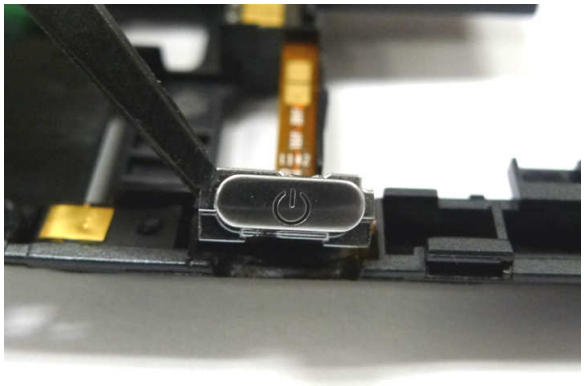
Replacing the Vibrator

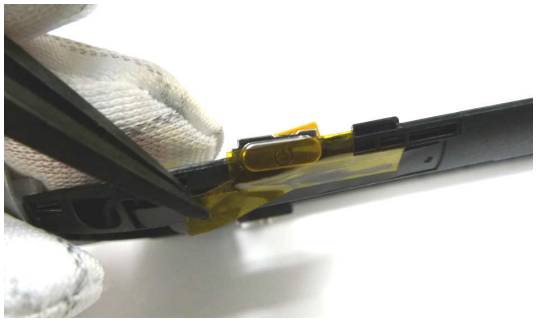
1. Assemble the vibrator onto the rear case.



Replacing the Power Key

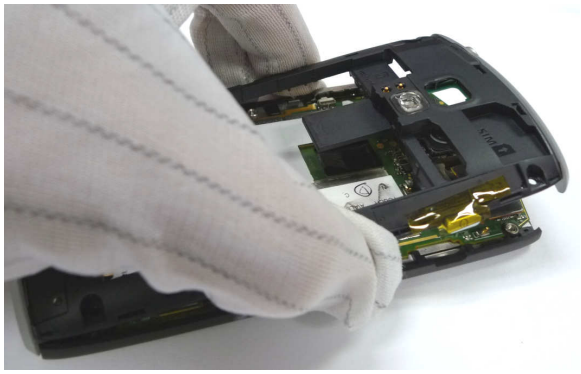
1. Assemble the power key with the front case. And covers the key with protect film to make sure it won't fall off during assembly



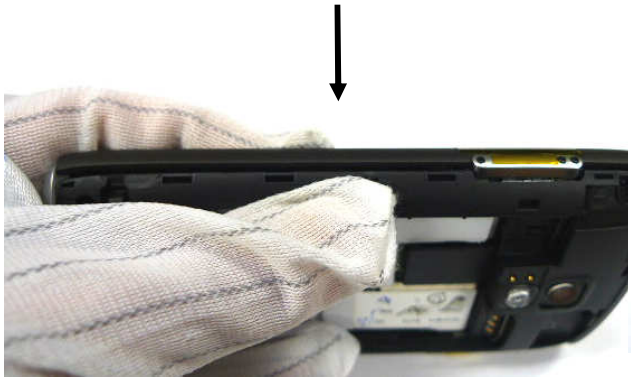


Replacing the Rear Case

1. Assemble the rear case and front case. Click in the bottom end first, then the top.



2. Press at the top, side and four corners; make sure all the hooks are properly hitched. Lock six screws. The lock force should be set at 1.1± 0.1kgf/cm.



3. Attach new warranty seal label and water indication label if needed.

4. Attach new Spec label if needed

Replacing the DSC Lens

1. Assemble the DSC lens with plastic tweezers, and use the hole on rear case as constrain. Press it to make sure the lens is well stuck.

Replacing the SIM Card

1. Insert SIM card into the phone.

Replacing the SD Card

1. Insert SD card into the SD socket.

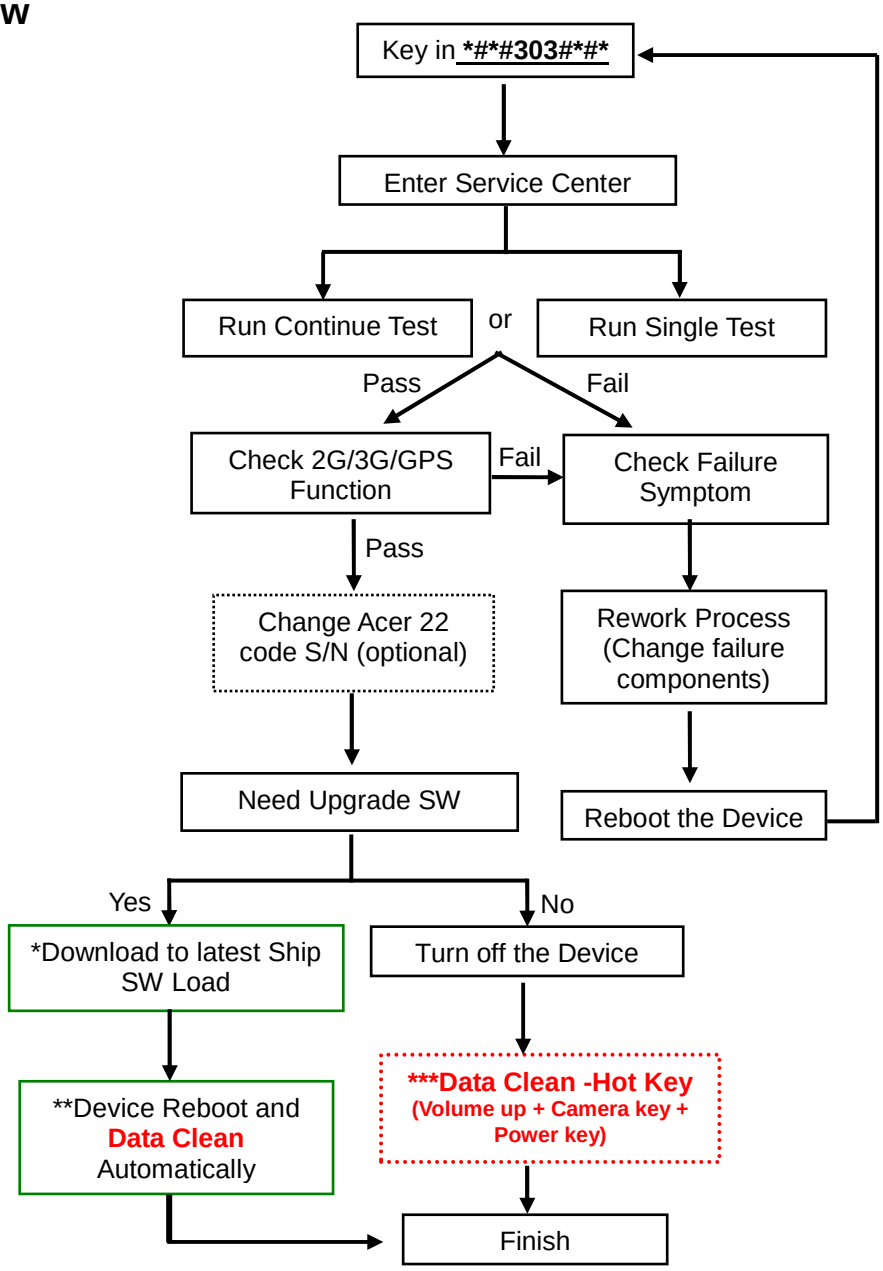
Replacing the Battery

1. Assemble battery into battery tank.

Replacing the Battery Cover

1. Assemble the battery cover with the phone. Maker sure all the hooks are properly hitched.

Work Flow



*For D/L process please refer to "**Software Upgrade**" section in this Service Guide .
** If you do not need to clean out user's data, please choose SD D/L or EUU tool for D/L process.
*** Optional. Just Turn off or reboot the device if you don't need to clean the user data.

Remember to **reboot the device after the test**; otherwise the device will not function normally.

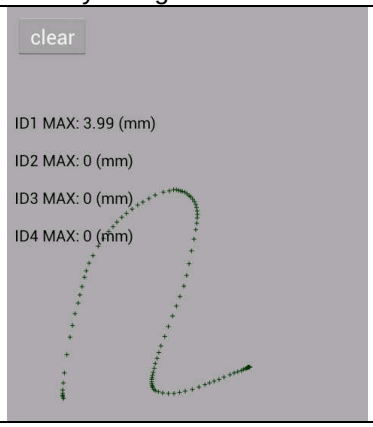
If you are **using Qisda E330 Service Tool to do the repair process, please remember to Close Authorization after the process**. (For more information please refer to E330 Service Tool User Guide).

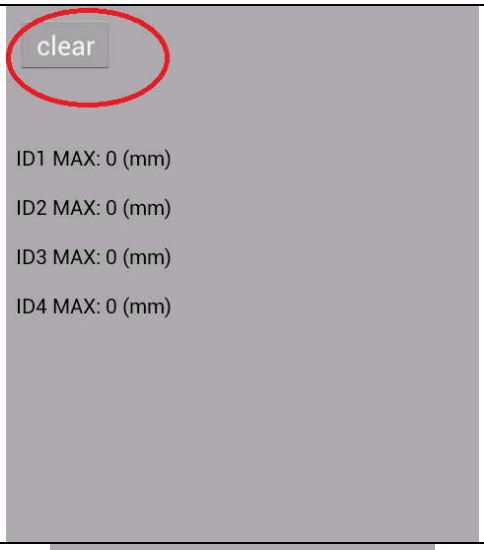
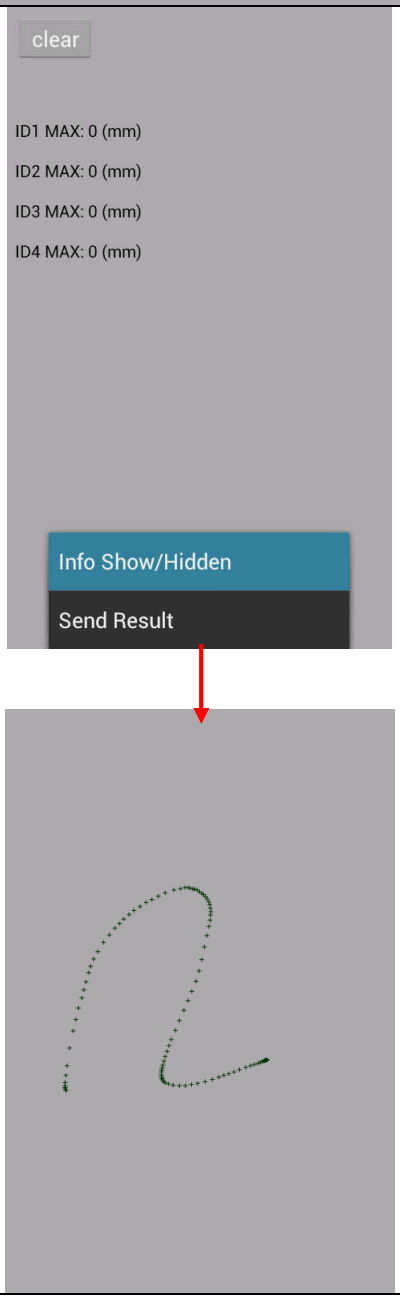
Enter EM Mode and Service Center

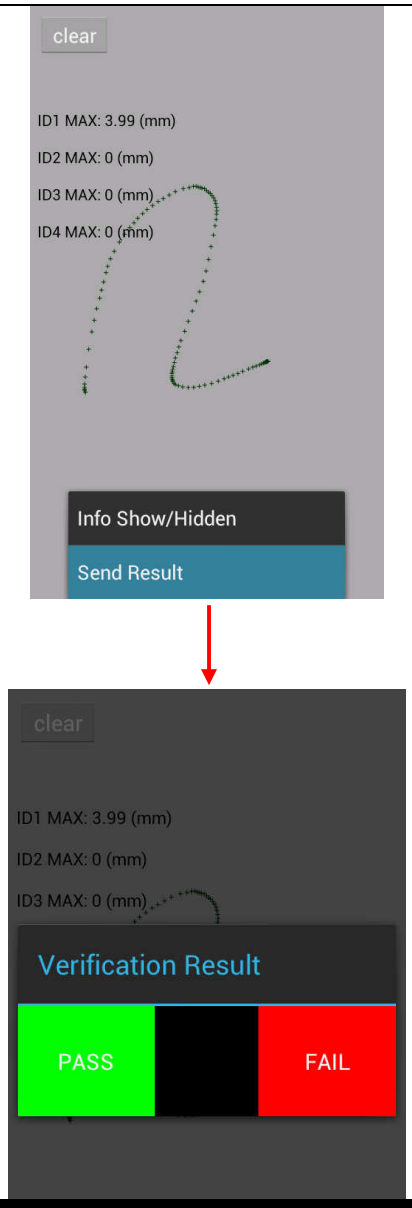
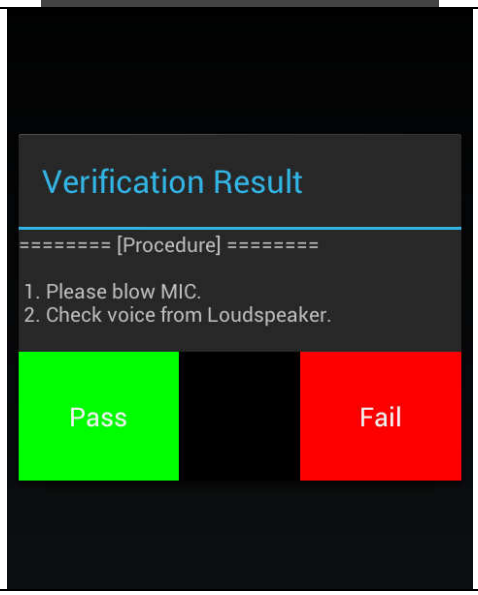
1. Turn on the device and dial *#*#303#*#*	2. Enter Service Center Test Item
	

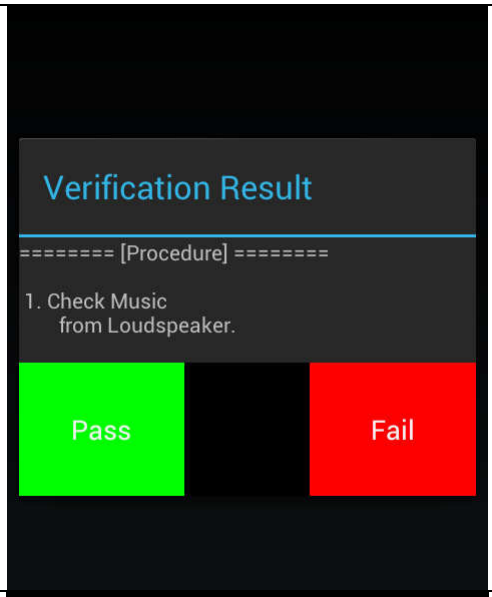
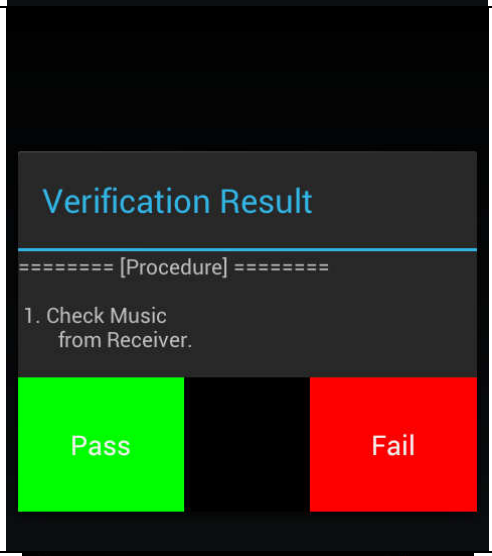
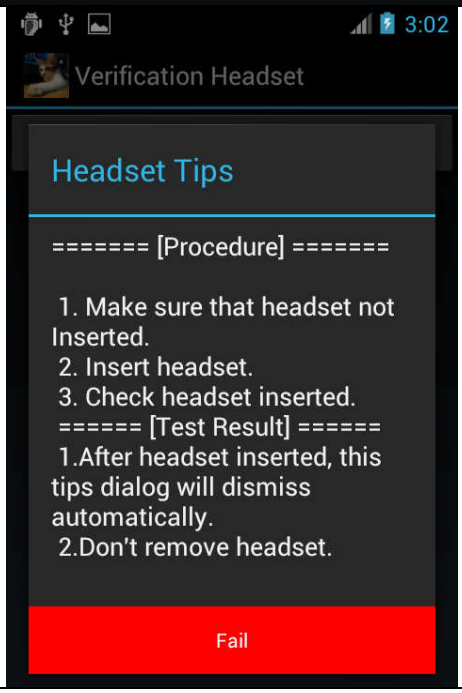
Run MMI Test (Diagnostics Test)

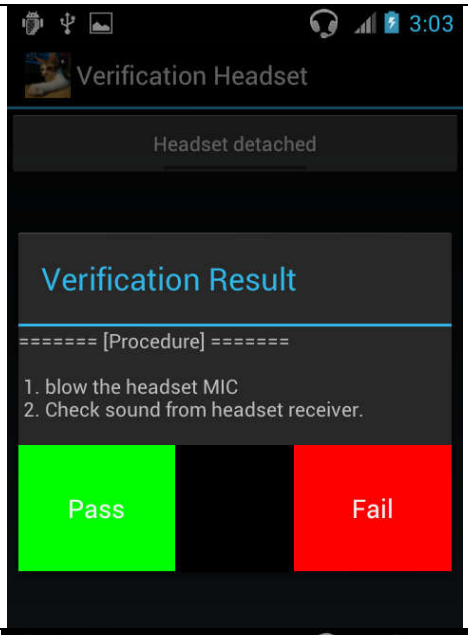
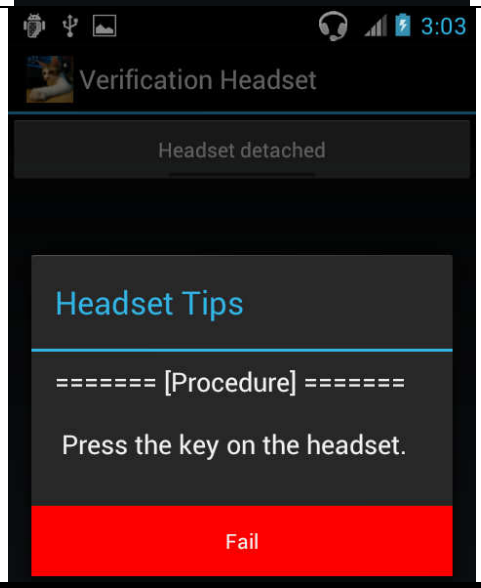
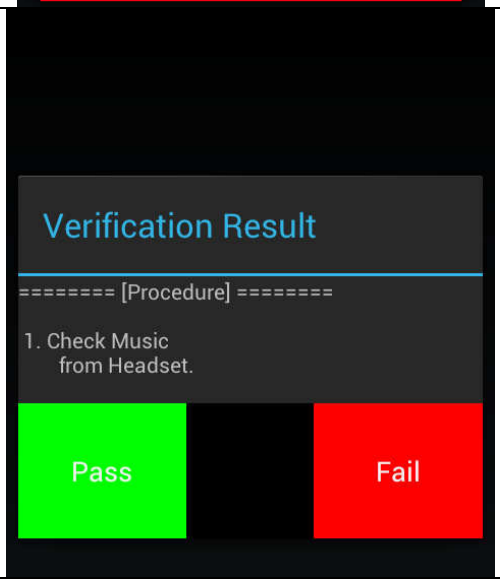
Continue Test

Detail operation instructions	Display
Select Continued Test to start the test items of MMI Test. **Before Start:** ①. Please prepare a headset, A2DP BT headset, NFC cards, and a lamp as test accessories. ②. Please make sure the device battery is not full, and plug in the USB cable for charging in advance. (Otherwise the charging test will be fail automatically) ③. Please insert SIM & SD card in the device. ④. Please modify the WiFi SSID as “Mobile-Wireless” and security set at “Open”.	
1. SIM Card Automatic Verification	This is an automatic testing item, device will test automatically and go on the the next test item.
2. E-compass Auto Verification	This is an automatic testing item, device will test automatically and go on the the next test item.
3. GaugeIC Voltage Auto Verification	This is an automatic testing item, device will test automatically and go on the the next test item.
4. GaugeIC Temperature Auto Verification	This is an automatic testing item, device will test automatically and go on the the next test item.
5. USB Charging Auto Verification	This is an automatic testing item, device will test automatically and go on the the next test item.
6. Touch Panel Hardware Auto Verification	This is an automatic testing item, device will test automatically and go on the the next test item.
7. Single Touch Verification You can draw on the panel by using fingers (up to 4 fingers) to see the touch panel is work or not.	

①. You can “clear” it by pressing “Clear” button	
②. If you want a pure panel, please press menu key and choose “Info Show/hidden	

③. Press menu key and choose “Send result” to judge Pass or Fail.	
8. Audio Verification Please below the MIC that located at the bottom of the phone and check the voice from the loudspeaker. Press “Pass” if you have heard the voice comes from the loudspeaker, otherwise, press “Fail”.	

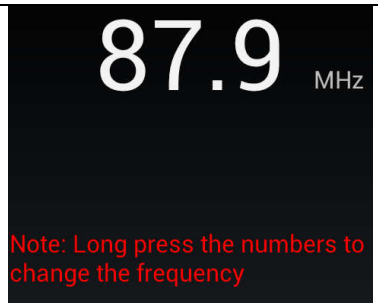
9. Audio play music to Loudspeaker Check the music has played from loudspeaker. Press “Pass” if you have heard the music from the loudspeaker, otherwise, press “Fail”.		
10. Audio play music to Receiver Check the music has played from receiver. Press “Pass” if you have heard the music from the receiver, otherwise, press “Fail”.		
11. Headset Detect Verification Please do not plug in the headset before this test. The test will pass automatically after plug in the headset. If the dialog still appears after plug in the headset, please press “Fail” to exit this test		

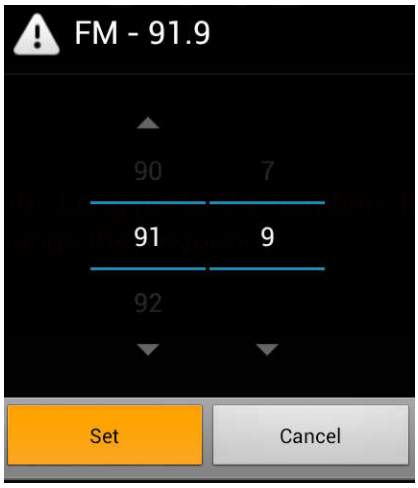
12. Headset Verification Keep the headset attached; blow the headset MIC to check the sound can be heard from the headset receiver. Press “Pass” if you can hear the sound you blow comes from the headset receiver, otherwise, press ‘Fail”.		
13. Headset KEY Verification Keep the headset attached; press the key on the headset, the test will pass automatically after that. If the dialog still appears after you have pressed the key on the headset, please press “Fail” to go on to the next test.		
14. Audio play music to Headset Verification Keep the headset attached; check to see if you have heard the music from the headset receiver. Press “Pass” if you have heard the music, otherwise, press “Fail”.		

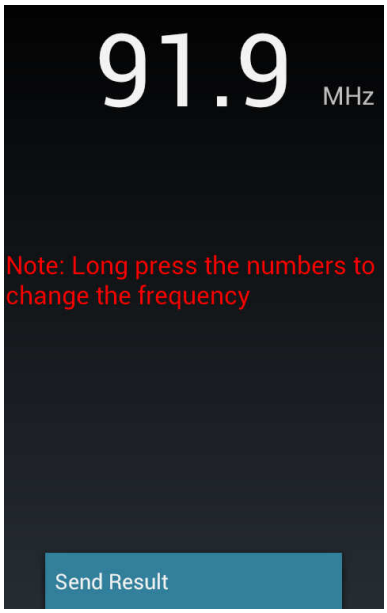
15. FM Radio Verification

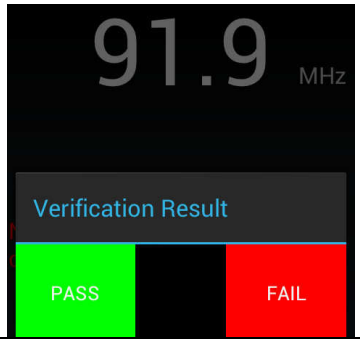
Keep the headset attached; Long press the number (87.9) to change the frequency to your local radio station, so you hear it.

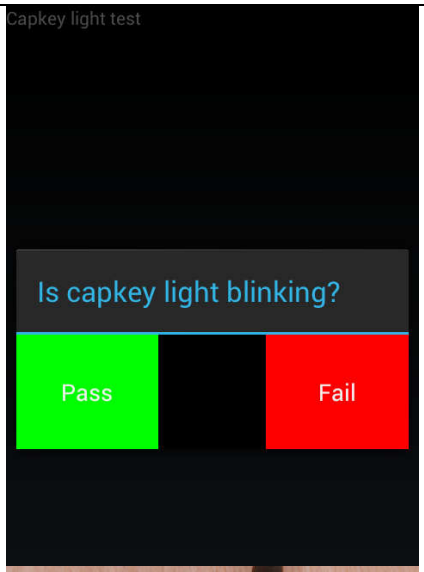
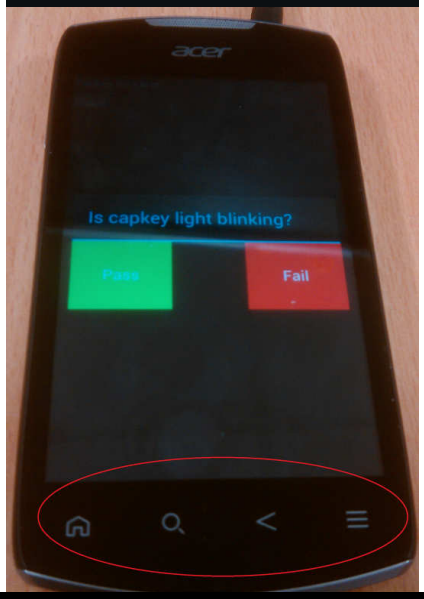
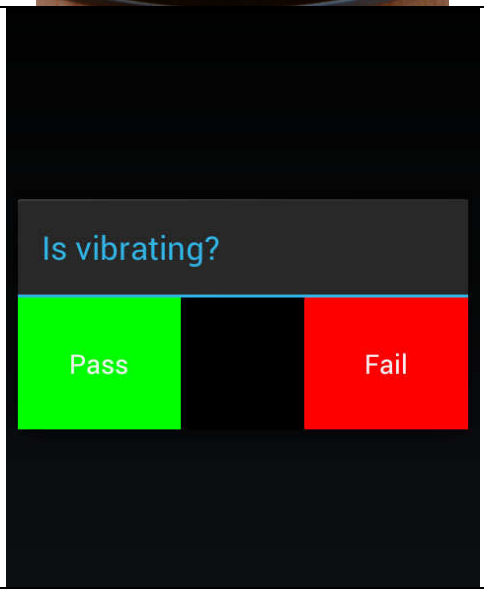
Press menu key and choose “Send result” to judge “Pass” if you can hear the sound of the radio station, otherwise, press “Fail”.







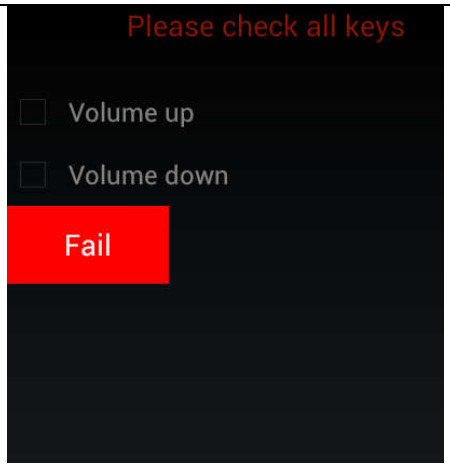


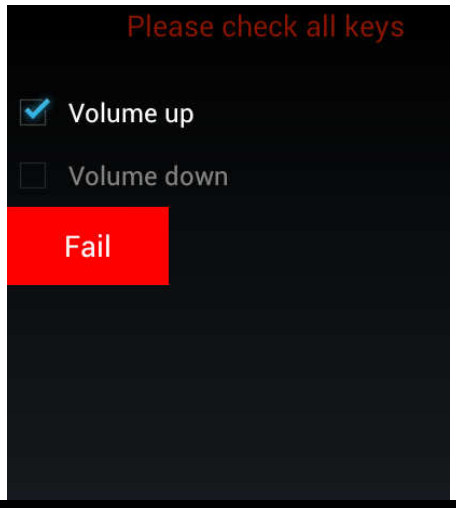
16. LED Verification To Check if the capkeys that located at the bottom of the panel has blinking. Press “Pass” if the capkey’ light has blanking, otherwise, press “Fail”.	 
17. Vibrator Verification Check to see is the device vibrating or not. Press “Pass” if the device is vibrating, otherwise, press “Fail”.	

18. KEY Verification

① . Press Volume up key and make sure the “Volume up” column has checked
② . Press Volume down key and make sure the “Volume down” column has checked.

The test will pass automatically and move to the next test item after both volume key is workable, otherwise, please press “Fail” to exit.

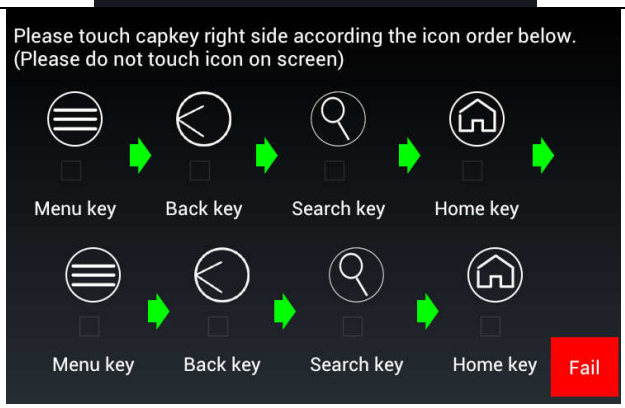


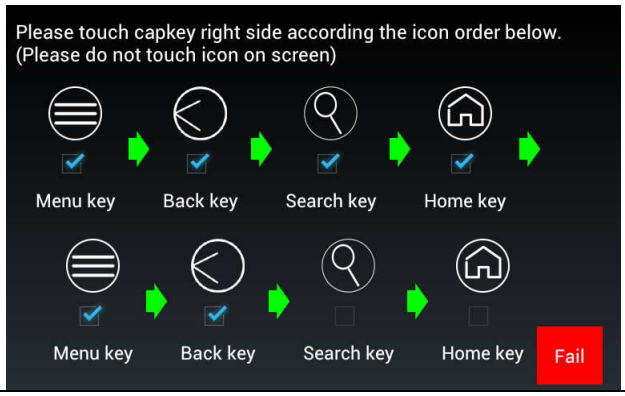


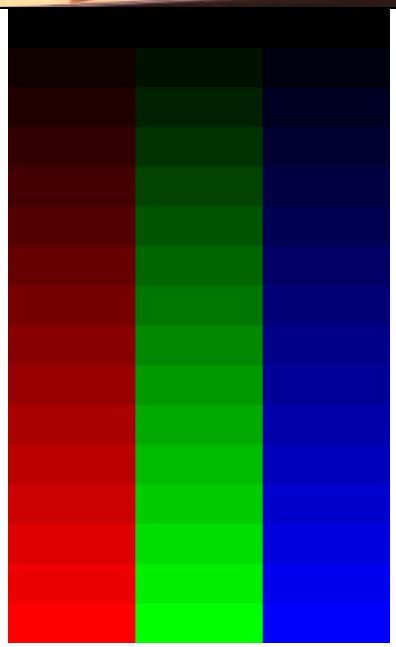
19. Cap Key Verification

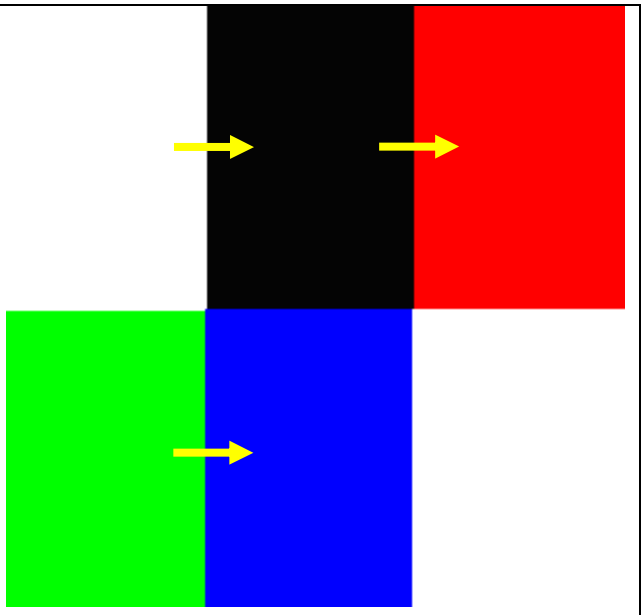
Please press the capkeys follow by the order that shown on the screen and check the column has tagged once you have press the corresponding key.

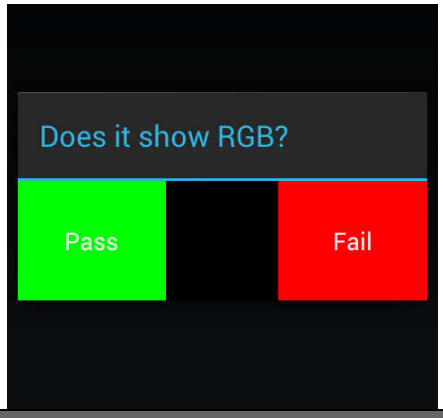
The test will pass automatically and move to the next test item after all the keys has been pressed and tagged, otherwise, press “Fail” to exit.





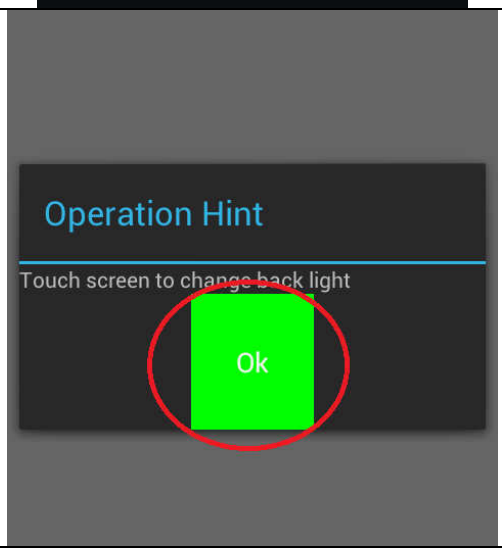
20. SD Card Automatic Verification	This is an automatic testing item, device will test automatically and go on the the next test item.
21. Camera Verification Press the capture icon to take a picture, the flash light will be on and the device will auto focus the object when you taking the picture, please double check. Press “Pass” if the camera has do the auto focus and light on the flash light and the picture looks fine, otherwise, please press “Fail”.	 
22. LCD Verification Tap the screen for next color frame, and check whether there has bad pixel(s) in each color frame. Press “Pass” if every color frame are prefect without any bad pixels, otherwise, press “Fail”.	

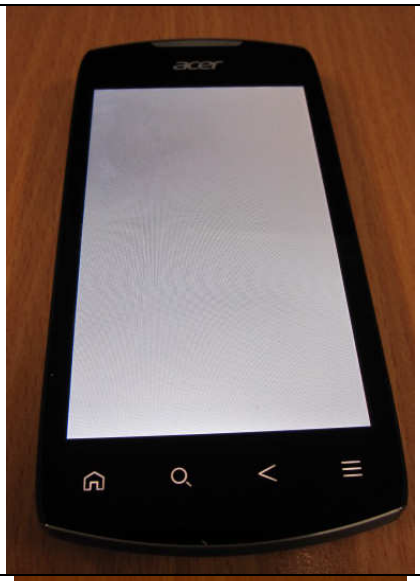
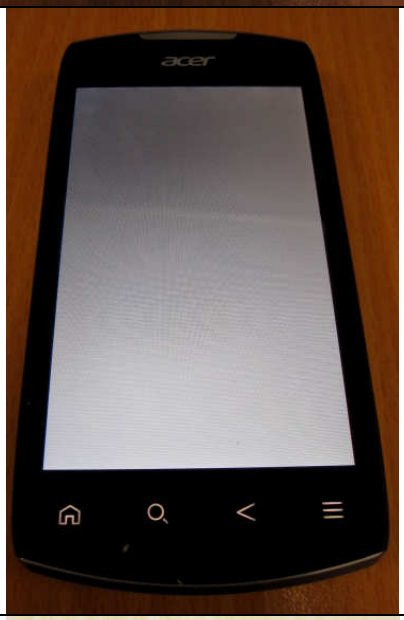


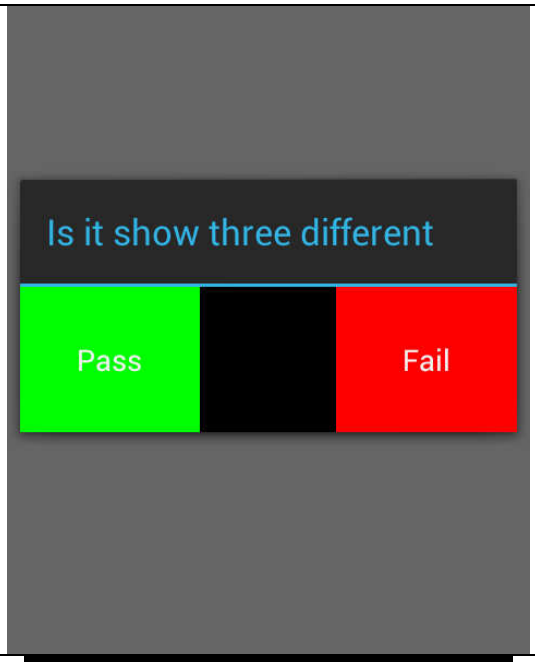
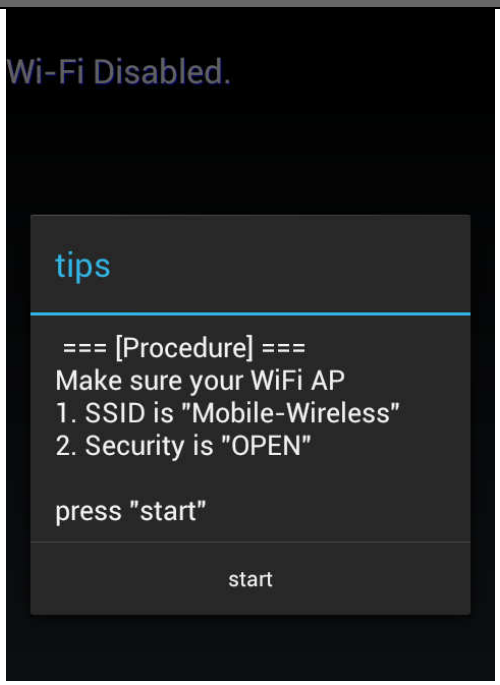


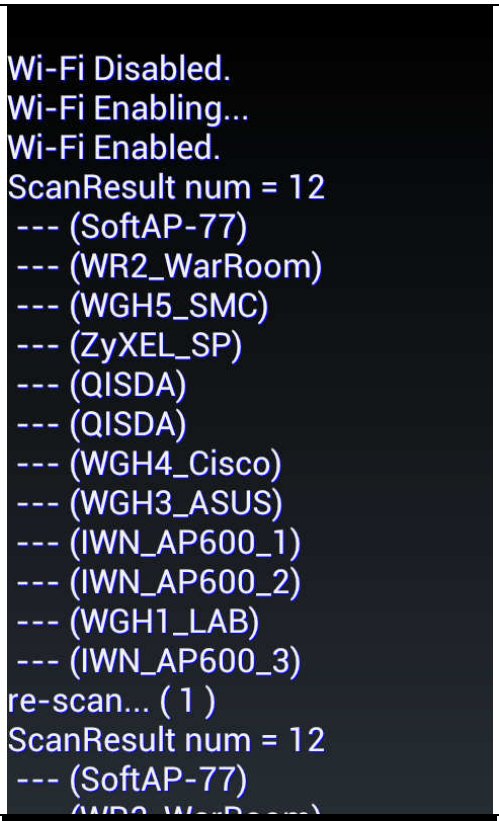
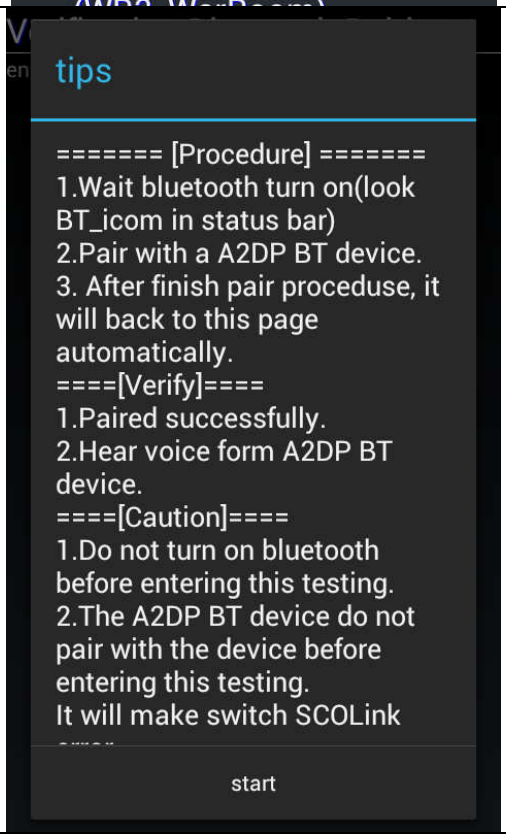
23. LCD Backlight Verification

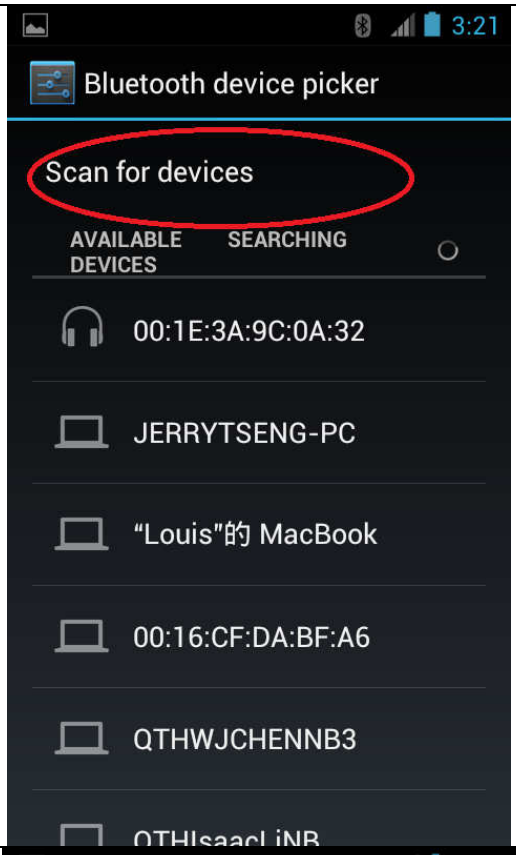
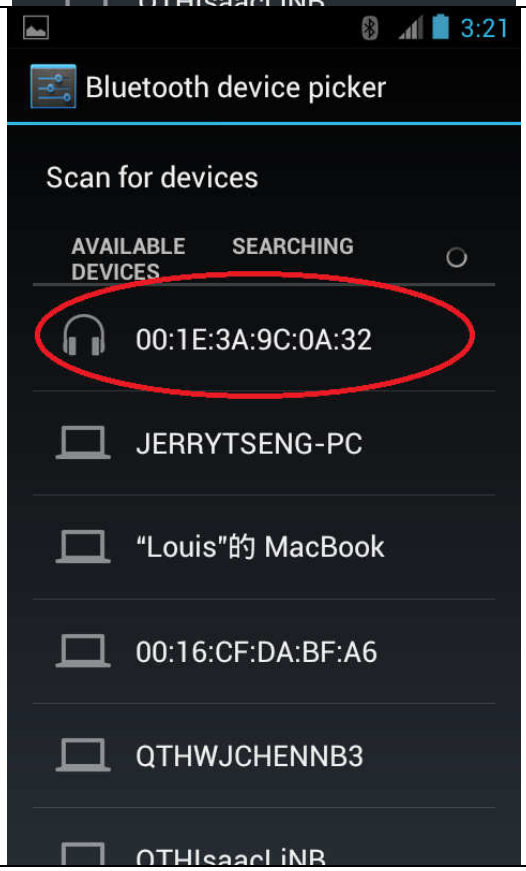
Press OK to start the LCD backlight verification.

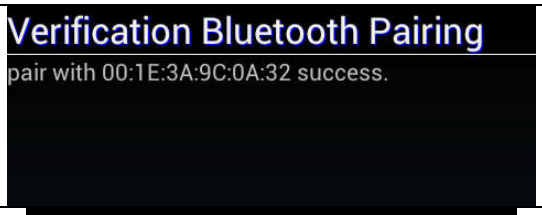
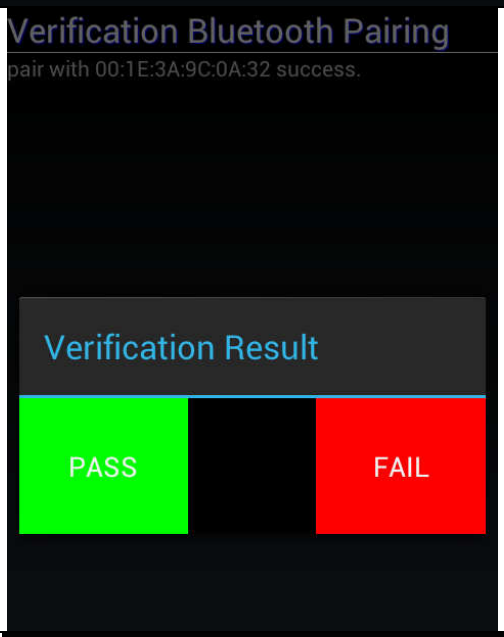
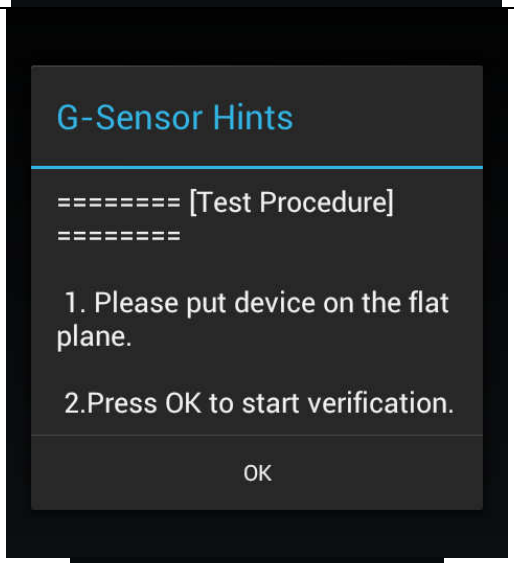
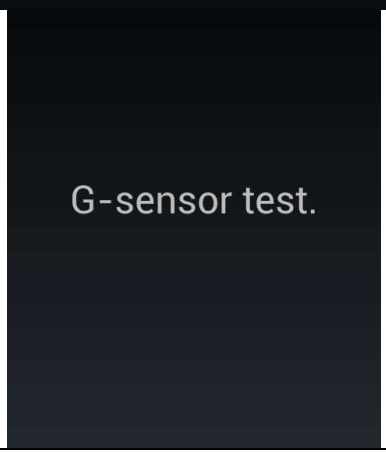


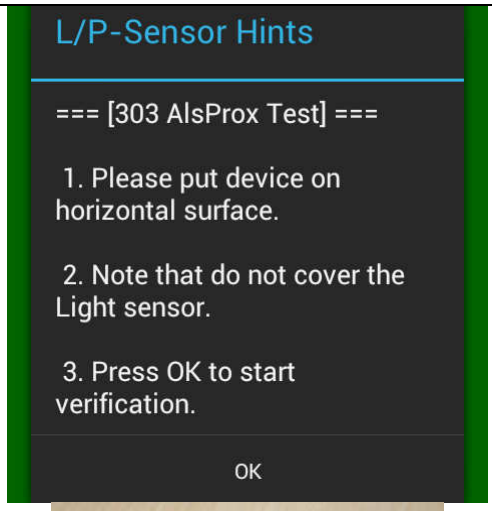
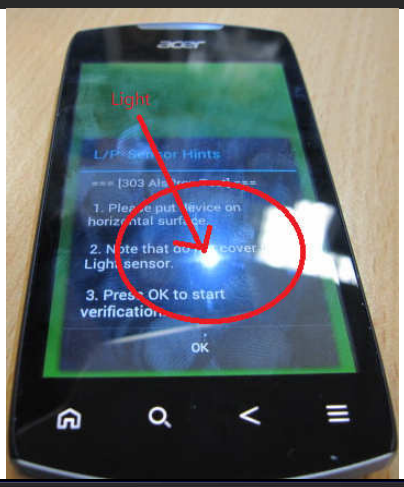
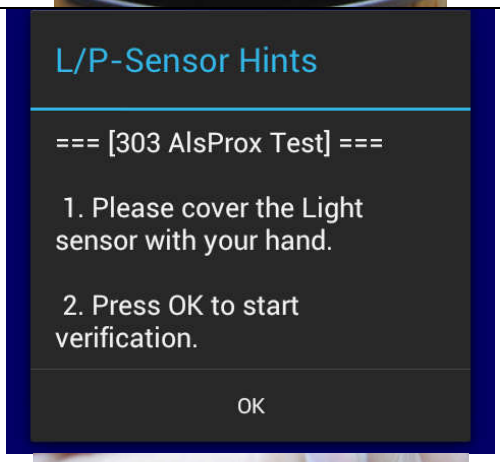
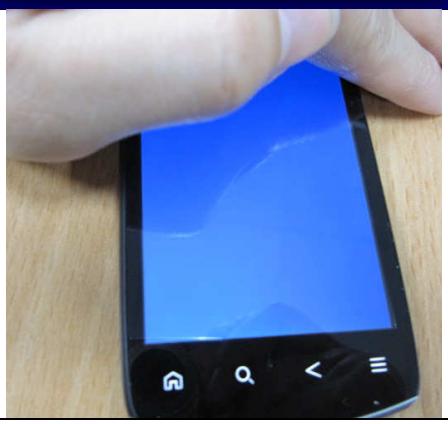
①. <u>Brightest:</u> Touch the screen to see the first backlight level, the brightest. And tap screen for next level.	
②. <u>Normal:</u> Check the second backlight level, the normal. And tap screen for next level	
③. <u>Darkest:</u> Check the third backlight level, the darkest. And tap screen for send result	

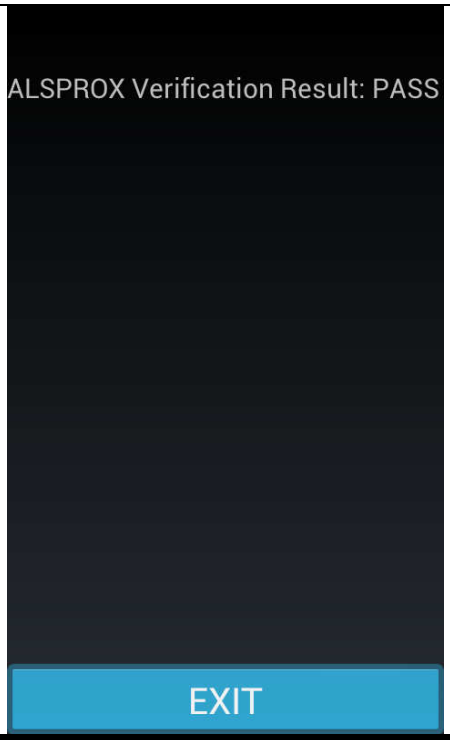
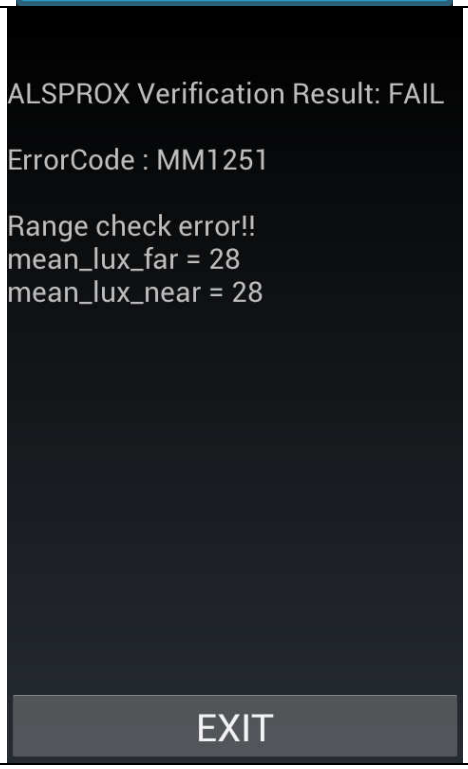
Press “Pass” if the screen has correctly show three different backlight level, otherwise, press “Fail”.	
24. WIFI Verification Make sure you have already set up the WIFI AP correctly before start the MMI Test. Press start to start the WIFI vertification. The test will Pass automatically if the device has detected the WIFI AP with the SSID “Mobile-Wireless”. The Test will Fail automatically if the device cannot detect the correct WIFI AP after 20 times of tried.	

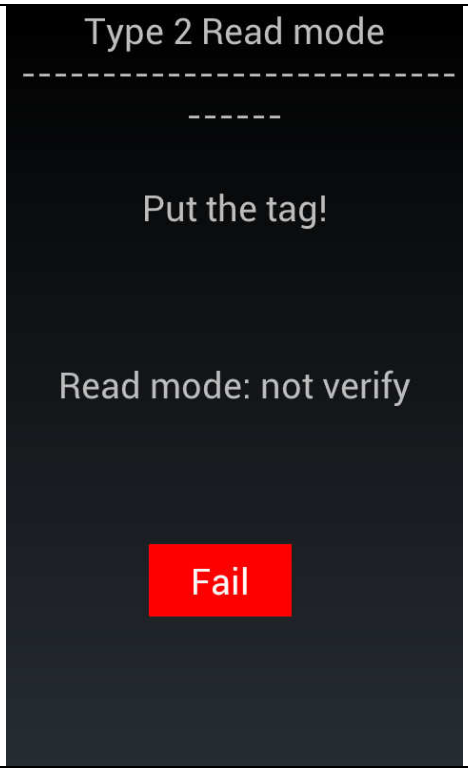
		
25. Bluetooth Pairing and Audio Verification Make sure you have prepared an A2DP BT headset beside the device. Press “start” to start the test.		

①. Press “Scan for device”, the phone will scan the entire BT device around you.	
②. After see your A2DP BT headset appear in the list, touch it to pair.	

③. Wait a minute (depend on BT earphone device), make sure you can hear music played from your BT earphone when this page is shown.	
④. Press “Pass” if you can hear the music played successfully, otherwise press “Fail” ⑤. If you cannot pair successfully or cannot find your BT earphone device, press menu key and select “Send result”, and press “Fail” to exit the test.	
26. G-sensor Verification This is auto G-sensor verification; make sure the device is on the flat surface, and press “OK” to start the test. It will go on to the next test item automatically after the test.	 

27. P-sensor Verification ①. Please prepare a fixed lamp before test, the requirement of lamp should be1700 lux fluorescent lamp or 23W bright light ②. Put the device **under the lamp** on the flat surface, and do not cover the light sensor of the device. Press OK to start the test.	 
③. Next is Cover test. Cover the light sensor with you hand. Press OK to start the test.	 

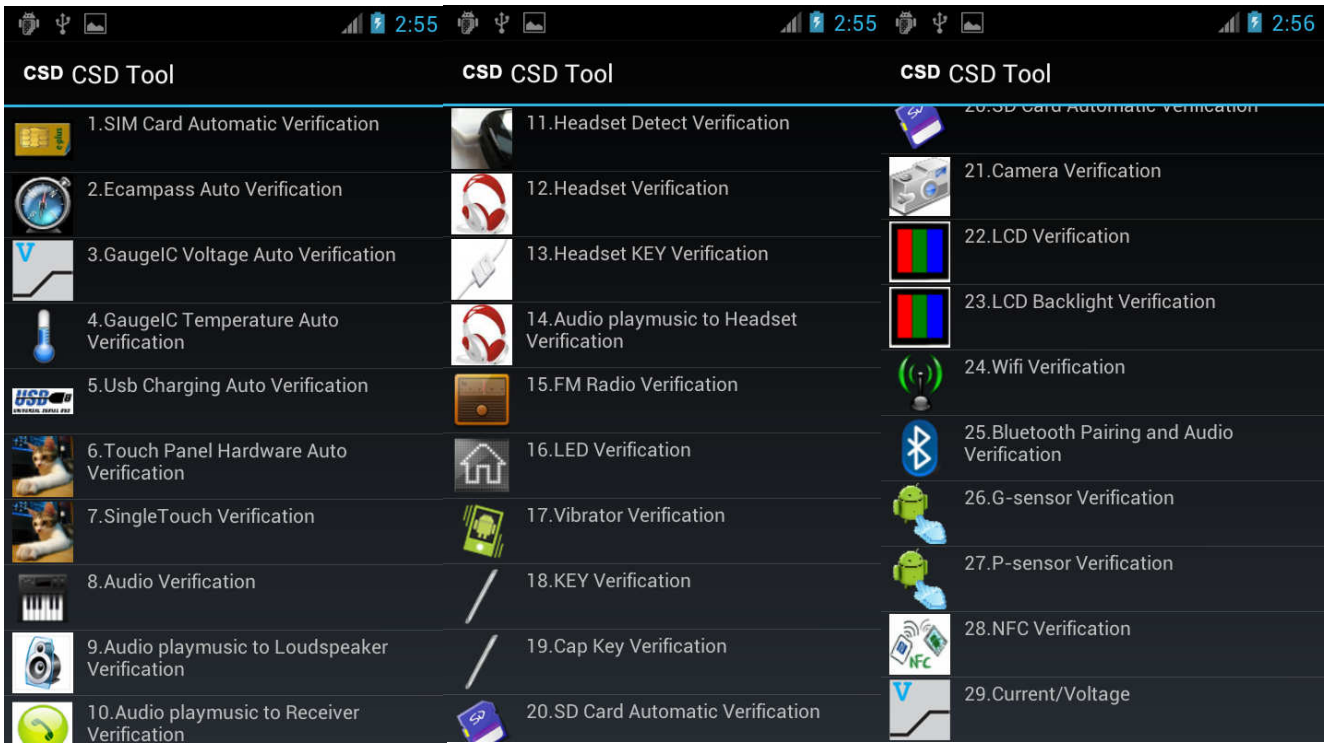
If Pass, the screen will shown “PASS”, and please press “Exit” to exit and go on to the next test item.		
If Fail, the screen will shown “FAIL”, please press “Exit” to exit and go on to the next test item.		

28. NFC Verification Prepare 2 kinds of NFC read mode card (Type 2 and Type 4). ①. Put your type 2 card right under the battery cover of device. if pass will enter type 4 test automatically. ②. Put your type 4 card right under the battery cover of device. If your device has detect all 2 type 2 and 4 NFC card, it will show the result of all the MMI test automatically (this is the last test item), If your device has no response to your NFC card, please press “Fail” for this test item, and the device will show all the MMI test result.		

***** Please remember to **reboot the device after the test**; otherwise the device will not function normally.

Single Test

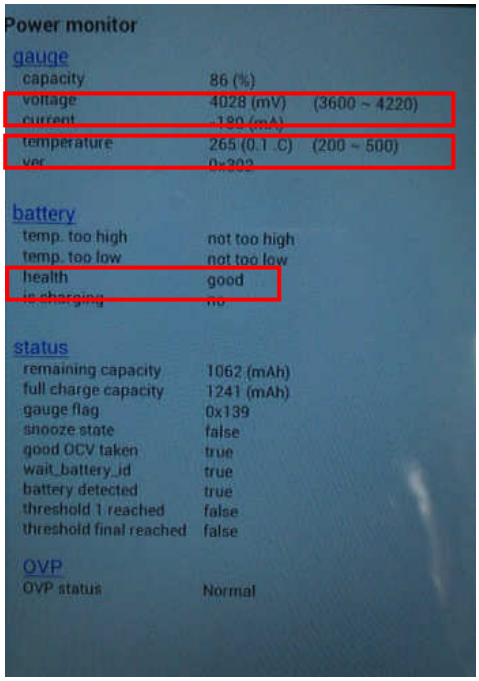
Single test is to break down the continue test items separately. But there are one more extra item that does not included in continue test, item 29, Current/Voltage.



***** Please remember to **reboot the device after the test**; otherwise the device will not function normally.

Current/Voltage

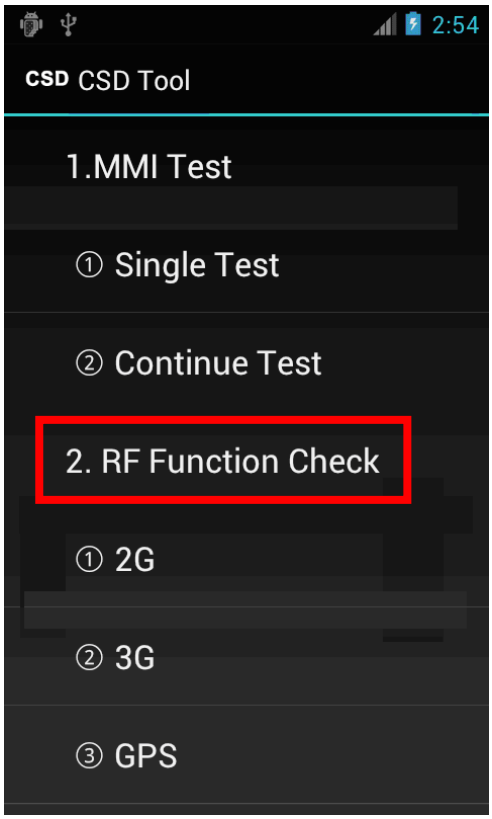
This is for service center to know Current/Voltage information, Not really a test item. Exit this function by pressing the menu icon of the cap key, select “Sent result”, and press “Pass” or “Fail”.



You can judge Pass or Fail by looking at the gauge voltage and temperature is in range or not, and see the battery health status.

RF Function Check

Exit the MMI test by pressing the back key and select RF Function Check.
This item is only for make sure the RF function is work or not, it is not the performance test.



2G

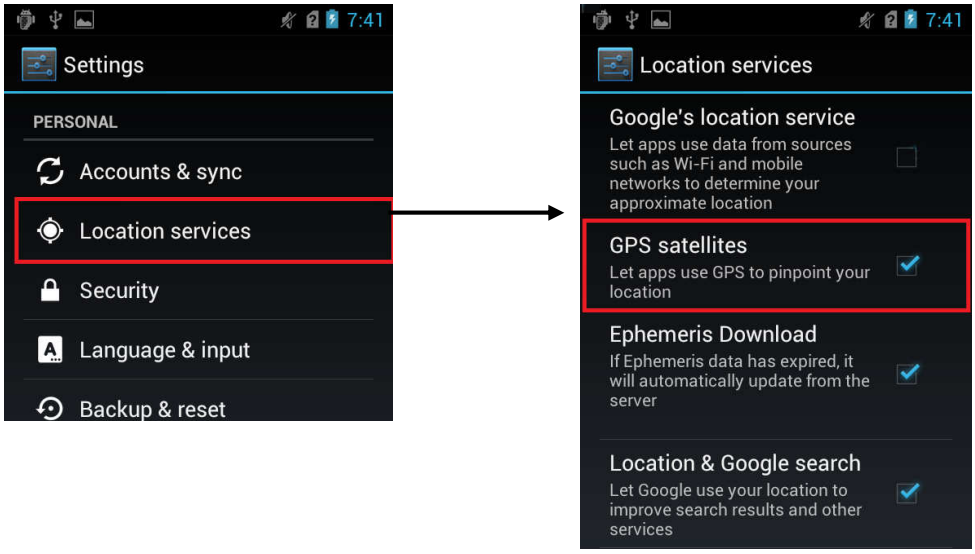
1. Press 2G
2. Wait for few seconds to let device detect the signal
3. The device will shown the RSSI value
4. To see if the RSSI value is in the range of ±10 of the golden sample

3G

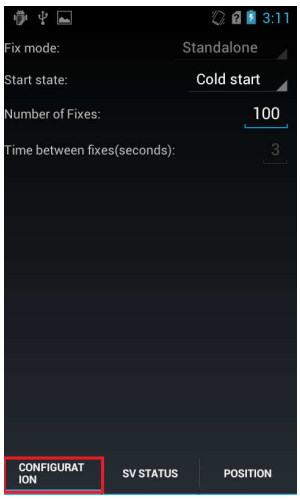
1. Press 3G
2. Wait for few seconds to let device detect the signal
3. The device will shown the RSCP value
4. To see if the RSCP value is in the range of ±10 of the golden sample

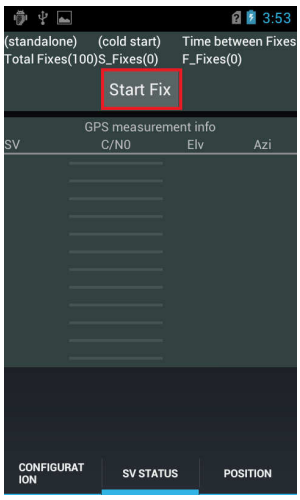
GPS

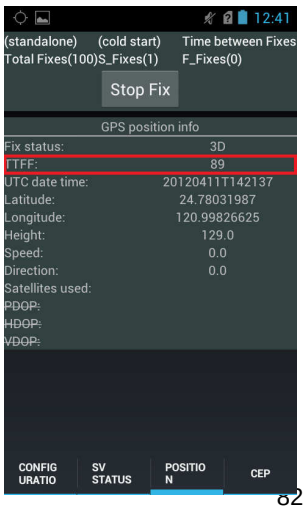
Before start, please make sure" Settings\Location services\GPS satellites" be ticked



1. After finish setting the GPS satellites under OS setting, please enter *#*#303#*#* Service Center test item and press GPS test under RF function check.
2. Select "CONFIGURATION" tab located at bottom of the screen.
3. User can select
   (1) Start State: Cold start/Warm start/Hot start (Default state is Cold start)
   (2) Number of Fixes (Default value is 100)
4. Select "SV STATUS" tab to start fix. Press "Start Fix" button to start GPS fix.
   (1) Please wait for fix. During the fix processing, the GPS satellite status will be updated in SV STATUS tab.
   (2) User can press "Stop Fix" button to stop fix
5. Press "POSITION" tab to see the TTFF value after the GPS has finish fix.
   (1) Check TTFF value (check the fix time is reasonable or not)
   (2) TTFF in open sky
   Cold Start ≦ 50 seconds
   Warm Start ≦40 seconds
   Hot Start ≦ 7 seconds
   *The time for TTFF is for reference only.

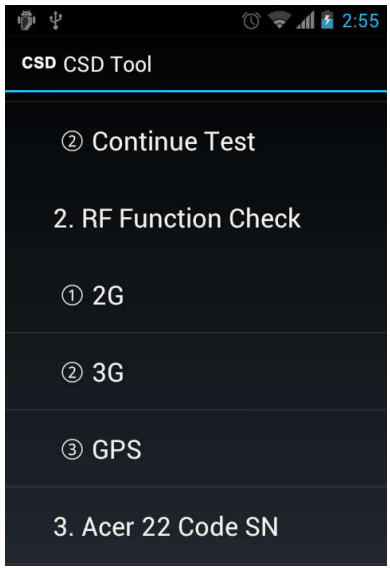




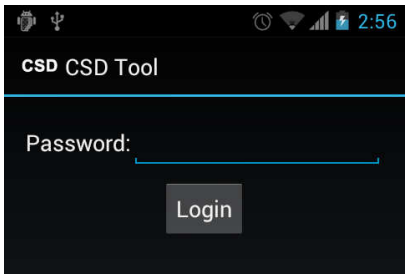


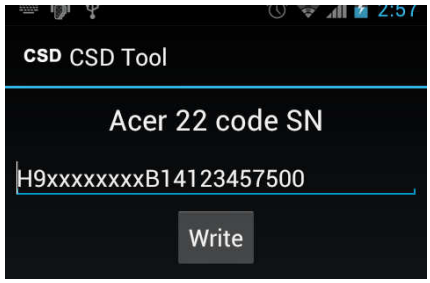
Acer 22 Code S/N

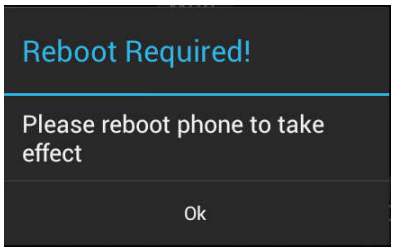
You can change Acer 22 code SN if needed.



1. Login with password ***#2237#**
2. Type 22 digital
3. Press “Write”
4. Please reboot the device after writing the Acer 22 code to get effect.







Data Clean

Remember to clean all user's data before shipping to new customer.

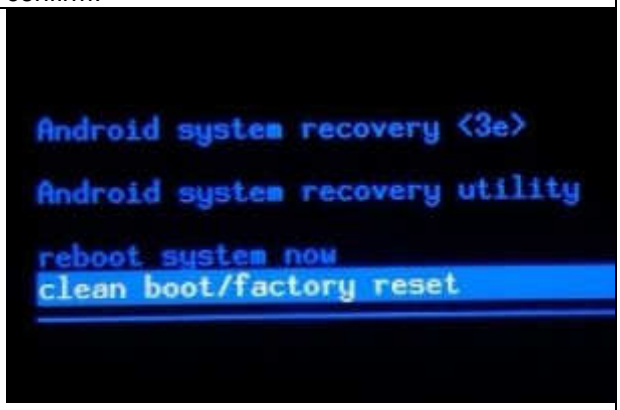
Item	Des.	Memo
Hot Key Reset (Factory Reset)	Press following keys at the same time: **VolumeUp** + **VolumeDown** + **Power Key** till the device has vibrated.	Turn OFF the device before press the Hot Key
SD Card D/L	Use SD Card D/L to erase all users' data.	Please refer to **Software Upgrades** Chapter in this Service Guide
Re-Download	Connect the C7 with USB cable and PC, and do the Download process through the EUUs tools.	Please refer to **Software Upgrades** Chapter in this Service Guide

Hot Key Reset

1. Turn OFF the device.
2. Press following keys at the same time: **VolumeUp** + **VolumeDown** + **Power Key** till the device has vibrated.

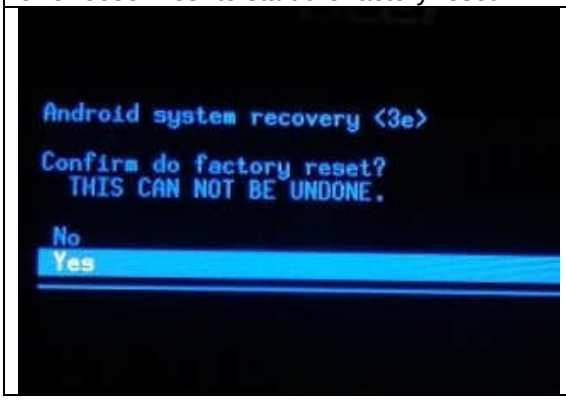
3. Device will enter Android EM Mode

4. Slide down to "clean boot/factory reset" by press the volume key, and press the power key to confirm.

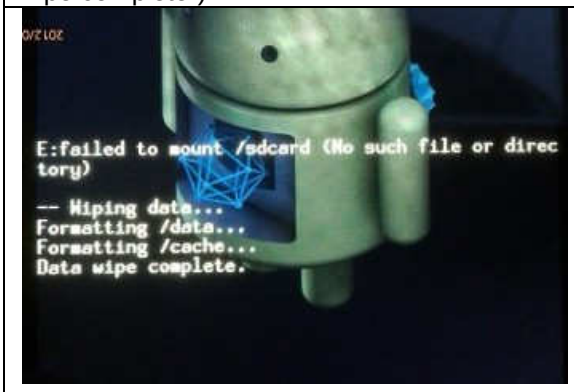
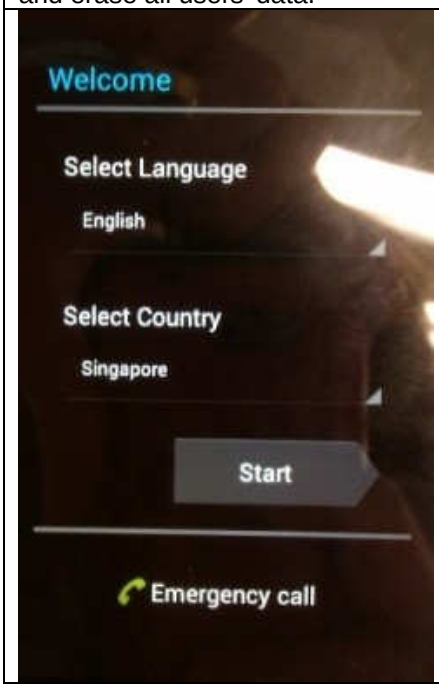


- Press volume up side key for slide up
- Press volume down side key for slide down
- Press power key to confirm

5. Choose "Yes" to start the factory reset.



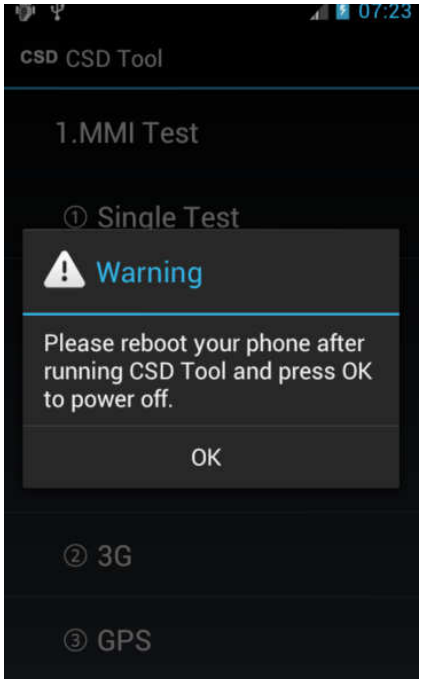
6. Processing….

7. There will be the message to tell you when the factory reset process is complete. (“date wipe complete”)	8. Select “reboot system now”.
	
9. After reboot the system, you will see as follow: that means you have finish data clean and erase all users’ data.	
	

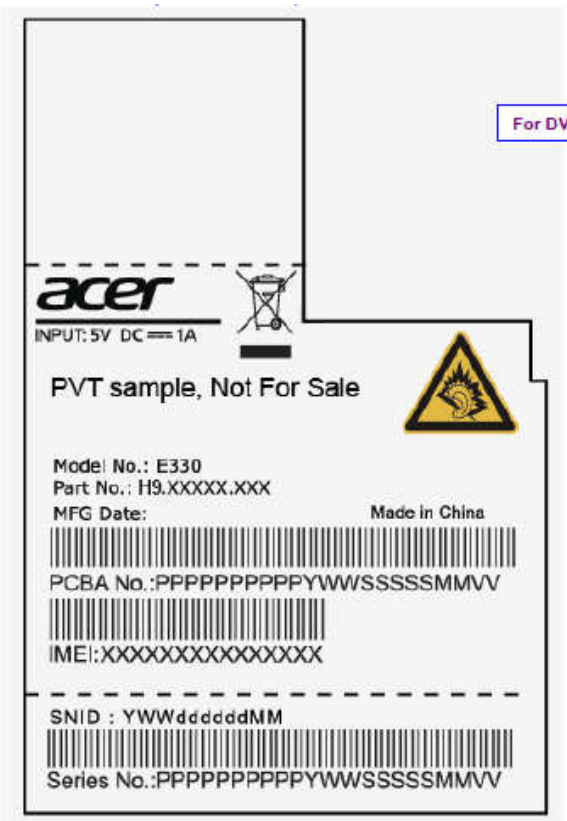
Exit the Test Program

1. Press “go back” icon located in the front bezel to exit the Service Center EM mode.
2. There will be a dialog pop up to remind you to reboot the device
3. Press OK to power off.

NOTE: *Please always remember to reboot the phone before given back to end user.*



Serial Number Definition



Remark:

Factory code (MM)	75	
Version (VV)	Qisda	Ferrari
E1	EVT1	EVT
D1	EVT2	DVT1
D2	EVT3	DVT2
P1, 2, ...	DVT	PVT
A1	PVT	PPR & MP

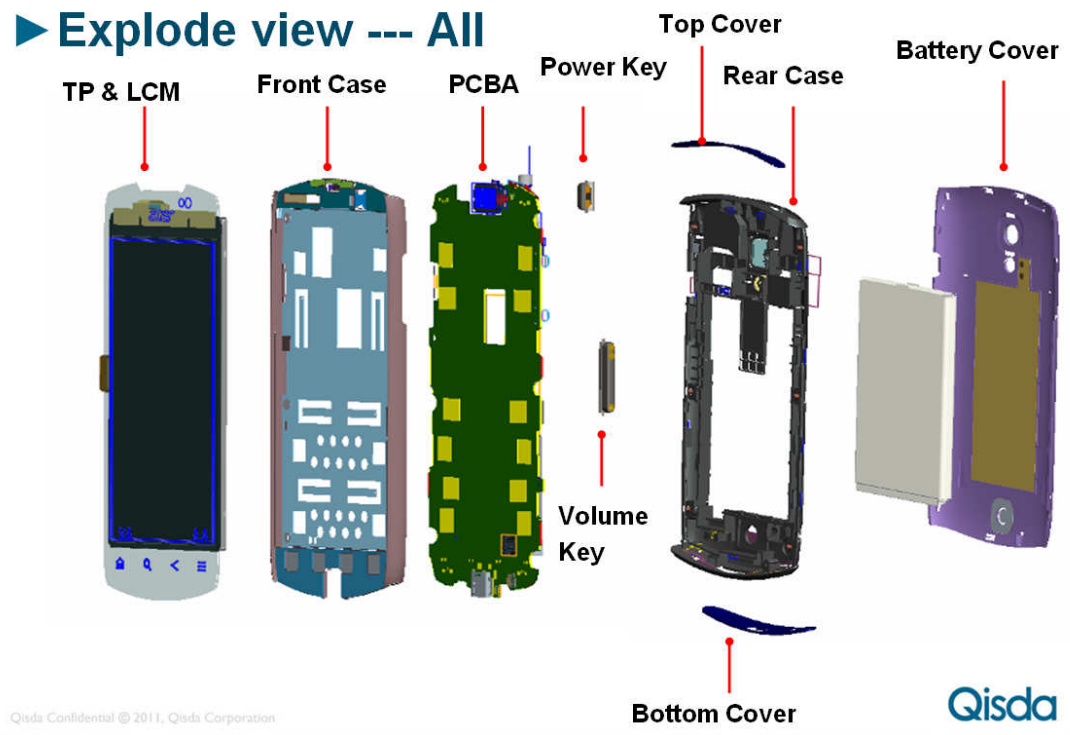
Content rule:

Item	Kind	Type	Purpose
1	Font	Arial	All label contents
2	Barcode	Code 128	All barcodes（unless UPC/EAN/Pallet label code）

CODE	DESCRIPTION	INFORMATION SOURCE
1	Model No.	E330
2	ACER 22_Code_SN /barcode	PPPPPPPPPPYWWSSSSSMMVV PPPPPPPPPP: ACER PN YWW: 3 numeric of Year & Week code SSSSS: **5** unique hexadecimal codes, by manufacturer/factory base, start form **00001** and reset every week. Hexadecimal numeral system uses **16** digits, they are **0~9**, **A**, **B**, **C**, **D**, **E** and **F**. First digit of **SSSSS** can not be **F**, so the maximum value of **SSSSS** is Hex (**EFFFF**) = **98303** MM: manufacture code **(Please see remark)** VV: Eng. Version code **(Please see remark)**
3	ACER SNID	YWWddddddMM YWW: 3 numeric of Year & Week code dddddd : 6 unique decimal number transfer from SSSSS of Acer 22_Code_SN. Transfer rule for S_1 S_2 S_3 S_4 S_5: The sequence no. in decimal dddddd = $S_1 * 16^4 + S_2 * 16^3 + S_3 * 16^2 + S_4 * 16^1 + S_5$ Ex, If Acer FG SN (SSSSS) = 001FD, SNID (dddddd)= 1*16*16+15*16+13=000509. (0,1,2,3...9,A,B,C.....) MM : manufacture code (same as above MM)
4	IMEI/barcode	TTTTTTFFXXXXXXX TAC(6) + FAC(2) + S/N (6): serial No.(000001~999999) + SP(1)
	"000001-010000" only for C7 engineering sample (Ferrari EVT1-PVT). "010001-999999" specify for C7 MP goods, including Ferrari PPR samples.	

FRU (Field Replaceable Unit) List

C7 Smartphone Exploded Diagram

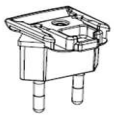
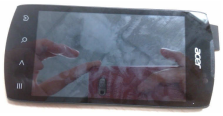


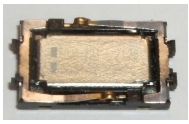
Item	Part Number	Description	Qty.
1	CS.5J1PD.TPT (Black) CS.5J1PD.TPW (White) CS.5J1PD.TPP (Pink)	ASSY TOUCH PANEL (TPLCM + FRONT CASE)	1
2	CS.5J1PD.MB1	ASSY MAINBOARD	1
3	4B.1PD02.002	KEY POWER GCHIB1A	1
4	4B.1PD03.004	KEY VOLUME GCHIB1A	1
5	CS.5J1PD.REA	ASSY REAR CASE POWER FPC C7	1
6	3J.1PD04.002	COVER TOP GCHIB1A	1
7	3J.1PD05.002	COVER BOTTOM GCHIB1A	1
8	TY.2C430.00B	BATTERY UF424261F 1300MAH	1
9	CS.5J1PD.BCT (Black) CS.5J1PD.BCW (White) CS.5J1PD.BCP (Pink)	ASSY BATTERY COVER	1

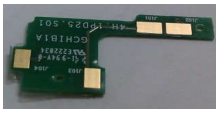
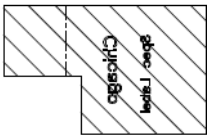
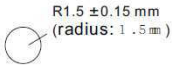
*** Part Number for reference only, for latest P/N please contact us for more information**

M310 Smartphone Spare Parts List

*** Part Number for reference only, for latest P/N please contact us for more information**

Des.	Picture	Qisda PN
CHARGER PSAI05R-050QCH-AU-R		TY.2E430.005
PLUG RPA ACE-R US PLUG 2PIN (US)		TY.2B430.00D
PLUG PES01296-V RPE-N-R (EU)		TY.2B430.00H
HEADSET KJAH4028AENCB D		TY.2C430.00F
BATTERY UF424261F 1300MAH		TY.2C430.00B
CABLE MICRO-USB-B 1M GLEOS1A		5K.16R01.021
#MODULE CAMERA CBAB519		5F.181K4.001
ASSY MB C7 (W/O DEVICE LABEL)		CS.5J1PD.MB1
ASSY REAR CASE POWER FPC C7		CS.5J1PD.REA
ASSY PANEL C7 TITANIUM		CS.5J1PD.TPT

ASSY PANEL C7 WHITE		CS.5J1PD.TPW
ASSY PANEL C7 PINK		CS.5J1PD.TPP
ASSY BATTERY COVER TITANIUM		CS.5J1PD.BCT
ASSY BATTERY COVER WHITE		CS.5J1PD.BCW
ASSY BATTERY COVER PINK		CS.5J1PD.BCP
RECEIVER RA 2403 260 00031		2C.45017.A11
SPK 8OHM 2403 260 00001		2C.40290.052
JACK AUDIOD3.5 8192-3B05-SF71		2B.1C101.021
VIBRATOR L5.5-V7JB-TW		2C.46051.001
COVER TOP GCHIB1A		3J.1PD04.002
COVER BOTTOM GCHIB1A		3J.1PD05.002
KEY VOLUME GCHIB1A		4B.1PD03.004
KEY POWER GCHIB1A		4B.1PD02.002

LENS DSC GCHIB1A		4B.1PD04.002
PCB RECEIVER/B V3 2L GCHIB1A		4H.1PD25.A01
PCB LED/B V4 2L GCHIB1A		5E.1PD28.001
RUBBRT P SENSOR GCHIB1A		4G.1PD01.002
LABEL DEVICE_EU GCHIB1A		4E.1K613.012
LABEL WATER DETECTION 6 SIDED		4E.0H101.002
LABEL WARRANTY SEAL V.2 56F53		4E.G8702.002
SCRW T5M1.6*2.6L(3.2/.6)BZN-NY		8F.00T64.2R6

Online Support Information

This section describes online technical support services available to help you repair your Acer device.

If you are a distributor, dealer, ASP or TPM, please refer your technical queries to your local Acer branch office. Acer Branch Offices and Regional Business Units may access our website. However some information sources will require a user i.d. and password. These can be obtained directly from Acer CSD Taiwan.

Acer's Website offers you convenient and valuable support resources whenever you need them.
In the Technical Information section you can download information on all of Acer's products including:

- Service guides for all models
- User's manuals
- Training materials
- Software utilities
- Spare parts lists
- TABs (Technical Announcement Bulletin)

For these purposes, we have included an Acrobat File to facilitate the problem-free downloading of our technical material.

Also contained on this website are:

- Detailed information on Acer's International Traveler's Warranty (ITW)
- Returned material authorization procedures
- An overview of all the support services we offer, accompanied by a list of telephone, fax and email contacts for all your technical queries

We are always looking for ways to optimize and improve our services, so if you have any suggestions or comments, please do not hesitate to communicate these to us.