



HTC Corporation

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A05

Doc. Title

CLIO Service Manual

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CLIO

Service Manual



HTC Proprietary

Confidential Treatment Requested

Rev. A05

HTC Corp.

Engineering Mobility



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REVISION CONTROL TABLE

REV	DATE	CONTENTS	DEPT	REVISED	STAGE
AX01	2007/10/29	Fist Draft	PSE	Budiman_Cheng	CVT
AX02	2007/12/17	1. Change product features: remove antenna diversity, add "for US market and MR release only". 2. Add RF antenna spec. 3. Change Windows Vista installation procedure 4. Change assembling and disassembling pictures 5. Add list of diagnostic items 6. Add battery rundown test procedure.	PSE	Budiman_Cheng	PVT
AX03	2007/12/28	1. Add pictures of diagnostic items. 2. Add M/B leakage current test procedure.	PSE	Budiman_Cheng	PVT
A01	2008/01/04	Add more pictures of diagnostic items.	PSE	Budiman_Cheng	PVT
A02	2008/01/22	1. Add refurbishment info in SPL photos 2. Change CPU name, add Origami 2.0 on product feature.	PSE	Budiman_Cheng	PVT
A03	2008/2/22	Revise battery life, remove charging time and Picture Password from Origami 2.0 on product feature	PSE	Budiman_Cheng	PVT
A04	2008/3/6	Remove fingerprint board from chapter 9.2	PSE	Budiman_Cheng	PVT
A05	2008/4/8	1. Add USB port, SD card slot and VGA port test items on chapter 4. 2. Update Vista installation procedure on chapter 3.3 3. Update RF antenna specification on chapter 10.	PSE	Budiman_Cheng	PVT



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1. Introduction

- This manual provides the technical information to support the service activities of this product.
- This document contains highly confidential information, so any or all of this document should not be revealed to any third party.
 - Chapter 1: Introduction-This Chapter is about Products features and basic Product function. After reading this chapter, you will know what feature the product has and basic hardware operation. Also you will know how to perform soft-rest and hard-rest in this chapter.
 - Chapter 2: Device Disassembling and Assembling Procedure- After reading this chapter, you will learn how to disassemble and assemble the product. Also, you will know what tools to use and the torque. Please follow the instruction to disassemble the unit to prevent from damaging the unit.
 - Chapter 3: ROM Re-flash Procedure- After reading this chapter, you will learn how to perform the ROM image re-flesh by using RUU and SD-Card. Also you can find the steps of enter the boot loader mode.
 - Chapter 4: DIAGNOSTIC PROGRAM- After reading this chapter, you will learn
 - How to use the diagnostic program to perform unit function test
 - How to test some functions in Windows Mobile mode (ex. WLAN, Bluetooth, and USB etc...)
 - Chapter 5: Power measurement test- After reading this chapter, you will learn how to use MB leakage test procedure and battery run-down test (Battery Capacity Measurement).
 - Chapter 6: Cosmetic Inspection Criteria- After reading this chapter you will learn the appearance quality inspection criteria, ex. Display, bezel, and housing etc...
 - Chapter 7: Generic Troubleshooting- After reading this chapter, you will learn how to do generic trouble-shooting.
 - Chapter 8: Generic Labeling Plan- In this chapter, you will find generic labels for reference, ex. Regulation label, and battery label etc...
 - Chapter 9: Generic Spare Part List and Photos- In this chapter, you will find Spar parts reference list and photos for repairing, including unit and Board level.
 - Chapter 10: RF Antenna Specification- Reference Spec for RF test.



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1.1 Product Features

Platform

- Mobile Computer with adjustable screen angle and slide-out keyboard
- Microsoft Windows Vista Business

Dimension

- 207 x 129 x 25mm
- Less than 800g with battery (780 +/-20g)

Processor/Chipset

- Qualcomm MSM 7200, 400Mhz
- Intel Processor A110, 800Mhz + Little River(945GMS) + ICH7U

Memory

- ROM: 128 MB for SnapVue
- RAM: 64 MB for SnapVue + 1G DDR2 microDIMM RAM for Vista
- HDD: 1.8" 40 GB / 60 GB with G sensor

LCD Module

- 7" 800x480
- 262K-color TFT LCD with LED backlight
- Sensitive Touch Screen for thumb and stylus input

UMTS/HSDPA/GSM/EDGE Data Function

- Internal antenna
- HSDPA/UMTS and GSM/GPRS/EDGE Bands
 - ◇ HSDPA/UMTS
 - ✓ EU: 850/1900/2100
 - ✓ US: 850/1900/2100
 - ✓ Japan: 800/2100
 - ◇ GSM / GPRS/EDGE
 - ✓ 850: 824-849, 869-894MHz
 - ✓ 900: 880-915, 925-960MHz
 - ✓ 1800: 1710-1785, 1805-1880MHz
 - ✓ 1900: 1850-1910, 1930-1990MHz
- HSDPA / UMTS standards
 - ◇ UMTS: 3GPP Release 99 compliant
 - ◇ HSDPA: 3GPP Release 5 compliant
 - ◇ UE category 5/6, QPSK, 3.6Mbps peak rate



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- ◇ Concurrent: DL up to 1.8Mbps and UL up to 384Kbps
- Equalizer [HSDPA channels only]
- Global roaming
- Auto band switching
- Handover and cell selection between GSM/EDGE and UMTS
- E-GPRS Function
 - ◇ EGPRS class B
 - ◇ Multi-slot standard class 10
 - ◇ MO/MT SMS over GPRS
 - ◇ PBCCH
- USIM/SIM
 - ◇ 1.8 / 3V of UICC
 - ◇ USIM Application at least according to 3GPP TS 31.102
 - ◇ PIN Security

Standalone GPS [for US market and MR release only]

- Internal GPS antenna
- Support both standalone & assisted modes
- Sensitivity : better than -150dBm for indoor & outdoor
- Support NMEA 0183 version 3.0 or above
- Dynamically allocated parallel channel GPS receiver Acquisition time
 - ◇ Hot start: 8 seconds, average TTFF (open sky & static condition)
 - ◇ Warm start: 60 seconds, average TTFF (open sky & static condition)
 - ◇ Cold start: 75 seconds, average TTFF (open sky & static condition)
- Update rate: once/1sec (default)
- GPS Accuracy
 - ◇ Position: < 15 meters, 95% typical
 - ◇ Velocity: 0.05 meter/sec steady state

Digital Camera

- Color CMOS VGA Camera for Video Conferencing

Finger Print Sensor

Keyboard/Button/Switch

- POWER / Hold button (Two Direction Siding Key)
 - ◇ Power Short Press: Power On/Off Vista from S3 or S4
 - ◇ Power Long Press: Force Vista off



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◇ Opposite key position for Hold function

- Left Mouse Key
- Right Mouse Key
- SnapVue Key
 - ◇ Short Press to turn on/off SnapVue
- Control Center Key
- Resolution Change Key (1024x600 / 800x480)
- microPad Mouse Pad
- QWERTY Keyboard

Notification

- 1st lens - one-color (amber) LED for new message and notification
- 2nd lens - one-color (green) LED for network status: Data Available & Data Connected
- 3rd lens – bi-color (green and blue) LED for WiFi and Bluetooth notification
- 4th lens – HDD
- 5th lens – one-color (green) LED for Capital Lock
- 6th lens – tri-color (green, amber and red) LED for Charging status & Low power indicator
- 7th lens – one color (green) LED for Power Status : Vista On & S3 status
- Notification with Sound

Audio

- Built-in Microphone
- Dual speakers

Connectivity & Interface

- Bluetooth
 - ◇ Compliant with v2.0 with EDR
 - ◇ Class 2 transmit power
 - ◇ Supported profiles:
 - ✓ GAP (Generic Access Profile)
 - ✓ SPP (Serial Port Profile)
 - ✓ SDP (Service Discovery Profile)
 - ✓ OPP (Object Push Profile)
 - ✓ DUN (Dial-up Networking Profile)
 - ✓ GOEP (Generic Object Exchange Profile)
 - ✓ ActiveSync (legacy application via SPP)
 - ✓ AVRCP (Audio/Video Remote control Profile)



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- ✓ HID (Human interface device profile)
- ✓ PAN (Personal Area Network)
- ◇ Co-exist with WiFi
- WiFi (manufacture option)
 - ◇ IEEE 802.11b/g compliant
 - ◇ Internal WLAN antenna
 - ◇ Data rate auto fallback for extended range
 - ◇ Security 802.11i and AES
 - ✓ WPA authentication – WEP, WPA, PSK, EAP-TLS, PEAP
 - ✓ Signaling interfaces between the terminal device and the servers: mutually authenticated and encrypted utilizing TLS (RFC 2246) with RC4 encryption with SGA1 used as the message integrity check
 - ◇ QoS
 - ✓ 802.11 WME QoS
 - ✓ 802.11e
- SDIO card slot with hotswap feature
- External Antenna (UMTS/GSM/) Connector
- 1.8 / 3 V USIM/SIM card slot
- 1 x USB 2.0 Host
- D-sub VGA port
- Power Jack
- 3.5 Ø stereo audio jack with microphone

Power

- Battery
 - ◇ Removable and chargeable Lithium ion polymer battery, 2700 mAh
 - ◇ RTC: min. two weeks supported by battery
- Battery life
 - ◇ Vista operating time: up to 2.8 hours
 - ◇ Push e-mail standby time: up to 191 hours
 - ◇ Standby time without push e-mail: up to 12 days
- AC adaptor
 - ◇ AC input: 90~265V, 47~63Hz
 - ◇ AC input current: 1.2Arms at 90Vac/60Hz
 - ◇ Output voltage: 12Vdc(typical)



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◇ Output current: 3Amax

Stylus

- Push/Push type in the main unit

Accessories

- AC Adapter
- Pouch for main unit
- Pouch for AC Adaptor & Extension kit
- Stereo wired headset with microphone
- CD (User manual and PIM Sync. Software)
- Stereo Bluetooth headset with microphone [optional]
- Mono Bluetooth headset with microphone [optional]
- Extension Kit (3 x USB + RJ45)

Windows Vista Business

- Internet Explorer
- Windows Media Player 11
- Games

SnapVue

- Messaging (Push E-mail & SMS)
- Calendar
- Contact
- Weather
- HTC Connection setup
- Settings

Microsoft Origami 2.0

- Origami Now
- Origami Central
- Touch Setting

Value Added Applications in Vista

- Control Center
- GPS Navigation SW [optional]
- System Utility
 - ◇ Power Management
 - ◇ Finger Print Sensor
 - ◇ HDD Shock Protection



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◇ VGA out setting

Regulatory

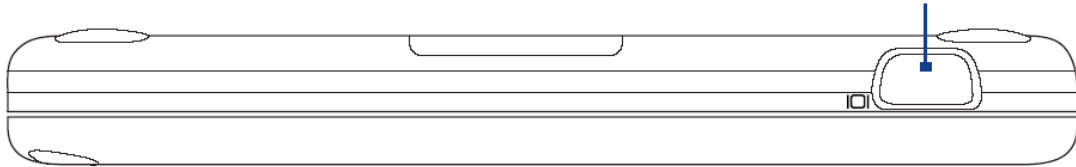
- GCF certification [Operator dependent]
- R&TTE: EMC / EMI, Safety SAR
- WiFi Certification
- BQB (Bluetooth Qualification Body) certification
- Windows Logo
- USB certification
- JRF (Japan Only)
- JPA (Japan Only)
- UAE (Middle East)
- CCC (Russia)
- RCT (Russia)

1.2 Product overview

Top panel

External VGA Port

Connect an external monitor to this port. For more information, see "Using Device Features" in Chapter 3.

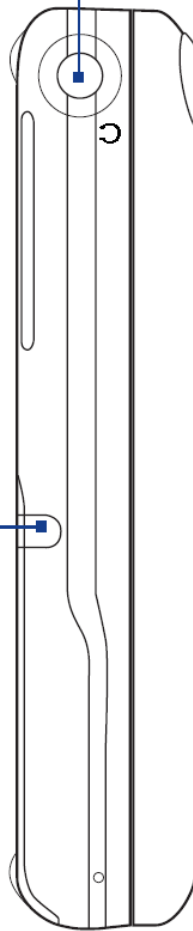


Left panel

Earpiece

Connect stereo headphones to this jack to listen to the device audio.

Stylus



Right panel

DC-In

Connect the AC adapter to this jack to power the device.

USB Port

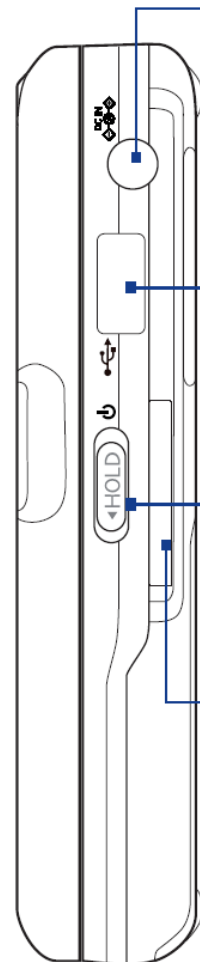
Connect to USB devices using this port.

Power Switch

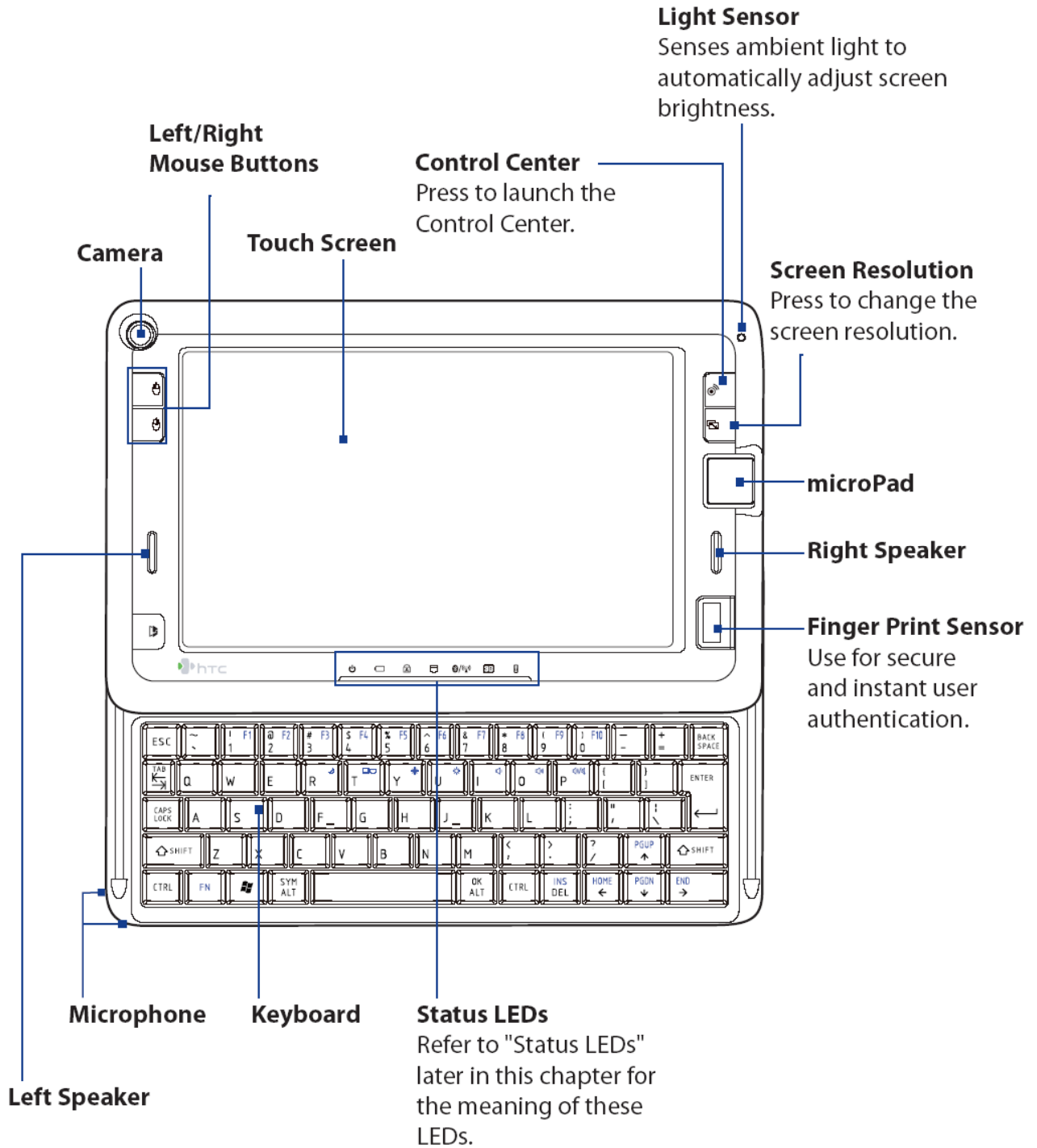
Slide and hold this switch to power on the device.

SD Card Slot

Insert an SD card into this slot for extra storage.



Front panel and keyboard





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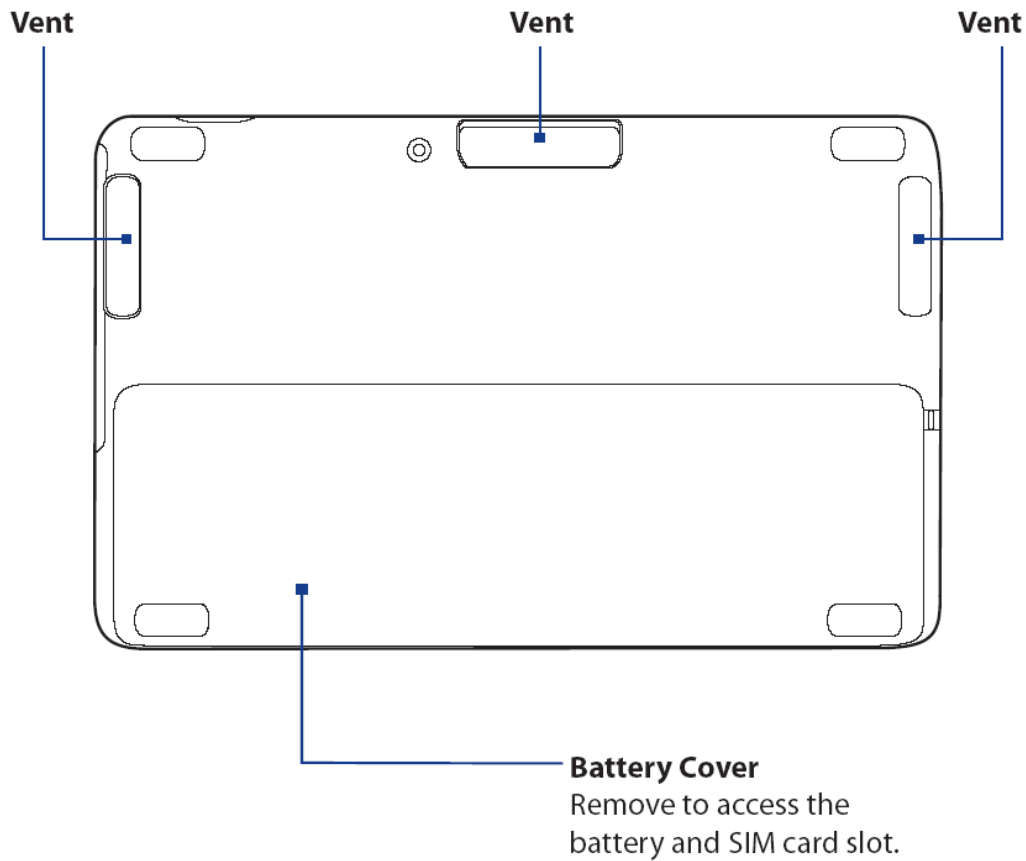
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Status LEDs

Icon	LED	Meaning
	Power	Lights green when AC power is connected. Flashes green when the device is in sleep mode.
	Charging	Lights amber when the battery is charging. Lights green when the battery is fully charged.
	CAPS Lock	Lights when the CAPS lock key is activated.
	HDD Activated	Flashes green when the HDD is being accessed.
	Bluetooth/WLAN	Shows a flashing Blue light when the Bluetooth system is powered up and ready to transmit Bluetooth radio signals, or a flashing Green light for Wi-Fi status. When both Bluetooth and Wi-Fi are enabled, their lights flash alternately.
	3G Activated	Flashes green for GSM/GPRS/EDGE standby, message, and network status.
	Mail/SMS	Flashes amber when a new e-mail or SMS has arrived.

Bottom panel



Warning! Be careful not to obstruct the vents. The device may overheat and you may damage internal components.



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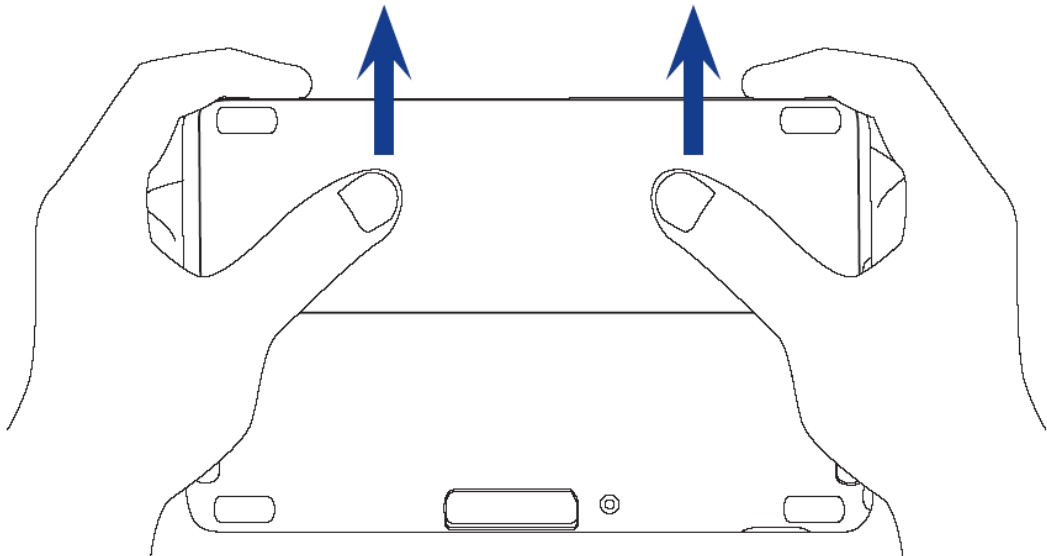
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Using Battery Power

Remove the battery pack cover

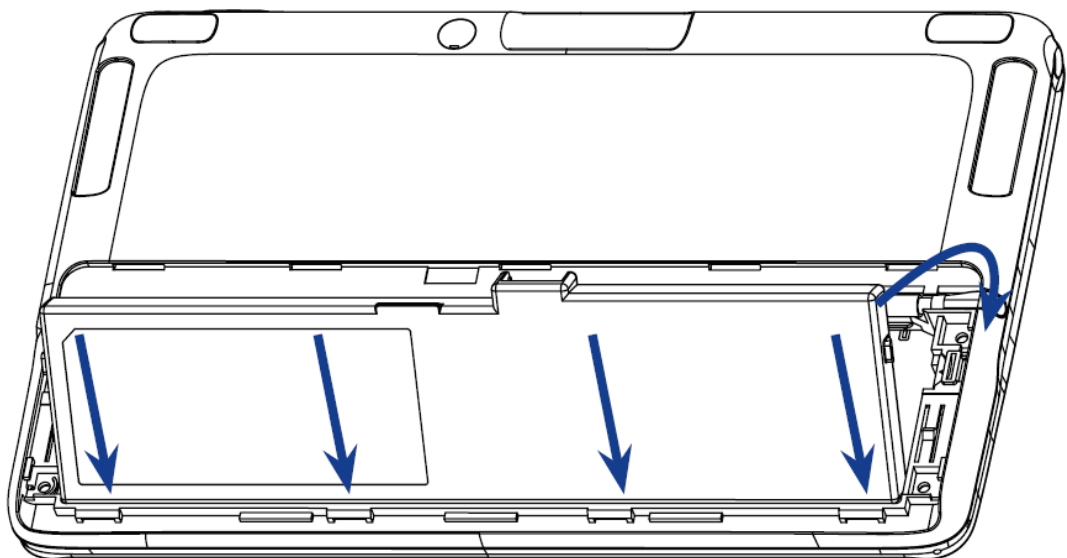
1. Flip the device over so that the battery pack faces away from you.
2. Press the battery pack cover in the direction of the arrows while holding the sliding keyboard in place, as shown.

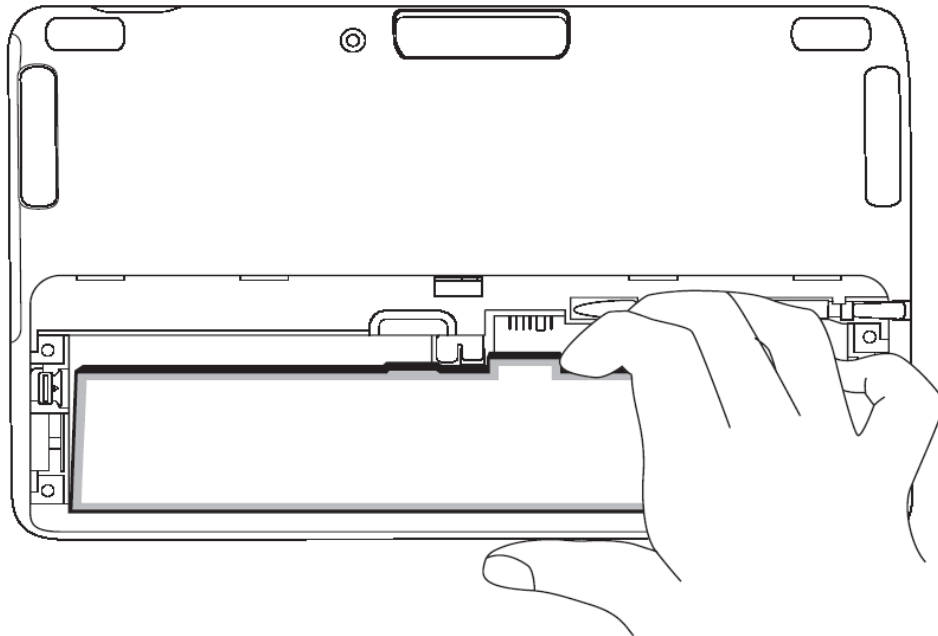


3. Remove the cover.

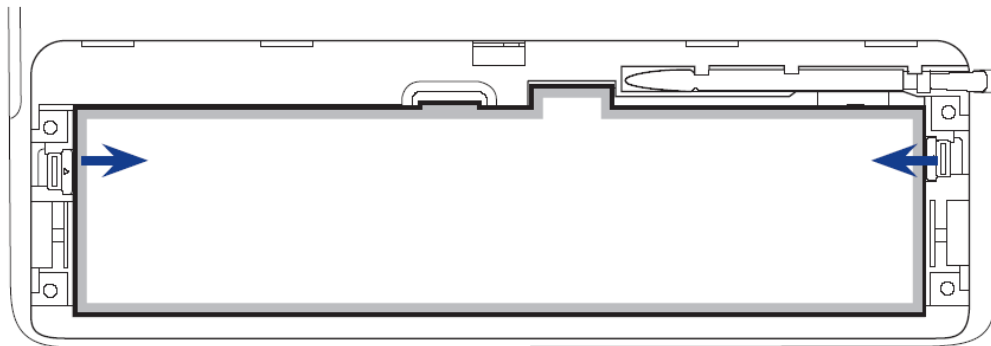
Insert the battery pack

1. Insert the battery pack with the tabs as shown, and place the battery pack in the compartment.



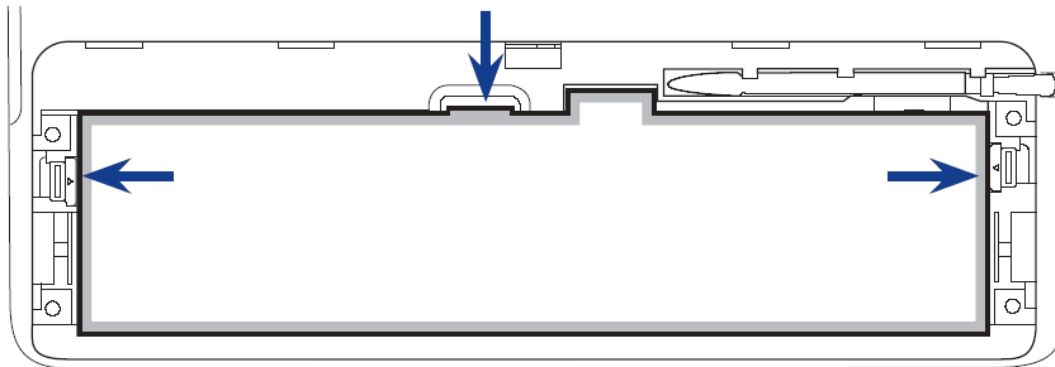


2. Slide the battery latches in.



Remove the battery pack

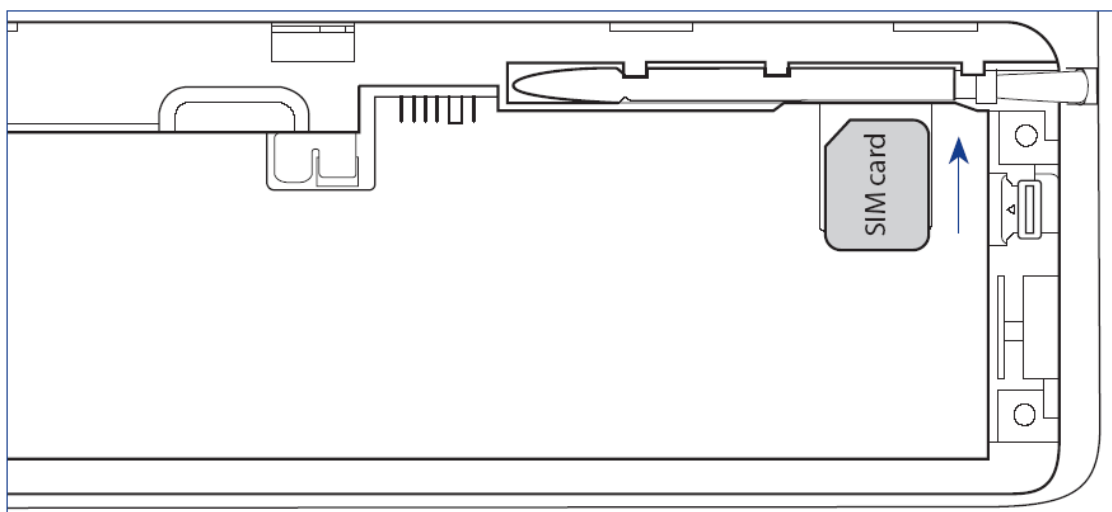
To remove the battery pack, slide the battery latches out, and lift the battery from the compartment as shown.



- Install the SIM card

Warning! Always turn off your device before installing or removing the SIM card.

1. Remove the battery cover and battery. Refer to "Using Battery Power" earlier in this chapter.
2. Slide the SIM card into the SIM card slot in the direction indicated by the icon inside the battery case. The SIM's gold contacts face down and the cut-off corner faces toward the inside of the slot.

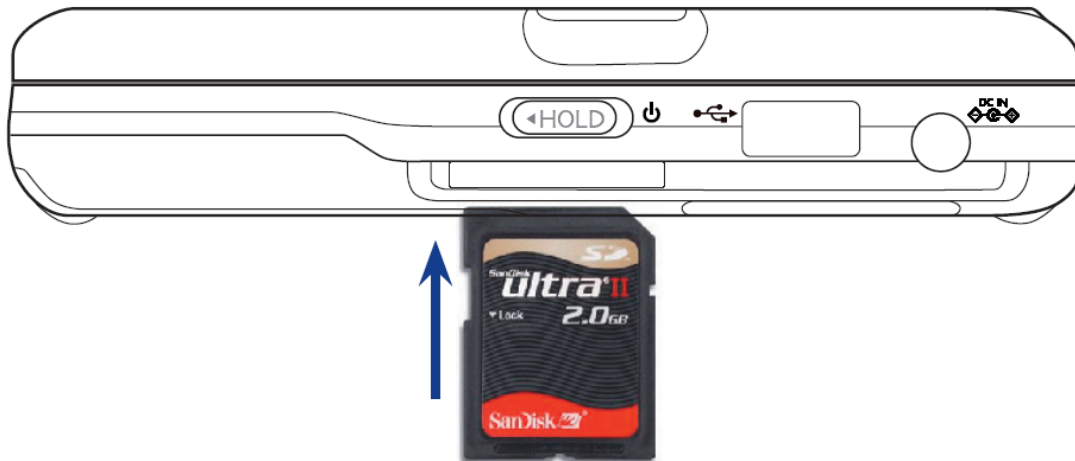


Note To remove the SIM card, press the card to pop it out of the slot.

- **Install the SD card**

The storage card slot is located at the right panel of your device.

Insert the SD card with the contacts facing down and the cut off corner facing the rear of the device.



Note To remove storage card, press the card to pop it out of the slot.

- **Charge the battery**

Use the AC adapter to charge the battery pack fully before using it for the first time. When charging, the charge LED flashes amber. When the battery is fully charged, the LED is green.

Refer to "Using AC Power" later in this chapter for information on connecting the AC adapter.

New batteries are shipped partially charged. Before you start using your device, it is recommended that you charge the battery. Some batteries perform best after several full charge/discharge cycles.

Note Only the AC adapter provided with your device should be used to charge the device.

Warning!

- Do not remove the battery from the device while you are charging it using the AC adapter.
- As a safety precaution, the battery stops charging when it overheats.

Using AC Power

The AC adapter that comes with your device is a universal adapter that converts AC power to DC power. You can connect the power adapter to any 100V-120V or 220V-240V outlet. The adapter automatically detects the input voltage.

Note Different countries may require a plug adapter to accommodate the AC adapter power plug.

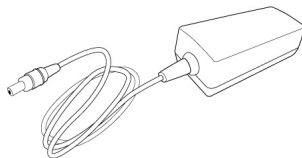
Connect the AC adapter

1. Connect the power cord to the AC-DC converter.
2. Connect the power cord to an AC outlet.
3. Connect the power jack to the device.

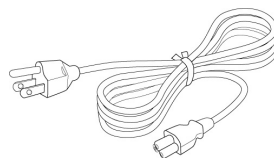
If a battery is installed, the charging LED flashes amber if the battery needs charging, or lights green if the battery is fully charged.

● Accessories

AC adapter



Power cord



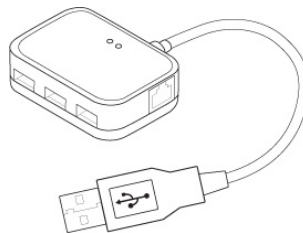
Battery



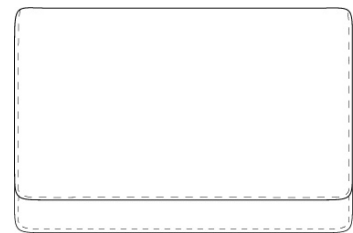
Headset



Extension kit (optional)



Carrying case

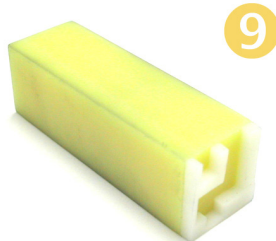


2. Device Disassembling and Assembling Procedure

2.1 Disassembling procedure



1. PHILLIPS SCREW-DRIVER 1x50
2. PHILLIPS SCREW-DRIVER 00x50
3. TORX SCREW-DRIVER T6x50
4. TORX SCREW-DRIVER T5x50
5. FLAT PLASTIC STICK
6. CLEANING CLOTH
7. PLASTIC TWEEZERS
8. ESD WRIST STRAP.



9. MICRO-PAD ASSEMBLY TOOL
10. REFRIGERANT (ELECTROLUBE FREEZER)



REMOVE THE STYLUS FROM ITS SLOT AT THE BOTTOM OF THE DEVICE.

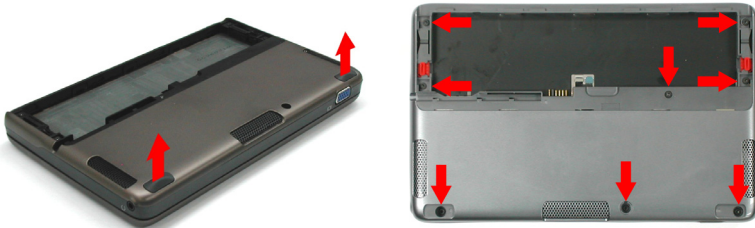


PRESS AND SLIDE THE BATTERY COVER IN THE DIRECTION OF THE ARROWS TO REMOVE THE BATTERY COVER AS SHOWN.

SLIDE THE BATTERY LATCHES OUT.



REMOVE THE BATTERY PACK BY LIFTING THE BATTERY FROM THE BATTERY COMPARTMENT.

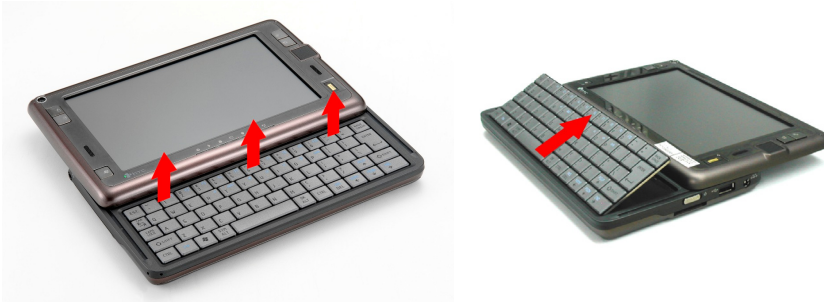


REMOVE THE RUBBER FEET.

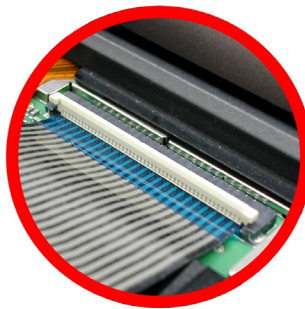
LOOSEN EIGHT SCREWS FROM THE KEYBOARD BOTTOM COVER.



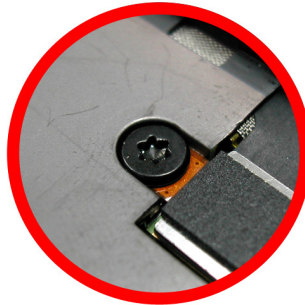
EXTEND THE KEYBOARD BY SLIDING THE DISPLAY UP.



DISASSEMBLE THE KEYBOARD AS SHOWN.



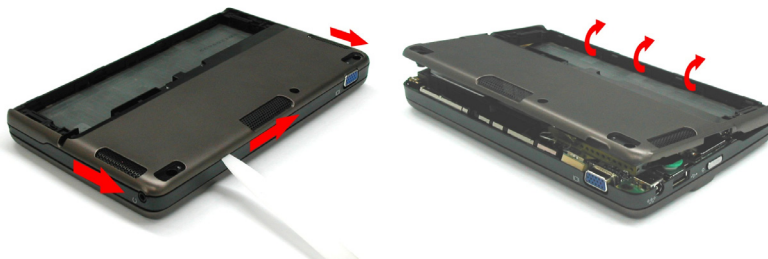
DISCONNECT THE KEYBOARD FPC.



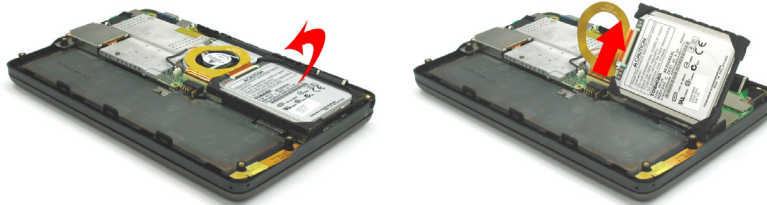
LOOSEN THE SCREW.



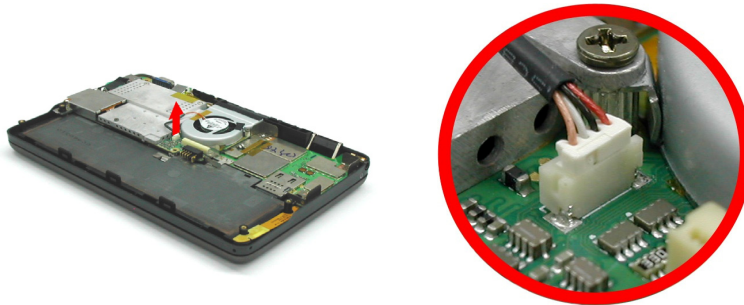
DISCONNECT THE MAIN FPC FROM
MAIN BOARD.



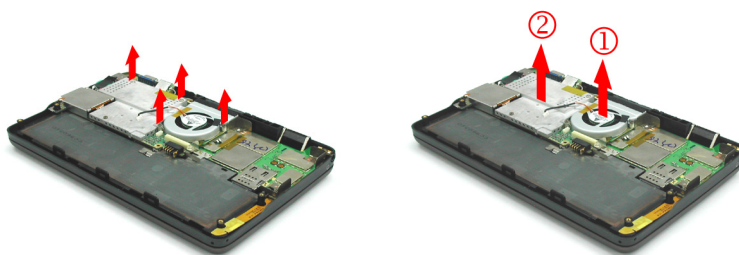
DISASSEMBLE THE KEYBOARD
HOUSING AS SHOWN.



DISCONNECT THE HDD FPC FROM THE MAIN BOARD

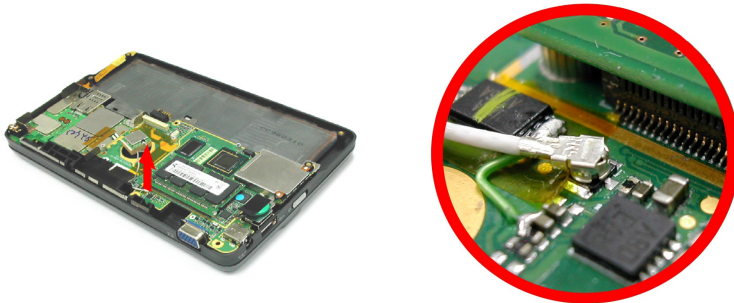


DISCONNECT THE FAN CONNECTOR.

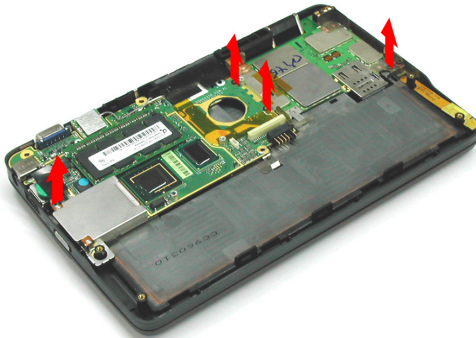


LOOSEN FOUR SCREWS FROM THE FAN AND THE HEAT SINK.

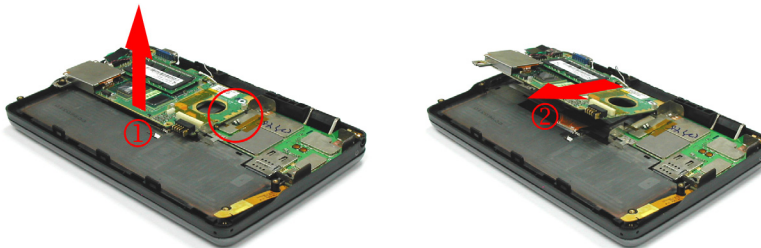
TAKE OUT FAN AND THE HEATSINK.



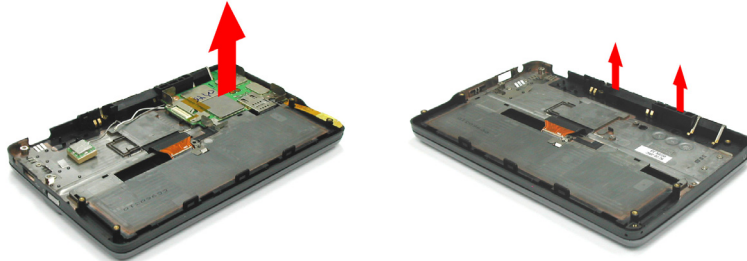
DISCONNECT THE ANTENNA CONNECTOR FROM THE MAIN BOARD.



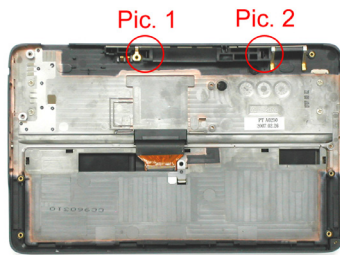
LOOSEN FOUR SCREWS FROM THE MAIN BOARD AND THE BASEBAND BOARD



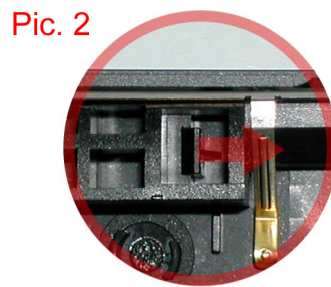
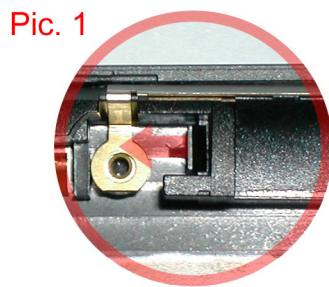
DISCONNECT THE BOARD TO BOARD CONNECTOR BY LIFTING UP THE MAIN BOARD AND THEN TAKE OUT THE MAIN BOARD AS SHOWN.

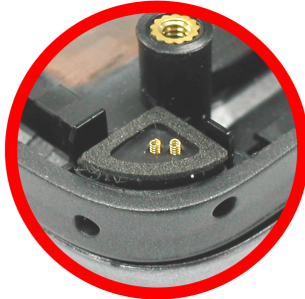
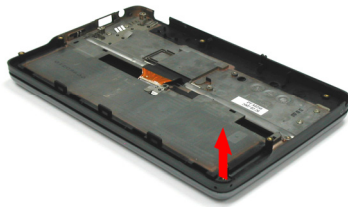


TAKE OUT THE BASEBAND BOARD.
DISASSEMBLE THE ANTENNA.

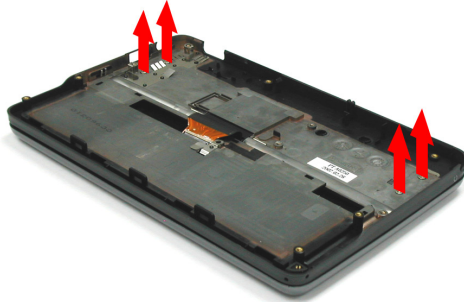


NOTE: RELEASE THE TWO HOOKS BEFORE DISASSEMBLE THE ANTENNA

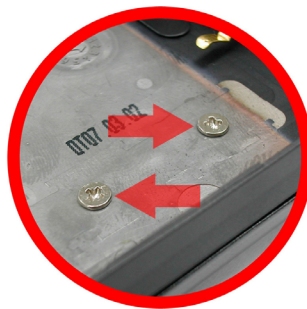


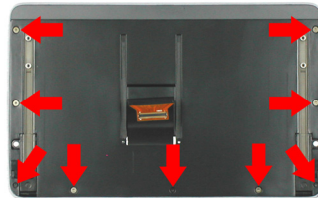
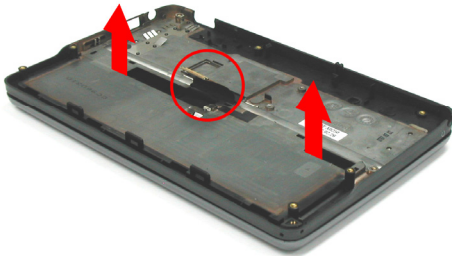


TAKE OUT THE MICROPHONE.



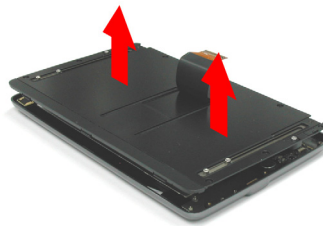
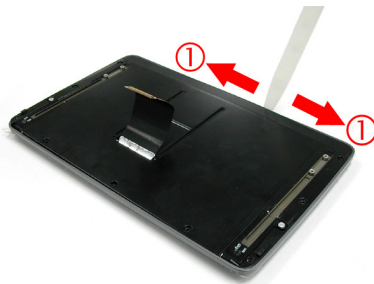
LOOSEN FOUR SCREWS FROM THE KEYBOARD BEZEL.



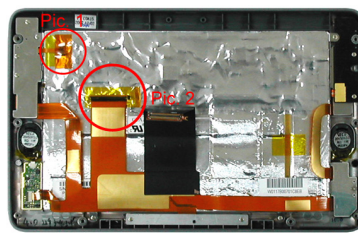
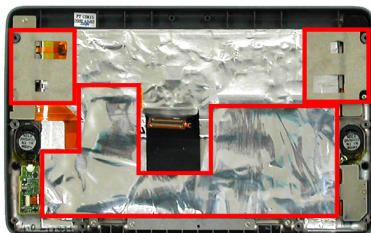


DISASSEMBLE THE KEYBOARD BEZEL.

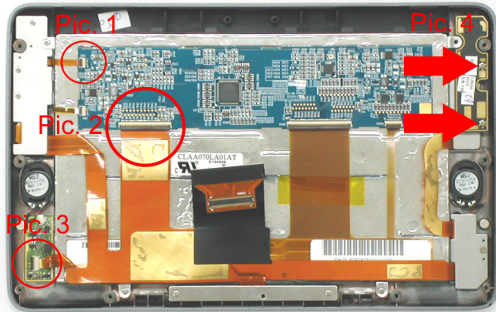
LOOSEN NINE SCREWS FROM THE LCD HOUSING.



USE THE FLAT PLASTIC STICK TO SEPARATE THE LCD BEZEL AND THE HOUSING AS SHOWN.



REMOVE TWO EMI GASKETS, AN ALUMINIUM FOIL AND TWO KAPTON TAPE AT THE LOCATION INDICATED.

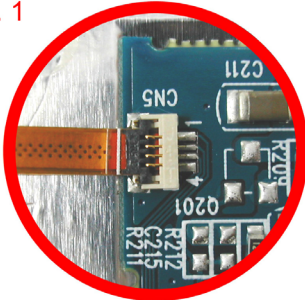


DISCONNECT JOGBAR FPC FROM THE LCM (PIC. 1)

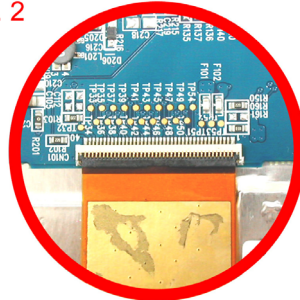
DISCONNECT THE MAIN FPC FROM THE LCM AND THE FINGER PRINT BOARD (PIC. 2 AND PIC. 3)

LOOSEN TWO SCREWS FROM CAMERA MODULE (PIC. 4)

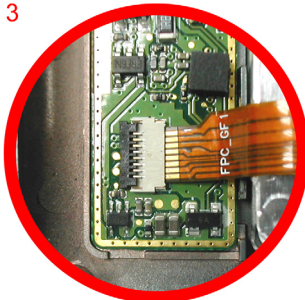
Pic. 1



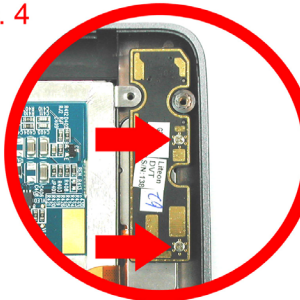
Pic. 2

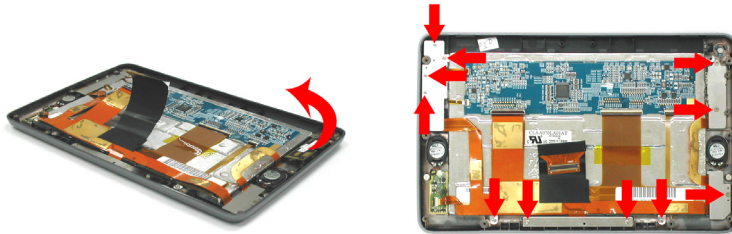


Pic. 3



Pic. 4





LIFT UP THE CAMERA MODULE AS SHOWN.

LOOSEN ELEVEN SCREWS AS SHOWN.



LIFT UP THE SNAPVUE FPC.

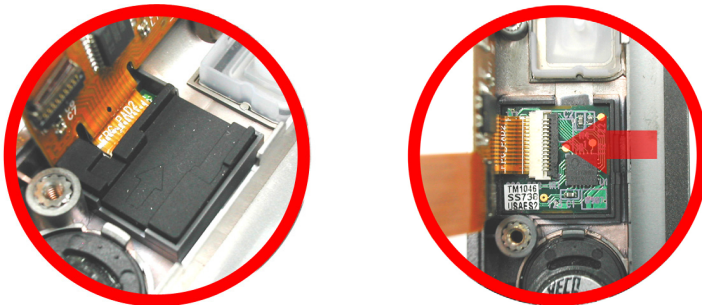
DISCONNECT THE SPEAKER CONNECTOR.



TURN OVER THE FPC AND TAKE OUT THE LCM.

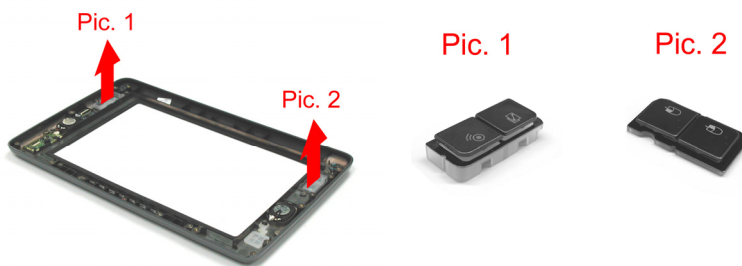


LIFT UP THE JOGBAR FPC.

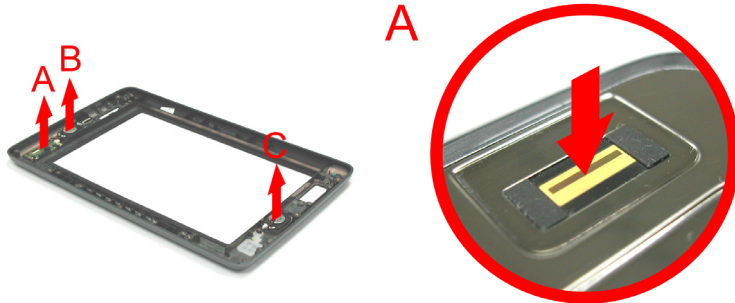


TAKE OUT THE MICRO-PAD RUBBER.

DISCONNECT THE FPC FROM THE MICRO PAD.



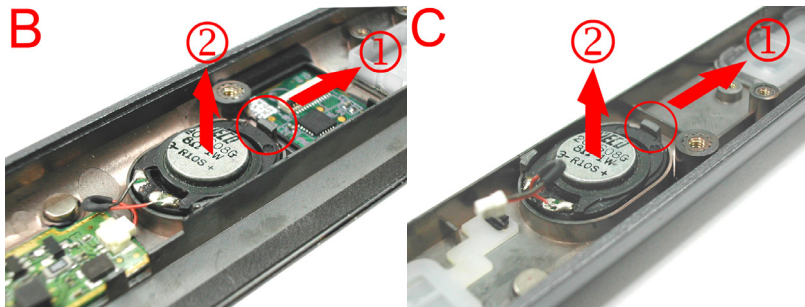
TAKE OUT APPLICATION KEYPAD AND MOUSE BUTTON KEYPAD.



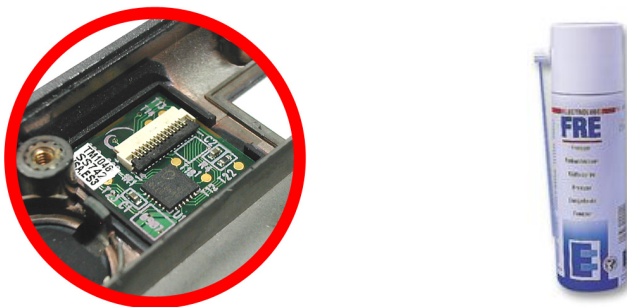
USE YOUR FINGER TIP TO PUSH IT FROM THE SENSOR SIDE (PIC. A)

NOTE: DO NOT USE HARD AND SHARP MATERIAL TO PUSH THE FINGER PRINT SENSOR.

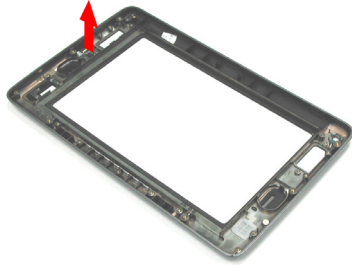
TAKE OUT TWO SPEAKERS (PIC. B & C)



NOTE: RELEASE THE HOOK AS SHOWN BEFORE TAKE OUT THE SPEAKERS



SPRAY THE MICRO-PAD WITH THE REFRIGERANT FOR ABOUT 10 SECONDS.



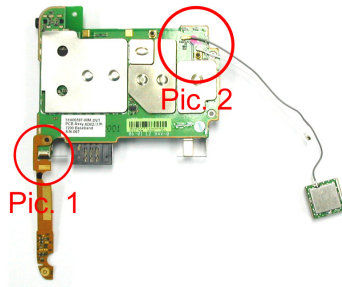
PLEASE USE FLAT PLASTIC STICK TO TAKE OUT THE MICRO-PAD.

NOTE: CLEAN THE MICRO-PAD SURFACE AND THEN REPLACE THE DOUBLE SIDED TAPE (P/N: [76H02435-00M](#)) IF YOU WANT TO RE-USE THE MICRO-PAD. DO NOT BEND THE MICRO-PAD PCB WHILE CLEANING THE SURFACE OR WHILE REMOVING THE MICRO-PAD.



RELEASE THE CONNECTOR TO DISCONNECT THE HDD FPC.

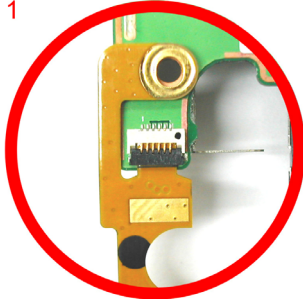
DISASSEMBLE THE HDD CUSHION AS SHOWN.



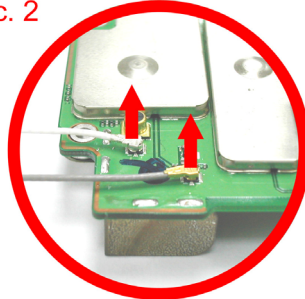
RELEASE THE CONNECTOR TO DISCONNECT THE MICROPHONE FPC (PIC. 1)

DISCONNECT THE ANTENNA WIRES FROM ATHE BASEBAND BOARD. (PIC. 2)

Pic. 1



Pic. 2

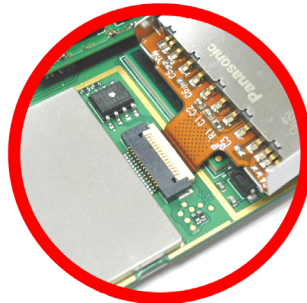


REMOVE THE MYLAR FROM THE BACKUP BATTERY.

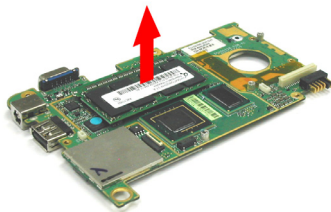
REMOVE AND DISCONNECT THE BACKUP BATTERY.



LIFT UP THE SDIO FPC BOARD.

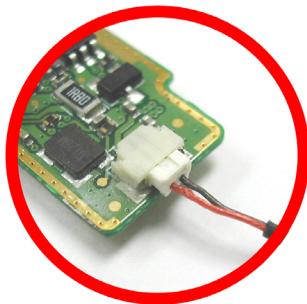
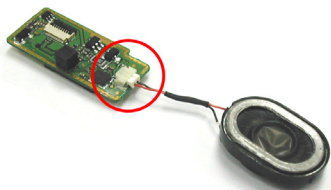


DISCONNECT THE SDIO FPC.

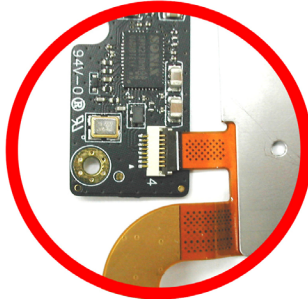


USE FLAT PLASTIC STICK TO UN-INSTALL THE MEMORY MODULE.

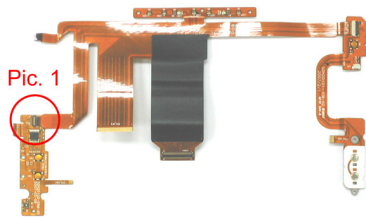
NOTE: DO NOT REMOVE THE MEMORY MODULE IF NOT NECESSARY. THE M/B PART NUMBER IS INCLUDING THE MEMORY MODULE..



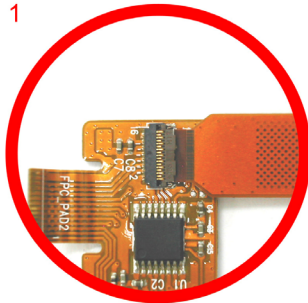
DISCONNECT THE SPEAKER FROM THE FINGER PRINT BOARD.



DISCONNECT THE CAMERA MODULE FROM THE FPC.



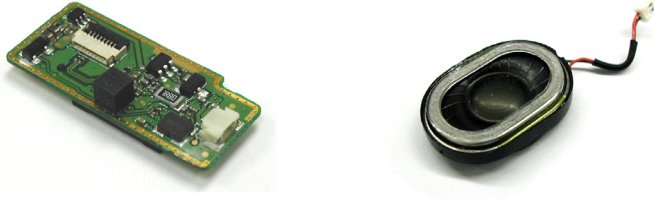
Pic. 1



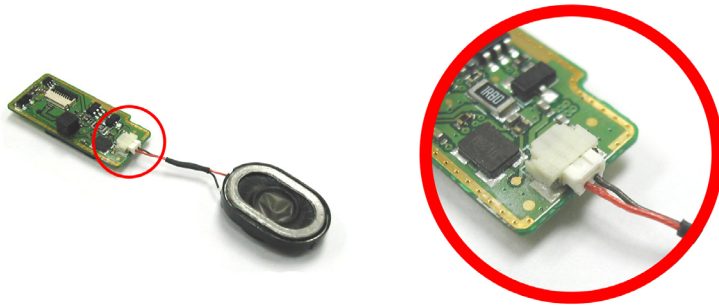
DISCONNECT JOGBAR FPC FROM MAIN FPC AS SHOWN.

The Disassemble process is done

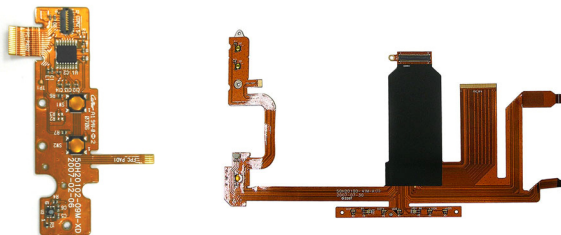
2.2 Assembling procedure



PREPARE A FINGER PRINT MODULE AND A SPEKAER.

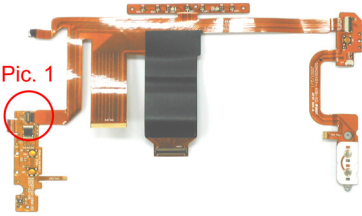


CONNECT THE SPEAKER TO THE FINGER PRINT MODULE.

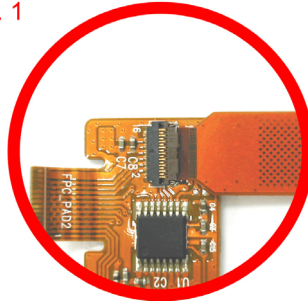


PREPARE A JOGBAR FPC AND MAIN FPC.

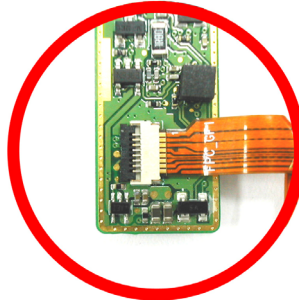
Pic. 1



Pic. 1



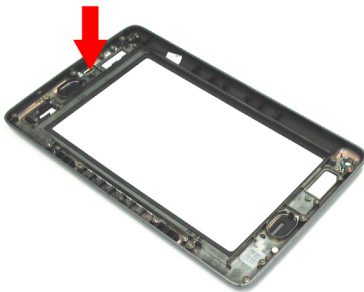
CONNECT JOGBAR FPC TO THE MAIN FPC AS SHOWN.



CONNECT THE FINGER PRINT BOARD TO THE MAIN FPC.

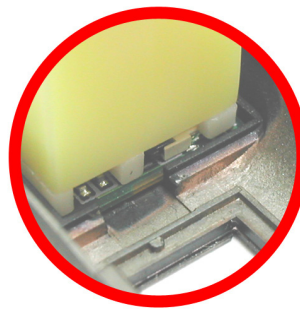
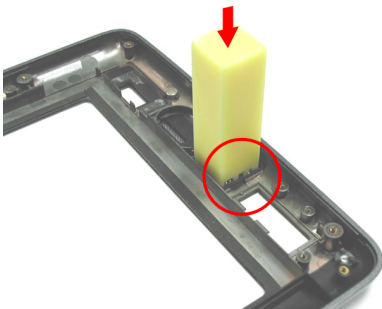


PREPARE A MICRO-PAD AND A DISPLAY BEZEL.

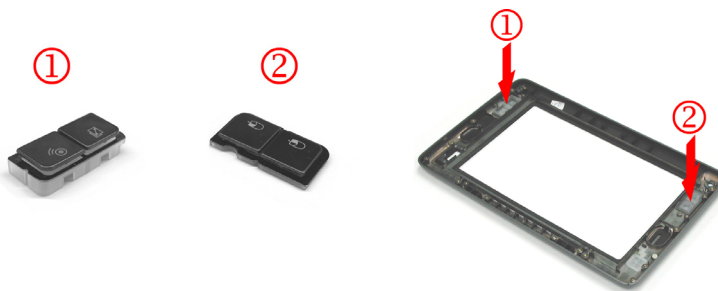


STICK THE MICRO-PAD.

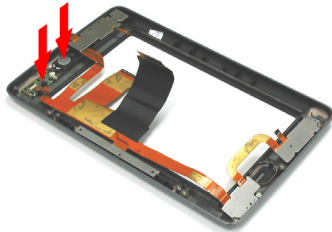
NOTE: PLEASE REMOVE THE DOUBLE SIDED TAPE PROTECTION BEFORE YOU STICK THE MICRO-PAD.



PLEASE USE MICRO-PAD TOOL TO FIX THE MICRO-PAD AS SHOWN.



PUT THE APPLICATION KEYPAD AND MOUSE KEYPAD ONTO THE DISPLAY BEZEL.

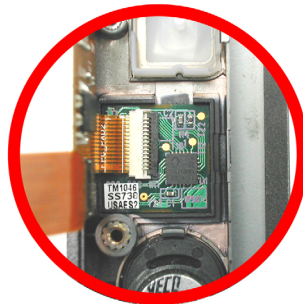
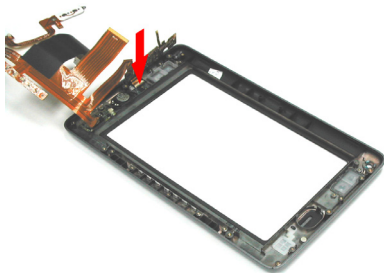


STICK THE FINGER PRINT AND INSTALL THE SPEAKER PROPERLY.

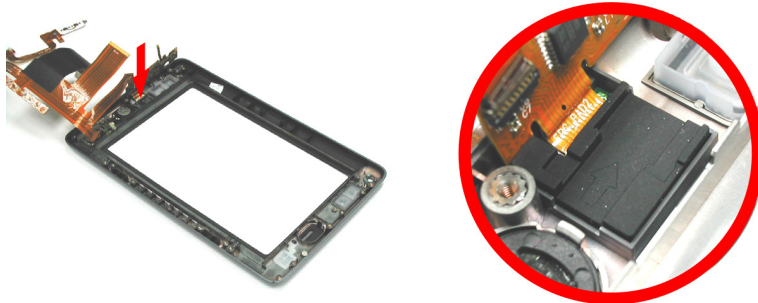


PREPARE A MICRO-PAD RUBBER.

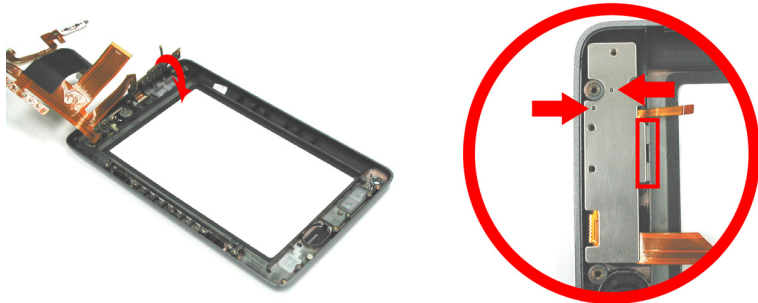
LIFT UP THE JOGBAR FPC.



CONNECT THE JOGBAR FPC TO THE MICRO-PAD.

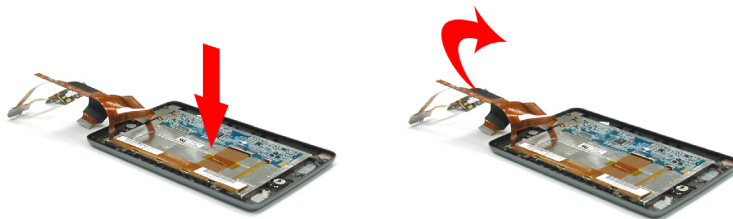


PUT THE MICRO-PAD RUBBER INPLACE.

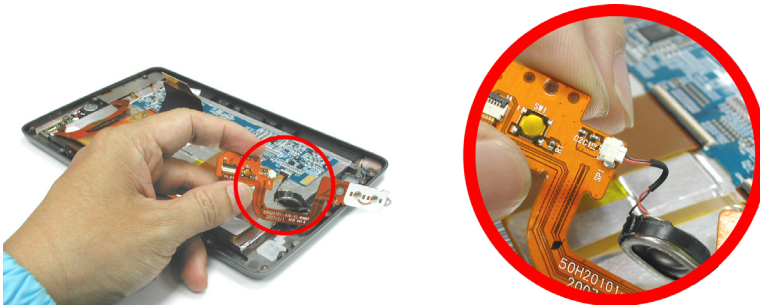


PUT THE JOGBAR FPC INPLACE.

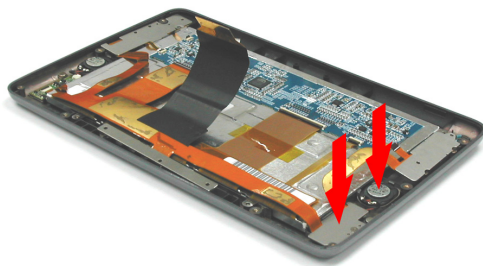
MAKE SURE YOU CAN SEE THE RIB AND THE GUIDE PINS PASS THROUGH THE HOLES BEFORE FASTEN THE SCREW



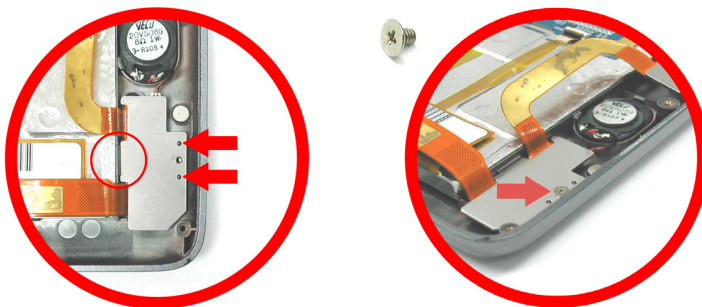
PUT THE LCM INPLACE.



CONNECT ANOTHER SPEAKER TO THE SNAPVUE FPC.

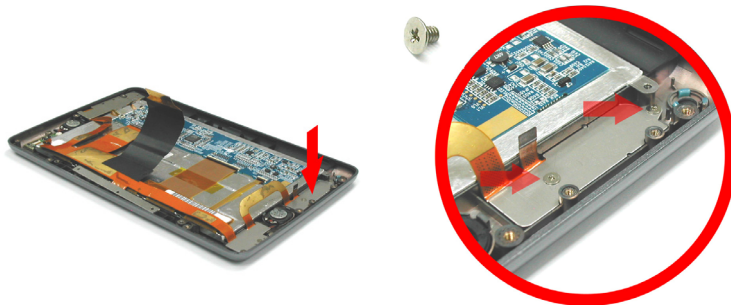


INSTALL THE SPEAKER AND THE FPC INPLACE.



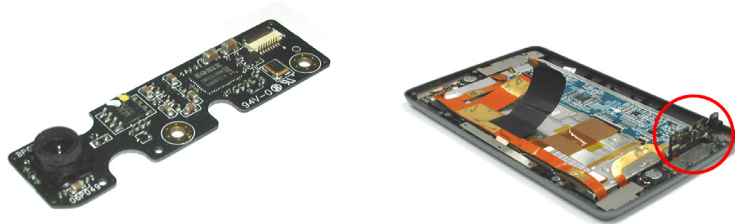
MAKE SURE YOU CAN SEE THE RIB AND GUIDE PINS PASS THROUGH THE HOLES BEFORE FASTEN THE SCREW (P/N: **72H01696-00M**) AT THE LOCATION INDICATED.

NOTE: TORQUE 0.8 + 0.1 KGF-CM



FASTEN ANOTHER TWO SCREWS (P/N: 72H01696-00M) TO FIX THE SNAPVUE FPC AT THE LOCATION INDICATED.

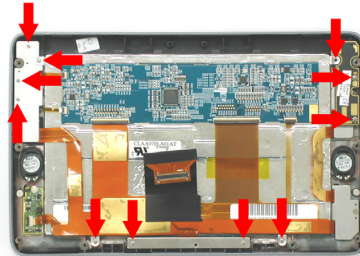
NOTE: TORQUE 0.8 + 0.1 KGF-CM



CONNECT THE CAMERA MODULE TO THE SNAPVUE FPC.

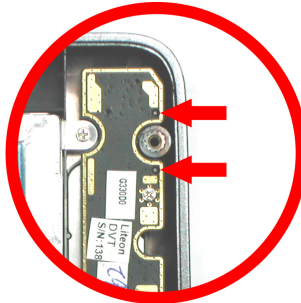


PUT THE CAMERA MODULE INPLACE.

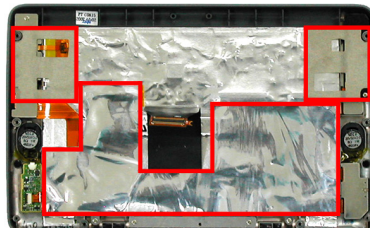
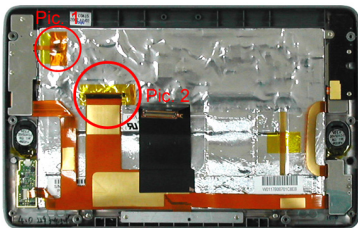


FIX THE LCM, CAMERA MODULE, MAIN FPC AND JOGBAR FPC WITH ELEVEN SCREWS (P/N: 72H01519-00M) AT THE LOCATION INDICATED.

NOTE: TORQUE 0.8 + 0.1 KGF-CM



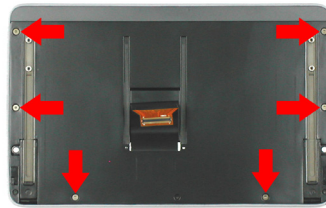
NOTE: MAKE SURE THE GUIDE PINS PASS THROUGH THE HOLES BEFORE FASTEN THE SCREW.



CONNECT THE JOGBAR FPC AND MAIN FPC TO THE LCD MODULE AND THEN PASTE THE KAPTON TAPE, AN ALUMINIUM FOIL AND TWO GASKETS AT THE LOCATION INDICATED.

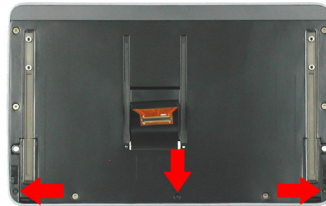


ASSEMBLE THE DISPLAY HOUSING AS SHOWN (LET THE FPC PASS THROUGH THE DISPLAY HOUSING'S HOLE)



FASTEN SIX SCREWS (P/N: **72H01821-00M**) ON THE DISPLAY HOUSING AT THE LOCATION INDICATED.

NOTE: TORQUE 0.8 + 0.1 KGF-CM

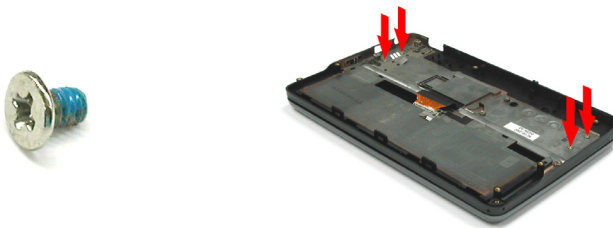


FASTEN ANOTHER THREE SCREWS (P/N: **72H01691-00M**) ON THE DISPLAY HOUSING AT THE LOCATION INDICATED.

NOTE: TORQUE 0.8 + 0.1 KGF-CM

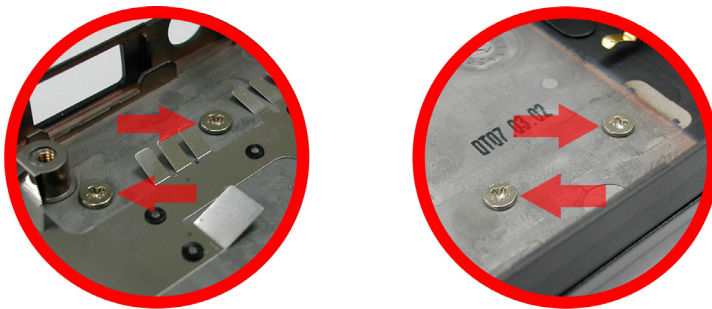


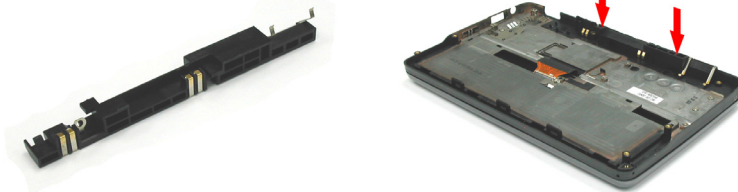
PUT THE KEYBOARD BEZEL ONTO THE DISPLAY HOUSING AND MAKE SURE THE MAIN FPC CONNECTOR PASS THROUGH THE HOLE.



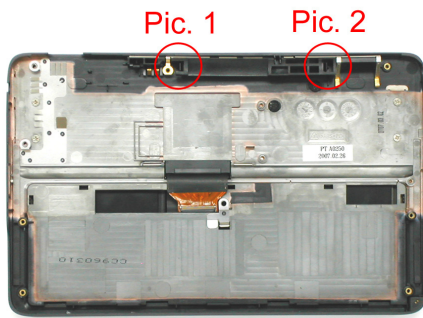
FASTEN FOUR SCREWS (P/N: **72H02036-00M**) ON THE KEYBOARD BEZEL AT THE LOCATION INDICATED.

NOTE: TORQUE 2.5 + 0.1 KG/CM2

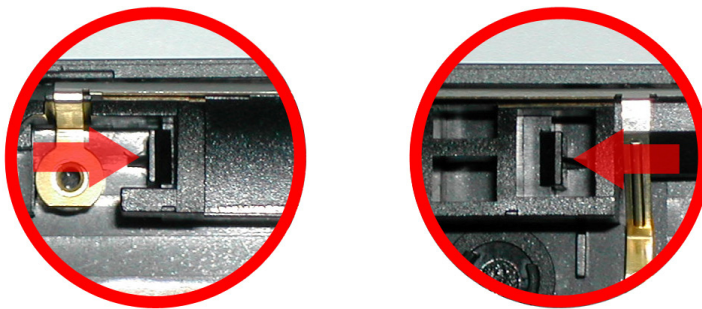


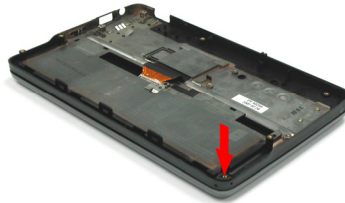


INSTALL THE GSM ANTENNA.

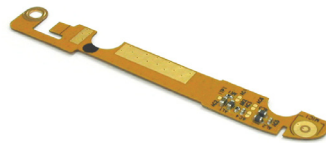
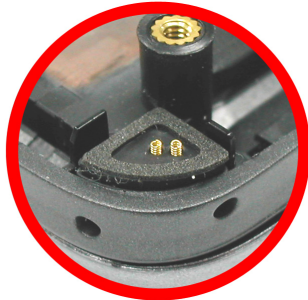


NOTE: MAKE SURE THE ANTENNA IS FIXED PROPERLY BY THE HOOKS. (YOU SHOULD HEAR THE "CLICK" SOUND DURING THE INSTALLATION)

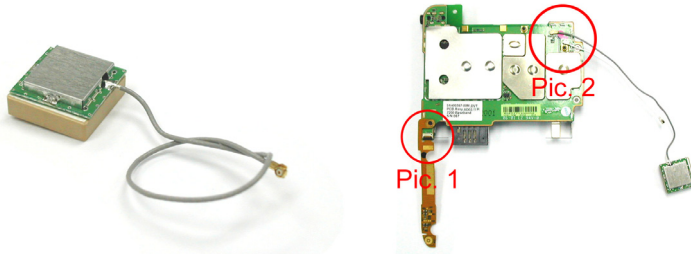




PUT THE MICROPHONE INPLACE.



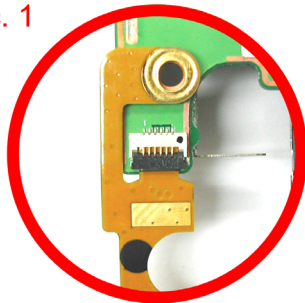
PREPARE AN ANTENNA WIRE, A MICROPHONE FPC AND A GPS ANTENNA.



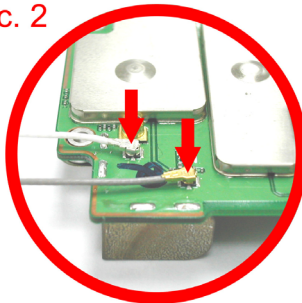
CONNECT THE TWO ANTENNAS AND THE MICROPHONE FPC TO THE BASEBAND BOARD.

NOTE: DO NOT BEND THE ANTENNA WIRE SHARPLY TO AVOID DAMAGE.

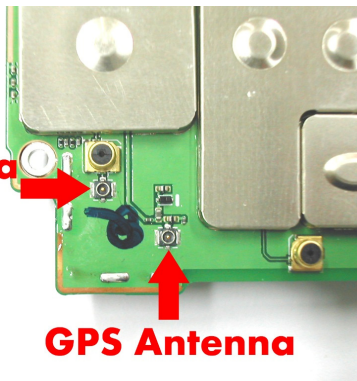
Pic. 1



Pic. 2

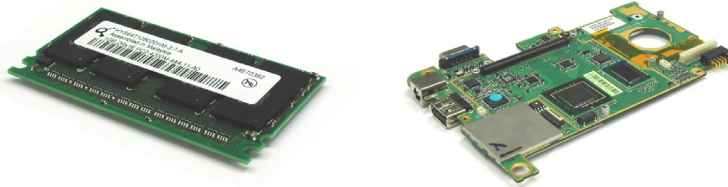


Antenna Wire

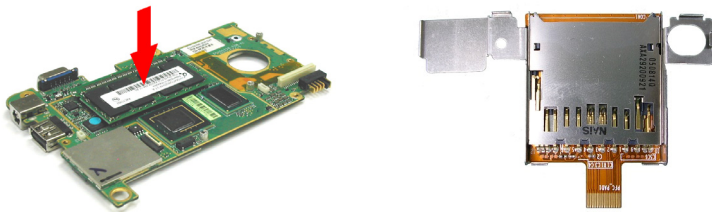


GPS Antenna

NOTE: DON'T MIX THE TWO ANTENNA LOCATIONS.

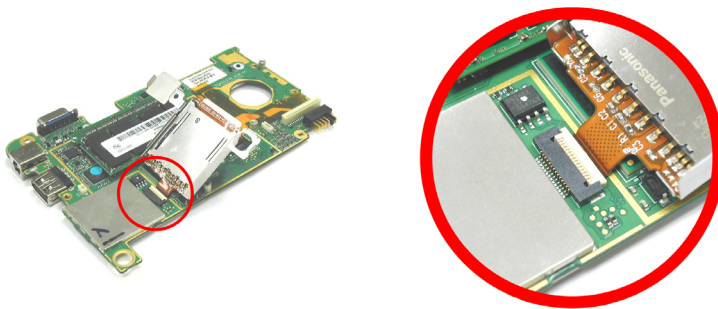


PREPARE A MEMORY MODULE AND A MAIN BOARD.

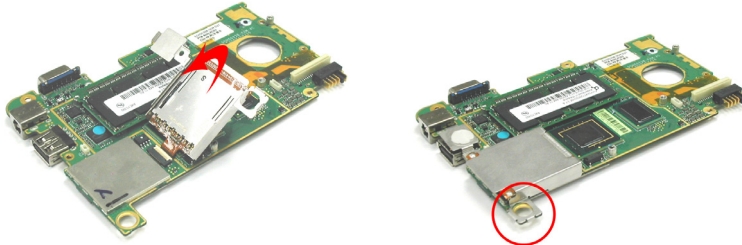


INSTALL THE MEMORY MODULE TO THE MAIN BOARD.

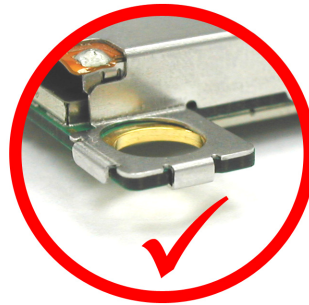
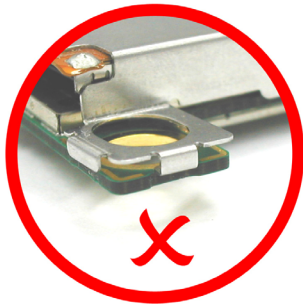
PREPARE A SD FPC BOARD.



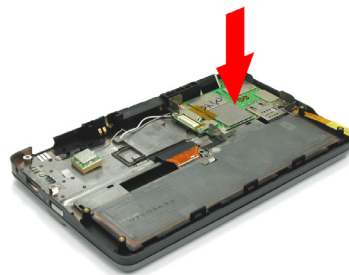
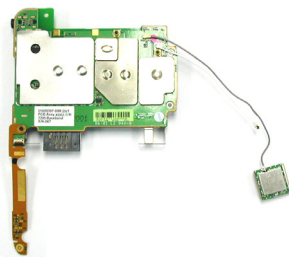
INSTALL THE SD FPC BOARD.



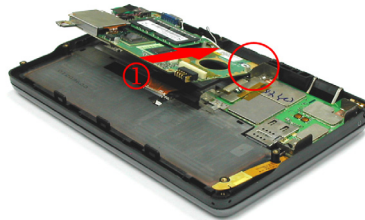
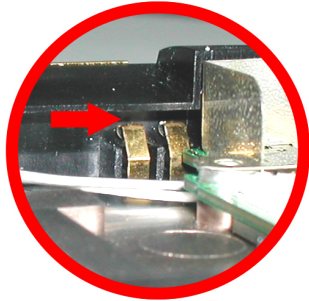
PLACE THE SD FPC BOARD IN PLACE.



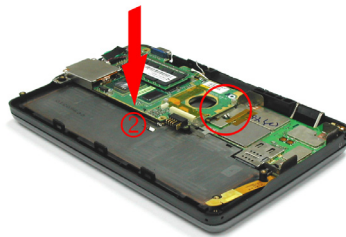
NOTE: DON'T MAKE THEM STACK



PUT THE BASEBAND BOARD ONTO THE KEYBOARD BEZEL AS SHOWN.



INSERT THE MAINBOARD IN-BETWEEN THE ANTENNA FINGERS AND THE PLASTIC PART AS SHOWN.



Connect the board to board connector.



NOTE: MAKE SURE THE SWITCH KNOB IS INSERTED PROPERLY AT THE GAP OF THE POWER SWITCH.



PUT THE GPS ANTENNA INPLACE.



FIX THE BASEBAND BOARD WITH A SCREW
(P/N: 72H02115-00M) AT THE LOCATION
INDICATED.

NOTE: TORQUE 1.0 + 0.1 KGF-CM



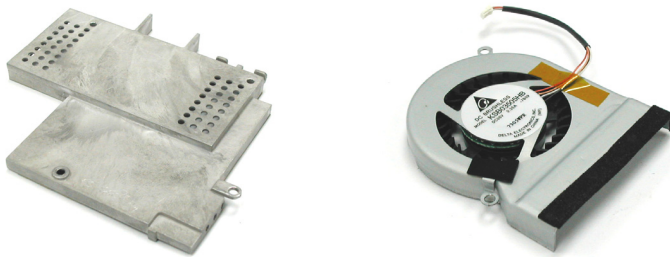
FIX THE MAIN BOARD WITH TWO SCREWS
(P/N: 72H02061-00M) AT THE LOCATION
INDICATED.

NOTE: TORQUE 1.0 + 0.1 KGF-CM

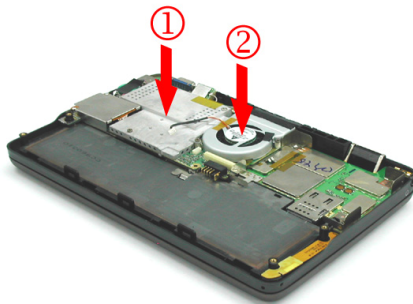


FIX THE SD FPC BOARD WITH A SCREW (P/N: 72H02115-00M) AT THE LOCATION INDICATED.

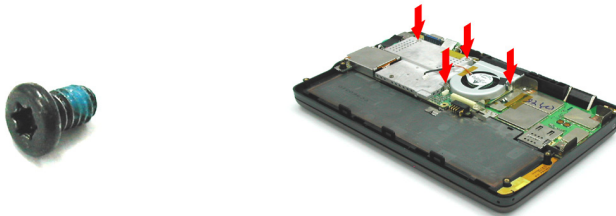
NOTE: TORQUE 1.0 + 0.1 KGF-CM



PREPARE A HEAT SINK AND A FAN.

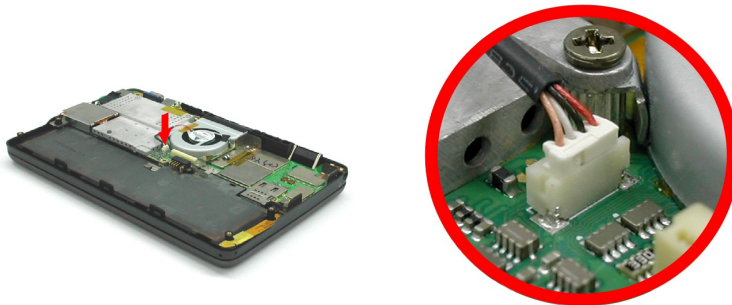


PUT THE HEAT SINK AND THE FAN INPLACE.

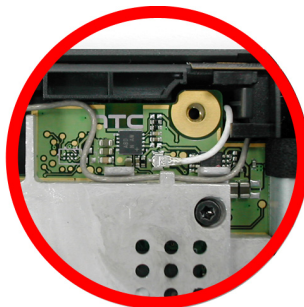


FIX THE HEAT SINK AND THE FAN WITH FOUR SCREWS (P/N: 72H02115-00M) AT THE LOCATION INDICATED.

NOTE: TORQUE 1.0 + 0.1 KGF-CM



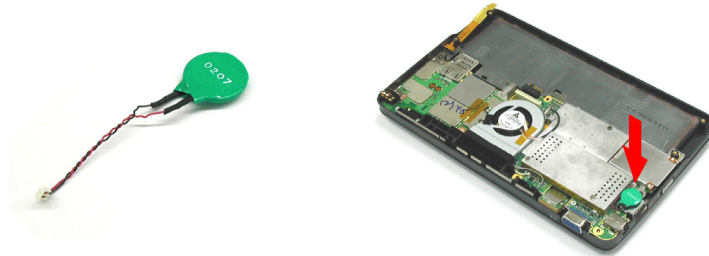
CONNECT THE FAN CONNECTOR TO THE MAIN BOARD.



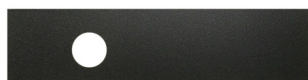
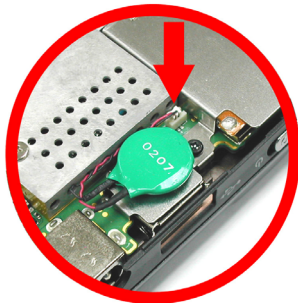
ROUTE THE GPS ANTENNA WIRE AS SHOWN.

CONNECT THE ANTENNA WIRE TO THE MAINBOARD.

NOTE: DO NOT BEND THE ANTENNA WIRE SHARPLY TO AVOID DAMAGE.



CONNECT AND STICK THE BACKUP BATTERY AS SHOWN.



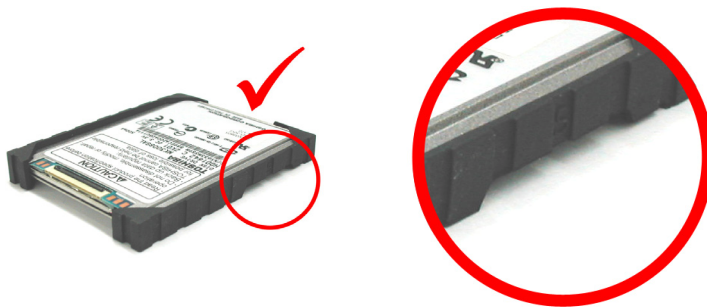
PASTE A MYLAR ON THE BACKUP BATTERY.



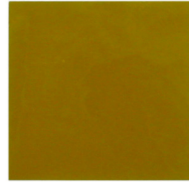
PREPARE A HDD CUSHION AND A HDD.



ASSEMBLE THE HDD CUSHION AS SHOWN.



NOTE: THE HDD CUSHION GAP MUST BE AT THE LOCATION INDICATED.



PREPARE HDD FPC AND KAPTON TAPE..

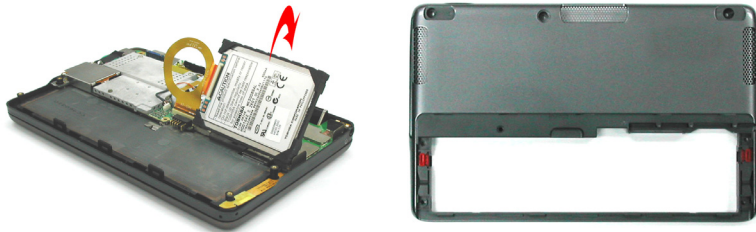


CONNECT THE HDD FPC TO THE HDD

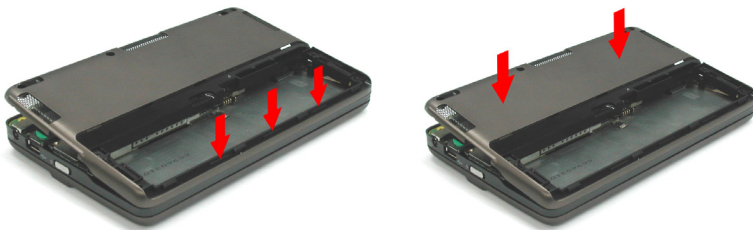
PASTE THE KAPTON TAPE AT THE LOCATION INDICATED.



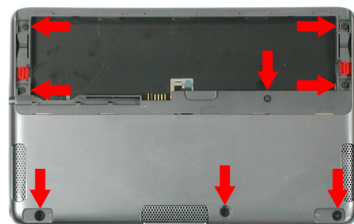
INSERT THE HDD FPC TO THE CONECTOR ON THE MAIN BOARD.



PUT THE HDD INPLACE.
PREPARE A KEYBOARD HOUSING



ASSEMBLE THE KEYBAORD HOUSING AS SHOWN.

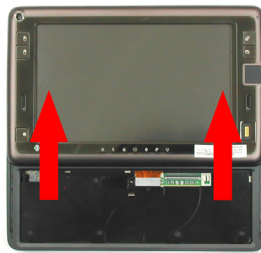


FASTEN EIGHT SCREWS (P/N: **72H01821-00M**) ON THE KEYBOARD HOUSING AT THE LOCATION INDICATED.

NOTE: TORQUE 0.8 + 0.1 KGF-CM



PREPARE A LEFT AND A RIGHT RUBBER FOOT.



ATTACH THE RUBBER FEET.

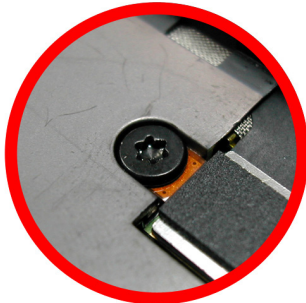
SLIDE THE DISPLAY UP.



PREPARE A SCREW (P/N: **72H01821-00M**)

CONNECT THE MAIN FPC TO THE MAIN BOARD THEN FIX IT WITH THE SCREW.

NOTE: TORQUE 0.8 + 0.1 KGF-CM



PASTE A PORON ON MAIN FPC CONNECTOR AS SHOWN.



PREPARE A KEYBOARD.



CONNECT THE KEYBOARD FPC TO THE MAIN BOARD.

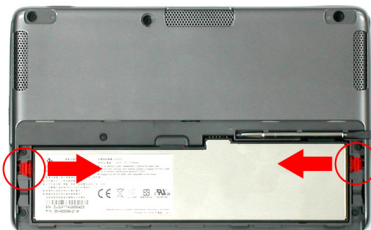


ASSEMBLE THE KEYBOARD AS SHOWN.



SLIDE THE DISPLAY DOWN AND TURN OVER THE DEVICE.

PREPARE THE BATTERY PACK.



INSERT THE BATTERY PACK WITH THE TABS AS SHOWN AND PLACE THE BATTERY PACK IN THE COMPARTMENT.

SLIDE THE BATTERY LATCHES IN.



PUT THE BATTERY COVER AND SLIDE THE BATTERY COVER IN AS SHOWN TO REPLACE THE BATTERY COVER.



REPLACE THE STYLUS IN ITS SLOT AT THE BOTTOM OF THE DEVICE.



THE ASSEMBLING PROCESS IS DONE.

The Assemble Process is Done. You may perform the Function Test or the following process.

3. BIOS, ROM update and Windows Vista Installation Procedure

3.1 BIOS update

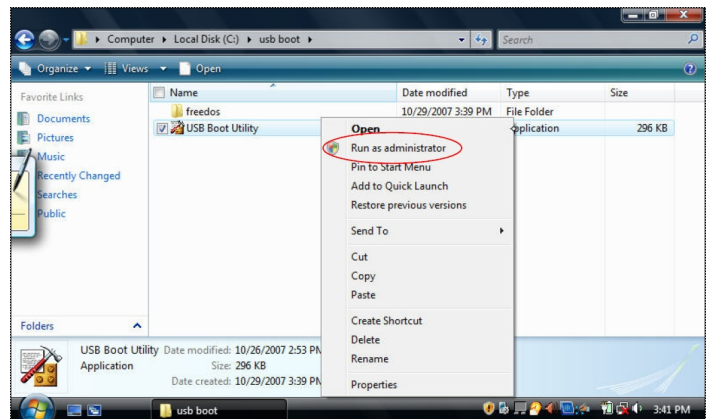
To upgrade the BIOS of your Mobile Computer, please download the following files:

- **USB Boot Utility.zip.** Contains a utility that you can use to create a bootable USB flash disk.
- **HTCFD.exe.** This is the BIOS upgrade program.
- **BIOS image file.**

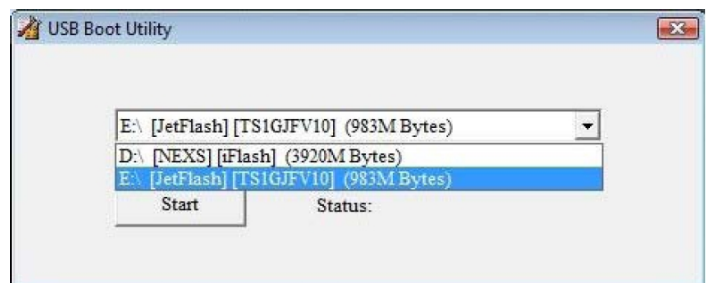
After downloading the above files to the hard drive of your Mobile Computer, follow the steps in this installation guide to create a bootable USB flash disk and then use it to upgrade the BIOS.

Creating a Bootable USB Flash Disk

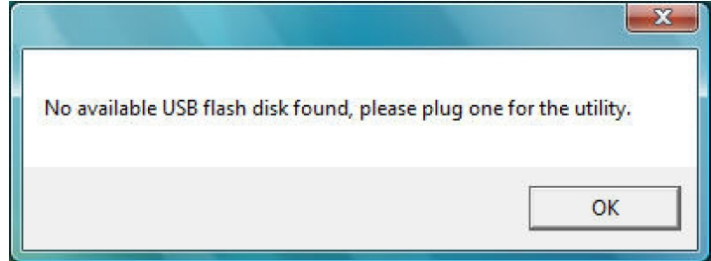
- Connect your USB flash disk to the Mobile Computer and then follow the steps below to make the flash disk bootable
- Unzip **USB boot utility.zip.**
- Right-click **USB boot utility.exe** and then **Run as administrator.**



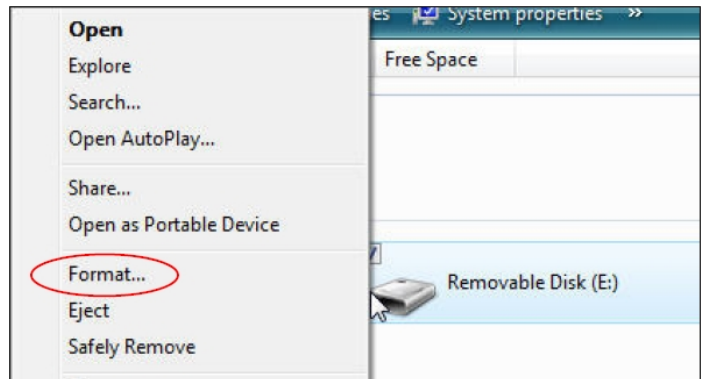
- Select the USB flash disk that you want to create as a bootable device and then click **Start.**
- A message then appears, informing you that all data on the USB flash disk will be lost when it is created as a bootable disk. Click **Yes** to continue.
- The USB Boot Utility then starts the creation process.
- When done, click **OK.**



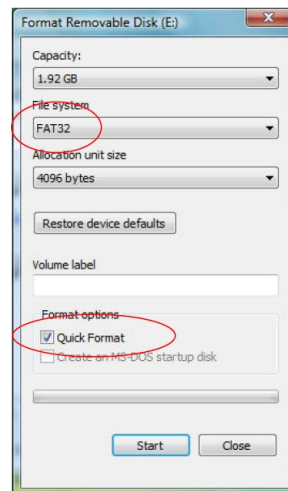
- If the USB Boot Utility cannot recognize your USB flash disk, you will see the following message
- If the above problem occurs, format the USB flash disk in Windows first by following the steps below before you run the USB Boot Utility again.



- Go to "Computer", right-click on the drive that corresponds to the USB flash disk that you want to format, and then click **Format**.



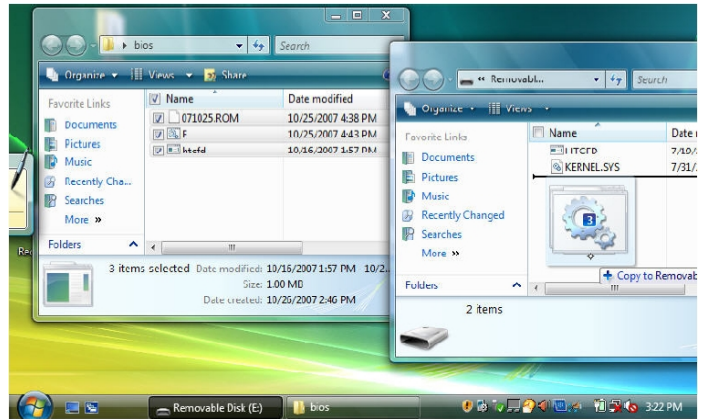
- The default file system that is selected is "FAT32". Select **Quick Format** to save time, and then click **Start** to begin the Windows format process.
- **Note:** A floppy disk can also be used to create a bootable disk. In this case, you need to connect an external USB floppy drive.



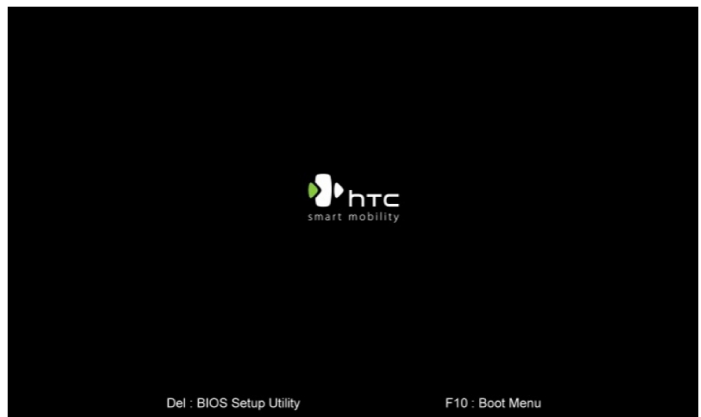
Upgrading the BIOS

After creating a bootable USB flash disk, follow the steps below to upgrade the BIOS of your Mobile Computer.

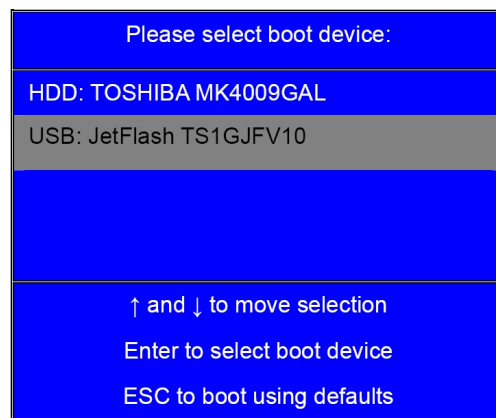
- Copy the **HTCFD.EXE** file to the USB flash disk, and extract the BIOS image file (for instance, 071025.ROM and F.BAT files) to the flash disk.



- Restart the system, and then press **F10** when you see the BIOS POST screen.



- Select the bootable USB flash disk and then press the **Enter** key to boot from the flash disk.





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Revised Date 2008/04/08 A05

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- Press the **F** key and then press **Enter** key to start the BIOS upgrade process.
- After the BIOS upgrade has been completed successfully, the system will shut down automatically. Turn the power back on.
- When you power on the device after upgrading the BIOS, the “CMOS Checksum Bad” message will be displayed on the BIOS POST screen. Press **F1** to enter the BIOS Setup Utility, go to the Exit page, and then select **Load BIOS default setting**. Finally, select **Save Changes and Exit** to exit BIOS Setup.

```
FreeDOS kernel build 2036 cvs [version Aug 18 2006 compiled Aug 18 2006]
Kernel compatibility 7.10 - WATCOMC -80386 CPU required - FAT32 support
```

```
© Copyright 1995-2006 Pasquale J. Villani and The FreeDOS Project.
All Rights Reserved. This is free software and comes with ABSOLUTELY NO
WARRANTY: you can redistribute it and/or modify it under the terms of the
GNU General Public License as published by the Free Software Foundation;
Either version 2, or (at your option) any later version.
```

```
- InitDiskWARNING: using suspect partition Pri:1 FS 0c: with calculated values
250-225-39 instead of 249-254-63
C: HD1, Pri[ 1], CHS= 0-1-1, start= 0 MB, size= 1967MB
```

```
FreeCom version 0.84-pre2 XMS_Swap [Aug 28 2006 00:29:00]
```

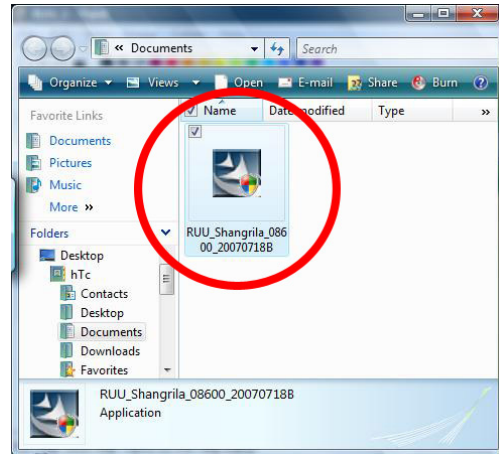
```
C:\>F
```

```
HTC Flash Utility V1.0.0.7
Copyright ©2007 High Tech Computer Corp. All Rights Reserved.
```

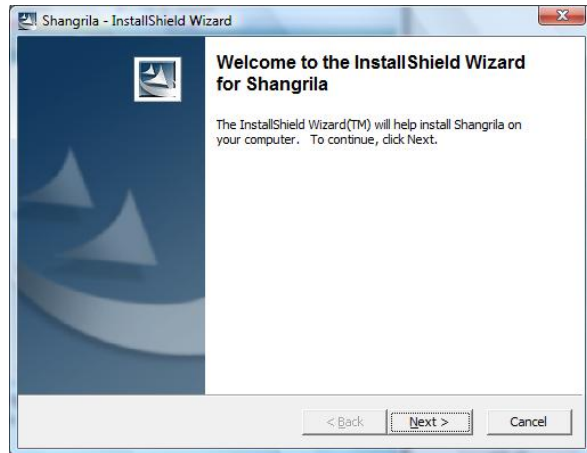
```
Reading ROM file : 100%
BIOS boot block checksum : ok
BIOS module checksum : ok
EC checksum : ok
Erasing BIOS ROM process : 100%
Writing BIOS ROM process : 100%
Verifying BIOS ROM process : 100%
BIOS update successfully
```

3.2 ROM update thru RUU (Re-flash Upgrade Utility)

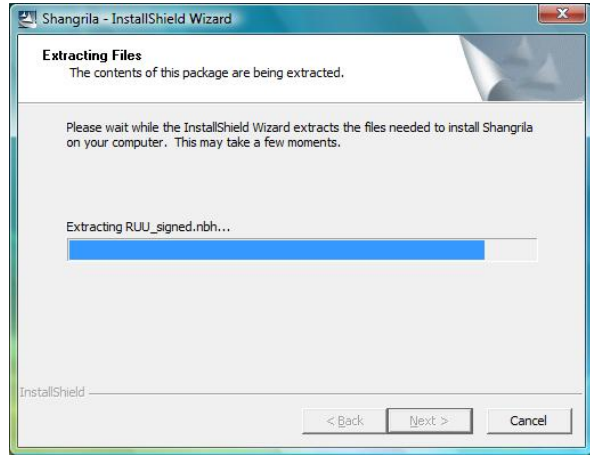
- Execute the RUU program from your Windows Vista platform.
- Note: Please plug in the AC adaptor and make sure your battery is fully charged



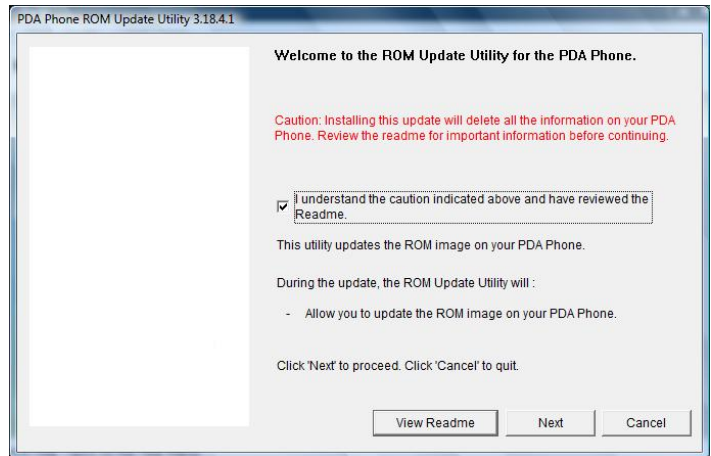
- Read the pop-up message form ROM update utility.
- Click **Next** to proceed.



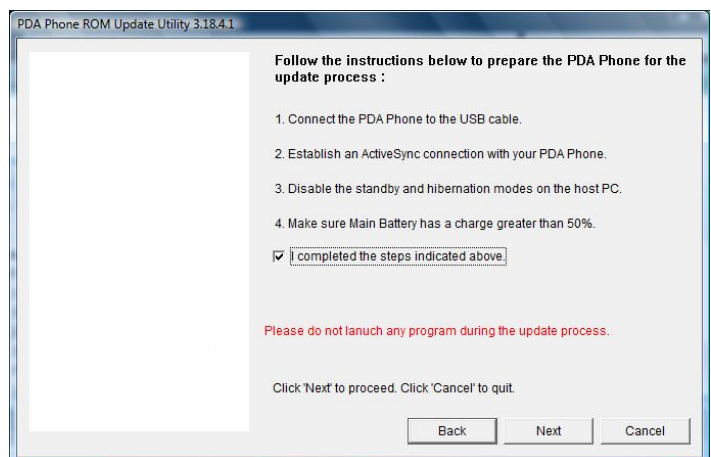
- The contents of the package are being extracted.



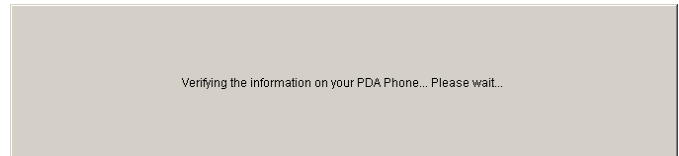
- On the **Welcome Screen**, select the “I understand...” checkbox then click **Next** to begin the ROM update installation



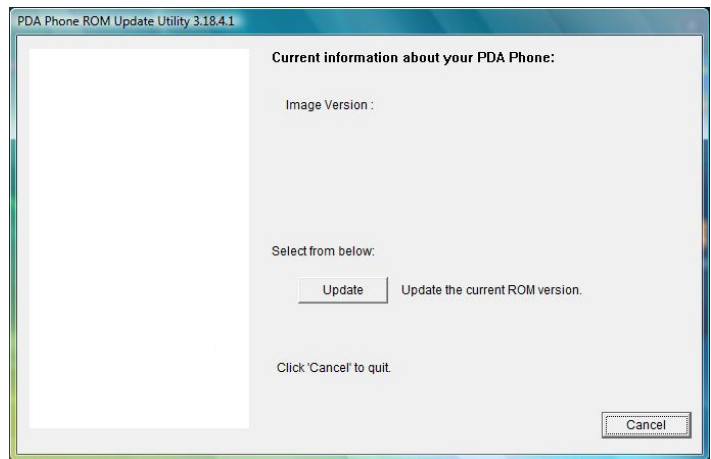
- On the next screen, follow the listed instructions in the dialog box first and select the “I completed...” checkbox when you are done, click **Next** to proceed.
- Note: You should read and follow all the instructions listed before clicking **Next**.



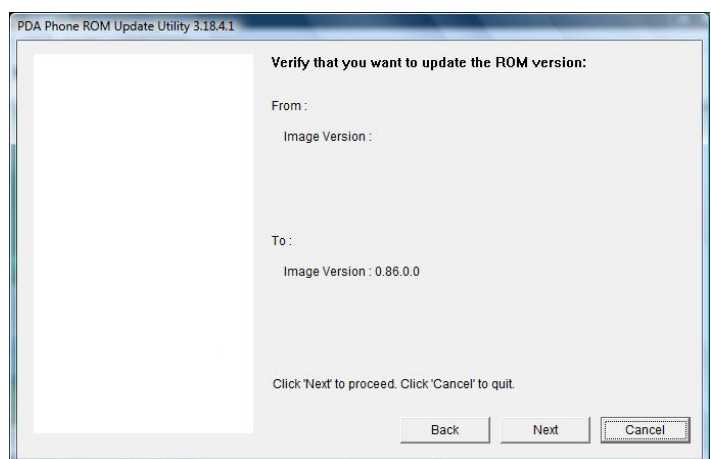
- The following message will then be displayed, indicating that the utility is verifying and acquiring information about the device as preparation for the update process. Wait for this verification process to finish.



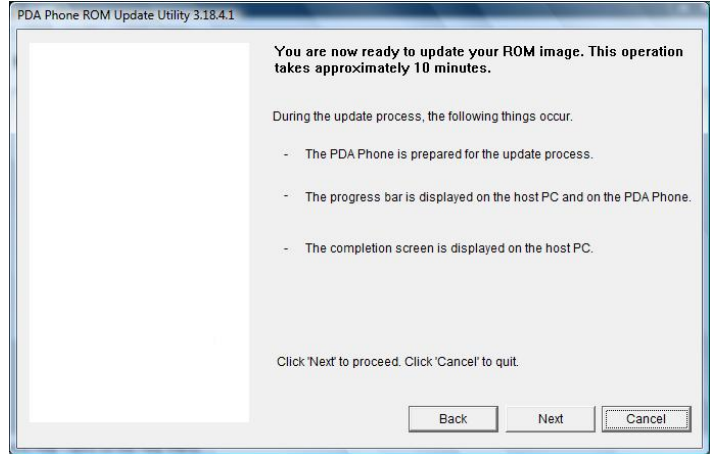
- Current information about the device, such as the model ID, image version and language will then be displayed. Click **Update** to proceed.



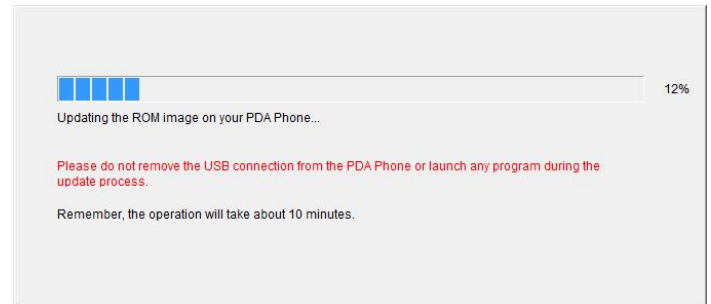
- The information about the new ROM update will then be displayed. If you are certain that you want to install the Mobile Device with the new ROM update, click **Next** to proceed.



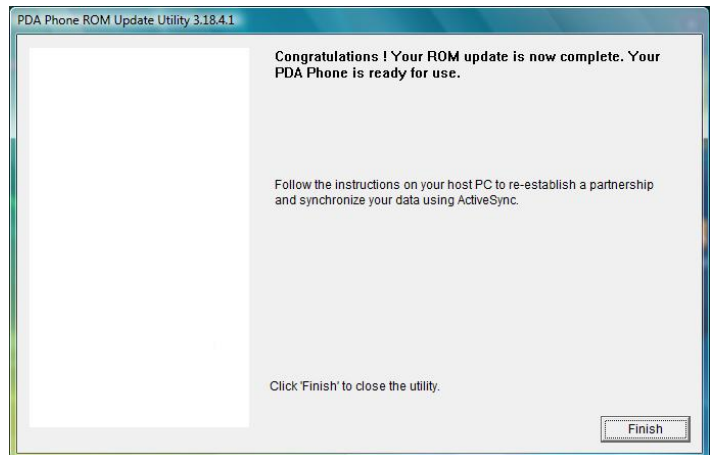
- A confirmation message then appears and shows the length of time it will take to copy the necessary files (including radio image) to the device. Click **Next** to begin the update.



- A progress bar will run through the screen during the update process.
- Note: In the middle of the update process, the progress bar may stop running. This is normal as the RUU is adjusting itself to complete the update process automatically.

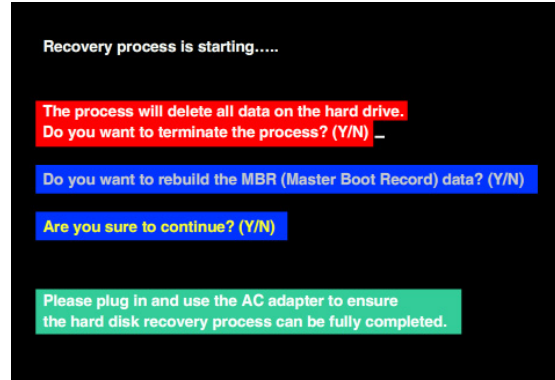


- When you see the screen below, it means update is complete. Click **Finish** to exit the utility.



3.3 Windows Vista Installation thru USB storage devices

- Please refer to chapter 3.1 to create a bootable USB storage device.
- **Note:** 1. Press **Fn** and **F3** simultaneously when you see the BIOS POST screen to recover you Windows Vista and then follow the on screen display. 2. Please plug in the AC adaptor during the recovery process.



- **Note:** Below process is not necessary unless you replace the HDD with the new one or the hidden partition is crashed.
- Unzip the *.ZIP file and **copy all of the files** (including *.GHO, *.GHS files) **to the root directory** of the bootable USB storage device.
- **Note:** Please prepare the Norton Ghost 2003 utility by your own.



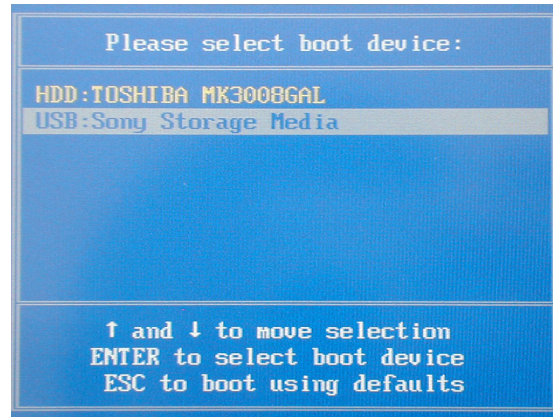
- **Note:** **4GB** is the minimum requirement of the USB storage device capacity.



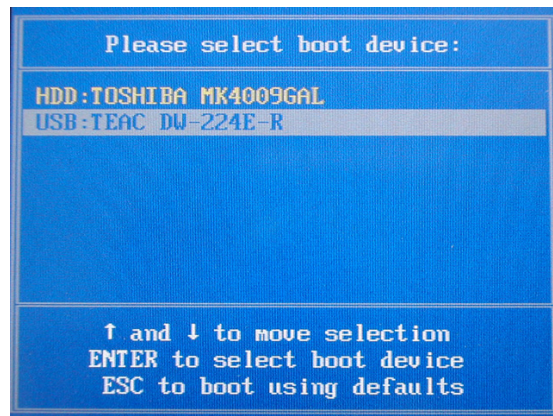
- Insert the **USB storage device** into an available USB port and then **turn on** the power.
- Press **Fn** and **F10** simultaneously to go to device boot menu.



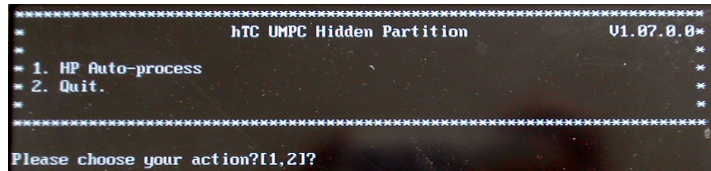
- Choose to boot from USB storage device or an external optical drive then press **Enter**.



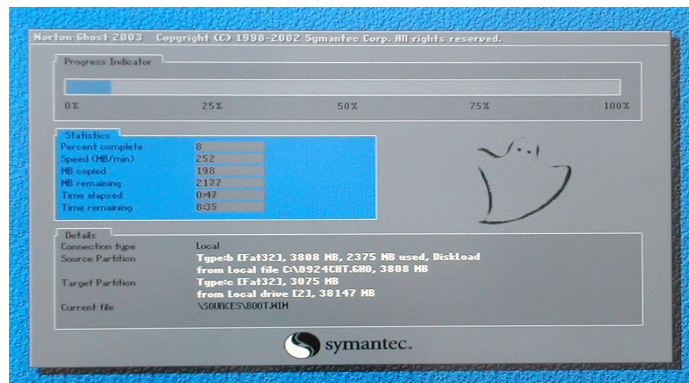
- Note: Use only the DVD ROM which provided by HTC.



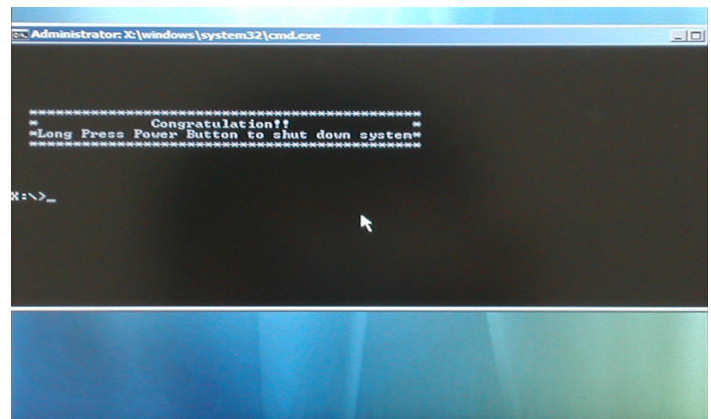
- Choose 1 from the menu to create a hidden partition on the HDD or 2 to quit.



- Image recovery on hidden partition is in progress.



- Windows Vista recovery is completed.
- Slide and hold the power switch to **shutdown** the device and **remove** the USB storage device.
- Note:** Do not turn on the device after the system recovery process is completed unless you ready to setup your Windows Vista.





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4. DIAGNOSTIC PROGRAM

4.1 List of Diagnostic Test Items

Mode	No	Item	Description	Remark	
Windows Vista	Function Test				
		1	Display Test	R/G/B/Black/White pattern test	
		2	LED Test	Power, battery, caps lock, BT/WLAN, 3G and mail/SMS status LED test	
		3	Backlight Test	LCM brightness test	
		4	Keyboard Test	QWERTY keyboard test	
		5	Button Test	L/R mouse buttons, comm. manager and resolution button test	
		6	Micro-pad Test	Micro-pad sensitivity test	
		7	G Sensor Test	HDD G-sensor test.	
		8	System Information	Temperature and FAN status	
		9	Bluetooth Info.	Bluetooth turn on and address check	
		10	Calibration Test	LCM calibration test	
		11	Webcam Test	Webcam life test	
		12	Battery Info	Battery info and AC adapter status	
		13	Audio Test	Internal / external speaker and MIC test	
		14	Fingerprint Test	Fingerprint image read	
		15	WLAN Info	WLAN info	
		16	USB port test	USB port test	
		17	SD card slot test	SD card slot test	
		18	VGA port test	External display test	
Run-in Test					
	1	Run-in Test	1~8 hours run-in test (display, LED, backlight)	Option	
	2				
Auto Test					
	1	Auto Test	Full functions test		

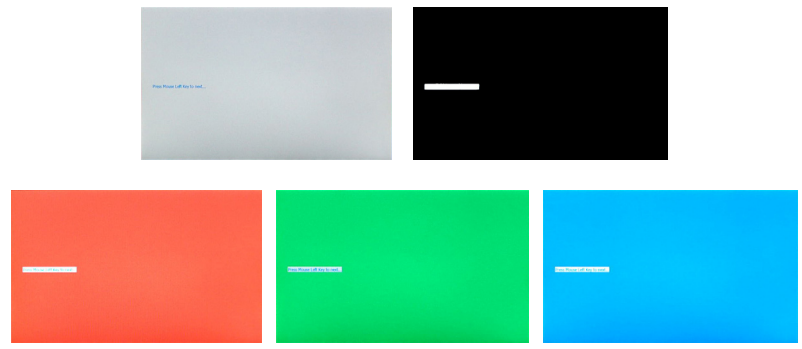
Test Procedure

How to select test item: Use the mouse cursor or the touch panel to select the test items.

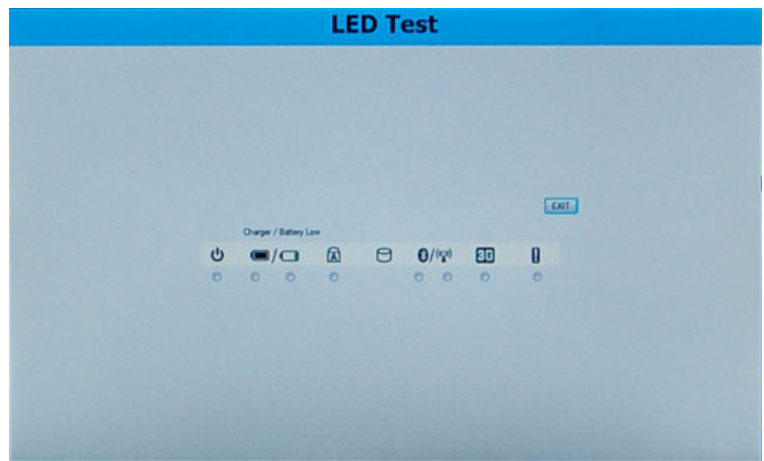
How to execute the test program: Click the left mouse keypad or tap the touch panel to start each of test items.

Diagnostic

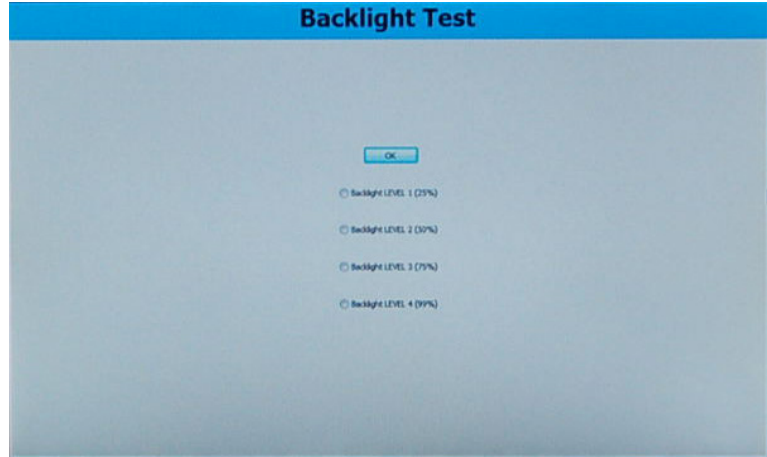
A. Display Test



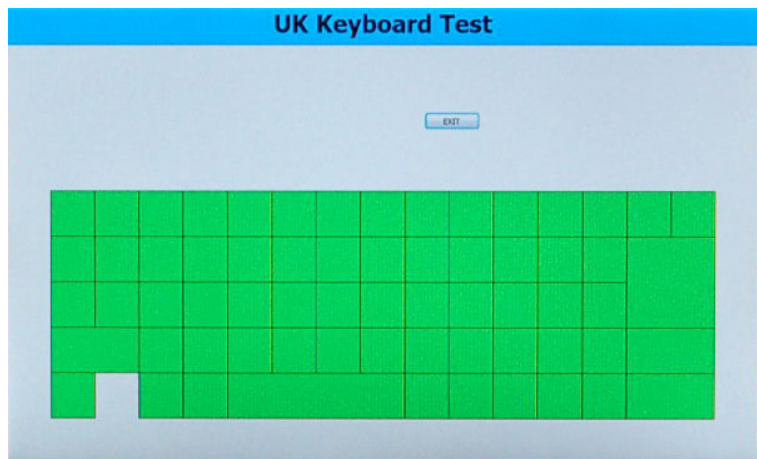
B. LED Test



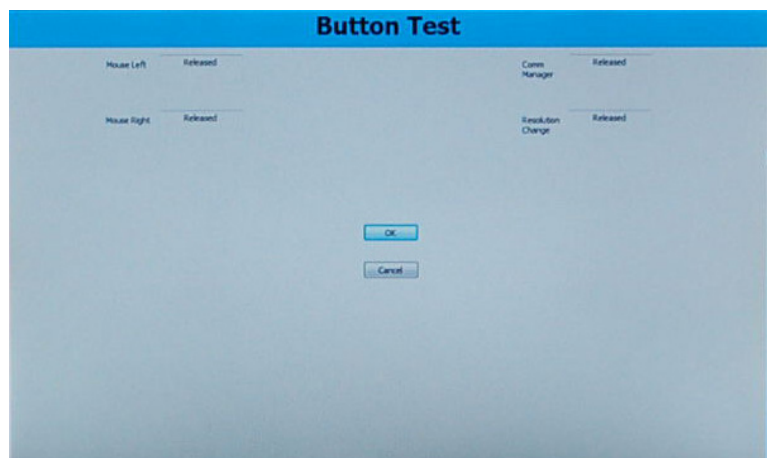
C. Backlight Test



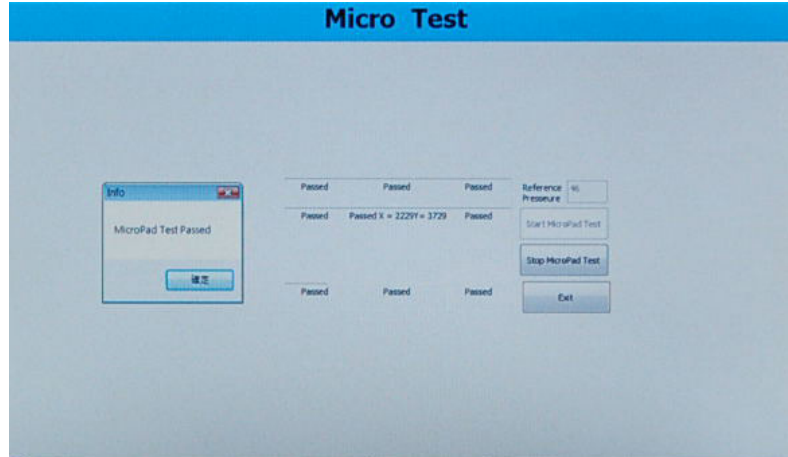
D. Keyboard Test



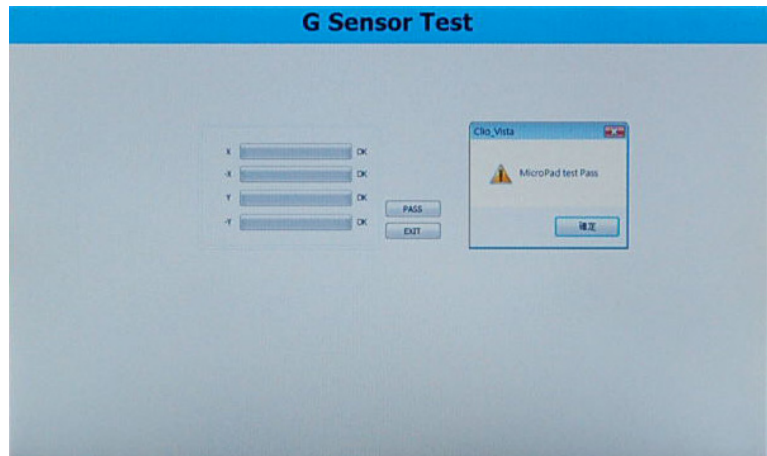
E. Button Test



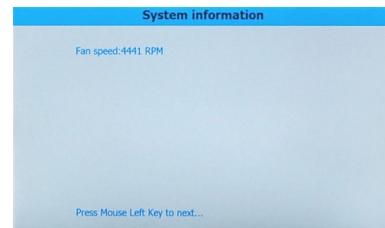
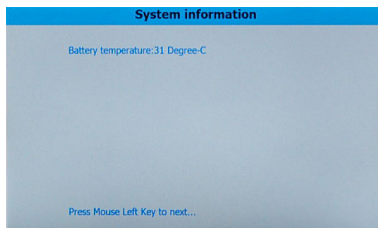
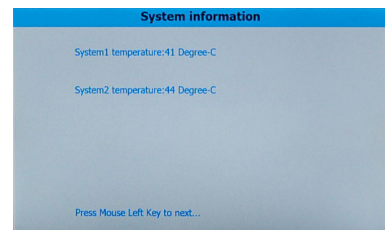
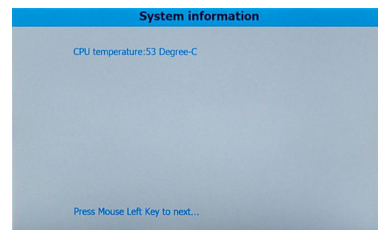
F. Micropad Test



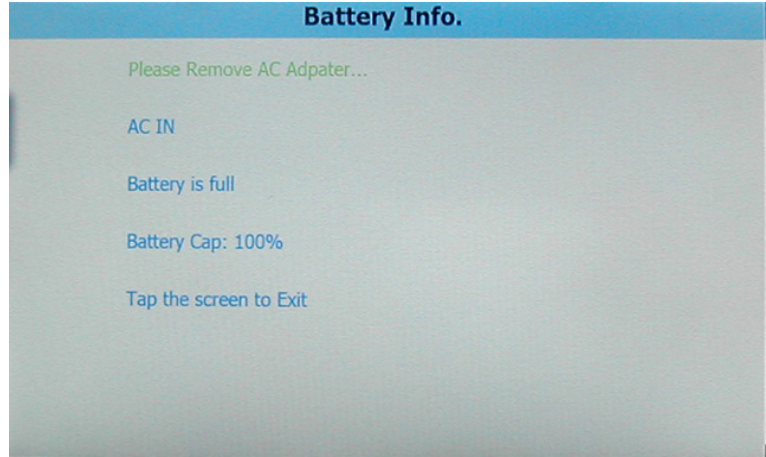
G. G Sensor Test



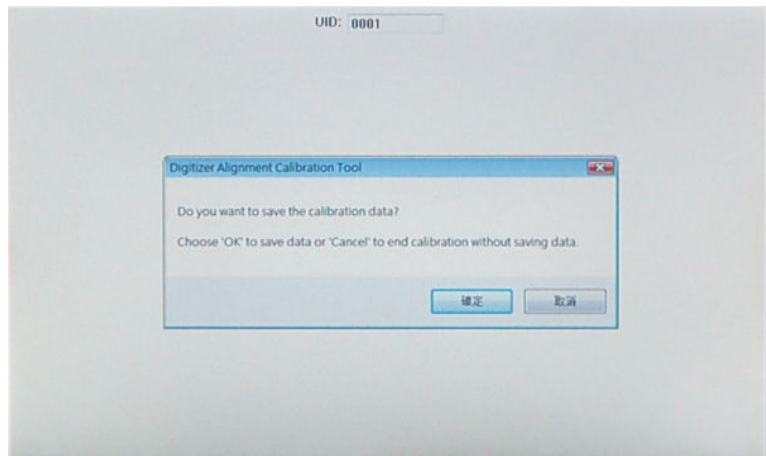
H. System Information



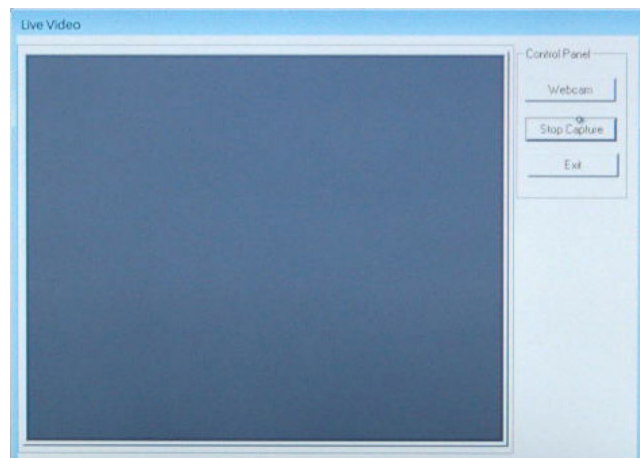
I. Battery Info



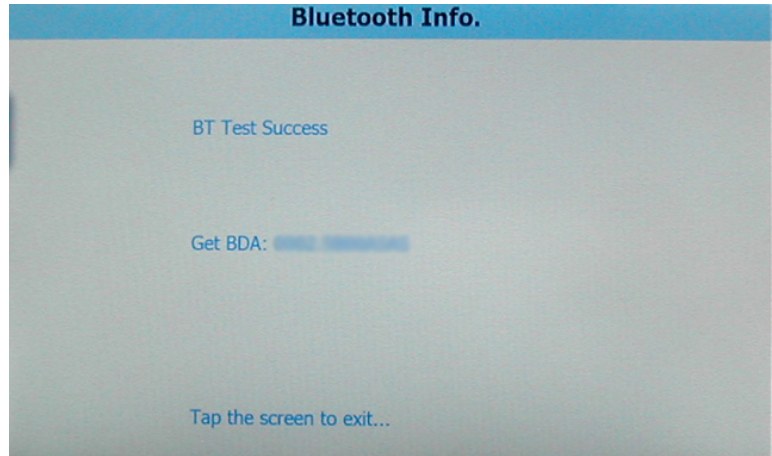
J. Calibration Test



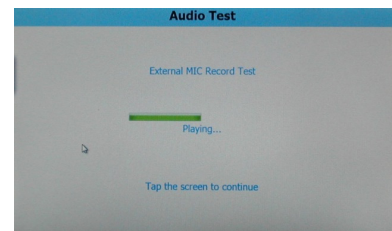
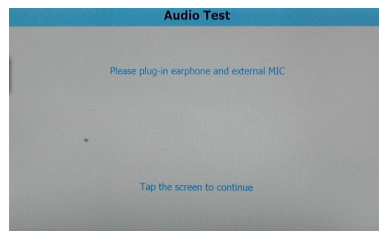
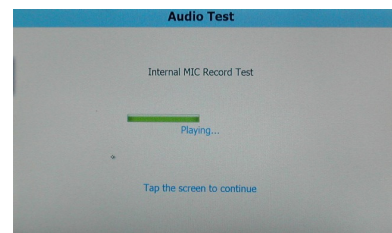
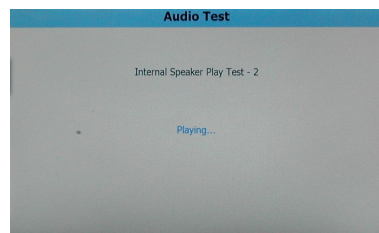
K. WebCam Test



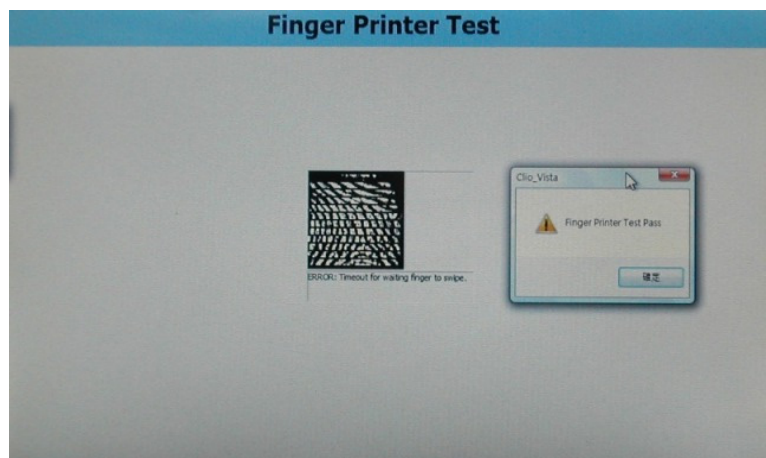
L. Bluetooth Info



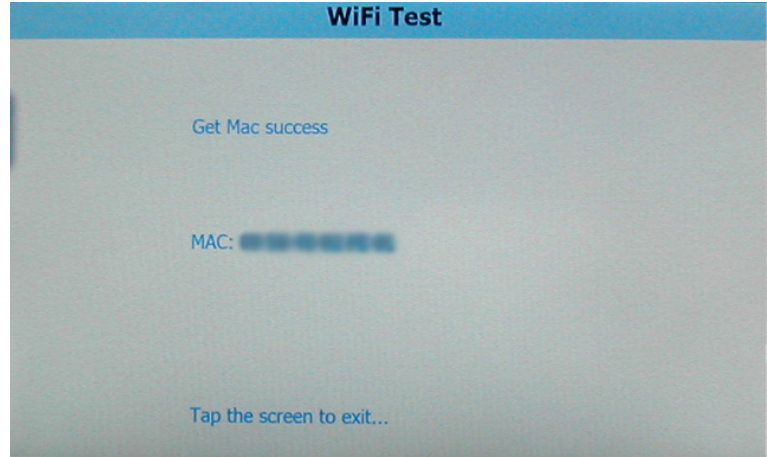
M. Audio Test



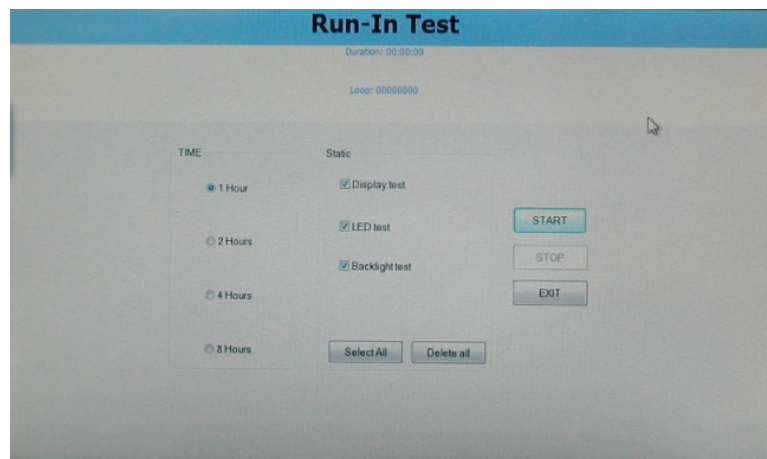
N. Fingerprint Test



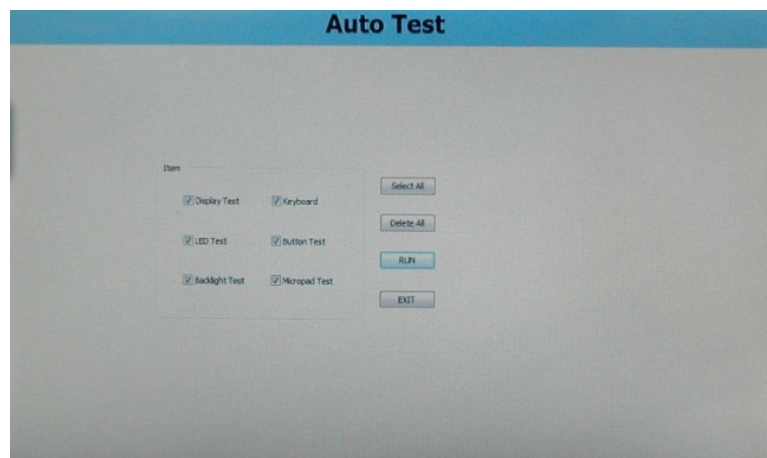
O. WLAN Test



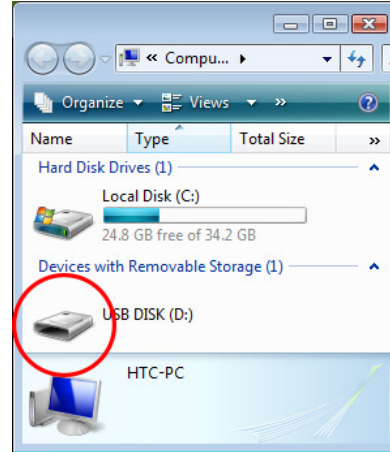
P. Run-In Test



Q. Auto Test



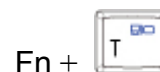
R. USB port test. Insert an empty USB storage device and then copy a file to the device before read it.



S. SD card slot test. Insert an empty SD card and then copy a file to the SD card before read it.



T. VGA port test. Press “Fn” key and “T” key simultaneously to switch between the LCD, the external display and both the LCD and external display.



5. Power measurement test

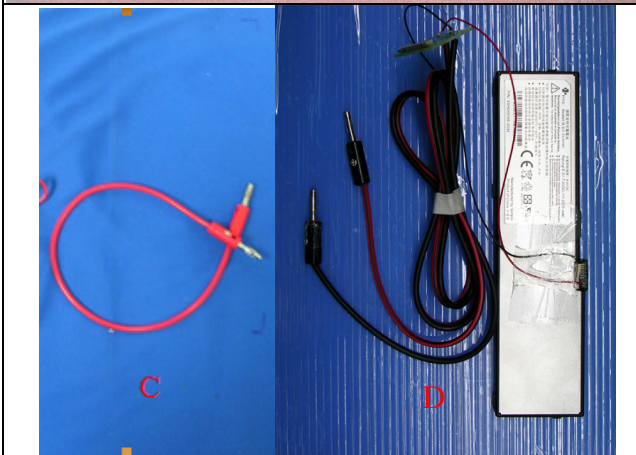
5.1 Main board leakage current Test Procedure

This is a quick method to measure if any abnormal leakage current on main board which caused high power consumption compare to GOOD main board.



Equipment:

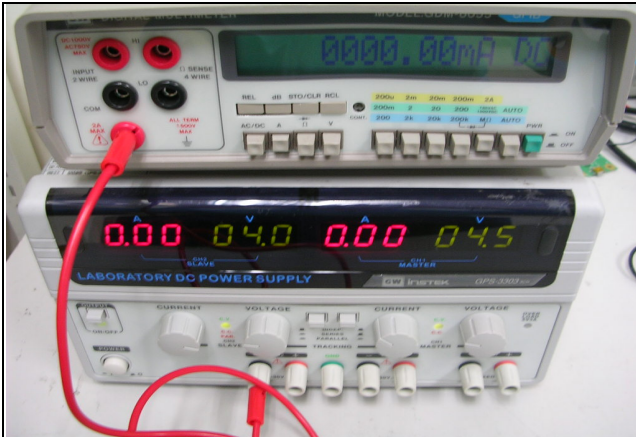
- A. Power Supply (set at 7.6 V /2A).
- B. Micro-Current Meter.



2. Fixture needed:

- C. Cable
- D. Battery with extension cable

Note: Don't short the battery extension cable polarity.



3. Install the battery to the device.
4. Connect cable (C) to positive polarity of power supply (A) and current meter (B)



5. Connect battery extension cable (D) to negative polarity of power supply (A) and current meter (B)

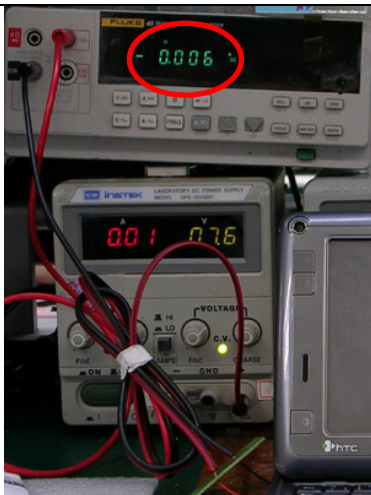


6. Setting is Ready now for testing



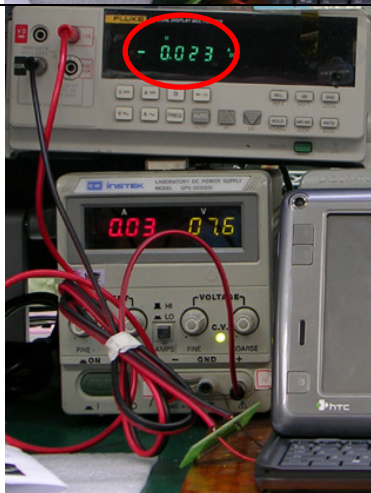
7. Turn on power supply (7.6V) and current meter (2A)

Unit setting:
* Vista Shutdown, CE in flight mode



7. Measure Vista shutdown, CE in flight mode current (condition: Vista display & BL off/WiFi off/BT off/CE in flight mode)

Please check current value on the current meter.
Current value must be under **7mA**, if over, it means M/B failed, please replace M/B for repair.



8. Measure Vista sleep, CE in flight mode current (condition: Vista display & BL off/WiFi off/BT off/CE in flight mode)

Please check current value on the current meter after **about 2 mins**.
Current value must be under **30mA**, if over, it means M/B failed, please replace M/B for repair.



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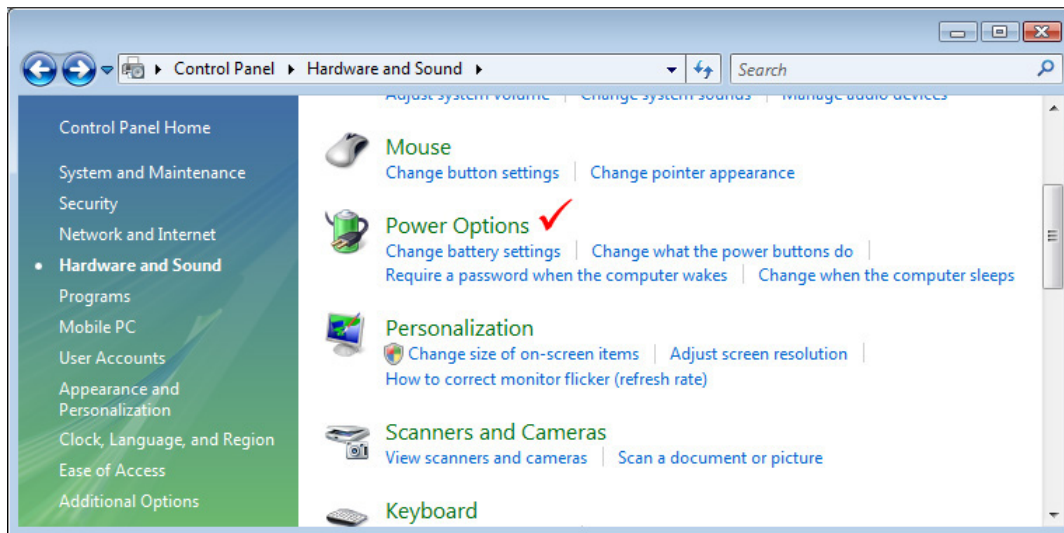
Conclusions

If above measurement results are Pass both in sleep mode and power off mode, then the Main board is judged as normal (Good)

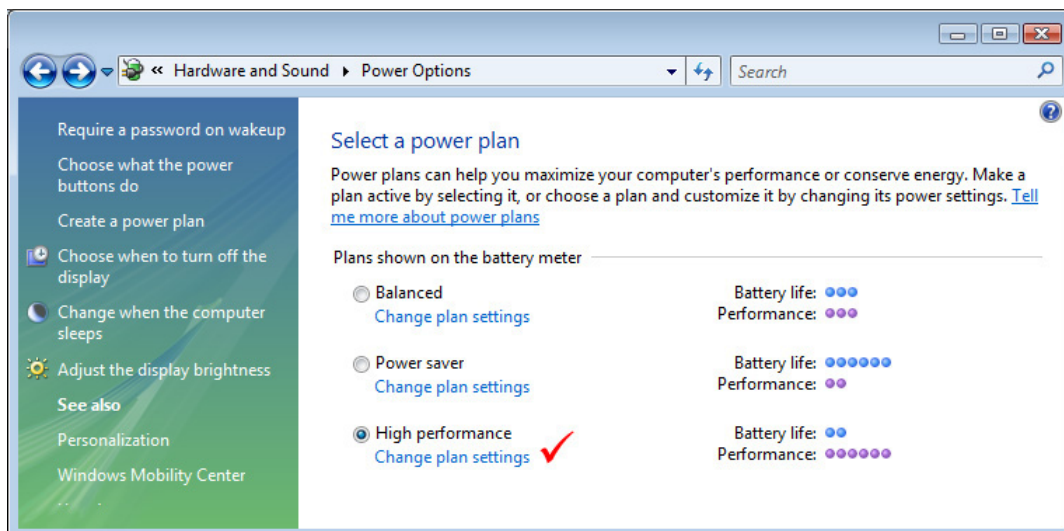
If any of measurement modes is **FAILED**, please replace the main board.

5.2 Battery rundown test procedure

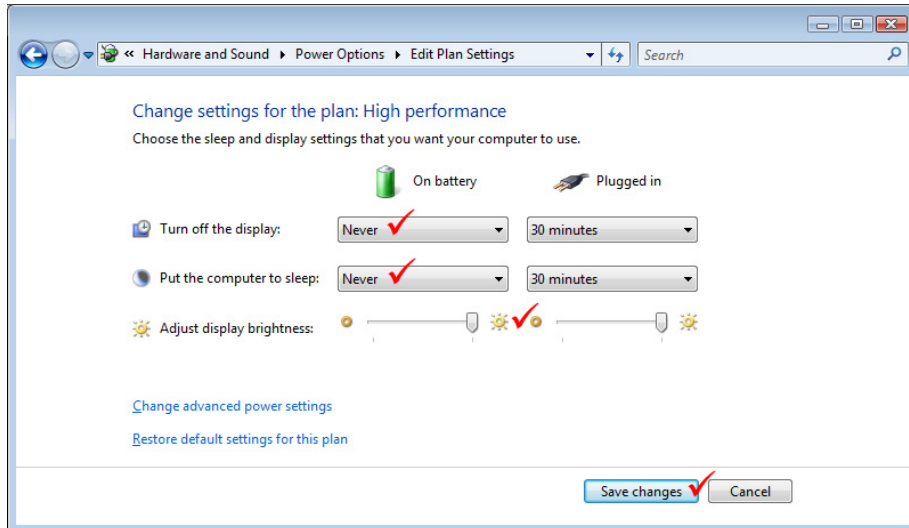
1. Charge the battery capacity till 100%.
2. Disable the screen saver and turn on the flight mode.
3. Choose power options.



4. Choose high performance and then change the plan settings.



5. Make sure never “Turn off the display” and “Put the computer to sleep”, adjust the display brightness to maximum and then save the changes.

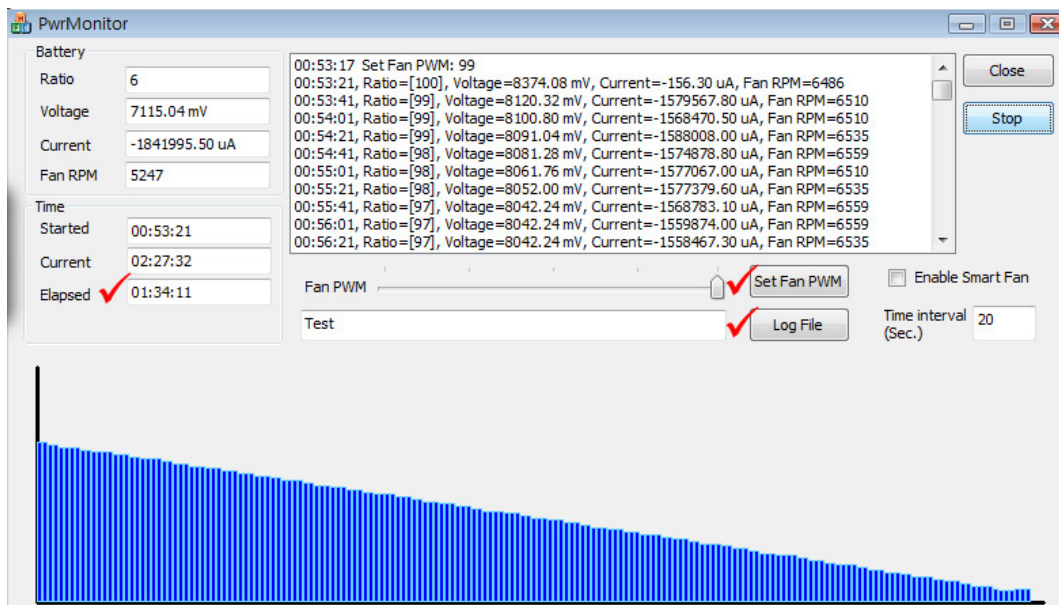


6. Create a **“Retry.bat”** batch file which is contents below text and then run the batch file from the command prompt

```

:retry
dir /a /s
goto retry
  
```

7. Execute the PwrMonitor program. Set the Fan PWM to maximum, fill in the name of the log file then press “Start”. The battery life should be around 1hour 30 minutes. (You can check the test result from the log file as well)

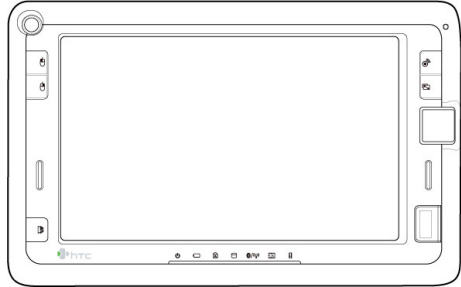

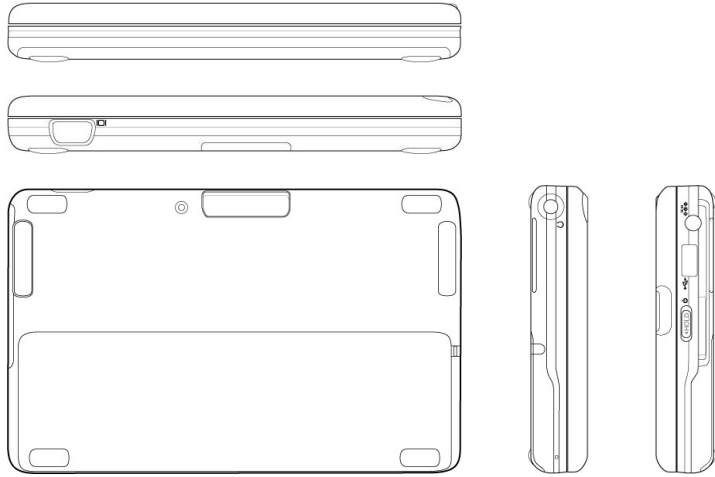


6. Cosmetic Inspection Criteria

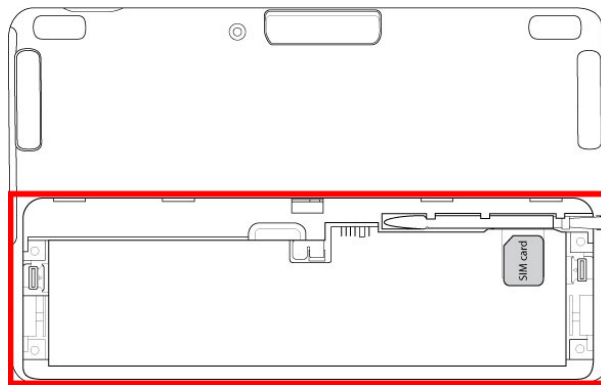
6.1 Classes definition of inspective area

- Class A area => LCM, buttons, LEDs, lens.
- Class B area => Keyboard, C part.
- Class C area => 4 sides and back side (including battery cover)
- Class D area => The area under battery cover, back of sliding and base, inside of battery cover, battery, stylus.

Photo of inspection areas

CLASS A		
CLASS B		
CLASS C		

CLASS D





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IT IS GENERIC COSMETIC INSPECTION CRITERIA FOR ALL PRODUCTS IF THERE HAVE ANY CONFLICT WITH THESE GENERIC CRITERIONS; PLEASE FOLLOW THE PRODUCT INSPECTION CRITERIA RESPECTIVELY.

Description

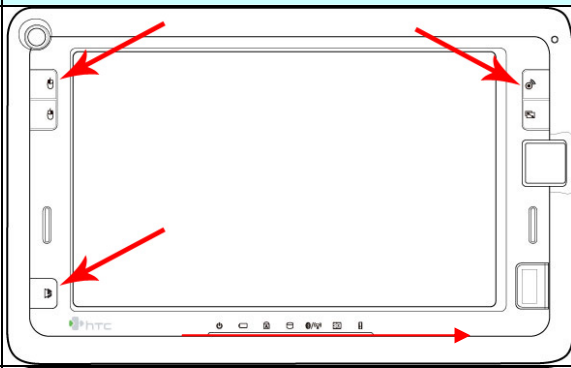
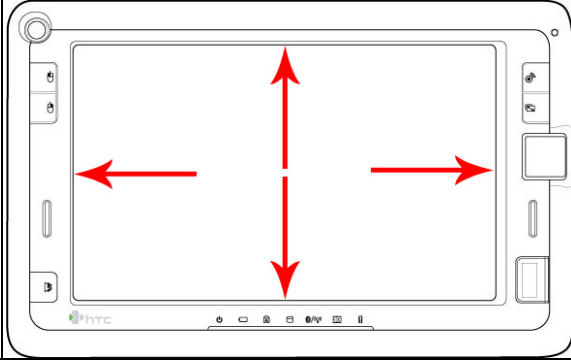
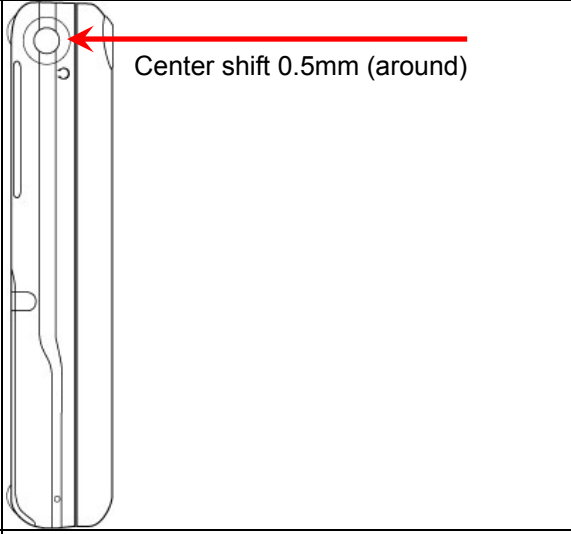
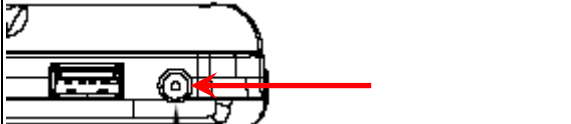
- **D:** Diameter / **L:** Length / **W:** Width / **N:** Number of defects/ **S:** Distance from dot to dot
- Inspecting distance: 30 ± 5cm / Mechanical inspection angle : 90 degrees /
- LCM inspection angle : 90±15 degrees / Inspection time:5 secs per surface.
- Ambient illumination is to be 500-1100 lux
- The inspection condition of Newton ring:
 - a. Inspection distance: 30cm / Inspection time: 5 sec
 - b. Ambient illumination is to be 500-1000 Lux (Incandescent lamp)
 - c. Inspection should be performed under the condition that LCD screen could reflect the mirror image of lamp.
 - d. The criteria of Newton ring's tinges and measure of area must follow up the worst-case sample.

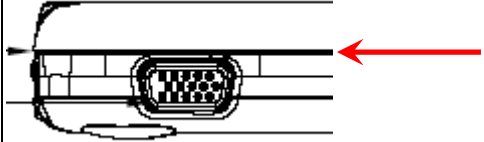

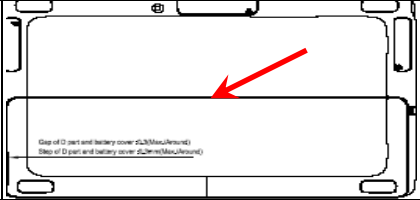

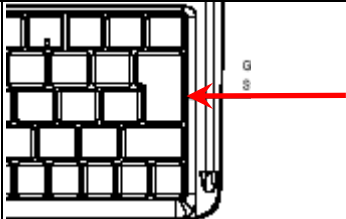
6.2 Display inspection

Inspection Defects		Accept Level	Level
Electrical Characteristic Defects	Bright Dots	Single	Red+ Green+ Blue ≤ 3, S ≥ 5mm.
		2 adjacent	0
		3 or more adjacent	0
	Dark Dots	Single	Total Number ≤ 2, S ≥ 5mm.
		2 adjacent	0
	Dark or Bright lines	0	
	All Allowable Dots Defects	Total Number ≤ 3, S ≥ 5mm.	
Shift and tilt of screen viewed area	The black edge around display area must be detected by front view.		
Foreign Scratch, Objects or Lint on power off status	Scratch	0.03 < W ≤ 0.1 (mm) L ≤ 5 (mm), N ≤ 2 (mm)	
	Lint (linear foreign objects)	0.03 < W ≤ 0.1 (mm) 0.3 < L ≤ 3.0 (mm) N ≤ 5	
	Spots	0.1 < D ≤ 0.3 (mm), N ≤ 4	
	Fish eye on film	0.1 < D ≤ 0.4 (mm), N ≤ 4	
	Breakage on film surface	Not acceptable	
	Total acceptable defect quantity	≤ 10	

6.3 Main unit inspection

GAP & STEP INSPECTIONS

Area	Spec.	Illustration
Button * 5	$\leq 0.35\text{mm}$	
LCD to A part	$\leq 0.7\text{mm}$	
Audio Jack	Max – Min = 0.5mm	
DC in Jack	Max – Min = 0.5mm	

Gap between B & C part	Max: 1.0mm Max – Min = 0.8mm	
Gap between C & D part	Max: 0.3mm	
Battery Cover	Max: 0.3mm	
Stylus	Max: 0.3mm	
Gap between keyboard & C part	Max: 0.3mm	

COSMETIC INSPECTION:

✧ Micro Pad:

Scratch, Exposure of substrate do not accept

$L \leq 2\text{mm}$, $W \leq 0.1\text{mm}$, $N \leq 2$, $S \geq 10\text{mm}$.

✧ Finger Printer:

Device can't sink.

Dent/Dot/ Granule/contamination:

IC : $D \leq 0.2\text{mm}$

Plastic : $D \leq 0.3\text{mm}$

Total : $N \leq 2$, $S \geq 3\text{mm}$



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- ✧ Scratch (include IC and plastic) : Exposure of substrate do not accept
 $L \leq 2\text{mm}$, $W \leq 0.1\text{mm}$, $N \leq 2$, $S \geq 3\text{ mm}$
- ✧ Speaker Net and Fan Net : Do not allow deform and paint off.
- ✧ Not allow battery connector pin and SIM/Micro SD Conn. Deform.
 The hook of battery cover also can't allow broken and deform.

OTHERS

Scratch		
Description	Accept Criteria	
Class A	Exposure of substrate do not accept Scratch : $L \leq 4\text{mm}$, $W \leq 0.2\text{mm}$, $N \leq 2$, $S \geq 10\text{mm}$	MI
Class C	Label area don't care Exposure of substrate do not accept Scratch : $L \leq 10\text{mm}$, $W \leq 0.4\text{mm}$, $N \leq 5$, $S \geq 5\text{mm}$	MI
Contamination dot/Granule dot/Cave granule		
Description	Accept Criteria	
Class A	$D \leq 0.5\text{mm}$, $N \leq 2$, $S \geq 15\text{ mm}$ (Ignored if $D \leq 0.15\text{mm}$)	MI
Class C	$D < 0.9\text{mm}$, $N \leq 4$, $S \geq 10\text{ mm}$	MI
Burr		
Description	Accept Criteria	
Burr.	Don't accept hand scrape	MI
Imprint mark		
Description	Accept Criteria	
Class A	$0.25 \leq \text{diameter} \leq 0.65\text{mm}$, $N \leq 3$	MI
Bright mark		
Description	Accept Criteria	
Class A	$L \leq 2.5\text{mm}$, $W \leq 0.25\text{mm}$, $N \leq 3$	MI
Class C	$L \leq 3.0\text{mm}$, $W \leq 0.3\text{mm}$, $N \leq 5$	MI
Lint		
Description	Accept Criteria	
Class A	$L \leq 3\text{mm}$, $W \leq 0.2\text{mm}$, $N \leq 2$, $S \geq 5\text{ mm}$	MI
Class C	$L \leq 10\text{mm}$, $W \leq 0.3\text{ mm}$, $N \leq 3$	MI



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7. Generic Troubleshooting

1 · Main Unit Does Not Respond to Power Button

- (1) Connect the AC adapter, maybe the battery pack is exhaust and wait few minutes for battery recharging.
- (2) Check if battery installed well.
- (3) Check the Power Button whether it's damaged.
- (4) Replace another battery pack.
- (5) Check all connectors including LCD FPC to Main Board.
- (6) Replace Main Board if necessary.
- (7) Once the defective part has been identified, verify the defective part again whether the symptom could be duplicated with another unit.

2 · Touch Panel Does Not Respond to Screen Tap

- (1) Check the connection of LCM FPC cable whether is properly connected.
- (2) Try to cold boot the unit then perform screen tap again.
- (3) Try with another LCM.
- (4) Try with another Main Board.
- (5) Replace LCM if necessary
- (6) Replace Main Board if necessary.
- (7) Once the defective part has been identified, verify the defective part again whether the symptom could be duplicated with another unit.

3 · Buttons Does Not Respond

- (1) Try to reboot the unit then tries again.
- (2) Dismantle the unit; check the status of switches and the plastic parts of the Button not responding.
- (3) Try with another Main Board, JOGBAR or Main FPC.
- (4) Replace Main Board if necessary.
- (5) Once the defective part has been identified, verify the defective part again whether the symptom could be duplicated with another unit.

4 · Micro PAD Does Not Respond

- (1) Try to reboot the unit then tries again.
- (2) Dismantle the unit; check the status of micro PAD and the FPC connection is properly installed.
- (3) Try with another micro PAD, Main Board, JOGBAR FPC or Main FPC.
- (4) Replace micro PAD, Main Board, JOGBAR FPC or Main FPC if necessary.



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(5) Once the defective part has been identified, verify the defective part again whether the symptom could be duplicated with another unit.

5 · Unusual Vertical / Horizontal lines or partial display

- (1) Check the connection of LCM FPC whether is properly connected.
- (2) Try to reboot the unit then tries again.
- (3) Try to re-install the OS.
- (4) Try with another LCM or LCM FPC.
- (5) Try with another Main Board.
- (6) Replace LCM, Main Board or LCM FPC if necessary
- (7) Replace Main Board if necessary.
- (8) Once the defective part has been identified, verify it again with the defective part whether the symptom could be duplicated.

6 · Back Light Does Not Turn ON/OFF

- (1) Check the connection of LCM FPC whether is properly connected.
- (2) Try to re-flash the ROM code.
- (3) Try with another LCM.
- (4) Try with another Main Board.
- (5) Replace LCM if necessary
- (6) Replace Main Board if necessary.
- (7) Once the defective part has been identified, verify it again with the defective part whether the symptom could be duplicated.

7 · SD Card cannot be used

- (1) Check whether SD Card is fully inserted to the slot until you hear a click.
- (2) Dismantle and Check whether the SD FPC board is properly installed
- (3) Try to re-install the OS.
- (4) Try with another SD Card.
- (5) Try with another Main Board or SD FPC board.
- (6) Replace Main Board or SD FPC board if necessary.
- (7) Once the defective part has been identified, verify it again with the defective part whether the symptom could be duplicated.



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8 · USB Connection not possible

- (1) Check whether it connects with other USB devices, customer's devices might be failed.
- (2) Check the external appearance of the connector on the unit whether it is physically damaged.
- (3) Try to re-install the OS.
- (4) Replace Main Board if necessary.
- (5) Once the defective part has been identified, verify it again with the defective part whether the symptom could be duplicated.

9 · No VGA output

- (1) Check whether it displays with other display devices, customer's devices might be failed.
- (2) Check whether the keyboard function is normal, try to switch through display application.
- (3) Check the external appearance of the connector on the unit whether it is physically damaged.
- (4) Try to re-install the OS.
- (5) Replace Main Board if necessary.
- (6) Once the defective part has been identified, verify it again with the defective part whether the symptom could be duplicated.

10 · Battery Pack does not start

- (1) Make sure the battery cover is closed properly.
- (2) Connect to the AC Adapter and see if it takes charge. Also check AC Adapter condition.
- (3) Check whether AC Adapter is functioning properly.
- (4) Check whether the condition of Battery Charging status is correct.
- (5) Check the appearance of Battery Pack if any abnormal..
- (6) Try with another Battery Pack or Replace Battery Pack if necessary
- (7) Try with another Main Board or Replace Main Board if necessary.
- (8) Once the defective part has been identified, verify it again with the defective part whether the symptom could be duplicated.

11 · Battery discharges quickly even after fully charged

- (1) Make sure the Battery Pack takes fully charge with AC Adapter.
- (2) Check whether the condition of Battery Charging status is correct.
- (3) Dismantle the unit and check the appearance of Battery Pack.
- (4) Try with another Battery Pack or Replace Battery Pack if necessary
- (5) Try with another Main Board or Replace Main Board if necessary.



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(6) Once the defective part has been identified, verify it again with the defective part whether the symptom could be duplicated.

12 · Battery Pack does not recharge

- (1) Make sure the Battery Pack takes fully charge with AC Adapter.
- (2) Check whether the condition of Battery Charging status is correct. Charge should be done no more than 4 hours.
- (3) Dismantle the unit and check the appearance of Battery Pack.
- (4) Try with another Battery Pack or Replace Battery Pack if necessary
- (5) Try with another Main Board or Replace Main Board if necessary.
- (6) Once the defective part has been identified, verify it again with the defective part whether the symptom could be duplicated.

13 · No Sound from Speaker or Distorted sound

- (1) Check "Sound" Settings in the unit for Sound Enabling.
- (2) Make sure it's not MUTED.
- (3) Try to re-install the OS.
- (4) Dismantle and Check whether the Main FPC is properly installed.
- (5) Dismantle and Check whether the Speaker is properly installed (Orientation)
- (6) Replace Speaker if necessary.
- (7) Replace Main FPC if necessary.
- (8) Replace Main Board if necessary.
- (9) Once the defective part has been identified, verify it again with the defective part whether the symptom could be duplicated.

14 · No Recorded Sound or Distorted sound

- (1) Check "Sound" Settings in the unit for Sound Enabling.
- (2) Make sure it's not MUTED.
- (3) Try to re-install the OS.
- (4) Dismantle and Check whether the Microphone and Microphone FPC is properly installed.
- (5) Replace Microphone FPC if necessary.
- (6) Replace Microphone if necessary.
- (7) Replace Main Board if necessary.
- (8) Once the defective part has been identified, verify the defective part again whether the symptom could be duplicated with another unit.



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15 · Wireless connection (WLAN/BT) not functioning

- (1) Make sure the wireless environment is OK before connecting to WLAN.
- (2) Make sure the wireless connection setting has properly set.
- (3) Make a life connection with Internet or another device.
- (4) Try to re-install the OS.
- (5) Try with another main board if necessary
- (6) Once the defective part has been identified, verify the defective part again whether the symptom could be duplicated with another unit.



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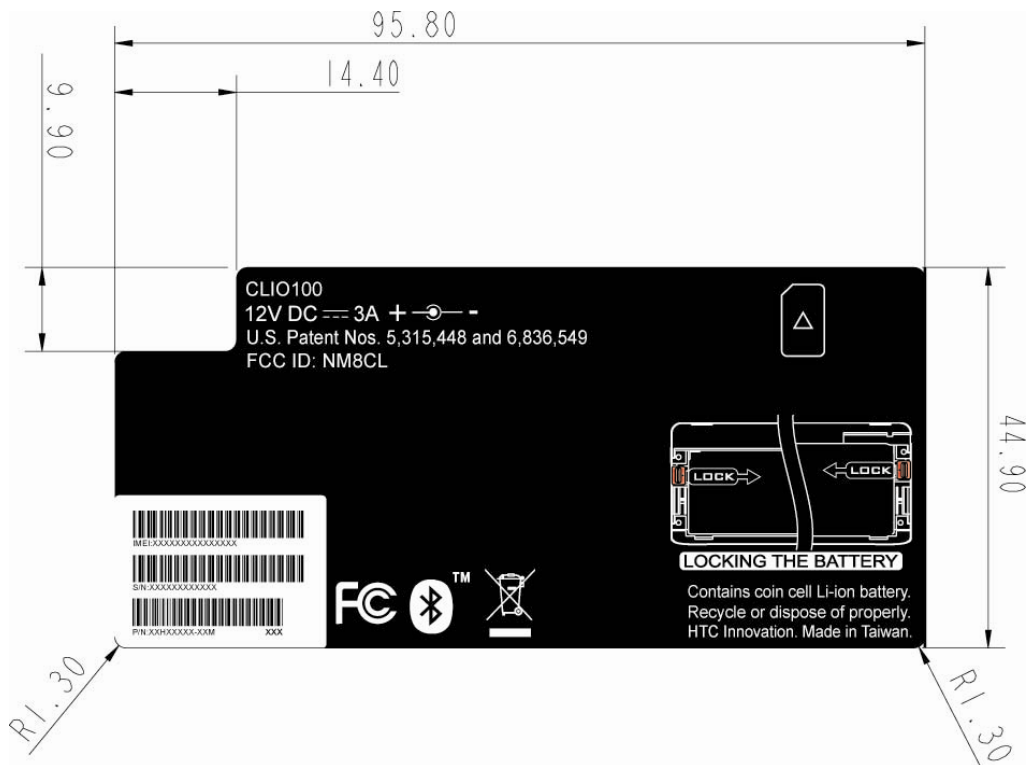
8. Generic Labeling Plan

■ Main unit

■ Agency label_CLIO100

HTC P/N: 77H00533-00M

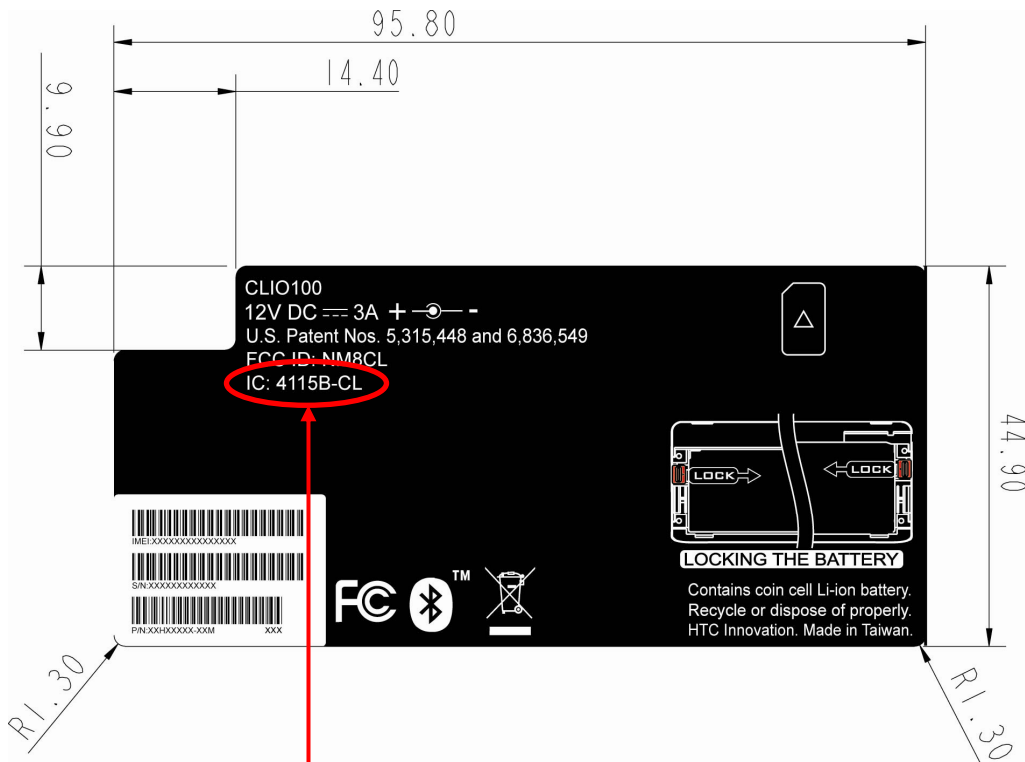
Size: 95.8X 44.9mm



■ **Agency label_CLIO100**

HTC P/N: 77H00533-01M

Size: 95.8X 44.9mm



Add Canada IC ID on CLIO100 agency label.
Running change to 77H00533-01M.



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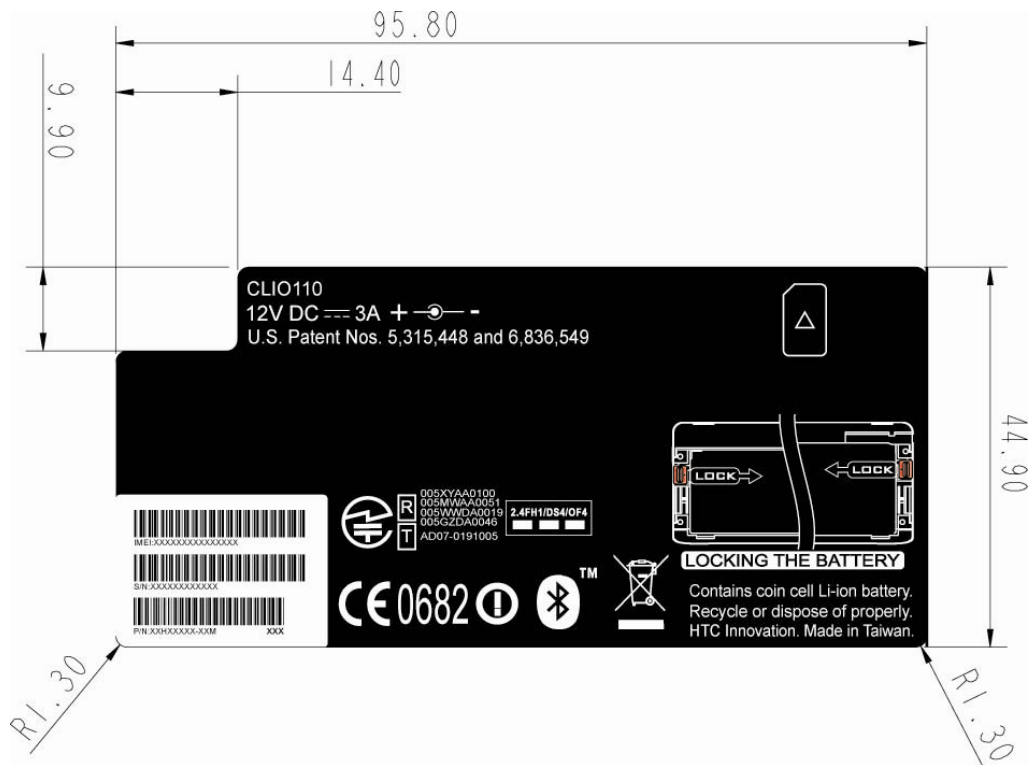
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■ **Agency label_CLIO110**

HTC P/N: 77H00554-00M

Size: 95.8X 44.9mm



■ **BIOS label on MB**

HTC P/N: 77H00545-00M

Size: 10.0 x 10.0mm





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■ **Water sensitive label**

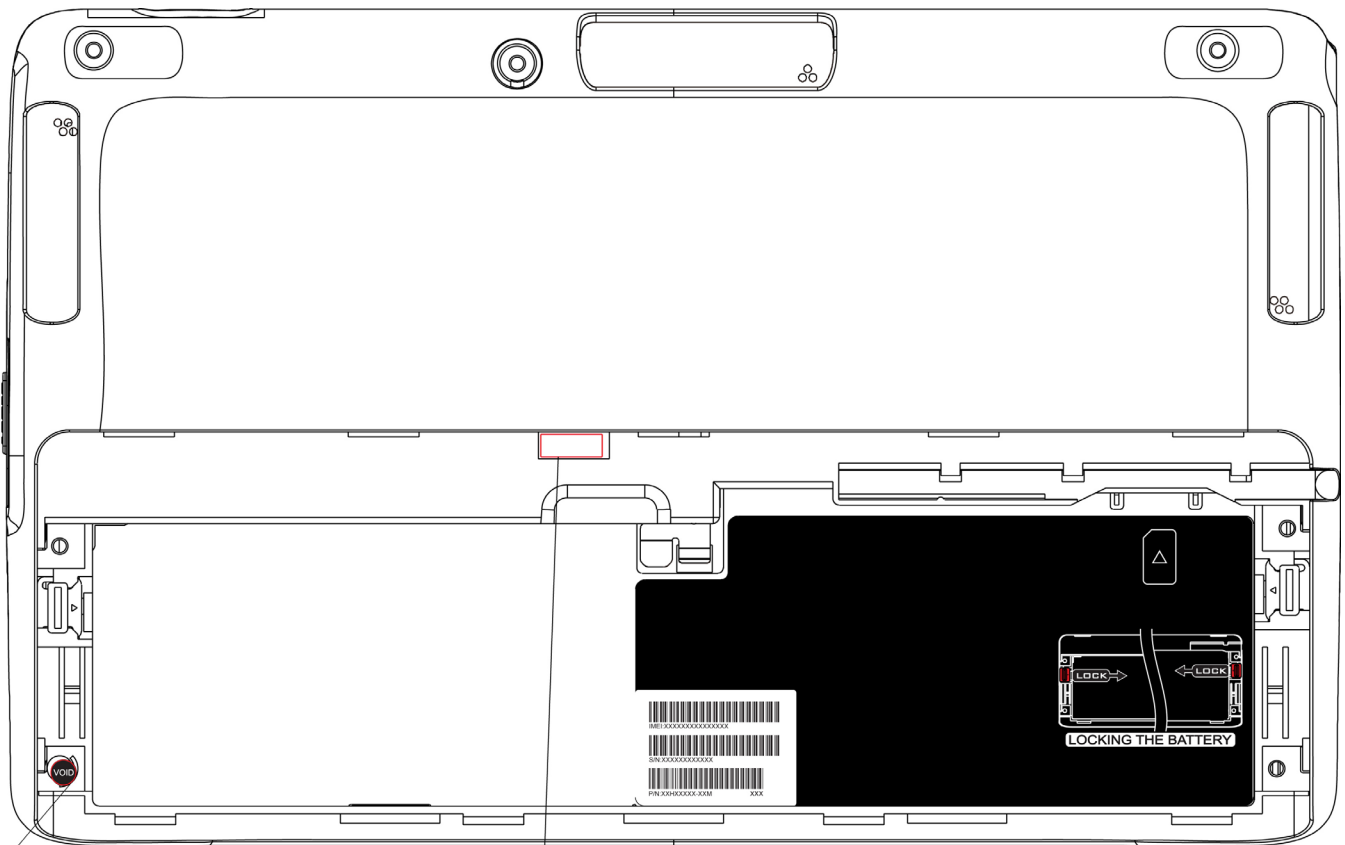
HTC P/N: 77H00193-00M

Qty: 1

■ **Tamper evident label**

HTC P/N: 77H00460-01M

Qty: 1



Tamper Evident label
HTC P/N: 77H00460-01M

Water Sensitive label
HTC P/N: 77H00193-00M

■ **Microsoft Vista Label**

HTC P/N: 77H00556-00M

Size: 12.7 x 17.01mm



6mm +/- 1mm

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■ **COA Label**

COA_Win Mobile Professional 6

HTC P/N: 77H00599-00M

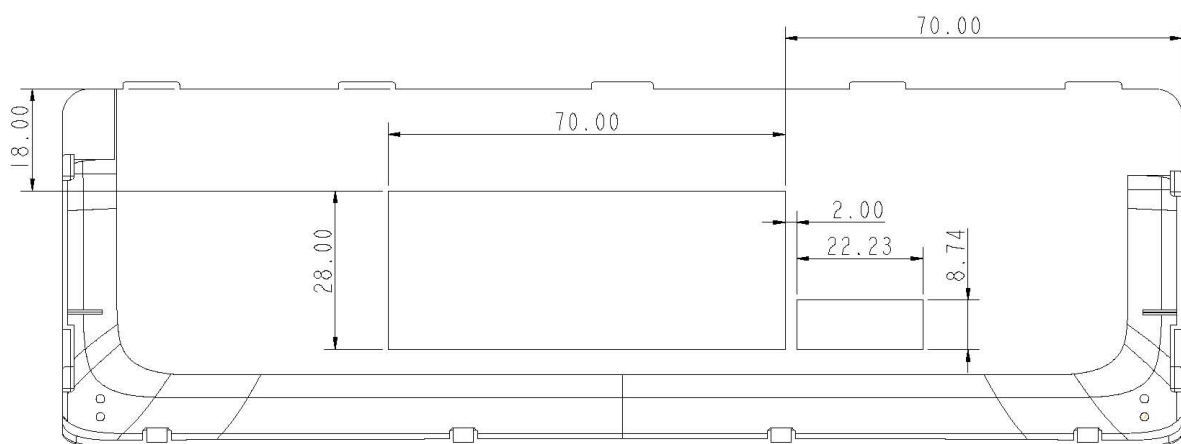
Size: 22.23 x 8.74mm

COA_Vista label

HTC P/N: 77H00567-01M

Size: 70.0 X 28.0mm

Location (on battery cover)





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9. Generic Spare Part List and Photos

9.1 SPL for Repair

Item	P/N	Description	Qty
1	35H00097-01P	BATTERY_LI-MA,16mAh,3V,ML1220 WC DT-6964 14,VARTA,60/-20degC,19*13.5*2.8mm	1
2	35H00098-00M	BATTERY_LI-POLYMER,2700mAh,7.4V,ATL,SIMPLO,MLR600,60/-20degC,48*180*8.6mm	1
3	36H00525-00M	Antenna,G351 139900002,Y&Y	1
4	36H00559-00M	Microphone,SDMF215-42S1033,KDIC	1
5	36H00590-00P	Fan,5V,KSB03505HB-7B09,DELTA,CLIO	1
6	36H00594-00M	Antenna Pre-Assy, MainANT_850MHz, GAN40053A, AMPHENOL, Clio	1
7	36H00615-00M	Speaker,P20VS08G-2-7JJ,VANSONIC	2
8	50H20103-41M	FPC, CLIO-HDD-FPC, GLOBAL FLEX, Tradition-SS_DS, 46.05*20.5*0.27mm, CLIO	1
9	51H00397-00M	PCBA,7200 Baseband Board,Clio	1
10	51H00398-00M	PCBA-MAIN BOARD,XP,CLIO	1
11	51H00406-00M	PCBA,Finger Print Board,Clio	1
12	54H00238-00M	Camera Module,06P049,LITEON	1
13	54H00245-00P	Module Assy, Micro Pad, TM-01046-001, SYNAPTICS, 14*14*0.5mm	1
14	60H00102-00M	TFT-LCD Module,CLAA070LA01AT,中華映管,RGB vertical stripe,7	1
15	65H00007-00P	Micro Drive,40GB,MK4009GAL,disk diameter 1.8 inch,TOSHIBA,71*54*5mm	1
16	71H01812-00M	Holder,HDD CUSHION TOSHIBA,CLIO	1
17	72H01519-00M	Screw,POINT SCREW,M1.6*3,FLAT,Libra	11
18	72H01691-00M	Screw,M1-6,L3-5,T5(2.8*0.7),Black,Herald	3
19	72H01696-00M	Screw,M1.4,L2-0(3.5*0.2),Cross,Herald	3
20	72H01821-00M	Screw,T,RD,M2*5,BLACK+NYLOK	15
21	72H01884-00M	Copper Foil,FPC,MAIN,Clio	1
22	72H01891-00M	Copper Foil,FPC,SWITCH,Clio	1
23	72H02036-00M	Screw,PH,FD(D4*H0.6),M2.0*3,NICKEL,NYLOK	4
24	72H02061-00M	Screw,PH,FD(D3.5*H1),M2.0*6,BLACK+NYLOK,T6	2
25	72H02115-00M	Screw,PH,FD(D3.5*H1),M2.0*3,BLACK+NYLOK,T6	6
26	72H02173-00M	Conductive Fabric,Shielding 3,Clio	1
27	72H02174-00M	Conductive Fabric,Shielding 4,Clio	1
28	72H02242-00M	Conductive Fabric,E-Component,Clio	1



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29	73H00261-00M	Wire,Antenna,W.FP-2LP-04N1-A-(70)A,HIROSE	1
30	73H20096-41M	FPC Pre-Assy,MIC,GLOBAL FLEX,Clio	1
31	73H20100-41M	FPC Pre-Assy,Main FPC,GLOBAL FLEX,Clio	1
32	73H20102-41M	FPC Pre-Assy,JOGBAR,FPC,GLOBAL FLEX,Clio	1
33	73H20104-41M	FPC Pre-Assy,SD FPC Board,GLOBAL FLEX,Clio	1
34	74H00923-00M	Stylus Pre-Assy,STYLUS,CLIO	1
35	74H00924-00M	Bezel Pre-Assy,Keyboard,Clio	1
36	74H00925-00M	Housing Pre-Assy,Keyboard,CLIO	1
37	74H00927-00M	Bezel Pre-Assy,DISPLAY,CLIO	1
38	74H00928-10M	Housing Pre-Assy,WITH HINGE,CLIO	1
39	74H00929-00M	Cover Pre-Assy,BATCVR,CLIO	1
40	74H00943-00M	Keypad Pre-Assy,MOUSE,DISPLAY,CLIO	1
41	74H00944-00M	Keypad Pre-Assy,AP,DISPLAY,CLIO	1
42	74H01017-00M	Shielding Pre-Assy,CATCHER,THERMAL MODULE,Clio	1
43	76H01968-00M	Rubber,Foot,Keyboard,R,SR,CLIO	1
44	76H01969-00M	Rubber,Foot,Keyboard,L,SR,CLIO	1
45	76H01970-00M	Rubber,RF PLUG,SR,CLIO	2
46	76H01981-00M	Mylar,PC,Antenna mylar,Cilo	1
47	76H01995-00M	Mylar,SD bracket and backup battery,PET,Clio	1
48	76H01996-00M	Mylar,FAN INSULATE,PET,Clio	1
49	76H02025-00M	Rubber,Screw_cap,Silicone,CLIO	1
50	76H02278-00M	Rubber,PIONEER,Micro Pad,SILICON,Clio	1
51	76H02040-00M	Tape,20*10*0.05mm,Kapton	1
52	76H02116-00M	Tape,Kapton,Shielding 3,Clio	1
53	76H02202-00M	Mylar,HDD FPC,Kapton,Clio	1
54	76H02219-00M	Tape,BTB connector,Kapton,Clio	1
55	77H00193-00M	Liquid Damage Indicator, ONTARIO	1
56	77H00460-00M	Tamper-Evident Label,with VOID wording ,3*3mm,MING JYE	1
57	77H00533-00M	Regulation Label,MING JYE,80*35mm,CLIO100,Clio	1
58	78H00012-00M	Keyboard,US KB Moudle,HMB3105HCA,OKI,Clio	1
59	76H02454-00M	Poron,3*3*3mm,ML32,Clio	1
60	76H02284-00M	Sponge,FOR SIM SOCKET,35*23*1.5mm,P1800,PIONEER,Clio	1
61	72H02308-00M	Screw,THREAD DIA_6*0.8,T,FD,M2*5,BLACK+NYLOCK, POINT SCREW	3
62	72H02285-00M	Screw,M2*5-Y1,S,BLACK+NYLOCK	2
63	72H02286-00M	Screw,M2*5-Y2,S,BLACK+NYLOCK	1
64	76H02435-00M	Adhesive-Double Tape,MICROPAD,3M 468 MP,CLIO	1



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NOTE:

THE PHOTO OF SPL IS GENERIC AND FOR REFERENCE ONLY, THE COLOR AND THE APPEARANCE MAY BE DIFFERENT FROM THE SHIPPED PARTS, IF YOU WANT TO APPLY THOSE PARTS, PLEASE CONTACT YOUR SERVICE ACCOUNT MANAGER FOR MORE INFORMATION.

AS FOR PICTURE, PLEASE REFER TO THE TABLE AS BELOW.

Picture for SPL 80H Kernel and Accessories

(Part no on picture is for Generic version only, please check SPL for detail per customer)

Part no	72H02036-00M		Part no	72H01696-00M	
Description	Screw, M2.0*3, NICKEL, NYLOK		Description	Screw, M1.4, L2-0(3.5*0.2), Cross	
Quantity	4		Quantity	3	
Refurbishment	No		Refurbishment	No	
Part no	72H02115-00M		Part no	72H02061-00M	
Description	Screw, M2.0*3, BLACK+NYLOK, T6		Description	Screw, M2.0*6, BLACK+NYLOK, T6	
Quantity	6		Quantity	2	
Refurbishment	No		Refurbishment	No	
Part no	72H01691-00M		Part no	72H01519-00M	
Description	Screw, T5(2.8*0.7), Black		Description	Screw, POINT SCREW, M1.6*3, FLAT	
Quantity	3		Quantity	11	
Refurbishment	No		Refurbishment	No	



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Part no	72H01821-00M		Part no	73H20102-41M	
Description	Screw, M2*5, BLACK+NYLOK		Description	FPC Pre-Assy, JOGBAR	
Quantity	15		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	73H20096-41M		Part no	73H20100-41M	
Description	FPC Pre-Assy, MIC		Description	FPC Pre-Assy, Main FPC	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	50H20103-41M		Part no	73H20104-41M	
Description	HDD-FPC		Description	FPC Pre-Assy, SD FPC Board	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	35H00097-01P		Part no	35H00098-00M	
Description	BATTERY_LI-MA, 16mAh, 3V		Description	BATTERY_LI-POLYMER, 2700mAh, 7.4V	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	74H01095-00M		Part no	73H00261-00M	
Description	Holder Pre-Assy		Description	Wire, Antenna	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	

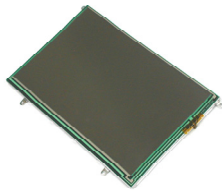



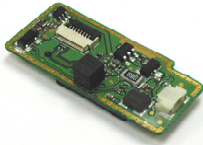

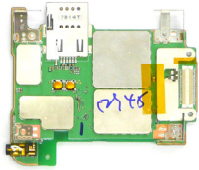
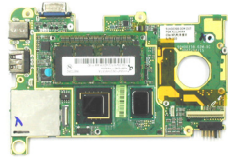
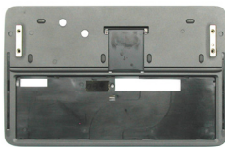




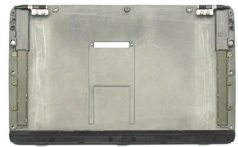








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Part no	65H00007-00P		Part no	36H00525-00M	
Description	Micro Drive, 40GB, disk diameter 1.8 inch		Description	Antenna	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	36H00594-00M		Part no	36H00615-00M	
Description	Antenna Pre-Assy, MainAntenna		Description	Speaker	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	36H00559-00M		Part no	54H00238-00M	
Description	Microphone		Description	Camera Module	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	74H00943-00M		Part no	74H00944-00M	
Description	Keypad Pre-Assy, MOUSE		Description	Keypad Pre-Assy, AP	
Quantity	1		Quantity	1	
Refurbishment	Yes		Refurbishment	Yes	
Part no	74H00923-00M		Part no	78H00012-00M	
Description	Stylus		Description	Keyboard, US KB	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	Yes	

Part no	60H00102-00M		Part no	54H00245-00P	
Description	TFT-LCD Module, 7 inch Panel, 6*165*104mm		Description	Micro Pad	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	74H01017-00M		Part no	36H00590-00P	
Description	THERMAL MODULE		Description	Fan,5V	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	51H00406-00M		Part no	74H00929-00M	
Description	Finger Print Board		Description	Battery Cover	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	Yes	
Part no	51H00397-XXM		Part no	51H00398-00M	
Description	Baseband Board		Description	MAIN BOARD	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	74H00924-00M		Part no	74H00925-00M	
Description	Bezel Pre-Assy, Keyboard		Description	Housing Pre-Assy, Keyboard	
Quantity	1		Quantity	1	
Refurbishment	Yes		Refurbishment	Yes	










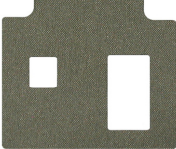
Part no	74H00927-00M		Part no	74H00928-10M	
Description	Bezel Pre-Assy, DISPLAY		Description	Housing Pre-Assy, WITH HINGE	
Quantity	1		Quantity	1	
Refurbishment	Yes		Refurbishment	Yes	
Part no	76H01969-00M		Part no	76H01968-00M	
Description	Rubber Foot, Left		Description	Rubber Foot, Right	
Quantity	1		Quantity	1	
Refurbishment	Yes		Refurbishment	Yes	
Part no	76H01970-00M		Part no	76H02025-00M	
Description	RF PLUG		Description	Screw Cap	
Quantity	2		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	76H01981-00M		Part no	76H02040-00M	
Description	Mylar, Antenna Mylar		Description	Kapton Tape, 20*10*0.05mm	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	76H02202-00M		Part no	76H02301-00M	
Description	Kapton Tape, HDD FPC		Description	Poron	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	



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Part no	72H02174-00M		Part no	76H02116-00M	
Description	Conductive Fabric		Description	Kapton Tape	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	72H02173-00M		Part no	72H02242-00M	
Description	Conductive Fabric		Description	Conductive Fabric	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	76H01995-00M		Part no	72H01884-00M	
Description	Mylar, SD bracket and backup battery		Description	Copper Foil, Main FPC	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	76H01996-00M		Part no	77H00533-00M	
Description	Mylar, FAN INSULATE		Description	Regulation Label	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	77H00460-00M		Part no	72H02368-00M	
Description	Tamper-Evident Label, with VOID wording		Description	EMI Gasket	
Quantity	1		Quantity	2	
Refurbishment	No		Refurbishment	No	

Part no	77H00193-00M		Part no	76H02419-00M	
Description	Liquid Damage Indicator Label		Description	Kapton tape, 10*3*0.05mm	
Quantity	1		Quantity	3	
Refurbishment	No		Refurbishment	No	
Part no	76H02435-00M		Part no	76H02454-00M	
Description	Adhesive-Double Tape, MICROPAD		Description	Poron, 3*3*3mm	
Quantity	1		Quantity	1	
Refurbishment	No		Refurbishment	No	
Part no	76H02284-00M		Part no	72H02308-00M	
Description	Sponge, 35*23*1.5mm		Description	Screw, THREAD DIA_6*0.8, M2*5	
Quantity	1		Quantity	3	
Refurbishment	No		Refurbishment	No	
Part no	72H02285-00M		Part no	72H02286-00M	
Description	Screw, M2*5-Y1		Description	Screw, M2*5-Y2	
Quantity	2		Quantity	1	
Refurbishment	No		Refurbishment	No	

9.2 Board Level 2.5 Repairs

■ Basic Repair Instructions for Component Replacement:

Step 1 Place the solder-proof tape to cover the surrounding area of the components which being replaced.

Warning : DO NOT overheat the tape and components to avoid the tape melted and the components damaged

Step 2 Use Heater Gun (HAKO850B, set the temperature between 350°C, Air Speed 3~5) to remove the components.

Step 3 Wait till the temperature cool down before removing the solder-proof tape to avoid other components being removed

Step 4 After the damaged or defective components have been replaced; clear the surroundings for solder and flux residues.

Notice:

- A. Check the polarity and the position of the components, it can't be shifted, reversed or lifted.
- B. All the parts of the PCB should be checked if it is missing or not.
- C. The OP must to wear antistatic wrist strap .Don't put boards together and avoid hitting them.
- D. When you solder and repair that the soldering iron temperature must be setup 415°C . (The temperature range is 415°C±5°C),and the solder wire's diameter is 0.4/0.5/0.6mm(SAC 305 (1.1%))
- E. Please be noticed to follow below steps for main board repair which is equipped with **Golden**

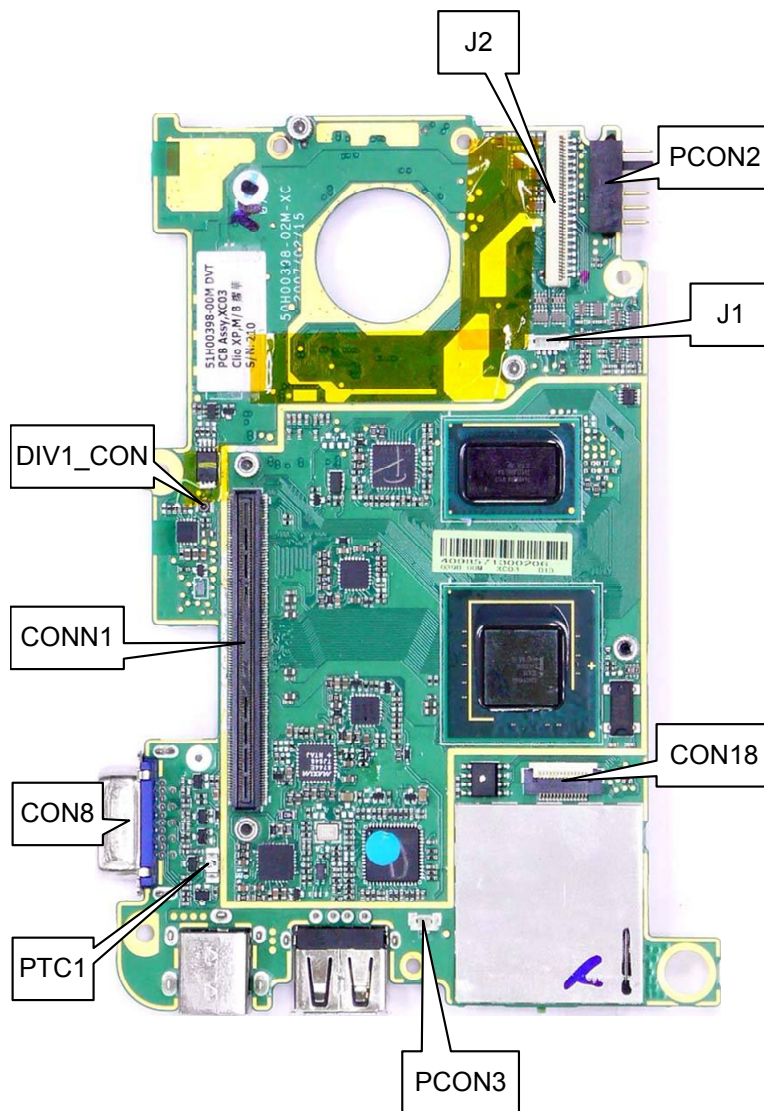
Capacitor:

1. When replacing level 2.5 components located around the golden capacitor:
 - I. The temperature of the hot air blower must be under 400°c
 - II. When apply the hot air to the part / component, the heating time must be under 20 seconds (including the time of removing and soldering)
 - III. The temperature of the soldering iron must be under 350°c
 - IV. When apply the solder tip to the part / component, the heating time must be under 5 seconds
 - V. The solder tip must not contact with the golden capacitor
2. For BGA replacement: The golden capacitor must be removed before perform pre-heating, heating, soldering and de-soldering process, and then it must be replaced with a new one (please refer to 1.c. and 1.d. steps)
3. For main board which failed to pass the function test, the golden capacitor must be replaced with a new one and must follow below soldering criteria: The temperature of the soldering iron must be under 350°c When apply the solder tip to the part / component, the heating time must be under 5 seconds The solder tip must not have a contact with the body of golden capacitor

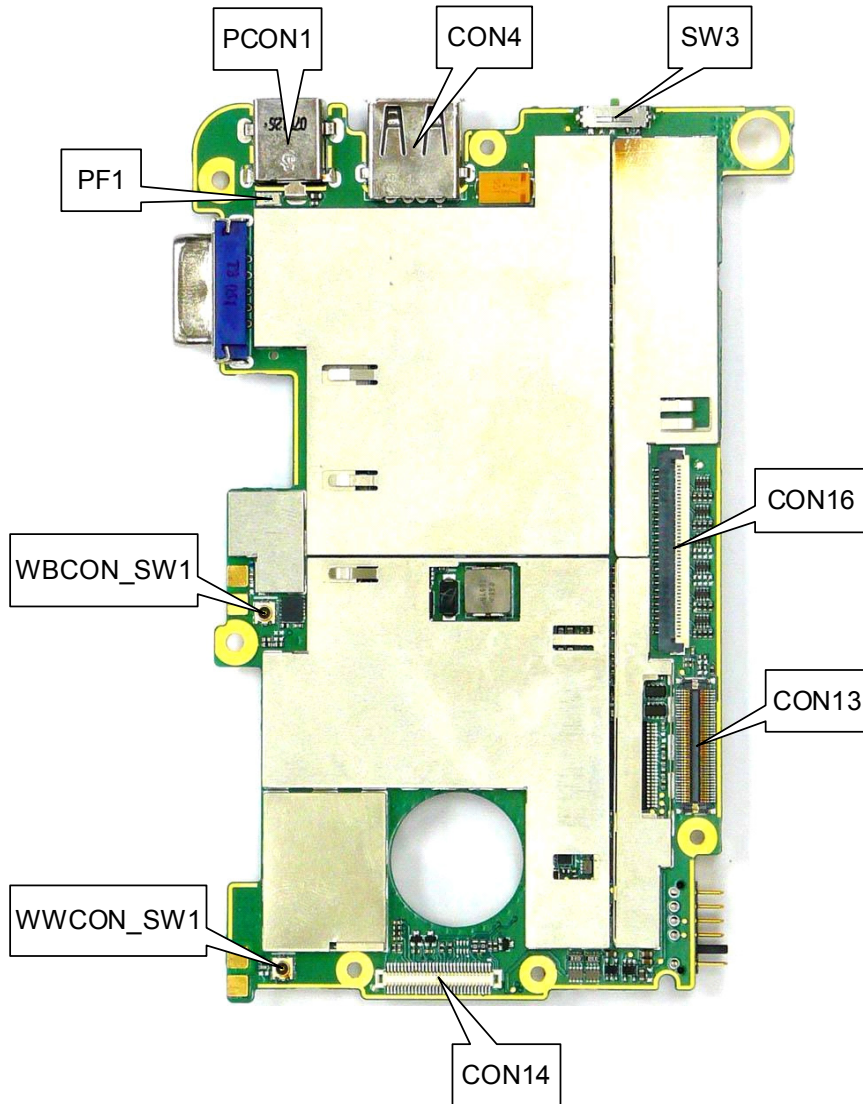


MAIN BOARD (51H00398-00M)

TOP SIDE



BOTTOM SIDE





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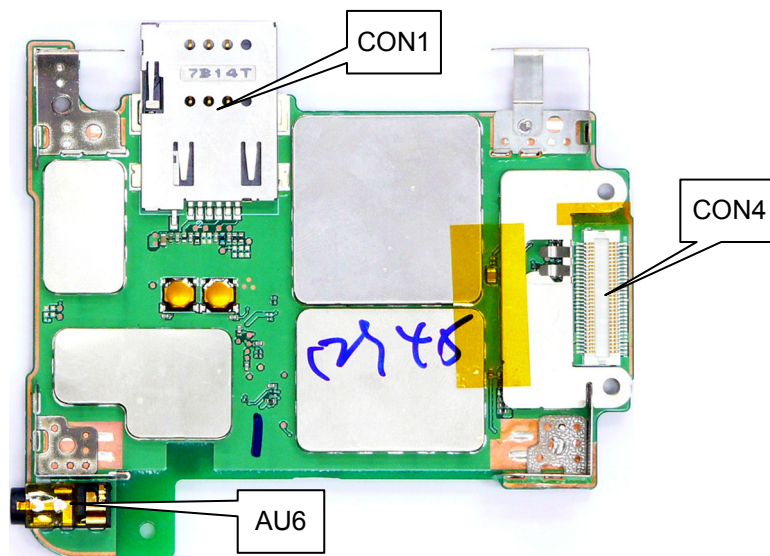
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Item	P/N	Description	Qty	Location
1	36H00301-00M	Fuse, PTC, 1.5A, 6V 0.04 ohm~0.12 ohm, 0.08ohm, +/-50%,1206, SMD1206P150TF, POLYTRONICS, 85/-40degC, 3.5*1.8*1.8mm	1	PTC1 (Fuse)
2	36H00497-00M	Switch,Power-hold, SSA-131CHT, MITSUMI	1	SW3 (Power switch)
3	36H00498-00M	DC Jack, 2DC-G328-D04, SINGATRON	1	PCON1 (DC-IN jack)
4	36H00596-00M	Fuse, 5A, 32V, 1206, TR/3216TD5-R, BUSSMANN, 125/-55degC	1	PF1 (Fuse)
5	75H00248-00M	COAXIAL CONNECTOR, RF, WITH SWITCH, SMD, MM8430-2600RA1, MURATA	2	WBCON_SW1 WWCON_SW1 (Antenna connector)
6	75H00307-00M	Connector RF, Female, W.FL-R-SMT-1(10), 4P, Hirose, 2 * 2 * 0.85 mm	1	DIV1_CON (Antenna connector)
7	75H00443-00M	Connector B to B, header, AXK6F60337Y, 60pin, Pitch=0.5mm, Ni Barrier, MATSUSHITA	1	CON14 (Board to board connector)
8	75H00596-00M	Connector(HDD), 40P, 0.5mm pitch, (40)FLT-SM2-GSA(LF)(SN), JST, 0.5A, 50V, 10mohm	1	J2 (HDD connector)
9	75H00597-00M	Connector B to C, 2P, 0.8mm pitch, BM02B-SURS-TF(LF)(SN), JST, 0.5A, 30V, 20mohm	1	PCON3 (Backup battery connector)
10	75H00600-00M	Connector Others, Fan, 4P, 0.8mm pitch, BM04B-SURS-TF(LF)(SN), JST, 20mohm, 0.5A, 30V	1	J1 (Fan connector)
11	75H00601-00M	Connector FPC, 24P, 1mm pitch, 6915-Q24N-00R, ENTERY, 20mohm, 0.5A, 50V	1	CON16 (Keyboard connector)
12	75H00619-00M	Connector Others, USB, 4P, 2pitch, 2UB1506-000111, SINGATRON, 30mohm, 1.5A, 250V	1	CON4 (USB connector)
13	75H00622-00M	Connector Others, 214P, 0.4mm pitch, WA6F214VA1TR1800, JAE,SJ101337, 100mohm, 0.3A, 200V	1	CONN1 (Memory connector)
14	75H00630-00M	Connector(D-SUB VGA), 15PIN, 2.29mm pitch, 070112FR015SA27ZR, SUYIN, 50V, 30mohm,	1	CON8 (VGA connector)
15	75H00631-00M	Connector(Battery), 5PIN, 2.5mm pitch, 200069MR005GX01ZL, SUYIN, 2A, 12V, 40mohm,	1	PCON2 (Battery connector)
16	75H00636-00P	Connector B to B, 80P, 0.4Pitch, 24 5801 080 002 829+, KYOCERA, Female, without position boss	1	CON13 (Main FPC connector)
17	75H00660-00M	Connector B to C, 14P, 0.5pitch, 6705-F14N-00R, ENTERY, 20mohm, 0.5A, 50V, 11.1x4.47x1.53mm	1	CON18 (Card reader)

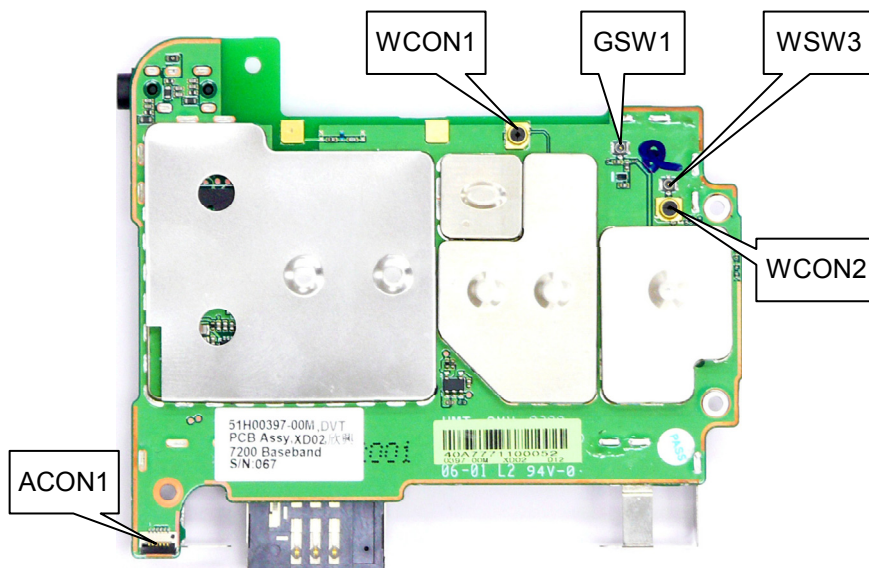


BASEBAND BOARD (51H00397-XXM)

TOP SIDE



BOTTOM SIDE





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Item	P/N	Description	Qty	Location
1	36H00218-11M	Audio Jack, JP011-D4BA-3602XT, 3.5mm, T-MEC	1	AU6 (Audio jack)
2	75H00307-00M	Connector RF, Female, W.FL-R-SMT-1(10), 4P, Hirose, 2 * 2 * 0.85 mm	2	GSW1, WSW3 (Antenna connector)
3	75H00514-00P	Connector RF, Female, 4P, MS-162, HIROSE, 3.5*3.1*2.5mm	2	WCON1, WCON2 (Ext antenna connector)
4	75H00590-00M	Connector B to B, 60P, 0.5Pitch, AXK5F60337YG, MATSUSHITA, 90mohm, 0.5A, 60V	1	CON4 (Board to board connector)
5	75H00598-00M	Connector FPC, 6P, 0.5 pitch, FH19SC-6S-0.5SH-05, HIROSE, 0.5A, 50V, Touch sensor	1	ACON1 (Mic FPC connector)
6	75H00661-00M	Connector SIM Card, 7P, 1.25pitch, 20412-06082, ACES, 100mohm, 0.5A, 5V	1	CON1 (SIM card connector)



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10. RF Antenna Specification

GSM Antenna Test Specification					
Item	Test Name	TX Level	TCH	1st Downlink cell power	note
1	Wait_Signal	0	512	-65	
2	Power_Class	0	512	-65	
PCS 1900 Receiver Test					
3	Fast Bit Error Rate	0	512	-104	<= 2 %
4	Fast Bit Error Rate	0	661	-104	
5	Fast Bit Error Rate	0	810	-104	
PCS 1900 Transmitter Test					
6	TX Power	0	512	-75	>= 26 dbm
7	TX Power	0	661	-75	
8	TX Power	0	810	-75	
GSM 850 Receiver Test					
9	Fast Bit Error Rate	5	128	-100	<= 2 %
10	Fast Bit Error Rate	5	189	-100	
11	Fast Bit Error Rate	5	251	-100	
GSM 850 Transmitter Test					
12	TX Power	5	128	-75	>= 29 dbm
13	TX Power	5	189	-75	
14	TX Power	5	251	-75	
GSM 900 Receiver Test					
15	Fast Bit Error Rate	5	975	-100	<= 2 %
16	Fast Bit Error Rate	5	37	-100	
17	Fast Bit Error Rate	5	124	-100	
GSM 900 Transmitter Test					
18	TX Power	5	975	-75	>= 29 dbm
19	TX Power	5	37	-75	
20	TX Power	5	124	-75	
PCS 1800 Receiver Test					
21	Fast Bit Error Rate	0	512	-104	<= 2 %
22	Fast Bit Error Rate	0	698	-104	
23	Fast Bit Error Rate	0	885	-104	



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PCS 1800 Transmitter Test					
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24	TX Power	0	512	-75	>= 26 dbm
25	TX Power	0	698	-75	
26	TX Power	0	885	-75	



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WCDMA Antenna Test Specification

Item	Test Name	TX Level	Uplink / DownlinkUA RF CN	1st Downlink cell power	note
1	Camp@ W-CDMA Band (850)	3	4133 / 4358	-60	
2	BS Originate Cell	3	4133 / 4358	-60	
Receiver Test					
3	Fast Bit Error Rate	3	4133 / 4358	-104	<= 0.1 %
4	Fast Bit Error Rate	3	4175 / 4400	-104	
5	Fast Bit Error Rate	3	4232 / 4457	-104	
Transmitter Test					
6	TX Power	3	4133 / 4358	-75	>= 18 dbm
7	TX Power	3	4175 / 4400	-75	
8	TX Power	3	4232 / 4457	-75	

WCDMA Antenna Test Specification

Item	Test Name	TX Level	Uplink / DownlinkUA RF CN	1st Downlink cell power	note
1	Camp@ W-CDMA Band (1900)	3	9263 / 9663	-60	
2	BS Originate Cell	3	9263 / 9663	-60	
Receiver Test					
3	Fast Bit Error Rate	3	9263 / 9663	-104	<= 0.1 %
4	Fast Bit Error Rate	3	9400 / 9800	-104	
5	Fast Bit Error Rate	3	9537 / 9937	-104	
Transmitter Test					
6	TX Power	3	9263 / 9663	-75	>= 18 dbm
7	TX Power	3	9400 / 9800	-75	
8	TX Power	3	9537 / 9937	-75	



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WCDMA Antenna Test Specification

Item	Test Name	TX Level	Uplink / DownlinkUA RF CN	1st Downlink cell power	note
1	Camp@ W-CDMA Band (2100)	3	9613 / 10563	-60	
2	BS Originate Cell	3	9613 / 10563	-60	
Receiver Test					
3	Fast Bit Error Rate	3	9613 / 10563	-104	<= 0.1 %
4	Fast Bit Error Rate	3	9750 / 10700	-104	
5	Fast Bit Error Rate	3	9887 / 10837	-104	
Transmitter Test					
6	TX Power	3	9613 / 10563	-75	>= 18 dbm
7	TX Power	3	9750 / 10700	-75	
8	TX Power	3	9887 / 10837	-75	