Nike

Service Manual

HTC Proprietary

Confidential Treatment Requested

Rev. A07

HTC Corporation.

Engineering Mobility

REVISION CONTROL TABLE

REV	DATE	CONTENTS	DEPT	REVISED	STAGE
AX01	2007/9/26	First Draft	PSE	Justin_Lai	DVT
AX02	2007/10/11	1. Modify chapter 3. 2. Modify chapter 10.	PSE	Justin_Lai	PVT
A01	2007/10/25	1. Change Screw P/N from 72H02246-00M to 72H02310-00M. 2. Modify chapter 7.3 3. Modify chapter 9. Update NIKI100 & NIKI300 label	PSE	Justin_Lai	MV
A02	2007/11/8	1. As EN-00006960, change 72H02245-00M*5→72h02373-00 m*3+ 72H02287-00M*2	PSE	Justin_Lai	MV
A03	2007/11/14	1. Add chapter 6.1 leakage current test procedure. 2. Modify chapter 3 change some assembly pictures. 3. Modify chapter 10.1 change P/N and SPL pictures.	PSE	Justin_Lai	MV
A04	2007/12/17	1. Modify L2.5 component 2. Change the screw torque from 0.3 to 0.4 KGF-CM.(72H02373-00M & 72H02287-00M) .	PSE	Justin_Lai	MV
A05	2008/1/2	1. Modify the assembly process at page 29. 2. Change the picture of front cover.	PSE	Justin_Lai	MV
A06	2008/1/31	1. Add on LCM assembly process. 2. Revise spare part.	PSE	Justin_Lai	MV
A07	2008/4/21	1. Change 76H02285-00M to 76H02281-00M at page78. 2. Modify L2.5 at page84.	PSE	Justin_Lai	MV

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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.

1.1 Product Features

Platform

- PDA form factor integrated dual modes UMTS/HSDPA and Tri-band GSM/EDGE, Bluetooth, 2 mega-pixel camera, and one stop sliding phone keypad
- Windows Mobile 6 Professional

Dimension

- 107 mm(L) x 55 mm(W) x 15.8 mm(T)
- 120 g with battery pack

Processor/Chipset

- Qualcomm MSM 7200
- TI 6300

Memory

- ROM: 128/ 256 (main SKU) MB (for programs and users' storage)
- RAM: 64/128 (main SKU) MB DDR RAM (96+160 MB)

LCD Module

- 2.6" QVGA dots resolution
- 262K-color TFT LCD with LED back light
- Sensitive Touch Screen

WCDMA/HSDPA (available when ready)/GSM/EDGE Function

- Internal antenna
- Dual mode HSDPA/UMTS 2100MHz and GSM/GPRS/EDGE Tri-band (900/1800/1900)
  - HSDPA/UMTS
    - 2100:1920-1980MHz, 2110-2170MHz
  - GSM/GPRS/EDGE
    - 900: 880-915, 925-960MHz
    - 1800: 1710-1785, 1805-1880MHz
    - 1900: 1850-1910, 1930-1990MHz
- HSDPA / UMTS
  - 3GPP Release 5 compliant
  - UE category 6, 3.6Mbps peak rate (7.2Mbps if available)
  - Concurrent : DL up to 3.6Mbps (7.2Mbps if available) and UL up to 384Kbps
- Global roaming
- Auto band switching
- Handover and cell selection between GSM/EDGE and UMTS
- DTM
- SAIC (Circuit Switch only)
- Audio codec: AMR, EFR, FR, HR
- SMS (MO, MT), concatenated SMS (640 characters)
- Generic services:
  - Call holding/waiting/forwarding
  - Call barring
  - CLI (Calling Line Identity)
  - Display own number
  - Network selection
  - Cell broadcast
  - Multi-party conference call
  - Spool icon
  - Phase 2+ unstructured supplementary service data
  - Network Lock
  - CPHS (partial support)
- EGPRS Functionality
  - EGPRS class B
  - Multi-slot standard class 10 (Class 12- carrier dependent)
  - PBCCH

- Link Adaptation and Incremental Redundancy
- USIM/SIM
  - 1.8/3V of UICC
  - USIM Application at least according to 3GPP TS 31.102
  - SIM Application Tool Kit release 96 complete, 98 class 3, and 99 partial
  - Over the Air (OTA) programming
  - FDN
  - ADN
  - Security Pin 1 & 2 control

Camera

- Main camera:
  - 2 mega-pixel CMOS imagine sensor FF
- 2nd camera:
  - CIF CMOS imagine sensor
- Preview Mirror

Keyboard/Button/Switch

- Power button (position: upper side)
  - Short Press: system on/off
  - Long Press: Turn off power totally
- One 5-way navigation pad
- Send/Hands-free button
  - Long Press during the call: Hands-free On/Off
- End Key/lock button
- Volume Up/ Voice Recording Button (position: left side)
  - Quick Press: Volume Up
  - Long Press: Voice Recording
- Volume Down/Voice Command & Dial Button (position: left side)
  - Quick Press: Volume Down
  - Long Press: Voice Command
- Camera capture button (position: right side)
- Back / Clear button (Dialing pad area)
  - Non-Text mode: Back key
  - Text Editing mode: short press: clear one character or number; long press; clear continually characters or numbers
- Smart Launcher button (Grid menu) (Left soft key)
- Reset
- 2 SKUs Dialing Pad: 12 keys and 20 keys

12-Keys SKU:

- Start button (Left button (Dialing pad area))
- Messaging/Inbox button (Left button (Dialing pad area))
- Portal button (Right button (Dialing pad area))
- Vibrator button (share with # Key)
  - Long Press # Key: Turn off/on Vibration mode
- One numerical dialing pad- 12 keys

20-Keys SKU:

- One numerical dialing pad- 20 keys

Notification

- One bi-color LED for UMTS/GSM standby, UMTS/GSM message, UMTS/GSM network status, notification, and charging status
- One Blue LED for Bluetooth connectivity status
- Vibration for notification and incoming call
- Notification by LED, Sound, message on the display

Audio

- Built-in Microphone
- Receiver
- Loud speaker for Hands-Free supported
- Full duplex
- Audio sampling rate
- 16-bits with 8KHz, 11KHz, 22KHz, 44.1KHz
- AMR/AAC/WAV/WMA/MP3 codec
- Audio Path Routing

- Bluetooth
- Receiver
- Speaker
- Headset

Connectivity & Interface

- Bluetooth
  - Compliant with v2.0 with EDR
  - Class 2 transmit power
  - Supported profiles:
    - GAP (generic access profile)
    - SPP (serial port profile)
    - OPP (object push profile)
    - GOEP (generic object exchange profile)
    - ActiveSync-Over-Bluetooth (legacy application via SPP)
    - HSP (headset profile)
    - HFP (handsfree profile)
    - A2DP (Advanced Audio Distribution profile)
    - AVRCP (Audio/Video Remote control Profile)
    - HID (Human interface device profile)
    - SAP(SIM Access Profile)
    - Service Discovery Application Profile
    - BPP (basic printing profile)
    - FTP (file transfer profile)
    - PAN (personal area networking profile)
- HTC 11-pin mini-USB Connector
  - USB 2.0 Client with Full Speed
  - Audio Jack
  - Support USB charging and synchronization
  - H2W
- Micro SD
- 1.8/3V USIM/SIM card slot
- External RF connector with cover

Power

- Battery
  - Removable and Rechargeable Lithium ion or Lithium-polymer battery, 1100mAh
  - Charging time: 3 hours
- Battery life
  - Playing WMV: 8 hours
  - Playing WMA: 12 hours
  - Talk time: 2.8 ~ 6 hours for GSM based on RF power level 5~12
  - Talk time: 1.5 ~ 4 hours for UMTS based on RF power level 0 dbm~Max
  - Video Telephony time: 60~120 mins based on RF power level 0 dbm~Max
  - Standby time: 150+ hours for GSM based on multiframe 2~5
  - Standby time: 160 ~ 250 hours for UMTS
- AC adaptor
  - AC input: 100 ~ 240V AC, 50/60 Hz
- DC output: 5V and 1A

Liquid Indicator

Stylus

- Retractable stylus with lock type mechanism

Hanger hole

- Stylish hanger to wear phone with neck strap as pendant or to attach various phone hangers

Accessories

- Quick Start Guide [Inbox]
- CD (User manual & Sync. software) [Inbox]
- Screen Protector [Inbox]
- Stylus [Inbox]
- Travel Charger (AC adapter) [Inbox]
- Pouch (Carrying Case) [Inbox]

- USB Sync Cable (mini-USB/USB) [Inbox]
- Battery with battery cover [Inbox]
- Wired Stereo Headset (HS 168 or HS 200) [Inbox]
  Device shall comply both models.
- 3-in-1 stylus
- 3.5 mm Audio Adaptor with Microphone plus 3.5mm stereo headset, HS U110
- Wired Remote Controller with Earphone, RC E100
- Mono Bluetooth Headset, BH M100
- Mono Bluetooth Headset, BH M200
- Stereo Bluetooth Headset, BH S100
- Bluetooth Keyboard
- Y-Cable 11 pin to 5pin + 6pin
- Y-Cable 11 pin to 5pin + 3.5 mm Audio Jack
- 4-in-1 multifunction audio cable
- Car Charger
- Car Holder

Compatibility Test :

Below 3rd party accessories are required to do the compatibility test for all models.

- Handsfree Carkit : Parrot CK3400LS, Parrot MK6100, Parrot Minikit, Audi, BMW & Mercedes incar solutions
- Bluetooth Conference: Parrot Conference
- Bluetooth Speaker: Parrot Boombox
- SanDisk memory cards (including SDHC format) – Micro SD, and test all available memory size.

Windows Mobile 6 Professional

- Microsoft Outlook Mobile
  - Messaging (SMS/E-mail), Contacts, Calendar, Tasks, Email Set Up Wizard
- Microsoft Internet Explorer Mobile
- Microsoft Media Player Mobile
- Microsoft ActiveSync
- Microsoft Windows Mobile Update
- Microsoft Windows Mobile Marketplace
- Internet Sharing
- Picture & Video
- Games
- File Explorer
- Device Management
- Security Enhancement
  - Storage Card Encryption, Device Lock
- Microsoft Office Mobile (optional with extra cost)
  - Word, Excel & PowerPoint Mobile
- Microsoft Windows Live!
  - Windows Live Messenger
  - Windows Live Mail (Push Mail)
  - Windows Live Contacts
  - Windows Live Search
  - Windows Live Spaces
- Microsoft Remote Desktop Mobile (optional with extra cost)

Value Added Applications

- Camera / Camcorder
  - Camera Mode
    - Encoding format: JPEG
    - Resolution: UXGA 1600x1200, SXGA 1280x960, VGA 640x480, QVGA 320x240, QQVGA 160x120
    - Night Mode
    - Digital Zooming: at least 8X
    - Support user selectable UI for Normal and Macro mode
  - Camcorder Mode
    - 25 fps encoding for QVGA resolution
    - Encoding format
      - H.263 + AMR-NB

- MPEG4 + AMR-NB
- Motion JPEG + PCM (AVI)

- Ring tone
  - MIDI
    - 40 polyphonic & Standard MIDI format 0 and 1 (SMF) / SP MIDI
  - MP3, AAC, AAC+, WMA, WAV and AMR-NB
- DirectShow Filters for WMP - Audio
  - Audio Playback format: AAC, AAC+, eAAC+, MP3, WMA, WAV, AMR-NB/WB, M4A, SP-Midi
- DirectShow Filters for WMP - Video
  - Video Playback format: H.263, MPEG4, WMV, Motion JPEG (AVI), H. 264
  - Min. 30 fps decoding for H.263 & MPEG4 & H. 264@ QVGA resolution
  - Combined Bit Rate: 64Kbps (playback)
- Picture Enhancement for Pictures & Videos
  - Graphics: JPEG, GIF87a, GIF89a, PNG, WBMP
  - Video Thumbnail Preview: H.263, MPEG4, Motion JPEG (AVI), and WMV, H. 264
- 3G-324M Video Telephony
- ZIP
- Smart Dialing
- MMS Client
  - Compliant to MMS 1.2
- Java virtual machine (J2ME, CLDC 1.1, MIDP 2.0)
  - JSR 118 MIDP2.0
  - JSR 139 CLDC 1.1
  - JSR 185 JTWI
  - JSR 75 PDA Optional Pack
  - JSR 135 Mobile Media API
  - JSR 120 Wireless Messaging API
  - JSR 184 Mobile 3D Graphics API
  - JSR 179 Location API
- Voice Dial & Command
  - Speaker Dependent or Independent
- Document Viewer - PDF
- OMA DRM Engine: For all types of files (Pictures, audio, application etc.), and also all types of delivery method (MMS, email etc.)
  - OMA 1.0 / 2.0 when available
  - Multi-DRM support : MSFT & OMA DRM
- SIM Manager
- Comm. Manager
- STK
- Sound Effect
- Keypad Sliding Sound
  - System sound effect when sliding out and closing up the phone pad
  - User customizable sounds
- Keypad/Button Sound
- Device Behavior when Sliding Out/In Keypad
  - If the display is off, turn on display when sliding out keypad

  Note: The display also can be timeout if user doesn't press any key after the keypad slides out
  - If key lock is also on, unlock key lock when sliding out keypad. And immediately key lock after the keypad slides in
- Audio Booster
- Audio Manager
- Ringtone Trimmer
- Podcast/RSS Reader
- Magic Lyric
- Voice Recorder (AMR only)
- Streaming Media Player
  - A 3GPP PSS based client solution

- Support RTSP/RTP based streaming protocol
- Support Live broadcast/on-Demand Streaming
- Launched from Internet Explorer Mobile

- Linear & Animated menu
- Personalization of the presentation
  - Music Player
  - Window Media Player
- Music Player Home Screen Plug-in
- Media Hub
- Bluetooth Explorer
- Task Manager
- Flash 7 PIE Plug-in
- Flash 7 Player
- Backup Tool
- IME
- Network Plug-in for File Explorer
- Pictbridge
- Yahoo Go!
- Phone Experience Enhancement

Carrier Specific Applications

- Streaming Video Player
  - 3GPP (T-Mobile, CHT, Vodafone)
  - Combined Bit Rate: 32Kbps (streaming)
  - Java– JSR 179 Location API
- Push E-mail
  - RIM Blackberry Push E-mail Client
  - Visto (Vodafone)
- Network Wizard (for EU customer, HTC OB)

Regulatory

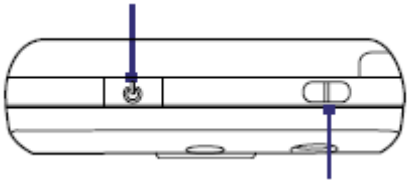
- GCF certification [Operator dependent]
- R&TTE: EMC / EMI, Safety SAR
- FCC Approval
- FCC HAC(Hearing Aid Compatibility)
- PTCRB Approval
- BQB (Bluetooth Qualification Body) certification
- Windows Mobile Logo (NTSL)
- USB certification

1.2 Product overview

Top panel

POWER

Press to turn off the display temporarily. To turn off the power, press and hold for about 5 seconds.



Lanyard/Strap holder

Left panel

Volume Buttons

• Press the top or bottom to adjust the speaker volume.

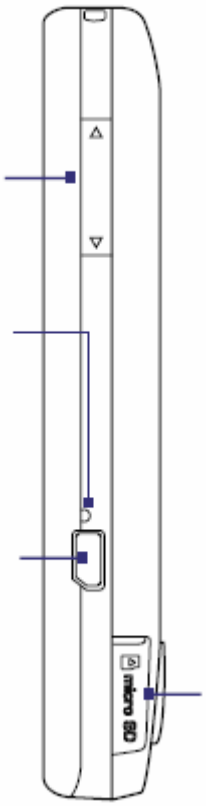
• During a call, press the top or bottom to adjust the earpiece volume.

RESET

Remove the back cover to see the Reset button. With the stylus, press the RESET button to soft-reset your device.

Sync Connector/Earphone Jack

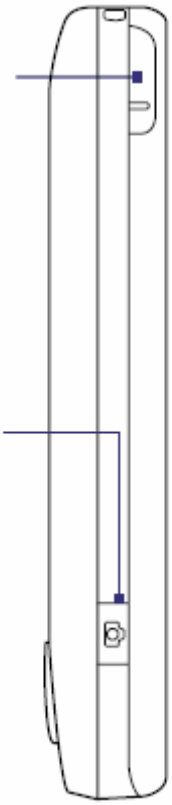
Connect the supplied USB cable to synchronize information or plug in the AC adapter to recharge the battery. You can also connect the supplied USB stereo headset for hands-free conversation or for listening to audio media.



microSD Slot

Right panel

Stylus



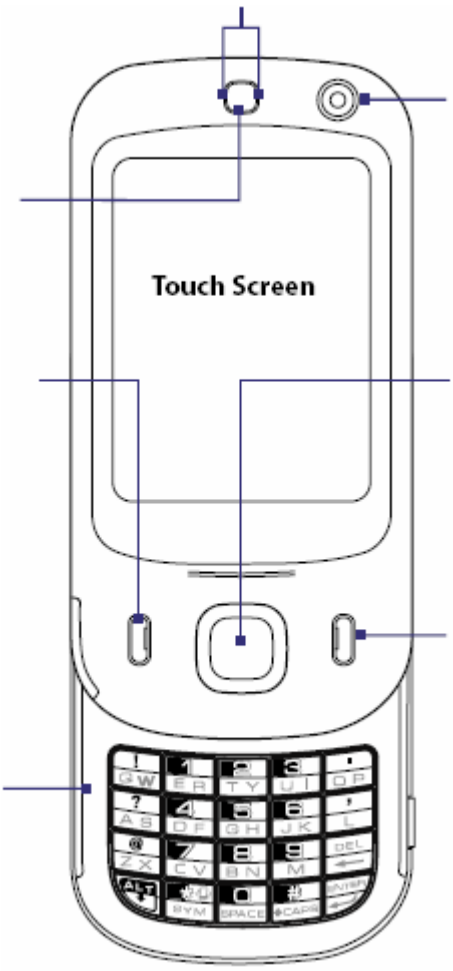
CAMERA

Press to launch the Camera.

Front panel

Notification LEDs

* See description below.



Second Camera

Use this camera for video call conversations.

Earpiece

Listen to a phone call from here.

NAVIGATION Control/ENTER

Press this multi-directional control up, down, left, or right to move through menus and program instructions; carry out the selection by pressing the center button.

TALK

Press to answer an incoming call or dial a number.

END

Press to end a call or to return to the Today screen. Press and hold to open the Quick List where you can choose an action to do.

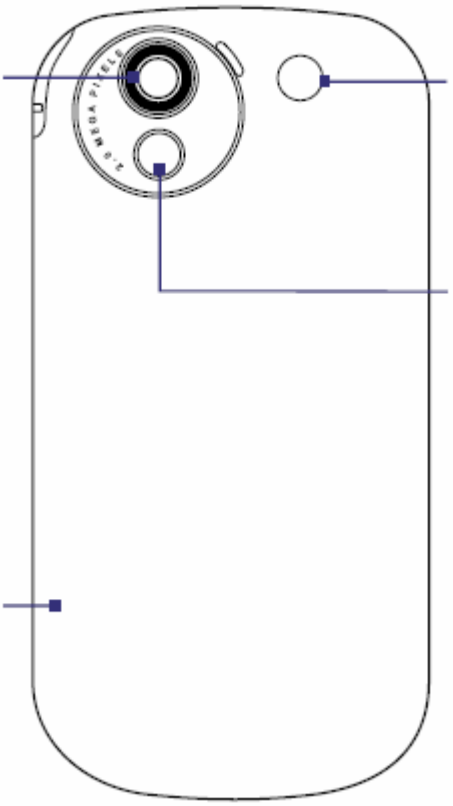
In the Quick List, touch **Setings** (or tap **Start > Settings > System** tab **> Long Press End Key**) to set the behavior when pressing and holding the END key.

16/20-key QWERTY keyboard

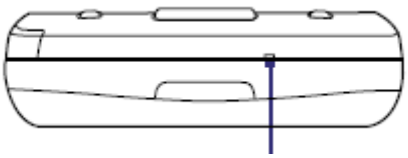
Slide up the front panel of the device to reveal the keyboard. Use to dial phone numbers and enter information.

- Shows Green and Amber lights for HSDPA/UMTS/GSM/GPRS/EDGE standby, message and network status as well as for notification and battery charging status. Shows a flashing red light when the battery level reaches 5% or lower.
- Left LED: Shows a flashing Blue light when the Bluetooth system is powered up and ready to transmit Bluetooth radio signal.

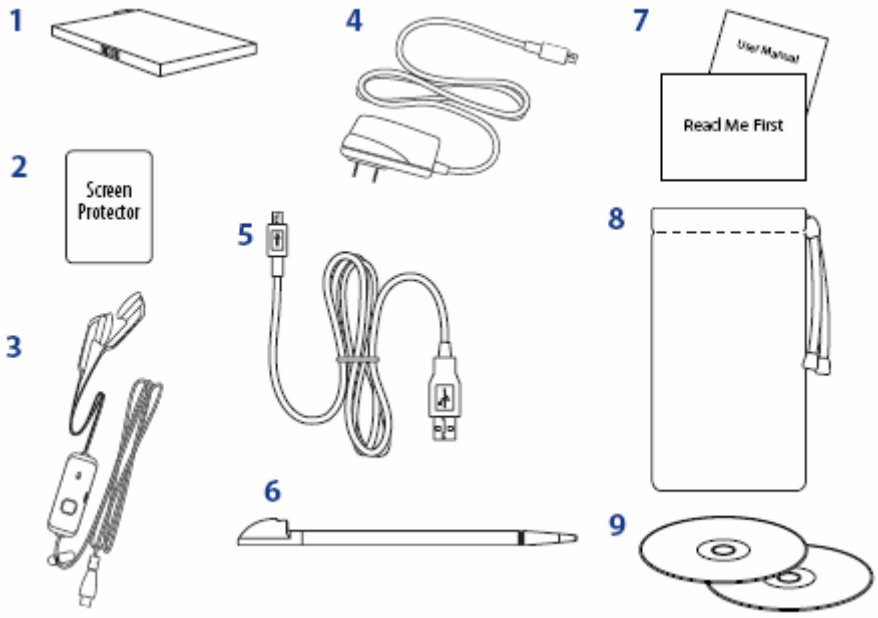
Back panel



Bottom panel



Accessories



No	Accessory	Function
1	Battery	Insert into the device before turning it on.
2	Screen protector	Stick on the touch screen to prevent scratches.
3	Stereo headset	Provides a volume control slider and a Send/End button. Press the Send/End button to pick up a call or put a call on hold; press and hold the button to end the call.
4	AC adapter	Recharges the battery.
5	USB Sync cable	Connects your device to a PC and synchronizes data.
6	Extra stylus	Use to tap items onscreen.
7	User manual and ReadMeFirst	References for using your device.
8	Pouch	Acts as a protective carrying case for your device.
9	Getting Started and Applications discs	Source for additional tools and programs.

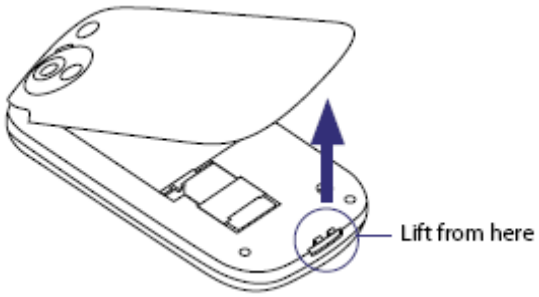
To remove the back cover

Before installing the SIM card or battery, you have to remove the back cover.

1. Make sure your device is turned off.

2. Hold the device securely with the front facing down.

3. With your thumb or finger, lift up the bottom of the back cover.



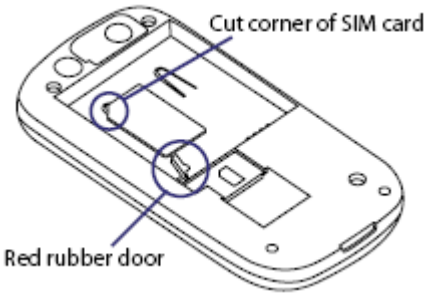
To install the SIM card

1. Pull back the red rubber door near the SIM card slot to allow you to insert the SIM card.

2. Insert the SIM card with the gold contacts facing down and the cut corner on the outside.

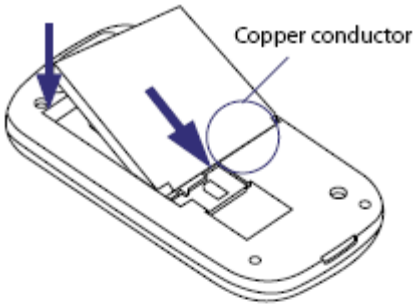
Note You can check the SIM card drawing on the SIM card slot to see how to insert the SIM card.

3. Secure the SIM card in place by closing the red rubber door.



To install the battery

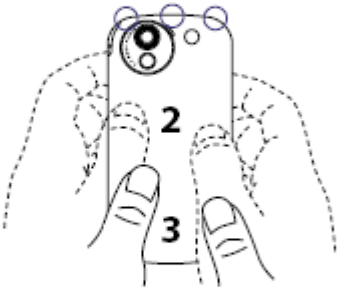
Install the battery by inserting it with its exposed copper part aligned with the protruding copper conductor on the lower-right side of the battery compartment.



Insert the bottom side of the battery first, then gently push the battery into place.

To replace the back cover

1. Secure the top part of the back cover by 'locking' it into the 3 openings on the device.
2. Press the middle portion of the back cover.
3. Press the bottom part of the back cover to lock it into place. You should hear a click.



To install the microSD™ card

1. Pry open the rubber cover at the bottom-left side of the device.
2. Insert the microSD card with the gold contacts facing up.
3. Close the rubber cover.

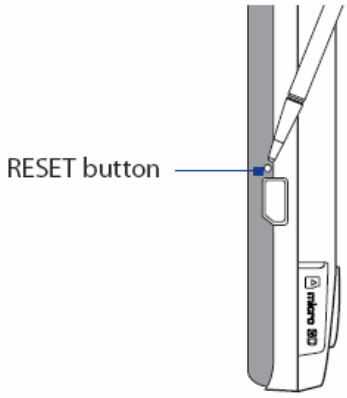
Tip Press the microSD card to pop it out of the slot.

Soft reset

Occasionally, you may need to reset your device. A soft (or normal) reset of your device clears all active program memory and shuts down all active programs. This can be useful when your device is running slower than normal, or a program is not performing properly. A soft reset is also necessary after the installation of some programs. If a soft reset is performed when programs are running, unsaved work will be lost.

To perform a soft reset

Remove the back cover and then with the stylus, press the RESET button found at the left side of your device. Your device restarts and displays the Today screen.



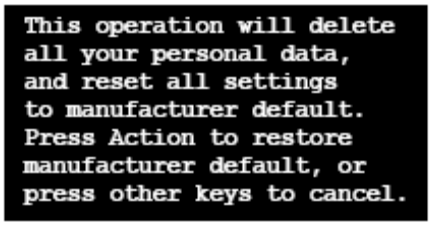
Hard reset

You can also perform a hard reset (also known as a full reset). A hard reset should be performed only if a normal reset does not solve a system problem. After a hard reset, the device is restored to its default settings – the way it was when you first purchased it and turned it on. Any programs you installed, data you entered, and settings you customized on your device will be lost. Only Windows Mobile® software and other pre-installed programs will remain.

To perform a hard reset

1. Press and hold the TALK and END buttons, and at the same time, use the stylus to press the RESET button at the bottom of your device.

2. Release the stylus, but continue pressing the TALK and END buttons until you see the following message on the screen:



2. Release the TALK and END buttons, and then press Action on your device.

Warning! Your device will be set back to factory default settings. Please ensure any additional installed programs and/or user data have been backed up before a hard reset is performed.

Important! If **Encrypt files placed on storage cards** is or was enabled before, then backup all files from the storage card **before** using Clear Storage, hard reset or updating the ROM system software. Otherwise you will no longer be able to access the encrypted files on the storage card. Use ActiveSync or Windows Mobile Device Center to transfer files between your storage card and computer.

3. Device Disassembling and Assembling Procedure

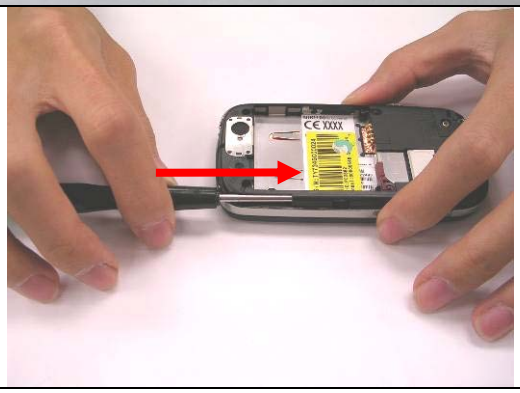
3.1 Disassembling procedure

	Tools needed for Assembling and Disassembling: 1. Philip Screw Driver #0. 2. Torx Screw Driver type T6. 3. Special Made Plastic Stick. 4. ESD bracelet. 5. Plastic type tweezers. 6. Lens Cleaning Tissue. 7. Air gun
	Power off the device before remove the Battery cover.
	Take off the Stylus.

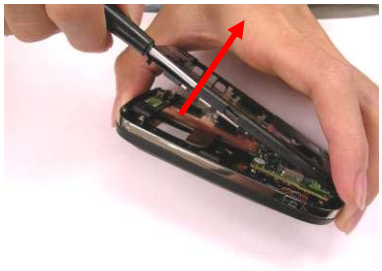
Remove the Battery.

Unfasten the screws at the location indicated.

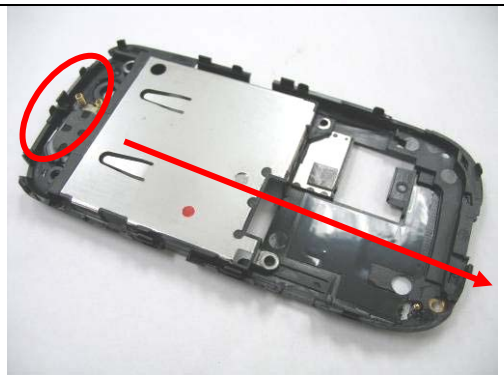
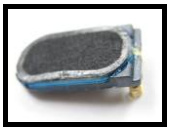
- ✓ SCREW: 72H01059-00M (Q'TY:6)
- ✓ Philip Screw Driver type T6



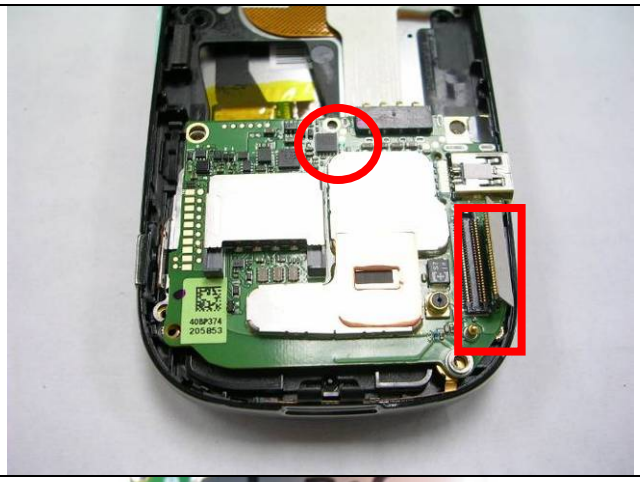
Insert the screw driver into Stylus hole.



Lift up the screw driver to disassemble the Housing-D as indicated direction.

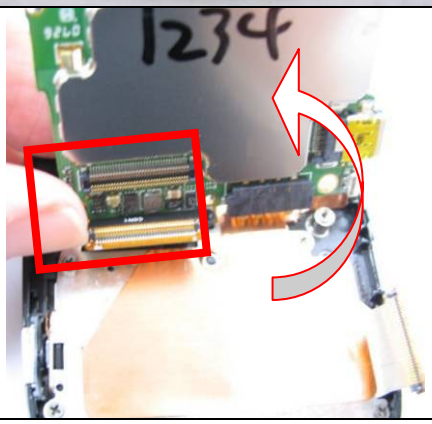



Take off the speaker from Housing-D.
[NOTE]
The speaker can't reuse. If disassemble the speaker, must replace new.

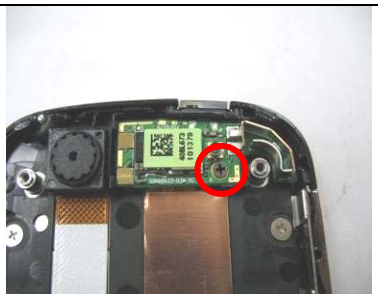
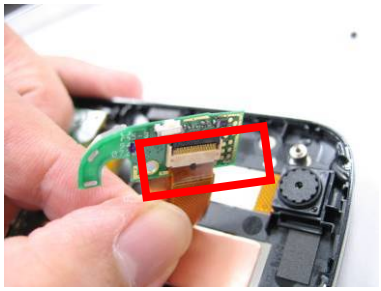


1. Unfasten the screw on M/B.
   - ✓ SCREW:72H00724-00M (Q'TY:1)
   - ✓ Philip Screw Driver #0

2. Release the FPC from M/B.

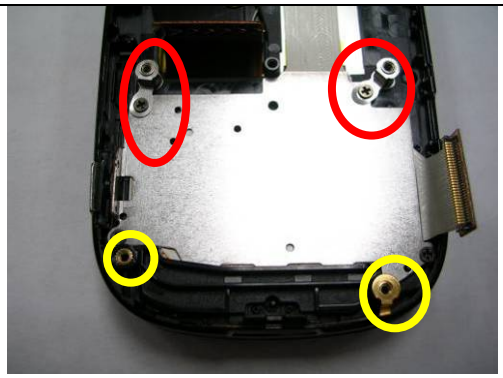


1. Lift the M/B to release the FPC from the bottom of M/B.
2. Remove M/B

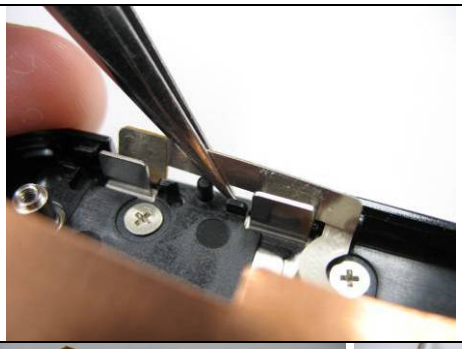
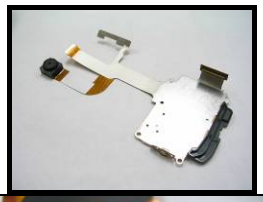
1. Unfasten the screw on BT board.
   ✓ SCREW: 72H02373-00M (Q'TY:1)

2. Release the connector to separate FPC and BT board.

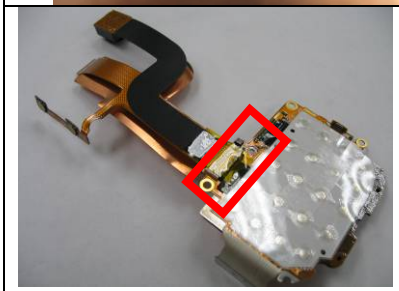
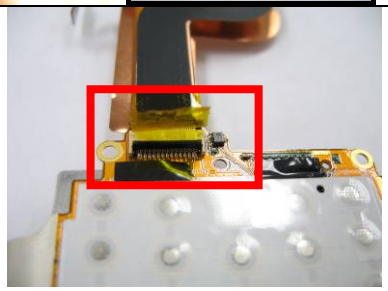


1. Unfasten the screws on FPC Keyboard.
   ✓ SCREW: 72H02373-00M (Q'TY:2) as red indicated.

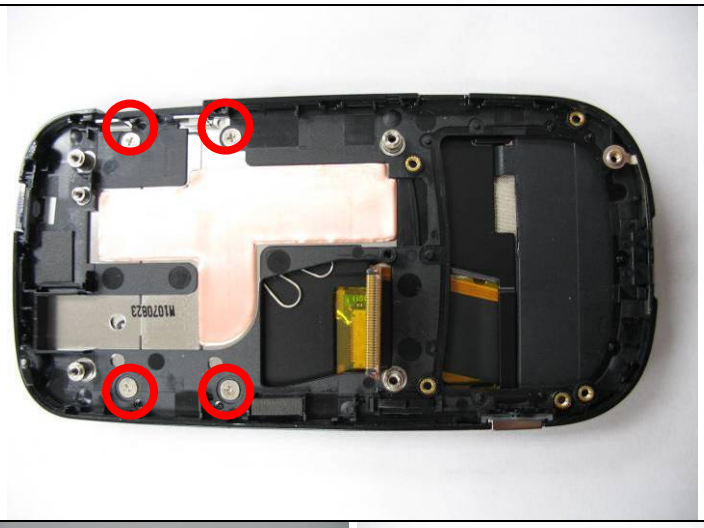
   ✓ SCREW: 72H02287-00M (Q'TY:2) as yellow indicated.
2. Remove the Spring.

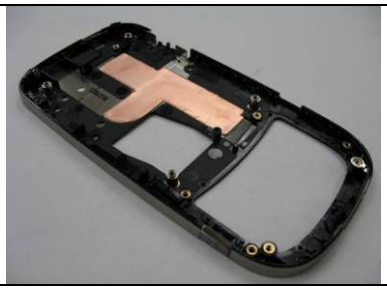
1. Separate the FPC from the support of Housing.
2. Remove the FPC keyboard.

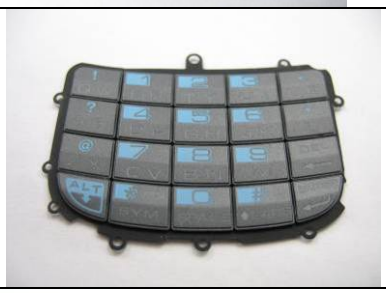



1. Remove the Tape.
2. Release the lock to remove Camera module from the FPC Keyboard.



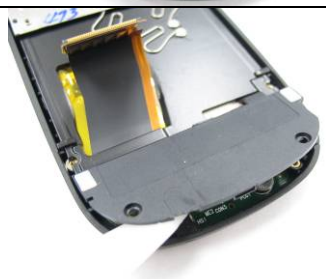
Unfasten the screws on Housing-C.
✓ SCREW:72H00740-00M (Q'TY:4)



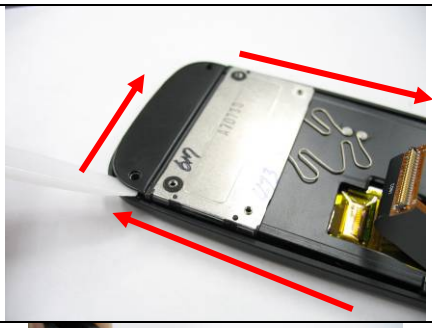
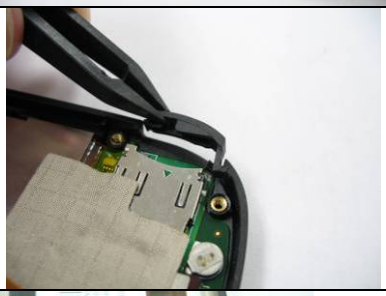
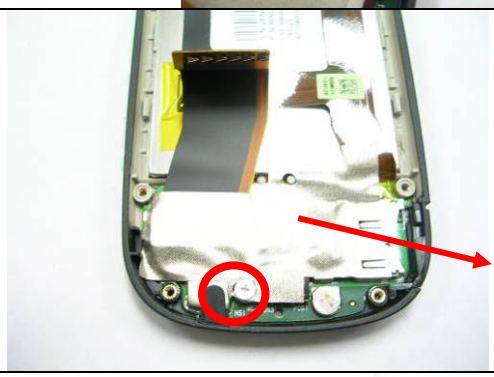
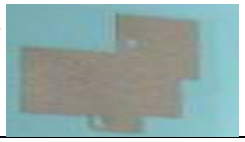
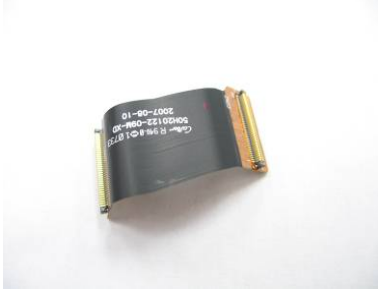


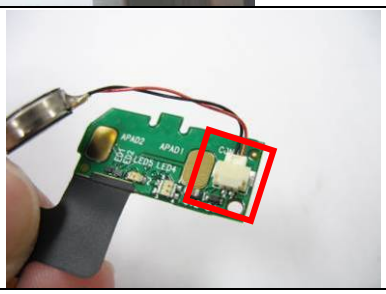
Remove the Housing-C and separate the Keypad.

Unfasten the screws on Hinge.
✓ SCREW:72H02310-00M (Q'TY:6)



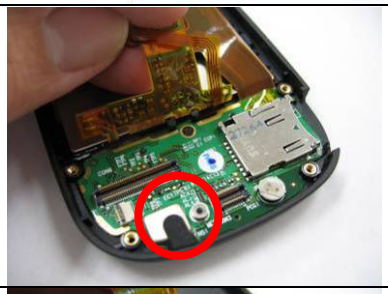
Disassemble the Hinge cover by plastic stick.

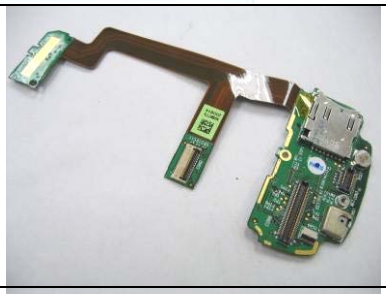
	Disassemble the Hinge by plastic stick as indicated direction.
	Remove the SD –Door Cover.
 	1. Unfasten the screw on Housing. ✓ SCREW:72H00740-00M (Q'TY:1) 2. Remove the Gasket.
	Disassemble the sliding FPC.

	Remove the Tape.
	Release the lock to take off 2nd Camera module.
	Unfasten the screw on the Rigid-Flex Board. ✓ SCREW:72H00724-00M (Q'TY:1)
	Disconnect the Vibrator from the Connector.

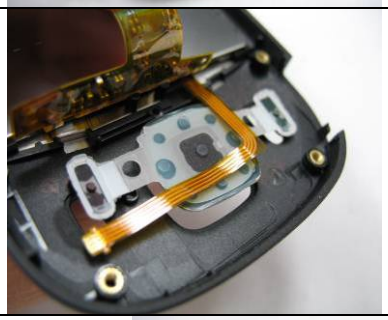
1. Release the LCD connector.
2. Disconnect the touch panel FPC.
3. Unfasten the screw from Rigid-Flex Board.

✓ SCREW:72H00464-00M (Q'TY:1)





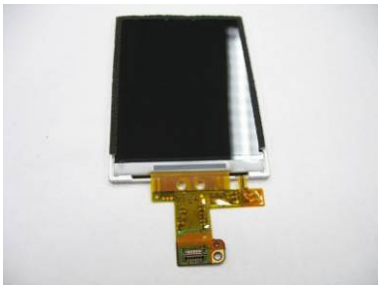
1. Remove the MIC Rubber.
2. Take off the Rigid-Flex Board.



Take off the NAVI key.

Remove the receiver from the Housing-A.

Disassemble the LCD by plastic stick as indicated direction.
It has twin adhesive around the LCD, be care to take apart.



Remove the LCD from the Housing-A.

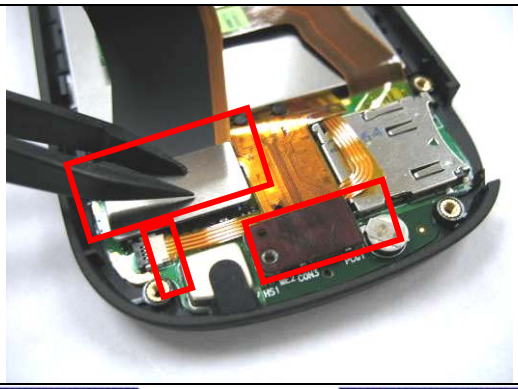
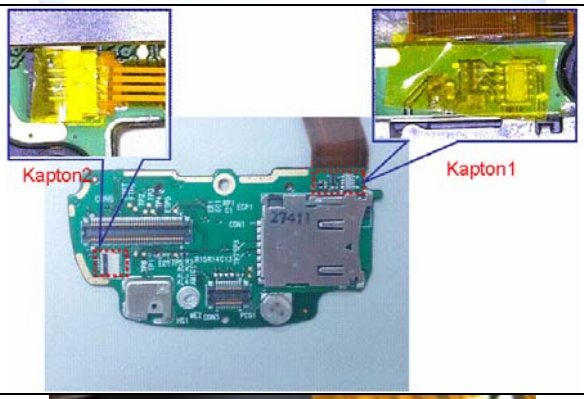
[NOTE]

1. **The LCD is attached on the bezel with glue. The LCD is thin and fragile, so it's easy to break the LCM when disassembling. Please carefully separate the LCD from the Bezel. Please don't forget to remove the remained glue on the LCD.**
2. **The glue on the bezel will be damaged after disassemble the LCD. If you need to replace a new LCD, please replace a new bezel too.**

The Disassemble process is done

3.2 Assembling procedure

	Peel off the film on inner side of Touch Panel and check if any stain exists. Then assemble the LCD into Housing-A. Please apply air gun to clean the LCM & casing surface in **CLEAN ENVIRONMENT** , and ensure no dust or particle inside before assemble into bezel. **[NOTE]** **The glue on the bezel will be damaged after disassemble the LCD. If you need to replace a new LCD, please replace a new bezel too.**
	Assemble the Receiver into Housing-A.
	Assemble the NAVI key into Housing-A.
	1. Assemble the Rigid-Flex Board and MIC rubber. 2. Fasten the screw on the Rigid-Flex Board. ✓ SCREW:72H00464-00M (Q'TY:1) **[NOTE]** **PLEASE SET UP THE TORQUE OF ELECTRICAL SCREW DRIVER TO 0.6 ± 0.1 KGF-CM**

	1. Connect the LCD FPC 2. Connect the touch panel FPC. 3. Connect the sliding FPC with the Rigid-Flex Board.
	✓ **Notice: Stick two Kaptons as the indicator location.** ✓ **Kapton1 PN:76H02281-00M** ✓ **Kapton2 PN:76H02285-00M**
	✓ Connect the FPC with flat plate with Rigid-Flex Board as the picture on the left.

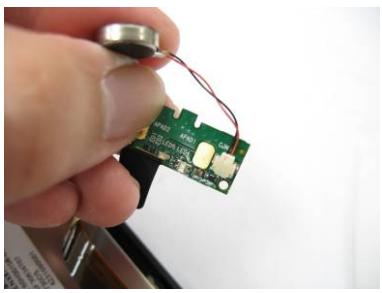
1. Paste the Gasket.
2. Fasten the screw on the Rigid-Flex Board.

✓ SCREW:72H00740-00M (Q'TY:1)

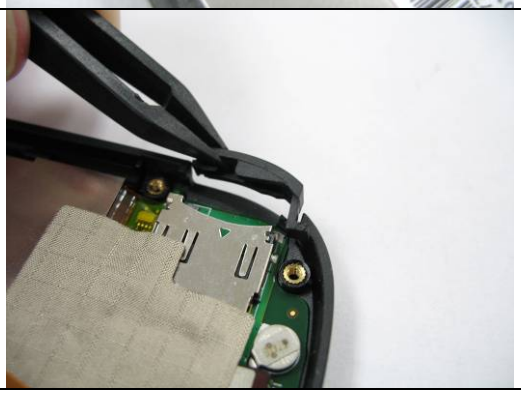
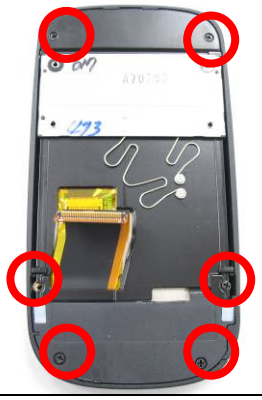
[NOTE]
PLEASE SET UP THE TORQUE OF ELECTRICAL SCREW DRIVER TO 0.6 ± 0.1 KGF-CM

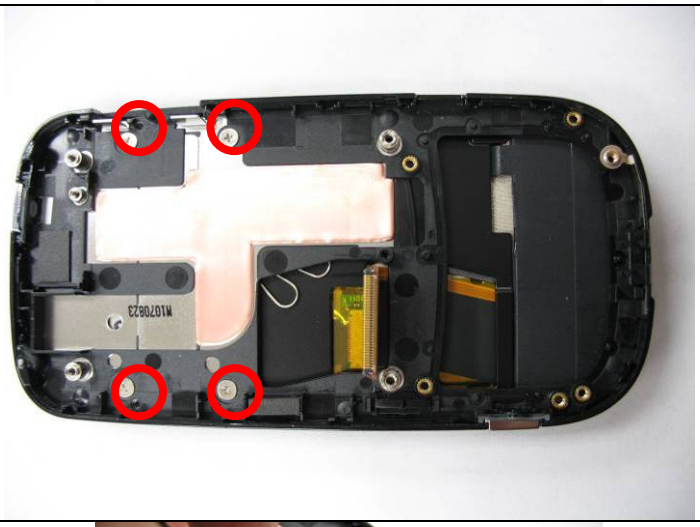
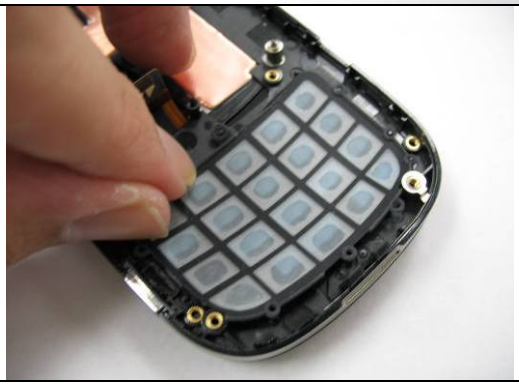
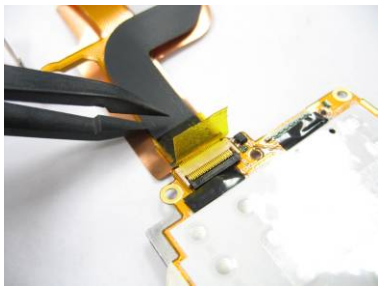
Connect the 2nd camera module with Rigid-Flex board.

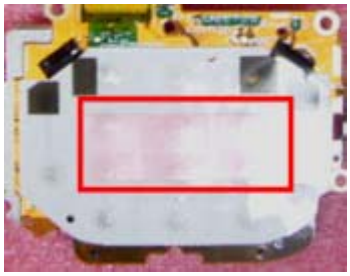
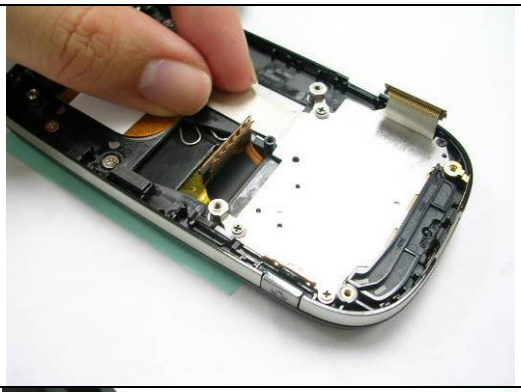
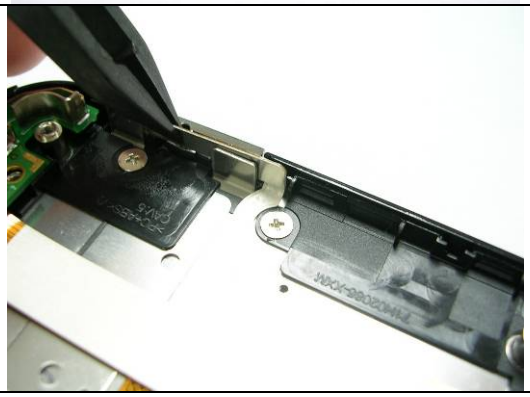
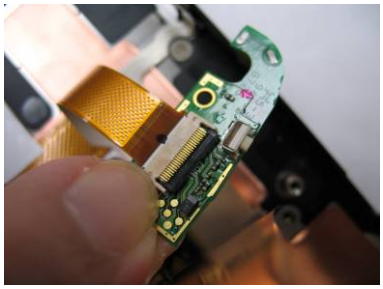
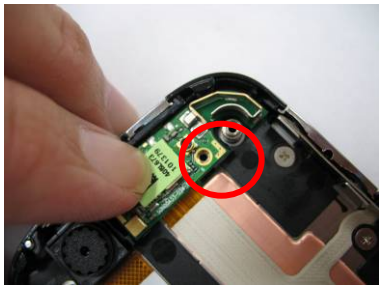
Stick the Tape.

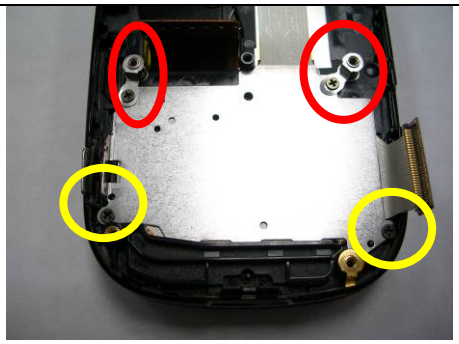


1. Connect the Vibrator with Rigid-Flex board.
2. Put the Vibrator into Housing.

	Fasten the screw on the Rigid-Flex Board. ✓ SCREW:72H00724-00M (Q'TY:1) **[NOTE]** **PLEASE SET UP THE TORQUE OF ELECTRICAL SCREW DRIVER TO 0.8 ± 0.1 KGF-CM**
	Assemble the SD-door cover.
	Assemble the Hinge and Hinge cover.
	Fasten the screws on the Hinge. ✓ SCREW:72H02310-00M (Q'TY:6) **[NOTE]** **PLEASE SET UP THE TORQUE OF ELECTRICAL SCREW DRIVER TO 0.8 ± 0.1 KGF-CM**

	Assemble the Housing-C.
	Fasten the screws on the Housing-C. ✓ SCREW:72H00740-00M (Q'TY:4) **[NOTE]** **PLEASE SET UP THE TORQUE OF ELECTRICAL SCREW DRIVER TO 0.4 ± 0.1 KGF-CM**
	Assemble the keypad.
	1. Connect the Camera Module with the FPC Keyboard. 2. Stick the Type.

	Paste one tape on the keyboard. ✓ P/N: 76H02273-00M
	Assemble the FPC Number Keypad on Housing.
	Stick the FPC into the support of Housing.
 	1. Connect the FPC with BT board. 2. Fasten the screw on the BT board. ✓ SCREW:72H02373-00M (Q'TY:1) **[NOTE]** **PLEASE SET UP THE TORQUE OF ELECTRICAL SCREW DRIVER TO 0.4 ± 0.1 KGF-CM**

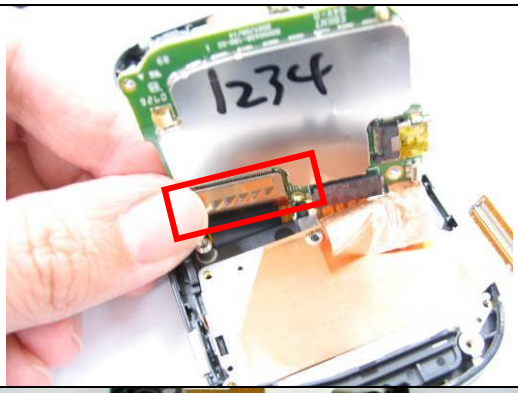


Insert the Spring and then fasten the screws on the FPC Number Keyboard.

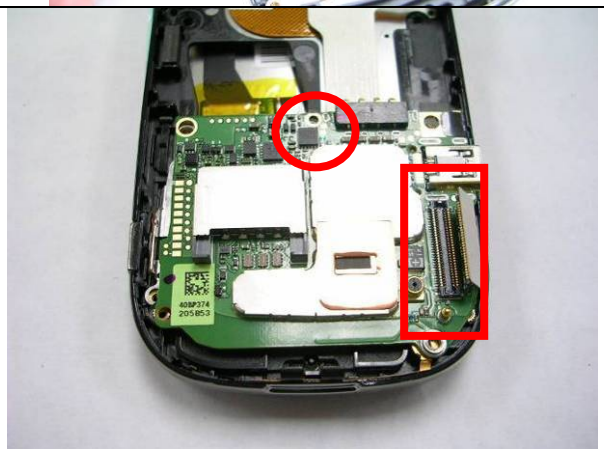
✓ SCREW: 72H02373-00M (Q'TY:2) as red indicated.

✓ SCREW: 72H02287-00M (Q'TY:2) as yellow indicated.

[NOTE]
PLEASE SET UP THE TORQUE OF ELECTRICAL SCREW DRIVER TO 0.4 ± 0.1 KGF-CM



Connect the FPC with M/B.

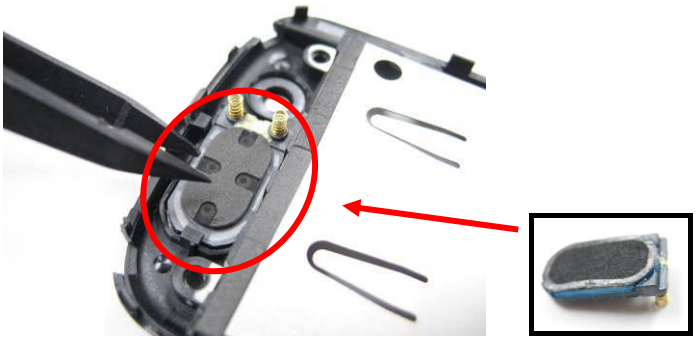


1. Fasten the screw on the M/B.

✓ SCREW:72H00724-00M (Q'TY:1)

[NOTE]
PLEASE SET UP THE TORQUE OF ELECTRICAL SCREW DRIVER TO 0.4 ± 0.1 KGF-CM

2. Connect the FPC with M/B.



Assemble the Speaker into Housing-D.

Assemble the Housing-D into Device and then fasten the screws at the location indicated.

✓ SCREW: 72H01059-00M (Q'TY:6)

[NOTE]
PLEASE SET UP THE TORQUE OF ELECTRICAL SCREW DRIVER TO 1.0 ± 0.1 KGF-CM

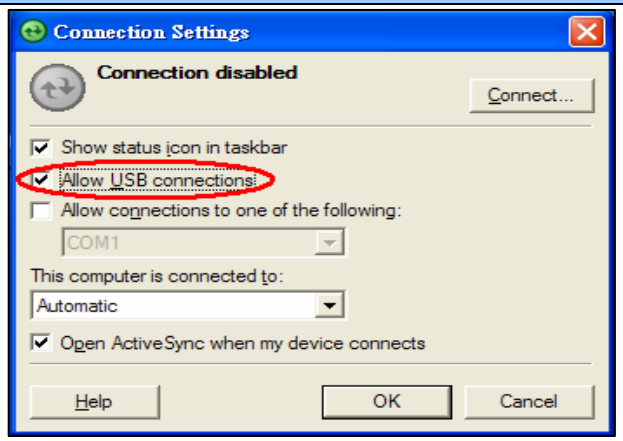
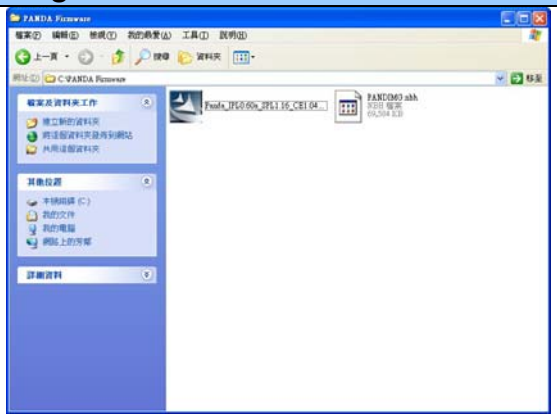
Insert the Stylus and Battery.

	Assemble the battery cover.

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

4. ROM Re-flash Procedure

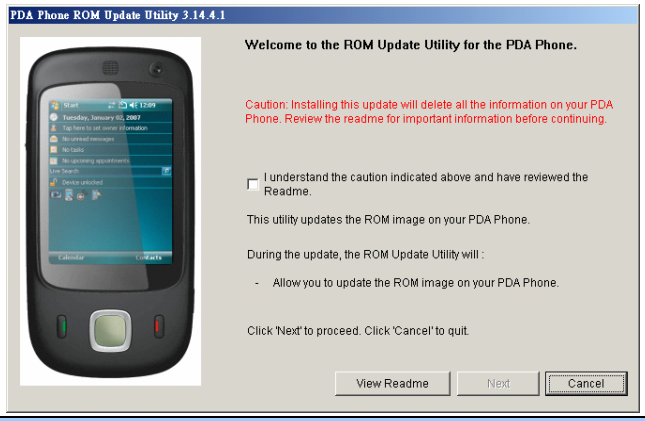
4.1 ROM upgrade thru RUU (Re-flash Upgrade Utility)

Connect device to PC	
I. Setting and allow USB connections in Microsoft ActiveSync. II. Connect your device and desktop/ or laptop via USB cable. III. Check the pop-up message from Microsoft ActiveSync when device is synchronized with PC.	
Download ROM Image from SDO	
I. Download OS image from SDO. http://htcscm10.htc.com.tw/SDO II. Un-zip the file and execute RUU program.	

RUU - 1

III. Read the pop-up message form ROM update utility and select the “I understand…” checkbox.

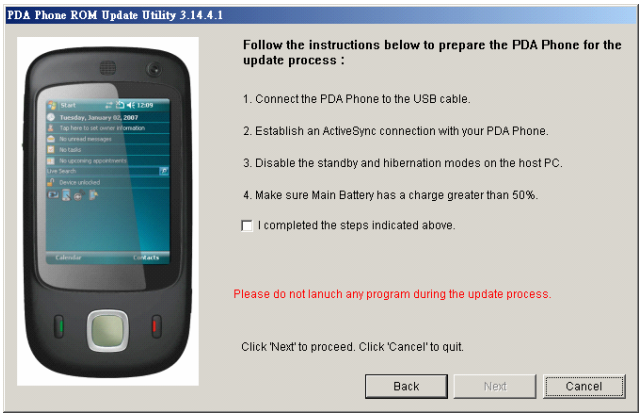
IV. Click “Next” to proceed.



RUU - 2

V. Read the pop-up message form ROM update utility to follow and perform the instructions and select the “I completed…” checkbox.

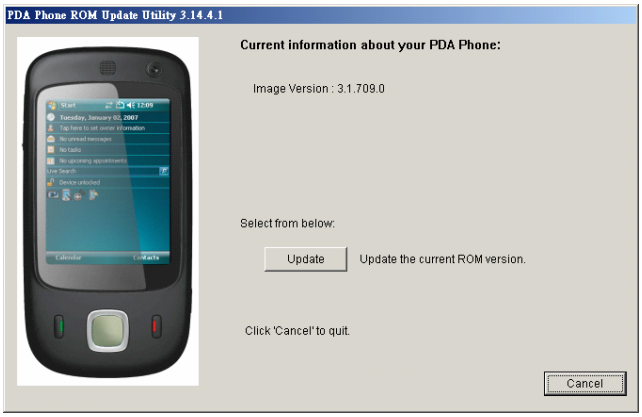
VI. Click “Next” to proceed.



RUU - 3

VII. Current image version confirmation.

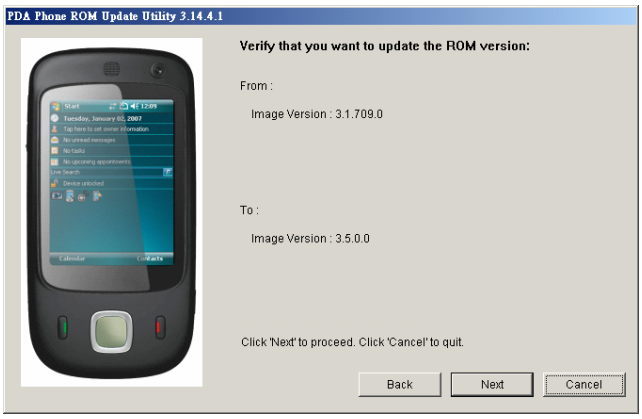
VIII. Click “Update” to proceed.



RUU - 4

IX. Double verify the ROM revision which you want to update before re-flash procedure.

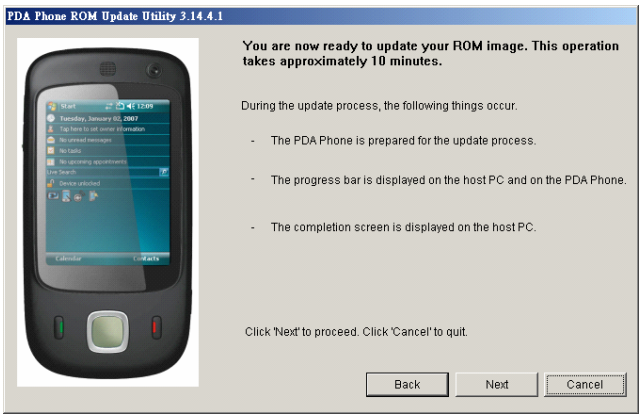
X. Click “Next” to proceed.



RUU - 5

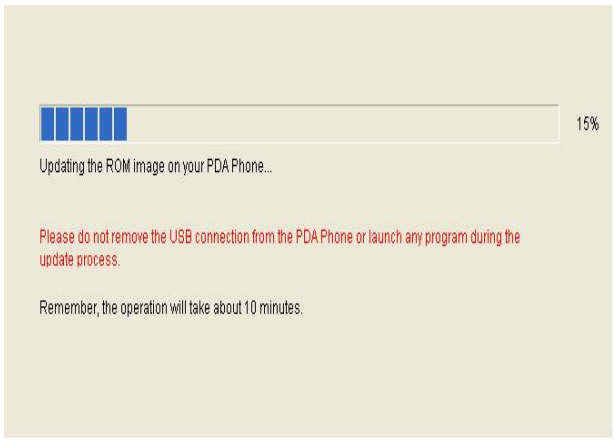
XI. Read the information from pop-up message and the OS update procedure will takes 10 minutes long.

XII. Click “Next” to proceed.



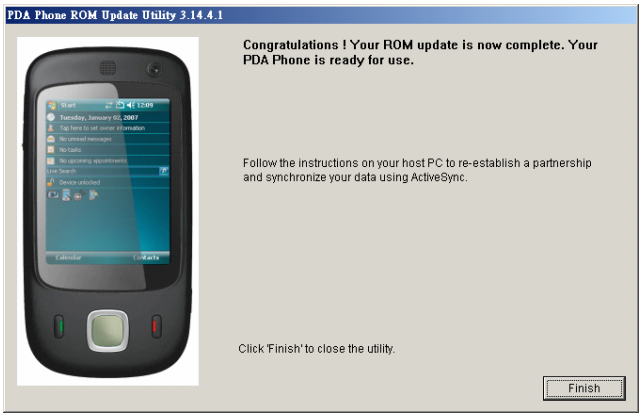
RUU - 6

XIII. You can see the update progress from your PC and in your device.

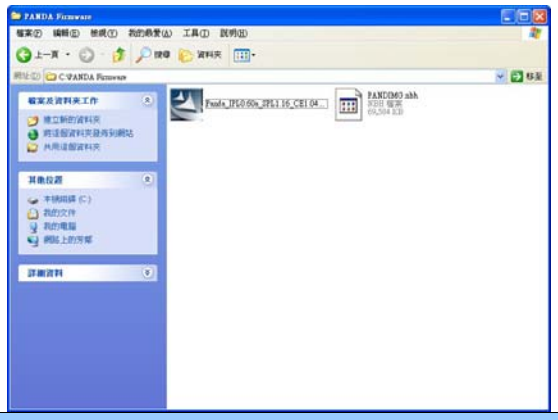
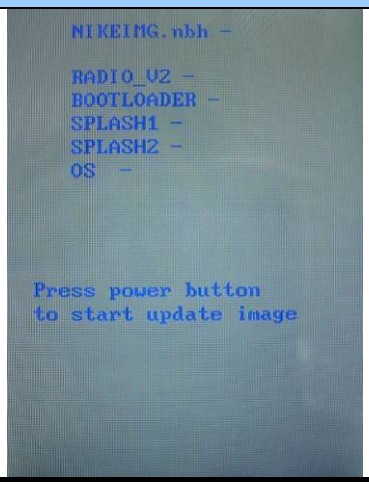


RUU - 7

XIV. The OS upgrade is finished, click "Finish" to close the utility.



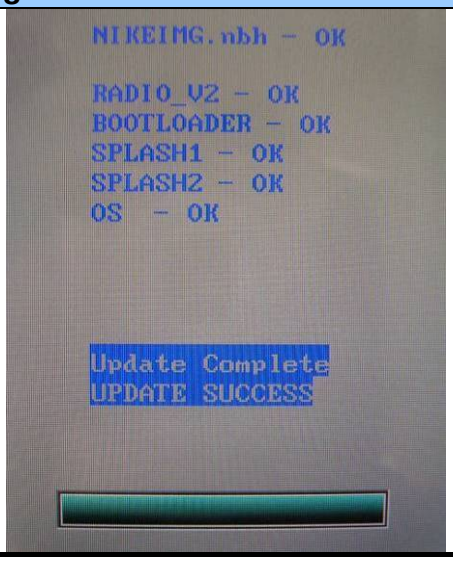
4.2 Rom Image upgrade thru SD card

Download ROM Image from SDO	
I. Download ROM image from SDO. http://htcscm10.htc.com.tw/SDO II. Un-zip the image file.	
Format SD card and copy image file to SD card	
III. Select file system and format the SD card to FAT32 mode. IV. Copy image file XXX.nbh to the micro SD card and rename to **NIKEIMG.NBH**.	
SD Upgrade - 1	
V. Turn the device power off and insert Diagnostic SD card. VI. Press and hold **Power+Camera** button, and **Reset** button to entry Boot loader mode. VII. Press **Power** button to start upgrade procedure.	

SD Upgrade - 2

VIII. Reading source code from SD card.
[Note]: This process will takes 10 mins, please don't power off the device.

IX. After finish, press **Reset** button to reboot.



5. DIAGNOSTIC PROGRAM

5.1 List of Diagnostic / WinCE Test Items

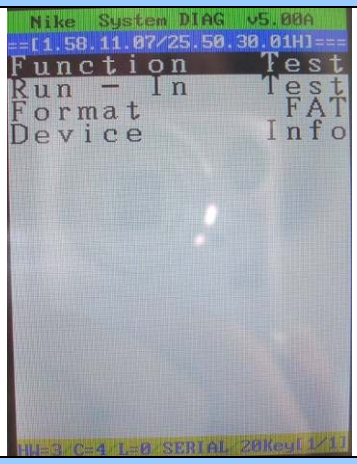
Model	No	Item	Description	Remark
DIAGNOSTIC	Function Test			
	1	Auto Test	Auto run the regular tests	
	2	Display Test	Color bar/R/G/B/Black/White/Gray pattern display	
	3	TouchPanel Test	Align screen test	
	4	Vibrator Test	Vibrator on test	
	5	Button Test	Function keys and keyboard test	
	6	RAM Test	RAM memory test	
	7	ROMChecksum Test	Show device Checksum info	
	8	SD Card Test	SD card Read/Write test	
	9	MegaSIM Test	MegsSIM test	
	10	Battery Test	Battery info and charge/discharge test	
	11	Show Flash Info	Show flash information	
	12	Show RF Status	Show Radio information	
	13	LED Test	LED indicator test	
	14	Backlight Test	Back Light adjust test	
	15	MR Sensor Test	Keyboard slide Sensor test	
	Run-in Test			
	1	1 Hour	1 Hour Run-in Test/Press UP key.	Option
	2	2 Hours	2 Hours Run-in Test/Press DOWN key.	Option
	3	4 Hours	4 Hours Run-in Test/Press LEFT key.	Option
	4	8 Hours	8 Hours Run-in Test/Press RIGHT key.	Option
	Format Storage (Personal information, talk times)			
	Device Info			
WiN CE	1	USB Test	USB link test (Microsoft ActiveSync v4.5 or above).	
	2	Camera Test	Camera test.	
	3	Bluetooth Test	Bluetooth test.	
	4	GPRS/3G Test	GPRS/3G connection Test	

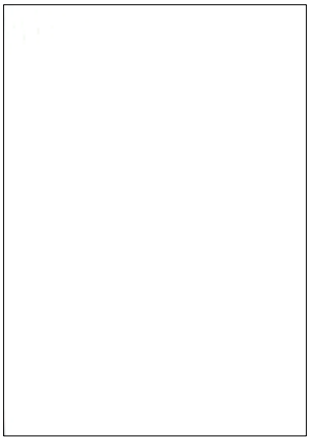
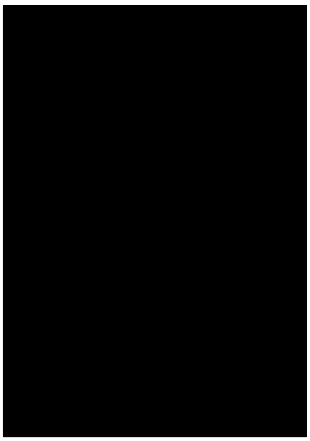
Test Procedure

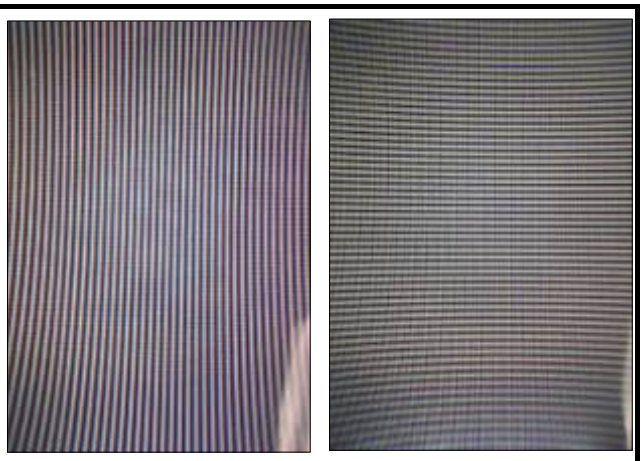
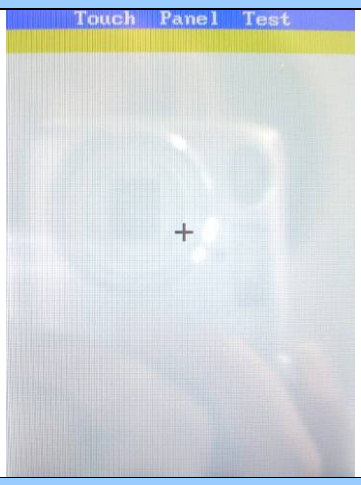
How to select test item: Using “Action” button -"Up" or "Down" to select the test items

How to execute the test program: Press “Action” button to start each of test items.

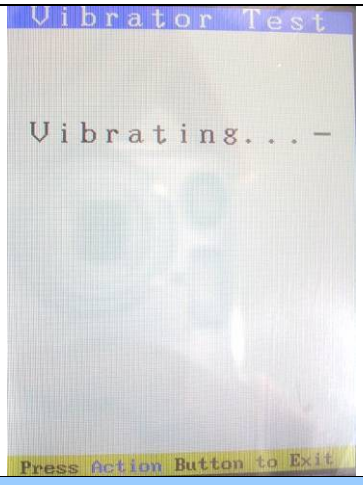
Diagnostic

Main Menu/Function Test Menu	
I. Turn the device power off and insert Diagnostic SD card. II. Press and hold **Power + Capture** button, including **Reset** button, and then enter Diagnostic mode. III. Using to select the test item and move to next page as well. IV. Select item “Function Test” to find the Function test menu.	
Auto Test	
I. Press the Action key to start the Auto-test. II. It will perform the regular tests, please follow the system instruction to do the test.	
Display Test-1 (RED/ GREEN pattern)	

I. Press Action key to select Display Test on Function test menu. II. After the test pattern is show up, please check the pattern if any un-uniform color or chromatist. III. Press Action key to continue the next test pattern.	
Display Test-2 (BLUE/ WHITE pattern)	
IV. Press Action key to continue the next test pattern.	
Display Test-3 (BLACK/Color bar pattern)	
V. Press Action key to continue the next test pattern.	
Display Test-4 (Straight/Crabwise lines pattern)	

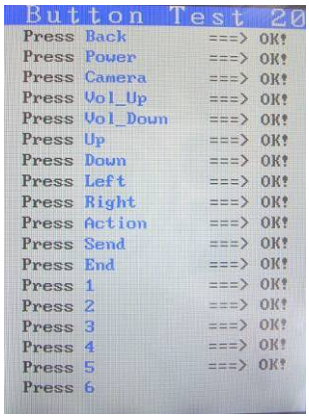
VI. Press Action key to continue the next test pattern.	
Display Test-5(Black white contrast pattern)	
VII. Press action key to exit and return to Function test menu.	
Touch Panel Test	
I. Press Action key to select Touch Panel on Function test menu. II. Using Stylus to tap and follow the symbol “+” at Center, Up-left, Down-left, Down-right position of the screen to perform the test. III. Press action key to exit and return to Function test menu.	
Vibrator Test	

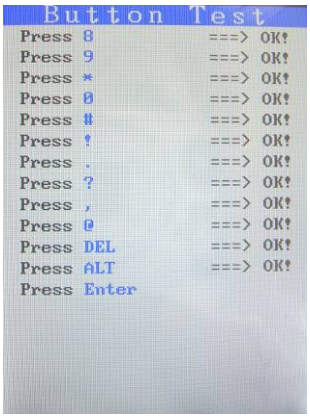
I. Press Action key to select Vibrator on Function test menu. Check the device if vibrating.
II. Press Action key to exit and return to Function test menu.



Button Test

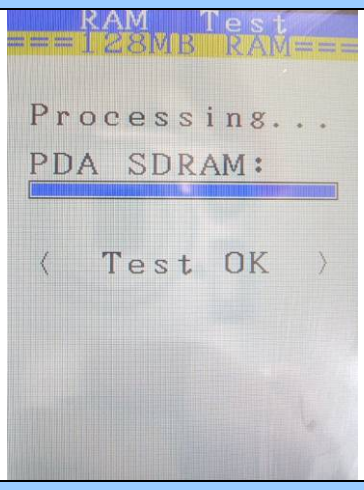
I. Press Action key to select Button on Function test menu.
II. Follow the instruction on screen to perform the Button test.
III. Press action key to exit and return to Function test menu.



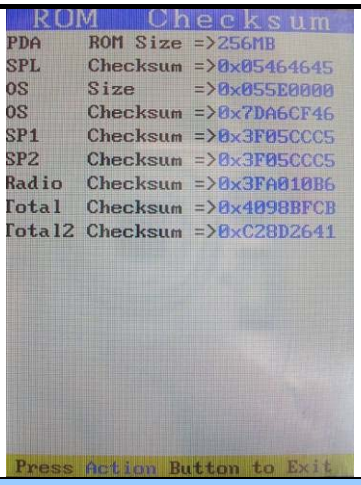
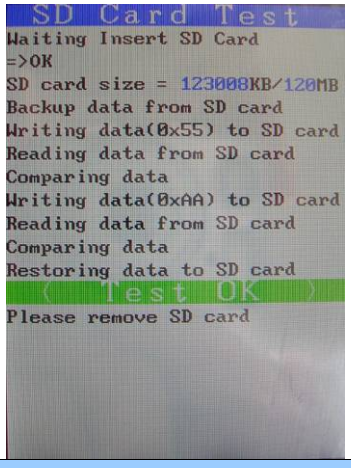


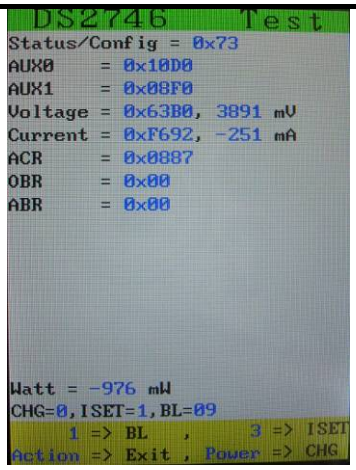
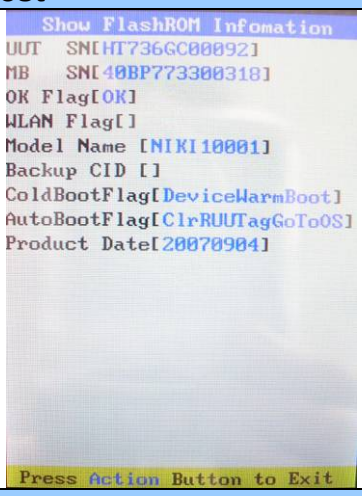
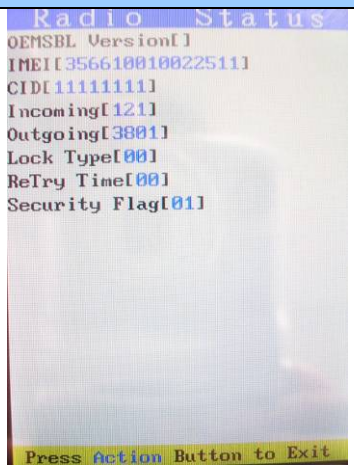
RAM Test

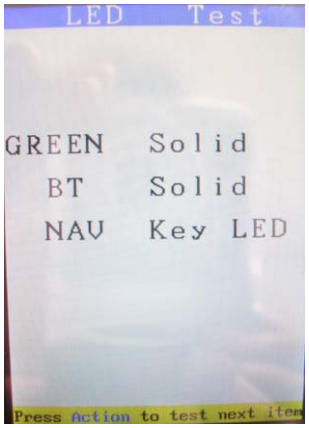
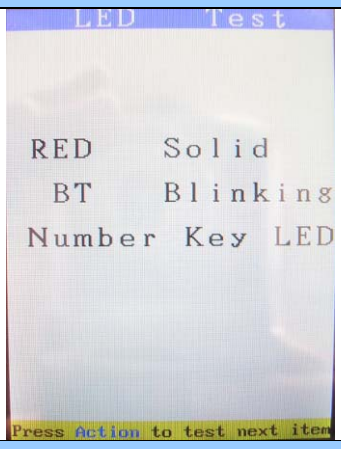
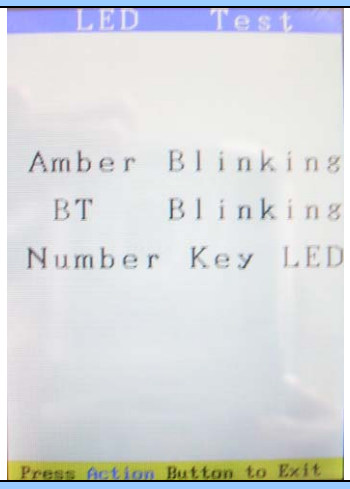
I. Press Action key to select RAM on Function test menu.
II. After test process pass. It will exit and return to Function test menu.

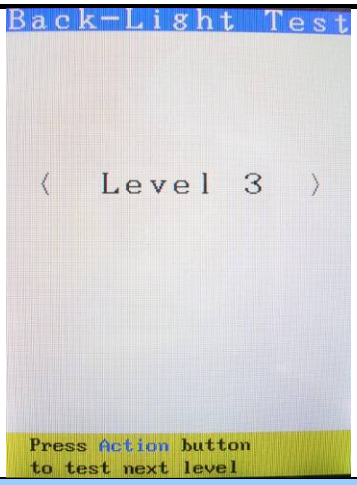
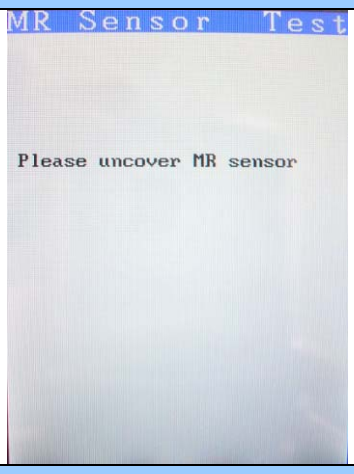
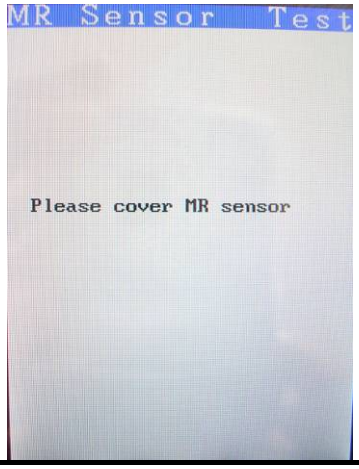


Rom Checksum Test

I. Press Action key to select Rom Checksum on Function test menu. II. Inspect the Checksum and please check the value. III. Press action key to exit and return to Function test menu.	
SD Card Test	
I. Press Action key to select SD Card on Function test menu. II. Insert SD card and device will read/write SD card for testing. III. Remove the SD Card to exit and return to Function test menu.	
MegaSIM Test	
I. Please inset the Mega SIM card to the device before test. II. Press Action key to select MegaSIM on Function test menu. III. Press action key to exit and return to Function test menu.	
Battery Test	

I. Press Action key to select Battery on Function test menu. II. Plug In/Out the AC-Adapter to check the battery charging/discharging status. III. Press action key exit and return to Function test menu.	
Show Flash Info Test	
I. Press Action key to select Show Flash Info on Function test menu. II. Please check the information. III. Press action key exit and return to Function test menu.	
Show RF Status	
I. Press Action key to select Show RF Status on Function test menu. II. Please check the information. III. Press action key exit and return to Function test menu.	
LED Test-1	

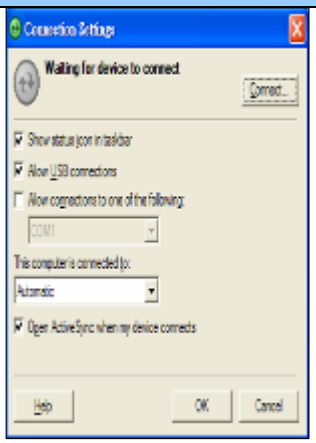
I. Press Action key to select LED on Function test menu. II. Follow the screen instruction to check the LED status. III. Press Action key to test next item.	 
LED Test-2	
IV. Follow the screen instruction to check the LED status. V. Press Action key to test next item.	
LED Test-3	
VI. Follow the screen instruction to check the LED status. VII. Press action key exit and return to Function test menu.	
Backlight Test	

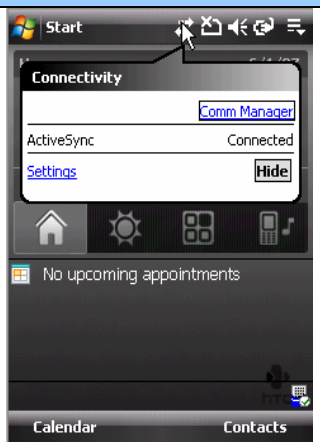
I. Press Action key to select Backlight on Function test menu. II. Press action key test next level.(Level3 -> Level2 -> Level1 -> Black screen) III. Press action key exit and return to Function test menu.	
MR Sensor Test-1	
I. Press Action key to select MR Sensor on Function test menu. II. Follow the screen instruction to open the slide keyboard.	
MR Sensor Test-2	
III. Follow the screen instruction to close the slide keyboard.	

WinCE Test

USB Test

I. Start up the Microsoft® ActiveSync® V4.5 or above program in the PC.
II. Insert USB cable and connect unit to desktop/ or laptop.
III. The USB to PC icon -> is appears on the Today screen when your device is connected to your desktop/ or laptop.

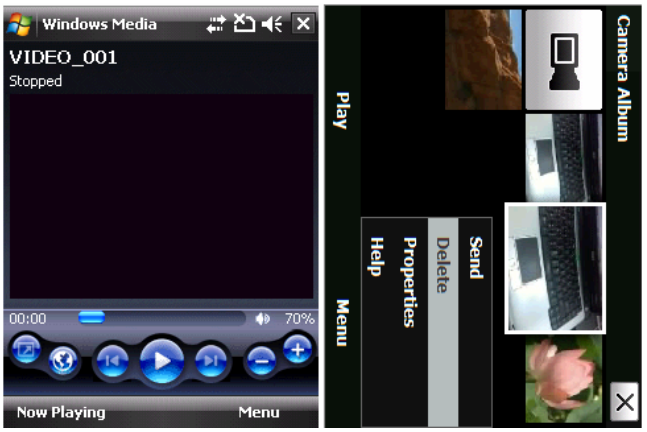




Camera Test

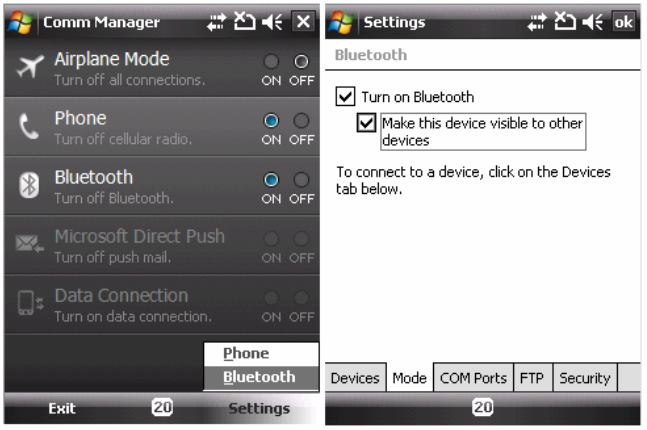
I. Tap Start->Program->Camera or Press Camera button to turn on the Camera.
II. Make sure the device will present and enter the preview display.
III. Check camera pre-view and image quality.
IV. Photo Test:
(1). Press Capture key.
(2). Press Capture key again.
(3). Tap 'Delete' icon on the preview screen, then Yes.
V. Video Recording Test
(1). Tap the camera icon until a video icon appears.
(2). Press Capture key to start recording a clip.
(3). Press Capture key again to stop recording.

(4). On the preview screen, tap the 'Magnifier' icon to view the captured video clip.
(5). Tap X. to close the camera program
(6). Tap the 'Browser' icon and choose My video.
(7). Tap and Hold on the clip and select Delete.
(8). Tap X and then X to exit.



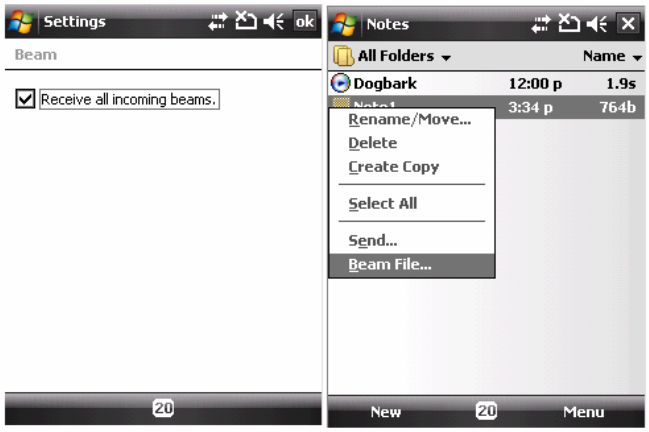
Bluetooth Test - 1

I. Tap icon Comm Manager on the Today screen and turn on Bluetooth.
II. Tap the icon “Settings” down-right the corner of the screen and select the “Make this device….” Checkbox.
III. Press Action key to go next test pattern.



Bluetooth Test - 2

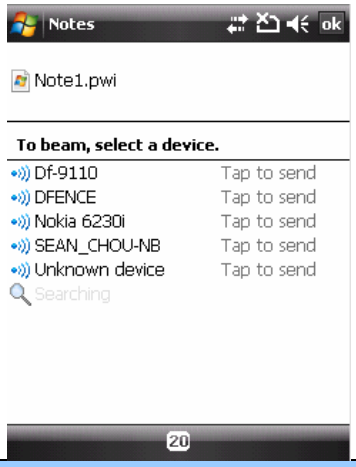
I. Tap Start->Settings->Connections-> Beam and select “Receive all….” Checkbox.
II. To create a file, tap Start->Programs ->Notes->New.
III. Tap and select the “Beam file…”



Bluetooth Test - 3

IV. Once device is searched, tap the device to send the file.

V. Return to Today screen and tap Start->Program->Comm Manager ->Bluetooth to turn off Bluetooth.



GPRS/3G connection Test

I. Tap Start, Settings, Connections, Connections.

II. Select 'Add a new modem connection'

III. Key in random name for the first field, and choose 'Cellular Line (GPRS/3G)' as second field.

IV. Tap Next, and key in name of the 'access point carrier'.

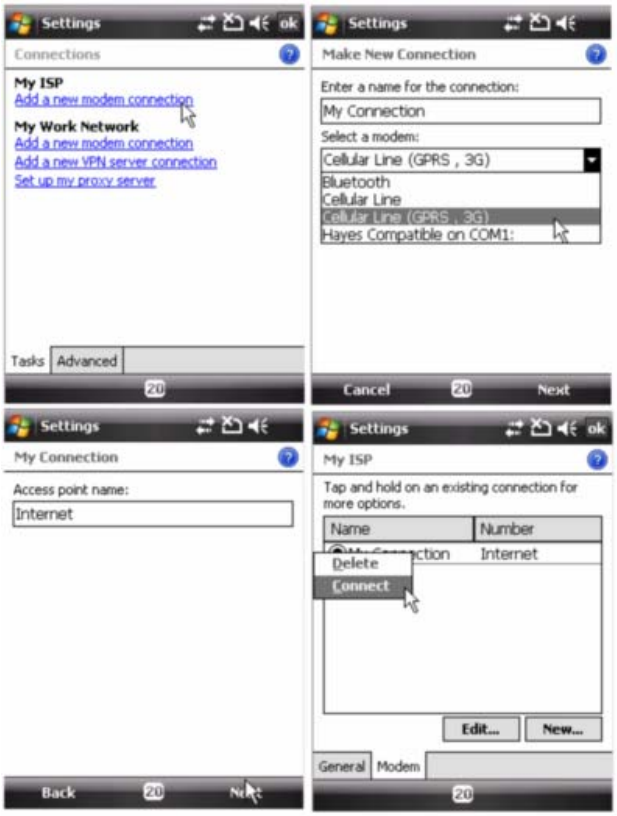
V. Tap Next, then key in the GPRS/3G account details, then Finish.

VI. Tap 'Manage existing connections', then tap and hold on an existing connection. Tap 'Connect'

VII. Tap Start and select Internet Explorer.

VIII. On the address bar, key in an address.

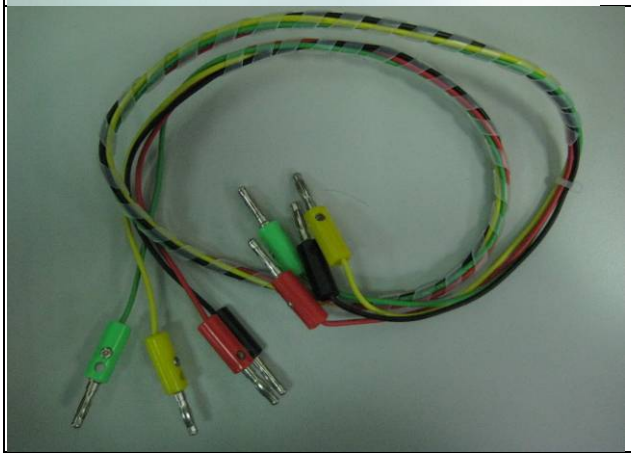
IX. (9). Tap and Hold the 'END' key to disconnect GPRS/3G.

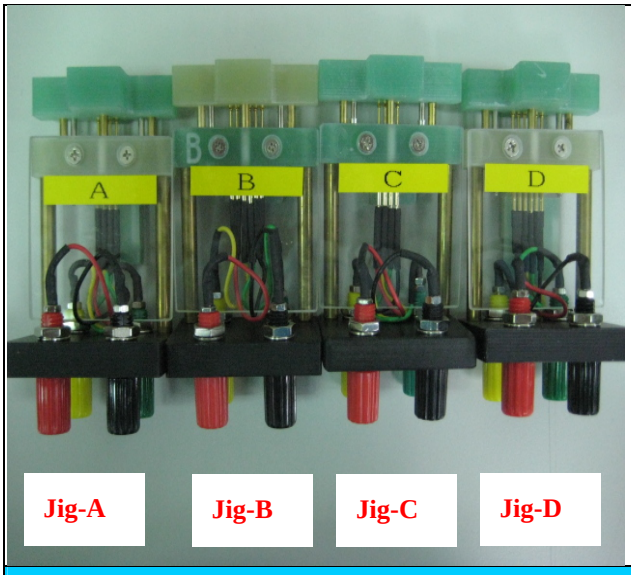


6. Power measurement test

6.1 Main board leakage current Test Procedure

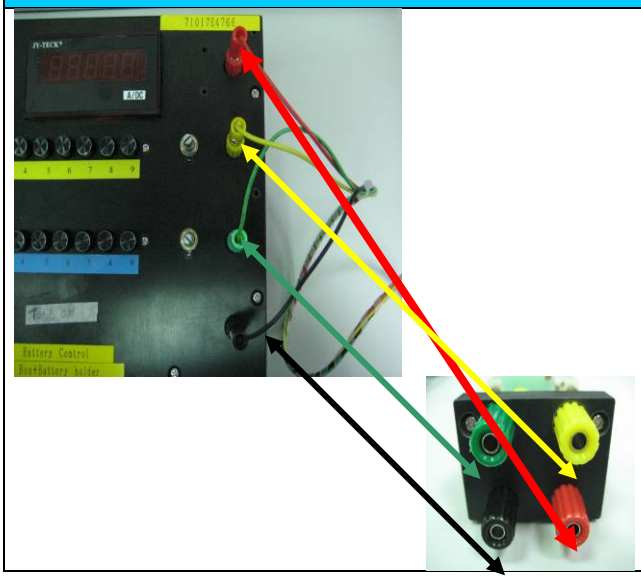
This is a quick method to measure if any abnormal leakage current on main board which caused high power consumption compare to GOOD main board.

Equipment list	
	1. Control box
	**2. 4 colors cable** Cable A: Red Cable B: Yellow Cable C: Green Cable D: Black



C. 4 types Jig
Jig - A (4 pins-Short)
Jig - B (6 pins-Long)
Jig - C (4 pins-Short)
Jig - D (6 pins-Long)

Equipment set up

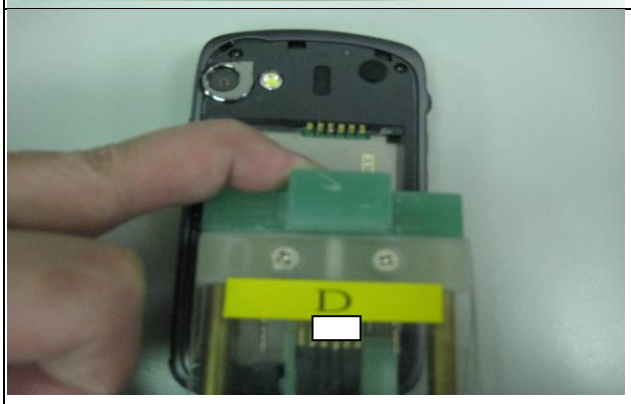


1. Connect control box and jig through 4 colors cable

2. Set up each button by row A~D according to product specification Following is an example for Nike

MADEL	JIG TYPE	Button set up matrix			
		A	B	C	D
Nike	C	0	8	4	0

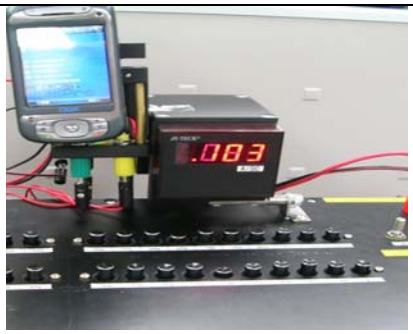
It means, press button A0,B8,C4,D0



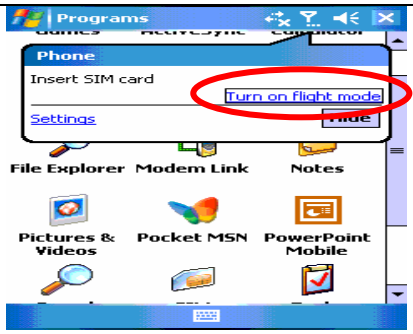
3. Install jig to device (the photo is for reference only)

Start testing

1. Turn on control box power button



2. Press Power button to turn on the Device

	3. In “main page”, Check phone status, Click “Turn on flight mode” Set the unit to : * Flight mode * Make sure all RF function is off (phone, BT, Wifi..)
Idle current test	4. Measure Idle mode current. Idle current value must under 35mA, if over the criteria, it means M/B failed, please replace M/B for repair.
Sleep current test	5. After idle current checked, Switch OFF the unit. Unit is turn off and no display. Sleep current value must under 3mA, if over the criteria, it means M/B failed, please replace M/B for repair.
Conclusion: **If current consumption is passed at both of idle and sleep mode, it means M/B is GOOD. If there is any item FAILED at idle or sleep mode, it means M/B is failed, please replace M/B for repair.**	

Model	Jig Type	Button set up matrix				Testing Criteria	
		A	B	C	D	Idle Current <=	Sleep Current <=
Nike	C	0	8	4	0	35 mA	3 mA

6.2 Battery rundown test procedure

Test Requirement:

-Windows 2000/XP

-USB Cable

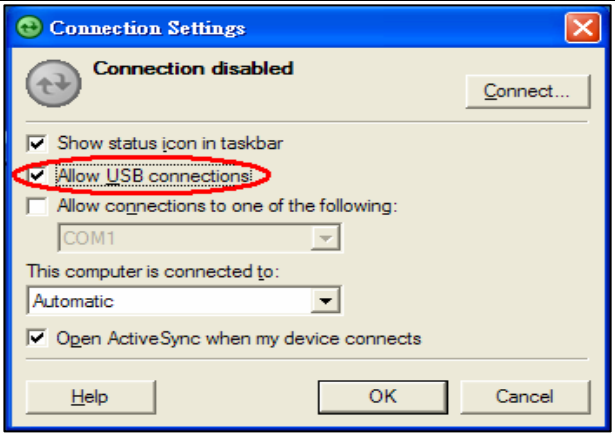
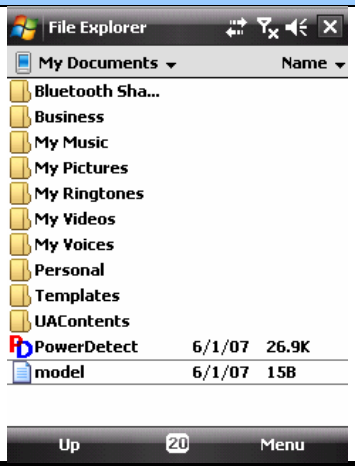
-ActiveSync 4.5 or above

-Master Unit

-Battery in Warrantee

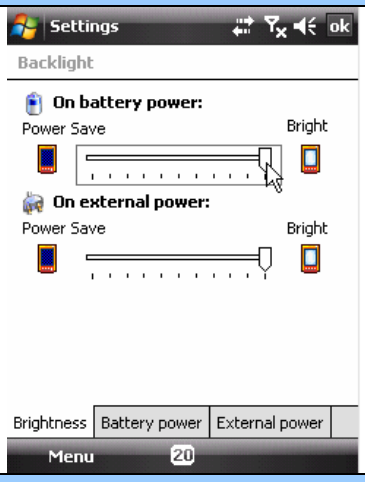
Caution: Please charge your unit to full capacity for battery (until the green light is displayed) before doing the test.

TEST PROCEDURE

Connect device to PC	
I. Setting and allow USB connections in Microsoft ActiveSync. II. Connect your device and desktop/ or laptop via USB cable. III. Check the pop-up message from Microsoft ActiveSync when device is synchronized with PC.	
Copy the Battery Rundown tool into the device	
IV. Make a folder in the device. V. Download testing program from SDO. VI. Copy PowerDetect.exe and model.txt into the folder.	

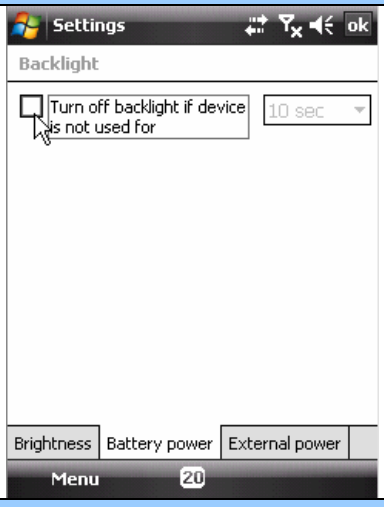
Battery Rundown-1

VII. Adjust the Backlight brightness into the maximum level on battery power.



Battery Rundown-2

VIII. Disable Turn off backlight if device is not used for in Battery power.



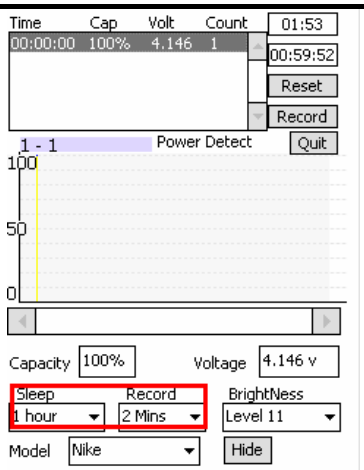
Battery Rundown-3

IX. Execute PowerDetect.exe under WinCE

Battery Rundown-3

X. Set the Sleep as 1hour

XI. Set the Record as 2Mins

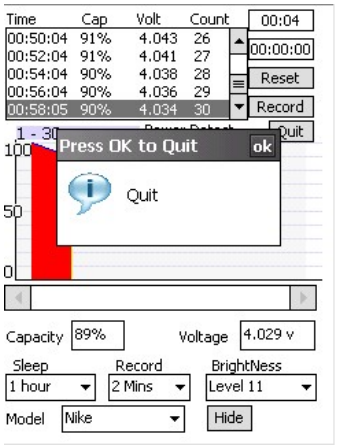


Battery Rundown-4

XII. After running 1 hour, the test will be finished.

XIII. Press the Power Button to turn on the power.

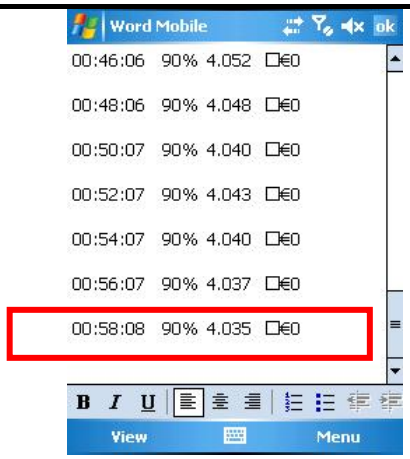
XIV. Click ok to quit the program.



Battery Rundown-5

XV. Test result is generated into the log file as PowerCap(x).

Battery Rundown-6

XVI. Tag the log file to check the capacity.	

Caution: If the capacity is under 70%, Please replace a new battery.

7. Cosmetic Inspection Criteria

This criteria based on the experience of customer's requirements is designated as HTC internal quality inspection standard of Nike Series products for HTC.

7.1 Classes definition of inspective area

- Class A area => The front side of main unit involve all buttons and LED lens except LCD.
- Class B area => The view of qwerty keyboard after slid out main unit (involve stylus).
- Class C area => 4 sides and back views of main unit.
- Class D area => Socket of battery, inner side of battery cover and back side of upper slid part.

Photo of inspection areas

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.

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.

7.2 Display inspection

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

7.3 Main unit inspection

GAP INSPECTION

Description		Accept Criteria
1.	Gap between sliding bezel and housing	GAP ≦ 0.9 (mm)

OTHERS

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

ACCEPTABLE SPEC OF SEMI-AUTO SLIDING

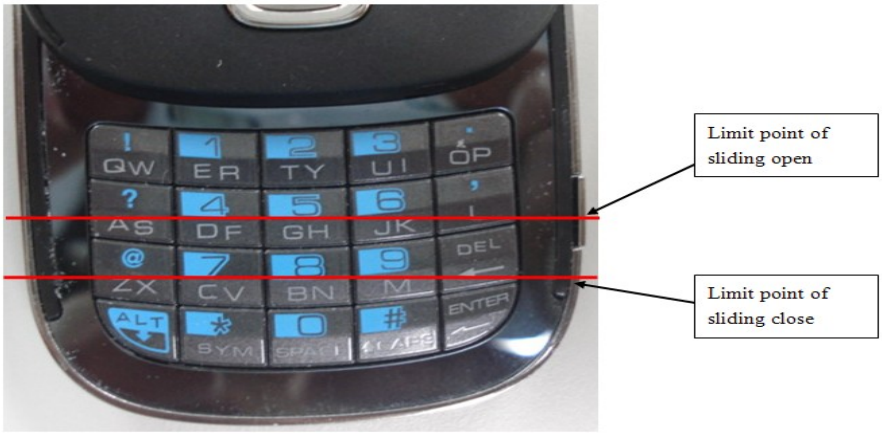
1、Testing method：

- ✓ Pushing the right side of sliding bezel by thumb till it can auto sliding for opening.
- ✓ Pushing the left side of sliding bezel by other 4 fingers till it can auto sliding for closing.

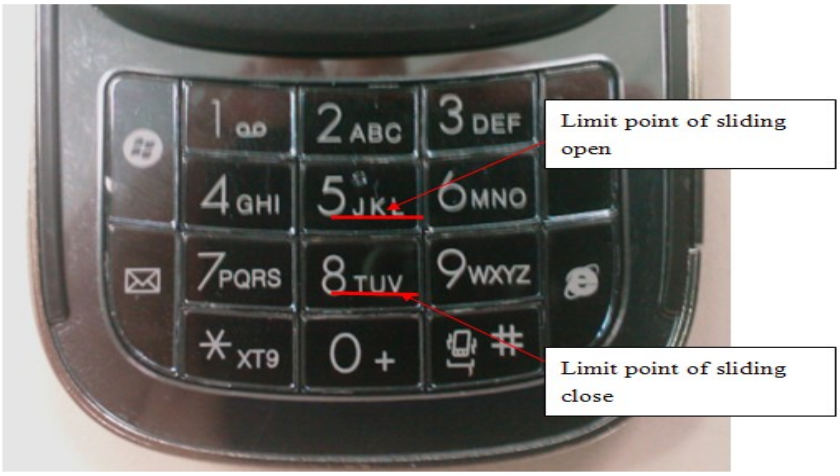
2、Checking SPEC：

- ✓ The starting point of auto slide opening must before the position that right side of the bezel reach the upper side of 3rd array (from bottom to top) of QWERTY keyboard.
- ✓ The starting point of auto slide closing must before the position that right side of the bezel reach the upper side of 2nd array (from bottom to top) of QWERTY keyboard.

For 20 Key



For 16 key



8. 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) Try to start boot-loader mode [refer to section 4.2]. Re-flash ROM if boot loader mode is enabled.

(6) Check all connectors including LCD FPC to Main Board.

(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.

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 Do Not Respond

(1) Try to cold boot the unit then tries again.

(2) Dismantle the unit; check the status of switches on the Main Board and the plastic parts of the Button not responding.

(3) Try with another Main Board or Front Bezel.

(4) Replace Main Board or Front Bezel 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 · Unusual Vertical / Horizontal lines or partial display

(1) Check the connection of LCM FPC whether is properly connected.

(2) Try to cold boot the unit then tries again.

(3) Try to re-flash the ROM code.

(4) Try with another LCM.

(5) Try with another Main Board.

(6) Replace LCM 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.

5 · 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.

6 · CF/SD Card cannot be used

(1) Check whether CF/SD Card is fully inserted to the slot until you hear a click.

(2) Try to re-flash the ROM code.

(3) Try with another CF/SD Card.

(4) Try with another Main Board.

(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.

7 · PC Connection not possible

(1) If test result is NFF, it is possible caused by user connect cradle to computer before ActiveSync is installed.

(2) Check whether “Connection Settings” in the MS ActiveSync is properly set.

(3) Check whether it connects with other cables or cradle, customer’s cable might be damaged.

(4) Check the external appearance of the connector on the unit whether it is physically damaged.

(5) Try to re-flash the ROM code.

(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.

8 · 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.

9 · 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.

(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 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.

11 · No Sound from Speaker or Distorted sound

(1) Check “Sound & Notifications” Settings in the unit for Sound Enabling.

(2) Make sure it’s not MUTED.

(3) Try to re-flash the ROM code.

(4) Clean up the speaker connection side on MB if there is any contamination.

(5) Dismantle and Check whether the Speaker is properly installed (Orientation)

(6) Replace Speaker 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.

12 · No Recorded Sound or Distorted sound

(1) Check “Sound & Notifications” Settings in the unit for Sound Enabling.

(2) Make sure it’s not MUTED.

(3) Try to re-flash the ROM code.

(4) Dismantle and Check whether the Microphone is properly installed.

(5) Replace Microphone 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.

13．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-flash the ROM code.

(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.

9. Generic Labeling Plan

■ Main unit

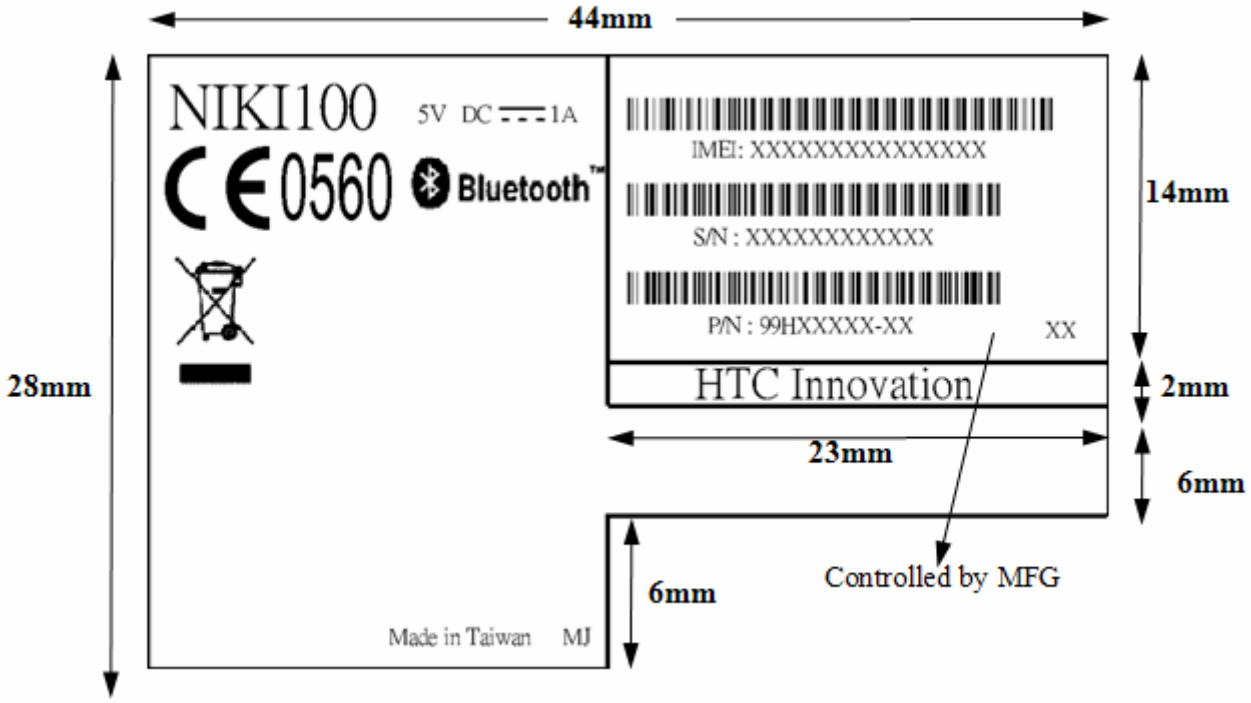
a. Main unit Regulation label (on the rear housing of main unit)

HTC P/N: 77H00547-00M

Image file name: Main_Unit_Regulation

Please note: 1.The brand name is shown on Bezel.

2. All bar codes must be code 128 symbology.

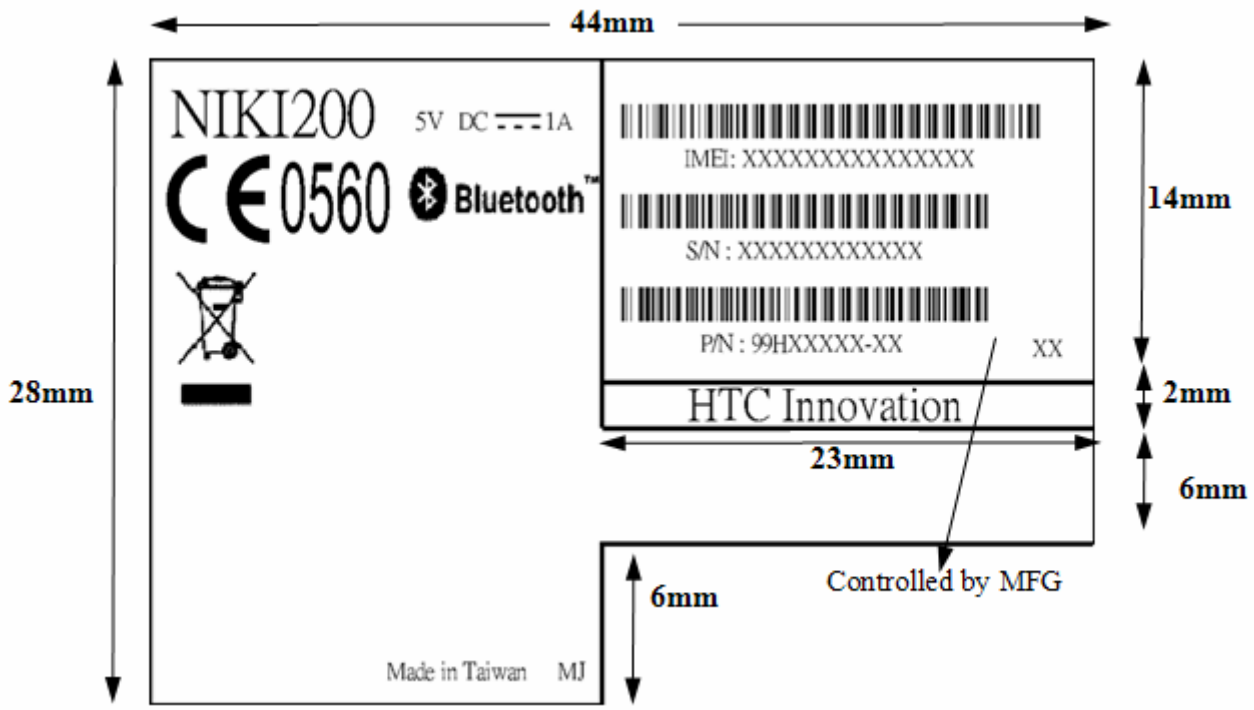


b. Regulation label(on the rear housing of main unit)

HTC P/N: 77H00547-01M

Please note: 1. The brand name is shown on Bezel.

2. All bar codes must be code 128 symbology

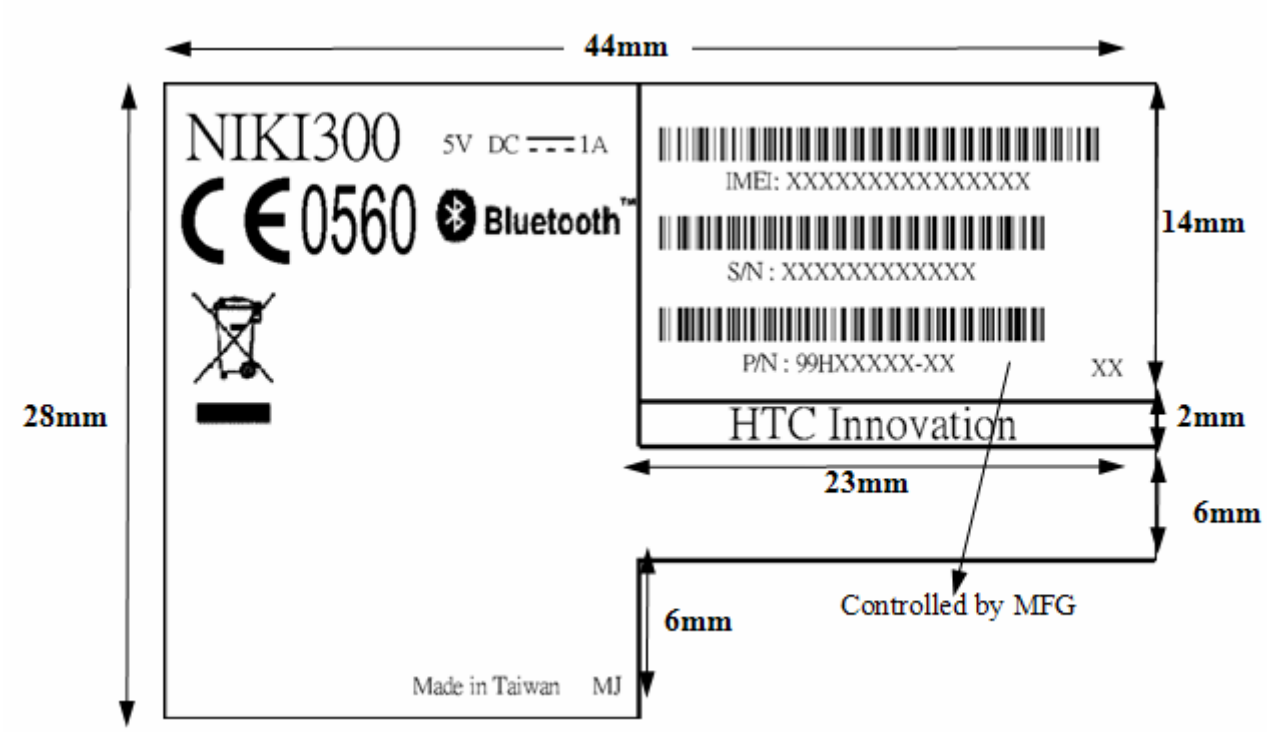


c. Regulation label(on the rear housing of main unit)—for O2 (Amor)

HTC P/N: 77H00547-02M

Please note: 1. The brand name is shown on Bezel.

2. All bar codes must be code 128 symbology



For S/N: SSYWWPPZZZZZ

SS: SITE CODE --> HT

Y: Year Last Digital of the Year.

WW: Week Code: 01 ~ 54

PP: Product Code: GC

ZZZZZ: Serial Number (00001 ~ 99999) Use Base 10

MODEL ID: NIKI100

Label Characteristic :

Material: polyester

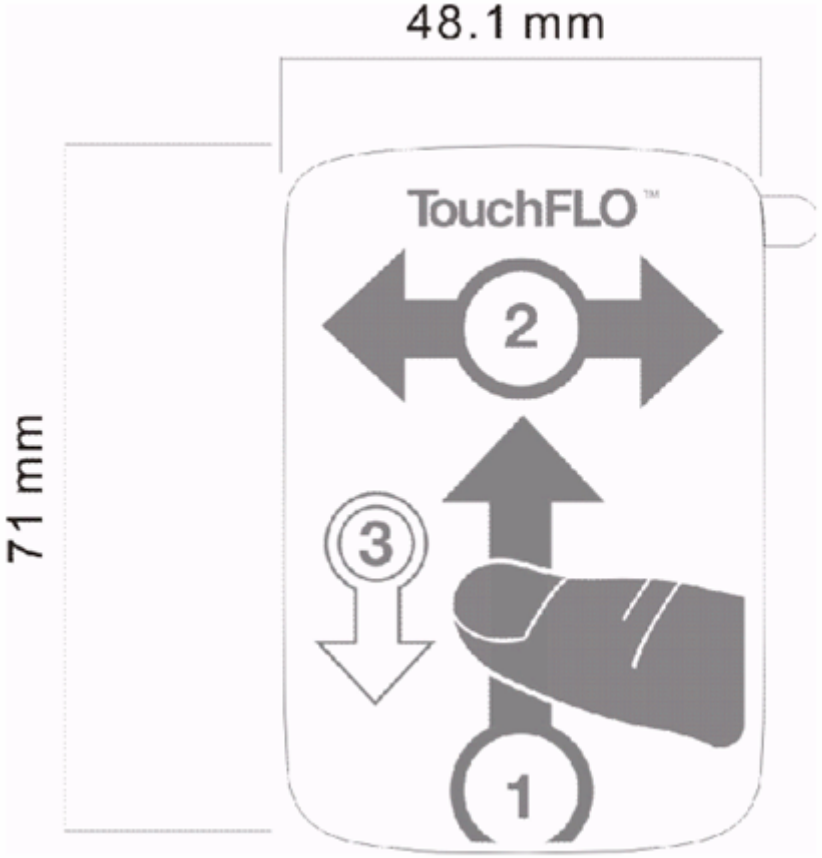
Color:pantone 422c

Ink:pantone 425c

■ *Screen Protector label*

HTC P/N: 76H02262-00M

Size: 71* 48.1mm



■ Battery Label

a. Main Battery Warning Label (Simplo)

HTC P/N: 35H00103-00M

Size : 45.1 mm*43.3 mm

Image file name: Main_Battery_warning

Manufacture by battery vendor.

b. Main Battery Warning Label(Second source)—(SKME)

HTC P/N: D00054369

Size : 42 mm*40 mm

Image file name: Main_Battery_warning(Second source)

Manufacture by battery vendor.

10. Generic Spare Part List and Photos

10.1 SPL for Repair

Item	HTC P/N	Description	Qty	Substitute	Remark
1	35H00103-00M	BATTERY_LI-ION,1120mAh,3.7V,SONY,HTC-CER584,SIMPLO,SONY cell US574240A9T,60/-20degC,44.5*16.9*6.5mm	1		
2	36H00632-00M	Receiver,2403 266 00028 ,PHILIPS	1		
3	36H00635-00M	Vibrator,MVMF-A272Q1,LG	1		
4	36H00636-00M	Speaker,SBD181029P-BS01B8,BLUECOM	1		
5	51H00428-00M	PCBA-MAIN BOARD,GENERIC,NIKE	1		
6	51H00433-00M	PCBA,BT Board,NIKE	1		
7	51H10064-00M	Rigid-Flex Board ASSY,SD_Receiver Board,NIKE	1		
8	54H00260-00M	Camera Module,07P008,LITEON,FF,LiteOn,Largan,SUIWA,OV6680,Largan-988A,0.16Mpixel,56.35*5.92*3.09mm	1		
9	54H00261-00M	Camera Module,07PE03,LITEON,FF,LiteOn,Largan,APCB,Samsung S5K4B1FX EVT2,Largan-970A6,2Mpixel,62.8*9.02*6.08mm	1		
10	60H00108-00M	TFT-LCD,L5F30634T00,EPSON,64.7*46.2*1.85mm,Nike	1		
11	71H02082-00M	Cover,SD_DOOR,TPU,NIKE	1		
12	72H00724-00M	Screw,PH,FD,T1.4*2.9, Nickel,Black,AISI 1018	2		
13	72H00740-00M	SCREW,PH,FD,M1.6X1.6,NICKEL+NYLOK	5		
14	72H01059-00M	Screw,POINT Mechanical,P,1.6*4.5,BZ+NYLOK	6		
15	72H02282-00M	Copper Foil,THERMAL,D,NIKE	1		
16	72H02287-00M	Screw,T6,KH,M1.6*4.0,BZ,POINT SCREW,Neon	2		
17	72H02304-00M	Spring,EMC,NIKE	2		
18	72H02495-00M	EMI Gasket,L gasket with Kapton,Nike	1		
19	72H02310-00M	Screw,BIH-M1.6*2.5BZ+NY,Nike	6		
20	72H02345-00M	Screw,BIH-BT1.4*2,NIKE	1		
21	72H02373-00M	Screw,KH-M1.6*1.7 BNI+NY,Nike	3		
22	73H20122-09M	FPC Pre-Assy,B to B Sliding Board,CAREER,NIKE	1	73H20122-41M	
23	73H20134-09M	FPC Pre-Assy,True,CAREER,73H20134-09M,20 Number keyboard, NIKE	1	73H20134-41M	
24	74H00979-00M	Stylus Pre-Assy,NIKE	1		
25	74H00999-00M	Keypad Pre-Assy,NAVI_KEY,NIKE	1		
26	74H01001-00M	Housing Pre-Assy,HOUSING-D_ASSY,NIKE	1		
27	74H01002-00M	Housing Pre-Assy,HOUSING-C_ASSY,NIKE	1		
28	74H01003-00M	Cover Pre-Assy,COVER_BATTERY,NIKE	1		
29	74H01004-00M	Cover Pre-Assy,COVER,HINGE,PRE_ASSY,NIKE	1	74H01004-01M	
30	74H01005-00M	Keypad Pre-Assy,NUMBERKEY,20KEY,NIKE	1		
31	74H01018-00M	HINGE_PRE_ASSY,NIKE	1		
32	76H00814-00M	TAPE,LCD UPPER LEFT,SAUSALITO	1		

33	76H02072-00M	Rubber,RUBBER_MAIN_CAMERA,NIKE	1		
34	76H02239-00M	Rubber,Rubber,MIC,NIKE	1		
35	76H02273-00M	Adhesive-Double Tape,ADHESIVE,KEYPAD,NIKE	1		
36	76H02282-00M	KAPTON,FPC,CAMERA,NIKE	1		
37	76H02281-00M	Insulator,square,SD board square insulator tape,9*4*0.05mm,Nike	1		
38	76H02316-00M	Mylar,MYLAR,RESET,NIKE	1		
39	76H02381-00M	PROTECT,FILM,LEYPAD,190HC,Nike	1		
40	76H02396-00M	Mylar,Mylar,Donut,SD Board,Nike	1		
41	77H00203-00M	Water Sensitive Label,4*2.5mm,Ming Jye,BlueAngels	1		
42	80H00617-00	FRU-SUB ASSY,Housing w/Touch window Pre-Assy	1		
43	80H00598-00	FRU 80H Kernel	1		
44	99HDT000-01	FRU Unit	1		
45	99HDT000-02	FRU Main Board	1		
46	99HDT000-00	SKU	1		
47	80H00548-00	SKU 80H Kernel	1		

NOTE:

THE PHOTO OF SPL IS GENERIC AND ONLY FOR REFERENCE, THE COLOR AND 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.

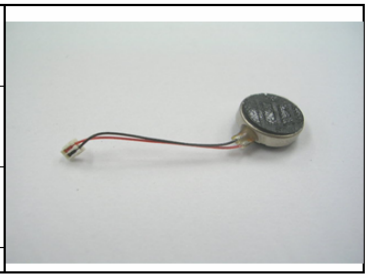
Picture for SPL 80H Kernel and Accessories

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

Part No.	35H00103-00M
Description	BATTERY_LI-ION
Q'ty	1
Refurbishment	No

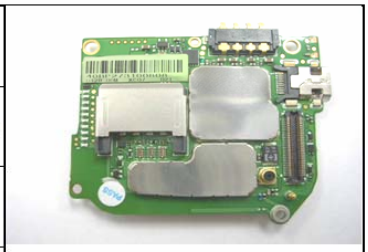
Part No.	36H00632-00M
Description	Receiver
Q'ty	1
Refurbishment	No

Part No.	36H00635-00M
Description	Vibrator
Q'ty	1
Refurbishment	No

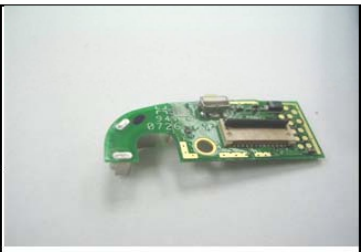


Part No.	36H00636-00M
Description	Speaker
Q'ty	1
Refurbishment	No

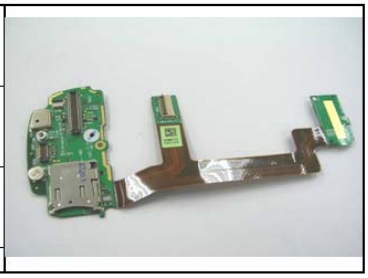
Part No.	51H00428-00M
Description	PCBA MAIN BOARD
Q'ty	1
Refurbishment	No



Part No.	51H00433-00M
Description	PCBA BT Board
Q'ty	1
Refurbishment	No

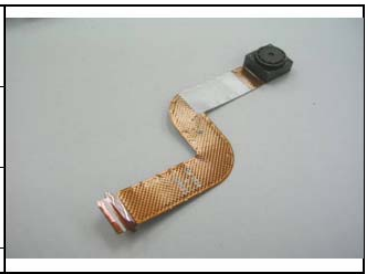


Part No.	51H10064-00M
Description	Rigid-Flex Board
Q'ty	1
Refurbishment	No

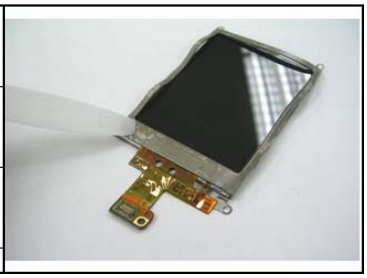


Part No.	54H00260-00M
Description	2nd Camera Module,07P008
Q'ty	1
Refurbishment	No

Part No.	54H00261-00M
Description	Main Camera Module,07PE03
Q'ty	1
Refurbishment	No



Part No.	60H00108-00M
Description	TFT-LCD
Q'ty	1
Refurbishment	No



Part No.	71H02082-00M
Description	Cover SD_DOOR
Q'ty	1
Refurbishment	Yes

Part No.	72H02287-00M
Description	Screw,T6,KH,M1.6*4.0,BZ
Q'ty	2
Refurbishment	No

Part No.	72H00724-00M
Description	Screw,PH,FD,T1.4*2.9, Nickel,Black
Q'ty	2
Refurbishment	No

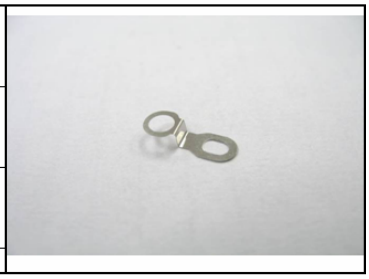
Part No.	72H00740-00M
Description	SCREW,PH,FD,M1.6X1.6,NICKEL+NYLOK
Q'ty	5
Refurbishment	No

Part No.	72H01059-00M
Description	Screw,POINT Mechanical,P,1.6*4.5,BZ+NYLOK
Q'ty	6
Refurbishment	No

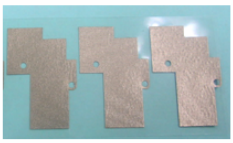
Part No.	72H02373-00M
Description	Screw,KH-M1.6*1.7 BNI+NY
Q'ty	3
Refurbishment	No

Part No.	72H02282-00M
Description	Copper Foil
Q'ty	1
Refurbishment	No

Part No.	72H02304-00M
Description	Spring EMC
Q'ty	2
Refurbishment	No



Part No.	72H02495-00M
Description	L gasket with Kapton
Q'ty	1
Refurbishment	No



Part No.	72H02310-00M
Description	Screw,BIH-M1.6*2.5BZ+NY
Q'ty	6
Refurbishment	No

Part No.	73H20122-09M
Description	Sliding FPC
Q'ty	1
Refurbishment	No

Part No.	73H20134-09M
Description	FPC Number keyboard
Q'ty	1
Refurbishment	No

Part No.	74H00979-00M
Description	Stylus
Q'ty	1
Refurbishment	No

Part No.	80H00617-00
Description	Housing w/Touch window
Q'ty	1
Refurbishment	Yes

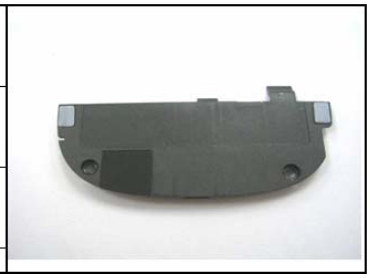
Part No.	74H00999-00M
Description	NAVI_KEY
Q'ty	1
Refurbishment	Yes

Part No.	74H01001-00M
Description	Housing D part
Q'ty	1
Refurbishment	Yes

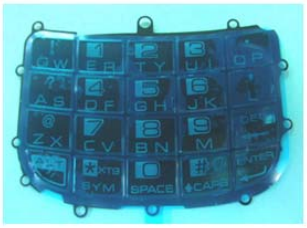
Part No.	74H01002-00M
Description	Housing C part
Q'ty	1
Refurbishment	Yes

Part No.	74H01003-00M
Description	Battery cover
Q'ty	1
Refurbishment	Yes

Part No.	74H01004-00M
Description	HINGE Cover
Q'ty	1
Refurbishment	Yes

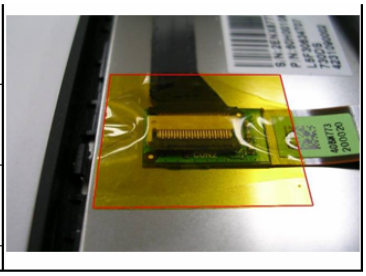


Part No.	74H01005-00M
Description	Keypad
Q'ty	1
Refurbishment	Yes



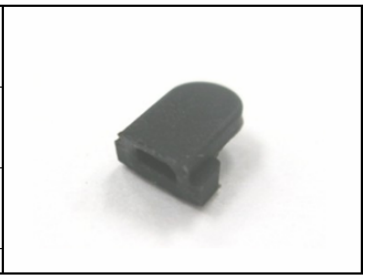
Part No.	74H01018-00M
Description	HINGE
Q'ty	1
Refurbishment	Yes

Part No.	76H00814-00M
Description	TAPE,LCD UPPER LEFT
Q'ty	1
Refurbishment	No

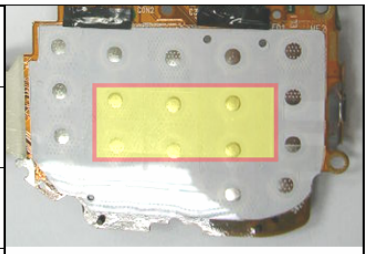


Part No.	76H02072-00M
Description	Camera Rubber
Q'ty	1
Refurbishment	No

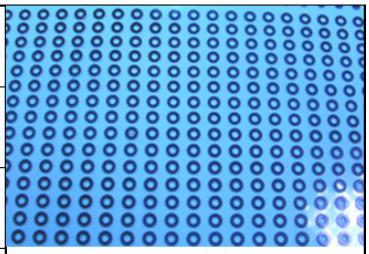
Part No.	76H02239-00M
Description	MIC Rubber
Q'ty	1
Refurbishment	No



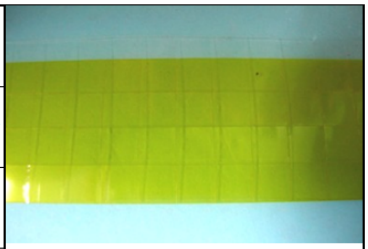
Part No.	76H02273-00M
Description	Adhesive-Double Tape
Q'ty	1
Refurbishment	No



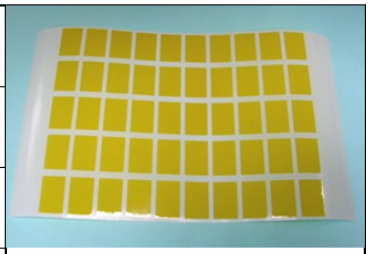
Part No.	76H02396-00M
Description	Mylar,Mylar,Donut,SD Board
Q'ty	1
Refurbishment	No



Part No.	76H02285-00M
Description	Insulator,square,SD board square insulator tape
Q'ty	1
Refurbishment	No

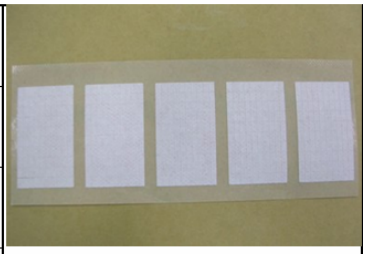


Part No.	76H02282-00M
Description	KAPTON,FPC,CAMERA
Q'ty	1
Refurbishment	No



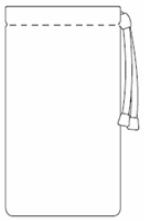
Part No.	76H02316-00M
Description	Mylar,MYLAR,RESET
Q'ty	1
Refurbishment	No

Part No.	77H00203-00M
Description	Water Sensitive Label
Q'ty	1
Refurbishment	No



Part No.	36H00582-01M
Description	Earphone
Q'ty	1

Part No.	70H00144-02M
Description	Accessary Pouch
Q'ty	1

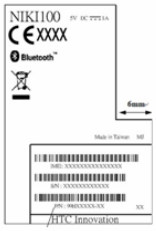


Part No	73H00131-04M
Description	USB Cable with WEEE logo
Q'ty	1

Part No	77H00222-00M
Description	Label security
Q'ty	1

Part No	79H00055-01M
Description	AC Adapter,1A,5V
Q'ty	1

Part No	77H00547-00M
Description	Regulation Label
Q'ty	1



10.2 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:

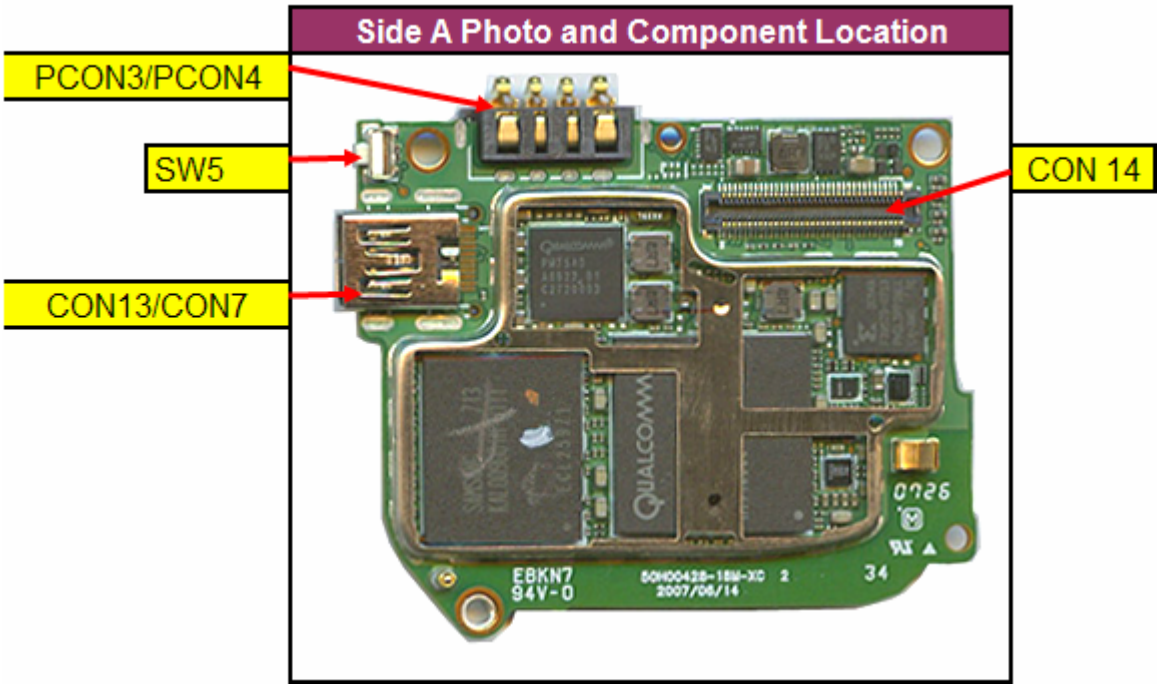
A. All the parts of the PCB should be checked if it is missing or not.

B. The OP must to wear antistatic wrist band. Don't put boards together and avoid hitting them.

C. When you solder and repair that the soldering iron ,temperature must be setup 415℃. (The temperature range is 415℃±5℃),and the solder wire's diameter is 0.4/0.5/0.6mm(SAC 305 (1.1%)

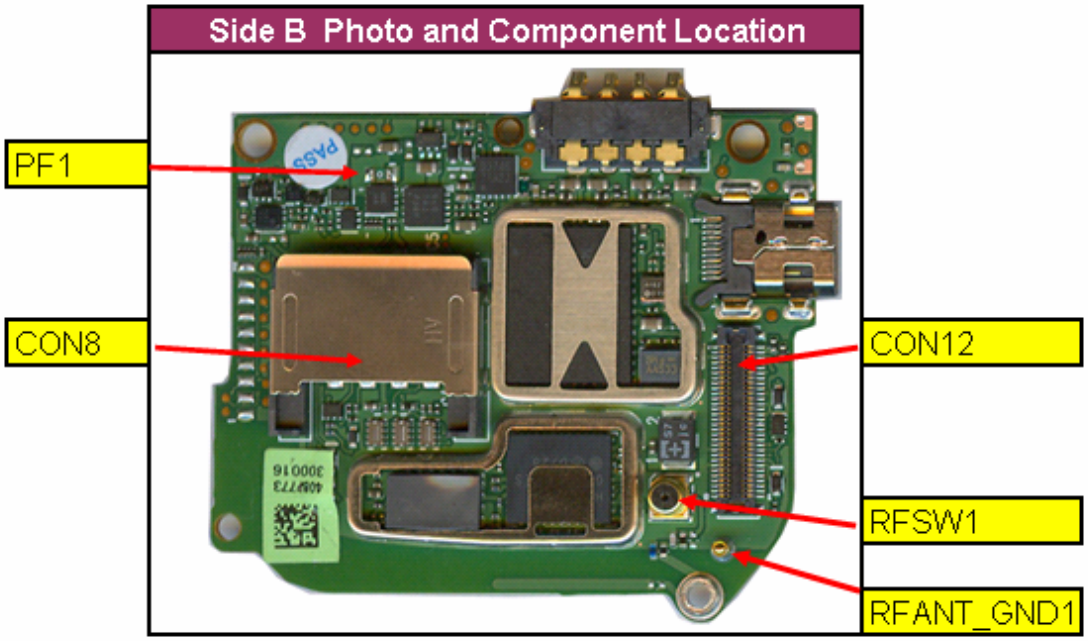
➢ 51H00428-00M PCBA-MAIN BOARD(Side A)

51H00428-00M PCBA-MAIN BOARD(Side A)				
Location	**P/N**	**Description**	**Q'ty**	**Description**
SW5	36H00515-00M	Switch,LS12K2-T,CITIZEN,3.85*2.9*1.55mm	1	Reset button
CON14	75H00724-00M	Connector B to B,1000mohm,70P,0.4Pitch,0.3A,60V,AXT370164,MATSUSHITA	1	Sliding FPC connector
CON13	75H00742-00M	Connector Others,Miniusb,normal,0.45mmPitch,XS1110117a	1	USB connector
CON7	75H00743-00M	Connector Others,Miniusb,reverse,0.45mmPitch,Xs1110118a	1	USB connector
PCON3	75H00725-00M	Connector Others,Battery,Normal,4P,2.5Pitch,2.5A,15V,800-04000-09	1	Battery connector
PCON4	75H00726-00M	Connector Others,Battery,Reverse,4P,2.5mmPitch,2.5A,15V,800-04000-10,ACT	1	Battery connector



➢ 51H00428-00M PCBA-MAIN BOARD(Side B

51H00428-00M PCBA-MAIN BOARD(Side B)				
Location	**P/N**	**Description**	**Q'ty**	**Description**
PF1	36H00300-00M	Fuse,046702.5,2.5A/32V,LITTLEFUSE,Apache	1	Fuse
RFANT_GND1	36H00611-00M	Antenna-W/O Elec Inspection,SBS13-1030G04,ACON,NIKE	1	Antenna connector
CON12	75H00722-00M	Connector B to B,1000mohm,60P,0.4Pitch,0.3A,60V,AXT360164,MATSUSHITA	1	Keypad FPC
CON8	75H00727-00M	Connector SIM Card,50mohm,8PIN,2.54 mmPitch,ICC-432,HAMBURG	1	SIM card connector
RFSW1	75H00514-00P	Connector RF,Female,4P,MS-162,HIROSE,3.5*3.1*2.5mm	1	RF connector



11. RF Antenna Specification

Items	Test Name	TxLevel	TCH	lst Downlink CellPower	Note
1	Camp @ DCS Band	0	512	-65	BCCH=600
2	BS Originate Call	0	512	-65	
E-GSM 900 ReceiverTest					
3	Fast Bit Error Rate	5	975	-104	
4	Fast Bit Error Rate	5	37	-104	
5	Fast Bit Error Rate	5	124	-104	
E-GSM 900 Ttansmitter Test					
6	Check TX Power	5	975	-104	
7	Check TX Power	5	37	-104	
8	Check TX Power	5	124	-104	
DCS 1800 ReceiverTest					
9	Fast Bit Error Rate	0	512	-104	
10	Fast Bit Error Rate	0	698	-104	
11	Fast Bit Error Rate	0	885	-104	
DCS 1800 Ttansmitter Test					
12	Check TX Power	0	512	-104	
13	Check TX Power	0	698	-104	
14	Check TX Power	0	885	-104	
PCS 1900 ReceiverTest					
15	Fast Bit Error Rate	0	512	-104	
16	Fast Bit Error Rate	0	662	-104	
17	Fast Bit Error Rate	0	810	-104	
PCS 1900 Ttansmitter Test					
18	Check TX Power	0	512	-104	
19	Check TX Power	0	662	-104	
20	Check TX Power	0	810	-104	

Items	Test Name	Power Level	Uplink/Downlink UARFCN	Ist Downlink CellPower	Note
1	Camp @ W-CDMA Band I (2100)	3	9613/10563	-60	
2	BS Originate Call	3	9613/10563	-60	
ReceiverTest					
3	Bit Error Rate	3	9613/10563	-105	
4	Bit Error Rate	3	9750/10700	-105	
5	Bit Error Rate	3	9887/10837	-105	
Ttansmitter Test					
6	Check TX_Max Power	3	9613/10563	-60	
7	Check TX_Max Power	3	9750/10700	-60	
8	Check TX_Max Power	3	9887/10837	-60	