



HTC Corporation

Doc. No.

DOC-00045020

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Issued Date

2008/07/14

Revised Date

2008/10/20

A04

Doc. Title

Dream Service Manual

Page

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Dream

Service Manual



HTC Proprietary

Confidential Treatment Requested

Rev. A04

HTC Corporation



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Engineering Mobility

REVISION CONTROL TABLE

REV	DATE	CONTENTS	DEPT	REVISED	STAGE
AX01	2008/7/14	First draft	PSE	Aken_Kan	DVT
AX02	2008/8/7	Second draft	PSE	Aken_Kan	DVT
AX03	2008/9/10	1. Update diagnostic program 2. Update power measurement test 3. Update spare part list	PSE	Aken_Kan	PVT
A01	2008/9/12	A01 version release	PSE	Aken_Kan	PVT
A02	2008/9/19	Add 1.3 product service flowchart	PSE	Aken_Kan	PVT
A03	2008/10/8	1. Add one gasket in page 41 (LCM assembling procedure). 2. Add one gasket in SPL list page 106.	PSE	Aken_Kan	MP
A04	2008/10/20	Update SPL list	PSE	Aken_Kan	MP



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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-flash 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 leakage test procedure and Battery test procedure.
 - Chapter 6: Cosmetic Inspection Criteria- After reading this chapter you will learn the appearance quality inspection criteria, ex. Display, bezel, and housing etc...
 - Chapter 7: Generic Troubleshooting- After reading this chapter, you will learn how to do generic trouble-shooting.
 - Chapter 8: Generic Labeling Plan- In this chapter, you will find generic labels for reference, ex. Regulation label, and battery label etc...
 - Chapter 9: Generic Spare Part List and Photos- In this chapter, you will find Spar parts reference list and photos for repairing, including unit and Board level.
 - Chapter 10: RF Antenna Specification- Reference Spec for RF test.



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1.1. Product Features

Platform

- Slide-out QWERTY Internet phone
- Android platform

Dimension

- 117.8 x 55.7 x 17.1 mm

Processor/Chipset

- Qualcomm MSM 7201a, 528 MHz

Memory

- Flash: 256 MB
- RAM: 192 MB DDR (include 64MB baseband chip)

LCD Module

- 3.2-inch 320x480 HVGA resolution
- 262K color TFT LCD with LED back light (OS support 65K color)
- Capacitive touch screen

HSUPA/HSDPA/UMTS/EDGE/GPRS/GSM Function

- Internal antenna
- HSDPA/UMTS dual-band (2100, 1700/2100 MHz) and GSM/GPRS/EDGE Quad-band (850/900/1800/1900 MHz)
 - ◆ HSDPA/UMTS
 - ✓ 2100:1920-1980, 2110-2170 MHz
 - ✓ AWS band: 1700 (1710- 1755 MHz) and 2100(2110-2155 MHz)
 - ◆ GSM/GPRS/EDGE
 - ✓ 850: 829-849, 869-894MHz
 - ✓ 900: 880-915, 925-960 MHz
 - ✓ 1800: 1710-1785, 1805-1880 MHz
 - ✓ 1900: 1850-1910, 1930-1990 MHz
- HSDPA
 - ◆ 3GPP release 5 compliant
 - ◆ UE category 8, up to 7.2 Mbps downlink
- HSUPA
 - ◆ 3GPP release 6 compliant
 - ◆ UE category 5, up to 2 Mbps uplink
- Global roaming
- Auto band switching
- Handover and cell selection between GSM/GPRS/EDGE and UMTS
- DTM
- SAIC (circuit switch only)
- Equalizer (HSDPA channels only)
- Audio codec: AMR-NB,EFR, FR, HR
- SMS (MO, MT), concatenated SMS (640 characters)
- Support MCC-MNC-UC-ID, as stated in 3GPP TS 25.401 R99, Section 6, for both RIL and radio
- Generic Services:
 - ◆ Call holding/waiting/forwarding
 - ◆ Call barring
 - ◆ CLI (Calling Line Identity)



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- ◆ Display own number
- ◆ Network selection
- ◆ Cell broadcast
- ◆ Multi-party conference call
- ◆ Spool icon
- ◆ Phase 2+ unstructured supplementary service data
- ◆ Network Lock
- ◆ USSD
- ◆ CPHS
- EGPRS functionality
 - ◆ EGPRS class B
 - ◆ Multi-slot standard class 12
 - ◆ 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 Toolkit release 99
 - ◆ EAP-SIM
 - ◆ Over the Air (OTA) programming
 - ◆ FDN
 - ◆ ADN/SDN
 - ◆ Security Pin 1 & 2 control

Standalone GPS

- Internal GPS antenna
- Sensitivity -145 dBm for cold start and -155 dBm for tracking
- Support NMEA 0183 version 3.0 or above
- Dynamically allocate parallel channel GPS receiver
- Acquisition time
 - ◆ Hot start: 8 seconds, typical TTFF (open sky & static condition)
 - ◆ Warm start: 60 seconds, typical TTFF (open sky & static condition)
 - ◆ Cold start: 75 seconds, typical TTFF (open sky & static condition)
- Update rate: once/1sec (default)
- GPS Accuracy
 - ◆ Position: < 15 meters, 95% typical
 - ◆ Velocity: 0.05 meter/sec steady state

AGPS

- Support UE-Based & UE-Assisted AGPS
- OMA SUPL v1.0 compliance (v2.0 if available)
 - ◆ SUPL-RRLP
 - ◆ SUPL-RRC (optional) (TBD)
 - ◆ WAP push initiated SUPL
- Standard 3GPP AGPS compliance
 - ◆ 3GPP TS 44.031 (RRLP 5.12)
 - ◆ 3GPP TS 25.305 (GSM & UMTS)
- Performance requirement
 - ◆ TTFF (95% successful rate): < 20 seconds
 - ◆ 2D Location Error (95% successful rate): < 100 m
 - ◆ Sensitivity requirement



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Liquid Indicator

Lanyard / Strap Hole

Accessories

- Quick Start Guide [Inbox]
- CD (User manual & Sync. software) [Inbox]
- Screen Protector [Inbox]
- Travel Charger [Inbox]
- Pouch (Carrying Case) [Inbox]
- USB Sync Cable (mini-USB/USB) [Inbox]
- Battery with battery cover [Inbox]
- Wired Stereo Headset [Inbox]
- Mono Bluetooth Headset, BH M200
- Stereo Bluetooth Headset, BH S100
- Bluetooth Keyboard
- Car Charger
- Car Holder

Compatibility Test

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

- Mono Bluetooth Headset, BH M100
- Handsfree Carkit : Parrot CK3400LS, Parrot MK6100, Parrot Minikit, Audi, BMW & Mercedes in car solutions
- Bluetooth Conference: Parrot Conference
- Bluetooth Speaker: Parrot Boombox
- SanDisk memory cards (including SDHC format)

Android Applications

Applications under OHD distribution model

- Home Screen, Application Launcher, Lock Screen, and Track View for notification, Settings
- Dialer
- Browser
- Camera
- Pictures
- Music
- Media Player (and streaming media supported)
- SMS/MMS
- **IM (MSN(*)/Yahoo IM) (TBD)**
- Contacts
- Calendar
- Alarm Clock
- Calculator
- Voice Dialer
- SIM Toolkit

Applications under GMS licensing model

- Search
- Maps
- Street View
- YouTube
- Gmail
- IM (GTalk, AIM) (*)
- Synchronization (Contacts, Calendar, Gmail)
- Market (*)
- Modules, Codec under OHD distribution model
- Bluetooth profiles



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- ◆ GAP, RFCOMM, HFP, HSP
- Audio Codec
 - ◆ MP3, MIDI, AAC-LC, AAC+, AMR-NB, AMR-WB, SBC
- Video Codec
 - ◆ MPEG4 SP, H.263, H.264
- Image File Format
 - ◆ PNG, JPG
- OMA DRM 1.0 (Forward Lock only)
- Multiple APN

Enhancements

Android Application Enhancements

- **Smart Dialer (TBD)**
- **Input Method, support Traditional and Simple Chinese handwriting recognition (TBD)**
- Camera
 - ◆ Multiple modes support - Camera, Photo ID, **Camcorder(TBD)**

HTC Value-Added Applications [Generic]

- POP3/IMAP4 Mail Client
- **WAP Browser (TBD)**
- J2ME Support
 - ◆ JAM
 - ◆ JSR 75 PIM access & FC
 - ◆ JSR 118
 - ◆ JSR 120 Wireless Messaging API
 - ◆ JSR 135 Mobile Media API
 - ◆ JSR 139
 - ◆ JSR 185 JTWI

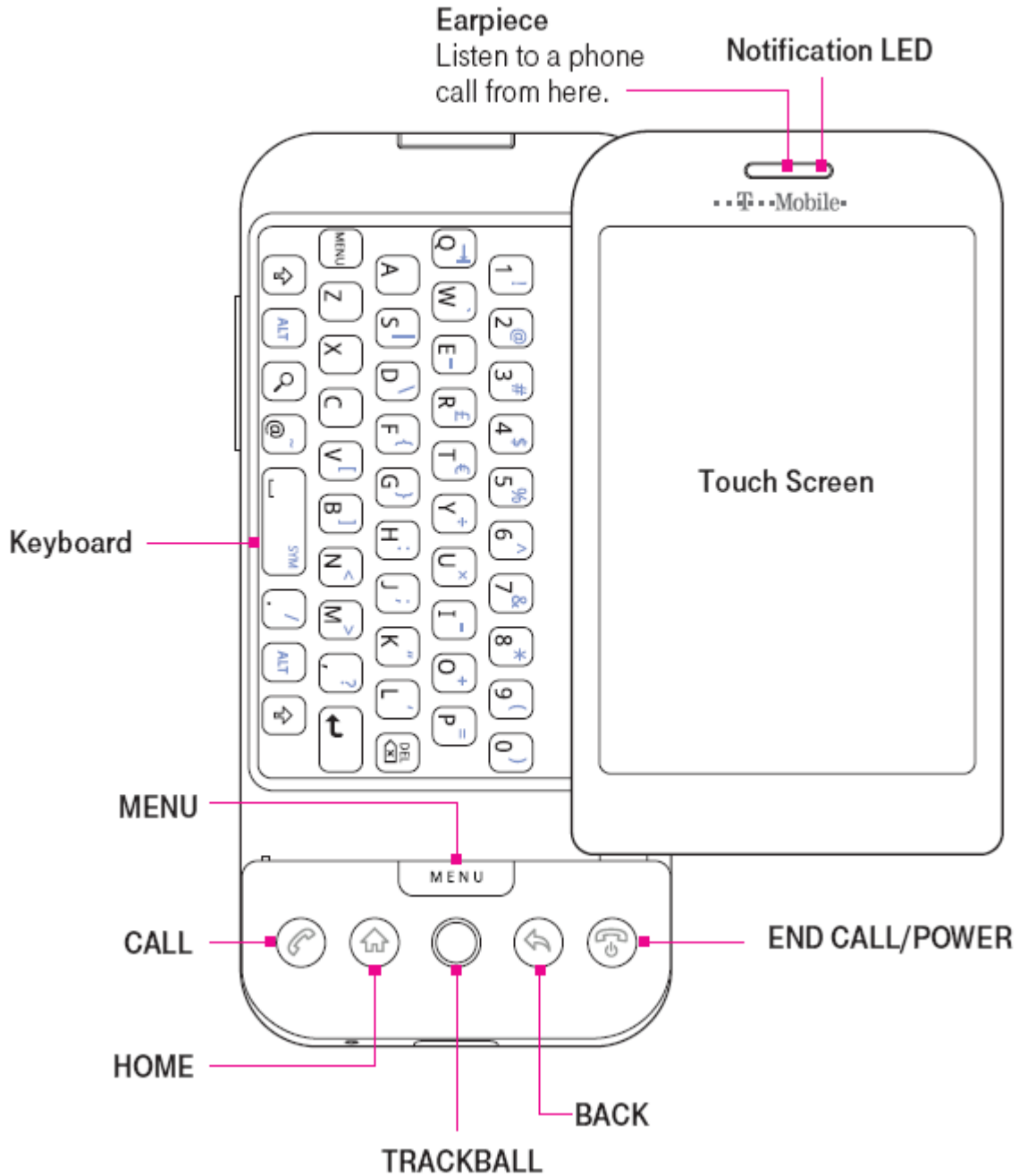
Customer Specific Applications

- **Regulatory**
 - USB Certification
 - BQB Certification
 - Wi-Fi Certification
 - CB Certificate/report [International]
 - GCF Certification [European Union]
 - R&TTE: EMC / EMI, Safety SAR [European Union]
 - FCC approval

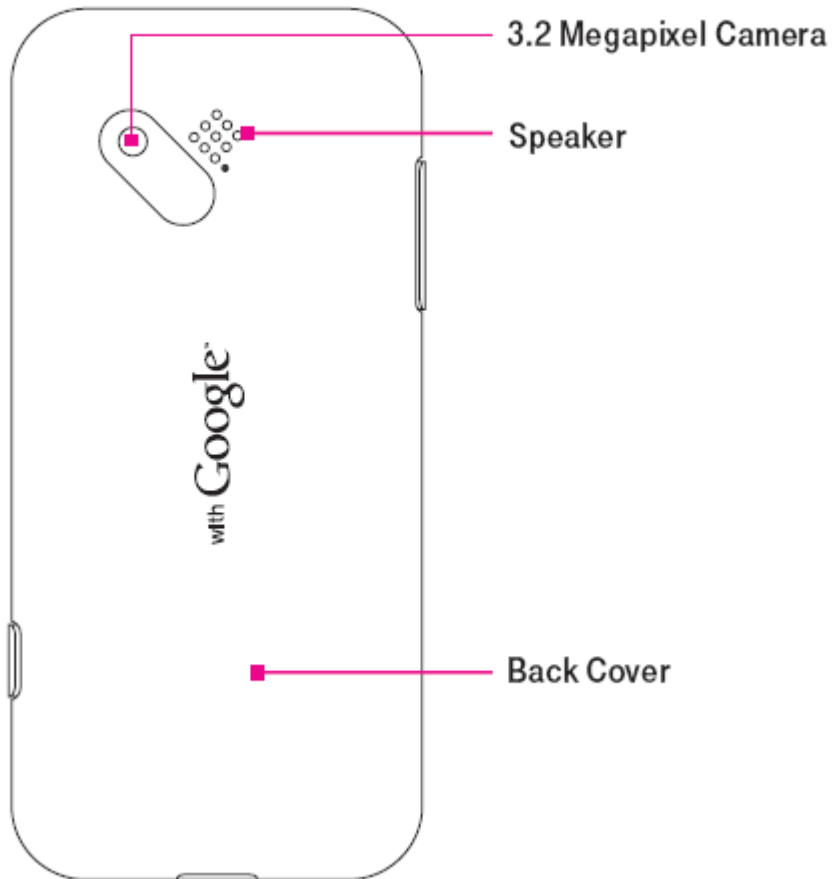
Note: (*) Not ready, dependent on Google.

1.2. Product overview

Front panel

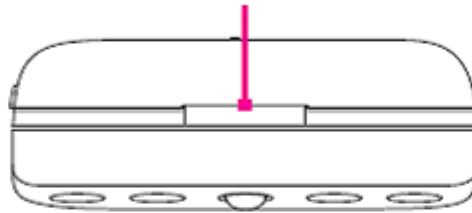


Back panel



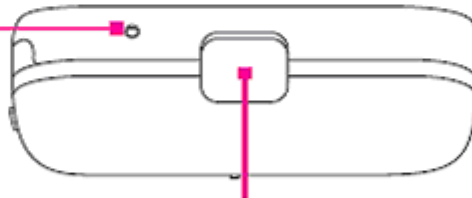
Top panel

Back Cover Release Tab



Bottom panel

Microphone



PC Connector/Earphone Jack

Flip open the cover to connect the supplied USB cable and transfer files or to plug in the AC adapter and recharge the battery. You can also connect the supplied USB stereo headset for hands-free conversation or for listening to music and videos.

Left panel

VOLUME UP

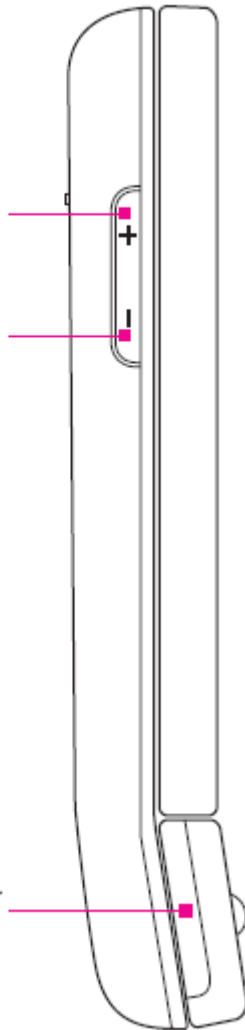
Press to increase the ringer or media volume.

VOLUME DOWN

Press to lower the ringer or media volume.

Storage card slot

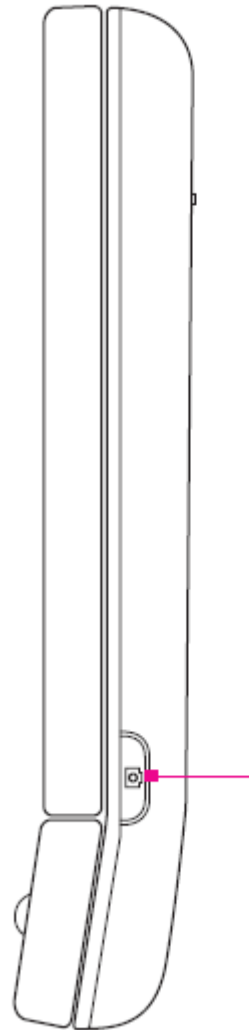
Open the slot cover to install a storage card.



Right panel

CAPTURE

Press to open Camera. When in the Camera application, press half-way to activate auto-focus. Press fully to take the shot.



Insert SIM & battery

1 Slide the display up to reveal the keyboard.



2 The cover release tab is located to the left of the the keyboard along the edge. Pull the tab up with your thumb while pulling the battery cover back, then free.

Release tab




3 Turn the device over. Slide the SIM card into the slot with the gold contacts face-down and with the cut corner facing away from the slot.



4 Insert the battery with the gold contacts facing down, then gently press the battery into place. Replace the battery cover.



Insert SD card

- 1 Slide the display up to reveal the keyboard.
- 2 Open the SD card slot rubber cover, located just below the Call button .

- 3 Insert the SD card with the gold contacts facing down, until the card clicks into place. Replace the cover.




To remove the card, press it in slightly and release.

Charge battery

- 1 Connect the AC adapter plug to an electrical outlet and connect the other end to the USB port at the bottom of the device. Keep connected for at least three hours.



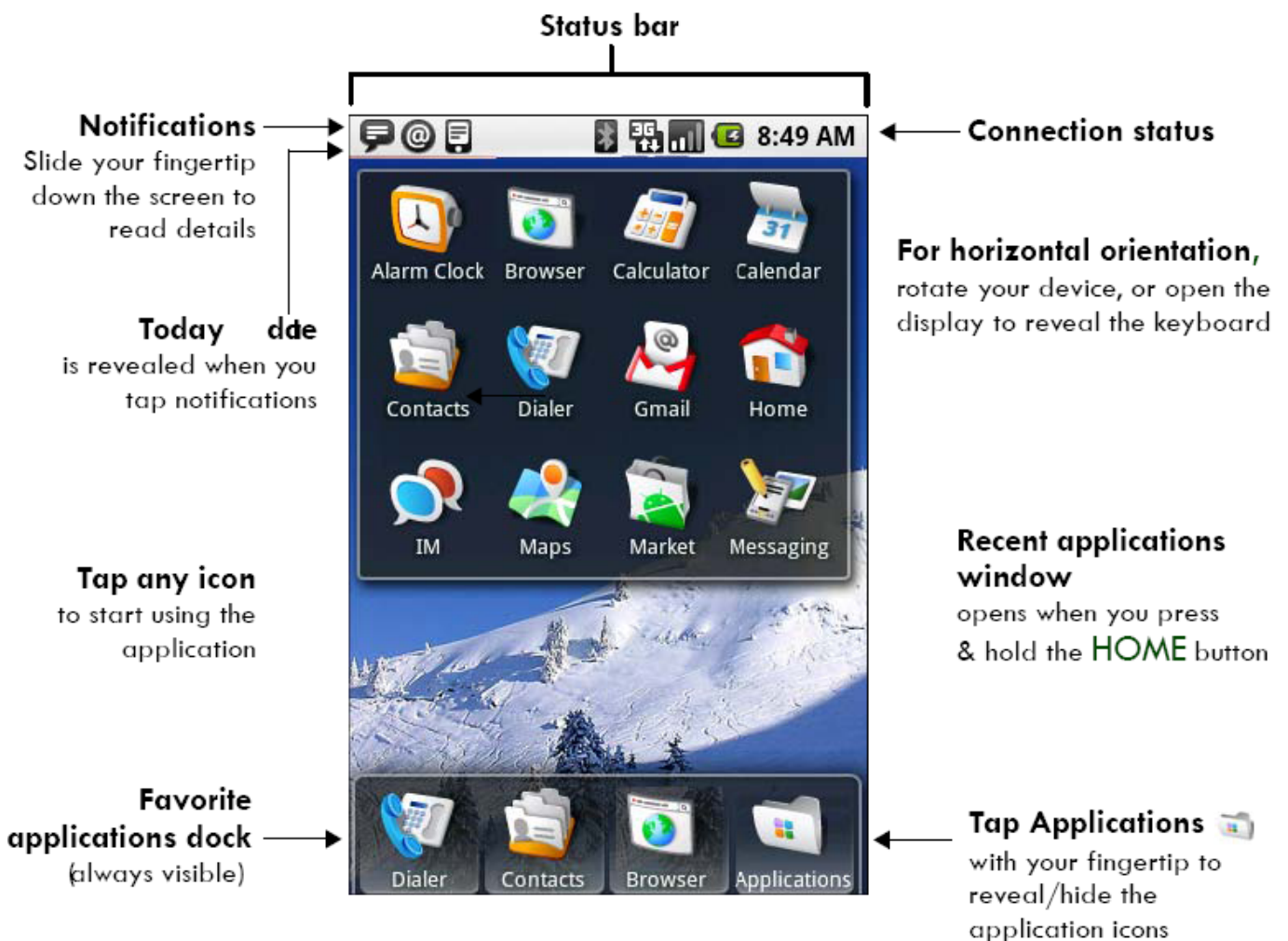
- 2 To power on your device, press & hold the PWR button . To power off, press & hold the PWR button 3 seconds. From the menu that opens, either tap Power off with your finger, or select it using the trackball.

When your device is turned off, charging is indicated by a solid amber light on the LED indicator.

When your device is turned on, charging is indicated by a solid amber light on the LED indicator as well as a charging icon (🔋) on status bar.

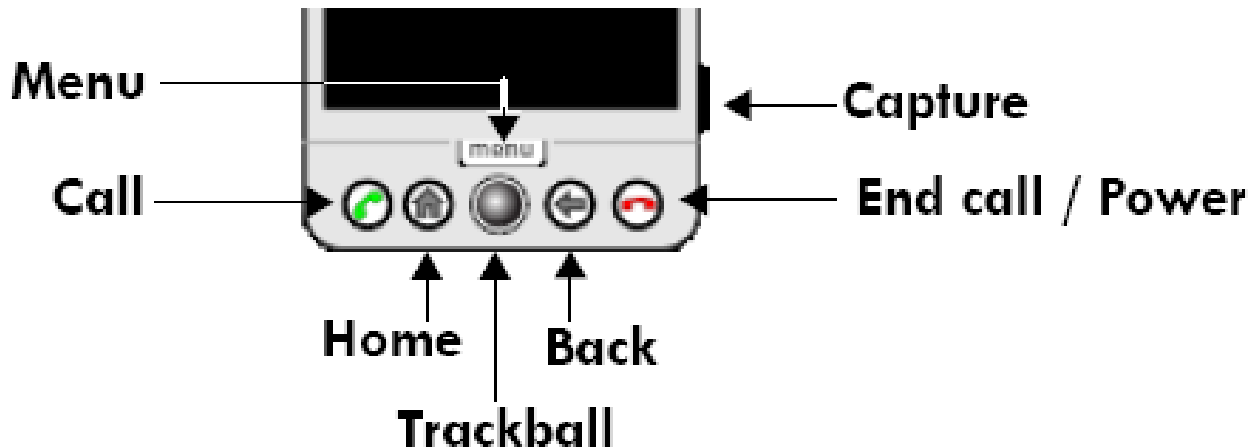
After the battery has been fully charged, the LED indicator becomes green and a full battery icon (🔋) appears on status bar.

Home screen



- [To perform a soft reset](#)

Press **Call + Menu + power button** at the same time.



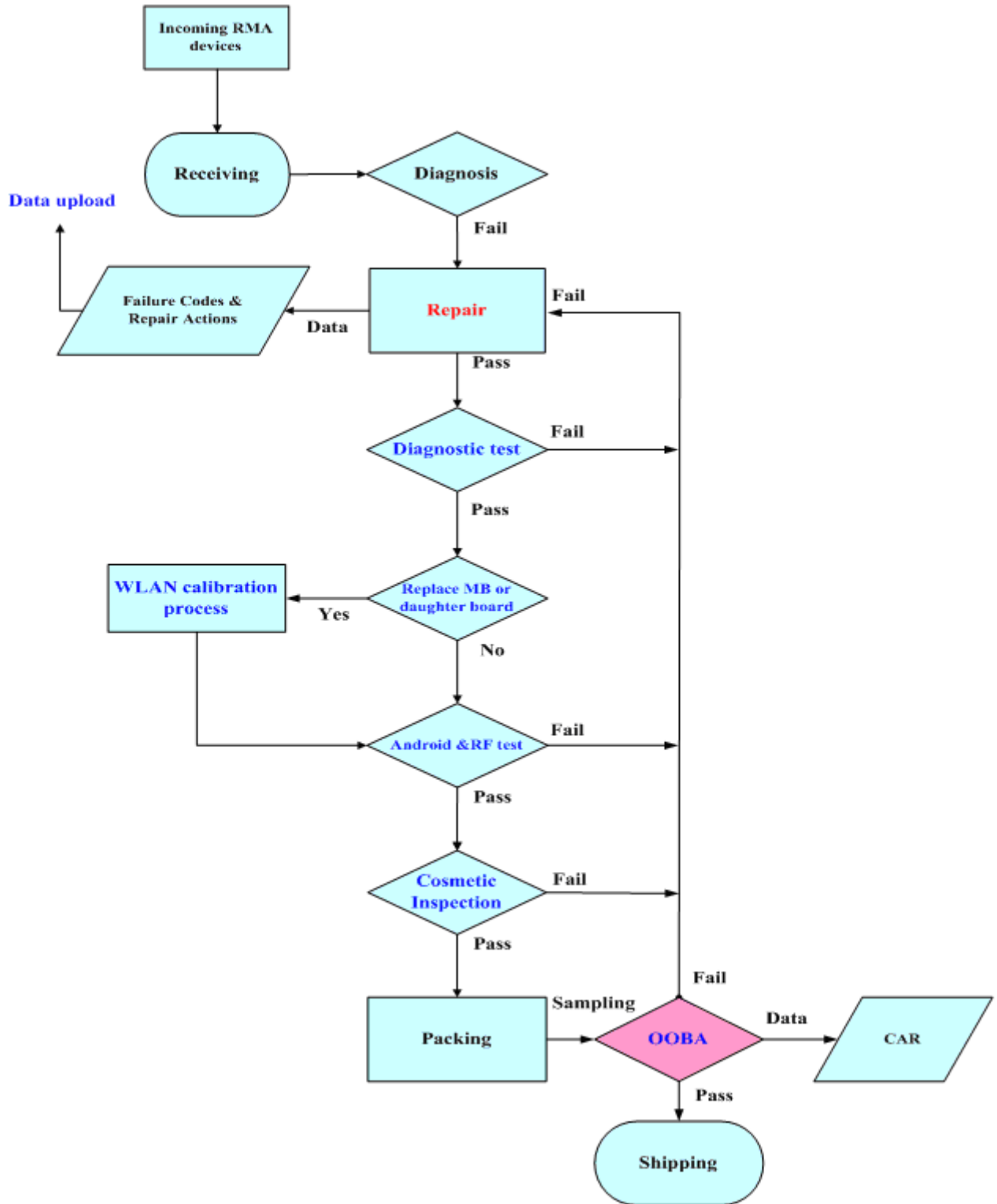
- [To perform a hard reset](#)

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.

1. Power off the device.
2. Press and hold **Home + Back Button** then press **Power Button**.
3. Press **Call Button** to double confirm hardware reset.

This operation will delete all your personal data, and reset all settings to manufacturer default. Press Send to restore manufacturer default, or press other keys to cancel.

1.3. Product service flowchart for Dream




2. Device Disassembling and Assembling Procedure

2.1. Tools list

Level	No.	Item	Vendor	P/N
L1	1	Micro USB DATA interface Cable		
	2	Earphone Headset		
	3	AC Adapter		
	4	WLAN AP		
	5	Diagnostic Cards - level 0	HTC design	DCZ-00053
	6	Diagnostic Cards - level 2	HTC design	DCT-00053
	7	Universal leakage current tester	HTC design	MLT-00001
	8	Power supply		
	9	Current Meter		
	10	Mobile tester		
	11	3 pin battery holder	HTC special tools	MLT-00008
L2	12	Special Made Plastic Stick	HTC special tools	RTT-00006
	13	Hand tools		
	14	Barcode label printer (400dpi resolution and up)		
L2.5	15	Lead-free Soldering station		
	16	Air heater		

2.2. Disassembling procedure

2.2.1 Key parts disassembling procedure



Tools needed for Assembling and Disassembling the device:

1. Glove & Cleaning Tissue.
2. Tweezers.(Suggest to use plastic made)
3. Philip Screw Driver #0.
4. Philip Screw Driver type T6.
5. Philip Screw Driver type T5.
6. Flat Plastic Stick.
7. ESD bracelet.



Please wear the ESD Wrist Strap during the work and make sure the strap is firmly around your wrist.



1. Slide out the device
2. Remove the battery cover from device



Remove the battery from device



Unfasten 4 screws from housing as red mark.

Philip Screw Driver type T5

SCREW M1.6*3.5 P/N 72H02325-00M * 4

Torque : 2.0+-0.1kgf-c m²



Unfasten 1 screw from housing as blue mark

Philip Screw Driver type T6

SCREW P1.6*4 P/N 72H01059-00M * 1

Torque : 2.0+-0.1kgf-c m²



1. Use plastic stick into the gap and release the hooks
2. Separate the housing from device



Separate the speaker from housing

[SPEAKER P/N 36H00693-00M * 1](#)



1. Unplug UMTS coaxial cable and GPS coaxial cable
2. Unfasten 2 screws from UMTS board and GPS board

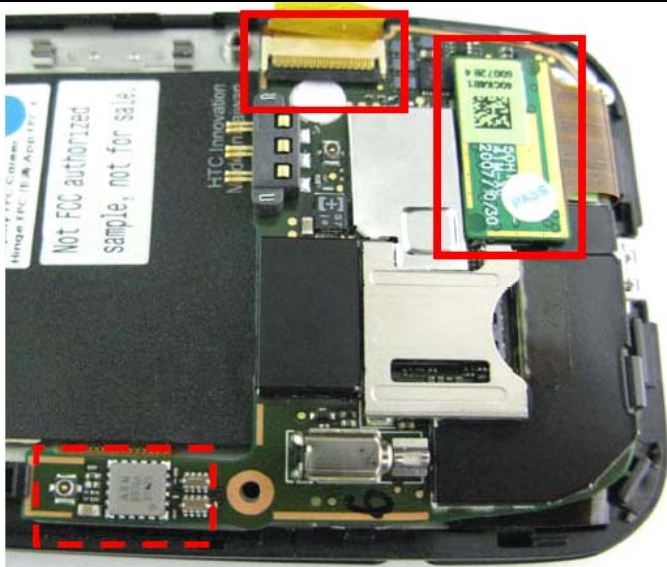
UMTS COAXILA CABLE(80mm)
P/N 73H00284-00M

GPS Coaxial Cable(22mm)
P/N 73H00285-00M

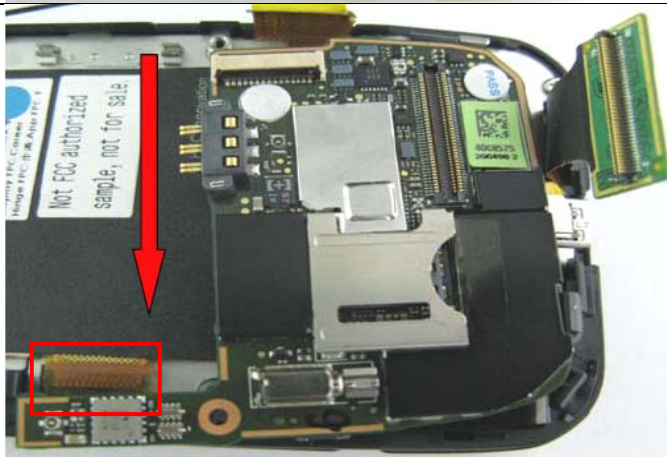
Philip Screw Driver #0
SCREW T1.4*2.9
SCREW P/N 72H02663-00M * 2
Torque : 0.6+-0.1kgf-c m²



1. Remove GPS board from device
2. Remove UMTS board from device



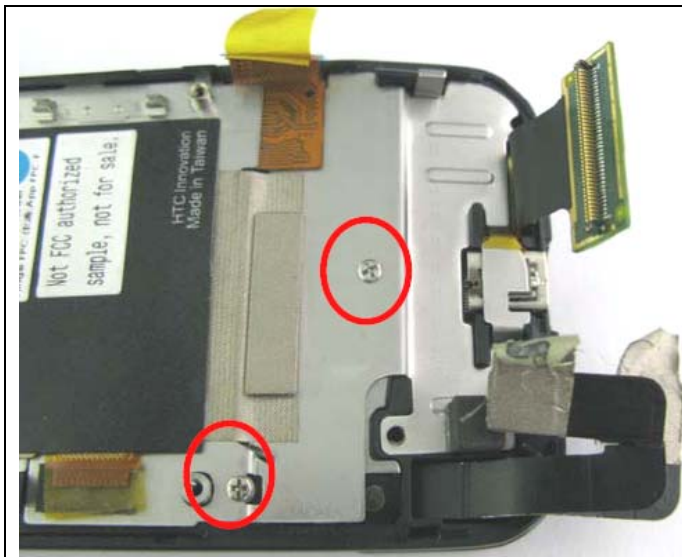
1. Remove the tape and disconnect Qwerty key FPC
2. Disconnect the daughter board FPC connector
3. Unlock the camera connector



Move the main board as the direction shows to disconnect the camera FPC



Disconnect the hinge FPC and separate main board



Unfasten the screw(s) as location indicated

Philip Screw Driver #0



SCREW T1.6*6

P/N 72H02403-00M * 2

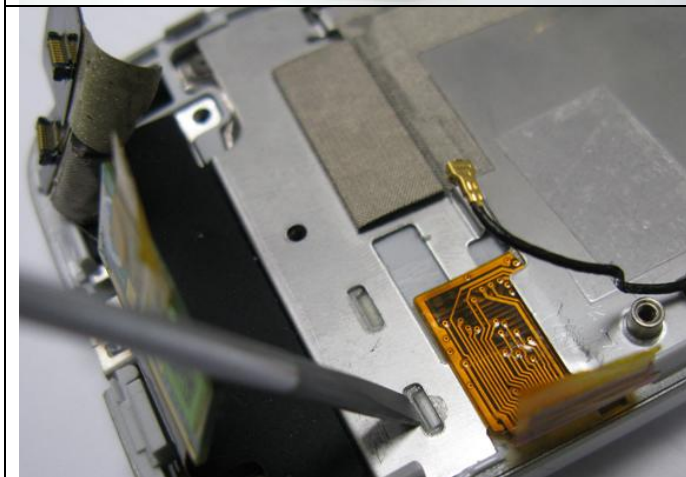
Torque : 0.4+-0.1kgf-c m²



Use the plastic stick to release the UI Cover



Through the gap to release the hooks



Use – type screw driver insert the hole



Separate the UI Cover



Unfasten the screw(s) as location indicated

Philip Screw Driver #0



Screw,hinge,PH,BIH,M1.6*2

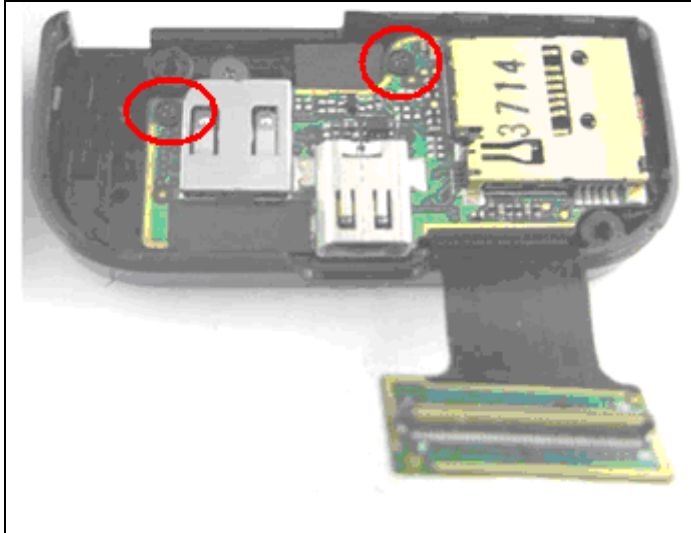
P/N 72H00624-01M * 4

Torque : 1.5+-0.1kgf-c m²



Finish key parts disassembly

2.2.2 UI module disassembling procedure



Unfasten the screws as location indicated

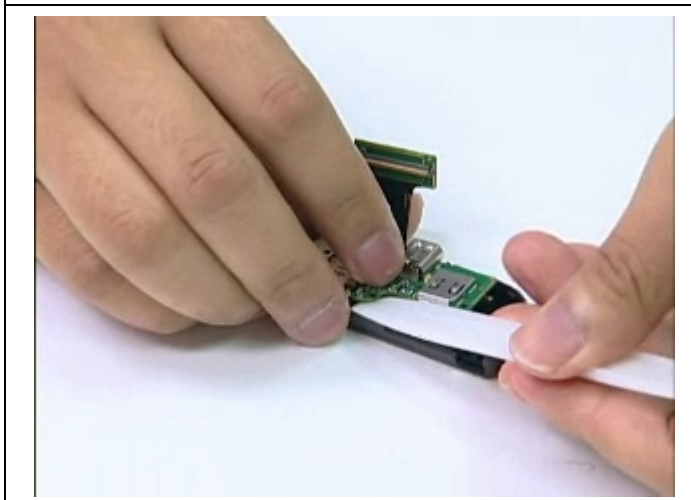
Philip Screw Driver #0



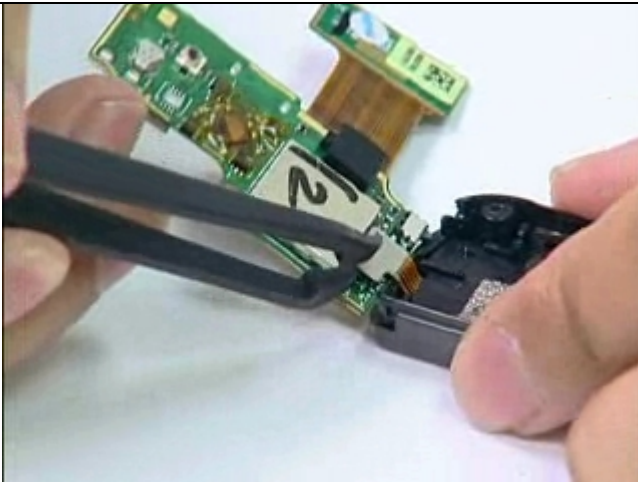
SCREW T1.4*2.9

SCREW P/N 72H02663-00M * 2

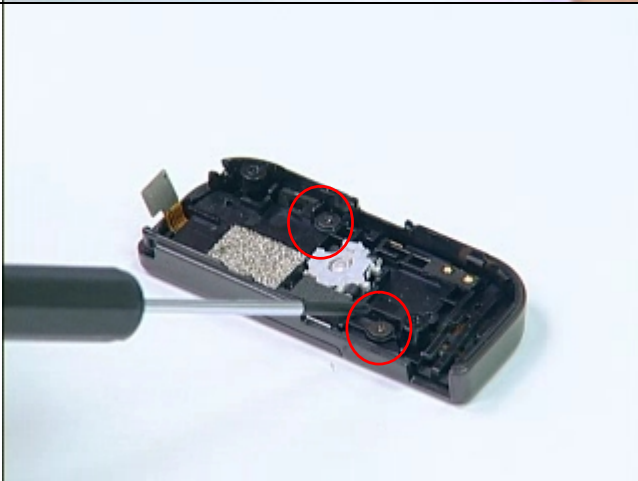
Torque : 0.6+-0.1kgf-c m²



Release the daughter board from hooks



Release the FPC and disassembly the daughter board from UI module



Unfasten the screws as location indicated

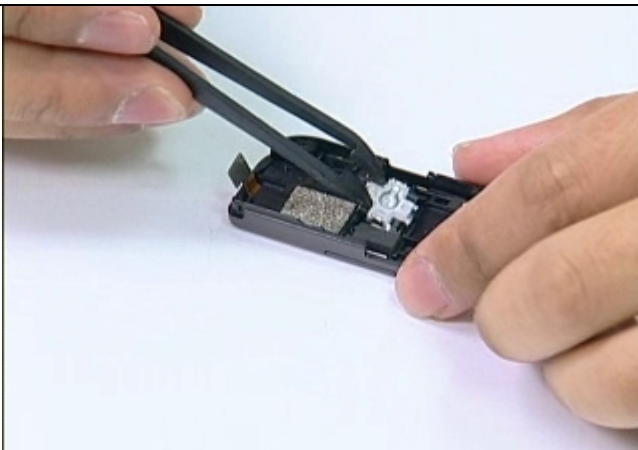
Philip Screw Driver #0



SCREW T1.4*2.65

SCREW P/N 72H002404-00M

Torque : 0.5+-0.1kgf-c m²



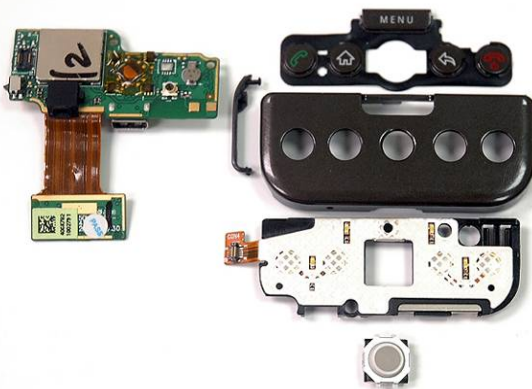
Remove the Trackball switch



Release the AP dome with UI cover and SD cover



Remove the App keycap



Finish UI module disassembly

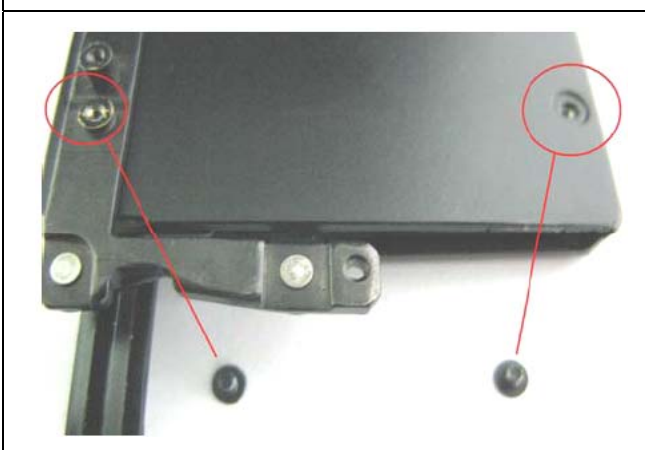
2.2.3 LCM disassembling procedure



Unfasten the screws as location indicated
 Philip Screw Driver #0



SCREW M1.6-0.35*4.8
 P/N 72H02873-00M (Black) * 2
 Or 72H02873-01M (White) * 2
 Torque : 1.5+-0.1kgf-c m²



Unfasten the screws as location indicated
 Philip Screw Driver #0



SCREW T1.4*2.65

P/N 72H00740-00M(White) * 2
Or 72H00740-01M(Black) * 2

Torque : 1.5+-0.1kgf-c m²



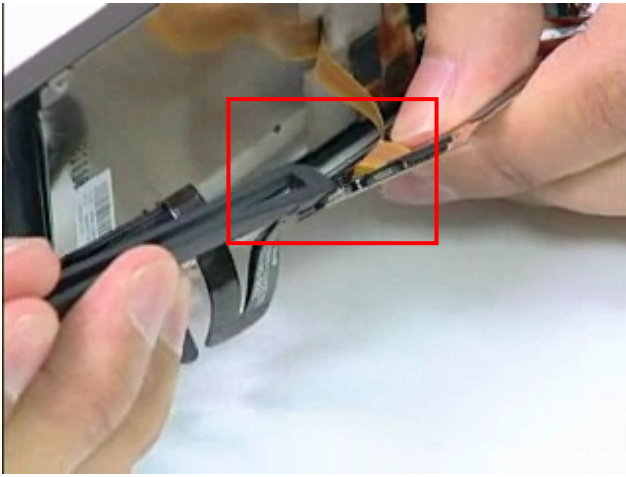
Use the plastic stick to slide through the gap to separate the hinge with bezel



Remove the hinge



Remove the display FPC Chassis



Disconnect the hinge FPC



Disconnect the display FPC



Remove the receiver



Disconnect Touch Panel FPC



Remove the LCD



Remove the rubber as location indicated



Remove the Touch Panel



Separate Touch Panel and bezel



Remove the LED Lens from bezel

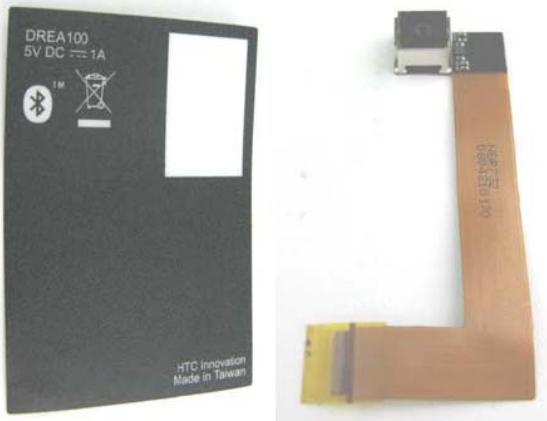


Finish LCM disassembly

2.2.4 Keyboard module disassembling procedure



Remove the Regulation label



Remove the camera



Unfasten the screws as location indicated

Philip Screw Driver #0



SCREW T1.4*2.9

SCREW P/N 72H02663-00M * 2

TORQUE : 0.6+-0.1KGF-C m²



Separate the Qwerty FPC with C cover



Replace FPC dome if FPC dome defect



Finish keyboard module disassembly

2.3. Assembling procedure

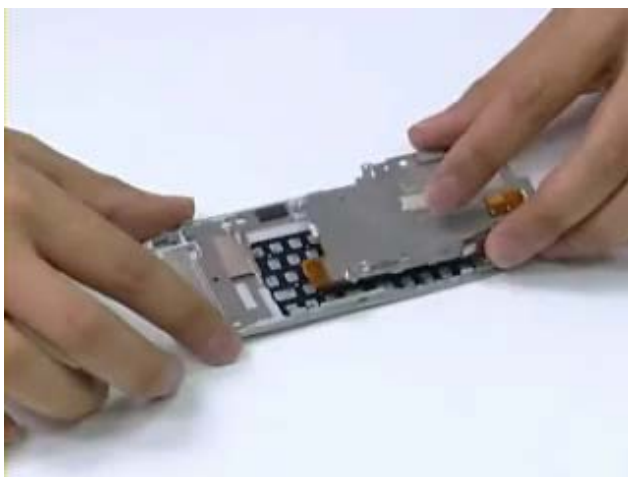
2.3.1 Keyboard module assembling procedure



Please wear the ESD Wrist Strap during the work and make sure the strap is firmly around your wrist



Put the Qwerty keypad on the C cover



Combine the Qwerty keypad FPC with C cover



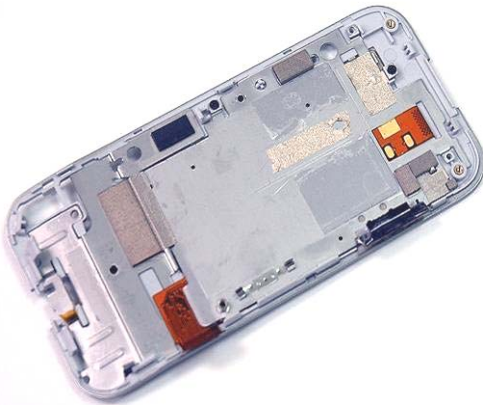
Fasten the screw(s) as location indicated

Philip Screw Driver #0

SCREW T1.4*2.9

SCREW P/N 72H02663-00M * 2

TORQUE : 0.6+-0.1KGF-C m²



Finish keyboard module assembly

2.3.2 LCM assembling procedure



Attach the LED Lens to the bezel, A cover



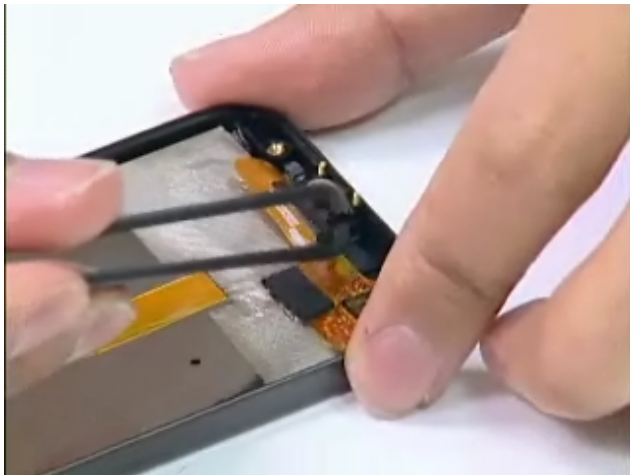
Combine the Touch Panel with bezel, A Cover



Attach the rubbers to Bezel, A cover to fix the Touch Panel



Combine the LCD with Bezel, A cover



Attach the receiver to the Bezel, A cover



Paste the gasket around the FPC cable

[Gasket 72H02996-01M](#)





Connect the Touch panel FPC connector



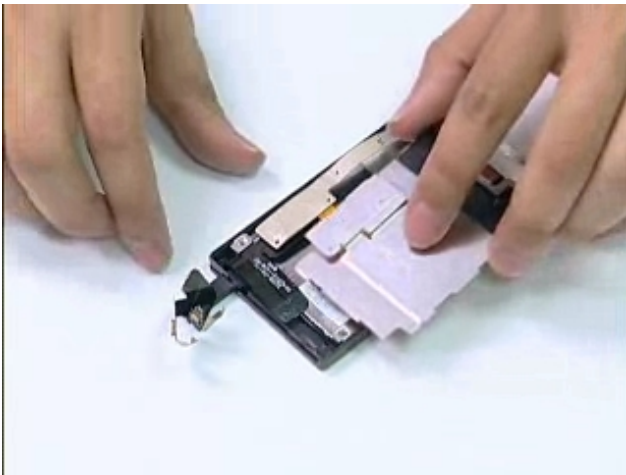
Paste the gasket on the LCD



Connect LCM FPC with display FPC



Connect the hinge FPC with display FPC



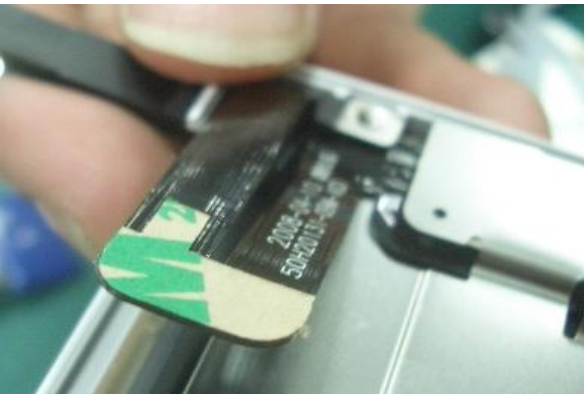
Combine the LCD bracket with Bezel, A cover



Combine the Hinge chassis with LCD Chassis



Put the hinge FPC in the bezel

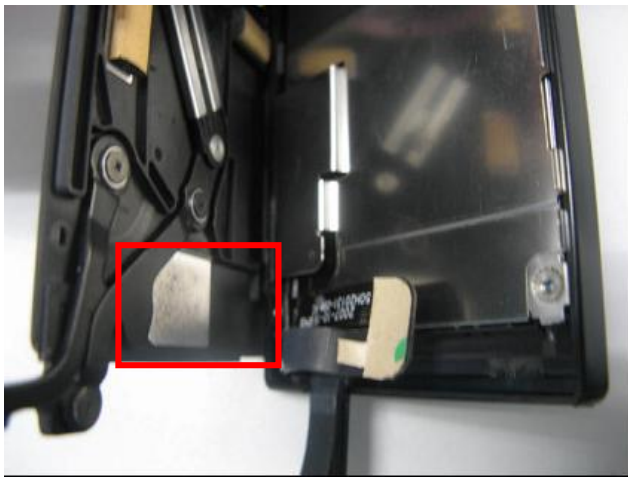


Paste the tape on hinge FPC



The hinge FPC is recyclable parts after reassembly

Adhesive-double tape P/N: [76H02553-00M](#)



Remove the scrap tape of hinge FPC



Stick the tape of hinge FPC to hinge



Assembly hinge and bezel



Fasten the screws as location indicated

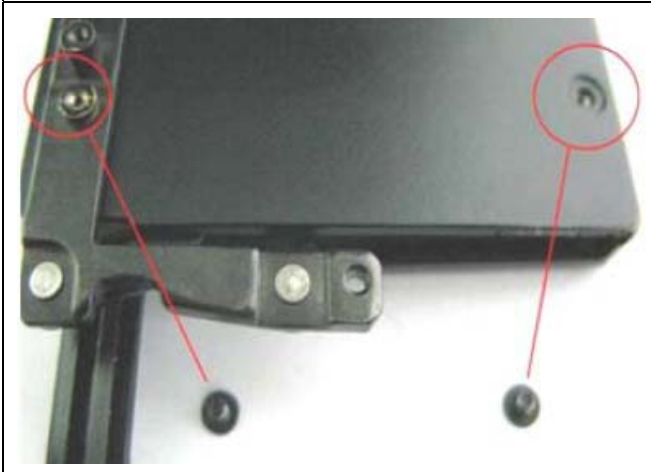
Philip Screw Driver #0



SCREW M1.6-0.35*4.8

P/N 72H02873-00M (Black) * 2
Or 72H02873-01M (White) * 2

Torque : 1.5+-0.1kgf-c m²



Fasten the screws as location indicated

Philip Screw Driver #0



SCREW T1.4*2.65

P/N 72H00740-00M(White) * 2
Or 72H00740-01M(Black) * 2

Torque : 1.5+-0.1kgf-c m²



Finish LCM assembly

2.3.3 UI module assembling procedure



Put the App Keypad on the UI Cover



Install the AP Dome FPC



Install the Trackball Switch



Fasten the screws as location indicated

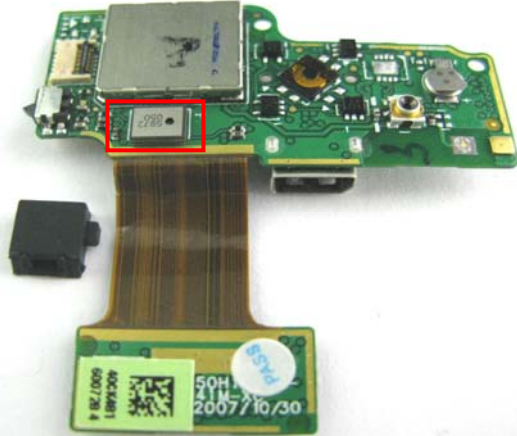
Philip Screw Driver #0



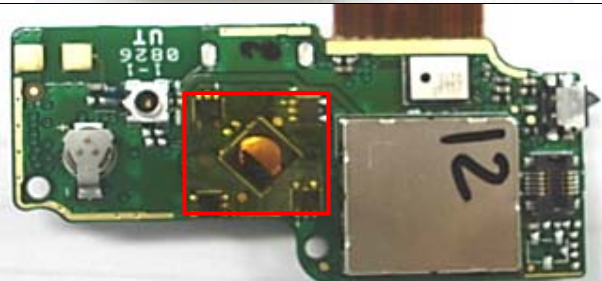
SCREW T1.4*2.65

SCREW P/N 72H002404-00M

Torque : 0.5+-0.1kgf-c m²



Install the rubber on the Microphone



Attach one tape on daughter board



Tape P/N76H02529-00M * 1



Connect the AP Dome FPC with the daughter board



Install the SD cover



Fasten the screws as location indicated

Philip Screw Driver #0



SCREW T1.4*2.9

SCREW P/N 72H02663-00M * 2

Torque : 0.6+-0.1kgf-c m²



Finish UI module assembly

2.3.4 Module assembling procedure



Pass the hinge FPC through the hole on the C cover



Fasten the Screws as the location indicated

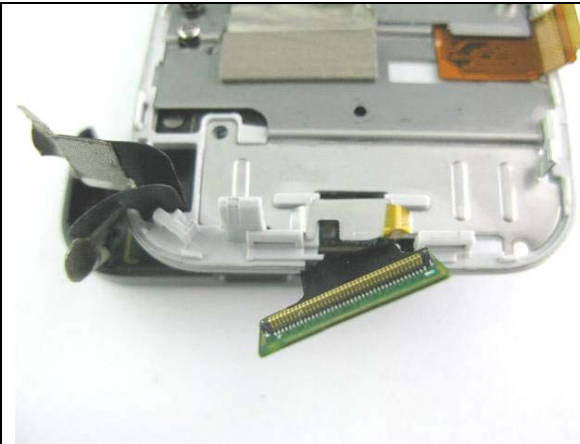
Philip Screw Driver #0



Screw,hinge,PH,BIH,M1.6*2

P/N 72H00624-01M * 4

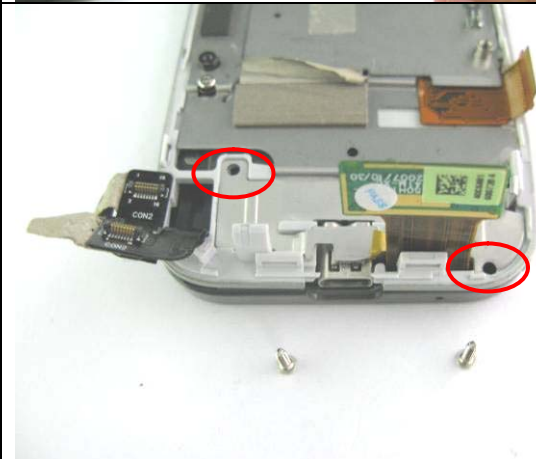
Torque : 1.5+-0.1kgf-c m²



Combine the UI module FPC with C cover



Assembly UI cover through hinge track



Fasten the Screw(s) as the location indicated

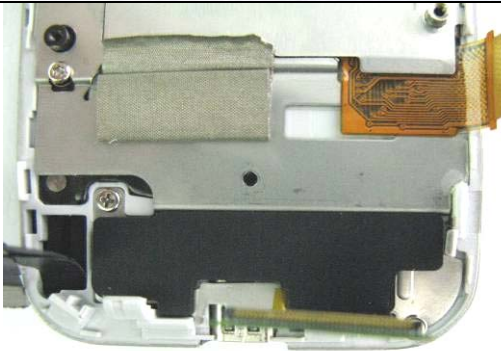
Philip Screw Driver #0



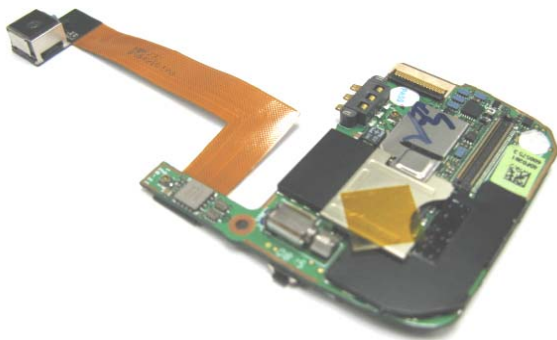
SCREW T1.6*6

P/N 72H02403-00M * 2

Torque : 0.4+-0.1kgf-c m²



Put the rubber on the device



Connect the Camera FPC with main board and attach 1 tape to the connector



Tape P/N76H02529-00M * 1



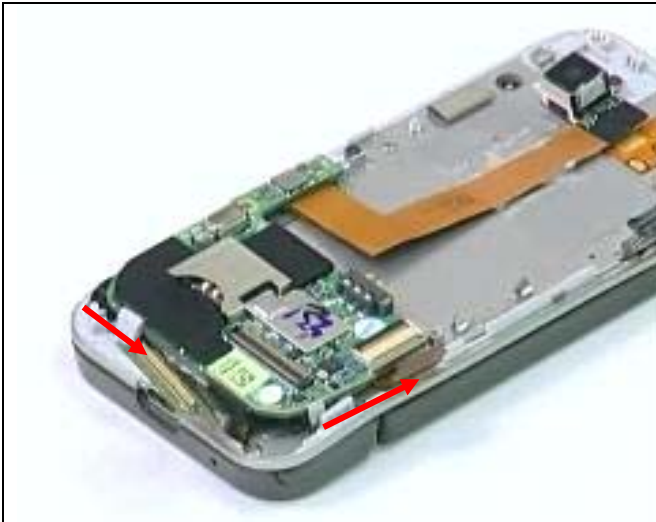
Connect the hinge FPC with main board



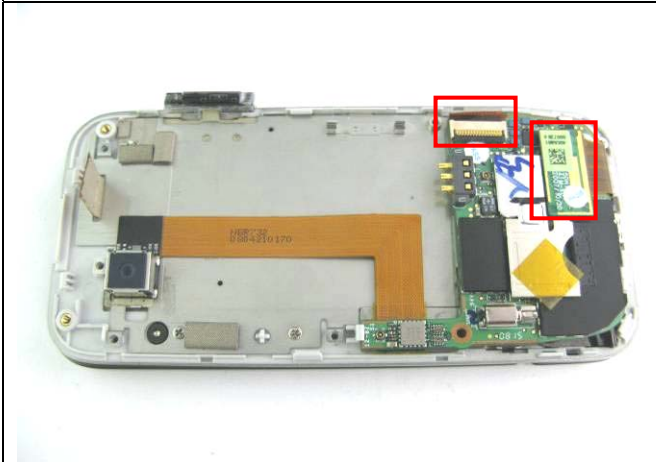
Paste gaskets on the hinge FPC



Gaskets P/N 72H02481-00M * 2



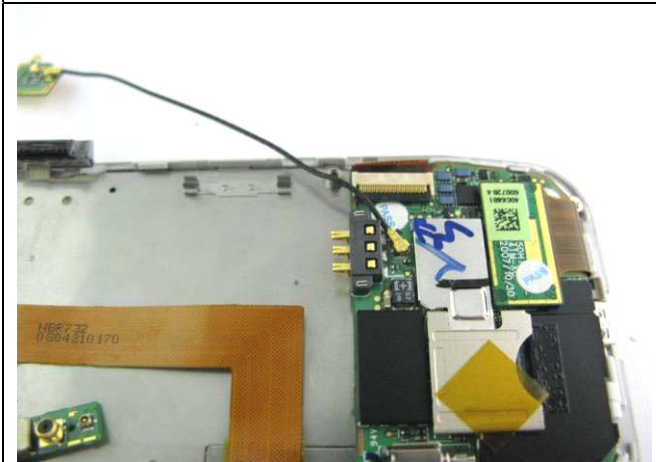
Assembly main board with C cover



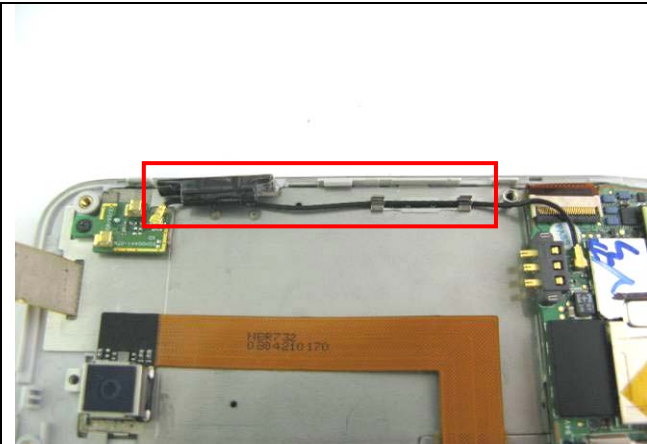
1. Connect the Qwerty Keypad FPC with main board
2. Connect the daughter board FPC with main board



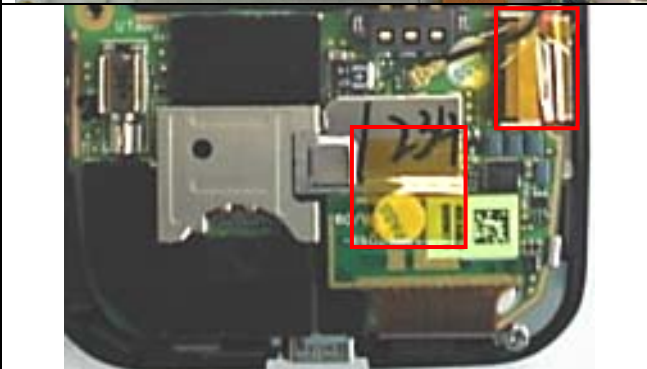
Connect the cable with UMTS board



Connect the cable with main board



Put the cable into the hooks and



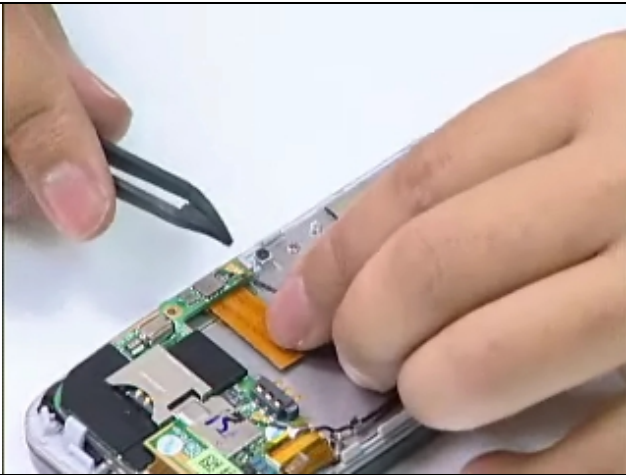
Attach 2 tapes to the connector



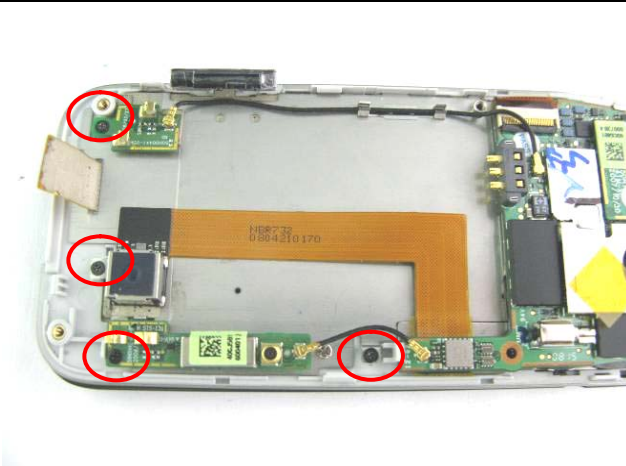
Tape P/N76H02529-00M * 2



Connect the cable with GPS board



Connect the cable with main board



Fasten the Screw(s) as the location indicated

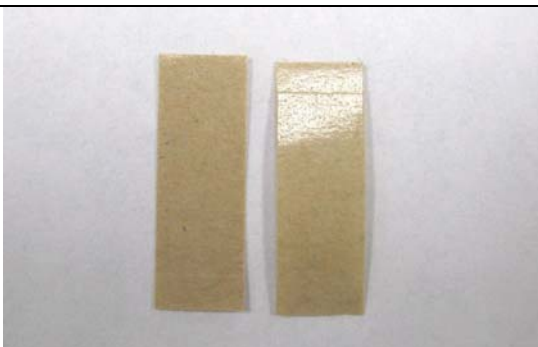
Philip Screw Driver #0



SCREW T1.4*2.9

SCREW P/N 72H02663-00M * 2

Torque : 0.6+-0.1kgf-c m²



Attach adhesive-double tape on camera FPC

Type P/N76H02523-00M * 1



Attach the Camera FPC to C cover



Attach the Mylar regulation label



Install the USB IO cover and attach the speaker to the housing, D cover



Combine the housing with C cover



Fasten 4 screws from housing as red mark.

Philip Screw Driver type T5

SCREW M1.6*3.5 P/N 72H02325-00M * 4

Torque : 2.0+-0.1kgf-c m²



Fasten 1 screw from housing as blue mark

Philip Screw Driver type T6

SCREW P1.6*4 P/N 72H01059-00M * 1

Torque : 2.0+-0.1kgf-c m²



Install the Battery



Install the battery cover





Power on the device



Finish assembly

3. ROM Re-flash Procedure

3.1. Rom Image upgrade thru SD card

Download ROM Image from SDO	
<p>I. Download ROM image from SDO. http://htcscm10.htc.com.tw/SDO</p> <p>II. Un-zip the image file.</p>	
Format SD card and copy image file to SD card	
<p>III. Select file system and format the SD card to FAT32 mode.</p> <p>IV. Copy image file XXX.nbh to the SD card and rename to DREAMG.NBH.</p>	

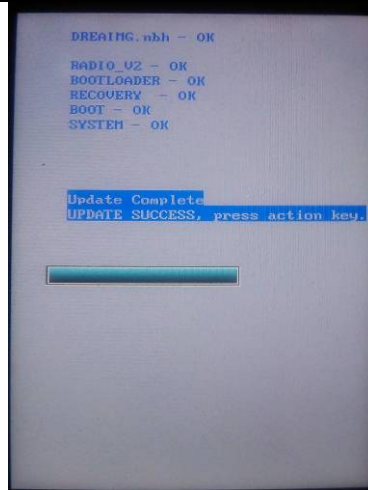
SD Upgrade - 1

- V. Turn the device power off and insert Diagnostic SD card.
- VI. Hold **Camera** button, and press **Power** 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 5 mins, please don't power off the device.
- IX. After finish, perform the **soft reset** to reboot.





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4. DIAGNOSTIC PROGRAM

4.1. List of Diagnostic / Android Test Items

Mode	No	Item	Description	Remark
Diagnostic	Function Test			
	1	Auto	Auto Regular Tests (SD card, Vibrator, Display, B.L, etc...)	
	2	SDRAM Test	RAM memory test.	
	3	Display Test	Color bar/R/G/B/Black/White/Gray pattern.	
	4	Button Test	Send, Home, Return, End(Power), Menu, Volume up, Volume down, Up, Down, Left, Right, Action, Capture, QWRERTY Key test	
	5	LED Test	Red, Green, Blue, UI, Key Led	
	6	Back Light Test	Back light test Level (0/1/2/3/4)	
	7	Touch Test	Touch panel test	
	8	Vibrator Test	Vibrator on test.	
	9	SD Card Test	SD door test, SD card Read/Write test.	
	10	Sliding Test	Sliding Test	
	11	ROM Checksum	ROM checksum	
	12	SIM Test	SIM card test	
	13	G-sensor calibration	G-sensor calibration	
	14	Audio Test	Headset, Receiver audio test	
	Run-in Test			
	1	1 Hour	1 Hour Run-in Test	Option
	2	2 Hours	2 Hours Run-in Test	Option
	3	4 Hours	4 Hours Run-in Test	Option
	4	8 Hours	8 Hours Run-in Test	Option
	Format Storage			
	Device Info			
	Check WLAN calibration status			
	Check SKU ID			
	Calibration Test (Perform WLAN calibration)			



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DOC-00045020

REV.

Issued Date

2008/07/14

Revised Date

2008/10/20

A04

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	Compass Test		
	Battery Test (1H)		
	Battery info.		
Android	1	USB Test	USB link test
	2	Camera Test	Camera test
	3	Bluetooth Test	Bluetooth test
	4	GPS Test	GPS test
	5	WLAN Test	WLAN test
	6	Speaker Test	Speaker test



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Test Procedure

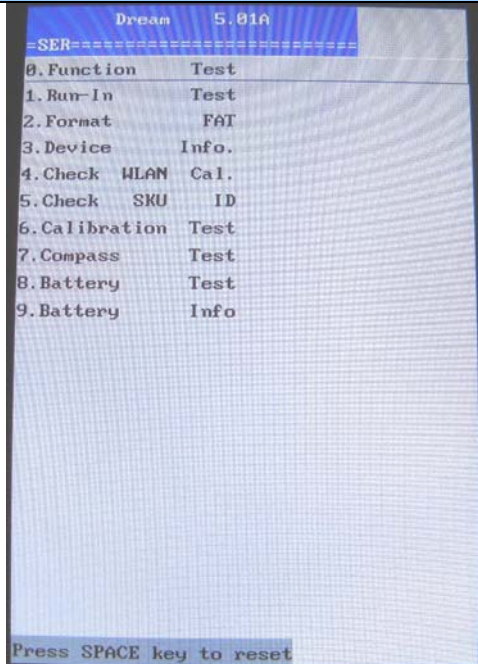
How to select test item: Using Vol_ "Up" or "Down" to select the test items

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

Diagnostic

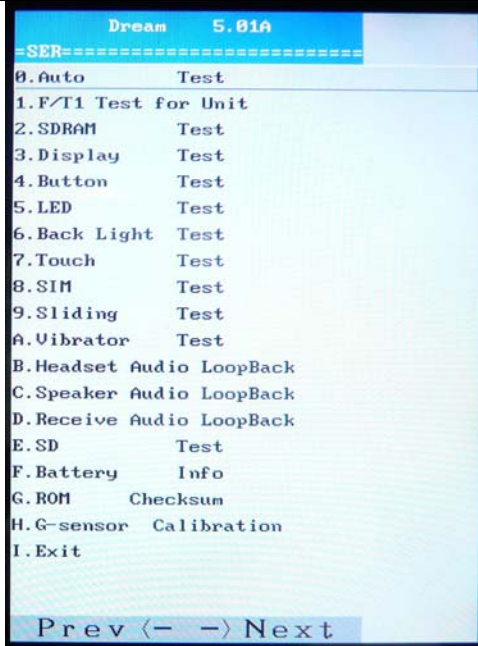
Main Menu/Function Test Menu

- I. Turn the device power off and insert Diagnostic SD card.
- II. Press and hold **Capture** button, then press **Power** button to enter Diagnostic mode.
- III. Using the Vol_up or Vol_down button to select the test item. (Also you can press the hot key 0 ~ 1 to perform the test item)
- IV. Select item "Function Test" to find the Function test menu.



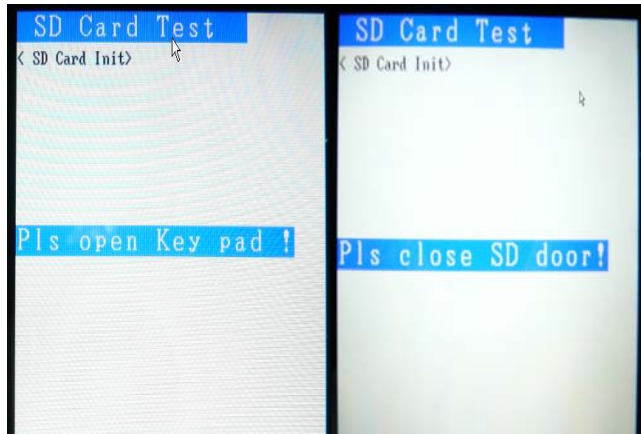
Auto Test

- 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.



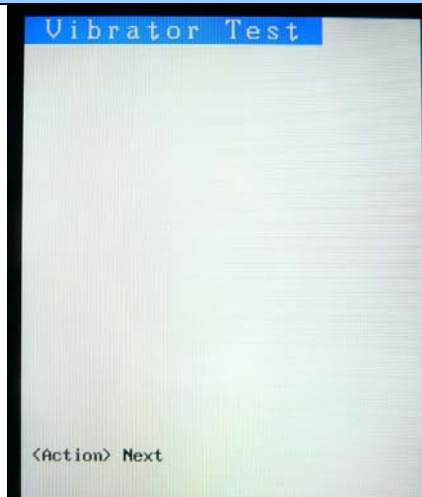
SD card Test

- I. Insert the SD card and follow the system instruction to do the test.
- II. If success, press Action key to next or return to Function test menu.



Vibrator Test

- I. Press Action key to select Vibrator Test on Function test menu.
- II. Press Action key to next or return to Function test menu.



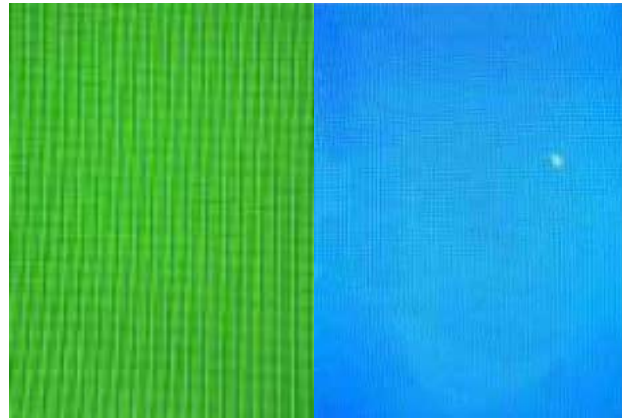
Display Test (Color bar / Red pattern)

- 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 (Green / Blue pattern)

IV. Press Action key to continue the next test pattern.



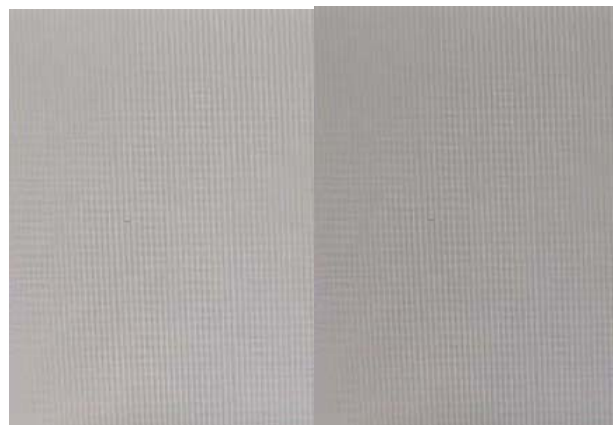
Display Test (Black / White pattern)

V. Press Action key to continue the next test pattern.



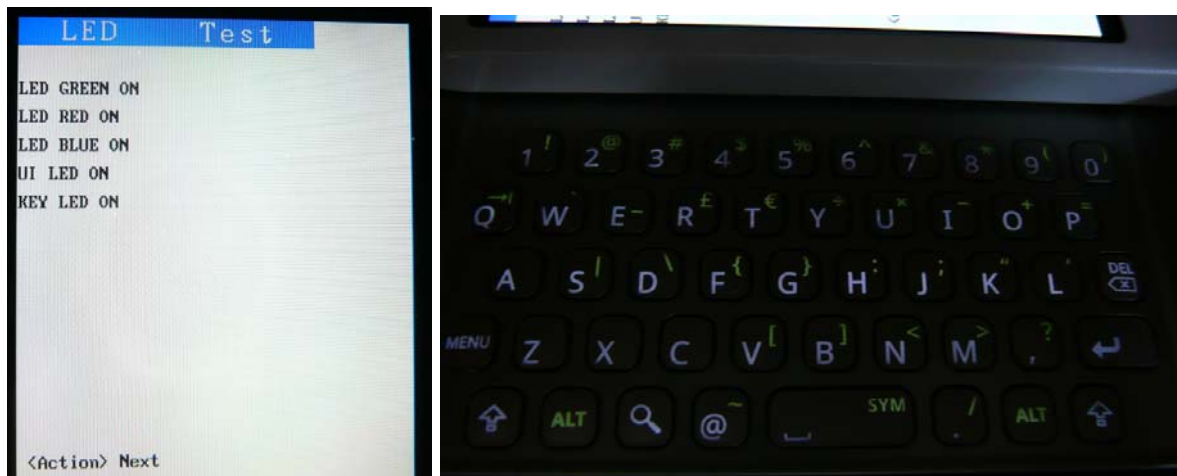
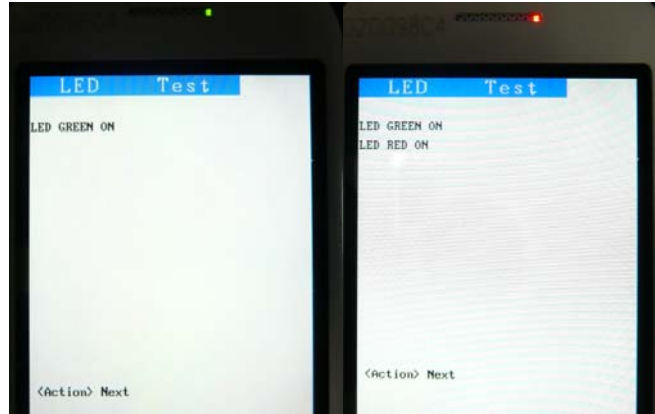
Display Test (Gray pattern)

VI. Press Action key to continue the next test pattern.



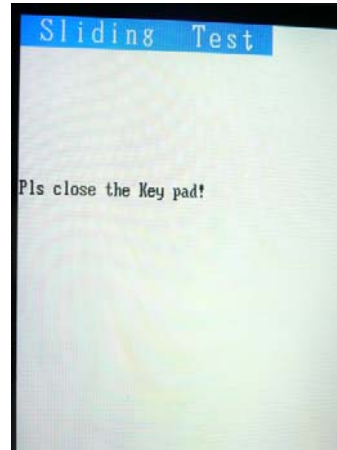
LED Test

- I. Press Action key and follow the instruction on screen to perform the LED inspection test (**Green, Red, Blue, UI LED and Key LED**).
- II. Press Action key to next or return to Function test menu.



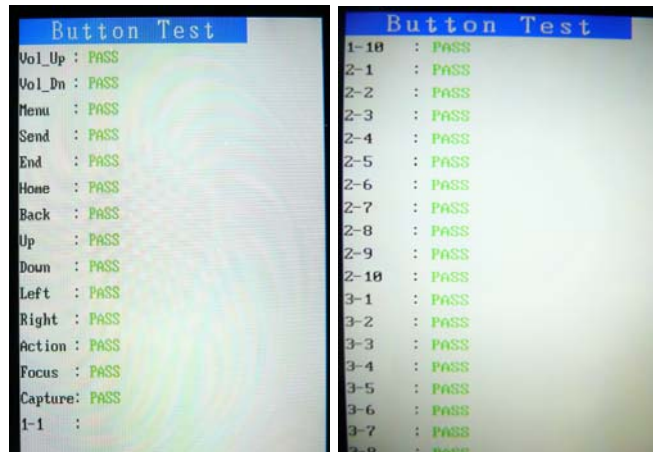
Sliding Test

- I. Press Action key to select Sliding Test on Function test menu.
- II. Follow the instruction on screen to perform open and close the key pad.
- III. The screen will go to the next test or return to Function test menu.



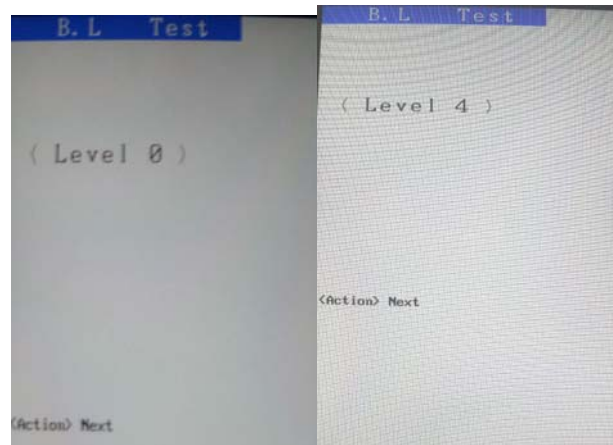
Button Test

- I. Press Action key to select Button Test on Function test menu.
- II. Follow the instruction on screen to perform the Button/Key test (**Volume up, Volume down, Menu, Send, End, Home, Back, Up~ Right, Action, Focus, Capture and Keyboard test**).
- III. The screen will go to the next test or return to Function test menu.



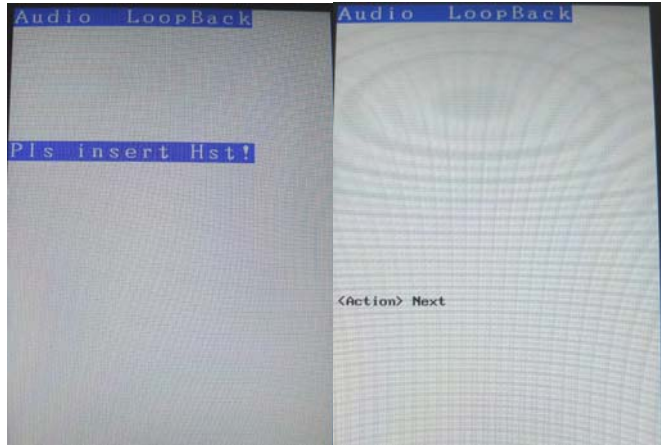
Back Light Test

- I. Press Action key to select Backlight Test on Function test menu.
- II. Press Action key to switch the LCD backlight level from Level 0, Level 1, Level 2, Level3, Level 4.
- III. The screen will go to the next test or return to Function test menu.



Headset Audio Test

- I. Press "B" key or select Headset Audio Test on Function test menu.
- II. Insert the headset and speaking.
- III. You can hear the sound output from the headset.
- IV. Press the action to exit the test.



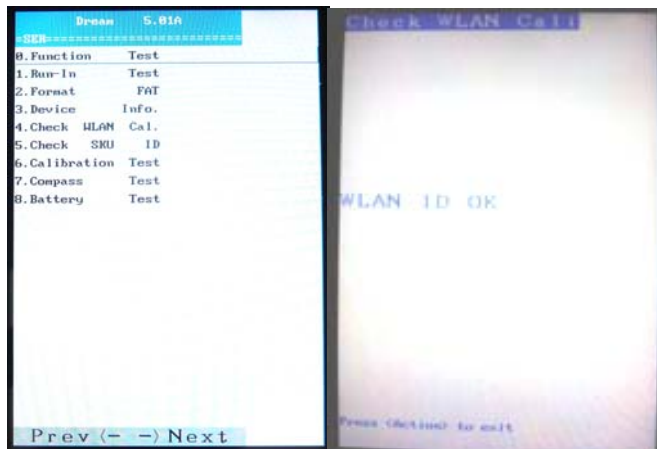
Receiver Audio Test

- I. Press "C" key or select Receiver Audio Test on Function test menu.
- II. You can hear the sound output from the receiver.
- III. Press the action to exit the test.



Check WLAN Calibration

- I. Select Check WLAN Cal. on the menu.
- II. Check the WLAN ID status, if WLAN ID error, please go to the Calibration Test.
- III. Press the action to exit.



Calibration Test

I. After replace M/B or daughter board, the device should go to the WLAN calibration process.

II. Download calibration program and data from SDO

<http://htcscm10.htc.com.tw/SDO>

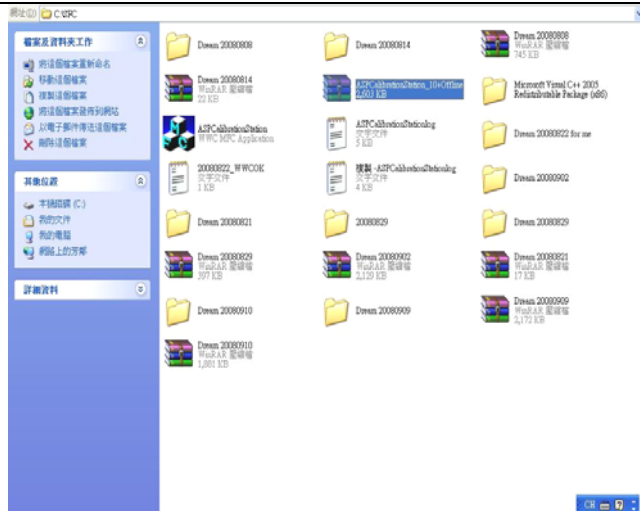
Calibration data

OPEN_TO_CSE	GSD-00005441	1	When calibration data for Dream	DREAM		1 file(s)
RELEASED	GSD-00005401	1	When calibration data for Victor	VICTOR	2008/08/08	1 file(s)
OPEN_TO_CSE	GSD-00005331	1	When calibration data for Diamond (refer to SA- (Diamond) DOC-00044706 WLAN calibration for MB or Navit BD replacement(401)	DIAMOND	2008/07/24	7 file(s)

more...

III. Un-zip the file to C:\SFC.

Note: Don't un-zip the data to third layer. The chip date will be updated and upload to SDO by week. Please download them from SDO once per week.

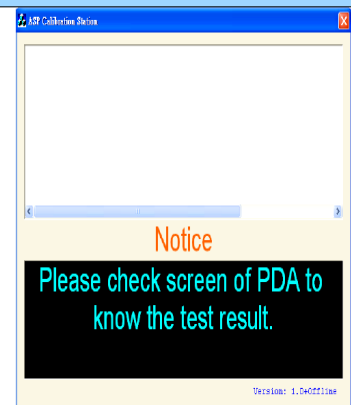


IV. Execute the "ASP calibration station" program in the computer.

1. Disable ActiveSync in Windows before running WLAN calibration.
2. Execute the "ASP Calibration Station" program in the computer.

Remark: You can perform WLAN calibration for 4 units by 1 computer at same time.

WLAN Calibration





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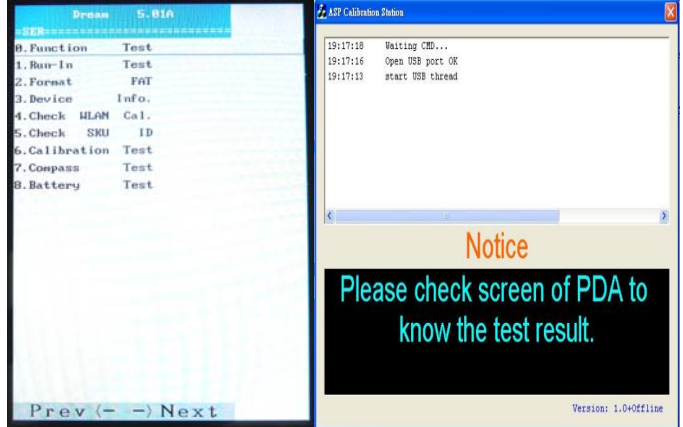
Issued Date 2008/07/14

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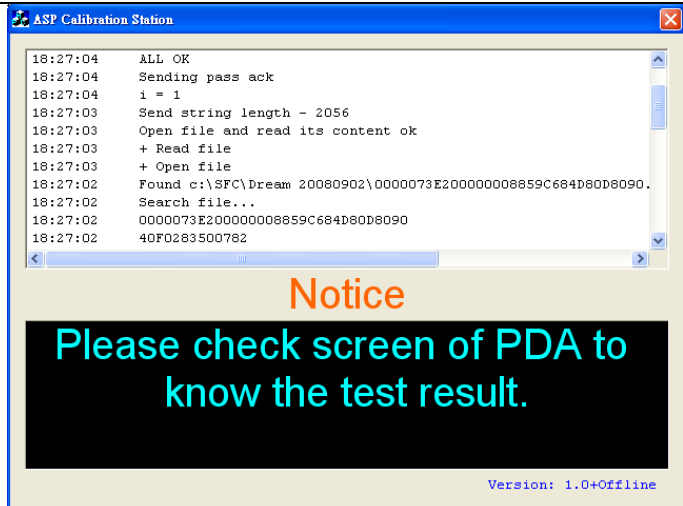
V. Connect the device and computer via USB cable.

VI. Select Calibration Test on the menu and start the calibration.



VII. The program will automatically run and exit when finish the process.

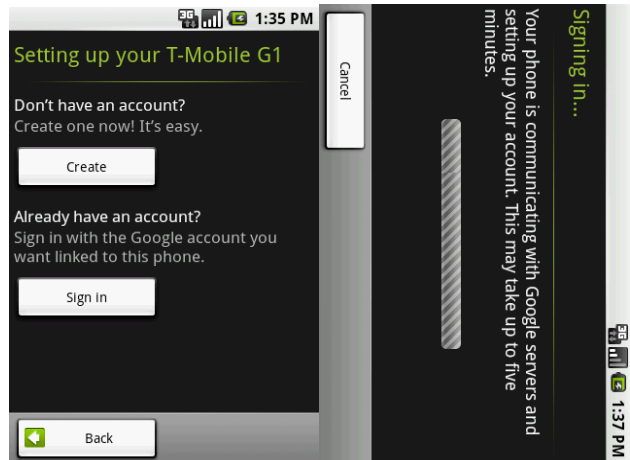

Note: If the display show "Get SFC data error", it means can not found the chip data in the SFC folder, please download all data from SDO or replace new daughter board if the problem still. Please re-execute the process when getting any error.



Android Test

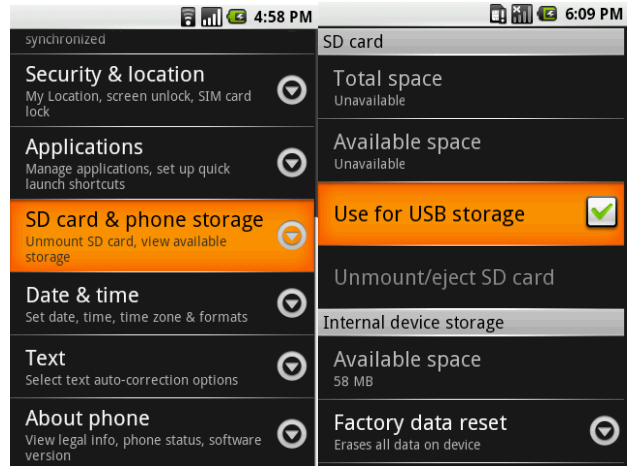
Test Requirement:

- 3G SIM card
- Google account

Sign in	
<p>I. Insert the 3G SIM card.</p> <p>II. Signing in the Google account and enter to the system.</p>	
<p>III. Follow the test item of the service manual to perform the function test.</p>	

USB Test

- I. Select to use your memory card as USB mass storage when your phone is connected to your computer (selected by default or press Menu>Settings>SD card & phone storage>Use for USB storage)
- II. Insert USB cable and connect device to computer then you can view and manage the SD card storage from your computer.



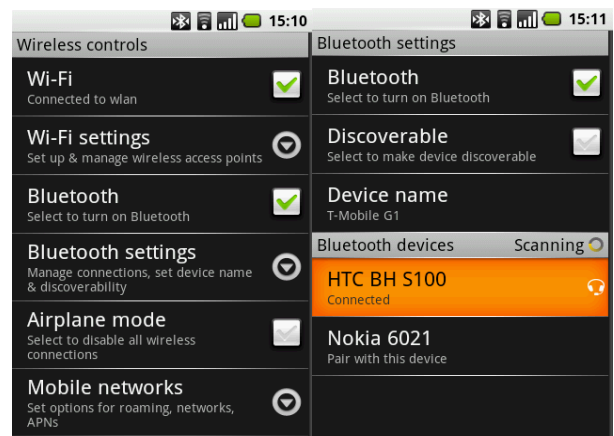
Camera Test

- I. Tap the application tab and press Camera icon 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.



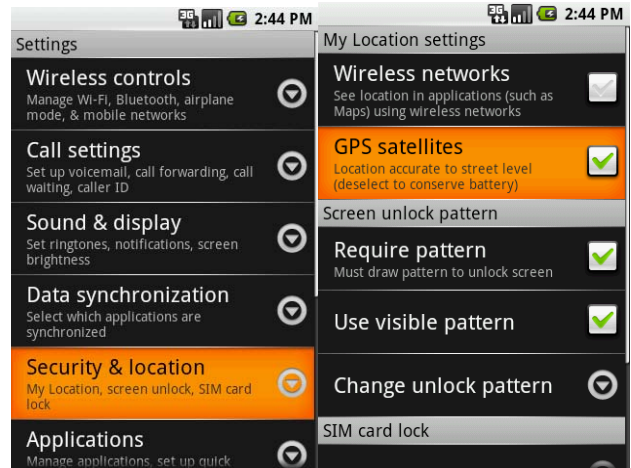
Bluetooth Test (BT headset)

- I. Press Menu button.
- II. Tap the icon "Settings".
- III. Select Wireless controls, and then select the Bluetooth check box to turn on Bluetooth services.
- IV. To pair with a device in the list, select it.
- V. Once the other Bluetooth device shows "connected" status, you can start using it to make and receive phone calls.



GPS Test

- I. Press Menu button and tap the icon "Settings".
- II. Select "Security & location".
- III. Select My Location settings to "GPS satellites".

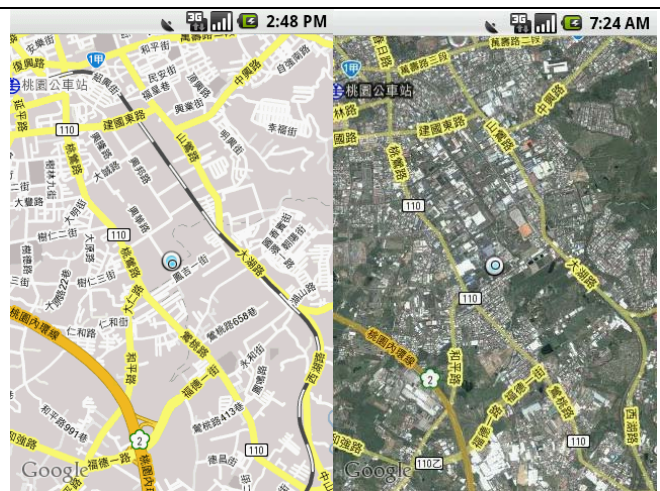


- IV. Tap the application tab and press the Maps icon to enter to the Google Map.
- V. Press Menu button and select "My Location".

Note: The device should test at you can view of sky area or within connection extension antenna area.

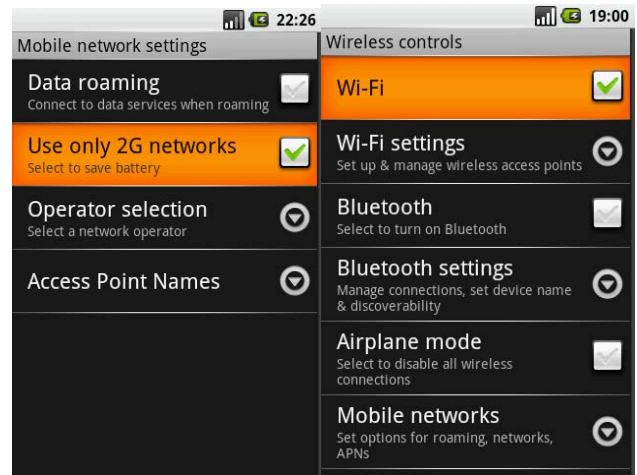



- VI. The screen should appear your location on the map.

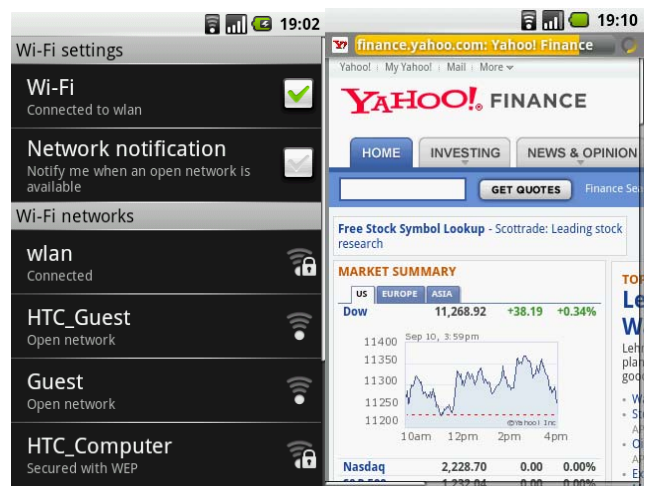


WLAN Test

- I. Press Menu button and tap the icon "Settings".
- II. Select "Wireless controls" > select the "Mobile networks" > select "USE only 2G networks" check box.
- III. Select "Wireless controls" > select the "Wi-Fi" check box to turn on Wi-Fi services and open the "Wi-Fi settings" screen.

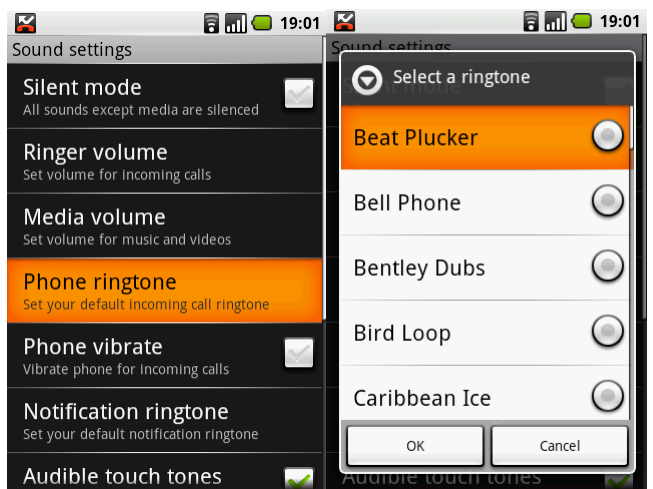


- IV. View and scan for available network.
- V. Connect to a network - Select it from the network list. (Provide your username or password if required.) And you can see the icon  appear on the status bar when Wi-Fi service connected.
- VI. Make sure the device can access to the internet via Wi-Fi network.



Speaker Test

- I. Press Menu button and tap the icon "Settings".
- II. Select "Sound & display" > select the "Phone ringtone".
- III. Select and play a ringtone then check the sound quality from the speaker.



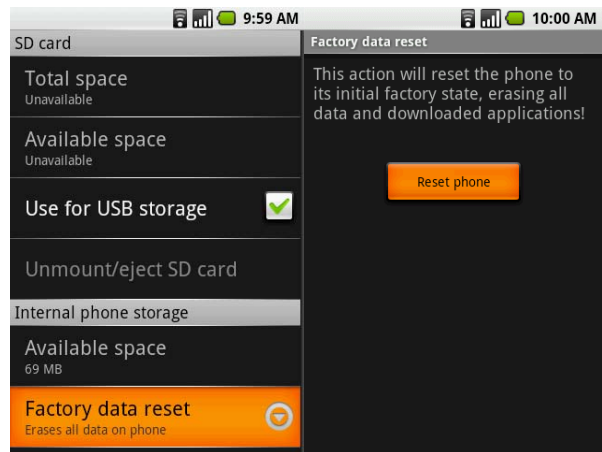
RF Test

- I. Press **Call Button** to dial for performs the RF test.
- II. Also you can test by mobile tester.

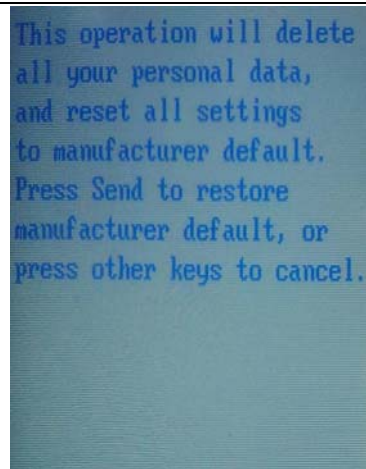


Erase all test data

- I. Before shipping you should erase all test data on the phone.
- II. Press Menu button and tap the icon "Settings".
- III. Select "SD card & phone storage" > Press the "Factory data reset" and press the "Reset phone" button.



- IV. Also you can perform the hard reset when the device is power off.
- V. Press and hold **Home + Back Button** then press **Power Button**.



5. Power measurement test

5.1. Main board leakage current Test Procedure

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

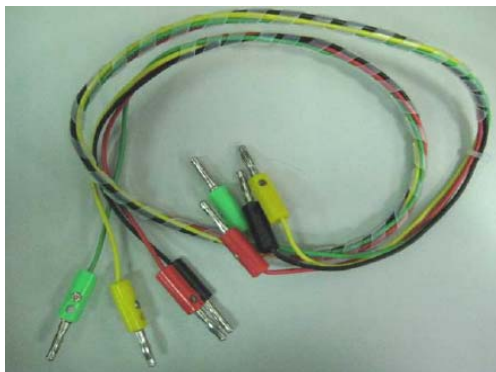
Requirement :

- Power Supply
- Micro-current Meter
- Current series JIG
- CABLE
- Battery JIG

Equipment list

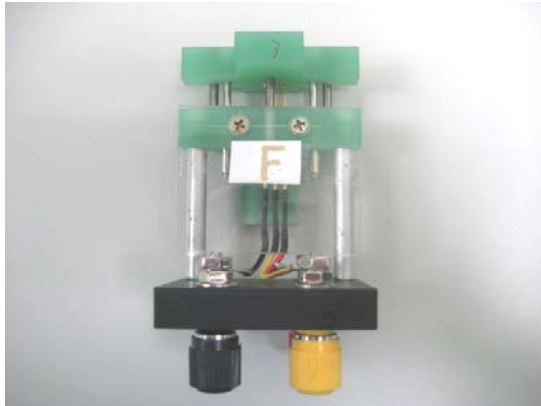


1. Control box



2. Four colors cables

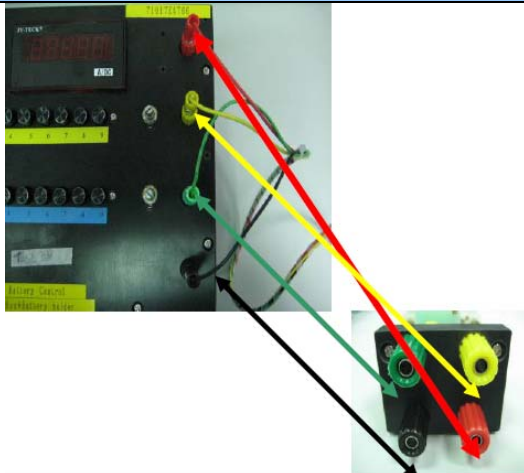
- Cable A: Red
- Cable B: Yellow
- Cable C: Green
- Cable D: Black



3. Test Jig

Jig - F (3 pins-Long for Dream)

Equipment set up



Connect control box and jig through

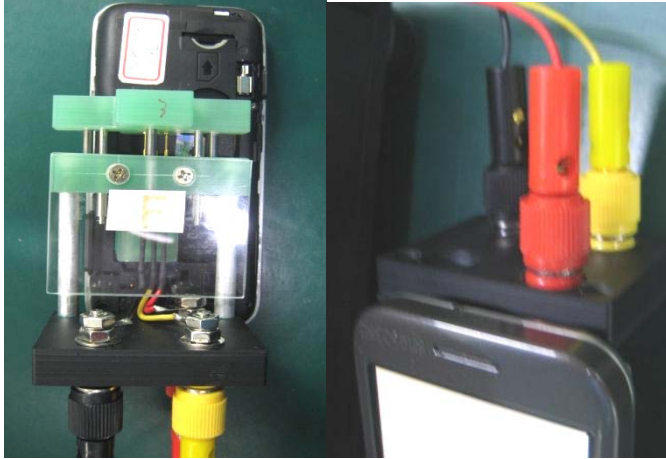
4 colors cable



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

MADEL	JIG TYPE	Button set up matrix			
		A	B	C	D
Dream	A	1	8	X	0

It means, press button A=1,B=8,C=X,D=0 (X=Don't care, the Dream battery only 3 pins)



Install the jig to device

Start testing

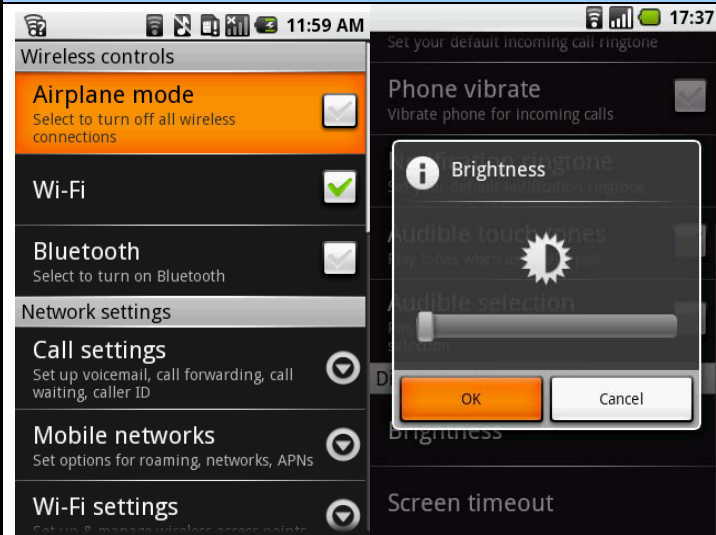


Turn on control box power button



Press power button to turn on the Device

Idle current test



1. Set the device to airplane mode.
2. Set the brightness to minimum(Press MENU>Settings>Sound & display>Brightness)



Measure the idle mode current.
The idle current value must under **180mA**.
If out of the criteria, it means the devices is fail and please replace M/B or daughter board for repair.

Sleep current test



Power off the device and measure the sleep mode current.
The sleep current value must under **3mA**.
If out of the criteria, it means the devices is fail and please replace M/B or daughter board for repair.



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Conclusion:

If current consumption is passed at both of flight and power off mode, it means the device is **GOOD**.

If there is any item **FAILED** at flight or power off mode, it means M/B or Daughter board is failed, please replace M/B or daughter board for repair.

Measurement parameter

Measurement mode	Measured Current	REMARK
Flight Mode (Idle mode)	Under 180 mA	Device is good
	Over 180 mA	Fail, MB or daughter board need to be further repaired
POWER OFF (Sleeping mode)	Under 3 mA	Device is good
	Over 3 mA	Fail, MB or daughter board need to be further repaired

5.2. Battery Test Procedure

Battery Test	
<p>I. Turn the device power off and insert Diagnostic SD card.</p> <p>II. Press and hold Capture button, then press Power button to enter Diagnostic mode.</p> <p>III. Select item "Battery Info" to check the battery capacity.</p>	



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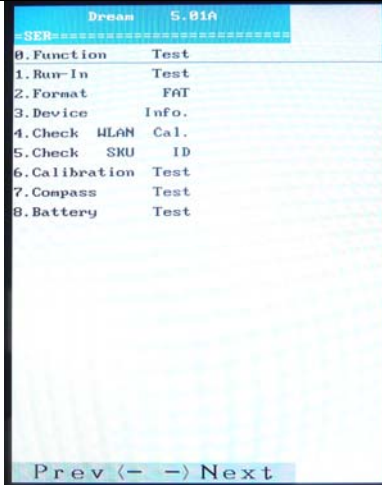
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IV. If the battery has been fully charged, please perform the "Battery Test".



V. After one hour, check the test result.

VI. If the capacity is under 70%, please replace a new battery.

```

Original Volt :4180mV
Original Temp :34c
Original Curr :5mA
Original Capt :99%
  
```

```

Final Volt :3877mV
Final Temp :38c
Final Curr :4mA
Final Capt :75%
  
```

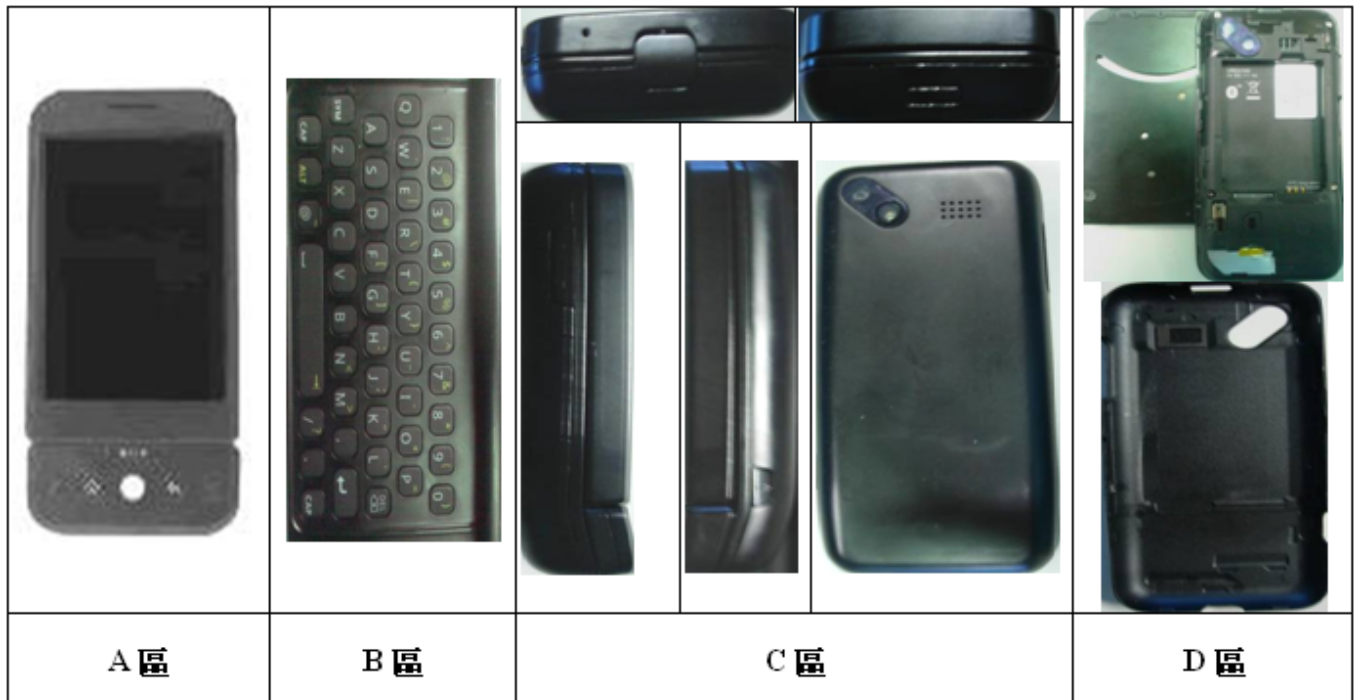
<Action> to Next

6. Cosmetic Inspection Criteria

6.1. 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 => Qwerty key of main unit
- Class C area => 5 sides and back views of main unit. (Except Front view of main unit)
- Class D area => Apart from the previous 2 areas, the class D area indicates the inner part which can't be seen while a user operations

Photo of inspection areas



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

Description

- **D:** Diameter / **L:** Length / **W:** Width / **N:** Number of defects/ **S:** Distance from dot to dot
- Inspecting distance: 30 ± 5cm / Mechanical inspection angle : 90 degrees /
- LCM inspection angle : 90±15 degrees / Inspection time: 5 secs per surface.
- Ambient illumination is to be 500-1100 lux

- The inspection condition of Newton ring:
 - a. Inspection distance: 30cm / Inspection time: 5 sec
 - b. Ambient illumination is to be 500-1000 Lux (Incandescent lamp)
 - c. Inspection should be performed under the condition that LCD screen could reflect the mirror image of lamp.
 - d. The criteria of Newton ring's tinges and measure of area must follow up the worst-case sample.
 - e. The area of Newton ring is smaller than 10 * 10 square mm.

Display inspection

Inspection Defects		Accept Level	Level	
Electrical Characteristic Defects	Bright Dots	Single	Red+ Green+ Blue ≤ 3 , S ≥ 5 mm.	Minor
		2 adjacent	0	Minor
		3 or more adjacent	0	Minor
	Dark Dots	Single	Total Number ≤ 2 , S ≥ 5 mm.	Minor
		2 adjacent	0	Minor
	Dark or Bright lines	0	Minor	
	All Allowable Dots Defects	Total Number ≤ 3 , S ≥ 5 mm.	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 \leq 0.1 (mm) L \leq 5 (mm), N \leq 2 (mm)	Minor	
	Lint (linear foreign objects)	0.03 < W \leq 0.1 (mm) 0.3 < L \leq 3.0 (mm) N \leq 5	Minor	
	Spots	0.1 < D \leq 0.3 (mm), N \leq 4	Minor	
	Fish eye on film	0.1 < D \leq 0.4 (mm), N \leq 4	Minor	
	Breakage on film surface	Not acceptable	Minor	
	Total acceptable defect quantity ≤ 10		Minor	

6.2. Main unit inspection

GAP INSPECTIONS

Description		Accept Criteria
1.	Gap between each key and ME parts.	Can't stuck up or no click feeling. It couldn't allow stuck up at pressing process.
2.	Gap between all generic ME parts	Gap between all generic ME parts < 0.4 mm



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3.	Gap between B、C parts of sliding cover phone	Gap between B、C parts < 0.5 mm
4.	Others, refer to production release spec	Others, refer to production release spec

STEP INSPECTIONS

Description		Accept Criteria
1.	Step between mating parts.	(Step) < 0.3 mm
2.	Others, refer to production release spec	Others, refer to production release spec

OTHERS

Scratch		
Description	Accept Criteria	
Class A	Exposure of substrate do not accept Scratch : $L \leq 4\text{mm}$, $W \leq 0.2\text{mm}$, $N \leq 2$, $S \geq 10\text{mm}$	MI
Class B	Exposure of substrate do not accept Scratch : $L \leq 7\text{mm}$, $W \leq 0.25\text{mm}$, $N \leq 3$, $S \geq 10\text{mm}$	MI
Class C	Label area don't care Exposure of substrate do not accept Scratch : $L \leq 10\text{mm}$, $W \leq 0.4\text{mm}$, $N \leq 5$, $S \geq 5\text{mm}$	MI
Contamination dot/Granule dot/Cave granule		
Description	Accept Criteria	
Class A	$D \leq 0.5\text{mm}$, $N \leq 2$, $S \geq 15\text{mm}$ (Ignored if $D \leq 0.15\text{mm}$)	MI
Class B	$D \leq 0.6\text{mm}$, $N \leq 4$, $S \geq 15\text{mm}$ (Ignored if $D \leq 0.25\text{mm}$)	MI
Class C	$D < 0.9\text{mm}$, $N \leq 4$, $S \geq 10\text{mm}$	MI
Burr		
Description	Accept Criteria	
Burr.	Don't accept hand scrape	MI
Imprint mark		
Description	Accept Criteria	
Class A	$0.25 \leq \text{diameter} \leq 0.65\text{mm}$, $N \leq 3$	MI
Class B	$0.65 \leq \text{diameter} \leq 1.00\text{mm}$, $N \leq 3$	MI
Bright mark		
Description	Accept Criteria	
Class A	$L \leq 2.5\text{mm}$, $W \leq 0.25\text{mm}$, $N \leq 3$	MI
Class B	$L \leq 3.0\text{mm}$, $W \leq 0.25\text{mm}$, $N \leq 4$	MI



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Class C	$L \leq 3.0\text{mm}, W \leq 0.3\text{mm}, N \leq 5$	MI
Lint		
Description	Accept Criteria	
Class A	$L \leq 3\text{mm}, W \leq 0.2\text{mm}, N \leq 2, S \geq 5\text{ mm}$	MI
Class B	$L \leq 5\text{mm}, W \leq 0.3\text{mm}, N \leq 3, S \geq 5\text{ mm}$	MI
Class C	$L \leq 10\text{mm}, W \leq 0.3\text{ mm}, N \leq 3$	MI



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7. Generic Troubleshooting

1 · Main Unit Does Not Respond to Power Button

- (1) Connect the AC adapter, maybe the battery pack is exhaust and wait few minutes for battery recharging.
- (2) Check if battery installed well.
- (3) Check the Power Button whether it's damaged.
- (4) Replace another battery pack.
- (5) 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 Daughter Board if necessary.
- (8) Replace Main Board if necessary.
- (9) 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 LCD FPC cable whether is properly connected.
- (2) Try to cold boot the unit then perform screen tap again.
- (3) Try with another Touch Panel.
- (4) Try with another Main Board.
- (5) Replace Touch Panel 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.



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4 · Unusual Vertical / Horizontal lines or partial display

- (1) Check the connection of LCD 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 LCD.
- (5) Try with another Main Board.
- (6) Replace LCD 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 LCD FPC whether is properly connected.
- (2) Try to re-flash the ROM code.
- (3) Try with another LCD.
- (4) Try with another Main Board.
- (5) Replace LCD 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 Daughter Board.
- (5) Try with another Main Board.
- (6) Replace Daughter Board 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.



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7 · PC Connection not possible

- (1) If test result is NFF, it is possible caused by user connect cradle to computer.
- (2) Check Use for USB storage is enable (Menu>Setting>Data>SD card & device storage).
- (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) 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.

8 · 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.

9 · 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.

10 · 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.



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- (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.

11 · 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.

12 · 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.

8. Generic Labeling Plan

Main unit

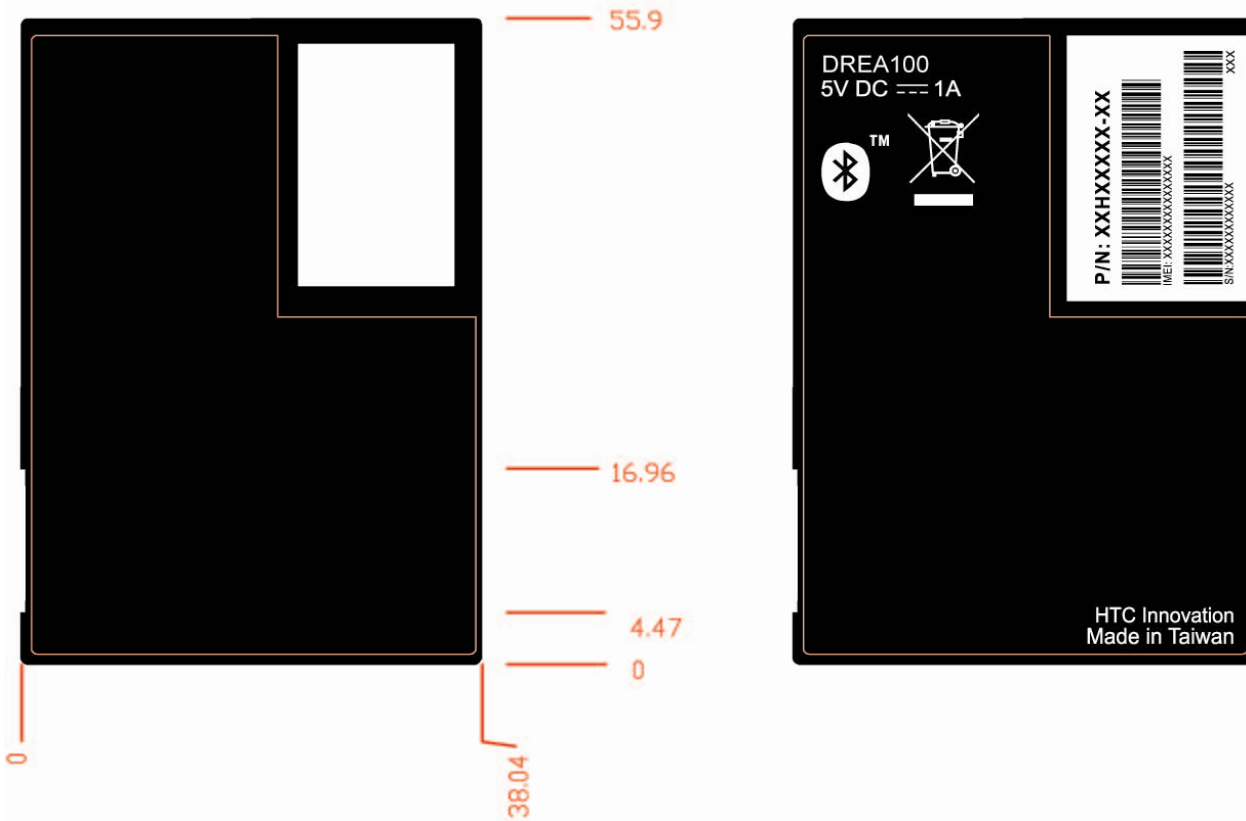
8.1 Agency label-DREA100

HTC P/N: 77H00612-00M (regulation label) 38.04 X 55.9mm

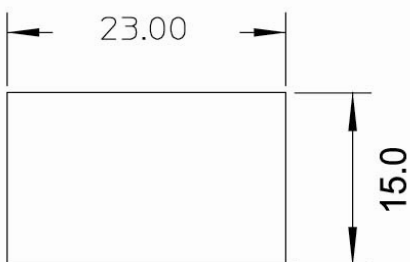
77H00470-01M (barcode label) 23.0 X 15.0mm

Layer1_regulation label: 0.25T

printing area



Layer2_barcode label: 0.05T





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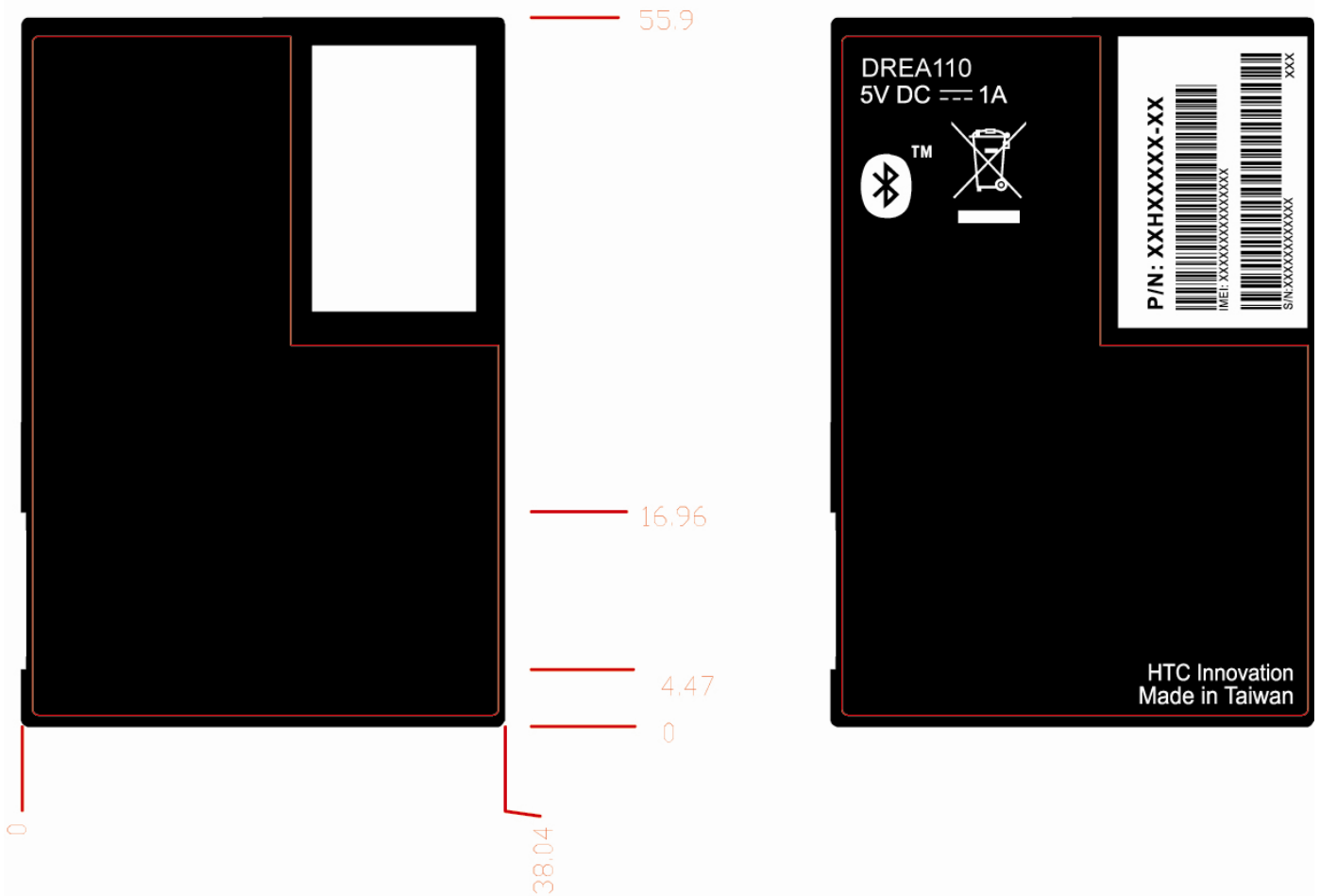
8.2 Agency label-DREA110

HTC P/N: 77H00612-01M (regulation label) 38.04 X 55.9mm

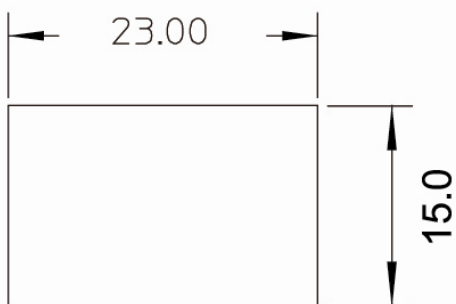
77H00470-01M (barcode label) 23.0 X 15.0mm

Layer1_regulation label: 0.25T

 printing area



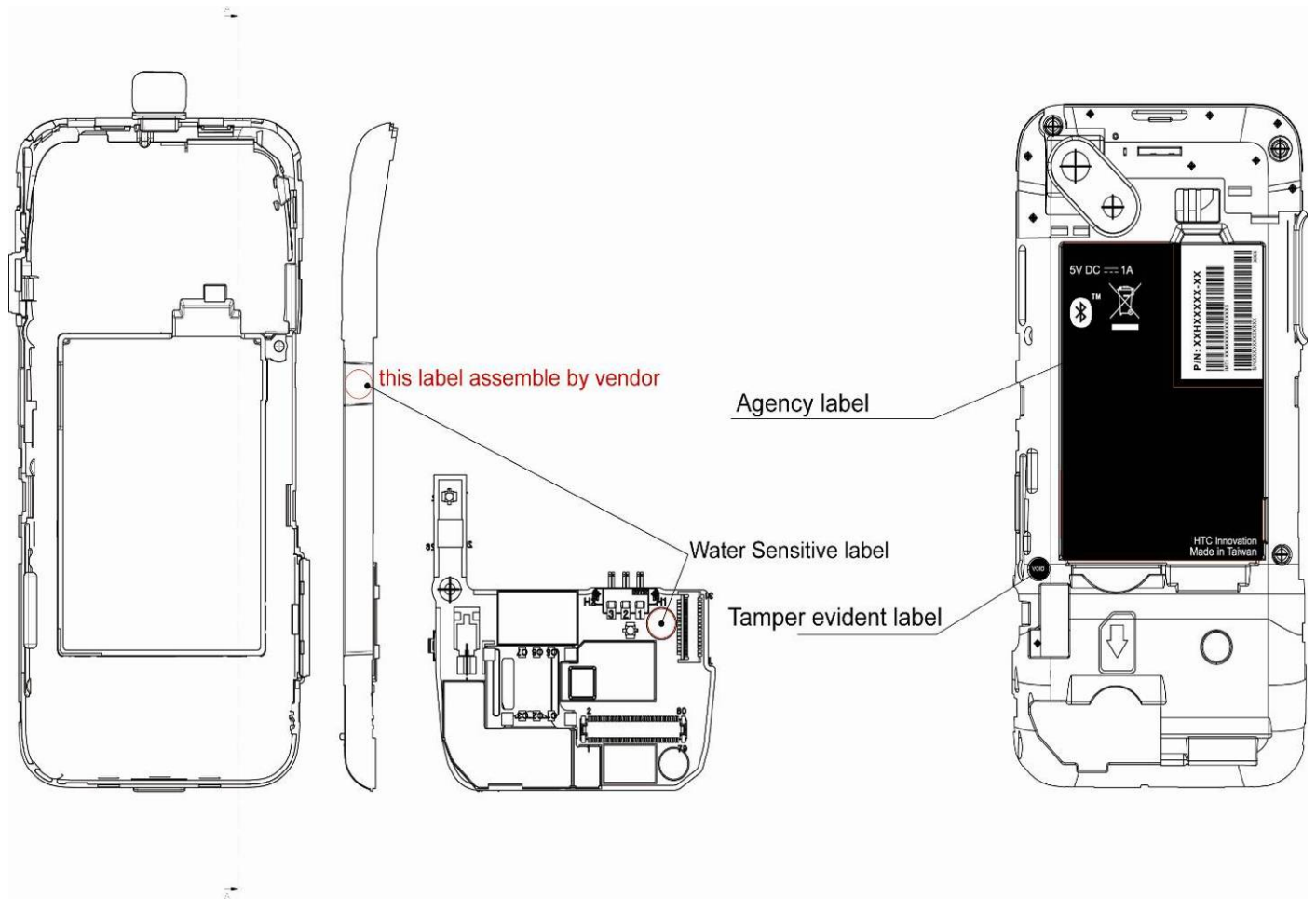
Layer2_barcode label: 0.05T



8.3 Unit label location explanation

Water sensitive label HTC P/N: 77H00685-00M Qty: 2

Tamper evident label HTC P/N: 77H00460-01M Qty: 1





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8.4 battery label-Dynapack WW version

DREA160 1150mAh

53.0mm

36.0mm

htc INNOVATION



WARNING: To reduce risk of fire or burns, do not attempt to open, disassemble, or service the battery pack. Do not crush, puncture, short external contacts or dispose of in fire or water. Do not expose to temperatures above 60°C(140°F). Replace only with the battery pack designated for this product. Rechargeable Li-ion Battery. Recycle or dispose of properly. Read instructions in operating guide before using the battery. Model: DREA160 Rating: 3.7VDC==1150mAh Made in XXXXX



Serial no.:

Part no.:

(artwork only, dimension for reference)

- for reference only, not for printing
- black C
- cool gray 9C
- cool gray 5C
- font english:Helvetica Neue 55 Roman
- chinese:微軟正黑體



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9. Generic Spare Part List and Photos

9.1. SPL for Repair

Item	Description	Qty	Substitute
1	36H00695-01M Receiver,AAC ELECTRONICS,SDRP0611AS-01-F1B-G	1	
2	36H00720-00M Speaker,KDIC,MPS101707BB	1	
3	51H00441-00M PCBA,UMTS Antenna Board for US,Dream	1	
4	51H00442-00M PCBA,GPS Antenna Board,Dream	1	
5	51H10069-00M Rigid-Flex Board ASSY,Daughter board,Dream	1	
6	51H40446-00M PCBA-MAIN BOARD with SKU_ID,GSM/UMTS 2100/AWS	1	
7	54H00287-00M Camera Module,MI3130+Largan9410,FOXCONN,CMHT-3A404D,AF,Largan	1	
8	60H00152-00M TFT-LCD Module,SHARP,LS032B7LX01,76.45*50.55*1.95mm	1	
9	71H02354-00M Lens,Led	1	
10	72H00624-01M Screw,hinge,PH,BIH,M1.6*2,NINY	4	
11	72H01059-01M Screw,POINT Mechanical,P,1.6*4.5,NI+NYLOK,T6	1	
12	72H02325-00M Screw,KT,M1.6*3.5,Ni-plated,NY	4	
13	72H02403-00M Screw,PH,FD,T1.6*6,Nickel	2	
14	72H02404-00M Screw,PH,FD,T1.4*2.65,Nickel,Black	2	
15	72H02481-00M EMI Gasket,Hinge FPC stiffener,15*8*0.1mm	2	
16	72H02483-00M EMI Gasket,Shielding,20*5*1.3mm	1	
17	72H02663-00M Screw,BT,KH,1.4X3.3,BZ	6	
18	73H00284-00M Cable,UMTS,ACON,CP7P75-0079000,UMTS coaxial,78mm	1	
19	73H00285-00M Cable,GPS,ACON,CP7P75-0023000,Coaxial,22mm	1	
20	73H20136-41M FPC Pre-Assy,AP Dome FPC,GLOBAL FLEX	1	
21	73H20137-41M FPC Pre-Assy,Qwerty Keypad FPC,GLOBAL FLEX	1	
22	76H02523-00M Adhesive-Double Tape,backup,Camera FPC,18*18*0.05mm,3M 9703	1	
23	76H02529-00M Tape,Qwerty FPC conn,Kapton	2	
24	76H02561-00M Sponge,TP-LCD_connector	1	
25	76H02562-00M Rubber,Microphone	1	
26	76H02564-00M Tape,LCD conn.,Kapton	1	
27	76H02565-00M Tape,Touch Screen,Kapton	1	
28	76H02566-00M Mylar,Receiver	1	
29	76H02569-00M Rubber,Front-LCD	2	



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30	76H02570-00M Rubber,Side-LCD	4	
31	76H03105-00M Mylar,Daughter Board,Kapton	1	
32	77H00612-00M Regulation Label,55.9*38.04mm,昇彩	1	
33	77H00685-00M Water Sensitive Label,MING JYE,4*4mm,3M 5558	1	
34	36H00375-02M Switch,Black,PANASONIC,EVQWJN008 1	1	
35	61H00144-10M Touch Window,SYNAPTICS,TM-01062-001,w/o CAMERA HOLE ,77.74*51.1*0.48mm	1	
36	71H02357-00M Cover,IO cover,TMUS,Black	1	
37	72H00740-01M Screw,PH,FD,M1.6X1.6,Nickel-Black+NYLOK	2	
38	72H02873-00M Screw,FH M1.4-0.3*4.3 BZ+Ny	1	
39	73H20132-41M FPC Pre-Assy,Dispaly FPC,GLOBAL FLEX	1	
40	73H20179-41M FPC Pre-Assy,Hinge FPC,GLOBAL FLEX	1	
41	74H01149-00M Cover Pre-Assy,C cover,TMUS,Black(matt)	1	
42	74H01155-01M Cover Pre-Assy,Battery cover,Black,TMUS,w/logo,Dream-O6	1	
43	74H01156-00M Cover Pre-Assy,UI,TMUS,Black	1	
44	74H01157-00M Housing Pre-Assy,D cover,TMUS,Black(matt)	1	
45	74H01158-00M Keypad Pre-Assy,TMUS,QWERTY,Black,WWE	1	
46	74H01163-01M Bezel Pre-Assy,A Cover,TMUS,Black,w/ logo	1	
47	74H01164-00M Keypad Pre-Assy,APP-key,TMUS,Black	1	
48	74H01172-04M Hinge Pre-Assy,Black,TMUS.w/ logo,DIABELL	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.


FOR REFURBISHMENT PARTS, THE TABLE IS FOR YOUR REFERENCE. YOU CAN DO THE REFURBISHMENT ONLY WHEN YOUR SERVICE MODEL IS ALLOWED TO DO THE REFURBISHMENT.


Picture for SPL 80H Kernel and Accessories

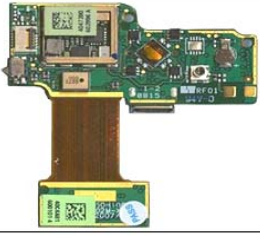
(Part no on picture is for Generic version only, please check SPL for detail per customer)


Part No.	36H00695-01M	
Description	Receiver, AAC ELECTRONICS	
Q'ty	1	
Refurbishment	No	
Repair code	G103.1	
Return to HTC	No	


Part No.	51H00442-00M	
Description	GPS Antenna Board	
Q'ty	1	
Refurbishment	No	
Repair code	M206	
Return to HTC	No	


Part No.	51H00441-XXM (Different P/N by customer)	
Description	UMTS Antenna Board	
Q'ty	1	
Refurbishment	No	
Repair code	M104.3	
Return to HTC	No	


Part No.	51H0446-XXM (Different P/N by customer)	
Description	PCBA-MAIN BOARD	
Q'ty	1	
Refurbishment	No	
Repair code	M101	
Return to HTC	Yes	

Part No.	51H10069-00M	
Description	Daughter Board	
Q'ty	1	
Refurbishment	No	
Repair code	M201	
Return to HTC	Yes	

Part No	54H00287-00M	
Description	Camera Module Micron, 59.52*24.09*6.3mm	
Q'ty	1	
Refurbishment	No	
Repair code	G117	
Return to HTC	No	


Part No.	36H00720-00M	
Description	Speaker,KDIC	
Q'ty	1	
Refurbishment	No	
Repair code	G103	
Return to HTC	No	

Part No.	60H00152-00M	
Description	TFT-LCD Module,SHARP	
Q'ty	1	
Refurbishment	No	
Repair code	L101	
Return to HTC	Yes	


Part No.	61H00144-10M <i>(Different P/N by customer)</i>	
Description	Touch Window, SYNAPTICS,w/o CAMERA HOLE	
Q'ty	1	
Refurbishment	Yes	
Repair code	L103	
Return to HTC	No	

Part No.	71H02354-00M	
Description	Lens,Led,Dream	
Q'ty	1	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	

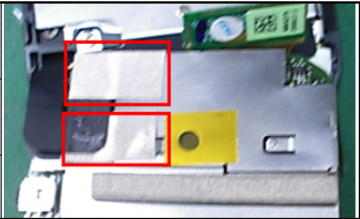
Part No.	72H00624-01M	
Description	Screw,hinge,PH,BIH,M 1.6*2,NINY	
Q'ty	4	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	


Part No.	72H01059-00M	
Description	Screw,POINT Mechanical,P,1.6*4.5, NI+NYLOK,T6	
Q'ty	1	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	

Part No.	72H02325-00M	
Description	Screw,KT,M1.6*3.5 ,Ni-plated, NY	
Q'ty	4	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	


Part No.	72H02403-00M	
Description	Screw,PH, FD,T1.6*6,Nickel	
Q'ty	2	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	


Part No.	72H02404-00	
Description	Screw,PH,FD,T1.4*2.65,Nickel,Black	
Q'ty	2	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	

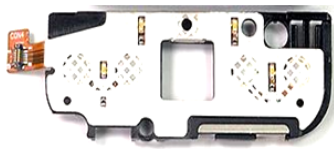
Part No	72H02481-00M	
Description	Gasket,Hinge FPC stiffener,15*8*0.1mm	
Q'ty	2	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	

Part No	72H02483-00M	
Description	EMI Gasket,Shielding,20*5*1.3mm	
Q'ty	1	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	

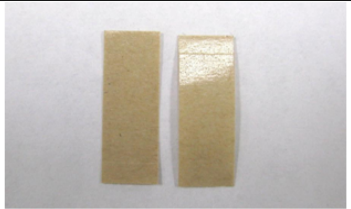
Part No	72H02663-00M	
Description	Screw,BT,KH,1.4X3.3,BZ	
Q'ty	6	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	

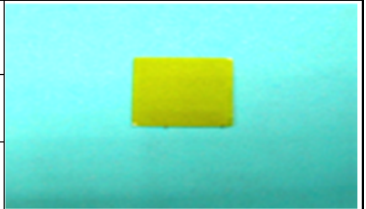
Part No	73H00284-00M	
Description	Cable,UMTS,ACON,UMTS coaxial,80mm	
Q'ty	1	
Refurbishment	No	
Repair code	B108	
Return to HTC	No	

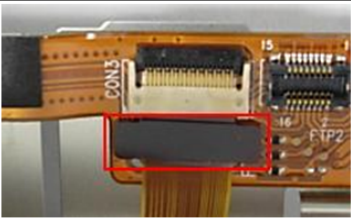
Part No.	73H00285-00M	
Description	Cable,GPS,ACON,Coaxial,22mm	
Q'ty	1	
Refurbishment	No	
Repair code	B108	
Return to HTC	No	


Part No	73H20136-41M	
Description	FPC Pre-Assy,AP Dome FPC,GLOBAL FLEX	
Q'ty	1	
Refurbishment	No	
Repair code	C122	
Return to HTC	No	


Part No	73H20137-41M	
Description	Pre-Assy,Qwerty Keypad FPC,GLOBAL FLEX	
Q'ty	1	
Refurbishment	No	
Repair code	C122.1	
Return to HTC	No	

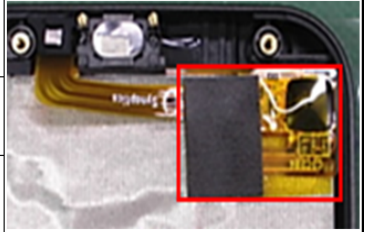
Part No	76H02523-00M	
Description	Adhesive-Double Tape,backup,Camera FPC,18*18*0.05mm,3	
Q'ty	1	
Refurbishment	Yes	
Repair code	N/A	
Return to HTC	No	

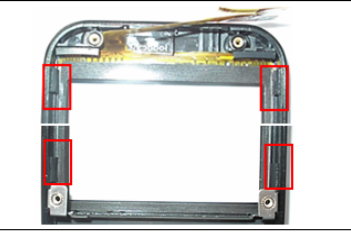
Part No	76H02529-00M	
Description	Tape,Qwerty FPC conn,Kapton	
Q'ty	3	
Refurbishment	Yes	
Repair code	N/A	
Return to HTC	No	

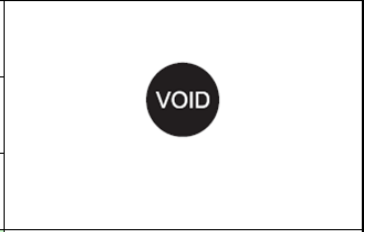
Part No	76H02564-00M	
Description	Tape,Kapton_Spong_LCD-connector	
Q'ty	1	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	


Part No	76H02562-00M	
Description	Rubber,Microphone	
Q'ty	1	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	


Part No	76H02569-00M	
Description	Rubber,Front-LCD	
Q'ty	2	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	

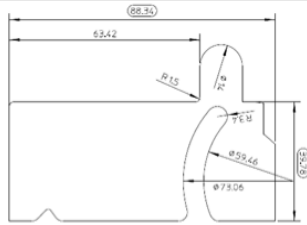
Part No	76H02565-00M	
Description	Tape,Kapton_Spong_TP-connector	
Q'ty	1	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	

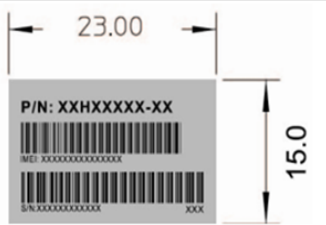
Part No	76H02570-00M	
Description	Rubber,Side-LCD	
Q'ty	4	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	

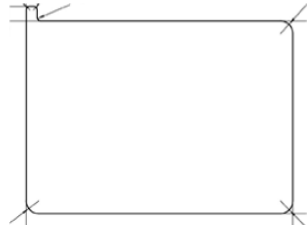
Part No	77H00460-01M	
Description	Tamper-Evident Label,VOID wording,black	
Q'ty	1	
Refurbishment	Yes	
Repair code	N/A	
Return to HTC	No	

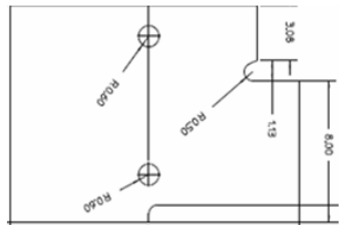
Part No	77H00612-00M	
Description	Regulation Label,55.9*38.04mm,昇彩	
Q'ty	1	
Refurbishment	Yes	
Repair code	N/A	
Return to HTC	No	


Part No	77H00685-00M	
Description	Water Sensitive Label,MING JYE,4*4mm,3M 5558	
Q'ty	1	
Refurbishment	Yes	
Repair code	O12.1	
Return to HTC	No	


Part No	76H10039-00M	
Description	Protector Film,39.78*0.04*88.34 mm,MA2550	
Q'ty	1	
Refurbishment	Yes	
Repair code	N/A	
Return to HTC	No	

Part No	77H00470-01M	
Description	Blank Label,for barcode printing	
Q'ty	1	
Refurbishment	Yes	
Repair code	N/A	
Return to HTC	No	

Part No	76H10005-01M (Different P/N by customer)	
Description	Protector Film, screen protector, w/o warning message	
Q'ty	1	
Refurbishment	Yes	
Repair code	N/A	
Return to HTC	No	

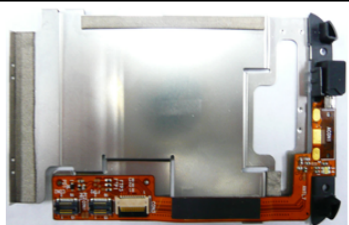
Part No	76H03105-00M	
Description	Mylar, Daughter Board,Kapton	
Q'ty	1	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	

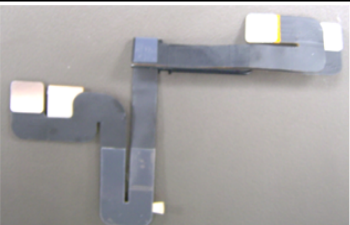
Part No	36H00375-XXM (Different P/N by customer)	
Description	Switch,PANASONIC	
Q'ty	1	
Refurbishment	Yes	
Repair code	C105	
Return to HTC	No	


Part No	71H02357-XXM (Different P/N by customer)	
Description	Cover,IO cover	
Q'ty	1	
Refurbishment	Yes	
Repair code	C113	
Return to HTC	No	


Part No	72H00740-01M	
Description	Screw,PH,FD,M1.6 X 1.6,Nickel-Black+NYLOK	
Q'ty	2	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	


Part No	72H02873-00M	
Description	Screw,FH M1.4-0.3*4.3 BZ+Ny	
Q'ty	2	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	


Part No	73H20132-41M	
Description	FPC Pre-Assy,Dispaly FPC,GLOBAL FLEX	
Q'ty	1	
Refurbishment	No	
Repair code	C122.3	
Return to HTC	No	


Part No	73H20179-41M (Different P/N by customer)	
Description	FPC Pre-Assy,Hinge FPC,GLOBAL FLEX	
Q'ty	1	
Refurbishment	Yes	
Repair code	C124	
Return to HTC	No	


Part No	74H01149-xxM (Different P/N by customer)	
Description	Cover Pre-Assy,C cover	
Q'ty	1	
Refurbishment	Yes	
Repair code	C101.6	
Return to HTC	No	


Part No	74H01155-xxM (Different P/N by customer)	
Description	Cover Pre-Assy,Battery cover	
Q'ty	1	
Refurbishment	Yes	
Repair code	C112	
Return to HTC	No	

Part No	74H01156-xxM (Different P/N by customer)	
Description	Cover Pre-Assy,UI	
Q'ty	1	
Refurbishment	Yes	
Repair code	C112.5	
Return to HTC	No	

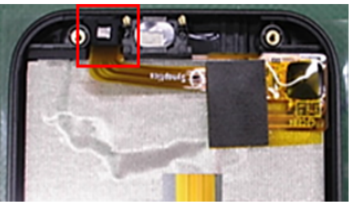
Part No	74H01157-xxM (Different P/N by customer)	
Description	Housing Pre-Assy,D_cover	
Q'ty	1	
Refurbishment	Yes	
Repair code	C102	
Return to HTC	No	

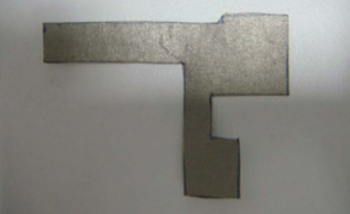
Part No	74H01158-XXM <i>(Different P/N by customer)</i>	
Description	Keypad Pre-Assy,QWERTY	
Q'ty	1	
Refurbishment	Yes	
Repair code	C109	
Return to HTC	No	

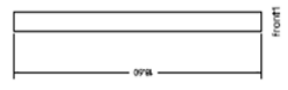
Part No	74H01163-XXM <i>(Different P/N by customer)</i>	
Description	Bezel Pre-Assy,A Cover	
Q'ty	1	
Refurbishment	Yes	
Repair code	C101.5	
Return to HTC	No	


Part No	74H01164-xxM <i>(Different P/N by customer)</i>	
Description	Keypad Pre-Assy,APP-key	
Q'ty	1	
Refurbishment	Yes	
Repair code	C106	
Return to HTC	No	


Part No	74H01172-xxM <i>(Different P/N by customer)</i>	
Description	Hinge Pre-Assy_SZS	
Q'ty	1	
Refurbishment	Yes	
Repair code	C102.5	
Return to HTC	No	

Part No	76H02929-00M	
Description	Rubber,LED to A cover	
Q'ty	1	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	


Part No	72H02996-01M	
Description	EMI Gasket,Touch Panel	
Q'ty	1	
Refurbishment	No	
Repair code	N/A	
Return to HTC	No	


Part No	76H03274-00M	
Description	Adhesive-Double Tape	
Q'ty	1	
Refurbishment	Yes	
Repair code	N/A	
Return to HTC	No	

Part No	76H02553-00M	
Description	Adhesive-Double Tape,Hinge-FPC	
Q'ty	1	
Refurbishment	Yes	
Repair code	N/A	
Return to HTC	No	


Part No	71H02353-xxM (Different P/N by customer)	
Description	Chassis, Display FPC	
Q'ty	1	
Refurbishment	Yes	
Repair code	N/A	
Return to HTC	No	


Part No	71H02352-xxM (Different P/N by customer)	
Description	Chassis, Hinge FPC	
Q'ty	1	
Refurbishment	Yes	
Repair code	N/A	
Return to HTC	No	


Part No	79H00055-XXM (Different P/N by customer)	
Description	AC Adapter, 1A, 5V	
Q'ty	1	
Refurbishment	No	
Repair code	G101	
Return to HTC	No	

Part No	73H00296-01M	
Description	Cable, 60-4516-200, MEC, DC U200, 08' ID	
Q'ty	1	
Refurbishment	No	
Repair code	G110	
Return to HTC	No	

Part No	70H00177-XXM (Different P/N by customer)	
Description	AC Adapter, 1A, 5V	
Q'ty	1	
Refurbishment	No	
Repair code	G110	
Return to HTC	No	

Part No	36H00582-01M	
Description	Earphone, COTRON, C HM-311STV08002	
Q'ty	1	
Refurbishment	No	
Repair code	G106	
Return to HTC	No	

Part No	54H20043-XXM (Different P/N by customer)	
Description	Micro SD Card, 1GB, TMUS, w/o content, w/o plastic case	
Q'ty	1	
Refurbishment	No	
Repair code	G104	
Return to HTC	No	

Part No	54H20003-00C	
Description	Consign Module Assy, SIM Card Module, T-MOBILE US	
Q'ty	1	
Refurbishment	No	
Repair code	G110	
Return to HTC	No	



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Part No	35H00106-01M	
Description	BATTERY_LI-ION,1150mAh,3.7V,S ANYO,DYNAPACK	
Q'ty	1	
Refurbishment	No	
Repair code	B101	
Return to HTC	Yes	

Part No		
Description		
Q'ty		
Refurbishment		
Repair code		
Return to HTC		



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9.2. Board Level 2.5 Repairs

■ Basic Repair Instructions for Component Replacement:

- Step 1 Place the solder-proof tape to cover the surrounding area of the components which being replaced.
Warning : DO NOT overheat the tape and components to avoid the tape melted and the components damaged
- Step 2 Use Heater Gun (HAKO850B, set the temperature between 350°C, Air Speed 3~5) to remove the components.
- Step 3 It has to wait the temperature cool down before the damaged components been removed. Or, the others components could be gone when the solder-proof tape been taken off.
- Step 4 After the damaged or defective components have been replaced; clear the surroundings for solder and flux residues.

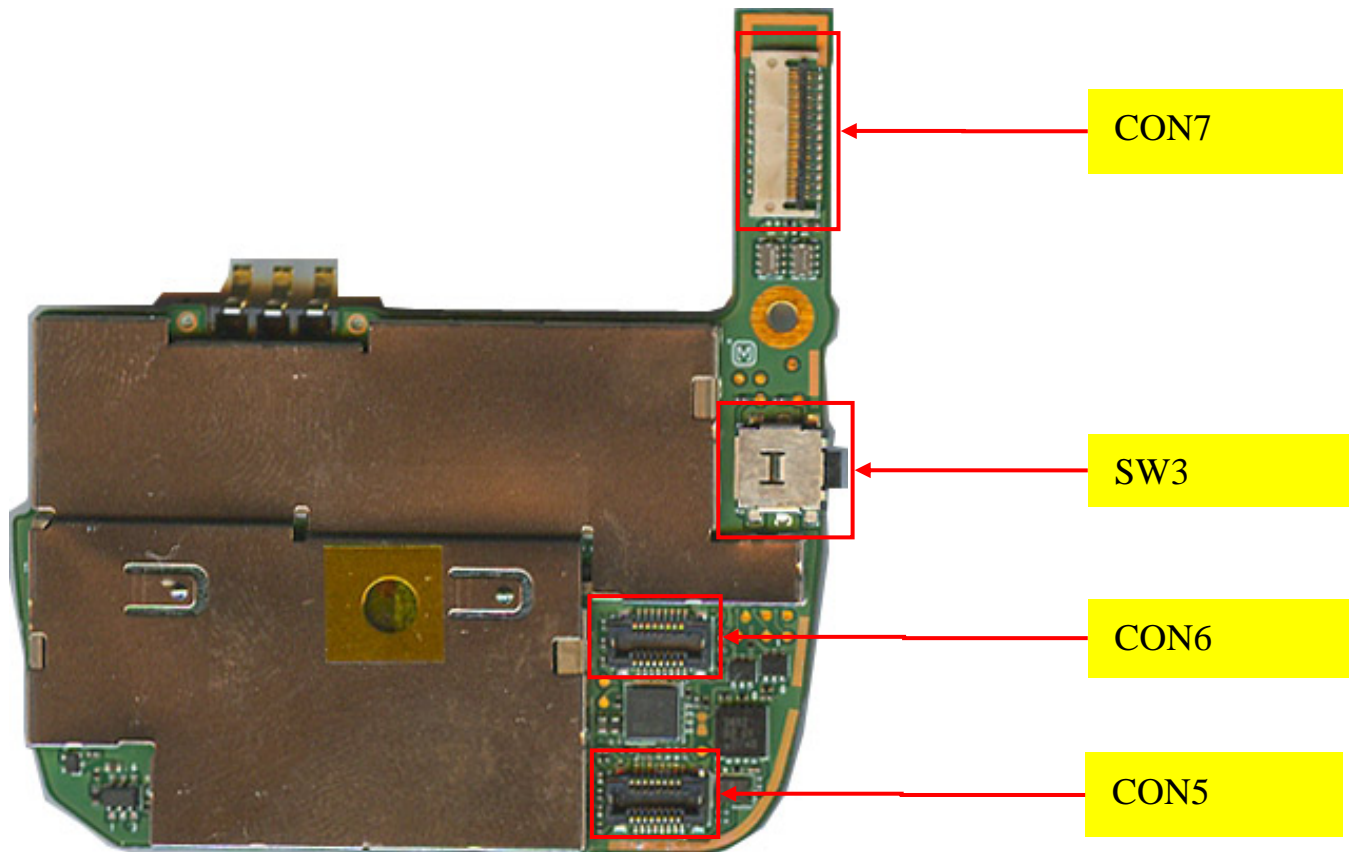
Notice:

- A. Checking the polarity of CON5 、 CON6 、 CON7 、 CON8 、 CON10, and the position can't be shifted.
- B. Checking the polarity of CON7 、 CON8, and it can't be reversed.
- C. All the parts of the PCB should be checked if it is missing or not.
- D. The OP must to wear antistatic wrist band .Don't put boards together and avoid hitting them.

51H40446-XXM PCBA-MAIN BOARD(Side A)

51H40446-XXM PCBA-MAIN BOARD(Side A)				
Location	P/N	Description	Q'ty	Remark
SW3	36H00683-00M	Switch,NTC603-CB1G-B200T,T-MEC,Double-action w/o boss	1	Camera switch
CON5	75H00755-00M	Connector B to B,16P,0.4pitch,AXT316164,PANASONIC,0.3A,60V,90mohm	1	
CON6	75H00755-00M	Connector B to B,16P,0.4pitch,AXT316164,PANASONIC,0.3A,60V,90mohm	1	
CON7	75H00753-00M	Connector FPC,26P,0.3Pitch,0.2A,50V,FF12-26A-R11B,DDK	1	

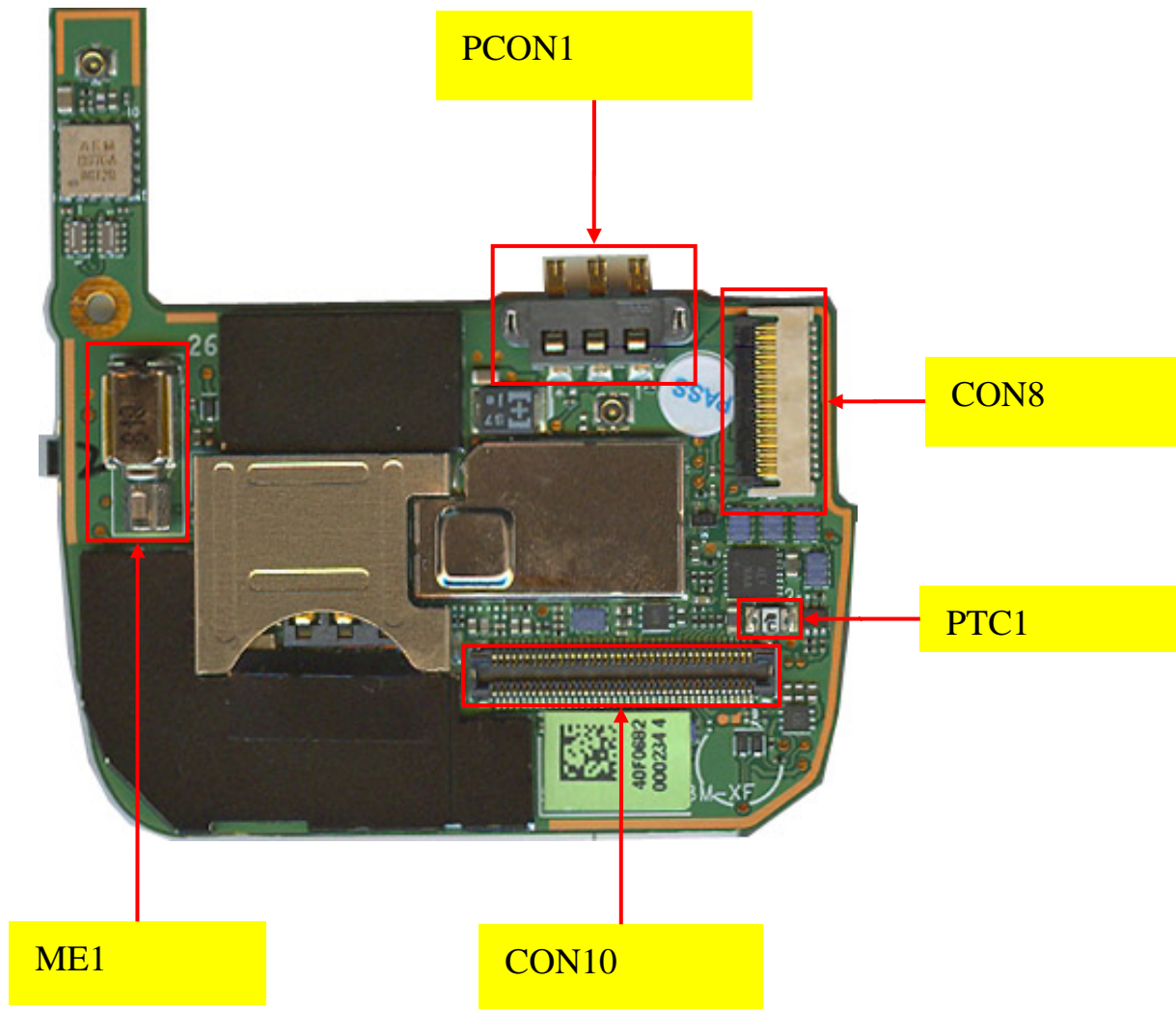
SIDE A PHOTO AND COMPONENT LOCATION



51H40446-XXM PCBA-MAIN BOARD(Side B)

51H40446-XXM PCBA-MAIN BOARD(Side B)				
Location	P/N	Description	Q'ty	Remark
PCON1	75H00786-00M	Connector Device(Battery conn),3P,2.5pitch,250089MB003G400ZL,SUYIN,0.5A,5V,50mohm	1	
CON8	75H00761-00M	Connector FPC,31P,0.3pitch,FF12-31A-R11B,DDK,0.2A,50V	1	
CON10	75H00754-00M	Connector B to B,80P,0.4pitch,AXT380164,PANASONIC,0.3A,60V,90mohm	1	
PTC1	36H00602-00M	Fuse,SMD0805P100TF,POLYTORNICS,PTC,85/-40degC	1	Fuse
ME1	36H00665-00M	Vibrator,BHT-3285,SANYO,SMT Type,70/-20degC	1	

SIDE B PHOTO AND COMPONENT LOCATION



10. RF Antenna Specification

Dream WCDMA Antenna Test Specification (US 850/1900 System)

Item	Test Name	TX Level	Uplink / Downlink UA RF CN	1st Downlink cell power	note
1	Camp@ W-CDMA Band (AWS)	3	1312 / 1537	-60	
2	BS Originate Cell	3	1312 / 1537	-60	
Receiver Test					
3	Fast Bit Error Rate	3	1312 / 1537	-104	<= 1.2 %
4	Fast Bit Error Rate	3	1450 / 1675	-104	
5	Fast Bit Error Rate	3	1513 / 1738	-104	
Transmitter Test					
6	TX Power	3	1312 / 1537	-60	>= 18 dbm
7	TX Power	3	1450 / 1675	-60	
8	TX Power	3	1513 / 1738	-60	

Dream GSM Antenna Test Specification (US 850/1900 System)

Item	Test Name	TX Level	TCH	1st Downlink cell power	note
1	Wait_Signal	0	600	-65	
2	Power_Class	0	600	-65	
GSM 850 Receiver Test					
3	Fast Bit Error Rate	5	128	-104	<= 2 %
4	Fast Bit Error Rate	5	189	-104	
5	Fast Bit Error Rate	5	251	-104	
GSM 850 Transmitter Test					
6	TX Power	5	128	-65	>= 28 dbm
7	TX Power	5	189	-65	
8	TX Power	5	251	-65	
DCS 1800 Receiver Test					
9	Fast Bit Error Rate	0	512	-104	<= 2 %
10	Fast Bit Error Rate	0	698	-104	
11	Fast Bit Error Rate	0	885	-104	
DCS 1800 Transmitter Test					
12	TX Power	0	521	-65	>= 25 dbm
13	TX Power	0	698	-65	
14	TX Power	0	885	-65	
PCS 1900 Receiver Test					
9	Fast Bit Error Rate	0	512	-104	<= 2 %
10	Fast Bit Error Rate	0	661	-104	
11	Fast Bit Error Rate	0	810	-104	
PCS 1900 Transmitter Test					
12	TX Power	0	512	-65	>= 27 dbm
13	TX Power	0	661	-65	
14	TX Power	0	810	-65	



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Dream WCDMA Antenna Test Specification(EU 900/1800 System)

Item	Test Name	TX Level	Uplink / Downlink UA RF CN	1st Downlink cell power	note
1	Camp@ W-CDMA Band (2100)	3	9613 / 10563	-60	
2	BS Originate Cell	3	9613 / 10563	-60	
Receiver Test					
3	Fast Bit Error Rate	3	9613 / 10563	-104	<= 1.2 %
4	Fast Bit Error Rate	3	9750 / 10700	-104	
5	Fast Bit Error Rate	3	9887 / 10837	-104	
Transmitter Test					
6	TX Power	3	9613 / 10563	-60	>= 18 dbm
7	TX Power	3	9750 / 10700	-60	
8	TX Power	3	9887 / 10837	-60	

Dream GSM Antenna Test Specification (EU 900/1800 System)

Item	Test Name	TX Level	TCH	1st Downlink cell power	note
1	Wait_Signal	0	600	-65	
2	Power_Class	0	600	-65	
GSM 900 Receiver Test					
3	Fast Bit Error Rate	5	975	-104	<= 2 %
4	Fast Bit Error Rate	5	42	-104	
5	Fast Bit Error Rate	5	124	-104	
GSM 900 Transmitter Test					
6	TX Power	5	975	-65	>= 28 dbm
7	TX Power	5	42	-65	
8	TX Power	5	124	-65	
DCS 1800 Receiver Test					
9	Fast Bit Error Rate	0	512	-104	<= 2 %
10	Fast Bit Error Rate	0	698	-104	
11	Fast Bit Error Rate	0	885	-104	
DCS 1800 Transmitter Test					
12	TX Power	0	521	-65	>= 27 dbm
13	TX Power	0	698	-65	
14	TX Power	0	885	-65	
PCS 1900 Receiver Test					
9	Fast Bit Error Rate	0	512	-104	<= 2 %
10	Fast Bit Error Rate	0	661	-104	
11	Fast Bit Error Rate	0	810	-104	
PCS 1900 Transmitter Test					
12	TX Power	0	512	-65	>= 25 dbm
13	TX Power	0	661	-65	
14	TX Power	0	810	-65	