



Service Manual
for
Tempo

HTC Proprietary
Confidential Treatment Requested

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HTC Corp.
Engineering Mobility



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Chapter 1 – Introduction

This manual provides the technical information to support the service activities of Hurricane series. It contains highly confidential information, so any or all of this document should not be revealed to any third party.

1.1 History

Reversion	Update item	Pages effected
A01	First release	N/A



Chapter 2 - Product Specifications

Function	Specification
Platform	<ul style="list-style-type: none"> ● Microsoft Windows Mobile Smartphone
Dimensions	<ul style="list-style-type: none"> ● 109.28mm(L) x 47.97mm(W) x 19.22/19.33mm(T)
Weight	<ul style="list-style-type: none"> ● 100 g (with battery pack)
CPU	<ul style="list-style-type: none"> ● TI OMAP 750 tri-band GSM/GPRS solution
Memory	<ul style="list-style-type: none"> ● Flash ROM: 64MB ● RAM: 64MB SDRAM
GSM Function	<ul style="list-style-type: none"> ● Full integrated GPRS / GSM (Tri-band) module (900+1800+1900MHz) <ul style="list-style-type: none"> ◆ GSM900: 880-915, 925-960MHz ◆ GSM1800: 1710-1785, 1805-1880MHz ◆ GSM1900: 1850 -1910, 1930-1990MHz
Display	<ul style="list-style-type: none"> ● 2.2" QVGA, 64K colors TFT LCD ● LED backlight
Keyboard/Button	<ul style="list-style-type: none"> ● One Power button (Wake up key) ● One 5 ways navigation key ● One Send Button (Wake up key) <ul style="list-style-type: none"> ◆ Quick Press: Start a phone call ◆ Long Press: Switch On/Off loud speaker during incoming call ● One End button (Wake up key) <ul style="list-style-type: none"> ◆ Quick Press: End a phone call ◆ Long Press: Switch On/Off Key Lock ● 2 Soft Keys ● One Home/Connection Quick List Button <ul style="list-style-type: none"> ◆ Quick Press: Home ◆ Long Press (Press and Hold): BT/PDP Quick list ● One Back/Clear Button <ul style="list-style-type: none"> ◆ Text Editing mode: Clear one character (Long press to delete whole text field) ◆ Non-Text mode: Back key ● Numerical dialing keypad (12 buttons / Wake up key) <ul style="list-style-type: none"> ◆ Keypad is labeled as GSM 02.30



	<ul style="list-style-type: none"> • Volume Up Button (Left Upper Side / Wake up Key) <ul style="list-style-type: none"> ◆ Quick Press: Volume Up ◆ Long Press: Voice Recording • Music play button x 3 • One record button • Hot key for internet link • Volume Down Button (Left Upper Side / Wake up Key) <ul style="list-style-type: none"> ◆ Quick Press: Volume Down ◆ Long Press: Voice Command
Interface	<ul style="list-style-type: none"> • 3V SIM card • One Mini-USB plug (Slave USB, Power In) • One Infrared IrDA SIR • One miniSD Card slot • 2.5 Ø Stereo audio jack <p>External RF connector with cover</p>
Power	<ul style="list-style-type: none"> • Battery <ul style="list-style-type: none"> ◆ Rechargeable battery, Li-Ion 1150 mAh ◆ RTC backup battery - golden capacitor for min.20minutes ◆ Battery Meter Showing available battery ◆ Low Battery Warning • AC Adapter: <ul style="list-style-type: none"> ◆ AC input rating: 100 ~ 240 VAC, 50/60Hz ◆ DC output: 5VDC, 1A • Photon Sensor for LED power consumption saving • Support USB charging
Device to device connectivity	<ul style="list-style-type: none"> • Bluetooth <ul style="list-style-type: none"> ◆ Compliant with v1.1 ◆ Class 2 transmit power ◆ Supported profiles: <ul style="list-style-type: none"> ⇒ DUN Client Profile ⇒ File Transfer Profile ⇒ Generic Access Profile ⇒ Generic Object Exchange Profile



	<ul style="list-style-type: none"> ⇒ Hands-free Profile ⇒ Headset Profile ⇒ Object Push Profile ⇒ Serial Port Profile ⇒ ActiveSync • Infrared IrDA SIR • USB 1.1 with mini-USB plug and receptacle
Digital Camera	<ul style="list-style-type: none"> • Image Sensor: <ul style="list-style-type: none"> ◆ 1.3 Mega Pixels CMOS • Lighting: Min. 5 Lux
Notification	<ul style="list-style-type: none"> • One Bi-color LED (Green and Red) for GSM standby, GSM network status, Event Notification, Power Charging status • One Blue LED for Bluetooth connectivity status • Vibration for notification and incoming call • Notification by LED, Sound, Message, Vibration Motor
Accessories	<ul style="list-style-type: none"> • Bundle <ul style="list-style-type: none"> ◆ AC adapter w/ DC_IN via mini-USB plug • USB Sync. Cable • Stereo wired headset with microphone • DRM Engine: For all types of files (pictures, audio, application etc.), and also all types of delivery method (MMS, email etc.) <ul style="list-style-type: none"> ◆ OMA 1.0 ◆ Forward lock ◆ Combined delivery ◆ Separate delivery • Speech Recognition <ul style="list-style-type: none"> ◆ Voice command/ voice dial



Chapter 3 - Servicing Tools

This chapter provides information for the servicing tools for Hurricane series -Robbie.

List of Servicing Tools

No.	Item	Use	Remark
1	Disassembly tools	Plastic stick for dismantle the unit Cleaning wipers Philips Screw driver Protective Film Tweezers Air Gun Clean Bench (Mandatory)	**
2	Mini USB cable	For Synchronization Test	
3	Mini SD Memory Card	For SD card test	
4	Headset	For Hand free / Recording test	
5	AC Adapter	Power supply to this model	
6	Diagnostic Test Program	Test Program for Functional Test	
7	Software Upgrade tools	For software version upgrade or re-flash	
8	Label Printer & Scanner	For Printing & Scanning regulation label when housing or M/B is changed.	**
9	Battery Test Jig	For Main Battery judgment.	
10	Mini SD card for OS reflash	Optional method besides of using RUU via PC	

How to purchase repair tool:

Please place your order for item you need to correspond BSO window; normally it will need 2 ~4 weeks for purchasing lead time.

Note: Not suitable for (** IN REMARK)



Chapter 4 - Assembling and Disassembling

4.1 Disassembling



Tools needed for Assembling and Disassembling the Smart Phone

1. Glove & Lens Cleaning Tissue.
2. Plastic type tweezers.
3. Philip Screw Driver #0.
4. Philip Screw Driver type T5
5. Special Made Plastic Stick
6. Precision flat driver type 0.9mm (⊖)



Front side



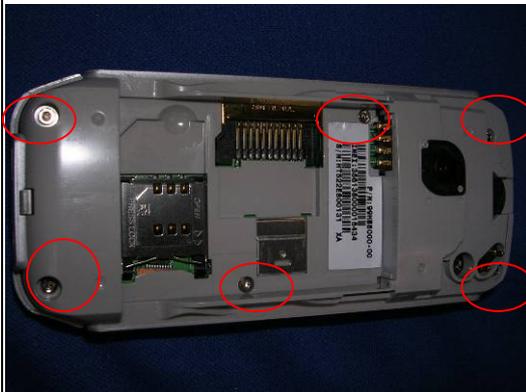
Remove antenna rubber, battery cover, battery from unit



Release the antenna radiator by inserting Precision flat driver type 0.9mm into two holes located at lower part of antenna as shown on picture (1)
Use flat plastic tool to insert into the open gap (2)



Release the antenna



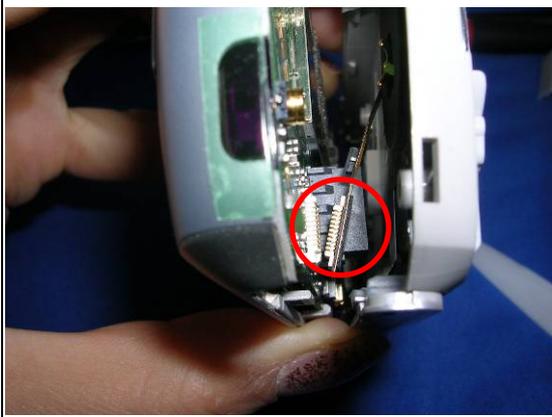
Unfasten 6 screws located on the back side



Insert plastic stick into the gap between upper cover and housing to release three hooks which fix them.



The same method to release hooks on other side.



Release the camera FPC before removing the frame.

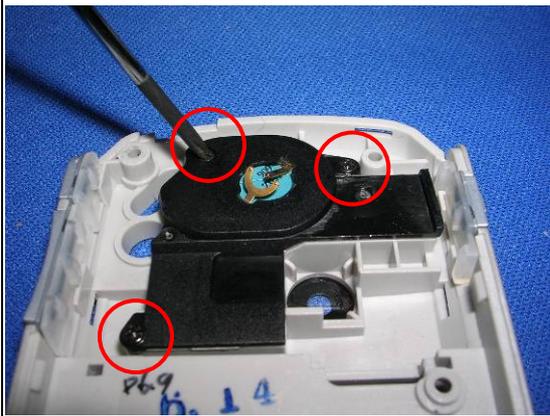
Note: The FPC is fragile



Separate the Upper cover from frame housing



1. Vibrator could be removed from housing.
2. To remove the speaker, release three screws which fix the sound box cover

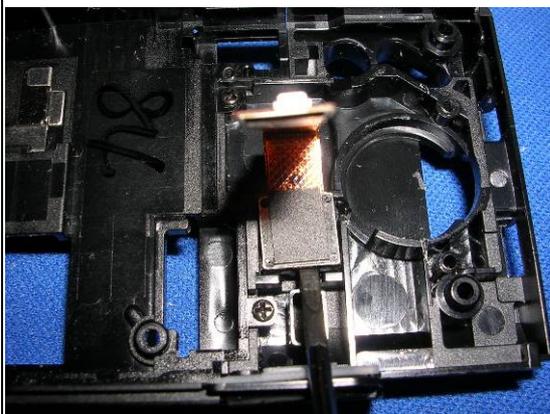


Three screws fix the sound box



Speaker could be released after removing the sound box cover.

CAUTION: There is risk to damage the camera during release the cover. Put your finger to hold on the camera FPC during release the cover.

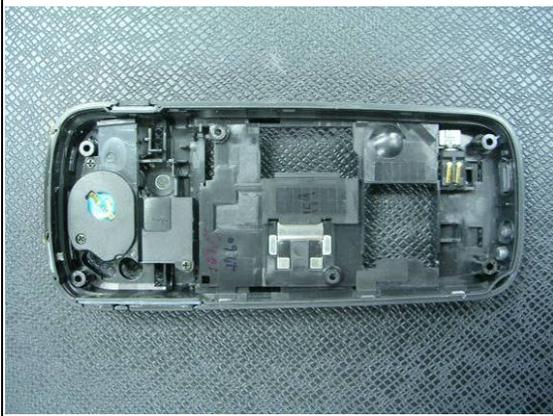


To remove Camera use soft tool such as stylus to take out the camera.

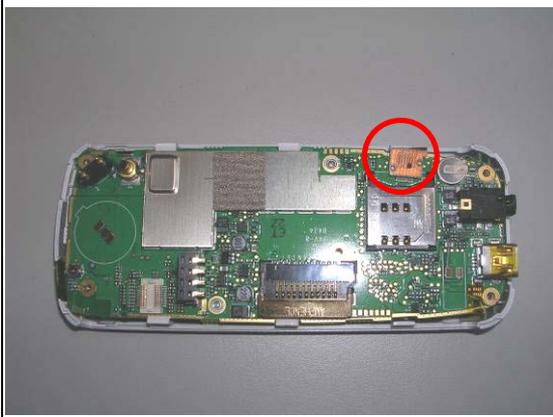
Caution: Please do not pull out the Camera from its FPC side



CMOS camera



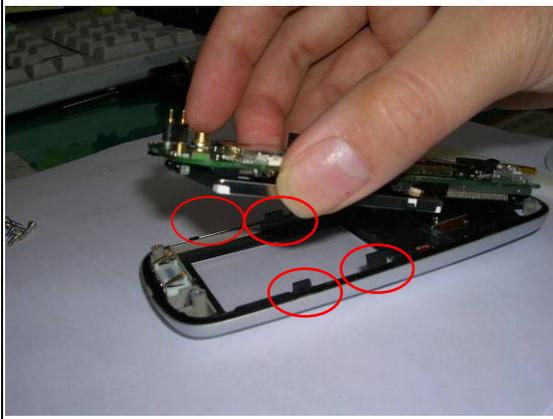
Frame housing



Release the Switch board FPC



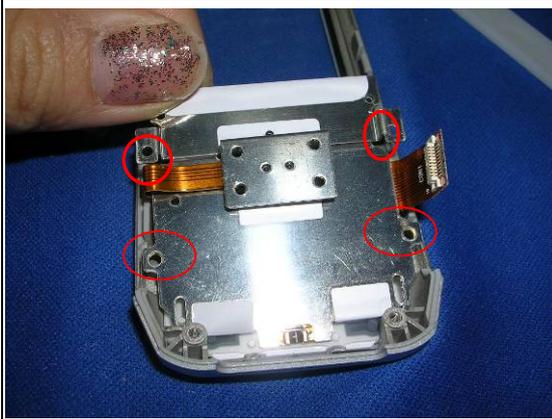
Release 6 hooks which hold the MB with upper cover, starting from left side.



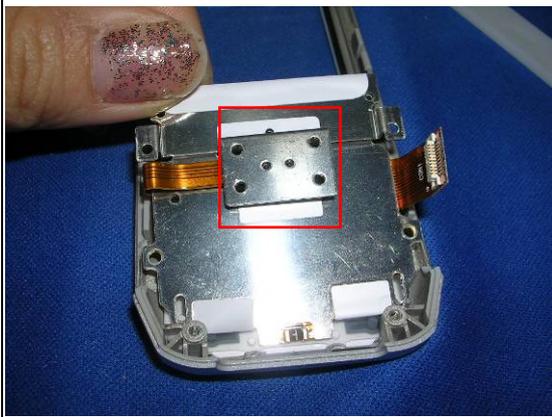
Remove the MB together with the LCD, pay attention to the hooks.

Then take out the MB and LCD

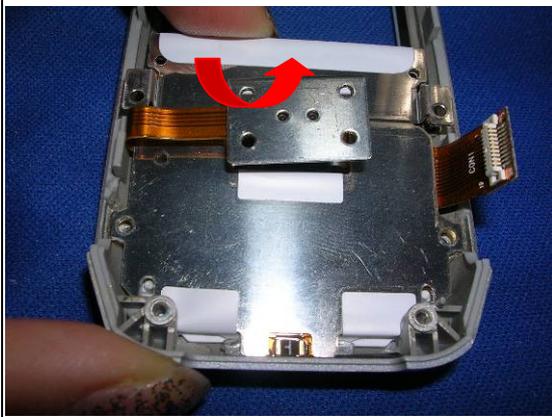
Please put on soft surface to protect the LCD.



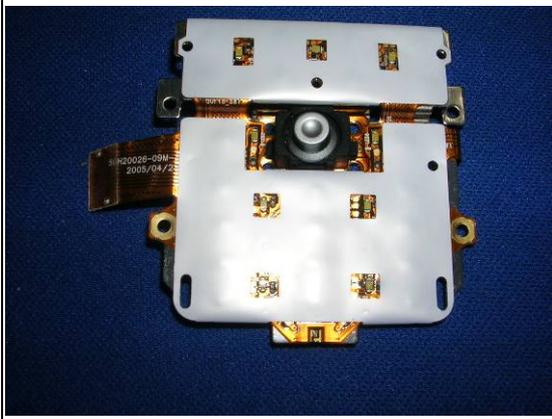
1. Unfasten 4 screws located on metal support of keypad.



Also 4 screws on the center



Take out the switch board



Switch board



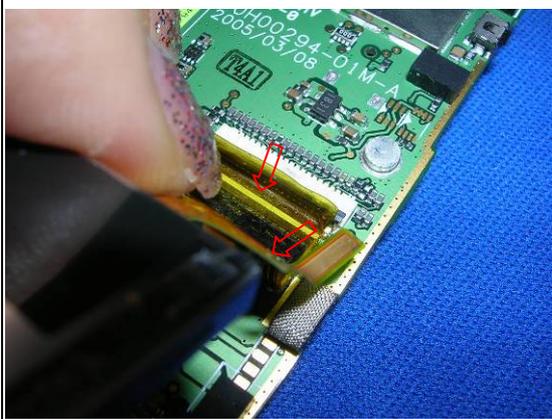
To disassembly receiver
Slightly release it from its lower left part.



Push out the functional keypad and Numeric keypad from front side



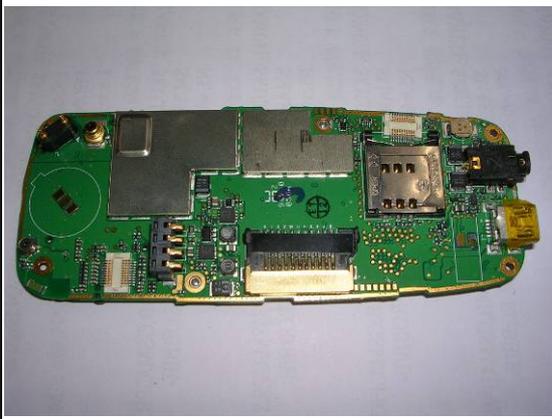
Take out and put on safe place.
Function keypad with Numeric keypad



MB and LCD
Release its two tape on LCD's rear side.
***.Note**
Please don't pull the LCD FPC directly ,hold the edge of LCD instead.



To release the LCD, unlock the connector cover.



Main Board



LCD

Now the disassembly process is DONE



4.2 Assembly Process

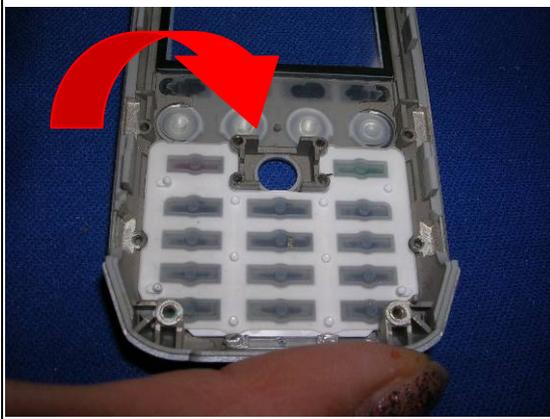


Assembly vibrator into its place on rear cover.

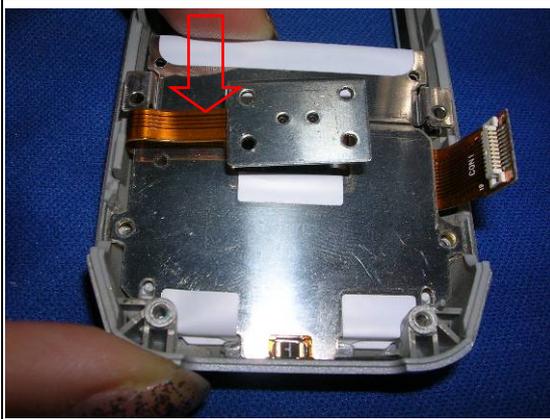


Assemble Receiver into its place, notice the two pins **should not bent** on assembly process.

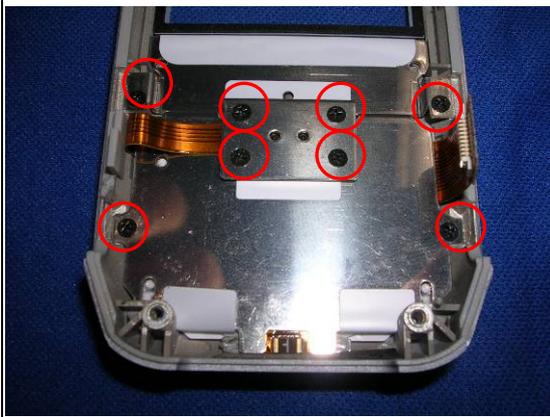
Notice: Receiver coming as spare part already has double side tape on it. You could remove the top layer and stick it on front panel.



Assemble functional keypad on upper cover.

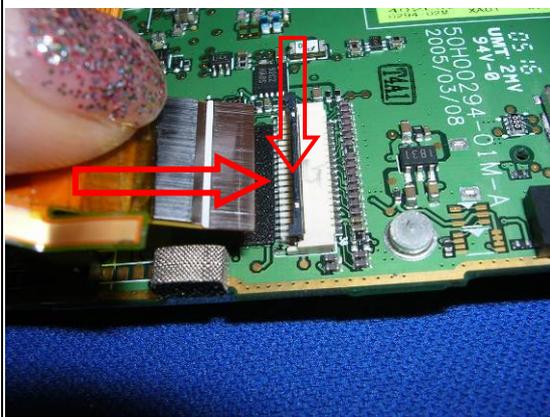


Assembly Switch Board into upper cover.



Fasten 8 screws to fix the switch board.
Upper part assembly is done

Torque 0.6±0.1 kgf-cm



LCD assembly.

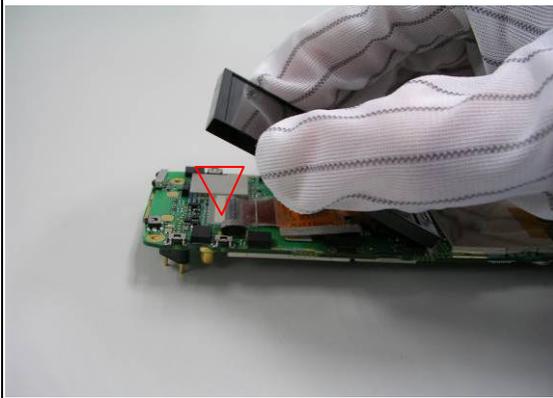
Insert the LCD into MB connector which refer to white guide line

Use your finger to push the FPC black mylar on FPC

Lock the connector.

Note: Once down the white line should be in parallel with connector cover.

Remark: Make sure the LCD is installed properly.



Place the LCD as shown on figure

***.Note**

Please don't pull the LCD FPC directly ,hold the edge of LCD instead.

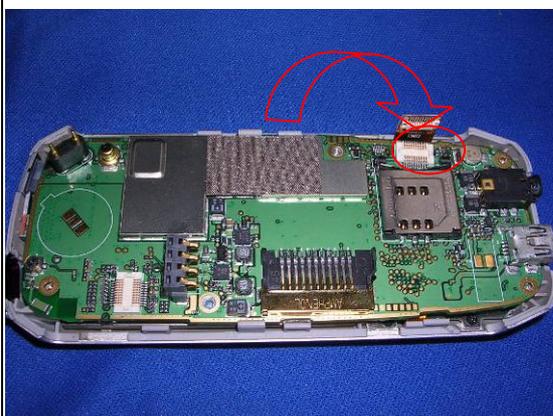


Assemble the MB AND LCD INTO UPPER cover.

Make sure the LCD & MB is inserted properly into hooks.



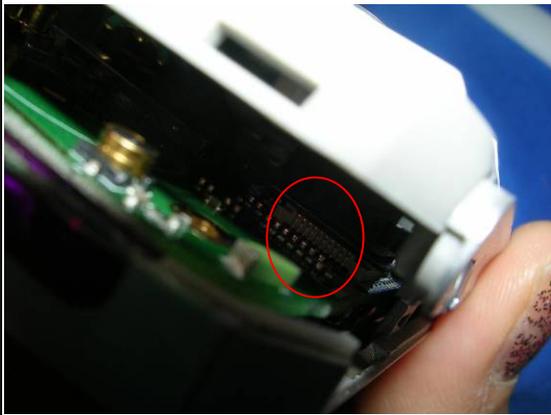
Assemble the switch board connector



Assemble frame housing to upper part



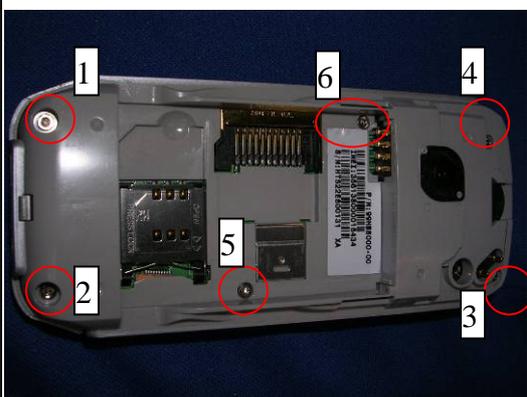
Starting from bottom part, match the connector into their place.



Insert camera FPC into its place.
Then fasten frame housing with upper cover properly.



Fix along each side of unit



Fasten 6 screws follow the sequence on picture.

1 ~4 continue with 5 ~ 6

Torque: **1.0 ± 0.05 kgf-cm**



Antenna radiator ASSEMBLY



Installed the antenna radiator starting from upper part,



Attached Battery, battery cover, external antenna cover into unit.

If the warranty seal is broken on receiving, please treat as out of Warranty(F216).



The unit now is ready for Functional TEST

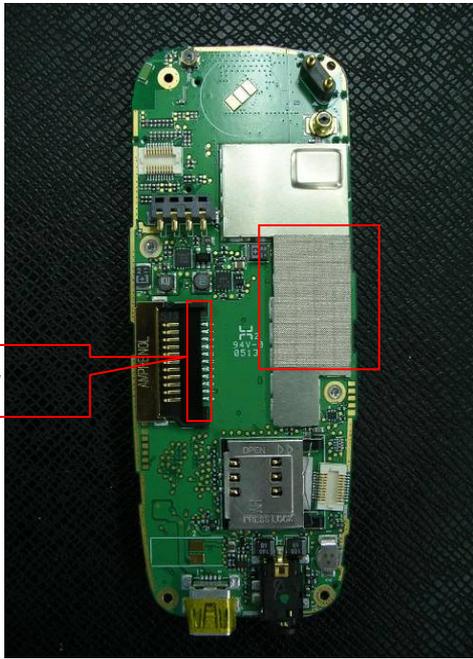
Assembly process is DONE.



4.3 MB Pre-assembly

Parts that need to pre-assembled first upon replacing to new one:

Main board.(A SIDE)



Mylar

Mylar

P/N: 76H00952-00M

Q'ty:1

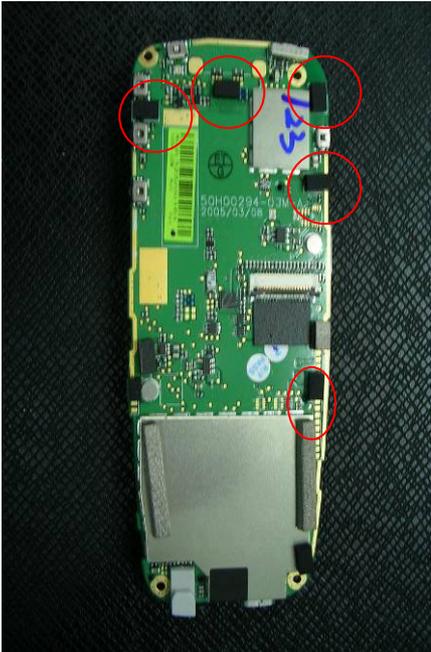
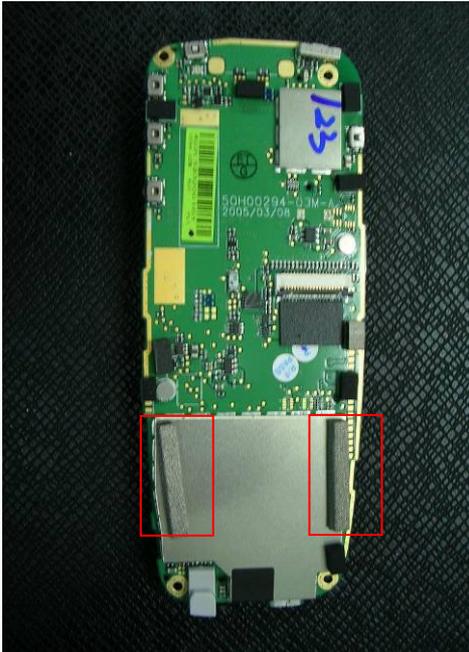
Gasket,Conductive Fabric

P/N: 76H00949-00M

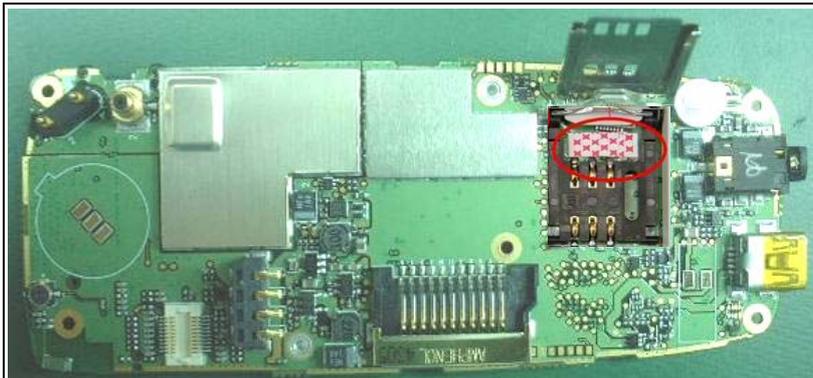
Q'ty:1



(2)MB Pre Assembly (B SIDE)

		
<p>Sponge P/N:72H00922-00M Q'ty:5</p>	<p>Gasket P/N:72H00967-00M Q'ty:2</p>	<p>Gasket P/N:76H00595-00 Q'ty:1</p>

And one liquid damage indicator behind SIM connector cover.



P/N: 77H00193-00

Note:If the color of liquid indicator changed ,it's out of warranty.



4.4 LCD Pre-assembly On LCD



There is a Mylar put on LCD FPC, this Mylar need to be attached when connect the LCD WITH Main board.
P/N: **76H00965-00M**



Sponge for LCD support
P/N:76H00948-00M
Q'ty:1



Chapter 5. Diagnostics Program

5.1 List of Test Item

- You will see HTC Copy right on the first page of Diagnostic program.
- Totally there are 28 items content of Diagnostic test.

No.	Item	Description	Remark
1	Auto-test	Functional test automatically	
2	SDRAM TEST	RAM Memory Test	
3	DISP TEST	LCD pattern display test	
4	LED Test	LED (BLUE/GREEN/RED/Key) test	
5	Key Test	Keypad & soft-key pressing test	
6	Timer Test	RTC timer test	
7	VIB. Test	Vibrator On/Off test	
8	B.L TEST	Back light Test	
9	SD TEST	SD card read / write test	
10	SPK PLAY	Test Speaker output	
11	REV Play	Test Receiver output	
12	HST play	Test headset output	
13	INT1~ SPK O	Internal MIC to Speaker output	
14	INT1~ REV O	Internal MIC to Receiver output	
15	INT1~ HSTO	Internal MIC to Headset output	
16	HSTI~HSTO	Headset input to Headset output	
17	LI Sensor	Light Sensor Test	
18	MS Format	RESET Phone to Default(Factory setting)	Use for Refurbishment only, this will clear User's talk time and PIM data.
19	DIAG 2 SD	HTC internal use	HTC Use Only
20	Batt Info	Show AC IN or Out and Battery info	
21	Unit Info	Show Unit Serial No and IMEI No.	
22	RUN IN	Perform RUN IN Test	
23	Checksum	Checksum value check after Reflash	
24	Battery run down	Check the performance of battery	



Some items need to test under OS Mode			
25	USB TEST	Link with PC/Notebook to check USB Link function	
26	SIR Test	Infrared port test	Test with second unit
27	Camera Test	Test Camera Function	
28	Bluetooth	Test Bluetooth function	

5.2 Test procedure

- (a) Power OFF.
- (b) Insert Diagnostic Mini SD card (provide by HTC) to Smart phone Unit
- (c) Set the Unit into Boot loader Mode (Press & Hold **Capture**, then press **Power** button, then release power button first). Then press volume down button to download diagnostic to unit. Wait for "HTC logo" appears on screen, press **Action key** into Diagnostic test.
- (d) On test menu, use Navigation button to select the item then press Action key for testing, you could also use numeric key to select the test item. Use Right/Left to change to other page.
- (e) Remove the battery directly to exit the Diagnostic program when finish the testing.
- (f) If the system fails while testing, please also remove the battery directly to turn off power.

IMPORTANT NOTICE:

1. Please do not leave the mini SD diagnostic card left on the unit while booting to Windows mode. Because mini SD card do not have lock mechanism, easily to be formatted accidentally.
2. Once the unit has been entering Windows mode (HOME SCREEN), the SD card might be formatted already and once executing the diagnostic will stop on "CHECKSUM ERROR "without successfully entering the Diagnostic.
3. Once happen, you might need to ask HTC assistance for card replacement.
4. Please use one of SD card with diagnostic program pre-loaded as your master sd card ,in case of your SD card accidentally formatted, use it to restore the diagnostic software.



5.3 Test procedure and description

No.	Item	Description	Remark
1	Auto TEST	Functional test by automatically	Will stop once FAILED.
2	DISP TEST	Press Action to change display mode	Press Action to change display mode
3	LED Test	LED ON for BLUE>GREEN>RED>Keypad	Press Action to NEXT
4	Key Test	Launch(capture)> Vol up> Vol dwn>Soft1> Home >Back >Soft2 >AP1 >AP2 >AP3 >AP4 >Talk >End > UP >Right > Down >Left > Action > Numeric(1 ~ #)	Back to Main MENU automatically
5	Time Test	RTC timer test	Back to Main MENU automatically
6	VIB. Test	Select this item will activate Vibrator	Press Action to MENU
7	B.L TEST	Back light adjust from MAX >DIM > OFF	Press Action to MENU
8	SD TEST	Performing SD R/W test	Back to Main MENU automatically
9	SPK PLAY	Select this item to check speaker	Back to Main MENU automatically
10	REV Play	Select this item to check Receiver quality	Back to Main MENU automatically
11	HST play	Select this item to check Headset function	Back to Main MENU automatically
12	INT1~ SPK O	Recording test via MIC > Speaker	Back to Main MENU automatically
13	INT1~ REV O	Recording test via MIC > Receiver	Back to Main MENU automatically
14	INT1~ HSTO	Recording test via MIC > Headset	Back to Main MENU automatically
15	HSTI~HSTO	Recording test headset	Back to Main MENU automatically
16	LI Sensor	Light Sensor Test	Put your finger into light sensor on bottom part of unit, under 0 keypad. Follow procedure on screen.



17	MS Format	RESET Phone to Default(Factory setting)	Use for Refurbishment only, this will clear User's talk time and PIM data.
18	Batt Info	Show AC plug status & battery capacity(ref)	Press Action to exit
19	Unit Info	Show Unit Serial No and IMEI No.	Press " 0 " to exit
20	RUN IN	For RUN IN Test	Could be selected as 1,2,4,8.
21	BatRunDwn	Check Battery performance	RUN DOWN FOR 1 HOUR
22	CheckSum	Calculate checksum of Flash-ROM	Could be use for verifying after OS reflash
23	SD RAM test	RAM Memory test	
Some items need to test under OS Mode			
24	USB TEST	Link with PC/Notebook to check USB Link function	
25	SIR Test	Infrared port test	Test with second unit
26	Camera Test	Test Camera Function	
27	Bluetooth	Test Bluetooth function	



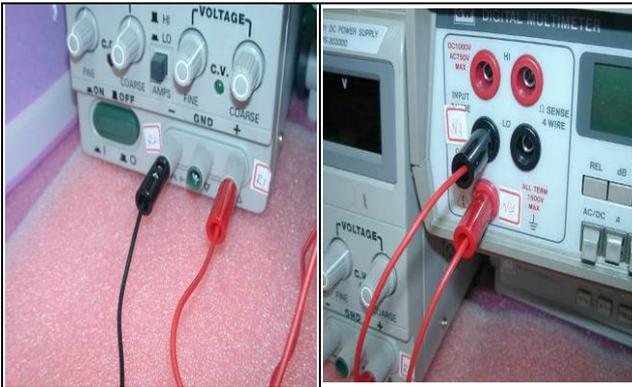
Chapter 6 – Leakage current measurement

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.

(1) Requirement :

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

	<p>Equipment need:</p> <p>A. Power Supply (set at 4 V).</p> <p>B. Micro-Current Meter (support 0.5mA ~ 2A).</p>
	<p>2. Fixture needed</p> <p>C. Current series jig.(with black and red cable)</p> <p>D. Cable</p> <p>E. Battery with extension cable</p>
	<p>3. Connect cable (D) to positive polarity of power supply (A) and current meter (B)</p>



4. Connect cable of fixture(C) to negative polarity of power supply (A) and current meter (B)

Note : black cable to power supply (A) and red cable to current meter (B)



5. Setting is Ready now for testing
(Don't turn the power on at this moment)



6. Set the unit to :

- * Flight mode
- * Turn on Bluetooth

Note : Need to put SIM card first on the unit.



7. Remove original main battery and install battery fixture (E)

8. Turn on power supply (4V) and current meter (2A)

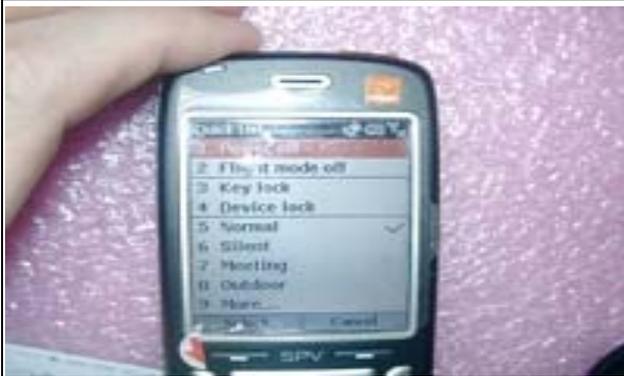


9. Power on.



10. Measure flight mode current

Wait about 1 minutes, display will be off, in this condition, please check current value on the current meter,
Current value must under **5 mA**, if over, it means M/B failed, please replace M/B for repair.



11. Switch OFF the unit.



12. Measure power off current

Check current value on the current meter,
Current value must under **0.3 mA**, if over, it means M/B failed, please replace M/B for repair.



Conclusion:

If current consumption is passed at both of flight and power off mode, it means M/B is GOOD.

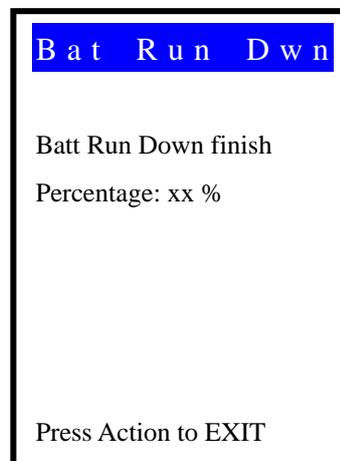
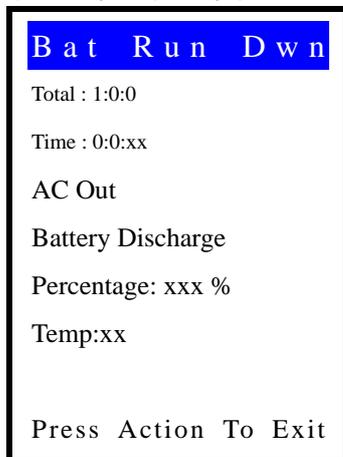
If there is any item FAILED at flight or power off mode, it means M/B is failed, please replace M/B for repair.

Measurement parameter

Measurement mode	Measured Current	REMARK
Flight Mode	Under 5mA	MB is good
	Over 5mA	Fail, MB need to be further repaired
POWER OFF	Under 0.3 mA	MB is good
	Over 0.3 mA	Fail, MB need to be further repaired

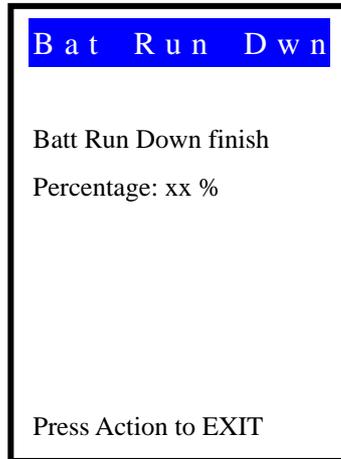
6.2 Battery Capacity Test (with Rundown program - Diagnostic)

- (1) Full charge the battery
- (2) Turn power off, then insert Diagnostic SD card to handset.
- (3) Set the handset into Bootloader Mode (While Press & Hold Capture button, then press **Power** button). Wait for the message "Press Volume down to download SD Image" appears, press ACTION key to into Diagnostic mode.
- (4) Under DIAG menu, GOTO page 3 and select item "4. **BatRunDwn**" to perform Battery rundown test.
- (5) Screen will display as fig. 1
- (6) After an hour test, the Battery Rundown Test will stop automatically. Then indicate the test result on the screen (Battery capacity percentage) for your reference(Fig 2)





If you would stop the program while testing, press "ACTION" button several times to exit the test program and back to menu screen.



(6) Test Result and Criteria

Run Down 1 hour	Capacity \geq 60 %	GOOD
Run Down 1 hour	Capacity \leq 60 %	Failed

(a) The Battery Rundown Test program is available for the battery in **Warranty period ONLY**.

(b) How to check the warranty period

Check unit serial no or Manufacturing date, please refer labeling plan at chapter 11.



Chapter 7 – Software Upgrade Procedure

7.1 Software upgrades

(1) System Requirement :

- Windows 2000 or XP on PC
- USB Cable
- **RUU** tool for Smart phone
- 64MB SD card with latest software version(optional)

(2) Software upgrades procedure

(a) Enable the USB Connection Settings in ActiveSync.



(b) Set the Smartphone into **OS** Mode (SIM card must be inside).

(c) Sync Smartphone to PC via **USB cable** and synchronize with PC.

(d) *Attach AC Adapter to USB cable (**It's necessary to attach AC Adapter to unit to prevent software upgrade fail**).

(e) Run "**RUU**" tool under Window 2000. Then Click "**Next**" to continue.



SmartPhone ROM Update Utility 1.00.2



Welcome to the ROM Update Utility for the SmartPhone.

Caution: Installing this update will delete all the information on your SmartPhone. Review the readme for important information before continuing.

I understand the caution indicated above and have reviewed the Readme.

This utility updates the ROM image on your SmartPhone.

During the update, the ROM Update Utility will :

- Allow you to update the ROM image on your SmartPhone.

Click 'Next' to proceed. Click 'Cancel' to quit.

View Readme

Next

Cancel

SmartPhone ROM Update Utility 1.00.2



Follow the instructions below to prepare the SmartPhone for the update process :

1. Connect the SmartPhone to the USB cable.
2. Establish an ActiveSync connection with your SmartPhone.
3. Disable the standby and hibernation modes on the host PC.
4. Make sure Main Battery is larger than fifty per cent .

I completed the steps indicated above.

Please do not launch any program during the update process.

Click 'Next' to proceed. Click 'Cancel' to quit.

Back

Next

Cancel

(f) Select the location to save file then click "Next" to continue.



SmartPhone ROM Update Utility 1.00.2



Welcome to the ROM Update Utility for the SmartPhone.

Caution: Installing this update will delete all the information on your SmartPhone. Review the readme for important information before continuing.

I understand the caution indicated above and have reviewed the Readme.

This utility updates the ROM image on your SmartPhone.

During the update, the ROM Update Utility will :

- Allow you to update the ROM image on your SmartPhone.

Click 'Next' to proceed. Click 'Cancel' to quit.

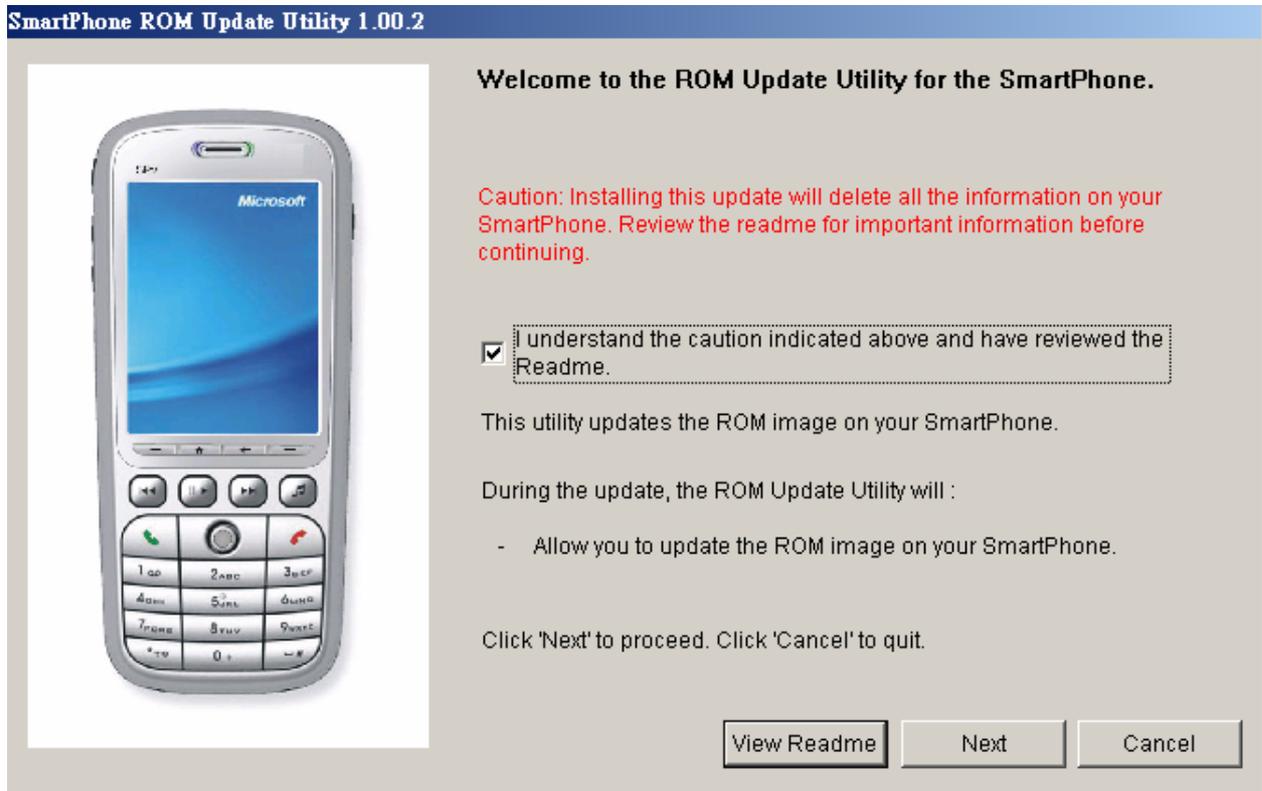
[View Readme](#)

[Next](#)

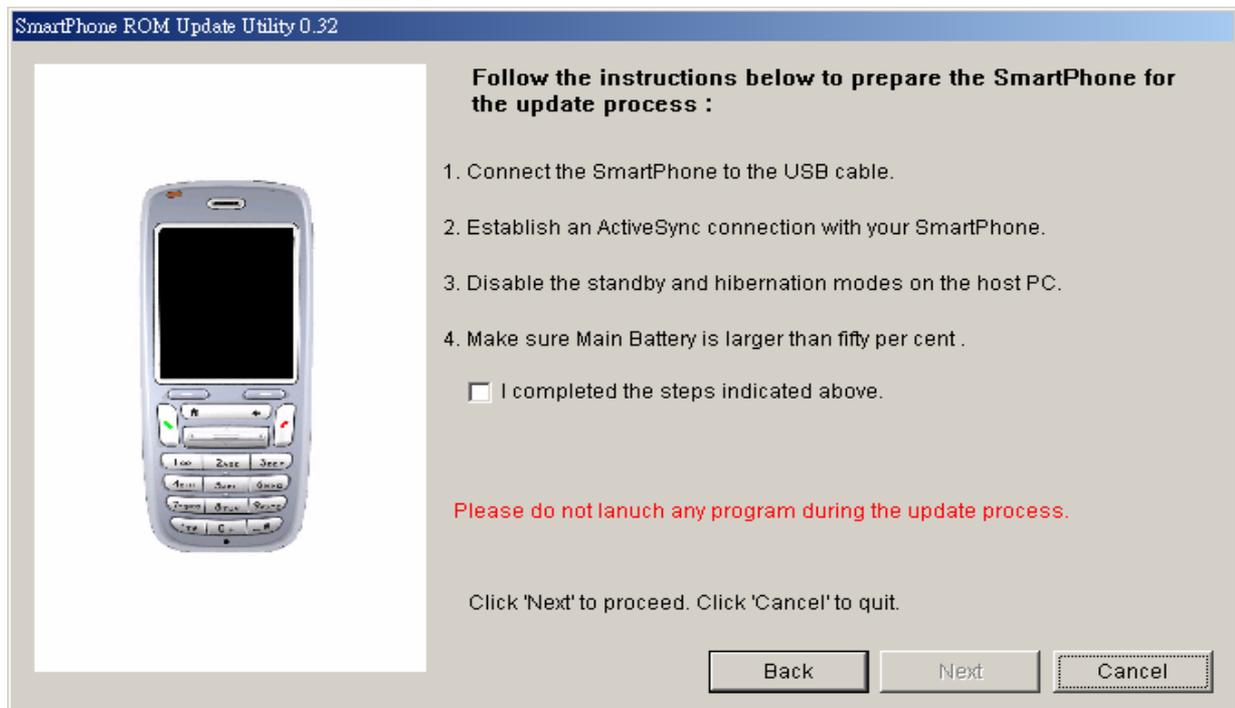
[Cancel](#)



(g) On your PC, it will show below messages, Check the option on screen:



Follow the instruction shown on screen, check the selection part:



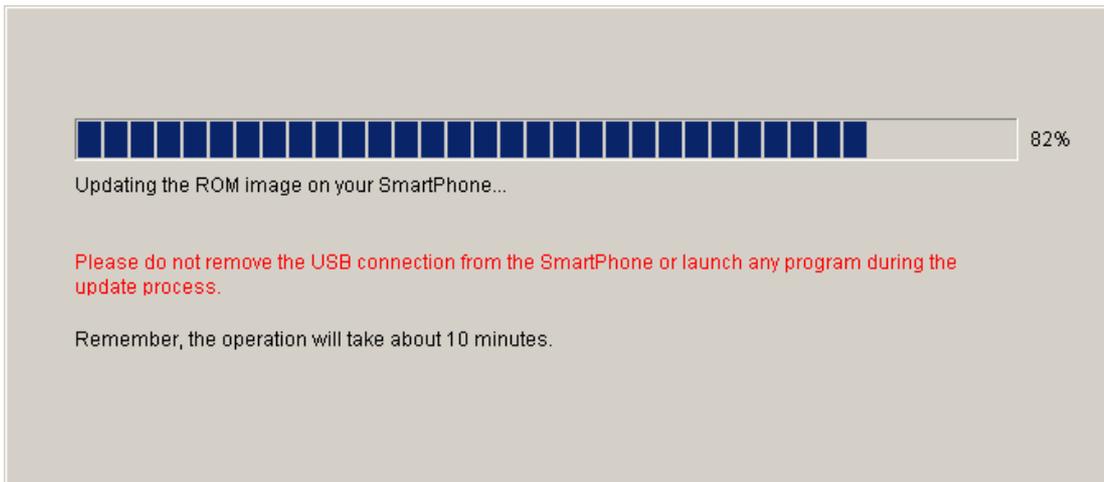


(h) During the process, PC will show current information about your smart phone, choose update after confirm.

(k) Choose NEXT if you have verified and want to update

(l) It will take about 10 minutes to complete.

(j) PC will show the RUU progress



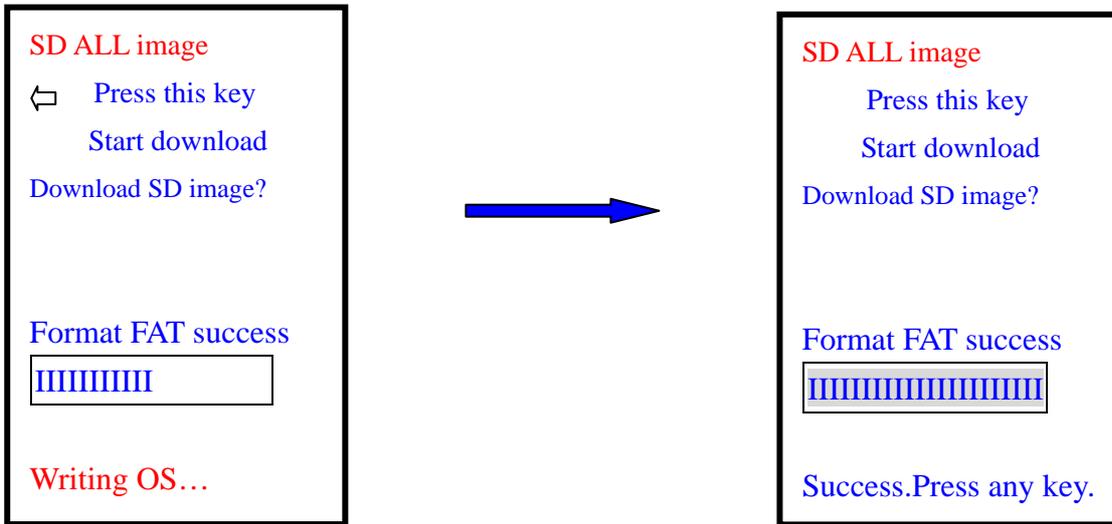
(k) When software upgrade is finished, the Unit will reboot automatically.



(3) Software upgrade from 64MB MINI SD card (with latest software version)

Caution: The unit must have at least 50% of battery capacity before starting the re-flash process. Charge the battery in advance if necessary.

- (a) Take one smartphone unit and turn off power.
- (b) Insert 64MB Mini SD card (with latest software version) to unit and set it into SPL Mode(Press and Hold Camera + Power button for 2 seconds).Then release Power button first. The screen shown as below.



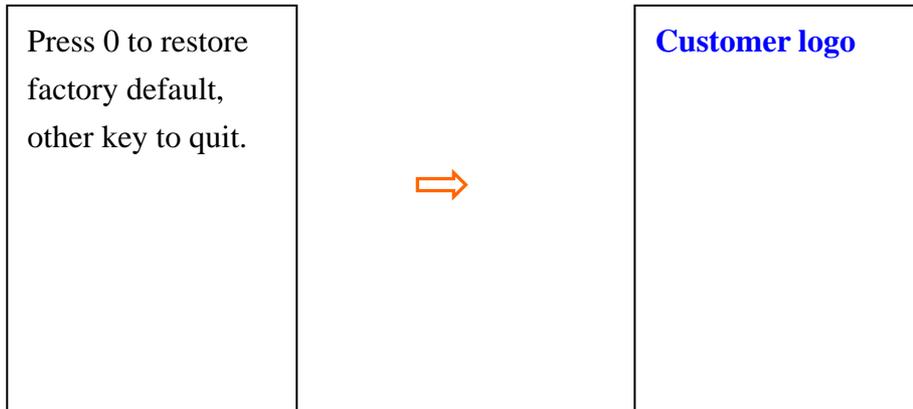
Unit has been re-flashing successfully.



7.2 Smart phone Reset.

In case if the system is freezing or not working under OS mode, service center could perform “RESET” the smart phone to fix the problem:

- (a) Release the battery and attached again to unit.
- (b) Hold two soft key together , then press power button for 0.5 seconds.



Warning: This will set phone to original factory setting , there is risk of loosing customer data.

(c) Unit will reboot .

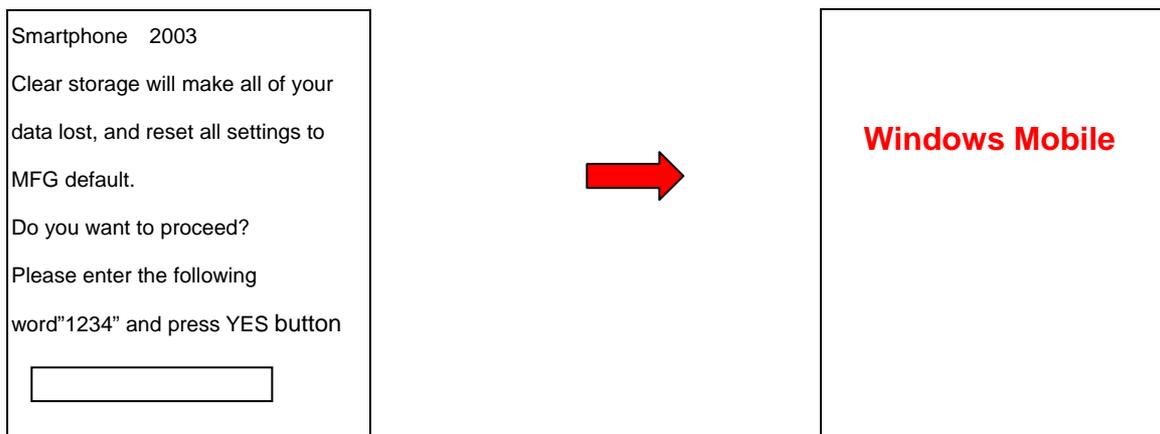
7.3 Smartphone rebuild

- Use only if you feel system is slow performance (weight loading may cause system run slowly).
- Please be noted that there is a **Risk of Loosing customer data** and back to factory default setting.

Procedure:

(1) On Windows mode, Press Start > More >More > Accessories > Clear Storage.

On display it will show:





7.4 Software back up to SD card

(A) **Build your own Golden Mini SD card**

1. Flash a golden unit with the last update ROM Code.
2. Insert a 64MB mini-SD card into unit.
3. Enter SPL : Press and hold camera key. Press power key for one or two seconds, release power key. Device will entering BL mode (Red,Green,Blue).
4. On your PC,
 - 4-1 Disable(uncheck) active sync connection.
 - 4-2 Connect your device with to PC via mini USB cable.
 - 4-3 Execute MTTY(1.42),select USB, Press Enter.
 - 4-4 PC display will show **USB>**
5. Enter "r2sd all". Check device ' screen. Wait for the percentage bar reach to the end.
6. After it is completed, turn off the unit. Take of mini-SD card.

(B) **Flash unit with golden mini-SD "**

1. Insert mini-SD card into unit.
2. Enter SPL : Press and hold camera key. Press power key for one or two seconds, release power key.
3. SPL will ask if you want to flash the unit.
4. IF Yes, Press Volume Down key quickly. Check the screen. Wait for the percentage bar reach to the end.
5. After it is completed, press any key to enter SPL automatically.
6. Power down device by pressing power button or taking out battery.
7. Remove mini-SD card.
8. Insert SIM card.
9. Power on the unit.
10. Boot into OS.

“Your Mini SD card is ready now for doing Reflash”

CAUTIONS:

- Per customer request, due to security reason, UPGRADE/ Reflash to different CID will be blocked, and will not continue.
- Repair for different region or Customer ID should be treated as OOW repair.



Chapter 8 – RF Antenna test spec and criteria

GSM test items:

Items	Test Name	TxLevel	TCH	1st Downlink CellPower	Note
1	Camp @ DCS Band	0	512	-75	BCH=600
2	BS Originate Call	0	512	-75	
GSM 900 Transmitter Test					
3	Check TX Power	5	975	-106	
4	Power vs Time Mask	5	975	-106	
5	TX Phase RMS Error	5	975	-106	
6	TX Phase Peak Error	5	975	-106	
7	TX Frequency Error	5	975	-106	
8	ORFS due to Switching	5	975	-106	
9	ORFS due to Modulation	5	975	-106	
10	Check TX Power	12	975	-106	
11	Power vs Time Mask	12	975	-106	
12	TX Phase RMS Error	12	975	-106	
13	TX Phase Peak Error	12	975	-106	
14	TX Frequency Error	12	975	-106	
15	ORFS due to Switching	12	975	-106	
16	ORFS due to Modulation	12	975	-106	
17	Check TX Power	19	975	-106	
18	Power vs Time Mask	19	975	-106	
19	TX Phase RMS Error	19	975	-106	
20	TX Phase Peak Error	19	975	-106	
21	TX Frequency Error	19	975	-106	
22	ORFS due to Switching	19	975	-106	
23	ORFS due to Modulation	19	975	-106	
24	Check TX Power	5	42	-106	
25	Power vs Time Mask	5	42	-106	
26	TX Phase RMS Error	5	42	-106	
27	TX Phase Peak Error	5	42	-106	
28	TX Frequency Error	5	42	-106	
29	ORFS due to Switching	5	42	-106	



30.	ORFS due to Modulation.	5.	42.	-106.	.
31.	Check TX Power.	12.	42.	-106.	.
32.	Power vs Time Mask.	12.	42.	-106.	.
33.	TX Phase RMS Error.	12.	42.	-106.	.
34.	TX Phase Peak Error.	12.	42.	-106.	.
35.	TX Frequency Error.	12.	42.	-106.	.
36.	ORFS due to Switching.	12.	42.	-106.	.
37.	ORFS due to Modulation.	12.	42.	-106.	.
38.	Check TX Power.	19.	42.	-106.	.
39.	Power vs Time Mask.	19.	42.	-106.	.
40.	TX Phase RMS Error.	19.	42.	-106.	.
41.	TX Phase Peak Error.	19.	42.	-106.	.
42.	TX Frequency Error.	19.	42.	-106.	.
43.	ORFS due to Switching.	19.	42.	-106.	.
44.	ORFS due to Modulation.	19.	42.	-106.	.
45.	Check TX Power.	5.	124.	-106.	.
46.	Power vs Time Mask.	5.	124.	-106.	.
47.	TX Phase RMS Error.	5.	124.	-106.	.
48.	TX Phase Peak Error.	5.	124.	-106.	.
49.	TX Frequency Error.	5.	124.	-106.	.
50.	ORFS due to Switching.	5.	124.	-106.	.
51.	ORFS due to Modulation.	5.	124.	-106.	.
52.	Check TX Power.	12.	124.	-106.	.
53.	Power vs Time Mask.	12.	124.	-106.	.
54.	TX Phase RMS Error.	12.	124.	-106.	.
55.	TX Phase Peak Error.	12.	124.	-106.	.
56.	TX Frequency Error.	12.	124.	-106.	.
57.	ORFS due to Switching.	12.	124.	-106.	.
58.	ORFS due to Modulation.	12.	124.	-106.	.
59.	Check TX Power.	19.	124.	-106.	.
60.	Power vs Time Mask.	19.	124.	-106.	.
61.	TX Phase RMS Error.	19.	124.	-106.	.
62.	TX Phase Peak Error.	19.	124.	-106.	.
63.	TX Frequency Error.	19.	124.	-106.	.



64.	ORFS due to Switching.	19.	124.	-106.	.
65.	ORFS due to Modulation.	19.	124.	-106.	.
GSM 900 Receiver Test.					
66.	RBBER (Class II).	5.	975.	-106.	.
67.	Frame Error Rate.	5.	975.	-106.	.
68.	RBBER (Class II).	5.	42.	-106.	.
69.	Frame Error Rate.	5.	42.	-106.	.
70.	RBBER (Class II).	5.	124.	-106.	.
71.	Frame Error Rate.	5.	124.	-106.	.
72.	SACCH Rx Level.	5.	975.	-103.	.
73.	SACCH Rx Level.	5.	975.	-80.5.	.
74.	SACCH Rx Level.	5.	975.	-60.5.	.
75.	SACCH Rx Level.	5.	42.	-103.	.
76.	SACCH Rx Level.	5.	42.	-80.5.	.
77.	SACCH Rx Level.	5.	42.	-60.5.	.
78.	SACCH Rx Level.	5.	124.	-103.	.
79.	SACCH Rx Level.	5.	124.	-80.5.	.
80.	SACCH Rx Level.	5.	124.	-60.5.	.
DCS 1800 Transmitter Test.					
1.	Check TX Power.	0.	512.	-106.	.
2.	Power vs Time Mask.	0.	512.	-106.	.
3.	TX Phase RMS Error.	0.	512.	-106.	.
4.	TX Phase Peak Error.	0.	512.	-106.	.
5.	TX Frequency Error.	0.	512.	-106.	.
6.	ORFS due to Switching.	0.	512.	-106.	.
7.	ORFS due to Modulation.	0.	512.	-106.	.
8.	Check TX Power.	8.	512.	-106.	.
9.	Power vs Time Mask.	8.	512.	-106.	.
10.	TX Phase RMS Error.	8.	512.	-106.	.
11.	TX Phase Peak Error.	8.	512.	-106.	.
12.	TX Frequency Error.	8.	512.	-106.	.
13.	ORFS due to Switching.	8.	512.	-106.	.
14.	ORFS due to Modulation.	8.	512.	-106.	.



15	Check TX Power	15	512	-106	
16	Power vs Time Mask	15	512	-106	
17	TX Phase RMS Error	15	512	-106	
18	TX Phase Peak Error	15	512	-106	
19	TX Frequency Error	15	512	-106	
20	ORFS due to Switching	15	512	-106	
21	ORFS due to Modulation	15	512	-106	
22	Check TX Power	0	700	-106	
23	Power vs Time Mask	0	700	-106	
24	TX Phase RMS Error	0	700	-106	
25	TX Phase Peak Error	0	700	-106	
26	TX Frequency Error	0	700	-106	
27	ORFS due to Switching	0	700	-106	
28	ORFS due to Modulation	0	700	-106	
29	Check TX Power	8	700	-106	
30	Power vs Time Mask	8	700	-106	
31	TX Phase RMS Error	8	700	-106	
32	TX Phase Peak Error	8	700	-106	
33	TX Frequency Error	8	700	-106	
34	ORFS due to Switching	8	700	-106	
35	ORFS due to Modulation	8	700	-106	
36	Check TX Power	15	700	-106	
37	Power vs Time Mask	15	700	-106	
38	TX Phase RMS Error	15	700	-106	
39	TX Phase Peak Error	15	700	-106	
40	TX Frequency Error	15	700	-106	
41	ORFS due to Switching	15	700	-106	
42	ORFS due to Modulation	15	700	-106	
43	Check TX Power	0	885	-106	
44	Power vs Time Mask	0	885	-106	
45	TX Phase RMS Error	0	885	-106	
46	TX Phase Peak Error	0	885	-106	
47	TX Frequency Error	0	885	-106	
48	ORFS due to Switching	0	885	-106	



49.	ORFS due to Modulation.	0.	885.	-106.	.
50.	Check TX Power.	8.	885.	-106.	.
51.	Power vs Time Mask.	8.	885.	-106.	.
52.	TX Phase RMS Error.	8.	885.	-106.	.
53.	TX Phase Peak Error.	8.	885.	-106.	.
54.	TX Frequency Error.	8.	885.	-106.	.
55.	ORFS due to Switching.	8.	885.	-106.	.
56.	ORFS due to Modulation.	8.	885.	-106.	.
57.	Check TX Power.	15.	885.	-106.	.
58.	Power vs Time Mask.	15.	885.	-106.	.
59.	TX Phase RMS Error.	15.	885.	-106.	.
60.	TX Phase Peak Error.	15.	885.	-106.	.
61.	TX Frequency Error.	15.	885.	-106.	.
62.	ORFS due to Switching.	15.	885.	-106.	.
63.	ORFS due to Modulation.	15.	885.	-106.	.

DCS 1800 Receiver Test.

64.	RBER (Class II).	0.	512.	-106.	.
65.	Frame Error Rate.	0.	512.	-106.	.
66.	RBER (Class II).	0.	700.	-106.	.
67.	Frame Error Rate.	0.	700.	-106.	.
68.	RBER (Class II).	0.	885.	-106.	.
69.	Frame Error Rate.	0.	885.	-106.	.
70.	SACCH Rx Level.	0.	512.	-103.	.
71.	SACCH Rx Level.	0.	512.	-80.5.	.
72.	SACCH Rx Level.	0.	512.	-60.5.	.
73.	SACCH Rx Level.	0.	700.	-103.	.
74.	SACCH Rx Level.	0.	700.	-80.5.	.
75.	SACCH Rx Level.	0.	700.	-60.5.	.
76.	SACCH Rx Level.	0.	885.	-103.	.
77.	SACCH Rx Level.	0.	885.	-80.5.	.
78.	SACCH Rx Level.	0.	885.	-60.5.	.

PCS 1900 Transmitter Test.



1.	Check TX Power.	0.	512.	-106.	.
2.	Power vs Time Mask.	0.	512.	-106.	.
3.	TX Phase RMS Error.	0.	512.	-106.	.
4.	TX Phase Peak Error.	0.	512.	-106.	.
5.	TX Frequency Error.	0.	512.	-106.	.
6.	ORFS due to Switching.	0.	512.	-106.	.
7.	ORFS due to Modulation.	0.	512.	-106.	.
8.	Check TX Power.	8.	512.	-106.	.
9.	Power vs Time Mask.	8.	512.	-106.	.
10.	TX Phase RMS Error.	8.	512.	-106.	.
11.	TX Phase Peak Error.	8.	512.	-106.	.
12.	TX Frequency Error.	8.	512.	-106.	.
13.	ORFS due to Switching.	8.	512.	-106.	.
14.	ORFS due to Modulation.	8.	512.	-106.	.
15.	Check TX Power.	15.	512.	-106.	.
16.	Power vs Time Mask.	15.	512.	-106.	.
17.	TX Phase RMS Error.	15.	512.	-106.	.
18.	TX Phase Peak Error.	15.	512.	-106.	.
19.	TX Frequency Error.	15.	512.	-106.	.
20.	ORFS due to Switching.	15.	512.	-106.	.
21.	ORFS due to Modulation.	15.	512.	-106.	.
22.	Check TX Power.	0.	660.	-106.	.
23.	Power vs Time Mask.	0.	660.	-106.	.
24.	TX Phase RMS Error.	0.	660.	-106.	.
25.	TX Phase Peak Error.	0.	660.	-106.	.
26.	TX Frequency Error.	0.	660.	-106.	.
27.	ORFS due to Switching.	0.	660.	-106.	.
28.	ORFS due to Modulation.	0.	660.	-106.	.
29.	Check TX Power.	8.	660.	-106.	.
30.	Power vs Time Mask.	8.	660.	-106.	.
31.	TX Phase RMS Error.	8.	660.	-106.	.
32.	TX Phase Peak Error.	8.	660.	-106.	.
33.	TX Frequency Error.	8.	660.	-106.	.
34.	ORFS due to Switching.	8.	660.	-106.	.



35	ORFS due to Modulation	8	660	-106	
36	Check TX Power	15	660	-106	
37	Power vs Time Mask	15	660	-106	
38	TX Phase RMS Error	15	660	-106	
39	TX Phase Peak Error	15	660	-106	
40	TX Frequency Error	15	660	-106	
41	ORFS due to Switching	15	660	-106	
42	ORFS due to Modulation	15	660	-106	
43	Check TX Power	0	810	-106	
44	Power vs Time Mask	0	810	-106	
45	TX Phase RMS Error	0	810	-106	
46	TX Phase Peak Error	0	810	-106	
47	TX Frequency Error	0	810	-106	
48	ORFS due to Switching	0	810	-106	
49	ORFS due to Modulation	0	810	-106	
50	Check TX Power	8	810	-106	
51	Power vs Time Mask	8	810	-106	
52	TX Phase RMS Error	8	810	-106	
53	TX Phase Peak Error	8	810	-106	
54	TX Frequency Error	8	810	-106	
55	ORFS due to Switching	8	810	-106	
56	ORFS due to Modulation	8	810	-106	
57	Check TX Power	15	810	-106	
58	Power vs Time Mask	15	810	-106	
59	TX Phase RMS Error	15	810	-106	
60	TX Phase Peak Error	15	810	-106	
61	TX Frequency Error	15	810	-106	
62	ORFS due to Switching	15	810	-106	
63	ORFS due to Modulation	15	810	-106	
DCS 1800 Receiver Test					
64	RBBER (Class II)	0	512	-106	
65	Frame Error Rate	0	512	-106	
66	RBBER (Class II)	0	660	-106	



67	Frame Error Rate	0	660	-106	
68	RBER (Class II)	0	660	-106	
69	Frame Error Rate	0	660	-106	
70	SACCH Fx:Level	0	512	-103	
71	SACCH Fx:Level	0	512	-80.5	
72	SACCH Fx:Level	0	512	-60.5	
73	SACCH Fx:Level	0	660	-103	
74	SACCH Fx:Level	0	660	-80.5	
75	SACCH Fx:Level	0	660	-60.5	
76	SACCH Fx:Level	0	810	-103	
77	SACCH Fx:Level	0	810	-80.5	
78	SACCH Fx:Level	0	810	-60.5	



Chapter 9 – Inspection Criteria

9.1 Definition

The inspection criteria HTC defined is for service center repair ONLY. All service centers must follow below inspection criteria to judge if customer returned unit is exactly “defective” caused by out of HTC’s specification.

9.2 Inspection Area

The inspection area of Smartphone is for **LCD module** ONLY.

9.3 Criteria

Definition:

D: Diameter; L: Length; W: Width ;N: Number of defects ; S: Distance from dot to dot ;H: Height.

Viewing distance for LCM is, approximately: 30cm ±5cm

Ambient illumination is to be 500~1000lux

Inspection viewing angle range: ±30degree Horizontal and ±45 degree Vertical:

(1) Defective Dot

Item	Status	Criteria
1	Defective dot > 0.25mm	Fail
2	0.15 < Defective dot ≤ 0.25mm	If the Q'ty of defective dot ≤ 6, Pass
3	Defective dot ≤ 0.15mm	Neglect

Total dot ≤6; Distance between dot and dot >5mm

Defective Pixel

Item	Description/Specifications	Notes	
Missing Sub-Pixels	1) Bright Defect	n ≤ 2pcs	MA
	2) Dark Defect	n ≤ 2pcs	MA
	3)1+2.	n ≤ 3pcs	MA
	4)Bright Defects Conjunction	n ≤ 0set	MA
	5)Dark Defects Conjunction	n ≤ 0set	MA
	6) 4+5	n ≤ 0set	MA

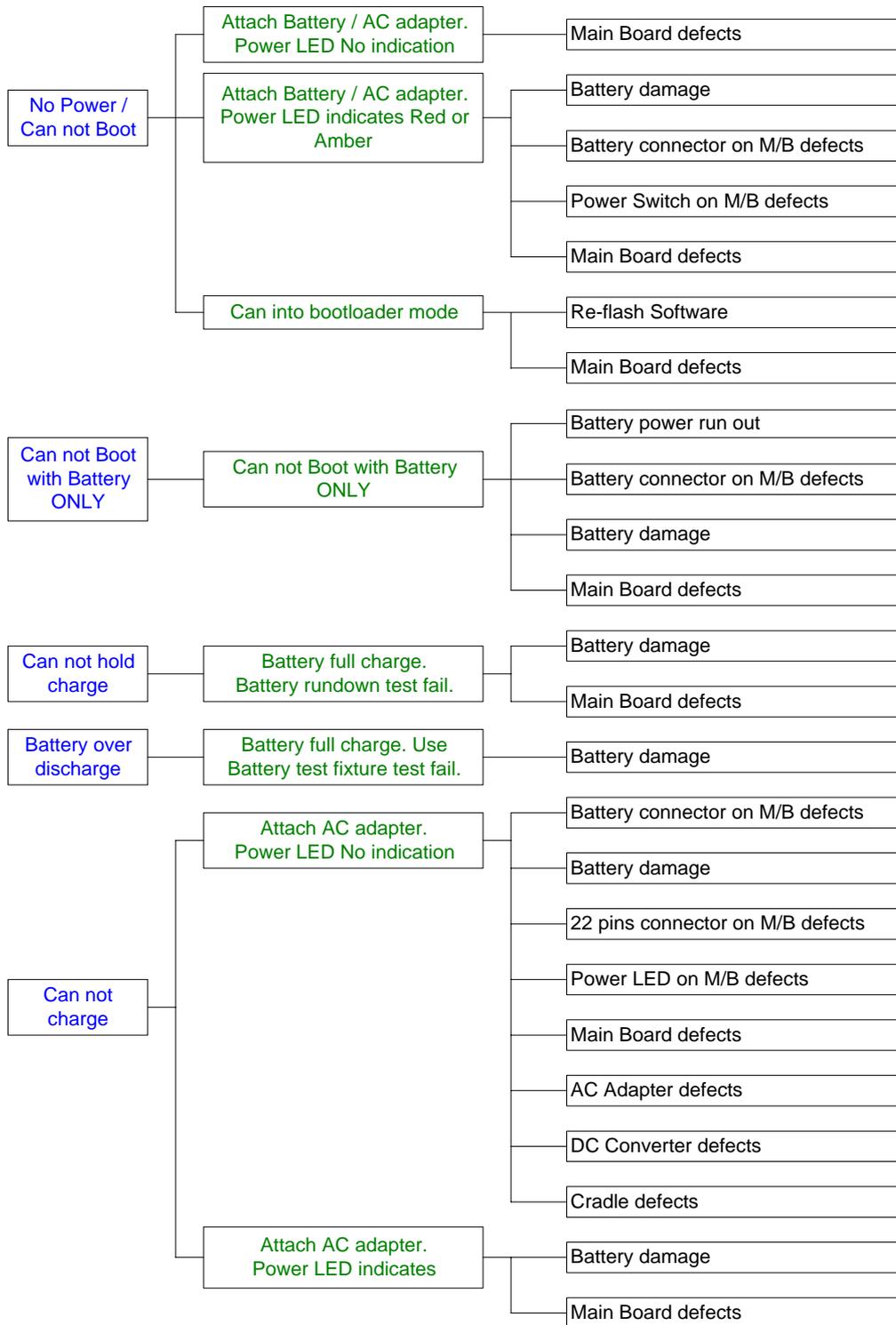


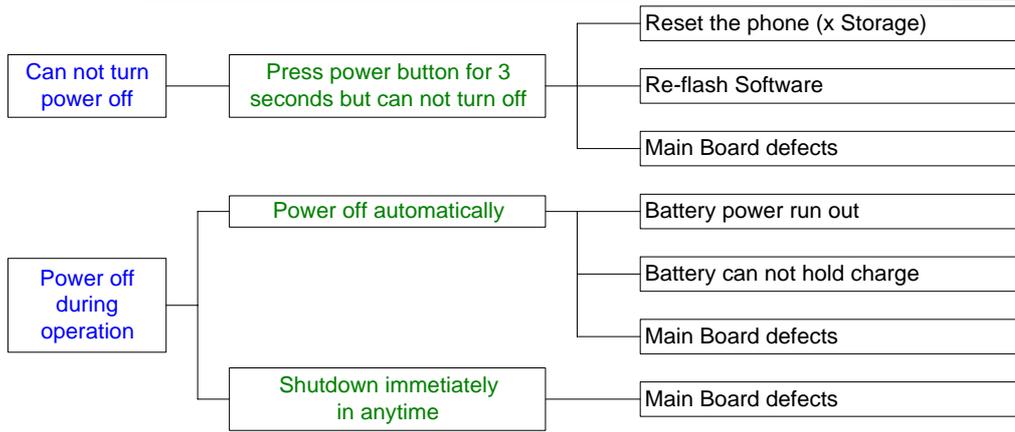
	7)Bright Defect to Bright Defect Distance	$S \geq 5\text{mm}$	MA
	8)Dark Defect to Dark Defect Distance	$S \geq 5\text{mm}$	MA

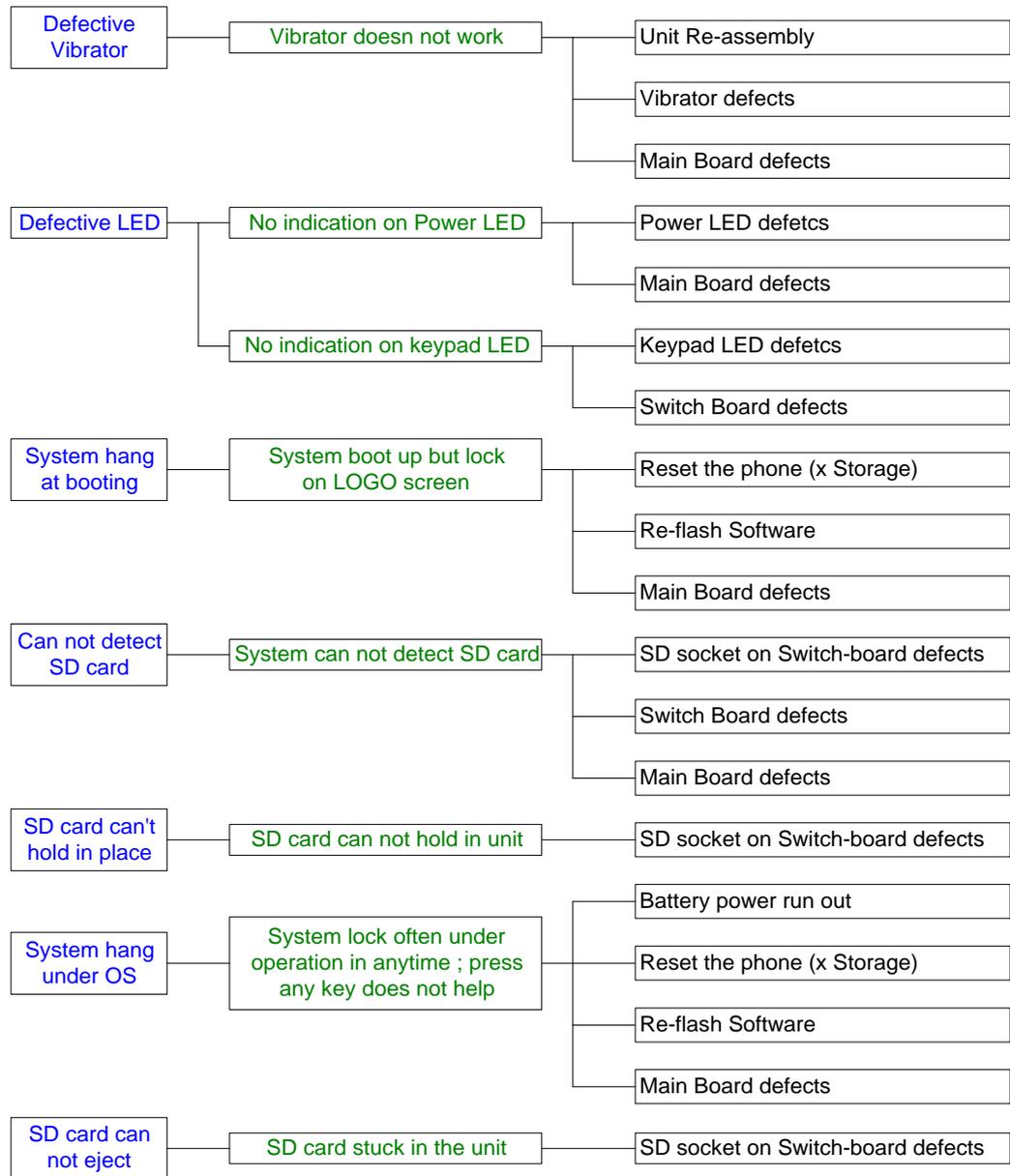


Chapter 10 - Trouble Shooting Guide

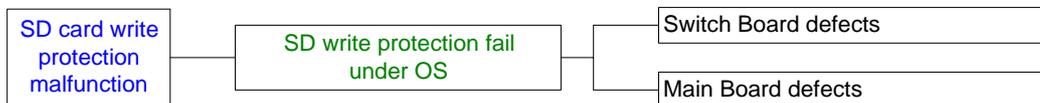
(1) Power / Battery





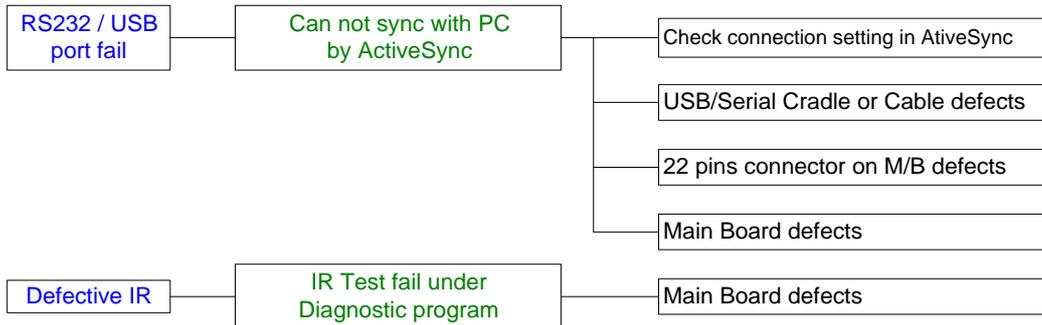


(2) System

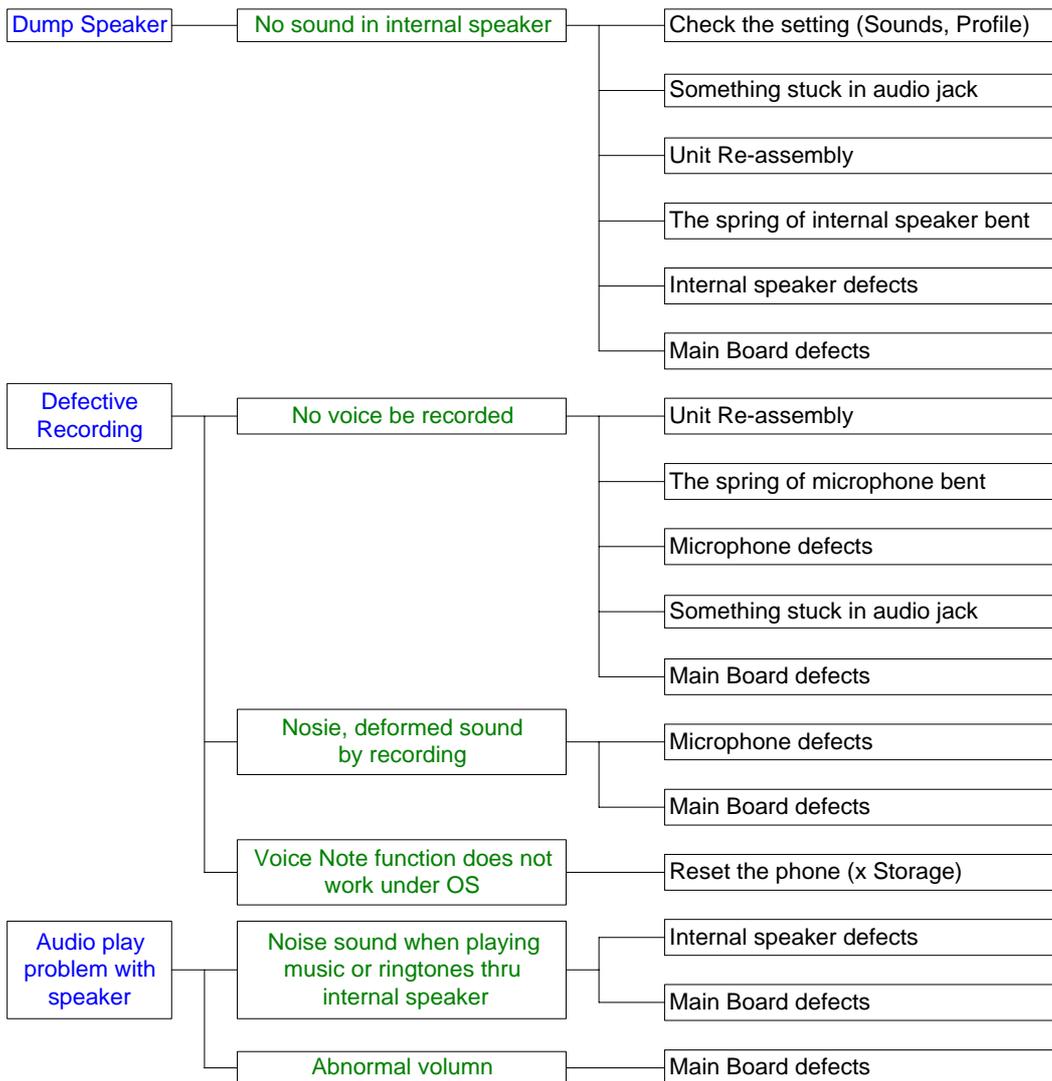




(3) Communication

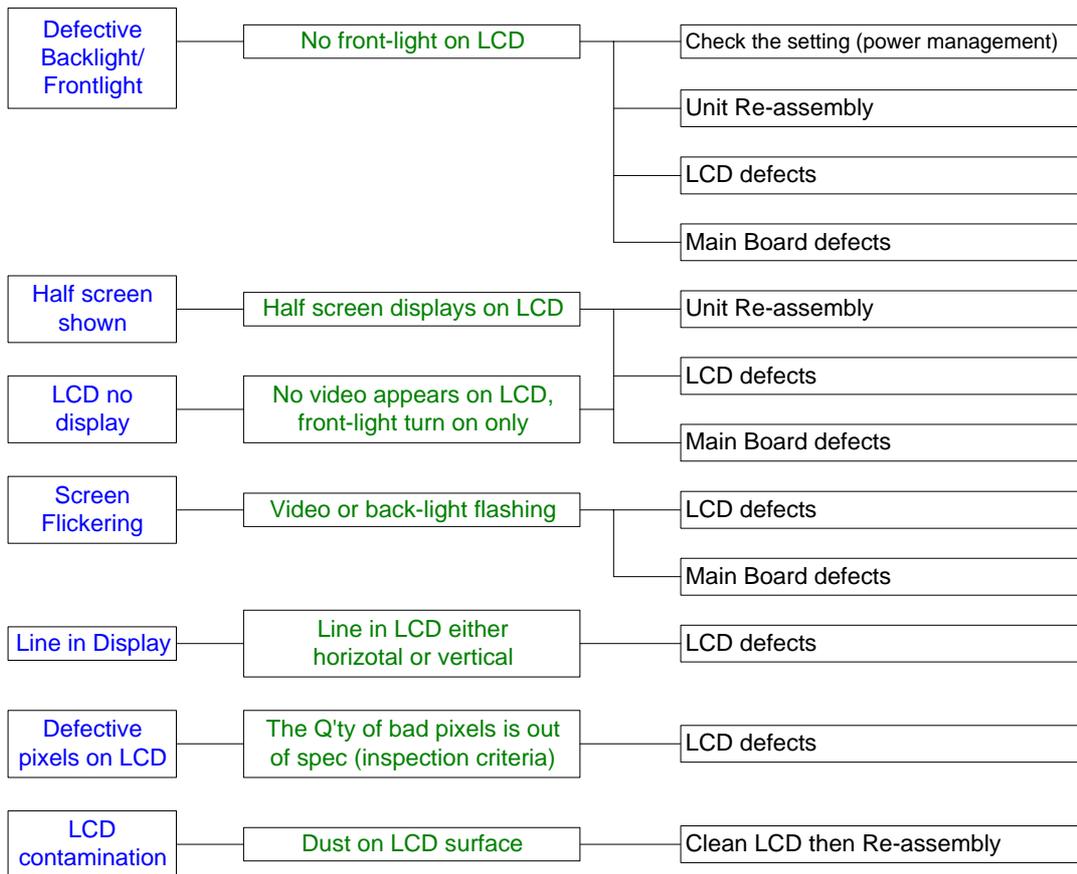


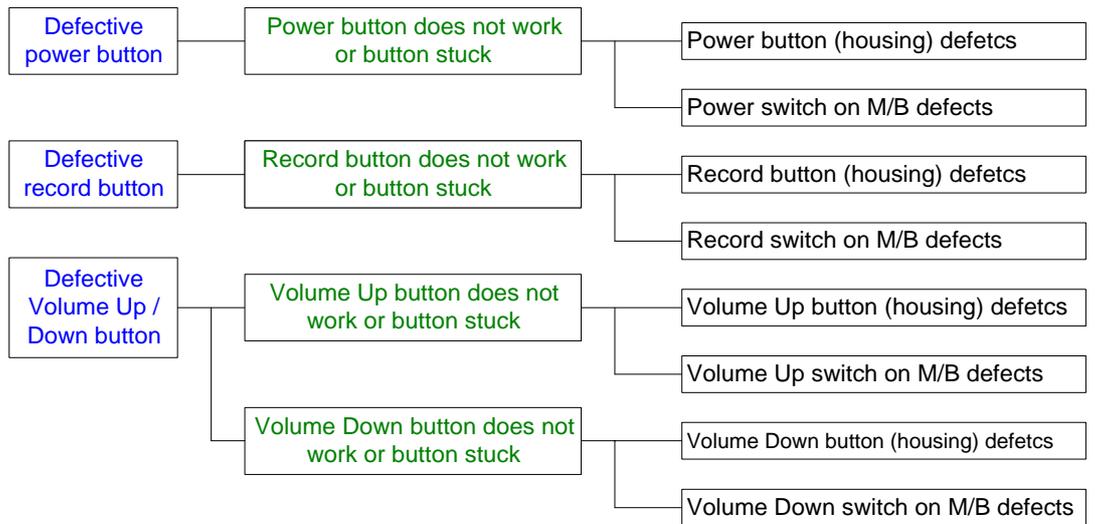
(4) Audio



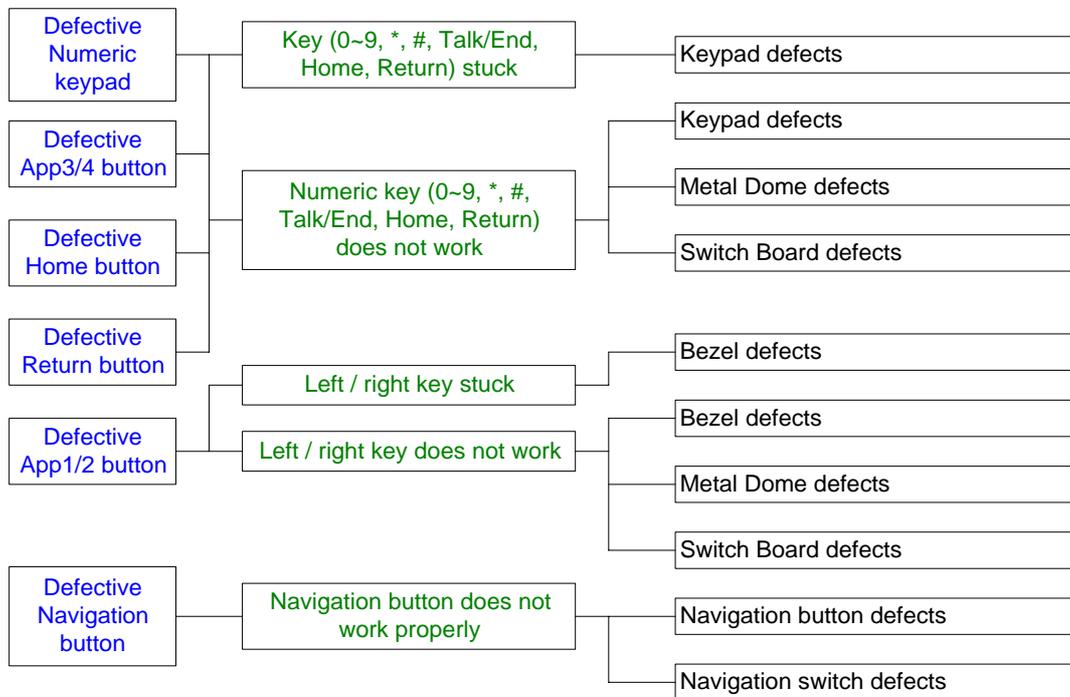


(5) Screen



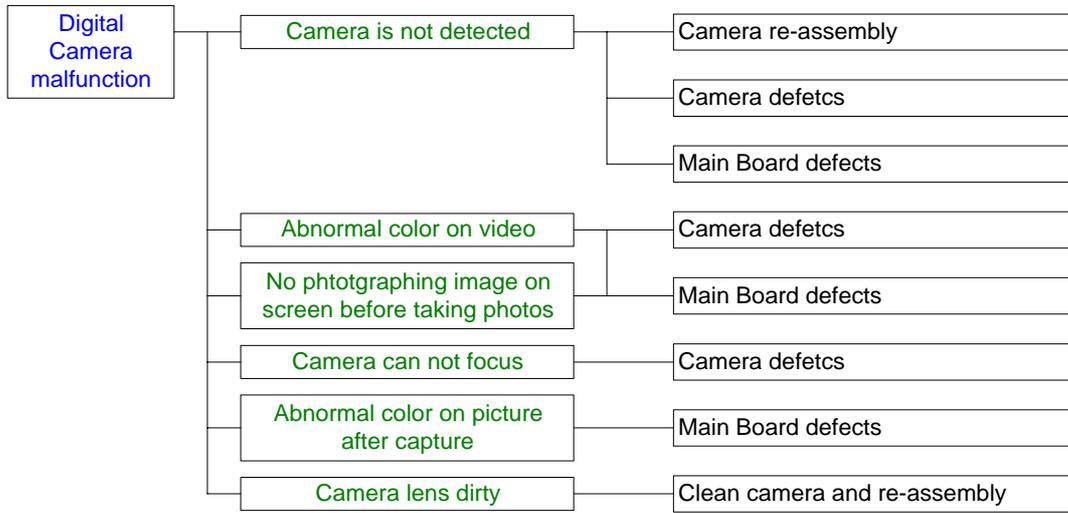


(6) Mechanical

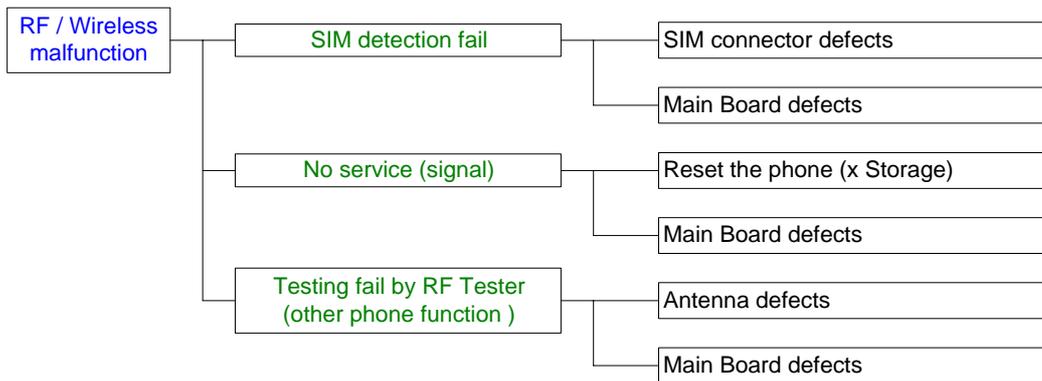




Camera



(7) RF / Wireless





Chapter 11 – Label Plan

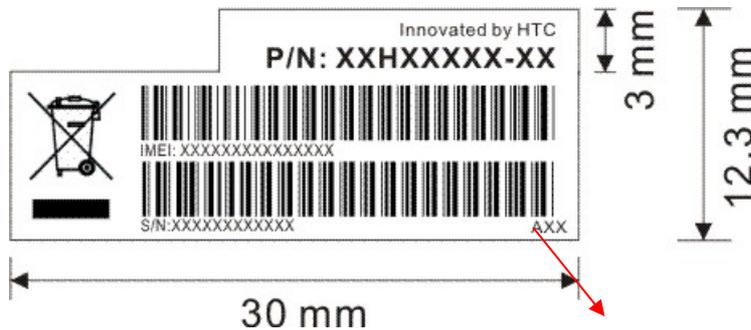
11.1 Main unit Regulatory label(on the housing of main unit)

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

1. Brand name is shown on the bezel.
2. All bar codes must be code 128 symbology.



HTC P/N: 77H00165-xx



According to kernel (80H) revision

For S/N: SSYWWPPZZZZZ

SS: SITE CODE --> HT

Y: Year Last Digital of the Year.

WW: Week Code (01~54)

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

Label Characteristic

Material: polyester

Color: White

Ink: B110



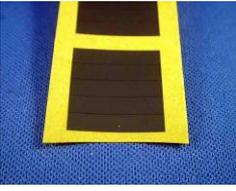
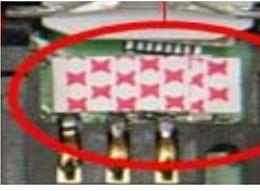
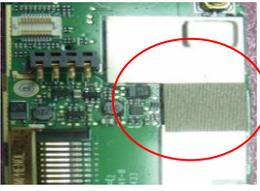
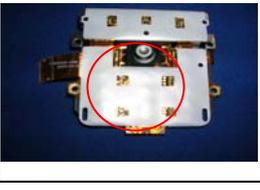
Charpt 12 Spare parts list

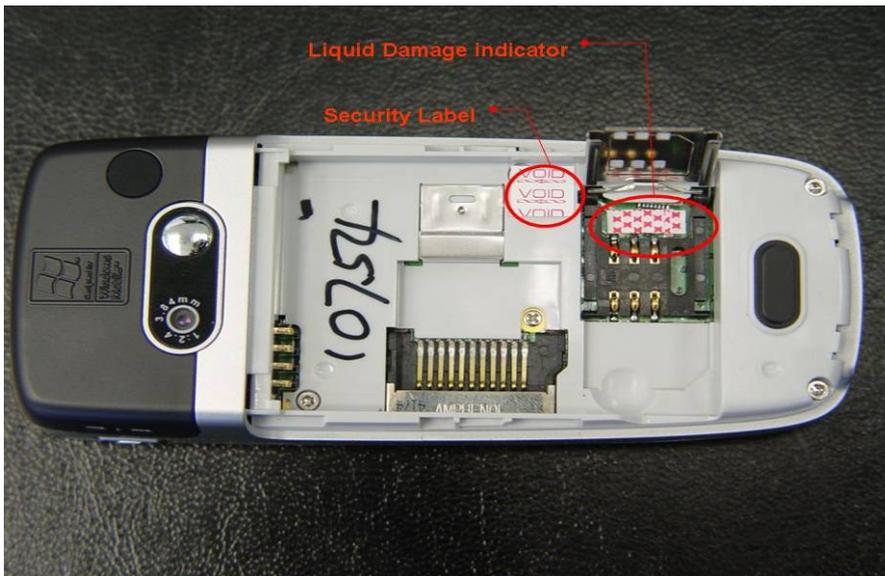
12.1 Spare Part List for Repair

(Please be noticed that Part no on the list below is for reference only, please refer to List from our logistic team which differ per customer)

36H00233-00M		36H00180-00		71H01228-01M	
Antenna Receiver		Vibrator		Function Keypad	
Q'ty : 1		Q'ty : 1		Q'ty : 1	
36H00215-10		72H00993-00M		54H00120-00M	
Speaker		Frame, Keypad	Iron only	CMOS Camera Module, 1.3	
Q'ty : 1		Q'ty : 1		Q'ty : 1	
60H00041-01		74H00505-00M		77H00184-00	
LCD QVGA, 2.2 inch		Bezel Pre- Assy		Security label (Warranty seal)	
Q'ty : 1		Q'ty : 1		Q'ty : 1	
71H01229-00M		72H00765-00		72H00765-01	
Keypad Pre- Assy		Screw, M1.6*8.2		Screw, M1.6*3.5	
Q'ty : 1		Q'ty : 4		Q'ty : 2	
74H00438-XX		36H00327-00M		74H00470-00M	
Housing Pre- Assy		Antenna Pre- Assy		Battery cover	
Q'ty : 1		Q'ty : 1		Q'ty : 1	
99HAW0XX-XX		72H00996-00M		80H00407-00	
FRU MB		Dome, Function	See red circle	FRU, SUB ASSY, Switch board	
Q'ty : 1		Q'ty : 1		Q'ty : 1	
76H00960-00M		76H00595-00		76H00597-00	
Rubber, External Antenna		Gasket, U-tek	Gasket	Poron, LCD support, H48	



Q'ty : 1		Q'ty : 2		Q'ty : 1	
76H00561-00		77H00193-00		76H00949-00M	
Mylar mini SD		Liquid damage indicator		Gasket fabric	
Q'ty : 1		Q'ty : 1		Q'ty : 1	
35H00044-00		72H00609-00		76H00965-00M	
Main Battery		Screw KH-BT,4*2.4		Mylar, LCD	
Q'ty : 1		Q'ty : 10		Q'ty : 1	
74H00377-00		72H30055-01		72H00906-00M	
Sound Box Pre-Assy		Screw, BIH-BT1.6*4mm		Dome, Numeric	
Q'ty : 1		Q'ty : 3		Q'ty : 1	



Position of label on unit

**Note: If the color of liquid indicator changed ,it's out of warranty.
If the warranty seal is broken on receiving,please treat as out of Warranty(F216).**



Chapter 13- Board Level Repair

If you are authorized by HTC to perform board level repair , you could ask below material/parts from HTC .

13.1 Problem Identification & Troubleshooting

(1) 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 make the component damage.*

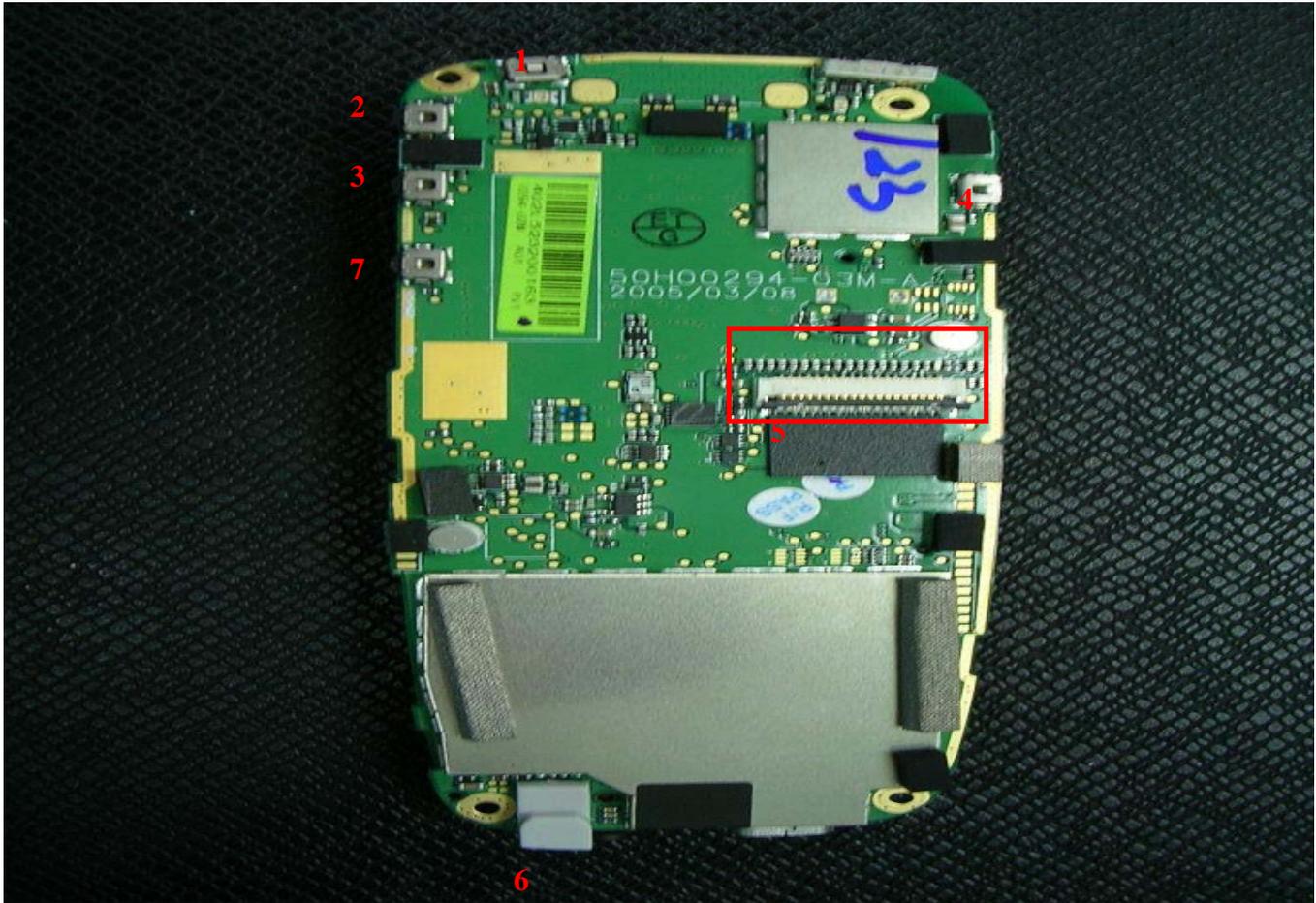
Step 2. Use Heater Gun (HAKO850B, set the temperature between 350°C , Air Speed 3~5) to remove the components.

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 component has been replaced, clear the surroundings for solder and flux residues.

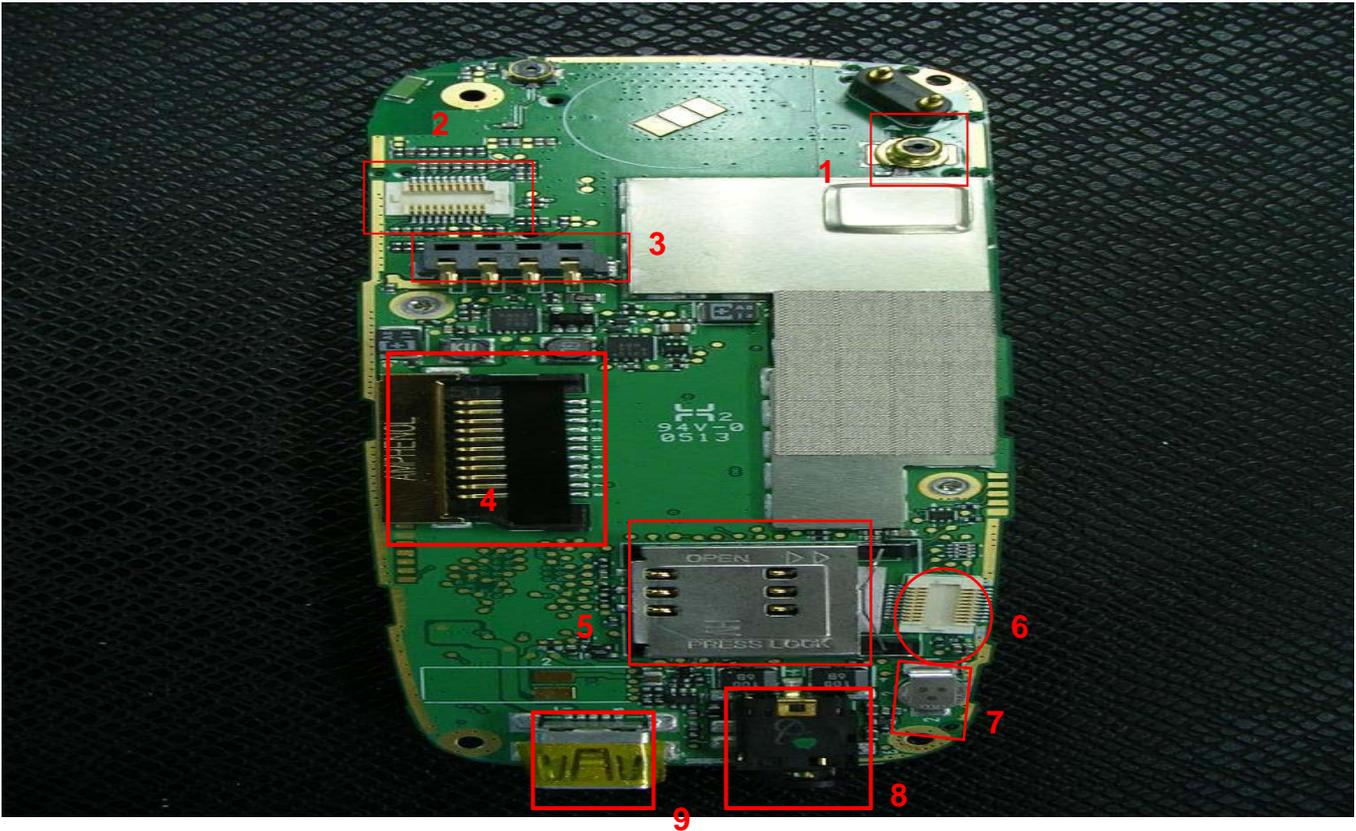


13.2 Components to be replaced :



Parts that could be replaced from MB front side

NO	Part location name	HTC Part No	REMARK
1	Power switch button	36H00230-00M	SW1
2	Volume up	36H00230-00M	SW2
3	Volume down	36H00230-00M	SW3
4	Camera capture	36H00230-00M	SW4
5	Connector FPC,39P (LCD)	75H00371-10M	Con 3
6	MIC	36H00208-00M	MIC1
7	Record button	36H00230-00M	SW5



Parts that could be replaced from MB Back side

NO	Part location name	HTC Part No	REMARK
1	RF Antenna connector	75H00276-00	WSW1
2	Camera connector (20P)	75H00337-00M	CON4
3	Battery connector	75H00332-00M	CON10
4	Mini SD Connector	75H00352-00M	CON6
5	SIM Connector (6p)	75H00378-00M	CON 9
6	Connector B to B(Keypad Connector,16P)	75H00371-10M	CON3
7	Back up capacitor	16H00012-00M	CG1
8	Audio Jack	36H00059-00M	ACON1
9	I/O Mini USB connector	75H00379-00M	CON7
10	FRU,SUB ASSY,Switch board FPC,Hurricane-Robbie	80H00401-00	Switch board Assy



Chapter 14- Return to Vendor(RTV)

Please attached the DIC (Defect identity card)on each RTV part.

HTC Defect Identification Card	
ASP	Teleplan
Date	MM/DD/YYYY (repair date)
RMA Number	(HTC RMA number)
Part Number	(bar code)
	(number)
Series Number	(bar code)
	(number)
IMEI Number (optional)	(bar code)
	(number)
Technician	(Name of the person repairing the device)
Customer Reported Failure Symptom	(Original failure description reported by the end user)
Verified HTC Failure Code	(ASP verified failure symptom in HTC failure code)
Verified HTC Failure Description	(ASP verified failure symptom in HTC failure description)
Remark	



Chapter 15 –Repair report format and definition

Repair Report Definition

No	Column	Data	Format	Description	Your Comments
1	A	Service Centre	FreeFormat	Your Name of the Repair Sites	
2	B	RMA_No	FreeFormat	Reference no. for tracking this RMA	
3	C	Work_Order	FreeFormat	ASP internal tracking control code	
4	D	RMA_Source	CallMail / Store / Hub	WHERE the RMA comes from	
5	E	Claim Date	mm/dd/yy	WHEN the RMA is claimed	
6	F	Receive_Date	mm/dd/yy	WHEN the RMA is received	
7	G	Confirm_Date	mm/dd/yy	WHEN the OOW charge/ repair is confirmed with the client	
8	H	ReStock_ShipDate	mm/dd/yy	WHEN the repair is done [Weekly Report is Based on this Date]	
9	I	TAT	Column H - Column F	In House Repair Turn Around Time	
10	J	Service_Model	Exchange / DOA / Express	WHAT is the SERVICE Model	
11	K	Refurbishment	Y/N	Is Refurbishment required by POLICY	
12	L	Warranty	(0,1, 2, 3)	Warranty Status 0: In Warranty 1: OOW (Beyond warranty period) 2: OOW (Customer abuse/ misuse) 3: OOW (Broken warranty seal)	
13	M	Part_No	HTC 99 H	HTC unit Part Number 99Hxxxxxxx	
14	N	Product	Model and Mem Size	HTC unit Description	
15	O	Device_SN	HTC SN	RMA Unit Serial Number	
16	P	Device_IMEI	HTC IMEI	Unit under repair IMEI Number	
17	Q	OS_Rev	ex: 3.14.16	OS reversion of received unit	
18	R	Repeat_Return	Y/N	Did the same unit return more than once?	
19	S	Reported_Code	Code or NA	The original failure/ claim code from customer	
20	T	Reported_Symptom	Text description or NA	The original failure/ claim description from customer	
21	U	Failure_code	HTC definition	Failure code after ASP verification	
22	V	Failure_Description	HTC definition	Failure description after ASP Verification	

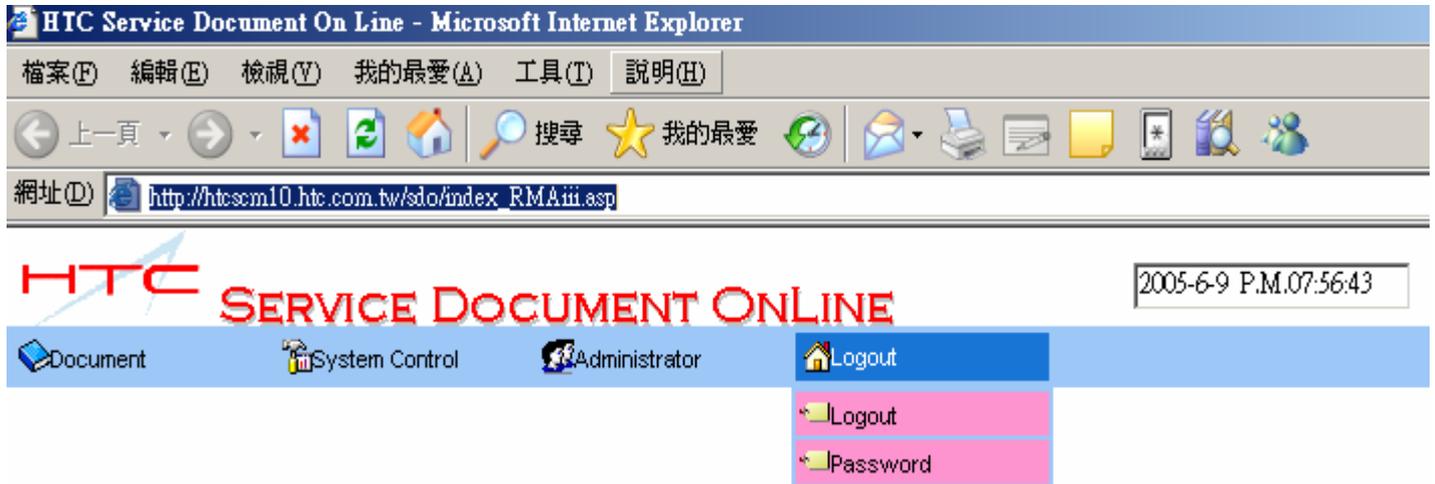


23	W	Repair_Code	HTC definition	What your action for the Repair. Functional first. If NFF, you may add
24	X	Repair_Description	HTC definition	What your action for the Repair ; IF NFF, you may apply C001 or C003 or C004 according to your service model
25	Y	Repair_Level	(1, 2, 3)	The repair level defined in HTC list and agreement
26	Z	SN_for_Replacement	As labeled	Series Number of the unit replacement
27	AA	IMEI_for_Replacement	As labeled	IMEI number of the unit or M/B replacement
28	AB	Material_Used_1	HTC P/N	Major material part number used for repair
29	AC	Warranty1	Y/N	Material for IW or OOW purpose
30	AD	Material1_SN	#	Major material Serial No.
31	AE	Material_Used_2	HTC P/N	2nd material Part Number used for repair
32	AF	Warranty2	Y/N	Material for IW or OOW purpose
33	AG	Material2_SN	#	2nd material Serial No.
34	AH	Material_Used_3	HTC P/N	3rd material Part Number used for the repair
35	AI	Warranty3	Y/N	Material for IW or OOW purpose
36	AJ	Material3_SN	#	3rd material Serial No.
37	AK	Material_Used_4	HTC P/N	4th material Part Number used for repair
38	AL	Warranty4	Y/N	Material for IW or OOW purpose
39	AM	Material4_SN	#	4th material Serial No.
40	AN	Material_Used_5	HTC P/N	5th material Part Number used for repair
41	AO	Warranty5	Y/N	Material for IW or OOW purpose
42	AP	Material5_SN	#	5th material Series No.
43	AQ	Material_Used_6	HTC P/N	Cosmetic Material Part Number used for repair
44	AR	Warranty6	Y/N	Material for IW or OOW purpose
45	AS	Material_Used_7	HTC P/N	Cosmetic Material Part Number used for repair
46	AT	Warranty7	Y/N	Material for IW or OOW purpose
47	AU	Engineer_Badge_No	FreeFormat	WHO did the Repair/Technician batch no.



Chapter 16 – HTC service document on line (SDO)

http://htcscm10.htc.com.tw/sdo/index_RMAiii.asp



The HTC SDO system which you could down load such as following items

1. Failure/Repair code
2. ROM code
3. Service Advisory
4. Service Manual
5. Training VCD

Note: Please get the authorization from HTC Technical Support Center for access authority.

~End of Service Manual~