



Service Manual
for KIWI/H1915/H1920

HTC Proprietary
Confidential Treatment Requested

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HTC Corp.
Engineering Mobility



TITLE: Service Manual

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AX01	Mar,18 2003	Fist Draft	Technical Support	Vince Huang		
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1.Introduction

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

2.Product Configuration

Platform

- Windows CE Merlin OS – English, French, German, Italian, Spanish, Traditional Chinese, Simplified Chinese, Japanese.
- A low cost PDA built with optimized number of key elements
- Dimensions: Main unit
70mm(W) x 113.6mm(L) x 12.7mm (T)
- Weight (Main Unit) ->115g

Processor

- Intel Cotulla 200MHz

Memory

- **ROM:**
16MB Nand Flash ROM
Boot ROM :4M Bit (Bootloader)
- **RAM:**
64MB SDRAM (46MB user accessible)

LCD Module

- **Philip LCD 3.5"** , reflective type TFT Color with 6pcs LED back light & 64K colors
- Touch sensitive screen

ASIC

- HTC ASIC 3 (TC222C56)

Stylus

- Around 100 mm

Hardware Buttons/reset button

- One power button
- One recording button
- One soft reset switch
- Four software programmable AP buttons with wake up function



- One 5-way joy stick

Notification

- One bi-color LED for Event Alarm or PDA charging status
- Notification by Sound and Message on the display

Audio

- Microphone
- Speaker
- One 2.5mm Earphone Jack, with stereo sound
- MP3 stereo (through audio jack)

Power

- **Battery**
 - ▶ Rechargeable 900mAH, Lithium Ion battery
 - ▶ User Swappable Battery
 - ▶ Battery life: >8 hrs
 - ▶ Back up battery
 - ▶ Data retention time: 72 hrs
 - ▶ Battery fully charge time: 4 hours
- **AC Adapter**
 - ▶ AC input: 100~240 Vac, 50/60Hz
 - ▶ AC input current: 0.2 Aac max.
 - ▶ Output voltage: 5Vdc (typical)
 - ▶ Output current: 2A (typical)
 - ▶ Same as H38XX/H39XX series

SD Slot

- Support both memory and IO
- Support SD/MMC type standard

Environment

- Operating temp.: 0 ~40 degree C. Humidity : 80% RH
- Storage temp.: -20 ~ 60 degree C. Humidity : 80% RH

Peripheral Interface

- Infrared Port IrDA SIR x 1, Transceiving range: 30cm
- Combo Port for USB and power
- Audio Jack (2.5mm)
- SD slot connector

Accessories

- USB sync. Cable: 22 pins USB connector + DC Jack



- AC adapter
- Stylus
- Ear plug

Options

- Stylus
- Battery
- USB Cradle (Battery Charger Included) – 22 pins Combo Port
 - ▶ Main-Battery Charger
 - ▶ PDA + Sled Slot for Active sync. And Battery Charger
 - ▶ Rechargeable 900mAH, Lithium Ion battery
 - ▶ DC-In Jack
 - ▶ LED Indicator

Regulatory

- EMC / EMI: CE, FCC
- Safety: UL
- Pocket PC Logo

Applications

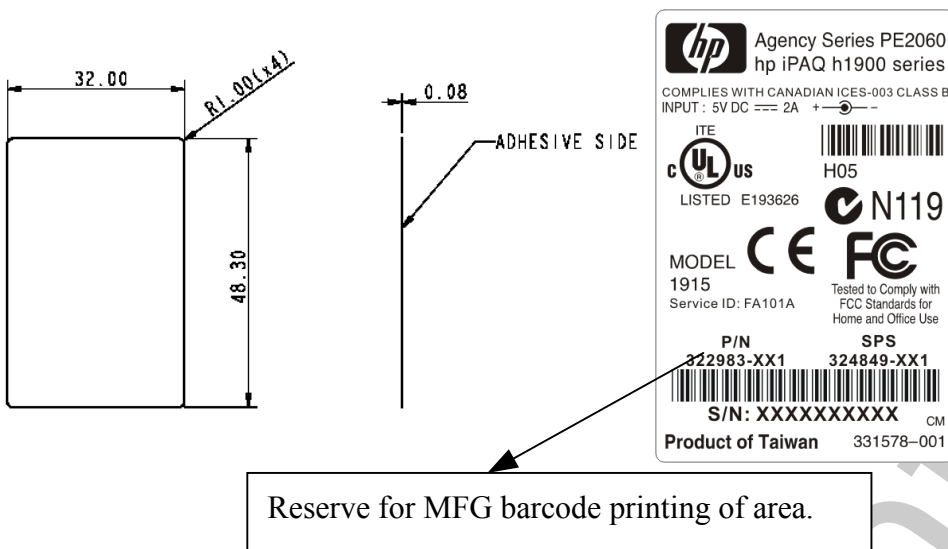
- Power Management
- Data Backup
- Back Light Control



3.Label Plan

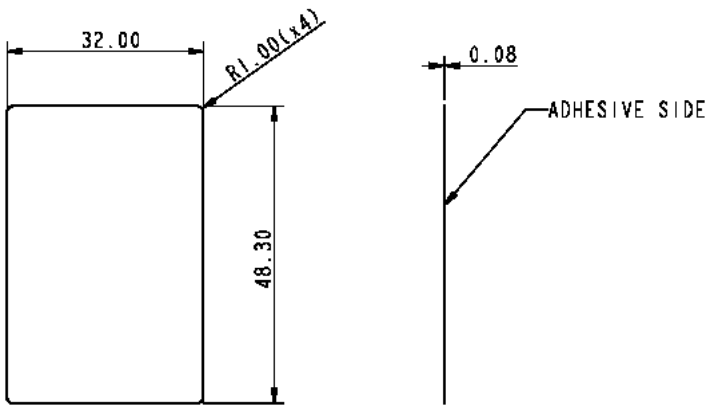
3.1 iPAQ H1915 Agency Label (on back housing under battery)

HP P/N: 311578-001
HTC P/N: 77H00067-00
Image file: See below
Size: 32.00 mm x 48.30 mm
Barcode Type: Code 39
MFG barcode printing of area: 32 mm x 12mm



3.2 iPAQ H1920 Agency Label

HP P/N: 331579-001
HTC P/N: 77H00068-00
Image file: See below
Size: 32.00 mm x 48.30 mm
Barcode Type: Code 39
MFG barcode printing of area: 32 mm x 12mm



hp Agency Series(型号) PE2060
hp iPAQ h1900 series
随身型电脑

INPUT(电源): 5V DC --- 2A + ---

FC H07
Tested to Comply with
FCC Standards for
Home and Office Use

VCCI **MIC** **CCC** S&E
A003798

MODEL R33001
1920
Service ID: FA102A

P/N **SPS**
330497-XX1 331231-XX1

S/N: XXXXXXXXXXXX CM

Product of Taiwan(台湾制造) 331579-001

3.3 SKU S/N Format (10 digit format)

S/N: CCSYWWZZZZ

CC: Country of Manufacture
2 capital alpha (A-Z) characters, ISO 3166 Alpha-2 Code list. (Ex: TW=Taiwan)

S: Site Code
1 character, pre-assigned by HP (ex: C=HTC TW)

YWW: Date of Manufacture
The date of manufacture is expressed alpha-numerically by year counting from the base year, 2000, and week of manufacture

ZZZZ: Sequence Number
Alphanumeric, Base 31(0 through 9 and B through Z (A, E, I, O and U are disallowed characters), unique identifier that identifies the exact unit, which was manufactured in the lot, produced within the date of manufacture. This number is the serialization identifier which is essential to track the shipped, delivered, invoiced, installed, inventoried, repaired and possibly returned or written off or scrapped, item itself, throughout the life cycle of unit. (ex: An example of a serial number using all sub-elements above would be: DE=produced in Germany; B-At the HP Boeblingen/Sindelfingen Plant; 2-In the year 2002; 38-Week of September 9; B2H4-For the actual unit per that weekly lot of number 300, 301 (B=10 which gives $10 \times 313 = 29,7910$; 2=2 which gives $2 \times 312 = 1,922$; H=15 which gives $15 \times 311 = 465$; 4=4 which gives $4 \times 310 = 4$). Therefore this unit is the 300, 30 1st units produced of this product in week 38 of 2002.

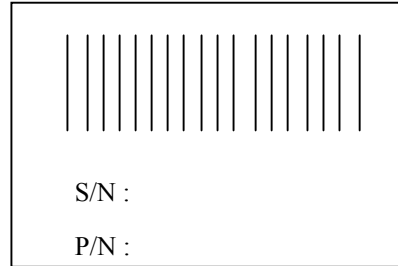


3.4 Key Component Label Plan (Used for LCM/MB/Battery)

Barcode Serial number requirement (14 digits)

Barcode symbology use Code 128

For S/N: VPPRRYMDZZZZZZ



V: Vendor Code (defined by MFG)

PP: Part Number Code (defined by MFG)

RR: Revision Code

Component revision code	RR code
A01	A1
A02	A2
.....
AX01	X1
AX02	X2
.....
B01	B1
B02	B2
.....

Y: Manufacture Year

Lowest one digit of A.D

example: 2002 = 2

M: Manufacture Month

1, 2, 3,, 9, A, B, C

D: Manufacture Day

1st digit of serial number and represent the DAY

Use base 31 (ex: 1, 2, 3....., 9, A, B, C..... Z, exclude I, O, Q, U, please note day start from 1)

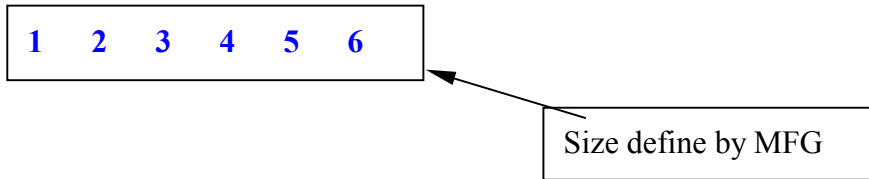
Z: Remaining 6 digitals of serial number (reset every day)

Use base10 (000001 ~ 999999)



3.5 FRU Date Code Label

P/N: 77H30010-10



Digit 1,2: Site Code.(t)

Digit 3,4: Year. Manufactured , last 2 digits

Digit 5: Month of production , Jan to Dec(1-9,A-C).

Digit 6: Type of Warranty: "1"

Date Code Label will apply on following FRU:

1. Main unit.
2. Cradle

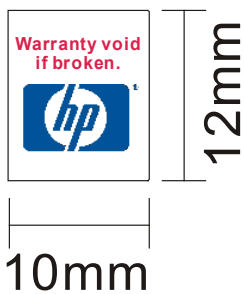
3.6 Warranty Seal

HTC P/N: 77H00036-00

Dimension: 10.00mm x 12.00mm

Logo: **PANTONE 653C**

Ink: **PANTONE 193C**

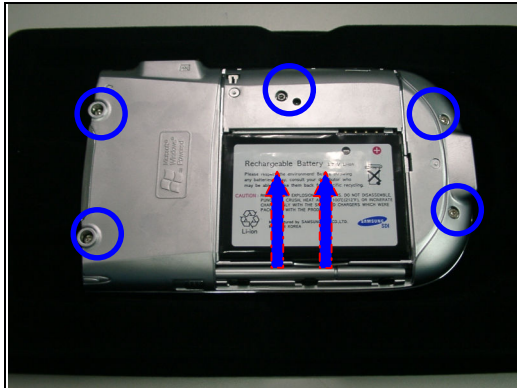




4.Assembling and Disassembling

4.1 Disassembling

	<p>Tools needed for Assembling and Disassembling the KIWI</p> <ol style="list-style-type: none"> 1. Lens Cleaning Tissue. 2. Philip Screw Driver 000X40. 3. Torex Screw Driver T5X40 4. Special Made Plastic Stick. 5. Tweezers.
	<ol style="list-style-type: none"> 1.Push battery cover latch and remove the cover. 2.Pull up to release the stylus.
	<p>Please check the warranty seal under the battery cover before take any repair activity.</p> <ol style="list-style-type: none"> 1.Using UV light tool to check fake warranty seal.(There is light reflection surround the HP logo) 2.Check If any damage/broken on the warranty seal, If damaged please treat this kind of case as OOW.
	<p>If the repair activity need to take off the warranty seal ,it is required to stick the warranty seal back as picture shows.(above the screw hold)</p>



Push to release the battery and Remove the screws as picture shown with screw driver (T5).



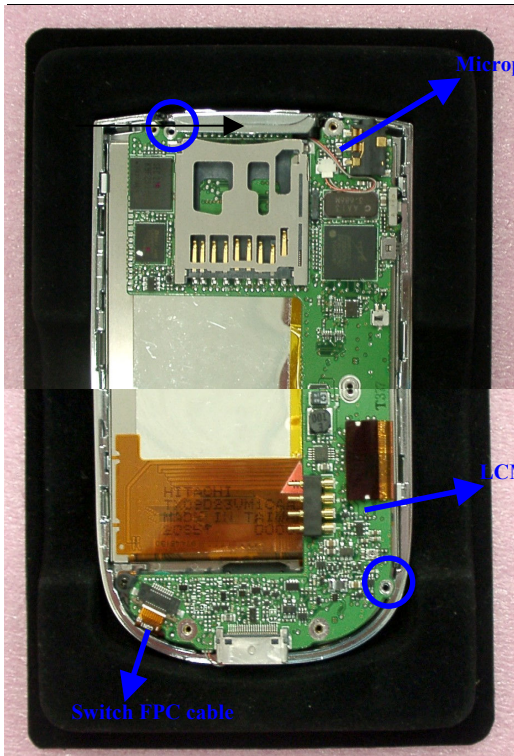
Once the 5 screws has been removed from the Back Housing, Use the Plastic Tool to open the housing. Insert and gently twist into the gap at the between upper and lower case with the FLAT side of the tool. From the top side first.



Separate the left side.

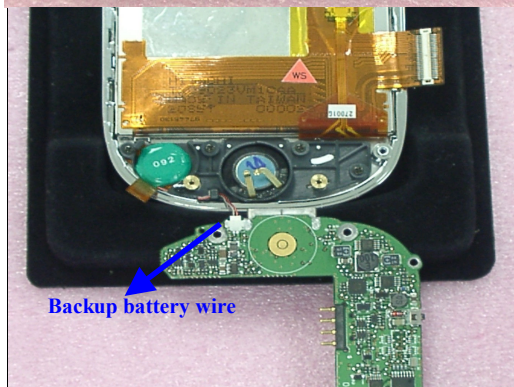


Then the right side.

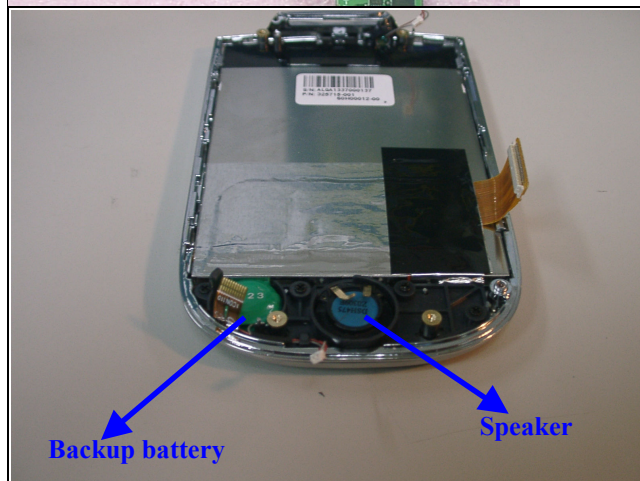


1. Remove the screw with Philip screwdriver.
2. Disconnect the microphone wire from the connector of main BD with tweezers.
- 3. When disconnecting microphone wire that the angle must be within 20 degrees to mating axis.**

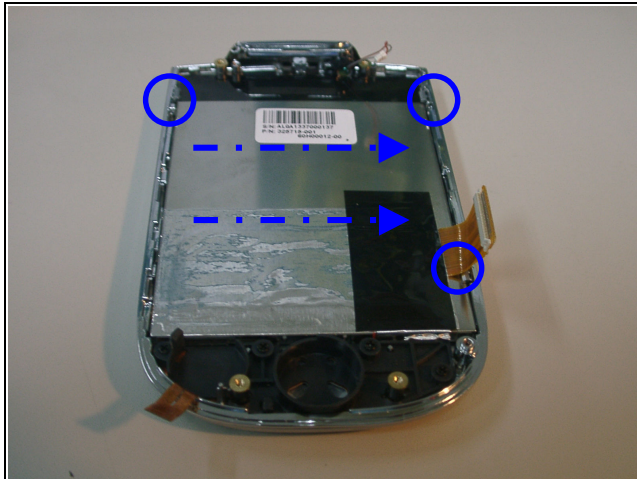
1. Disconnect the LCM FPC cable from MB with tweezers.
2. Disconnect the switch FPC cable from MB with tweezers.
3. Remove the screw with Philip screw driver.



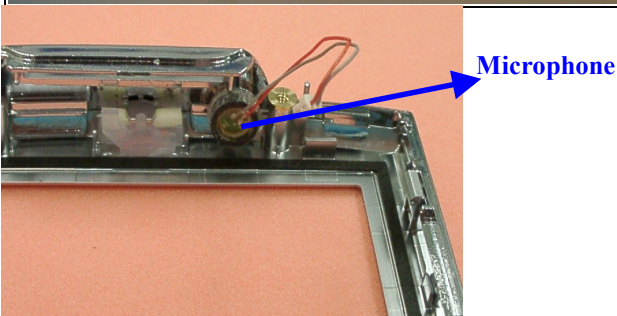
- 1. Disassemble and slipover the MB (180 degree) from the top to the bottom. Caution! Careless handling could be damaged the back battery or the connector.**
2. Disassemble the MB and disconnect the backup battery wire.
- 3. When disconnecting the angle must be within 20 degrees to mating axis.**



1. Take out the speaker with tweezers
2. Disassemble the backup battery from upper cover.



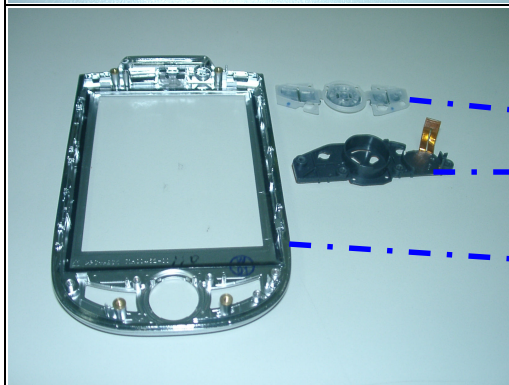
Unhook the LCM from upper cover on the both sides, and then take out the LCM from left to the right.



Disassemble the microphone from upper cover



Remove the 4 screws with Philip screwdriver.



Disassemble the upper cover, pre-assy (74H00157-00) to the parts as below;

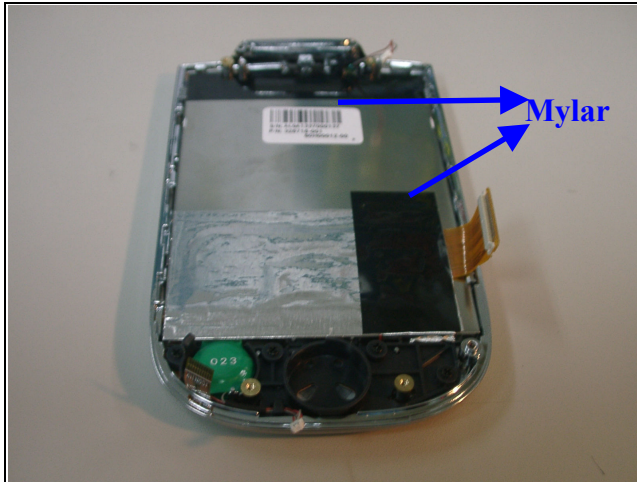
- ▶ 77H00158-00 → Key pad, assy, HB
- ▶ 74H00175-00 → FPC Pre-assy + speaker holder
- ▶ 74H00199-00 → upper cover pre-assy

The disassembly procedure is finished.



4.2 Assembling

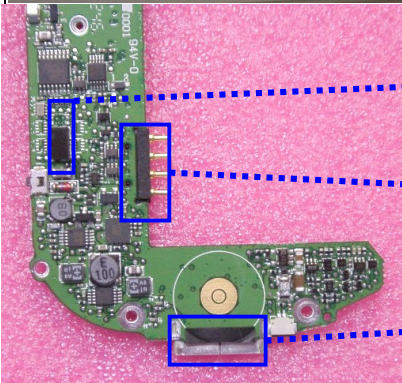
	<p>Assemble Key pad and FPC cable to upper cover.</p>
	<p>Screw on the 4 screws as picture shown.</p>
	<p>Assemble the microphone to the upper cover with the wire toward upside</p>
<p style="text-align: right;">Hook</p>	<p>Get the backup battery and stick it to the bottom left corner of upper cover. Route the wires under the hook.</p>



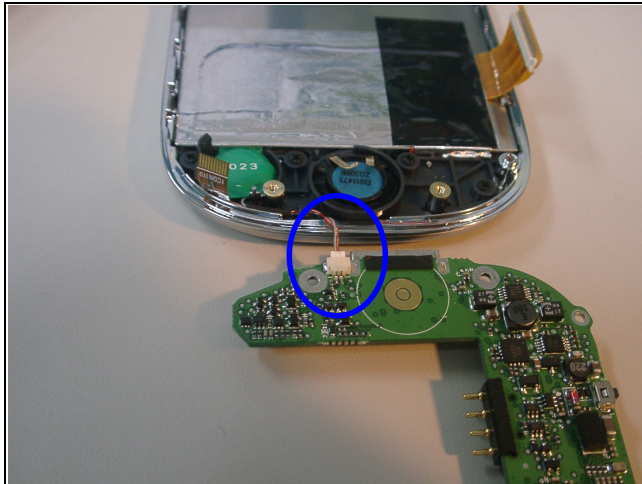
Assemble the LCM to the upper cover. When assembling get the LCM hooked from the right side then the left side. **Note that is not allowed to pull LCM FPC cable when getting the LCM.** It's required to make the Mylar to LCM as picture show.



Assemble the speaker to the upper cover. **Please note that does not press the springs otherwise it might cause the poor contact between speaker and MB. The speaker's install location must as picture shows (the bottom of the spring is on the upside).**



- 76H00339-00(Sponge, MPCB)
- 76H00340-00(Sponge, Battery Connector)
- 76H00353-00(Sponge, Speakerholder)



Connect backup battery wire to the MB connector as well.



Assemble MB to the front bezel and screw them to the position follow the sequence as pictures shown. **Please note that when assembling, only allow to hold the M/B on the audio jack at upper right corner and the cradle connector at the bottom**



Connect the microphone wire to the connector and use tape to fix it. **Please note that the wire must be placed under the SD connector and audio jack.**



<p>LCM FPC cable</p> <p>Switch BD FPC cable</p>	<p>1. Connect LCM FPC cable to the connector. When connecting the FPC cable, must confirm the correct position first then press down.</p> <p>2. Connect SWB FPC cable to the connector. Please ensure the white line of SWB FPC cable must be aligned with connector as well.</p>
	<p>Please note when connecting LCM FPC cable, please make sure the connector is installed to the correct position.</p>
	<p>Assemble the bottom cover to the upper cover. Please note the cradle connector at the bottom fully inserted into the bottom cover first, then connect other side.</p>
<p>M1.6*3</p> <p>M1.6*5. R</p>	<p>Insert the screws and tight screw as picture shown.</p>
	<p>Assemble the main battery to the bottom cover.</p>



Put the warranty seal back after finish all the testing. The correct position as attached picture.



Assemble battery cover to the bottom cover.

The Unit Assembly is done ready for further test and outlook inspection.



5. Diagnostic Program

5.1 Tools required

- (1) SD card with Diagnostic program loaded.(provide by HTC)
- (2) Mtty1.4 (only need when a unit need to key-in serial number and Country ID)

5.2 How to enter Diagnostic Program

- (1) Insert SD card with Diagnostic program loaded to the unit.
- (2) Press and hold Power Button+ Reset until HTC copyright display appear, then press action to perform the HB diagnostic test.

5.3 List of Diagnostic Test Items

No.	Item	Description	Remark
1	Run-In Test	Unit run-in test.	
2	Auto Test	All function test for 1 loop	
3	Button Test	Test every most of button.	
4	TouchPan Test	Touch screen alignment test. Suggest to test in WinCE	
5	Audio Test	Record and playback.	
6	Display Test	Test the LCD display quality.	
7	Blight&LED Test	Blight ON with in different brightness level and LED test.	
8	Upload to SD	Upload ROM or bootloader to SD card	
9	SDRAM Test	SDRAM Check Size/Write/Read/Comparison test	
10	SD card Test	SD card Write/Read/Write Protect test.	
11	SIR Test	Test SIR RX/TX communication between two devices.	
12	Checksum Test	Verifies the checksum of the code	
13	USB Test	USB test	
14	Asset Viewer	Asset data check	



5.4 Test Items Operation

How to select test item: Using navigation button -"Up" or "Down" to select the test items

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

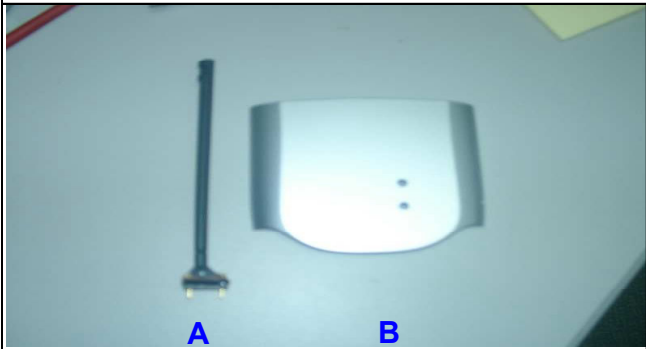



No.	Item	Description	Remark
1	Run-in Test	Runs all test items listed here. To stop the program when end of every cycle. A cycle is around 65 secs.	
2	Auto Test	Runs all test items listed here for 1 loop.	
3	Button Test	Press each button to know if it works. Follow up the instruction shown on the screen to finish the test item Stop on fail.	
4	Touch Test	Tap the cross mark (+) with stylus on the correct location. Fail if no reaction. If get fail suggest to test again under WinCE for double check.	
5	Audio Test	Record and Playback Test, must test with the ear plug	
6	Display Test	Unit prompts for different display page to detect the defect of LCD, lines or dots. Press left/up/right/down to carry on/choose the different mode.	
7	BLight & LED Test	Follow up the instruction shown on the screen to finish the test item	
8	Upload to SD	Upload bootloader or Rom image to SD card	
9	SDRAM	SD card Write/Read/Write Protect test.	
10	SD Card Test	Insert SD card (Enable Write Protect) and start test. Pull out the SD card if you see the message " Plugged OK Protected". Adjust lock switch to unlock site (Disable Write Protect, and insert it. Return to test menu if pass.	
11	SIR Test	Prepare another unit as 'supporting' site. On test unit, please choose 'Test Target' and press action button to start test. Before test, make the IR ports of them face to each other. If get fail suggest to test again under WinCE for double check.	
12	Checksum	Verifies the checksum of the code.	
13	USB Test	Plug USB cable to connect PDA to PC then and check if USB OK or not.	
14	Asset viewer	Asset data check for SN and country ID	



5.5 Shipping Mode (It is required before ship the repaired unit to EU)

Description:

- * The purpose is to prevent over-discharge of backup battery.
- * This SA will guide you how to perform shipping mode for repaired device

	<p>Fixture contain :</p> <ul style="list-style-type: none"> A. Contact stick. B. Special made battery cover
	<p>Step 1 : Assemble charged main battery into device.</p>
	<p>Step 2 : Assemble Special made battery cover into device.</p>
	<p>Step 3 : Set the device to be power-on.</p>



Step 4 :
Apply contact stick to the 2 holes of spec made battery cover.



Step 5 :
***The unit should be power-off after step 4**
*** Press power button, make sure the devi can't power-on.**



Step 6 :
***Remove the special made battery cover**
***Replace with the original battery cover.**
*** Ready to ship back to customer.**

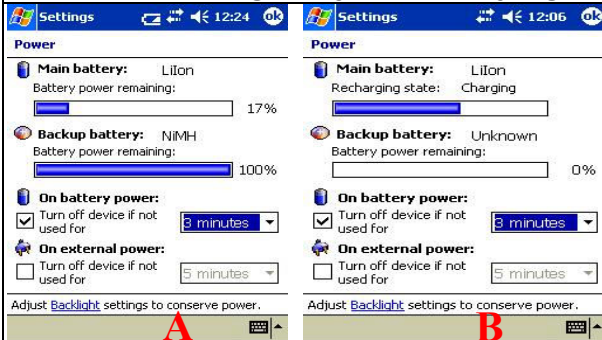


5.6 Backup Battery Inspection

Description:

* HB backup battery is a chargeable part (it is different from old models).

* This SA will guide you how to judge backup battery.



Step 1. Check remaining capacity

Turn on HB unit and check on backup b status.

There will be one of three results.

3.1.1 100% capacity

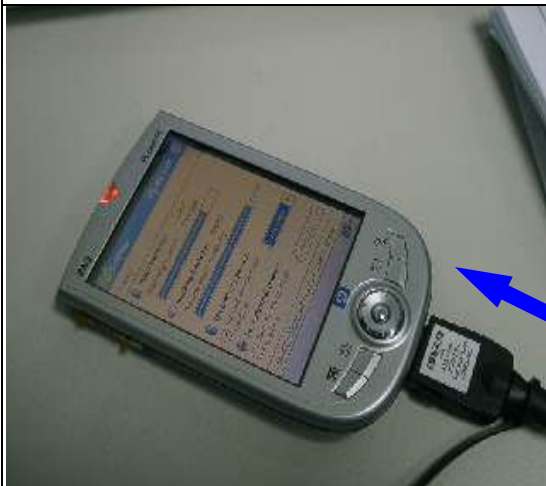
Go to Step 4

3.1.2 Less than 100% capacity

Go to step 2

C. Can't boot.

Go to step 2



Step 2. Charge batteries

Make sure the main battery is in the unit then plug in AC adapter for charging.

1. Normally It takes about 1 - 5 minutes for backup battery to reach to 100% capacity. And then go to Step 3.
2. In case the returned unit is left unused for a long time, the power may drain away and the unit can't power on or the backup battery may be all empty. As a result of B, the device should be recharged for an 1 hour.

1. If battery display is 100%, go to step 3
2. If it is NG (backup battery can't be charged or capacity does not reach to 100% in 1 hour), the battery has to be replaced.

1. Replace the M/B if new backup battery still does work.



Step 3. Check backup battery function

1. Don't turn off the device. (Keep the unit powered with the power management screen)
2. Remove the AC adapter from the device.



Step 5. Reinstall the main battery

Wait for **60** seconds, and then reinstall the main battery and power cover to the device.



A

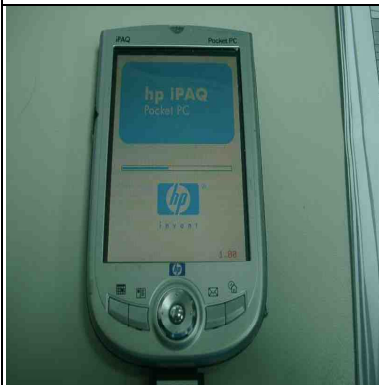
Step 6. Check the Screen

Turn on the device. There will be three results.

A. If the display stays on original screen and backup battery is 100%, the backup battery is considered good.

Note: if the backup battery is less than 100%, please charge for the other 1 hour and then testing again.

Usually the backup battery could reach 100%, otherwise, please replace backup battery.



B

B. If the unit boots from soft reset with show the screen as seen on photo B, the backup battery is OK and leave no further action.

Note: please look into the status of backup battery and make sure it is kept on 100%, if the backup battery is less than 100%, please charge for 1 hour then testing again.



C

C. If the unit boots from hard reset with show the screen as seen on photo C, the backup battery is NG and need to be replaced.



6. Problem Diagnostics

6.1 List of Test Jigs

Item Name	Usage	Remark
USB Cable	For data port test	
Special Plastic Tool	For unit disassembly	
AC Adapter	For battery recharge and power related tests	
Earphone	For audio test	
SD Card or MMC Card	For write protect, read and write test	

<Hardware Requirement for PC>

- O.S.: Windows 2000 or above.
- CPU: Pentium 166MHz or above.
- Memory: 64MB
- PC Link: ActiveSync 3.5 or above.

6.2 Troubleshooting & Repair

1 – A · Main Unit Does Not Respond to Power Button

- (1) Connect the AC adapter, maybe the battery pack is exhaust and wait for few mins if unit boot.
- (2) Check if the battery cover closed properly, check the micro switch under the battery cover if any damage.
- (3) Check the Power Button if any damage.
- (4) Try with another battery pack.
- (5) Replace battery pack if necessary.
- (6) Check all connections including LCD FPC to Main Board. Try with another Main Board.
- (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.

2 – A · Touch Panel Does Not Respond to Screen Tap

- (1) Check the connection of LCM FPC cable whether is properly connected.
- (2) Try with another LCM.
- (3) Try with another Main Board.
- (4) Replace LCM if necessary



- (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.

2—B · Buttons Do Not Respond

- (1) Dismantle the unit, check the status of switches on the Main Board and the plastic parts of button of the Button not responding.
- (2) Try with another Main Board or Front Bezel.
- (3) Replace Main Board or Front Bezel if necessary.
- (4) Once the defective part has been identified, verify it again with the defective part whether the symptom could be duplicated.

3—A · Unusual Vertical / Horizontal lines or partial display

- (1) Check the connection of LCM FPC whether is properly connected.
- (2) Try with another LCM.
- (3) Try with another Main Board.
- (4) Replace LCM if necessary
- (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.

3—B · Back Light Does Not Turn ON/OFF

- (1) Check the connection of LCM FPC whether is properly connected.
- (2) Try with another LCM.
- (3) Try with another Main Board.
- (4) Replace LCM if necessary
- (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.

4—A · SD Card cannot be used

- (1) Check whether SD or MMC Card is fully inserted to the slot until you hear a click.
- (2) Try with another SD / MMC Card and Check whether it is Write Protected.
- (3) Try with another Main Board.
- (4) Replace Main Board if necessary.
- (5) Once the defective part has been identified, verify it again with the defective part whether the



symptom could be duplicated.

5—A · PC Connection not possible

- (1) Check whether “Connection Settings” in the MS ActiveSync is properly set.
- (2) Check whether it connects with other cables or cradle, customer’s cable might be damaged.
- (3) Check the external appearance of the connector on the unit whether it is physically damaged.
- (4) Replace Main Board if necessary.
- (5) Once the defective part has been identified, verify it again with the defective part whether the symptom could be duplicated.

5—B · IrDA Connection not possible

- (1) Make sure the IrDA port settings on the Notebook or the other device are properly set.
- (2) Make sure the IrDA function is properly activated on the Pocket PC and on the other device.
- (3) Make sure there’s no obstruction between the two devices in connection and within the distance.
- (4) Check the IrDA window whether it is broken or cracked.
- (5) Replace Bezel 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—A · Battery Pack does not start

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

6—B · 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.

6—C · 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.

7—A · No Sound from Speaker or Distorted sound

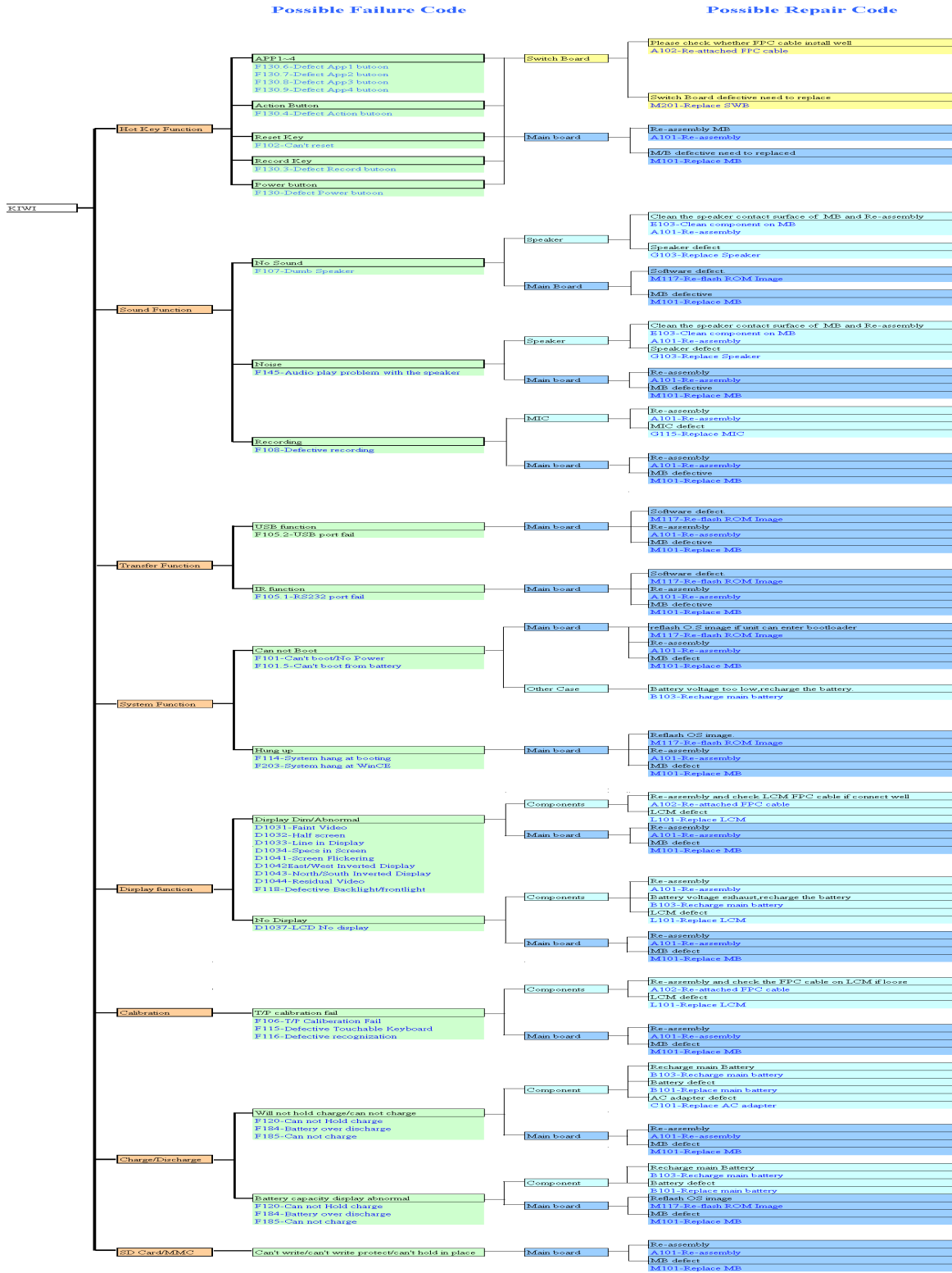
- (1) Check "Sound & Notifications" Settings in the unit for Sound Enabling.
- (2) Make sure it's not MUTED.
- (3) Clean up the speaker connection side on MB if there is any contamination.
- (4) Dismantle and Check whether the Speaker is properly installed (Orientation)
- (5) Replace Speaker if necessary.
- (6) Replace Main Board if necessary.
- (7) Once the defective part has been identified, verify it again with the defective part whether the symptom could be duplicated.

7—B · 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) Dismantle and Check whether the Microphone is properly installed.
- (4) Replace Microphone if necessary.
- (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.



6.3 Faulty Tree





7. Re-flash procedure

Tools required : 1) AC adapter. 2) PC with Windows2000 or above. 3) SD card
4) USB cable.

Software: 1) Mtty1.4.exe 2) Boot-loader 3) O.S image

A.OS image or Boot-loader re-flash (From PC to iPAQ):

- 1) Enter Boot-loader (Press and hold Pwr+App1+App4 then press reset button) until HP logo appears. Connect Hummingbird to PC through USB sync cable.
- 2) Execute Mtty1.4.exe and choose USB port then choose OK.(Figure I)

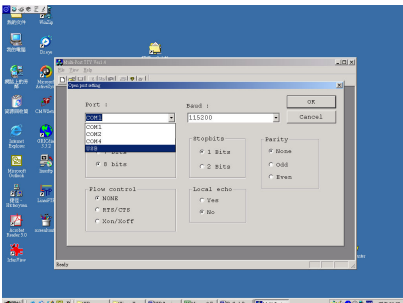


Figure I

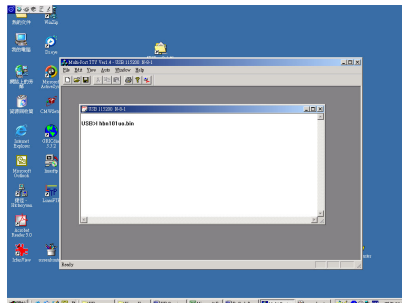


Figure II

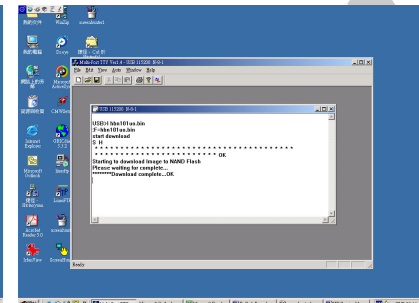


Figure III

- 3) Enter I(L small letter) O.S image or boot-loader file name then Enter. (Figure II)
- 4) Wait a while the program will show the process complete, once complete please cold boot the unit(Press Power button and reset) (Figure III)

B. Download boot-loader or O.S image (from iPAQ to SD card):

- 1) Enter SD card with diagnostic program loaded and choose the item of upload to SD card.
- 2) Remove the SD card loaded with diagnostic program. Put another SD card in it,download boot-loader and O.S image follow the diagnostic program instruction from unit to SD card. SD card size 32MB at least is required.
- 3) **It's strongly required to build master by using the ROM image that provided by HTC (following the item A first), it's not allowed to build the ROM image master SD card from unit to unit.**



C. Download boot-loader or O.S image (from SD card to iPAQ):

- 1) Insert SD card loaded with boot-loader and O.S image to Unit.
- 2) Press and hold Power key then Reset.
- 3) Wait a while then proceeds the re-flash process.
- 4) After the re-flash done, please take out the SD card. It will take approx 6 minutes then cold boot your unit (Power button + reset).

D. Key-in Serial number and Country ID

- 1) Insert SD card with Diag program loaded, press and hold power button then reset.
- 2) Wait until HTC copyright appears and press action to enter the Diag program.
- 3) Press power button to enter the item of "key-in S/N and country ID".
- 4) Connect USB sync cable between PC and your iPAQ.
- 5) Execute MTTY1.4 on PC and Choose the USB port and press "OK". < Figure I >
- 6) Enter the original S/N and country ID <Figure II >
- 7) You can check the asset viewer under diag program if it works.

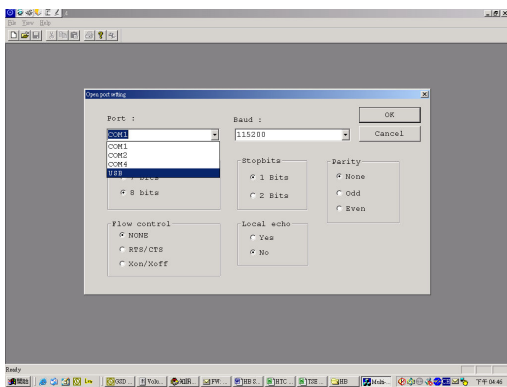


Figure I

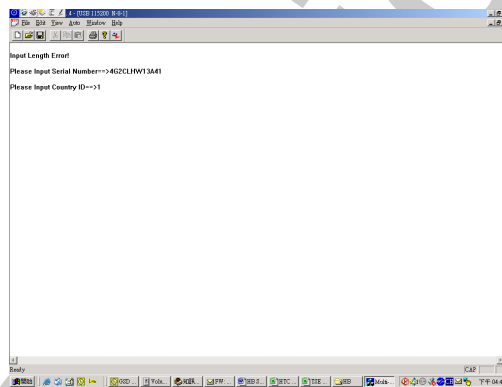


Figure II



8.Spare parts list

Item	Description	HTC P/N	Using Q'ty
1	Main Battery assy,ICP553450R	35H00014-00	1
2	Stereo Earphone,2.5mm,EP-122,Tachima	36H00113-00	1
3	Stylus, PRE-ASSY, Hummingbird	74H00148-00	1
4	Connector, DC jack adapter	75H00153-00	1
5	Backup battery Assy,V20HR-02SUR-32S	35H00011-00	1
6	Speaker Assy	36H00091-00	1
7	Microphone Assy	36H00137-00	1
8	PCBA, KIWI,16/64 MB	51H00178-00	1
9	LCM,3.5" color TFT LCD,PHILIP	60H00012-00	1
10	Battery Cover	71H00436-00	1
11	Screw,Trox,FD,M1.6*3,BLACK	72H00265-00	1
12	Screw,Trox,FD,M1.6*5.5,NICKLE	72H00266-00	4
13	Screw,PH,FD,T1.6*4,BLACK	72H30055-00	6
A	Upper cover, assy, KIWI	74H00177-00	1
14	Upper cover, pre assy	74H00199-00	1
15	FPC Ass'y + Speaker holder	74H00175-00	1
16	Key Pad	77H00158-00	1
17	Bottom cover, pre assy	74H00164-00	1
18	Sponge, Mylar,LCD	76H00354-00	1
19	Sponge, MPCB	76H00339-00	1
20	Sponge, Battery Connector	76H00340-00	1
21	Sponge, Speaker holder	76H00353-00	1
22	Mylar, LCD	76H00396-00	1
23	Agency Label,331578-002,H1915,FRU,Kiwi(SKU-00;FRU-01)	77H00067-00/01	1
23	Agency Label,331579-002,H1920,FRU,Kiwi(SKU-00;FRU-01)	77H00068-00/01	1
24	Disassembling prevent label (warranty seal) , Main unit	77H00036-00	1

Notice*Item A is assembled by item 14,15 and 16.**



1.Main Battery



2.Earphone



3.Stylus



4.DC jack connector



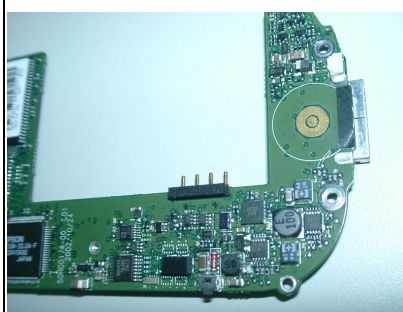
5.Backup battery



6.Speaker



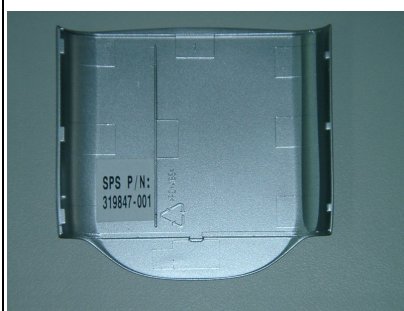
7.Microphone



8.PCBA, KIWI



9.LCM, Philip



10.Battery Cover



11.Screw, Trox, black



12.Screw, Trox, nickle



 <p>72H30055-00</p>		
<p>13. Screw, Philip, black</p>	<p>14. Upper cover, Pre-assy</p>	<p>15. FPC assy + Speaker holder</p>
		
<p>16. Key Pad assy</p>	<p>17. Bottom cover</p>	<p>18. Sponge, LCD Mylar</p>
		
<p>19. Sponge, MPCB</p>	<p>20. Sponge, Battery connector</p>	<p>21. Sponge, speakerholder</p>
<p>22. Mylar, LCM</p>	<p>23. Agency Label</p>	<p>24. Warranty seal</p>



9.MB Major Component

