

Form No: 704- C13- 01 (000715)

☐ Product System (PS)

Subject:	TROU	JBLE SHOOTING GUIDE	Part No.:			Rev.: 0	
Project (	Code:		Doc. No.  Effective Date:	425-C01		Page 1	of 1
Model N	lame: 56F05					Revision	Status
Descript		,				Page	Rev.
	TROUB	BLE SHOOTING GUIDE				1	0
						/	/
Reason	For Release:						0
	FIRS	T RELEASE					
Item	Contents			Q'ty	Unit		
1	TROUBLE	SHOOTING GUIDE FOR RF			PAGE		
2		SHOOTING GUIDE FOR BB		5	PAGE		
	( All Contents):						
Copy (C	Cover sheet):						
Approve	d By /	Reviewed By /			Pr	epared By /	

**BenQ's Confidence and Property** 



Subject:	C4 TROUBLE SHOOTING GUIDE	Part No.: Doc. No.	425-C01	Rev.: 0
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NA   -	50505			

Model name: 56F05

# **Troubleshooting**

Symptom	Probable Cause	Verification and Remedy
1.Unit doesn't turn on	a) Battery either discharged or defective.	<ol> <li>Measure battery voltage. If the battery voltage is &lt;3.2V, recharge the battery using the appropriate battery charger.</li> <li>If the battery can't be recharge, replace the battery.</li> <li>If the battery is not at fault, proceed to b.</li> </ol>
	b) Battery connector open or misaligned.	<ol> <li>Visually inspect the battery connectors on both the battery pack and the unit.</li> <li>Disassembly to check the battery connectors if it misaligned or short with the RF or Base-band shielding cases. If necessary, replace either the battery or battery connector.</li> <li>If the battery connectors are not at fault, proceed to c.</li> </ol>
	c) Shield case short with components	<ol> <li>Visually inspect the RF/BB shielding case. If they become deformed, replace the shielding case.</li> <li>If the shielding case are not at fault, proceed to d.</li> </ol>
	d) X3, R4, C1 or C2	<ol> <li>Use the power supply to supply the VBAT voltage. Then, press the power-on key. Visually inspect the current of the handset used.</li> <li>Measure the waveform of the R4.</li> <li>If the waveform isn't the 32KHz clock, replace the X3, R4, C1 or C2.</li> <li>If they are not at fault, proceed to e.</li> </ol>
	e) C59 or R19 is at fault.	<ol> <li>Measure the waveform of the R19.</li> <li>If the waveform isn't the 13MHz clock, replace the C59 and R19.</li> <li>If they are not at fault, proceed to f.</li> </ol>
	f) U3 is at fault.	<ol> <li>If the current is under 100mA when power on, check the VR1 (1.8V), VR19 (2.9V), VR19B (2.9V), and VR3 (2.9V) voltage.</li> <li>If they are not correct, maybe the U3 is at fault. Replace the U3.</li> </ol>
2.LCD no display.	a) LCD module is at fault	<ol> <li>Disassembly to visually inspect the LCD module. If the glass is break on the LCD, replace the LCD module.</li> <li>Change LCM to a new LCM, and power on again. IF can work properly, LCM is fail. If not go 3.</li> <li>If the LCD module is not break, proceed to b</li> </ol>
	b) LCD module has no power.	<ol> <li>check connection of U5, U8, U21, R112, C63, CN10, CN12.         If connect not good, re-flow or re-place the component     </li> <li>If the component is connect well, proceed to c</li> </ol>
	c) U3 is at fault	<ol> <li>Power on the handset. Then measure the waveforms of the C63.1, U21.1 pins.</li> <li>If the C63.1 is always low or the U21.1 pins with no data, the U3 is at fault. Replace the U3.</li> </ol>
3.Keypad no function.	Keypad bottom short	Disassembly to replace the keypad metal dome.
4.LED no display	a) Components shift	<ol> <li>Disassembly to visually inspect the LED1~LED8, R109, R110.         If any component is shifted, replace the components.     </li> <li>If they are not shifted, proceed to b</li> </ol>
	b) U3 is at fault	Measure the waveform of the U20.2. If the U20.2 doesn't output any signal when LED function is executed, U3 is at fault.



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no function    Components are at fault   Components are				
2. Visually inspect the R44, R48, C51, JP3.1, C47, R47, U15, C85, C90, JP3.2. If any component is shifted, replace the components.  b) U3 is at fault  1. Measure the waveform of the R45. If the R45 doesn't output any signal when Loud speaker function is executed, U3 is at fault.  2. If it is not at fault, proceed to e.  c) Other components are at fault.  2. If it is not at fault, proceed to e.  c) Other components are at fault.  2. If it is not at fault, proceed to e.  c) Other components are at fault.  3. If they are not shifted, proceed the component relative to that pin.  6. Vibrator no function  4. Components shift  5. LCM: change a new LCM, to check vibrator function. If it works, change LCM.  7. Visually inspect the R62, R63. If component is shifted, replace the components.  8. If they are not shifted, proceed to b  8. Micphone no function  6. Vibrator no function  6. Vibrator no function  7. Receiver no function  8. Micphone no function  9. Other components shift  1. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contract well with PCB pads, replace the cover of the X2 or microphone.  9. Visually inspect the C12, C13, R17, R19, R20, R83, R84, C14, C19, C15, C21. If any component isn't contacted well, replace the components.  1. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  9. Visually inspect the C12, C13, R17, R19, R20, R83, R84, C14, C19, C15, C21. If any component isn't contacted well, replace the components.  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  9. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't cont	5.Loud speaker	a) Components shift	1.	Disassembly to visually inspect the U16. If the component
CSS, C90, JP3.2. If any component is shifted, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  2. If it is not at fault, proceed to e.  c) Other components are at fault,  2. If it is in our at fault, proceed to e.  c) Other components are at fault,  3. If may pin is no signal, replace the component relative to that pin.  6. Vibrator no function  4. Components shift  5. UK: change a new LCM, to check vibrator function if it works, change LCM.  2. Visually inspect the R62, R63. If component is shifted, replace the components are at fault.  8. Uk is at fault  1. LCM: change a new LCM, to check vibrator function if it works, change LCM.  2. Visually inspect the R62, R63. If component is shifted, replace the components where the components is shifted, proceed to b  b) U6 is at fault  1. LCM: change a new LCM, to check vibrator function is standard the components.  3. If they are not shifted, proceed to b  1. LCM: change a new LCM is at fault.  4. LCM: change a new LCM is at fault.  5. Usually inspect the R62. If the R62 pin doesn't output any signal when Vibrator function is executed, U6 is at fault.  8. Micphone no function  6. Visually inspect the R7, R29, C24, C27, C24, C27, C28. If any component isn't contacted well, replace the components.  8. Micphone no function  8. Micphone no function  1. Measure the waveforms of the R27 and R29. If the R27 or R29 pins don't output any signal when speaker function is executed, U3 is at fault.  1. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84, C14, C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  4. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal of Micbias voltage level is not equal 2-2-5. When micphone function is executed, U	no function	_		outward is damaged, replace the U16.
components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveform of the R45. If the R45 doesn't output any signal when Loud speaker function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  c) Other components are at fault,  2. If it is not at fault, proceed to c.  c) Other components are at fault,  3. If they are not shifted, proceed to c.  c) Other components shift  1. LCM: change a new LCM, to check vibrator function. If it works, change a LCM.  2. Visually inspect the R62, R63. If component is shifted, replace the components.  3. If they are not shifted, proceed to b  b) U6 is at fault  1. LCM: change a new LCM for the R62 in doesn't output any signal when Vibrator function is executed, U6 is at fault.  2. Visually inspect the R62, R63. If the R62 pin doesn't output any signal when Vibrator function is executed, U6 is at fault.  2. Visually inspect the R7, R29, C24, C27, C28. If any component is not not shifted, proceed to b  b) U3 is at fault  1. LCM: change a new LCM it it works, change a new LCM.  2. Visually inspect the R27, R29, C24, C27, C28. If any component is not not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R62. If the R62 pin doesn't output any signal when speaker function is executed, U3 is at fault.  2. Visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84,C14, C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't output any signal or Micbias voltage level is not equal 2-2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  3. Other components shift  4. Disassembly to visually inspect the J1. If audio jack (J1) pins don't outp			2.	Visually inspect the R44, R48, C51, JP3.1, C47, R47, U15,
B) U3 is at fault   1.   Measure the waveform of the R45. If the R45 doesn't output any signal when Loud speaker function is executed, U3 is at fault.   2.   If it is not at fault, proceed to c.				C85, C90, JP3.2. If any component is shifted, replace the
b) U3 is at fault  1. Measure the waveform of the R45. If the R45 doesn't output any signal when Loud speaker function is executed, U3 is at fault.  2. If it is not at fault, proceed to e.  (c) Other components are at fault.  6. Vibrator no function  7. Receiver no function  8. Other components shift  1. LCM: change a new LCM, to check vibrator function. If it works, change LCM.  9. Visually inspect the R62, R63. If component is shifted, replace the components.  1. LCM: change a new LCM. If it works, change a new LCM. If it works, change a new LCM. Visually inspect the R27, R29, C24, C27, C28. If any component is not shifted, proceed to b.  1. LCM: change a new LCM. If it works, change a new LCM. Visually inspect the R27, R29, C24, C27, C28. If any component is not succeeded. U3 is at fault.  1. LCM: change a new LCM. If it works, change a new LCM. Visually inspect the R27, R29, C24, C27, C28. If any component is not shifted, proceed to b.  1. Measure the waveforms of the R27 and R29. If the R27 or R29 pins don't output any signal when speaker function is executed, U3 is at fault.  8. Micphone no function  8. Micphone no function  9. Components shift  1. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84, C14, C19, C15, C21. If any component isn't contacted well, replace the components.  1. If it is not at fault, proceed to b.  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2-2-5. When micphone function is executed, U3 is at fault.  1. Disassembly to visually inspect the L1. If audio jack (U1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any comp				
b) U3 is at fault  1. Measure the waveform of the R45. If the R45 doesn't output any signal when Loud speaker function is executed, U3 is at fault.  2. If it is not at fault, proceed to e.  (c) Other components are at fault.  6. Vibrator no function  7. Receiver no function  8. Other components shift  1. LCM: change a new LCM, to check vibrator function. If it works, change LCM.  9. Visually inspect the R62, R63. If component is shifted, replace the components.  1. LCM: change a new LCM. If it works, change a new LCM. If it works, change a new LCM. Visually inspect the R27, R29, C24, C27, C28. If any component is not shifted, proceed to b.  1. LCM: change a new LCM. If it works, change a new LCM. Visually inspect the R27, R29, C24, C27, C28. If any component is not succeeded. U3 is at fault.  1. LCM: change a new LCM. If it works, change a new LCM. Visually inspect the R27, R29, C24, C27, C28. If any component is not shifted, proceed to b.  1. Measure the waveforms of the R27 and R29. If the R27 or R29 pins don't output any signal when speaker function is executed, U3 is at fault.  8. Micphone no function  8. Micphone no function  9. Components shift  1. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84, C14, C19, C15, C21. If any component isn't contacted well, replace the components.  1. If it is not at fault, proceed to b.  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2-2-5. When micphone function is executed, U3 is at fault.  1. Disassembly to visually inspect the L1. If audio jack (U1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any comp			3.	If they are not shifted, proceed to b
2. If it is not at fault, proceed to c. c) Other components are at fault.  2. If it is not at fault, proceed to c. c) Other components are at fault.  2. If any pin is no signal, replace the component relative to that pin.  3. If any pin is no signal, replace the component relative to that pin.  4. Components shift  5. Visually inspect the R62, R63. If component is shifted, replace the components.  5. If they are not shifted, proceed to b.  6. Visually inspect the R62, R63. If component is shifted, replace the components.  6. Visually inspect the R62, R63. If component is shifted, replace the components.  7. Receiver no function  7. Receiver no function  8. Components shift  1. LCM: change a new LCM. If it works, change a new LCM. If it works, change a new LCM. Visually inspect the R27, R29, C24, C27, C28. If any component isn't contacted well, replace the components.  8. Micphone no function  8. Micphone no function  8. Micphone no function  9. Components shift  1. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  9. Visually inspect the C12, C13, R17, R19, R20, R83, R84,C14, C19, C15, C21. If any component isn't contacted well, replace the components.  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2-2-5 when micphone function is executed, U3 is at fault.  9. Handfree no function  9. Handfree no function  1. Disassembly to visually inspect the L1. If audio jack (I1) pins don't output any signal or Micbias voltage level is not equal 2-2-5 when micphone function is executed, U3 is at fault.  1. Disassembly to visually inspect the L1. If audio jack (I1) pins don't output any signal when handfree the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  1. If they are not shifted, proceed to b.  1. Me		b) U3 is at fault	1.	Measure the waveform of the R45. If the R45 doesn't output
2. If it is not at fault, proceed to c. c) Other components are at fault. 1. Measure the waveform of the U15.1, U15.6 when Loud speaker function is executed. 2. If any pin is no signal, replace the component relative to that pin. 6. Vibrator no function  a) Components shift  a) Components shift  b) U6 is at fault  7. Receiver no function  7. Receiver no function  b) U3 is at fault  1. LCM: change a new LCM, to check vibrator function . If it works, change LCM. 2. Visually inspect the R62, R63. If component is shifted, replace the components. 3. If they are not shifted, proceed to b  Measure the waveform of the R62. If the R62 pin doesn't output any signal when Vibrator function is executed, U6 is at fault.  8. Micphone no function  a) Components shift  1. Measure the waveforms of the R27 and R29. If the R27 or R29 pins don't output any signal when speaker function is executed, U3 is at fault.  8. Micphone no function  a) Components shift  1. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84, C14, C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2-2-5.V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the equal 2.9V.  2. Measure to waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3				any signal when Loud speaker function is executed, U3 is at
c) Other components are at fault.  2. If any pin is no signal, replace the component relative to that pin.  3. Components shift  1. LCM: change a new LCM, to check vibrator function . If it works, change LCM.  2. Visually inspect the R62, R63. If component is shifted, replace the components . If they are not shifted, proceed to b  3. If they are not shifted, proceed to b  4. Components shift  1. LCM: change a new LCM, to check vibrator function . If it works, change LCM.  3. If they are not shifted, proceed to b  4. Components shift  1. LCM: change a new LCM . If it works, change a new LCM.  4. Visually inspect the R27, R29, C24, C27, C28. If any component is not to catacted well, replace the components.  3. If they are not shifted, proceed to b  4. Measure the waveforms of the R27 and R29. If the R27 or R29 pins don't output any signal when speaker function is executed, U3 is at fault.  4. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  3. If they are not shifted, proceed to b  4. Disassembly to visually inspect the X2. If the cover of the X2 or microphone.  4. Visually inspect the C12, C13, R17, R19, R20, R83, R84,C14, C19, C15, C21. If any component isn't contacted well, replace the components.  5. If they are not shifted, proceed to b  6. Wassure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal of Micbias voltage level is not equal 2-2.5V when micphone function is executed, U3 is at fault.  6. Usually inspect the R35, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  6. Wassure to visually inspect the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3.  6. Wassure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3.				fault.
6.Vibrator no function  a) Components shift  1. LCM: change a new LCM, to check vibrator function . If it works, change LCM.  2. Visually inspect the R62, R63. If component is shifted, replace the components.  3. If they are not shifted, proceed to b  b) U6 is at fault  7.Receiver no function  a) Components shift  1. LCM: change a new LCM.  1. Measure the waveform of the R62. If the R62 pin doesn't output any signal when Vibrator function is executed, U6 is at fault.  1. LCM: change a new LCM. If it work change a new LCM on the stange and the LCM. If it work change a new LCM is the stange and the LCM. If it work change a new LCM is a stange and the stange an			2.	If it is not at fault, proceed to c.
2. If any pin is no signal, replace the component relative to that pin.  6. Vibrator no function  a) Components shift  1. LCM: change a new LCM, to check vibrator function. If it works, change LCM.  2. Visually inspect the R62, R63. If component is shifted, replace the components.  3. If they are not shifted, proceed to b  1. Measure the waveform of the R62. If the R62 pin doesn't output any signal when Vibrator function is executed, U6 is at fault.  7. Receiver no function  4. Components shift  5. LCM: change a new LCM. If it works, change a new LCM. Cysually inspect the R27, R29, C24, C27, C28. If any component isn't contacted well, replace the components.  5. If they are not shifted, proceed to b  1. Measure the waveforms of the R27 and R29. If the R27 or R29 pins don't output any signal when speaker function is executed, U3 is at fault.  7. Receiver no function  8. Micphone no function  a) Components shift  1. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84,C14, C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  4. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2-2.5V when micphone function is executed, U3 is at fault.  9. Handfree no function  4. Components shift  5. Disassembly to visually inspect the J1. If audio jack (I1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R83, R84. If the R83, R84 pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R87, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to e.  4. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output		c) Other components are at fault.	1.	
Disassembly to visually inspect the X2 if the cover of the X2 is not matched with the microphone hole or microphone.				
a Components shift   1. LCM: change a new LCM, to check vibrator function   1. LCM: change a new LCM, to check vibrator function   1. LCM: change a new LCM, to check vibrator function   1. Visually inspect the R62, R63. If component is shifted, replace the components.   3. If they are not shifted, proceed to b   3. Measure the waveform of the R62. If the R62 pin doesn't output any signal when Vibrator function is executed, U6 is at fault.   3. Components shift   1. LCM: change a new LCM. If it works, change a new LCM.   5. Visually inspect the R27, R29, C24, C27, C28. If any component isn't contacted well, replace the components.   3. If they are not shifted, proceed to b   4. Measure the waveforms of the R27 and R29. If the R27 or R29 pins don't output any signal when speaker function is executed, U3 is at fault.   4. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.   2. Visually inspect the C12, C13, R17, R19, R20, R83, R84, C14, C19, C15, C21. If any component isn't contacted well, replace the components.   4. Disassembly to visually inspect the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2-2-5. When micphone function is executed, U3 is at fault.   4. If it is not at fault, proceed to c.   4. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.   5. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.   5. If they are not shifted, proceed to c.   5. Wisually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.   5. Wisually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.   6. Wisually inspect the R54, R57. If the C54 or R57 pins don't output any signal wh			2.	
function    Solution   Proceed to b   Proceed to b			ļ	
2. Visually inspect the R62, R63. If component is shifted, replace the components. 3. If they are not shifted, proceed to b b) U6 is at fault 1. Measure the waveform of the R62. If the R62 pin doesn't output any signal when Vibrator function is executed, U6 is at fault.  7. Receiver no function 2. Visually inspect the R27, R29, C24, C27, C28. If any component isn't contacted well, replace the components. 3. If they are not shifted, proceed to b b) U3 is at fault 4. Measure the waveforms of the R27 and R29. If the R27 or R29 pins don't output any signal when speaker function is executed, U3 is at fault.  8. Micphone no function 4. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84,C14, C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b b) U3 is at fault 4. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2-2-SV when micphone function is executed, U3 is at fault.  9. Handfree no function function 4. Components shift 5. Disassembly to visually inspect the J1. If audio jack (II) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components. 3. If they are not shifted, proceed to b b) U3 is at fault 4. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3		a) Components shift	1.	
the components.  3. If they are not shifted, proceed to b  b) U6 is at fault  7.Receiver no function  a) Components shift  1. LCM: change a new LCM. If it works, change a new LCM. function  2. Visually inspect the R27, R29, C24, C27, C28. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R27 and R29. If the R27 or R29 pins don't output any signal when speaker function is executed, U3 is at fault.  8. Micphone no function  8. Micphone no function  a) Components shift  b) U3 is at fault  1. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84,C14, C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2-2-2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  9. Handfree no function  4. Components shift  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3	function			
3. If they are not shifted, proceed to b			2.	
b) U6 is at fault  1. Measure the waveform of the R62. If the R62 pin doesn't output any signal when Vibrator function is executed, U6 is at fault.  7. Receiver no function  2. Visually inspect the R27, R29, C24, C27, C28. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R27 and R29. If the R27 or R29 pins don't output any signal when speaker function is executed, U3 is at fault.  8. Micphone no function  9. Wisually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  9. Visually inspect the C12, C13, R17, R19, R20, R83, R84, C14, C19, C15, C21. If any component isn't contacted well, replace the components.  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault.  9. Handfree no function  9. Handfree no function  10. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  11. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  12. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  13. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3				
Any signal when Vibrator function is executed, U6 is at fault.  7. Receiver no function  a) Components shift  1. LCM: change a new LCM. If it works, change a new LCM. Visually inspect the R27, R29, C24, C27, C28. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  8. Micphone no function  a) Components shift  1. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84,C14, C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  4. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  4. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contacted well, replace the components.  3. If they are not shifted, proceed to b  4. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they ar			_	
7.Receiver no function  a) Components shift  a) Components shift  b) U3 is at fault  a) Components shift  b) U3 is at fault  a) Components shift  b) U3 is at fault  a) Components shift  a) Components shift  b) U3 is at fault  a) Components shift  a) Components shift  a) Components shift  a) Components shift  b) U3 is at fault  a) Components shift  a) Components shift  b) U3 is at fault  c) Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  c) Visually inspect the C12, C13, R17, R19, R20, R83, R84, C14, C19, C15, C21. If any component isn't contacted well, replace the components.  J) Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2-2-2.5V when micphone function is executed, U3 is at fault.  J) Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  a) Components shift  b) U3 is at fault  b) U3 is at fault  c) Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  c) Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  If they are not shifted, proceed to b  b) U3 is at fault  b) U3 is at fault  c) Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  c) Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  If they are not shifted, proceed to b  Di U3 is at fault  Di Wasure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3		b) U6 is at fault	1.	
function  2. Visually inspect the R27, R29, C24, C27, C28. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  2. Neasure the waveforms of the R27 and R29. If the R27 or R29 pins don't output any signal when speaker function is executed, U3 is at fault.  8.Micphone no function  a) Components shift  1. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84, C14, C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  a) Components shift  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3				
b) U3 is at fault  a) Components shift  b) U3 is at fault  a) Components shift  a) Components shift  b) U3 is at fault  a) Components shift  a) Components shift  b) U3 is at fault  a) Components shift  contact well with PCB pads, replace the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84, C14, C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  9.Handfree no function  a) Components shift  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  b) U3 is at fault  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3		a) Components shift		
3. If they are not shifted, proceed to b	function		2.	
b) U3 is at fault  1. Measure the waveforms of the R27 and R29. If the R27 or R29 pins don't output any signal when speaker function is executed, U3 is at fault.  8.Micphone no function  a) Components shift  1. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84,C14, C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3				
pins don't output any signal when speaker function is executed, U3 is at fault.  8.Micphone no function  a) Components shift  1. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84,C14, C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  9.Handfree no function  4) Components shift  1) Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3		1) 770 !	_	
8.Micphone no function  a) Components shift  1. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84,C14, C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3		b) U3 is at fault	1.	
8.Micphone no function  1. Disassembly to visually inspect the X2. If the cover of the X2 is not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84, C14, C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  9.Handfree no function  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3				
function  not matched with the microphone hole or microphone doesn't contact well with PCB pads, replace the cover of the X2 or microphone.  Visually inspect the C12, C13, R17, R19, R20, R83, R84,C14, C19, C15, C21. If any component isn't contacted well, replace the components.  If they are not shifted, proceed to b  b) U3 is at fault  Neasure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault.  If it is not at fault, proceed to c.  9.Handfree no function  a) Components shift  Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  If they are not shifted, proceed to b  b) U3 is at fault  Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3	9 Mianhana na	a) Commonants shift	1	
contact well with PCB pads, replace the cover of the X2 or microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84,C14, C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  9.Handfree no function  a) Components shift  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3		a) Components sint	1.	
microphone.  2. Visually inspect the C12, C13, R17, R19, R20, R83, R84,C14, C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  9.Handfree no function  a) Components shift  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3	Tunction			
2. Visually inspect the C12, C13, R17, R19, R20, R83, R84,C14, C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3				
C19, C15, C21. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  9.Handfree no function  a) Components shift  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3			2	
the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  9.Handfree no function  a) Components shift  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3			2.	
3. If they are not shifted, proceed to b b) U3 is at fault  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault. 2. If it is not at fault, proceed to c.  9.Handfree no function  a) Components shift  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components. 3. If they are not shifted, proceed to b b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V. 2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3				
b) U3 is at fault  1. Measure the waveforms of the R83, R84. If the R83, R84 pins don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  9.Handfree no function  a) Components shift  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3			3	
don't output any signal or Micbias voltage level is not equal 2~2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  9.Handfree no function  a) Components shift  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3		b) II3 is at fault		
2~2.5V when micphone function is executed, U3 is at fault.  2. If it is not at fault, proceed to c.  9.Handfree no function  a) Components shift  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3		o) os is at taut	1.	
2. If it is not at fault, proceed to c.  9.Handfree no function  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3				
9.Handfree no function  a) Components shift  1. Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components. 3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V. 2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3			2.	
function  don't contact well with PCB pads, solder the pins and pads together.  Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  If they are not shifted, proceed to b  b) U3 is at fault  Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3	9 Handfree no	a) Components shift	_	Disassembly to visually inspect the II. If audio jack (II) pins
together.  2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3		a) components sint	1.	
2. Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3				
any component isn't contacted well, replace the components.  3. If they are not shifted, proceed to b  b) U3 is at fault  1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3			2.	
3. If they are not shifted, proceed to b b) U3 is at fault 1. Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V. 2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3				
<ol> <li>b) U3 is at fault</li> <li>Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.</li> <li>Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3</li> </ol>			3.	
equal 2.9V.  2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3		b) U3 is at fault	+	
2. Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when handfree function is executed, U3				
don't output any signal when handfree function is executed, U3			2.	
is at fault.				is at fault.
3. If it is not at fault, proceed to c.			3.	
			3	



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10.Datacable no function	a) Components shift	3. 4. 1.	When handfree is plugged in, IO6 detect 0V. Then, IO11 outputs high level, U17.4 pin connects to U17.1 pin and U19.4 pin connects to U19.1 pin. If not, maybe the U17 and U19 are at fault. Replace the U17 or U19.  After IO6=0, IO11=1, measure the waveform of the U18.3 pin. If its voltage level doesn't drop to 1 ~ 2.6V and the voltage of the U3.C6 pin isn't equal to 0.5 ~ 1.3V, test it again by another handfree. If handfree is still no function, D2, R55, R56 is at fault. Visually inspect the components. If any component isn't contacted well or wrong, replace the components.  Measure the waveforms of U18.5, U18.1, U18.4 and U18.3 when handfree function is executed.  If any pin is no signal, replace the U18  Disassembly to visually inspect the J1. If audio jack (J1) pins don't contact well with PCB pads, solder the pins and pads together.
		<ol> <li>3.</li> </ol>	Visually inspect the R53, R69, U18, U17, U19, R57, C54. If any component isn't contacted well, replace the components. If they are not shifted, proceed to b
	b) U3 is at fault	<ol> <li>1.</li> <li>2.</li> <li>3.</li> </ol>	Measure voltage level if VRIO (U17.4, U19.6) voltage level are equal 2.9V.  Measure the waveforms of the C54, R57. If the C54 or R57 pins don't output any signal when data service function is executed, U3 is at fault.  If it is not at fault, proceed to c.
	b) Components are at fault.	1. 2. 3.	When data cable is plugged in, IO6 detect 0V. Then, IO11 outputs high level, U17.4 pin connects to U17.1 pin and U19.4 pin connects to U19.1 pin. If not, maybe the U17 and U19 are at fault. Replace the U17 or U19.  After IO6=0, IO11=1, measure the waveform of the U18.3 pin. If its voltage level doesn't drop to 2.6 ~ 2.8V and the voltage of the U3.C6 pin isn't equal to 1.3 ~ 1.5V, test it again by another handfree. If handfree is still no function, D2, R55, R56 is at fault. Visually inspect the components. If any component isn't contacted well or wrong, replace the components.  Measure the waveforms of U18.5, U18.1, U18.4 and U18.3 when handfree function is executed.  If any pin is no signal, replace the U18
12. Can't find SIM	a) Components shift	1. 2. 3.	Visually inspect the U4. If the pins of the SIM socket is at fault, Disassembly to replace the U4.  Disassembly to visually inspect the R12,R16, R15, R14, C11, C70, C84, C9, C10. If any component isn't contacted well, replace the components.  If they are not shifted, proceed to b



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b) Components are at fault.	1.	Plug in the SIM card to power on the handset and measure the
c) U3 or U6 is at fault	2. 3. 4. 5. 6. 7.	voltage of the U4.4 or U4.5. If it isn't equal to 3V or 5V, check the R15, R16 and replace it.  If R15, R16 is ok but U4.4 is still no voltage, proceed to c.  Measure the voltage of the U4.2 if it goes to high about 3V or 5V. If not, check the R14 and replace it.  If R14 is ok but U4.2 is still no voltage, proceed to c.  Measure the voltage of the U4.1 if it output a clock about 3V or 5V. If not, check the R12 and replace it.  If R12 is ok but U4.1 is still no voltage, proceed to c.  Measure the voltage of the U4.3 if it goes to high about 3V or 5V. If not, proceed to c.  If check the b steps and the U4.1, U4.2, U4.3 or U4.4 is still no signal, maybe the U3 or U6 is at fault.
	2	Replace the U6 then re-check the step b.
		If it is still no signal, replace the U3
a) Battery or charger is at fault		Use the correct battery and charger to check the charge
, miles y as a second as an indicate		function.
	2.	If charging function is ok, the battery or charger is illegal.
	3.	If it still can't charge, proceed to b
b) Components shift	4.	Disassembly to visually inspect the J1. If the pins of the power
	5.	jack (J4) aren't contacted well with the pads of the PCB, resolder the pins.  Visually inspect the ,F1,BQ3, R91, DZ1, U28, U33, BQ4, R102. If any component isn't contacted well, replace the components.
	6. 7. 8.	Visually inspect the polarity of the BQ3, R91, DZ1, R92, R111, U28. If any component is wrong, replace the component. Check the F1. If it is open, replace the F1. If they are not wrong, proceed to c
c) Peripheral components for charging are at fault.		Use dummy battery to check the charging function, JP4.1 connected to V+ (3.6V) of the power supply. JP4.3 connected to V- (GND) of the power supply. JP4.2 connected to a resistor (10K ohm) to ground.
	<ul><li>2.</li><li>3.</li></ul>	Plugged in the charger then check the voltage of the CHARGERIN pin and U28.5 pin. If their voltage isn't the same about 4~6V, F1 is at fault. Replace the F1. Check the voltages of the U28.2 and U28.4 if their voltages are
d) U6 is at fault	4. 5. 1.	above 4V. If not, maybe U28 is at fault. Replace the U28.  Measure the current flowing across the R102. If not, maybe R102 is at fault. Replace the R102.  If they are not wrong, proceed to d  When the charger is plugged in, the voltage of the VCHG pin is 4~6V. And when charging, the ICTL pin will high/low to
	a) Battery or charger is at fault b) Components shift c) Peripheral components for charging are at fault.	3. 4. 5. 6. 7. c) U3 or U6 is at fault 1. 2. 3. a) Battery or charger is at fault 1. 2. 3. b) Components shift 4. 5. 6. 7. 8. c) Peripheral components for charging are at fault. 2. 3. 4. 5.