

# Trouble Shooting Guide, Mechanical

Applicable for J220 and J230

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# 1 General





This document outlines the mechanical repairs that should be made in an attempt to fix the common failures that are seen in the field. To gain a complete understanding of how to test and repair a specific failure, this document should be used in conjunction with the Test Instructions, Mechanical and the Working Instructions, Mechanical.


# 2 Appearance Problems

<b>Problem Area</b>	<b>Items to Check</b>	<b>Repair Action</b>	<b>Reference Image</b>
Appearance	Visually inspect the cosmetic quality of all user viewable surfaces	<ul style="list-style-type: none"> <li>• If dirty – Clean</li> <li>• If unacceptably scratched or damaged – Replace parts that are unacceptable</li> </ul>	
	Visually inspect all keys	<ul style="list-style-type: none"> <li>• If dirty – Clean</li> <li>• If unacceptably damaged – Replace</li> </ul>	
	Visually inspect for improper gap between seams	<ul style="list-style-type: none"> <li>• Reassemble or replace damaged parts as necessary</li> </ul>	





### 3 Power Problems

Insert a regular functionality Battery and connect a Charger to the phone. The phone will charge the Battery without turning on the phone while the Battery voltage is too low. (It takes less than 10 minutes) When the Battery voltage is high enough to turn on the phone, it will show “charging only” on the LCD.

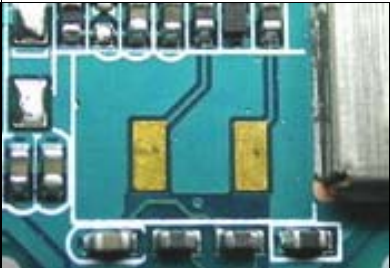



Problem Area	Items to Check	Repair Action	Reference Image
<b>No Power On</b>	Check whether the phone Keypad illuminated	<ul style="list-style-type: none"> <li>If the Keypad are undetectable, refer to the “<a href="#">Display Problems</a>” section</li> </ul>	
	Visually inspect contact the pads of Battery	<ul style="list-style-type: none"> <li>If dirty or oxidized – Clean pads</li> <li>If damaged – Replace Battery</li> </ul>	
	Visually inspect Battery Connector	<ul style="list-style-type: none"> <li>If dirty or oxidized – Clean pads</li> <li>If damaged – Replace Battery Connector</li> <li>If can't power on – Replace Battery Connector</li> </ul>	
	Visually inspect Battery pads	<ul style="list-style-type: none"> <li>If dirty or oxidized – Clean pads</li> </ul>	
	Visually inspect the power key portion of the Keypad for debris or damage	<ul style="list-style-type: none"> <li>If dirty – Clean</li> <li>If damaged – Replace Keypad</li> </ul>	


Problem Area	Items to Check	Repair Action	Reference Image
	Visually inspect the power contact portion of the Dome Switch Foil	<ul style="list-style-type: none"> <li>• If dirty – Clean</li> <li>• If damaged – Replace Dome Switch Foil</li> </ul>	
	If the issue has not been resolved →	<ul style="list-style-type: none"> <li>• Replace the Keypad and the Dome Switch Foil, if they have not already been replaced</li> </ul>	

## 4 Network/Signal Problems

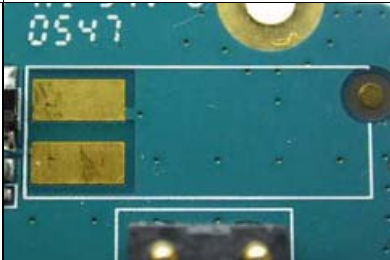


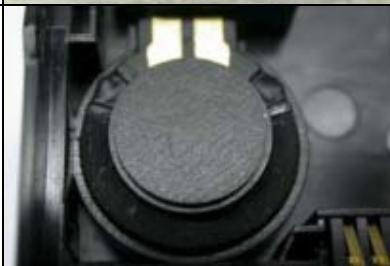
Problem Area	Items to Check	Repair Action	Reference Image
<b>No Signal or Poor Signal</b>	Visually inspect SIM Holder	<ul style="list-style-type: none"> <li>• If dirty or – Clean</li> <li>• If damaged – Send to an electrical repair location</li> </ul>	
	Visually inspect the Antenna Connector	<ul style="list-style-type: none"> <li>• If dirty or oxidized – Clean</li> <li>• If damaged – Send to an electrical repair location</li> </ul>	
	Visually inspect the Antenna Insert	<ul style="list-style-type: none"> <li>• If dirty or oxidized – Clean</li> <li>• If damaged – Replace the Frame Cabinet</li> </ul>	
	Visually inspect the Antenna Flex	<ul style="list-style-type: none"> <li>• If dirty or oxidized – Clean</li> <li>• If damaged – Replace the Frame Cabinet</li> </ul>	

## 5 Audio Problems

Problem Area	Items to Check	Repair Action	Reference Image
<b>Microphone</b>	Before proceeding →	<ul style="list-style-type: none"> <li>Perform a setting reset</li> </ul>	
	Visually inspect the Microphone pads	<ul style="list-style-type: none"> <li>If dirty or oxidized – Clean</li> </ul>	
	Visually inspect the Microphone Assy	<ul style="list-style-type: none"> <li>If damaged, dirty or oxidized - Replace Microphone Assy</li> </ul>	
<b>Earphone</b> No sound or poor quality sound	Before proceeding →	<ul style="list-style-type: none"> <li>Perform a setting reset</li> </ul>	
	Visually inspect the Front Cover Assy Insert external	<ul style="list-style-type: none"> <li>If clogged – Replace Front Cover Assy</li> </ul>	
	Visually inspect the Earphone Speaker pads	<ul style="list-style-type: none"> <li>If dirty or oxidized – Clean</li> </ul>	



<b>Problem Area</b>	<b>Items to Check</b>	<b>Repair Action</b>	<b>Reference Image</b>
<b>Earphone</b> No sound or poor quality sound (Cont.)	Visually inspect the Earphone Speaker	<ul style="list-style-type: none"> <li>If damaged, dirty or oxidized - Replace Earphone Speaker</li> </ul>	
	Check for the latest Software version	<ul style="list-style-type: none"> <li>Update to the latest Software</li> </ul>	

## 6 Alert Problems




Problem Area	Items to Check	Repair Action	Reference Image
<b>Vibrator</b>	Before proceeding →	<ul style="list-style-type: none"> <li>Perform a setting reset</li> </ul>	
	Visually inspect the Vibrator pads	<ul style="list-style-type: none"> <li>If dirty or oxidized – Clean</li> </ul>	
	Visually inspect the Vibrator Assy	<ul style="list-style-type: none"> <li>If damaged, dirty or oxidized - Replace Vibrator Assy</li> </ul>	
<b>Loudspeaker</b>	Before proceeding →	<ul style="list-style-type: none"> <li>Perform a setting reset</li> </ul>	
	Visually inspect the Speaker Connector	<ul style="list-style-type: none"> <li>If dirty or oxidized – Clean</li> <li>If damaged – Send to an electrical repair location</li> </ul>	
	Visually inspect the Loudspeaker Assy	<ul style="list-style-type: none"> <li>If damaged, dirty or oxidized - Replace Loudspeaker Assy</li> </ul>	

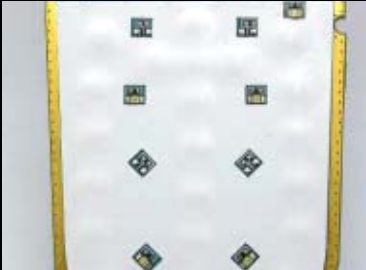


## 7 Key Problems


Problem Area	Items to Check	Repair Action	Reference Image
<b>Keypad</b> A key on the keypad is not functioning or is intermittent	Before proceeding →	<ul style="list-style-type: none"> <li>Perform a setting reset</li> </ul>	
	Visually inspect the Dome Switch Foil	<ul style="list-style-type: none"> <li>If damaged, dirty or oxidized - Replace the Dome Switch Foil</li> </ul> Make sure that the surface of the PCB is cleaned before replacing.	
	Visually inspect the Keypad	<ul style="list-style-type: none"> <li>If damaged, dirty or oxidized - Replace the keypad</li> </ul>	

## 8 Display Problems




Problem Area	Items to Check	Repair Action	Reference Image
<b>Display</b>	Check whether the phone keypad is illuminates	<ul style="list-style-type: none"> <li>If the Keypad are undetectable, refer to the "<a href="#">Power Problems</a>" section</li> </ul>	
	Visually inspect whether the Flex Film is properly connected into the LCD connector	<ul style="list-style-type: none"> <li>If improperly connected - Reestablish proper connection</li> <li>If dirty or oxidized – Clean</li> <li>If damaged – Replace the LCD</li> </ul>	
	Visually inspect the LCD Flex Film	<ul style="list-style-type: none"> <li>If dirty or oxidized – Clean</li> <li>If damaged – Replace the LCD</li> </ul>	
	Visually inspect the LCD connector	<ul style="list-style-type: none"> <li>If dirty or oxidized – Clean</li> <li>If damaged – Send to an electrical repair location</li> </ul>	
	If issue has not been resolved →	<ul style="list-style-type: none"> <li>Replace the LCD</li> </ul>	
<b>Illumination</b>	Before proceeding →	<ul style="list-style-type: none"> <li>Perform a setting reset</li> </ul>	

Problem Area	Items to Check	Repair Action	Reference Image
	Visually inspect the 5 LEDs	<ul style="list-style-type: none"> <li>• If dirty or oxidized– Clean</li> <li>• If damaged or no light - Send to an electrical repair location</li> </ul>	


## 9 SIM Problems

Problem Area	Items to Check	Repair Action	Reference Image
<b>Display</b> “Insert SIM “	Inspect SIM holder	<ul style="list-style-type: none"> <li>• If dirty or oxidized – Clean</li> <li>• If damaged – Send to an electrical repair location</li> </ul>	
Unit indicates the incorrect SIM is inserted	Check whether the phone is locked to a particular carrier and whether the correct carrier’s SIM is being used	<ul style="list-style-type: none"> <li>• Use Correct Carrier SIM or test SIM</li> </ul>	

## 10 Charging/Capacity Problems

Problem Area	Items to Check	Repair Action	Reference Image
<b>Battery can not charge</b>	Visually inspect the contact pads of the Battery	<ul style="list-style-type: none"> <li>• If dirty or oxidized – Clean</li> <li>• If damaged – Replace the Battery</li> </ul>	
	Visually the Battery Connector	<ul style="list-style-type: none"> <li>• If dirty or oxidized – Clean</li> <li>• If damaged – Replace the Battery Connector</li> </ul>	
	Visually inspect the System Connector	<ul style="list-style-type: none"> <li>• If damaged, dirty or oxidized – Send to an electrical repair location</li> </ul>	
Battery loses charge quickly/ standby time seems short	<p><b>NOTE - Some features noticeably reduce the amount of standby time if they are turned on. Some examples are the back light (when turn on all the time), Blue tooth, and infrared.</b></p> <p>Perform the following repair action →</p>	<ul style="list-style-type: none"> <li>• Replace the Battery</li> </ul>	

## 11 Data Communication Problems

Problem Area	Items to Check	Repair Action	Reference Image
Problem transferring data using a direct connection	Visually inspect the System Connector	<ul style="list-style-type: none"> <li>If damaged, dirty or oxidized – Send to an electrical repair location</li> </ul>	

## 12 Software Problems

- If there are problems with the response of the keypad commands, or spelling errors in the menu, if they are not related to mechanical damage, make a master reset and flash the phone with the latest software from EMMA III.
- Checking the software revision can be done in the Service info, see chapter *Service functions in the software*.  
Choose: Service info / SW information.  
The Software revision and date will be shown in the display.

**Note:** Do a SW upgrade before sending the unit to a higher level. Do **not** scrap a phone that hasn't been upgraded.

If the failure still occurs, handle the unit according to the local directives.

## 13 Revision History

Rev.	Date	Changes / Comments
A	2006-03-07	First Release