



Trouble Shooting Guide, Mechanical

Applicable for Z750

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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 unit, this document should be used in conjunction with the Test Instructions, Mechanical and the Working Instructions, Mechanical.

NOTE! *A unit should always be inspected for liquid damage and flashed with latest software before using the Mechanical Trouble Shooting Guide. Refer to the Mechanical Test Instructions for details regarding upgrading software.*

NOTE! *If all of the repair actions listed in this document for addressing a problem have been performed and a unit still is not working, handle the unit according to your local Sony Ericsson Representative.*

View of Z750



Service functions in the software

The service menu will be accessed with the following key combination.

⇒*←←*←*

The service menu options are:

Service info

Service Settings

Service tests

Text labels

Under the “**Service tests**” option, the phone’s software has a built in service functionality that allows you to test some of the phones functions. It looks like this:

Main display

External display

LED/illumination

Keyboard

Speaker

Earphone

Microphone

Vibrating alert

Camera

Video call camera (*only applies to Z750i*)

Memory card

FM Radio

Real time clock

Total call time





Security


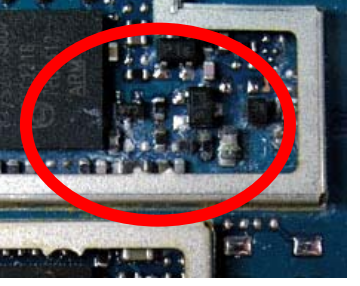

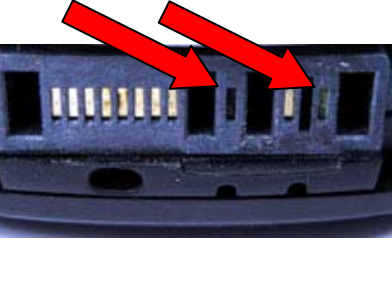
NOTE: Different names may occur depending on language setting and customization.

Misuse and other no warranty issues

A phone that is damaged due to misuse is not covered by warranty. This section shows many of the signs of misuse that are seen in the field. Please refer to local directives on how a phone that appears to be damaged due to misuse should be handled.

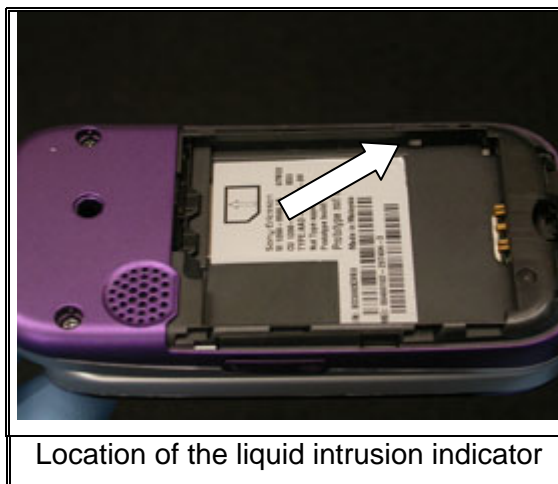
Below are some **examples** of damage due to misuse that are not covered by warranty.

			
Front window broken due to misuse.	LCD cracked due to drop.	Clear scratches	Mark after drop

			
Corrosion components on the PCB.	Corrosion components on the PCB.	Components damaged by liquid	System connector damaged by liquid

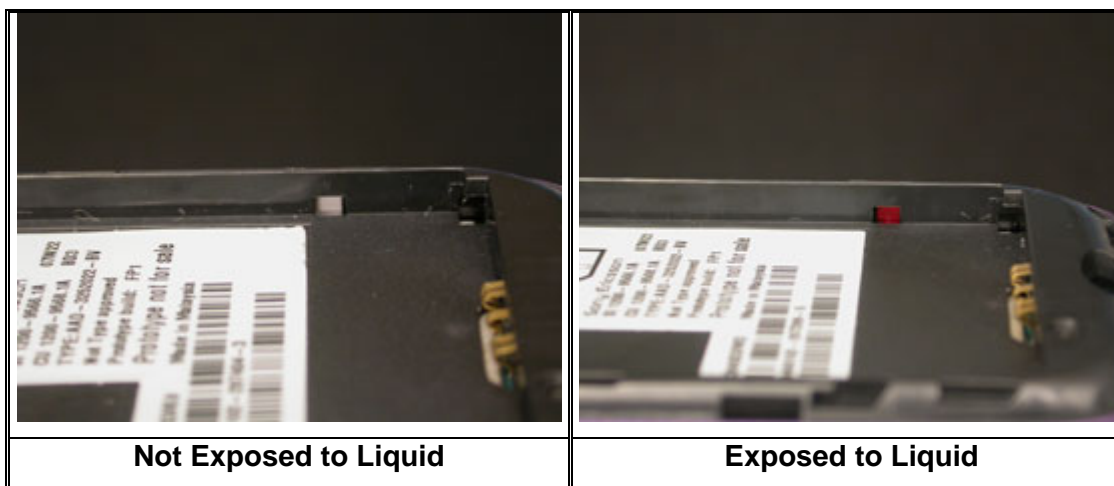
Liquid damage

Before any tests are performed, an inspection of the liquid intrusion indicator should be made. If the liquid intrusion indicator is red, this is an indication of possible liquid exposure. If the liquid intrusion indicator suggests liquid exposure, please consult your local SEMC representative for handling instructions.

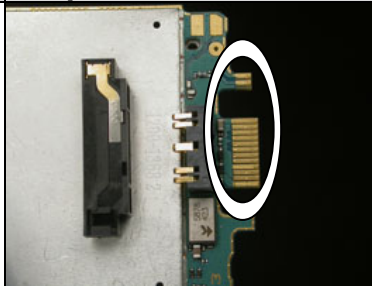
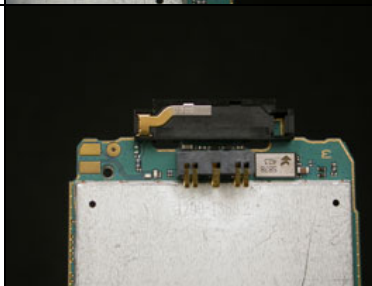


Location of the liquid intrusion indicator


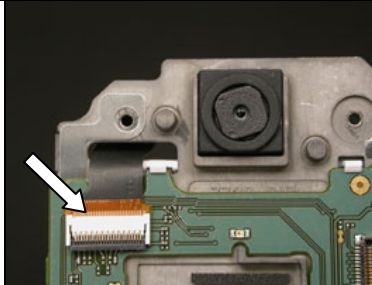
The following pictures show the difference between an indicator that has been in contact with liquid and one that has not.




2 Bluetooth Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Will not connect with a functional Bluetooth device	Inspect the Bluetooth antenna contact pads on the circuit board	<ul style="list-style-type: none"> If dirty or oxidized, clean the contact pads on the circuit board and replace the system connector If damaged, escalate to an electrical repair level 	
	If the issue is not resolved →	<ul style="list-style-type: none"> Replace the system connector, if it has not already been replaced 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	


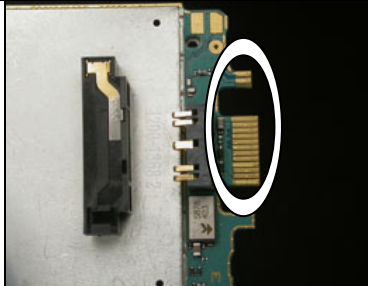
3 Camera Problems - Picture Camera

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Lines or marks in picture	Visually inspect the camera window	<ul style="list-style-type: none"> If dirty, clean the camera window in the upper rear cover If scratched or damaged, replace upper rear cover 	
	If the issue is not resolved →	<ul style="list-style-type: none"> Replace the camera module 	
	If the issue is still not resolved→	<ul style="list-style-type: none"> Escalate to an electrical repair level 	
Camera not functioning properly	Inspect camera module connections	<ul style="list-style-type: none"> Inspect the ZIF connector and make sure the flex is connected and secured If the flex is damaged, replace the camera module If the ZIF connector is damaged, replace the upper PWB 	
	If the issue is not resolved →	<ul style="list-style-type: none"> Replace the camera module, if it has not already been replaced 	
	If the issue is still not resolved→	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

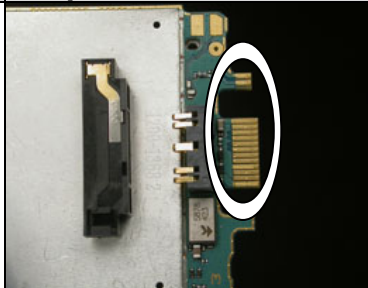
4 Camera Problems - Video Call Camera – (Z750i Only)

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Camera not working properly	Visually inspect the video telephony camera window	<ul style="list-style-type: none"> If dirty, clean the camera window portion of the upper inner screw cover If scratched or damaged, replace upper inner screw cover 	
	If the issue is not resolved →	<ul style="list-style-type: none"> Replace the video telephony camera and the upper PWB assembly 	
	If the issue is still not resolved→	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

5 Charging/Capacity Problems


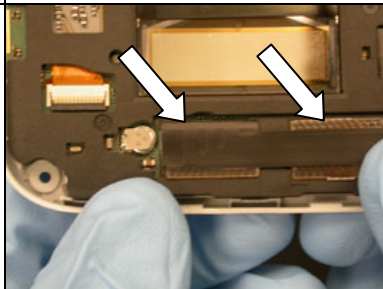
Problem Area	Items to Inspect	Repair Action	Inspection Reference
Phone is not charging properly	Inspect the battery connector	<ul style="list-style-type: none"> If dirty or oxidized, clean the battery connector's contact pins If damaged, escalate to an electrical repair level 	
	If the issue has not been resolved →	<ul style="list-style-type: none"> Replace the system connector and clean the contact pads on the circuit board 	
	If the issue is still not resolved→	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

6 Data Transfer Problems using a Data Cable


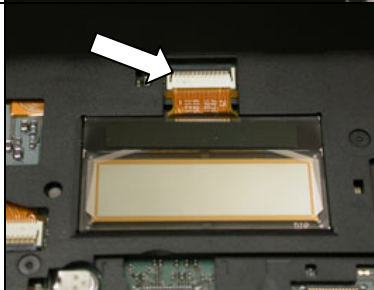
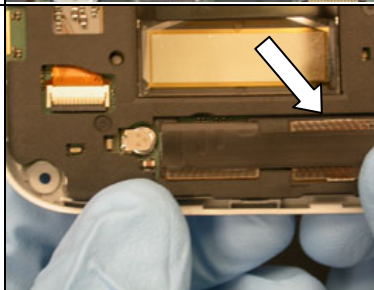
Problem Area	Items to Inspect	Repair Action	Inspection Reference
Problem transferring data using a direct connection	Perform the following action→	<ul style="list-style-type: none"> Replace the system connector and clean the contact pads on the circuit board 	
	If the issue is still not resolved→	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

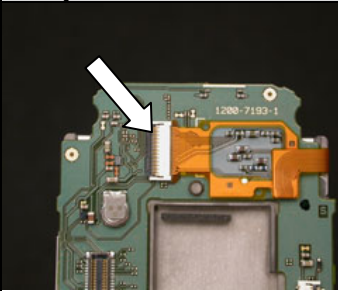


7 Display Problems


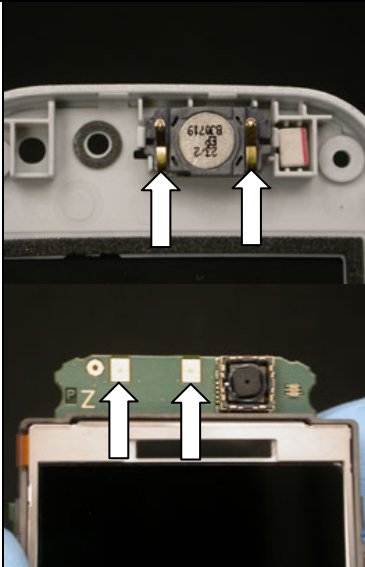
Problem Area	Items to Inspect	Repair Action	Inspection Reference
Neither display is functioning	Check whether the phone vibrates when you press the power key and whether the navigation keypad illuminates 20 to 25 seconds after the phone vibrates	If activation of the vibrator and illumination of the navigation keypad are not detected , refer to the “Power Problems” section	
	Inspect the hinge flex’s connection to the lower circuit board	<ul style="list-style-type: none"> • If improperly connected, establish proper connection • If dirty or oxidized, clean both halves of the connection • If the portion of the connection on the hinge flex is damaged, replace the hinge flex • If the circuit board portion of the connection is damaged, escalate to an electrical repair level 	
	Inspect the hinge flex’s upper connections where it connects to the upper PWB assembly	<ul style="list-style-type: none"> • Make sure the upper and lower hinge flex connections are properly connected • If dirty or oxidized – Clean both halves of both connections • If either of the two connector portions on the hinge flex are damaged – replace the hinge flex • If either of the two connector portions on the PWB assembly are damaged – replace the PWB assembly 	



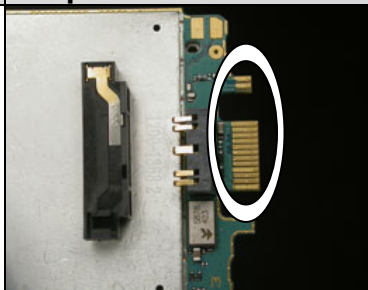
Problem Area	Items to Inspect	Repair Action	Inspection Reference
Neither display is functioning (Cont'd)	Inspect each display's connection to the PWB assembly	<ul style="list-style-type: none"> Make sure each display is properly connected and secured 	
	If the issue is not resolved →	<ul style="list-style-type: none"> Replace the hinge flex, if it has not already been replaced 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	
Only the outer display is not functioning	Check that the magnet is in place	<ul style="list-style-type: none"> If it is not, replace the upper front cover assembly 	
	Inspect outer display's connection to the PWB assembly	<ul style="list-style-type: none"> Make sure the outer display ZIF connector is properly connected and secured If the flex is damaged, replace the outer display If the ZIF connector is damaged, replace the upper PWB assembly 	
	Inspect the hinge flex's lower connection to the upper PWB assembly	<ul style="list-style-type: none"> Make sure the lower hinge flex connection is properly connected to the upper PWB assembly. If either half of the connection is damaged, replace the hinge flex or PWB assembly as necessary. 	
	If the issue is not resolved →	<ul style="list-style-type: none"> Replace the outer display, if it has not already been replaced 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Only the inner display is not functioning	Check the display connections	<ul style="list-style-type: none"> • Make sure the inner display ZIF connector is properly connected and secured • If the display flex is damaged, replace the inner display • If the ZIF connector is damaged, replace the upper PWB assembly 	
	If the issue is not resolved →	<ul style="list-style-type: none"> • Replace the inner display, if it has not already been replaced 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> • Escalate to an electrical repair level 	
Display is not Illuminating properly	Refer to the "Illumination Problems" section of this document		

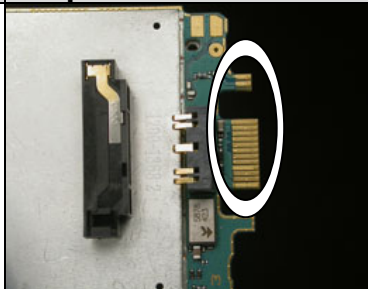
8 Earphone (Receiver) Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
No sound or poor quality sound	Before proceeding →	<ul style="list-style-type: none"> Perform a setting reset 	
	Inspect the receiver's external port	<ul style="list-style-type: none"> If clogged – Replace the upper inner screw cover and the upper front cover 	
	Inspect the connections between the receiver and upper PWB assembly.	<ul style="list-style-type: none"> If any of the contacts are dirty, replace the receiver and clean the contact pads on the upper PWB assembly If the contacts of the receiver are damaged, replace the receiver. If the contact pads on the upper PWB assembly are damaged, replace the PWB assembly. 	
	If the issue is not resolved →	<ul style="list-style-type: none"> Replace the receiver, if it has not already been replaced 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	



9 FM Radio Problems

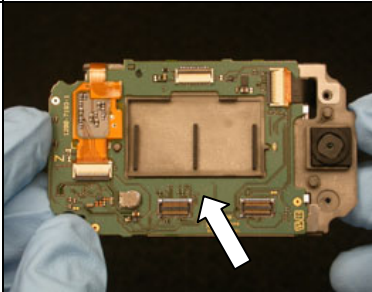

Problem Area	Items to Inspect	Repair Action	Inspection Reference
FM Radio not working	Perform the following action→	<ul style="list-style-type: none"> Replace the system connector and clean the contact pads on the circuit board 	
	If the issue is still not resolved→	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

10 Hands-Free Problems


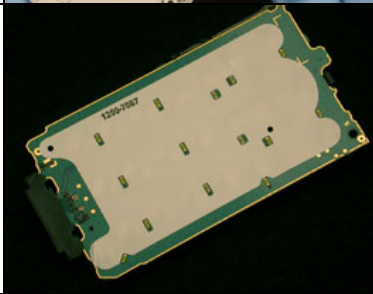
Problem Area	Items to Inspect	Repair Action	Inspection Reference
Hands-free not working	Perform the following action→	<ul style="list-style-type: none"> Replace the system connector and clean the contact pads on the circuit board 	
	If the issue has not been resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	


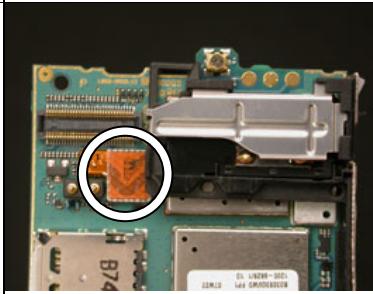
11 Illumination Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Keyboard Illumination: Bright light spots shining through keyboard	Inspect keypad light shield	<ul style="list-style-type: none"> Install or replace keypad light shield as needed 	
Keyboard Illumination: The entire keyboard will not illuminate	Perform the following action→	<ul style="list-style-type: none"> Escalate to an electrical repair level 	
Keyboard Illumination: A portion of the keyboard does not illuminate	Perform the following action→	<ul style="list-style-type: none"> Escalate to an electrical repair level 	
Inner Display Illumination: Inner Display's illumination is irregular	Before proceeding →	<ul style="list-style-type: none"> Perform a setting reset 	
	Perform the following action→	<ul style="list-style-type: none"> Replace the inner display 	
	If the issue has not been resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

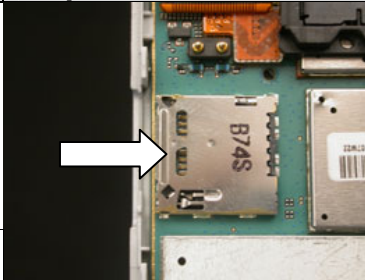
Problem Area	Items to Inspect	Repair Action	Inspection Reference
Inner Display Illumination: Inner Display's illumination is dim	Before proceeding →	<ul style="list-style-type: none"> Perform a setting reset 	
	Perform the following action→	<ul style="list-style-type: none"> Replace upper PWB assembly 	
	Perform the following action→	<ul style="list-style-type: none"> Replace the inner display 	
	If the issue has not been resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

12 Key Problems

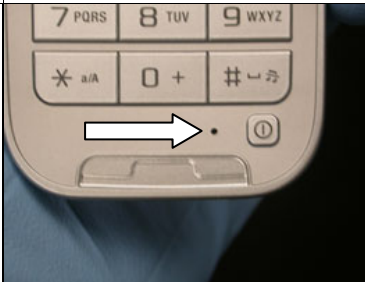
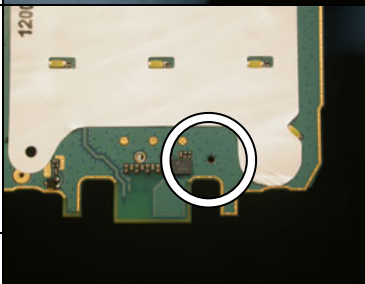
Problem Area	Items to Inspect	Repair Action	Inspection Reference
Keyboard: A key on the keyboard is not functioning or is intermittent	Inspect for debris between and/or damage to the keyboard, keypad light shield, and the dome array.	<ul style="list-style-type: none"> If debris is present between the keypad light shield and the dome foil, clean and/or replace parts as necessary If debris is present between the keyboard and keypad light shield, clean and/or replace parts as necessary 	
	If the issue is not resolved →	<ul style="list-style-type: none"> Replace the dome foil, if it has not been replaced <p>NOTE: Thoroughly clean the key contacts on the circuit board before installing a new dome foil.</p>	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Replace the keyboard and keypad light shield if they have not been replaced 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Volume Key/Play key:	Inspect for debris between and/or damage to the Side Key Assembly and the side key dome array	<ul style="list-style-type: none"> • If debris is found between Side Key Assembly and the side key dome array, clean and/or replace parts as necessary • If the side key assembly is damaged, replace the side key assembly • If the side key dome array is damaged, replace the SIM FPC assembly 	
	Inspect the SIM FPC assembly's connection to the circuit board	<ul style="list-style-type: none"> • If improperly connected, establish proper connection • If dirty or oxidized, clean both halves of the connection • If the SIM FPC assembly's portion of the connection is damaged, replace it • If the circuit board portion of the connection is damaged, escalate to an electrical repair level 	
	If the issue is not resolved →	<ul style="list-style-type: none"> • Replace the SIM FPC assembly, if it has not already been replaced 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> • Escalate to an electrical repair level 	

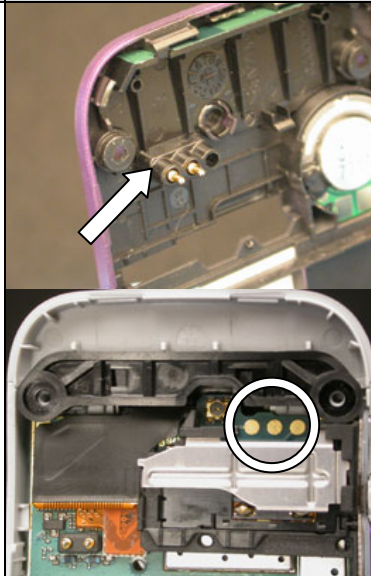
13 Memory Card Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Memory card undetected	Inspect memory card reader	<ul style="list-style-type: none"> If dirty or oxidized, clean If damaged, escalate to an electrical repair level 	
	If the issue has not been resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	



14 Microphone Problems

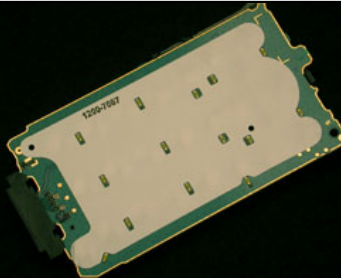
Problem Area	Items to Inspect	Repair Action	Inspection Reference
Microphone	Before proceeding →	<ul style="list-style-type: none"> Perform a setting reset 	
	Inspect the microphone's external port	<ul style="list-style-type: none"> If clogged, clean microphone's external port or replace keyboard and the lower front cover as necessary. Also clean the microphone's port hole in the circuit board 	
	Inspect the microphone's port hole in the circuit board	<ul style="list-style-type: none"> Clean the port hole in the circuit board 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

15 Network/Signal Problems

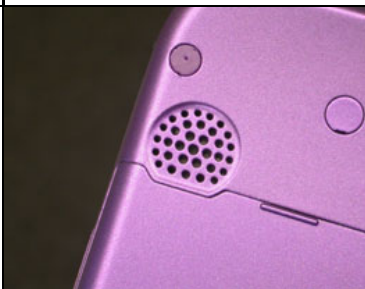

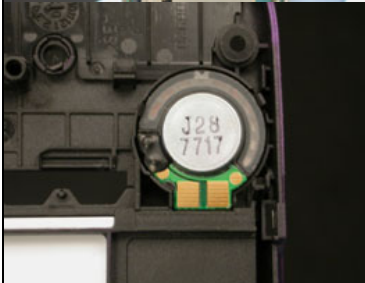
Problem Area	Items to Inspect	Repair Action	Inspection Reference
No Signal or Poor Signal	Perform the following action→	<ul style="list-style-type: none"> Replace antenna assembly and clean the antenna's contact points on the circuit board 	
	If the issue is still not resolved→	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

16 Power Problems

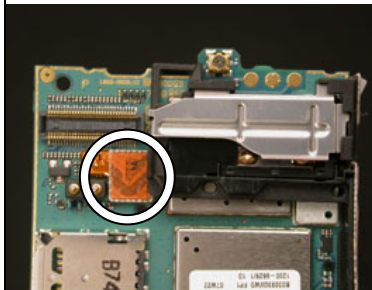
Problem Area	Items to Inspect	Repair Action	Inspection Reference
Unit will not Power On	Check whether the phone vibrates when you press the power key and whether the navigation keypad illuminates 20 to 25 seconds after the phone vibrates	If activation of the vibrator and illumination of the navigation keypad are detected, refer to the "Display Problems" section	
	Inspect battery connector	<ul style="list-style-type: none"> If dirty or oxidized, clean the battery connector's contact pins If damaged, escalate to an electrical repair level 	
	Inspect for debris between and/or damage to the keyboard, keypad light shield, and the dome array in the power key area.	<ul style="list-style-type: none"> If debris is present between the keypad light shield and the dome foil, clean and/or replace parts as necessary If debris is present between the keyboard and keypad light shield, clean and/or replace parts as necessary 	

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Unit will not Power On (Cont'd)	If the issue is not resolved →	<ul style="list-style-type: none"> Replace the dome foil, if it has not been replaced <p>NOTE: Thoroughly clean the power key contacts on the circuit board before installing a new dome foil.</p>	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	



17 Rear Speaker Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
No sound or poor quality sound	Before proceeding →	<ul style="list-style-type: none"> Perform a setting reset 	
	Inspect whether the rear speaker's external port is clogged	<ul style="list-style-type: none"> If clogged – Clean or replace the lower rear cover and replace the speaker gasket. 	
	Inspect the rear speaker's connection to the circuit board	<ul style="list-style-type: none"> If any of the contacts are dirty, clean the contacts pins on the circuit board and replace the rear speaker If the connector pins on the lower circuit board are damaged, escalate to an electrical repair level If the contact pads on the rear speaker are damaged, replace the rear speaker. 	 
	If the issue is not resolved →	<ul style="list-style-type: none"> Replace the rear speaker, if it has not already been replaced 	
	If the issue is still not resolved→	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

18 SIM Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
SIM undetected	Inspect the SIM FPC assembly's connection to the circuit board	<ul style="list-style-type: none"> • If improperly connected, establish proper connection • If dirty or oxidized, clean both halves of the connection • If the SIM FPC assembly's portion of the connection is damaged, replace it • If the circuit board portion of the connection is damaged, escalate to an electrical repair level 	
	If the issue is not been resolved →	<ul style="list-style-type: none"> • Replace the SIM FPC assembly, if it has not been replaced 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> • Escalate to an electrical repair level 	
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"> • Use Correct Carrier SIM or test SIM 	

19 Vibrator Problems

Problem Area	Items to Inspect	Repair Action	Inspection Reference
Vibrator not working	Before proceeding →	<ul style="list-style-type: none"> Perform a setting reset 	
	Inspect the vibrator's connection to the circuit board	<ul style="list-style-type: none"> If any of the contacts are dirty, clean the contacts pads on the circuit board and replace the vibrator If the vibrator's contact pads on the circuit board are damaged, escalate to an electrical repair level If the contacts on the vibrator are damaged, replace it. 	 
	If the issue is not been resolved →	<ul style="list-style-type: none"> Replace the vibrator, if it has not been replaced 	
	If the issue is still not resolved →	<ul style="list-style-type: none"> Escalate to an electrical repair level 	

20 Revision History

Rev.	Date	Changes / Comments
A	2007-Sept 19	Initial Release
2	2008-April, 24	Fixed variant reference